LIBRARY
★ APR 28 1903 ★
Weather Bureau.

GOVERNMENT OF INDIA.

India. METEOROLOGICAL DEPARTMENT.

LIBRARY
WEATHER BUREAU
No. 24558

THE

INDIA WEATHER REVIEW

FOR THE YEAR

1901.

QC
990
.I39
I52
1901

Published by authority of the Government of India.

UNDER THE DIRECTION OF

JOHN MURRAY, M.A.,

OFFICIATING METEOROLOGICAL REPORTER TO THE GOVERNMENT OF INDIA AND DIRECTOR GENERAL OF INDIAN OBSERVATORIES.

LIBRARY
N.O.A.A.
U.S. Dept. of Commerce

CALCUTTA:
OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA.
1903.

National Oceanic and Atmospheric Administration

Environmental Data Rescue Program

ERRATA NOTICE

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages
Faded or light ink
Binding intrudes into the text

This document has been imaged through the NOAA Environmental Data Rescue Program. To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or www.reference@nodc.noaa.gov.

Information Manufacturing Corporation
Imaging Subcontractor
Rocket Center, West Virginia
September 14, 1999

LIBRARY
JUN 20 1901
Weather Bureau

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JANUARY 1901.

INTRODUCTION.

THE monthly review of the weather in India for the month of January 1901 is based on observations taken daily at 8 A.M. at 220 stations, and on additional observations recorded at 10 A.M. and 4 P.M. at 65 stations. In the case of the rainfall section of the review there are also utilized the weekly rainfall telegrams received from district officers throughout India, and the rainfall statements of the month published in the Government Gazettes by the Provincial Governments that have been issued prior to the date of the publication of the review. A brief summary of the information relating to the weather in the Bay of Bengal and Arabian Sea, extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given. In the remaining monthly reviews of the present year the brief statements of the methods of recording and tabulating the data, for each of the elements of observation given in the present number at the commencement of each section, will not be repeated.

Summary of the chief features of the weather in India during the month of January, 1901.

The first three weeks of January, 1901, were very unsettled over the greater part of the Indian region. A series of depressions, which either advanced to North-West India from countries further to the westward or were developed over North Bombay and the north-east of the Arabian Sea, passed from west to east across the country, and though these depressions, with one exception, only slightly affected the barometric pressure, they were accompanied with widespread showers. On the 1st snow was falling on the hills, and rain on the plains of Northern India, while some showers had extended to the central stations. In consequence temperature was very low all over North-Western and part of Northern India, while, on the contrary, over the central parts of India, the Peninsula and Burma the heat was very excessive. The following gives temperature data for the 24 hours preceding

8 A.M. of the 1st, and illustrates the conditions prevailing at the commencement of the month:—

Province or Division.	Variation from normal of Mean maximum temperature, 1st January.	Mean minimum temperature, 1st January.	Mean daily temperature, 1st January.
	°	°	°
Burma	+1·6	+1·6	+1·6
Assam	−0·1	+1·0	+0·5
Bengal	+0·3	+2·1	+1·2
Orissa	+2·2	+8·4	+5·3
Bihar	−9·3	+4·8	−2·3
Chota Nagpur	−5·5	+7·1	+0·8
North-Western Provinces and Oudh	−15·9	+5·4	−5·3
Punjab	−13·7	+6·4	−3·7
Sind	−13·2	−2·8	−8·0
Rajputana	−15·7	+0·2	−7·8
Gujarat	−6·3	−2·7	−4·5
Central India	−7·5	+6·5	−0·5
Central Provinces	+3·7	+10·2	+7·0
Berar	+5·0	+12·0	+8·5
West Coast	+0·2	+2·8	+1·5
Bombay Deccan	+4·1	+4·4	+4·3
Mysore	+2·7	+0·7	+1·7
Madras Coast	+2·8	+5·1	+4·0
Madras Deccan	+2·3	+4·7	+3·5
South India	+0·1	+0·7	+0·4

On this day the sky was densely clouded all over Northern India, and the air was exceedingly damp. The following shows the stations at which the relative humidity equalled 100 at 8 A.M.:—

Station.	Relative Humidity. Actual, 1st January 8 A.M.
	%
Dinajpur	100
Allahabad	100
Bahraich	100
Bareilly	100
Sirsa	100
Nowgong	100

Rain gradually ceased during the next few days and the weather improved, but the recovery of temperature was only small over Northern India, while, on the other hand, there was a large fall of temperature over the central parts of the country. The following gives temperature data for Baluchistan, the Punjab, Rajputana, Sind, Gujarat, Central India, Berar and the Central Provinces from the 2nd to the 8th in illustration:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 2nd January.	3rd January.	4th January.	5th January.	6th January.	7th January.	8th January.
	°	°	°	°	°	°	°
Baluchistan	−2·3	−0·6	−4·3	−3·6	−3·8	−4·5	−2·3
Punjab	−4·6	−2·0	−2·7	−1·7	−2·3	−2·7	−1·8
Rajputana	−7·8	−7·8	−7·1	−8·0	−6·6	−4·5	−2·7
Sind	−7·2	−2·9	−6·3	−2·5	−3·2	−2·6	−4·7
Gujarat	−6·4	−6·1	−5·7	−7·1	−7·3	−4·7	−2·1
Central India	−2·6	−4·9	−2·2	−5·9	−6·9	−5·7	−1·6
Berar	+4·5	+3·4	−0·3	−4·1	−6·7	−3·9	−0·1
Central Provinces.	+4·7	0	+0·2	−4·6	−6·7	−6·4	−1·7

Throughout December the existence of a low pressure area over Kathiawar, Gujarat and the adjacent parts of the Arabian Sea was a marked feature of the pressure distribution. This feature re-appeared in January, and on the 7th a depression was shown over Kathiawar. This depression moved into Gujarat and South-East Rajputana on the 8th, and subsequently into the Central Provinces, where it filled up. It was throughout a shallow and ill-defined depression, but it occasioned showers all over Rajputana and the more central parts of the country. It was hence accompanied by a brisk fall of temperature over the disturbed area. The following gives temperature data for the different divisions of Northern and Central India from the 7th to the 10th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 7th January.	8th January.	9th January.	10th January.
	°	°	°	°
Punjab	−2·7	−1·8	−2·0	−3·0
Rajputana	−4·5	−2·7	−6·9	−6·0
Berar	−3·9	−0·1	+0·3	−3·8
Central India	−5·7	−1·6	−2·5	−8·4
Central Provinces	−6·4	−1·7	+0·1	−4·9
North-Western Provinces and Oudh.	−3·8	−2·1	−5·1	−2·0
Chota Nagpur	−6·2	−6·0	−2·9	−0·7
Orissa	−3·0	−5·6	−3·6	−0·1
Bihar	−5·8	−3·6	−1·0	+2·0
Bengal	−2·1	−3·2	−0·7	+1·6

On the 10th and 11th the weather became disturbed and unsettled in Persia, while temperature rose briskly in Upper Sind and Baluchistan. These changes were followed by the appearance of a barometric depression which entered Sind on the morning of the 12th. This depression was the most important of the month, as, apparently, it gave rise to a secondary disturbance in the Punjab. This complex disturbance traversed North-Western India and was accompanied with excessively unsettled weather with heavy snow on the hills and heavy rain on the plains. The following shows the largest amounts (exceeding 3″ in 24 hours) recorded over Baluchistan, Kashmir and North-West India at this time (13th to 15th) :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kashmir	Kotli	13th January	5·75
	Punch	,, ,,	4·00
Rawalpindi	Murree	,, ,,	3·60
Kashmir	Meerpore	,, ,,	3·48
Garhwal	Joshimath	14th ,,	3·31
Kashmir	Rampore Rajauri	,, ,,	3·20
Jullundur	Nawashahr	15th ,,	3·99
Hoshiarpur	Garhshankar	,, ,,	3·39
Saharanpur	Hardwar	,, ,,	3·35

The barometer rose very rapidly on the 15th. The following shows the change between the 14th and 15th at those stations where the rise amounted to 0·250″ :—

Station.	Pressure change in 24 hours preceding 8 A.M. of 15th January, 1901.
Sialkot	+·346
Sirsa	+·324
Lahore	+·321
Rawalpindi	+·321
Khushab	+·298
Montgomery	+·296
Ludhiana	+·295
Mooltan	+·294
Dera Ismail Khan	+·286
Peshawar	+·281
Ajmer	+·276
Bikaner	+·272
Sambhar	+·266
Jaipur	+·255

The depression had partly filled up and partly passed eastward, and the weather was clearing. A wave of very great cold succeeded this depression, and the mean temperature was below the normal over Northern and Central India from the 15th to the 21st. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	15th January.	16th January.	17th January.	18th January.	19th January.	20th January.	21st January.
	°	°	°	°	°	°	°
Punjab	−5·0	−4·5	−5·3	−4·6	−2·4	−2·1	−1·4
Rajputana	−8·0	−5·8	−6·9	−7·4	−6·5	−1·4	−1·9
Berar	−1·5	−6·4	−1·3	+0·2	−7·6	−7·5	−4·5
Central India	−4·1	−8·1	−5·6	−5·9	−8·9	−5·5	−1·3
Central Provinces.	−0·4	−5·0	−2·4	−1·5	−7·4	−7·5	−4·0
N.-W. P. and Oudh.	−3·9	−4·4	−4·2	−5·0	−5·2	−4·3	−4·0
Chota-Nagpur	−3·5	−3·1	−3·1	−2·0	−7·6	−7·3	−6·2
Orissa	−3·5	−0·6	−0·3	+1·6	−3·3	−6·3	−5·7
Bihar	−1·6	−3·2	−3·6	−2·0	−2·6	−5·5	−3·9
Bengal	−0·3	−0·1	−1·2	−0·8	−2·5	−5·7	−5·0

On the night of the 14th—15th, when the sky cleared, very low minimum temperatures were recorded at several places in North-West India. The following gives the more remarkable :—

Station.	Minimum temperature.		
	Actual, 15th January.	Normal, 15th January.	Variation of actual from normal, 15th January, 1901.
	°	°	°
Deesa	38·0	52·8	−14·8
Rajkot	39·1	51·8	−12·7
Kurrachee	42·2	54·7	−12·5
Bhavnagar Para	46·2	58·2	−12·0
Bhuj	43·0	54·4	−11·4
Hyderabad (Sind)	40·0	51·2	−11·2

After the rapid barometric rise, which succeeded the breaking up of this depression, the weather changed. The barometer rose above the normal, and, though another depression developed over Kathiawar on the 16th, and thence passed eastward across the head of the Peninsula, occasioning showery unsettled weather in its progress, conditions never became seriously disturbed after the 20th. By the 22nd pressure had become higher than usual everywhere, but particularly in the north-west, an

strongly marked anti-cyclonic conditions were established which practically held until the end of the month. The weather consequently improved, but it was some time before the large deficiency of temperature, which prevailed over Northern India, commenced to give way. Thus on the 24th all divisions of Northern and Central India still reported lower temperatures than usual. This is shown below :—

Province or Division.	Variation from normal of		
	Mean Maximum temperature, 24th January.	Mean Minimum temperature, 24th January.	Mean daily temperature, 24th January.
	°	°	°
Bengal	−2·7	−4·2	−3·5
Orissa	−5·5	−3·8	−4·7
Bihar	−2·8	+0·4	−1·2
Chota-Nagpur	−3·4	+1·2	−1·1
North-Western Provinces and Oudh	−4·8	−0·7	−2·8
Punjab	−8·3	−4·5	−6·4
Rajputana	−2·6	−0·7	−1·7
Central India	−1·8	+0·8	−0·5
Central Provinces	−1·4	+1·2	−0·1
Berar	−1·4	+0·6	−0·4

On the 25th a rapid rise of temperature commenced over North Bombay and the central parts of the country. This rise continued and extended during the next few days, so that by the 28th the mean temperature had risen to above the normal everywhere—a condition which lasted with slight modifications till the end of the month. This is shown in the following table which gives temperature data for the last four days of the month :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	28th January.	29th January.	30th January.	31st January.
	°	°	°	°
Burma	+2·3	+2·4	+1·0	+1·2
Assam	−0·2	+0·1	−1·4	−1·3
Bengal	+1·5	+1·3	+0·9	+0·2
Orissa	+0·3	+2·1	+2·0	+0·2
Bihar	+0·6	−0·7	−1·1	+0·7
Chota-Nagpur	+1·7	+0·3	0	+0·5
North-Western Provinces and Oudh.	−1·4	−0·6	+1·3	+3·6
Punjab	+0·9	+0·8	+2·5	+4·1
Sind	+3·7	+4·7	+5·5	+5·0
Rajputana	+3·4	+5·2	+7·0	+8·1
Gujarat	+2·5	+4·3	+4·5	+3·8
Central India	−0·4	+1·8	+3·3	+5·3
Central Provinces	+1·3	+2·1	+3·2	+5·0
Berar	+2·0	+3·6	+4·1	+2·1
West Coast	+1·7	+2·1	+2·0	+2·0
Bombay Deccan	+4·3	+5·3	+5·3	+5·0
Mysore	+3·6	+1·4	+2·7	+3·5
Madras Coast	+1·5	+1·4	+1·6	+2·7
Madras Deccan	+3·9	+3·6	+4·2	+5·5
South India	+0·4	+1·9	+1·7	+1·5

Pressure.—Pressure was on the average of the whole Indian area 0·011″ above the normal. The variations were generally slight or small, but the deficiency amounted to 0·02″ or more at the following stations in Lower Burma, Tenasserim and the Peninsula :—

Province or Division.	Station.	Variation from normal of mean 8 A.M. pressure of January, 1901.	Pressure anomaly, January, 1901.
		″	″
Lower Burma	Rangoon	−·018	−·029
Tenasserim	Moulmein	−·016	−·027
Do.	Tavoy	−·014	−·025
Peninsula	Madras	−·013	−·024

Pressure, in addition to Lower Burma, Tenasserim and the Peninsula, was also in defect over the Indus Valley, and Assam and East Bengal. Over the remainder of Northern India and over Upper Burma the pressure, relatively to the general condition, was in slight excess the greatest excess having been reported from the following stations in the North-Western Provinces, Bihar, Bengal and Upper Burma :—

Province or Division.	Station.	Variation from normal of mean 8 A.M. pressure of January, 1901.	Pressure anomaly, January, 1901.
		″	″
North-Western Provinces.	Cawnpore	+·037	+·026
Do.	Gorakhpur	+·033	+·022
Do.	Bahraich	+·031	+·020
Bihar	Purnea	?+·047	?+·036
Bengal	Jalpaiguri	+·036	+·025
Upper Burma	Bhamo	+·037	+·026
Do.	Mandalay	+·032	+·021

The vertical pressure anomalies were negative over North-Western and Northern India—slightly so in North-East India, and considerably so in the north-west and centre—and feebly positive in Southern India. The following table gives the mean pressure variations and anomalies of the month for the eleven meteorological provinces :—

Meteorological Province.	Variation from normal of mean 8 A.M. pressure of January, 1901.	Pressure anomaly, January, 1901.
	"	"
Burma Coast and Bay Islands	—·004	—·015
Burma Inland	+·028	+·017
Assam	+·006	—·005
Bengal and Orissa	+·019	+·008
Gangetic Plain and Chota Nagpur	+·022	+·011
Upper Sub-Himalayas	+·016	+·005
Indus Valley and North-West Rajputana	+·011	0
East Rajputana, Central India and Gujarat	+·013	+·002
Deccan	+·008	—·003
West Coast	+·009	—·002
South India	+·005	—·006

Temperature.—The variations of the mean temperature conditions of the month from the normal were large and the temperature conditions over Northern India and over the Peninsula were in marked contrast. The mean day or maximum temperature was lower than usual along the Bombay coast and over the whole of Northern and Central India. The deficiency was considerable to large at most places and varied between 6° and 7½° at the stations given below :—

Station.	Mean maximum temperature.		
	Actual, January, 1901.	Normal, January.	Variation of actual from normal, January, 1901.
	°	°	°
Delhi	63·4	71·0	—7·6
Nowgong	68·0	75·3	—7·3
Benares	67·2	74·4	—7·2
Chaibassa	73·0	80·2	—7·2
Jhansi	69·1	76·0	—6·9
Sutna	67·8	74·6	—6·8
Allahabad	67·3	74·0	—6·7
Mainpuri	65·4	72·1	—6·7
Ludhiana	60·9	67·6	—6·7
Lucknow	67·2	73·8	—6·6
Ajmer	67·4	74·0	—6·6
Ranchi	67·2	73·7	—6·5
Bahraich	66·4	72·8	—6·4
Gorakhpur	66·8	73·2	—6·4
Gaya	69·4	75·7	—6·3
Hazaribagh	66·8	72·8	—6·0
Agra	67·5	73·5	—6·0
Roorkee	63·5	69·5	—6·0

Over the Peninsula, except the West coast, the day temperature, on the mean of the month, was in excess, the excess having been greatest over the region represented by the following stations :—

Station.	Mean maximum temperature.		
	Actual, January, 1901.	Normal, January.	Variation of actual from normal, January, 1901.
	°	°	°
Bangalore	84·4	79·3	+5·1
Cuddapah	92·3	87·6	+4·7
Bellary	91·7	87·5	+4·2
Chitaldroog	87·9	84·0	+3·9
Salem	92·1	88·2	+3·9

Over the greater part of Burma the day temperature was in excess of the normal, but, except at a few stations in the south, the variations were not considerable. The following were the largest variations recorded in this region :—

Station.	Mean maximum temperature.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal January 1901.
	°	°	°
Moulmein	91·2	88·3	+2·9
Rangoon	91·1	88·7	+2·4
Tavoy	91·4	89·3	+2·1

The mean maximum temperature of the month was (with the exception of Srinagar) in considerable to large defect at the hill stations in all parts of the country, except at Wellington.

The mean minimum temperature of the month was in defect over portions of North-Western and of North-Eastern India, but both the amount and extent of the deficiency were slight. In the following instances the deficiency exceeded 1°:—

Area.	Station.	Mean minimum temperature. Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		°	°	°
North-Western India.	Bhuj	52·6	54·8	−2·2
	Rajkot	49·5	51·2	−1·7
	Dera Ismail Khan.	39·6	41·3	−1·7
	Indore	48·7	50·3	−1·6
	Cawnpore	45·9	47·5	−1·6
	Bikaner	46·5	47·9	−1·4
	Montgomery	41·5	42·9	−1·4
	Neemuch	47·6	48·9	−1·3
	Hyderabad (Sind).	49·9	51·2	−1·3
	Ahmedabad	56·7	57·8	−1·1
	Saugor Island.	56·9	59·4	−2·5
North-Eastern India.	Dhubri	51·5	53·6	−2·1
	Chittagong	54·4	55·4	−1·0
	Dinajpur	48·2	49·2	−1·0

Over the remainder of India the mean night temperature exceeded the normal, the excess having been great over the centre and east of the Peninsula and over Tenasserim and Lower Burma. The mean night temperature was generally lower than usual at the Himalayan hill stations, but was in slight excess in Baluchistan.

The above shows that both the day and night temperatures and consequently the mean temperature were above the normal over the Peninsula and Burma, while the mean temperature was in considerable defect over nearly the whole of Northern India. The deficiency was greatest and more than 3° over West Bengal and the Gangetic Plain. This is shown below:—

Province or Area.	Station.	Mean daily temperature. Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		°	°	°
Gangetic Plain.	Mainpuri	55·9	59 6	−3·7
	Jhansi	59·8	63·4	−3·6
West Bengal.	Ranchi	58·6	61·9	−3·3
	Hazaribagh	58·5	61·7	−3·2

The mean temperature of the hill stations in the north and centre was lower than usual.

The following gives variation data for the eleven meteorological provinces of the empire:—

Meteorological Province.	Variation of actual from normal of: Mean maximum temperature, January 1901.	Mean minimum temperature, January 1901.	Mean daily temperature, January 1901.
	°	°	°
Burma Coast and Bay Islands	+1·7	+4·5	+3·1
Burma Inland	−1·2	+0·2	−0·5
Assam	−1·5	−0·7	−1·1
Bengal and Orissa	−3·1	+0·1	−1·5
Gangetic Plain and Chota Nagpur	−6·2	+0·9	−2·7
Upper Sub-Himalayas	−5·6	+1·1	−2·3
Indus Valley and North-West Rajputana.	−3·8	−0·1	−1·9
East Rajputana, Central India and Gujarat.	−4·7	−0·5	−2·6
Deccan	−1·3	+2·2	+0·5
West Coast	−0·5	+2·0	+0·8
South India	+2·5	+4·0	+3·3

Winds.—In Northern India and Burma the winds were generally somewhat stronger than usual, except in the Punjab and Rajputana, where the velocity was about normal, and in Sind, where it was much lower than usual. The wind was unusually easterly in Sind and Rajputana, presumably on account of the tracks of the different small depressions. The wind velocity was about normal in the Peninsular divisions, but the steadiness was low, while the directions varied irregularly from the normal. Over the Indian seas the wind force, on the mean of the month, was exactly normal. At Zanzibar the velocity of the Trades was low, but at the Seychelles it was normal.

Humidity.—The increased dampness of the air was one of the most marked features of the meteorology of the

month. There was, on the mean of the month, a slight deficiency of humidity in Burma and in Deltaic Bengal, as well as over the interior districts of the Peninsula (Bellary and Mysore each —5), but over the whole of the remainder of India the air was damper than usual. The excess was greatest and large over West Bengal (Hazaribagh +15), the Gangetic Plain (Allahabad +11) and the East and Central Punjab (Lahore +13). At all the hill stations, except Leh, the relative humidity was in excess, more particularly at those in Baluchistan (Quetta +15) and the Kumaun Himalayas (Simla +15). The local deficiency at Leh was very large —27, and that station appeared to be beyond the area of excessive precipitation and moisture which covered the outer ranges of the Himalayas. The following gives variation data of the mean aqueous vapour pressure and mean humidity of nine meteorological provinces for the month:—

Meteorological Province.	Mean absolute humidity.		Mean relative humidity.	
	Average actual, January 1901.	Variation of actual from normal, January 1901.	Average actual, January 1901.	Variation of actual from normal, January 1901
	"	"	%	
Burma Coast and Bay Islands	·689	+·033	68	— 2
Bengal and Orissa	·463	—·019	73	— 1
Gangetic Plain and Chota Nagpur	·367	+·032	74	+11
Upper Sub-Himalayas	·309	+·026	76	+10
Indus Valley and North-West Rajputana.	·294	+·026	62	+ 6
East Rajputana, Central India and Gujarat.	·266	+·003	51	+ 6
Deccan	·377	+·031	53	+ 5
West Coast	·597	+·013	69	0
South India	·512	+·050	59	0

Cloud.—The amount of cloud was very generally in excess of the normal. There was a slight local deficiency at Diamond Island (—1·0) and there was more general deficiency over the south-east of the Peninsula, where Madras reported a deficiency of 0·1, Bangalore of 0·7 and Salem of 0·1. There was also a trifling local deficiency at Karwar. In all other parts of the country, both on the hills and plains, the cloud amount was in excess. This excess was greatest over West Bengal, the south of the North-Western Provinces and the central parts of India and of the Peninsula, and amounted to 3·0 at Hazaribagh, 2·5 at Allahabad and Nagpur, 2·2 at Akola, and 2·0 at Bellary.

The following table gives variation data of the mean cloud amount of nine meteorological provinces for the month under review:—

Meteorological Province.	Mean cloud amount.	
	Average actual, January, 1901.	Variation of actual from normal, January, 1901.
Burma Coast and Bay Islands	2·5	+0·3
Bengal and Orissa	2·8	+1·3
Gangetic Plain and Chota Nagpur	4·2	+2·2
Upper Sub-Himalayas	4·8	+1·1
Indus Valley and North-West Rajputana	4·1	+0·7
East Rajputana, Central India and Gujarat	3·7	+1·0
Deccan	3·0	+1·3
West Coast	1·3	+0·3
South India	3·3	+0·6

Rainfall.—The rainy unsettled weather, which was confined to Persia, Baluchistan and the North-West frontier of India in November and to Northern India in December, had, during the month under review, extended to all parts of the Indian region, except the extreme north-east of India and Burma. A series of storms entered North-Western and Western India during the month and, travelling eastward, occasioned an excess of rain over nearly the whole country. This excess of rain was most marked in Chota Nagpur, the east of the North-Western Provinces, Berar and North Madras, where the rainfall, relatively to the normal, was very heavy. The snowfall on the Himalayas was also very heavy, but in Baluchistan the excessive rain had ceased and the total rainfall of that province for the month was about normal.

The following gives comparative rainfall data for the eleven meteorological provinces of the empire:—

Meteorological Province.	Rainfall.			
	Mean actual for January, 1901.	Mean normal for January.	Variation of actual from normal, January, 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands.	0·55	0·34	+0·21	+ 62
Burma Inland	0·09	0·23	—0·14	— 61
Assam	1·04	0·86	+0·18	+ 21
Bengal and Orissa	0·97	0·45	+0·52	+116
Gangetic Plain and Chota Nagpur.	2·75	0·71	+2·00*	+282
Upper Sub-Himalayas	2·75	1·67	+1·12*	+ 67
Indus Valley and North-West Rajputana.	0·51	0·55	—0·04	— 7
East Rajputana, Central India and Gujarat.	0·70	0·29	+0·49*	+169
Deccan	0·98	0·28	+0·72*	+257
West Coast	0·38	0·24	+0·15	+ 63
South India	0·99	0·48	+0·33*	+ 69

* A reference to Table I will show that the means in columns 2 and 3 are derived from a smaller number of stations than the means in the 1st column. The sum of the figures in columns 2 and 3 will therefore not agree with the figures in column 1.

Atmospheric Pressure.

The barometers in use at the great majority of stations in India are mercurial barometers on Fortin's principle, and are generally Casella's small observatory standards with tubes 0·4 inch in diameter.

Casella's observatory barometers on the Kew principle (with a contracted scale to compensate for changes of level of the mercury in the cistern) are in use at the following stations:—

Aden.	Dinajpur.	Negapatam.
Akyab.	Dunga (Zanzibar)	Noakhali.
Arrah.	Faridpur.	Nowgong.
Barisal.	Gorakhpur.	Perim.
Bhamo,	Hyderabad (Sind).	Rangpur.
Bogra.	Jacobabad.	Sambhar.
Bushire.	Jalpaiguri.	Tavoy.
Chapra.	Kindat.	Toungoo.
Cochin.	Mangalore.	Zanzibar.
Cocos Island.	Midnapore.	
Comilla.	Moulmein.	
Cuddapah.	Mymensingh.	

The instruments at the following stations are by various makers and of various kinds, but are being gradually replaced by Casella's small observatory standard barometers:—

Amini Divi.	Kurnool.
Dehra.	Patiala.
Karwar.	Shahrig.
Katmandu.	Wellington.

At Bombay and Calcutta large Newman's standards on Fortin's principle, with adjustable scales and tubes of more than 0·5″ in diameter, are in use.

All instruments are carefully compared at Calcutta before issue, and their corrections determined to the Calcutta standard, which is believed to be ·011″ higher than the Kew standard.

The barometers are kept in all cases in masonry buildings to protect them as much as possible from changes of temperature.

The elevations of the barometers of all stations, with the exception of Bhamo, Daltonganj, Purulia, Chaibassa, Bikaner, Pachpadra, Kotah, Veraval, Bidar, Pariyakulam, Shahrig, Astor, Minimarg, Skardu, Dras, Kailang, Chitral, Cherat, Muktesar, Guntok, Teheran, Ispahan, Jask, Baghdad, Bussrah, Kashgar and Dunga (Zanzibar) have been obtained as accurately as possible. In the great majority of cases they have been referred to datum levels determined by the Great Trigonometrical Survey of India.

The readings of the barometers are reduced to 32° F., and are corrected to constant gravity (Lat. 45°), and in the cases of all stations, the elevations of which are accurately known and are below 3,500 feet, to sea level Each reading is separately corrected, and the means of the month are the means of the daily corrected readings.

In Table I, columns 2 to 8, under the general heading "Pressure 8 A.M. in inches," are given for each station the 8 A.M. barometric data of the month, including the mean 8 A.M. pressure reduced to 32° F., and its variation from the normal mean pressure (reduced to 32° F.) of the month, the mean 8 A.M. pressure corrected to constant gravity and to sea-level, the highest and the lowest pressures and their respective dates of occurrence and the total range of 8 A.M. pressure during the month.

In Table II, under the heading "Pressure," are given the monthly means of the two hours of observation, 10 A.M. and 4 P.M., reduced to 32°F., the mean daily range, the mean daily pressure reduced to 32° F. and its variation from the normal, and the mean daily pressure reduced to 32° F. and corrected to constant gravity and sea-level for all second class observing stations. The mean daily pressures have been obtained for all stations except Jamnagar, Muktesar, Mysore, Udaipur, Periyakulam, Waltair, Wellington, Zanzibar and the Seychelles (for which crude means are used) by taking the means of the 10 and 16 hours, observations and applying corrections for each month, derived from the observations of the same or neighbouring stations, to give true daily means. For Kodaikanal the means are taken of a Richard barogram.

The distribution of the mean 8 A.M. pressure of the month is shown by means of two charts. The first chart (Plate I) shows the distribution of the mean pressure of the month reduced to sea-level and to constant gravity (that of Lat. 45°) by means of isobars drawn for differences of pressure of 0·05 or $\frac{1}{20}$ th of an inch. The second chart (Plate II) gives the variations of the actual mean 8 A.M. pressure reduced to 32° F. from the normal pressure.

The normal 8 A.M. daily and monthly means of pressure utilized in the pressure section of the review have been deduced from the barometric observations of the sixteen years' period 1878—93, the same period being selected for all stations (with ten or eleven exceptions), in order that the means may be fairly comparable.

A small chart, No. 4 of Plate III, gives the distribution of the monthly mean daily pressure corrected to standard gravity and to sea-level, and of the mean winds, in the same form and manner as in the monthly charts issued with the annual reports on the meteorology of India, previous to the year 1891. The data on which this chart is based will be found in Table II.

The monthly means employed in the determination of the variations of the mean actual from the mean normal pressures of the month given in Table II are derived from all the available trustworthy pressure data for each station,

and hence are the means for very varying numbers of years, ranging from three years in the case of the Seychelles to fifty years in the case of Bombay.

The more important barometric changes and movements during the month are described in the statement of the barometric depressions of the month. The data that are chiefly used in that discussion are the 8 A.M. reduced observations and the variations derived from comparison of these observations with the normal daily or monthly 8 A.M values.

The mean pressure of the whole Indian land area for January 1901 was 0·011″ above the normal.

Relatively to this general condition pressure was in very slight defect in the Indus Valley, in Gujarat and in Assam and East Bengal; it was in very slight to slight defect over the Peninsula and in slight to moderate defect over Lower Burma and Tenasserim. The greatest deficiency over the Indian area was reported from the last-named region (and locally from Madras) where it amounted to over 0·02″ at the following stations:—

Province or Division.	Station.	Variation from normal of mean 8 A.M. pressure of January, 1901.	Pressure anomaly, January 1901.
		″	″
Lower Burma	Rangoon	—·018	—·029
Tenasserim	Moulmein	—·016	—·027
	Tavoy	—·014	—·025
Madras Coast	Madras	—·013	—·024

Pressure was in very slight to slight excess over Northern and Central India except within the regions mentioned above. Two areas of slight to moderate excess were shown—one lying along the foot of the central Himalayas, and the second over Upper Burma. The excess amounted to 0·02″ or more at the following stations:—

Province or Division.	Station.	Variation from normal of mean 8 A.M. pressure of January, 1901.	Pressure anomaly, January, 1901.
		″	″
Central Himalayan foot stations.	Cawnpore	+·037	+·026
	Jalpaiguri	+·036	+·025
	Gorakhpur	+·033	+·022
	Bahraich	+·031	+·020
Upper Burma	Bhamo	+·037	+·026
	Mandalay	+·032	+·021

Pressure was very unsteady during the month, and the changes from day to day were frequently large, but the resultant variations at the close of the month were, as is shown above, generally slight or small. Pressure, on the mean of the month, was highest in the North Punjab, and was relatively high over Rajputana and the adjacent parts of Central India while it was lowest over Malabar and the south and south-east of the Bay. On the whole the barometric gradients were slightly steeper than usual.

At all the western and central hill stations the mean pressure, relatively to the normal, was lower than usual, the deficiency having been greatest at the interior station of Leh and least at the hill stations in Baluchistan. On the Sikkim Himalayas there was a slight excess of pressure on the mean of the month. This excess was, however, slightly less than the excess on the plains at the foot of the hills. At the southern station of Wellington pressure was in excess of the normal while on the neighbouring plains the mean pressure was about normal. The following gives comparative data for ten pairs of stations:—

Hill Station.	Variation of actual from normal pressure, January, 1901.	Plain Station.	Variation of actual from normal pressure, January 1901.	Vertical pressure anomaly (Hill—Plain).
	″		″	″
Quetta	—·015	Jacobabad	+·009	—·024
Leh	—·052	Lahore	+·016	—·068
Murree	—·017	Peshawar	0	—·017
Simla	—·039	Ludhiana	+·014	—·053
Chakrata	—·026	Roorkee	+·016	—·042
Ranikhet	—·013	Bareilly	+·013	—·026
Darjeeling	+·031	Dhubri	+·009	+·022
Mount Abu	—·033	Deesa	+·007	—·040
Pachmarhi	—·009	Khandwa	+·013	—·022
Wellington	+·017	Coimbatore	+·005	+·012

The above shows that the vertical pressure anomalies were negative, to a considerable amount, in all the north-western and central districts, and that they were positive in North-East India and in the south. These conditions of pressure are ordinarily associated, as was the case this year, with more unsettled and rainy weather condition sthan usual.

Barometric depressions and cyclonic storms of the month.

During the first five days of the month a shallow depression crossed the head of the Peninsula and the head of the Bay, advancing in an easterly direction. The depression was exceedingly slight and ill-defined, but occasioned light irregular easterly winds over Northern India and gave much general rain to the plains of Northern India and some snow to the hills.

January 1st.—On the 1st the centre of the depression lay near Nagpur, where the barometer was 0·149″ below the normal, but other small centres of depression were shown,—one lying over the east of the North-Western Provinces, and a second over Deltaic Bengal. The following gives 8 A.M. data for the Central Provinces and adjacent parts of Central India and of the North-Western Provinces:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M., reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Hoshangabad	29·924	+·051	—·150	NE	3	5	0·32	
Nagpur	·897	—·039	—·149	Calm	9	3	...	
Seoni	·924	—·003	—·130	NE	0	1	...	
Saugor	·963	+·009	—·128	SW	1	4	0·03	
Raipur	·921	+·007	—·123	SW	8	1	...	
Chanda	·941	—·008	—·117	W	2	4	...	
Nowgong	·960	—·038	—·140	Calm	1	10	0·20	
Satna	·968	+·015	—·121	Calm	5	10	0·30	Showery.
Benares	·931	—·064	—·146	ESE	4	10	1·72	Continuous rain.
Allahabad	·936	—·046	—·143	E	10	10	1·62	Do.
Agra	·873	—·015	—·124	SW	4	10	0·30	
Jhansi	·995	+·033	—·109	Calm	1	8	0·21	

Rain and snow had fallen over the Upper India hills, and rain over the Punjab, the North-Western Provinces, West Bengal and Central India. The following were the principal amounts exceeding 1·50″ in the previous 24 hours:—

Province.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 1st January 1901.
			Inches.
North-Western Provinces and Oudh.	Mirzapur	Robertsganj	2·86
	Allahabad	Barah	2·42
	Mirzapur	Chunar	2·40
	Naini Tal	Naini Tal	2·38
	Moradabad	Sambhal	2·33
	Mirzapur	Dudhi	2·27
	Do.	Mirzapur	2·24
	Allahabad	Karchana	2·20
	Do.	Meja	2·17
	Do.	Handia	2·08
Bengal	Palamau	Ranka	3·10
	Gaya	Daudnagar	2·92
	Monghyr	Gidhaur	2·85
	Palamau	Husainabad	2·80
	Gaya	Gaya	2·60
	Palamau	Nagarutari	2·60
	Gaya	Nawada	2·50
	Palamau	Palamau	2·50
	Monghyr	Jamni	2·45
	Palamau	Panki	2·41
	Shahabad	Kath	2·40
	Gaya	Aurungabad	2·34
	Shahabad	Dehri	2·20
	Palamau	Garwha	2·20
	Hazaribagh	Barhi	2·11
	Gaya	Arwal	2·10
	Hazaribagh	Chatra	2·05
Punjab	Kangra	Kangra	1·80
	Do.	Nagar	1·77
	Umballa	Naraingarh	1·60

January 2nd.—Pressure had increased in the north-west, where conditions were more settled, but the ill-defined depression was still shown over Berar and the Central Provinces, and small subsidiary depressions over

Bengal. The following gives 8 A.M. data for Berar and the Central Provinces :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Chanda	29·915	—·026	—·145	Calm	2	8	...	
Nagpur	·919	+·022	—·141	NNE	8	7	...	
Raipur	·927	+·006	—·125	NNE	7	9	...	
Seoni	·959	+·035	—·117	NNE	7	10	...	
Sambalpur	·948	0	—·113	ENE	7	10	0·02	
Amraoti	·918	—·002	—·131	NNE	7	6	...	
Akola	·917	—·002	—·128	Calm	3	3	...	
Khandwa	·961	+·014	—·100	NE	4	10	...	
Hoshangabad.	·989	+·065	—·088	NE	5	10	...	
Jubbulpore	952	+·035	—·133	NNE	6	10	0·11	

Rain had been less general than on the preceding day but moderately heavy falls continued to be reported from Bengal. The more important of these are shown below :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 2nd January 1901.
		Inches.
Ranchi	Chainpur	1·95
Singhbhum	Gailkura	1·76
Ranchi	Lohardaga	1·64
Singhbhum	Monaharpur	1·41
Ranchi	Gangpur	1·32
Manbhum	Jhalda	1·31
Manbhum	Purulia	1·29
Ranchi	Ranchi	1·24
Sonthal Parganas	Sarath	1·20
Ranchi	Palkot	1·19
Singhbhum	Katbari	1·10
Singhbhum	Ghatsila	1·08
Sonthal Parganas	Naya Dumka	1·05
Ranchi	Silli	1·02

January 3rd.—Pressure continued low over the Central Provinces, but the Bengal depressions had filled up. The following gives 8 A.M. data for the Central Provinces :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Nagpur	29·901	—·018	—·161	ENE	5	6	...	
Chanda	·915	0	—·153	Calm	1	4	0·01	
Akola	·894	—·023	—·149	ENE	3	8	...	
Amraoti	·912	—·006	—·143	ENE	7	9	...	
Seoni	·936	—·023	—·145	NNE	5	10	1·00	Drizzling.
Sambalpur	·928	—·020	—·132	ENE	6	10	0·02	Do.
Raipur	·926	—·001	—·129	NNE	9	10	0·28	
Khandwa	·934	—·027	—·136	E	5	1	...	
Hoshangabad.	·972	—·017	—·115	N E	12	10	...	

Rainfall had again decreased, but the following moderately heavy falls were reported from the Central Provinces :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 3rd January, 1901.
		Inches.
Sambalpur	Raigarh (State)	1·55
Sambalpur	Sarangarh (State)	1·20
Seoni	Seoni	1·00

January 4th.—The barometer had risen over Western India, and the depression over the Central Provinces had been moved eastward. The following gives 8 A.M. data for the Central Provinces, Orissa, Ganjam and Deltaic

Bengal, showing that the depression was passing through the east of the Central Provinces and entering Orissa :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches	
Chanda .	29·944	+·029	—·126	WNW	3	10	...	
Nagpur .	·953	+·052	—·119	NNE	4	3	...	
Raipur .	·911	+·015	—·144	NNE	6	10	0·05	
Sambalpur .	·888	—·040	—·169	ENE	4	10	0·26	
False Point.	·906	—·020	—·143	ENE	6	2	0 50	
Cuttack .	·913	—·023	—·140	ENE	5	7	0 16	
Balasore .	·955	—·005	—·102	NNW	3	9	0·15	
Saugor Island.	·926	—·025	—·125	NNE	9	9	0·02	
Puri . .	·903	—·025	...	NE	8	0	...	Sea smooth
Gopalpur .	·899	—·038	—·135	Calm	8	5	...	
Waltair .	·901	—·024	—·123	Calm	6	5	...	Sea smooth.
Hazaribagh	·950	—·034	—·131	SSE	7	10	0·39	
Ranchi .	·957	—·011	—·116	ENE	7	10	0·70	Showery.
Chaibassa .	·931	—·034	—·130	ENE	4	9	2·96	Continuous rain.

Rainfall had decreased, except in Bengal, in some parts of which province it was again heavy. The following shows the more important amounts :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 4th January 1901.
		Inches.
Singhbhum	Chaibassa	2·96
	Monoharpur	2·69
	Gailkura	2·58
	Kathari	2·40
	Baharagura	2·29
Balasore	Baripada	2·10
Palamau	Husainabad	2·10
Puri	Gop	1·98
Singhbhum	Ghatsila	1·80
Midnapore	Midnapore	1·60

January 5th.—On the 5th the depression was crossing the north of the Bay and the barometer rising over the central parts of the country. These changes are shown in the following table, which gives 8 A.M. data for the east of the Central Provinces, Orissa and Deltaic Bengal :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches	
Raipur .	30·054	+·143	—·024	N	6	0	...	
Sambalpur .	·023	+·135	—·043	NNW	5	2	0·02	
Hazaribagh	·030	+·080	—·062	NW	8	10	0·14	
Ranchi .	·021	+·064	—·064	NW	6	7	0·08	Showery.
Chaibassa .	29·996	+·065	—·067	Calm	1	3	0·22	
Saugor Island.	·968	+·042	—·086	NE	10	10	0·19	Showery.
Balasore .	·986	+·031	—·074	NNE	4	7	0·32	
False Point	·964	+·058	—·088	N	10	8	0·47	
Cuttack .	·971	+·058	—·086	Calm	5	10	0·23	
Puri . .	·950	+·047	...	NE	9	4	1·31	Sea smooth.

Rain was reported over Lower Bengal, the following giving a few of the larger amounts :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 5th January 1901.
		Inches.
Puri	Ranpur	1·86
	Banpur	1·38
	Puri	1·31
	Nayagarh	1·20
	Kasas	1·10
Balasore	Soro	1·07
Puri	Pipli	1·05

Depression of the 6th to the 9th.—On the 6th the barometer was falling briskly in Sind and Kathiawar. On the 7th the depression which had occasioned this fall had reached Gujarat and had developed somewhat. The

following gives 8 A.M. data for the North Bombay stations for the 7th:—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"					
Veraval	29·877	—·114	—·132	N	6	3	...	Sea smooth.
Bhavnagar Para.	·908	—·105	—·140	NW	3	0	...	
Rajkot	·979	—·075	—·084	N	4	2	...	
Surat	·876	—·099	—·146	E	6	0	...	
Ahmedabad	·974	—·082	—·068?	NE	5	3	...	
Malegaon	·991	—·078	—·081	NE	3	0	...	
Ahmednagar	·982	—·065	—·074?	S	6	2	...	

January 8th.—On the 8th the depression still lay over Gujarat and the adjacent parts of Central India and Rajputana. The following gives 8 A.M. data for the depression area:—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inch.	
Rajkot	29·931	—·048	—·129	W	6	0	...	
Bhavnagar Para.	·927	+ ·019	—·114	W	8	0	...	
Surat	·928	+·052	—·092	W	9	0	...	
Malegaon	·947	—·044	—·104	WSW	6	4	...	
Ahmedabad	·926	—·048	?	NE	3	0	0·04	
Deesa	·928	—·067	—·141	ENE	10	0	...	
Neemuch	·992	—·103	—·136	Calm	14	9	0·03	
Indore	·953	—·091	—·124	SE	7	8	0·25	Distant lightning.

Showers had fallen over Rajputana and the central parts of the country, but the amounts were not heavy.

January 9th.—By the morning of the 9th the depression had reached the Central Provinces. The following gives 8 A.M. data for the depression area and shows that the disturbance was very slight and ill-defined:—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inch.	
Indore	30·122	+·169	+·024	N	6	10	...	
Khandwa	·076	+·111	+·010	E	5	10	...	Distant lightning.
Hoshangabad.	·106	+·135	+·024	NE	4	10	0·14	
Jubbulpore.	·078	+·088	—·020	NNW	5	10	0·13	Showery.
Seoni	·084	+·011	—·012	NNE	7	0		Foggy.
Nagpur	·037	—·024	—·024	Calm	4	9	0·36	
Chanda	·038	—·018	—·083	NE	3	10	0·74	Showery.
Raipur	·064	+ ·008	—·002	NE	4	10	0·28	
Sambalpur.	·076	+ ·006	+·017	N	3	10	0·02	Drizzling.
Saugor	·129	+·130	+·014	NNW	5	8	0·13	
Nowgong	·122	+·075	+·016	N	3	10	0·23	
Sutna	·105	+ ·044	+·009	ENE	5	10	0·30	Showery.

The above shows that further rain had fallen over the Central Provinces.

On the 10th and 11th anti-cyclonic conditions and fairly fine weather prevailed over India, but the weather was disturbed in Persia, where on the 10th the barometer was beginning to fall with unsettled, cloudy weather. The following gives the observations for the Persian and Afghan stations on this day:—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inch.	
Jask	30·022	—·016	—·043	Calm	7	0	...	Sea smooth.
Bushire	29·968	—·068	—·144	ENE	4	7	...	Do.
Tehran	...	...	...	SSE	5	3	0·14	
Ispahan	...	...	...	...	10	2	...	
Meshed	...	...	...	...	...	10	...	Snowing.
Kabul	...	...	...	W	...	10	...	

January 11th.—On this day the fall of the barometer

became greater in Persia and the weather more unsettled. The following gives 8 A.M. data for the Persian stations :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Jask .	29·938	—·084	—·126	E	15	0	...	Nor'-wester.
Bushire .	·938	—·030	—·171	NW	7	5	0·02	Sea smooth.
Teheran .	...	...	...	NNE	3	2	...	
Ispahan .	...	...	...	SE	2	9	...	Snowing.
Meshed .	...	...	...	...	...	0	...	

January 12th.—On this day the barometer was falling fast in Baluchistan and North-West India and the depression was passing through Baluchistan and entering Sind. The following gives 8 A.M. data for Baluchistan and North-West India, where rain and snow had commenced :—

	Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
		"	"	"				Inch.	
Baluchistan.	Quetta .	...	—·122	—·130	Calm	6	10	0·55	Snowing.
	Chaman .	...	—·126	—·109	S	3	10	0·60	
	Kalat .	...	...	..	N	...	...	0·78	Cloudy.
North-West India.	Jacobabad .	29·973	—·132	—·105	NW	1	10	0·02	
	Hyderabad (Sind).	·975	—·125	—·096	NNE	4	0	...	
	Kurrachee .	·970	—·118	—·090	E	4	0	...	
	D. I. Khan .	30·052	—·136	—·055	NE	2	10	0·11	Drizzling.
	Mooltan .	·041	—·139	—·075	Calm	1	10	...	
	Khushab .	·110	—·084	?	Calm	3	10	0·07	Raining.
	Rawalpindi .	·132	—·076	+·019	Calm	4	10	0·34	Do.
	Peshawar .	·147	—·105	—·016	Calm	1	10	0·20	Do.
	Murree .	...	—·066	—·023	SSE	4	10	0·15	Snowing.
	Cherat .	...	—·116	—·034	S	6	10	0·41	Raining.
	Srinagar .	...	—·078	—·061	NW	6	10	0·01	

The above shows that rain and snow had commenced in Baluchistan and Kashmir and rain on the Punjab plains.

January 13th.—Pressure had recovered rapidly in the Persian Gulf region. The following gives data for the Persian stations :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Jask .	30·109	+·216	+·030	NNE	16	1	...	Sea rising.
Bushire .	·188	+·078	+·084	NE	8	0	...	Sea falling.
Teheran .	...	...	...	NE	2	0	...	
Ispahan .	...	...	...	...	1	6	...	
Meshed .	...	...	...	...	...	0	...	

On the other hand, pressure had given way rapidly in the Punjab and Rajputana, and the depression had advanced into Rajputana and the South Punjab. The following gives 8 A.M. data for the storm area for this day :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Dera Ismail Khan.	29·934	—·120	—·175	Calm	2	0	0·38	Foggy.
Mooltan .	·924	—·117	—·190	Calm	1	8	0·09	
Montgomery	·897	—·158	—·186	SE	8	9	...	Strong wind.
Lahore .	·956	—·139	—·126	SE	5	10	0·03	
Sirsa . .	·953	—·149	—·118	SE	9	10	0·07	
Bikaner .	·901	—·141	—·138	W	8	7	...	
Jaipur .	·981	—·152	—·106	ENE	6	7	...	Distant lightning.
Sambhar .	·964	—·151	—·113	Calm	8	2	...	
Ajmer .	·989	—·147	—·124	Calm	3	2	...	
Ranikhet .	...	+·006	+·057	NE	2	10	0·17	Snowing.
Mussooree .	...	—·033	+·005	S	...	10	0·36	Snowstorm.
Chakrata .	...	—·048	—·020	N	12	0	0·46	Do.
Simla .	...	—·040	—·031	SSE	8	10	0·31	Do.
Srinagar .	...	—·172	—·221	SSE	8	10	0·05	Severe gale.
Skardu .	...	—·106	...	Calm	1	10	0·01	...
Dras . .	...	—·123	...	Calm	...	10	0·43	...
Murree .	...	—·164	—·186	SSE	5	10	3·50	Snowstorm.
Cherat .	...	—·143	—·169	N	8	10	4·21	Snowing.
Quetta .	...	—·014	—·143	Calm	0	7	0·24	Snowstorm.
Chaman .	...	—·022	—·127	W	4	10	0·26	Do.

The above shows that heavy snow had fallen on the the hills and general rain over the plains of North-West

and Central India. Some of the largest amounts were as follows :—

Province or State.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 13th January, 1901.
			Inches.
KASHMIR.	KASHMIR	Kotli	5·75
		Punch	4·00
		Meerpore	3·48
		Ramban	2·83
		Bhimber	2·64
		Kathua	2·57
		Domel	2·55
PUNJAB	RAWALPINDI	Murree	3·60
		Rawalpindi	2·75
	GURDUSPUR	Dalhousie	2·64
	RAWALPINDI	Kahuta	2·63
		Fatahjang	2·58
	HAZARA	Abbotabad	2·43
		Attock	2·40
	PESHAWAR	Swabi	2·30
		Katlang	2·30
	HAZARA	Mansahra	2·15
		Haripur	2·03
N. W. PROVINCES.	DEHRA DUN	Mussooree	1·95
		Rajpur	1·54
CENTRAL PROVINCES.	NAGPUR	Katol	1·42
	SAUGOR	Rehli	1·18
	HOSHANGABAD	Hoshangabad	1·13
		Harda	1·04
	SAUGOR	Saugor	1·01

January 14th.—The depression had advanced very slowly and was central between Sialkot and Lahore. The following gives 8 A.M. data for the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inch.	
Dera Ismail Khan.	29·902	—·030	—·210	NNW	2	0	—	
Mooltan	·896	—·028	—·219	Calm	1	3	...	
Montgomery	·876	—·021	—·210	SSE	12	10	0·28	Showery.
Sirsa	·856	—·097	—·216	SE	14	10	0·16	
Ludhiana	·869	—·136	—·194	SE	13	10	0·08	Strong wind
Lahore	·855	—·101	—·226	S	11	7	1·00	Thunder-storm.
Sialkot	·833	—·162	—·232	NE	8	9	1·05	Showery.
Khushab	·889	—·057	?	SSW	8	6	0·16	Do.
Rawalpindi	·900	—·051	—·209	Calm	4	10	0·72	Do.
Peshawar	·964	—·054	—·213	Calm	1	0	0·09	Do.
Murree	...	—·064	—·249	Calm	1	10	0·90	Snowstorm.
Cherat	...	—·070	—·233	N	18	2	0·15	Strong wind.
Srinagar	...	—·104	—·320	Calm	7	10	1·42	Snowstorm.
Leh	...	—·140	—·361	SW	1	10	0·29	Do.

The weather remained very disturbed over North-West and Central India, with general snow on the hills and general rain over the plains of North-West and Central India. The largest amounts in 24 hours were as follows :—

Province or State.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 14th January, 1901.
			Inches.
KASHMIR	KASHMIR	Rampore Rajauri	3·20
		Domel	2·24
PUNJAB	SIMLA	Kilba	2·83
	RAWALPINDI	Murree	2·80
	JHELUM	Jhelum	2·47
	GURDASPUR	Madhopur	2·20
	KANGRA	Dharmsala	2·10
	GURDASPUR	Gurdaspur	2·07
	KANGRA	Palampur	2·02
	GURDASPUR	Pathankot	2·00
N. W. PROVINCES.	GARHWAL	Joshimath	3·31
	DEHRA DUN	Chakrata (Observatory)	2·84
	GARHWAL	Okhimath	2·50
	DEHRA DUN	Chakrata Tahsil (Kalsi)	2·40
	GARHWAL	Landsdowne	2·22
	ALMORA	Chaukuri	2·06
CENTRAL PROVINCES.	BETUL	Betul	2·85
	WARDHA	Arvi	1·67
	NIMAR	Burhanpur	1·61

January 15th.—The barometer had risen rapidly over North-West India, and the depression had practically filled up. The sky had cleared in the north-west, but had become cloudy and the weather showery in the north-east.

After the 15th the weather became more settled. A very shallow depression appeared, however, over Gujarat on the 16th, and thence advanced eastward across the head of the Peninsula, giving cloudy and feebly unsettled weather to the more central parts of the country on the 17th, and rain to the east of the Central Provinces, Chota Nagpur, Orissa and Lower Bengal on the 18th. The depression apparently crossed the Bay, and the unsettled showery weather extended into Upper Burma.

As this depression passed eastward, anti-cyclonic conditions were established over the central parts of the country, and though a shallow depression appeared over Sind on the 19th, passing thence through Rajputana, and another depression appeared over the same area on the 24th, these anti-cyclonic conditions with fairly fine settled weather were maintained right up to the close of the month.

The preceding data show that, though the barometric depressions have been fairly numerous throughout the month, they have all been more or less feeble disturbances. The storm of the 11th to 15th, which was apparently a complex disturbance with one centre passing through Rajputana and a second through the Punjab, occasioned a largish change of pressure, but all the remaining disturbances were very slight and ill-defined and affected the barometer to only a very limited extent. Most of the disturbances entered the Indian area further south than usual and, passing across the head of the Peninsula, drew the wind into the eastward over Northern India and gave widespread general rain to Northern and Central India.

Appendix.

H. M. H. T. "PUNDUA."

THE CYCLONE OFF MAURITIUS, JANUARY 11TH TO 14TH 1901.

January 10th, 1901.—At 5 A.M. proceeded to Cannonier's point to disembark the remaining half of the troops (18th Bengal Infantry) arriving there about 7 A.M. The wind was now from south to south-south-east and was "fresh" even at this hour and steadily increased throughout the day. We left this anchorage at 7-20 P.M. and proceeded to the Quarantine Anchorage off Port Louis and let go anchor at 9 P.M. with increasing wind and frequent squalls, weather otherwise being fine, but very hazy to north and east. Barometer 29·95 and slight north-east swell.

By 1 A.M. on Friday (11th) morning wind shifted to east-south-east with fierce squalls, the sea rapidly rising, running down the coast line from the North-East and causing the ship to range wildly and roll at times; the second anchor was let go and awnings furled, slight rain fell at times, when the wind moderated between the squalls, the barometer now stood at 29·84 thermometer 82 Farh. By 4 A.M. barometer 29·86 thermometer 83 wind had worked round, to east north-east blowing very hard, and a heavy swell rolling in ship rolling heavily and ranging wildly at her cables; squalls were more frequent and harder. By 8 A.M. barometer 29·86 thermometer 83, the swell had grown to such proportions that the Commander thought it advisable to change the anchorage so we put up our anchors and then proceeded to windward of the Light Vessel. Signals were made to the shore asking permission to enter the harbour, but the answer No was returned. The barometer still stood at 29·86. Sky looking very angry, with dull and very hazy appearance to the eastward, fierce squalls swept down the coast and the surf was breaking in clouds of foam on the outlying reefs of the Island. The weather, however, still remained clear, ship now lay somewhat easier to her anchor but rolled heavily at times. All lashings were doubled on all gear about the decks and precautions taken to well secure all hatches and stores and baggage down below.

At 4 P.M. barometer 29·85 thermometer 84. Wind and weather as before but at 5 P.M. wind shifted to north-east and increased in violence, the ship now ranged very wildly, the north-east swell being much heavier and the weather began to look much worse. Steam was raised, we weighed anchor and proceeded to sea, steering north and engines at slow; as the end of the Main Land was cleared experienced a fierce squall with blinding rain, wind shifted back to east and blew with great violence. By 8 P.M. barometer 29·90 thermometer 82 wind had backed to east by south with overcast cloudy weather, frequent squalls with rain and high sea from North-East ship rolling and labouring heavily, 10 P.M. barometer 29·89, thermometer 82, and by midnight barometer 29·86 thermometer 82. Wind still at east by south. No sign of Flat Island light was visible, wind and weather as at 8 P.M., but squalls were more frequent and brought more rain. At 2 A.M. (12th January) turned ship round and set course south-west. By 4 A.M. barometer 29·75, thermometer 82. Wind now blew from east, sea increasing, sky entirely overcast with heavy rain, ship rolling very heavily. At day-break observed land at south-east by east ½ east being the high land of Mauritius and about 15 to 20 miles distant. Sky overcast with thick haze on horizon to north and east. At 6 A.M. turned ship and set course N. 70 E., ship now commenced to take water fore and aft, and laboured very heavily. Wind still continuing at east and barometer 29·76, thermometer 82. By 8 A.M. barometer had risen to 29·85, thermometer 82, but the weather was much worse than before the wind having changed to east by north, the sea higher and confused. Shortly after 9 A.M. one of the horses (of which we had nine on board belonging to the officers of the 18 Bengal Infantry) slipped down and rolled outside the stalls. Before help could be obtained, he had rolled across the decks damaging himself severely by striking the various deck fittings, the ship was now rolling so badly that no attempts were successful to get him back into the stalls and we had to tie him where he lay. Heavy rain squalls now set in and it was not before 11 A.M. that the land was again seen, at east by south. The barometer for 10 A.M. was 29·83 thermometer 82.

By noon the wind had worked round to north-east by east blowing with great force and frequent heavy rain squalls, high sea. Dull and overcast, vessel pitching and labouring heavily. 4 P.M. shows barometer 29·71, thermometer 80 with wind at north-east.

Strong gale with heavy rain squalls, high sea (a north-east direction predominating) vessel labouring very heavily and taking quantities of water fore and aft (vessel's speed about 2 knots).

At 4·20 P.M. suddenly made land at N. 80° E. The "Morne" or south-west corner or Mauritius) turned ship and stood to north ship making about a north-west by westerly or west-north-westerly course; the wind now became very unsteady flying from north-east to east and back in the squalls, which blew with terrific violence, blowing No. 7 boat out of her tackles and tossing it up as though it was only a small empty box. The ship was now labouring very badly and rolling incessantly, taking large quantities of water fore and aft, horses were falling and we were unable to help or secure them owing to the violent motion of the ship. By 8 P.M. barometer 29·59, thermometer 78. The weather had now become truly cyclonic the wind keeping up an incessant howl and the sprays were driving right over the ship from forward to aft, with blinding rain and a tremendous high and confused sea, ship labouring very heavily and taking large quantities of water on board. The wind stood at east ship not steering. Now commenced the really dangerous and awful part of the storm; utter darkness reigned, all that could be seen were the flying sprays and high crests of the confused and angry sea as it came rolling onward to crush in upon our decks and flood the vessel fore and aft. At 10 P.M. a large sea curled round the starboard bow and washed two of the native galleys down, whilst aft the horse stalls were broken by the seas and the frightened horses were washed about the decks, crashing into the iron bulwarks, hatches, etc., and carrying away all the pipes on deck; tarpaulins were washed off the hatches and it was with great difficulty they were replaced. Wind continued at east varying slightly to east by north and east-north-east which it reached at midnight. Barometer 10 P.M. 29·43, thermometer 78; 11 P.M. barometer 29·35, thermometer 78. Midnight barometer 29·29, thermometer 78 with fierce blinding gale accompanied with terrific squalls, tremendous high cross sea, overcast and rainy. About 1 A.M. (13th January) the remaining five native galleys were washed away from their lashings, also sheep pens, goose pens, duck pens, etc. Attempts were made to secure them, but with the violent motion of vessel the fore deck became quite untenable, for with each roll the seven iron galleys washed from side to side making a noise like thunder and ploughing up the wooden decks. Sheep were cut in piece, horses were gashed and bleeding and the decks fore and aft which were lighted by the electric decklights presented a terrible picture. The noise of the storm and loose wreckage being terrific.

At 1-30. A. M. on Sunday January 13th came the 'Lull' with the barometer standing at 29·10, thermometer 78 and a light to moderate north wind blowing, but sea and sky, sprays and rain all intermingled and now without the wind to steady the ship the rolling became terrible, but at 2 A.M. (barometer 29·23, thermometer 78) then burst upon the ship such a terrific squall from the north-west working to north-north-west the like of which I have never heard. We experienced bad weather in the S. S. Mitiana in February 1896, but in comparison to the squall which now passed over the vessel and which took two hours to do so, I can only compare all former winds as "Moderate Breezes" to it. It seemed to be one continuous roll of cannons, whilst the ship simply wallowed in the sea, until it had passed. The ship's head having fallen off from north-north-east to north-east but only making about a south-east to south-east by south course through the water. Sheets of blinding spray swept the ship as high as the mastheads, whilst the decks were filled continually with water, which washed the wreckage to and fro with every roll and doing great damage to decks. Quantities of water getting below, the horses were crashing into all the deck fittings, some being killed and all being badly injured, the rolling was so violent and the decks by this time so slippy that it was impossible to render them any assistance and where you stood at 2 A. M. there you had to stand until 4. A. M. When the squall moderated and the barometer then stood at 29·35 thermometer 76. Ship's head was brought N. E. at 6 A.M. when she began to steer. By 8 A. M. barometer had reached 29·53, thermometer, same as at 4 A.M. 76, with a strong northerly wind, overcast rainy weather, frequent fierce squalls tremendous high and cross sea of no direction, the ship continued to labour badly and take water on board; by 10 A. M. barometer had climbed up to 29·61 whilst thermometer remained at 76. And at noon barometer showed 29·66, thermomerer 77. Strong north by west wind with occasional lulls. High sea, sky cloudy and overcast, ship still rolling heavily and taking sprays. At 4 P.M. wind had changed to north-east by north and barometer fell to 29·63 thermometer 75. Strong breeze and high sea with heavy rain squalls and dense overcast sky. 6 P.M. wind at north-east by north still Barometer at 29·72, thermometer 78. At 8 P.M. the wind had worked back again to north the barometer risen to 29·87 thermometer 80, strong breeze with frequent heavy squalls of wind and rain high N. E sea, weather cloudy and overcast but clear. At 10 P.M. barometer read 30·01 thermometer 80, and by midnight barometer had risen steadily to 30 12, thermometer still at 80, wind at north but moderate and sea less, but a very heavy N. E swell continued, sky cloudy and overcast, weather apparently clear. At 11 P.M. turned ship and set course south-west until 2 A. M. on January 14th, speed of ship about 3 knots. At 2 A.M. turned ship and stood north-east again at 3 knots until 7·30 A. M. then altered course to north-west and went full speed by engines, ship making about 11 knots. At day-light we started and put over board all the carcases of the horses, (four of which had to be shot) and to secure all the wreckage about the decks. At 10 A.M. on January 14th we made Grand Port Light House bearing north-north-west. About 8 miles distant, showing what a heavy haze still hung over the land for no land was visible before this, from this we steered round the south end of the Island and made Port Louis at 4 P.M. the same evening. The weather was quite fine and cloudy by noon, but a heavy north-east swell was felt until rounding the south of the Island and a north-west swell was still running into Port Louis when we reached our anchorage.

Jan. 14th	4 A.M.	Barometer	30·30	Thermometer	80
	8 A.M.	"	30·29	"	80
	Noon	"	30·33	"	82
	4 P.M.	"	30·33	"	80

Notes

I consider the ship would be about 12 to 15 miles west-south-west of the south-west corner of the Island when we had the centre of the cyclone and I think the Mauritius Observatory stated that the centre passed about 30 miles north-west of them.

The sea was certainly no worse than that experienced in the S. S. Mitiana in February 1896, but the wind from 2 A.M. to 4 A.M. on the morning of January 13th, 1901, was the strongest I have ever felt at sea in 20 years' experience in all parts of the world.

The observatory also stated the speed of the centre to be travelling about 5 miles an hour. Had timely warning been given to us that a cyclone was approaching, I think we might easily have avoided it. No indication of a coming storm was given until about 4 P. M, on January 11th, when the blue and white flag was hoisted at Signal Mountain, but was scarcely distinguishable from the place in which we were anchored.

I think we must have passed to the eastward of the Island between 5 and 6 A.M. on the morning of January 13th, 1901.

Summary of the Reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

I.—AFGHAN MOUNTAIN DISTRICTS.

(1) *Kabul.*—The following report of the snowfall in Afghanistan in December and January has been received:—

16th	December	2 inches fell in Kabul.
17th	„	7½ „
18th	„	½ „
22nd	„	3¾ „
23rd	„	7½ „
24th	„	1 „
26th	„	2½ „
29th	„	1 „
30th	„	2 „

making a total of 27¾ inches during December 1900.

9th	January	2½ inches fell in Kabul.
10th	„	4 „
11th	„	13 „
12th	„	7 „
18th	„	3 „
23rd	„	¼ „
31st	„	9½ „

making a total of 39¼ inches in January 1901.

It is said that about twice the above amount of snow fell on the Paghman Hills. The total snowfall in Kabul during December 1900 and January 1901 was 67 inches and on the Paghman Hills and Ghazni about 134 inches the whole surrounding hills and plains of Kabul were covered with snow at the end of January and the snowfall was more than during the past few years.

(a) *Wana.*—The Political Officer, Wana, furnishes the following report of the snowfall in that district:—

On the 1st snow fell to a depth of one inch on the Kashmirkar, Suleiman and Shankai Hills; on the 4th light snow fell on the Kashmirkar and neighbouring hills; on the 10th snow fell to a depth of 6 inches on the Kashmirkar and neighbouring hills, and to a depth of one inch on the Wana plains and Marwati, Kaniguram, Pirghal, Kundeghar, Karbuna, Kot Kan, Shinwarsak and Toratiza hills; on the 12th snow fell on the following hills:—

Kashmirkar, Chaparwazi, Sarangai	9 inches.
Kaniguram	2 feet 3 „
Marwati	2 „ 9 „
Pirghal	2 „ 6 „
Kundeghar	1 foot
Karbuna	1 „
Kot Kan, Shinwarsak, Toratiza	6 inches.

On the Wana plains on this occasion 4 inches of snow fell, but soon melted away.

The snowfall of the present winter up to date has been much heavier than that of previous winters.

(2) *Kurram.*—The officer on special duty sends the following account of the snowfall in this region:—Snow fell on the 10th, 11th, 12th, 13th, 14th and 31st. The fall of the 12th was the heaviest during the year, and is reported to have extended to Sadda, which is 4,000 feet above the sea level. The Passes were closed, and the accumulation of snow probably exceeded 10 feet. The fall during January 1901 was heavier than those of the forerunning three Januaries.

(3) *Kohat.*—Mr. Donald, District Superintendent of Police, Fort Lockhart, reports that during January there were eight falls of snow on the hills on the border, *viz.*, on the 7th, 10th, 11th, 13th, 18th, 19th, 21st and 31st. At Fort Lockhart the falls were as follows:—

10th	January	3 inches
11th	„	8 „
18th	„	2 „
19th	„	18 „
31st	„	8 „

On the 13th and 21st heavy falls were reported on the hills down to 5,411 feet, the falls varying from 1 foot to 3½ feet. This year the Orakzais state that they have never had so much snow, but these statements cannot be relied on.

The Assistant Commissioner, Thal, reports the following falls of snow on the Samana Range. The fall commenced on the 23rd December, and snow was recorded on the following dates:—

23rd	December 1900	4 inches
24th	„ „	2 „
25th	„ „	1 inch.
30th	„ „	4½ inches.
10th	January 1901	3 „
11th	„ „	8 „

Snow descended on the 13th January to hills between 2,000 and 3,000 feet.

(4) *Khyber.*—Captain I. Roos-Keppel, Political Officer, Khyber, reports as follows regarding the snowfall of that region for the end of December and January:—

Heavy rain fell at Landi Kotal and its vicinity and continued at intervals until January 3rd. Snow fell on the high peaks of Lakka, Dalkhad, Torsappar, etc., to an average depth of one foot. Rain recommenced on the 10th January and continued till the 13th followed by a heavy snowfall on the neighbouring hills and plains; the depth of snow on the hills was 12 inches, while the average depth on the Loargi plateau was 6 inches.

(5).—The following statement of snowfall has been received from Killa Drosh.

Snow fell on the following dates:—

7th	January 1901	Slight snowfall on tops of hills.
10th	„ „	Slight snowfall on all hills.
11th	„ „	„ „ „ „ „
12th	„ „	Heavy snowfall on all hills.
13th	„ „	„ „ „ „ „
20th	„ „	Slight snowfall on all hills.
21st	„ „	„ „ „ „ „
26th	„ „	„ „ „ „ „

On the 13th 4 inches and on the 21st ¼ inch of snow were measured on the parade ground at Drosh.

II. KASHMIR AND PUNJAB HIMALAYAS.

The Deputy Commissioner, Rawalpindi, has sent in the following statement of the snowfall in the Murree and Kahuta hills during January :—

MURREE.

1st January	2 inches.
9th „	3 „
11th „	2 „
12th „	8 „
13th „	3 feet.
14th „	2 feet 4 inches.
15th „	4 inches.
21st „	6 „
22nd „	6 „
Total	7 feet 11 inches.

KAHUTA.

	Feet.
12th January	1
13th „	2
14th „	1
Total	4

(2) The Meteorological Observer at Leh reports that there were frequent slight snowfalls at Leh during January, and still more frequent falls on the surrounding hills above, 18,000 feet. Indeed, hardly a day passed without some snowfall on the hills. At Leh the falls were as follows :—

1st January	½ inch.
2nd „	½ „
4th „	¼ „
9th „	Sprinkle.
13th „	4 inches.
14th „	4 „
15th „	1½ „
18th „	Sprinkle.
21st „	„
22nd „	½ inch.
23rd „	¼ „
24th „	¼ „
28th „	1 „
30th „	½ „

(3) The Deputy Conservator of Forests, Chamba Division, sends the following statement of the snowfall during January :—

THE FOLLOWING FALLS OF SNOW WERE RECORDED.

DATE.	Bhandal.	Duir.	Alwa.	Khangu.	Tisa.	Chatri.	Kalatop.	Surkhigali.	Bakloh	Barmaur.	Olansa.	Chitrari.	Doreri.	Chamba.
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
1st	0 4	0 4	0 5	0 5	0 1	0 3	...	...	...	0 3	0 2	...	...	...
2nd	...	...	...	...	...	...	...	0 6	...	...	...	...	...	...
3rd	...	...	...	...	...	...	1 0	...	...	...	...	...	...	...
8th	...	...	...	...	...	...	...	...	...	0 2	0 2	...	...	...
12th	0 3½	0 2	0 7	0 7	...	0 4	...	...	...	...	...	...	...	...
13th	0 3	0 2	1 3	1 3	0 4	0 6	...	...	...	...	...	...	...	...
14th	1 0	0 11	2 1	1 10	0 11	2 3	...	...	...	0 8	0 8	1 1	0 9	0 1
15th	...	...	...	...	...	...	...	1 0	0 2	2 3	2 1	...	...	...
17th	0 3	0 2	...	...	...	...	...	...	...	...	...	...	...	...
18th	...	...	...	...	...	...	...	0 6	...	1 3	1 0	0 1	...	...
19th	...	...	...	...	...	...	1 9	...	...	...	...	...	...	...
20th	0 6	0 6	0 11	0 11	0 6	0 9	...	...	...	0 4	0 4	...	...	...
21st	1 1	1 0	3 2	3 0	1 6	2 10	...	...	...	2 3	1 10	1 11	1 7	0 2
22nd	...	...	...	...	...	...	...	1 8	0 6	1 6	1 4	...	...	...
23rd	...	...	...	...	...	...	3 0	...	...	...	...	...	...	...

On the 31st January there were 5" of snow at Bhandal, 2½ at Duir, 3 feet 10 inches at Alwas, 3 feet 8 inches at Khangu, 3 feet 4 inches at Chhatri, 8 feet at Kalatop 1½ feet at Surkhigali, 4 feet 1 inch at Baramaur, 3 feet at Olansa and 1 foot at Chatrari. The snow on the Padri Pass is said to have been about 15 feet. The snowfall was far heavier at high elevations than that of last year.

(4) At Poo in the Upper Sutlej Valley snow fell as follows during December 1900 and January 1901 :—

December	2nd	2 inches.
„	18th and 19th	1 foot.
„	23rd to 25th	2 feet 2 inches.
„	31st and 1st January 1901	6 inches.
January	8th	2 „
„	13th and 14th	1 foot 9 inches.
„	17th	2 inches.
„	21st	4 „

The snowfall commenced unusually early in the winter.

(5) *Kulu.*—The Assistant Commissioner, Kulu, reports that there were falls of snow on the 1st, 2nd, 12th, 13th, 14th, 20th, 21st, 29th and 30th in Kalu and on the 1st, 2nd, 13th, 14th, 15th, 18th, 21st and 25th in Plach The falls were general and descended to an elevation of 5,200 feet.

The following table shows the reported depth of snow on the higher passes of the sub-division at the end of January :—

Kulu Tahsil.

	Feet.
Rotang	12
Hamta	10
Barsai	6
Chandarkhani	12
Bujadhar	8
Lahri Achri	9
Bhubhu	12
Sari	11
Pashtari	10
Majhang	4

Plach Tahsil.

	Feet.
Sirikhand	18
Chul	12
Maghin	10
Dundku	13
Tikar	10
Nunu	6
Jalori	10
Raghupur	11
Lambri	10
Sakiran	10
Gargarasan	14
Supakun	12
Bashleo	11
Plach	12
Tirath	15
Ramgadh	2

The snowfall during January was the same as in January 1900 and heavier than in previous years.

(6) The Deputy Conservator of Forests, Bashahr, Simla, furnishes the following particulars of the snowfall in the Simla hills :—

1st	January	snow fell to	5,750	feet and measured	1 foot.
2nd	„	„	5,750	„ „	1 inch.
9th	„	„	5,750	„ „	2 inches.
13th	„	„	5,750	„ „	2 „
14th	„	„	5,750	„ „	3 „
15th	„	„	10,000	„ „	3 „
16th	„	„	5,750	„ „	1 inch.
17th	„	„	7,000	„ „	1 „
20th	„	„	5,750	„ „	1 „
21st	„	„	5,750	„ „	2 inches.
25th	„	„	8,500	„ „	1 inch.

All the passes were closed and traffic and post were stopped for a few days on the Hindustan-Thibet Road above Sarahan (7,000 feet). The depth of snow over the passes above 10,000 feet is said to be from 20 feet to as much as 50 feet. The snowfall of the period is far in excess of last year, and is generally said to be the largest for many years.

III.—North-Western Provinces Himalayas.

(1) The Deputy Commissioner, Garhwal, reports as follows :—Snow fell throughout the month, the depth of snow varying from 1 inch to 5 feet. The snowline descended to 5,000 feet. All the passes were closed throughout the month, but the snowfall during the month, though more frequent, was not heavier than usual.

(2) The Deputy Commissioner, Almora, reports as follows :—

Snow fell as under—

Malla Johar.

2nd	January 1901	4 feet.
13th	„	6 „
14th	„	6 „

Malla Danpur.

1st to 4th	January 1901	3 feet.
13th	„	2 feet 6 inches.
15th to 18th	„	2 „ 6 „

Byans, Chandas and Darma.

2nd	January 1901	1 foot.
13th	„	2 feet.
14th	„	2 „
17th	„	1 foot.
20th	„	4 feet 6 inches.

The snowfall was generally less than in the previous year.

Summary of snowfall information.—The preceding data show that the snow commenced unusually early in the winter of 1900-1901, and was very heavy throughout January. The snowstorms were very heavy and general on the 13th, and the snow line descended in some places to between 2,000 and 3,000 feet.

Summary of special Storm Reports.

Occasional thunderstorms and hailstorms occur in the cold weather. These storms are, however, rare and the following statement records most of the chief local storms of the month of January 1901 of which reports were received:—

2nd.—A local storm passed over Nagpur with strong winds and gales.

7th.—A thunderstorm occurred at Khandwa at 9-30 P.M.

12th.—At 11·40 P.M. an earthquake, lasting 30 seconds, occurred at Mount Abu.

13th.—A snowstorm occurred at Srinagar with a south-east to north-west gale.

13th.—Thunderstorm at Mount Abu with rain and strong winds.

" Thunderstorm at Gonda with continuous rain. Disturbed conditions lasted from the morning of the 13th to midday of the 15th.

14th.—A thunderstorm occurred at Nagpur on the 14th.

" At Saugor there was a thunderstorm and heavy rain between 10 A.M. and 5 P.M.

" A heavy snowstorm occurred at Srinagar.

25th.—A slight earthquake was felt at Darjeeling at three minutes past 8 A.M.

The following reports of hailstorms have been received:—

11th.—A hailstorm passed over the Sibsagar Sadr Tahsil. The stones were the size of plums and did some damage.

12th.—A hailstorm occurred at Khandwa at 5 P.M.

13th.—A hailstorm passed over Chikalda between 7-35 P.M. and 7-40 P.M.

20th.—A severe hailstorm occurred at Dehra Dun at 2 P.M., coming up from west and lasting one hour.

Brief Summary of the Weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea.—Ordinary north-east monsoon winds prevailed steadily throughout the month over nearly the whole of the Arabian Sea except in the north-east angle, where winds were variable and considerably stronger than usual about the middle of the month. The winds were more or less above their normal intensity on the 4th and 5th, between 13th and 16th and on the 23rd, 24th, 26th and 28th. The winds were strongest on the 4th, when they averaged 4·2 or 0·9 above the normal intensity of the month, and were feeblest on the 21st, when they averaged 2·5 or 0·8 less than usual. The mean wind force for the whole month was 3·3, which was identical with the normal. The weather was generally quiet and settled, and was practically free from any serious disturbance. The weather was, however, slightly disturbed in the north-east about the middle of the month. In the Persian Gulf and off the Mekran coast the weather was feebly unsettled, on several occasions, and light showers and squalls were experienced. In the Red Sea the winds were as steady as usual, except on the 1st, 2nd, 3rd and 22nd, when they departed much from the normal direction.

Bay of Bengal.—Steady north-east monsoon winds obtained generally throughout the month in the Bay of Bengal, except on the 6th, 9th, 10th, 19th and 26th, when the winds were variable in the north, and on the 16th when they were variable in the centre, of the Bay. The mean wind force, as derived from the data of 15 vessels, was 3·3 at the commencement of the month. The wind force began to decrease on the 2nd, and was only 2·2 on the 5th, when the winds were feeblest in strength over the Bay. Between the 6th and 13th, and again between 21st and 24th and on the 31st, the mean wind force was more or less above the normal intensity of the month. The winds were strongest on the 23rd, when they averaged 4·2 or 1·2 above the normal. During the remainder of the month, except on the 10th, 11th and 30th, when the winds were exactly normal in force, the wind force ranged between 2·2 and 2·9. The weather was quiet and settled generally throughout the month, though light showers and squalls were experienced in the centre and south of the Bay on some occasions.

Equatorial Belt.—So far as can be judged from the scanty data available, it appears that the winds blew from the normal directions in the south-east trades region, and that they were less steady than usual at the Seychelles and less strong than usual at Zanzibar. The weather was fine and settled, and no disturbance of any importance occurred over the Equatorial Belt but further to the southward, near Mauritius, conditions were disturbed between the 16th and 14th, (see appendix).

Temperature of the Air.

The mean temperature data are given in Table I and Table II under the headings "Temperature of the Air." In Table I they are based upon observations of the dry bulb thermometers and the maximum and minimum thermometers recorded at 8 A.M. The variations of the mean maximum and mean minimum temperatures from the

corresponding normal means for the month are given in Table I for all stations, for which sixteen years' trustworthy temperature observations are available. With few exceptions (chiefly in Bengal), the normal mean maximum and minimum temperatures of the month have been obtained for all stations from the observations of the same period, *viz.*, 1878 to 1893, and are hence fairly comparable with each other. The mean daily temperature in this table is taken as the mean of the maximum and minimum. It differs from the true mean of the day by small amounts which vary from month to month. But the variations of the mean daily temperature from the normal, as determined by the use of the definition, agree in almost all cases closely with the variations of the true daily means derived from the readings at 16 hours and of the maximum and minimum thermometers, and the employment of corrections deduced from the various series of hourly observations which have been taken at many stations in different parts of India.

It should be noted that the mean temperature of the day in Table I really denotes the mean temperature of the 24 hours preceding 8 A.M. of the day in question, and the month for which the means are given in this table hence terminates at 8 A.M. of the last day of the month.

In Table II are given means of the 10 and 16 hours temperatures of the month, in addition to maximum and minimum temperature data. The mean temperature of the month (*i.e.*, the arithmetical mean of the mean temperature of each day of the month) is also shown. The mean temperature of the day is obtained by the use of the formula—

$$\frac{\text{Maximum} + 16 \text{ hours} + 2 \text{ Minimum.}}{4}$$

and by applying a constant correction for each month, obtained from the hourly observations at the same or a neighbouring station, except in the case of Nagpur (Sanitary Commissioner's Office), Udaipur, Jamnagar, Hyderabad (Deccan), Periyakulam, Mysore, Hassan, Chitaldroog, Waltair, Quetta, Muktesar, Srinagar, Katmandu, Darjeeling, Bangalore, Mount Abu, Wellington, Kodaikanal, Perim, Zanzibar and Port Victoria (Seychelles) (for all of which crude means are given) and Madras. For Madras the means are those given in the registers sent by that observatory.

The methods of exposing thermometers will be found fully described in the handbook of instructions to observers in India or briefly in the Annual Report on the Meteorology of India for the year 1886, page 37. All thermometers in use have been verified by comparison with Kew standard thermometers at Calcutta, and all thermometer readings are corrected to their true readings, and are hence strictly comparable.

The variations of the mean temperature of the month given in Table II have been obtained by a comparison of the actual means with normal means calculated in the same manner. The means have been derived from all the available trustworthy temperature data for each station, and hence for very varying numbers of years, ranging from 50 years in the case of Bombay to 3 years in the case of Port Victoria. It should be noted that the day or 24 hours period in Table II terminates at 4 P.M. (and not at 8 A.M.), and hence the monthly means are for monthly periods ending at 4 P.M. of the last day of the month in question.

The mean distribution of temperature in India in each month is exhibited by means of three charts, which show the variations of the mean maximum, mean minimum and mean daily temperature from their normal values for the month. These charts are Nos. 1, 2 and 3 of Plate III. In these charts equal variations of temperature are indicated by lines, the lines being drawn for differences of 2° of variation. A continuous line indicates that the temperature was in excess by the amount indicated by the number given near the line, and a broken line that it was in defect by the amount indicated by the number placed near the line. The line of no variation, separating areas of excess from areas of deficient temperature, consists of a continuous and of a broken line placed parallel and near to each other, the broken line being on the side of deficient temperature, and the continuous line on that of increased temperature. The variations of the temperature of the month from the normal at the hill stations (*i.e.*, stations the elevations of which exceed 5,000 feet) are given in figures with a positive or negative sign to indicate excess or defect.

Table of normal mean maximum, minimum and mean daily temperature for each month and for the whole year were given in the annual summary for 1891. Similar tables were given in the annual review of 1894, based on the data for sixteen years, 1878 to 1893.

The disturbed weather, which commenced around the north-west frontier of India exceptionally early, extended all over North-Western and Northern India during December and continued during January 1901, and exercised an important influence on the temperature of Northern and Central India, throughout the whole of which area the heat was less than usual.

The mean maximum temperature of the month varied very largely from the normal. Over the whole of Northern India, from Baluchistan to the Assam Valley, as well as over the head and west coast of the Peninsula, the day temperature, on the mean of the month, was below the normal. The deficiency was considerable at the West coast stations, slight across the head of the Peninsula and considerable to large over Northern India. The deficiency was greatest within an area which included the East Punjab, the east of Rajputana, the North-Western Provinces, the north of the Central Provinces and of

Central India and West Bengal, and exceeded 6° at the stations for which comparative data are given below :—

Station.	Mean Maximum temperature. Actual, January. 1901.	Normal, January.	Variation of actual from normal, January 1901.
	°	°	°
Delhi	63·4	71·0	—7·6
Nowgong	68·0	75·3	—7·3
Benares	67·2	74·4	—7·2
Chaibassa	73·0	80·2	—7·2
Jhansi	69·1	76·0	—6·9
Sutna	67·8	74·6	—6·8
Allahabad	67·3	74·0	—6·7
Mainpuri	65·4	72·1	—6·7
Ludhiana	60·9	67·6	—6·7
Ajmer	67·4	74·0	—6·6
Lucknow	67·2	73·8	—6·6
Ranchi	67·2	73·7	—6·5
Gorakhpur	66·8	73·2	—6·4
Bahraich	66·4	72·8	—6·4
Gaya	69·4	75·7	—6·3

Over the remainder of India, including the Deccan and the south and east of the Peninsula, as well as over the greater part of Burma, South-East Bengal and Cachar, the day temperature was in excess of the normal. The excess was considerable over the inland districts of the Peninsula, and exceeded 3° at the stations for which comparative data are given below :—

Station.	Mean maximum temperature. Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	°	°	°
Bangalore	84·4	79·3	+5·1
Cuddapah	92·3	87·6	+4·7
Bellary	91·7	87·5	+4·2
Chitaldroog	87·9	84·0	+3·9
Salem	92·1	88·2	+3·9
Trichinopoly	90·6	87·2	+3·4
Bijapur	88·5	85·3	+3·2
Cochin	91·7	88·6	+3·1

The excess was moderate also in parts of Lower Burma and of Tenasserim and exceeded 2° at the following stations :—

Station.	Mean maximum temperature. Actual, January, 1901.	Normal, January.	Variation of actual from normal, January 190 .
	°	°	°
Moulmein	91·2	88·3	+2·9
Rangoon	91·1	88·7	+2·4
Tavoy	91·4	89·3	+2·1

With the doubtful exception of Srinagar, the day temperature, on the mean of the month, was in defect of the normal at all the hill stations in Northern and Central India. The deficiency was greatest (and more than 10°) at Leh in Kashmir, and was more than 5° at the following places :—

Station.	Mean maximum temperature. Actual, January, 1901.	Normal, January.	Variation of actual from normal, January 1901.
	°	°	°
Leh	22·3	33·7	—11·4
Murree	40·0	47·9	— 7·9
Chakrata	44·1	50·6	— 6·5
Ranikhet	47·8	54·2	— 6·4
Simla	40·6	46·4	— 5·8
Mount Abu	61·7	67·0	— 5·3

In Southern India the temperature at the level of the hills was as much in excess as at the stations on the neighbouring plains, the excess amounting to over 3° at Wellington. The following gives comparative data for this station :—

Station.	Mean maximum temperature. Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	°	°	°
Wellington	69·7	66·5	+3·2

The following gives the highest temperature recorded in each province during the month under review, together with the name of the station recording the reading and the highest maximum previously recorded at that station :—

Province or Division.	Station.	Highest maximum temperature recorded in January 1901.	Date on which recorded.	Highest maximum temperature recorded in January previous to 1901.	Year in which recorded.
		°		°	
Burma	Rangoon	94·1	4th and 29th.	97·7	1877
Assam	Silchar	82·4	2nd	85·4	1900
Bengal	Noakhali	88·8	29th	85·6	1900

Province or Division.	Station.	Highest maximum temperature recorded in January 1901.	Date on which recorded.	Highest maximum temperature recorded in January previous to 1901.	Year in which recorded.
		°		°	
Orissa	Cuttack	85·4	27th and 29th.	95·6	1882
Bihar	Dehri	76·8	31st	87·7	1897
Chota Nagpur	Chaibassa	79·5	29th and 31st.	90·4	1894
N.-W. Provinces and Oudh.	Jhansi	81·1	31st	91	1898
Punjab	Sirsa	74·2	,,	83·6	1884
Sind	Kurrachee	82·4	25th and 27th.	88·4	1898
Rajputana	Deesa	88·1	29th and 30th.	93·8	1898
Gujarat	Surat	94·7	24th and 29th.	97·2	1891
Central India	Indore	86·3	31st	90·1	1889
Central Provinces.	Chanda	92·2	26th	95·7	1900
Berar	Akola	90·0	30th	95·9	1900
West Coast	Cochin	94·5	23rd and 24th.	95·8	1896
Bombay Deccan.	Poona	94·0	30th	94·6	1889
Mysore	Chitaldroog	91·1	31st	93·1	1900
Madras Coast	Nellore.	91·8	20th	93·4	1900
Madras Deccan	Cuddapah	96·2	31st	99·7	1897
South India	Trichinopoly.	94·0	20th	95·3	1890

The preceding data show that there were no exceptionally high temperatures recorded during the month and that in most cases the maxima were considerably lower than those previously recorded.

The mean minimum temperature of the month was higher than usual over the greater part of the country. There were only two important areas, one covering part of North-West India, and the other covering part of North-East India, where the minimum or night temperature, on the mean of the month, was below the normal. The following gives data for those stations in the first area, where the deficiency exceeded 1° and which approximately define the limits of the area :—

Province or Division.	Station.	Mean minimum temperature.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		°		°
North-West India.	Bhuj	52·6	54·8	−2·2
	Rajkot	49·5	51·2	−1·7
	Dera Ismail Khan	39·6	41·3	−1·7
	Indore	48·7	50·3	−1·6
	Cawnpore	45·9	47·5	−1·6
	Bikaner	46·5	47·9	−1·4
	Montgomery	41·5	42·9	−1·4
	Neemuch	47·6	48·9	−1·3
	Hyderabad (Sind)	49·9	51·2	−1·3
	Ahmedabad	56·7	57·8	−1·1

The following gives similar information for the second area :—

Province or Division.	Station.	Mean minimum temperature.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		°	°	°
North-East India.	Saugor Island	56·9	59·4	−2·5
	Dhubri	51·5	53·6	−2·2
	Chittagong	54·4	55·4	−1·0
	Dinajpur	48·2	49·2	−1·0

Over practically the whole of the remainder of India the night temperature, on the mean of the month, was in excess. The excess was greatest and large over the Deccan and the east of the Peninsula. This is shown below :—

Province or Division.	Station.	Mean minimum temperature.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		°	°	°
Deccan	Kurnool	64·9	58·8	+6·1
	Bellary	66·4	60·5	+5·9
	Cuddapah	69·6	64·2	+5·4
	Hyderabad (Deccan)	63·2	57·9	+5·3
	Secunderabad	63·0	57·9	+5·1
	Salem	68·1	63·3	+4·8
	Sholapur	62·4	57·7	+4·7
	Bangalore	61·0	56·6	+4·4
	Chitaldroog	65·8	61·5	+4·3
East of the Peninsula.	Cocanada	70·0	65·4	+4·6
	Nellore	70·5	66·3	+4·2
	Masulipatam	69·8	65·7	+4·1

The excess was also considerable to large over Lower Burma and Tenasserim. This is shown below :—

Province.	Station.	Mean minimum temperature.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		°	°	°
Lower Burma	Bassein	66·5	61·0	+5·5
	Diamond Island	74·2	70·3	+3·9
Tenasserim	Mergui	72·9	65·8	+7·1
	Tavoy	69·8	64·4	+5·4
	Moulmein	68·6	65·6	+3·0

The excess was moderate at some stations in North-West India. The following gives data for those places at which the excess was more than 2°:—

Province or Division.	Station.	Mean minimum temperature.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		°	°	°
Punjab	Lahore	44·3	41·4	+2·9
	Ludhiana	46·4	43·7	+2·7
Upper Sind	Jacobabad	45·9	43·1	+2·8

The mean night temperature, relatively to the normal, was lower at the level of the hills than at the level of the plains stations. Thus, while at most of the plains stations of Northern India the night temperature was generally in slight excess, at all the Himalayan hill stations, except at Srinagar (where it was locally in moderate excess), it was in slight to considerable defect. At Mount Abu in Rajputana the mean night temperature was in moderate defect. At Pachmarhi in the Central Provinces it was about normal, and at Wellington in South India in excess. The following gives comparative data for the hill stations:—

Province or Division.	Station.	Mean minimum temperature.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal January 1901.
		°	°	°
Northern India hill stations.	Leh	4·9	9·6	−4·7
	Simla	31·9	36·5	−4·6
	Chakrata	31·8	36·0	−4·2
	Murree	31·6	35·4	−3·8
	Ranikhet	36·3	39·7	−3·4
	Darjeeling	32·6	34·6	−2·0
	Cherat	36·8	37·9	−1·1
Central hill stations.	Mount Abu	48·6	51·1	−2·5
	Pachmarhi	47·1	47·4	−0·3
Southern India hill station.	Wellington	48·9	45·5	+3·4

The following gives the more noteworthy absolute minimum temperatures recorded during the month on the hills and plains of Northern and Central India. The lowest readings previously recorded are added for comparison:—

Station.	Lowest minimum temperature recorded in January 1901.	Date on which recorded.	Lowest minimum temperature recorded in January previous to 1901.	Year in which recorded.
	°		°	
Lahore	38·5	6th	29·2	1889.
Mooltan	38·5	17th	29·0	1878.
Udaipur	38·2	15th	34·7	1899.
Deesa	38·0	,,	37·0	1885.
Khushab	37·9	22nd	25·0	1899.
Ajmer	37·9	5th	31·0	1867.
Sirsa	36·0	18th	30·0	1878.
Pachpadra	35·2	15th	26·6	1900.
Montgomery	34·0	22nd	31·0	1900.
Dera Ismail Khan	34·0	,,	26·0	1876.
Jacobabad	34·0	15th	30·3	1885.
Peshawar	32·9	,,	28·8	1878 and 1880.
Pishin	12·0	,,	2·4	1899.
Yatung	9·9	16th and 22nd.	10·9	1899 and 1900.
Astor	2·0	13th	3·0	1899.
Kalat	0·4	15th	— 6·4	1897.
Minimarg	— 7·0	22nd	— 4·0	1899.
Skardu	— 7·9	26th	—10·0	1897.
Leh	— 8·5	,,	—19·0	1899.
Dras	—33·9	,,	—35·5	1899.

The above table shows that the minima in most cases were not so low as those previously recorded.

The mean temperature of the month was in defect over Baluchistan, the whole of Northern and Central India and part of the West coast. The deficiency was greatest over the West Punjab, North Bombay, Rajputana, Central India, the Central and North-Western Provinces and West Bengal, and exceeded 3° at many stations. This is shown below:—

Station.	Mean daily temperature.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	°	°	°
Mainpuri	55·9	59·6	−3·7
Delhi	55·9	59·6	−3·7
Jhansi	59·8	63·4	−3·6
Nowgong	57·7	61·2	−3·5
Ranchi	58·6	61·9	−3·3

Station.	Mean daily temperature. Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	°	°	°
Ajmer	56·2	59·5	−3·3
Jaipur	57·7	61·0	−3·3
Bhuj	64·3	67·5	−3·2
Hazaribagh	58·5	61·7	−3·2
Dera Ismail Khan	52·4	55·5	−3·1

The mean temperature was also in defect along the Bombay coast, but the deficiency was small. This is shown below :—

Station.	Mean daily temperature. Actual, January, 1901.	Normal, January.	Variation of actual from normal, January, 1901.
	°	°	°
Bombay	73·9	75·1	−1·2
Goa	76·7	77·6	−0·9
Ratnagiri	76·6	76·8	−0·2

Over the remainder of India and over Burma the mean temperature was in excess. The excess was most marked over the inland parts of Madras where it amounted to over 4°. The following gives comparative data for this area :—

Province.	Station.	Mean daily temperature. Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		°	°	°
Madras	Cuddapah	81·0	75·9	+5·1
	Bellary	79·1	74·0	+5·1
	Bangalore	72·7	67·9	+4·8
	Salem	80·1	75·7	+4·4
	Chitaldroog	76·9	72·8	+4·1
	Kurnool	77·7	73·6	+4·1

The mean temperature was below the normal at all the northern and central hill stations, but was in excess at Wellington in the south. The variations in the Kashmir Valley differed from those in other parts of the North-West Himalayas and particularly from those at Leh and Murree. This is shown by the following data for these three stations :—

Station.	Mean daily temperature. Actual, January, 1901.	Normal, January.	Variation of actual from normal, January 1901.
	°	°	°
Srinagar	34·3	33·0	+1·3
Leh	13·6	21·7	−8·1
Murree	35·8	41·7	−5·9

The following gives a brief summary of the more important variations of the mean temperature conditions of the month from the normal :—

(1) The day temperature was in considerable to large defect and the night temperature in very slight excess or defect over Northern and Central India, so that the mean temperature was generally in considerable defect.

(2) The day temperature was considerably below and the night temperature about the normal along the West coast, so that the mean temperature was slightly below the normal.

(3) Over the Deccan and the south and east of the Peninsula the day and night temperatures and consequently also the mean temperature were more or less in excess.

(4) The excess was large over the inland parts of Madras.

(5) Both the day and night temperatures and consequently also the mean temperature were in excess over the greater part of Burma.

(6) Both the day and night temperatures were generally below the normal at the Himalayan hill stations.

The following table gives temperature data of the month for the 56 meteorological divisions of the empire :—

Province.	Division.	Actual temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	89·9	72·1	81·0	17·8	25·4	+1·9	+5·2	−3·3
	Lower Burma (Deltaic)	87·5	68·9	78·2	18·6	28·4	+1·5	+3·8	−2·3
	Central do.	86·7	54·9	70·8	31·8	46·1	...	...	...
	Upper do.	79·5	53·5	66·6	26·0	38·7	−1·2	+0·2	−1·4
	Arakan	82·4	56·5	69·5	25·9	36·8	...	...	...

Province.	Division.	Actual temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bengal and Assam	Eastern Bengal	76·3	53·1	64·7	23·2	34·3	−1·8	−0·3	−1·5
	Assam (Surma)	77·5	51·6	64·6	25·9	36·9	+0·3	−0·7	+1·0
	Do. (Brahmaputra)	69·4	51·0	60·2	18·4	27·1	−2·4	−0·7	−1·7
	Deltaic Bengal	74·4	54·5	64·5	19·9	32·0	−2·9	−0·7	−2·2
	Central do.	72·5	53·4	63·0	19·2	30·8	−3·2	+0·5	−3·7
	North do.	70·9	49·5	60·2	21·5	30·9	−3·5	−0·8	−2·7
	Bengal Hills	45·4	23·6	34·5	21·7	34·6	−3·0	−2·0	−1·0
	Orissa	78·1	59·9	69·0	18·2	29·5	−3·5	+0·8	−4·3
	Chota Nagpur	69·5	51·0	60·3	18·5	32·2	−6·6	+0·6	−7·2
	Bihar (South)	68·8	51·9	60·4	16·8	28·7	−5·4	+1·0	−6·4
	Do. (North)	68·9	50·4	59·7	18·6	28·8	−4·4	+1·0	−5·4
North-Western Provinces and Oudh.	North-Western Provinces (East)	67·3	49·8	58·6	17·5	32·6	−7·0	+2·0	−9·0
	Oudh (South)	67·2	47·3	57·3	19·9	36·0	−6·6	+0·9	−7·5
	Do. (North)	66·4	48·0	57·2	18·4	31·1	−6·4	+1·2	−7·6
	North-Western Provinces (Central)	67·3	47·5	57·5	19·8	34·6	−6·8	−0·4	−6·4
	Do. do. (West)	66·2	47·4	56·8	18·8	34·4	−6·0	0	−6·0
	Do. do. (Submontane, East)	66·8	50·1	58·5	16·7	27·2	−6·4	+1·2	−7·6
	Do. do. (Submontane, West)	63·2	45·5	54·4	17·7	31·1	−5·3	+0·5	−5·8
	Do. do. (Hills)	44·4	33·5	39·0	10·9	26·5	−6·5	−3·8	−2·7
Punjab	Punjab (South-East)	63·4	48·3	55·9	15·1	31·0	−7·6	+0·3	−7·9
	Do. (South)	63·5	43·9	53·8	19·6	33·7	−5·9	+0·4	−6·3
	Do. (Central)	63·4	44·3	53·9	19·1	33·7	−4·0	+2·9	−6·9
	Do. (Submontane)	61·7	45·0	53·4	16·6	30·0	−5·7	+1·5	−7·2
	Do. (Hills)	40·5	20·7	30·6	19·8	39·6	−5·5	−2·4	−3·1
	Do. (North)	59·9	39·1	49·5	20·8	35·8	−4·0	−0·3	−3·7
	Do. (West)	65·0	42·1	53·6	22·9	36·2	−3·7	−0·2	−3·5
Bombay and Malabar Coast Districts (Madras).	Malabar	88·1	72·9	80·5	15·2	22·5	+1·3	+2·7	−1·4
	Madras (South Central)	90·6	68·0	79·3	22·7	32·2	+3·2	+4·3	−1·1
	Coorg	79·8	59·6	69·7	20·2	26·8	+3·4	+3·7	−0·3
	Mysore	85·9	62·1	74·0	23·8	32·1	+4·0	+4·1	−0·1
	Konkan	84·0	68·8	76·4	15·2	25·9	−1·9	+1·4	−3·3
	Bombay Deccan	87·5	59·8	73·6	27·7	42·0	+2·3	+2·4	−0·1
	Hyderabad (North)	85·8	53·4	69·7	32·4	45·7	...	...	...
	Khandesh	84·5	53·3	68·9	31·2	47·0	−0·2	+1·8	−2·0
Central Provinces and Berar.	Berar	82·7	56·8	69·8	25·9	40·9	−1·6	+1·5	−3·1
	Central Provinces (West)	78·9	54·4	66·8	24·6	42·7	−3·3	+1·1	−4·4
	Do. (Central)	75·5	53·1	64·3	22·4	40·2	−4·0	+1·7	−5·7
	Do. (East)	78·1	56·7	67·4	21·4	36·0	−3·4	+1·6	−5·0
Bombay (North)	Gujarat	83·7	57·2	70·5	26·5	43·8	−1·3	+1·3	−2·6
	Kathiawar	78·9	53·3	66·1	25·7	44·1	−3·4	−1·5	−1·9
	Sind	72·2	50·5	61·4	21·7	41·5	−3·9	+0·6	−4·5
	Baluchistan Hills	50·1	27·3	38·7	22·8	48·8	−2·7	+1·1	−3·8
Rajputana and Central India.	Central India (East)	71·4	48·4	59·9	22·9	40·3	−5·2	+0·1	−5·3
	Rajputana (East), Central India (West)	70·9	47·9	59·4	23·0	42·2	−5·8	−0·2	−5·9
	Do. (West)	71·3	47·1	59·2	24·2	44·0	−3·8	−1·4	−2·4
Madras	East Coast (North)	81·2	68·5	74·8	12·7	21·6	+0·3	+3·8	−3·5
	Hyderabad (South)	87·3	64·1	75·8	23·2	38·4	+2·1	+4·5	−2·4
	Madras (Central)	91·5	67·0	79·3	24·5	34·2	+3·7	+5·8	−2·1
	East Coast (Central)	87·3	70·2	78·8	17·1	24·3	+2·7	+4·2	−1·5
	Do. (South)	86·9	71·3	79·1	15·5	24·9	+2·4	+3·3	−0·9
	Madras (South)	88·4	71·9	80·2	16·5	24·2	+1·5	+2·3	−0·8

The following gives a brief sketch of the more important changes in the temperature conditions du ri nganuary.

During the first three weeks of the month the weather over Northern India was exceedingly unsettled. A series of depressions entered North-West India from the westward and advanced eastward right across Northern India. Some of these depressions advanced from Baluchistan into the Punjab, while others advanced from Gujarat into Khandesh, etc, so that both North-Western and Central India were affected, and the precipitation throughout the whole country was excessive. The month was hence marked by large temperature changes. The waves of heat and cold were less well marked than is occasionally the case when the different storms are separated by longer intervals of time, but the rise and fall of temperature, occurring during the passage of these storms, were nevertheless distinctly traceable. At the commencement of the month pressure was lower than usual everywhere, and a shallow depression lay over the Central Provinces. Snow had fallen on the hills and rain had fallen over the whole of Northern India and at some of the central stations. The mean temperature was high over the Peninsula and the Central Provinces, particularly across the head of the Peninsula, but was lower than usual all over Northern India. The following gives data for the 24 hours preceding 8 A.M. of the 1st, and shows the conditions prevailing at the commencement of the month:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 1st January.	Mean minimum temperature, 1st January.	Mean daily temperature, 1st January.
	°	°	°
Burma	+ 1·6	+ 1·6	+1·6
Assam	− 0·1	+ 1·0	+0·5
Bengal	+ 0·3	+ 2·1	+1·2
Orissa	+ 2·2	+ 8·4	+5 3
Bihar	− 9·3	+ 4·8	−2·3
Chota Nagpur	− 5·5	+ 7·1	+0·8
North-Western Provinces and Oudh	−15·9	+ 5·4	−5·3
Punjab	−13·7	+ 6·4	−3·7
Sind	−13·2	− 2·8	−8·0
Rajputana	−15·7	+ 0·2	−7·8
Gujarat	− 6·3	− 2·7	−4·5
Central India	− 7·5	+ 6·5	−0·5
Central Provinces	+ 3·7	+10·2	+7·0
Berar	+ 5·0	+12·0	+8·5
West Coast	+ 0·2	+ 2·8	+1·5
Bombay Deccan	+ 4·1	+ 4·4	+4·3
Mysore	+ 2·7	+ 0·7	+1·7
Madras Coast	+ 2·8	+ 5·1	+4·0
Madras Deccan	+ 2·3	+ 4·7	+3·5
South India	+ 0·1	+ 0·7	+0·4

These conditions continued practically uninterruptedly until the 5th, when snow fell on the hills and rain on the plains of Northern India, and the depression of temperature over North-West India intensified. An area of very low temperature was at this time established over North Bombay and the adjacent parts of Rajputana, and this area proceeded to move slowly eastward through the Central Provinces to Bengal, which it reached on the 8th. The following gives temperature data for the different provinces of Northern, North-East and Central India from the 5th to the 8th, and shows the advance of this cold area across the country:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	5th January.	6th January.	7th January.	8th January.
	°	°	°	°
N.-W. Provinces and Oudh	−3·8	−4·4	−3·8	−2·1
Punjab	−1·7	−2·3	−2·7	−1·8
Rajputana	−8·0	−6·6	−4·5	−2·7
Central India	−5·9	−6·9	−5·7	−1·6
Berar	−4·1	−6·7	−3·9	−0·1
Central Provinces	−4·6	−6·7	−6·4	−1·7
Orissa	+0·8	−0 2	−3·0	−5·6
Chota Nagpur	−2·5	−4·8	−6·2	−6·0
Bihar	+1·4	−1·7	−5·8	−3·6
Bengal	−0·9	−0·1	−2·1	−3·2
Assam	+0·7	+1·1	+0·4	−0·8

Although this area of low temperature marched very distinctly from North Bombay eastward right across the country, it was not succeeded by a recovery of temperature in Gujarat, where, on the contrary, both the day and night temperatures remained very low during the whole of that period. This is shown in the following table, which gives the variations of the day and night and of the mean temperature of each station in Gujarat from the 5th to the 8th:—

Date.	Station.	Variation from normal of		
		Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
5th January	Ahmedabad	— 6·6	— 6·1	— 6·4
	Rajkot	— 7·6	— 6·5	— 7·1
	Veraval	— 3·0	— 5·6	— 4·3
	Bhavnagar Para	— 6·9	— 9·6	— 8·3
	Bhuj	—11·3	— 9·7	—10·5
6th ,,	Ahmedabad	— 6·2	— 6·6	— 6·4
	Rajkot	—11·3	—10·8	—11·1
	Veraval	— 1·5	— 4·4	— 3·0
	Bhavnagar Para	— 5·7	—11·5	— 8·6
	Bhuj	—10·1	—11·0	—10·6
7th ,,	Ahmedabad	— 4·5	— 2·2	— 3·4
	Rajkot	— 8·6	— 6·5	— 7·6
	Veraval	— 3·5	— 1·1	— 2·3
	Bhavnagar Para	— 3·9	— 7·4	— 5·7
	Bhuj	— 9·7	— 6·8	— 8·3
8th ,,	Ahmedabad	— 3·9	+ 0·6	— 1·7
	Rajkot	— 4·9	— 2·6	— 3·8
	Veraval	— 5·0	— 4·6	— 4·8
	Bhavnagar Para	+ 1·2	— 1·1	+ 0·1
	Bhuj	—6·8	— 7·1	— 7·0

Within this cold centre a barometric depression was developed on the 8th. This depression subsequently advanced into the Central Provinces and was accompanied with rain over Rajputana and the central parts of the country, and on the 9th an area of very low temperature was shown over Eastern Rajputana and the adjacent districts of the North-Western Provinces and of Central India. This area of low temperature advanced eastward through the central parts of the country and reached Bengal on the 13th. The following gives data for Baluchistan, Sind and the different divisions of Northern and Central India, and exhibits the advance of this area of low temperature eastward:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	9th January.	10th January.	11th January.	12th January.	13th January.
	°	°	°	°	°
Baluchistan	+0·2	+1·2	+2·8	+3·0	—8·4
Sind	—3·6	—1·4	+0·4	+1·9	—0·5
N.-W. Provinces and Oudh	—5·1	—4·0	—3·4	—3·4	+0·2
Punjab	—2·0	—3·0	—2·2	+0·5	+0·2
Rajputana	—6·9	—6·0	—4·0	—0·7	+3·0
Central India	—2·5	—8·4	—6·3	—2·1	+2·9
Berar	+0·3	—3·8	—3·0	+2·3	+5·3
Central Provinces	+0·1	—4·9	—6·2	—2·2	+2·2
Orissa	—3·6	—0·1	—0·7	—2·8	—5·5
Chota Nagpur	—2·9	—0·7	—4·8	—5·8	—6·3
Bihar	—1·0	+2·0	—2·7	—2·5	—2·7
Bengal	—0·7	+1·6	—2·1	—3·2	—3·7

The depression of temperature was more marked in the day than in the night temperature, as is shown by the following table, which gives comparative data for those stations at which the maximum or day temperature was 15° or more below the normal between the 8th and the 13th:—

Date.	Station.	Maximum temperature.		
		Actual of date.	Normal of date.	Variation of actual from normal of date.
		°	°	°
29th January	Jhansi	55·2	76·5	—21·3
	Jaipur	54·2	74·5	—20·3
	Agra	54·0	74·1	—20·1
	Mainpuri	52·3	72·0	—19·7
	Ajmer	54·5	74·2	—19·7
	Delhi	52·2	71·0	—18·8
	Sambhar	56·8	72·8	—16·0
	Cawnpore	58·1	73·9	—15·8
	Meerut	54·3	70·1	—15·8
	Bareilly	54·9	70·5	—15·6
10th ,,	Jhansi	57·2	76·4	—19·2
	Jubbulpore	59·0	77·5	—18·5
	Sutna	57·9	74·5	—16·6
	Allahabad	57·9	73·5	—15·6
11th ,,	Hoshangabad	64·7	80·1	—15·4
13th ,,	Dera Ismail Khan	53·8	69·9	—16·1

It will be noticed from the last table but one that the mean temperature had risen above the normal in Baluchistan and Sind on the 10th and 11th. This condition continued until the 12th and showed the warm wave preceding the advance of a fresh barometric depression. This depression entered Sind on the morning of the 12th, when rain and snow were falling in Baluchistan and on the North-West Himalayas. The storm subsequently advanced through the Punjab and was accompanied with heavy rain over the plains of Northern India and with exceptionally heavy snow on the hills. A cold wave of great intensity followed and slowly advanced right across Northern India, disappearing over Bengal on the 21st. The following gives comparative temperature data for Baluchistan and the different divisions of Northern, North-East and Central India from the 14th to the 21st and shows the advance of this cold wave :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of							
	14th January.	15th January.	16th January.	17th January.	18th January.	19th January.	20th January.	21st January.
	°	°	°	°	°	°	°	°
Baluchistan . .	−13·2	−16·3	−7·3	−0·6	−2·2	+2·3	+1·9	−4·8
Sind	−2·7	−11·7	−7·7	−6·9	−5·9	−1·0	+1·1	+2·4
Punjab . . .	−1·3	−5·0	−4·5	−5·3	−4·6	−2·4	−2·1	−1·4
North-Western Provinces and Oudh.	−0·7	−3·9	−4·4	−4·2	−5·9	−5·2	−4·3	−4·0
Rajputana . . .	+4·1	−8·0	−5·8	−6·9	−7·4	−6·5	−1·4	−1·9
Central India . .	+4·6	−4·1	−8·1	−5·6	−5·9	−8·9	−5·5	−1·3
Berar	+4·1	−1·5	−6·4	−1·3	+0·2	−7·6	−7·5	−4·5
Central Provinces .	+3·1	−0·4	−5·0	−2·4	−4·5	−7·4	−7·5	−4·0
Orissa . . .	−4·8	−3·5	−0·6	−0·3	+1·6	−3·3	−6·3	−5·7
Chota Nagpur . .	−3·8	−3·5	−3·1	−3·1	−3·4	−7·6	−7·3	−6·2
Bihar	−1·4	−1·6	−3·2	−3·6	−2·0	−2·6	−5·5	−3·9
Bengal . . .	−1·9	−0·3	−0·1	−1·2	−0·8	−2·5	−5·7	−5·0
Assam . . .	−3·0	−1·2	−1·4	−1·8	−3·9	−0·7	−3·4	−2·4

As is usual at this season of the year, the deficiency of temperature was more marked in the day than in the night temperatures. This is shown in the following table, which gives the variations of the maximum and minimum temperatures from the normal for all stations in Baluchistan and Northern India (hills and plains) at which the variation of the maximum was 15° or more in defect between the 14th and 21st ;—

Date.	Station.	Variation from normal of	
		Maximum temperature of date.	Minimum temperature of date.
		°	°
14th January.	Chaman . .	−21·6	−7·9
	Quetta . . .	−15·4	−7·8
	Murree . . .	−15·4	−6·2
15th „	Quetta . . .	−22·9	−12·2
	Chaman . .	−20·1	−9·9
	Cawnpore . .	−15·7	+3·9
	Murree . . .	−15·4	−7·7
17th „	Leh . . .	−16·4	−6·5

During the first ten days of the month the mean temperature was steadily in excess over Madras, the Madras Deccan and Mysore, but was generally in defect over the west of the Peninsula—more particularly along the Bombay coast, where the mean temperature on some days was very low. The following gives comparative data for the different divisions of the Peninsula for each alternate day from the 1st to the 9th in illustration :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	1st January.	3rd January.	5th January.	7th January.	9th January.
	°	°	°	°	°
West Coast . .	+1·5	+0·2	−0·8	−0·7	+0·6
Bombay Deccan .	+4·3	+0·4	−4·0	+0·1	+1·0
Mysore . . .	+1·7	+3·8	+3·1	+5·2	+5·5
Madras Coast . .	+4·0	+4·0	+4·3	+2·2	+3·8
Madras Deccan . .	+3·5	+5·7	+0·5	+3·7	+6·9
South India . .	+0·4	+4·0	+4·8	+4·2	+5·1

In the early part of the month the area of greatest excess of heat lay over the northern districts of the Deccan, but as the weather became more unsettled and cooler in Northern India, this area of largest excess was moved southward and was established between Cuddapah and Salem. The following gives comparative data for the

two stations exhibiting the largest excess of temperature in this region between the 5th and the 10th:—

Date.	Station.	Variation from normal of Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
5TH JANUARY	Salem	+6·3	+8·3	+7·3
	Cocanada	+4·9	+6·8	+5·9
6TH ,,	Salem	+6·4	+6·1	+6·3
	Cocanada	+6·2	+5·0	+5·6
7TH ,,	Salem	+5·1	+6·3	+5·7
	Chitaldroog	+5·3	+5·7	+5·5
8TH ,,	Kurnool	+2·1	+10·5	+6·3
	Cuddapah	+5·2	+6·5	+5·9
9TH ,,	Bellary	+4·9	+11·6	+8·3
	Kurnool	+3·1	+13·1	+8·1
10TH ,,	Bellary	+6·5	+12·7	+9·6
	Bangalore	+7·8	+10·2	+9·0

After the 10th a change commenced in the general distribution of temperature over the Peninsula, when the warm wave, which preceded the appearance of the principal depression of the month, began to appear in the north-west. Temperature also rose over the west of the Peninsula, and the area of greatest excess of temperature was established over the Western Deccan, and this condition continued until the 14th after which it disappeared before the advancing cold wave. The following gives comparative data for the different divisions of the Peninsula from the 11th to the 15th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 11th January.	12th January.	13th January.	14th January.	15th January.
	°	°	°	°	°
West Coast	+1·3	+2·8	+3·7	+2·9	+1·9
Bombay Deccan	+3·6	+7·2	+8·2	+5·5	+0·3
Mysore	+8·3	+7·0	+5·0	+4·4	+3·4
Madras Coast	+5·0	+4·0	+3·6	+0·6	+1·2
Madras Deccan	+7·0	+6·4	+5·6	+4·2	+4·0
South India	+5·0	+4·2	+3·3	+2·6	+1·4

The excess of temperature shown above was principally attributable to high night temperatures. This is shown by the following table, which gives comparative variation data of the maximum and minimum temperatures for the different stations included in the area of greatest excess from the 10th to the 14th:—

Date.	Station.	Variation from normal of Maximum temperature of date.	Minimum temperature of date.
		°	°
10TH JANUARY	Bellary	+ 6·5	+12·7
	Kurnool	+ 4·5	+12·2
	Cuddapah	+ 6·1	+11·7
	Chitaldroog	+ 6·7	+10·5
	Bangalore	+ 7·8	+10·2
11TH ,,	Cuddapah	+ 9·1	+11·1
	Mangalore	+ 6·3	+11·0
	Chitaldroog	+ 7·8	+10·6
12TH ,,	Ahmednagar	+ 6·8	+16·4
	Bijapur	+ 6·3	+10·5
13TH ,,	Ahmednagar	+ 5·7	+16·1
	Malegaon	+ 6·8	+12·5
14TH ,,	Ahmednagar	− 0·3	+15·6
	Chanda	+ 1·8	+13·5

After the 14th temperature resumed the distribution which it had during the first ten days of the month. The following gives data for the Peninsular divisions from the 16th to the 21st:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 16th January.	17th January.	18th January.	19th January.	20th January.	21st January.
	°	°	°	°	°	°
West Coast	+0·5	+0·4	−0·3	−1·8	−1·4	−0·2
Bombay Deccan	−2·1	+2·2	+2·0	−3·5	−4·3	−1·7
Mysore	+5·9	+5·8	+6·7	+4·3	+3·9	+5·5
Madras Coast	+2·4	+3·5	+3·5	+4·1	+3·2	+1·8
Madras Deccan	+6·1	+6·0	+6·2	+4·2	+0·5	+1·3
South India	+2·4	+3·3	+4·2	+4·9	+6·0	+5·0

In Burma the temperature, though not very steady, ranged more or less above the normal throughout the whole of the first three weeks of the month. The follow-

ing gives comparative data for this province for each third day from the 1st to the 22nd :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of							
	1st January.	4th January.	7th January.	10th January.	13th January.	16th January.	19th January.	22nd January.
	°	°	°	°	°	°	°	°
Burma . . .	+1·6	+4·6	+3·1	+1·8	—1·1	+2·3	+3·4	+1·0

After the 21st the weather changed. Anti-cyclonic conditions were established, and were maintained more or less steadily till the close of the month with quiet weather. For several days, however, after this change temperature remained steadily low over Northern India. The following gives data for all provinces for the 25th in illustration :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 25th January.	Mean minimum temperature, 25th January.	Mean daily temperature, 25th January.
	°	°	°
Burma	—1·5	—2·0	—1·8
Assam	—1·4	—1·8	—1·6
Bengal	—3·4	—4·5	—4·0
Orissa	—4·0	—5·1	—4·6
Bihar	—5·0	—2·5	—3·8
Chota Nagpur	—5·4	—4·0	—4·7
North-Western Provinces and Oudh.	—2·8	—2·3	—2·6
Punjab	—2·0	—2·4	—2·2
Sind	+2·0	+1·7	+1·9
Rajputana	+1·7	—0·9	+0·4
Gujarat	+2·9	+5·0	+4·0
Central India	0	—0·6	—0·3
Central Provinces . . .	—0·2	+1·7	+0·8
Berar	+1·8	+3·9	+2·9
West Coast	+1·9	—0·5	+0·7
Bombay Deccan . . .	+4·6	+1·9	+3·3
Mysore	+0·9	—0·7	+0·1
Madras Coast	0	+0·3	+0·2
Madras Deccan . . .	+0·4	0	+0·2
South India	—0·1	—2·1	—1·1

The high temperatures prevailing over the Peninsula and the Central Provinces gradually, however, extended first north-westward into North Bombay and Rajputana and subsequently north-eastward into Bengal, etc., so that by the 28th the mean temperature was in excess in most provinces. This is shown below :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 28th January.	Mean minimum temperature, 28th January.	Mean daily temperature, 28th January.
	°	°	°
Burma	+1·5	+3·0	+2·3
Assam	+2·0	—2·3	—0·2
Bengal	+2·4	+0·5	+1·5
Orissa	—1·1	+1·7	+0·3
Bihar	0	+1·1	+0·6
Chota Nagpur	—0·4	+3·7	+1·7
North-Western Provinces and Oudh .	—2·2	—0·6	—1·4
Punjab	—0·3	+2·1	+0·9
Sind	+4·0	+3·4	+3·7
Rajputana	+3·9	+2·9	+3·4
Gujarat	+3·0	+2·0	+2·5
Central India	—1·3	+0·5	—0·4
Central Provinces . . .	—0·8	+3·3	+1·3
Berar	+0·5	+3·7	+2·0
West Coast	—0·1	+3·4	+1·7
Bombay Deccan	+4·2	+4·3	+4·3
Mysore	+4·0	+3·1	+3·6
Madras Coast	+1·2	+1·8	+1·5
Madras Deccan	+2·3	+5·4	+3·9
South India	+0·8	—0·1	+0·4

This excess of temperature was most marked in two areas, *viz.*, the Western desert and the north-west of the Peninsula, in both of which regions the excess of temperature was more than 5° and in some places was as much as 8°. The following gives the largest variations from the normal recorded within these two regions on each day from the 26th to the 31st :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
26th January	Malegaon	+5·9
	Deesa	+2·1
27th ,, ...	Bellary	+5·3
	Deesa	+3·5

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
28th January	Sholapur	+6·4
	Surat	+5·7
29th ,,	Surat	+7·8
	Jaipur	+7·8
30th ,,	Jaipur	+9·6
	Sholapur	+6·9
31st ,,	Jaipur	+11·5
	Bellary	+6 8

On the last day of the month the mean temperature was in excess in all the divisions except Assam where it was locally in defect. This is shown below :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 31st January.	Mean minimum temperature, 31st January.	Mean daily temperature, 31st January.
	°	°	°
Burma	+0·5	+1·8	+1·2
Assam	+0·5	−3·0	−1·3
Bengal	+0·6	−0·3	+0·2
Orissa	−1·0	+1·4	+0·2
Bihar	−0·3	+1·7	+0·7
Chota Nagpur	−0·3	+1·3	+0·5
North-Western Provinces and Oudh.	+2·8	+4·3	+3·6
Punjab	+3·3	+4·9	+4·1
Sind	+0·9	+9·1	+5·0
Rajputana	+5·7	+10·5	+8·1
Gujarat	+3·6	+ 3·9	+3·8
Central India	+4·7	+ 5·9	+5·3
Central Provinces	+3·4	+ 6·5	+5·0
Berar	+1·6	+ 2·6	+2·1
West-Coast	+0·1	+ 3·8	+2·0
Bombay Deccan	+4·5	+ 5·4	+5·0
Mysore	+3·9	+ 3·1	+3·5
Madras Coast	+1·3	+ 4·1	+2·7
Madras Deccan	+4·1	+ 6·9	+5·5
South India	+1·4	+ 1·6	+1·5

The low temperature, relatively to the normal, which prevailed over Northern India during January was also experienced in the countries lying to the westward. Thus Kabul had very low temperatures throughout the month, more particularly between the 17th and 22nd and again on the 26th. The mean maximum temperature of the month at this station was only 35°, and the mean minimum 11°·6, while on the 17th, 18th, 21st and 22nd the minimum was only 2°·4. At Bushire, at the head of the Persian Gulf, both the day and night temperatures were lower than usual on the mean of the month, and very cold periods were experienced on the 13th and 14th and between the 23rd and the 27th.

On the other hand, at the more southern stations of Aden and Perim the mean temperature of the month was higher than usual, though the weather there was cloudy and somewhat unsettled.

The following table gives the variations of the mean temperature, week by week, during the month and also for the whole month :—

Province or Division.	Variation from normal of mean temperature for week ending					
	5th January.	12th January.	19th January.	26th January.	2nd February.	For whole month January, 1901.
	°	°	°	°	°	°
Burma	+2·7	+1·8	+1·3	+0·2	+1·7	+1·9
Assam	+0·3	−0·3	−2·2	−2·4	−0·1	−1·1
Bengal	+0·4	−1·4	−1·5	−3·6	+1·1	−1·6
Orissa	+3·3	−2·3	−2·3	−4·3	+0·6	−1·4
Bihar	−2·1	−2·2	−2·4	−3·0	+0·9	−2·0
Chota Nagpur	−1·0	−4·5	−4·4	−3·9	+1·4	−3·0
North-Western Provinces and Oudh.	−3·6	−3·7	−3·3	−3·2	+2·1	−2·7
Punjab	−2·6	−1·9	−3·3	−3·2	+2·6	−2·2
Sind	−4·4	−1·9	−5·2	+0·8	+3·9	−1·7
Rajputana	−6·5	−4·5	−3·9	−1·6	+6·2	−2·7
Gujarat	−4·5	−4·1	−3·6	+1·6	+4·6	−1·9
Central India	−2·3	−4·8	−3·6	−1·8	+3·2	−2·6
Central Provinces	+2·4	−4·0	−1·6	−1·8	+3·1	−1·1
Berar	+4·2	−2·1	−1·1	−0·7	+3·5	−0·1
West Coast	+0·6	+0·5	+1·0	+0·4	+2·2	+0·8
Bombay Deccan	+1·8	+2·1	+1·8	+1·2	+4·9	+1·9
Mysore	+2·6	+5·9	+5·1	+2·5	+2·5	+4·1
Madras Coast	+3·6	+3·8	+2·7	+1·0	+1·8	+2·7
Madras Deccan	+3·6	+5·6	+5·2	+1·4	+4·0	+4·1
South India	+3·1	+4·7	+3·2	+1·8	+1·2	+2·9

Winds.

The 8 A.M. wind data, consisting of observations of the direction of the wind and of the air movement as registered by Robinson anemometers, are given in Table I, under the headings "Wind direction" and "Wind velocity." In these columns are shown the number of days the wind at 8 A.M. blew from each of eight points, the resultant direction of winds and also the mean hourly air movement. The wind resultant is calculated in all cases by the use of Lambert's formula, in which equal values are given to each wind observation. The mean wind directions are shown in Plate I by means of arrows in the usual manner.

The wind data for 10 and 16 hours are given in a similar form in Table II. Under the headings "Wind direction," "Wind steadiness" and "Wind velocity" are shown the number of times that each of eight wind directions was observed at the hours of record, the trigonometrical resultant of these observations computed by Lambert's formula, the mean diurnal movement of the air at each station and the average monthly values of the last two elements computed from the previous wind observations at that station.

The mean wind directions of the month for the second class stations are indicated in the small chart No. 4 of Plate III by means of arrows flying with the wind. In this chart the lengths of the arrows are drawn so as to indicate the comparative wind prevalence in the mean direction on a scale such that five-eighths of an inch would represent a wind blowing continuously throughout the month from the mean direction.

The following gives a statement of the chief features of the air movement of the month based on a comparision of the mean wind direction and intensity (determined from the 10 and 16 hours' wind observations) and the corresponding normal values of these elements for the month.

The air movement in January 1901 was in many places stronger and steadier than usual chiefly in consequence of the prevalence of more strongly marked cold weather conditions than the average in Upper India. The winds were generally more northerly than usual over Burma and the Bay Islands. This is shown below:—

Station.	Mean wind direction.		
	Actual, January 1901.	Normal, January.	Northerly deflection.
Rangoon	N 10 E	N 27 E	+17
Diamond Island	N 21 W	N 1 W	−20
Cocos Island	N 19 E	N 18 E	− 1
Akyab	N 1 W	N 19 W	+18
Port Blair	N 28 E	N 41 E	+13

The steadiness was generally about normal, except at Diamond Island where it was low for the time of year notwithstanding that the velocity was considerably above the average. The following gives data of steadiness and velocity for this station:—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, January 1901.	Normal, percentage, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Diamond Island	53	71	−18	231	176	+55

The increased northing in the wind noticed in Burma and the Bay was also shown in the winds over Bengal and Orissa. The following gives comparative direction data for the stations in this region:—

Station.	Mean wind direction.		
	Actual, January 1901.	Normal, January.	Northerly deflection.
	°	°	°
Chittagong	N 2 E	N 26 W	+26
Calcutta	N 10 W	N 36 W	+26
Saugor Island	N 3 W	N 6 W	+ 3
False Point	N 48 E	N 57 E	+ 9

The winds in this region were exceptionally steady while the velocity was about normal. This is shown below:—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Chittagong	63	47	+16	74	75	− 1
Calcutta	67	39	+28	79	62	+17
Saugor Island	68	20	+48	198	166	+32
False Point	72	22	+50	132	147	−15

In West Bengal and the Lower Gangetic Plain there was a general fairly steady west-north-west wind the velocity of which was above the average. The following gives data :—

Station.	Mean Steadiness.			Mean Wind Direction.			Mean Wind Velocity in Miles per Diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual from normal January 1901.	Actual, January 1901.	Normal, January.	Westerly deflection.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
				°	°	°			
Hazaribagh	40	49	—9	N 79 W	N 53 W	+26	145	135	+10
Darbhanga	40	46	—6	N 65 W	S 80 W	+10	78	63	+15
Allahabad	31	25	+6	N 46 W	N 40 W	+ 6	130	81	+49

In the Upper Sub-Himalayas Division a westerly to west-north-westerly wind prevailed at most stations but at Dehra Dun the direction of the wind was nearly east. The following gives data for this region :—

Station.	Mean Wind Direction.	
	Actual, January 1900.	Normal, January.
	°	°
Dehra Dun	S 82 E	S 63 W
Roorkee	N 53 W	N 76 W
Meerut	S 85 W	N 56 W
Lahore	N 44 W	N 27 W
Ludhiana	N 53 W	N 54 W

The winds were steadier than usual at all stations but the velocity at some stations was below the average. The following gives data :—

Station.	Mean Steadiness.			Mean Wind Velocity in Miles per Diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Dehra Dun	46	18	+28	24	40	—16
Roorkee	24	19	+ 5	47	51	— 4
Meerut	50	42	+ 8	32	49	—17
Lahore	34	20	+14	44	43	+ 1
Ludhiana	39	29	+10	63	35	+28

The wind was very variable in the Indus Valley as is shown below :—

Station.	Mean Wind Direction.	
	Actual, January 1901.	Normal, January.
	°	°
Peshawar	N 34 W	S 2 W
Jacobabad	N 14 E	N 4 W
Kurrachee	S 55 E	N 23 E

The steadiness was even lower than usual at Jacobabad and the velocity was low at all stations. The following gives data of velocity and steadiness :—

Station.	Mean Steadiness.			Mean Wind Velocity in Miles per Diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Peshawar	10	5	+5	21	64	—43
Jacobabad	20	24	—4	27	51	—24
Kurrachee	30	23	+7	158	239	—81

The wind was slightly more easterly than the average in Rajputana, but both the steadiness and velocity were about the average. The following gives data for this province :—

Station.	Mean Steadiness.			Mean Wind Direction.			Mean Wind Velocity in Miles per Diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Easterly deflection.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
				°	°	°			
Jaipur	24	18	+6	N 20 E	N 8 E	+12	67	83	—16
Deesa	36	38	—2	N 47 E	N 20 E	+27	208	208	0

The following gives comparative data of the mean wind

direction, steadiness and velocity for the different divisions of Northern India and for Burma and the Bay Islands:—

Province or Division.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
				°	°			
Bay Islands	77	76	+ 1	N 28 E	N 41 E	128	162	—34
Burma	50	50	0	N 4 W	N 7 W	135	113	+22
Bengal	66	35	+31	N 6 W	N 23 W	117	101	+16
Orissa	72	22	+50	N 48 E	N 57 E	132	147	—15
Bihar	40	46	— 6	N 65 W	S 80 W	78	63	+15
Chota Nagpur	40	49	— 9	N 79 W	N 53 W	145	135	+10
North-Western Provinces.	38	35	+ 3	N 52 W	N 70 W	58	55	+ 3
Punjab	28	18	+10	N 44 W	N 65 W	43	47	— 4
Sind	25	24	+ 1	N 68 E	N 10 E	93	145	—52
Rajputana	20	28	— 8	N 34 E	N 14 E	138	146	— 8

The wind directions in the Deccan varied irregularly from the normal, but on the whole there was slightly increased easting. The following gives direction data for the stations in this division:—

Station.	Mean wind direction.		
	Actual, January 1901.	Normal, January.	Easterly deflection.
	°	°	°
Belgaum	S 80 E	S 75 E	+ 5
Sholapur	S 74 E	S 59 E	+15
Poona	S 67 W	N 63 E	...
Akola	N 37 E	N 50 E	—13
Buldana	N 15 W	N 75 W	...
Khandwa	N 60 E	N 21 E	+39
Nagpur	N 76 E	N 71 E	+ 5
Hyderabad (Deccan)	S 46 E	S 51 E	— 5

The wind was steadier than usual at Poona, in Berar and the west of the Central Provinces, and was stronger than usual except at Akola, Sholapur and Belgaum. This is shown below:—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Belgaum	8	43	—35	184	249	—65
Sholapur	21	55	—34	164	184	—20
Poona	44	9	+35	190	134	+56
Akola	40	28	+12	80	88	— 8
Buldana	21	13	+ 8	157	132	+25
Khandwa	39	21	+18	104	74	+30
Nagpur	16	30	—14	98	93	+ 5
Hyderabad (Deccan)	37	60	—23	92	90	+ 2

Along the West coast the wind was more westerly than the average and was stronger than usual at Karwar. The following gives data:—

Station.	Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual, January 1901.	Normal, January.	Westerly deflection.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	°	°	°			
Bombay	N 2 W	N 6 E	+ 8	231	239	— 8
Karwar	N 42 W	N 19 W	+23	97	73	+24

In South India the wind's direction was about normal, but the steadiness was generally less than the average while the velocity varied irregularly from the normal. At Bellary the reported velocity was much higher than usual. The following gives data for the stations in South India:—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
				°	°			
Salem	60	62	— 2	N 75 E	N 82 E	123	117	+ 6
Chitaldroog	47	77	—30	N 89 E	S 88 E	141	175	—34
Bangalore	69	79	—10	S 88 E	N 88 E	178	111	+67
Hassan	69	74	— 5	N 87 E	N 87 E	51	75	—24
Mysore	60	83	—23	S 89 E	N 82 E	173	218	—45
Madras	82	78	+ 4	S 83 E	N 49 E	133	141	— 8
Bellary	50	64	—14	S 52 E	S 68 E	221	81	+140

The following gives mean data of the wind's direction,

steadiness and velocity for the different divisions of the Peninsula :—

Province or Division.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual, from normal, January 1901.	Actual, January 1901.	Normal, January.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
				°	°			
Central Provinces .	28	26	+ 2	N 68 E	N 46 E	101	84	+17
Berar . . .	31	21	+10	N 11 E	N 63 E	119	110	+ 9
Bombay Deccan .	24	36	—12	S 50 E	S 83 E	179	189	—10
Madras Deccan .	43	62	—19	S 49 E	S 60 E	157	86	+71
West Coast .	54	76	—22	N 22 W	N 6 W	164	156	+ 8
Madras Coast .	82	78	+ 4	S 83 E	N 49 E	133	141	— 8
Mysore . .	61	78	—17	N 89 E	N 84 E	136	145	— 9
South India . .	60	62	— 2	N 75 E	N 82 E	123	117	+ 6

The principal features in the above are the increased easting in the wind on the Madras Coast and the unsteadiness of the wind over the Peninsula.

On the hills the wind generally exceeded the normal velocity, but the wind was unsteady and varied irregularly from the normal directions. This is shown below :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, January 1901.	Normal percentage, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
				°	°			
Quetta . .	32	25	+ 7	S 67 W	N85 W	50	74	—24
Leh . . .	43	29	+14	S 6 E	S 10 W	32	22	+10
Srinagar . .	26	10	+16	N 23 W	S 37 E	79	71	+ 8
Kailang . .	55	52	+ 3	S 61 W	S 66 W	4	20	—16
Simla . .	34	31	+ 3	S 18 E	S 7 E	86	128	—42
Chakrata . .	14	5	+ 9	S 63 E	S 84 W	168	123	+45
Ranikhet . .	19	15	+ 4	N 63 W	S 51 W	50	44	+ 6
Katmandu . .	52	49	+ 3	N 85 W	N 76 W	22	21	+ 1
Darjeeling . .	47	22	+25	S 31 W	S 89 W	73	88	—15
Mount Abu . .	23	11	+12	N 76 W	N 69 W	142	119	+23
Pachmarhi . .	13	10	+ 3	S 78 W	N 79 W	125	78	+47
Chikalda . .	21	24	— 3	S 10 E	N 40 W	175	123	+52
Wellington .	55	65	—10	S 56 E	S 27 E	56	52	+ 4

At the Seychelles the wind blew from nearly north-west and was of about the normal force, but was very unsteady while at Zanzibar the wind was north-easterly and lighter than usual. The following gives data :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, January 1901	Normal percentage, January.	Variation of actual, from normal, January 1901.	Actual, January 1901.	Normal, January.	Actual, January.	Normal, January.	Variation of actual from normal, January 1901.
				°	°			
Seychelles . .	35	66	—31	N 39 W	N 43 W	145	144	+ 1
Zanzibar . .	72	69	+ 3	N 41 E	N 35 E	166	196	—30

The pressure differences over the Indian area and the Indian Seas were slightly greater than usual and the north-east winds over the Bay and the Arabian sea were practically normal. This is shown below :—

Area.	Wind force at 8 A.M.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Arabian Sea	3·3	3·3	0
Bay of Bengal . . .	3·0	3·0	0

The following gives comparative data of the mean air movement for the various provinces based on Table I :—

Province or Division.	Mean wind velocity in miles per diem.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Burma	72	74	— 2
Assam	46	62	—16
Bengal	50	70	—20
Orissa	106	89	+17
Bihar	77	46	+31
Chota Nagpur	77	118	—41
North-Western Provinces and Oudh.	43	60	—17
Punjab	55	46	+ 9
Sind	115	154	—39
Rajputana	103	98	+ 5
Gujarat	144	132	+12
Central India	74	96	—22
Central Provinces . . .	91	62	+29
Berar	115	79	+36
West Coast . . .	151	190	—39
Bombay Deccan . . .	144	166	—22
Mysore	134	91	+43
Madras Coast . . .	144	120	+24
Madras Deccan . . .	137	91	+46
South India	106	110	— 4

Humidity and Cloud.

The hygrometric data of the month employed in the following paragraphs are given in Table II. In that table are columns giving the means of the wet bulb readings at 10 and 16 hours and of the minimum wet bulb readings, the mean vapour tension and humidity at the same hours, and also the daily means of these elements. The hygrometric data are taken from the tables accompanying "*The Indian Meteorologist's Vade Mecum*," which were computed by means of Regnault's modification of August's formula. The normal values, by means of which the variations have been derived, are the means calculated in the same way for periods varying from 3 to 50 years.

The proportion of cloud is estimated in tenths of the sky expanse, an overcast sky being denoted by 10 and a cloudless sky by 0. The daily means are the arithmetical means of the cloud amount at 10 and 16 hours, and the normal means, with which the actual daily means of the month are compared, are the means for periods varying from 3 to 50 years of the available cloud data for the same hours.

The air was drier than usual, on the mean of the month, over two areas one including Burma and the head of the Bay and the second the interior districts of the Peninsula. Over the whole of the remainder of India the air was damper than usual. The excess was large over the greater part of Northern and Central India and amounted to 10 or more at the following stations:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Hazaribagh . .	·311	·268	+·043	66	51	+15
Lahore . . .	·308	·272	+·036	76	63	+13
Ludhiana . .	·326	·289	+·037	80	69	+11
Allahabad . .	·374	·339	+·035	77	66	+11
Meerut . . .	·316	·290	+·026	75	65	+10
Roorkee . .	·312	·289	+·023	76	66	+10

At Port Blair the mean absolute humidity was considerably above the average but the temperature was in considerable excess and the humidity only slightly above the normal. At the Burma stations the absolute humidity was also in excess but less so than at the Bay Islands, and the relative humidity was less than usual. The following gives data for this division:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Port Blair . . .	·851	·787	+·064	77	76	+1
Rangoon . . .	·551	·351	0	60	64	−4
Diamond Island . .	·665	·630	+·035	67	70	−3

In Lower Bengal and Orissa the relative humidity was normal or less than usual except at Calcutta where it was in trifling excess. This is shown below:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual, from normal January 1901.
	"	"	"	%	%	
Chittagong . . .	·432	·467	−·035	69	73	−4
Calcutta . . .	·419	·402	+·017	70	69	+1
Saugor Island . .	·458	·519	−·061	73	75	−2
False Point . . .	·541	·537	+·004	78	78	0

All over the Gangetic Plain and Upper India the absolute humidity exceeded the normal, while the mean temperature was lower than usual, so that over the whole of that large area the relative humidity was in considerable to large excess. The following gives data:—

Province or Division.	Station.	Absolute Humidity.			Relative Humidity.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		"	"	"	%	%	
Gangetic Plain and Chota Nagpur.	Hazaribagh .	·311	·268	+·043	66	51	+15
	Darbhanga .	·415	·396	+·019	79	71	+ 8
	Allahabad .	·374	·339	+·035	77	66	+11
Upper India .	Dehra Dun .	·284	·274	+·010	74	67	+ 7
	Roorkee .	·312	·289	+·023	76	66	+10

Province or Division.	Station.	Absolute humidity.			Relative humidity.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
		"	"	"	%	%	
Upper India	Meerut	·316	·290	+·026	75	65	+10
	Lahore	·308	·272	+·036	76	63	+13
	Ludhiana	·326	·289	+·037	80	69	+11
	Peshawar	·229	·225	+·004	66	62	+ 4
	Jacobabad	·268	·229	+·039	58	49	+ 9
	Kurrachee	·385	·351	+·034	62	56	+ 6

In Rajputana the absolute humidity was about normal, but temperature was low and the relative humidity higher than usual. The following gives data for Jaipur and Deesa :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Jaipur	·285	·274	+·011	61	53	+8
Deesa	·246	·252	—·006	41	37	+4

The following gives mean data for the different divisions of Northern India and for Burma and the Bay Islands :—

Province or Division.	Mean absolute humidity.			Mean relative humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Bay Islands	·851	·787	+·064	77	76	+ 1
Burma	·608	·590	+·018	64	68	— 4
Bengal	·436	·462	—·026	71	73	— 2
Chota Nagpur	·311	·268	+·043	66	51	+15
Orissa	·541	·537	+·004	78	78	0
Bihar	·415	·396	+·019	79	71	+ 8
North-Western Provinces.	·322	·298	+·024	76	66	+10
Punjab	·288	·262	+·026	74	65	+ 9
Sind	·327	·290	+·037	62	55	+ 7
Rajputana	·266	·263	+·003	51	45	+ 6

In the Deccan the absolute humidity was everywhere in excess, while the relative humidity was also in excess except at Hyderabad and Sholapur. This is shown below :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal January.	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Belgaum	·388	·345	+·043	52	47	+5
Sholapur	·353	·350	+·003	42	44	—2
Poona	·326	·316	+·010	48	42	+6
Akola	·378	·329	+·049	56	48	+8
Buldana	·322	·310	+·012	49	44	+5
Khandwa	·358	·325	+·033	57	49	+8
Nagpur	·427	·359	+·068	61	52	+9
Hyderabad Deccan	·467	·437	+·030	57	60	—3

Along the West coast the variations from the normal were small and irregular, a slight deficiency having been reported from Bombay and a slight excess from Karwar. Comparative data for these two stations are given below :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Bombay	·549	·577	—·028	67	69	—2
Karwar	·644	·590	+·054	71	69	+2

In South India the absolute humidity was everywhere in excess, but the mean temperature was largely above the normal, and the relative humidity was hence in defect at several stations. This is shown below :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Salem	·586	·564	+·022	60	65	—5
Chitaldroog	·477	·354	+·123	53	46	+7
Bangalore	·453	·405	+·048	60	61	—1
Hassan	·430	·385	+·045	59	57	+2
Mysore	·452	·447	+·005	55	60	—5
Madras	·761	·654	+·107	80	75	+5
Bellary	·427	·426	+·001	47	52	—5

The following gives mean data for the different divisions of the Peninsula :—

Province or Division.	Mean Absolute Humidity.			Mean Relative Humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Central Provinces .	·393	·342	+·051	59	50	+9
Berar . . .	·350	·319	+·031	53	46	+7
Bombay (Deccan) .	·356	·337	+·019	47	44	+3
Madras „ .	·447	·431	+·016	52	56	−4
West Coast . .	·597	·584	+·013	69	69	0
Mysore . .	·453	·398	+·055	57	56	+1
Madras Coast .	·761	·654	+·107	80	75	+5
South India . .	·586	·564	+·022	60	65	−5

At Leh, in Kashmir, the absolute humidity was low, and the relative humidity in large defect, but at all the remaining hill stations the air was damper than usual, and at some stations by large amounts. The following gives comparative data of the hill stations :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Quetta . . .	·198	·158	+·040	82	67	+15
Leh . . .	·031	·072	−·041	40	67	−27
Srinagar . .	·170	·154	+·016	88	82	+ 6
Kailang . .	·076	·088	−·012	77	71	+ 6
Simla . . .	·153	·147	+·006	73	58	+15
Chakrata . .	·163	·156	+·007	74	62	+12
Ranikhet . .	·185	·193	−·008	72	63	+ 9
Katmandu . .	·257	·249	+·008	78	73	+ 5
Darjeeling . .	·197	·203	−·006	89	81	+ 8
Mount Abu . .	·220	·207	+·013	51	43	+ 8
Pachmarhi . .	·316	·284	+·032	67	55	+12
Chikalda . .	·328	·209	+·019	60	52	+ 8
Wellington . .	·366	·302	+·064	71	68	+ 3

At Aden and Perim as well as in the Trades region, the absolute humidity was in excess but the variations of the relative humidity were variable and small. The following gives data :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
	"	"	"	%	%	
Aden . . .	·668	·640	+·028	70	72	−2
Perim . . .	·761	·662	+·099	76	70	+6
Zanzibar . .	·864	·850	+·014	75	77	−2
Seychelles . .	·826	·820	+·006	81	80	+1
Mauritius . .	·738	·744	−·006	73	75	−2

As mentioned above the air was much damper than usual over Northern and Central India, the increased dampness being as much marked on the hills as on the plains (except in the case of Leh), so that exceptionally low humidities were not probable. The following gives the lowest humidities recorded during the month :—

Station.	Date.	Hour.	Lowest humidity recorded during January 1901.
Leh	3rd January.	10 A.M. and 4 P.M.	0
	4th „	4 P.M.	0
	5th „	10 A.M and 4 P.M.	0
	6th „	10 A.M.	0
	10th „	10 A.M. and 4 P.M.	0
	11th „	4 P.M.	0
	16th „	10 A.M., and 4 P.M.	0
	17th „	10 A.M.	0
Poona	„ „	4 P.M.	13
Belgaum	18th „	„	14
Sholapur	„ „	„	14
Belgaum	19th „	10 A.M.	13
Deesa	„ „	4 P.M.	15
Poona	„ „	„	15
Belgaum	20th „	„	15
Sholapur	21st „	„	12
Poona	„ „	„	12
Leh	22nd „	10 A.M.	0
	24th „	10 A.M. and 4 P.M.	0

Station.	Date.	Hour.	Lowest humidity recorded during January 1901.
Kodaikanal	24th January.	10 A.M.	12
	25th "	"	12
Belgaum	" "	4 P.M.	14
Akola	26th "	"	14
Belgaum	" "	"	15
Poona	27th "	"	13
Dessa	" "	"	15
Leh	29th "	10 A.M.	0
	30th "	"	0
Poona	" "	4 P.M.	13
Leh	31st "	10 A.M.	0
Poona	" "	4 P.M.	15

The above shows that the lowest humidity percentages were recorded at Leh but that in parts of the Deccan the humidity was also low at times.

There were some cases of local deficiency of cloud. Notably in the south-east of the Peninsula, but in general the sky was more cloudy than usual. This was more particularly the case over West Bengal, the North-West and Central Provinces and the central districts of the Peninsula where the cloud amount, relatively to the normal, was very large. The following gives comparative data for the stations contained within this area of excessive cloudiness :—

Province or Division.	Station.	Mean cloud amount.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
West Bengal	Hazaribagh	5·3	2·3	+3·0
North-West Provinces.	Allahabad	4·6	2·1	+2·5
Central Provinces	Nagpur	4·6	2·1	+2·5
Berar	Akola	3·6	1·4	+2·2
Centre of the Peninsula.	Bellary	4·8	2·2	+2·6

The amount of cloud was less than usual locally at Diamond Island, but was excessive at the remaining stations in Burma and the Bay Islands :—

Station.	Mean cloud amount.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Port Blair	3·8	3·4	+ ·4
Rangoon	3·3	2·0	+1·3
Diamond Island	1·3	2·3	−1·0
Akyab	1·6	1·3	+0·3

At all stations in Bengal, the Gangetic Plain, Upper India and the Indus Valley, the sky was more cloudy than the normal, the excess having been greatest at Allahabad and Hazaribagh. The following gives comparative data for the stations in this large area :—

Province or Division.	Station.	Mean cloud amount.		
		Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Bengal	Chittagong	2·0	1·4	+0·6
	Calcutta	2·9	1·3	+1·6
	Saugor Island	3·0	1·6	+1·4
Gangetic Plain.	Hazaribagh	5·3	2·3	+3·0
	Darbhanga	2·6	1·4	+1·2
	Allahabad	4·6	2·1	+2·5
Upper India	Dehra Dun	3·8	4·2	+1·6
	Roorkee	4·2	3·4	+0·8
	Meerut	4·8	3·2	+1·6
	Lahore	4·6	3·6	+1·0
	Ludhiana.	4·7	4·4	+0·3
Indus Valley	Peshawar.	4·4	4·8	−0·4
	Jacobabad	4·9	3·0	+1·9
	Kurrachee	3·1	2·6	+0·5

In Rajputana the cloud amount was also in excess, the excess having been moderate at Jaipur and slight at Deesa :—

Station.	Mean cloud amount.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Jaipur	4·6	3·2	+1·4
Deesa	2·8	2·2	+0·6

In the Peninsula the excess of cloud was less general, and at the following stations in Madras the sky was clearer than usual :—

Station.	Mean cloud amount.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Bangalore	1·8	2·5	−0·7
Madras	3·9	4·0	−0·1
Salem	2·7	2·8	−0·1

At Bombay there was a moderate excess and at Karwar a slight deficiency of cloud. The following gives data for these two stations :—

Station.	Mean cloud amount.		
	Actual, January 1901.	Normal January.	Variation of actual from normal, January 1901.
Bombay	2·2	1·4	+0·8
Karwar	0·4	0·7	−0·3

Over the whole of the remainder of the Peninsula the sky was more cloudy than usual. This is shown below :—

Station.	Mean cloud amount.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Belgaum	2·7	1·5	+1·2
Sholapur	2·4	1·8	+0·6
Poona	2·1	1·5	+0·6
Akola	3·6	1·4	+2·2
Buldana	2·5	2·0	+0·5
Khandwa	2·8	1·5	+1·3
Nagpur	4·6	2·1	+2·5
Hyderabad (Deccan)	2·9	1·6	+1·3
Chitaldroog	2·1	1·8	+0·3
Hassan	3·3	3·1	+0·2
Mysore	4·8	2·8	+2·0
Bellary	4·8	2·2	+2·6

At Aden and Perim, as well as in the south-east trades region, the variations in the amount of cloud, relatively to the normal, were irregular. The following gives data :—

Station.	Mean cloud amount.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Aden	5·0	3·8	+1·2
Perim	2·0	2·4	−0·4
Zanzibar	5·5	4·4	+1·1
Seychelles	6·2	7·0	−0·8

The largest cloud amount was reported from the hill stations, the cloud proportion, on the mean of the month, exceeding 5 at the following places for which comparative data are given below :—

Station.	Mean cloud amount.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Quetta	5·5	4·1	+1·4
Leh	7·0	6·6	+0·4
Srinagar	8·5	0·6	+7·9
Kailang	7·6	6·7	+0·9
Simla	7·6	5·6	+2·0
Chakrata	5·4	4·6	+0·8
Ranikhet	5·4	4·1	+1·3
Darjeeling	6·9	5·7	+1·2

Over the plains the largest cloud amount was reported from parts of West Bengal, the Gangetic Plain, the Punjab and the Indus Valley; and the cloud proportion,

on the mean of the month, was more than 4·0 at the following stations. This is shown below: —

Station.	Mean cloud amount.		
	Actual, January 1901.	Normal, January.	Variation of actual from normal, January 1901.
Hazaribagh	5·3	2.3	+3·0
Allahabad	4·6	2·1	+2·5
Dehra Dun	5·8	4·2	+1·6
Roorkee	4·2	3·4	+0·8
Meerut	4·8	3·2	+1·6
Lahore	4·6	3·6	+1·0
Ludhiana	4·7	4·4	+0·3
Peshawar	4·4	4·8	−0·4
Jacobabad	4·9	3·0	+1·9
Jaipur	4·6	3·2	+1·4
Nagpur	4·6	2·1	+2·5
Mysore	4·8	2·8	+2·0
Bellary	4·8	2·2	+2·6

Rainfall.

Rainfall observations are made at upwards of 2,000 stations in India. The hour of observation is 8 A.M. The rainfall data for each province are tabulated in the office of the Meteorological Reporter, Director of Land Records, or other office in the province, and published in the provincial gazettes. A weekly statement of the rainfall of every district is telegraphed to the Simla Meteorological Office by District Officers, and a summary of this information is published in the *Gazette of India* weekly.

The charts illustrating the distribution of rainfall in the month under discussion are based in part upon the rainfall data of the meteorological observatories throughout India, and in part upon the rainfall information relating to the month telegraphed to Simla by District Officers, and the rainfall statements of the month published by the Local Governments.

The first rainfall chart (Plate IV) shows the actual distribution of the rainfall of the month so far as it is indicated by the returns of upwards of 220 meteorological stations. The distribution of rainfall is shown on this chart by means of isohyetic lines or lines of equal amounts of rainfall, the numbers attached to each line stating the rainfall in inches. The second chart (Plate V) shows the normal average rainfall and the variation of the rainfall from the normal of the month of the 57 meteorological or rainfall divisions, over each of which the meteorological conditions (more especially the rainfall) are fairly uniform and the staple crops similar in character.

Northern India usually receives light to moderate rain in the month of January from cold weather cyclonic storms. The precipitation is generally heaviest in the hill districts and decreases in amount southwards from the foot of these hills. Rain is also occasionally received in the South Madras coast districts, usually under the same conditions as in December. This rainfall is, however, exceptional in occurrence.

The rainy unsettled weather which appeared over Persia, Baluchistan and the north-west frontier in November and extended over India in December, continued during the month under review. During the month a series of small depressions entered North-West India from the westward, while other feeble disturbances were apparently developed over Kathiawar and the north-east angle of the Arabian Sea and thence advanced eastward across the head of the Peninsula. All these disturbances, though in most cases very feeble, when considered barometrically, exercised an important influence on the weather and gave wide-spread rain over Central and Northern India.

The chief periods of rainfall and of disturbed weather were as follows:—

The 1st to the 5th.—When the Punjab, the North-Western Provinces, the north of the Central Provinces and subsequently Bengal and Assam received moderate rain and the hills moderate snow.

The 8th and 9th.—When Rajputana, Central India, the Central Provinces and the North-Western Provinces received moderate rain.

The 10th to the 13th.—When Madras received rain.

The 13th to the 15th.—When Baluchistan and the whole of the north-western and central parts of India and subsequently Bengal received heavy rain and the hills heavy snow.

The 18th and 19th.—When Bengal received heavy showers.

The 20th and 21st.—When parts of North-West India received scattered showers.

The chief abnormal features of the rainfall of the month were:—

(1) The practical absence of even the small normal rainfall over Burma, East Bengal and Cachar.

(2) The large excess over most other parts of the Indian region and

(3) The very large fall, relatively to the normal, in parts of West Bengal, the North-Western Provinces and the Peninsula.

The following gives comparative rainfall data for the 56 meteorological divisions of the empire:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, January 1901.	Average normal, January.	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	...	...	0	0·02	− 0·02
	Lower Burma (Deltaic)*	...	...	0	0·16	− 0·16
	Central do.*	...	...	0·01	0·09	− 0·08
	Upper do.*	...	...	0·04	0·16	− 0·12
	Arakan*	...	...	0·07	0·10	− 0·03
Bengal and Assam	Eastern Bengal	0·5	0·9	0·20	0·44	− 0·24
	Assam (Surma)	1·1	1·2	0·26	0·60	− 0·34
	Do. (Hills)	1·7	1·3	0·67	0·61	+ 0·06
	Do. (Brahmaputra)	3·3	2·2	1·10	0·86	+ 0·24
	Deltaic Bengal	2·7	0·8	0·99	0·41	+ 0·58
	Central do.	2·8	0·9	1·08	0·43	+ 0·65
	North do.	2·6	1·0	0·72	0·50	+ 0·22
	Bengal Hills	3·7	1·4	1·41	0·86	+ 0·55
	Orissa	2·5	0·6	1·80	0·34	+ 1·46
	Chota Nagpur	4·4	1·2	3·59	0·58	+ 3·01
	Bihar (South)	3·3	1·2	2·41	0·67	+ 1·74
	Do. (North)	3·6	1·2	1·78	0·72	+ 1·06
North-Western Provinces and Oudh.	North-Western Provinces (East)	3·5	1·4	2·83	0·65	+ 2·18
	Oudh (South)	4·1	1·4	2·10	0·72	+ 1·38
	Do. (North)	4·2	1·3	2·38	0·78	+ 1·60
	North-Western Provinces (Central)	4·1	1·3	1·80	0·56	+ 1·24
	Do. do. (West)	4·0	1·4	1·54	0·56	+ 0·98
	Do. do. (Submontane, East)	3·7	1·2	2·50	0·57	+ 1·93
	Do. do. (Do. West)	5·4	2·5	3·18	1·45	+ 1·73
	Do. do. (Hills)	6·3	4·2	4·62	2·62	+ 2·00
Punjab	Punjab (South-East)	4·3	1·5	1·57	0·72	+ 0·85
	Do. (South)	2·4	1·3	0·92	0·65	+ 0·27
	Do. (Central)	2·4	2·1	1·58	1·11	+ 0·47
	Do. (Submontane)	5·0	2·5	3·33	1·56	+ 1·77
	Do. (Hills)	7·5	4·2	5·89	3·36	+ 2·53
	Do. (North)	4·1	2·8	3·16	1·81	+ 1·35
	Do. (West)	1·5	1·3	0·59	0·55	+ 0·04
Bombay and Malabar Coast Districts (Madras).	Malabar	0·8	0	0·57	0·17	+ 0·40
	Travancore	2·4	...	1·69	...	...
	Madras (South Central)	0·5	0·1	0·45	0·13	+ 0·32
	Coorg	0·9	...	0·37	...	...
	Mysore*	...	...	0·21	0·07	+ 0·14
	Konkan	...	...	...	...	...
	Bombay Deccan	...	...	...	...	...
	Hyderabad North	1·0	...	0·38	0·10	+ 0·28
	Khandesh	...	...	...	...	...
Central Provinces and Berar.	Berar	3·1	...	2·11	0·43	+ 1·68
	Central Provinces (West)	4·0	0·9	1·80	0·56	+ 1·24
	Do. do. (Central)	3·8	1·1	1·61	0·53	+ 1·08
	Do. do. (East)	3·3	1·1	1·67	0·49	+ 1·18

* Note.—The figures entered against divisions marked with an asterisk have been obtained from the Weekly Telegraphic Reports.

Province.	Division.	Number of rainy days. Average actual, January 1901.	Number of rainy days. Average normal, January.	Rainfall. Average actual, January 1901.	Rainfall. Average normal, January.	Rainfall. Variation of actual from normal, January 1901.
				Inches.	Inches.	Inches.
Bombay (North)	Gujarat	0	0	0	0	0
	Kathiawar and Cutch	0	0	0	0	0
	Sind	0	0	0	0	0
	Baluchistan Hills	4·8	...	1·74	1·93	— 0·19
Rajputana and Central India.	Central India (East)	2·7	...	1·12	0·59	+ 0·53
	Rajputana (East) and Central India (West)	2·5	...	1·03	0·47	+ 0·56
	Do. (West)	1·0	...	0·34	0·32	+ 0·02
Madras	East Coast (North)	1·6	0·1	0·79	0·16	+ 0·63
	Hyderabad (South)	0·8	...	0·26	0·13	+ 0·13
	Madras (Central)	0·4	0	0·25	0·07	+ 0·18
	East Coast (Central)	0·7	1·0	0·47	0·38	+ 0·09
	Do. (South)	1·3	0·9	0·56	0·45	+ 0·11
	Madras (South)	2·6	1·1	1·67	0·56	+ 1·11

The above shows that there was actually or practically no rain in five of the rainfall divisions, *viz.*, Tenasserim, Lower Burma, Central Burma, Upper Burma and Arakan; deficient rain in three divisions, *viz.*, Eastern Bengal, Assam Surma and Baluchistan Hills; normal rainfall in three divisions, *viz.*, Assam Hills, West Punjab and West Rajputana and excessive rain in all the remaining divisions. The excess was more than 200% in the following divisions, *viz.*, Orissa (+429 per cent.), Chota Nagpur (+519 per cent.), South Bihar (+260 per cent.), North-Western Provinces East (+335 per cent.), North Oudh (+205 per cent.), North-Western Provinces Central (+221 per cent.), North-Western Provinces East submontane (+339 per cent.), Malabar (+235 per cent.), Madras South Central (+246 per cent.), Hyderabad North (+280 per cent.), Berar (+391 per cent.), East Coast North (+394 per cent.), Central Madras (+257 per cent.), Berar (+391 per cent.), Central Provinces West (+221 per cent.), Central Provinces Central (+204 per cent), and Central Provinces East (+241 per cent.).

Practically no rain occurred in Burma and in Tenasserim and Lower Burma Deltaic, the month was absolutely rainless throughout.

In Assam there were four showery periods. The first lasted from the 1st to the 7th, but during this period the rainfall was light and in no case exceeded 1″ in 24 hours The second showery period lasted from the 10th to the 12th and the rainfall was even lighter than in the preceding period. The third period occurred on the 19th and 20th. This fall was both heavier and more general than the two preceding falls and the following amounts exceeding 1″ in 24 hours were registered :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Khasi and Jantia Hills.	Cherrapunji Police Station.	19th January	1·61
Sibsagar	Seleng	,, ,,	1·35
Lakhimpur	Margherita	,, ,,	1·34
Khasi and Jantia Hills.	Jowai	,, ,,	1·16

The last showery period occurred between the 22nd and 25th when the rainfall was again light and scattered. The following gives comparative data for the three rainfall divisions of the province :—

Division.	Rainfall. Average actual, January 1901.	Rainfall. Average normal, January.	Rainfall. Variation of actual from normal, January 1901.	Rainfall. Percentage variation from normal.	Number of rainy days. Average actual, January 1901.	Number of rainy days. Average normal, January.
	Inches.	Inch.	Inch.			
Assam Surma	0·26	0·60	—0·34	—57	1·1	1·2
,, Hills	0·67	0·61	+0·06	+10	1·7	1·3
,, Brahmaputra	1·10	0·86	+0·24	+28	3·3	2·2

East Bengal like Cachar had less rain than the average, but in all the remaining divisions the month's rainfall was in excess of the average. There were three rainy periods over Bengal. The first lasted from the 1st to the 5th when rain was received in all parts of the province though the amount was much less in East Bengal than in the remaining divisions. The fall was heaviest in Bihar and Chota Nagpur and exceeded 1·50" in 24 hours at the following large number of stations:—

	District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
				Inches.
Bihar.	Gaya	Daudnagar	1st January	2·92
	Monghyr	Gidhaur	" "	2·85
	Gaya	Gaya	" "	2·60
		Nawada	" "	2·50
	Monghyr	Jamoi	" "	2·45
	Shahabad	Kath	" "	2·40
	Gaya	Aurungabad	" "	2·34
	Shahabad	Dehri	" "	2·20
	Gaya	Arwal	" "	2·10
	Shahabad	Monaharpur	" "	1·92
	Gaya	Deo	" "	1·90
	Patna	Hilsa	" "	1·85
	Gaya	Jahanabad	" "	1·80
	Shahabad	Sasaram	" "	1·79
	Patna	Bihar	" "	1·70
		Bikram	" "	1·58
	Shahabad	Arrah	" "	1·51
Chota Nagpur.	Palamau	Ranka	" "	3·10
		Husainabad	" "	2·80
		Nagaruṭari	" "	2·60
		Palamau	" "	2·50
		Panki	" "	2·41
		Garhwa	" "	2·20
	Hazaribagh	Barhi	" "	2·11
		Chatra	" "	2·05
	Ranchi	Jashpur	" "	1·75
		Chainpur	2nd "	1·95
	Singhbhum	Gailkura	" "	1·76
	Ranchi	Lohardaga	" "	1·64
		Bano	3rd "	2·47
		Chaibassa	4th "	2·96
		Monaharpur	" "	2·69
		Gailkura	" "	2·58
		Katbari	" "	2·40
		Baharagura	" "	2·29
	Palamau	Husainabad	" "	2·10

The second rainy period occurred on the 15th and 16th. The rainfall on this occasion was generally light, but as in the previous case was heavier in Bihar than in other parts of the province. In Bihar the following falls exceeding 1 inch in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Champaran	Bagah	15th January	1·71
	Ramnagar	" "	1·50
	Motihari	" "	1·15

The next fall of rain was reported on the 18th and 19th. It was fairly general throughout the province but was not heavy except in parts of South-West Bengal where the following falls exceeding 2 inches in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Orissa Tributary Mahals.	Anandpur	18th January	2·58
Angul	Baisinga	" "	2·47

After the 20th, the rainfall practically ceased and only one or two trifling unimportant amounts were recorded.

The following gives comparative rainfall data for the different divisions of Bengal :—

Division	Rainfall.				Number of rainy days.	
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.	Average actual, January 1901.	Average normal, January.
	Inches.	Inch.	Inch.			
Eastern Bengal . .	0·20	0·44	— 0·24	— 55	0·5	0·9
Deltaic „ . .	0·99	0·41	+ 0·58	+141	2·7	0·8
Central „ . .	1·08	0·43	+ 0·65	+151	2·8	0·9
North „ . .	0·72	0·50	+ 0·22	+ 44	2·6	1·0
Bengal Hills . .	1·41	0·86	+ 0·55	+ 64	3·7	1·4

There were four rainy periods over the North-Western Provinces, the first and last having been the more general and heavy. The first rainy period occurred on the 1st and 2nd when the rainfall was heavy in the south-east, north-east and submontane divisions. The following gives particulars of the falls exceeding 2 inches in 24 hours :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Mirzapur . .	Robertsganj . .	1st January	2·86
	Chunar . . .	„ „ .	2·40
Allahabad . .	Barah . . .	„ „ .	2·42
Naini Tal . .	Naini Tal . .	„ „ .	2·38
Moradabad . .	Sambhal . .	„ „ .	2·33
Mirzapur . .	Dudhi . . .	„ „ .	2·27
	Mirzapur . . .	„ „ .	2·24
Allahabad . .	Karchana . .	„ „ .	2·20
	Meja . . .	„ „ .	2·17
	Handia . . .	„ „ .	2·08
Naini Tal . .	Naini Tal . . .	2nd „	2·02

The second fall of rain occurred on the 5th and 6th, when Oudh and the south-east of the North-Western Provinces received moderate rain, but the amounts were small compared with those reported during the preceding fall. The third rainy period was reported on the 8th and 9th. The fall on this occasion was remarkably general but the amounts received were generally small and only in a few cases exceeded half an inch in 24 hours. The last and most important fall of the month occurred between the 13th and 15th. On this occasion every part of the North-Western Provinces and Oudh received rain and at many places, but particularly in the submontane division, the amounts were exceptionally heavy. The following falls exceeding 1·50″ in 24 hours were recorded on this occasion :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Dehra Dun . .	Mussooree . .	13th Jannary .	1·95
	Rajpur . . .	„ „ .	1·54
Garhwal . .	Joshimath . .	14th „ .	3·31
Dehra Dun . .	Chakrata (Obsty.) .	„ „ .	2·84
Garhwal . .	Okimath . . .	„ „ .	2·50
Dehra Dun . .	ChakrataTahsil, (Kalsi)	„ „ .	2·40
Garhwal . .	Lansdowne . .	„ „ .	2·22
Almora . . .	Chaukuri . .	„ „ .	2·06
Garhwal . . .	Birankhal . .	„ „ .	1·72
Dehra Dun . .	Ambari . . .	„ „ .	1·70
Bijnor . . .	Najibabad . .	„ „ .	1·67
Naini Tal . .	Naini Tal . . .	„ „ .	1·66
Almora . . .	Purana Thal . .	„ „ .	1·60
Saharnpur . .	Hardwar . . .	15th „ .	3·35
Muzaffarnagar .	Jauli-Jansath . .	„ „ .	2·26
Garhwal . . .	Lansdowne . .	„ „ .	2·18
Dehra Dun . .	Chakrata (Obsty.) .	„ „ .	2·16
Naini Tal . .	Naini Tal . . .	„ „ .	2·10
Almora . . .	Champawat . .	„ „ .	2·06
Naini Tal . .	Kilpuri . . .	„ „ .	2·04
Dehra Dun . .	Bhogpur . . .	„ „ .	1·90
Gorakhpur . .	Maharajganj . .	„ „ .	1·84
Budaun . . .	Dataganj . . .	„ „ .	1·75
Kheri . . .	Muhamdi . . .	„ „ .	1·73
Basti . . .	Basti . . .	„ „ .	1·68
Almora . . .	Ranikhet (Obsty.) .	„ „ .	1·63
Garhwal . . .	Joshimath . .	„ „ .	1·60
Banda . . .	Banda . . .	„ „ .	1·54
	Birankhal . . .	„ „ .	1·52
Dehra Dun . .	ChakrataTahsil,(Kalsi)	„ „ .	1·52

As a consequence of these heavy general falls of rain every division in the North-Western-Provinces exhibited

a large excess at the close of the month. This excess was particularly large in the east and east submontane divisions. The following gives comparative data for the eight divisions :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.	Average actual, January 1901.	Average normal, January.
	Inches.	Inches.	Inches.			
North-Western Provinces East.	2·83	0·65	+2·18	+335	3·5	1·4
South Oudh . .	2·10	0·72	+1·38	+192	4·1	1·4
North Oudh . .	2·38	0·78	+1·60	+205	4·2	1·3
North-Western Provinces Central..	1·80	0·56	+1·24	+221	4·1	1·3
North-Western Provinces West	1·54	0·56	+0·98	+175	4·0	1·4
N. W. P. East Submontane.	2·50	0·57	+1·93	+339	3·7	1·2
Do. West Do. .	3·18	1·45	+1·73	+119	5·4	2·5
N. W. P. Hills . .	4·62	2·62	+2·00	+ 76	6·3	4·2

In the Punjab there were also four rainy or showery periods of which the most important was that of the 13th to the 15th. The first rainfall period occurred on the 1st and 2nd when the rainfall was moderately heavy over the submontane and north-west divisions of the province where the following amounts exceeding 1″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kangra . . .	Kangra . . .	1st January .	1·80
	Nagar . . .	,, ,, .	1·77
Umballa . . .	Naraingarh . .	,, ,, .	1·60
Kangra . . .	Dharmsala . .	,, ,, .	1·50
Umballa . . .	Jagadhri. . .	,, ,, .	1·45
Gurdaspur . .	Madhopur . .	,, ,, .	1·40
	Dalhousie . .	,, ,, .	1·36
Umballa . . .	Dadupur . . .	,, ,, .	1·20
Gurdaspur . .	Pathankot . .	,, ,, .	1·09
	Shakargarh . .	,, ,, .	1·05
Hoshiarpur . .	Sadr station . .	,, ,, .	1·04
	Garhshankar . .	,, ,, .	1·03
Kangra . . .	Kulu	,, ,, .	1·02

The second fall of rain occurred on the 8th and 9th. It was only a light and partial fall and was practically confined to the central division. The third and most important fall of the month occurred between the 13th and 15th. Rain fell in all divisions of the province and heavy snow on the hills. Rainfall amounts exceeding 2″ in 24 hours were recorded at the following large number of stations on this occasion :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Rawalpindi . .	Murree . . .	13th January .	3·60
	Rawalpindi . .	,, ,, .	2·75
Gurdaspur . .	Dalhousie . .	,, ,, .	2·64
Rawalpindi . .	Kahuta . . .	,, ,, .	2·63
	Fatahjang . .	,, ,, .	2·58
Hazara . .	Abbottabad . .	,, ,, .	2·43
	Attock . . .	,, ,, .	2·40
Peshawar . .	Swabi . . .	,, ,, .	2·30
	Katlang . . .	,, ,, .	2·30
Hazara . .	Mansahra . . .	,, ,, .	2·15
	Haripur . . .	,, ,, .	2·03
Simla . . .	Kilba . . .	14th ,, .	2·83
Rawalpindi . .	Murree . . .	,, ,, .	2·80
Jhelum . . .	Sadr Station . .	,, ,, .	2·47
Gurdaspur . .	Madhopur . . .	,, ,, .	2·20
Kangra . .	Dharmsala . . .	,, ,, .	2·10
Gurdaspur . .	Gurdaspur . . .	,, ,, .	2·07
Kangra . . .	Palampur . . .	,, ,, .	2·02
Gurdaspur . .	Pathankot . . .	,, ,, .	2·00
Jullundur . .	Nawashahr. . .	15th ,, .	3·99
Hoshiarpur . .	Garhshankar . .	,, ,, .	3·39
	Una	,, ,, .	2·88
Kangra . .	Dharmsala . . .	,, ,, .	2·55
	Palampur . . .	,, ,, .	2·43

The last rainy period of the month occurred on the 20th and 22nd. There was fairly general rain and though not

so heavy as the immediately preceding fall, the following amounts exceeding 1″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall, during 24 hours preceding 8 A.M. of date.
			Inches.
Gurdaspur	Dalhousie	20th January	1·08
	,,	21st ,,	2·16
Kangra	Nagar	,, ,,	1·25
Patiala State	Gujran	,, ,,	1·16
Gujranwala	Rampur	,, ,,	1·10
Amritsar	Raya	,, ,,	1·09
Kangra	Dera	22nd ,,	1·79
	Palampur	,, ,,	1·75
Hoshiarpur	Sadr Station	,, ,,	1·70
Jullundur	Jullundur	,, ,,	1·67
Hoshiarpur	Hoshiarpur	,, ,,	1·65
Kangra	Kangra	,, ,,	1·45
Gurdaspur	Pathankot	,, ,,	1·13

The rainfall of the month was about normal in the west of the province but was in more or less large excess in other places. The following gives comparative rainfall data of the province:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, January 1901.	Average normal, January	Variation of actual from normal, January 1901.	Percentage variation from normal.	Average actual, January 1901.	Average normal, January.
	Inches.	Inches.	Inches.			
Punjab: South-East	1·57	0·72	+0·85	+118	4·3	1·5
Punjab: South	0·92	0·65	+0·27	+ 42	2·4	1·3
Punjab: Central	1·58	1·11	+0·47	+ 42	2·4	2·1
Punjab: Sub-montane	3·33	1·56	+1·77	+113	5·0	2·5
Punjab: Hills	5·89	3·36	+2·53	+ 75	7·5	4·2
Punjab: North	3·16	1·81	+1·35	+ 75	4·1	2·8
Punjab: West	0·59	0·55	+0·04	+ 7	1·5	1·3

In Persia the rainfall of the month, so far as the scanty data available show, was as follows:—

Station.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jask	0·64	1·00	—0·36	— 36
Bushire	1·22	3·23	—2·01	— 62
Teheran	0	1·16	—1·16	—100
Ispahan	0	0·11	—0·11	—100
Meshed	0·01	0·23	—0·22	— 96

Baluchistan received showers more or less throughout the month, but the principal periods of rainfall were between the 10th and 14th and between the 18th and 20th. The amounts received were not generally heavy and the total rainfall of the month was approximately normal.

Kashmir had rain and snow on the 1st and 2nd, between the 12th and 14th and between the 20th and 23rd. The only heavy fall was the second, *viz.*, that between the 12th and 14th when the following large amounts exceeding 1″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kashmir	Kotli	12th January	2·07
Kashmir	Utar Machhipore	,, ,,	1·52
Kashmir	Ramban	,, ,,	1·41
Kashmir	Punch	,, ,,	1·34
Kashmir	Meerpore	,, ,,	1·10
Kashmir	Kotli	13th ,,	5·75
Kashmir	Punch	,, ,,	4·00
Kashmir	Meerpore	,, ,,	3·48
Kashmir	Ramban	,, ,,	2·83
Kashmir	Bhimber	,, ,,	2·64
Kashmir	Kathua	,, ,,	2·57
Kashmir	Domel	,, ,,	2·55
Kashmir	Anantnag	,, ,,	1·72
Kashmir	Rampore Rajauri	,, ,,	1·67
Kashmir	Udumpur	,, ,,	1·52
Kashmir	Uri	,, ,,	1·52
Kashmir	Utar Machhipore	,, ,,	1·48
Kashmir	Jammoo	,, ,,	1·32
Kashmir	Pattan	,, ,,	1·23

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kashmir—*contd.*	Vantipore	13th January	1·17
	Haripore	,, ,,	1·05
	Rampore Rajauri	14th ,,	3·20
	Domel	,, ,,	2·24
	Pader	,, ,,	1·74
	Sri Ranbir Singh Pora	,, ,,	1·58
	Sambha	,, ,,	1·53
	Srinagar	,, ,,	1·42
	Kathua	,, ,,	1·10

Western Rajputana had a few light showers during the first three weeks of the month, and the total fall of the month was about normal. Eastern Rajputana, on the contrary, had fairly general showers on the 1st, the 8th and 9th, the 14th and the 20th. The heaviest fall was that of the 8th and 9th when the following amounts exceeding 1" in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Jaipur	Chatsu	8th January	1·40
	Chomu	,, ,,	1·38
	Sri Madhopur	,, ,,	1·21
	Dausa	,, ,,	1·06

The total rainfall of this part of the province was about twice as heavy as usual. The following gives comparative rainfall data for some of the larger states :—

State.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inches.	Inch.	Inch.	
Jodhpur	0·38	0·30	+0·08	+ 27
Jaipur	1·37	0·64	+0·73	+114
Alwar	1·44	0·64	+0·80	+125
Bharatpur	1·00	0·47	+0·53	+113
Ajmer Merwara	1·06	0·26	+0·80	+ 38
Udaipur	0·08	0·11	−0·03	− 27
Sirohi	0·44	0·22	+0·22	+100

In the west of Central India the rainfall was light and scattered, but in the east it was more general and amounts exceeding 1" in 24 hours were recorded at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Nagode	Nagode Hospital	15th January	1·72
Rewah	Tyonthar	,, ,,	1·05
Bundelkhand	Charkhari	,, ,,	1·04

The following gives comparative data for some of the large states :—

State.	Rainfall.			
	Average actual, January 1901.	Average normal, January	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Indore	0·76	0·28	+0·48	+171
Rutlam	0·27	0·19	+0·08	+ 42
Bhopal Agency	...	...	...	...
Gwalior	0·67	0·31	+0·36	+116
Rewah	1·86	0·92	+0·94	+102
Bundelkhand	1·82	0·60	+1·22	+203

The Central Provinces received rain between the 2nd and the 5th; the 8th and the 10th; and the 13th and the 18th after which date the rainfall ceased. The fall was heaviest between the 13th and 18th when the following amounts exceeding 1 inch in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Nagpur	Katol	13th January	1·42
Saugor	Rehli	,, ,,	1·18
Hoshangabad	Hoshangabad	,, ,,	1·13
	Harda	,, ,,	1·04
Saugor	Saugor	,, ,,	1·01
Betul	Betul (Badnur)	14th ,,	2·85
Wardha	Arvi	,, ,,	1·67
Nimar	Burhanpur	,, ,,	1·61
Hoshangabad	Pachmarhi	,, ,,	1·32
Betul	Shahpur	,, ,,	1·10

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Damoh	Hatta	15th "	1·13
Saugor	Banda	" "	1·10
Bilaspur	Pandaria	18th "	1·20

Total rainfall of the month largely exceeded the normal in all parts of the Central Provinces.

Berar had light rain on the 8th and 9th and general rain between the 13th and 15th. The fall on the latter occasion was exceedingly heavy and amounts exceeding 1″ in 24 hours were recorded at the following large number of stations :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Amraoti	Morsi	13th January	1·32
Buldana	Pimpalgaon Raja	" "	1·08
	Do.	14th "	8·41
Basim	Risod	" "	2·63
	Basim, Civil Station	" "	2·55
	Sirpur	" "	2·38
Amraoti	Talegaon	14th January	2·25
	Chandur	" "	1·85
Buldana	Nandura	" "	1·85
Amraoti	Karinja	" "	1·74
	Badnera	" "	1·70
Wun	Yeotmal, Civil Station	" "	1·68
Ellichpur	Chandur Bazar	" "	1·65
	Daryapur	" "	1·63
Basim	Mangrul	" "	1·60
Amraoti	Amraoti, Civil Station	" "	1·59
Akola	Patur	" "	1·49
Buldana	Donigaon	" "	1·43
Amraoti	Murtizapur	" "	1·40
Akola	Akote	" "	1·30
Wun	Darwha	" "	1·24
	Wun	" "	1·24
Amraoti	Kholapur	" "	1·23
Akola	Khamgaon	" "	1·20
Buldana	Malkapur	" "	1·20
Akola	Telhara	" "	1·16
	Balapur	" "	1·12
	Shegaon	" "	1·07
Ellichpur	Daryapur	15th "	6·48

The following gives comparative data for Berar and the three divisions of the Central Provinces :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.	Average actual, January 1901.	Average normal, January.
	Inches.	Inch.	Inches.			
Berar	2·11	0·43	+1·68	+391	3·1	...
Central Provinces, (West).	1·80	0·56	+1·24	+221	4·0	0·9
Central Provinces (Central).	1·61	0·53	+1·08	+204	3·8	1·1
Central Provinces (East)	1·67	0·49	+1·18	+241	3·1	1·1

In the Nizam's Territory there were light showers between the 8th and the 14th and the small normal fall of the month in this region was largely exceeded.

Bombay had rain during the disturbed period between the 13th and the 15th when the following amounts exceeding 1″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Ahmednagar	Nevasa	13th January	2·03
Khandesh	Jalgadu	" "	1·07
Ahmednagar	Rahuri	" "	1·04
Khandesh	Yaval	13th "	1·80
Poona	Indapur	" "	1·64
	Talegaon Dabhada	" "	1·58
	Baramati	" "	1·31
Kolhapur and other Southern Maratha Country States.	Kolhapur	" "	1·44
Poona	Dhond	" "	1·41
Khandesh	Raver	" "	1·30
Ahmednagar	Jamkned	" "	1·19
Sholapur	Barsi	" "	1·16
Poona	Junnar	" "	1·09

The small normal fall of the month was exceeded in all divisions of the Bombay Presidency except Sind where the month's rainfall was in slight defect. This is shown

by the following table which gives rainfall data for all the Bombay divisions :—

Division.	Number of rainy days.		Rainfall.			
	Average actual, January, 1901.	Average normal, January.	Average actual, January, 1901.	Average normal, January.	Variation from normal.	Percentage variation.
Konkan . . .	0·5	0·2	0·24	0·14	+0·10	+ 71
Bombay Deccan . .	1·0	0·2	0·46	0·07	+0·39	+557
Khandesh . . .	1·6	0·2	0·87	0·10	+0·77	+770
Gujarat . . .	0·3	0·2	0·12	0·06	+0·06	+100
Kathiawar and Cutch .	0·3	0·2	0·07	0·05	+0·02	+ 40
Sind	0·6	...	0·24	0·40	—0·16	— 40

The rainfall of the Madras Presidency was everywhere in excess of the normal. The rainfall was received mainly during two periods the first running from the 10th to the 13th, the second from the 18th to the 22nd.

Malabar had one showery period, *viz.*, between the 11th and the 12th but the total rainfall of the division was more than the small normal of the month. The following gives data for the districts in this division :—

District.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Malabar . . .	0·80	0·18	+0·62	+344
South Canara . .	0·14	0·15	—0·01	— 7

The division of South Madras received rain between the 10th and 13th, on the 18th and on the 23rd. The showers were moderately heavy and exceeded 1″ in 24 hours at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Tinnevelly . .	Tuticorin . . .	10th January.	1·73
	Sattur . . .	„ „	1·55
Madura . . .	Periyakulam . .	11th „	3·30
Tinnevelly . .	Watrap . . .	„ „	3·24
	Srivilliputtur . .	„ „	2·70
Madura . . .	Usilampatti . .	11th January.	2·09
Tinnevelly . .	Keeranur . . .	„ „	1·62
	Srivaikuntam . .	„ „	1·20
	Kayalpatnam . .	12th „	1·78
	Watrap . . .	„ „	1·75
	Srivilliputtur . .	„ „	1·70
Madura . . .	Periyakulam . .	„ „	1·54
Tinnevelly . .	Kulasekarapatnam .	„ „	1·53
	Sankaranayinarkoyil .	„ „	1·26
Madura . . .	Pamban . . .	18th „	1·25
Tinnevelly . .	Vilattikulam . .	22nd „	1·58
	Nanaguneri . .	„ „	1·28
	Ottappidaram . .	„ „	1·12
	Palamcottah . .	23rd „	1·50

In consequence the total rainfall of the division was in excess. The following gives data for the two districts :—

District.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madura . . .	0·99	0·39	+0·60	+154
Tinnevelly . . .	2·50	0·76	+1·74	+230

South-Central Madras had only two falls of rain, *viz.*, on the 11th and 12th and on the 23rd but as will be seen below the amounts received were in some cases heavy. The following gives particulars of the falls exceeding 1″ in 24 hours in this division :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Coimbatore .	Mettupalaiyam . .	11th January.	2·68
Salem . . .	Thammampatti .	„ „	1·78
	Attur . . .	„ „	1·31
Coimbatore . .	Satyamangalam .	21st „	6·00

The total fall of this division was in large excess, as is shown below :—

District.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation, of actual from normal, January 1901.	Percentage variation from normal.
	Inch	Inch.	Inch.	
Salem	0·19	0·14	+0·05	+ 36
Coimbatore	0·80	0·11	+0·69	+627

Central Madras had showers on the 11th, but at no other time during the month. The showers were, however, moderate, and the total fall of the month largely exceeded the small normal amount. This is shown below :—

District.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Cuddapah	0·12	0·14	−0·02	− 14
Anantapur	0·15	0·03	+0·12	+400
Bellary	0·30	0·04	+0·26	+650
Kurnool	0·43	0·07	+0·36	+514

The north division of the East coast received showers between the 4th and the 11th, and again on the 19th. The amounts were moderately heavy on several occasions and exceeded 1″ in 24 hours at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Ganjam	Rambha	4th January	2·30
	Chatrapur	5th ,,	1·45
	Purushottapur	,, ,,	1·35
	Russellkonda	,, ,,	1·17
Vizagapatam	Valacheruvu	6th ,,	1·55
Godavari	Coringa	8th ,,	1·93
Vizagapatam	Nowrangapur	10th ,,	1·31
Ganjam	Ramagiri	,, ,,	1·21
Godavari	Polavaram	11th ,,	3·25
	Addatigala	,, ,,	2·55
Kistna	Narsaraopet	,, ,,	1·57
	Tenali	,, ,,	1·31
	Avanigadda	,, ,,	1·26
Vizagapatam	Parvatipuram	,, ,,	1·12
Kistna	Ponnur	,, ,,	1·06
Vizagapatam	Waltair	12th ,,	2·72

In consequence the small normal rainfall was considerably exceeded. The following gives comparative data for the different districts in this division :—

District.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inches.	Inch.	Inch.	
Ganjam	1·03	0·18	+0·85	+472
Vizagapatam	0·82	0·20	+0·62	+310
Godavari	0·96	0·11	+0·85	+773
Kistna	0·51	0·22	+0·29	+132

The central division also received showers between the 7th and the 13th and on some occasions these showers were heavy. The following gives the falls exceeding 1″ in 24 hours.

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Nellore	Udayagiri	11th January	1·75
	Kanigiri	,, ,,	1·30
	Venkatgiri	12th ,,	2·60

Comparative data for the Nellore district are given below :—

District.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Nellore . . .	0·47	0·38	+0·09	+24

The south division of the East coast had showers about the 11th and 12th and between the 20th and 23rd. The amounts were not generally large but the normal rainfall was slightly exceeded. The following gives comparative data for the different districts in this division :—

District.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inches.	Inch.	Inch.	
Chingleput . . .	0·54	0·42	+0·12	+ 29
Madras	0·72	0·86	—0·14	— 16
North Arcot . . .	0·27	0·25	+0·02	+ 8
South Arcot . . .	1·08	0·46	+0·62	+135
Tanjore . . .	0·62	0·71	—0·09	— 13
Trichinopoly . . .	0·17	0·24	—0·07	— 29

The general rainfall of the Madras Presidency, as stated above, was more or less largely in excess. This is shown by the following table which gives rainfall data for all the Madras divisions :—

Division.	Rainfall.			
	Average actual, January 1901.	Average normal, January.	Variation of actual from normal, January 1901.	Percentage variation from normal.
	Inches.	Inch.	Inch.	
Malabar . . .	0·57	0·17	+0·40	+235
Madras (South Central) .	0·45	0·13	+0·32	+246
„ (East Coast North).	0·79	0·16	+0·63	+394
„ (Central) . .	0·25	0·07	+0·18	+257
„ (East Coast Central).	0·47	0·38	+0·09	+ 24
„ (East Coast South).	0·56	0·45	+0·11	+ 24
„ (South) . .	1·67	0·56	+1·11	+193

Table

Abstract of Observations taken at 8 A.M. at 220

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.				−·004								88·1	+1·7	68·9	+4·5	78·5	+3·1	19·1					28·0
1	Tenasserim and Bay Islands.	Port Blair	61	29·957	+·017	29·949	30·014	12th	29·849	2nd	·165	79·0	88·1		77·0*		82·7*		11·1	90·8	4th	73·2	18th, 26th & 31st.	17·6
		Mergui	96	29·907	0	29·935	29·971	28th	29·822	2nd	·149	77·1	88·9	+0·7	72·9	+7·1	80·9	+3·9	16·0	93·1	1st	70·4	11th & 13th.	22·7
		Tavoy	26	29·975	−·014	29·932	30·030	28th	29·892	2nd	·138	73·5	91·4	+2·1	69·8	+5·4	80·6	+3·8	21·6	93·7	28th	64·0	10th	29·7
		Moulmein	94	29·936	−·016	29·969	29·996	14th	29·871	30th & 31st.	·125	72·9	91·2	+2·9	68·6	+3·0	79·9	+3·0	22·6	93·5	18th, 27th & 29th.	61·8	25th	31·6
2	Lower Burma	Rangoon	41	29·984	−·018	29·963	30·046	14th	29·908	31st	·138	70·4	91·1	+2·4	65·9	+2·0	78·5	+2·2	25·2	94·1	4th & 29th.	57·7	12th	36·4
		Bassein	27	30·018	?	29·981	30·081	13th	29·938	31st	·143	69·5	87·2	+1·8	66·5	+5·5	76·9	+3·7	20·7	91·2	29th	60·2	30th	31·0
		Diamond Island	41	29·989	−·004	29·935	30·046	14th	29·909	31st	·137	77·4	84·2	+0·3	74·2	+3·9	79·2	+2·1	10·0	88·6	6th	70·7	25th	17·9
5	Arakan	Akyab	20	30·033	−·008	29·996	30·108	22nd	29·944	2nd	·164	61·8	82·4	+1·0	56·5	?	69·5	?	25·9	86·4	5th	49·6	12th	36·8
3	Central Burma	Toungoo	183	29·859	+·008	29·991	29·939	13th	29·788	30th & 31st.	·151	67·1†	?	?	?	?	?	?	?	?	?	?		?
	II.—Burma Inland				+·028								80·9	−1·2	53·8	+0·2	67·4	−0·5	27·1					40·2
3	Central Burma	Thayetmyo	130	29·934	+·009	30·011	30·033	13th	29·851	3rd	·182	63·2	86·7	+1·3	54·9	?	70·8	?	31·8	92·9	29th	46·8	14th	46·1
4	Upper Burma	Minbu	165	29·914	+·036	30·029	30·017	14th	29·823	19th	·194	64·1	81·9	?	57·3	+2·3	71·1	?	27·6	92·6	29th	51·5	14th	41·1
		Yamethin	657	29·380	+·025	30·016	29·476	13th	29·299	3rd	·177	62·3	88·1	+1·9	55·9‡?	+3·1‡?	72·2‡?	+2·5?	32·2?	92·0	29th	48·7	15th	42·3
		Mandalay	250	29·811	+·032	30·026	29·920	14th	29·713	20th	·207	61·4	84·2	+0·4	56·1	+0·6	70·2	+0·5	28·1	87·5	18th	50·2	12th & 13th.	37·3
		Kindat	377	29·717	?	30·074	29·834	14th	29·587	19th	·247	54·5	74·6	−1·0	51·9	−0·4	63·3	−0·7	22·7	82·8	20th	45·8	23rd	37·0
		Bhamo†	381	29·688	+·037	30·052	29·786	13th & 14th.	29·601	19th	·185	53·4	74·3	−3·1	48·8	+0·3	61·6	−1·4	25·5	79·5	29th	40·2	13th	39·3
4(a)	Burma Hill Stations.	Maymyo										49·4	73·4							75·0	4 days			
		Taunggyi										55·3	72·5	−0·9	44·3	+2·0	58·4	+0·6	28·2	77·2	10th & 30th.	33·1	12th	44·1
		Lashio										50·7	74·6	+0·5	45·1	+1·1	59·9	+0·8	29·5	78·6	28th	38·1	13th	40·5
	III.—Assam				+·006								72·1	−1·5	51·2	−0·7	61·7	−1·1	20·9					30·4
7	Surma	Silchar	104	30·003	+·020?	30·066	30·110	12th	29·902	4th	·209	56·5	77·5	+0·3	51·6	−0·7	64·6	−0·2	25·9	82·4	2nd	45·5	14th	36·9
9	Brahmaputra	Sibsagar	333	29·774	+·002	30·086	29·888	12th	29·647	19th	·241	53·5	68·1	−1·8	50·5	+0·7	59·3	−0·6	17·6	71·3	8th & 27th.	44·9	14th	26·4
		Dhubri	115	29·982	+·009	30·060	30·101	12th	29·824	19th	·217	55·0	70·6	−2·9	51·5	−2·1	61·1	−2·5	19·1	75·6	29th	47·8	22nd & 24th.	27·8
	IV.—Bengal and Orissa				+·019								74·2	−3·1	53·7	+0·1	64·0	−1·5	20·5					31·6
6	East Bengal	Chittagong	87	29·995	+·012	30·036	30·077	12th	29·898	4th	·179	59·8	79·3	+1·5?	54·4	−1·0	66·9	+0·3?	24·9	84·4	28th	48·6	22nd	35·8
		Noakhali	43	30·043		30·035	30·128	12th	29·950	4th	·178	57·5	79·5		50·9		65·2		28·6	88·8	29th	44·9	25th	43·9
		Comilla	36	30·061		30·046	30·150	12th	29·957	4th	·193	59·5	77·7		52·2		65·0		25·5	83·4	2nd	47·8	4 days	36·3
		Sirajganj	49	30·039		30·041	30·146	12th	29·927	4th	·219	56·2	73·6		52·5		63·1		21·1	77·8	28th	47·4	11th	30·4
		Narayanganj	26	30·065	+·009	30·041	30·157	12th	29·969	4th	·188	58·8	74·7	−3·5	54·7	−0·3	64·7	−2·0	20·0	80·1	28th & 29th.	49·7	2th, 20th & 21st.	30·4
		Barisal	13	30·077	+·019	30·037	30·172	12th	29·977	2nd	·195	60·8	75·8	−0·7	54·7	−0·3	65·3	−0·5	21·1	81·3	30th	49·2	13th, 20th & 21st.	32·1
		Mymensingh	59	30·024	+·003	30·039	30·125	12th	29·922	2nd	·203	56·0	73·4	−1·1	52·3	−0·1	62·9	−0·6	21·1	77·3	30th	47·4	22nd	29·9
10	Deltaic Bengal	Faridpur	46	30·058		30·054	30·150	12th	29·943	4th	·207	59·1	74·9		52·6		63·8		22·3	81·7	4th	47·0	20th & 24th.	34·7
		Jessore	33	30·068	+·021	30·049	30·152	12th	29·973	4th	·180	58·2	73·6	−4·4	53·5	+0·3	63·6	−2·1	20·1	79·6	28th & 29th.	46·1	20th	33·5
		Calcutta	21	30·093	+·023	30·061	30·193	12th	29·996	3rd	·197	59·6	73·8	−3·1	55·4	0	64·7	−1·6	18·4	80·1	28th & 29th.	50·1	20th & 28th.	30·0
		Sangor Island	25	30·072	+·014?	30·042?	30·165	23rd	29·956	4th	·209	60·8	75·5	−1·1	56·9	−2·5	66·2	−1·8	18·6	80·0	30th	50·0	20th	30·0
		Krishnagar	47	30·076		30·075	30·186	12th	29·976	4th	·210	59·9	74·3		53·3		63·8		21·0	80·5	28th	46·9	20th	33·6
		Midnapore	149	29·960		30·065	30·061	12th	29·856	4th	·205	60·3	74·0		55·3		64·7		18·7	80·3	29th	50·2	8th & 20th.	30·1

* Mean of 28 days. † Mean of 30 days. ‡ Mean of 26 days.

tions in India, Burma, etc., in January, 1901.

Wind Direction. Number of winds from								Wind resultant.	Wind Velocity.				Hygrometry, 8 a.m.		Mean cloud amount.	Rainfall.							Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
..	NE.	E.	SE.	S.	SW.	W.	NW.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st January 1900.	Normal rainfall for period, 1st to 31st January.	Variation from normal of period, 1st to 31st January.				
																			0·55	0·34	+0·21						I.—Burma Coast and Bay Islands.	
7	13	1	1			2	7	N 11° E	5·3		7·0	−24	84	·838	4·1	3			1·94	0·81	+ 1·13	1·94	0·81	+ 1·13	1·15	Port Blair .	Tenasserim and Bay Islands.	1
								Calm	3·0		2·0	+50	89	·815	3·8	7			2·63	0·84	+ 1·79	2·63	0·84	+ 1·79	0·65	Mergui.		
								Calm	1·0				92	·768	0·3	0			0·03	0·19	− 0·16	0·03	0·19	− 0·16	0·02	Tavoy.		
							7	N 7° E	1·6	1·8	2·4	−25	80	·652	0·6	0	0·09	− 0·09	0	0·51	− 0·51		0·51	− 0·51	0	Moulmein.		
2	11						7	N 7° E	1·6	1·8	2·4	−25	80	·652	0·6	0	0·09	− 0·09	0	0·51	− 0·51		0·51	− 0·51	0	Moulmein.		
8	7	1			2	7	3	N 19° W	4·4		4·3	+ 2	78	·582	2·7	0	0·27	− 0·27	0	0·17	− 0·17	0	0·17	− 0·17	0	Rangoon .	Lower Burma.	2
4	13						5	N 19° E	4·2		2·9	+45	84	·616	1·2	0	0	0	0	0·17	− 0·17	0	0·17	− 0·17	0	Bassein.		
9	12	2					3	N 23° E	9·7	9·7	6·6	+47	72	·686	0·9	0	0·44	− 0·44	0	0·18	− 0·18	0	0·18	− 0·18	0	Diamond Island.		
30	1							N 1° E	2·9		2·6	+12	88	·492	1·1	1	0·18	+ 0·82	0·37	0·08	+ 0·29	0·37	0·08	+ 0·29	0·37	Akyab .	Arakan.	5
13	5		2	1	1		7	N 2° W	2·1	2·1	1·9	+11	83†	·557†	1·6	0	0·27	− 0·27	0	0·12	− 0·12	0	0·12	− 0·12	0	Toungoo .	Central Burma.	3
																			0·09	0·23	−0·14						II.—Burma Inland.	
3	2	1			1	1	1	N	1·6		2·4	−33	77	·452	0·9	0	0	0	0·01	0·02	− 0·01	0·01	0·02	− 0·01	0·01	Thayetmyo .	Central Burma.	3
4			2	1			23	N 40° W	4·0	4·8			71	·424	1·6	0			0	0·05	− 0·05	0	0·05	− 0·05	0	Minbu .	Upper Burma.	4
7	2		1	1		2	8	N 24° W	2·3	2·4			84	·475	1·5	0			0	0·02	− 0·02	0	0·02	− 0·02	0	Yamethin.		
6	1			3	1		2	N 18° W	2·1	2·1			82	·448	0·4	0			0·07	0·08	− 0·01	0·07	0·09	− 0·01	0·07	Mandalay.		
								Calm	0·3	0·3			98	·425	0·6	1			0·37	0·40	− 0·03	0·37	0·40	− 0·03	0·29	Kindat.		
3	4	2						N 40° E	1·9	2·2			96	·395	2·9	0			0·09	0·83	− 0·74	0·09	0·83	− 0·74	0·04	Bhamo.		
													86	·398		0			0·16			0·16			0·09	Maymyo .	Burma Hill Stations.	4(a)
				7	23	1		S 36° W					68	·308	2·2	0			0	0	0	0	0	0	0	Taunggyi.		
1	2	1	6	8	7	2	3	S 12° W					92	·341	3·6	0			0·05	0·07	− 0·02	0·05	0·07	− 0·02	0·03	Lashio.		
																			1·04	0·86	+0·18						III.—Assam.	
								Calm	0·3	0·5	2·0	−75	92	·428	2·7	1	1·79	− 0·79	0·20	0·72	− 0·52	0·20	0·72	− 0·52	0·10	Silchar .	Surma.	7
1	3				1			N 31° E	1·8	1·6	1·8	−11	99	·411	8·7	5	4·30	+ 0·70	1·64	1·47	+ 0·17	1·64	1·47	+ 0·17	0·53	Sibsagar .	Brahmaputra.	8
2	11	8			3			N 60° E	3·1	3·7	3·9	− 5	92	·405	2·4	3	0·93	+ 2·07	1·29	0·40	+ 0·89	1·29	0·40	+0·89	0·69	Dhubri.		
																			0·97	0·45	+0·52						IV.—Bengal and Orissa.	
10	20						1	N 27° E	3·1	3·0	3·7	−19	84	·436	2·2	0	0·73	− 0·73	0·03	0·49	− 0·46	0 03	0·49	− 0·46	0·03	Chittagong .	East Bengal.	6
20	5	2	1			1	2	N 9° E	2·6	2·4			90	·430	2·7	0	0·96	− 0·96	0 03	0·47	− 0·44	0·03	0·47	− 0·44	0·02	Noakhali.		
8						1	3	N 17° W	1·8				77	·391	2·2*	1	1·30	− 0 30	0·26	0·53	− 0·27	0·26	0·53	− 0·27	0·19	Cothilla.		
2						1	4	N 39° W	0·4				92	·420	4·5§	1	1·04	− 0·04	0·65	0·45	+ 0·20	0 65	0·45	+ 0·20	0·58	Sirajganj.		
7	5	1	1	1	1	2	9	N 15° W	2·9		2·1	+38	89	·445	5·1	1	0·91	+ 0·09	0·30	0·24	+ 0·06	0·30	0·24	+ 0·06	0·11	Narayanganj.		
5	3	1		1		1	15	N 28° W	2·3	2·3			88	·468	2·6	1	1·01	− 0·01	0·23	0·61	− 0·38	0·23	0·61	− 0·38	0·15	Barisal.		
			1				3	N 45° W	0·4	0·4			90	·407	P	1	0·85	+ 0·15	0·33	0·39	− 0·06	0·33	0·39	− 0·06	0·25	Mymensingh.		
6							1	N 8° W	1·2	1·0			91	·460	2·3¶	2	0·77	+ 1·23	0·36	0·36	0	0·33	0·36	0	0·12	Faridpur .	Deltaic Bengal.	10
5	1							N 9° E	1·4	1·4	1·6	−13	87	·429	2·4‖	2	0·88	+ 1·12	0·51	0·55	− 0·04	0·51	0·55	− 0·04	0·16	Jessore.		
12	5	1					6	N 1° E	3·4		3·0	+13	85	·433	3·1	3	0·72	+ 2·28	1 31	0·60	+ 0·71	1·31	0·60	+ 0·71	0·51	Calcutta.		
18	9	1					3	N 10° E	5·3		6·3	+32	90	·480	2·8‖	3	0 77	+ 2·23	0·61	0·32	+ 0·29	0·61	0·32	+ 0·29	0·22	Saugor Island.		
6	2	1	1		1	7	11	N 41° W	2·5				85	·428	3·5	3	0 73	+ 2·27	0·74	0·30	+ 0 44	0·73	0·30	+ 0·44	0·32	Krishnagar.		
25	2						2	N	2·8	3·6			81	·430	2·4	5	0·85	+ 4·15	3·38	0·52	+ 2·86	3·38	0·52	+ 2·86	1·47	Midnapore.		

§ Mean of 18 days. ‖ Mean of 20 days. ¶ Mean of 21 days.

Table

Abstract of Observations taken at 8 A.M. at 220

Number of District.	Meteorological Province or District.	Station.	Elevation of bar. cistern above sea-level in feet	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·781		30·051	29·881	12th	29·671	4th	·210	58·3	72·7		55·1		64·0		17·6	79·6	28th	49·6	20th	30·0
		Kamiganj	334	29·758		30·064	29·864	12th	29·666	1st	·198	57·7	72·8		54·0		63·4		18·8	79·4	28th	49·2	25th	30·2
		Burdwan	99	30·015	+·024	30·069	30·108	12th	29·913	4th	·195	56·8	74·5	−4·0	55·5	+0·8	65·0	−1·6	19·0	81·3	28th	50·0	25th	31·3
		Naya Dumka	489	29·598		30·182	29·701	12th	29·518	1st	·183	56·9	76·5		52·3		61·4		18·2	76·6	23rd	46·4	20th	30·2
		Berhampore	67	30·043	+·021	30·052	30·152	12th	29·948	2nd	·204	57·7	72·9	−3·9	53·7	+0·4	63·3	−1·8	19·2	78·5	29th	47·1	20th	31·4
		Rampur Hostia.	70	30·014		30·057	30·143	12th	29·949	4th	·194	57·8	72·0		53·0		62·5		19·0	77·5	7th	47·3	19th	30·2
		Malda	72	30·049		30·069	30·152	12th	29·955	2nd	·197	55·6	70·9		51·4		61·2		19·5	76·8	29th	45·8	20th	31·0
		Bogra	61	30·033		30·049	30·146	12th	29·936	4th	·210	56·9	73·9	−1·8	51·9	+0·3	62·9	−0·8	22·0	78·3	28th, 29th 30th.	46·2	20th	32·1
12	North Bengal	Dinajpur	123	29·965	+·022	30·052	30·071	12th	29·860	19th	·211	51·9	71·2	−4·1	38·2	−1·0	59·7	−2·6	23·0	76·3	10th & 20th.	43·9	4 days	32·4
		Rangpur	123	29·971		30·057	30·088	12th	29·879	2nd	·209	54·4	71·4†		48·9*		60·2*		22·5	76·5	28th	44·3	22nd	32·2
		Jalpaiguri	284	29·811	+·036	30·072	29·923	12th	29·708	19th	·216	53·7	70·3	−2·8	50·2	−0·5	60·3	−1·7	20·1	75·4	14th	46·1	22nd	29·3
		Cooch Behar	156	29·951		30·075	30·173	12th	29·844	19th	·229	53·4	70·8		50·5		60·7		20·3	75·3	28th & 29th.	45·7	22nd	29·6
13	North Bihar	Purnea*	125	30·001	+·047	30·090	30·077	13th	29·889	4th	·188	52·7	69·7	−5·0	49·4	+1·5	59·6	−1·8	20·3	74·7	29th	45·1	21st	28·6
14	Orissa	Balasore	46	30·071	+·032	30·067	30·178	23rd	29·960	4th	·218	60·8	76·2	−3·9	56·6	+0·9	66·4	−1·5	19·6	82·4	29th	49·4	8th & 13th.	33·0
		False Point.	21	30·074	+·008	30·038	30·175	23rd	29·943	4th	·232	65·0	76·9	−1·9	58·6	−0·3	67·8	−1·1	18·3	80·4	1st & 29th.	52·0	14th & 15th.	28·4
		Cuttack	89	30·018	+·012	30·045	30·119	23rd	29·887	4th	·232	64·0	80·0	−4·6	61·6	+1·7	70·7	−1·5	18·4	85·4	27th & 28th.	55·1	13th & 28th.	30·3
		Puri	20	30·072		30·035	30·139	23rd	29·940	4th	·240	66·6	79·3		62·9		71·1		16·4	83·7	5th	57·6	13th & 20th.	26·1
	V.—Gangetic Plain and Chota Nagpur.				+·022								68·3	−6·2	50·2	+0·9	59·3	−2·7	18·1					30·7
15	Chota Nagpur	Hazaribagh.	2,007	28·024	+·011	30·089	28·117	12th	27·906	4th	·211	53·7	66·8	−6·0	50·1	−0·4	58·5	−3·2	16·7	75·7	27th	44·7	19th	31·0
		Ranchi	2,128	27·836	+·010	30·080	27·983	12th	27·794	4th	·189	54·3	67·2	−6·5	50·1	−0·1	58·6	−3·3	17·1	74·8	28th	43·8	20th	31·0
		Daltonganj	730	29·363		30·101	29·460	23rd	29·211	4th	·249	54·4	71·0		48·1		59·6		22·9	78·8	31st	41·5	21th	37·3
		Purulia		29·260		30·071	29·351	12th	29·178	30th	·173	57·9	71·2		?		?		?	78·8	23rd	?		?
		Chaibassa	760	29·312		30·066	29·413	12th	29·186	4th	·227	58·5	73·0	−7·2	55·7	+2·2	64·4	−2·5	17·3	79·5	29th & 31st.	50·1	24th	29·4
16	South Bihar	Gaya	375	29·725	+·019	30·081	29·821	12th	29·609	4th	·212	55·5	69·4	−6·3	52·0	+0·5	60·7	−2·9	17·4	75·3	28th & 31st.	45·9	20th	29·4
		Behri	351	29·750		30·081	29·915	12th	29·627	4th	·218	57·4	69·9		54·1		61·5		14·8	76·8	31st	50·1	7th	26·7
		Patna	183	29·931	+·020	30·078	30·032	12th	29·833	4th	·199	55·1	68·3	+4·4	51·3	+1·4	59·8	−1·5	17·0	74·4	31st	45·4	20th	29·0
		Arrah	190	29·908		30·064	29·898	12th	29·802	4th	·196	54·4	68·5		51·1		59·8		17·4	74·9	31st	46·0	24th & 25th.	28·9
		Buxar	239	29·878		30·090	29·974	12th	29·767	4th	207	56·4	68·6		51·2		59·9		17·4	76·6	31st	46·1	20th	30·5
17	North Bihar	Bhagalpur	160	29·958		30·078	30·052	12th	29·866	19th	·186	57·1	69·8		51·7		60·8		18·1	74·8	27th & 29th.	45·6	7th	29·2
		Darbhanga	166	29·935	+·021	30·067	30·044	12th	29·840	19th	·204	54·7	69·5	−3·7	52·5	+0·4	60·6	−1·7	16·0	73·6	28th & 31st.	47·5	7th	26·1
		Muzaffarpur	178	29·942		30·087	30·040	12th	29·846	4th	·194	54·3	68·3		50·3		59·3		18·0	73·2	31st	45·5	25th	27·7
		Motihari	224	29·899		30·097	30·062	12th	29·803	30th	·199	55·4	68·1		48·1		58·2		20·0	73·0	31st	41·9	21st, 24th & 25th.	32·1
		Chapra	181	29·923		30·072	30·012	12th	29·807	4th	·205	53·7	69·2		50·2		59·7		19·0	75·1	31st	46·1	24th	29·0
18	N.-W. Provinces (East).	Benares	267	29·832	+·018	30·074	29·925	23rd	29·689	1st	·236	54·0	67·2	−7·2	50·4	+2·4	58·8	−2·4	16·8	76·2	31st	44·9	20th & 25th.	31·3
		Allahabad	309	29·791	+·019	30·078	29·893	23rd	29·652	1st	·211	53·7	67·3	−6·7	49·2	+1·5	58·3	−2·6	18·1	77·2	31st	43·4	24th	33·8
22	N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·815	+·033	30·079	29·944	12th	29·750	4th	·194	53·5	66·8	−6·4	50·1	+1·2	58·5	−2·6	16·7	73·3	31st	46·1	20th & 25th.	27·2
19	South Oudh	Lucknow	368	29·719	?	30·075	29·815	22nd	29·627	1st	·188	51·3	67·2	−6·6	47·3	+0·9	57·3	−2·9	19·8	78·2	31st	42·2	21st	36·0
20	North Oudh	Bahraich	403	29·678	+·031	30·074	29·761	12th	29·588	1st	·173	51·7	66·4	−6·4	48·0	+1·2	57·2	−2·6	18·4	75·1	31st	44·0	21st & 24th.	31·1
21	N.-W. Provinces (Central).	Cawnpore	416	29·629	+·037	30·084	29·772	23rd	29·586	1st	·186	50·3	67·4	?	45·9	−1·6	56·7	?	21·5	77·2	31st	42·0	24th	35·2
		Mainpuri	516	29·564	+·026	30·081	29·683	22nd	29·453	13th	·230	50·1	65·4	−6·7	46·3	−0·6	55·9	−3·7	19·1	76·8	31st	42·6	19th & 24th.	34·2

* Mean of 29 days. † Mean of 30 days. ‡ Mean of 28 days. § Mean of 24 days.

continued.

tions in India, Burma, etc., in January 1901—continued.

Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st January.	Normal rainfall for period, 1st to 31st January.	Variation from normal of period, 1st to 31st January.	Heaviest rainfall during month.	Station.	Meteorological Provinces & Districts.	Number of District.
1							1	N 27° W	0·6	0·7			81	·408	4·0	5	0·93	+4·04	1·90	0·34	+1·56	1·90	0·34	+ 1·56	0·46	Bankura	Central Bengal.	11
1	1	2				3	7	N 35° W	0·9				84	·404	3·4	4	0·96	+3·04	1·64	0·40	+1·24	1·64	0·40	+ 1·24	0·58	Raniganj.		
7	2	1					9	N 9° W	1·6	1·6	1·8	−11	83	·413	3·7¶	5	0·77	+4·23	1·02	0·36	+0·66	1·02	0·36	+ 0·66	0·26	Burdwan.		
	2	2	3	1	1	1	4	N 59° E	0·7				88	·409	4·0*	2	1·17	+0·83	1·46	0·60	+0·86	1·46	0·60	+ 0·86	1·05	Naya Dumka.		
					1		1	W	0·7	0·8	1·8	−56	88	·420	3·1†	2	1·04	+0·96	0·85	0·52	+0·13	0·65	0·52	+ 0·13	0·36	Berhampore.		
9	1				3	4	4	N 39° W	2·4	2·4			89	·425	2·2§	2	0·81	+1·19	0·66	0·41	+0·25	0·66	0·41	+ 0·25	0·36	Rampur Boalia.		
6	2				2	12	9	N 56° W	2·0	1·9			90	·400	2·11	2	0·81	+1·19	1·65	0·52	+1·11	1·68	0·52	+ 1·11	0·98	Malda.		
													85	·400	2·1**	1	0·86	+0·12	0·12	0·47	−0·35	0·12	0·47	− 0·35	0·12	Bogra.		
2	6		1	1	6	7	8	N 63° W	3·8	4·4			94	·366	3·1¶	3	0·88	+2·12	1·00	0·45	+0·55	1·00	0·45	+ 0·55	0·42	Dinajpur	North Bengal.	12
3	7	3	2	1	4	2	6	N 3° E	2·0*	2·1*			94	·398	1·0††	3	0·85	+2·15	0·85	0·61	+0·24	0·85	0·61	+ 0·24	0·40	Rangpur.		
6	8	2		1	2	6	6	N 16° W	1·0	1·2			93	·386	1·99	3	0·8.	+2·15	0·66	0·53	+0·13	0·66	0·53	+ 0·13	0·29	Jalpaiguri.		
1	3	4		3		2		N 69° E	1·3	1·4			94	·388	3·0¶	3			0·81	0·38	+0·43	0·81	0·38	+ 0·43	0·39	Cooch Behar.		
	2		1			4	7	N 49° W	2·7	2·3	1·7	+35	91*	·371	1·71	3	0·80	+2·20	1·28	0·49	+0·80	1·29	0·49	+ 0·80	0·50	Purnea	North Bihar.	17
15	3						8	N 10° W	2·4				85	·456	2·6	3	0·66	+2·35	1·66	0·39	+1·27	1·66	0·39	+ 1·27	1·15	Balasore	Orissa.	16
21	2	2					5	N 1° W	5·6	5·4	6·0	−10	90	·560	3·0	3	0·81	+2·19	2·15	0·57	+1·58	2·13	0·57	+ 1·56	1·10	False Point.		
1	6	3				1	1	N 45° E	1·5		1·4	+ 7	86	·518	3·6	4	0·65	+3·35	1·21	0·32	+0·89	1·21	0·32	+ 0·89	0·61	Cuttack.		
14	11						1	N 18° E	8·6	8·1			83	·547	2·6*	2	0·50	+1·50	1·7.	0·28	+1·43	1·71	0·28	+ 1·43	1·31	Puri.		
																			2·7.	0·71	+2·00					V.—Gangetic Plain and Chota Nagpur.		
2		1	2	2	2	8	7	N 81° W	7·2	6·4	4·9	+31	79	·328	4·9	5	1·38	+3·62	3·00	0·56	+2·50	3·06	0·56	+ 2·50	1·00	Hazaribagh	Chota Nagpur.	15
1	3	2	2	3	1	4	7	N 53° W	4·0	4·7			80	·341	4·5	4	1·28	+2·72	2·98	0·52	+2·43	2·98	0·52	+ 2·43	1·21	Ranchi.		
1		4	2	1	3	3	1	S 12° W	2·6*	3·1			83	·351	2·6	4	1·52	+2·48	3·65	0·72	+2·91	3·63	0·72	+ 2·91	2·50	Daltonganj.		
		1		1			1	S 45° E	0·7				80	·389	2·9	5			3·65			3·65			1·29	Purulia.		
1	3	1	1		2	2	1	N 9° W	1·0	0·9			89	·442	3·6	5	1·35	+3·65	6·05	0·58	+5·45	6·03	0·58	+ 5·45	2·96	Chaibassa.		
1	4	1	2	6	7	3	3	S 40° W	7·0	6·3	1·6	+293	87	·384	4·6*	4	1·31	+2·69	3·20	0·58	+2·62	3·20	0·58	+ 2·62	2·60	Gaya	South Bihar.	16
1		3	3	7	11	5	1	S 28° W	5·1	4·5			83	·394	4·2	3	0·12	+2·88	3·20	0·62	+2·58	3·20	0·62	+ 2·58	2·20	Dehri.		
	4	4	1	2	11	5	4	S 58° W	2·8	3·3	2·0	+65	90	·394	4·2	3	1·13	+1·77	2·26	0·65	+1·61	2·26	0·65	+ 1·61	1·48	Patna.		
1		4	3	1	2	10	2	S 74° W	1·8	1·9			90	·386	2·61	3	1·50	+1·50	2·23	0·73	+1·56	2·29	0·73	+ 1·56	1·55	Arrah.		
	1	6	2	3	4	13	1	S 53° W	5·3	4·8			84	·386	4·5*	3	1·62	+1·38	2·62	0·72	+1·92	2·64	0·72	+ 1·92	1·23	Buxar.		
	1				8	2	2	S 63° W	2·0	1·9			86	·405	4·1*	2	1·12	+0·38	1·57	0·48	+1·09	1·57	0·48	+ 1·09	1·81	Bhagalpur	North Bihar.	17
3	4	2	1	1	2	8	7	N 48° W	3·3		2·3	+43	93	·400	3·8	6	1·24	+4·76	2·38	0·66	+1·72	2·38	0·66	+ 1·72	0·82	Darbhanga.		
		1				3	3	N 63° W	1·2	1·1			92	·393	2·5¶	6	1·76	+4·64	2·01	0·84	+1·17	2·01	0·84	+ 1·17	1·08	Muzaffarpur.		
	6	3	1	1	6	7	7	N 21° W	2·8				83	·411	2·8¶	4	1·35	+2·65	2·33	0·71	+1·62	2·33	0·71	+ 1·62	1·15	Motihari.		
	1	4		1	9	6	1	S 53° W	2·0	2·5			91	·378	3·0‡‡	4	1·46	+2·54	2·00	0·68	+1·32	2·00	0·68	+ 1·32	1·12	Chapra.		
		1	2		6	3		S 40° W	1·7	1·9	2·9	−34	88	·371	4·2	3	1·55	+1·45	3·16	0·79	+2·37	3·16	0·79	+ 2·37	1·72	Benares	N.-W. Provinces (East).	18
	1	4	1	1	2	11	5	N 84° W	1·7	1·9	3·4	−44	90	·371	4·7	4	2·09	+1·91	3·03	0·85	+2·18	3·03	0·85	+ 2·18	1·62	Allahabad.		
3	3	1		5	4	5	4	N 89° W	1·5		1·7	−12	93	·377	3·4	4	1·18	+2·82	2·47	0·84	+1·63	2·47	0·84	+ 1·63	1·11	Gorakhpur	N.-W. Provinces (East Submontane).	23
2		4	1			13		N 76° W	1·9	2·1	2·4	−12	90	·342	4·3	3	1·64	+1·36	1·61	1·10	+0·54	1·64	1·10	+ 0·54	0·59	Lucknow	South Oudh.	19
4	1	2	1		1	4	6	N 38° W	2·1	2·0			95	·371	2·4	5			3·33	0·86	+2·47	3·33	0·86	+ 2·47	1·47	Bahraich	North Oudh.	20
	1	1				5	1	N 71° W	0·8				88	·324	3·7	4	1·40	+2·60	1·22	0·72	+0·50	1·22	0·72	+ 0·50	0·40	Cawnpore	N.-W. Provinces (Central).	21
		3	1	1	1	8	3	S 88° W	1·6	1·6			88	·319	5·5	5			2·50	0·61	+1·89	2·50	0·61	+ 1·89	0·83	Mainpuri.		

¶ Mean of 26 days. ¶ Mean of 27 days. ** Mean of 23 days. †† Mean of 21 days. ‡‡ Mean of 25 days.

Table

Abstract of Observations taken at 8 A.M. at 220

Number of District.	Meteorological Provinces or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas				+ ·016								63·0	− 5·6	45·3	+ 1·1	54·2	− 2·3	17·8					31·6
24	N.-W. Provinces (West Submontane).	Bareilly .	569	29·49₂	+ ·013	30·072	29·615	22nd	29·402	1st	·208	49·6	64·7	−5·6	47·2	+1·1	56·0	−2·3	17·5	73·8	31st	42·7	24th	31·1
		Dehra Dun .	2,233	27·763	−·005	30·091	27·897	22nd	27·665	14th	·232	46·3	61·4	−4·2	44·2	0·5	52·8	−2·4	17·2	69·5	26th & 31st.	39·0	23rd	30·5
		Roorkee .	887	29·160	+ ·016	30·088	29·295	22nd	29·045	14th	·250	47·7	63·7	−5·8	45·2	+0·9	54·5	−2·5	18·5	71·8	26th	40·0	23rd & 24th.	31·8
28	N.-W. P. (West)	Meerut .	738	29·319	+ ·012	30·086	29·443	22nd	29·181	14th	·262	47·5	64·8	?−5·3	46·2	+1·6	55·5	?−1·9	18·6	73·9	31st	41·7	23rd & 4th.	32·2
26	South-East-Punjab.	Delhi .	718	29·355	+ ·019	30·094	29·502	22nd	29·219	14th	·283	50·7	63·4	−7·6	48·3	+0·3	55·9	−3·7	15·1	73·2	31st	42·2	23rd	31·0
28	Central Punjab.	Lahore .	702	29·366	+ ·016	30·102	29·597	22nd	29·134	14th	·463	45·4	63·4	−4·0	44·3	+2·9	53·9	−0·6	19·1	72·2	31st	38·5	6th	33·7
27	South Punjab .	Sirsa .	662	29·417	+ ·021	30·104	29·622	22nd	29·185	14th	·437	46·9	65·0	−5·9	42·9	+0·4	54·0	−2·8	22·1	74·2	31st	36·0	18th	38·2
		Patiala .	818	29·23₂		30·088	29·393	22nd	29·068	14th	·325	48·1	62·0		44·9		53·5		17·1	70·1	31st	41·0	23rd	29·1
29	Punjab (Submontane).	Ludhiana .	812	29·24₃	+ ·014	30·092	29·430	22nd	29·040	14th	·390	47·7	61·1	−6·5	46·4	+2·7	53·8	−1·9	14·7	68·2	31st	40·1	23rd	28·1
		Sialkot .	830	29·22₈	+ ·028	30·099	29·452	22nd	28·976	14th	·476	47·0	61·3	−5·3	44·4	+1·6	52·9	−1·9	16·9	70·0	31st	39·1	18th	30·9
		Umballa .	892	29·15₀	?	30·093	29·318	22nd	29·010	14th	·308	48·1	62·8	−5·2	44·3	+0·1	53·6	−2·6	18·5	71·0	13th	40·0	7th & 25rd.	31·0
31	North Punjab .	Rawalpindi.	1,676	28·353	+ ·015	30·140	28·584	22nd	28·127	14th	·457	42·2	58·8	−4·5						66·5	31st			
	VII.—Indus Valley and North-West Rajputana.				+ ·011								68·2	−3·8	45·5	− 0·1	56·9	− 1·9	22·8					39·8
21	North Punjab .	Peshawar .	1,110	28·97₂	0	30·168	29·211	22nd	28·773	14th	·438	41·8	59·9	−4·0	39·1	− 0·3	49·5	−2·2	20·8	68·7	31st	32·9	15th	35·8
32	West Punjab .	Khushab .	612	29·46₀	+ ·023	30·111	29·722	22nd	29·254	14th	·468	45·0	62·7	−4·6	43·2	+1·0	53·0	−1·8	19·5	71·2	31st	37·9	22nd	33·3
		Montgomery	558	29·52₁	+ ·009	30·097	29·752	22nd	29·308	14th	·444	46·0	64·9	−3·0	41·5	−1·4	53·2	−2·2	23·4	72·0	30th	34·0	22nd	38·0
		D. I. Khan	594	29·51₉	+ ·006	30·118	29·771	22nd	29·311	14th	·460	43·6	65·1	−4·5	39·6	−1·7	52·4	−3·1	25·5	72·3	31st	34·0	22nd	38·3
		Mooltan .	420	29·68₂	+ ·003	30·111	29·930	22nd	29·472	14th	·458	47·1	67·1	−2·7	44·1	+1·4	55·6	−0·7	23·0	73·8	30th	38·5	17th	35·3
47	Sind . .	Jacobabad .	186	29·91₉	+ ·009	30·083	30·114	22nd	29·755	13th	·359	49·6	69·7	−3·6	45·9	+2·8	57·8	−0·6	23·8	78·4	20th	34·0	15th	44·4
		Hyderabad .	96	30·01₅	+ ·006	30·069	30·22₅	23rd	29·875	13th	·351	54·1	72·0	−4·5	49·9	−1·3	61·0	−2·9	22·1	80·0	27th & 30th.	40·0	15th	40·0
		Kurrachee .	30	30·09₀	+ ·022	30·079	30·283	23rd	29·956	13th	·327	59·1	75·1	−3·2	55·6	+0·4	65·4	−1·4	19·5	82·4	25th & 27th.	42·2	15th	40·2
51	West Rajputana	Bikaner .	771	29·29₅	+ ·018	30·100	29·506	22nd	29·109	14th	·397	49·9	68·0	−3·8	46·5	−1·4	57·3	−2·6	21·5	78·1	30th	41·1	22nd & 23rd.	37·0
		Pachpadra .	350	29·71₄		30·083	29·892	22nd	29·573	14th	·319	51·7	74·0		45·0		59·5		29·0	86·2	29th	35·2	15th	51·0
		Jodhpur .	782	29·269		30·090	29·450	22nd	29·115	14th	·335	53·5	71·9		49·7		60·8		22·2	85·1	29th	41·1	2nd	44·0
	VIII.—East Rajputana, Central India, and Gujarat.				+ ·013								74·6	−4·7	50·6	− 0·5	62·6	− 2·6	24·0					42·1
50	East Rajputana	Jaipur .	1,431	28·63₂	+ ·014	30·121	28·781	22nd	28·478	14th	·303	51·4	67·9	−5·8	47·6	−0·8	57·7	−3·3	20·3	81·2	31st	41·0	5th & 15th.	40·2
		Kotah . .	819	29·24₅			29·407	23rd	29·107	14th	·300	51·0	72·0		50·5		61·3		21·5	84·5	30th	45·5	7th & 10th.	39·0
		Sambhar .	1,254	28·80₅	+ ·020	30·115	28·970	22nd	28·631	14th	·339	49·2	67·3	−5·1	46·3	+0·2	56·8	−2·5	21·0	79·3	30th	41·5	5th	37·8
		Ajmer .	1,611	28·43₆	?	30·129	28·604	23rc	28·270	14th	·334	48·0	67·4	−6·6	45·0	+0·1	56·2	−3·3	22·4	78·9	30th	37·9	5th	41·0
		Udaipur .	1,925	28·09₃		30 088	28·248	23rd	27·985	3rd	·263	52·9	72·0		47·0		59·5		25·0	83·5	30th	38·2	15th	45·3
		Deesa . .	466	29·60₅	+ ·007	30·057	29·751	23rd	29·484	8th	·267	57·6	79·3	−3·4?	50·9	−0·5	65·1	−2·0?	28·4	88·1	29th & 30th.	38·0	15th	50·1
46	Kathiawar and Cutch.	Bhuj .	395	29·69₅	+ ·004	30·068	29·846	23rd	29·567	13th	·279	58·9	75·9	−4·2	52·6	−2·2	64·3	−3·2	23·3	86·3	30th	43·0	15th	43·3
		Jamnagar .	61	30·03₆		30·043	30·162	23rd	29·923	13th	·259	59·3	76·7		53·1		64·8		23·6	86·0	30th	43·7	15th	42·3
		Rajkot .	429	29·65₁*	+ ·025*	30·059*	29·782	23rd	29·523	8th	·259	57·4	79·9	−4·3	49·5	−1·7	64·8	−3·0	30·4	88·9	29th, 30th & 31st.	39·1	15th & 16th.	49·8
		Veraval .		30·051	+ ·013	30·011	30·131	15th	29·917	7th	·214	63·3	79·9	−1·8	58·4	−0·7	69·2	−1·2	21·5	88·1	29th	49·8	16th	38·3
		Bhavnagar Para.	35	30·039	+ ·003	30·022	30·160	23rd	29·926	7th	·234	59·9	82·3	?	52·8	?	67·6	?	29·5	91·1	13th	44·2	16th	46·9
49	Central India .	Nowgong .	757	29·32₉	+ ·010	30·102	29·487	23rd	29·202	1st	·285	51·9	68·0	−7·3	47·3	+0·4	57·7	−3·5	20·7	78·0	31st	42·5	12th	35·5
		Indore . .	1,823	28·21₉	+ ·019	30·084	28·381	23rd	28·101	8th	·280	55·8	76·3	−2·6	48·7	−1·6	62·5	−2·1	27·6	86·3	31st	41·6	10th & 18th.	44·7
		Neemuch .	1,830	28·42₇	+ ·005	30·112	28·585	23rd	28·303	14th	·282	53·9	73·3	−4·1	47·6	−1·3	60·5	−2·7	25·7	84·0	13th	39·1	10th	44·9
45	Gujarat . .	Surat . .	39	30·01₅	?	29·998	30·126	23rd	29·892	7th	·234	62·8	85·0	−1·3	57·7	+1·3	71·4	0	27·3	94·7	24th & 29th.	51·1	15th	43·6
		Ahmedabad .	164	29·93₄	?	30·055	30·086	23rd	29·806	8th	·280	62·2	82·4	?	56·7	−1·1	69·6	?	25·7	91·2	30th	47·2	15th	44·0

* Mean of 30 days.

ontinued.

ions in India, Burma, etc., in January, 1901—continued.

Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st January 1901.	Normal rainfall for period, 1st to 31st January.	Variation from normal of period, 1st to 31st January.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																			2·75	1·67	+1·12					VI.—Upper Sub-Himalayas.		
		1		1	1	1		S 24° W	0·6	0·6	2·8	− 79	93	·330	4·6	6	2·36	+ 3·64	2·25	1·10	+1·15	2·25	1·10	+ 1·15	0·80	Bareilly	N.-W. Provinces (West, Sub-montane).	26
		3	1					S 28° E	1·1		1·8	− 39	87	·278	5·5	8	3·73	+ 4·27	4·92	2·54	+2·38	4·92	2·54	+ 2·38	1·42	Dehra Dun.		
		1	1			1	3	N 45 W	2·1		2·2	− 5	91	·303	4·1	6	2·73	+ 3·27	3·63	1·76	+1·87	3·63	1·76	+ 1·87	1·08	Roorkee.		
			2		1	11		S 79° W	1·3	1·3	2·1	− 38	88	·300	5·1	4	2·45	+ 1·55	2·86	1·27	+1·59	2·86	1·27	+ 1·59	1·25	Meerut.	N.-W. P. (West).	22
		2	3		1	13	7	N 83° W	3·2	3·0	3·0	0	81	·302	5·0	5	1·82	+ 3·18	1·35	1·24	+0·11	1·35	1·24	+ 0·11	0·51	Delhi .	South-East Punjab.	25
2			1	2		2	1	W	1·9		1·9	0	93	·288	4·9	2	2·00	0	1·54	1·06	+0·48	1·54	1·06	+ 0·48	1·00	Lahore .	Central Punjab	28
	5		6		5		9	N 45° W	2·4	2·8	2·6	+ 8	87	·280	4·6	2	1·36	+ 0·64	0·42	0·90	−0·48	0·42	0·90	− 0·48	0·16	Sirsa .	South Punjab.	27
7		2	3			6	5	N 32° W	?				90	·305	4·6	6			2·26			2·26			0·61	Patiala.		
	3		2	1		8	3	N 74° W	2·9	2·6	1·1	+136	92	·304	4·7	4	3·00	+1·00	2·62	1·97	+0·65	2·62	1·97	+ 0·65	0·89	Ludhiana .	Punjab (Submontane).	29
1	2	4	1			4	4	N 9° W	1·6		1·4	+ 15	87	·282	4·1	5	2·36	+2·64	2·93	2·49	+0·44	2·93	2·49	+ 0·44	1·05	Sialkot.		
		1	3			1	3	Calm	1·9				94	·310	4·1	7			3·70	1·15	+2·55	3·70	1·15	+ 2·55	1·00	Umballa.		
1	1		1		1			N 67° E	2·4	2·2	1·9	+ 16	90	·246	3·7	5	4·00	+1·00	4·53	2·84	+1·69	4·53	2·84	+ 1·69	2·75	Rawalpindi .	North Punjab.	31
																			0·51	0·55	−0·04					VII.—Indus Valley and North-West Rajputana.		
				5	1	1		S 17° W	1·0	1·1	2·5	− 56	80	·214	4·7	2	2·73	− 0·73	1·69	1·77	−0·08	1·69	1·77	− 0·08	1·17	Peshawar .	North Punjab.	31
1	2	1			2	1	2	N 31° W	2·2	2·6			84	·255	4·0	2	1·30	+ 0·70	1·44	0·52	+0·92	1·44	0·52	+ 0·92	1·13	Khushab .	West Punjab.	32
7	2	1	5	2	2	1	1	N 52° E	3·6	3·1			79	·251	4·3	1	0·90	+ 0·10	0·28	0·58	−0·30	0·28	0·58	− 0·30	0·28	Montgomery.		
2	3						1	N 15° E	0·8	0·8	1·4	− 43	87	·249	3·1	2	1·45	+ 0·55	0·49	0·53	−0·04	0·49	0·53	− 0·04	0·38	D. I. Khan.		
	7		1					N 53° E	1·1	1·4	1·7	− 18	79	·258	4·4	1	1·27	−0·27	0·25	0·48	−0·23	0·25	0·48	−0·23	0·16	Mooltan.		
1		3					2	N 34° E	1·0	1·0	2·1	− 52	73	·257	4·9	1	0·73	+0·27	0·27	0·25	+0·02	0·27	0·25	+0·02	0·18	Jacobabad .	Sind.	47
24	2			1	1	1		N 1° W	6·3	6·6	7·2	− 8	66	·270	3·0	1	0·90	+0·10	0·23	0·31	−0·08	0·23	0·31	−0·08	0·23	Hyderabad.		
	8	15	3			2		N 81° E	5·4	6·8	0	− 32	69	·354	3·3	1	1·18	−0·18	0·59	0·72	−0·13	0·59	0·72	−0·13	0·54	Kurrachee.		
3	6	9	2	3	1		2	2	N 31° E	5·4		2·9	+ 86	49	·182	3·6	2			0·20	0·30	−0·10	0·20	0·30	− 0·10	0·10	Bikaner .	West Rajputana	51
	5	12	7	3	1	2	1		N 59° E	4·3	4·9	2·8	+ 75	68	·257	1·8	1			0·14	0·37	−0·23	0·14	0·37	− 0·23	0·12	Pachpadra.		
9	2	10	8				1	1	N 53° E	3·7	3·3			62	·247	4·5	0			0·07	0·27	−0·20	0·07	0·27	− 0·20	0·07	Jodhpur.		
																			0·70	0·29	+0·49					VIII.—East Rajputana Central India and Gujarat		
5	4	9	5	1		1	1	5	N 29° E	2·8		3·9	− 28	76	·286	3·7	3	1·60	+ 1·40	1·60	0·69	+0·91	1·60	0·69	+ 0·91	0·57	Jaipur .	East Rajputana	50
3	1	1			1	1		1	N 45° W	5·5	6·5			73	·315	3·3	2			0·52	0·15	+0·37	0·52	0·15	+ 0·37	0·35	Kotah.		
23	2	3	2			1		N 37° E	2·3		4·5	− 49	82	·283	3·2	3	1·10	+1·90	2·35	0·47	+1·88	2·35	0·47	+ 1·88	0·99	Sambhar.		
11	1	3		2		2		2	N 24° E	2·2		1·9	+ 16	88	·295	3·9	3	1·45	+ 1·55	1·40	0·52	+0·88	1·40	0·52	+ 0·88	0·75	Ajmer.		
9	6	1	1			3	5	6	N 47° W	2·4	2·4			64	·261	3·4	1			0·15			0·15			0·13	Udaipur.		
		13	14	1	1	1	1		N 73° E	3·8		8·6	+ 2	54	·257	2·2	0	0·36	− 0·36	0·11	0·17	−0·06	0·11	0·17	− 0·06	0·06	Deesa.		
8	5	2	3			3	7	3	N 47° W	5·7*		6·0	− 5	68*	·346*	1·0	0			0·04	0·11	−0·07	0·04	0·11	− 0·07	0·03	Bhuj .	Kathiawar and Cutch.	46
	2	10	5		3	6	3	2	N 46° E	8·7	9·3			67	·349	1·7	0			0			0			0	Jamnagar.		
8	13		4		1		5		N 5° W	5·7	5·6	5·2	+ 8	57	·284	0·9	0	0·20	− 0·20	0	0·04	−0·04	0	0·04	−0·04	0	Rajkot.		
	15	12	1			1	2	N 16° E	5·7	6·7			58	·346	2·4	0			0·01	0	+0·01	0·01	0	+ 0·01	0·01	Veraval.		
	7	1			1	1	9	15	N 51° W	4·8	4·9			51	·275	1·5	0			0	0·09	−0·09	0	0·09	− 0·09	0	Bhavnagar Para.		
8	6		8		1	2	5	1	N 12° E	1·7	1·7	1·4	+ 21	88	·343	4·8	5	1·73	+3·27	1·94	0·65	+1·29	1·94	0·65	+ 1·29	0·63	Nowgong	Central India.	49
14	3	4	1	3	2	2	1	1	N 70° E	2·7		2·5	+ 8	75	·347	3·7	3	0·36	+ 2·64	0·76	0·18	+0·58	0·76	0·18	+ 0·58	0·39	Indore.		
8	2	9	9	1	1		1		N 66° E	5·1	4·6	8·1	− 43	65	·271	2·2	0	0·45	− 0·45	0·11	0·30	−0·19	0·11	0·30	− 0·19	0·05	Neemuch.		
2	11	7	6	2			1	2	N 32° E	4·4	7·2	5·2	+ 38	61	·356	1·4	1	0·18	+ 0·82	0·38	0·05	+0·33	0·38	0·05	+ 0·33	0·28	Surat .	Gujarat.	
1	2	13	10	1		1		2	N 58° E	2·8				52	·259	1·8	0			0·04	0·04	0	0·04	0·04	0	0·04	Ahmedabad		

Table

Abstract of Observations taken at 8 A.M. at 220

Numbers of Districts.	Meteorological Province or District.	Station.	Elevation of barometer above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
26	N.-W. P. (West)	Agra	555	29·569	+·016	30·089	29·666	23rd	29·370	14th	·286	50·9	67·5	−6·0	48·5	0	58·0	−3·0	19·0	80·0	31st	43·4	23rd	36·6
27	N.-W.P. (Central)	Jhansi	858	29·243	+·030	30·119	29·388	23rd	29·116	14th	·272	53·8	69·1	−6·9	50·4	−0·2	59·8	−3·6	18·7	81·1	31st	46·7	19th	34·4
	IX.—Deccan				+·008								82·2	−1·3	57·0	+2·2	69·6	+0·5	25·2					40·9
28	Bombay Deccan	Belgaum	2,539	27·493	+·004	29·982	27 587	23rd	27·395	3rd	·192	67·9	85·3	+2·2	59·4	+2·0	72·3	+2·1	25·9	90·8	26th	51·4	3rd	39·4
		Sholapur	1,560	28·437	−·009	30·016	28·561	23rd	28·338	3rd	·223	68·9	85·8	+1·5	62·4	+4·7	75·6	+3·1	26·4	93·7	4 days.	53·1	20th	40·6
		Poona	1,840	28·194	+·001	30·054	28·326	23rd	28·090	2nd	·236	60·3	87·2	+2·1	54·6	−0·4	70·9	+0·9	32·6	94·0	30th	47·5	19th	46·5
		Bijapur	1,946	28·082	+·006	30·015	28·200	23rd	27·983	2nd	·217	68·0	88·5	+3·2	62·6	+3·3	75·6	+3·3	25·9	93·7	26th & 30th.	52·1	20th	41·6
29	Khandesh	Malegaon	1,120	28·610	+·002	30·058	28·757	23rd	28·498	3rd	·259	66·3	84·9	−0·2	52·7	+0·7	68·8	+0·3	32·2	93·4	25th	44·5	5th & 6th.	48·9
		Ahmednagar	2,152	27·898	+·019	30·063	28 032	23rd	27·782	1st	·250	62·6	84·0	−0·1	53·9	+2·8	69·0	+1·4	30·1	90·4	26th & 30th.	45·4	4th	45·0
31	Berar	Akola	930	29·124	+·011	30 051	29·267	23rd	28·987	3rd	·280	61·4	83·3	−1·1	55·2	+1·9	69·3	+0·4	28·1	90·0	26th	45·5	20th	44·5
		Amraoti	1,215	28·836	+·016	30·055	28·972	23rd	28·700	3rd	·272	63·4	82·1	−2·1	58·4	+1·1	70·3	−0·5	23·7	87·6	31st	50·4	6th	37·2
32	Central Provinces (West).	Khandwa	1,044	28·011	+·013	30 068	29·161	23rd	28·881	3rd	·280	58·5	81·1	−2·3	53·4	+1·5	67·3	−0·4	27·7	90·2	30th	44·1	6th	46·1
		Hoshangabad	1,006	29·165	P	30·087	29·184	23rd	28·913	1st	·271	57·7	74·4	−5·8	52·2	−0·2	63·6	−3·0	22·2	85·7	14th	41·2	11th	41·5
		Nagpur	1,025	29·030	+·008	30·058	29·172	23rd	28·885	3rd	·287	61·8	81·3	−1·7	57·5	+2·1	69·4	+0·2	23·8	89·6	31st	49·2	6th, 20th & 21st.	40·4
33	Central Provinces (Central)	Chanda	634	29·441	−·007?	30·050	29 585	23rd	29·313	3rd	·272	64·3	84·6	−0·3	60·2	+5·6	72·4	+2·7	24·4	92·2	26th	49·2	20th.	43·0
		Seoni	2,033	28 015	+·014	30·087	28·133	23rd	27·878	3rd	·255	56·9	74·8	−4·2	51·6	+0·3	63·2	−2·0	23·2	83·8	31st	45·0	6th & 7th.	38·8
		Jubbulpore	1,527	28·715	?	30·080	28·868	23rd	28·576	1st	·292	53·8	71·3	−5·9	45·5	+1·2	60·4	−2·4	21·8	81·9	31st	42·4	7th & 11th.	39·5
		Saugor	1,807	28·245	+·0.4	30·100	28 409	23rd	28·127	1st	·282	55·5	71·2	−5·4	51·2	−0·2	61·2	−2·8	20·0	82·4	31st	43·1	10th	39·3
19	Central India	Sutna	1,040	29·033	+·019	30·104	29·170	23rd	28·912	1st	·258	53·3	67·8	−6·8	50·1	+2·8	59·0	−2·0	17·7	77·8	31st	41·8	11th	36·0
34	Central Provinces (East).	Raipur	976	29 089	+·020	30·060	29·213	2nd	28·955	4th	·258	61·0	76·0	−3·0	55·8	+0·6	66 9	−1·2	22·2	85·3	1st & 26th.	48 9	7th & 20th.	36·4
		Sambalpur	496	29·603	+·017	30·064	29·720	25rd	29·457	4th	·283	62·5	78 2	−3·8	57·6	+2·6	67 9	−0·6	20·6	84·6	1st	49·1	10th & 23rd.	35·5
20	Hyderabad (North).	Nander		28·755			28 837	23rd	28·613	3rd	·224	69·3	86·2		58·9		72·6		27·3	91·0	31st	52 1	25rd	38·9
		Bidar	2,165	27·661		P	27·947	28th	27·705	26th & 27th.	242	70·1	55·4		47·9		66·7		37·5	91·7	26th	39·2	5th	52·5
35	Hyderabad (South).	Gulbarga	1,502	28·554		30·038	28·673	23rd	28·447	2nd	226	70·8	89·3		62·9		76·1		26·4	94·0	31st	50·9	20th	43·1
		Raichur	1,309	28·724	+·017	30·015	28·829	23rd	28 620	2nd	·209	71·8	88·6	+1·9	63·9	+3·1	77·8	+2·5	21·7	92·6	31st	57·2	5th	35·4
		Hyderabad (City)	1,690	28·346	−·007	30·030	28·471	23rd	28·229	3rd	·242	67·4	85·7	+1·6	63·2	+5·3	74·5	+3·5	22·5	91·4	31st	51·3	20th	37·1
		Secunderabad	1,787	28·246	−·009	30·027	28·373	23rd	28·127	3rd	·246	67·0	87·0	+2·9	63·0	+5·1	75·0	+4·0	24·0	93·6	27th	53·7	20th	39·9
		Hanmakonda	865	29·164		30·028	29·302	23rd	29·029	3rd	·273	69·4	86·1		64·6		75·4		21·5	90·0	26th	53·7	20th	36·3
	X.—West Coast				+·009								85 8	−0·5	70 6	+2 0	78 2	+0 8	15 2					24·4
37	Konkan	Bombay	37	30·016	+·016	29·964	30·105	23rd	29·900	7th	·205	70·2	80·9	−1·4	67·0	−0·9	73·9	−1·2	13·9	86·5	24th	63·0	5th, 10th, & 19th.	23·5
		Ratnagiri	110	29·913	+·008	29·964	30·003	23rd	29·833	31st	·170	72·1	85·3	−2·1	67·8	+1·7	76·6	−0·2	17·5	93·4	24th	61 9	22nd	31·5
		Mormugao	60	29·977	+·018	29·973	30·084	23rd	29·897	1st	·187	72·8	84·6	−1·4	71·3	+2·1	78·0	+0·3	13·3	87·5	24th, 25th & 29th.	66·8	6th	20·7
		Goa	199	29·821	P	29·861	29 924	23rd	29·638	1st	·186	72·9	83·0	−4·2	70·4	+2·4	76·7	−0·9	12 6	88·0	1st	66·0	19th, 20th & 21st.	22·0
		Karwar	44	29·988	+·011	29·965	30·083	23rd	29·901	1st	·182	69·5	86·2	−0·3	67·5	+1·7	76·9	+0·7	18 7	93·3	24th	61·5	20th	31·8
38	Malabar	Cochin	11	30·009	+·013	29·947	30·099	28th	29·931	1st	·168	73·8	91·7	+3 1	74·3	+3·0	85·0	+3·1	17·4	91·5	23rd & 27th.	70·2	25th	24·3
		Calicut	27	29·991	−·003	29·947	30·070	23rd	29·916	1st	·154	77·0	88·4	+0·9	72·0	+2·8	80·2	+1·9	16·4	90·3	11th	66·5	25th	23·8
		Mangalore	65	29·961	+·003	29·958	30·063	23rd	29·882	1st	·181	76·5	87·6	−0·2	72·4	+3·2	80·0	+1·5	15·2	91·8	24th & 25th.	68·0	19th	23·8
		Trivandrum	198	29·789	P	29·920	29·877	28th	29·715	1st	·162	76·0	84·6	+1·2	73·0	+1·8	78·8	+1·5	11·6	86·0	5 days	68·0	25th	18·0
	XI.—South India				+·005								87 1	+2·5	68·5	+4 0	77 8	+3·3	18·7					27·4
37	Madras (South)	Pamban	37	29·992		29·956	30·097	23rd	29·905	5th	·192	79·9	85·8		75·8		80 8		10·0	86·8	5 days	74·7	23rd	12·1
		Tinnevelly	168	29 875	+·005	29·975	29·971	24th	29·778	3rd	·193	77·5	89·0	+1·1	73·3	+1·5	81·2	+1·3	15·7	93·2	5th & 6th.	67·9	25th	25 3
		Madura	447	29·587	+·006	29·977	29·673	24th	9·495	3rd	·177	76·9	89·7	+1·8	71 5	+3·0	80·6	+2·4	18·2	91·4	5 days	66·1	25th	25 3
		Periyakulam		29·095			29·194	24th	29·006	5th	·178	73·0	89·0		66·9		78·0		22·1	93·1	5th	59·0	26th	34·1

* Mean of 30 days. † Mean of 29 days. ‡ Mean of 28 days.

ontinued.

tions in India, Burma, etc., in January, 1901—continued.

Wind Direction. Number of winds from								Wind resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.							Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
	NE.	E.	SE.	S.	SW.	W.	NW.		Mean velocity in miles per hour by anemometer (uncorrected)	Mean velocity corrected where possible.	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st January.	Normal rainfall for period, 1st to 31st January.	Variation from normal of period, 1st to 31st January.				
	4		3		6	1	13	N 58° W	3·5	4·1	3·5	+17	85	·317	3·0	3	1·27	+1·73	1·19	0·53	+0·66	1·19	0·53	+0·66	0·62	Agra	N.-W. P. (West)	28
1		1	1		5	2		S 53° W	2·3		2·2	+5	77	·316	2·4	5	1·18	+3·82	2·01	0·59	+1·42	2·01	0·59	+1·42	0·81	Jhansi	N.-W.P. (Central)	21
																			0·98	0·28	+0·72					IX.—Deccan.		
7	3	2	1	1	1	2	4	N 4° W	7·5		10·9	−31	61	·420	2·7	0	0·27	−0·27	0·02	0·06	−0·04	0·02	0·03	−0·04	0·02	Belgaum	Bombay Deccan	26
2	9		11	1	1		7	N 65° W	9·3	6·7	7·1	−6	48	·345	1·8	2	0·36	+1·64	0·62	0·11	+0·51	0·62	0·11	+0·51	0·33	Sholapur		
1		2	2		3	3	6	N 83° W	6·9	7·8	5·7	+37	65	·346	1·7	1	0·36	+0·64	0·22	0·06	+0·16	0·22	0·06	+0·16	0·22	Poona		
	2	4	4	1	1	4	3	S 52° E	1·7	1·7			58	·400	1·2	0	0·20	−0·20	0	0·04	−0·04	0	0·01	−0·01	0	Bijapur		
3	7			3	1	12	5	N 56° W	4·3	4·9	3·9	+26	54	·294	1·0	2	0·27	+1·73	0·74	0·16	+0·58	0·74	0·16	+0·58	0·50	Malegaon	Khandesh	16
1	3		3	2	3	3	14	N 62° W	5·9	7·2			63	·363	1·4	2			1·41	0·01	+1·40	1·41	0·01	+1·40	1·10	Ahmednagar		
	5	6	1		1	2	1	N 67° E	3·1	3·3	3·4	−3	69	·377	3·5	3	0·45	+2·55	1·36	0·43	+0·93	1·36	0·43	+0·93	0·79	Akola	Berar	6
3	9	9	2	4	2		2	N 74° E	7·1	6·3	3·2	+97	66	·360	3·2	3	0·55	+2·45	2·62	0·39	+2·23	2·62	0·39	+2·23	1·59	Amraoti		
	6	8	4	1	1			S 85° E	4·1		2·8	+46	72	·352	2·8	4	0·45	+3·55	1·48	0·31	+1·17	1·48	0·31	+1·17	0·48	Khandwa	Central Provinces (West)	12
	29						1	N 43° E	5·2	5·3	2·5	+112	74	·353	3·7	6	0·82	+5·18	2·12	0·25	+1·87	2·12	0·25	+1·87	1·13	Hoshangabad		
3	3	2	1					N 47° E	4·2		3·9	+8	72	·400	4·1	4	0·64	+3·36	0·97	0·55	+0·42	0·97	0·55	+0·42	0·36	Nagpur		
5	2	1	2			9	3	N 18° W	1·7		2·1	−19	75	·408	3·6	1			0·78	0·37	+0·41	0·78	0·37	+0·41	0·78	Chanda	Central Provinces (Central)	6
7	15	3	1	1	1	2	1	N 31° E	4·5		2·7	+67	75	·349	3·1	4	1·18	+2·82	2·40	0·63	+1·77	2·40	0·63	+1·77	1·00	Seoni		
5	6	1	8	3		1	3	N 70° E	2·7		2·2	+23	87	·365	3·7	7	1·73	+5·27	2·28	0·76	+1·52	2·28	0·76	+1·52	0·51	Jubbulpore		
5	5	6	10	2	2	1		S 82° E	4·1	4·7	2·8	+68	65	·210	2·9	5	1·33	+3·64	2·89	0·70	+2·19	2·89	0·70	+2·19	1·01	Sangor		
3	3	3				7	7	N 34° W	3·3	3·5	4·0	−13	86	·357	4·0	4	1·73	+2·27	1·90	1·05	+0·85	1·90	1·05	+0·85	0·70	Sutna	Central India.	10
12	9	2			1			N 23° E	4·1	5·8	2·0	+46	74	·405	3·6	2	0·45	+1·55	0·69	0·20	+0·49	0·69	0·20	+0·49	0·28	Raipur	Central Provinces (East).	6
12	6	5	1				5	N 21° E	2·9	2·8	1·0	+75	79	·450	3·2	3			0·72	0·30	+0·42	0·72	0·30	+0·42	0·26	Sambalpur		
	2		4		2		6	N 45° W	4·5	4·3			75	·541	2·8	0			0·07	0·05	+0·02	0·07	0·05	+0·02	0·07	Indur	Hyderabad (North).	10
2	2	7	3	4	7	2	2	S 18° E	6·2	5·2			65	·482	0?	0			0·09	0	+0·09	0·09	0	+0·09	0	Bidar		
2	5	6	5	7	1			S 63° E	7·4	7·1			58	·445	1·5	0			0·04	0·08	−0·04	0·01	0·08	−0·04	0·04	Gulbarga	Hyderabad (South).	8
1	2		17	1	4	1	3	S 33° E	7·5	7·4			63	·459	3·5	0			0	0·04	−0·04	0	0·04	−0·04	0	Raichur		
		3	6			1	1	S 57° E	4·0	3·9			74	·506	3·2	1			0·34	0·09	+0·25	0·34	0·09	+0·25	0·31	Hyderabad (Dn.).		
3	8	13	5					N 77° E	5·6		3·8	+47	77	·511	2·8	1			0·13	0·09	+0·04	0·13	0·09	+0·04	0·13	Secunderabad		
1			14	6	1		1	S 30° E	8·2	7·0			80	·589	4·3	1			0·61			0·61			0·61	Hanumakonda		
																			0·38	0·24	+0·15					X.—West Coast.		
4	15	9	2			1		N 57° E	9·5		10·1	−6	74	·552	2·9	1	0·27	+0·73	0·71	0·13	+0·61	0·74	0·13	+0·61	0·72	Bombay	Konkan.	27
1	5	7	5					N 86° E	4·2	4·1	5·8	−58	72	·566	1·5	0	0·45	−0·45	0·01	0·22	−0·21	0·01	0·22	−0·21	0·01	Ratnagiri		
5	3	12	6	1				N 84° E	7·7				86	·700	1·8	0			0	0	0	0	0	0	0	Mormugao		
2	7	21		1				N 76° E	6·9				81	·660	2·2	0			0	0·25	−0·25	0	0·25	−0·25	0	Goa		
6	4	16	1					N 67° E	4·1				84	·604	1·5	0	0·27	−0·27	0	0·12	−0·12	0	0·12	−0·12	0	Karwar		
21	14						1	N 23° E	5·7				77	·720	1·9	1	0·82	+0·18	0·73	0·59	+0·14	0·73	0·59	+0·14	0·73	Cochin	Malabar.	20
3	15	11	2					N 62° E	9·1	11·5			79	·726	1·3	1	0·33	+0·62	1·28	0·08	+1·20	1·28	0·08	+1·20	1·28	Calicut		
	2	14	12					S 74° E	2·5		3·9	−36	78	·714	2·5	0	0·10	−0·10	0·09	0·09	0	0·09	0·09	0	0·09	Mangalore		
4	11	6	2				2	N 49° E	4·3				79	·719	2·6	2			0·69	0·64	−0·01	0·69	0·68	−0·01	1·38	Trivandrum		
																			0·99	0·48	+0·33					XI.—South India.		
1	23	4					1	N 48° E	9·7	10·3			86	·856	2·8	2	1·50	+0·50	1·57	1·80	−0·23	1·57	1·80	−0·23	1·25	Pamban	Madras (South)	27
17	1					2	11	N 20° W	4·1	3·9			82	·777	4·2	4	2·20	+1·80	2·89	1·26	+1·63	2·89	1·26	+1·63	1·50	Tinnevelly		
14	9	3					4	N 16° E	3·2	3·2	5·4	−41	80	·751	3·1	2	1·00	+1·00	0·70	0·33	+0·37	0·70	0·33	+0·37	0·59	Madura		
		1		1			8	N 45° W	2·0				78	·639	3·4	7			5·99			5·99			3·30	Periyakulam		

Table

Abstract of Observations taken at 8 A.M. at 220

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
26	Madras, (South Central).	Salem	940	29·122	−·005	30·017	29·224	23rd	29·010	3rd	·194	75·7	92·1	+3·9	68·1	+4·8	80·1	+4·4	24·0	95·2	20th	61·9	25th	33·3
		Coimbatore	1,348	28·687	+·005	30·004	28·776	23rd	28·593	4th	·183	72·5	89·1	+2·5	67·8	+3·8	78·5	+3·2	21·3	93¼	23rd	62·3	24th & 28th.	31·1
25	Coorg	Mercara	3,781	26·307	−·003		26·401	23rd	26·232	6th	·169	64·2	79·8	+3·4	59·6	+3·7	69·7	+3·6	20·2	82·5	27th	55·7	5th	26·8
26	Mysore	Chitaldroog	2,405	27·622	+·005	29·970	27·736	23rd	27·541	2nd	·195	72·3	87·9	+3·9	65·8	+4·3	76·9	+4·1	22·1	91·1	31st	60·9	19th	30·2
		Bangalore	3,021	27·043	+·004	30·006	27·142	23rd	26·967	3rd	·175	67·0	84·4	+5·1	61·0	+4·4	72·7	+4·8	23·4	87·3	27th & 31st.	54·9	24th	32·4
		Hassan	3,091	26·978		30·001	27·087	23rd	26·900	2nd	·187	70·3	84·1		55·1		71·1		26·0	87·0	31st	53·1	26th	33·7
		Mysore	2,518	27·534	+·013	29·998	27·635	23rd	27·458	3rd	·177	70·9	87·0	+2·9	63·3	+3·6	75 1	+3·3	23·7	90·1	27th	58·4	25th	31·7
55	Madras, East Coast, South.	Negapatam	31	30·012	+·007	29·972	30·087	23rd	29·930	3rd & 4th.	·157	78·3	84·6	+2·8	74·2	+3·6	79·4	+3·2	10·4	88·2	21st	69·9	15th & 28th	18·3
		Cuddalore	12	30·043	+·012	29·985	30·137	23rd	29·949	3rd	·188	75·7	84·7	+1·5	70·7	+3·2	77·7	+2·4	14·0	87·1	20th	63·2	29th	23·9
		Trichinopoly	255	29·796	+·005	29·969	29·881	24th	29·700	3rd	·181	76·3	90·6	+3·4	70·5	+3·6	80·6	+3·5	20·1	94·0	20th	63·9	24th	30·1
		Madras	22	30·033	−·013	29·986	30·143	23rd	29·932	3rd	·211	76·1	86·5	+1·9	70·1	+2·6	78·3	+2·3	16·4	89·5	20th	64·0	24th	25·5
		Vellore	707	29·333		30·001	29·452	23rd	29·250	4th	·202	72·4	87·9		71·1		79·7		16·8	92 4	20th	65·9	24th	26·5
55	Madras, East Coast, Central.	Nellore	71	29·695	+·012	30·000	30·115	23rd	29·897	3rd	·218	74·9	88·6	+2·7	70·5	+4·2	79·6	+3·5	18·1	91·8	20th	66·6	24th	25·2
		Masulipatam	15	30·059	+·006	30·109	30·189	2.rd	29·944	3rd	·245	75 4	85·9	+2·6	69·8	+4·1	77·9	+3·4	16·1	89·5	20th	66·2	15th	23·3
54	Madras, Central	Cuddapah	433	29·610	−·007	29·990	29·737	23rd	29·523	3rd	·214	77·6	92·5	+4·7	69·6	+5·4	81·0	+5·1	22·7	96·2	31st	65·9	5th & 23rd	30·3
		Kurnool	924	29·108	−·007	30·001	29·242	23rd	29·015	3rd	·227	70·4	90·4	+2·1	64·9	+6·1	77·7	+4·1	25·5	94·7	31st	55·7	20th	39·0
		Bellary	1,475	28·559	+·002	30·007	28·663	23rd	28·470	3rd	·215	72·6	91·7	+4·2	66·4	+5·9	79·1	+5·1	25·3	96·0	31st	62·7	6th	33·3
52	Madras, East Coast, North.	Cocanada	26	30·048	+·009	30·009	30·166	23rd	29·940	4th	·226	74·2	82·7	+1·8	70·0	+4·6	76·3	+3 2	12·7	86·6	28th	65·5	24th	21·1
		Waltair (Vizag).	226	29·852	+·010	30·024	29·982	23rd	29·731	4th	·251	75·0	81·1	0	70·6	+3·6	75·9	+1·8	10·5	84·4	5th	65·9	15th	18·5
		Gopalpur	21	30·067	+·019	30·028	30·171	23rd	29·938	4th	·233	69·5	79·7	−0·8	64·8	+3·3	72·3	+1·3	14·9	83·2	5th	58·1	14th & 21st	25·1
	XII.—Hill Stations.																							
43	Baluchistan	Shahrig		25·836			26·030	22nd	25·620	13th	·410	41·0	54·6		18·4		36·5		36·2	63·0	28th & 31st.	14·0	24th	49·0
		Pishin											49·4		25·7		37·6		23·7	62·0	31st	12·0	15th	50·0
		Quetta	5,502	24·666	−·015		24·815	22nd	24·540	13th	·275	33·1	48·5	−3·0	31·1	+1·8	39·8	−0·6	17·4	62·2	31st	17·3	15th	44 9
		Kalat										35·9	47·6		25·5		36·6		22·1	63·3	29th	0 4	15th	62·9
		Chaman	4,311	25·767	−·012		25·903	22nd	25·634	13th	·269	39·2	50·5	−2·4	35·7	+0·4	43·1	−1·0	14 8	60·3	31st	23·1	15th	37·2
30	Punjab	Leh	11,503	19·609	−·052		19·790	23rd	19·302	14th	·488	3·3	22·9	−11·4	4·9	−4·7	13·9	−8·1	17·4	33·5	12th	−8·5	26th	42·0
		Srinagar	5,204	24·958	−·033		25·169	23rd	24·635	14th	·534	30·8	39·8	+0·5	29·1	+2·4	34·4	+1·5	10·7	45·5	5th	21·6	22nd & 23rd.	23·9
		Astor (Kashmir).		22·595			22·821	23rd	22·319	11th	·502	19·2	33·8		13·9		23·9		19·9	45·4	31st	2·0	13th	43·4
		Minimarg		21·273			21·434	23rd	21·105	14th	329	13·4	29·2		6·9		18·1		22·3	41·0	31st	−7·0	22nd	48·0
		Skardu		22·931			23·191	23rd	22·560	14th	·631	15·5	28·7		11·2		20·0		17·5	36·9	16th	−7·9	26th	44·8
		Dras		20·745			20·957	23rd	20·401	14th	·553	−0·2	18·2		−12·0		3·1		30·2	30·8	13th	−33·9	26th	64·7
		Gilgit		25·256			25·425	22nd	24·932	13th	·493	34·5	43·6		31·3		37·5		12·3	51·7	31st	24·5	24th	27·2
		Chitral		24·661			24·850	22nd	24·525	21st	·325	31·5	63·9		30·5		47 3		33·4	80·1	4th	26·0	18th	54·1
		Killa Drosh										33·0	74·5		26·1		50·3		46·4	74·7	8 days	23·8	21st	50·9
		Para Chinar	6,000									31·9	46·3		26·9		36·6		19·4	53·7	30th	12·7	22nd. 15th	41·0
		Cherat		25·761	−·005		25·947	22nd	25·519	14th	·428	39·2	45·8	−3·0	36·8	1·1	41·3	−2·1	9·0	56·7	31st	28·0	21st	28·7
		Murree	8,333	23·836	−·017		23·981	22nd	23·613	11th	·368	34·3	40·0	7 9	31·6	·3·8	35·8	−5·9	8·4	46·1	30th & 31st.	27·0	15th & 18th	19·1
		Peo											35·2		18·8		27·0		16·4	47·8	30th	10·5	19th	37·3
		Simla	7,229	23·083	−·039		23·177	22nd	22·969	14th	·208	34·7	40·7	−5·7	31·9	−4·6	36·3	−5·2	8·8	49·6	31st	24·2	15th	25 4
28	N.-W. Provinces.	Chakrata	7,022	23·26½	−·026		23·358	27th	23·171	20th	·187	34·7	44·1	−6·5	31·8	4·2	38·0	−5·4	12·3	54·8	24th	25 8	5th	29·0
		Mussooree	6,705	23·55½	−·025		23·643	22nd	23·45[illegible]	1st	·184	36·2	41·9		34·2		38·1		7·7	51·2	31st	29·0	15th & 18th.	22 2

* Mean of 30 days.

† Mean of 21 days.

continued.

tions in India, Burma, etc., in January, 1901—continued.

Wind Direction, Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st January 1901.	Normal rainfall for period, 1st to 31st January.	Variation from normal of period, 1st to 31st January.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
	12	6						N 63° E	5·7	5·1	5·0	+ 2	72	·652	2·1	0	0·36	−0·36	0	0·31	−0·31	0	0·31	−0·31	0	Salem .	Madras (South Central).	34
	10	21						N 76° E	3·2	2·8	3·1	−10	84	·678	5·5	1	0·64	+0·36	0·43	0·19	+0·24	0·43	0·19	+0·24	0·43	Coimbatore.		
	7	12					1	N 71° E	6·7	6·2	4·3	+44	82	·499	6·4	1	0·30	+0·70	0·12	0·04	+0·08	0·12	0·04	+0·08	0·12	Mercara .	Coorg.	35
1	1	7	8	1	5	5	2	S 20° E	6·7	5·8			63	·513	1·1	1			0·27	0·24	+0·03	0·27	0·24	+0·03	0·27	Chitaldroog .	Mysore.	36
	2	18	7	1		2		S 78° E	8·4	7·3	3·8	+92	78	·524	2·3	0	0·50	−0·50	0	0·19	−0·19	0	0·19	−0·19	0	Bangalore.		
2	7	9	11	1				S 85° E	2·4	2·1			68	·504	2·6	2			0·30	0·70	−0·30	0·30	0·70	−0·30	0·20	Hassan.		
3	6	9	6	2	2	2	1	N 89° E	6·5	7·0			70	·524	4·3	0			0·06	0·08	−0·02	0·06	0·08	−0·02	0·06	Mysore.		
1	3	2				3	11	N 12° W	12·5	11·0	5·4	+104	84	·818	4·7	3	2·82	+0·18	1·22	1·46	−0·24	1·22	1·46	−0·24	0·80	Negapatam .	Madras, East Coast, South.	56
2		2					1	N 26° E	1·7	2·1			87	·773	4·3	6	1·40	+4·60	2·57	1·05	+1·52	2·57	1·05	+1·52	1·03	Cuddalore.		
5	6							N 25° E	3·5		4·7	−26	83	·750	1·3	0	0·91	−0·91	0	0·26	−0·26	0	0·26	−0·26	0	Trichinopoly.		
5	5	5	1	2	2			N 29° E	5·6		6·1	− 8	81	·758	2·9	4	1·36	+2·64	0·72	0·89	−0·17	0·72	0·89	−0·17	0·16	Madras.		
								Calm	1·0				85	·675	2·2	0			0			0			0	Vellore.		
							19	N 45° W	3·2				85	·743	3·6	0	0·60	−0·60	0	0·44	−0·44	0	0·44	−0·44	0	Nellore .	Madras, East Coast, Central.	35
2	6	1	3	2				N 31° E	6·5		5·2	+25	82	·719	3·7	1	0·27	+0·73	0·17	0·12	+0·05	0·17	0·12	+0·05	0·12	Masulipatam.		
	9	8	13			1		S 13° E					70	·661	1·2	0	0·20	−0·20	0·01	0·02	−0·01	0·01	0·02	−0·01	0·01	Cuddapah .	Madras, Central	34
	1	1						N 66° E					70	·532	1·1	2	0·60	+1·40	0·68	0·08	+0·80	0·88	0·08	+0·80	0·60	Kurnool.		
		1	15	3			6	S 38° E	4·7	5·0	3·3	+52	55	·447	4·0	0	0·18	−0·18	0	·13	−0·13	0	0·13	−0·13	0	Bellary.		
5	11		1				4	N 20° E	8·5	7·1			79	·684	3·8	2	0·50	+1·50	1·11	0·14	+0·97	1·11	0·14	+0·97	0·83	Cocanada.	Madras, East Coast, North.	32
5	10	4	1		2	2		N 40° E	8·8				71	·614	4·1	3			2·88	0·19	+2·69	2·88	0·19	+2·69	2·05	Waltair (Vizag).		
6					1		13	N 22° W	8·8	8·6	6·5	+32	85	·615	1·1	3	0·38	+2·62	1·08	0·16	+0·92	1·08	0·16	+0·92	0·64	Gopalpur.		
																										XII.—Hill Stations.		
			6		4	4		S 23° W	3·5				73	·189	1·9	1			0·16	2·51	−2·35	0·16	2·51	−2·35	0·16	Shahrig .	Baluchistan.	42
																1			2·40	2·84	−0·44	2·40	2·84	−0·44	0·65	Pishin.		
				2	1	1	1	S 49° W	2·0	2·1	3·8	−45	94	·184	4·7	6	4·36	+1·64	2·12	2·11	+0·01	2·12	2·11	+0·01	0·57	Quetta.		
3				26		2		S 5° W					82	·173		6			2·74	1·90	+0·84	2·74	1·90	+0·84	0·78	Kalat.		
1	1	7	9	6	4	1	2	S 37° E	5·3	5·8			92	·227	4·3	7			1·95	1·65	+0·30	1·95	1·65	+0·30	0·60	Chaman.		
	12	11	2	3	2	1		N 81° E	1·3				47	·033	8·0	3			0·94	0·33	+0·61	0·94	0·33	+0·61	0·29	Leh . .	Punjab.	30
1			4	3	2	1	7	S 74° W	2·9	3·1			93	·163	9·5	4			2·51	2·59	−0·08	2·51	2·59	−0·08	1·42	Srinagar.		
	1			8	12	3		S 34° W	4·9				82	·088	7·7	5			2·05			2·05			0·88	Astor (Kashmir).		
	2	2	4					S 78° E	3·0				89	·073	7·9	14			5·76			5·76			1·80	Minimarg.		
1								N	1·7	2·0			93	·053	8·3	2			·69	2·28	−1·59	0·69	2·28	−1·59	0·24	Skardu.		
							1	W	0·5	0·5			93	·047	7·2	11			3·18			3·18			1·00	Dras.		
									0·3	0·3			73	·145	8·5	1			0·25	0·14	+0·11	0·25	0·14	+0·11	0·25	Gilgit.		
3	2	1				12	3	N 35° W					79	·139		0			0			0			0	Chitral.		
1	3	7	6	2	5			S 51° E					88	·168	4·3	0			0			0			0	Killa Drosh.		
0	6	3	2	2	2	2	4	N 12° E	2·5				81	·147	4·4*	3			2·47			2·47			1·07	Para Chinar.		
	1			2			6	N 8° W	13·7	12·7			67	·158	4·3	6			6·01	2·94	+3·07	6·01	2·94	+3·07	4·21	Cherat.		
2	1	1	12	6				S 41° E	5·4	6·6	8·1	−19	81	·160	6·0	8	3·13	+4·82	6·01	3·52	+2·49	6·01	3·52	+2·49	3·50	Murree.		
							5	N 39° W							5·7	6			2·60	3·20	−0·60	2·60	3·20	−0·60	0·73	Poo.		
	6	4	4	6				S 72° E	3·5		2·0	+75	69	·137	6·2	9	4·27	+4·73	6·20	2·35	+3·85	6·20	2·35	+3·85	1·71	Simla.		
3	2	3	2	2		1	1	N 13° E	8·3		4·8	+73	71	·142	3·8	11			10·36	3·53	+6·83	10·36	3·53	+6·83	2·94	Chakrata .	North-Western Provinces.	26
1	4	3	9	5			3	S 66° E					75	·164	4·2	11	3·20	+7·70	8·66	2·83	+5·83	8·66	2·83	+5·83	2·25	Mussooree.		

* Mean of 24 days.

Table

Abstract of Observations taken at 8 A.M. at 220

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
25	N.-W. Provinces —*concld.*	Ranikhet	6,069	24·122	−·013		24·207	22nd	24·032	1st & 20th.	·175	39·0	47·8	−6·4	36·3	−3·4	42·1	−4·9	11·5	55·8	24th	29·5	21st	26·3
		Muktesar		22·825			22·919	12th	22·733	4th	·186	35·0	43·8		31·7		37·8		12·1	54·5	31st	25·9	15th	28·6
13	Bengal	Yatung	10,430?										39·8		17·5		28·7		22·3	52·1	14th	9·9	16th & 22nd,	42·2
		Darjeeling	7,409	23·009	+·021		23·134	14th	22·961	20th	·173	35·4	42·0	−3·0	32·6	−2·0	37·3	−2·5	9·4	48·8	11th & 14th,	28·4	22nd	20·4
		Gantok	5,660	24·499			24·584	18th	24·452	30th	·132	40·6	54·3		20·8		37·6		33·5	58·3	11th	17·0	19th	41·3
	Central India	Mount Abu	3,945	26·105	−·033		26·274	23rd	25·988	8th	·284	53·2	61·7	−5·3	48·6	−2·5	55·2	−3·9	13·1	70·6	13th	36·0	15th	34·6
		Pachmarhi	3,528	26·551	−·009		26·683	23rd	26·427	3rd	·256	54·2	67·3	−3·6	47·1	−0·3	57·2	−2·0	20·2	75·8	31st	37·3	6th	38·0
	South India	Wellington	6,200	24·326	+·017		24·395	23rd	24·255	2nd	·140	57·0	69·7	+3·2	48·9	+3·4	59·3	+3·3	20·8	71·7	4 days	38·2	24th	33·5
		Kodai Kanal	7,688	22·890			22·937	23rd	22·820	2nd	·117	54·6	63·0		47·5		54·0		15·5	67·1	25th	43·2	24th	23·9
	XIII.—Extra India.																							
	Ceylon	Trincomalee	12	30·018	+·028?	29·956	30·088	24th	29·920	5th	·168	79·5	84·5	+0·4	75·6	+1·0	80·1	+0·7	8·9	86·0	9th, 30th & 31st,	73·0	25th & 28th,	13·0
		Colombo	40	29·963	+·011	29·929	30·028	24th & 28th	29·869	4th	·159	77·4	88·6	+1·3	72·6	+0·5	80·6	+0·9	16·0	91·5	2nd, 4th & 31st.	69·0	27th	22·5
	Persia	Meshed	3,104									30·9			26·3							9·0	14th	
		Teheran		26·043† / 25 327¶			26·230 / 25·480	23rd & 13th23rd & 31st.	25·610 / 25·000	9th / 9th	·620 / ·480	34·1	47·0		26·7		36·9		20·3	56·5	5th	13·0	25th	43·5
		Ispahan		24·264‡			24·450	23rd	24·000	9th	·450	30·7	48·6		24·7		36·8		24·1	57·3	9th	13·7	14th	43·6
		Bushire	14	30·190	+·020	30·113	30·367	23rd	29·965	11th	·402	53·3	62·1	−3·1	50·6	−1·4	56·4	−2·3	11·5	72·1	18th	41·3	13th	30·8
		Jask*		30·100	−·016		30·264	23rd	29·932	30th	·332	64·7	73·6	+0·1	60·3	+0·1	67·0	+0·1	13·3	77·3	29th	47·3	14th	30·0
		Muscat	20	30·098		30·066	30·241	23rd	29·956	12th	·285	69·8	72·3		67·8		70·1		4·5	76·4	12th	62·5	15th	13·9
	Arabia	Baghdad	220	30·026	0	30·242	30·406	23rd	29·728	17th	·678	41·1	57·0	−6·3	28·2	+0·5	47·6		18·8	67·7	7th	30·9	24th	38·8
		Bussrah		30·208			30·481	23rd	30·015	17th	·466		58·5		43·6		51·1		14·9	66·2	18th	34·5	13th	31·7
		Aden	94	29·978	−·006	30·005	30·089	28th	29·874	13th	·215	73·6	81·1	−0·5	74·9	+2·7	78·0	+1·1	6·2	83·8	21st	69·4	30th	14·4
		Perim	201	29·848		29·986	29·947	28th	29·758	31st	·189	78·2	84·6		75·4		80·0		9·2	85·9	26th	73·2	31st	12·7
	Afghanistan	Kabul										16·4	35·0		11·6*		23·4*		23·4	43·2	1st	2·4	4 days.	40·8
	Central Asia	Kashgar		25·662†			25·850	16th & 23rd	25·420	11th & 13th.	·430	14·4	31·8		10·8		21·3		21·0	40·1	4th	4·7	16th	35·4
	Arabian Sea Islands,	Amini Devi	13	30·013		29·954	30·077	24th	29·938	1st	·139	83·6	86·9		74·5		80·8		12·4	89·8	29th	70·0	7th & 25th.	19·8
		Minicoy	7	30·013		29·945	30·093	28th	29·927	1st	·166	82·5	86·8							89·7	19th			
	Africa	Zanzibar	73	29·934	+·027	29·934	30·011	28th	29·878	10th & 21st.	·133	82·5	86·7		80·4		83·6		6·3	88·6	11th & 15th,	76·6	2nd	12·0
		Dunga (Zanzibar)		29·862			29·934	28th	29·794	12th	·140	81·4	91·7		72·8		82·3		18·9	97·1	28th	69·9	2nd & 3rd.	27·2

Note.—When a query is inserted against any reading or in the variation returns for any station, the data fo

* Mean of 30 days. † Aneroid corrected. ‡Aneriod uncorrected. ¶ Mountain barometer uncorrected.

—concluded.

tations in India, Burma, etc., in January 1901—concluded.

Calms	Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variations.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st January 1901.	Normal rainfall for period, 1st to 31st January.	Variation from normal of period, 1st to 31st January.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
9	1	3	4	1		2	1		N 77° E	1·7	1·9	1·4	+36	75	·177	5·1	7	3·71	+3·29	4·03	2·94	+1·09	4·03	2·94	+1·09	1·63	Ranikhet.	North-Western Provinces—*concld.*	25
1	1	1	5	13		1	2	7	S 67° E	8·4	7·8			72	·147	4·6	7			4·09			4·09			1·28	Muktesar.		
																	6			3·00			3·00			1·55	Yatung .	Bengal.	13
1		2	5	7	1	2	2	1	S 54° E	3·2	3·0	2·6	+15	89	·185	5·5§	2	1·65	+0·35	1·63	0·67	+ 0·96	1·63	0·67	+ 0·96	0·88	Darjeeling.		
1										P	P			80	·205	5·7	5			2·03	0·69	+ 1·34	2·03	0·69	+ 1·34	0·85	Gantok.		
5	5	7			1	9	2	2	N 50° W	5·8	6·0	4·8	+25	54	·222	4·3	2	0·73	+1·27	0·77	0·42	+ 0·35	0·77	0·42	+ 0·35	0·46	Mount Abu.	Central India.	
9	2	1	1	2	4	2			S 23° E	5·2	5·4	3·1	+74	79	·333	3·4	5	1·55	+3·45	3·50	0·51	+ 2·99	3·50	0·51	+ 2·99	1·35	Pachmarhi.		
3	1	6		1					N 47° E	2·3		2·4	— 4	74	·342	3·3	6	1·75	+4·25	6·83	1·04	+ 5·79	6·83	1·04	+ 5·79	3·90	Wellington .	South India.	
2	4	7	5	7				6	N 51° E	13·8				60	·253	3·1	10			2·05			2·05			0·19	Kodai Kanal.		
																											XIII.—Extra India.		
8		11						2	N 35° E	1·1				84	·851	2·8	6			1·90	7·44	− 5·54	1·90	7·44	− 5·54	0·54	Trincomalee	Ceylon.	
	6	15	6	4					N 55° E	7·3		8·4	− 13	86	·816	2·2	11			11·46	2·92	+ 8·54	11·46	2·92	+ 8·54	3·60	Colombo .		
														73	·130	3·0	0			0·01	0·23	− 0·22	0·01	0·23	− 0·22	0·01	Meshed .	Persia.	
2	3	15	1	1	1	1		2	N 29° E	2·0	2·5			61	·122	3·0	2			0·41	1·16	− 0·75	0·41	1·16	− 0·75	0·20	Teheran.		
										1·3	1·8			89	·155	3·0	0			0	0·11	− 0·11	0	0·11	− 0·11	0	Ispahan.		
2	5	6	5	4				9	N 24° E	7·3	8·7			79	·327	5·2	4			1·22	3·23	− 2·01	1·22	3·23	−2·01	0·43	Bushire.		
5	6	5	9					5	N 35° E	11·9	13·8			81	·511	3·1	1			0·60	1·00	− 0·40	0·60	1·00	− 0·40	0·60	Jask.		
4		1		3	1	2	4	6	N 87° W	5·0	5·2			67	·491	4·4	0			0	2·36	− 2·36	0	2·36	− 2·36	0	Muscat .		
8	7				4	3	1	8	N 52° W	3·8	5·0			79	·208	3·1	1			0·53	1·59	− 1·06	0·53	1·59	− 1·06	0·35	Baghdad.	Arabia.	
	16				13		1	1	N 27° W								2			1·24			1·24			0·98	Bussrah .		
		15	13	3					N 72° E	15·9‡	15·6	12·0	+30	75	·689	6·4	2			0·28	0·28	0	0·28	0·28	0	0·13	Aden.		
		2	22	7					S 82° E	22·1	20·5			79	·772	4·4	0			0·02	0·50	− 0·48	0·02	0·50	− 0·48	0·02	Perim.		
	6	3	2	1	5	2	9	3	N 69° W					86	·486	3·3 **				0			0			0	Kabul .	Afghanistan.	
	1		4	3	9	3	4		S	0·7	0·6					4·3‡	0			0·11	0·42	− 0·31	0·11	0·42	− 0·31	0·08	Kashgar .	Central Asia.	
1	16	7	1		1	1		4	N 5° E					73	·836	2·7	2			0·57			0·57			0·39	Amini Devi.	Arabian Sea Islands	
	7	16	4	4					N 48° E	4·1	4·4			73	·817	2·4	2			0·89						0·76	Minicoy .		
	13	14	2		2				N 30° E	7·4	6·9			81	·898	6·2	3			2·21	2·95	− 0·74	2·21	2·95	−0·74	1·67	Zanzibar .	Africa.	
2	9	13	1			1		2	N 22° E	7·3	7·0			85	·910	5·5	2			3·00			3·00			2·19	Dunga (Zanzibar.)		

‡ Mean of 27 days. § Mean of 29 days. ** Mean of 18 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to Sea-level and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair		29·971	29·865	·106	29·913	+·024	29·904	88·1	77·0†	11·1	90·8	73·2	17·6	83·5	86·5	81·9†	+2·4	73·7	77·6	78·6	76·6
	Rangoon		30·005	·865	·140	·934	−·009	·912	91·3	66·1	25·2	94·2	57·8	36·4	79·7	89·1	76·4	+2·4	63·3	69·3	71·1	67·9
	Diamond Island		·011	·898	·115	·950	−·005	·925	84·3	74·1	10·2	88·6	70·6	18·0	81·0	81·4	78·1	+2·2	68·7	72·7	72·4	71·3
	Cocos Island	111	·965	·867	·098	·912	+·055	·856	84·1	76·1	8 0	86·2	72·9	13 3	81·6	80·6	78·8	+3·9	70·0	73·1	72·4	71·8
	Akyab		·056	·937	·119	·991	−·003	·954	82·2	56·5	25·7	86·6	49·4	37·2	70·8	77·4	68·5	−1·4	?	63·1	66·9	?
Bengal and Orissa.	Chittagong		·021	·911	·110	·962	+·020	30·000	79·4	54·4	25·0	84·4	48·7	35·7	69·7	75·7	66·4	+0·3	53·5	62·0	63·9	59·8
	Calcutta (Alipore)		·124	·995	·129	30·048	+·034	·015	73·9	55·5	18·4	80·3	50·1	30·2	67·3	72·8	63·7	−1·5	54·5	60·3	61·8	58·9
	Saugor Island		·103	·981	·122	·032	+·027	·002	75·5	56·9	18·6	80·7	50·0	30·7	68·9	72·4	65·0	−2·1	55·3	62·5	63·5	60·4
	False Point		·102	·957	·115	·040	+·015	·003	76·9	58·6	18·3	80·6	52·0	28·6	72·9	74·1	66·7	−1·1	58·2	66·7	66·6	63·8
Gangetic Plain and Chota Nagpur.	Hazaribagh		28·060	27·949	·111	27·997	+·019	·026	67·2	50·1	17·1	75·7	44·7	31·0	59·7	65·1	57·6	−3·3	48·3	52·6	54·5	51·8
	Darbhanga		29·968	29·841	·127	29·896	+·073	·024	68·8	52·5	16·3	74·1	47·5	26·6	62·2	67·6	60·2	−1·9	51·6	58·6	60·2	56·8
	Allahabad		·828	·709	·119	·755	+·026	·035	67·2	49·3	17·9	77·3	44·5	32·8	60·6	67·0	57·5	−3·1	48·5	56·2	58·8	54·5
Upper Sub-Himalayas.	Dehra Dun		27·814	27·721	·093	27·758	+·015	·053	62·1	44·2	17·9	73·0	39·0	34·0	53·3	58·9	51·9	−2·9	42·4	49·4	51·4	47·7
	Roorkee		29·201	29·101	·100	29·140	+·026	·047	61·3	45·1	19·2	74·8	40·0	34·8	54·1	62·2	53·7	−2·1	43·3	51·5	54·4	49·7
	Meerut		·360	·256	·104	·299	+·016	·047	65·5	46·2	19·3	75·7	41·7	34·0	55·2	62·6	54·6	−1·6	45·2	51·5	54·4	50·4
	Lahore		·401	·317	·084	·347	+·019	·063	64·0	44·3	19·7	72·0	38·6	33·4	54·0	61·9	52·5	+0·5	42·8	51·0	54·4	49·4
	Ludhiana		·283	·199	·084	·229	+·027	·062	61·8	46·5	15·3	72·1	40·1	32·0	54·0	60·1	52·8	0	45·6	51·1	53·9	50·2
Indus Valley and N.W. Rajputana.	Peshawar		·008	28·924	·084	28·954	+·010	·117	60·1	39·1	21·0	68·7	33·1	35·6	52·2	57·6	47·9	−1·6	37·3	46·3	48·6	44·1
	Jacobabad		·958	29·836	·122	29·885	+·014	·040	70·0	45·9	24·1	78·4	34·1	44·3	59·7	68·3	56·4	−0·2	42·9	51·9	55·6	50·1
	Kurrachee		30·118	30·004	·114	30·052	+·021	·033	75·4	55·4	20·0	8·.4	42·2	40·2	67·2	72·5	64·4	−0·6	52·0	58·4	61·7	57·4
E. Rajputana, Central India, and Gujarat.	Jaipur		28·664	28·562	·102	28·602	+·022	·054	68·7	47·6	21·1	81·2	41·0	40·2	60·8	66·8	56·4	−2·4	44·9	52·4	55·1	50·8
	Udaipur		·147	·020‡	·127	·084		·022‡	72·5	47·1	25·4	83·5	38·3	45·2	63·1	71·2‡	59·5‡		42·7‡	53·1	56·7‡	50·8
	Deesa		29·632	29·507	·125	29·557	+·021	29·990	79·8	51·1	28·7	89·4	36·0	51·4	70·7	77·8	65·4	−2·2	45·1	56·5	58·5	53·4
	Jamnagar		30·056	·932	·124	·994		30·001	77·3	52·9	24·4	86·8	43·4	43·4	68·9	75·3	64·6		47·5	57·8	59·3	54·9
Deccan.	Belgaum		27·483	27·358‡	·125	27·415	−·002	29·856‡	85·5	59·3	26·2	90·8	51·3	39·5	77·0	83·3‡	72·0‡	+2·1	56·7	62·2	63·7‡	60·9
	Sholapur		28·448	28·299	·149	28·370	−·013	903	89·1	62·5	26·6	93·9	53·3	40·6	77·9	87·6	75·1	+3·1	54·8	62·5	64·9	60·7
	Poona		·202	·067	·135	·132	+·002	·917	87·4	54·6	32·8	94·0	47·5	46·5	74·5	85·5	70·7	+1·4	51·5	60·1	62·7	58·1
	Akola		29·149	·997	·152	29·065	+·013	·964	83·4	55·2	28·2	92·0	45·5	46·5	72·2	82·2	68·3	+0·1	52·3	61·0	64·6	59·3
	Buldana	2,132	27·918	27·790	·128	27·846	+·007	·945	79·0	57·6	21·4	87·7	50·1	37·6	70·9	76·4	66·9	−1·6	51·8	58·2	60·0	56·7
	Khandwa		29·030	28·885	·145	28·950	+·017	·971	81·3	53·3	28·0	91·2	44·1	47·1	69·0	80·0	66·3	−0·6	49·7	59 0‡	63 2‡	57·3
	Nagpur		·057	·906	·151	·974	+·018	·974	81·7	57·5	24·2	90·1	49·4	40·7	69·9	79·5	68·3	+0·1	54·0	61·1	65·7	60·3
	Do. (Sanitary Commr.'s Office).		·070	·925	·145	·990		·980	82·3	57·2	25·1	90·8	47·5	43 3	70·6	80·8	69·4		52·3	60·3	65·3	59·3
	Hyderabad (Deccan).		28·359	·223	·136	·285	−·004	·924	86·1	63·2	22·9	91·4	54·5	36·9	76·8	85·5	74·0	+3·7	59·8	65·6	65·9	63·8
West Coast.	Bombay		30·032	29·915	·117	29·965	+·014	943	80·9	66·9	14·0	86·6	63·0	23·6	73·9	77·6	72·6	−0·6	61·5	66·5	69·2	65·7
	Karwar		·016	·895	·121	·946	+·032	·922	6·2	67·5	18·7	93·3	61·8	31·5	78·8	84·5	76·0	+0·8	66·0‡	70·3	73·2	69·9

† Mean of 28 days.

‡ Mean of 30 days.

II.

65 Stations in India, Burma, etc., in January, 1901.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from											Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Provinces.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
.800*	.874	.879	.851	+.064	86†	76	69	77	+ 1	3·4	4·2	3·8	+0·4		18	33	2	3			1	5	N. 28° E.	N. 41° E.	% 77	% 76	128	162			Port Blair .	Burma Coast and Bay Islands.
.550	.579	.523	.551	0	85	57	38	60	− 4	2·4	4·2	3·3	+1·3		24	19	1	3	3	2	7	3	N. 10° E.	N. 27° E.	53	36	104	95			Rangoon .	
.618	.698	.678	.665	+.035	74	65	63	67	− 3	1·0	1·6	1·3	−1·0	9	10	13	2				11	17	N. 21° W.	N. 1° W.	53	71	231*	176			Diamond Island, Cocos Island	
.662	.708	.692	.687	+.025	73	65	66	68	− 3	1·4	1·5	1·5	−0·5		35	25							N. 19° E.	N. 18° E.	94	86	120	391	*Nil*	*Nil*		
?	.480	.523	?	?	?	63	56	?	?	1·2	1·9	1·6	+0·3			20	11				12	18	N. 1° W.	N. 19° W.	43	42	69	67			Akyab .	
.402	.456	.439	.432	−.035	94	63	50	69	− 4	1·6	2·3	2·0	+0·6		7	22	4	2			1	26	N. 2° E.	N. 26° W.	63	47	74*	75			Chittagong .	Bengal and Orissa.
.416	.432	.408	.419	+.017	93	65	52	70	+ 1	2·7	3·0	2·9	+1·6		23	10	3	2		1	5	18	N. 10° W.	N. 36° W.	67	39	79	62			Calcutta (Alipore).	
.421	.484	.469	.458	−.061	90	69	59	73	− 2	2·9	3·0	3·0	+1·4		32	12		2	1	3	4	8	N. 3° W.	N. 6° W.	68	20	198	186			Saugor Island.	
.489	.578	.557	.541	+.004	98	71	66	78	0	3·5	3·2	3·4	+1·4		20	17	21	2	1			1	N. 48° E.	N. 57° E.	72	22	132*	147			False Point	
.321	.313	.298	.311	+.043	87	62	50	66	+15	4·9	5·6	5·3	+3·0	5	5		3	6	6	2	19	16	N. 79° W.	N. 53° W.	40	49	145*	135			Hazaribagh	Gangetic Plain and Central India.
.374	.447	.425	.415	+.019	94	80	64	79	+ 8	2·1	2·1	2·6	+ 1·2	4	4	5	6	2	2	5	20	14	N. 65° W.	S. 80° W.	40	46	78	63			Darbhanga	
.337	.396	.389	.374	+.035	94	75	60	77	+11	4·5‡	4·6	4·6	+2·5	1	5	5	12	2	1	4	18	14	N. 46° W.	N. 40° W.	31	25	130*	81			Allahabad .	
.252	.308	.291	.284	+.010	86	76	59	74	+ 7	5·8	5·7	5·8	+1·6	16	2		24	9		1	3	2	S. 82° E.	S. 69° W.	46	18	245	40			Dehra Dun.	
.259	.350	.326	.312	+.023	86	83	59	76	+10	4·5	3·8	4·2	+0·8	21	3	2	2	8		2	8	16	N. 53° W.	N. 76° W.	24	19	47	51			Roorkee .	Upper Sub-Himalayas.
.292	.336	.320	.316	+.026	93	76	57	75	+10	5·3	4·2	4·8	+1·6	9	1		3	6		8	26	9	S. 85° W.	N. 56° W.	50	42	32*	49			Meerut .	
.260	.336	.327	.308	+.036	89	80	60	76	+13	4·5	4·6	4·6	+1·0	11	10	1	5	5	2		14	14	N. 44° W.	N. 27° W.	34	20	44	43			Lahore .	
.299	.339	.339	.326	+.037	94	81	65	80	+11	4·8	4·6	4·7	+0·3	8	7	3		8	3		12	20	N. 53° W.	N. 54° W.	39	29	63*	35			Ludhiana .	
.205	.247	.235	.229	+.004	85	63	51	66	+ 4	3·9	4·8	4·4	−0·4	39	4	3	1	2	3	1	3	6	N. 34° W.	S. 2° W.	10	5	21*	64			Peshawar .	Indus Valley and N.-W. Rajputana.
.242	.285	.277	.268	+ .039	78	56	41	58	+ 9	4·9	4·8	4·9	+1·9	36	4	4	8				3	7	N. 14° E.	N. 4° W.	20	24	27*	51			Jacobabad .	
.353	.384	.418	.385	+.034	78	56	51	62	+ 6	3·2	3·0	3·1	+0·5	1		12	15	9	7	10	6	2	S. 55° E.	N. 23° E.	30	23	158*	239			Kurrachee .	
.269	.292	.295	.285	+.011	81	55	46	61	+ 8	4·0	5·2	4·6	+1·4	2	5	15	11	2	4	6	6	11	N. 20° E.	N. 8° E.	24	18	67	83			Jaipur .	E. Rajputana, Central India, and Gujarat.
.250‡	.287	.289‡	.275		76‡	50	38‡	55		3·5	3·4	3·5		5	4	10	15	11	3	4	4	5	N. 87° E.		21		†67*				Udaipur .	
.226	.274	.239	.246	−.006	60	37	25	41	+ 4	2·3	3·2	2·8	+0·6		7	15	15	6	2	3	5	9	N. 47° E.	N. 20° E.	36	38	208	206			Deesa .	
.268	.342	.301	.304		64	47	34	48		1·4	2·2	1·8			19	18	3	1	1	4	8	8	N. 1° W.		53		221*				Jamnagar .	
.433	.376	.346‡	.388	+.043	85	40	31‡	52	+ 5	2·7	2·7‡	2·7	+1·2		7	7	13	7	5	10	7	6	S. 80° E.	S. 75° E.	8	43	184	249			Belgaum .	Deccan.
.343	.379	.337	.353	+.003	59	40	26	42	− 2	1·9	2·9	2·4	+0·6		6	11	2	22	4	6	2	9	S. 74° E.	S. 59° E.	21	55	164*	184			Sholapur .	
.349	.344	.286	.326	+.010	81	40	24	48	+ 6	1·9	2·3	2·1	+0·6	2	1	5	1	9	1	17	20	6	S. 67° W.	N. 63° E.	44	9	190*	134			Poona .	
.362	.391	.381	.378	+.049	81	50	35	56	+ 8	3·5	3·7	3·6	+2·2	10	5	14	15	2	1	1	3	11	N. 37° E.	N. 50° E.	40	28	80*	88			Akola .	
.320	.328	.318	.322	+.012	66	45	36	49	+ 5	2·1	2·8	2·5	+0·5		10	8	5	8	5		5	16	N. 15° W.	N. 75° E.	21	13	157*	132	1·56	0·82	Buldana .	
.317	.381‡	.376‡	.358	+.033	77	55‡	38‡	57	+ 8	2·4	3·2	2·8	+1·3	3	5	16	15	7	3	2	4	7	N. 60° E.	N. 21° E.	39	21	104	74			Khandwa .	
.381	.434	.466	.427	+.068	79	59	46	61	+ 9	4·0	5·2	4·6	+2·5	19	9	6	10	4	5	5	3	1	N. 76° E.	N. 71° E.	16	20	98	93			Nagpur .	
.384	.402	.438	.408		81	54	42	59		3·1	3·9	3·5		2	1	45	1	4		4		5	N. 44° E.		63		50*				Do. (Sanitary Commr.'s Office).	
.481	.497	.422	.467	+.030	81	53	37	57	− 3	2·5	3·2	2·9	+1·3	30		1	3	23	1		2	1	S. 46° E.	S. 51° E.	37	60	92*	90			Hyderabad (Deccan).	
.482	.557	.607	.549	−.028	73	66	63	67	− 2	2·2	2·2	2·2	+0·8		8	12	11	2			6	23	N. 2° W.	N. 6° E.	50	58	231	239			Bombay .	West Coast.
.623‡	.634	.669	.644	+.054	92‡	64	56	71	+ 2	0·7	0·1	0·4	−0·3	2	11	2	7	1		1	16	22	N. 42° W.	N. 19° W.	57	53	97	73			Karwar . .	

‡ Mean of 28½ days.

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S.L. and for gravity 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
South India.	Periyakulam		29·098	28·954	·144	29·026			89·0	66·9	22·1	93·1	59·0	34·1	79·4	86·4	77·3		64·9	71·7	72·4	69·7
	Salem		·126	·970	·156	·051	0	29·925	92·1	68·2	23·9	95·2	61·9	33·3	82·2	89·3	78·8	+4·3	65·7	70·5	71·9	69·4
	Chitaldroog		27·631	27·501	·130	27·562	+·010	·871	88·1	65·6	22·5	91·1	61·0	30·1	79·0	85·8	76·3	+4·3	59·4	67·3	68·1	64·9
	Bangalore		·051	26·927	·124	26·988	0	·889	84·6	61·0	23·6	87·3	55·1	32·2	75·0	82·5	72·3	+4·7	59·1	64·2	64·5	62·6
	Hassan		26·983	·862	·121	·922	+·023	·884	84·3	58·1	26·2	87·6	53·1	34·5	76·1	82·5	70·8	+3·0	56·7	64·0	63·8	61·5
	Mysore		27·539	27·399	·140	27·469	+·014	·886	87·2	63·3	23·9	89·9	58·6	31·3	77·5	85·6	74·9	+3·6	60·4	65·5	65·4	63·8
	Madras		30·050	29·935	·120	29·989	+·001	·941	86·5	70·0	16·5	89·7	64·0	25·7	83·3	83·1	77·8	+2·3		74·6	74·4	73·2
	Bellary		28·569	28·420	·149	28·491	−·010	·903	91·8	66·4	25·4	95·8	62·9	32·9	80·2	88·5	78·0	+4·8	60·2	64·7	67·2	64·0
	Waltair		29·872	29·746	·126	29·809		·990	81·1	70·6	10·5	84·1	65·9	18·2	78·3	78·2	75·1		64·7	69·6	70·0	68·1
Hill Stations, Baluchistan.	Quetta		24·693	24·618	·080	24·643	−·012		48·9	31·1	17·8	62·2	17·5	44·7	41·7	45·2	39·1	−0·5	30·9	38·4	41·0	36·8
Hill Stations, Northern India.	Leh		19·625	19·561	·064	19·594	−·031		22·7	4·9	17·8	33·5	−8·5	42·0	15·0	19·0	12·6	−5·9	2·0	8·9	13·1	8·0
	Srinagar		24·990	24·926	·064	24·949	−·008		39·8	29·1	10·7	45·5	21·6	23·9	32·1	38·0	34·0	+1·0	27·9	31·4	36·4	31·9
	Kailang	10,087	20·906	20·834	·072	20·869	P		30·1	9·8	20·3	39·6	−2·0	41·6	19·0	21·7	16·7	−4·7	8·7	16·9	19·0	14·9
	Simla (Ridge)		23·120	23·059	·061	23·080	−·023		41·1	31·8	9·3	49·8	24·2	25·6	37·9	38·7	35·1	−5·2	29·4	33·4	35·3	32·7
	Chakrata		·303	·247	·056	·265	−·026		44·7	31·7	13·0	55·8	25·8	30·0	38·1	40·1	36·6	−5·0	30·2	33·8	36·5	33·5
	Ranikhet		24·162	24·087	·075	24·109	−·002		48·2	36·3	11·9	57·3	29·4	27·9	43·2	45·6	41·1	−4·9	34·4	38·5	39·9	37·6
	Muktesar		22·865	22·800	·065	22·832			44·3	31·7	12·6	55·6	25·9	29·7	39·4	40·6	37·1		29·1	34·7	35·6	33·1
	Katmandu	4,388	25·683	25·557	·126	25·614	P		59·9	39·0	20·9	67·0	32·6	34·4	48·0	55·7	48·4	−1·9	37·7	45·2	49·3	44·1
	Darjeeling		23·020	22·960	·060	22·984	+·027		41·9	32·6	9·3	48·8	28·4	20·4	38·1	40·4	36·9	−2·4	32·2	36·3	38·5	35·7
Hill Stations, Central India.	Mount Abu		26·138	26·066	·072	26·090	−·031		62·1	48·7	13·4	71·7	36·0	35·7	57·9	59·5	54·7	−2·9	42·3	48·0	49·0	46·4
	Pachmarhi		·583	·485	·098	·526	+·002		67·4	47·1	20·3	76·8	37·8	39·0	61·6	65·2	55·0	−2·0	45·4	53·4	55·6	51·5
	Chikalda	3,642	·455	·355	·100	·397	−·014		71·1	53·9	17·2	79·8	46·3	33·5	63·6	69·0	60·3	−2·1	49·2	54·7	57·7	53·9
Hill Stations, S. India.	Wellington		24·338	24·262	·076	24·300	+·030		69·7	48·9	20·8	71·9	38·2	33·7	65·0	65·7	58·3	+3·1	47·1	56·8	58·0	54·0
	Kodaikanal		22·905	22·835	·070	22·866			63·0	47·5	15·5	67·1	43·2	23·9	59·4	58·2	54·0		42·0	51·3	53·2	48·8
Extra India.	Aden		29·991	29·884	·107	29·930	+·003	·956	81·1	74·9	6·2	83·7	69·3	14·4	78·5	80·3	78·0	+2·0	70·0	71·5	71·4	71·0
	Perim		·861	·751	·110	·798	+·032	·934	84·6	75·4	9·2	85·9	73·2	12·7	81·4	81·8	79·3	+1·9	71·4	74·8	75·0	73·7
	Minicoy		30·019	·924	·095	·968		·900	86·8			89·7			84·6	84·2				76·8	76·9	
	Zanzibar		29·934	·816	·118	·875	+·037	·874	86·9	80·1	6·5	88·7	76·6	12·1	83·7	86·8	83·7	+1·3	75·8¶	78·4¶	78·4¶	77·5
	Port Victoria (Seychelles)	15	·992	·909	·083	·951	+·026	·890	83·0	75·1	7·9	85·2	73·1	12·1	81·9	82·1	78·8	−0·9	73·4	76·3	76·4	75·4
	Mauritius (Pamplemousses)	181					+·019	·916				95·1	68·2	26·9			79·5	+0·4				

† Mean of 24 days. ‡ Mean of 29 days. § Mean of 27 days. ‖ Mean of 28½ days.

II.—*concluded.*

65 Stations in India, Burma, etc., in January, 1901—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
														Number of winds from																	
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean Velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
.601	.682	.616	.633		90	69	50	70		2·3	4·4	3·4		18	3	2	11	10	6	1	5	6	S. 62° E.		18	%	56*				Periyakulam	South India.
.602	.598	.557	.586	+.022	87	54	40	60	− 5	2·2	3·2	2·7	−0·1	15		17	25	2		1	2		N. 75° W.	N. 82° E.	60	62	123*	117			Salem	
.437	.524	.469	.477	+.123	69	53	38	53	+ 7	1·9	2·3	2·1	+0·3		4	10	22	13	2	3	4	4	N. 89° E.	S. 88° E.	47	77	141*	175			Chitaldroug	
.482	.477	.401	.453	+.048	89	55	36	60	− 1	1·3	2·3	1·8	−0·7	2	3	9	31	11	3	1	1	1	S. 88° E.	N. 88° E.	69	79	178*	111			Bangalore	
.450	.462	.379	.430	+.045	91	51	34	59	+ 2	3·0	3·6	3·3	+0·2		1	19	23	13	3	1	1	1	N. 87° E.	N. 87° E.	69	71	51*	75			Hassan	
.494	.483	.378	.452	+.005	84	51	31	55	− 5	5.2	4·4	4·8	+2·0		3	13	21	16	3	1	2	3	S. 89° E.	N. 82° E.	50	83	173*	218			Mysore	
	.742	.738	.761	+.107		65	65	80	+ 5	4·5	3·3	3·9	−0·1		1	11	30	18	2				S. 83° E.	N. 49° E.	82	78	133	141			Madras	
.451	.424	.406	.427	+.001	69	41	30	47	− 5	4·3	5·2	4·8	+2·6	4	2	4	13	20	12	1	2	4	S. 52° E.	S. 68° E.	50	64	221*	81			Bellary	
.535	.613	.626	.591		71	63	61	66		4·6	4·0	4·3				10	27	10	11	2	2		S. 72° E.		64		103				Waltair	
.173	.203	.219	.198	+.040	97	77	72	82	+15	4·7	6·3	5·5	+1·4	29	1			3	4	9	11	5	S. 67° W.	N. 85° W.	32	25	50*	74			Quetta	Hill Station, Baluchistan.
.028	.025	.040	.031	−.041	51	29	39	40	−27	6·5	7·4	7·0	+0·4			8	11	4	17	18	4		S. 6° E.	S. 10° W.	43	29	32¶	22			Leh	Hill Stations, Northern India.
.139	.171	.201	.170	+.016	85	92	87	88	+ 6	8·9	8·1	8·5	+0·6	18	12	3		6	6		2	15	N. 23° W.	S. 37° E.	26	10	79*	71			Srinagar	
.061	.082	.086	.076	−.012	84	76	72	77	+ 6	7·7	7·5	7·6	+0·9		2		1	8	9	12	23	7	S. 61° W.	S 66° W	55	52	4	20	2·71	1·38	Kailang	
.139	.147	.174	.153	+.006	79	66	75	73	+15	7·0	8·1	7·6	+2·0	16	3	8	2	3	24	4			S. 18° E.	S. 7° E.	34	31	86	128			Simla(Ridge)††	
.154	.153	.182	.163	+.007	87	62	74	74	+12	4·8	5·9	5·4	+0·8	6	18	5	2	6	23			2	S. 62° E.	S. 84° W.	14	5	168	123			Chakrata	
.179	.196	.191	.185	−.008	84	68	64	72	+ 9	4·9	5·8	5·4	+1·3	23	1	10	4			6	16	2	N. 63° W.	S. 51° W.	19	15	50*	44			Ranikhet	
.134	.155	.158	.149		78	66	65	70		6·1	5·5	5·8		4	2	.1	5	29	3	3	4	11	S. 29° E.		40		184*				Muktesar	
.215	.274	.283	.257	+.008	88	81	64	78	+ 5	4·4	4·9	4·7	+1·4		2	3	8	3		3	39	4	N. 85° W.	N. 76° W.	52	49	22	21	2·32	1·30	Katmandu	
.178	.196	.216	.197	−.006	95	85	86	89	+ 8	6·7‡	7·0§	6·9	+1·2	2	1	3		15	6	21	10	4	S. 21° W.	S. 89° W.	47	22	73*	88			Darjeeling	
.201	.226	.232	.220	+.013	59	47	46	51	+ 8	4·2	3·7	4·0	+1·6		7	11	3	4	2	17	10	8	N. 76° W.	N. 69° W.	23	11	142*	119			Mount Abu	Hill Stations, C. India.
.292	.318	.337	.316	+.032	88	59	55	67	+12	4·2	4·7	4·5	+2·2	12	7	6	2	5	8	8	8	6	S. 78° W.	N. 79° W.	13	10	125*	78			Pachmarhi	
.302	.331	.350	.328	+.019	72	58	50	60	+ 8	2·7	2·8	2·8	+0·6	41	9			4	5	2	1		S. 10° E.	S. 40° W.	21	24	175*	123	2·15	0·86	Chikalda	
.309	.380	.408	.366	+.064	87	62	65	71	+ 3	3·2	5·0	4·1	+0·9	6	5	9	4	26	11	1			S. 56° E.	S. 27° E.	55	65	56	52			Wellington	Hill Stations, S. India.
.217	.302	.358	.292		65	61	74	67		3·6	5·7	4·7			7	15	8	10	1			11	N. 46° E.		40		328†				Kodaikanal**	
.670	.682	.651	.668	+.028	77	70	63	70	− 2	6·5	3·5	5·0	+1·2			25	26	10				1	N. 77° E.	N. 89° E.	82	70	340‖	319			Aden	Extra India.
.719	.783	.782	.761	+.099	82	73	72	76	+ 6	3·5	0·5	2·0	−0·4			2	25	31	4				S. 63° E	S. 63° E.	87	78	493*	472			Perim	
	.820	.830				69	70			2·6	2·7	2·7			13	36	8	4				1	N. 44° E.		82		105*				Minicoy	
.830¶	.901¶	.860¶	.864	+.014	80¶	78¶	68¶	75	− 2	7·0	4·0	5·5	+1·1		22	22	12	4	1		1		N. 41° E.	N. 25° E.	72	69	166*	196			Zanzibar	
.805	.836	.838	.826	+.006	91	76	76	81	+ 1	5·9	6·5	6·2	−0·8	8	2	5	6	5	1	2	8	25	N. 39° W.	N. 43° W.	35	66	145	144	12·03	3·80	Port Victoria (Seychelles).	
			.728	−.006				73	− 2																		341	269	18·60	12·22	Mauritius (Pamplemousses)	

¶ Mean of 30 days. ** Wind variable 10. †† Wind variable 2. * Corrected.

C. I. C. P. O.—No. 168 Meteor.—9-5-1901—385.

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one	feather added to the wind arrow
„ „	2 to 5 „ „ „	...	two	feather „ „ „ „
„ „	5 to 10 „ „ „	...	three	„ „ „ „
„ „	10 to 20 „ „ „	...	four	„ „ „ „ „
	over 20 „ „ „	...	five	„ „ „ „ „

LITHO. BY J. N. MUNDLE.

Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

CHART SHEWING THE VARIATION OF THE MEAN MAXIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.

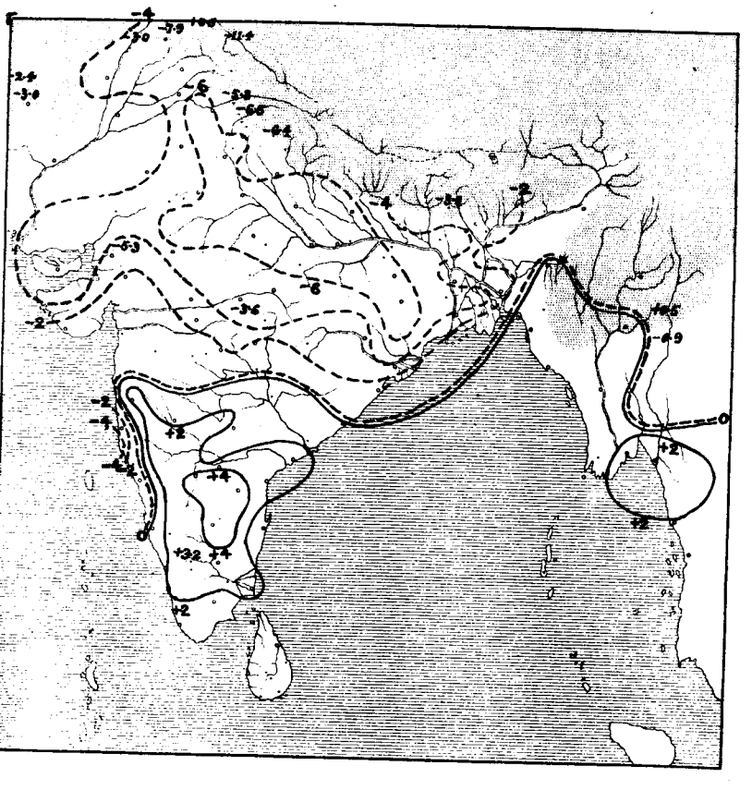
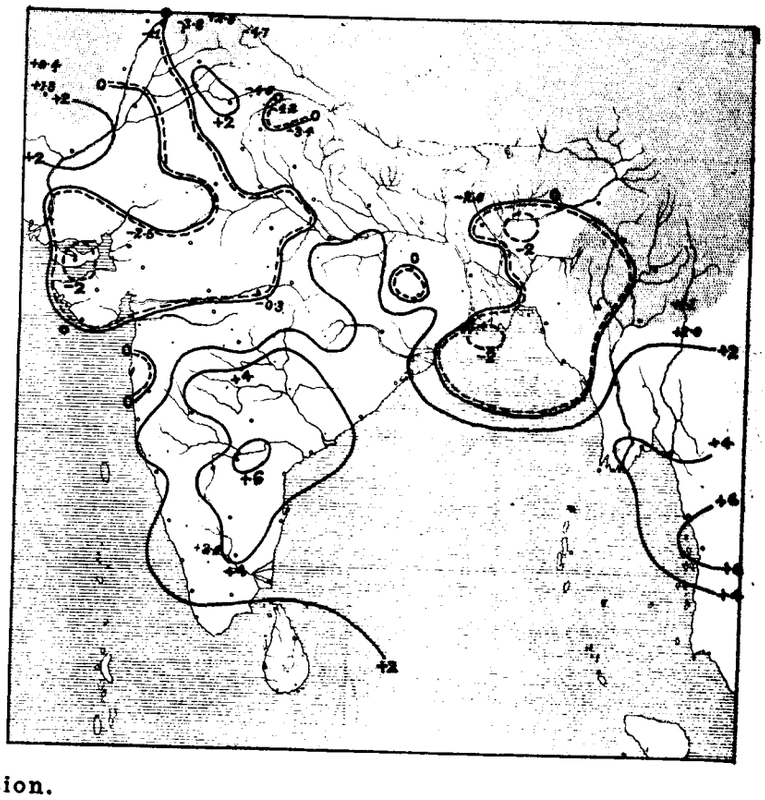


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

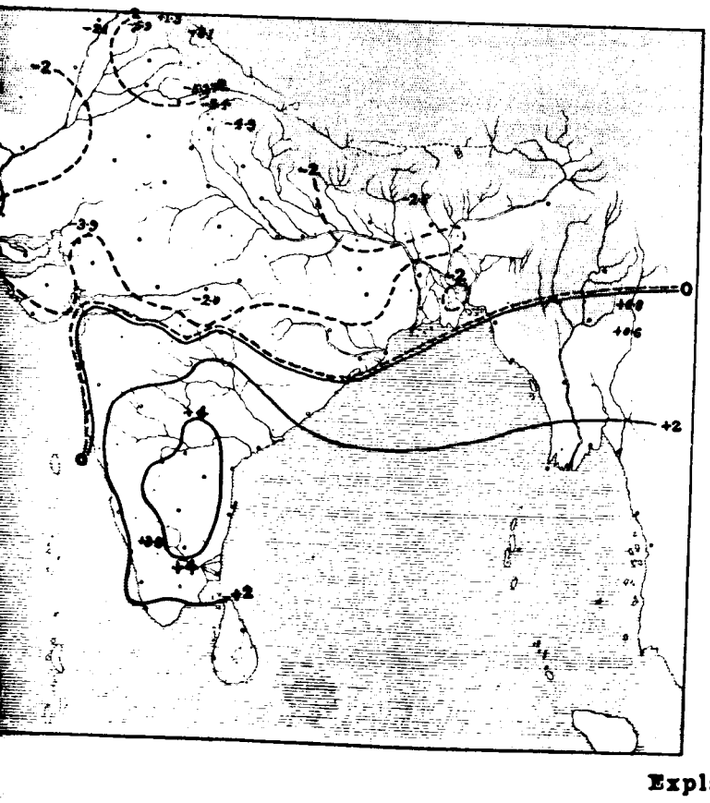
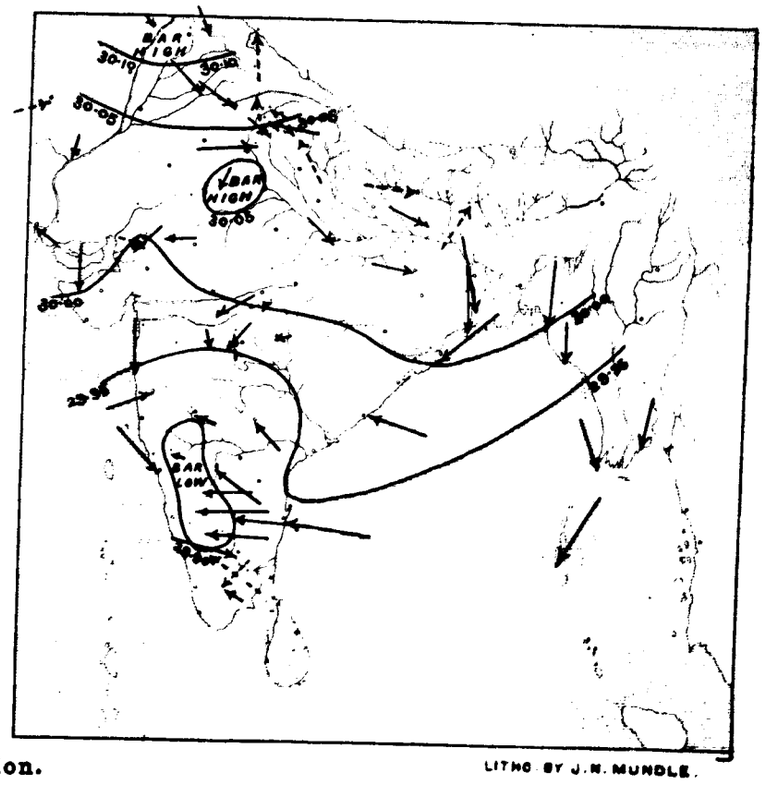


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF JANUARY 1901.



Explanation.

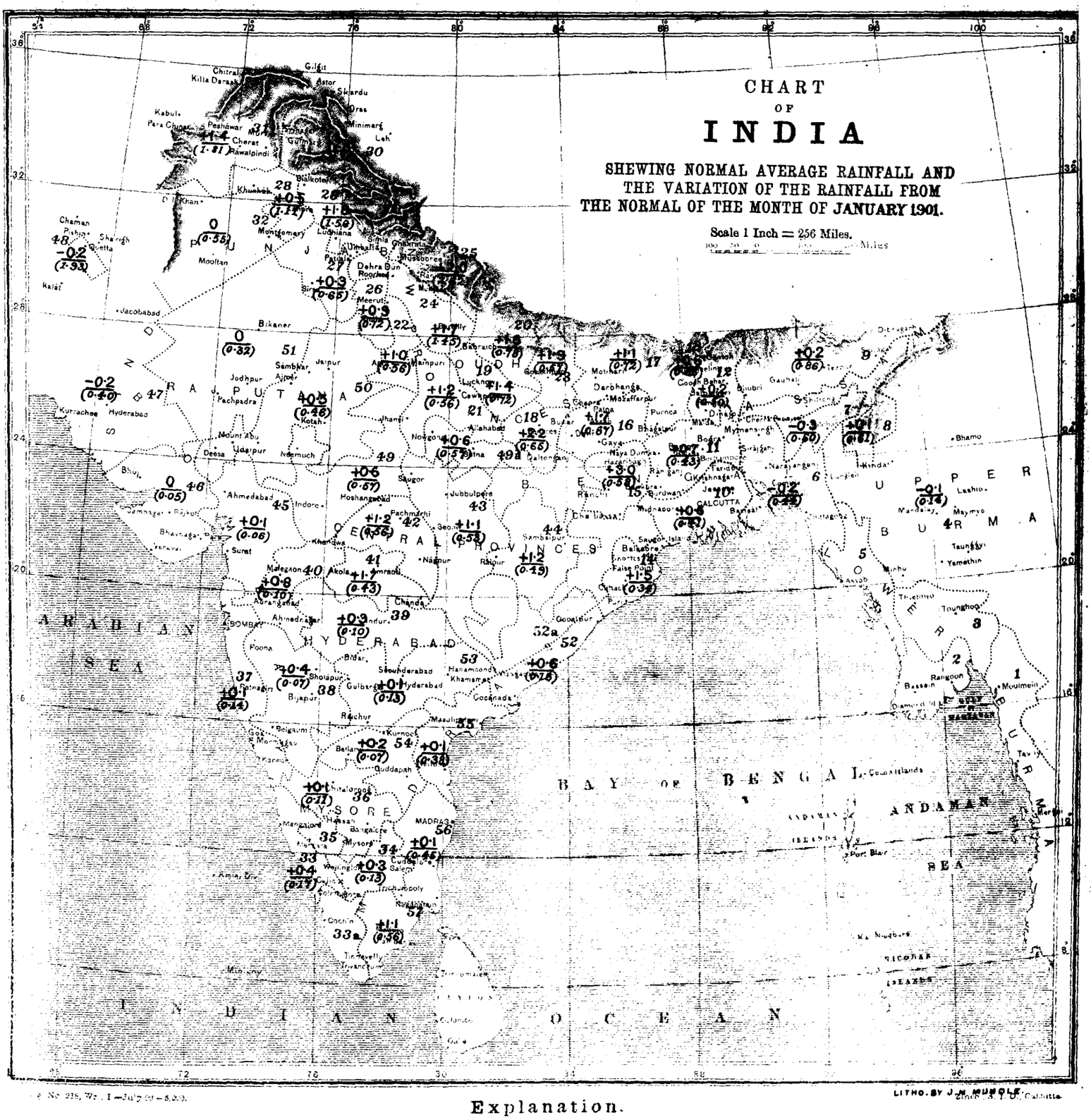
LITHO BY J.N. MUNDLE.

tinuous lines indicate that the mean daily temperature of month in excess by amounts indicated by the attached numbers. Broken otted lines that it was in defect by the amounts indicated by the ed numbers. Double lines are the lines of no variation, the broken

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the direction

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India (182 in number), except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.



No. 218, W. I.—July 20—5,000.

LITHO. BY J.N. MUKOLE, Govt. P. O., Calcutta.

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month have been calculated, and the numbers given in the centre of each division usually with a + or − sign attached give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
33. Malabar
33a. Travancore
34. Mysore, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Rajputana, East, Central India West
46. West Rajputana
52. Madras, East Coast, North
52a. Do. do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South
58. Baluchistan Hills
59. Punjab, Indus, East
60. Do. do.
61. Rajputana East, Central India West
62. West Rajputana

LIBRARY
JUL 26 1901
Weather Bureau

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, FEBRUARY, 1901.

INTRODUCTION.

THIS review of the weather in India during the month of February 1901 is based on observations taken daily at 8 A.M. at 221 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 65 stations. In the rainfall summary the rainfall data of the meteorological observatories and the weekly rainfall telegrams received during the month from the District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the preparation of the review, are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is given.

Summary of the chief features of the weather in India during the month of February, 1901.

The meteorology of the month of February 1901 was marked by several unusual features. One of the most important was the considerable number of depressions which passed from west to east across the country. The place of origin of these depressions was also remarkable. So far as can be judged, most of the storms which entered North-West India originated over or near the north-west frontier, as there were no recognisable indications of their passage through Persia, while those which traversed Central India apparently originated within or near an area of low temperature, low humidity and diminished cloud amount which overlay North Bombay during nearly the whole month. Abnormally heavy rain fell during the month in certain areas which usually receive very little rain during February These were Southern India, the Central Provinces, Central India, parts of Bengal and Burma. In all these districts the total rainfall of the month though not very large in actual amount yet was very considerably in excess of the normal. In addition over North-West India, where, ordinarily, a considerable amount of rain is anticipated, the normal fall was in many cases largely exceeded. Between the 1st and the 3rd anticyclonic conditions of pressure prevailed over India, and temperature was in excess practically in all parts of the country. This excess was greatest within a broad band stretching from North Bombay to the South-East Punjab,

and the mean temperature was 10° or more in excess of the normal at the following stations on these three days:—

Date.	Station.	Mean temperature. Actual of date.	Normal of date.	Variation of actual from normal of date.
		°	°	°
1st February	Jaipur	69·6	59·3	+10·3
	Sambhar	68·7	58·6	+10·1
2nd February	Jaipur	73·2	59·5	+13·7
	Veraval	80·5	68·9	+11·6
	Ahmedabad	81·2	70·8	+10·4
	Sambhar	68·9	58·6	+10·3
	Deesa	77·1	67·1	+10·0
3rd February	Surat	85·1	71·8	+13·3
	Veraval	82·2	69·0	+13·2
	Deesa	80·3	67·2	+13·1
	Indore	76·7	64·2	+12·5
	Rajkot	79·9	67·8	+12·1
	Sambhar	69·9	58·3	+11·6
	Ahmedabad	82·4	70·9	+11·5
	Jaipur	70·4	59·5	+10·9
	Ajmer	70·3	59·5	+10·8

On the 4th a barometric depression, which had apparently originated over North Bombay and the adjacent districts, passed inland over Khandesh and Rajputana. In this position it apparently broke up, one portion advancing north-eastward into the Punjab and the other portion advancing eastward through the Central Provinces, across the head of the Peninsula and passing out into the Bay. That portion of the disturbance which passed north-eastward into the Punjab occasioned a good deal of rain on the plains and of snow on the hills of North-West India on the 5th, 6th and 7th, of which the more noteworthy amounts were as follows:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Punjab, D. G. Khan	Fort Munro	5th February	3·60
Punjab, Kangra	Plach	" "	2·40
Punjab, Umballa	Rupar	" "	1·95
Punjab, Gurdaspur	Dalhousie	" "	1·82
Punjab, Umballa	Naraingarh	" "	1·68
Punjab, Simla	Simla	" "	1·58
Kashmir, Kashmir	Pattan	5th February	1·50
Punjab, Umballa	Kasauli	6th "	3·23
Punjab, Kangra	Nurpur	" "	3·10
Punjab, Simla	Barauli	" "	2·15
Punjab, Kangra	Kangra	" "	2·12
Punjab, Umballa	Kharar	" "	2·09
Punjab, Kangra	Nagar	" "	1·92
Punjab, Hoshiarpur	Hoshiarpur	" "	1·75
Punjab	Sadr station	" "	1·72
Punjab, Kangra	Palampur	" "	1·70
Punjab, Ludhiana	Ludhiana	" "	1·65
Punjab, Kohat	Fort Lockhart	" "	1·60
Punjab, Rawalpindi	Rawalpindi	" "	1·57
North-Western Provinces, Moradabad	Moradabad	" "	1·52
Kashmir, Kashmir	Doda	" "	2·20
Kashmir	Anantnag	" "	1·53
Punjab, Kangra	Hamirpur	7th "	3·46
Punjab	Palampur	" "	2·50
Punjab	Dharmsala	" "	2·35
Punjab	Dera	" "	1·72
Kashmir, Kashmir	Doda	" "	3·45

A well marked cool wave succeeded this precipitation, and the area of greatest excess of temperature retreated eastward from Rajputana and North Bombay as far east as Central Bengal. The contrast of temperature over India at this time was remarkable. The following gives data from the 4th to the 8th for the two stations exhibiting the greatest negative and the two stations exhibiting the greatest positive variations of the mean temperature from the normal:—

Date.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date. Station.	Positive.	Date.	Station.	Negative.
		°			°
4th February	Neemuch	+11·2	4th February	Hyderabad (S)	− 0·2
	Indore	+10·4		Quetta	− 2·7
5th "	Hoshangabad	+11·1	5th "	Rajkot	− 4·1
	Khandwa	+10·5		Bhuj	− 3·4
6th "	Jubbulpore	+10·8	6th "	Rajkot	− 9·2
	Sutna	+ 9·4		Deesa	− 6·8
7th "	Sutna	?+12·3	7th "	Rajkot	− 9·2
	Gaya	+ 9·5		Deesa	− 9·0
8th "	Jalpaiguri	+12·0	8th "	Rajkot	−10·6
	Bogra	+11·6		Bhuj	− 7·8

On the 8th and 9th another shallow depression was developed over North Bombay and the adjacent districts and thence drifted slowly eastward across the head of the Peninsula to the Bay of Bengal into which it passed on the 12th and filled up on the 16th. Over the Bay the storm developed some additional intensity. The storm was a complicated disturbance occasioning only a moderate depression of the barometer, but giving a most remarkable fall of rain over part of Bengal, the Madras coast and Burma and occasionally a severe gale at Diamond Island. The following are the more noteworthy falls of rain associated with this storm :—

	District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
				Inches.
Bengal	Manbhum	Barahabhun	12th February	3·30
	Orissa Tributary Mahals.	Talchar	,, ,,	2·60
	Ranchi	Tamar	,, ,,	2·53
	Orissa Tributary Mahals.	Baisanga	13th ,,	5·00
	Midnapore	Contai	,, ,,	4·20
	,,	Damtan	,, ,,	3·86
	Puri	Pipli	,, ,,	3·65
	Cuttack	Jaypur	,, ,,	3·31
	Balasore	Akhyapada	,, ,,	3·25
	Puri	Ranpur	,, ,,	3·17
	Cuttack	False Point	,, ,,	3·14
East Coast.	Kistna	Masulipatam	,, ,,	3·80
	,,	Arepalle	,, ,,	3·55
	Godavari	Prappipada	,, ,,	3·38
Burma	Sandoway	Taungup	14th ,,	3·36
	Pegu	Pegu	,, ,,	3·23
	Thayetmyo	Kama	,, ,,	3·00
	Bassein	Kangyidaung	,, ,,	2·89
East Coast.	Kistna	Avanigadda	,, ,,	4·62
	Godavari	Mummidivaram	,, ,,	2·76
	Chingleput	Conjeeveram	,, ,,	3·83
	South Arcot.	Panruti	,, ,,	3·58
	Chingleput	Saidapet	,, ,,	3·07
Burma	Bassein	Bassein	15th ,,	2·80
	Pegu	Nyaunglebin	,, ,,	2·4
	Thoangwa	Maubin	,, ,,	2·27
	Toungoo	Shwegyn	,, ,,	2·25
East Coast.	Chingleput	Ponnery	15th February	3·13
	,,	Kovelong	,, ,,	2·68
	South Arcot.	Tittavudi	,, ,,	2·52
	Nellore	Iskapalle	,, ,,	2·51
	North Arcot	Arkonam	17th ,,	3·25
	South Arcot.	Tirukkovilur	,, ,,	3·30

While this storm was crossing the head of the Peninsula and passing out into the Bay, a fresh storm appeared in Sind on the 11th, but the storm was shallow and ill-defined and never attained to any importance. The chief feature of the temperature conditions at this time was the large deficiency over Bombay, Rajputana and the adjacent districts. The following gives variation data for the 13th for those stations at which the deficiency of the mean temperature amounted to 8° or more :—

Station.	Variation from normal of		
	Maximum temperature, 13th February.	Minimum temperature, 13th February.	Mean temperature, 13th February.
	°	°	°
Poona	— 9·5	—14·4	—12·0
Jaipur	—12·4	— 9·0	—10·7
Sambhar	—14·1	— 7·1	—10·6
Ajmer	—16·0	— 5·2	—10·6
Ahmednagar	— 8·7	—12·5	—10·6
Malegaon	— 7·5	—13·3	—10·4
Belgaum	— 8·8	—11·1	—10·0
Ratnagiri	— 7·5	—10·3	— 8·9
Sholapur	— 5·3	—12·4	— 8·9
Akola	— 6·8	—10·8	— 8·8
Deesa	— 5·7	—10·7	— 8·2
Nagpur	— 8·7	— 7·4	— 8·1

On the 17th a shallow low pressure area began to appear over Khandesh and the Bombay Deccan. The depression developed quickly during the next 24 hours and during the 18th and 19th passed quickly north-eastward to the neighbourhood of Nowgong (Central India) where it disappeared. The storm, though at no time severe, was accompanied with very general and moderately heavy

rain over a large part of the country. The following were some of the more noteworthy amounts:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Rewah	Umaria	17th February	1·27
Bhandara	Bhandara	,, ,,	1·20
Chanda	Armori	,, ,,	1·05
Raipur	Dhamtari	,, ,,	1·05
Bundelkhand	Orchha	18th ,,	2·10
Mandla	Tikaria	,, ,,	1·60
Chanda	Chimur	,, ,,	1·25
Rewah	Umaria	,, ,,	1·05

This rainfall occasioned a very general decrease of temperature except in the north-east, and on the 20th the mean temperature was more or less below the normal in the following large number of divisions:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 20th February.	Mean minimum temperature, 20th February.	Mean daily temperature, 20th February.
	°	°	°
Orissa	− 0·3	−0·5	− 0·4
Bihar	−10·8	+6·1	− 2·4
Chota Nagpur	− 9·0	+4·9	− 2·1
North-Western Provinces and Oudh	− 9·6	+3·4	− 3·1
Punjab	− 6·2	−2·6	− 4·4
Sind	− 3·5	−6·5	− 5·0
Rajputana	− 6·9	−4·1	− 5·5
Gujarat	− 7·0	−5·7	− 6·4
Central India	− 7·1	+4·1	− 1·5
Central Provinces	−10·7	+2·2	− 4·3
Berar	−16·3	−0·3	− 8·3
West Coast	− 1·9	+0·8	− 0·6
Bombay Deccan	−10·7	+0·8	− 5·0
Madras Deccan	− 5·9	+2·3	− 1·8

On the 20th a fresh shallow depression appeared in Sind and passing into Rajputana filled up there on the 21st, without much affecting the weather, but on the 22nd a new storm appeared over the South-West Punjab and thence advancing quickly eastward filled up over or at the foot of the Kumaun Himalayas to which region it gave a heavy fall of snow. The precipitation occasioned by these two storms was accompanied and followed by a large decrease of temperature over North-Western, Western and Central India and on the 22nd the mean temperature was in large defect over the greater part of the country. The following gives comparative data for the divisions in which the temperature was in defect:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 22nd February.	Mean minimum temperature, 22nd February.	Mean daily temperature, 22nd February.
	°	°	
Orissa	− 3·3	+ 1·6	− 0·9
Bihar	−13·5	+ 3·8	− 4·9
Chota Nagpur	−13·9	+ 3·8	− 5·1
North-Western Provinces and Oudh	− 8·1	− 0·2	− 4·2
Punjab	− 5·3	− 4·1	− 4·7
Sind	− 6·5	− 8·2	− 7·4
Rajputana	−12·2	−11·0	−11·6
Gujarat	−12·8	−13·3	−13·1
Central India	−11·1	− 5·7	− 8·4
Central Provinces	−13·0	− 3·7	− 8·4
Berar	−17·1	−10·9	−14·0
West Coast	− 4·1	− 2·6	− 3·4
Bombay Deccan	− 7·7	− 7·0	− 7·4
Madras Deccan	− 5·5	+ 3·4	− 1·1

A rapid rise of the barometer succeeded the disappearance of these depressions and anti-cyclonic conditions of pressure were established which continued until the 27th. On this date a shallow depresion appeared in Sind and on the following day (the 28th) another depression appeared in Khandesh. These two depressions occasioned a rapid fall of the barometer over Northern and Central India and broke down the anti-cyclonic conditions previously existing. A considerable change occurred in the temperature conditions, relatively to the normal, during the last week of the month. A marked rise of temperature commenced along the West coast of the Peninsula on the 21st and this rise extended to the greater part of Western, Central and North-Western India, while the area of greatest deficiency of temperature retreated eastward and north-eastward towards North-East India. As a result, at the close of the month, the mean temperature was generally in

excess over the more western divisions and in defect over the eastern divisions of India. This is shown below :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 28th February.	Mean minimum temperature, 28th February.	Mean daily temperature, 28th February.
	°	°	°
Burma	−3·1	−3·5	−3·3
Assam	0	−4·7	−2·4
Bengal	−3·7	−7·6	−5·7
Orissa	−5·2	−8·2	−6·7
Bihar	−4·8	−2·3	−3·6
Chota Nagpur	−7·8	−5·5	−6·7
North-Western Provinces and Oudh	−6·5	+1·7	−2·4
Punjab	−0·8	+0·4	−0·2
Sind	+2·0	−0·7	+0·7
Rajputana	−0·5	−0·3	−0·4
Gujarat	+2·4	−2·2	+0·1
Central India	−2·3	+5·2	+1·5
Central Provinces	−4·6	+0·2	−2·2
Berar	−1·2	+5·0	+1·9
West Coast	+1·4	+1·6	+1·5
Bombay Deccan	−1·3	+5·1	+1·9
Mysore	−1·7	+3·0	+0·7
Madras Coast	−2·5	+0·6	−1·0
Madras Deccan	−4·8	+1·4	−1·7
South India	−1·5	+3·3	+0·9

Pressure.—The excess of pressure which had prevailed for several preceding months was maintained during the month under review when the mean pressure of the Indian land area was 0·020″ above the normal. There was an excess of pressure over nearly the whole country except the centre and south of the Peninsula and the Lower Burma coast districts. The excess was considerable along the foot of the North-West Himalayas and over North Bombay while the deficiency was greatest, though far from large, over parts of the Madras Presidency. The excess of pressure noticed over Northern India apparently extended all over Persia and Arabia where the few stations existing exhibited a higher pressure than usual. The vertical pressure anomalies varied considerably, but were strongly positive in the Eastern Himalayan region. The following table gives the mean pressure variations and anomalies of the month for the eleven meteorological provinces of India :—

Meteorological Province.	Variation from normal of mean 8 A.M. pressure of February, 1901.	Pressure anomaly, February, 1901.
	″	″
Burma Coast and Bay Islands	+·007	−·013
Burma Inland	+·025	+·005
Assam	+·019	−·001
Bengal and Orissa	+·027	+·007
Gangetic Plain and Chota Nagpur	+·036	+·016
Upper Sub-Himalayas	+·044	+·024
Indus Valley and North-West Rajputana	+·038	+·018
East Rajputana, Central India and Gujarat	+·029	+·009
Deccan	+·011	−·009
West Coast	+·008	−·018
South India	−·002	−·022

Temperature.—The mean temperature was, during by far the greater part of the month, lower than usual over North-Western and Central India. It was steadily above the normal over Madras and varied rather irregularly from the normal over Burma and North-East India.

The mean day temperature of the month was above the normal over the south of the Peninsula, Ceylon, North and East Bengal, Assam and the greater part of Burma, except Lower Burma. The excess was generally small but equalled or exceeded 2° at the following stations in these two localities :—

	Province or Division.	Station.	Mean maximum temperature.		
			Actual, February 1901.	Normal, February.	Variation of actual from normal, February, 1901.
			°	°	°
1st Area.	South of the Peninsula.	Negapatam	86·5	84·2	+ 2·3
		Trichinopoly	94 0	92·0	+ 2·0
	Ceylon	Colombo	90·3	88·0	+ 2·3
2nd Area.	Bengal	Chittagong	85·7	81·5	+ 4·2
		Bogra	81·8	79·1	+ 2·7
		Barisal	82·5	80·0	+ 2·5
		Mymensingh	79·9	77·8	+ 2·1
	Assam	Silchar	83·8	79·9	+ 3·9
	Upper Burma	Kindat	84·3	81·0	+ 3·3

Over the whole of the remainder of India the mean day temperature was unusually low. The deficiency was

considerable over nearly the whole of this large region and exceeded 4° at the following large number of stations:—

Station.	Mean Maximum temperature.		
	Actual, February, 1901.	Normal, February.	Variation of actual from normal, February, 1901.
	°	°	°
Rajkot	81·5	87·5	—6·0
Raipur	80·8	86·8	—6·0
Nowgong	74·3	80·3	—6·0
Sambalpur	82·4	87·9	—5·5
Chanda	86·2	91·6	—5·4
Benares	75·1	80·4	—5·3
Seoni	78·7	83·9	—5·2
Gaya	76·3	81·3	—5·0
Nagpur	84·2	89·1	—4·9
Hazaribagh	72·9	77·7	—4·8
Hoshangabad	80·5	85·2	—4·7
Jubbulpore	77·3	81·9	—4·6
Chaibassa	79·4	83·7	—4·3
Jhansi	76·3	80·5	—4·2
Amraoti	85·5	89·7	—4·2
Sutna	75·1	79·2	—4·1
Hyderabad (Sind)	86·9	91·0	—4·1

The mean minimum or night temperature was below the normal over a considerable part of North-West India, but particularly so over Sind and Gujarat, where the following variations, exceeding —3°, were recorded:—

Province or Division.	Station.	Mean Minimum temperature.		
		Actual, February, 1901.	Normal, February.	Variation of actual from normal, February, 1901.
		°	°	°
Sind	Hyderabad (Sind)	49·0	54·1	— 5·1
	Kurrachee	53·9	58·3	— 4·4
	Jacobabad	43·8	47·8	— 4·0
Gujarat	Bhuj	52·4	57·9	— 5·5
	Rajkot	48·7	54·1	— 5·4
	Ahmedabad	56·1	59·8	— 3·7

Over nearly the whole of the remainder of India, except parts of Orissa, the mean night temperature was in excess of the normal. The excess was greatest in Central and Lower Burma and in Madras, where it exceeded 5° at the following stations:—

Province or Division.	Station.	Mean minimum temperature		
		Actual, February 1901.	Normal, February.	Variation of actual from normal, February, 1901.
		°	°	°
Burma	Bassein	70·8	63·9	+ 6·9
	Yamethin	65·2	59·0	+ 6·2
	Rangoon	70·4	65·2	+ 5·2
	Thayetmyo	61·1	56·0	+ 5·1
Madras	Salem	71·8	64·8	+ 7·0
	Trichinopoly	73·4	67·8	+ 5·6
	Negapatam	77·1	71·5	+ 5·6
	Coimbatore	70·4	65·0	+ 5·4

At the hill stations the mean night temperature was generally in excess at the Burma, Bengal and South India stations and in defect at the central and north-west stations except Srinagar. The deficiency was large at Quetta (—5°·9) and the excess was large at Wellington (+5°·3).

The variations of the mean temperature from the normal exhibited an excess of temperature, on the mean of the month, over the southern half of the Peninsula, Burma, Assam and Bengal and a deficiency elsewhere. The deficiency was greatest in Sind and Gujarat while the excess was greatest in Madras. The following gives comparative data for these two areas:—

Province or Division.		Station.	Mean temperature.		
			Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
			°	°	°
1st Area	Sind	Hyderabad (Sind)	63·0	67·1	—4·1
		Kurrachee	66·4	69·4	—3·0
		Jacobabad	59·8	62·5	—2·7
	Gujarat	Rajkot	65·1	70·8	—5·7?
		Bhuj	66·0	70·9	—4·9?
		Bhavnagar Para	68·7	72·8	—4·1?
		Ahmedabad	70·7	73·5	—2·8

Province or Division.	Station.	Mean temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
		°	°	°
2nd area Madras	Salem	83·4	79·1	+4·3
	Negapatam	81·8	77·8	+4·0
	Trichinopoly	83·7	79·9	+3·8
	Madras	80·3	77·2	+3·1
	Coimbatore	81·3	78·4	+2·9
	Madura	83·4	80·6	+2·8
	Cuddalore	79·9	77·2	+2·7
	Cuddapah	83·7	81·3	+2·4

The following table gives temperature variation data of the month of February for eleven meteorological provinces :—

Meteorological Province.	Variation of actual from normal of: Mean maximum temperature, February 1901.	Mean minimum temperature, February 1901.	Mean temperature, February 1901.
	°	°	°
Burma Coast and Bay Islands	—0·2	+4·0	+1·9
Burma Inland	+0·9	+3·9	+2·4
Assam	+2·3	+2·2	+2·3
Bengal and Orissa	+0·1	+2·1	+1·1
Gangetic Plain and Chota Nagpur	—3·2	+2·8	—0·2
Upper Sub-Himalayas	—2·4	+0·7	—0·8
Indus Valley and North-West Rajputana.	—1·7	—2·9	—2·3
East Rajputana, Central India and Gujarat.	—2·9	—0·5	—1·7
Deccan	—4·1	+0·7	—1·8
West Coast	—0·5	+1·0	+0·2
South India	+0·1	+3·9	+2·0

Wind.—The air movement during the month was generally more easterly than usual over Burma and the Bay. Steady west-north-west and north-west winds prevailed down the Gangetic Plain and more northerly winds than usual in Bengal. The winds were light and unsteady in Upper India, but were considerably more westerly than usual in the Indus Valley. In the Deccan the wind was more easterly and stronger than usual while in Southern India there was considerably increased southing in the wind directions. The South-east Trades, on the mean of the month, were about normal at the Seychelles, but were a few degrees more easterly than usual at Zanzibar.

Humidity.—The air was again damper than usual over the greater part of the country, but the distribution, relatively to the normal, had changed since the preceding month. The air was drier than usual over the Bombay Presidency (Bombay —9) and the adjacent parts of South Rajputana (Deesa —5) and of the Central Provinces (Khandwa —5). The air was also drier than usual over Assam and south-east Bengal (Chittagong —9) and the humidity was apparently lower than usual over part of the Bay area. Over the whole of the remainder of the Indian area the air was damper than the average. This was particularly the case within a broad band extending from West Bengal to Mysore within which the relative humidity was more than 10 above the average. The greatest excess was reported from the two extremities of this band where Hazaribagh showed an excess of 21 and Chitaldroog of 19.

The following gives variation data of the mean aqueous vapour pressure and of mean humidity of nine meteorological provinces for the month of February 1901 :—

Meteorological Province.	Mean absolute humidity. Average actual, February 1901.	Variation of actual from normal, February 1901.	Mean relative humidity. Average actual, February 1901.	Variation of actual from normal, February 1901.
	"	"	%	
Burma Coast and Bay Islands	·763	+·079	72	+ 2
Bengal and Orissa	·544	—·010	70	— 2
Gangetic Plain and Chota Nagpur	·398	+·077	66	+12
Upper Sub-Himalayas	·307	+·016	65	+ 5
Indus Valley and North-West Rajputana.	·289	—·002	55	+ 2
East Rajputana, Central India and Gujarat.	·213	—·030	37	+ 1
Deccan	·324	+·001	42	+ 3
West Coast	·547	—·079	63	— 8
South India	·564	+·113	61	+ 9

Cloud.—There was more cloud than usual over the greater part of the country. In North-West India and the adjacent districts there was some deficiency in the cloud amount, the amount of the deficiency increasing westward and being greatest at Quetta (—2·3). There was also a very slight deficiency of cloud over part of North-East India and of Lower Burma as represented by the stations of Chittagong and Diamond Island (each —0·2). Over the whole of the remainder of the country the cloud amount was in excess of the normal, the amount of the excess having been greatest within a broad band extend-

ing from West Bengal through the Central Provinces, etc., as far as Mysore and the south of the Peninsula. The stations with the greatest excess were Hazaribagh (+3·7), Nagpur (+3·2), Bellary (+4·6) and Mysore (+3·9). At most of the Himalayan stations the cloud amount was in slight excess.

The following table gives variation data of the mean cloud amount of nine meteorological provinces for the month of February 1901:—

METEOROLOGICAL PROVINCE.	MEAN CLOUD AMOUNT.	
	Average actual, February 1901.	Variation of actual from normal, February 1901.
Burma Coast and Bay Islands	2·5	+0·5
Bengal and Orissa	2·8	+0·7
Gangetic Plain and Chota Nagpur	4·5	+2·5
Upper Sub-Himalayas	3·5	−0·2
Indus Valley and North-West Rajputana	1·9	−1·6
East Rajputana, Central India and Gujarat	2·3	−0·5
Deccan	3·2	+1·7
West Coast	2·1	+1·2
South India	4·5	+2·6

Rainfall.—There were in all five periods of disturbed weather and of rainfall over India during February 1901. The most important of these was that between the 11th and 16th when the land area surrounding the Bay received exceptionally heavy rainfall. The periods of disturbance and rain were: the 1st and 2nd when the extreme north-west received rain and snow; the 4th to the 7th when the Punjab and North-Western Provinces received rain; the 11th to the 16th when parts of Bengal, the Madras coast districts and Burma received very heavy rain; the 18th to the 20th when the Deccan and Central and North-West India received general rain, and the 22nd and 23rd when the Peninsula received rain, and the Kumaun Himalayas received snow.

The rainfall of the month, as shown by the table in the rainfall section, was absolutely or practically *nil* over the Konkan, Khandesh, Gujarat, Kathiawar, Cutch, and western Rajputana, while it averaged over 7 inches in the Punjab Hills and more than 3 inches in Lower Burma and the central division of the east coast and more than 4 inches in the east of the Central Provinces. Except over North Bombay and the adjacent districts and over part of North-East India the total rainfall of the month was almost everywhere above the normal. The excess was large in very many cases and was excessively large in parts of Burma and of the Peninsula and very large in parts of Bengal, the North-Western Provinces and the Central Provinces.

The following table gives comparative data of the eleven meteorological provinces or divisions:—

METEOROLOGICAL PROVINCE.	RAINFALL.			
	Mean actual for February 1901.	Mean normal for February.	Variation of actual from normal, February, 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands	2·38	0·54	+2·01*	+372
Burma Inland	0·97	0·17	+0·81	+476
Assam	0·71	1·59	−0·88	− 55
Bengal and Orissa	1·27	0·93	+0·34	+ 37
Gangetic Plain and Chota Nagpur	1·51	0·54	+0·92*	+170
Upper Sub-Himalayas	1·90	1·17	+0·78*	+ 67
Indus Valley and North-West Rajputana.	0·24	0·42	−0·18	− 43
East Rajputana, Central India and Gujarat.	0·29	0·17	+0·17*	+100
Deccan	1·17	0·21	+0·96	+457
West Coast	0·60	0·15	+0·45	+300
South India	2·24	0·27	+2·02*	+748

* A reference to Table I will show that the means of columns 2 and 3 are derived from a smaller number of stations than the means in the 1st column. The sum of the figures in columns 2 and 3 will therefore not agree with the figures in column 1.

Atmospheric pressure.

The excess of pressure which commenced in September 1900, and has continued more or less uninterruptedly ever since was maintained during February 1901. The mean pressure of the Indian land area for February 0·020″ was above the normal.

Relatively to the general condition, pressure was in excess in nearly all parts of Northern and in parts of Central India. The excess was considerable in two areas, one lying along the foot of the North-West Himalayas, the

second over North Bombay. The following were the anomalies exceeding 0·02″ in amount in these two areas:—

Area.	Station.	Variation from normal of mean 8 A.M. pressure of February 1901.	Pressure anomaly, February 1901.
		″	″
First Area	Rawalpindi	+·062	+·042
	Khushab	+·061	+·041
	Sialkot	+·057	+·037
	Ludhiana	+·049	+·029
	Roorkee	+·048	+·028
	Bahraich	+·047	+·027
	Mainpuri	+·046	+·026
	Gorakhpur	+·042	+·022
	Bareilly	+·042	+·022
	Lahore	+·042	+·022
Second Area	Kurrachee	+·060	+·040
	Bhuj	+·052	+·032
	Veraval	+·042	+·022
	Rajkot	+·041	+·021

On the other hand over South-East Rajputana, over the east of the Central Provinces, over South-East Bengal, over the Assam Valley, over the greater part of Burma, and over nearly the whole of the Peninsula, pressure, relatively to the general condition, was in defect. The deficiency was greatest and more than 0·02″ in amount in three regions, *viz.*, the Deccan districts, the south of the Peninsula and Ceylon and the Lower Burma coasts. The following shows the pressure anomalies in these three districts:—

Province or Division.	Station.	Variation from normal of mean 8 A.M. pressure of February 1901.	Pressure anomaly, February 1901.
		″	″
Deccan	Hyderabad (Deccan)	—·019	—·039
	Secunderabad	—·009	—·029
	Belgaum	—·008	—·028
	Sholapur	—·003	—·023
	Kurnool	—·001	—·021
South of the Peninsula	Negapatam	—·026	—·046
	Salem	—·025	—·045
	Madras	—·019	—·039
	Calicut	—·017	—·037
	Trichinopoly	—·017	—·037
	Madura	—·015	—·035
	Coimbatore	—·012	—·032
	Mangalore	—·010	—·030
	Bangalore	—·010	—·030
	Cochin	—·005	—·025
Ceylon	Colombo	—·014	—·034
	Trincomalee	—·001	—·021
Lower Burma Coast.	Tavoy	—·002	—·022
	Rangoon	—·001	—·021

The excess of pressure noticed over Northern India apparently extended all over the countries to the westward of the Indian empire, as the stations in Persia and Arabia all showed a considerable excess on the mean of the month. The following gives variation data for the stations of Bushire, Jask and Aden :—

Station.	Variation from normal of mean 8 A.M. pressure of February 1901.
	″
Bushire	+·092
Jask	+·136
Aden	+·053

On the other hand, the deficiency of pressure which prevailed over the south of the Peninsula Lower Burma and Ceylon did not apparently extend south-ward across the Equator, as at the Seychelles, Mauritius and Zanzibar

the mean pressure of the month was in excess of the normal. This is shown below :—

Station.	Variation from normal of mean 8 A. M. pressure of February 1901.
	"
Seychelles	+·012
Zanzibar	+·018
Mauritius	+·046

Pressure on the mean of the month was more or less above the normal at the Baluchistan and Himalayan hill stations, but at Mount Abu pressure was in local defect while at Pachmarhi and Wellington it was nearly normal. The amount of the excess at the Himalayan stations varied considerably. It was greatest and amounted to 0·087" at Darjeeling. The vertical anomalies varied considerably. They were generally positive in the Baluchistan-Sind area, and in the Eastern Himalayan region while they were generally negative or small in the North-West Himalayas and in the central districts. The following gives data for ten pairs of stations :—

Hill Station.	Variation from normal pressure, February 1901.	Plain Station.	Variation from normal pressure, February 1901.	Vertical pressure anomaly (Hill-Plain).
	"		"	"
Quetta	+·033	Jacobabad	+·032	+·001
Leh	+·055	Lahore	+·042	+·013
Murree	+·039	Peshawar	+·033	+·006
Simla	+·016	Ludhiana	+·049	—·033
Chakrata	+·023	Roorkee	+·048	—·025
Ranikhet	+·040	Bareilly	+·042	—·002
Darjeeling	+·087	Dhubri	+·024	+·063
Mount Abu	—·021	Deesa	+·020	—·041
Pachmarhi	+·002	Khandwa	+·017	—·015
Wellington	—·003	Coimbatore	—·012	+·009

The chief abnormal feature in the pressure distribution was the excess of pressure over the greater part of the country.

The chief features of the pressure distribution of February 1901 were :—

(1) Higher pressures than usual over Northern and Central India.

(2) Somewhat steeper pressure gradients than usual.

(3) Slight deficiency of pressure over the south of the Peninsula and the Gulf of Martaban.

(4) Irregular vertical pressure anomalies.

Barometric depressions and cyclonic storms of the month.

One of the most marked features of the meteorology of the month has been the succession of slight barometric depressions which appeared over North Bombay and the adjacent districts. This region, as will be seen from the monthly charts, has, on the mean of the month, been the seat of low temperatures both by day and night. These low temperatures, so far as can be judged were not connected with and were independent of the snowfall and rainfall on the frontier and in North-West India and were very persistent throughout the month. The region of origin of these depressions was also characterised by low humidities, diminished cloud and absence of rain and yet within this region one shallow depression after another was developed as the month progressed. In addition it will be noticed that even in the case of these storms which appeared further to the northward in Sind and the Punjab it is at least doubtful whether they advanced to these positions from countries further westward or originated in the frontier districts of India, but the latter appears the more probable.

Cyclonic storm of 1st to 8th.—On the 1st a shallow depression was shown over the Gulf of Cambay where the winds were cyclonic and the sky cloudy. On the 2nd under the influence of a slight barometric rise, this depression became slighter and less well marked, but there was no change in the winds, and on the 3rd, when, the barometer was falling over the whole country, but particularly over Khandesh, Gujarat and Rajputana, the depression intensified and extended northward. The following gives data

for this day for North Bombay, Rajputana, Berar and Central India:—

STATION.	PRESSURE.			WIND				WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"					
Bhuj	30·006	—·067	—·024	NW	14	3	...	
Rajkot	29·965	—·073	—·053	Calm	5	4	...	
Bhavnagar Para.	·912	—·097	—·089	NW	3	5	...	
Veraval	·912	—·058	—·066	N	4	4	...	Sea smooth.
Surat	·878	—·102	—·123	ESE	5	4	...	
Ahmedabad	·942	—·105	?	NE	3	1	...	
Malegaon	·959	—·104	—·039	NE	4	2	...	
Khandwa	·989	—·098	—·025	Calm	5	3	...	
Akola	30·002	—·081	—·013	ENE	4	0	...	
Indore	29·989	—·094	—·009	N	4	8	...	
Neemuch	30·024	—·118	—·033	E	12	1	...	
Deesa	29·944	—·111	?—·080	E	10	3	...	
Udiapur	·979	—·133	...	NNW	2	1	...	
Jodhpur	·980	—·145	...	NE	10	10	...	

On the 4th pressure had commenced to recover around the Gulf of Cambay, but the barometer continued to fall over other parts of North-West India. The depression had apparently moved eastward and north-eastward, and two centres of depression were shown, one lying over Khandesh and the other over Rajputana. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inch.	
Veraval	29·916	+·004	—·062	NNW	9	5	...	Sea smooth.
Bhavnagar Para.	·905	—·007	—·087	W	5	4	...	
Surat	·892	+·014	—·110	N	6	6	...	
Malegaon	·887	—·072	—·120	W	6	0	...	
Ahmedabad	·915	—·027	...	NW	3	5	...	
Indore	·873	—·116	—·119	Calm	4	4	...	
Akola	·894	—·108	—·102	NE	3	4	...	
Khandwa	·872	—·117	—·138	Calm	2	1	...	
Udaipur	·854	—·125	...	Calm	2	5	0·02	Showery.
Deesa	·899	—·045	—·135	NNW	9	3	...	
Kotah	...	—·113	...	Calm	3	9	...	
Pachpadra	·904	—·061	...	NNW	6	1	...	
Jodhpur	·886	—·094	...	Calm	5	4	...	Showery.
Ajmer	·880	—·178	—·174	SE	3	6	...	
Jaipur	·899	—·149	—·136	E	5	6	0·01	Distant lightning.
Sambhar	·899	—·159	—·140	Calm.	3	8	...	
Neemuch	·916	—·108	—·137	E	7	3	0·02	

The rainfall which was slight was confined to the north of the storm area. The depression apparently split up during the day, one portion passing north-eastward into the Punjab and the other continuing to move eastward into the Central Provinces.

February 5th.—On the 5th the barometer was falling briskly over the Punjab and slightly over the Central Provinces, and the two centres of the depression were shown one lying over the South Punjab and the second over the Central Provinces. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"					
Ajmer	29·912	+·032	—·173	Calm	5	3	...	
Sambhar	·899	0	—·147	Calm	2	2	...	
Jaipur	·905	+·006	—·148	ENE	2	3	...	

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	°	°	°				Inch.	
Bikaner .	·886	—·030	...	Calm	7	3	...	
Agra . .	·894	—·018	—·140	SE	5	6	0·03	
Delhi. .	·901	—·011	—·120	SE	5	8	0·02	
Sirsa . .	·877	—·037	—·169	W	...	0	...	
Ludhiana .	·880	—·058	—·137	SE	2	5	0·08	
Montgomery	·878	—·061	—·174	N	4	6	...	
Lahore .	·886	—·047	—·158	N	1	10	...	
Akola .	·900	+·006	—·100	NE	...	2	...	
Amraoti .	·900	—·035	—·093	S	10	7	...	
Khandwa .	·886	+·014	—·123	W	7	7	...	
Indore .	·912	+·039	—·100	Calm	3	10	...	
Hoshanga-bad.	·895	—·031	—·126	SW	3	10	...	
Saugor .	·906	—·034	—·123	SE	7	4	0·02	
Seoni .	·904	—·008	—·098	S	7	3	...	
Jubbulpore.	·893	—·007	...	Calm	3	8	...	
Sutna. .	·942	—·007	—·088	ENE	6	3	0·05	
Nowgong .	·870	—·064	—·172	ESE	5	9	...	
Jhansi .	—·917	—·032	—·127	Calm	5	8	0·11	

The barometric recovery which had commenced over the Gulf of Cambay on the 4th had extended over the whole of the west of the Peninsula, Kathiawar and Rajputana.

February 6th.—On this day the depression over the Eastern Punjab was still shown and was giving a good deal of rain and snow to the hills and plains of North-West India. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inch.	
Delhi .	29·903	+·002	—·116	ESE	8	5	0·02	
Sirsa . .	·881	+·004	—·169	SW	...	0	...	Gentle wind
Montgomery	·880	+·002	—·169	NW	6	3	...	

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches.	
Lahore .	·889	+·003	—·158	E	4	4	...	
Sialkot .	·930	+·020	—·095	NNE	8	8	0·43	
Ludhiana .	·882	+·002	—·144	NE	6	10	1·87	Thunder-storm with hail.
Umballa .	·864	—·058	—·127	SE	3	9	1·40	Thunder-storm.
Dehra Dun.	·937	—·025	—·082	Calm	...	7	00·6	Distant Lightning.
Roorkee .	·918	—·018	—·093	SE	4	5	0·17	Thuder-storm.
Ranikhet .	...	+·064	+·087	NE	3	8	0·06	
Mussooree .	...	—·014	—·009	SE	...	8	0·29	Showery.
Chakrata .	...	—·118	—·011	NW	14	7	0·63	Do.
Simla. .	...	—·036	—·072	NE	12	10	0·73	Snowstorm.
Srinagar .	...	+·008	—·073	Calm	2	10	1·04	Do.

The central area of depression over the Central Provinces had to a large extent filled up and the disturbance was only faintly indicated.

February 7th.—On the 7th the Punjab depression had filled up and an anti-cyclonic area had been developed over North Bombay and Rajputana. On the other hand, the depression over the Central Provinces had become more definite, and the central area was shown passing through the east of the Central Provinces. The following gives 8 A.M. data for the area surrounding this depression:—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"					
Amraoti .	30·012	+·023	+·009	WSW	4	2	...	
Raipur .	29·974	—·005	—·020	Calm	3	2	...	
Nagpur .	·978	+·022	—·024	Calm	8	8	...	Distant lightning.
Sambalpur.	30·001	—·004	—·009	ESE	3	0	...	
Seoni .	29·987	+·031	—·008	NNE	8	6	...	
Jubbulpore.	·984	+·039	...	Calm	4	8	...	Drizzling.
False Point.	30·017	—·005	+·031	NW	7	0	...	
Chanda .	29·987	+·010	—·025	SE	3	8	...	
Cuttack .	30·014	—·009	+·021	Calm	2	0	...	
Puri . .	·020	—·008	...	Calm	5	0	...	
Gopalpur .	·015	—·004	+·055	NNW	7	0	...	

February 8th.—On the 8th this depression was apparently passing out into the north of the Bay, but was no longer of much importance.

A very well marked cool wave followed the advance of this depression across the country.

Cyclonic storm of 8th to 16th.—On the 8th another brisk barometric fall occurred over the Gulf of Cambay and the surrounding coast districts and a shallow depression was formed there during the day. This depression passed quickly eastward through the Central Provinces and North Deccan during the 9th and reached the east of the Central Provinces and the Circars on the 10th. When it had reached this position the storm spread out covering a large area, including North Madras, the Central Provinces, Orissa, and part of Bengal. On the 12th the storm apparently passed out into the Bay. The following gives 8 A.M. data for the Bay ports on the 12th :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inch	
Cuddalore .	29·876	—·030	—·075	Calm	2	2	...	
Madras .	·867	—·043	—·108	SSW	7	4	...	Sea smooth.
Nellore .	·856	—·041	—·103	SSE	8	10	...	
Masulipatam	·858	—·045	—·108	SSE	6	8	...	
Cocanada .	·871	—·034	—·096	Calm	7	6	...	Sea slight.
Waltair .	·871	—·033	—·101	SW	13	1	...	Sea smooth.
Gopalpur .	·856	—·027	—·113	NW	21	0	...	
Puri . .	·865	—·021	...	Calm	15	4	...	Drizzling rain.
Cuttack .	·866	—·020	—·112	E	3	4	...	
False Point	·882	—·014	—·090	SE	11	4	...	
Balasore .	·905	+·006	...	NE	1	4	...	
Saugor Island.	·888	+·006	—·092	NE	9	3	...	Nor' Wester.
Calcutta .	·928	+·045	—·062	E	5	6	0·40	Ditto
Barisal .	·925	+·029	—·058	NE	2	5	0·58	
Chittagong	·946	+·026	—·043	NE	4	3	0·03	
Akyab .	·918	+·011	—·061	N	3	0	...	Foggy.
Diamond Island.	·915	+·026	—·037	Calm	19	3	...	
Bassein .	·905	+.021	—·045	NW	7	7	...	

The above shows that north-easterly to south-easterly winds prevailed over the north of the Bay where pressure was lowest, but that elsewhere the winds were fairly normal. The following gives the marine data for this day :—

Name of Vessel.	8 A.M. Positon.				Barometer as corrected by Calcutta Office.	Wind.		Weather.
	Lat. N.		Long. E.			Direction.	Force.	
	°	′	°	′	"			
S. S. *Drachenfels*	8	19	82	39	29·875	Calm	0	
S. S. *Chanda* .	9	01	83	57	·764	NE	2	Fine.
S. S. *Ockenfels* .	10	57	87	42	·870	E	3	
S. S. *Onipenta* .	11	03	88	29	·977	SE	2	Cloudy ; noon rain squalls.
S. S. *Historian* .	12	02	84	22	...	ESE	3	Fine.
S. S. *Barenfels* .	Madras				·780	...	...	
S. S. *Plympton* .	14	01	81	14	...	SSW	6	Overcast.
S. S. *Kum Sang*	14	24	93	23	·927	E	2	
S. S. *Malda* .	15	39	94	13	·923	N	4	Smooth sea, fine.
S. S. *Madura* .	15	56	93	43	·893	NNW	4	Fine.
S. S. *Maharani* .	16	37	93	45	·815	NNW	3	Fine.
S. S. *Nizam* .	Vizagapatam				·775	...	...	4 A.M., fine.
S.S. *Umlasi* .	18	01	86	51	...	SE	2	Smooth sea and fine, midnight, overcast.
S.S. *Rasmora* .	18	46	87	19*	...	Calm	0	
S.S. *Comeric* .	19	13	87	25	·926	Var.	1	Smooth sea and fine.
S.S. *Urlana* .	19	19	87	32	·843	Var.	2	Moderate south swell and fine.
S.S. *Kerbela* .	Puri				·926	SSW	4	
S.S. *Yanariva* .	20	13	87	51*	·925	S	3	
S.S. *Rajah*. .	Akyab*				·855	N	2	
S.S. *Rajpootana*.	20	38	87	34	·897	SE	2	Fine.
S.S. *Catherine Apcar*.	Upper Gasper*				·862	Calm	0	Smooth sea and fine.
S.S. *Kistna* .	21	29	91	08	·919	Var.	2	Ditto
S.S. *Ethiopia* .	Mud point*				·864	...	...	Noon cloudy.

* Noon position.

The preceding tables show that there was a small central area of depression in about Lat. 18° N. and Long. 87° E., while another small central area was advancing into the Bay from Madras. The weather was fine.

February 13th.—On this day pressure was increasing over the east and north of the Bay and decreasing in the south. The lowest pressures were reported from the neighbourhood of Madras, but north-easterly winds continued to be reported from the north-west of the Bay.

The following gives 8 A.M. data for the Bay ports on this day:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches	
Negapatam	29·853	—·016	—·101	S	12	3	...	
Cuddalore	·856	—·020	—·091	Calm	2	8	...	
Madras	·850	—·017	—·121	S	8	4	...	
Nellore	·849	—·007	—·107	SE	6	0	0·04	Showery.
Masulipatam	·865	+·007	—·095	Calm	10	10	3·80	Distant lightning.
Cocanada	·863	—·008	—·101	Calm	9	10	0·66	Sea rough
Waltair	·869	—·002	—·102	SE	13	10	1·90	Continuous rain.
Gopalpur	·893	+·037	—·072	NNE	21	8	0·04	
Cuttack	·907	+·041	—·069	NE	7	10	2·51	Drizzling rain.
Puri	·881	+·016	...	NE	13	10	1·88	
False Point	·890	+·008	—·081	ENE	14	10	3·14	
Balasore	·950	+·045	...	NNE	5	7	1·18	
Saugor Island.	·943	+·055	—·035	NE	14	10	2·98	Raining.
Calcutta	·966	+ 083	—·022	NNW	6	10	1·20	Continuous rain.
Chittagong	·948	+·002	—·036	NE	3	10	...	
Akyab	·921	+·003	—·055	N	3	10	...	
Bassein	·951	+·046	+·003	Calm	3	8	...	
Diamond Island	·930	+·015	—·026	SSE	4	9	...	

The most remarkable feature in connection with these observations was the very heavy rainfall over parts of Bengal, Orissa and the Circars. The following gives the more noteworthy falls in these provinces:—

	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 13th February.
			Inches.
Bengal and Orissa.	Orissa Tributary Mahals	Baisanga	5·00
	Midnapore	Contai	4·20
	Do.	Dantan	3·86
	Puri	Pipli	3·65
	Cuttack	Jajpur	3·31
	Balasore	Akhyapada	3·25
	Puri	Ranpur	3·17
	Cuttack	False Point	3·14
	24-Parganas	Saugor Island	2·98
	Balasore	Jellasore	2·93
Bengal and Orissa.	Orissa Tributary Mahals	Angul	2·86
	Cuttack	Cuttack	2·76
	Puri	Khurda	2·75
	Orissa Tributary Mahals	Kunjahangarh	2·30
	Cuttack	Kendrapara	2·17
	Do.	Salepur	2·12
	Singhbhum	Ghatsila	2·10
	Do.	Katbari	2·07
Circars.	Kistna	Masulipatam	3·80
	Do.	Repalle	3·55
	Godavari	Prattipada	3·38
	Kistna	Avanigadda	2·90
	Vizagapatam	Anakapalle	2·86
	Godavari	Coringa	2·73
	Kistna	Nizampatam	2·60
	Do.	P. Endraka	2·35
	Godavari	Chintalapudi	2·08

The Marine data for this day were as follows:—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	"			
S.S. *Onipenta*	9 18	85 51	29·975	SW	6	Cloudy.
S.S. *Nadir*	Negapatam		·826	WSW	3	Fine.
S.S. *Plympton*	12 00	80 08	...	S	6	Overcast.
S.S. *Chanda*	12 01	86 07	·842	S	4	Moderate sea and fine.
S.S. *Ockenfels*	13 06	91 00	·900	SE	4	
S.S. *Nawab*	14 35	93 39*	·993	SSW	3	Overcast, midnight squally.
S.S. *Barenfels*	15 04	82 43	·815	SE	3	
S.S. *Rasmora*	15 59	85 50	...	NNE	3	
S.S. *Historian*	16 21	86 03	...	Var.	1	Fine.
S.S. *Karagola*	Rangoon River		·932	...	...	Midnight light rain.
S.S. *Yanariva*	17 40	86 43	·855	SSE	4	
S.S. *Nizam*	Bimlipatam		·800	...	...	4 P.M., fine.
S.S. *Ethiopia*	18 53	90 30	·854	ESE	2	Cloudy, 4 P.M. light rain.
S.S. *Madura*	19 14	90 09	·900	NE	2	Cloudy, noon rain squalls.
S.S. *Maharani*	20 28	92 01	·831	NNW	3	Dull, overcast.
S.S. *Umlasi*	Upper Gasper		...	Var.	6	Rain squalls.
S.S. *Kistna*	Saugor Island		·921	NE	2	Dull, cloudy.

* Noon position.

The preceding data apparently show that the depression in the north of the Bay had moved a little southward, while the depression which was passing through Madras had passed out into the Bay. These two had apparently coalesced and a largish, but shallow, low pressure area over lay the west of the Bay.

February 14th.—The barometer was rising around the Bay except on the Tenasserim and Lower Burma coasts. The following gives 8 A.M. data for the Bay ports :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches.	
Negapatam	29·878	+·025	−·071	S	4	4	...	
Cuddalore .	·889	+·033	−·054	Calm	1	5	2·84	Showery.
Madras .	·879	+·029	−·087	S	6	8	0·55	Sea slight.
Nellore .	·873	+·024	−·077	SE	5	2	...	
Masulipatam	·893	+·028	−·062	NNE	4	0	1·25	Distant lightning.
Cocanada .	·897	+·034	−·063	NNE	5	10	0·06	Sea slight.
Waltair .	·917	+·048	−·047	NE	9	4	0·08	Sea smooth.
Gopalpur .	·936	+·043	−·030	NNW	10	1	0·15	
Puri . .	·944	+·063	...	N	10	10	0·05	
Cuttack .	·937	+·050	−·010	Calm	3	8	0·02	
False Point	·946	+·056	−·017	N	6	6	0·08	
Balasore .	·962	+·022	0	ENE	1	9	0·04	
Saugor Island.	·938	−·005	−·031	NNE	9	3	0·10	Showery.
Calcutta .	·967	+·001	−·009	E	3	10	0·27	Do.
Chittagong.	·950	+·002	−·030	NE	5	2	0·06	
Akyab .	·889	−·032	−·080	E	4	9	0·38	
Diamond Island.	·930	0	−·020	SSW	22	10	3·82	Sea rough.
Bassein .	·932	−·019	−·009	SW	3	10	2·37	Raining.
Rangoon .	·906	−·045	−·043	S	6	10	...	

The above shows a severe gale and rough sea at Diamond Island and unsettled weather all round the Bay. The marine data for this day were as follows:—

Name of Vessel.	8 A.M. Position.		Barometer as corrected by Calcutta Office.	Wind.		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S. S. *Nadir* .	Cuddalore		29·829	...	...	Midnight heavy rain.
S. S. *Rasmora* .	12 26	84 19	...	NE	3	
S. S. *Nawab* .	13 56	91 30	·913	SW by S	5	Rough sea, midnight cloudy.
S. S. *Upada* .	14 19	93 22*	·801	SSW	6	Frequent heavy rain squalls.
S. S. *Yanariva* .	14 39	85 14	·905	NE	2	
S. S. *Ockenfels* .	14 44	94 39	·910	SSE	5	
S. S. *Chanda* .	15 00	88 37	·852	Var.	...	Cloudy.
S. S. *Ethiopia* .	16 03	94 01	·904	S	5	Thick rain squalls.
S. S. *Shahsada* .	Rangoon		·964	...	...	4 P.M. heavy rain.
S. S. *Karagola* .	17 30	94 06	·919	W	6	Rainy.
S. S. *Barenfels* .	18 31	85 54	·894	ENE	2	
S. S. *Foreland* .	18 50	87 20*	·910	Var.	2	
S. S. *Nisam* .	19 13	85 54	·771	NE	4	Squally.
S. S. *Historian* .	Intermediate		...	NE	2	Fine.
S. S. *Quito* .	Saugor Island		·964	...	...	Midnight occasional rain squalls.
S. S. *Kasara* .	22 01	91 43	·924	...	...	Noon fine.

* Noon position.

The preceding table shows that the combined depression had advanced eastward across the centre of the Bay and that strong winds, rain, squalls and thick rainy weather were reported from the east of the Bay. North-east winds and rain continued in the west.

February 15th.—Pressure was increasing all around the Bay, but particularly on the Tenasserim and Lower Burma coasts, where, on the previous day, the barometer had been falling. The following gives 8 A.M. data for the Bay ports:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches.	
Negapatam	29·893	+·015	−·052	SW	12	6	1·05	
Cuddalore	·911	+·022	−·030	Calm	1	8	0·23	Showery.
Madras .	·905	+·026	−·057	SSE	6	10	0·67	Sea smooth.
Nellore .	·914	+·041	−·031	SE	6	5	0·55	Showery.
Masulipatam.	·941	+·048	−·010	Calm	10	10	3·30	Distant lightning.
Cocanada .	·923	+0·26	−·035	NE	14	10	...	Sea rough.
Waltair .	·953	+·036	−·005	NE	11	8	2·54	Continuous rain.
Gopalpur .	·995	+·059	+·049	NNW	11	5	1·41	Sea slight.

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
							Inches	
Puri . .	30·015	+·071	...	NE	11	9	0·28	
Cuttack .	·027	+·070	+·065	Calm	1	8	...	
False Point	·010	+·064	+·058	N	7	10	...	
Balasore .	·044	+·082	+·088	Calm	1	6	...	
Saugor Island.	·030	+·092	+·068	NNE	9	4	...	Sea smooth.
Calcutta .	·062	+·095	+·093	NW	3	1	...	
Chittagong	·029	+·079	+·056	NE	4	2	...	
Akyab .	·005	+·116	+·040	N	3	9	...	
Diamond Island.	29·998	+·068	+·052	ENE	11	10	0·52	Sea smooth.
Bassein .	30·016	+·084	+·078	SE	5	10	2·80	Drizzling rain.
Rangoon .	30·006	+·100	+·068	SSW	5	9	1·91	
Moulmein .	·027	+·079	+·081	E	4	8	0·28	Drizzling rain.
Tavoy .	·017	+·072	+·063	Calm	3	10	0·38	Showery.
Mergui .	·012	+·039	...	Calm	3	4	...	

The winds were northerly all around the north of the Bay and had changed to east-north-east and decreased in strength at Diamond Island. The weather remained very rainy and unsettled all around the Bay.

The following gives marine data for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Jelunga* .	8 26	81 30	29·983	S	1	Fine.
S.S. *Rasmora* .	9 03	82 52	...	NE	3	
S.S. *Nawab* .	11 20	88 55	30·013	SSW	2	
S.S. *Yanariva* .	11 34	83 55	29·925	SE	3	4 P.M. heavy showers.
S.S. *Upada* .	12 27	90 50	·846	Calm	0	Midnight cloudy.
S.S. *Nadir* .	Madras.		·843	...	...	4 A.M. heavy squalls of wind and rain.
S.S. *Foreland* .	15 49	86 07	·960	Var.	3	
S.S. *Shahsada* .	16 16	97 06	·928	...	...	Overcast.
S.S. *Purulia* .	Moulmein.		30·014	...	...	Noon cloudy.
S.S. *Ethiopia* .	Rangoon.*		29·954	Var.	2	Overcast.
S.S. *Putiala* .	Rangoon.		·977	...	...	8 P.M. fine.
S.S. *Chanda* .	17 50	90 49	·901	NE	4	Moderate sea and fine.
S.S. *Quito* .	18 08	86 59	30·004	SSE	5	Rain squalls.
S.S. *Karagola* .	18 58	93 30	·014	NE	4	Slight sea.
S.S. *Kasara* .	Akyab.		29·897	...	...	4 P.M. fine.
S.S. *Nizam* .	Saugor Island.		·953	NE	3	Fine.
S.S. *Maharani* .	Chittagong		·960	...	...	Noon fine.

* Noon position.

Conditions were quieter over the Bay and the observations showed that the depression had begun to fill up.

February 16th.—On this day pressure was steady, or rising slightly, around the Bay, but the weather was still unsettled along the Madras coast. The following gives 8 A.M. data for the Bay ports:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inch.	
Negapatam	29·913	+·020	—·030	Calm	6	5	...	
Cuddalore	·929	+·018	—·007	Calm	0	4	0·69	Showery.
Madras .	·947	+·042	—·015	SE	3	3	0·52	Sea smooth.
Nellore .	·954	+·040	+·018	NNE	4	5	0·18	Showery.
Masulipatam.	·978	+·037	+·030	NNE	10	2	...	
Waltair .	30·025	+·072	+·065	NE	13	8	0·27	Sea smooth.
Gopalpur .	·036	+·041	+ 100	N	11	1	0·16	
Puri . .	·043	+·028	...	NE	8	7	0·04	
Cuttack .	·046	+·019	+·082	ENE	2	8	0·05	
False Point	·045	+·035	+·086	N	6	8	...	
Balasore .	·081	+·037	+·125	NNW	4	6	0·12	
Saugor Island.	·048	+·018	+·085	NE	9	8	...	
Calcutta .	·084	+·022	+·113	NNE	3	3	...	
Chittagong	·050	+·021	+·079	NNW	3	6	...	
Akyab .	·017	+·012	+·055	N	3	5	...	
Diamond Island.	29·987	—·011	?+·041	ENE	7	7	...	
Bassein .	30·017	+·001	+·081	E	4	8	...	
Rangoon .	29·999	—·007	+·057	NE	4	4	0·06	Distant lightning.
Moulmein .	30·016	—·011	+·065	NW	2	2	...	
Tavoy .	29·980	—·037	...	Calm	0	0	0·04	
Mergui .	·982	—·030	+·068	Calm	3	3	...	

The northerly winds around the north of the Bay had increased in strength. The following are the marine observations for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Indrapura* .	8 10	82 30	29·995	SW	4	Moderate sea and cloudy, 6 P.M. heavy rain squalls.
S.S. *Yanariva* .	8 29	82 40	·955	SE	3	

NAME OF VESSEL.	8 A.M. POSITION. Lat. N	Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	Force.	WEATHER.
S.S. *Nawab* .	9 16	86 14	30·013	SE	3	Midnight vivid lightning.
S.S. *Scindia* .	9 16	81 03*	29·927	SW	3	
S.S. *Upada* .	10 17	87 34	·830	NNE	2	Overcast.
S.S. *Vortigern* .	Negapatam.		30·059	...	...	Noon fine.
S.S. *Purnea* .	12 19	96 55	29·851	E	2	Fine.
S.S. *Foreland* .	12 20	84 29	·960	E	2	
S.S. *Quito* .	14 54	85 25	·984	SSE	5	High beam sea. 8 P.M. heavy rain squalls.
S.S. *Nadir* .	15 10	81 41	·915	NE	2	Fine, 8 P.M. rainy squally.
S.S. *Purulia* .	15 41	94 33	·974	NNE	2	Cloudy.
S.S. *Putiala* .	15 44	93 57	·971	Var.	2	Fine noon, light rain.
S.S. *Chanda* .	20 06	92 32	30·018	NE	2	Fine.
S S. *Kasara* .	Akyab.		29·937	...	...	4 P.M. fine.
S.S. *Maharani* .	20 52	88 48	·965	NW	1 to 2	Cloudy.
S.S. *Maharaja*	21 08	90 22*	·992	N	4	Fine.

* Noon position.

The above data show that the weather had become quieter and more settled over the Bay and the storm disappeared.

In the meantime, on the 10th, the barometer was falling briskly over the South Punjab, and on the 11th a shallow depression was shown over Sind and the South-West Punjab. This depression drifted eastward through the Punjab during the day and was shown over the East Punjab on the 12th. The storm filled up on the 13th, and was throughout of little importance.

Cyclonic storm of the 15th to 20th.—A slight barometric fall appeared over the Bombay Deccan on the 15th and thence extended to Khandesh, Berar and the Central Provinces on the 16th. The fall spread to a large part of the country on the 17th, and a small central area of depression was developed over the Bombay Deccan. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	WIND. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"					
Belgaum .	29·959	—·023	—·024	Calm	9	0	...	
Poona .	30·003	+·004	—·032	W	8	0		
Bijapur .	29·982	—·010	+·011	WSW	4	0	...	
Sholapur .	·957	—·022	—·040	SW	8	0	...	
Ahmednagar	·983	—·008	—·015	NW	3	0	...	
Malegaon .	·980	—·017	—·024	NNW	4	0	...	

February 18th.—The depression intensified during the 17th and moved northwards. It was central over an area represented by the stations of Akola, Khandwa and Indore on the 18th. The following gives 8 A.M. data for this date :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	WIND. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inch.	
Sholapur .	29·990	+·033	+·022	SW	7	6	...	
Ahmednagar	·985	+·002	—·009	Calm	3	2	...	
Malegaon .	·995	+·015	—·007	W	5	0	...	
Ahmedabad	·969	?—·008	?+·002	NNW	3	0	...	
Akola .	·931	—·057	—·033	SW	8	6	...	
Amraoti .	·956	—·045	—·011	SE	17	7	...	
Khandwa .	·938	—·061	—·044	W	5	5	...	
Indore .	·942	—·081	—·042	SE	2	8	...	
Hoshangabad.	·985	—·098	—·010	NE	8	10	0·23	
Saugor .	30·004	—·065	0	SE	11	7	0·11	
Neemuch .	29·989	—·076	—·051	E	7	3	...	
Deesa .	·997	—·028?	—·007	N	12	0	...	

February 19th.—During the preceding day the storm had travelled north-eastward and at 8 A.M. of the 19th lay in the neighbourhood of Nowgong (Central India). The following gives 8 A.M. data for this day :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	WIND. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Neemuch .	30·148	+·159	+·097	N	10	9	...	
Saugor .	·127	+·123	+·094	W	7	7	...	
Jubbulpore.	·073	+·054	+·069?	SSE	5	10	0·64	Showery.
Jaipur .	·153	+·141	+·101	NNW	8	10	0·27	Thunderstorm.
Sutna .	·086	+·024	+·078	WSW	7	10	0·12	
Nowgong .	·065	+·031	+·049	Calm	5	10	1·72	Distant lightning.
Bareilly .	·101	+·036	+·123	E	0	6	0·45	Showery.
Jhansi .	·090	+·053	+·070	ESE	8	5	0·99	Continuous rain.
Cawnpore .	·115	+·031	+·150	E	2	10	1·01	Thunderstorm.
Allahabad .	·099	+·043	+·111	ENE	10	10	0·53	Showery.
Mainpuri .	·098	+·053	+·145	SSE	4	10	0·44	
Agra . .	·103	+·073	+·096	NE	6	10	0·37	

The storm had become slighter and less well-defined at this time, and on the 20th it disappeared.

On the 20th the barometer was falling in Sind and a depression appearing in that province. On the following day there occurred a rapid barometric fall all over North-West India and the depression was shown passing through Rajputana. Over this province it apparently filled up during the day.

On the 21st the barometer was falling rapidly over the Punjab, and on the 22nd a fresh depression was shown over the area represented by the stations of Dera Ismail Khan, Mooltan and Montgomery. Cyclonic winds prevailed over the Punjab, and the following heavyish falls of snow and rain were reported from the hills and plains of North-West India:—

District.		Station.	Rainfall during 24 hours preceding 8 A.M. of 22nd February.
			Inches.
Punjab	Simla	Simla	1·89
	Kangra	Dharmsala	1·80
	Umballa	Dadupur	1·40
	Do.	Jagadhri	1·15
	Do.	Naraingarh	1·08
North-Western Provinces.	Saharanpur	Hardwar	1·31
	Dehra Dun	Ambari	1·25
	Saharanpur	Naiashahr	1·20
	Do.	Kuankhera	1·20
	Do.	Roorkee (Observatory)	1·16
	Do.	Saharanpur	1·13
	Dehra Dun	Dehra	1·12
	Saharanpur	Salempur	1·10
	Do.	Nakur	1·09
Kashmir	Kashmir	Udumpur	1·50

A rapid recovery of pressure set in over the extreme north-west on the 23rd, and the depression passed quickly through the Punjab, filling up over the East Punjab on the 24th. The following show the larger pressure changes between the 8 A.M. on the 22nd and 8 A.M. on the 23rd:—

Station.	Pressure change in 24 hours preceding 8 A.M. of 23rd February.
	"
Dera Ismail Khan	+·316
Mooltan	+·315
Khushab	+·306
Peshawar	+·302
Rawalpindi	+·300
Montgomery	+·288
Sialkot	+·275
Srinagar	+·273
Lahore	+·264
Jacobabad	+·249
Cherat	+·228
Murree	+·219
Quetta	+·215

On the 24th anti-cyclonic conditions prevailed all over the country, but on the 26th the barometer fell quickly over the Indus Valley and Western Rajputana, and on the 27th a shallow depression was shown entering Sind from the westward. The storm was never, however, of any importance, and it disappeared on the 28th under the influence of a large barometric fall caused by the appearance of a fresh depression over Gujarat and Khandesh.

Summary of the Reports of the Weather and Snowfall in the Mountain Districts to the North and North-west of India.

I.—Afghan mountain districts.

(1) *Kabul*:—At Kabul the snow fell as follows during February:—

5th	A sprinkle.
6th	5 inches.
18th	½ inch.

The snowfall during the month was 5½ inches while in February 1900 it was 7 inches.

(2) *Wana*:—Lightsnow fell on the 4th on the Kashmirkar and neighbouring hills to an average depth of one foot.

On the 6th and 7th snow fell as follows:—

Kut Hills	4 inches
Isamlara hills	4 "
Marwati "	·54 "
Kanigorum "	·30 "
Pirghal "	·48 "
Kundeghar "	·24 "
Kashmirkar "	1 "

On the highest points 2 feet, and on the Wana plains 3 inches, of snow fell on the 13th, 14th and 17th February,

the snow on the plains quickly melting away. On the 19th, one foot of snow fell on the Kashmirkar and neighbouring hills. On the 28th February the amount of snow-accumulation on the well-known peaks was as under:—

Kanigorum	2 feet
Marwati	2½ „
Kundeghar	1 foot
Pirghal	3 feet
Karbuna	1 foot
Kot Kun	6 inches
Shinwarsuk	6 „
Tora Tiza	6 „

The snowfall of the present year has been much heavier and more frequent than that of previous years.

(3) *Kurram*:—Snow fell as follows during February:—

1st and 2nd.—Snowed and rained all day.

4th.—Snow fell down to 8,000 feet.

6th and 7th.—Light snow fell.

8th.—Snow fell to 7,000 feet.

14th., *15th.*, *16th.* } ½ inch of snow fell on each day at Parachinar.—

17th.—A sprinkling of snow fell.

18th.—1 inch fell at Parachinar.

28th.—Snow fell to 6,500 feet.

The total snowfall of the month was greater than usual.

(4) *Kurram*.:—Snow fell on the adjacent hills on the 1st, 6th, 7th, 14th, 15th, 16th, 17th and 18th. All these falls extended to Parachinar, but the snow did not lie long.

(5) *Khyber*:—Snow fell on the 5th February. The depth on the high peaks was 1½ feet, in the plains the snow melted as soon as it fell.

(6) *Kohat*:—On the Samana Range snow was recorded on the following dates in January:—

4th	Jan. 1901	1 foot	4 inches
5th	„ „	0 „	1 inch
7th	„ „	0 „	5 inches
14th	„ „	0 „	3 „
17th	„ „	0 „	1 inch

Snow fell only in the neighbourhood of Fort Lockhart and the higher ranges of the Samana, but there was no snow at the end of the month. The weather was milder in Kohat than in previous years. When snow fell on the Samana rain has generally fallen in Miranzai where there was more rain in this February than in last.

During the month of February there were nine falls of snow on the border, but the heaviest falls were reported on the 5th in the Samilzai Ilaqa, and on the 6th at Fort Lockhart as shown below:—

SAMILZAI HILLS.

		Snowfall.
5th February	Astarghar	6 inches
Do.	Krumba	1 foot
Do.	Sandaka	1½ feet
Do.	Tangdarra	1 foot

FORT LOCKHART.

5th	February	1 inch
6th	„	1½ feet
7th	„	5 inches
14th	„	3 inches
17th	„	1 inch

(7) *Killa Drosh*:—The following snowfall was reported during the month:—

4th February.—Slight snow fell on all the peaks of the mountains.

6th „ Snow fell at night on all the mountains and hills, about 1 inch was measured on the parade ground.

16th „ Slight snow fell at night on the peaks of the mountains.

17th „ Slight snow fell on all the mountains and hills.

18th „ Snow fell at night, about ½ inch was measured on the parade ground.

(8) *Murree and Kahuta*:—The falls of snow on these hills during the month of February were as follows:—

MURREE.

1st	February	0 foot	2 inches
5th	„	0 „	6 „
6th	„	1 „	0 „
7th	„	0 „	8 „
13th	„	0 „	4 „
14th	„	0 „	2 „
17th	„	0 „	3 „
18th	„	1 „	0 „
23rd	„	0 „	8 „
		4 foot	9 „

KAHUTA.

Nil.

II—KASHMIR AND PUNJAB HIMALAYAS.

(1) *Kailang*:—On December 13th the snow began to fall heavily, and at once all communication over the Rotang Pass, about 13,000 feet, was closed. From that date onward the snow has completely covered hills and valleys. The total snowfall was as follows:—

December 1900	3·54″	of melted snow
January 1901	2·45″	„
February 1901	4·46″	„
March 1st to 11th 1901	1·05″	„
	11·50″	„

On March 11th the snow was about 6 feet deep around Kailang and more snow than usual has been received during the winter.

(2) *Leh*:—Snow fell during the month of February 1901 as follows

3rd	February	A sprinkle
6th	„	½ inch
7th	„	½ „
14th	„	a sprinkle
15th	„	do.
23rd	„	do.
27th and 28th	„	1 inch

On the 28th February there was a depth of snow of from five to six inches in the open country around Leh. Last year on the same date there was about three inches.

(3) *Chamba*:—The following account of the snowfall in the Chamba district has been received. The following is a statement of the snowfalls measured in different parts of the district:—

DATE.	Barmaur.	Olansa.	Chitrari.	Dareri.	Chamba.	Kalatop.	Surkhigali.	Bakloh.	Duir.	Chhatri.	Tisa.	Alwas.	Khanger.	Bhandal.
	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. Ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.
2nd .	0 2	0 2	...	...	...	...	...	...	...	...	...	0 2½	...	...
3rd .	0 3	0 3	...	...	...	...	...	...	...	...	...	...	...	...
4th .	0 1	0 8	...	...	...	...	...	...	...	...	...	0 3	...	...
5th .	1 3	1 2	0 8	...	...	...	...	...	...	0 5	...	0 2	0 8	0 2
6th .	2 4	1 0	1 8	0 9	0 4	...	...	...	0 8	0 6	...	0 6½	2 1	0 9
7th .	0 3	2 0	...	0 3	...	1 6	0 7	...	...	1 4	0 8	2 7	1 7	...
8th .	...	...	...	...	...	...	...	...	...	...	...	2 1	...	...
9th .	...	...	...	...	...	...	...	...	...	...	...	0 4	...	...
10th .	...	...	...	...	...	...	...	...	...	0 2	...	...	...	...
11th .	0 6	1 0	...	...	...	...	...	...	...	0 2½	...	...	0 2	...
12th .	1 0	0 3	...	...	...	...	...	...	...	0 3½	...	0 11	0 3	...
13th .	0 1	0 1	0 4	...	...	...	...	...	0 1	0 2	...	...	0 4	...
14th .	...	...	...	...	...	1 3	0 1	...	...	0 1½	...	1 0	0 1	...
15th .	0 3	0 3	0 1	..	...	...	..	...	...	...	...	...	...	...
16th .	0 5	0 5	0 3	...	...	...	...	...	0 2	0 2½	...	0 3	0 4	0 4
17th .	0 3	0 3	0 3	...	...	...	...	...	...	0 4	...	0 6	0 9	0 1
18th .	0 5	0 6	0 4	...	...	...	...	...	...	0 11	...	1 3	0 7	...
19th .	1 2	1 0	0 3	0 2	...	...	0 3	...	...	...	0 4	0 10	1 2	...
18th and 19th.	...	...	...	...	...	...	...	...	0 4	...	...	...	...	1 0
21st .	0 6	0 2	0 2	...	...	...	...	...	...	0 6	...	1 6	0 7	...
22nd .	0 5	0 4	0 3	...	...	4 3	0 5	0 1½	...	1 0	0 2	...	1 0	0 6
21st and 22nd.	...	...	...	...	...	...	...	...	0 5	...	...	...	...	...

On the 28th February there were 5 feet of snow at Barmaur; 5 feet at Olansa, 2 feet at Chitrari, 7 feet 4 inches at Kalatop; 2 inches at Bhandal; 3 feet 8 inches at Chhatri; 4 feet 1 inch at Alwas; 3 feet 6 inches at Khanger; 3 feet 6 inches at Sogti; 2 feet 6 inches at Junt; 3 feet at Shaol; and 3 feet 3 inches at Lela.

The snowfall has been much greater and longer than in the previous year.

(4) *Simla*:—The following information has been received for the Bashahr division:—

2nd February	1 inch of snow fell	and descended to	10,000 feet
4th "	2 "	"	"	7,000 "
5th "	5 "	"	"	5,750 "
6th "	3 "	"	"	6,500 "
7th "	1 "	"	"	6,500 "
8th "	1 "	"	"	7,000 "
12th "	1 "	"	"	6,500 "
13th "	1 "	"	"	5,700 "
14th "	2 "	"	"	5,700 "
18th "	1 "	"	"	5,750 "
19th "	1 "	"	"	7,000 "
20th "	11 "	"	"	5,750 "
22nd "	3 "	"	"	5,750 "
23rd "	9 "	"	"	5,750 "

All the passes were closed at the end of the month, and reports state that the depth of snow on the passes is as follows:—

Rupin Pass	(16,000 feet) . . .	28 feet
Borenda "	(16,000 feet) . . .	28 "
Harang "	(13,000 feet) . . .	14 "
Shatul "	(16,000 feet) . . .	30 "
Bulder "	(16,000 feet) . . .	31 "
Runang "	(14,000 feet) . . .	13 "

The snowfall was heavier than in 1900 and the winter unusually long.

(5) *Poo*:—Snow fell as under in the Upper Sutlej Valley:—

1st to 6th February . . .	11 inches
13th February	2 "
17th to 19th February . . .	14 "
22nd February	3 "
	2 ft. 6 "

The snowfall commenced unusually early this winter (23rd December 1900), and though the amount of the

snow-accumulation may not exceed that of the previous year, the snow has lasted longer on account of the amount of cloud having been greater.

(6) *Kulu.*—There were falls of snow on the 3rd, 4th, 5th, 6th and 18th of February over the Kulu Tahsil, and on the 4th, 5th, 6th, 7th, 8th, 12th, 13th, 14th, 18th, 19th, 20th, 22nd and 23rd February over the Plach Tahsil. The falls descended to an elevation of about 5,000 feet.

The following table shows the reported depth of snow on the higher passes of the sub-division at the end of the month under report:—

KULU TAHSIL.		PLACH TAHSIL.	
Rotang	16 feet	Sirikhand	25 feet
Hamta	11 „	Chul	14 „
Barsai	6 „	Maghini	14 „
Chandarkhani	16 „	Dundku	15 „
Bujadhar	13 „	Tikar	13 „
Luhri Achri	8 „	Nunu	8 „
Bhubhu	11 „	Jalori	14 „
Bastari	12 „	Raghopur	15 „
Sari	14 „	Ramgarh	3 „
Majhang	3 „	Lambri	12 „
		Sakiron	14 „
		Gargarasan	17 „
		Supakun	15 „
		Basleo	14 „
		Tirath	19 „
		Plach	15 „

The snowfall during the month of February 1901 was heavier than in the same month of the former year.

III.—NORTH-WESTERN PROVINCES HIMALAYAS.

(1) *Garhwal:*— Snow fell more or less throughout the month, and was heaviest on the 18th, 19th, 22nd and 23rd. The snow line at this time descended to 5,000 feet, and the depth of snow was about 6 feet. The falls were more frequent and much greater than last year.

(2) *Almora:*—Snow fell as under:—

MALLA JOHAR.

	Feet.
2nd February 1901	4
4th „ „	3
13th „ „	5
18th „ „	3
22nd „ „	3
	18

MALLA DANPUR.

	Feet.
1st and 2nd February 1901	1
6th „ „	1
13th and 14th „ „	1
20th and 23rd „ „	1½
	4½

BYANS, CHANDAS AND DARMA.

	Feet.
6th February 1901	½
13th to 15th February 1901	2½
18th „ „	1½
22nd and 23rd „ „	2½
	7

The snowfall of the month under review was less than in the same month in 1900.

Summary of special Storm Reports.

The weather was very disturbed during February over a large part of Northern and Central India, and thunder-storms and hail-storms were reported from different parts of the country. The following gives brief notices of the thunder-storms and hail-storms during the month of which reports have been received:—

February 6th.—After disturbed weather from the 2nd onward a thunder-storm broke over Allahabad about 3-40 P.M. on the 6th and lasted till 11 P.M. It was felt over a large area.

At Gonda, about 40 miles east of Bahraich, a thunder-storm was experienced. The storm commenced at 11 A.M. on the 6th and lasted till midnight and was accompanied with heavy rain but no hail.

February 7th.—A thunder-storm occurred at Allahabad between 1 P.M. and continued till late at night. It was at no time severe.

„ *16th.*—A slight thunder-storm passed over Nagpur between 6 and 8 P.M.

February 17th.—A thunder-storm passed near Nagpur at 8-30 P.M.

„ *18th.*—A severe thunder-storm passed over Nagpur in the early morning.

„ *21st.*—A slight thunder-storm was experienced at Nagpur between 3-30 P.M. and 8 P.M.

„ *22nd.*—A thunder-storm was felt at Lahore between 5 P.M. and 8 P.M. with light rain and the winds strong to a gale.

„ *27th.*—A local storm giving strong squally winds and gales passed over Srinagar between noon and 3 P.M.

Hail-storms.—On the 18th February a hail-storm passed over the Muksudangarh State and hail-stones of the size of gooseberries fell in nine villages, and on the 28th February a similar storm occurred in the Sehore Tahsil.

On the 20th February a moderately severe hail-storm passed over Sirsi Shimoga Road (Ka-

nara district) and lasted for an hour. The hail-stones were of the size of a betelnut.

Earthquakes.—A shock of earthquake travelling from east to west was felt at Srinagar at 11-15 P.M. on the 4th February. The trembling lasted for nearly 5 seconds.

An earthquake occurred at Mount Abu on the 22nd February at 11-35, Madras time. The rumbling lasted 25 seconds and passed from south-east to north-west.

An earthquake occurred at Mount Abu at 23-50, Madras time, on the 25th and lasted for 37 seconds. The earthquake commenced with a good shock and was followed by a rumbling noise passing from south to north.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea :—Winds were even more unsteady along the Indian coast and in the Persian Gulf and the straits between Arabia and Africa than is usually the case in the month of February due to the very varying pressure conditions over the neighbouring land areas. They were, on the other hand, exceedingly steady out in the open sea, where ordinary north-east monsoon winds obtained throughout the month except in the extreme south-east off the West Ceylon coast where west to south-west winds were experienced for a short period from the 12th to the 15th due to low pressure conditions in the Bay.

The air movement over the Arabian Sea was more or less above its normal intensity on 27 days and averaged 3·8 for the whole month or 0·8 above the normal. It was strongest on the 21st (4·9) and feeblest on the 16th when its average strength, as deduced from the data of 32 vessels, was only 2·9 or 0·1 below the normal of the month.

Weather was feebly disturbed in the south-east on one or two occasions during the month and fine and settled over the rest of the sea.

Bay of Bengal:—Over this area also the air movement was stronger than usual though not to the same extent as in the Arabian Sea. On the mean of the whole month the winds were 0·4 above their normal intensity in this area. The variations of strength from day to day were, however, somewhat larger than usual, the mean daily force over the whole area ranging between 4·5 and 2·0. There were two well-defined periods of light winds *viz* the 4th and 5th and the 7th to the 12th. The air movement averaged 2·3 during these two periods as compared with 2·5 its normal strength in February. It was, on the other hand, strongest from the 24th to the 27th when the mean daily force varied between 3·6 and 4·5. Winds were somewhat more unsteady in direction than is ordinarily the case in February over the greater part of this area more especially in the vicinity of the coast. They were irregularly cyclonic in direction from the 12th to the 16th due to the passage eastwards of a cold weather disturbance across the north of the Bay.

The most abnormal feature of the air movement in this area, however, was the absence of local sea breezes which usually set in over the head of the Bay during the last week of the month.

Weather was generally fine throughout the month except in the vicinity of Ceylon, where it was slightly unsettled on several occasions and over the east of the Bay where it was rainy and squally about the middle of the month.

Equatorial Belt.—So far as can be judged from the limited information available for this area conditions were approximately normal over the western half. The belt of low pressure and light variable airs which is an important feature of the meteorological conditions of the month in equatorial regions probably lay to the south of Lat 9° or 10° S during the first week of the month under review and to the south of Lat 2° S during the last week.

Temperature of the Air.

The mean temperature of the month was below the normal over the greater part of the country and the variations of the temperature from the average were larger than usual. The disturbed periods were, as during January, frequent and the storms were moderately severe, so that the temperature was very unsteady during the month and frequently exhibited large changes from day to day.

The mean maximum or day temperature of the month exceeded the normal only in two regions, the first including North and East Bengal, Assam and Upper Burma, and

the second including the south of the Peninsula and Ceylon. The excess was more marked in the former than in the latter region, as is shown by the following table which gives comparative data for those stations in the two regions where the excess was 2° or more.

Area.	Station.	Mean maximum temperature. Actual, February 1901.	Normal, February	Variation of actual from normal, February 1901.
		°	°	°
First area	Chittagong	85·7	81·5	+4·2
	Silchar	83·8	79·9	+3·9
	Kindat	84·3	81·0	+3·3
	Bogra	81·8	79·1	+2·7
	Barisal	82·5	80·0	+2·5
	Mymensingh	79·9	77·8	+2·1
Second area	Negapatam	86·5	84·2	+2·3
	Trichinopoly	94·0	92·0	+2·0
	Colombo	90·3	88·3	+2·0

Over the whole of the remainder of India the mean maximum temperature was below the normal. The deficiency was more than 2° over the whole of the large area, including the South and East Punjab, Eastern Rajputana, the inland parts of Bombay, the central parts of India, the Deccan, the North-Western Provinces and West Bengal. Within this large area there existed two regions where the deficiency was very large and exceeded 4°. The following gives comparative data for the stations within these two areas:—

Area.	Station.	Mean maximum temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
		°	°	°
1st area	Raipur	80·8	86·8	−6·0
	Nowgong	74·3	80·3	−6·0
	Sambalpur	82·4	87·9	−5·5
	Chanda	86·2	91·6	−5·4
	Benares	75·1	80·4	−5·3
	Seoni	78·7	83·9	−5·2
	Gaya	76·3	81·3	−5·0
	Nagpur	84·2	89·1	−4·9
	Hazaribagh	72·9	77·7	−4·8
	Hoshangabad	80·5	85·2	−4·7
First area	Jubbulpore	77·3	81·9	−4·6
	Chaibassa	79·4	83·7	−4·3
	Jhansi	76·3	80·5	−4·2
	Amraoti	85·5	89·7	−4·2
	Sutna	75·1	79·2	−4·1
	Hyderabad (Deccan)	86·9	91·0	−4·1
Second area	Rajkot	81·5	87·5	−6·0 ?
	Bhuj	79·5	83·8	−4·3 ?

Except at Srinagar (Kashmir) and at the stations of Darjeeling and Wellington the mean maximum or day temperature was below the normal at all the hill stations. The following gives comparative data for the stations at which the temperature was in defect:—

Station.	Mean maximum temperature. Actual, February 1901.	Normal, February	Variation of actual from normal, February 1901.
	°	°	°
Leh	22·6	34·9	−12·3
Mount Abu	64·7	68·9	− 4·2
Murree	43·4	47·5	− 4·1
Chaman	52·9	56·7	− 3·8
Simla	43·5	47·0	− 3·5
Chakrata	47·4	50·9	− 3·5
Pachmarhi	71·6	75·1	− 3·5
Ranikhet	53·8	55·0	− 1·2
Cherat	51·0	52·0	− 1·0
Quetta	51·2	52·1	− 0·9

At Darjeeling the excess was large, while at Wellington the mean day temperature was about normal. The following gives data:—

Station.	Mean maximum temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	°	°	°
Darjeeling	51·8	46·2	+5·6
Wellington	71·2	70·4	+0·8

The highest maxima recorded during the month were in no case remarkable. The following gives the highest temperatures recorded during the month in each of the provinces with the station recording it, together with the highest temperatures previously recorded in February: —

Province or Division.	Station.	Highest maximum temperature recorded in February 1901.	Date on which recorded.	Highest maximum temperature recorded in February previous to 1901.	Year in which recorded.
		°		°	
Burma . .	Yamethin .	98·5	25th	100·0	1896
Assam . .	Silchar .	90·5	19th	91·0	1889
Bengal . .	Noakhali .	92·5	21st	89·5	1896 & 1897
Orissa . .	Cuttack .	92·4	11th	102·2	1896
Bihar . .	Purnea .	89·2	9th	93·8	1896
Chota Nagpur .	Daltonganj .	88·9	7th	92·1	1899
North-Western Provinces and Oudh.	Lucknow .	85·3	3rd	95·4	1869
Punjab . . .	Mooltan .	82·3	27th	90·6	1887
Sind . . .	Jacobabad .	89·5	28th	100·7	1887
Rajputana . .	Deesa . .	93·6	3rd	99·3	1886
Gujarat . .	Surat . .	99·7	„	103·7	1878
Central India .	Indore . .	88·8	28th	96·5	1886
Central Provinces.	Khandwa .	95·7	„	100·2	1878
Berar . . .	Akola . .	94·9	5th	101·0	1878
West Coast .	Mangalore .	98·8	3rd	98·8	1894
Bombay Deccan .	Poona . .	95·5	28th	101·9	1886
Mysore . . .	Chitaldroog .	92·1	9th	96·7	1897
Madras Coast .	Nellore . .	94·8	15th	100·8	1898
Madras Deccan .	Cuddapah .	99·2	13th	105·2	1897
South India . .	Salem . .	99·2	14th	102·1	1878

It will be seen from the above that, except in the case of Noakhali (Bengal), the maxima were far from being so high as those previously recorded, the difference having been most marked in the central parts of the country.

The variation of the minimum temperature from the normal, on the mean of the month, differed largely from that of the maximum, the cloudy skies having occasioned an excess of the night temperature over a large part of the country. There were, however, two areas of deficiency, one including the West Punjab, Western Rajputana, Sind, Gujarat, the Konkan, Khandesh, and the west of the Central Provinces and of Central India, and the second the north-west coast of the Bay. In the latter case the deficiency was small and unimportant, but in the former it was considerable and exceeded 3° at the stations for which comparative data are given below :—

Province or Division.	Station.	Mean minimum temperature.		
		Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
		°	°	°
Sind . . .	Hyderabad (Sind) .	49·0	54·1	—5·1
	Kurrachee . .	53·9	58·3	—4·4
	Jacobabad . .	43·8	47·8	—4·0
Gujarat . .	Bhuj . . .	52·4	57·9	—5·5
	Rajkot . . .	48·7	54·1	—5·4
	Ahmedabad . .	56·1	59·8	—3·7
West Rajputana .	Deesa . .	51·2	54·7	—3·5
Khandesh . .	Malegaon . . .	51·4	54·9	—3·5

Over the whole of the remainder of India the night temperature, on the mean of the month, was in excess of the normal. The excess was considerable to large over North East India and Burma and over the greater part of the Peninsula, and was absolutely greatest and over 4° in amount over Central and Lower Burma and over the south-east of the Peninsula. Comparative data for these two areas are given below :—

Province or Division.	Station.	Mean minimum temperature.		
		Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
		°	°	°
Burma . . .	Bassein . .	70·8	63·9	+6·9
	Yamethin . .	65·2	59·0	+6·2
	Rangoon . .	70·4	65·2	+5·2
	Thayetmyo . .	61·1	56·0	+5·1
	Toungoo . .	65·2	60·2	+5·0
	Minbu . . .	63·6	59·5	+4·1
South-East of the Peninsula.	Salem . . .	71·8	64·8	+7·0
	Trichinopoly . .	73·4	67·8	+5·6
	Negapatam . .	77·1	71·5	+5·6
	Coimbatore . .	70·4	65·0	+5·4
	Madras . . .	73·0	68·0	+5·0
	Madura . . .	73·9	69·2	+4·7
	Kurnool . .	68·4	63·7	+4·7
	Bangalore . .	63·5	58·9	+4·6
	Cuddapah . .	72·5	68·2	+4·3
	Bellary . . .	69·0	64·8	+4·2
	Cuddalore . .	73·2	69·0	+4·2

At the hill stations of Darjeeling, Srinagar, Wellington, Lashio and Taunggyi the mean minimum temperature was higher than usual, on the mean of the month. This is shown below:—

Station.	Mean minimum temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	°	°	°
Wellington	52·0	46·7	+5·3
Taunggyi	50·7	46·4	+4·3
Srinagar	30·5	26·5	+4·0
Darjeeling	38·0	34·1	+3·9
Lashio	51·8	48·1	+3·7

At the remaining hill stations the mean minimum temperature was in defect and in some cases considerably so. The following gives comparative data:—

Station.	Mean minimum temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	°	°	°
Leh	5·1	10·5	−5·4
Mount Abu	49·8	53·2	−3·4
Simla	33·6	36·0	−2·4
Chakrata	34·2	35·7	−1·5
Murree	32·6	33·9	−1·3
Cherat	38·5	39·8	−1·3
Quetta	25·5	31·4	−5·9
Chaman	32·4	35·9	−3·5

The absolutely lowest night temperatures of the month were generally registered during the first week in Burma, Sind and South India, during the second in North Bihar, North-Western Provinces, Rajputana, the Deccan and the West Coast, during the third in the Punjab and the Central Provinces, and during the last week of the month in Bengal. The following table gives the more noteworthy readings both on the hills and plains together with the lowest readings hitherto recorded at the same stations in February. It will be noticed that they are not remarkably low and that lower readings have been recorded in previous years, except in the case of Dras, Minimarg, Sharigh, Udaipur and Ahmednagar.

	Station.	Lowest minimum temperature recorded in February 1901.	Date on which recorded.	Lowest minimum temperature recorded in February previous to 1901.	Year in which recorded.
		°		°	
Hill Station.	Dras	−33·9	16th	−30·5	1899
	Leh	−6·5	16th	−10·0	1885
	Minimarg	−5·0	15th & 16th	−1·5	1898
	Skardu	4·1	5th	−4·0	1897
	Kalat	8·0	4th	1·4	1895
	Astor	9·0	12th	4·5	1897
	Sharigh	10·0	26th	20·0	1900
	Pishin	11·0	19th	9·9	1895
	Yatung	14·9	16th	11·9	1896
Plain Station.	Peshawar	36·4	12th	29·2	1883
	Jacobabad	37·0	7th	29·0	1887
	Malegaon	37·2	22nd	34·0	1887
	Dehra Ismail Khan	37·5	10th	28·0	1883
	Montgomery	38·0	8th	32·3	1893
	Sialkot	38·1	23rd	31·0	1876
	Dehra Dun	38·5	14th, 15th	33·9	1876
	Lahore	39·0	21st	30·5	1887
	Sirsa	39·0	11th & 21st	30·2	1887
	Rajkot	39·1	8th	33·6	1893
	Pachpadra	39·3	7th	25·4	1882
	Roorkee	39·4	12th	33·8	1891
	Udaipur	39·7	7th	44·8	1899
	Ahmednagar	39·9	14th	40·9	1898

The mean temperature of the month was in excess of the normal over Burma and the greater part of North-East India as well as over the southern half of the Peninsula. Within these two areas the excess was more than 2° in the case of the following stations:—

Province or Division.	Station.	Mean daily temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
		°	°	°
Burma	Bassein	80·1	76·7	+3·4
	Yamethin	78·6	75·7	+2·9
	Kindat	70·0	67·1	+2·9
	Mandalay	77·4	74·8	+2·6

Province or Division.	Station.	Mean daily temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
		°	°	°
Burma	Minbu	77·7	75·3	+2·4
	Thayetmyo	76·6	74·2	+2·4
	Rangoon	81·1	78·8	+2·3
	Moulmein	81·6	79·4	+2·2
North-East India.	Bogra	69·4	66·2	+3·2
	Silchar	70·6	67·5	+3·1
	Mymensingh	68·6	65·7	+2·9
	Jalpaiguri	65·6	62·8	+2·8
	Chittagong	72·7	70·0	+2·7
	Barisal	71·6	69·1	+2·5
South of the Peninsula.	Salem	83·4	79·1	+4·3
	Negapatam	81·8	77·8	+4·0
	Trichinopoly	83·7	79·9	+3·8
	Madras	80·3	77·2	+3·1
	Coimbatore	81·3	78·4	+2·9
	Madura	83·4	80·6	+2·8
	Cuddalore	79·9	77·2	+2·7
	Bangalore	74·6	72·1	+2·5
	Cuddapah	83·7	81·3	+2·4

Over the remainder of India the mean temperature was less than usual. The deficiency was more than 2° at a few central stations, comparative data for which are given below :—

Station.	Mean daily temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	°	°	°
Amraoti	72·6	75·3	—2·7
Seoni	67·2	69·6	—2·4
Hoshangabad	67·8	70·2	—2·4
Raipur	71·3	73·4	—2·1

The deficiency also exceeded 2° over the West Punjab, North Bombay, Khandesh and the west of Central India. The following gives comparative data for the stations in this area :—

Station.	Mean daily temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	°	°	°
Rajkot	65·1	70·8	—5·7 ?
Bhuj	66·0	70·9	—4·9 ?
Bhavnagar Para	68·7	72·8	—4·1 ?
Hyderabad (Sind)	63·0	67·1	—4·1
Deesa	66·8	70·3	—3·5
Malegaon	69·1	72·5	—3·4
Poona	71·0	74·1	—3·0
Kurrachee	66·4	69·4	—3·0
Ahmedabad	70·7	73·5	—2·8
Jacobabad	59·8	62·5	—2·7
Neemuch	63·6	66·1	—2·5
Surat	71·7	73·9	—2·2?

At all the north-western and central hill stations, except Srinagar, the mean temperature was lower than usual, as is shown below :—

Province or Division.	Station.	Mean daily temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
		°	°	°
North-Western Hill Stations.	Leh	13·9	22·8	—8·9
	Simla	38·6	41·6	—3·0
	Murree	38·0	40·7	—2·7
	Chakrata	40·8	43·3	—2·5
	Cherat	44·8	46·0	—1·2
	Ranikhet	46·8	47·8	—1·0
	Srinagar	36·9	34·1	+2·8
Central Hill Stations.	Mount Abu	57·3	61·1	—3·8
	Pachmarhi	61·0	63·0	—2·0

On the contrary, at the Sikkim, Burmese and South India hill stations the mean temperature of the month

was more or less excessive. The following gives data:—

Province.	Hill station.	Mean daily temperature. Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
		°	°	°
Sikkim	Darjeeling	44·9	40·1	+4·8
Burma	Lashio	65·9	63·1	+2·8
	Taunggyi	64·1	61·3	+2·8
South India	Wellington	61·6	58·5	+3·1

The chief features of the mean temperature distribution of the month were:—

(1) Unsteady temperatures with largish changes at short intervals.

(2) A higher night and a lower day temperature than usual over a large part of the country, and hence a low daily range of temperature.

The chief abnormal features of the temperature distribution were:—

(1) Higher temperatures than usual, both by day and night, over part of Burma, North-East India and the southern half of the Peninsula.

(2) Lower temperatures than usual, both by day and night, over a considerable part of North-West India, and

(3) Lower temperatures by day and higher temperatures by night over the remainder of India.

The following table gives mean temperature data of the month for 55 of the meteorological divisions into which India is divided:—

Province.	Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	90·1	72·4	81·2	17·8	29·5	−0·2	+3·3	−3·5
	Lower Burma (Deltaic)	88·3	72·3	80·3	16·0	26·2	−0·4	+5·4	−5·8
	Central do.	90·5	63·2	76·9	27·3	45·3	−1·1	+5·1	−6·2
	Upper do.	88·5	60·6	74·5	27·9	42·0	+1·1	+3·7	−2·6
	Arakan	86·3	61·3	73·8	25·0	38·8	+1·7	+0·4	+1·3
Bengal and Assam	Eastern Bengal	83·0	58·5	70·8	24·5	39·6	+2·1	+2·4	−0·3
	Assam (Surma)	83·8	57·3	70·6	26·5	40·1	+3·9	+2·3	+1·6
	Do. (Brahmaputra)	76·4	56·0	66·3	20·4	35·4	+1·5	+2·1	−0·6
	Deltaic Bengal	81·3	60·7	71·0	20·6	36·2	−0·9	+1·3	−2·2
	Central do.	80·2	59·5	69·8	20·6	36·2	−0·2	+3·5	−3·7
	North do.	78·2	54·2	66·2	24·0	37·8	+1·5	+3·1	−1·6
	Bengal Hills	53·4	29·1	41·3	24·3	35·7	+5·6	+3·9	+1·7
	Orissa	83·2	64·7	74·0	18·5	31·9	−2·0	+0·5	−2·5
	Chota Nagpur	76·3	57·6	67·0	18·7	37·3	−4·6	+3·5	−8·1
	South Bihar	75·5	56·7	66·1	18·9	34·3	−2·9	+3·9	−6·8
	North do.	76·3	55·1	65·7	21·2	35·2	−0·8	+2·8	−3·6
North-Western Provinces and Oudh	North-Western Provinces (East)	75·5	54·3	64·9	21·2	36·6	−4·6	+3·2	−7·8
	Oudh (South)	75·8	52·2	64·0	23·6	42·6	−2·7	+1·9	−4·6
	Do. (North)	75·0	51·6	63·3	23·4	38·6	−1·0	+1·2	−2·2
	North-Western Provinces (Central)	74·8	52·3	63·6	22·5	37·9	−4·2	+1·8	−6·0
	Do. do. (West)	73·3	51·0	62·2	22·3	35·0	−3·1	+1·4	−4·5
	Do. do. (East Submontane)	75·3	54·3	64·8	21·0	33·8	−2·7	+2·4	−5·1
	Do. do. (West do.)	70·0	48·3	59·2	21·7	36·8	−2·5	+0·1	−2·6
	Do. do. (Hills)	49·4	36·1	42·8	13·3	31·6	−2·4	−1·2	−1·2
Punjab	Punjab (South-East)	71·2	51·7	61·5	19·5	30·1	−3·9	+0·2	−4·1
	Do. (South)	70·0	47·1	58·6	23·0	35·8	−3·1	+0·1	−3·2
	Do. (Central)	69·2	46·2	57·7	23·0	39·2	−1·3	+2·3	−3·6
	Do. (Submontane)	68·1	47·9	58·0	20·3	34·8	−1·4	+0·8	−2·2
	Do. (Hills)	42·7	22·8	32·8	19·9	37·4	−3·9	−1·3	−2·6
	Do. (North)	64·7	40·8	52·8	23·9	41·7	−1·0	−0·7	−0·3
	Do. (West)	70·7	45·0	57·9	25·8	40·8	−1·6	−2·3	+0·7

Province.	Division.	Actual temperature: Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of month of: Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bombay and Malabar Coast Districts (Madras).	Malabar	89·2	74·9	82·0	14·3	24·0	+0·6	+2·3	−1·7
	Madras (South Central)	93·7	71·1	82·4	22·6	34·0	+1·0	+6·2	−5·2
	Coorg	79·6	60·6	70·1	19·0	29·3	−1·6	+3·3	−4·9
	Mysore	87·1	64·6	75·9	22·6	32·3	+0·5	+4·0	−3·5
	Konkan	83·5	68·6	76·1	14·9	32·0	−1·3	0	−1·3
	Bombay Deccan	87·7	60·2	74·0	27·5	47·6	−3·6	−0·3	−3·3
	Hyderabad (North)	86·4	62·6	74·5	23·8	36·4	...	...	...
	Khandesh	85·8	52·8	69·3	33·0	54·9	−3·2	−3·5	+0·3
Central Provinces and Berar.	Berar	86·5	58·1	72·3	28·4	46·9	−3·6	−0·7	−2·9
	Central Provinces (West)	83·6	56·7	70·2	26·9	46·3	−4·0	+0·2	−4·2
	Do. (Central)	79·9	57·0	68·5	22·9	41·2	−4·4	+1·0	−5·4
	Do. (East)	81·6	62·5	72·1	19·1	35·5	−5·8	+2·8	−8·6
Bombay (North)	Gujarat	86·0	56·4	71·2	29·6	50·0	−1·8	−3·7	+1·9
	Kathiawar and Cutch	80·7	53·9	67·3	26·7	47·1	+0·6	−2·6	+3·2
	Sind	77·2	48·9	63·1	28·3	46·8	−2·0	−4·5	+2·5
	Baluchistan Hills	52·8	22·7	37·8	30·1	53·6	−2·4	−4·7	+2·3
Rajputana and Central India.	Central India (East)	76·8	51·9	64·3	24·9	43·3	−3·9	+0·9	−4·8
	Rajputana (East), Central India (West)	76·8	50·4	63·6	26·4	44·9	−3·0	−0·5	−2·5
	Do. (West)	76·9	49·0	63·0	27·8	45·1	−1·8	−1·3	−0·5
Madras	East Coast (North)	83·0	70·1	76·5	12·9	22·6	−1·7	+0·6	−2·3
	Hyderabad (South)	88·5	66·7	77·6	21·8	35·4	−4·1	+3·1	−7·2
	Madras (Central)	93·1	70·0	81·5	23·1	35·8	−1·2	+4·4	−5·6
	East Coast (Central)	87·8	72·2	80·0	15·6	24·5	−0·9	+3·6	−4·5
	Do. (South)	89·0	73·6	81·3	15·4	25·3	+1·7	+5·1	−3·4
	Madras (South)	91·3	73·8	82·6	17·6	26·7	+0·8	+3·8	−3·0

The history of the larger temperature changes of the first half of the month is interesting, as the changes show the effect of the appearance and advance of a small cold weather storm on the temperature conditions. At the commencement of the month the mean temperature exceeded the normal in all the divisions of India. The excess was greatest along a line which ran north-north-eastward from Veraval to Jaipur, as is shown by the following data which give the variations exceeding +8°·0:—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A. M. of 1st February.
	°
Jaipur	+10·3
Sambhar	+10·1
Deesa	+9·6
Ajmer	+9·0
Ahmedabad	+8·6
Veraval	+8·4
Jhansi	+8·3
Surat	+8·2

These conditions continued during the 2nd, and on both these days ordinary anti-cyclonic conditions of pressure prevailed over North-West and Central India. During the 2nd a depression formed over the Gulf of Cambay and this was marked by a rapid rise of temperature over Gujarat and Khandesh, so that the area of maximum excess of temperature became central over Kathiawar and Gujarat. The following shows the stations at which the excess of temperature was more than 10°:—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A. M. of 2nd February.
	°
Jaipur	+13·7
Veraval	+11·6
Ahmedabad	+10·4
Sambhar	+10·3

The depression over the Gulf of Cambay intensified and extended; part passed into Rajputana and part into Khandesh. This extension was marked by rain and snow and a large fall of temperature over North-West India.

The fall of temperature first appeared in Sind on the 3rd and thence extended to Gujarat where, throughout the whole of this period, the lowest temperatures, relatively to the normal, were recorded. The following gives data illustrating the advance of these temperature changes :—

Warm area.			Cool area.		
Date.	Station.	Variation of mean temperature.	Date.	Station.	Variation of mean temperature.
		°			°
Feb. 3rd	Veraval	+13·2	Feb. 3rd	Jacobabad	— 0·4
„	Surat	+13·3			
„ 4th	Neemuch	+11·2	„ 4th	Hyderabad	— 0·2
„ 5th	Hoshangabad	+11·1	„ 5th	Rajkot	— 4·1
„ 6th	Jubbulpore	+10·8	„ 6th	Ditto	— 9·2
„ 7th	Sutna	+12·3	„ 7th	Ditto	— 9·2
„ 8th	Jalpaiguri	+12·0	„ 8th	Ditto	—10·6

From the above it will be seen that while the crest of the warm wave, if it may be so described, advanced east-north-eastward from Kathiawar to North Bengal between the 3rd and 8th, the dip of the cold wave never advanced beyond Kathiawar, though the area of low temperature extended during that period over the greater part of North-West India. This extension of relatively low temperatures was coincident with a fall of rain and snow over North-West India, but this precipitation does not explain the persistent large deficiency of temperature over Kathiawar. The area of relatively low temperature was at its greatest extension on the 9th, and the following gives variation data for the 24 hours ending at 8 A.M. on that day and illustrates the conditions prevailing at this time :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 9th February.	Mean minimum temperature, 9th February.	Mean daily temperature, 9th February.
	°	°	°
Burma	+0·8	+2·6	+1·7
Assam	+5·1	+7·0	+6·1
Bengal	+5·0	+8·5	+6·8
Orissa	+1·9	+7·6	+4·8
Bihar	—0·3	+4·6	+2·2
Chota Nagpur	+0·4	+6·6	+3·5
North-Western Provinces and Oudh.	—1·0	—1·1	—1·1
Punjab	—2·5	—0·6	—1·6
Sind	—2·1	—4·6	—3·4
Rajputana	—3·0	+0·5	—1·3
Gujarat	—4·4	—8·3	—6·4
Central India	—3·1	+2·4	—0·4
Central Provinces	—1·2	+6·2	+2·5
Berar	—1·8	—0·5	—1·2
West Coast	—1·8	+1·5	—0·2
Bombay Deccan	+0·6	—1·9	—0·7
Mysore	+3·3	+6·3	+4·8
Madras Coast	+2·5	+5·3	+3·9
Madras Deccan	+2·2	+8·6	+5·4
South India	+1·5	+5·6	+3·6

On the 10th and 11th there was no great change to record, the principal feature in the temperature conditions of this period having been the high night temperatures prevailing in Bengal. The following gives the more noteworthy examples :—

Date.	Station.	Minimum temperature.		
		Actual of date.	Normal of date.	Variation of actual from normal of date.
		°	°	°
10th February	Chaibasa	67·5	54·9	+12·6
	Balasore	69·9	58·2	+11·7
	Barisal	66·1	55·4	+10·7
	Ranchi	60·0	50·9	+ 9·1
	Saugor Island	71·6	63·6	+ 8·0
11th February	Barisal	68·6	55·8	+12·8
	Chaibassa	67·0	55·2	+11·8
	Saugor Island	74·1	63·4	+10·7
	Calcutta	69·2	58·9	+10·3
	Jessore	65·7	55·5	+10·2

On the 12th showers occurred over the Central Provinces and a sudden and large fall of temperature occurred over the Central Provinces, Berar and the Bombay Deccan. These showers subsequently extended to Rajputana and heavy rain fell also over Bengal and the Circars.

This rainfall was followed by a remarkable fall of temperature—more particularly in Rajputana. During the 14th and 15th the extension of the area of low temperature continued and on the latter date lower temperatures than usual had reached Burma so that the only divisions reporting higher temperatures than usual at this time were Assam and the south-east of the Peninsula. The following gives comparative data for the 24 hours preceding 8 A.M. of the 15th for all the provinces or divisions of India:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 15th February.	Mean minimum temperature, 15th February.	Mean daily temperature, 15th February.
	°	°	°
Burma	—10·1	+4·5	—2·8
Assam	+ 2·1	+2·3	+2·2
Bengal	— 2·7	+2·2	— 0·3
Orissa	— 5·4	+1·1	—2·2
Bihar	— 1·2	—0·5	—0·9
Chota Nagpur	— 5·4	+1·1	—2·2
North-Western Provinces and Oudh	— 3·8	—5·3	—4·6
Punjab	— 1·3	—1·4	—1·4
Sind	+ 0·3	—4·7	—2·2
Rajputana	— 3·2	—4·1	—3·7
Gujarat	— 4·8	—7·2	—6·0
Central India	— 7·0	—4·7	—5·9
Central Provinces	— 8·0	—3·8	—5·9
Berar	— 7·4	—4·3	—5·9
West Coast	— 3·9	—2·4	—2·7
Bombay Deccan	— 6·5	—9·5	—8·0
Mysore	+ 1·7	+0·6	+1·2
Madras Coast	— 0·9	+1·7	+0·4
Madras Deccan	— 0·4	+0·2	—0·1
South India	+ 3·9	+5·9	+4·9

On the 16th and 17th there was no important change to record; the mean temperature was generally lower than usual except in Madras, Bengal and Assam, but the variations from the normal were irregular and centres of large depression of temperature were shown, one over Kathiawar, a second over the Bombay Deccan and a third over the Central Provinces. The following gives comparative data for these two days for the two stations in each area where the depression of temperature was greatest:—

Date.	Province or Division.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. date.
			°
16th February.	Kathiawar	Rajkot	—9·6
		Bhavnagar Para	—6·4
	Bombay Deccan	Bijapur	—9·5
		Belgaum	—9·2
	Central Provinces.	Jubbulpore	—7·3
		Seoni	—5·7
	Central India	Sutna	—6·6
		Nowgong	—4·9
17th February.	Kathiawar	Rajkot	—7·9
		Bhuj	—5·6
	Bombay Deccan	Goa	—8·9
		Belgaum	—8·7
	Central Provinces.	Hoshangabad	—9·6
		Jubbulpore	—8·7

On the 17th a small depression was forming over the Bombay Deccan. This depression subsequently travelled through the Central Provinces and as far as Nowgong giving rain to the Central Provinces. This rainfall occasioned a fall of temperature over the central divisions, as is shown by the following comparative data for those divisions from the 17th to the 20th. On the latter date the depression filled up and the rain ceased:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	17th February.	18th February.	19th February.	20th February.
	°	°	°	°
Central India	—1·9	+1·4	—1·9	—1·5
„ Provinces	—4·4	—0·3	—1·2	—4·3
Berar	+0·3	+2·2	—0·3	—8·3

Between the 20th and the 24th the mean temperature was very low over all parts of the country except Burma, Bengal and Madras. The following gives comparative data for all divisions for the 22nd and illustrates the general conditions prevailing during these five days :—

Province or Division.	Variation from normal of Mean maximum temperature, 22nd February.	Mean minimum temperature, 22nd February.	Mean daily temperature, 22nd February.
	°	°	°
Burma	+ 1·4	+ 4·6	+ 3·0
Assam	+ 2·6	+ 4·4	+ 3·5
Bengal	— 2·6	+ 3·9	+ 0·7
Orissa	— 3·3	+ 1·6	— 0·9
Bihar	—13·5	+ 3·8	— 4·9
Chota Nagpur	—13·9	+ 3·8	— 5·1
North-Western Provinces and Oudh	— 8·1	— 0·2	— 4·2
Punjab	— 5·3	— 4·1	— 4·7
Sind	— 6·5	— 8·2	— 7·4
Rajputana	—12·2	—11·0	—11·6
Gujarat	—12·8	—13·3	—13·1
Central India	—11·1	— 5·7	— 8·4
Central Provinces	—13·0	— 3·7	— 8·4
Berar	—17·1	—10·9	—14·0
West Coast	— 4·1	— 2·6	— 3·4
Bombay Deccan	— 7·7	— 7·0	— 7·4
Mysore	— 0·2	+ 2·0	+ 0·9
Madras Coast	— 0·7	+ 4·8	+ 2·1
Madras Deccan	— 5·5	+ 3·4	— 1·1
South India	+ 1·0	+ 5·0	+ 3·0

On this day, the 22nd, a shallow depression was shown advancing eastward through the Punjab. This depression occasioned a sudden and heavy fall of snow over the North-West Himalayas, and this fall of snow was followed by very low temperatures over the North-West Himalayas and the Submontane districts of the Punjab and of the North-Western Provinces. The following gives comparative data for the stations on the hills and plains of this locality at which the deficiency exceeded 8° on the 23rd and 24th :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
23rd February	Chakrata	—16·4
	Simla	—12·7
	Murree	—11·8
	Ranikhet	— 9·3
	Cherat	— 8·3
	Dehra Dun	—13·3
	Roorkee	—11·1
	Delhi	— 9·3
	Meerut	— 8·3
24th February	Chakrata	—12·9
	Ranikhet	—10·2
	Simla	— 9·6
	Dehra Dun	— 9·0
	Montgomery	— 8·9
	Agra	— 8·5
	Roorkee	— 8·4

On the 24th temperature was very low over the central parts of the country but a recovery had commenced in the north-west and west. This recovery gradually extended during the next four days, and the area of very low temperature over the central parts of the country at the same time retreated north-eastward through the Central Provinces into Bengal and finally into Burma, so that by the close of the month the mean temperature was generally in excess over the whole of Western and Southern India, while it was in defect over Northern and Eastern India. The following gives comparative data for the whole country for the five days, 24th to 28th, and illustrates the gradual extension of the area of excessive heat over Western India and the retreat of the area of deficient heat towards North-Eastern and Eastern India :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 24th February.	25th February.	26th February.	27th February.	28th February.
	°	°	°	°	°
Burma	+ 4·6	+ 3·3	+ 2·7	— 0·8	— 3·3
Assam	+ 3·7	+ 1·3	— 3·1	— 2·4	— 2·4
Bengal	+ 0·9	— 5·4	— 7·2	— 6·4	— 5·7
Orissa	— 2·4	— 6·1	—10·0	— 8·9	— 6·7
Bihar	— 4·3	— 6·9	— 7·1	— 6·9	— 3·6

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	24th February.	25th February.	26th February.	27th February.	28th February.
Chota Nagpur	— 6·0	—11·0	— 9·9	— 8·7	— 6·7
North-Western Provinces and Oudh.	— 8·0	— 7·6	— 6·5	— 4·7	— 2·4
Punjab	— 5·6	— 4·5	— 2·8	+ 1·1	— 0·2
Sind	— 5·6	— 5·1	— 3·6	— 1·2	+ 0·7
Rajputana	— 7·8	— 8·8	— 6·3	— 1·4	— 0·4
Gujarat	— 6·3	— 4·4	— 1·6	+ 1·4	+ 0·1
Central India	—11·0	— 9·8	— 8·8	— 5·0	+ 1·5
Central Provinces	—10·6	—11·2	— 9·7	— 6·8	— 2·2
Berar	— 8·4	— 8·8	— 6·6	— 3·3	+ 1·9
West Coast	+ 1·4	+ 3·8	+ 3·5	+ 2·6	+ 1·5
Bombay Deccan	— 4·4	— 3·4	— 1·8	+ 1·0	+ 1·9
Mysore	— 1·3	— 1·4	— 1·8	— 0·8	+ 0·7
Madras Coast	+ 0·4	+ 0·9	— 0·7	— 0·8	— 1·0
Madras Deccan	— 3·7	— 4·7	— 3·4	— 2·3	— 1·7
South India	— 0·1	+ 0·6	+ 1·3	+ 1·6	+ 0·9

The following gives the variations of the mean temperature from the normal, week by week, during the month and also for the whole month :—

Province or Division.	Variation from normal of mean temperature for week ending				
	9th February.	16th February.	23rd February.	2nd March.	For whole month, February 1901.
	°	°	°	°	°
Burma	+2·7	+1·2	+2·8	+0·5	+2·2
Assam	+5·0	+2·1	+1·9	—0·7	+2·3
Bengal	+6·0	+2·1	+1·4	—4·2	+1·6
Orissa	+2·3	+0·9	—1·3	—6·0	—0·8
Bihar	+5·6	0	—1·5	—5·5	+0·8
Chota Nagpur	+5·8	+0·9	—3·0	—7·5	—0·6
North-Western Provinces and Oudh.	+4·7	—2·3	—3·2	—4·9	—0·7
Punjab	+2·2	—1·5	—3·2	—1·1	—1·0
Sind	—2·1	—3·3	—5·7	—2·1	—3·3
Rajputana	+2·6	—3·1	—5·5	—3·4	—1·7
Gujarat	—1·7	—5·5	—7·2	—1·7	—1·9
Central India	+4·5	—3·6	—4·1	—5·3	—1·5
Central Provinces	+5·0	—2·0	—4·8	—7·0	—1·7
Berar	+2·9	—4·5	—4·9	—4·4	—2·2
West Coast	+1·5	—1·4	—1·5	+1·6	+0·3
Bombay Deccan	+1·4	—5·5	—4·4	—1·2	—2·3
Mysore	+2·6	+2·2	+1·4	—0·4	+2·3
Madras Coast	+2·1	+1·5	+1·4	—0·2	+1·4
Madras Deccan	+3·2	+1·4	—0·7	—2·8	+1·1
South India	+3·8	+4·8	+2·9	+0·9	+3·1

Winds.

The weather was a good deal disturbed over India during February and the pressure conditions favoured more easterly winds than usual over a considerable part of the country so that the air movement over India was somewhat irregular during the month.

The winds, on the mean of the month, were more easterly than usual over the Bay Islands and Burma. This increased easting is shown in the following table :—

Station.	Mean wind direction.		
	Actual, February 1901.	Normal, February.	Easterly deflection.
	°	°	°
Port Blair	N 58 E	N 45 E	+13
Cocos Island	N 25 W	N 9 E	...
Rangoon	S 53 W	S 45 W	+98
Diamond Island	N 45 W	N 32 W	...
Akyab	N 4 E	N 23 W	+29

The steadiness in this region was in most cases less than usual, while the velocity varied irregularly from the normal. The following gives comparative data of steadiness and velocity for the different stations :—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, February 1901.	Normal percentage, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Port Blair	62	74	—12	124	121	+ 3
Cocos Island	72	89	—17	?	377	?
Rangoon	28	17	+11	99	91	+ 8
Diamond Island	21	85	—64	256	195	+61
Akyab	27	47	—20	73	85	—12

In Orissa the winds, as in the case of Burma and the Bay Islands, were more easterly than usual. The following gives data for False Point:—

Station.	Mean wind direction.		
	Actual, February 1901.	Normal, February.	Easterly deflection.
	°	°	°
False Point	S 73 E	S 12 E	+61

In Bengal, on the contrary, the wind was unusually northerly while the steadiness was high and the velocity about the normal. This is shown below:—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, February 1901.	Normal percentage, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
				°	°			
Chittagong . .	53	29	+24	N 4 W	N 43 W	91	93	—
Calcutta . .	35	25	+10	N 30 W	S 89 W	99	80	+1
Saugor Island .	27	18	+ 9	N 22 W	S 52 W	212	206	+ 6

In West Bengal and the Lower Gangetic Plain the winds varied between west-north-west and north-west and the steadiness and velocity were about the average This is shown below:—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, February 1901.	Normal percentage, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Westerly deflection.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
				°	°				
Hazaribagh	37	55	—18	N 77 W	N 62 W	+15	163	172	— 9
Darbhanga .	53	47	+ 5	N 78½ W	S 78 W	+12	99	90	+ 9
Allahabad .	37	34	+ 3	N 43 W	N 63 W	—20	144	100	+44

In the East Punjab the wind's direction was somewhat more northerly than usual, but at the remaining stations in the Upper Sub-Himalayas group the mean direction was approximately normal. The following gives data:—

Station.	Mean wind direction.	
	Actual, February 1901.	Normal, February.
	°	°
Dehra Dun	S 63 W	S 88 W
Roorkee	N 57 W	N 61 W
Meerut	N 59 W	N 59 W
Lahore	N 6 E	N 31 W
Ludhiana	N 14 W	N 50 W

The steadiness and velocity in this area were generally low. This is shown by the following data:—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, February 1901.	Normal percentage, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal February 1901.
Dehra Dun . . .	44	28	+16	40	43	— 3
Roorkee . . .	23	31	— 8	55	68	—13
Meerut . . .	39	50	—11	41	61	—20
Lahore . . .	20	31	—11	51	54	— 3
Ludhiana . . .	21	40	—19	61	44	+17

In the Indus Valley unsteady west-north-west winds prevailed throughout and the velocity was considerably below the normal more particularly at Kurrachee and Peshawar. The following gives data of direction and velocity:—

Station.	Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual, February 1901.	Normal, February.	Westerly deflection.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Peshawar . . .	N 67° W	N 9° W	+58°	37	82	—45
Jacobabad . . .	N 67 W	N 21 E	+88	44	71	—27
Kurrachee . . .	N 76 W	N 69 W	+ 7	170	249	—79

The wind was normal at Jaipur but unusually easterly at Deesa. The following gives data :—

STATION.	MEAN WIND DIRECTION.		
	Actual, February 1901.	Normal, February.	Easterly Deflection.
	°	°	°
Jaipur	N 14 W	N 18 W	...
Deesa	N 10 E	N 2 W	+12

The following gives comparative data of the mean air movement in the Bay Islands, Burma and the different divisions of Northern India :—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, February 1901.	Normal percentage, February.	Variation of actual from normal, February 1901.	February Actual, 1901.	Normal, February.	February Actual, 1901.	Normal, February.	Variation of actual from normal, February 1901.
				°	°			
Bay Islands .	67	82	−15	N 18 E	N 27 E	124	121	+ 3
Burma . .	25	50	−25	N 10 E	N 56 W	143	124	+19
Bengal . .	38	24	+14	N 19 W	N 88 W	134	126	+ 8
Orissa . .	37	17	+20	S 73 E	S 12 E	151	191	−40
Chota Nagpur .	37	55	−18	N 77 W	N 62 W	163	172	− 9
Bihar . .	52	47	+ 5	N 78 W	S 78 W	99	90	+ 9
N.-W. Provinces .	35	36	− 1	N 70 W	N 67 W	70	68	+ 2
Punjab . .	18	27	− 9	N 23 W	N 30 W	50	60	−10
Sind . . .	22	22	0	N 72 W	N 23 W	107	160	−53
Rajputana . .	31	32	− 1	N°	N 10 W	152	152	0

In the Deccan districts the wind's direction varied irregularly from the average, but at the following stations the direction was more easterly than usual :—

STATION.	MEAN WIND DIRECTION.		
	Actual, February 1901.	Normal, February.	Easterly deflection.
	°	°	°
Sholapur	S 83 E	S 43 E	+40
Khandwa	N 6 E	N 14 W	+20
Nagpur	N 79 E	N 42 E	+37
Hyderabad (Dn.)	S 65 E	S 50 E	+15

The wind was generally unsteady in this division, but the velocity was normal or above the normal, and in some cases largely so. The following gives data of steadiness and velocity for all the stations in the Deccan division :—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, February 1901.	Normal percentage, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Belgaum . . .	10	14	− 4	257	237	+ 20
Sholapur . . .	7	24	−17	182	174	+ 8
Poona . . .	38	27	+11	250	149	+101
Akola . . .	20	23	− 3	166	98	+ 68
Buldana . . .	25	27	− 2	183	147	+ 36
Khandwa . . .	12	31	−19	130	93	+ 37
Nagpur . . .	20	22	− 2	130	123	+ 7
Hyderabad (D.) .	28	29	− 1	116	97	+ 19

In Southern India the same irregularity in the pressure conditions which resulted in more easterly winds in the Deccan produced more southerly winds. This is shown below :—

STATION.	MEAN WIND DIRECTION.		
	Actual, February 1901.	Normal, February.	Southerly deflection.
	°	°	°
Salem	N 80 E	E	...
Chitaldroog	N 35 E	N 89 E	...
Bangalore	S 47 E	S 69 E	+22
Hassan	S 83 E	S 85 E	+ 2
Mysore	S 69 E	N 87 E	+24
Madras	S 70 E	S 85 E	+15
Bellary	S 68 E	S 57 E	−11

The steadiness of the wind in this locality was generally low while the velocity varied irregularly from the normal.

The following gives comparative data of steadiness and velocity :—

STATION.	MEAN STEADINESS			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, percentage February 1901.	Normal Percentage, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Salem . . .	53	51	+ 2	137	128	+ 9
Chitaldroog . .	16	48	—32	155	170	—15
Bangalore . .	55	65	—10	176	105	+71
Hassan . . .	52	67	—15	67	77	—10
Mysore . . .	37	67	—30	184	201	—17
Madras . . .	84	69	+15	159	119	+40
Bellary . . .	14	47	—33	141	92	+49

The following gives comparative data of the mean air movement, steadiness and velocity in the different divisions of the Peninsula :—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, February 1901.	Normal percentage, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
				°	°			
Central Provinces.	16	27	—11	N 43 E	N 19 E	130	108	+22
Berar . . .	23	25	— 2	N 24 W	N 16 W	175	123	+52
Bombay Deccan .	18	22	— 4	S 45 W	S 41 E	230	187	+43
West Coast . .	71	64	+ 7	N 36 W	N 66 W	188	170	+18
Madras Deccan .	21	38	—17	S 67 E	S 54 E	129	95	+34
Mysore . .	40	62	—22	S 82 E	S 84 E	146	138	+ 8
Madras Coast .	84	69	+15	S 70 E	S 85 E	159	119	+40
South India . .	53	51	+ 2	N 80 E	E	137	128	+ 9

At the northern hill stations the wind directions, on the mean of the month, varied irregularly from the average; the principal irregular feature being the increased southing at several stations, but particularly at those in the Eastern Himalayas. The following gives direction data for all the northern hill stations :—

STATION.	MEAN WIND DIRECTION.		
	Actual, February 1901.	Normal, February.	Southerly deflection.
	°	°	°
Leh	S 6 E	S	— 6
Srinagar	S 6 E	S 24 E	+18
Kailang	S 66 W	S 72 W	+ 6
Simla	S 23 E	S 20 E	— 3
Chakrata	S 74 E	S 20 W	...
Ranikhet	N 37 W	S 51 W	...
Katmandu	S 81 W	N 86 W	+13
Darjeeling	S 38 W	S 79 W	+41

At Mount Abu and Chikalda the wind was west-north-westerly and at Pachmarhi east-south-easterly. The steadiness was very low generally, but the velocity exceeded the normal. The following gives data :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, February 1901.	Normal percentage, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
				°	°			
Mount Abu .	25	27	— 2	N 62 W	N 63 W	186	140	+46
Chikalda . .	7	24	—17	N 65 W	N 83 W	162	148	+14
Pachmarhi . .	7	25	—18	S 64 E	N 64 W	159	98	+61

At Wellington the wind was approximately normal. Fairly normal winds also prevailed in the Gulf of Aden.

In the South-East Trades region the winds were of the normal velocity or slightly above. This is shown below :—

STATION.	MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Seychelles	143	145	— 2
Zanzibar	187	159	+28

The wind direction at the Seychelles was practically normal, but at Zanzibar the Trades were a few degrees more easterly than usual. At the Seychelles also the wind was unsteady. The following gives comparative data for the stations in the Trades region :—

Station	Mean steadiness.			Mean wind direction.	
	Actual percentage, February 1901.	Normal percentage, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.
				°	°
Seychelles . .	30	56	−26	N 28 W	N 27 W
Zanzibar . .	67	63	+ 4	N 40 E	N 34 E

The principal abnormal features of the wind circulation were directly related to the irregularity in the pressure distribution. This resulted in :—

(1) increased easting in parts of Burma, the Bay Islands and across the head of the Peninsula, and

(2) increased southing in the winds over Southern India.

The following gives comparative data of the mean air movement for the various provinces based on Table I.

Province or Division.	Mean wind velocity in miles per diem.		
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.
Burma	79	86	− 7
Assam	48	72	−24
Bengal	68	86	−18
Orissa	110	118	− 8
Bihar	91	67	+24
Chota Nagpur	82	156	−74
North-Western Provinces and Oudh .	65	77	−12
Punjab	77	60	+17
Sind	125	163	−38
Rajputana	108	113	− 5
Gujarat	197	146	+51
Central India	89	110	−21
Central Provinces	113	74	+39
Berar	151	91	+60
West Coast	175	192	−17
Bombay Deccan	182	168	+14
Mysore	149	86	+63
Madras Coast	175	122	+53
Madras Deccan	163	94	+69
South India	115	108	+ 7

Humidity and Cloud.

The distribution of humidity, relatively to the normal, changed considerably between January and February 1901. In the former month the relative humidity was in greatest excess within a large area extending east and west between Upper Sind and West Bengal, while over the Peninsula the air was generally drier than usual. During the month under review, on the other hand, the area of greatest excess of humidity extended north-north-east and south-south-west between West Bengal and Mysore and the air was much damper than usual over the greater part of the Peninsula. The following gives data for those stations at which the variation of the relative humidity from the normal was ten or more and defines the limits of the area of greatest excess of humidity :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Hazaribagh . .	·365	·253	+·112	63	42	+21
Chitaldroog . .	·515	·332	+·183	56	37	+19
Bangalore . .	·525	·396	+·129	65	52	+13
Nagpur . .	·414	·337	+·077	54	42	+12
Hassan . . .	·480	·381	+·099	62	52	+10
Bellary . . .	·482	·389	+·093	50	40	+10
Belgaum . .	·367	·328	+·039	49	39	+10

In addition to the above there was a small area illustrated by the station of Lahore in which the mean humidity

of the month was 10 above the normal. The following gives comparative data for Lahore:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual, from normal, February 1901.
	"	"	"	%	%	
Lahore . . .	·319	·282	+·037	68	58	+10

On either side of the ridge or band of excessive humidity, noticed above, there were areas within which the air was drier than usual, but generally by small or moderate amounts. One area included Assam and the adjacent parts of Burma and Bengal, while the second included a large part of the Bombay Presidency and the adjacent parts of the Central Provinces. The following gives data for these two areas of diminished humidity:—

AREA.	STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
		Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
		"	"	"	%	%	
FIRST AREA .	Chittagong .	·471	·509	—·038	61	70	—9
SECOND AREA.	Bombay . .	·481	·601	—·120	59	68	—9
	Karwar . .	·612	·649	—·037	66	72	—6
	Buldana . .	·206	·277	—·071	29	34	—5
	Khandwa. .	·246	·307	—·061	35	40	—5
	Deesa . .	·154	·229	—·075	25	30	—5

The air was damper than usual, on the mean of the month, at the Bay Islands and Burma observatories, and though the temperature was high the relative humidity was above the normal. The following gives comparative data for the stations in this area:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Port Blair . .	·883	·810	+·073	77	76	+1
Cocos Island . .	·748	·674	+·074	71	70	+1
Rangoon . .	·661	·574	+·087	66	63	+3
Diamond Island .	·755	·678	+·077	74	72	+2

In Bengal and Orissa the variations of the relative humidity from the normal were irregular. At Chittagong, Saugor Island and False Point the absolute humidity was lower than usual and the relative humidity normal or below the normal, while at Calcutta both the absolute and relative humidities were in excess. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Chittagong . . .	·471	·509	—·038	61	70	—9
Calcutta . . .	·493	·468	+·025	66	65	+1
Saugor Island . .	·594	·613	—·019	75	75	0
False Point . . .	·619	·628	—·009	77	78	—1

Over the whole of Upper India, from West Bengal to the Indus, the relative humidity was in excess of the normal, and in nearly all places the absolute humidity was also in excess and the temperature in defect. The greatest excess was reported from Hazaribagh, but at Jaipur, Lahore, Allahabad and Darbhanga, the excess was considerable to large. The following gives data for this large area:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Hazaribagh . .	·365	·253	+·112	63	42	+21
Darbhanga . .	·445	·382	+·063	71	63	+ 8
Allahabad . .	·385	·330	+·055	64	56	+ 8
Dehra Dun . .	·269	·283	—·014	62	62	0
Roorkee . .	·305	·291	+·014	63	61	+ 2
Meerut . . .	·322	·294	+·028	65	58	+ 7
Lahore . . .	·319	·282	+·037	68	58	+10
Ludhiana . .	·319	·303	+·016	68	64	+ 4
Peshawar . .	·240	·233	+·007	60	58	+ 2
Jacobabad . .	·210	·231	—·021	43	42	+ 1
Kurrachee . .	·416	·409	+·007	62	58	+ 4
Jaipur . . .	·272	·256	+·016	49	43	+ 6

At Deesa, in North Bombay, both the absolute and relative humidities were in defect as is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Deesa . . .	·154	·229	—·075	25	30	— 5

In the Deccan districts the variations of humidity were irregular. Thus at Belgaum, Sholapur, Poona, Nagpur and Hyderabad both the absolute and relative humidities were generally in excess. The following gives data for these stations:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Belgaum . .	·367	·328	+·039	49	39	+10
Sholapur . .	·328	·320	+·008	38	35	+ 3
Poona . . .	·240	·284	—·044	35	34	+ 1
Nagpur . .	·414	·337	+·077	54	42	+12
Hyderabad (Deccan)	·514	·437	+·077	59	50	+ 9

At the remaining stations in this area both the absolute and relative humidities were normal or in defect. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual February 1901.	Normal February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Akola . . .	·277	·292	—·015	37	37	0
Buldana . .	·206	·277	—·071	29	34	— 5
Khandwa . .	·246	·307	—·061	35	40	— 5

Along the West Coast the air was considerably drier than usual. The following gives data for Bombay and Karwar:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February 1901.	Normal, Febru. ary.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Bombay . .	·481	·601	—·120	59	68	—9
Karwar . . .	·612	·649	—·037	66	72	—6

In South India the absolute humidity was in large to considerable excess of the normal, so that though the mean temperature of this region exceeded the normal, the relative humidity was yet everywhere excessive. The excess was greatest in the Mysore State. The following gives data for the stations in South India:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Salem . . .	·651	·563	+·088	61	58	+ 3
Chitaldroog . .	·515	·332	+·183	56	37	+19
Bangalore . .	·525	·396	+·129	65	52	+13
Hassan . .	·480	·381	+·099	62	52	+10
Mysore . .	·521	·420	+·101	59	51	+ 8
Madras . .	·774	·679	+·095	75	74	+ 1
Bellary . .	·482	·389	+·093	50	40	+10

At the northern hill stations the variations of humidity from the normal were irregular. Thus at Leh the air was much and at Quetta and Darjeeling slightly drier than usual, as is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Leh	·030	·076	—·046	38	68	—30
Quetta . . .	·128	·166	—·038	60	66	— 6
Darjeeling . . .	·222	·211	+·011	75	80	— 5

At the remaining stations in this group the relative humidity exceeded the average, more particularly at Simla and Chakrata. The following gives data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February. 1901.	Normal, February.	Variation of actual from normal, February 1901.	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
	"	"	"	%	%	
Srinagar . . .	·190	·156	+·034	87	80	+ 7
Kailang . . .	·096	·092	+·004	80	73	+ 7
Simla . . .	·158	·152	+·006	72	58	+14
Chakrata . . .	·168	·163	+·005	72	63	+ 9
Ranikhet . . .	·194	·196	—·002	64	62	+ 2
Katmandu . . .	·263	·249	+·014	68	66	+ 2

At Wellington the air was much and at Pachmarhi slightly damper than usual, while at Mount Abu and Chikalda it was drier. The following gives comparative data for the central and southern hill stations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February. 1901.	Normal, February.	Variation of actual from normal, February. 1901.	Actual, February. 1901.	Normal, February.	Variation of actual from normal' February 1901.
	"	"	"	%	%	
Pachmarhi . . .	·266	·247	+·019	50	45	+ 5
Mount Abu . . .	·149	·188	—·039	33	36	— 3
Chikalda . . .	·247	·280	—·033	40	41	— 1
Wellington . . .	·406	·290	+·116	73	59	+14

At Perim and Aden the absolute humidity was in defect, but at Perim the deficiency was small and the relative humidity in slight excess, while at Aden the deficiency was large and the relative humidity was also in defect. This is shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February. 1901.	Normal, February.	Variation of actual from normal, February. 1901.	Actual, February. 1901.	Normal, February.	Variation of actual from normal, February. 1901.
	"	"	"	%	%	
Perim	·688	·694	—·006	73	72	+ 1
Aden	·564	·652	—·088	64	71	— 7

In the South-East Trades region the air was damper than usual. The following gives data for the Seychelles and Zanzibar :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, February. 1901.	Normal, February.	Variation of actual from normal, February. 1901.	Actual, February. 1901.	Normal, February.	Variation of actual from normal, February. 1901.
	"	"	"	%	%	
Seychelles . . .	·838	·814	+·024	82	78	+ 4
Zanzibar . . .	·854	·854	0	80	75	+ 5

No very low humidities were recorded during the month except at Leh. The following were the more noteworthy examples during the month :—

STATION.	Date.	Hour.	Lowest humidity recorded during February 1901.
			%
Kodaikanal	2nd	8 A.M.	5
Leh	4th	"	0
Deesa	7th	4 P.M.	9
Poona	8th	"	8
Leh	"	10 A.M.	0
Jamnagar	9th	4 P.M.	10
Leh	"	10 A.M. and 4 P.M.	0
"	10th	Do.	0
Deesa	11th	4 P.M.	9
Poona	12th	"	4
Leh	"	"	0
"	13th	"	0
Buldana	"	"	10
Poona	"	"	6
Deesa	"	"	8
"	14th	"	8
Sholapur	"	"	9
Poona	"	"	4
Leh	"	10 A.M.	0
Poona	15th	4 P.M.	6
Jamnagar	16th	"	7
Deesa	"	"	8
Belgaum	21st	"	10
Poona	22nd	"	5
Buldana	"	"	5

Station.	Date.	Hour.	Lowest humidity recorded during February 1901.
			%
Akola	22nd	4 P.M.	10
Poona	23rd	10 A.M.	7
Deesa	,,	4 P.M.	9
,,	24th	,,	5
Leh	25th	,,	0
Jamnagar	,,	10 A.M.	9
Leh	26th	10 A.M. and 4 P.M.	0
Deesa	,,	4 P.M.	6
Udaipur	,,	,,	8
Deesa	27th	,,	6
Jamnagar	28th	,,	6
Deesa	,,	10 A.M.	9

The variations of the amount of cloud from the normal agreed in general character with those of humidity. Over the greater part of the Indian region the sky was cloudier than usual, and the excess was greatest and most marked within a broad band which extended from West Bengal and the Lower Gangetic Plain south-south-westward to Mysore and the south of the Peninsula. On either side of this broad band the amount of the excess diminished and the excess disappeared and changed to a deficiency, over part of North-East India on the one hand, and over North-West India on the other.

Over the Bay Islands, Burma and South-East Bengal the variations from the normal in the amount of cloud were generally small and rather irregular. The following gives comparative data for this region :—

Province or Division.	Station.	Mean cloud amount.		
		Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Bay Islands	Port Blair	4·0	2·8	+1·2
	Cocos Island	1·6	2·0	—0·4
Burma	Rangoon	2·9	1·9	+1·0
	Diamond Island	2·0	2·2	—0·2
	Akyab	1·9	1·1	+0·8
South-East Bengal	Chittagong	1·7	1·9	—0·2

Over the remainder of Bengal, the greater part of the North-Western Provinces and the east of Rajputana the cloud amount was in excess, but, except at Hazaribagh and Allahabad, this excess was generally moderate or small. The following gives comparative data for this large area :—

Station.	Mean cloud amount.		
	Actual, February 1901.	Normal, February.	Variation of actual, from normal, February 1901.
Calcutta	3·5	1·9	+1·6
Hazaribagh	6·0	2·3	+3·7
Saugor Island	2·8	2·2	+0·6
Darbhanga	3·4	1·6	+1·8
False Point	3·3	2·7	+0·6
Allahabad	4·2	2·2	+2·0
Jaipur	3·6	3·0	+0·6

In North-West India, including in that area North Bombay, Southern Rajputana, the west of the North-Western Provinces, the Punjab, and Baluchistan, the sky, on the mean of the month, was clearer than usual, the deficiency having been greatest and most marked in Baluchistan. The following gives data for the stations in this area :—

Province or Division.	Station.	Mean cloud amount.		
		Actual, February, 1901.	Normal, February.	Variation of actual from normal, February 1901.
N.-W. P. West	Roorkee	2·7	3·4	—0·7
	Meerut	2·7	2·9	—0·2
Punjab	Lahore	3·5	3·7	—0·2
	Ludhiana	3·7	4·3	—0·6
	Peshawar	2·6	4·4	—1·8
Sind	Jacobabad	2·0	3·4	—1·4
	Kurrachee	1·1	2·8	—1·7
South-West Rajputana.	Deesa	0·9	2·4	—1·5
Baluchistan	Quetta	1·9	4·2	—2·3

Over the Peninsula the sky was universally more cloudy than the average. The excess was large and strongly marked in part of the Central Provinces, the Madras Deccan and Mysore, and the following gives data for the stations in these localities :—

Station.	Mean cloud amount.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Nagpur	5·1	1·9	+3·2
Bellary	6·0	1·4	+4·6
Mysore	5·3	1·4	+3·9

At the remaining stations in the Peninsula the excess of cloud was less than at the stations given in the preceding list, but was nevertheless generally moderate to considerable. This is shown below:—

Station.	Mean cloud amount.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Hyderabad (Deccan)	4·2	1·3	+2·9
Hassan	5·2	2·8	+2·4
Chitaldroog	3·8	1·5	+2·3
Sholapur	3·8	1·5	+2·3
Salem	4·2	2·0	+2·2
Belgaum	3·2	1·2	+2·0

At most of the Himalayan hill stations the sky was cloudier, on the mean of the month, than the normal, but the excess was nowhere large, and at Darjeeling and Leh there was some, and in Baluchistan moderate deficiency in the amount of cloud. This is shown below:—

Station.	Mean cloud amount.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Quetta	1·9	4·2	−2·3
Simla	6·6	5·7	+0·9
Chakrata	5·4	4·7	+0·7
Kailang	7·1	6·5	+0·6
Srinagar	7·2	6·8	+0·4
Katmandu	3·9	3·5	+0·4
Ranikhet	4·6	4·5	+0·1
Leh	6·0	6·8	−0·8
Darjeeling	4·9	5·9	−1·0

At Mount Abu, as on the plains of Southern Rajputana, the cloud amount was in defect, but at the other central hill stations as well as at Wellington in the south the sky was cloudier than usual. This is shown below:—

Station.	Mean cloud amount.		
	Actual, February 1901.	Normal February.	Variation of actual from normal, February 1901.
Pachmarhi	4·2	2·1	+2·1
Chikalda	2·8	1·8	+1·0
Mount Abu	1·5	2·6	−1·1
Wellington	5·1	2·6	+2·5

At Aden and Perim the cloud amount was in trifling excess, while in the South-East Trades region the variations were irregular, Zanzibar showing a considerable excess and the Seychelles a slight deficiency. The following gives data:—

Station.	Mean cloud amount.		
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.
Aden	4·5	5·9	+0·6
Perim	2·8	2·4	+0·4
Seychelles	6·3	6·5	−0·2
Zanzibar	7·2	4·0	+3·2

Rainfall.

During the month of February 1901 the rainfall was in excess over by far the greater part of the Indian region and in some places by very large amounts. The Chart Pl. IV shows the general distribution of rainfall as given by the meteorological observatories. From this it will be seen that there was actually or practically no rain during the month over the greater part of Sind and Rajputana, over Gujarat, Berar and the remainder of the Bombay Presidency. From this area the amount of rain increased to the northward and eastward and was heaviest on and near the Kumaun Himalayas in the north and at the stations of Masulipatam and Cuddalore on the Madras coast in the east. The rainfall of the month occurred during the passage of the various depressions, noticed in a preceding section, which passed across Northern and Central India.

The chief periods of disturbed weather and of rainfall and snowfall were as follows :—

(*a*) The 1st and 2nd when Baluchistan, Upper Sind and the North-West Himalayas received rain and snow.

(*b*) The 4th to the 7th when the Punjab and North-Western Provinces received rain and the North-West Himalayas had heavyish snow.

(*c*) The 11th to the 16th when parts of Bengal, the Madras coast districts and Burma received exceptionally heavy rain.

(*d*) The 18th to the 20th when the Deccan, the Central Provinces, Central India, the Punjab and Eastern Rajputana received general rain.

(*e*) The 22nd and 23rd when the south of the Peninsula received rain and the Kumaun Himalayas heavy snow.

The rainfall of the month was absolutely or practically *nil* (*i.e.*, less than 0·10″) in 5 divisions, and was in defect altogether in 16 divisions, *viz.*, Eastern Bengal, Assam Surma, Assam Hills, Assam Brahmaputra, North Bengal, Bengal Hills, North Bihar, Central Punjab, West Punjab, Khandesh, Berar, Gujarat, Kathiawar and Cutch, Sind, Baluchistan Hills and West Rajputana.

It was in excess in all the remaining divisions and was more than 100% in excess in 28 divisions, including Tenasserim, Lower Burma Deltaic, Central Burma, Upper Burma, Arakan, Orissa, Chota Nagpur, North-West Provinces East, South Oudh, North Oudh, North-West Provinces Central, North-West Provinces West, North-West Provinces East submontane, South-East Punjab, South Punjab, Punjab Hills, Malabar, Madras South-Central, Mysore, Bombay Deccan, Central Provinces West, Central Provinces Central, Central Provinces East, Rajputana East, Central India West, East Coast North, Madras Central, East Coast Central and East Coast South.

The following table gives mean actual, mean normal and variation rainfall data for the 56 meteorological divisions or districts into which India is divided in the same form as in previous months and has been prepared in the same manner as hitherto:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, February 1901.	Average normal, February.	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	...	...	0·28	0·05	+0·23
	Lower Burma (Deltaic)*	...	...	3·17	0·17	+3·00
	Central do*	...	...	2·42	0·09	+2·33
	Upper do*	...	...	0·57	0·23	+0·34
	Arakan*	...	...	1·22	0·14	+1·08
Bengal and Assam	Eastern Bengal	1·3	1·6	0·54	0·98	−0·44
	Assam (Surma)	0·4	3·0	0·19	1·78	−1·59
	Do. (Hills)	1·4	2·6	0·55	1·25	−0·70
	Do. (Brahmaputra)	2·2	3·3	0·83	1·26	−0·43
	Deltaic Bengal	2·6	1·7	1·71	1·22	+0·49
	Central do.	2·0	1·5	1·01	0·85	+0·16
	North do.	0·8	1·1	0·47	0·51	−0·04
	Bengal Hills	0·8	2·2	0·51	0·76	−0·25
	Orissa	1·8	1·4	2·54	0·82	+1·72
	Chota Nagpur	5·1	1·6	2·82	0·84	+1·98
	Bihar (South)	2·9	1·4	1·15	0·63	+0·52
	Do. (North)	1·5	1·2	0·43	0·49	−0·06
North-Western Provinces and Oudh.	North-Western Provinces (East)	3·9	0·8	1·36	0·34	+1·02
	Oudh (South)	3·3	0·6	1·24	0·23	+1·01
	Do. (North)	2·9	0·8	1·32	0·31	+1·01
	North-Western Provinces (Central)	2·5	0·6	1·14	0·22	+0·92
	Do. do. (West)*	1·7	0·8	0·86	0·32	+0·54
	Do. do. (East Submontane)	2·9	1·0	1·09	0·41	+0·68
	Do. do. (West do.)	3·7	2·0	1·65	1·06	+0·59
	Do. do. (Hills)	1·9	4·2	2·84	2·17	+0·67
Punjab	Punjab (South-East)	2·8	1·0	0·92	0·41	+0·51
	Do. (South)	2·0	1·1	0·90	0·43	+0·47
	Do. (Central)	1·8	2·0	0·76	0·89	−0·13
	Do. (Submontane)	4·1	2·4	2·45	1·34	+1·11
	Do. (Hills)	8·0	4·5	7·25	3·19	+4·06
	Do. (North)	3·5	2·6	1·79	1·42	+0·37
	Do. (West)	0·8	1·1	0·40	0·43	−0·03

* The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

Province.	Division.	Number of rainy days. Average actual, February 1901.	Number of rainy days. Average normal, February.	Rainfall. Average actual, February 1901.	Rainfall. Average normal, February.	Rainfall. Variation of actual from normal, February 1901.
				Inches.	Inches.	Inches.
Bombay and Malabar Coast Districts (Madras.).	Malabar	0·9	0·3	10·49	0·21	+0·28
	Travancore	3·1	...	11·93	...	...
	Madras (South Central)	1·5	0·6	0·77	0·33	+0·44
	Coorg	2·2	...	1·21	...	...
	Mysore*	...	...	1·10	0·04	+1·06
	Konkan	0	0	0·01	0	+0·01
	Bombay Deccan	0·5	0·1	0·30	0·03	+0·27
	Khandesh	0	0	0	0·03	—0·03
Central Provinces and Berar.	Berar	0·5	...	0·16	0·22	—0·06
	Central Provinces (West)	1·5	0·5	0·73	0·21	+0·52
	Ditto (Central)	3·8	0·6	1·72	0·24	+1·48
	Ditto (East)	8·0	0·6	4·18	0·33	+3·85
Bombay (North)	Gujarat	0	0	0	0·02	—0·02
	Kathiawar and Cutch	0	0	0	0·09	—0·09
	Sind	0·4	...	0·11	0·31	—0·20
	Baluchistan Hills	0·4	...	0·15	1·91	—1·76
Rajputana and Central India.	Central India (East)	1·1	...	0·62	0·39	+0·23
	Rajputana (East), Central India (West)	1·3	...	0·51	0·23	+0·28
	Rajputana (West)	0	...	0	0·11	—0·11
Madras	East Coast (North)	3·6	0·5	2·76	0·34	+2·42
	Hyderabad (South)*	...	...	1·67	...	...
	Madras (Central)	2·8	0	1·93	0·05	+1·88
	East Coast (Central)	4·8	0·1	3·04	0·19	+2·85
	Ditto (South)	3·0	0·6	2·51	0·45	+2·06
	Madras (South)	2·2	1·2	1·27	0·85	+0·42

* The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

In Burma practically the whole of the month's rainfall occurred on the 14th and 15th on which days the fall was very heavy and extensive. The following gives the more noteworthy amounts recorded on these dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sandoway	Toungup	14th March	3·36
Pegu	Pegu	,, ,,	3·23
Thayetmyo	Kama	,, ,,	3·00
Bassein	Kangyidaung	,, ,,	2·89
Do.	Bassein	,, ,,	2·37
Kyaukse	Toungdaw	,, ,,	2·27
Sandoway	Sandoway	,, ,,	2·15
Thayetmyo	Myede	,, ,,	2·12
Do.	Thayetmyo	,, ,,	2·11
Prome	Prome	,, ,,	2·07
Toungoo	Thandaung	,, ,,	2·00
Bassein	Bassein	15th ,,	2·80
Pegu	Nyaunglebin	,, ,,	2·42
Thongwa	Ma-Ubin	,, ,,	2·27
Toungoo	Shwegyin	,, ,,	2·25
Do.	Kyaukkyi	,, ,,	2·00

In consequence the small normal rainfall of the month was largely exceeded in all parts of the province, but particularly so in Lower and Central Burma. The following gives comparative data for the different divisions of the province:—

Division.	Rainfall. Average actual, February 1901.	Rainfall. Average normal, February.	Rainfall. Variation of actual from normal, February 1901.	Rainfall. Percentage variation from normal.
	Inches.	Inch.	Inches.	
Tenasserim	0·28	0·05	+0·23	+ 460
Lower Burma Deltaic	3·17	0·17	+3·00	+1765
Central Burma	2·42	0·09	+2·33	+2589
Upper Burma	0·57	0·23	+0·34	+ 148
Arakan	1·22	0·14	+1·08	+ 771

In the Surma Division of Assam also there was only one period of rainfall, *viz.*, between the 12th and 14th; but in the Brahmaputra valley there were two periods, one lasting from the 4th to the 9th the other from the 12th to the

16th. The amounts were not very heavy, not exceeding 1″ in 24 hours, and the total rainfall of the month was generally below the normal average. The following gives comparative data for the plains districts of the province :—

District.	Rainfall.			
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cachar	0·22	2·07	—1·85	—85
Sylhet	0·14	1·51	—1·37	—91
Goalpara	0·91	0·53	+0·38	+72
Kamrup	0·16	0·73	—0·57	—73
Darrang	0·21	0·89	—0·68	—76
Nowgong	0·13	0·79	—0·66	—84
Sibsagar	0·88	1·62	—0·74	—46
Lakhimpur	3·04	2·62	+0·42	+12

In Bengal proper there was one period of general rainfall, *viz.*, between the 12th and 14th, but in Chota Nagpur and Bihar rain was much more frequent, more particularly between the 6th and 8th, the 11th and 12th, the 19th and 20th and the 21st to the 23rd. The rainfall was very heavy for the time of year and exceeded 2″ in 24 hours at the following stations on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Ranchi	Sirguja	7th February	2·30
Shahabad	Khiri	,,	2·05
Manbhum	Barahabhum	12th February	3·30
Orissa Tributary Mahals.	Talchar	,,	2·60
Ranchi	Tamar	,,	2·53
Cuttack	Dharmsala	,,	2·45
Orissa Tributary Mahals.	Narsingpur	,,	2·27
Bankura	Bankura	,,	2·01
Orissa Tributary Mahals.	Baisanga	13th February	5·00
Midnapore	Contai	,,	4·20
	Dantan	,,	3·86
Puri	Pipli	,,	3·65
Cuttack	Jajpur	13th February	3·31
Balasore	Akhyapada	,,	3·25
Puri	Ranpur	,,	3·17
Cuttack	False Point	,,	3·14
24-Parganas	Saugor Island	,,	2·98
Balasore	Jallasore	,,	2·93
Orissa Tributary Mahals.	Angul	,,	2·86
Cuttack	Cuttack	,,	2·76
Puri	Khurda	,,	2·75
Orissa Tributary Mahals.	Khunjahangarh	,,	2·30
Cuttack	Kendrapara	,,	2·17
	Salepur	,,	2·12
Singhbhum	Ghatsila	,,	2·10
	Katbari	,,	2·07
Darjeeling	Siliguri	14th February	2·20

The following statement shows that the rainfall was lighter than usual in East Bengal and the Bengal Hills, was normal in North Bengal and North Bihar, and was excessive in the remaining divisions :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.	Average actual, February 1901.	Average normal February.
	Inches.	Inches.	Inches.			
Eastern Bengal	0·54	0·98	—0·44	— 45	1·3	1·6
Deltaic Bengal	1·71	1·22	+0·49	+ 40	2·6	1·7
Central Bengal	1·01	0·85	+0·16	+ 19	2·0	1·5
North Bengal	0·47	0·51	—0·04	— 8	0·8	1·1
Bengal Hills	0·51	0·76	—0·25	— 33	0·8	2·2
Orissa	2·54	0·82	+1·72	+210	1·8	1·4
Chota Nagpur	2·82	0·84	+1·98	+236	5·1	1·6
South Bihar	1·15	0·63	+0·52	+ 82	2·9	1·4
North Bihar	0·43	0·49	—0·06	— 12	1·5	1·2

In the North-Western-Provinces and Oudh rain occurred between the 5th and the 8th, on the 18th and 19th, and on the 22nd and 23rd. The first fall was the heaviest and most extensive and was particularly heavy in the sub-montane hills and east divisions, where the following falls

exceeding 1″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Dehra Dun	Chakrata (Obsy.)	5th February	1·40
	Chakrata Tahsil (Kalsi)	„	1·15
Moradabad	Moradabad	6th „	1·52
Basti	Haraiya	7th „	1·40
Mirzapur	Chakia	8th „	1·10

The second fall occurred between the 18th and 20th, and was also a general and heavy fall, more particularly in the central and submontane divisions. The following gives the more noteworthy falls exceeding 1·50″:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Agra	Itimadpur	18th February	1·85
Jhansi	Jhansi	„	1·70
Hamirpur	Hamirpur	19th „	2·71
Naini Tal	Naini Tal	„	2·61
Muttra	Basunti	„	2·00
Almora	Ranikhet (Obsy.)	„	1·56
Fatehpur	Khajwa	„	1·54

The third fall occurred on the 21st, 22nd and 23rd. It was lighter and less general than the two preceding falls, but amounts exceeding 1″ were recorded at the following stations:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Dehra Dun	Rajpur	21st February	1·76
	Dehra (Leper asylum)	„	1·24
Saharanpur	Hardwar	22nd „	1·31
Dehra Dun	Ambari	„	1·25
Saharanpur	Naiashahr	„	1·20
	Kuankhera	„	1·20
	Roorkee (Obsy.)	„	1·16
	Saharanpur	„	1·13
Dehra Dun	Dehra	„	1·12
Saharanpur	Salimpur	„	1·10
	Nakur	„	1·09
Dehra Dun	Chakrata Tahsil (Kalsi)	23rd „	1·47

The following gives rainfall data for the different divisions of the North-Western Provinces:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.	Average actual, February 1901.	Average normal, February.
	Inches.	Inches.	Inches.			
North-Western Provinces East.	1·36	0·34	+1·02	+300	3·9	0·8
South Oudh	1·24	0·23	+1·01	+439	3·3	0·6
North Oudh	1·32	0·31	+1·01	+326	2·9	0·8
North-Western Provinces Central.	1·14	0·22	+0·92	+418	2·5	0·6
North-Western Provinces West.	0·86	0·32	+0·54	+169	1·7	0·8
North-Western Provinces East Submontane.	1·09	0·41	+0·68	+166	2·9	1·0
North-Western Provinces West Submontane.	1·65	1·06	+0·59	+056	3·7	2·0
North-Western Provinces Hills.	2·84	2·17	+0·67	+031	1·9	4·2

In the Punjab the rainfall was similar to that in the North-Western Provinces. Rain fell between the 4th and the 6th, when the following amounts exceeding 1·50″ were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Umballa	Kasauli	4th February	3·25
Simla	Barauli	„	2·05
Ferozepur	Zira	„	1·84
Simla	Kot Khai	„	1·81
Kangra	Kulu	„	1·80
	Nagar	„	1·74
Dera Ghazi Khan	Fort Munro	5th „	3·60
Kangra	Palach	„	2·40
Umballa	Ruper	„	1·95
Gurdaspur	Dalhousie	„	1·82
Umballa	Naraingarh	„	1·68
Simla	Simla	„	1·58
Umballa	Kasauli	6th „	3·23
Kangra	Nupur	„	3·10

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Simla	Barauli	6th February	2·15
Kangra	Kangra	„	2·12
Umballa	Kharar	„	2·09
Kangra	Nagar	„	1·92
Hoshiarpur	Hoshiarpur	„	1·75
	Sadr station	„	1·72
Kangra	Palampur	„	1·70
Ludhiana	Ludhiana	„	1·65
Kohat	Fort Lockhart	„	1·60
Rawalpindi	Rawalpindi	„	1·57
Kangra	Hamirpur	7th „	3·46
	Palampur	„	2·50
	Dharmsala	„	2·35
	Dera	„	1·72

The second rainy period occurred on the 18th and 19th when the rain and snow were heavy on and near the hills. The following were the principal amounts exceeding 1″ on this occasion :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Simla	Barauli	18th February	1·56
Umballa	Kasauli	„	1·33
Rawalpindi	Murree	„	1·20
Dera Ghazi Khan	Fort Munro	„	1·20
Gurdaspur	Dalhousie	„	1·07
Simla	Kot Khai	19th „	2·51
Umballa	Jagadhri	„	2·00
Kangra	Nagar	„	1·72
Karnal	Thanesar	„	1·69
	Rajaund	„	1·50
Umballa	Kharar	„	1·45
	Umballa	„	1·30
	Naraingarh	„	1·12
Ferozepur	Moga	„	1·10
Simla	Simla	„	1·03

The third fall occurred on the 21st and 22nd and was lighter than the two preceding falls except in the Umballa and hill divisions where the following amounts exceeding 1″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
		20th February	1·75
Simla	Simla	„	1·37
Kangra	Palach	„	1·25
Simla	Kilba	„	1·08
Kangra	Nagar	„	1·02
Dera Ghazi Khan	Fort Monro	21st „	3·60
Simla	Barauli	„	1·78
	Simla	22nd „	1·89
Kangra	Dharmsala	„	1·80
Umballa	Dadupur	„	1·40
	Jagadhri	„	1·15
	Naraingarh	„	1·08

The month's rainfall was normal in the central and west divisions, but was more or less in excess elsewhere, as is shown below :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.	Average actual, February 1901.	Average normal, February.
	Inches.	Inches.	Inches.			
South-East Punjab	0·92	0·41	+0·51	+124	2·8	1·0
South Punjab	0·90	0·43	+0·47	+109	2·0	1·1
Central Punjab	0·76	0·89	—0·13	— 15	1·8	2·0
Punjab Submontane	2·45	1·34	+1·11	+ 83	4·1	2·4
„ Hills	7·25	3·19	+4·06	+127	8·0	4·5
North Punjab	1·79	1·42	+0·37	+ 26	3·5	2·6
West Punjab	0·40	0·43	—0·03	— 7	0·8	1·1

Baluchistan received a few light showers about the beginning and middle of the month, but the rainfall was much lighter than usual. The same is true of Persia as is

shown by the following comparative rainfall data for the Perrsian stations:—

Station.	Rainfall.			
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jask	0	1·33	—1·33	—100
Bushire	0	2·51	—2·51	—100
Teheran		1·02		
Ispahan	0	0·04	—0·04	—100
Meshed	0	0·90	—0·90	—100

Kashmir received rain and snow during two long periods the first lasting from the 1st to the 8th and the second from the 14th to the 18th. During these two periods the rainfall was frequently very heavy as is shown in the following table which gives falls exceeding 1″ in 24 hours:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Kashmir.	Doda	1st February	1·20
	Punch	3rd ,,	1·64
	Doda	,,	1·30
	Uri	4th ,,	1·92
	Haripore	,,	1·56
	Meerpore	,,	1·04
	Rampore Rajauri	,,	1·02
	Pattan	5th ,,	1·50
	Doda	6th ,,	2·20
	Anantnag	,,	1·53
	Ramnagar	,,	1·15
	Srinagar	,,	1·04
	Doda	7th ,,	3·45
	Vantipore	,,	1·21
	Anantnag	,,	1·05
	Uri	9th ,,	1·04
	Doda	14th ,,	4·56
	Rambaa	,,	1·20
	Doda	15th ,,	7·80
	Anantnag	,,	2·01
	Ramban	,,	1·20
	Doda	16th ,,	4·00
	Ramban	17th ,,	1·80
	Anantnag	,,	1·48
	Doda	,,	1·20
	Do.	18th ,,	2·40
	Ramban	,,	2·01
	Vantipore	,,	1·31
	Domel	15th February.	1·21

Western Rajputana was rainless, but Eastern Rajputana had showers about the 4th and again between the 17th and 22nd. The first fall of rain was generally light, but during the second rainy period the following amounts exceeding 1″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bharatpur	Kumher	18th February.	2·00
	Bhasawar	,, ,,	1·44
	Dig	,, ,,	1·12
	Bharatpur	,, ,,	1·10
	Akheggarh	19th ,,	1·15
Jaipur	Mahwa	,, ,,	1·05

The following gives comparative data for some of the larger states:—

State.	Rainfall.			
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Jodhpur	0	0·09	—0·09	—100
Jaipur	0·66	0·25	+0·41	+164
Alwar	1·02	0·40	+0·62	+155
Bharatpur	1·42	0·20	+1·22	+610
Kotah	0·20	0·21	—0·01	— 5
Ajmer Merwara	0·01	0·25	—0·24	— 96
Udaipur	0	0·17	—0·17	—100
Sirohi	0	0·24	—0·24	—100
Karauli	0·56	0·14	+0·42	+300

Central India received showers between the 5th and the 10th and between the 17th and the 20th. The latter was the heavier and more general fall, and during it, the following amounts exceeding 1″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Rewah	Umaria	17th February	1·27
Bundelkhand	Orchha or Tikamgarh	18th ,,	2·10
Rewah	Umaria	,, ,,	1·05
Bundelkhand	Nowgong	19th ,,	1·72
	Chhatarpur	,, ,,	1·15

The rainfall of the month was generally heavier than usual as is shown by the following comparative statement for some of the larger states:—

State.	Rainfall.			
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Bhopal Agency	0·50	0·28	+0·22	+79
Gwalior	0·21	0·25	—0·04	—16
Rewah	1·78	0·60	+1·18	+197
Bundelkhand	1·39	0·39	+1·00	+256
Nagode	0·71	0·43	+0·28	+ 65
Maihar	0·23	0·47	—0·24	— 51

Rain occurred during two disturbed periods in the Central Provinces. The first lasted from the 8th to the 13th when the following falls exceeding 1″ inch in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chanda	Armori	8th February	1·91
Mandla	Dindori (Ramgarh)	9th ,,	1·05
Bhandara	Sakoli	10th ,,	1·20
Mandla	Dindori (Ramgarh)	,, ,,	1·02
Sambalpur	Sarangarh State	11th ,,	1·23
	Bargarh	12th ,,	1·09
	,,	13th ,,	1·05

The second period ran from the 17th to the 23rd, and the rain on this occasion was exceptionally extensive and heavy. Amounts exceeding 1″ in 24 hours were recorded during this period at the following large number of stations:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bhandara	Bhandara	17th February	1·20
Chanda	Armori	,, ,,	1·05
Raipur	Dhamtari	,, ,,	1·05
Mandla	Tikaria	18th ,,	1·60
Chanda	Chimur	,, ,,	1·25
	,,	19th ,,	1·95
Bhandara	Sakoli	,, ,,	1·44
Seoni	Lakhnadon	,, ,,	1·12
Raipur	Simga	,, ,,	1·10
Bilaspur	Janjgir	20th ,,	1·25
	Bilaspur	,, ,,	1·10
Chanda	Armori	21st ,,	1·14
	Sironcha	,, ,,	1·10
Sambalpur	Sambalpur	22nd ,,	2·17
	Raigarh State	,, ,,	1·88
Chanda	Sironcha	,, ,,	1·68
Sambalpur	Bargarh	,, ,,	1·45
Balaghat	Lanji	,, ,,	1·17
Raipur	Dhamtari	23rd ,,	3·30
Bilaspur	Korba	,, ,,	2·05
Sambalpur	Sarangarh State	,, ,,	1·60
Raipur	Raipur	,, ,,	1·54
Sambalpur	Bargarh	,, ,,	1·11
	Sambalpur	,, ,,	1·05

Showers occurred in Berar between the 17th and 22nd, but, except in the Wun district, the amounts were generally very light. The following comparative data show that the total rainfall of the month was largely above the normal in all divisions of the Central Provinces and slightly below the normal in Berar:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.	Average actual, February 1901.	Average normal, February.
	Inches.	Inches.	Inches.			
Central Provinces (West)	0·73	0·21	+0·52	+ 248	1·5	0·5
,, Central	1·72	0·24	+1·48	+ 617	3·8	0·6
,, East	4·18	0·33	+3·85	+1167	8·0	0·6
Berar	0·16	0·22	—0·06	— 27	0·5	...

Moderate showers occurred on the 21st and 24th in the Dharwar and Bijapur districts of the Bombay Presidency, but with these exceptions the whole Presidency was practically rainless. The following gives the only falls exceeding 1″ in 24 hours recorded during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bijapur	Badami	21st February	1·69
Dharwar	Godag	" "	1·58
	Hungal	" "	1·50
	Ron	" "	1·49
	Nargund	" "	1·11
Bijapur	Bagevadi	" "	1·11
	Bagevadi	24th "	1·58
	Muddebihal	" "	1·45
	Bagalkot	" "	1·38

In consequence of the above falls the rainfall of the Bombay Deccan for the month largely exceeded the normal, but in all the remaining divisions the total rainfall was very short. The following gives comparative data for the different divisions of the Bombay Presidency:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.	Average actual, February 1901.	Average normal, February.
	Inches.	Inches.	Inches.			
Konkan	0·01	0	+0·01	0	0	0
Bombay Deccan	0·30	0·03	+0·27	+900	0·5	0·1
Khandesh	0	0·03	—0·03	—100	0	0
Gujarat	0	0·02	—0·02	—100	0	0
Kathiawar and Cutch	0	0·09	—0·09	—100	0	0
Sind	0·11	0·31	—0·20	— 65	0·4	...
Baluchistan hills	0·15	1·91	—1·76	— 92	0·4	...

Coorg received showers between the 19th and the 23rd.

Between the 13th and the 23rd more or less general rain was received over the Madras Presidency. In Malabar rain fell between the 20th and 23rd and was heavier than usual. The following gives rainfall data for the two districts in this division :—

District.	Rainfall.			
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Malabar	0·72	0·31	+0·41	+132
South Canara	0·05	0·04	+0·01	+ 25

South Madras had some showers at the commencement of the month, but the principal rainfall occurred between the 14th and 23rd. The rainfall was heavier than usual in both districts of this division. This is shown below :—

District.	Rainfall.			
	Average actual, February 1901.	Average normal, February.	Variation of actual, from normal, February 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madura	1·21	0·66	+0·55	+83
Tinnevelly	1·35	1·06	+0·29	+27

In South Central Madras the rainfall was similar to that in the south division only somewhat heavier relatively to the normal. The following gives data of the two districts in this division :—

District.	Rainfall.			
	Average actual, February 1901.	Average normal, February.	Variation of actual, from normal, February 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Salem	0·97	0·31	+0·66	+213
Coimbatore	0·52	0·36	+0·16	+ 44

In Central Madras the fall was heavier than in the two

preceding divisions, and the following amounts exceeding 1″ in 24 hours were recorded on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bellary	Yemmiganuru	18th February	3·70
Kurnool	Kurnool	„	2·62
Kurnool	Nandikotkur	„	1·88
Kurnool	Ramallakota	„	1·35
Bellary	Alur	„	1·22
Anantapur	Hinduput	„	1·20
Bellary	Siruguppa	19th „	1·78
Bellary	Adoni	„	1·20
Anantapur	Kalyandrug	„	1·12
Bellary	Kudligi	20th „	1·83
Bellary	Adoni	21st „	1·10
Cuddapah	Badvel	22nd „	2·61
Kurnool	Markapur	„	2·58
Cuddapah	Razampeta	„	1·98
Cuddapah	Cuddapah	„	1·77
Cuddapah	Vayalpad	„	1·74
Kurnool	Giddalur	„	1·70
Kurnool	Ramallakota	„	1·60
Cuddapah	Kamalapuram	„	1·50
Cuddapah	Rayachoti	„	1·39
Cuddapah	Proddatur	„	1·19
Kurnool	Kalva	„	1·10
Anantapur	Hindupur	„	1·10
Cuddapah	Madanapalle	„	1·07
Anantapur	Bukkapatnam	23rd „	4·08
Cuddapah	Pulivendla	„	1·46

The total rainfall of the month was, actually and relatively to the normal, heavier than in the south and south-central divisions as is shown by the following data for the four districts composing this division :—

District.	Rainfall. Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuddapah	2·11	0·10	+2·01	+2,010
Anantapur	1·55	0·04	+1·51	+3,775
Bellary	2·20	0·03	+2·17	+7,233
Kurnool	1·84	0·04	+1·80	+4,500

Along the east coast practically all the rainfall occurred between the 13th and the 23rd. In the north division the fall was particularly heavy on the 13th and 14th when the following amounts exceeding 2″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kistna	Masulipatam	13th February	3·80
Kistna	Repalle	„ „	3·55
Godavari	Prattipada	„ „	3·38
Kistna	Avanigadda	„ „	2·90
Vizagapatam	Anakapalle	„ „	2·86
Godavari	Coringa	„ „	2·73
Kistna	Nizampatam	„ „	2·60
Kistna	Pandraka	„ „	2·35
Godavari	Chintalapudi	„ „	2·08
Kistna	Avanigadda	14th „	4·62
Godavari	Mummidivaram	„ „	2·76

The total rainfall of the month was about eight times the normal amount. The following gives comparative data for the four districts included in this division :—

District.	Rainfall. Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Ganjam	1·82	0·58	+1·24	+ 214
Vizagapatam	2·42	0·39	+2·03	+ 521
Godavari	2·63	0·22	+2·41	+1095
Kistna	4·52	0·16	+4·36	+2725

In the central division of the east coast fairly continuous rain prevailed from the 15th to the 23rd, and the following falls exceeding 2″ were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Nellore	Iskapalle	15th February	2·51
Nellore	Kanuparti	18th „	2·94
Nellore	Iskalle	19th „	2·19
Nellore	Podili	20th „	2·80
Nellore	Atmakur	...	2·10

The following gives comparative data for the district composing this division:—

District.	Rainfall.			
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Nellore	3·04	0·19	+2·85	+1500

In the south division general continuous rain prevailed from the 14th to the 17th and showers from the 18th to the 23rd. During this period the following amounts exceeding 2″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chingleput	Conjeeveram	14th February.	3·83
South Arcot	Panruti	" "	3·58
Chingleput	Saidapet	" "	3·07
South Arcot	Cuddalore	" "	2·84
	Kallakurichi	" "	2·62
North Arcot	Teruvettiyur	" "	2·57
	Polur	" "	2·33
South Arcot	Vriddhachalam	" "	2·25
Chingleput	Ponneri	15th "	3·13
	Kovelong	" "	2·68
South Arcot	Tittavudi	" "	2·52
North Arcot	Gudiyattam	" "	2·47
Chingleput	Uttramerur	" "	2·37
North Arcot	Arkonam	17th "	3·25
South Arcot	Tirukkoyilur	" "	3·30
Chingleput	Uttramerur	" "	2·39
South Arcot	Tiruvananamalai	" "	2·35
	Manambadi	" "	2·32
	Villupuram	" "	2·28

The following gives comparative data of the six districts included in this division:—

District.	Rainfall.			
	Average actual, February 1901.	Average normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Madras	2·31	0·28	+2·03	+725
Chingleput	3·18	0·37	+2·81	+759
North Arcot	2·36	0·27	+2·09	+774
South Arcot	4·06	0·48	+3·58	+746
Tanjore	1·79	0·63	+1·16	+184
Trichinopoly	0·86	0·46	+0·40	+ 87

The concluding table shows the actual rainfall of February 1901 and the normal rainfall of February for the extra-Indian stations:—

Station.	Rainfall.			
	Actual, February 1901.	Normal, February.	Variation of actual from normal, February 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Trincomalee	2·48	2·59	−0·11	− 42
Colombo	3·54	2·63	+0·91	+ 35
Meshed	0	0·90	−0·90	−100
Ispahan	0	0·04	−0·04	−100
Bushire	0	2·51	−2·51	−100
Jask	0	1·33	−1·33	−100
Muscat	0·48	1·14	−0·66	− 58
Baghdad	0	2·49	−2·49	−100
Aden	0·05	0·33	−0·28	− 85
Perim	0·60	0·25	+0·35	+140
Kabul	0	0·72	−0·72	−100
Kashgar	0·01	0	+0·01	...
Seychelles	15·94	12·11	+3·83	+ 32
Zanzibar	10·74	2·98	+7·76	+260
Mauritius	3·67	7·43	−3·76	− 51

Table

Abstract of Observations taken at 8 A.M. at 22

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.				+·007								88·9	−0·2	71·1	+4·0	80·0	+1·9	17·8				29·0
1	Tenasserim and Bay Islands.	Car Nicobar	25	29·881		29·834	29·938	14th	29·814	27th	·122	80·9	88·2		78·5		83·4		9·7	89·4	22nd	73·2	11th	16·2
		Port Blair	61	29·947	+·016	29·899	30·011	19th	29·895	12th	·116	79·8	89·2		77·8		83·3		11·4	91·8	25th	73·1	22nd	18·7
		Mergui	96	29·920	?	29·948	30·000	18th	29·849	21st	·151	76·3	88·9	−0·9	71·2	+2·6	80·1	+0·9	17·7	93·1	19th	63·3	6th	29·8
		Tavoy	26	29·988	−·002	29·943	30·060	15th	29·904	22nd	·156	73·3	90·6	−0·5	69·0	+1·7?	79·8	+0·6?	21·6	94·7	23rd	57·5	6th	37·2
		Moulmein	94	29·930	+·008	29·963	30·013	7th	29·854	21st	·159	75·5	91·8	+0·5	71·4	+3·9	81·6	+2·2	20·4	96·0	20th & 22nd.	63·9	8th	32·1
2	Lower Burma	Rangoon	41	29·967	−·001	29·945	30·059	18th	29·892	21st	·167	74·2	91·7	−0·7	70·4	+5·2	81·1	+2·3	21·3	96·1	4th	63·3	28th	32·8
		Bassein	27	29·994	+·019	29·957	30·090	18th	29·921	11th & 22nd.	·169	73·4	89·4	−0·1	70·8	+6·9	80·1	+3·4	18·6	99·2	24th	62·8	28th	31·4
		Diamond Island.	41	29·970	0	29·946	30·050	19th	29·888	22nd	·162	78·2	83·8	−0·3	75·8	+4·0	79·8	+1·9	8·0	87·6	2nd	73·2	5th & 28th.	14·4
5	Arakan	Akyab	20	30·001	−·003	29·964	30·095	19th	29·926	14th	·169	67·9	86·3	+1·7	61·3	+0·4	73·8	+1·1	25·0	92·9	23rd	54·1	27th	38·8
3	Central Burma	Toungoo	183	29·827	+·015	29·956	29·924	18th	29·758	21st	·166	73·0	89·2	−1·5	65·2	+5·0	77·2	+1·8	24·0	94·6	24th & 26th.	55·6	28th	39·0
	II.—Burma Inland.				+·025								89·1	+0·9	60·7	+3·9	74·9	+2·4	28·4				42·9
3	Central Burma	Thayetmyo	130	29·893	?	29·963	30·017	19th	29·793	22nd	·224	69·6	92·0	−0·4	61·1	+5·1	76·6	+2·4	30·9	97·4	26th	49·8	4th	47·6
4	Upper Burma	Minbu	165	29·861	+·019	29·975	29·992	18th	29·787	11th	·205	69·4	91·8	+0·6	63·6	+4·1	77·7	+2·4	28·2	98·1	26th	52·5	4th	45·6
		Yamethin	657	29·344	+·025	29·968	29·463	18th	29·269	11th	·194	70·5	92·0	−0·4	65·2	+6·2	78·6	+2·9	26·8	98·5	25th	55·2	28th	43·3
		Mandalay	250	29·772	+·034	29·979	29·948	18th	29·685	4th & 11th.	·263	69·9	91·4	+1·4	62·3	+3·7	77·4	+2·6	28·1	97·5	26th	56·7	1st	40·8
		Kindat	377	29·660	+·017	30·011	29·832	18th	29·582	12th	·250	60·2	84·3	+3·3	55·7	+2·4	70·0	+2·9	28·6	89·3	24th	50·3	10th	39·0
		Bhamo	381	29·628	+·028	29·983	29·802	18th	29·539	26th	·263	60·2	82·8	+0·7	55·0	+2·1	68·9	+1·4	27·8	88·5	24th	47·2	1st	41·3
4(a)	Burma Hill Stations.	Maymyo										55·2	77·0		46·8		61·9		30·2	81·2	26th	39·0	1st & 5th.	42·2
		Taunggyi										61·1	77·4	+1·2	50·7	+4·3	64·1	+2·8	26·7	90·2	24th	41·6	28th	48·6
		Lashio										58·0	79·9	+1·9	51·8	+3·7	65·9	+2·8	28·1	85·5	23rd & 24th.	48·0	10th, 11th & 28th.	37·5
	III.—Assam.				+·019								78·9	+2·3	56·4	+2·2	67·7	+2·3	22·4				37·0
7	Surma	Silchar	104	29·958	+·021	30·019	30·088	18th	29·870	11th	·218	62·9	83·8	+3·9	57·3	+2·3	70·6	+3·1	26·5	90·5	19th	50·4	26th & 27th.	40·1
9	Brahmaputra	Sibsagar	333	29·721	+·011	30·029	29·891	18th	29·610	8th	·281	58·5	74·1	+1·4	55·2	+2·1	64·7	+1·8	18·9	80·3	25th	47·9	1st & 2nd.	32·4
		Dhubri	115	29·926	+·024	30·003	30·073	18th	29·824	4th	·249	61·2	78·7	+1·6	56·8	+2·1	67·8	+1·9	21·9	90·2	19th	51·8	1st & 17th.	38·4
	IV.—Bengal and Orissa.				+·027								81·0	+0·1	59·4	+2·1	70·2	+1·1	21·7				36·8
6	East Bengal	Chittagong	87	29·957*	+·018*	29·996*	30·048	18th	29·882	11th	·166	66·1	85·7	+4·2	59·6	+1·1	72·7	+2·7	26·1	92·0	20th	51·6	26th	40·4
		Noakhali	43	30·010		30·002	30·100	18th	29·924	28th	·176	65·0	85·8		56·0		70·9		29·8	92·5	21st	45·9	26th	46·6
		Comilla	36	30·026		30·011	30·122	17th	29·936	11th	·186	65·4	84·5		57·8		71·2		26·7	90·4	20th	49·1	26th	41·3
		Sirajganj	49	29·991		29·991	30·103	18th	29·898	11th	·205	62·5	80·7		58·1		69·4		22·6	86·9	8th	48·4	25th	38·5
		Narayanganj	26	30·020	+·018	29·995	30·122	17th	29·927	4th	·195	65·1	81·6	−0·6	60·1	+2·3	70·9	+0·9	21·5	89·1	20th	51·8	25th	37·3
		Barisal	13	30·035	+·023	29·995	30·128	18th	29·937	11th	·191	67·5	82·5	+2·5	60·6	+2·5	71·6	+2·5	21·9	87·8	20th	51·2	26th	36·6
		Mymensingh	59	29·980	+·010	29·994	30·099	18th	29·885	11th	·214	62·0	79·9	+2·1	57·2§	+3·6	68·6§	+2·9	22·7	85·2	8th	48·6	25th & 26th.	36·6
10	Deltaic Bengal	Faridpur	46	30·007		30·003	30·124	18th	29·891	11th	·233	65·5	81·6		58·3§		70·0§		23·3	87·8	7th	47·0	27th	40·8
		Jessore	33	30·019	+·026	30·000	30·122	18th	29·897	11th	·225	65·2	81·0	−2·1	59·3	+2·7	70·2	+0·3	21·7	87·5	20th	49·6	25th	37·9
		Calcutta	21	30·042	+·031	30·010	30·147	18th	29·916	11th	·231	66·5	81·4	−0·2	61·3	+1·5	71·4	+0·7	20·1	87·1	5th & 6th.	53·1	26th & 27th.	34·0
		Saugor Island	25	30·022	+·022	29·992	30·116	25th	29·912	11th	·204	68·9	80·6	−0·5	64·7	−0·4	72·7	−0·4	15·9	85·9	19th	55·5	26th & 27th.	30·4
		Krishnagar	47	30·019		30·017	30·135	18th	29·901	11th	·234	66·1	81·4		58·9		70·2		22·5	88·5	6th	49·3	25th	39·2
		Midnapore	149	29·906		30·009	30·004	18th & 19th.	29·782	11th	·222	67·1	81·6		61·7		71·7		19·9	88·3	4 days.	53·2	25th	35·1

* Mean of 27 days. † Mean of 20 days. § Mean of 28 days.

I.

Stations in India, Burma, etc., in February, 1901.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW	W.	NW	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st January to 28th February 1901.	Normal rainfall for period, 1st January to 28th February.	Variation from normal of period, 1st January to 28th February.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				2·38	0·54	+2·01					I.—Burma Coast and Bay Islands.		
1	3	9	8	3					N 68° E	6·0	6·0			78°	·826*	8·0*	2			0·84			1·84			0·74	Car Nicobar¶	Tenasserim and Bay Islands.	1
2	3	9	1	5	1		2	5	N 32° E	5·2				85	·871	4·3	2			3·43	1·17	+ 2·26	5·37	1·98	+ 3·39	1·82	Port Blair.		
27		1							N 45° E	2·4	2·1	2·0	+ 5	84	·752	3·5	2			2·89	1·89	+ 1·00	5·52	2·73	+ 2·79	2·60	Mergui.		
28									Calm	1·0				86	·718	0·6	3			1·66	0·58	+ 1·08	1·69	0·77	+ 0·92	0·99	Tavoy.		
		5	3	5	1	4	2	8	N 13° W	2·6	2·9	2·4	+21	78	·695	3·0	1	0·45	+0·55	0·28	0·20	+ 0·08	0·28	0·71	− 0·43	0·28	Moulmein.		
	2	5	2	2	3	7	4	3	S 67° W	4·2		3·9	+ 8	83	·706	1·9	1	0·45	+0·55	1·99	0·34	+ 1·65	1·99	0·51	+ 1·48	1·91	Rangoon .	Lower Burma.	2
7	1	4	1	1		1		13	N 25° W	4·0		3·8	+ 5	89	·732	2·1	2	0·45	+1·55	5·17	0·30	+ 4·87	5·17	0·47	+ 4·70	2·80	Bassein.		
5	8	2	3	1	1	1	1	6	N 4° W	11·3	11·3	7·2	+57	79	·769	2·8	2	0·40	+1·60	4·35	0·10	+ 4·25	4·35	0·28	+ 4·07	3·82	Diamond Island.		
	25	2	1						N 5° E	3·1		3·4	− 9	83	·569	1·5	1	0·36	+0·64	0·38	0·11	+ 0·27	0·75	0·19	+ 0·56	0·38	Akyab. .	Arakan.	5
3	5	2	1	11	1	1		4	S 88° E	2·7	2·7	1·9	+42	82	·678	2·6	2	0·36	+1·64	2·77	0·18	+ 2·59	2·77	0·30	+ 2·47	1·67	Toungoo .	Central Burma.	3
																				0·97	·17	+ 0·81					II.—Burma Inland.		
25					2	1			S 15° W	1·9		4·2	−55	76	·560	1·8	2	0	+2·00	2·37	0·01	+ 2·36	2·38	0·03	+ 2·35	2·11	Thayetmyo .	Central Burma.	3
9	1			6	2	1		9	N 81° W	3·4	4·0			66	·483	1·7	2			0·76	0·02	+ 0·74	0·78	0·07	+ 0·69	0·64	Minbu .	Upper Burma.	4
7	3			9	4			5	S 37° E	3·5	3·7			78	·585	1·6	2			1·35	0·13	+ 1·22	1·35	0·15	+ 1·20	1·05	Yamethin.		
16				1	6	3	2		S 21° W	2·3	2·3			68	·496	1·4	1			0·47	0·07	+ 0·40	0·54	0·15	+ 0·39	0·39	Mandalay.		
27	1								N	0·1	0·1			92	·485	2·1	1			0·16	0·24	− 0·18	0·53	0·74	− 0·21	0·14	Kindat.		
16	2	3	1		1	1	1	3	N 9° W	2·1	2·5			91	·479	2·1	1			0·72	0·43	+ 0·29	0·81	1·26	− 0·45	0·54	Bhamo.		
														81	·360												Maymyo .	Burma Hill Stations.	4(a)
	1			1	13	12	1		S 22° W					74	·399	1·9	2			1·20	0·65	+ 0·55	1·20	0·66	+ 0·54	0·97	Taunggyi.		
	4	8	2	1	4	8	1		S 66° E					85	·909	3·5	3			1·28	0·49	+ 0·79	1·33	0·56	+ 0·77	0·77	Lashio.		
																				0·71	1·59	−0·88					III.—Assam.		
22									Calm	0·8	1·4	2·8	−50	85	·488	3·4	0	4·04	−4·04	0·14	2·29	− 2·15	0·34	3·01	− 2·67	0·07	Silchar .	Surma.	7
17	3	3		2		3			N 41° E	1·8	1·6	2·2	−27	99	·490	6·9	5	5·30	−0·30	1·64	1·96	− 0·32	3·28	3·43	− 0·15	0·73	Sibsagar .	Brahmaputra.	9
7	2	4	6		3	4	1	1	S 86° E	2·6	3·1	4·0	−23	82	·450	2·9	1	1·14	−0·14	0·36	0·53	− 0·17	1·65	0·93	+ 0·72	0·31	Dhubri.		
																				1·27	0·93	+0·34					IV.—Bengal and Orissa.		
	4	16	4	2				2	N 45° E	3·8	3·8	4·4	−14	76	·487	1·8	0	1·35	−1·35	0·09	0·81	− 0·72	0·12	1·30	− 1·18	0·06	Chittagong .	East Bengal.	6
	13	4	1		2	3	1	4	N 8° W	3·0	2·7			83	·513	2·2	2	1·73	+0·27	1·01	1·02	− 0·01	1·04	1·49	− 0·45	0·84	Noakhali.		
6	8	2		7	1	1		3	N 39° E	2·9				73	·458	2·3*	3	2·10	+0·90	0·53	0·99	− 0·46	0·79	1·52	− 0·73	0·30	Comilla.		
23	1				1	2		1	N 63° W	1·0	0·9			82	·470	?	1	1·64	−0·64	0 30	1·02	− 0·72	0·95	1·47	− 0·52	0·23	Sirajganj.		
6	3	2	2	2		3	2	8	N 36° W	3·1		2·6	+19	81	·503	5·2†	2	2·00	0	0·44	1·26	− 0·82	0·74	1·50	− 0·76	0·29	Narayanganj.		
3	5	6		1	1	2	2	8	N 18° W	2·9	2·9			78	·527	2·6†	2	1·81	+0·19	0·73	1·13	− 0·40	0·96	1·74	− 0·78	0·58	Barisal.		
21				2			2	3	N 72° W	0·7	0·7			81	·455	?	1	1·50	−0·50	1·18	1·13	+ 0·05	1·51	1·52	− 0·01	1·03	Mymensingh.		
23	5								N	1·2	1·0			83	·521	2·5*	3	2·04	+0·96	0·58	1·49	− 0·91	0·94	1·85	− 0·91	0·36	Faridpur .	Deltaic Bengal.	10
27								1	N 45° W	1·5	1·5	2·0	−25	80	·500	2·6*	3	1·77	+1·23	1·14	1·21	− 0·07	1·65	1·76	− 0·11	0·63	Jessore.		
3	6	4	3		1	4	1	6	N 13° W	4·0		3·8	+ 5	80	·522	3·6*	3	1·92	+1·08	1 95	1·38	+ 0·57	3·26	1·98	+ 1·28	1·20	Calcutta.		
	9	8	1	0	1	3	3	3	N 4° W	8·8		7·9	+11	85	·609	3·6*	2	1·77	+0·23	3·11	1·10	+ 2·01	3·72	1·42	+ 2·30	2·98	Sangor Island		
1	4	3	1	1	3	4	5	6	N 58° W	2·9				73	·474	4·0‡	2	1·62	+0·38	1·39	1·23	+ 0·16	2·13	1·53	+ 0·60	0·71	Krishnagar.		
2	6	5	1	1	1	4	3	5	N 24° W	3·0	4·0			77	·518	2·7	4	1·46	+2·54	3·52	1·07	+ 2·45	6·90	1·59	+ 5·31	1·87	Midnapore.		

‡ Mean of 26 days.

¶ Wind variable 2.

Tabl

Abstract of Observations taken at 8 A.M. at 221 Statio

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal.	Bankura .	298	29·740		30·004	29·836	18th	29·603	11th	·223	66·0	79·7		52·1		70·9		17·6	87·6	4th & 6th.	53·8	25th	33·8
		Raniganj .	334	29·708		30·008	29·818	18th	29·594	11th	·224	64·6	80·3		50·7		70·5		19·6	88·2	7th & 8th.	52·2	25th	36·0
		Burdwan .	99	29·962	+·034	30·014	30·073	18th	29·845	11th	·228	64·7	80·9	−2·8	51·5	+3·4	71·2	+0·6	19·4	89·6	6th	51·9	25th	37·7
		Naya Dumka.	459	29·546		30·019	29·668	18th	29·429	12th	·239	64·8	78·7		50·3		69·0		19·4	86·4	4th & 6th.	52·0	25th	34·4
		Berhampore .	67	29·989	+·029	30·007	30·106	18th	29·880	4th	·226	63·7	80·9	−1·0	59·4	+3·5	70·2	+1·3	21·5	88·1	5th	52·2	25th & 27th.	35·1
		Rampur Boalia	70	29·981		30·003	30·099	18th	29·876	4th & 11th.	·223	64·9	79·2		50·1		69·1		20·1	86·1	6th	51·7	27th	34·4
		Malda . .	72	29·977		30·004	30·096	18th	29·865	11th	·231	62·4	78·7		56·7		67·7		22·0	85·2	7th	47·1	25th	38·1
		Bogra . .	61	29·983		30·000	30·099	18th	29·882	4th	·217	62·2	81·8	+2·7	57·0	+3·7	69·4	+3·2	24·8	88·2	8th	48·7	25th	39·5
12	North Bengal .	Dinajpur .	123	29·914	+·033	29·999	30·057	18th	29·822	4th	·235	59·1	79·6	+1·2	53·5	+2·3	66·6	+1·8	26·1	85·3	8th	42·9	25th	42·4
		Rangpur .	123	29·916		30·000	30·057	18th	29·817	4th	·240	60·4	79·2		53·6		66·5		25·8	84·8	8th	46·3	26th	38·2
		Jalpaiguri .	284	29·751	+·035	30·009	29·908	18th	29·655	4th	·253	58·7	76·6	+1·7	54·6	+3·8	65·6	+2·8	22·0	82·6	8th	47·1	25th	35·5
		Cooch Behar .	156	29·880		30·011	30·046	18th	29·786	4th	·260	59·1	77·2		55·0		66·1		22·2	82·8	8th	48·2	25th	34·1
17	North Bihar .	Purnea . .	125	29·927	+·040	30·013	30·062	19th	29·823	4th	·239	59·8	77·1	−1·7	55·7*	+5·0*	66·5*	+1·7*	21·4	89·2	9th	48·3	25th	40·9
14	Orissa . .	Balasore .	46	30·018	P	30·012	30·110	18th	29·901	11th	·209	67·3	83·0	−0·5	62·5	+2·3	72·8	+0·9	20·5	87·9	4th, 5th, 6th & 11th.	54·0	26th	33·1
		False Point .	21	30·035	+·031	29·999	30·128	19th	29·919	12th	·209	69·9	81·1	−1·5	63·1	−1·2	72·1	−1·4	18·0	85·4	4th	52·5	26th	32·6
		Cuttack .	60	29·980	+·034	30·005	30·080	19th	29·841	12th	·239	68·0	86·1	−3·9	65·1	+0·3	75·8	−1·8	20·7	92·4	11th	57·6	26th	34·1
		Puri . .	29	30·035		29·998	30·128	19th	29·902	12th	·226	71·8	82·6		67·7		75·2		14·9	85·7	4th & 13th.	59·6	26th	26·1
	V.—Gangetic Plain and Chota Nagpur.				+·036	...	...	...	...	...	...	...	75·7	−3·2	55·2	+2·8	65·4	−0·2	20·5	...	...	...	...	36·1
15	Chota Nagpur .	Hazaribagh	2,007	28·001	+·033	30·039	28·100	18th	27·880	12th	·220	60·0	72·9	−4·8	56·2	+2·3	64·5	−1·3	16·7	81·7	6th	47·2	25th	34·5
		Ranchi . .	2,128	27·876	+·038	30·029	27·977	18th	27·769	12th	·208	60·9	73·6	−3·2†	56·5	+3·3	65·1	+0·1†	17·1	82·8	7th	46·1	25th	36·7
		Daltonganj .	730†	29·320		30·044	29·454	24th	29·204	11th	·250	61·8	76·5		54·0		65·3		22·5	88·9	7th	45·0	26th	43·1
		Purulia . .		29·211		30·009	29·324	19th	29·097	11th	·227	64·5	79·2		58·7		69·5		19·5	86·7	7th	51·1	25th	35·6
		Chaibassa .	760	29·272		30·018	29·367	18th	29·140	11th	·227	65·0	79·4	−4·3	61·5	+4·6	70·5	+0·2	17·9	88·4	7th	52·6	26th	35·8
16	South Bihar .	Gaya . .	375	29·681	+·034	30·031	29·805	24th	29·575	12th	·230	62·2	76·3	−5·0	57·3	+1·5†	66·8	−1·8†	19·0	88·2	7th	50·3	26th	37·3
		Dehri . .	351	29·703		30·028	29·835	24th	29·590	12th	·245	62·3	75·4		58·6		67·1		16·8	85·3	7th	52·1	25th	33·2
		Patna . .	183	29·867	P	30·013	29·987	19th	29·746	4th	·241	60·5	75·1	−2·9	56·5	+3·9	65·8	+0·5	18·6	80·5	4th	48·4	26th	32·1
		Arrah . .	190	29·856		30·010	29·975	24th	29·737	4th	·238	59·3	75·3		55·3		65·3		20·0	81·4	3rd	47·0	16th	34·4
		Buxar . .	239	29·822		30·031	29·944	24th	29·706	12th	·238	60·6	75·5		55·6		65·6		19·9	81·6	3rd	47·9	27th	33·7
17	North Bihar .	Bhagalpur .	160	29·890		30·010	30·014	18th	29·780	4th	·234	63·2	77·3		57·5		67·4		19·8	83·6	7th	50·0	25th	33·6
		Darbhanga .	166	29·875	+·027	30·005	30·019	19th	29·763	4th	·256	59·6	75·4	−0·8	56·5	+2·8	66·0	+1·0	18·9	80·2	7th	48·8	16th	31·4
		Muzaffarpur .	178	29·872		30·015	30·005	16th	29·744	4th	·261	59·8	75·5		54·2		64·9		21·3	79·9	7th	45·8	16th	34·1
		Motihari .	224	29·830		30·024	29·962	19th	29·697	4th	·265	60·3	75·8		51·9		63·9		23·9	79·0	9th, 24th & 28th.	42·9	16th	36·1
		Chapra . .	181	29·887		30·013	29·965	19th	29·748	4th	·277	58·9	76·5		54·9		65·7		21·6	81·8	4th	47·0	16th	34·8
18	N.-W. P., East .	Benares . .	267	29·785	+·023	30·024	29·929	24th	29·676	4th	·253	59·5	75·1	−5·3	54·9	+3·5	65·0	−0·9	20·2	81·1	3rd	45·9	16th	35·2
		Allahabad .	369	29·747	+·034	30·020	29·881	24th	29·641	4th	·240	59·3	75·8	−3·9	53·7	+2·8	64·8	−0·6	22·1	82·3	3rd	44·4	16th	37·9
23	N.-W. P. (East Submontane).	Gorakhpur .	256	29·786	+·042	30·016	29·966	19th	29·669	12th	·239	59·0	75·3	−2·7	54·3	+2·4	64·3	−0·2	21·0	80·4	4th	46·6	16th	33·8
19	South Oudh .	Lucknow .	368	29·674	+·028	30·025	29·814	23rd	29·568	4th	·246	57·0	75·8	−2·7	52·2	+1·9	64·0	−0·4	23·6	85·3	3rd	42·7	16th	42·6
20	North Oudh .	Bahraich .	403	29·631	+·047	30·022	29·745	22nd & 24th.	29·530	11th	·215	56·5	75·0	−1·0	51·6	+1·2	63·3	+0·1	23·4	83·1	3rd	44·5	15th	38·6
21	N.-W. Provinces (Central).	Cawnpore .	416	29·637	+·037	30·037	29·782	23rd	29·533	5th	·249	56·4	74·9	−3·3	51·4	+0·5†	63·2	−1·2†	23·5	82·3	3rd	43·0	15th & 16th.	39·3
		Mainpuri .	516	29·525	+·046	30·036	29·675	23rd	29·402	5th	·273	54·7	73·2	−2·9	49·4	−0·7†	61·3	−1·3†	23·8	80·3	3rd	40·5	11th	39·8

* Mean of 27 days.

† Mean of 26 days.

I—*continued.*

***in India, Burma, etc., in February, 1901*—continued.**

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st January to 28th February 1901.	Normal rainfall for period, 1st January to 28th February.	Variation from normal of period, 1st January to 28th February.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
19				1			6	2	N 82° W	0·9	1·0			67	·433	4·6†	4	1·81	+ 2·19	3·28	0·94	+ 2·34	5·18	1·28	+ 3·90	2·01	Bankura	Central Bengal	11
14	3	1		1	1	1	4	3	N 51° W	1·4				75	·464	4·0	2	1·62	+ 0·38	1·55	1·18	+ 0·37	3·19	1·58	+ 1·61	0·85	Raniganj.		
13	2	1		1		1	4	6	N 53° W	2·0	2·0	2·3	−13	80	·495	4·6‡	2	1·58	+ 0·42	2·03	0·93	+ 1·10	3·05	1·29	+ 1·76	1·00	Burdwan.		
8	2	1	1	2	2	1	2	9	N 50° W	1·1	1·3			72	·442	4·8	3	1·67	+ 1·33	0·77	0·79	− 0·02	2·23	1·39	+ 0·84	0·36	Naya Dumka.		
17		1			1	1	4	4	N 74° W	1·3	1·3	2·4	−46	78	·461	3·3*	2	1·73	+ 0·27	0·59	1·04	− 0·45	1·24	1·56	− 0·32	0·31	Berhampore.		
9	2	4			1		6	6	N 41° W	2·8	2·8			76	·468	2·0	2	1·46	+ 0·54	0·36	0·84	− 0·48	1·02	1·25	− 0·23	0·19	Rampur Boalia.		
	2	1	2		1	3	12	7	N 73° W	2·3	2·6			79	·449	3·6	0	1·27	− 1·27	0·06	0·61	− 0·55	1·69	1·13	+ 0·56	0·06	Malda.		
														76	·431	1·5*	2	1·46	+ 0·54	0·30	0·97	− 0·67	0·42	1·44	− 1·02	0·13	Bogra.		
		1	1	1	3	10	5	7	S 72° W	3·5	3·9			86	·423	2·8	1	1·19	− 0·19	0·18	0·51	− 0·33	1·18	0·96	+ 0·22	0·10	Dinajpur	North Bengal.	12
11	1	1	1	1	2	4	4	3	S 74° W	2·8	2·9			86	·455	1·8‡	0	1·08	− 1·08	0	0·43	− 0·43	0·85	1·04	− 0·19	0	Rangpur.		
	9	3	1			3	7	5	N 38° W	1·2	1·5			90	·448	1·7*	1	1·12	− 0·12	1·29	0·38	+ 0·91	1·95	0·91	+ 1·04	1·29	Jalpaiguri.		
9	2	5	5	1		2	3	1	N 45° E	1·8	1·8			89	·450	2·7†	2			1·36	0·31	+ 1·05	2·17	0·69	+ 1·48	0·95	Cooch Behar		
9	2					1	2	14	N 50° W	3·9	3·4	2·5	+36	87*	·456*	3·5*	1	1·20	− 0·20	0·88	0·59	+ 0·29	2·17	1·08	+ 1·09	0·80	Purnea	North Bihar.	17
11	5	2	1			2	1	8	N 24° W	2·3				86	·577	3·0	2	2·23	− 0·23	1·24	1·31	+ 0·08	3·00	1·70	+ 1·30	1·18	Balasore	Orissa.	14
4	9	2	1	1		1	2	8	N 18° W	6·5	6·3	7·5	−16	88	·645	2·8‡	1	1·42	− 0·42	3·22	0·86	+ 2·36	5·35	1·42	+ 3·92	3·14	False Point.		
24		2	2						N 72° E	1·8		2·2	−18	87	·600	3·2†	1	1·22	− 0·23	2·58	0·63	+ 1·95	3·79	0·95	+ 2·84	2·51	Cuttack.		
6	8	7				4	2	1	N 5° W	3·6	3·1			81	·640	1·8	2	1·15	+ 0·85	2·25	0·78	+ 1·47	3·96	1·06	+ 2·90	1·88	Puri.		
																				1·51	0·54	+0·92					**V.—Gangetic Plain and Chota Nagpur.**		
5	1		2		4	2	8	6	S 89° W	7·6	6·8	6·5	+ 5	68	·364	6·1	6	1·81	+ 4·19	2·77	0·82	+ 1·95	5·83	1·38	+ 4·45	1·29	Hazaribagh.	Chota Nagpur.	15
6	1		1	2	5	2	3	8	S 83° W	4·8	5·4			76	·410	6·0	7	2·12	+ 4·88	4·06	1·21	+ 2·85	7·01	1·73	+ 5·28	1·21	Ranchi.		
10	1	1	5	4	1	1	4	1	S 56° E	2·2	2·6			72	·407	3·2	6	1·32	+ 4·68	1·93	0·49	+ 1·44	5·56	1·21	+ 4·35	0·90	Daltonganj.		
14	1			3			2	8	N 50° W	1·2				74	·455	3·8	5			2·58			6·23			1·12	Purulia.		
16		2	2	1			3	4	N 27° W	1·1	1·0			63	·519	4·4	5	1·65	+ 3·25	4·05	0·97	+ 3·08	10·08	1·55	+ 8·53	1·80	Chaibassa.		
1	2	4	1	2	3	6	8	1	S 69° W	6·8	6·1	2·6	+124	73	·414	4·9	4	1·25	+ 2·65	1·21	0·67	+ 0·54	4·41	1·25	+ 3·16	0·55	Gaya	South Bihar.	16
1	1		2	1	7	8	7	1	S 43° W	5·5	4·9			71	·420	4·6	5	1·25	+ 3·75	1·65	0·44	+ 1·21	4·85	1·06	+ 3·79	0·56	Dehri.		
	1	1	2	2	4	5	9	4	S 70° W	3·5	4·1	2·9	+41	79	·422*	4·5*	4	1·12	+ 2·88	1·37	0·53	+ 0·84	3·63	1·18	+ 2·45	0·53	Patna.		
7			1	2		4	8	6	W	2·7	2·8			83	·423	4·1	4	1·04	+ 2·96	1·33	0·59	+ 0·74	3·62	1·32	+ 2·30	0·48	Arrah.		
1			2	1	6	5	10	3	S 58° W	6·5	6·0			75	·405	4·3*	5	1·16	+ 3·54	1·45	0·50	+ 0·95	4·09	1·22	+ 2·87	0·51	Buxar.		
4			1	2	2	7	9	3	S 67° W	3·7	3·5			74	·434	4·6†	1	1·46	− 0·46	0·19	0·62	− 0·43	1·76	1·10	+ 0·66	0·13	Bhagalpur	North Bihar.	17
3		1	1	2	2	3	10	6	S 86° W	3·9		3·3	+18	85	·436	4·0	0	1·32	− 1·32	0·10	0·49	− 0·39	2·48	1·14	+ 1·34	0·09	Darbhanga.		
23							4	1	N 79° W	1·0	0·9			88	·455	2·1	0	1·32	− 1·32	0·20	0·48	− 0·28	2·21	1·32	+ 0·89	0·08	Muzaffarpur		
	1	5	3	1	1	4	9	4	N 67° W	3·8				94	·497	2·6*	2	1·17	+ 0·83	0·51	0·48	+ 0·03	2·64	1·19	+ 1·65	0·26	Motihari.		
7	1	1	1	1	1	6	7	3	S 80° W	2·4	2·9			83	·412	4·5*	3	1·08	+ 1·92	0·93	0·46	+ 0·47	2·93	1·14	+ 1·79	0·46	Chapra.		
9		1	1	2		7	7	1	S 63° W	2·5	2·9	4·1	−29	78	·407	4·8	5	0·82	+ 4·18	1·47	0·37	+ 1·10	4·63	1·16	+ 3·47	0·50	Benares	N.-W. P., East.	18
3		1	3	2		2	11	6	N 80° W	5·2	5·9	4·2	+40	77	·396	4·3	4	0·64	+ 3·36	1·17		+ 0·39	4·20	1·13	+ 3·07	0·53	Allahabad.		
1	5	3	2	1	4	4	6	2	N 79° W	2·0		2·3	−13	80	·404	3·5	3	0·73	+ 2·27	1·09	0·41	+ 0·68	3·56	1·25	+ 2·31	0·49	Gorakhpur	N.-W. P. (East Submontane).	22
3	2	1	3		1	1	14	3	N 77° W	2·4	2·6	3·3	−21	76	·360	4·6	4	0·55	+ 3·45	1·63	0·25	+ 1·38	3·27	1·35	+ 1·92	0·78	Lucknow	South Oudh.	19
3	5	1	2	2			4	11	N 32° W	4·0	3·8			85	·394	2·0	3			0·85	0·63	+ 0·22	4·18	1·49	+ 2·69	0·38	Bahraich	North Oudh.	20
8	6	2	1			2	6	3	N 41° W	1·2				78	·360	3·8	4	0·60	+3·40	1·87	0·44	+ 1·43	3·09	1·16	+ 1·93	1·01	Cawnpore	N.-W. Provinces (Central).	21
14	1	2	3	2	1	2	2	1	S 66° E	2·0	2·0			79	·343	4·4	3			0·82	0·16	+ 0·66	3·32	0·77	+ 2·55	0·44	Mainpuri.		

‡ Mean of 25 days

Tabl

Abstract of Observations taken at 8 A.M. at 221 Station

Number of district.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°.)	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas				+·044								69·7	−2·4	48·1	+0·7	58·9	−0·8	21·5				35·7
24	N.-W. Provinces, (West Submontane).	Bareilly	569	29·458	+·042	30·029	29·594	23rd	29·342	4th	·252	54·8	73·0	−1·9	50·9	+2·1?	62·0	+0·1?	22·1	79·8	3rd	41·7	14th & 15th.	38·1
		Dehra Dun	2,238	27·755	+·030	30·061	27·859	23rd	27·642	12th	·217	50·2	66·7	−2·1	46·4	−0·3	56·6	−1·2	20·3	74·0	5th	38·5	14th & 15th.	35·5
		Roorkee	937	29·136	+·048	30·054	29·255	24th	29·020	6th	·235	52·2	70·4	−2·8	47·7	+0·5	59·1	−1·2	22·7	76·3	2nd	39·4	12th	36·9
22	N.-W. P., West	Meerut	738	29·284	+·033	30·042	29·410	23rd	29·140	4th	·270	51·8	71·6	−2·8	48·9	+1·4	60·3	−0·7	22·7	78·5	2nd	41·7	15th	36·8
26	South-East Punjab.	Delhi	718	29·320	+·038	30·050	29·477	24th	29·183	5th	·294	55·4	71·2	−3·9	51·7	+0·2	61·5	−1·9	19·5	78·2	2nd	43·1	12th, 13th & 14th.	30·1
27	Central Punjab.	Lahore	702	29·344	+·042	30·073	29·506	23rd	29·169	5th	·337	49·5	69·2	−1·3	46·2	+2·3	57·7	+0·5	23·0	78·2	27th	39·0	21st	39·2
28	South Punjab	Sirsa	662	29·383	+·038	30·062	29·549	24th	29·203	5th	·346	51·4	72·0	−3·1	46·1	+0·1	59·1	−1·5	25·9	78·2	1st	39·0	11th & 21st.	39·2
		Patiala	818	29·209		30·053	29·352	23rd	30·045	6th	·307	52·4	68·1		43·1		58·1		20·0	74·2	1st	41·8	21st	32·4
29	Punjab (Submontane).	Ludhiana	812	29·222	+·049	30·063	29·356	22nd & 24th.	29·051	6th	·305	51·7	66·9	−4·6?	49·1	+2·7	58·0	−1·0?	17·8	73·1	27th	41·6	21st	31·5
		Sialkot	890	29·208	+·057	30·074	29·384	24th	29·059	5th	·325	50·6	68·3	−1·0	46·9	+1·6	57·6	+0·3	21·4	76·5	27th	38·1	23rd	38·4
		Umballa	892	29·131	?	30·055	29·283	23rd	28·965	6th	·318	52·2	69·0	−1·8	47·7	−0·1	58·4	−1·0	21·3	74·5	2nd	40·0	12th	34·5
31	North Punjab	Rawalpindi	1,676	28·351	+·062	30·128	28·502	18th	28·202	5th	·300	45·0	63·0	−1·4						75·0	28th			
	VII.—Indus Valley and North-West Rajputana.				+·038								73·6	−1·7	46·8	−2·9	60·2	−2·3	26·8				43·7
31	North Punjab	Peshawar	1,110	28·970	+·033	30·156	29·140	18th	28·822	22nd	·318	45·3	64·7	−1·0	40·8	−0·7	52·8	−0·9	23·9	78·1	28th	36·4	12th	41·7
32	West Punjab	Khushab	612	29·358	+·061	30·093	29·628	23rd	29·281	5th	·347	49·2	69·2	+1·1?	46·7	+0·9	58·0	+1·0?	22·5	80·2	27th & 28th.	42·8	25th	37·4
		Montgomery	553	29·495	+·028	30·066	29·661	23rd	29·313	5th	·348	50·3	70·4	−1·7	44·0	−2·0	57·2	−1·9	26·4	80·0	27th	38·0	8th	42·0
		D. I. Khan	594	29·501	+·028	30·093	29·667	23rd	29·339	5th	·328	47·9	70·7	−1·5	42·3	−2·5	56·5	−2·0	28·4	81·8	28th	37·5	10th	44·3
		Mooltan	420	29·656	+·023	30·081	29·829	23rd	29·494	5th	·335	50·1	72·5	−0·4	46·8	+0·7?	59·7	+0·2?	25·7	82·3	27th	42·9	8th	39·4
47	Sind	Jacobabad	186	29·897	+·032	30·060	30·044	23rd	29·743	28th	·301	51·2	75·7	−1·4	43·8	−4·0	59·8	−2·7	31·9	89·5	28th	37·0	7th	52·5
		Hyderabad	96	30·005	+·038	30·061	30·152	23rd	29·847	28th	·305	55·6	76·9	−3·1	49·0	−5·1	63·0	−4·1	27·9	88·6	28th	42·0	8th	46·6
		Kurrachee	30	30·096	+·060	30·078	30·250	19th	29·937	28th	·313	59·8	78·9	−1·6	53·9	−4·4	66·4	−3·0	25·0	87·9	27th	46·7	7th	41·2
51	West Rajputana	Bikaner	771	29·275	?	30·068	29·447	24th	29·100	5th	·347	54·4	73·4	−1·8	49·7	−1·3	61·6	−1·6	23·7	82·7	28th	41·6	8th	41·1
		Pachpadra	380	29·690		30·056	29·857	24th	29·535	5th	·322	54·7	79·3		45·8		62·6		33·5	88·9	27th	39·3	7th	49·6
		Jodhpur	782	29·251		30·064	29·420	24th	29·079	4th	·341	57·2	77·9		51·6		64·7		26·3	86·6	27th	42·1	22nd	44·5
	VIII.—East Rajputana, Central India and Gujarat.				+·029								78·9	−2·9	52·7	−0·5	65·8	−1·7	26·3				44·8
50	East Rajputana	Jaipur	1,431	28·603	+·026	30·075	28·750	23rd	28·448	5th	·302	56·6	74·8	−3·1	50·4	+0·4	62·6	−1·4	24·4	85·2	28th	40·5	13th	44·7
		Kotah	819	29·213			29·378	23rd	29·051	5th	·327	58·3	79·7		53·5		66·6		26·2	88·5	28th	47·0	15th	41·5
		Sambhar	1,254	28·781	?	30·081	28·936	24th	28·617	5th	·319	52·4	74·2	−2·2	48·5	+0·4	61·4	−0·9	25·7	82·4	28th	40·0	13th & 22nd.	42·4
		Ajmer	1,611	28·417	+·018	30·091	28·578	24th	28·250	5th	·328	53·3	74·1	−3·2	49·2	+0·8	61·7	−1·2	24·9	82·4	3rd	40·9	14th & 25th.	41·5
		Udaipur	1,925	28·090		30·069	28·242	23rd	27·921	4th	·321	56·6	75·6		49·4		62·5		26·2	86·5	28th	39·7	7th	46·8
		Deesa	466	29·582	+·020	30·032	29·727	23rd & 24th.	29·454	4th & 5th.	·273	59·4	82·3	−3·4	51·2	−3·5	66·8	−3·5	31·1	93·6	3rd	41·0	7th	52·6
46	Kathiawar and Cutch.	Bhuj	395	29·688	+·052	30·059	29·837	20th	29·556	4th	·281	61·2	79·5	−4·3?	52·4	−5·5	66·0	−4·9?	27·1	89·8	27th	46·0	7th, 8th & 9th.	43·8
		Jamnagar	61	30·031		30·038	30·174	20th	29·922	4th	·252	60·4	80·2		53·5		66·8		26·7	90·0	27th	44·2	8th	45·8
		Rajkot	429	29·642?	+·041	30·047?	29·772	20th	29·550	4th & 28th.	·222	58·6	81·5	−6·0?	48·7	−5·4	65·1	−5·7?	32·8	93·9	3rd	39·1	8th	54·8
		Veraval		30·046	+·042	30·007	30·176	19th	29·939	28th	·237	63·7	81·6	+0·6	58·1	−2·6	69·8	−1·0	23·5	94·1	3rd & 4th.	49·3	9th	44·8
		Dwarka*	27	30·077		30·051	30·208	20th	29·961	28th	·247	65·7	76·8		58·0		67·4		18·8	89·4	27th	46·6	9th	42·8
		Bhavnagar Para.	35	30·025	+·033	30·006	30·152	19th	29·801	28th	·251	61·3	84·4	−0·9	52·9	−7·2?	68·7	−4·1?	31·5	96·1	28th	45·7	22nd	50·4
39	Central India	Nowgong	757	29·286	+·020	30·047	29·438	23rd	29·125	5th	·313	57·3	74·3	−6·0	52·7	+2·7	63·5	−1·7	21·6	81·5	2nd & 3rd,	44·5	15th	37·0
		Indore	1,823	28·189	+·021	30·038	28·325	24th	28·071	4th	·254	60·3	79·8	−2·7	50·9	−0·7	65·3	−1·7	28·9	88·8	28th	40·6	22nd	48·2
		Neemuch	1,630	28·401	+·015	30·077	28·565	23rd	28 2 64	5th	·301	56·3	77·9	−2·6	49·2	−2·3	63·6	−2·5	28·7	88·0	4th & 28th.	41·1	13th	46·9

*Observation of 20 days.

I—*continued.*

in India, Burma, etc., in February 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st January to 28th February 1901	Normal rainfall for period, 1st January to 28th February	Variation from normal of period, 1st January to 28th February.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				1·90	1·17	+0·78					VI.—Upper Sub-Himalayas.		
16			1	2		2		7	N 63° W	1·1	1·0	4·0	−75	79	·346	3·5	3	1·13	+1·82	1·08	0·61	+0·47	3·33	1·71	+ 1·62	0·45	Bareilly	N.-W. Provinces (West Submontane).	24
19	1			1		2	3	2	N 87° W	1·6		2·0	−20	75	·278	4·8	5	3·00	+2·00	3·16	1·93	+1·23	8·08	4·47	+ 3·61	1·14	Dehra Dun.		
23		2		1			1	1	N 18° E	2·4		2·8	−14	82	·325	3·1	6	2·09	+3·91	2·57	1·22	+1·35	6·20	2·98	+ 3·22	1·16	Roorkee.		
13	2	1	2		1	3	4	2	N 79° W	1·7	1·7	2·6	−35	79	·317	2·5	3	1·27	+1·73	1·04	0·79	+0·25	3·83	2·06	+ 1·77	0·51	Meerut	N.-W. P., West.	22
10	1		2	2		1	6	6	N 67° W	2·8	2·6	3·6	−28	69	·306	3·8	3	1·00	+2·00	0·52	0·61	−0·09	1·87	1·85	+ 0·02	0·20	Delhi	South-East Punjab.	26
16	2	2	1	2	1		2	2	N 10° E	2·1		2·4	−12	86	·309	3·5	1	2·00	−1·00	0·22	1·10	−0·88	1·76	2·16	− 0·40	0·14	Lahore	Central Punjab.	27
5		5		6	2	5	1	4	S 7° E	2·7	3·2	3·4	− 6	79	·306	1·9	2	0·55	+1·45	0·43	0·27	+0·16	0·85	1·17	− 0·32	0·30	Sirsa	South Punjab.	28
13	6	1		2	1		2	3	N 18° W	10·9				80	·322	3·5	4			1·39			3·65			0·60	Patiala.		
6	1	3	1	6	2		4	5	N 27° W	2·8	2·5	1·6	+56	80	·310	3·5	4	1·82	+2·18	4·01	1·23	+2·78	6·63	3·20	+3·43	1·87	Ludhiana	Punjab (Submontane).	29
8	3	6	5	1		1	3	1	N 41° E	2·1		1·7	+23	77	·286	2·4	2	2·45	−0·45	0·99	1·70	−0·71	3·92	4·19	− 0·27	0·43	Sialkot.		
14		3		2			5	4	N 51° W	2·2				88	·347	3·8	7			5·13	1·05	+4·08	8·83	2·20	+ 6·63	1·40	Umballa.		
28									Calm	2·4	2·2	2·4	− 8	87	·261	1·8	2	3·18	−1·18	2·31	2·41	−0·10	6·84	5·25	+ 1·59	1·57	Rawalpindi.	North Punjab.	31
																				0·24	0·42	−0·18					VII.—Indus Valley and North-West Rajputana.		
15					6	4	3		S 34° W	1·5	1·6	3·3	−52	78	·238	2·4	4	2·00	+2·00	1·53	0·98	+ 0·55	3·22	2·75	+ 0·47	0·66	Peshawar	North Punjab.	31
10	3	7	1		2	2	3		N 19° E	4·4	5·1			72	·255	1·6	3	1·70	+1·30	0·48	0·76	− 0·28	1·92	1·28	+ 0·64	0·17	Khushab	West Punjab.	32
3	6	2	2	6	3		2	4	N 43° E	5·0	4·3			65	·241	2·8	0	1·10	−1·10	0	0·61	− 0·61	0·28	1·19	− 0·91	0	Montgomery.		
25							1	2	N 59° W	1·1	1·2	2·0	−48	74	·250	2·5	0	0·91	−0·91	0·11	0·52	− 0·41	0·60	1·05	− 0·45	0·08	D. I. Khan.		
9	3	10	1	4				1	N 52° E	1·4	1·7	2·4	−29	68	·217	2·0	1	1·00	0	0·26	0·38	− 0·12	0·51	0·86	− 0·35	0·26	Mooltan.		
17	1		4		1		2	3	N 3° W	1·8	1·9	3·0	−37	55	·209	2·3	1	1·00	0	0·26	0·40	− 0·14	0·53	0·65	− 0·12	0·18	Jacobabad	Sind.	47
1	19	1		1	3	1	2		N 5° W	6·3	6·6	7·0	− 6	46	·206	1·6	0	0·30	−0·30	0	0·23	− 0·23	0·23	0·54	− 0·31	0	Hyderabad.		
2	2	9	9	2	1			3	N 61° E	5·6	7·0	10·5	−33	68	·355	1·6	0	0·36	−0·36	0·02	0·31	− 0·29	0·61	1·03	− 0·42	0·02	Kurrachee.		
1	4	5	4	1	1	1	8	3	N 20° W	6·5		3·7	+76	55	·236	2·3	0			0	0·22	− 0·22	0·20	0·52	− 0·32	0	Bikaner	West Rajputana	51
1	6	8	4	1		2	3	3	N 18° E	4·9	5·7			44	·194	1·3	0			0	0·09	− 0·09	0·14	0·46	− 0·32	0	Pachpadra.		
5	4	13	4	1			1		N 46° E	4·9	4·4			42	·192	2·0	0			0	0·16	− 0·16	0·07	0·43	− 0·36	0	Jodhpur.		
																				0·29	0·17	+0·17					VIII.—East Rajputana, Central India and Gujarat.		
5	7	9	3		1		1	2	N 31° E	3·3		4·4	−25	62	·284	3·0	2	0·60	+1·40	0·55	0·19	+ 0·36	2·15	0·88	+ 1·27	0·27	Jaipur	East Rajputana.	50
14	2	2	1	1			4	4	N 35° W	3·0‡	3·5‡			54	·265	3·7	0			0	0·25	− 0·25	0·52	0·40	+ 0·12	0	Kotah.		
23	1	2	1				1		N 31° E	1·9		5·3	−64	64	·253	2·9	0	0·55	−0·55	0·13	0·21	− 0·08	2·48	0·68	+ 1·80	0·06	Sambhar.		
13	1	7		2	1			4	N 29° E	2·9		2·5	+16	66	·270	3·0	0	0·64	−0·64	0	0·30	− 0·30	1·40	0·82	+ 0·58	0	Ajmer.		
17	3					1	2	5	N 47° W	2·9	2·9			45	·209	1·2	0			0·02			0·17			0·02	Udaipur.		
	7	9	8			1	1	2	N 39° E	9·3§		9·0	+ 3	34	·173	1·0	0	0·27	−0·27	0	0·10	− 0·10	0·11	0·27	− 0·16	0	Deesa.		
	3	1	1	2	1	8	9	3	S 81° W	7·7		6·7	+15	51	·282	0·6	0			0	0·11	− 0·11	0·04	0·22	− 0·18	0	Bhuj	Kathiawar and Cutch.	45
	6	4	3	2	3	3	4	3	N 13° W	9·7	10·4			53	·284	1·1	0			0			0			0	Jamnagar.		
2	4	2	4	1	1	3	5	6	N 42° W	6·3	6·2	6·2	0	44	·220	0·8	0	0·10	−0·10	0	0·08	− 0·08	0	0·12	− 0·12	0	Rajkot.		
	19	6						3	N 5° E	7·7	9·1	5·8	+57	44	·260	1·5	0			0	0	0	0·01	0	+ 0·01	0	Veraval.		
	7	7	1					5	N 9° E	14·9				57	·366	1·5	0			0						0	Dwarka.		
	9		1				9	9	N 43° W	6·0	6·2			35	·190	1·2	0			0	0·09	− 0·09	0	0·18	− 0·18	0	Bhavnagar Para.		
8	5	3	4	2		1	4	1	N 20° E	2·1	2·1	1·7	+24	76	·366	3·7	3	0·73	+2·27	2·98	0·27	+ 2·71	4·32	0·92	+ 4·00	1·72	Nowgong	Central India.	49
9	3	4	2	3	1	3	2	1	N 58° E	3·3		3·0	+10	59	·313	3·0	0	0·55	−0·55	0	0·18	− 0·18	0·76	0·36	+ 0·40	0	Indore.		
2	3	4	15	1			1	1	N 71° E	6·2	5·6	9·1	−38	49	·223	1·4	0	0·55	−0·55	0·02	0·19	− 0·17	0·13	0·49	− 0·36	0·02	Neemuch.		

‡ Mean of 27 days. § Mean of 26 days.

Table

Abstract of Observations taken at 8 A.M. at 221 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
45	Gujarat	Surat	39	30·005	+·009	29·988	30·147	19th	29·878	28th	·269	63·5	86·7	−2·8	56·7	−1·6?	71·7	−2·2?	30·0	99·7	3rd	47·3	22nd	52·4
		Ahmedabad	164	29·901	+·046	30·022	30·032	23rd & 24th	29·768	28th	·264	63·1	85·2	−1·8	56·1	−3·7	70·7	−2·8	29·1	96·7	28th	49·2	14th & 22nd.	47·5
22	N.-W. P., West	Agra	555	29·488	+·024	30·040	25·633	23rd	29·351	5th	·282	56·9	74·9	−3·3	53·1	+1·4	64·0	−1·0	21·8	81·0	2nd & 28th.	47·9	5 days	33·1
21	N.-W.P., Central	Jhansi	858	29·205	+·037	30·068	29·360	23rd	29·067	5th	·293	59·9	76·3	−4·2	56·0	+1·8	66·2	−1·2	20·3	84·7	2nd & 3rd.	50·2	24th	34·5
	IX.—Deccan				+·011								84·8	−4·1	60·0	+0·7	72·4	−1·8	24·8					42·4
35	Bombay (Deccan)	Belgaum	2,539	27·443	−·008	29·952	27·528	19th	27·367	12th	·161	67·7	85·3	−3·3	59·7	+0·2	72·5	−1·6	25·6	89·3	1st, 27th & 28th.	43·6	14th	45·7
		Sholapur	1,590	28·408	−·003	29·986	28·509	19th	28·329	28th	·180	68·7	89·9	−3·9	62·9	+1·2	76·4	−1·4	27·0	95·2	6th	49·1	13th	46·1
		Poona	1,840	28·167	+·003	30·019	28·261	19th	28·093	4th	·168	62·1	87·2	−3·6	55·1	−2·4	71·1	−3·0	32·1	95·5	28th	42·0	13th	53·5
		Bijapur	1,946	28·057	P	29·966	28·144	19th	27·976	12th	·168	68·3	88·5	−1·5	63·1*	−0·6?	75·9*	−1·1?	25·4	94·7	10th	49·6	16th	45·1
40	Khandesh	Malegaon	1,430	28·581	+·009	30·024	28·712	24th	28·471	28th	·241	61·4	86·6	−3·2	51·4	−3·5	69·1	−3·4	35·2	94·4	28th	37·2	22nd	57·2
		Ahmednagar	2,152	27·867	P	30·023	27·978	19th	27·763	4th	·215	64·0	84·9	−3·0	54·1	−0·8?	69·5	−1·9?	30·8	92·4	28th	39·9	14th	52·5
41	Berar	Akola	930	29·089	+·023	30·008	29·224	24th	28·983	28th	·241	64·7	87·4	−2·9	56·5	−0·1	72·0	−1·5	30·9	94·9	5th	43·0	14th	51·9
		Amraoti	1,215	28·800	+·028	30·013	28·940	24th	28·706	5th & 11th, 4th	·234	65·3	85·5	−4·2	59·7	−1·2	72·6	−2·7	25·8	93·2	28th	51·4	13th	41·8
42	Central Provinces (West).	Khandwa	1,044	28·975	+·017	30·022	29·128	24th	28·847		·281	62·2	86·0	−2·5	54·2	−0·8	70·1	−1·7	31·8	95·7	28th	40·7	22nd	55·0
		Hoshangabad	1,006	29·041?	P	30·056?	29·215	24th	28·899	5th	·316	60·8	80·5	−4·7	55·0	−0·1	67·8	−2·4	25·5	90·7	5th	46·3	22nd	44·4
		Nagpur	1,025	28·984	+·009	30·005	29·123	24th	28·874	12th	·249	64·7	84·2	−4·9	60·9	+1·6	72·6	−1·7	23·3	91·1	11th	51·7	13th	39·4
43	Central Provinces (Central).	Chanda	634	29·402	+·007	30·005	29·533	24th	28·307	11th	·226	67·9	86·2	−5·4	63·7	+4·9?	75·0	−0·3?	22·5	92·2	11th	50·7	14th	41·5
		Seoni	2,033	27·978	+·018	30·031	28·119	24th	27·869	11th	·250	61·1	78·7	−5·2	55·6	+0·5	67·2	−2·4	23·1	86·8	28th	46·0	25th	40·8
		Jubbulpore	1,327	28·679	+·006	30·027	28·833	24th	28·565	4th	·268	59·2	77·3	−4·6	54·1	+2·4	65·7	−1·1	23·2	87·9	6th	43·4	25th	44·5
		Saugor	1,807	28·215	+·029	30·052	28·362	24th	28·087	5th	·275	59·7	77·3	−3·3	54·4	+0·2	65·9	−1·6	22·9	85·4	4th & 6th.	47·6	22nd	37·8
49	Central India	Sutna	1,040	28·998	+·035	30·055	29·133	23rd	28·895	12th	·238	59·0	75·1	−4·1	54·7	+3·7	64·9	−0·2	20·4	86·4?	7th	45·2	16th	41·2
44	Central Provinces (East).	Raipur	970	29·046	+·018	30·006	29·179	24th	28·930	11th	·249	56·0	80·8	−6·0	61·8	+1·8	71·3	−2·1	19·0	89·3	5th	53·8	25th	35·5
		Sambalpur	486	29·559	+·021	30·014	29·667	25th	29·428	11th	·239	67·3	82·4	−5·5	63·2	+3·7	72·8	−0·9	19·2	89·6	6th & 11th.	54·1	26th	35·5
39	Hyderabad (North).	Indur		28·711			28·819	3rd	28·622	12th	·197	71·3	86·8		61·8		74·3		25·0	91·8	10th	54·1	24th & 26th.	37·7
		Bidar	2,165?	27·813?		29·944?	27·951	24th	27·732	19th	·219	71·4	86·0		63·4		74·7		22·6	92·0	10th	57·0	13th	35·0
53	Hyderabad (South).	Gulbarga	1,502	28·499		29·977	28·594	19th	28·408	12th	·186	72·0	90·1		65·9		78·0		24·2	94·6	10th	55·9	14th	38·7
		Raichur	1,309	28·679	P	29·977	28·779	19th	28·591	12th	·188	74·2	90·0	−2·7	69·2	+1·0?	79·6	−0·9?	20·8	94·1	10th & 12th.	59·7	14th	34·4
		Hyderabad (Deccan).	1,690	28·310	−·019	29·983	28·404	19th	28·194	12th	·210	70·0	86·9	−4·1	65·8	+3·1	76·4	−0·5	21·1	91·9	10th	58·8	14th	33·1
		Secunderabad	1,787	28·212	−·009	29·983	28·293	26th	28·113	12th	·180	69·2	88·0	−3·0?	65·5	+2·8	76·8	−0·1?	22·5	93·6	10th	57·2	14th	36·4
		Hanumkonda	865	29·130		29·989	29·230	24th	29·027	12th	·203	71·6	87·5		67·2		77·3		20·3	92·5	10th	58·2	14th	34·3
	X.—West Coast				+·002								86·0	−0·5	71·4	+1·0	78·7	+0·2	14·6					28·4
37	Konkan	Bombay	37	30·003	+·018	29·980	30·124	19th	29·922	28th	·202	69·6	80·9	−1·6	66·4	−2·0	73·7	−1·8	14·5	90·5	26th	58·5	22nd	32·0
		Ratnagiri	110	29·895	+·014	29·946	29·997	19th	29·823	28th	·174	72·0	84·4	−1·9	67·7	+0·8	76·1	−0·6	16·7	94·4	2nd	56·0	13th	38·4
		Mormugao	60	29·959?	P	29·955?	30·052	19th	29·891	28th	·161	73·4	84·4	−0·6	71·4	+0·1	78·0	−0·3	13·0	92·0	25th	62·8	13th	29·2
		Goa	199	29·797	+·004	29·936	29·892	19th	29·725	28th	·167	73·4	82·8	−4·0?	69·4	−0·7	76·1	−2·4?	13·4	91·0	25th	61·5	16th & 17th.	29·5
		Karwar	44	29·969	+·012	29·945	30·047	19th	29·901	28th	·146	70·8	85·1	−1·1	68·2	+1·1	76·7	0	16·9	91·3	4th & 25th.	60·5	14th & 16th.	30·8
38	Malabar	Cochin	11	29·982	−·005	29·920	30·043	19th	29·935	13th	·108	80·2	93·3	+3·8?	76·5	+3·4	84·9	+3·6?	16·8	96·5	26th	71·1	3rd	25·4
		Calicut	27	29·961	−·017	29·917	30·025	18th	29·901	12th	·124	78·9	89·5	+0·7	74·0	+1·5	81·8	+1·1	15·5	92·3	21st	69·5	3rd	22·8
		Mangalore	65	29·932	−·010	29·929	30·002	19th	29·872	12th	·130	78·1	87·9	+0·1	73·8	+2·4	80·9	+1·3	14·1	93·8	3rd	69·5	16th	29·3
		Trivandrum	198	29·769	P	29·900	29·826	19th	29·725	13th	·101	78·0	85·9	+0·9	75·1	+3·0	80·5	+2·0	10·8	89·0	25th	70·5	3rd	18·5

* Mean of 25 days.

I—*continued.*

in India, Burma, etc., in February, 1901—continued.

Wind Direction. Number of winds from Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st January to 28th February 1901.	Normal rainfall for period, 1st January to 28th February.	Variation from normal of period, 1st January to 28th February.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
1	8	7	8	1	1			2	N 45° E	5·0	8·2	5·3	+ 52	51	·306	2·0	0	0	0	0	0·01	−0·01	0·38	0·96	+ 0·32	0	Surat	Gujarat.	45
	6	11	2	1				8	N 15° E	2·5				36	·209	0·7	0			0	0·16	−0·16	0·04	0·20	− 0·16	0	Ahmedabad		
5		3		8		4		8	S 45° W	4·2	5·0	4·0	+ 25	72	·338	2·5	2	0·36	+1·64	0·58	0·21	+0·37	1·77	0·74	+ 1·03	0·37	Agra	N.-W. P., West	22
14	1	2	3	2	1	2	2	1	S 66° E	3·6		2·7	+ 33	72	·371	2·8	2	1·09	+0·91	1·18	0·33	+0·85	3·19	0·92	+ 2·27	0·99	Jhansi	N.-W.P., Central.	21
																				1·17	0·21	+0·96					IX.—Deccan.		
14	1	3	4	2		1	2	1	N 67° E	10·4†		10·0	+ 4	58	·397	3·0	0	0·09	− 0·09	0·03	0·02	+ 0·01	0·05*	0·08	− 0·03	0·03	Belgaum	Bombay (Deccan).	38
1	1	5	3	8		4		6	N 87° E	10·5	7·6	6·5	+ 17	47	·334	4·3	0	0·09	− 0·09	0·11	0·03	+ 0·08	0·73	0·14	+ 0·59	0·07	Sholapur.		
1			4	5		3	5	10	N 78° W	9·2	10·4	6·3	+ 65	44	·261	1·8	0	0	0	0	0·04	− 0·04	0·22	0·10	+ 0·12	0	Poona.		
2	2	1	3	4		2	7	7	N 63° W	4·9	4·8			54	·379	2·5	2	0·10	+ 1·90	0·22	0·02	+ 0·20	0·22	0·06	+ 0·16	0·12	Bijapur.		
	3	5					16	4	N 59° W	5·3	6·1	5·0	+ 22	35	·202	1·0	0	0·18	− 0·18	0	0·05	− 0·05	0·74	0·21	+ 0·53	0	Malegaon	Khandesh.	40
5	8	2		1	2	1	1	8	N 24° W	5·2	6·3			48	·282	1·5	0			0·03	0·46	− 0·43	1·41	0·47	+ 0·97	0·03	Ahmednagar.		
4		3	8	1	1	3	7	1	S 45° E	6·3	6·8	3·8	+ 79	42	·262	3·4	0	0·18	− 0·18	0·08	0·13	− 0·05	1·44	0·56	+ 0·88	0·05	Akola	Berar.	41
	3	8	6	2	3	5	1		N 86° E	6·5	5·8	3·7	+ 57	46	·299	3·8	0	0·27	− 0·27	0·06	0·19	− 0·13	2·68	0·58	+ 2·10	0·06	Amraoti.		
7			9			1	4	7	N 9° W	5·3		3·6	+ 47	42	·236	2·5	0	0·18	− 0·18	0	0·06	− 0·06	1·48	0·37	+ 1·11	0	Khandwa	Central Provinces (West).	42
		19	1	2		5		1	N 52° E	5·2	5·3	2·9	+ 83	60	·325	3·2	2	0·36	+ 1·64	0·37	0·23	+ 0·14	2·49	0·48	+ 2·01	0·23	Hoshangabad.		
17	2	3	2	1			1	2	N 27° E	5·2		5·1	+ 2	64	·405	5·4	4	0·91	+ 3·09	1·04	0·27	+ 0·77	2·01	0·82	+ 1·19	0·37	Nagpur.		
8	2	4	4	2	1		3	4	N 25° E	2·3		2·7	− 15	71	·494	5·8	4			1·29	0·23	+ 1·06	2·07	0·60	+ 1·47	0·51	Chanda	Central Provinces (Central).	43
	7	9	3	1	4	3		1	N 45° E	5·4		2·9	+ 86	67	·365	3·9	4	1·55	+ 2·45	1·09	0·75	+ 0·34	3·49	1·38	+ 2·11	0·49	Seoni.		
6	4	7	1	5	3		1	1	N 68° E	3·1		2·5	+ 24	76	·394	4·0	2	0·91	+ 1·09	1·12	0·47	+ 0·65	3·40	1·23	+ 2·17	0·64	Jubbulpore.		
	2	6	9	6	1	1	3		N 89° E	6·8	7·8	2·8	+179	55	·290	3·0	1	0·82	+ 0·18	0·17	0·30	− 0·13	3·06	1·00	+ 2·06	0·11	Saugor.		
3	4	3	5		1	2	6	4	N 26° W	3·6	3·9	4·7	− 17	72	·369	4·4	2	1·18	+ 0·82	0·67	0·59	+ 0·08	2·57	1·64	+ 0·93	0·34	Sutna	Central India	49
15	2	6	5						N 56° E	4·6	4·2	3·7	+ 14	78	·504	5·7	11	0·73	+10·27	4·68	0·33	+ 4·35	5·37	0·53	+ 4·84	1·51	Raipur	Central Provinces (East).	44
	7	11	5	2	1			2	N 43° E	3·5‡	3·4‡	1·7	+100	78	·535	4·7	7			4·98	0·51	+ 4·47	5·70	0·81	+ 4·89	2·17	Sambalpur.		
13		1	1	3		3	2	5	W	5·0	4·8			63	·483	2·7	5			3·82	0·01	+ 3·81	3·89	0·06	+ 3·83	1·50	Indur.	Hyderabad (North).	39
1	5	3	8	1	2	4	3	1	N 63° E	8·3	6·9			71	·553	0·7	2			0·31	0·01	+ 0·30	0·40	0·01	+ 0·39	0·16	Bidar.		
4	3	7	6	3	3	2			N 85° E	10·1	9·7			56	·448	3·1	2			0·43	0·12	+ 0·31	0·47	0·20	+ 0·27	0·30	Gulbarga	Hyderabad (South).	53
2	4		1	11	4	1		5	S 43° E	7·8	7·6			61	·528	3·9	3			2·80	0·08	+ 2·72	2·80	0·12	+ 2·68	0·98	Raichur.		
17	1	1	4	3	1			1	S 83° E	5·1	4·9			73	·543	4·3	6			2·26	0·04	+ 2·22	2·60	0·13	+ 2·47	0·18	Hyderabad (Deccan).		
	1	8	6	11		1		1	S 87° E	6·5		3·8	+ 71	77	·552	3·5	5			2·37	0·04	+ 2·33	2·50	0·13	+ 2·37	1·09	Secunderabad.		
6	3			10	5	1	1	2	S 26° E	9·3	7·9			78	·614	5·7	4			1·27			1·88			0·54	Hanumkonda.		
																				0·60	0·15	+0·45					X.—West Coast.		
	8	12	6	1				1	N 41° E	10·8		10·7	+ 1	64	·475	1·8	0	0	?	0	0·01	−0·01	0·74	0·14	+ 0·60	0	Bombay	Konkan.	37
7	5	3	5	4				4	N 45° E	5·0	5·0	9·8	− 49	61	·487	2·1	0	0	0	0·02	0	+ 0·02	0·03	0·22	− 0·19	0·02	Ratnagiri.		
3	10	1	9	4				1	N 54° E	10·5				73	·609	1·9	0			0	0	0	0	0	0	0	Mormugao.		
1	7	8	12						N 54° E	9·2				70	·587	2·7	0			0	0	0	0	0·25	− 0·25	0	Goa.		
2	10	10	6						N 37° E	4·9				78	·589	1·7	0	0	0	0	0	0	0	0·12	− 0·12	0	Karwar.		
1	10	14	2			1			N 30° E	6·3				75	·784	3·5	2	1·00	+1·00	0·63	0·62	+ 0·01	1·36	1·21	+ 0·15	0·43	Cochin	Malabar.	38
2	2	11	8	3	1			1	N 67° E	9·3	11·7			77	·760	3·2	1	0·13	+ 0·87	1·13	0·22	+ 0·91	2·41	0·30	+ 2·11	1·13	Calicut.		
6	1	5	9	7					S 89° E	3·0		3·5	−14	71	·688	3·8	1	0	+1·00	0·15	0·01	+ 0·14	0·24	0·10	+ 0·14	0·15	Mangalore.		
10	4	7	4	2				1	N 49° E	4·6				79	·769	3·9	6			3·48	0·51	+ 2·9	4·08	1·15	+ 2·93	2·00	Trivandrum.		

† Mean of 26 days. ‡ Mean of 27 days.

Table

Abstract of Observations taken at 8 A.M. at 221 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	XI.—South India				−·002								89·1	+0·1	70·8	+3·9	80·0	+2·0	18·3					28·5
57	Madras (South)	Pamban	37	29·963		29·927	30·026	19th	29·905	12th	·121	81·1	87·9		75·5		81·7		12·4	90·8	22nd	74·2	12th, 23rd & 24th.	16·6
		Tinnevelly	168	29·840	?	29·940	29·900	19th	29·752	13th	·147	79·8	93·0	+0·8	75·5	+2·9	84·3	+1·9	17·5	97·8	15th	69·9	2nd	27·9
		Madura	447	29·555	−·015	29·942	29·625	19th	29·472	13th	·153	79·6	92·9	+0·8	73·9	+4·7	83·4	+2·8	19·0	96·4	14th	70·0	1st	26·4
		Periya Kulam		29·060			29·127	19th	28·975	13th	·152	75·9	91·5		70·1		80·8		21·4	95·2	14th	59·3	3rd	35·9
34	Madras (South Central).	Salem	940	29·086	−·025	29·975	29·148	19th	29·003	13th	·145	78·3	95·0	+1·6	71·8	+7·0	83·4	+4·3	23·2	99·2	14th	63·9	3rd	35·3
		Coimbatore	1,348	28·656	−·012	29·964	28·715	19th	28·576	13th	·139	75·0	92·3	+0·3	70·4	+5·4	81·3	+2·9	21·9	94·9	16th & 22nd.	62·3	3rd	32·6
35	Coorg	Mercara	3,781	26·298	+·009		26·365	19th	26·248	13th	·117	64·8	79·6	−1·6	60·6	+3·3	70·1	+0·9	19·0	83·0	28th	53·7	2nd	29·3
36	Mysore	Chitaldroog	2,405	27·598?	+·005	29·939?	27·663	19th	27·524	12th	·139	73·4	88·3	−1·1	67·1	+1·3?	77·7	+0·1?	21·2	92·1	9th	61·9	16th	30·2
		Bangalore	3,021	27·016	−·010	29·965	27·081	19th	26·948	13th	·133	68·7	85·6	+0·4	63·5	+4·6	74·6	+2·5	22·1	88·8	11th & 22nd.	55·9	3rd	32·9
		Hassan	3,081	26·950		29·966	27·018	19th	26·881	12th	·137	70·7	85·3		61·2		73·3		24·1	88·0	10th	54·2	3rd	33·8
		Mysore	2,518	27·504	+·009	29·960	27·568	19th	27·445	12th	·123	72·1	89·3	+0·5	66·5	+3·4	77·9	+2·0	22·8	91·6	15th	59·4	2nd	32·2
53	Madras (East Coast, South).	Negapatam	31	29·966	−·026	29·926	30·031	19th	29·893	13th	·138	81·4	86·5	+2·3	77·1	+5·6	81·8	+4·0	9·4	90·2	9th & 16th.	69·9	3rd	20·3
		Cuddalore	12	30·004	?	29·946	30·076	19th	29·915	13th	·161	77·5	86·7	+1·2	73·2	+4·2	79·9	+2·7	13·5	89·2	13th	69·2	2nd	20·0
		Trichinopoly	255	29·759	−·017	29·951	29·830	19th	29·666	13th	·164	78·3	94·0	+2·0	73·4	+5·6	83·7	+3·8	20·6	98·1	14th	66·9	2nd	31·2
		Madras	22	29·998	−·019	29·951	30·068	19th	29·897	13th	·171	79·7	87·7	+1·1	73·0	+5·0	80·3	+3·1	14·7	89·5	25th	67·5	2nd, 10th & 11th.	22·0
		Vellore	707	29·306		29·966	29·381	7th	29·225	14th	·156	75·2	90·1		71·2		80·9		18·9	95·4	14th	62·4	25th	33·0
55	Madras (East Coast, Central).	Nellore	71	29·954	+·018	29·959	30·036	26th	29·844	13th	·192	76·9	89·6	−0·9	72·5	+3·6	81·1	+1·4	17·1	94·8	15th	68·1	3rd & 4th	26·7
		Masulipatam	15	30·021	+·009	29·971	30·103	19th	29·908	12th	·195	77·4	85·9	−0·9	71·8	+4·1?	78·9	+1·6?	14·1	89·5	13th	67·2	3rd, 4th & 5th.	22·3
54	Madras (Central)	Cuddapah	433	29·573	+·007	29·951	29·652	26th	29·460	12th	·192	79·1	94·9	+0·5	72·5	+4·3	83·7	+2·4	22·4	99·2	13th	65·4	3rd & 4th.	33·8
		Kurnool	924	29·072	−·001	29·959	29·172	19th	28·961	12th	·211	73·2	91·9	−2·5	68·4	+4·7	80·1	+1·1	23·5	95·2	12th	57·8	14th	37·4
		Bellary	1,475	28·527	+·011	29·968	28·599	19th	28·420	12th	·179	74·3	92·4	−1·7	69·0	+4·2	80·7	+1·3	23·4	96·5	9th	60·2	3rd	36·3
52	Madras (East Coast, North).	Cocanada	26	30·011	+·015	29·972	30·101	19th	29·902	13th	·199	76·2	84·0	−1·9	71·7	+2·1	77·9	+0·1	12·3	89·1	12th	66·0	5th	23·1
		Waltair (Vizag.)	226	29·816	+·022	29·987	29·898	19th	29·696	13th	·202	75·7	82·8	−2·2	71·6	+0·5	77·2	−0·9	11·2	85·9	13th	66·4	4th	19·5
		Gopalpur	21	30·030	?	29·991	30·131	19th	29·895	12th	·236	72·3	82·2	−1·1	66·9	−0·9	74·5	−1·0	15·3	85·8	13th	60·6	27th & 28th	25·2
	XII.—Hill Stations.																							
48	Baluchistan	Shahrig		25·838			25·960	21st	25·700	5th & 6th.	·260	43·7	60·9		21·7		41·3		39·2	75·0	28th	10·0	26th	65·0
		Pishin											52·6		18·2		35·4		34·4	68·0	26th & 28th.	11·0	19th	57·0
		Quetta	5,502	24·694	+·033		24·820	23rd	24·558	5th	·262	32·2	51·2	−0·9	25·5	−5·9	38·4	−3·4	25·7	65·7	26th	19·8	18th & 23rd.	45·9
		Kalat										28·5	46·4		15·5		31·0		30·9	66·1	27th	8·0	4th	58·1
		Chaman	4,311	25·779	+·057		25·916	24th	25·643	5th	·273	37·6	52·9	−3·8	32·4	−3·5	42·7	−3·7	20·5	69·3	26th	27·1	20th & 21st.	42·2
30	Punjab	Leh	11,503	19·655	+·055		19·920	26th	19·469	22nd	·451	10·2	22·6	−12·3	5·1	−5·4	13·9	−8·9	17·5	29·0	9th	−6·5	16th	35·5
		Srinagar	5,204	24·954	+·017		25·120	26th	24·777	22nd	·343	32·2	43·3	+1·6	30·5	+4·0	36·9	+2·8	12·3	53·5	27th	26·1	16th	27·4
		Astor (Kashmir)		22·649			22·913	26th	22·463	22nd	·450	20·6	37·6		17·9		27·8		19·7	43·9	20th	9·0	12th	34·9
		Minimarg		21·307			21·538	26th	21·082	22nd	·456	15·0	34·4		8·8		21·6		25·6	42·0	22nd	−5·0	15th & 16th.	47·0
		Skardu		22·951			23·245	26th	22·758	22nd	·487	18·5	35·0		13·7		24·4		21·3	41·4	24th	4·1	5th	37·3
		Dras		20·794			21·085	26th	20·605	22nd	·480	1·1	21·1		−12·5		4·3		33·7	33·8	3rd	−33·9	16th	67·7
		Gilgit		25·264			25·521	26th	25·065	22nd	·456	40·6	52·0		35·8		43·9		16·2	59·4	27th	31·1	12th	28·3
		Chitral		24·666			24·825	20th	24·550	8th	·275	32·9	62·0†		22·7		46·7†		29·3	68·1	1st & 4th	27·0	19th	41·1
		Killa Drosh										35·1	53·7		30·4		42·1		23·3	62·3	26th & 28th.	25·8	1st	36·5
		Para Chinar	6,000									36·1	49·5		29·2		39·4		20·3	62·1	28th	22·1	18th	40·0
		Cherat		25·777	+·043		25·890	18th	25·648	22nd	·242	41·7	51·0	−1·0	38·5	−1·3	44·3	−1·2	12·5	64·8	28th	33·5	8th	31·3

† Mean of 20 days.

I—*continued.*

in India, Burma, etc., in February, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Hygrometry, 8 A.M. Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st January to 28th February 1901.	Normal rainfall for period, 1st January to 28th February.	Variation from normal of period, 1st January to 28th February.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				2·24	0·27	+2·02					**XI.—South India.**		
		16	7	2	2			1	N 65° E	10·4	11·0			81	·858	2·8	4	0·50	+ 3·50	0·78	0·13	+ 0·65	2·35	1·93	+ 0·42	0·28	Pamban	Madras (South).	57
	11	11		1			1		N 14° E	5·1	4·9			80	·820	4·6	1	1·50	− 0·50	0·37	0·77	− 0·40	3·26	2·03	+ 1·23	0·32	Tinnevelly.		
3	9	6	2	3	1			4	N 23° E	3·4	3·4	5·0	− 32	76	·775	4·8	2	0·45	+ 1·55	0·75	0·31	+ 0·44	1·45	0·64	+ 0·81	0·53	Madura.		
21	2		2	1	1		1		N 79° E	2·0				78	·671	2·9	3			2·13			8·12			0·82	Periya Kulam		
7		8	12			1			N 74° E	6·3	5·7	5·6	+ 2	73	·717	3·3	2	0·09	+ 1·91	0·43	0·30	+ 0·13	0·43	0·61	− 0·18	0·27	Salem	Madras (South Central).	34
		9	19						N 76° E	3·7	3·3	3·2	+ 3	81	·713	5·3	2	0·30	+ 1·70	0·64	0·29	+ 0·35	1·07	0·48	+ 0·59	0·34	Coimbatore.		
10		5	13						N 78° E	5·8	5·4	4·0	+ 35	84	·528	6·4	2	0·30	+ 1·70	0·95	0·07	+ 0·88	1·07	0·11	+ 0·96	0·61	Mercara	Coorg.	35
	2	3	6	6	1	2	4	4	N 86° E	7·6	6·6			66	·545	3·4	1			0·28	0·04	+ 0·24	0·55	0·28	+ 0·27	0·20	Chitaidroog	Mysore.	36
1		3	9	9	4		1	1	S 64° E	8·6	7·5	3·6	+108	81	·575	3·0	3	0·18	+ 2·82	3·11	0·11	+ 3·00	3·11	0·30	+ 2·81	2·65	Bangalore.		
		3	8	11	4	1		1	S 60° E	3·2	2·8			71	·532	5·1	2			1·37	0·09	+ 1·28	1·67	0·79	+ 0·88	1·24	Hassan.		
																				0·83	0·13	+ 0·70	0·89	0·21	+ 0·68	0·72	Mysore.		
1		4	5	4	5	5	2	2	S 28° E	7·4	8·0			72	·567	4·8	2												
4	2	13	2		2	1		4	N 34° E	14·6	12·8	3·6	+256	78	·842	4·4	3	0·55	+ 2·45	2·04	0·53	+ 1·51	3·26	1·99	+ 1·27	1·05	Negapatam	Madras (East Coast, South).	56
25	1		1					1	N 11° E	1·5	1·9			85	·807	4·8	6	0·40	+ 5·60	8·19	0·31	+ 7·88	10·76	1·36	+ 9·40	2·84	Cuddalore.		
20	1	6			1				N 45° E	3·6		4·1	− 12	81	·784	3·0	1	0	+ 1·00	0·24	0·90	− 0·66	0·24	1·16	− 0·92	0·12	Trichinopoly.		
	5	1	8	3	9	2			S 59° E	6·6		5·0	+ 32	77	·788	3·6	5	0·09	+ 4·91	2·31	0·28	+ 2·03	3·03	1·17	+ 1·86	0·67	Madras.		
25				3					S 45° E	2·9				83	·729	3·0	3			1·29			1·29			0·55	Vellore.		
3	1	1		12	1	1		9	S 45° E	4·5				87	·809	4·5	3	0·20	+ 2·80	1·19	0·09	+ 1·10	1·19	0·53	+ 0·66	0·55	Nellore	Madras (East Coast, Central).	55
6	6	5	3	7	1				N 72° E	7·6		5·1	+ 49	85	·800	4·0	5	0·27	+ 4·73	8·90	0·17	+ 8·73	9·07	0·29	+ 8·78	3·80	Masulipatam		
		14	2	8		3		1	N 79° E					69	·682	2·1	3	0·10	+ 2·90	2·76	0·06	+ 2·70	2·77	0·08	+ 2·69	2·03	Cuddapah	Madras (Central).	54
21			1	3	2		1		S 28° E					71	·591	3·4	3	0	+ 3·00	3·31	0	+ 3·31	4·19	0·08	+ 4·11	2·62	Kurnool.		
3	1	1	6	6	3			8	N 89° E	5·9	6·3	4·0	+ 58	59	·508	4·8	4	0·09	+ 3·91	1·80	0·04	+ 1·76	1·80	0·17	+ 1·63	0·78	Bellary.		
8	4	11	3					2	N 36° E	10·5	8·8			80	·717	4·4	3	0·40	+ 2·60	1·98	0·43	+ 1·55	3·09	0·57	+ 2·52	0·72	Cocanada	Madras (East Coast, North).	52
4	1	11	2	2	2	4	2		N 68° E	9·5				76	·663	4·0	3			4·80	0·11	+ 4·69	7·68	0·30	+ 7·38	2·54	Waltair (Vizag.).		
	10	3				3		12	N 25° W	11·7	11·5	9·6	+20	84	·660	1·4	4	1·13	+ 2·87	1·91	0·57	+ 1·34	2·99	0·73	+ 2·26	1·41	Gopalpur.		
																											XII.—Hill Stations.		
8						1	19		S 37° W	6·7				37	·105	0·2	1			0·30	1·59	− 1·29	0·46	4·10	− 3·64	0·30	Shahrig	Baluchistan.	48
																	1			0·24	2·36	− 2·12	2·64	5·20	− 2·56	0·24	Pishin.		
27								1	N 45° W	1·6	1·7	4·4	− 61	77	·138	1·8	0	4·09	− 4·09	0·07	2·21	− 2·14	2·19	4·32	− 2·13	0·06	Quetta.		
	5		1		21		1		S								0			0·09	2·61	− 2·52	2·83	4·51	− 1·68	0·09	Kalat.		
			7	14	3	3		1	S 45° E	5·4	5·7			84	·194	1·4	1			0·53	1·66	− 1·13	2·48	3·31	− 0·83	0·53	Chaman.		
		11	8		3	5	1		N 84° E	1·4				45	·033	7·5	1			0·22	0·28	− 0·06	1·16	0·61	+ 0·55	0·10	Leh	Punjab.	30
																				3·05	2·94	+ 0·11	5·56	5·53	+ 0·03	1·04	Srinagar.		
7	2			5	9	3		2	S	4·3	4·6			92	·171	7·9	9												
4					5	17	1	1	S 40° W	6·0				70	·082	5·3	2			0·59			2·45			0·24	Astor (Kashmir.)		
21		1	1	3	2				S 48° E	4·9				81	·073	6·6	7			3·20			8·78			1·07	Minimarg.		
26		1	1						N 66° E	1·5	1·8			94	·096	7·2	1			0·26	1·45	− 1·19	0·95	3·73	− 2·78	0·17	Skardu.		
27								1	N 45° W	0·1	0·1			94	·043	5·8	9			2·58			5·76			0·51	Dras.		
23						2	3		S 76° W	1·4	1·4			52	·130	6·7	0			0·08	0·11	− 0·03	0·33	0·25	+0·08	0·08	Gilgit.		
2	6						20		N 73° W					78	·146		0			0			0			0	Chitral.		
8	3		7	1	5	2	2		S 45° E					78	·156	3·2	2			0·49			0·49			0·21	Killa Drosh.		
	8	2	1		1	3	8	5	N 48° W	3·2				73	·152	2·6	2			1·39			3·86			0·56	Para Chinar.		
1	15	1		1			1	9	N 16° W	12·4	11·5			59	·152	2·8	4			2·61	2·34	+ 0·27	8·62	5·28	+3·34	1·09	Cherat.		

Table

Abstract of Observations taken at 8 A.M. at 221 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
30	Punjab—(*concld.*)	Murree	6,333	23·854	+·039		23·956	18th	23·726	22nd	·230	36·8	43·4	−4·1	32·6	−1·3	38·0	−2·7	10·8	57·2	28th	27·0	8th	30·2
		Poo											38·7		23·6		31·2		15·1	45·2	3rd	17·2	15th	28·0
		Simla	7,224	23·095	+·016		23·217	2nd	22·965	12th	·252	37·0	43·5	−3·5	33·6	−2·4	38·6	−3·0	9·9	53·5	27th	24·8	22nd	28·7
25	North-Western Provinces.	Chakrata	7,022	23·281	+·023		23·382	2nd	23·162	22nd	·220	37·5	47·4	−3·5	34·2	−1·5	40·8	−2·5	13·2	58·8	27th	25·8	23rd	33·0
		Mussooree	6,705	23·573	+·029		23·666	2nd	23·452	12th	·214	39·4	47·0		36·0		41·5		11·0	56·2	27th	26·5	21st	29·7
		Ranikhet	6,069	24·139	+·040		24·247	18th	24·017	12th	·230	43·4	53·8	−1·2	39·8	−0·8	46·8	−1·0	14·0	61·2	22nd & 27th.	31·0	14th	30·2
		Muktesar		22·854			22·966	18th	22·728	12th	·238	39·8	49·3		34·5		41·9		14·8	59·5	2nd	25·9	15th	33·6
13	Bengal	Yatung	10,480?										45·9		23·9		34·9		22·0	51·1	21st	14·9	16th	36·2
		Darjeeling	7,409	23·029	+·087		23·182	19th	22·916	14th	·266	42·3	51·8	+5·6	38·0	+3·9	44·9	+4·8	13·8	57·3	9th	31·7	16th	25·6
		Gantok	5,660	24·489			24·552	18th	24·443	11th, 12th & 31st.	·109	45·3	62·6		25·4		44·0		37·2	66·3	28th	21·0	17th & 18th.	45·3
	Central India	Mount Abu	3,945	26·095	−·021		26·208	24th	26·000	6th	·208	55·0	64·7	−4·2	49·8	−3·4	57·3	−3·8	14·9	75·1	3rd	40·6	22nd	34·5
		Pachmarhi	3,528	26·531	+·002		26·658	24th	26·429	12th	·229	58·5	71·6	−3·5	50·3	−0·4	61·0	−2·0	21·3	79·2	5th	39·3	25th	39·9
	South India	Wellington	6,200	24·310	−·003		24·367	19th	24·261	13th	·106	58·2	71·2	+0·8	52·0	+5·3	61·6	+3·1	19·2	74·7	12th & 15th.	42·7	3rd	32·0
		Kodaikanal	7,688	22·878			22·936	19th	22·841	13th	·095	55·4	63·4		48·6		54·9		14·8	67·0	12th	43·3	1st & 2nd.	23·7
XIII.—Extra India.																								
	Ceylon	Trincomalee	12	29·985	−·001	29·923	30·046	19th	29·922	13th	·124	80·5	87·4	+0·6	76·3	+1·3	81·9	+1·0	11·1	90·5	13th	73·0	2nd	17·5
		Colombo	40	29·940	−·014	29·906	29·990	19th	29·887	13th	·103	79·0	90·3	+2·0	73·6	+1·0	82·0	+1·5	16·7	94·0	20th	71·0	20th	23·0
	Persia	Meshed	3,104									33·4			28·2							20·0	6th	
		Teheran																						
		Ispahan		24·453†			24·575	2nd & 17th.	24·350	13th	·225	38·6	62·4		30·1		46·3		32·3	69·3	27th	19·9	2nd	49·4
		Bushire	14	30·167	+·092	30·140	30·303	3rd	30·052	28th	·251	57·3	66·1	+0·1	52·9	+0·4	59·5	+0·3	13·2	72·1	24th	45·3	1st	26·8
		Jask		30·188	+·136		30·330	9th	30·044	14th	·286	65·2	74·8	+0·1	60·0	−1·7	67·4	−0·8	14·8	77·8	15th & 28th.	53·8	5th	24·0
		Muscat	20	30·155		30·123	30·257	20th	30·024	28th	·233	68·2	71·1		66·0		68·6		5·1	75·2	28th	62·9	19th	12·3
	Arabia	Baghdad	220	30·055	+·092	30·266	30·233	2nd	29·806	27th	·427	51·9	75·1	+9·5	47·2	+6·9	61·2		27·9	84·8	21st	35·5	2nd	49·3
		Bussrah		30·209			30·380	2nd	30·067	28th	·313		68·4		49·8		59·1		18·6	81·3	28th	40·0	1st & 2nd.	41·3
		Aden	94	30·008	+·053	30·036	30·077	10th	29·931	24th	·146	74·3	79·0	−3·4	72·4	−0·6	75·7	−2·0	6·6	82·8	28th	66·9	18th	15·9
		Perim	201	29·879		30·008	29·937	10th	29·799	25th	·138	75·8	82·7		73·5		78·1		9·2	84·7	6th	72·2	26th	12·5
	Afghanistan	Kabul										17·6	41·2		12·7		27·0		28·5	55·2	28th	5·4	11th	49·8
	Central Asia	Kashgar		25·851‡			26·230	1st	25 629	28th	·601	21·9‡	43·4‡		17·3‡		30·4‡		26·1	60·5	27th	10·5	6th	50·0
	Arabian Sea Islands.	Amini Devi	13	29·981		29·922	30·035	16th	29·946	12th	·089	83·7	86·6		76·6		81·6		10·0	88·7	4th	71·9	3rd	16·8
		Minicoy	7	29·992		29·924	30·053	19th	26·942	13th	·111	81·8	86·0							88·4	8th			
	Africa	Zanzibar	73	29·926	+0·12	29·926	30·004	7th	29·866	14th	·138	80·4	84·5		78·4		81·5		6·1	87·3	3rd	73·1	12th	14·2
		Dunga (Zanzibar).		29·858			29·934	7th	29·799	14th	·135	79·0	87·4		71·6		79·5		15·8	92·1	28th	67·1	23rd	25·0

* Mean of 25 days. † Aneroid uncorrected. Note.—When a query is inserted against any reading or in the variation returns for any

I—*concluded.*

in India, Burma, etc., in February 1901—concluded.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st January to 28th February 1901.	Normal rainfall for period, 1st January to 28th February.	Variation from normal of period, 1st January to 28th February.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
14		1		11	2				S 41° E	5·1	6·3	8·2	− 23	78	·165	3·6	5	3·36	+1·64	1·71	3·73	− 2·02	7·72	7·25	+ 0·47	0·60	Murree.	Punjab—(*concld.*)	30
17	2	3	4				1	1	N 39° E							6·5	9			2·53	3·93	− 1·40	5·13	7·13	− 2·00	0·59	Poo.		
6	1	6	4	4	6	1			S 67° E	4·8		2·5	+ 92	69	·148	5·4	10	4·36	+5·64	9·04	2·68	+ 6·36	15·24	5·03	+10·21	1·89	Simla.		
	21	1		1	3	1		1	N	8·5		5·4	+ 57	68	·150	5·1	8			6·67	3·81	+ 2·86	17·02	7·34	+ 9·68	1·40	Chakrata .	North-Western Provinces.	25
	7	3	1	14		1		2	E					68	·163	4·9	8	3·50	+4·50	4·89	2·89	+ 2·00	13·55	5·72	+ 7·83	1·47	Mussooree.		
9	1	9	3	1	1	2	2		N 57° E	2·9	3·3	2·0	+ 65	62	·175	3·6	5	4·09	+0·91	3·40	1·95	+ 1·45	7·43	4·89	+ 2·54	1·56	Ranikhet.		
		3	3	15	1			.6	S 67° E	10·8	10·0			60	·142	3·9	6			1·79			5·88			0·41	Mubtesar.		
																	1			0·43			3·43			0·30	Yatung .	Bengal.	13
5	1	4	3	5	1	4	5		S 27° E	5·0	4·7	5·1	− 8	75	·205	3·4*	0	2·65	−2·65	0·06	0·95	− 0·89	1·69	1·61	+ 0·08	0·02	Darjeeling.		
28									Calm	9·3‡	11·1‡			82	·250	4·5	0			0·10	2·29	− 2·19	2·13	2·98	− 0·85	0·06	Gantok.		
5	4	8	3		1	4	2	1	N 26° E	7·5	7·8	5·6	+ 39	35	·157	1·6	0	0·36	−0·36	0	0·36	− 0·36	0·77	0·78	− 0·01	0	Mount Abu	Central India.	
13			3	4	2	3	1	2	S 13° E	6·4	6·6	3·8	+ 74	55	·275	4·5	2	0·82	+1·18	0·56	0·45	+ 0·11	4·06	0·96	+ 3·10	0·20	Pachmarhi.		
25	1	2							N 31° E	2·2		2·7	− 19	80	·412	2·8	6	0·50	+5·55	3·95	1·53	+ 2·42	10·78	2·57	+ 8·21	1·88	Wellington.	South India.	
	4	6	7	3	2		1	5	N 50° E	11·1				75	·332	3·0	5			3·55			5·60			1·23	Kodaikanal.		
																											XIII.—Extra India.		
10		8				10			S 45° W	1·1				84	·877	2·9	4			2·48	2·59	− 0·11	4·38	10·03	− 5·65	1·10	Trincomalee	Ceylon.	
	4	4	12	6	1	1			N 87° E	7·1		6·2	+ 15	87	·868	2·3	8			3·54	2·63	+ 0·91	15·00	5·55	+ 9·45	1·35	Colombo.		
														78	·149	1·3	0			0	0·90	− 0·90	0·01	1·13	− 1·12	0	Meshed .	Persia.	
																					1·02			2·18			Teheran.		
										1·7	2·2			67	·157	1·5	0			0	0·04	− 0·04	0	0·15	− 0·15	0	Ispahan.		
2	2	13	5	3				3	N 52° E	5·0	6·0			80	·379	0·9	0			0	1·23	− 1·23	1·22	4·46	− 3·24	0	Bushire.		
3	11	3	5					6	N 9° E	11·1	12·9			64	·410	0·8	0			0	1·09	− 1·09	0·60	2·09	− 1·49	0	Jask.		
7	1	1	2	2		1	7	6	N 63° W	3·8	4·0			61	·420	1·9	2			0·48	1·14	− 0·66	0·48	3·50	− 3·02	0·34	Muscat.		
10	6	2	1	1	2		2	4	N 14° W	3·0	4·0			65	·255	2·0	0			0	2·49	− 2·49	0·53	4·08	− 3·55	0	Baghdad .	Arabia.	
	14	1	1		9	2		1	N 5° W								0			0			1·24			0	Bussrah.		
4		12	11	1					N 69° E	17·0‡	16·7‡	12·9	+ 29	72	·604	7·1	0			0·05	0·33	− 0·28	0·33	0·61	− 0·28	0·03	Aden.		
		12	12	3	1				N 78° E	25·7	23·9			79	·710	6·3	4			0·60	0·25	+ 0·35	0·62	0·75	− 0·13	0·16	Perim.		
	6	7					6	9	N 22° W					84	·086		0			0	0·72	− 0·72	0	0·72§	− 0·72	0	Kabul .	Afghanistan.	
13	4	1	2	1	2	1	3		N 18° W	3·5	3·2					1·8‡	0			0·01	0	− 0·01	0·12	0·42	− 0·30	0·01	Kashgar .	Central Asia.	
	21	3						4	N 2° W					71	·818	3·6	0			0·07			0·64			0·04	Amini Devi.	Arabian Sea Islands.	
	8	13	1	1	2			3	N 28° E	4·1	4·4			79	·858	4·8	6			3·40			4·29			0·84	Minicoy.		
2	9	10	3		2	1		1	N 33° E	8·3	7·8			84	·875	7·8	12			10·74	2·98	+ 7·76	12·95	5·93	+ 7·02	1·93	Zanzibar .	Africa.	
7	11	8				1			N 17° E	7·5	7·3			89	·888	7·6	12			9·73			12·73			1·65	Dunga (Zanzibar.)**		

Station, the data for that station are not utilized in calculating the provincial variations. ‡ Mean of 27 days. § Only for February. ** Wind variable].

Tabl

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 6

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bu			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair		29·866	29·856	·110	29·906	+·019	29·898	89·3	77·8†	11·5	91·8	73·1	18·7	84·6	87·3	82·7†	+ 2·8	74·5	78·7	79·8	77
	Rangoon		·991	·854	·137	·919	+·010	·897	91·9	70·4	21·5	96·1	63·1	33·0	82·5	88·9	78·7	+ 2·3	68·1	73·1	73·6	71
	Diamond Island		·994	·878‡	·116	·931	−·001	·908‡	83·7‡	75·7	8·0	87·5	73·0	14·5	81·3	81·9‡	78·8‡	+ 2·2	71·3	75·0	74·8‡	73
	Cocos Island	111	·953‡	·858‖	·095	·902	+·042	·945‖	86·2‖	76·4‡	9·8	88·8	73·5	15·3	83·2‡	82·6‖	79·9‖	+ 3·2	71·9‡	75·1‡	74·7‖	73
	Akyab		30·022	·905	·117	·956	+·002	·918	86·3	61·3	25·0	92·7	54·0	38·7	76·9	81·1	73·0	+ 0·7	?	67·6	70·1	
Bengal and Orissa.	Chittagong		29·973	·874	·099	·917	+·014	·853	85·9	59·6	26·3	92·2	51·4	40·8	77·0	82·3	72·3	+ 2·2	57·5	66·0	67·2	63
	Calcutta (Alipore)		30·071	·947	·124	·998	+·045	·965	81·5	61·6	19·9	87·1	53·1	34·0	74·3	79·9	70·8	+ 0·8	59·5	65·4	66·6	63
	Saugor Island		·054	·937	·117	·983	+·034	·953	80·6	64·8	15·8	85·9	55·4	30·5	74·8	77·7	71·5	− 0·5	63·1	68·1	69·4	66
	False Point		·061	·949	·112	30 002	+·028	·965	81·2	63·1	18·1	85·4	52·4	33·0	77·4	78·5	71·0	− 1·1	62·7	70·1	70·4	67
Gangetic Plain and Chota Nagpur.	Hazaribagh		28·034	27·932	·102	27·979	+·040	·983	72·9	56·2	16·7	81·7	47·2	34·5	66·1	70·5	63·8	− 1·8	52·7	57·0	59·3	56
	Darbhanga		29·904	29·784	·120	29·938	+·025	·964	75·5	56·5	19·0	80·2	43·8	31·4	67·8	74·6	65·7	+ 0·8	54·7	61·5	63·9	60
	Allahabad		·774	·662	·112	·709	+·032	·983	75·8	53·8	22·0	82·0	44·6	37·4	67·1	74·5	64·0	− 1·3	51·6	59·3	61·8	5
Upper Gangetic Plain and Sub-Himalayan.	Dehra Dun		27·791	27·712	·079	27·745	+·039	30·019	66·7	46·4	20·3	74·0	38·5	35·5	57·4	62·9	55·0	− 2·4	43·9	50·0	52·4	48
	Roorkee		29·168	29·076	·092	29·114	+·016	·007	70·4	47·7	22·7	76·4	39·2	37·2	61·7	67·7	57·8	− 2·0	45·1	54·9	55·9	5
	Meerut		·317	·222	·095	·264	+·032	·000	71·7	48·9	22·8	79·3	41·7	37·6	61·5	69·2	59·2	− 1·6	47·1	54·5	57·3	5
	Lahore		·367	·289	·078	·318	+·034	·024	69·7	46·2	23·5	81·0	38·8	42·2	60·0	67·6	56·8	+ 0·1	44·4	54·3	57·3	5
	Ludhiana		·253	·171	·082	·203	+·045	·026	67·1	49·3	17·8	76·9	41·5	35·4	58·8	65·5	57·2	− 0·4	47·5	53·3‖	55·3‡	5
Indus Valley and N.-W. Rajputana.	Peshawar		28·987	28·901	·086	28·934	+·028	·083	65·3	40·8	24·5	77·9	36·2	41·7	57·3	63·8	52·1	− 0·4	38·7	49·4	51·8	4
	Jacobabad		29·929	29·810	·119	29·859	+·038	·012	76·4	44·0	32·4	91·5	37·0	54·5	64·5	74·9	59·2	− 2·6	39·9	52·1	56·1	4
	Kurrachee		30·117	30·004	·113	30·052	+·053	·034	79·2	53·9	25·3	88·0	46·8	41·2	70·5	75·3	65·7	− 2·5	49·2	61·7	66·0	5
East Rajputana, Central India, and Gujarat.	Jaipur		28·634	28·532	·102	28·573	+·031	·006	74·9	50·4	24·5	85·0	40·3	44·7	66·2	72·4	62·0	− 1·3	45·5	54·6	56·9	5
	Udaipur		·116	27·966	·120	·056		29·980	75·8	49·5	26·3	86·5	39·5	47·0	67·4	74·6	62·3		44·7‡	52·6‡	54·2	5
	Deesa		29·604	29·483	·121	29·534	+·028	·965	62·4	51·2	31·2	93·6	40·8	52·8	72·7	81·1	66·5	− 4·0	42·1	53·9	56·4	5
	Jamnagar		30·046	·921	·125	·983		·990	80·0	53·5	26·5	90·2	44·2	46·0	71·4	78·2	66·3		46·2	56·3	57·1	
Deccan.	Belgaum		27·457	27·342	·115	27·395	−·005	·839	85·3	59·7	25·6	89·4	43·4	46·0	76·2	82·7	71·3	− 1·5	55·5	61·2	63·0	
	Sholapur		28·420	28·272	·148	28·341	−·007	·872	88·8	62·9	26·9	95·1	49·2	45·9	77·2	88·4	76·7	− 1·4	53·7	61·2‡	64·5‡	
	Poona		·173	·046	·127	·108	+·007	·890	87·2	55·0	32·2	95·4	42·1	53·3	75·5	84·8	70·6	− 2·5	48·7	56·7	59·7	
	Akola		29·112	·963	·149	29·031	+·018	·923	87·3	56·5	30·8	94·7	43·1	51·6	75·1	86·4	71·4	− 1·7	49·9	58·6	63·0	
	Buldana	2,132	27·884	27·761	·123	27·816	+·002	·301	82·2	58·7	23·5	91·6	48·2	43·4	72·0	80·5	69·7	− 3·5	47·6	54·9	57·4	
	Khandwa		28·982	28·850	·142	28·915	+·018	·926	86·1	54·3	31·8	95·7	40·6	55·1	73·1	85·3	69·8	− 1·5	46·5	57·1	61·2	
	Nagpur		29·013	·873	·140	·837	+·026	·931	84·2	61·0	23·2	91·3	51·7	39·6	72·7	81·7	71·7	− 2·0	55·1	61·9	65·8	
	Nagpur (Sanitary Commr.'s Office.		·033	·896	·137	·959		·942	85·0	60·8	24·2	92·0	51·0	41·0	74·0	83·0	72·4		55·2	62·0	65·3	
	Hyderabad (Deccan).		·324	·189	·135	·251	−·005	·882	87·0	65·8	21·2	92·2	58·7	33·5	78·2	85·2	76·0	− 0·1	62·2	67·5	68·2	
West Coast.	Bombay		30·020	29·902	·118	29·952	+·027	·930	80·4	66·2	14·2	90·6	58·4	32·2	74·1	76·7	72·8	− 2·3	59·1	64·4	66·8	
	Karwar		29·994	·881	·113	·928	+·024	·904	85·2	68·2	17·0	91·5	60·6	30·9	80·3	83·6	76·6	+ 0·1	65·2‡	69·8	72·3	

† Mean of 23 days. ‡ Mean of 27 days. ‖ Mean of 26 days.

II.

Stations in India, Burma, etc., for February, 1901.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Meteorological Provinces.
														Number of winds from																	
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·825†	·906	·919	·883	+·073	86†	76	69	77	+1	3·6	4·4	4·0	+1·2	1	7	30	2	12	2		1	1	N. 58° E.	N. 45° E.	62	74	124	121			Port Blair	Burma Coast and Bay Islands.
·662	·694	·627	·661	+·087	88	63	47	66	+3	2·6	3·1	2·9	+1·0		5	7	8	14	10	4	4	4	S. 53° E.	S. 45° W.	28	17	99	91			Rangoon	
·706	·788	·772‡	·755	+·077	79	74	70‡	74	+2	2·3	1·6‡	2·0	−0·2	4	3	6	5	6	4	1	11	15	N. 45° W.	N. 32° W.	21	85	256	195			Diamond Island.	
·726‡	·763‡	·756‖	·748	+·074	79‡	67‡	68‖	71	+1	2·0‡	1·1‖	1·6	−0·4		24	21	1	2	3	1		1	N. 25° E.	N. 9° E.	72	89	72	377	1·44	1·44	Cocos Island.	
?	·556	·593	?	?	?	60	56	?	?	1·6	2·2	1·9	+0·8			10	18			1	15	12	N. 4° E.	N. 25° W.	27	47	73	85			Akyab	
·449	·496	·467	·471	−·038	88	53	43	61	−9	1·6	1·8	1·7	−0·2		11	18	2	1	2	2	6	14	N. 4° W.	N. 43° W.	53	29	91*	93			Chittagong	
·487	·513	·479	·493	+·025	88	61	49	66	+1	3·1	3·9	3·5	+1·6		12	7	5	2	2	9	5	14	N. 30° W.	S. 89° W.	35	25	99	80			Calcutta (Alipore).	Bengal and Orissa.
·565	·604	·614	·594	−·019	91	70	65	75	0	2·9‡	2·6	2·8	+0·6		21	6	2	2	8	8	4	5	N. 22° W.	S. 52° W.	27	18	212	206			Saugor Island.	
·573	·643	·641	·619	−·009	97	68	65	77	−1	3·4	3·1	3·3	+0·6		3	8	18	4	15	1	2	5	S. 73° E.	S. 12° E.	37	17	151*	191			False Point	
·363	·359	·372	·365	+·112	79	57	52	63	+21	5·5	6·4	6·0	+3·7	3	3	2	3	3	9	2	13	18	N. 77° W.	N. 62° W.	37	55	163*	172			Hazaribagh	Gangetic Plain and Chota Nagpur.
·412	·466	·456	·445	+·063	89	69	54	71	+8	3·5	3·3	3·4	+1·8		4	1	4	4	2	5	22	14	N. 78° W.	S. 78° W.	52	47	99	90			Darbhanga	
·360	·407	·388	·385	+·055·	85	61	46	64	+8	3·8	4·6	4·2	+2·0		6	7	6	3	2	2	16	14	N. 43° W.	N. 63° W.	37	34	144*	100			Allahabad	
·261	·276	·269	·269	−·014	81	59	47	62	0	4·4	5·7	5·1	+0·8	2			1	10	1	8	17	6	S. 63°W.	S. 88° W.	44	28	40¶	43			Dehra Dun	Upper Sub-Himalayas.
·272	·346	·297	·305	+·014	81	63	44	63	+2	2·6	2·8	2·7	−0·7	15	3	2	2	7	3	1	7	16	N. 57° W.	N. 61° W.	23	31	55‡	68			Roorkee	
·307	·339	·319	·322	+·028	87	62	45	65	+7	2·3	3·0	2·7	−0·2	4	8	3	4	3		9	11	14	N. 59° W.	N. 59° W.	39	50	41*	61			Meerut	
·274	·348	·336	·319	+·037	86	67	51	68	+10	3·4	3·6	3·5	−0·2	7	13	2	10	2	8		6	8	N. 6° E.	N. 31° W.	20	31	51	54			Lahore	
·311	·339‖	·306‡	·319	+·016	88	68‖	49‡	68	+4	3·5	3·8	3·7	−0·6	4	5	7	2	12	2	1	5	18	N. 14° W.	N. 50° W.	21	40	61*	44			Ludhiana	
·215	·261	·245	·240	+·007	83	55	42	60	+2	2·2	3·0	2·6	−1·8	21	5	3	3	4	3	3	9	5	N. 67° W.	N. 9° W.	12	9	37*	82			Peshawar	Indus Valley and N.-W. Rajputana.
·197	·229	·203	·210	−·021	66	38	24	43	+1	2·0	2·0	2·0	−1·4	31	1		5	1		3	7	8	N. 67° W.	N. 21° E.	18	24	44*	71			Jacobabad	
·296	·437	·517	·416	+·007	69	58	59	62	+4	0·9	1·3	1·1	−1·7		2	11	6	2	1	14	12	8	N. 76° W.	N. 69° W.	23	20	170*	249			Kurrachee	
·252	·288	·277	·272	+·016	68	45	36	49	+6	3·1	4·1	3·6	+0·6	1	6	13	2	6	5	4	7	12	N. 14° W.	N. 18° W.	21	34	79	93			Jaipur	East Rajputana, Central India, and Gujarat.
·241‡	·220‡	·174	·212		68‡	32‡	20	40		1·1	1·6	1·4		14	1	8	13	6	2	3	6	3	N. 88° E.		23		82*				Udaipur	
·156	·171	·134	·154	−·075	40	21	12	25	−5	0·6	1·1	0·9	−1·5		12	12	8	2	2	3	6	9	N. 10° E.	N. 2° W.	40	30	224	211			Deesa	
·223	·257	·192	·224		52	33	20	35		0·5	0·5	0·5			20	11	2			2	10	11	N. 16° W.		63		253				Jamnagar	
·398	·361	·340	·367	+·039	77	40	31	49	+10	2·8	3·5	3·2	+2·0	1	3	8	9	4	3	12	12	2	S. 58° W.	S. 62° E.	10	14	257**	237			Belgaum	Deccan.
·215	·354‡	·317‡	·328	+·008	52	38‡	24‡	38	+3	3·4	4·2	3·8	+2·3		1	10	7	10	5	7	4	12	S. 83° E.	S. 43° E.	7	24	182*	174			Sholapur	
·274	·235	·210	·240	−·044	62	25	17	35	+1	1·6	2·8	2·2	+0·7		1	2	5	7	3	8	19	4	S. 81° W.	N. 67° W.	38	27	250*	149			Poona	
·280	·281	·270	·277	−·015	59	32	21	37	0	2·7	3·3	3·0	+1·5	3	4	8	11	3	2	5	7	13	N. 5° W.	N. 14° W.	20	23	166*	98			Akola	
·199	·230	·190	·206	−·071	39	28	18	29	−5	1·9	2·5	2·2	+0·4		7	6	5	5	6	2	11	14	N. 43° W.	N. 17° W.	25	27	183*	147	*Nil*	*Nil*	Buldana	
·229	·271	·246	·249	−·058	53	33	20	35	−5	2·3	2·0	2·2	+0·8	1	2	8	13	4	2	6	8	12	N. 6° E.	N. 14° W.	12	31	130	93			Khandwa	
·374	·426	·442	·414	+·077	68	53	42	54	+12	4·6	5·5	5·1	+3·2	8	4	14	7	3	9	5	2	4	N. 79° E.	N. 42° E.	20	22	130	123			Nagpur	
·376	418	·414	·403		69	50	38	52		4·0	4·6	4·3		1	1	30		12		4		8	N. 52° E		48		51*				Do. (Sanitary Commr.'s Office).	
·520	·544	·479	·514	+·077	81	57	40	59	+9	3·8	4·5	4·2	+2·9	26	1	3	6	15		1	2	2	S. 65° E.	S. 50° E.	28	29	115*	97			Hyderabad (Deccan).	
·418	·488	·537	·481	−·120	63	56	57	59	−9	2·1	2·2	2·2	+1·0		9	10	6	2			4	25	N. 12° W.	N. 3° W.	59	58	257	254			Bombay	West Coast.
·589‡	·598	·650	·612	−·037	85‡	57	56	66	−6	1·9	1·8	1·9	+1·4		6		1			1	22	26	N. 59° W.	N. 53° W.	83	69	119	86			Karwar	

¶ Mean of 22½ days. § Mean of 27½ days. ** Mean of 22 days. * Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 65

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L., and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
South India.	Periyakulam		29·067	28·916	·151	28·992			91·6	70·1	21·5	95·2	59·3	35·9	82·4	88·5	80·1		66·7	72·2	73·2	70·7
	Salem		·093	·929	·164	29·015	−·021	29·883	95·1	71·8	23·3	99·0	64·0	35·0	84·4	91·6	81·5	+3·9	68·9	72·9	74·2	72·0
	Chitaldroog		27·609	27·473	·136	27·536	−·013	·841	88·3	57·1	21·2	92·1	61·9	30·2	79·1	86·1	77·2	+0·2	61·3	68·1	69·5	66·3
	Bangalore		·030	26·898	·132	26·963	−·012	·855	85·8	63·5	22·3	89·0	55·8	33·2	75·7	83·6	74·1	+2·2	61·7	66·7	67·5	65·3
	Hassan		26·958	·840	·118	·898	−·010	·783	85·2	61·2	24·0	88·0	54·2	33·8	76·9	82·6	72·6	+1·6	59·9	65·6	65·5	63·7
	Mysore		27·513	27·366	·147	27·440	−·017	·848	89·2	66·5	22·7	91·8	59·5	32·3	78·6	87·0	77·3	+2·5	63·8	67·6	68·2	66·5
	Madras		30 015	29·897	·120	29·952	−·013	·904	87·6	73·1	14·5	89·3	67·4	21·9	84·2	84·3	80·0	+2·9		75·7	75·7	74·3
	Bellary		28·541	28·390	·151	28·461	−·006	·869	92·4	69·0	23·4	96·7	60·0	36·7	81·2	89·6	80·7	+1·0	62·5	66·6	69·5	66·2
	Waltair		29·840	29·726†	·114	29·783		·954†	82·8	71·5	11·3	85·8	66·3	19·5	79·8	80·3	76·5		66·4	71·5	71·8	69·9
Hill Station, Baluchistan.	Quetta		24·709	24·634	·075	24·664	+·022		51·6	25·2	26·4	65·9	19·8	46·1	43·4	49·2	37·8	−3·3	24·6	35·7	38·4	32·9
Hill Stations, Northern India.	Leh		19·667	19·604	·063	19·642	+·050		22·8	5·1	17·7	29·5	−6·5	36·0	16·1	19·8	14·5	−6·9	2·5	9·1	13·6	8·4
	Srinagar		24·988	24·915	·073	24·945	+·010		43·6	30·6	13·0	58·2	26·1	32·1	35·3	41·9	36·7	+3·5	29·3	34·2	40·1	34·5
	Kailang	10,087	20·908	20·851	·057	20·886	?		33·3	14·3	19·0	43·8	−3·0	46·8	22·8	27·3	20·9	+0·5	13·4	20·9	24·2	19·5
	Simla (Ridge)		23·122	23·075	·047	23·091	+·014		43·4	33·4	10·0	53·5	24·8	28·7	39·5	40·0	37·0	−4·0	30·7	34·5	36·3	33·8
	Chakrata		·315	·268	·047	·285	+·021		47·4	34·2	13·2	58·8	25·8	33·0	39·6	42·4	39·0	−3·3	32·1	35·2	37·8	35·0
	Ranikhet		24·173	24·106	·067	24·128	+·041		53·8	39·7	14·1	61·2	31·0	30·2	48·6	48·8	44·9	−2·2	36·2	41·8	42·1	40·0
	Muktesar		22 893	22·831	·062	22·862			48·9	34·5	14·4	59·5	25·9	33·6	43·9	43·9	40·5		30·7	37·4	37·6	35·2
	Katmandu	4,388	25·667	25·549	·118	25·604	?		67·8	40·5	27·3	73·9	34·2	39·7	54·3	63·8	53·2	+0·5	39·1	49·1	52·5	46·9
	Darjeeling		23·038	22·977	·061	23·003	+·059		52·1	38·0	14·1	57·3	31·7	25·6	45·8	49·4	44·3	+3·6	35·5	42·2	44·9	40·9
Hill Stations, Central India.	Mount Abu		26·120	26·047	·073	26·074	−·030		63·9	49·8	14·1	75·1	40·8	34·3	59·3	61·7	56·3	−4·0	40·8	45·0	46·5	44·1
	Pachmarhi		·558	·463	·095	·505	+·003		71·5	50·3	21·2	79·2	39·1	40·1	64·7	69·8	60·3	−2·1	45·5	52·5	55·4	51·1
	Chikalda	3,642	·430	·331	·099	·374	−·014		74·6	55·3	19·3	82·2	43·0	39·2	66·5	72·5	64·2	−3·5	45·9	53·4	56·1	51·8
Hill Stations, S. India.	Wellington		24·323	24·247	·076	24·285	+·005		71·3	51·8	19·5	74·9	42·9	32·0	66·2	66·9	60·5	+2·6	49·9	58·7	60·2	56·3
	Kodaikanal		22·899	22·829	·070	22·857			63·4	48·6	14·8	67·0	43·3	23·7	60·1	58·6	54·9		45·1	53·6	55·0	51·2
Extra India.	Aden		30·025	29·918	·107	29·964	+·059	·991	79·1	72·3	6·8	83·0	66·8	16·2	76·9	78·0	75·7	−1·2	66·1	68·6	67·4	67·4
	Perim		29·877	·762	·115	·812	+·071	·949	82·7	73·5	9·2	84·7	72·2	12·5	78·6	79·7	77·3	−0·9	68·6	72·2	72·5	71·1
	Minicoy		30·061	·909	·092	·950		·882	86·0			88·4			83·6	84·0				77·4	77·3	
	Zanzibar		29·921	·805	·116	·863	+·018	·862	84·6	78·4	6·2	87·4	73·1	14·3	81·8	84·2	51·5	−1·9	74·5	77·5	77·8	76·6
	Port Victoria (Seychelles).	15	·987	·894	·093	·941	+·012	·880	83·5	75·2	8·3	86·0	72·4	13·6	82·0	82·7†	79·1†	−1·1	73·6	76·9	76·7	75·7
	Mauritius (Pamplemouses).	181				·800	+·016	·928				89·4	60·9	28·5			77·5	−0·5				

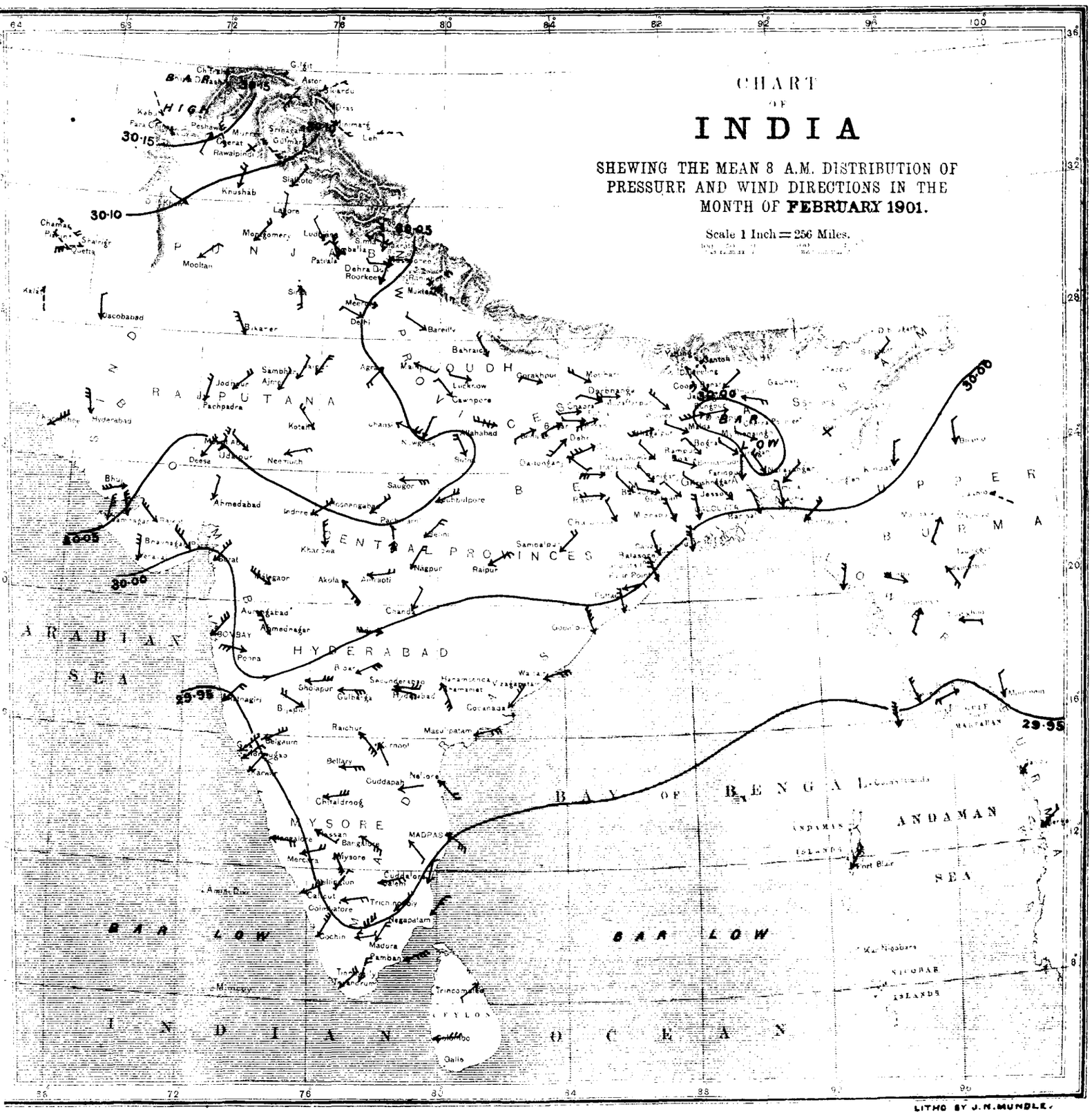
† Mean of 27 days. ‡ Mean of 26½ days § Mean of 24 days.

II—*concluded.*

Stations in India, Burma, etc., in February, 1901—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Meteorological Province
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfal during the month.		
·621	657	·619	·632		84	59	47	63		3·2	6·8	5·0		10	5	3	10	11	3		7	4	S. 86° E.		% 18	%	55*				Periyakulam	
·670	·662	·621	·651	+·088	86	56	42	61	+ 3	3·3	5·0	4·2	+2·2	12	1	16	18	4	3	1	1		N. 79° E.	E.	54	51	137*	128			Salem.	South India.
·476	·553	·517	·515	+·183	71	55	42	56	+19	3·8	3·7	3·8	+2·3		5	6	15	6	2	3	10	9	N. 35° E.	N. 89° E.	16	48	155*	170			Chitaldroog.	
·533	·554	·487	·525	+·129	90	62	42	65	+13	3·5	3·7	3·6	+1·7	2		3	19	13	9	8	1	1	S. 47° E.	S. 69° E.	55	65	176*	105			Bangalore.	
·505	·500	·435	·480	+·099	93	54	40	62	+10	5·0	5·3	5·2	+2·4		1	12	19	13	1	5	4	1	S. 83° E.	S. 85° E.	52	67	67*	77			Hassan.	
·563	·543	·457	·521	+·101	86	55	35	59	+ 8	5·1	5·4	5·3	+3·9		4	9	15	12	3	9	4		S. 69° E.	N. 87° E.	37	67	184*	201			Mysore.	
	·779	·777	·774	+·095		67	66	75	+ 1	4·5	2·8	3·7	+0·9			4	27	20	5				S. 70° E.	S. 85° E.	34	69	159	119			Madras.	
·495	·478	·474	·482	+·093	70	45	34	50	+10	4·9	7·1	6·0	+4·6	5	2	2	19	3	5	8	3	9	S. 68° E.	S. 57° E.	14	47	131*	92			Bellary.	
·582	·664	·669	·638		75	65	65	68		4·1	3·4	3·8				9	23	10	5	9			S. 68° E.		57		112				Waltair.	
·126	·133	·125	·128	−·038	93	49	38	60	− 6	1·5	2·3	1·9	−2·3	21	2				1	1	17	14	N. 69° W.	N. 83° W.	52	31	41*	88			Quetta.	Hill Station, Baluchistan.
030	·021	·040	·030	−·046	54	23	37	38	−30	5·2	6·8	6·0	−0·8			9	10	1	16	18	2		S. 6° E.	S.	41	23	34	29			Leh.	
·148	·188	·235	·190	+·034	85	91	86	87	+ 7	7·1	7·3	7·2	+0·4	12	4	3	1	13	10	4	6	3	S. 6° E.	S. 24° E.	25	13	109*	74			Srinagar.	Hill Stations, Northern India.
·078	·102	·109	·096	+·004	87	80	73	80	+ 7	6·6	7·6	7·1	+0·6		3	1	2	5	5	16	18	6	S. 66° W.	S. 72° W.	53	66	7	27	4·63	1·22	Kailang.	
·146	·151	·178	·158	+·006	78	64	73	72	+1½	5·4	7·7	6·6	+0·9	6	5	7	3	5	19	6			S. 23° E.	S. 20° E.	34	22	116§	131			Simla (Ridge).¶	
·161	·161	·183	·168	+·005	82	37	68	73	+ 9	4·7	6·0	5·4	+0·7		19	4	1	4	21	2	1	4	S. 74° E.	S. 20° W.	4	2	205	134			Chakrata.	
·181	·197	·203	·194	−·002	74	59	60	64	+ 2	3·5	5·7	4·6	+0·1	9	3	15	3	1	4	10	8	3	N. 37° W.	S. 51° W.	9	20	82*	57			Ranikhet.	
·137	·159	·164	·153		70	58	59	62		3·8	4·5	4·2		1	2	2	5	31	3	1	1	16	S. 52° E.		45		236*				Muktesar.	
·227	·294	·268	·263	+·014	88	70	46	68	+ 2	3·3	4·4	3·9	+0·4	1	1	2	4	6	2	4	33	3	S. 81° W.	N. 86° W.	52	48	26	29	0·52	0·32	Katmandu.	
·184	·233	·250	·222	+·011	80	75	71	75	− 5	4·6†	5·1	4·9	−1·0	3		4	2	8	7	17	11	4	S. 28° W.	S. 79° W.	45	31	113*	137			Darjeeling.	
·157	·141	·148	·149	−·039	44	27	27	33	− 3	1·3	1·6	1·5	−1·1		13	7	3	1	5	14	7	6	N. 62° W.	N. 63° W.	25	27	186*	140			Mount Abu.	Hill Stations, Central India.
·258	·262	·279	·266	+·019	69	43	39	50	+ 5	3·9	4·5	4·2	+2·1	6	6	7	6	8	5	10	1	7	S. 64° E.	N. 64° W.	7	25	159*	98			Pachmarhi.	
·209	·264	·267	·247	−·032	47	40	34	40	− 1	2·6	3·0	2·8	+1·0	41	6	1			3	3	2		N. 65° W.	N. 83° W.	7	24	162*	148	0·11	0·03	Chikalda.	
·344	·419	·454	·406	+·116	87	65	68	73	+14	4·3	5·8	5·1	+2·5	6	1	3	2	32	10	1	1		S. 40° E.	S. 39° E.	69	65	52	60			Wellington	Hill Stations, S. India.
·269	·352	·399	·340		77	68	81	75		5·0	7·5	6·3			5	7	8	13	6			14	N. 69° E.		23		266				Kodai kanal‖	
·562	·596	·534	·564	−·088	71	64	56	64	− 7	4·6	4·4	4·5	+0·6	4		21	24	7					N. 77° E.	N. 87° E.	80	73	‡ 356*	356			Aden.	Extra India.
·637	·714	·712	·688	−·006	77	72	70	73	+ 1	4·4	1·1	2·8	+0·4			5	20	29	2				S. 67° E.	S. 64° E.	85	73	574*	430			Perim.	
	·858	·856				75	73			5·2	6·1	5·7			20	22	4		1		1	8	N. 18° E.		75		105*				Minicoy.	
·807	·887	·868	·854	0	83	82	74	80	+ 5	8·1	6·2	7·2	+3·2	1	14	27	6	2	2	2	1		N. 40° E.	N. 34° E.	67		187*	159			Zanzibar.	
·812	·661	·842†	·838	+·024	92	79	75†	82	+ 4	6·2	6·3	6·3	−0·2	8	4	4	4	8	1	1	4	22	N. 28° W.	N. 27° W.	30	56	143	145	15·94	5·15	Port Victoria (Seychelles).	
			·750	−·007				77	0																		221	315	3·67	1·25	Mauritius (Pamplemousses).	

‖ Wind variable 3. ¶ Wind variable 1. * Corrected.

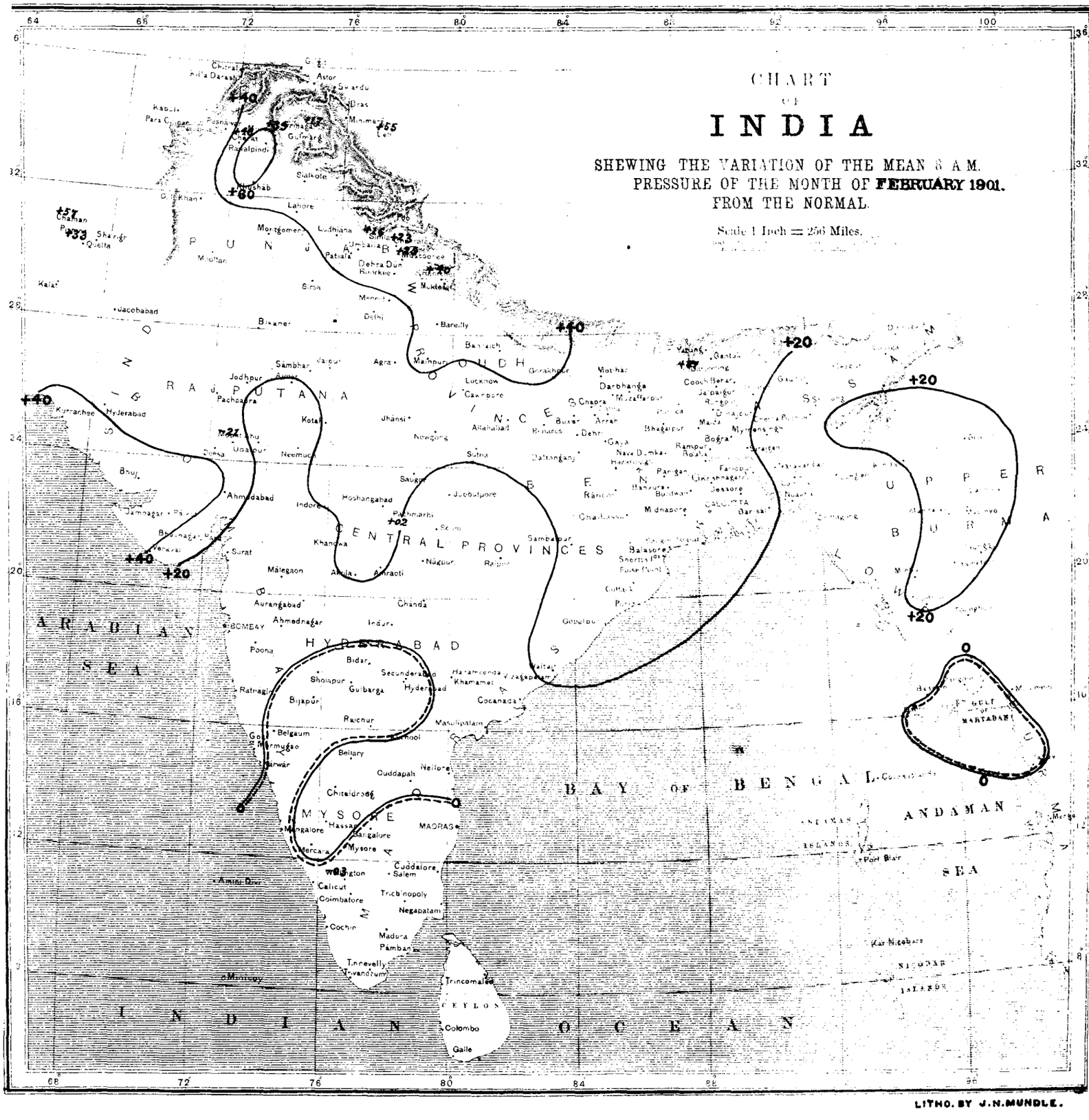


Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	one feather added to the wind arrow
„ „	2 to 5 „ „ „	two feathers „ „ „ „
„ „	5 to 10 „ „ „	three „ „ „ „
„ „	10 to 20 „ „ „	four „ „ „ „



LITHO. BY J.N.MUNDLE.

Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

CHART SHEWING THE VARIATION OF THE MEAN MAXIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.

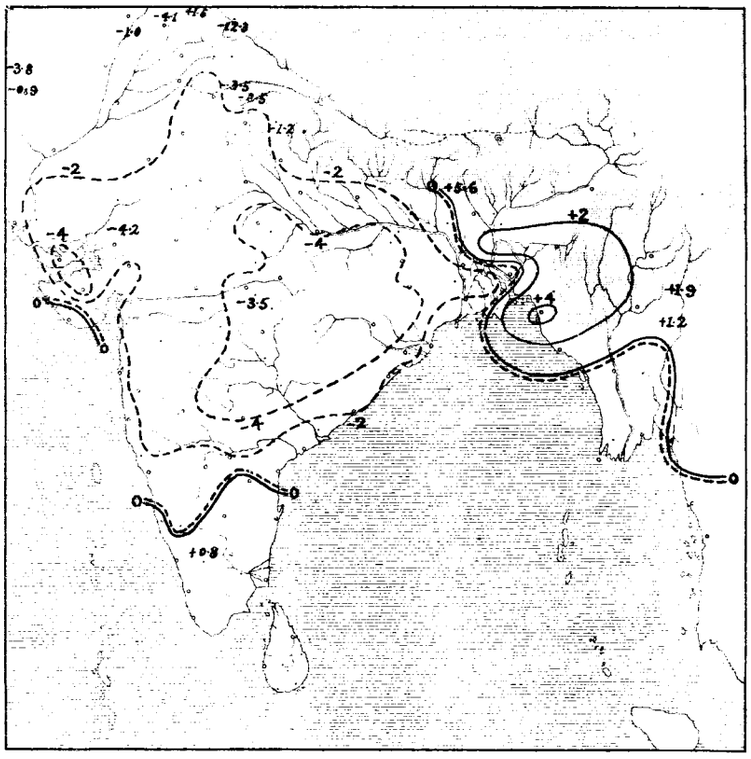
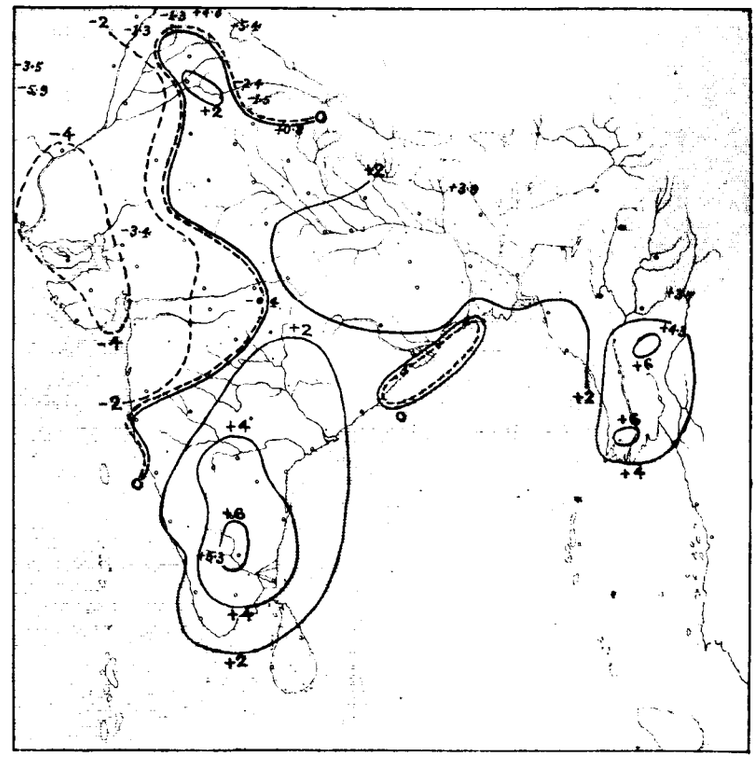


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

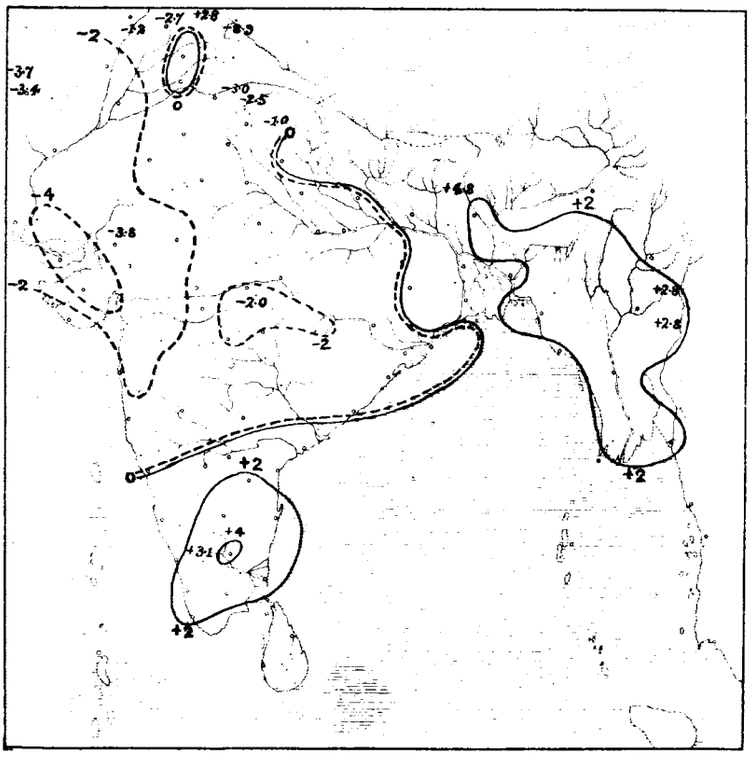
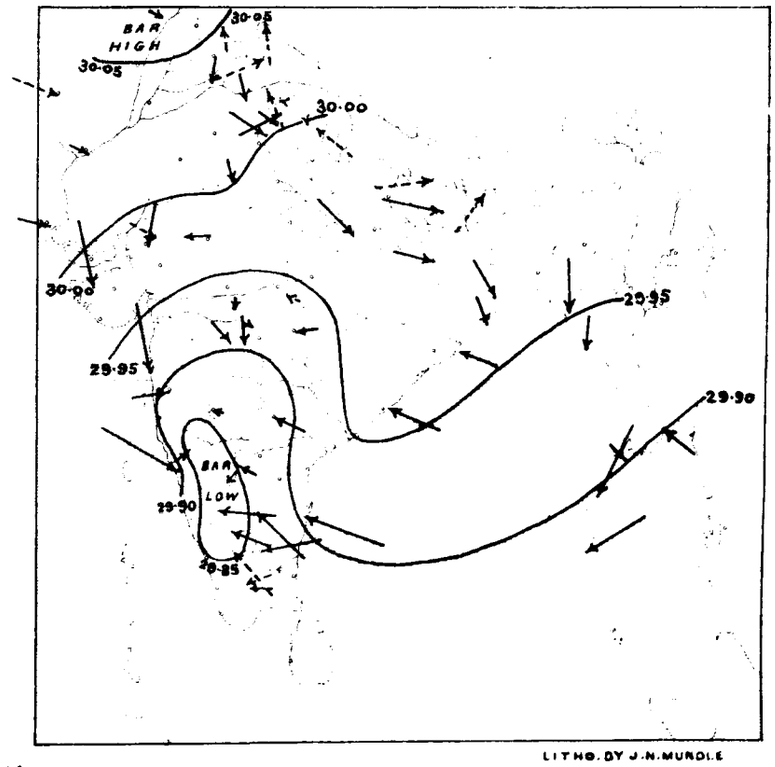


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF FEBRUARY 1901.



LITHO. BY J.N. MURDLE

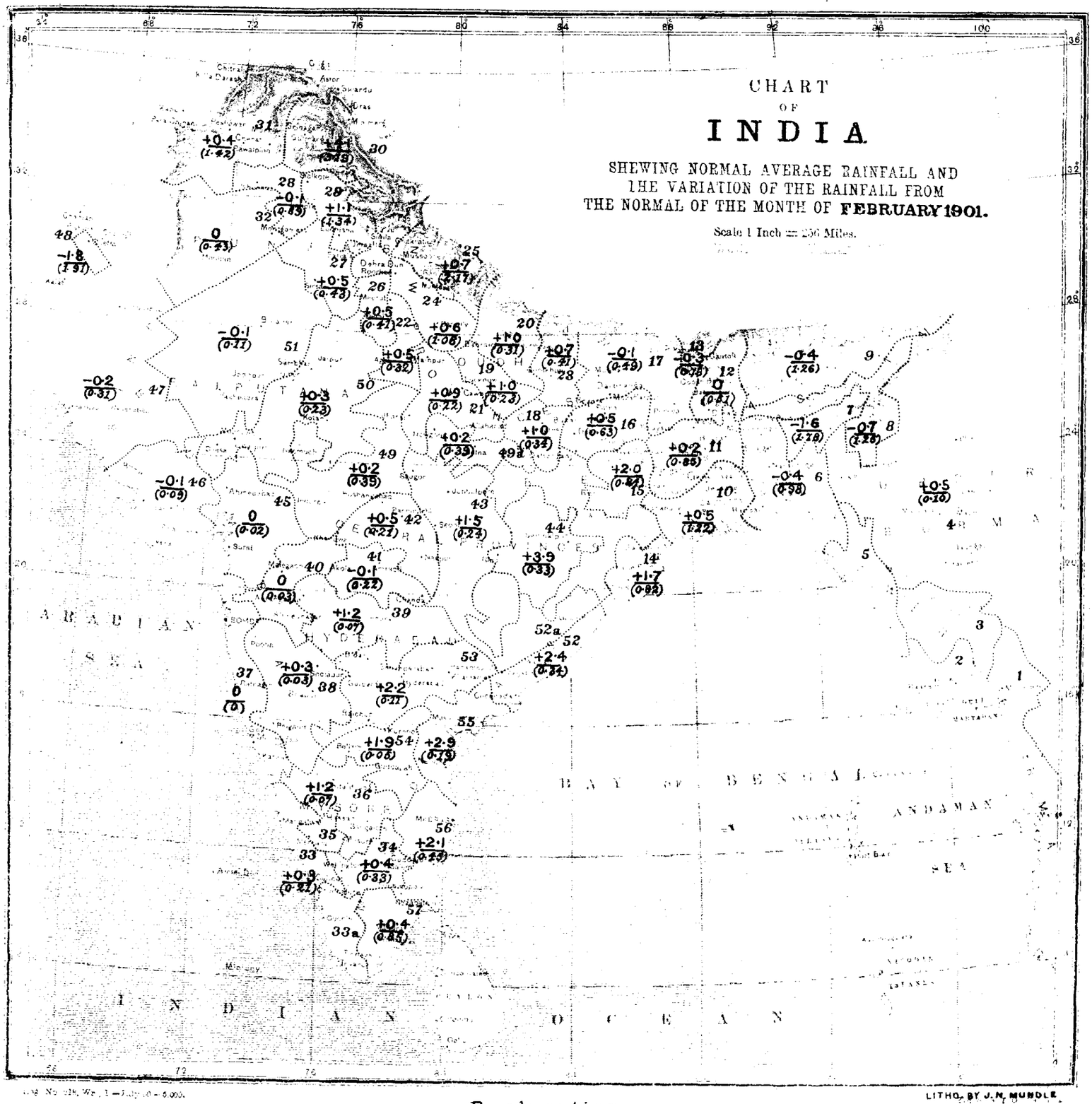
Explanation.

Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions of the resultants of the wind recorded at 10 and 16 hours, and by their

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India (182 in number), except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.



Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
16. [illegible]
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do. West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do. Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
33. Malabar
33a. Trichinopoly
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad North
40. Khandesh
41. Berar
42. Central Provinces West
43. Do. Central
44. Do. East
45. Gujarat
46. Kathiawar
48. Baluchistan Hills
49. Central India East
49a. Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. Madras, East Coast, North
52a. Do. do. do. (a)
53. Hyderabad South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South

LIBRARY
AUG 15 1901
Weather Bureau

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, MARCH 1901.

INTRODUCTION.

THIS review of the weather in India during the month of March 1901 is based on observations taken daily at 8 A.M. at 221 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 65 stations. In the rainfall summary the rainfall data of the meteorological observatories and the weekly rainfall telegrams received during the month from District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the preparation of the review, are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is given.

Summary of the chief features of the weather in India during the month of March, 1901.

The meteorology of the month of March 1901 was characterised by large and important variations from the normal. One of the principal features was the number of more or less shallow depressions which passed from west to east across the country.

On the 1st one of these shallow depressions lay over Gujarat, whence, during the next two days it passed eastward through the central parts of the country. It occasioned showers over the Central Provinces and the temperature was very low for the time of year over Central and North-East India. The following gives temperature data for the North-Western Provinces, the Central Provinces, Bengal and Assam, from the 1st to the 3rd.

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	1st March.	2nd March.	3rd March.
	°	°	°
North-Western Provinces and Oudh.	−3·8	−1·5	−1·1
Central Provinces . . .	−4·2	−4·3	−4·5
Orissa	−4·7	−3·3	−6·7
Bihar	−7·2	−2·4	−4·1
Chota Nagpur	−6·1	−4·3	−9·4
Bengal	−3·5	−2·2	−2·7
Assam	−1·2	−0·8	−0·4

On the 3rd another depression was shown over Gujarat and Sind and showers were reported from Rajputana, Central India, the Central Provinces and Berar. This depression hardly moved during the following day, but on the 6th a deepish subsidiary depression appeared over the Punjab, and on the 7th the double depression moved eastward through the Punjab and Rajputana into the North-Western Provinces. The secondary depression broke up amongst the Simla and Mussooree hills while the primary depression continued to move eastward and finally filled up on the 9th. Heavy and general snow fell on the hills, and rain over Upper and Central India and this precipitation was followed by a cold wave which travelled right across Northern India. The following gives temperature data for the different divisions of Northern India from the 5th to the 10th:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	5th March.	6th March.	7th March.	8th March.	9th March.	10th March.
	°	°	°	°	°	°
Sind	+5·1	+4·1	+2·4	+0·5	−2·0	−1·4
Punjab	+3·7	+5·3	+0·2	−3·4	−1·7	+0·5
Rajputana	−3·1	+1·9	+2·9	−2·1	−1·6	+0·3
North-Western Provinces and Oudh.	+1·1	−0·3	+2·4	−4·2	−5·5	−4·4
Central India	+0·2	−1·2	+2·7	−2·2	−3·7	−3·9
Chota Nagpur	−1·1	−4·6	−2·4	−2·3	−1·7	−2·7
Bihar	−1·3	−2·2	0	−2·0	−4·9	−3·9
Orissa	−2·8	−3·2	−0·2	−1·5	−1·9	−1·6
Bengal	−1·8	−2·5	−0·1	+1·9	−0·8	−1·8

On the 9th a slight depression was appearing on the Western frontier. It passed into Eastern Rajputana on the 10th, but it was of no importance at any time. On the 11th there occurred a local fall of the barometer and much disturbed weather over Kashmir and the North-West Himalayas and a rapid fresh fall of temperature took place in the North-West Punjab, but this fall was more or less local and did not extend across in India in the same manner as the preceding cold wave. From the 12th to the 17th the weather was fairly quiet and settled over India and during this period one of the most important features in the weather was the area of very high temperature which appeared in the west. This area of high temperature was first shown along the Konkan coast, thence it worked its way northward to Kathiawar and Gujarat and subsequently to Sind and the Punjab reaching the latter province on the 17th. The progress of this area northward is shown in the following table which gives the temperature variations from the 12th to the 17th for the West Coast, Gujarat, Sind and Punjab divisions:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	12th March.	13th March.	14th March.	15th March.	16th March.	17th March.
	°	°	°	°	°	°
West Coast	+2·9	+3·0	+3·1	+2·1	+0·4	+0·4
Gujarat	+4·5	+5·8	+3·1	+2·8	+3·3	+3·8
Sind	+0·7	−0·2	+0·6	+4·1	+6·0	+2·6
Punjab	−0·2	−1·5	−1·4	−1·8	−1·5	+1·4

Between the 18th and the 25th a series of small shallow depressions passed eastward from Sind through Rajputana and the central parts of the country into Bengal. These depressions were generally accompanied with very little rain and the mean temperature was generally excessive throughout India. The following gives temperature data for all divisions of the country on the 21st in illustration:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 21st March.	Mean minimum temperature, 21st March.	Mean daily temperature, 21st March.
	°	°	°
Burma	−0·2	+3·0	+1·4
Assam	+2·7	−1·1	+0·8
Bengal	+1·6	+0·6	+1·1
Orissa	+0·8	+1·2	+1·0
Bihar	+1·4	+1·8	+1·6
Chota Nagpur	−1·4	−0·2	−0·8
North-Western Provinces and Oudh	+1·8	+0·6	+1·2
Punjab	+3·0	+6·4	+4·7
Sind	+4·2	+5·5	+4·9
Rajputana	+4·8	+2·1	+3·5
Gujarat	+4·1	+3·7	+3·9
Central India	+2·0	+2·9	+2·5
Central Provinces	−0·3	+2·8	+1·3
Berar	+1·8	−1·6	+0·1
West Coast	+1·9	+2·3	+2·1
Bombay Deccan	−0·3	+5·6	+2·7
Mysore	+0·9	−0·5	+0·2
Madras Coast	+0·4	+0·1	+0·3
Madras Deccan	−1·8	+1·9	+0·1
South India	−1·9	−0·4	−1·2

The depression of the 23rd, however, occasioned rain over the Punjab, etc., and snow over the North-West Himalayas, and following this storm, a well marked cool wave passed across Northern India. The progress of this wave is shown in the following table which gives mean temperature variation data for the different districts of Baluchistan and northern and central India from the 23rd to the 26th.

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	23rd March.	24th March.	25th March.	26th March.
	°	°	°	°
Baluchistan	+0·8	−3·9	−2·7	+5·6
Sind	−4·1	−4·9	+0·3	+0·7
Punjab	+1·0	−8·2	−6·6	−3·0
Rajputana	+2·5	−4·7	−4·6	−3·0
Central India	+4·3	−1·8	−4·7	−4·9
Central Provinces	+1·7	−0·7	−4·0	−3·8
North-Western Provinces and Oudh.	+4·2	−1·5	−2·7	−4·5
Chota Nagpur	+2·5	+2·4	+0·4	−3·9
Bihar	+2·0	+2·5	+1·8	−3·1
Orissa	+2·5	+2·2	+0·8	+2·4
Bengal	+2·4	+2·8	+3·1	+0·9

During the 26th, 27th and 28th the weather was quiet and the temperature rose during those days and continued to rise slowly till the close of the month. On the 29th a barometric depression appeared over Sind and Gujarat. On the 30th this depression intensified and heavyish showers occurred over the North-West Himalayas and the Punjab plains. This fall of rain and snow was followed by a cold wave which appeared in the North-West Punjab on the 31st, but the history of which belongs to next month's review.

Pressure.—The mean pressure of the Indian land area was 0·045″ above the normal. Pressure, relatively to this general condition, was in excess over northern and central India and the east of the Peninsula, and generally in defect over the Indus Valley, North Bombay, the west and south of the Peninsula and Lower Burma. The excess was greatest over the east of the Central Provinces (Sambalpur +0·032″) and the deficiency was greatest in Malabar (Calicut —·044″), Ceylon (Colombo —·046″) and Tenasserim (Tavoy —·044″). Pressure was in excess at all the hill stations more particularly in the extreme north-west and extreme north-east. Positive pressure anomalies were shown in the Baluchistan and North-West and North-East Himalayan hill districts, but at the central Himalayan stations and in the central and southern hill districts the vertical anomalies were negative. The following table gives the mean pressure variations and anomalies of the month for the eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	Variation from normal of mean 8 A.M. pressure of March 1901.	Pressure anomaly, March 1901.
	″	″
Burma Coast and Bay Islands	+·016	—·029
Burma Inland	+·054	+·009
Assam	+·052	+·007
Bengal and Orissa	+·053	+·008
Gangetic Plain and Chota Nagpur	+·064	+·019
Upper Sub-Himalayas	+·063	+·018
Indus Valley and North-West Rajputana	+·038	—·007
East Rajputana, Central India and Gujarat	+·040	—·005
Deccan	+·050	+·005
West Coast	+·013	—·032
South India	+·038	—·007

Temperature.—The weather had been more rainy and unsettled than usual over parts of northern and central India and in the latter region the mean temperature was low.

The mean maximum or day temperature of the month was higher than usual over the greater part of north-west India (Jacobabad +4°·1), Gujarat (Bhavnagar +5°·0) and the west of the Peninsula (Mangalore +1°·9). It was also in excess over Upper Burma (Kindat +2°·4), Assam (Silchar +7°·2), East Bengal (Chittagong +5°·2) and the East Coast (Gopalpur +1°·2). Over the whole of the intervening region it was in defect. The deficiency was greatest over the east of the Central Provinces (Sambalpur —6°·4), but was also considerable over the south of the Peninsula (Tinnevelly —4°·1) and Ceylon (Trincomalee —4°·6).

The mean minimum temperature of the month was generally in excess over north-west India and practically the whole of the Peninsula as well as in Tenasserim and part of Burma. The excess was more than 2° in the central Punjab (Khushab +4°·1), Upper Sind (Jacobabad +2°·9), part of Gujarat (Surat +2°·7), the Deccan (Chanda +2°·7) and Tenasserim (Mergui +3°·3). Over the remainder of India the mean night temperature was in defect, the deficiency having been greatest in Orissa (False Point —2° 7) and Bengal (Jessore —3°·7).

The mean temperature of the month exceeded the normal over Baluchistan and north-western and western India as well as in parts of Burma, Assam and Bengal. Over the whole of the intervening region the mean temperature was in defect, the deficiency having been greatest and more than 3° in the east of the Central Provinces (Raipur

—3°·6 and Sambalpur —3·5). The following table gives temperature variation data for the month of March 1901 for eleven meteorological provinces of the empire :—

METEOROLOGICAL PROVINCE.	VARIATION OF ACTUAL FROM NORMAL OF		
	Mean maximum temperature, March 1901.	Mean minimum temperature, March 1901.	Mean daily temperature, March 1901.
	°	°	°
Burma Coast and Bay Islands	—0·5	+2·3	+0·9
Burma Inland	+0·8	+0·1	+0·5
Assam	+2·9	—2·0	+0·4
Bengal and Orissa	+1·1	—2·0	—0·4
Gangetic Plain and Chota Nagpur.	—2·5	—1·4	—2·0
Upper Sub-Himalayas	—1·4	+0·4	—0·5
Indus Valley and North-West Rajputana.	+2·8	+2·0	+2·4
East Rajputana, Central India and Gujarat.	+1·0	+1·0	+1·1
Deccan	—2·1	+0·8	—0·7
West Coast	+1·0	+1·0	+1·0
South India	—1·2	+0·3	—0·5

Winds.—The principal abnormal feature in the winds was the general south-east current which prevailed over South India and the Deccan. In other parts of the Indian area the wind directions varied irregularly from the normal. The air movement was generally weaker than usual over northern India. The wind was unsteady in the Gangetic Plain and Upper India, and, at the Himalayan hill stations the variations of the wind from the normal were very irregular. At Zanzibar an abnormal north-east wind prevailed on the mean of the month.

Humidity.—The air was drier than usual in two areas. The first included Rajputana, North Bombay and the west of the Peninsula. In this region the deficiency of humidity was considerable at Kurrachee (—6), Deesa (—5) and Hassan (—7), but was generally small elsewhere. The second area of low humidity included the Bay Islands, Burma, Assam, Bengal (proper), Orissa and North Madras. Within this area the deficiency was greatest in Deltaic Bengal (Calcutta—12) and south-east Bengal (Chittagong —12). Over the whole of the remainder of India the air was damper than usual. This abnormal dampness was at its maximum at Nagpur with a variation of +15, but in the east Punjab there was a second damp area where Lahore and Ludhiana reported variations of +6. At Leh, in Kashmir, the air was very dry both absolutely and relatively to the normal, but at the other hill stations in the Himalayas the air was damper than usual. The following table gives variation data of the mean aqueous vapour pressure and mean humidity for nine meteorological provinces for the month under review :—

METEOROLOGICAL PROVINCE.	MEAN ABSOLUTE HUMIDITY.		MEAN RELATIVE HUMIDITY.	
	Average actual, March 1901.	Variation of actual from normal, March 1901.	Average actual, March 1901.	Variation of actual from normal, March 1901.
	"	"	%	
Burma Coast and Bay Islands.	·776	+·009	69	— 3
Bengal and Orissa	·650	—·078	66	— 9
Gangetic Plain and Chota Nagpur.	·390	+·026	47	+ 4
Upper Sub-Himalayas	·382	+·042	55	+ 5
Indus Valley and North-West Rajputana.	·428	+·022	52	— 1
East Rajputana, Central India and Gujarat.	·274	—·029	30	— 3
Deccan	·387	+·042	39	+ 5
West Coast	·729	—·004	71	— 3
South India	·511	—·002	51	0

Cloud.—There was more cloud than usual over the greater part of the Peninsula. The amount of the excess increased inland and was greatest at Sholapur (+1·5), Belgaum (+1·8), Bellary (+2·1) and Mysore (+2·4). The cloud amount was also in excess over the Bay Islands and part of Lower Burma, but the excess in this region was slight. Over the whole of the remainder of the plains of India as well as at most of the hill stations the sky was clearer than usual. The deficiency was large on the Burma coast (Diamond Island —2·0) and considerable on the Bengal coast (Saugor Island —1·6), in southern Rajputana and North Bombay (Deesa —1·7) and in the east Punjab (Ludhiana —1·6). Over the Eastern Himalayas as well as at the central and southern hill stations the cloud amount was in excess on the mean of the month. The following table gives variation data of the mean cloud amount of nine meteorological provinces for the month of March 1901 :—

METEOROLOGICAL PROVINCE.	MEAN CLOUD AMOUNT.	
	Average actual, March 1901.	Variation of actual from normal, March 1901.
Burma Coast and Bay Islands	2·4	0
Bengal and Orissa	2·2	—0·9
Gangetic Plain and Chota Nagpur	1·4	—0·6
Upper Sub-Himalayas	2·2	—0·9
Indus Valley and North-West Rajputana	2·7	—0·8
East Rajputana, Central India and Gujarat	1·5	—1·2
Deccan	2·9	+0·9
West Coast	1·5	0
South India	3·1	+0·6

Rainfall.—The rainfall of the month under review was actually or practically *nil* (*i.e.*, was less than one-tenth of an inch) over the south-west Punjab, the greater part of Rajputana, nearly the whole of the Bombay Presidency, and across the centre of the Peninsula. It was also *nil* over the greater part of Burma. South India received numerous thunder showers about the middle of the month and Ceylon had thunder-storms accompanied with rain at intervals throughout the month. The principal periods of rainfall in Northern and Central India were initiated by cold weather disturbances in Upper India. Between the 1st and the 5th there were showers over the central parts of the country; between the 6th and the 8th there was general snow on the north-west hills and rain spread eastward from the Punjab to Bengal; between the 19th and the 24th there were scattered showers over Central and North-East India and general showers in North-West India and on the 30th and 31st there was general snow on the North-West Himalayas and general showers on the adjacent plains. One of the chief features of the rainfall of the month was the relatively heavy rain over North-West India and parts of the Peninsula and a second was the unusual lightness of the fall over inland Burma and North-East India. In other parts of the country the variations from the normal were irregular. The following table gives comparative rainfall data of the month for the eleven meteorological provinces of the empire:—

METEOROLOGICAL PROVINCE.	RAINFALL. Mean actual for March 1901.	Mean normal for March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands	1·15	0·66	+0·40*	+61
Burma Inland	0·06	0·41	−0·35	−85
Assam	0·61	5·24	−4·62	−88
Bengal and Orissa	0·35	1·55	−1·20	−77
Gangetic Plain and Chota Nagpur	0·38	0·50	−0·12*	−24
Upper Sub-Himalayas	1·12	0·89	+0·16*	+18
Indus Valley and North-West Rajputana.	0·58	0·42	+0·16	+38
East Rajputana, Central India and Gujarat.	0·07	0·15	−0·06*	−40
Deccan	0·52	0·48	+0·05*	+10
West Coast	0·89	0·51	+0·37	+73
South India	0·48	0·52	−0·12*	−23

* A reference to Table I will show that the means in columns two and three are derived from a smaller number of stations than the means in the 1st column. The sum of the figures in columns two and three will therefore not agree with the figures in column 1.

Atmospheric Pressure.

The mean pressure of the Indian land area was 0·045″ above the normal. This general excess of pressure commenced in September 1900 and with the exception of November has consequently been maintained for over six months. Relatively to the general condition pressure was in excess over the north and east Punjab, east Rajputana, the North-Western Provinces, the greater part of Bengal and of Assam, Upper and Central Burma, Orissa, Ganjam, the Central Provinces and Central India. The excess was 0·02″ or more in amount within four small areas, comparative data for which are given below:—

AREA.	STATION.	Variation from normal of mean 8 A.M. pressure of March 1901.	Pressure anomaly, March 1901.
		″	″
FIRST AREA.	Delhi	+·075	+·030
	Umballa	+·073	+·028
SECOND AREA.	Cawnpore	+·077	+·032
	Bahraich	+·074	+·029
SECOND AREA—(*contd.*)	Gorakhpur	+·073	+·028
	Mainpuri	+·066	+·021
THIRD AREA.	Jalpaiguri	+·072	+·027
	Purnea	+·065	+·020
FOURTH AREA.	Sambalpur	+·077	+·032
	Balasore	+·074	+·029
	Raipur	+·073	+·028

Over the remainder of India pressure was, relatively to the general condition, in defect. The deficiency was generally small over the West Punjab, North Bombay, the Deccan, the mid-Madras coast and East Bengal, but was

more or less considerable elsewhere and amounted to more than 0·02″ at the following large number of stations :—

	Station.	Variation from normal of mean 8 A.M. pressure of March 1901.	Pressure anomaly, March 1901.
		″	″
West Coast	Calicut	+·001	—·044
	Mangalore	+·007	—·038
	Cochin	+·009	—·036
	Surat	+·012	—·033
	Ratnagiri	+·014	—·031
	Bhavnagar Para	+·017	—·028
	Bombay	+·019	—·026
	Karwar	+·020	—·025
	Goa	+·023	—·022
South of the Peninsula.	Negapatam	+·018	—·027
	Bangalore	+·019	—·026
	Salem	+·020	—·025
	Coimbatore	+·023	—·022
	Madura	+·023	—·022
Ceylon	Colombo	—·001	—·046
Tenasserim	Tavoy	+·001	—·044
	Moulmein	+·006	—·039
Burma	Rangoon	+·007	—·038
	Diamond Island	+·015	—·030
	Akyab	+·015	—·030

The chart of actual pressure shows that the total range of pressure over the Indian land area was 0·151″ which was somewhat greater than usual. Pressure, on the mean of the month, was highest in the north Punjab, relatively high over the Assam Valley and lowest in Malabar. The barometer, on the mean of the month, read above the normal in all parts of India and Burma.

Pressure was as largely and as generally in excess at the level of the hill stations as at the level of the plains. The excess was very considerable over the Sikkim Himalayas and Baluchistan, but diminished southward and was very small at Wellington in South India. The vertical pressure anomalies were more or less positive in the hill districts in the extreme north-west and in the extreme north-east, but were negative in the Kumaun Himalayas region, over the central hill districts and over the southern hill districts, but the anomalies were generally moderate or small. The following gives data of the vertical pressure anomalies as determined from the pressure variations of ten pairs of stations in Baluchistan and India :—

Hill Station.	Variation of actual from normal pressure, March 1901.	Plain Station.	Variation of actual from normal pressure, March 1901.	Vertical pressure anomaly (Hill–Plain).
	″		″	″
Leh	+·089	Lahore	+·055	+·034
Quetta	+·083	Jacobabad	+·034	+·049
Murree	+·069	Peshawar	+·045	+·024
Simla	+·053	Ludhiana	+·061	—·008
Chakrata	+·036	Roorkee	+·061	—·025
Ranikhet	+·054	Bareilly	+·064	—·010
Darjeeling	+·097	Dhubri	+·062	+·035
Mount Abu	+·022	Neemuch	+·063	—·041
Pachmarhi	+·048	Seoni	+·058	—·010
Wellington	+·006	Coimbatore	+·023	—·017

The following is a summary of the chief abnormal features of the mean pressure conditions of the month :—

(1) The mean pressure of every station in India and Burma, on the mean of the month, exceeded the normal.

(2) The mean excess for the whole country was 0·045″.

(3) Relatively to this general condition pressure was locally in excess over the greater part of northern and central India and the east of these Peninsula.

(4) Relatively to the general condition pressure was in defect over the west Punjab, North Bombay, the west and south of the Peninsula and Lower Burma.

(5) The vertical pressure anomalies were positive in the extreme north-west and extreme north-east, but were negative over the central Himalayan region as well as over the central and southern hill districts of India.

Barometric depressions and cyclonic storms of the month.

One of the principal features in the weather of the month under review has been the numerous more or less shallow depressions which have traversed India from west to east. Some of these depressions appear to have been formed over Gujarat and Kathiawar where it may be noted the temperature conditions were very remarkable during the month. Others appear to have developed over Baluchistan and the countries close to the Western frontier of India, as the observations from Persia gave no indication of the presence of these depressions.

On the 1st a shallow depression lay over Gujarat and thence drifted slowly eastward giving showers on the 1st and 2nd to the Central Provinces. On the 3rd another depression appeared over Gujarat and Sind and during the 4th and 5th showers were received in Rajputana, Central India, Berar, the Central Provinces and Khandesh.

This depression apparently moved somewhat northward during the 5th and on the 6th a well marked and deepish subsidiary depression either formed or advanced over the central Punjab. The following gives 8 A.M. data for the depression area including Baluchistan, Sind, the Punjab and Rajputana:—

Province.	Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
		"	"	"				Inches	
Baluchistan	Quetta	...	+·014	−·032	Calm	6	0	...	
	Chaman	...	+·022	−·005	SW	14	0	...	
Sind	Jacobabad	29·782	−·097	−·173	Calm	2	0	...	
	Hyderabad (S).	·798	−·076	−·155	W	11	5	...	
	Kurrachee	·865	−·045	−·101	WSW	12	7	...	
Rajputana	Pachpadra	·840	−·061	...	SSW	8	7	...	
	Jodhpur	·858	−·060	...	SSW	4	7	...	
	Ajmer	·896	−·075	−·099	SE	3	8	...	
	Jaipur	·898	−·101	−·060	ESE	2	8	...	
	Bikaner	·816	−·127	−·139	SSE	7	5	...	
	Sambhar	·877	−·107	−·071	Calm	1	6	...	
	Deesa	·890	−·045	−·065	S	9	0	...	
Punjab	Delhi	·895	−·065	−·055	SW	2	7	...	
	Sirsa	·821	−·129	−·132	SE	3	5	...	
	Ludhiana	·869	−·074	−·081	NE	3	4	...	
	Lahore	·809	−·136	−·154	NE	3	8	0·06	Thunder-storm.
	Sialkot	·863	−·082	−·092	NE	3	8	0·21	
	Montgomery	·740	−·195	−·229	SE	11	2	...	
	Mooltan	·764	−·174	−·227	NW	2	0	...	
	Dera Ismail Khan.	·790	−·138	−·210	NNE	2	4	0·20	
	Khushab	·809	−·138	...	NE	10	2	0·10	Showery.
	Rawalpindi	·814	−·164	−·179	NE	6	6	0·97	Thunder-storm.
	Peshawar	·886	−·120	−·169	W	3	10	1·25	Showery.
Kashmir and Kumaun Himalayas.	Cherat	...	−·010	+·033	SE	9	10	0·94	Foggy.
	Murree	...	−·166	−·145	SE	8	10	1·10	
	Srinagar	...	+·033	−·078	WSW	4	10	0·46	
	Dras	...	−·138	...	Calm	0	10	0·25	
	Simla	...	−·018	−·004	Calm	5	10	...	
	Chakrata	...	−·010	−·031	N	10	3	...	
	Ranikhet	...	−·034	−·026	Calm	4	5	0·03	Frosty.
	Mussooree	...	−·032	−·026	N	...	2	...	Gentle wind.

The above shows that the primary depression lay over Sind and the secondary over the central Punjab. Strong cyclonic winds were blowing over the Punjab more particularly at some of the hill stations. Snow was falling in Kashmir and rain on the Punjab hills and plains.

March 7th.—Pressure had increased briskly to rapidly over Baluchistan, Sind and the west and central Punjab, while it had decreased over the Kumaun Himalayas. The following gives 8 A.M. data for the storm area:—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches	
Ludhiana	29·847	−·022	−·119	SE	8	6	0·34	Showery.
Umballa	·852	−·043	−·054	ESE	6	9	0·68	Distant lightning.
Sirsa	·847	+·026	−·113	SE	7	0	...	Do.
Delhi	·895	0	−·060	ENE	7	0	0·18	Thunder-storm with hail.
Bikaner	·832	+·016	−·123	ENE	9	0	...	Dusthaze.
Ajmer	·834	−·062	...	SW	9	0	...	
Kotah	...	−·047	...	WNW	8	...	...	
Jaipur	·842	−·056	−·114	NNE	3	0	...	Distant lightning.
Sambhar	·823	−·054	−·116	Calm	4	0	...	
Agra	·824	−·043	−·127	SE	6	8	0·26	Thunder storm.
Jhansi	·837	−·081	−·127	SSW	4	0	...	
Nowgong	·843	−·080	−·111	S	3	0	...	
Cawnpore	·848	−·052	−·067	SE	1	4	0·10	Do.
Mainpuri	·891	−·003	−·015	WNW	3	10	0·04	
Simla	...	−·092	−·099	N	6	10	1·22	Snowstorm.
Mussooree	...	−·060	−·092	E	...	10	0·84	Showery.
Chakrata	...	−·058	−·093	N	10	10	0·85	Snowing.

The above shows that both depressions had advanced eastward and that at 8 A.M. one centre lay over the southern Punjab, in the neighbourhood of Sirsa and Bikaner, and the other over the west of the North-Western Provinces between Agra and Jhansi. General rain had fallen over Upper India and snow on the hills. During the day both depressions continued to advance eastward and the more northern centre passed into the Simla and Mussooree hills, breaking up in that neighbourhood.

March 8th.—Pressure had increased briskly to rapidly over the whole of north-western India. The primary depression was still shown lying over the east of the Central Provinces, but the depression had partly filled up and was

less well-defined than on the 7th. The following gives 8 A.M. data for the storm :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Sutna .	29·901	+·044	—·065	ENE	8	0	...	
Jubbulpore.	·896	+·012	—·061	WSW	3	0	...	
Raipur .	·907	—·011	—·035	NW	9	0	...	
Benares .	·909	+·008	—·034	ESE	6	0	1·18	Thunder-storm.
Allahabad .	·909	+·021	—·039	ENE	8	1	0·32	Nor' wester with rain.

The winds had fallen light and the skies cleared. Rain had almost ceased over the Punjab and the west of the North-Western Provinces, but had continued over the east of the North-Western Provinces and had extended into Bengal.

March 9th.—Pressure had increased rapidly in the storm area and the depression had filled up and disappeared.

On the above day, the 9th, a fresh depression was appearing on the western frontier. This depression advanced into Eastern Rajputana on the 10th after giving light rain to Quetta and Peshawar, but the disturbance was at no time of any importance. On the 11th there occurred a brisk fall of the barometer in Kashmir followed by rain and snow over the North-West Himalayas and adjacent districts, but from the 11th up to the 17th the weather was quiet and fairly settled all over the country.

On the 18th a shallow depression appeared in Upper Sind and western Rajputana whence it advanced into eastern Rajputana by the 19th on which day showers were falling in Berar and the Central Provinces. By the 20th the above depression had reached the east of the North-Western Provinces and rain had extended to Chota-Nagpur, while by the 21st, the storm had reached East Bengal and showers had fallen at many places in north-east India. In the meantime another shallow depression had appeared over Sind on the 20th, reached west Rajputana on the 21st, the North-Western Provinces on the 22nd, the east of the North-Western Provinces on the 23rd and Bengal on the 24th and 25th. Showers accompanied the depression throughout, but the rainfall was at no time heavy or very important. On the 23rd another shallow depression had appeared over Rajputana, occasioning snow and rain on the north-west Himalayas.

On the 26th the depression over Bengal filled up and the weather was quiet and settled during the 27th and 28th. On the following day a brisk to rapid fall of the barometer occurred in the north-west and a depression appeared over Sind and Gujarat. The following gives 8 A.M. data for the depression area for the 29th:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"					
Jacobabad .	29·731	—·102	—·073	S	3	0	...	
Hyderabad.	·777	—·096	—·053	WNW	8	0	...	
Kurrachee .	·810	—·106	—·056	NW	9	0	...	
Bhuj . .	·822	—·100	—·039	W	9	0	...	
Dwarka .	·868	—·067	...	WNW	15	7	...	Sea smooth.
Rajkot .	·862	—·065	—·016	W	8	2	...	
Bhavnagar Para.	·821	—·057	—·064	W	6	3	...	
Ahmedabad	·805	—·066	—·072	E	2	2	...	

The above shows that a depression lay over Sind and that a feeble cyclonic circulation of the winds prevailed in the north-west.

March 30th.—Pressure had decreased slightly over the western desert while it had increased briskly along the foot of the north-west Himalayas so that, as a consequence, the depression had intensified. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"					
Jacobabad	29·761	+·030	—·050	E	2	7	...	
Hyderabad	·772	—·005	—·065	S	9	0	...	
Kurrachee .	·815	+·005	—·051	W	9	0	...	
Jodhpur .	·815	—·028	...	WSW	2	7	...	
Ajmer .	·859	—·027	+·006	Calm	2	6	...	
Bikaner .	·794	—·004	...	WSW	8	4	...	
Sirsa . .	·838	+·016	+·025	SE	6	7	...	
Ludhiana .	·888	+·048	+·070	SE	3	5	...	

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Lahore .	·874	+·058	+·051	NE	4	6	...	
Sialkot .	·867	+·047	+·050	NE	4	4	...	
Montgomery	·799	+·010	—·021	NE	13	3	...	Gale.
Mooltan .	·827	+·065	—·020	NE	4	0	...	Duststorm.
Khushab .	·855	+·019	+·022	NNE	16	3	...	Do.
D. I. Khan	·898	+·117	+·044	Calm	4	6	0·04	
Rawal Pindi	·943	+·091	+·089	NE	5	6	0·37	Thunderstorm.
Peshawar .	30·028	+·156	+·106	S	3	3	0·07	Showery.
Cherat .	...	+·014	+·043	NW	15	2	0·47	Foggy.
Murree .	...	+·076	+·129	N	6	10	0·65	
Srinagar .	...	+·087	+·085	NNW	8	10	0·02	Thunderstorm.

The preceding data show that fresh to strong northerly to north-easterly winds prevailed over the Punjab with rain in the north-west Punjab and snow in Kashmir.

March 31st.—Pressure had increased over the whole of north-west India slightly generally, but briskly in the depression area. The following gives 8 A.M. data for the storm area :—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Jacobabad .	29·891	+·130	+·081	N	4	0	...	Dust haze.
Hyderabad .	·882	+·110	+·043	Calm	11	5	...	
Kurrachee .	·896	+·081	+·030	WNW	8	4	...	
Deesa .	·922	+·054	+·059	S	8	2	...	
Jodhpur .	·921	+·106	...	Calm	7	5	...	Hot wind.
Ajmer .	·939	+·080	+·072	SW	5	4	...	
Bikaner .	·897	+·103	+·062	WSW	13	3	...	
Sirsa . .	·884	+·046	+·066	SE	7	8	...	
Jaipur .	·932	+·055	+·081	E	3	3	...	
Lahore .	·892	+·018	+·074	N	4	5	...	
Mooltan .	·935	+·108	+·082	NW	1	4	...	
Ludhiana .	·902	+·014	+·087	E	4	0	...	
Montgomery	·882	+·083	+·060	NNE	12	5	...	
D. I. Khan .	·989	+·091	+·130	N	3	0	...	
Khushab .	·937	+·082	+·101	N	18	3	...	Duststorm.
Sialkot .	·929	+·062	+·112	WNW	5	5	...	
Peshawar .	30·113	+·085	+·170	WNW	3	10	0·20	

The above shows that the storm had become much slighter and that the showers in the north-west had almost ceased.

Summary of the Reports of the Weather and snowfall in the Mountain Districts to the north and north-west of India.

I.—Afghan Mountain Districts.

The following is a statement of the snowfall in the Afghan Hills during March 1901 :—

(1) *Kabul* :—

March 6th.—Snow fell to a depth of ¼ inch.

The eastern and western hills have some snow and the Paghman hills are covered with snow.

(2) *Kurram.*—There was more snow in the month of March 1901 than in the same month last year.

The following is a record of the snowfall :—

March 4th, 5th and 6th.—Snow fell on the higher peaks of the Sufaid Koh (12,000 feet).

March 10th and 11th.—Snow fell down to 8,000 feet.

March 19th, 20th, 21st, 22nd and 23rd.—Snow fell down to 8,000 feet.

March 31st.—Snow fell down to 10,000 feet.

(3) *Kohat.*—No snow fell on the Samana Range during March, but one inch of snow still lay on the 20th March on a few places on the Samana. More snow fell during the winter under review than during last winter.

(4) *Killa Drosh* :—

March 5th.—There was a slight snowfall on the tops of the mountains.

March 6th.— Ditto ditto.

March 21st.— Ditto ditto.

II.—Kashmir and Punjab Himalayas.

(1) *Murree.*—There were two falls of snow during March making a total of 6 inches.

(2) The following report has been received from Kailang regarding the snowfall in March 1901.

Snow fell on March 3rd and 6th and it is believed that more snow has fallen during the winter while less than usual has melted, so that the accumulation is greater than in previous years.

(3) *Leh.*—Snow fell as follows :—

March 3rd, 24th and 25th.—A very slight sprinkle.

(4) *Chamba.*—The following table gives the recorded falls of snow between the middle of December and the middle of March :—

Date.	Lamar.	Chad Bhant.	Bhandal.	Duir.	Chhatrie.	Khangu.	Alwas.	Barmaur.	Chausa.	Kalatop.	Surkhigall.
	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
17th December.	0 10	0 7	...	...	...	...	...	...	...	...	...
23rd „ .	1 4	1 1	...	...	...	...	...	...	...	...	...
24th „ .	1 2	1 0	...	...	...	...	...	...	...	...	...
26th „ .	1 3	1 0	...	...	...	...	...	...	...	...	...
30th „ .	0 9	0 6	...	...	...	...	...	...	...	...	...
31st „ .	0 11	0 9	...	...	...	...	...	...	...	...	...
12th January .	1 4	1 0	...	...	...	...	...	...	...	...	...
13th „ .	1 9	1 3	...	...	...	...	...	...	...	...	...
20th „ .	2 4	1 10	...	...	...	...	...	...	...	...	...
4th February .	1 3	1 1	...	...	...	...	...	...	...	...	...
5th „ .	2 5	2 1	...	...	...	...	...	...	...	...	...
17th „ .	1 0	0 8	...	...	...	...	...	...	...	...	...
18th „ .	2 1	1 11	...	...	...	...	...	...	...	...	...
20th „ .	0 6	0 4	...	...	...	...	...	...	...	...	...
22nd „ .	1 0	0 9	...	...	...	...	...	...	...	...	...
6th March .	...	...	...	...	0 6	0 7	0 5	1 1	0 10	...	...
7th „ .	0 4	0 2	0 2	0 2	0 2	0 1½	0 2	...	...	...	0 1½
6th & 7th March	...	...	...	...	...	...	...	...	...	0 11½	...

The accumulation of snow at the end of March on the different hills was as follows :—

	′	″
Langar	0	6
Chhatrie	2	3
Khangu	2	0
Alwas	2	0
Sagti	1	6
Suatwari	3	0
Barmaur	0	2
Kalatop	2	6

The snowfall has been greater during the present winter than during the previous one. This season there has been exceptionally heavy snow in the high hills and down to about 6,500 feet. Below this altitude there has been much rain but relatively little snow.

(5) *Bashahr, Simla District.*—Snow occurred on the following dates :—

March 7th:—Snow fell as low as 5,750 feet.
„ 8th:— „ „ 10,000 „
„ 24th:— „ „ 9,000 „

The falls were slight and gave from one to two inches of snow. On the 7th March 1·30″ of rain was registered.

All the passes were still closed at the end of the month and the depth of snow on the different passes was as follows :—

Rupin Pass	29 feet.
Barenda „	29 „
Hairang „	8 „
Shahtul „	32 „
Bulder „	33 „
Pamung „	12 „

The snowfall has been heavier and the winter has been longer than for several years past.

(6) *Poo.*—In the Upper Sutlej valley there was no snow during March, and the snow-line was about 12,000 feet. Last year on the same date it was about 4,000 feet.

(7) *Kulu.*—There were falls of snow on the 6th, 22nd, 23rd and 24th of March in the Kulu Tahsil and on the 6th, 7th, 24th and 25th of March in the Plach Tahsil.

The fall was slight on these dates and confined to the higher peaks and passes.

The following shows the reported depth of snow on the higher passes at the end of March :—

Kulu Tahsil.		Plach Tahsil.	
Rotang	13 feet	Sirikhand	18 feet.
Hamta	7 „	Chul	6 „
Barsi	6 „	Maghini	7 „
Chandarkhani	12 „	Dundku	8 „
Bujadhar	5 „	Tikar	6 „
Lohri Achri	6 „	Nunu	3 „
Bhubu	6 „	Ramgarh	1 „
Poshtari	6 „	Jalor	8 „
Sari	9 „	Raghopur	9 „
Majhang	1 „	Lambri	7 „
		Sakiran	8 „
		Gargarasan	10 „
		Supakun	9 „
		Bashleo	8 „
		Plach	9 „
		Tirath	11 „

The snowfall during the month under review is reported to be in excess of past years and the accumulation of snow on the passes, as shown by the above table, is greater than usual.

III.—NORTH-WESTERN PROVINCES HIMALAYAS.

(1) *Garhwal.*—Snow fell on the 1st, 6th, 7th, 15th, 21st and 22nd March, but the falls were confined to the perpetual snows and the regions in their vicinity. The falls were, however, greater and more frequent than in the corresponding month of previous years.

(2) *Almora.*—Snow fell as under:—

Malla Johar.

March	13th	2 feet.
„	17th and 18th	4 „
„	24th	2 „
„	26th	2 „
	TOTAL	10 feet.

Malla Danpur.

March	1st	6 inches.
„	7th	6 „
„	23rd and 24th	3 „
„	26th and 28th	6 „
	TOTAL	1 feet 9 inches.

Byans, Chandas and Darma.

March	7th	2 feet.
„	17th and 18th	2 „
„	21st	6 inches.
„	23rd and 24th	18 „
	TOTAL	6 feet.

The accumulated snow at the end of the month was as follows:—

	31st March 1901.	31st March 1900.
Utadhura	10 feet	14 feet
Ralam Dhura	5 „	7 „
Pindari	1 „ 9 ins.	1 foot 6 inches.
Kaphini	1 „ 9 „	
Kantela	1 „ 9 „	
Byans, Chandas, Darma	6 „	3 feet.

The snowfall has been greater than in the previous year.

IV.—ASSAM HIMALAYAS.

(1) *Sadiya.*—The snowfall on the Himalayas of the north-east frontier during the winter of 1900-1901 was as follows:—

Small snow storms occurred early in the season, but the heavy snow storms came down later than usual, and judging from the mildness of the winter it is probable that the snowfall was not as great as it was last year.

The rivers are all abnormally low for the time of year though the weather has been quite warm enough of late to melt the snow, and this confirms the belief that the fall of snow has been smaller than usual during the late winter.

(2) *North Lakhimpur.*—The snow-fall during the past season in the hills north of Lakhimpur is understood to have been below the normal. There has certainly been less snow than usual on those peaks visible from the plains.

(3) *Kamrup.*—Snowstorms occurred at intervals during November, December and January. The snowfall was heavier, the depth being reported to vary from 28″ to 30″ in different ranges and passes.

It is reported that there was no snow accumulation for sometime previous to this date (31st March) on any of the roads leading to the hills, but as there was a heavier fall during the year it is likely that there is still an accumulation of snow at this date on the hills.

(4) *Darrang.*—No reliable information is available, but the Bhutia chiefs who came down to Mangaldai reported that the snowfall this year was heavier than last year. This has been corroborated by the Chavduan Bhutias and the Akas who came to Tezpur and reported that the snowfall in their hills was very heavy.

Summary of special Storm Reports.

The month of March was more disturbed than usual more particularly in north-west and central India. The following gives a statement of the more important storms in the various provinces of India reported by the meteorological observers:—

March 1st.—A duststorm with rain passed over Pachmarhi at 4-40 P.M., lasting five minutes. A very heavy duststorm was experienced at Hoshangabad at 6-10 P.M. The storm passed from north-west to south-east with much thunder and lightning.

4th.—Heavy thunderstorm passed over Nagpur between 8 P.M. and 10 P.M. with terrific lightning and thunder and heavy rain.

6th.—A storm with strong winds and rain passed over Srinagar.

7th.—A violent nor'-wester passed over Allahabad. The wind for a short time blew with a velocity equal to 67 miles per hour.

11th.—A thunderstorm with rain and a wind velocity equal to 50 miles per hour passed over Srinagar.

21st.—A very heavy duststorm was experienced at Hoshangabad at about 9-20

P.M. The storm lasted three quarters of an hour.

22nd.—A duststorm passed over Jodhpur at 5-55 P.M. with a gale of wind and a few showers.

Duststorm with rain occurred at Pachmarhi at 4-11 P.M.

23rd.—A small duststorm of moderate strength passed over Allahabad.

24th.—A duststorm passed over Saugor between 3-25 and 3-45 P.M.

A severe thunderstorm with hail occurred at Simla at about 2-15 P.M. and lasted till 4-30 P.M.

29th.—A thunderstorm passed over Srinagar between 5-30 P.M. and 8 P.M.

31st.—A duststorm was experienced at Malegaon between 5-22 P.M. and 5-27 P.M.

A thunder storm with strong winds and rain occurred at Khandwa at 6 P.M.

A very heavy duststorm passed over Hoshangabad at 2-40 P.M.

Hailstorms.—The following more or less severe hailstorms were reported during the month under review.

March 1st.—At Akola a hailstorm commenced about 4-42 P.M. and lasted for about ten minutes. The hailstorm extended to about 39 miles to the west of the observatory.

At Pathari in Central India a hailstorm was experienced in the evening. The hailstones were about the size of gram.

At Dewas (Central India) a storm began about 1 P.M. and rain commenced at 2 P.M., continuing for about half an hour. During that interval three hail showers occurred, the size of the stones varying from that of a plum to a betelnut. The crops were seriously damaged.

At Alot a hailstorm began about 2 P.M., the stones having been of about the size of plums. The storm continued for one hour and did much damage.

At Bagode the storm was at 4 P.M. and the hailstones about the size of a rupee.

March 4th.—At Sarangpore there was a hailstorm at 4 P.M. at about one mile to the north of the station, the size of the stones varied from a half to 2 inches in diameter. The fall continued about half an hour and the hailstones lay to a depth of nine inches on the ground completely destroying all cultivation. In the Bhopal Agency on the same afternoon hailstorms were experienced in several localities. The stones were of the size of gooseberries and plums and did much damage to the crops.

A severe hailstorm passed over the Kondhali Revenue Inspector's Circle (Nagpur) and lasted about 20 minutes. The hailstones varied from the size of a small nut to that of a mango.

7th.—A severe hailstorm passed over the Gonda district in North Oudh. The storm had a path of about 30 miles with a width of about 25 miles and the damage to crops was very great.

A hailstorm occurred in the Rampore Rajauri Tahsil (Jummu district).

At Tappa Lenhra (Gorakhpur district) a hailstorm was experienced lasting 15 minutes.

20th.—At Jowai in the Assam Hills there was a slight hailstorm at 4-30 P.M.

24th.—A severe hailstorm occurred in the Bojali Tahsil of the Kamrup district of Assam. The storm lasted 15 minutes, the size of the stones varying from ½ to 3 inches. Wild ducks and hares were killed by the hailstones.

31st.—At Petlawad in the Indore State a hailstorm occurred at 5 P.M., the size of the stones was that of a small plum.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea.—The north-east monsoon conditions which obtained steadily throughout the month over the Arabian Sea, were somewhat more strongly pronounced than usual, the air movement on the mean of the month

having been 0·1 stronger than usual. Winds were somewhat lighter than usual on the 2nd to the 5th, 8th, 9th, 16th, 20th to the 22nd and 29th to the 31st, of normal strength on the 10th and 17th and more or less above their normal March intensity on all other days. They were feeblest on the 5th and 9th when their average strength was only 2·1 and strongest on the 12th when they averaged 3·9 in force or 1·2 above the normal of the month.

Weather was feebly disturbed in the south-east off the Malabar and west Ceylon coasts from the 3rd to the 5th, and from the 11th to the 18th and fine and settled over the rest of the sea throughout the month.

Bay of Bengal.—Abnormal winds from between north and west prevailed off the Bengal and Orissa coasts and from between north and east along the Coromandel and Circars coasts during the first two weeks of the month, instead of the local sea breezes which usually obtain in these areas in March. During the remainder of the month the winds were fairly normal in direction, although somewhat less steady than usual.

The air movement varied considerably in strength from day to day during the month. There were three well-defined periods of light winds, *viz.*, the 6th to the 9th, 20th, and 21st and the 27th to the 31st. The air movement was about 10 per cent. weaker than usual during these periods. It was on the other hand strongest during the month on the 11th and 12th when it averaged 3·5 in strength as compared with 2.4, the normal of the month.

Winds averaged 2·6 in force for the whole month or 0·2 above the normal air movement in March.

Weather was generally fine although some occasional showers and squalls were experienced in the vicinity of Ceylon on one or two occasions.

The principal abnormal feature of the meteorology of the Bay was hence the prevalence of abnormal winds along the Bengal, Orissa and Madras coasts during the first half of the month.

Equatorial Belt. So far as can be inferred from the scanty information available, conditions were very abnormal in the extreme west of the belt along the African coast where north-east winds obtained on most days during the month to the exclusion of the normal south-east winds of the period. This is confirmed by the data of Zanzibar where the mean wind direction of the month was N. 31° E., the normal being S34°E. Conditions were approximately normal at the Seychelles. The rainfall of the month was 12 per cent. above the normal at the Seychelles 14 per cent. below it at Zanzibar.

Temperature of the Air.

The month of March 1901 was very disturbed over a large part of India, but particularly so over the Gangetic Plain, Bengal, the central parts of the country and the east and south-east of the Peninsula, and over the whole of this large area the heat was less than usual. On the other hand, the storms in Assam and Upper Burma were less severe and less frequent than is ordinarily the case in this month, so that in the extreme north-east of the Indian area the heat was greater than the normal. This condition was in marked contrast to the conditions prevailing in this region in March 1900. Two well marked cold waves crossed India during the month, one at the beginning and one towards the end of the month.

The mean maximum temperature of the month was higher than usual in two large areas. One included the west and south-west Punjab, Sind, Rajputana, North Bombay and the greater part of the West Coast. Within this area the greatest excess was shown over North Bombay and the variations from the normal exceeded +2° at the following stations;—

Province.	Station.	Mean maximum temperature.		
		Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
		°	°	°
West Punjab	Mooltan	88·8	86·3	+2·5
Sind	Jacobabad	95·2	91·1	+4·1
	Kurrachee	91·1	87·1	+4·0
	Hyderabad	96·2	93·3	+2·9
Rajputana	Deesa	98·1	95·9	+2·2
North Bombay	Bhavnagar Para	98·1	93·1	+5·0
	Ahmedabad	100·1	96·5	+3·6
	Surat	98·6	96·1	+2·5
	Veraval	88·3	86·1	+2·2

The second area of excess included part of Burma, part of Bengal and the whole of Assam. This area was of less extent than the western area of excess, but the variations from the normal were larger. This is shown in the following table which gives comparative data for the stations where the excess was more than 2° :—

Province.	Station.	Mean maximum temperature.		
		Actual, March, 1901.	Normal, March.	Variation of actual from normal, March 1901.
		°	°	°
Burma	Kindat	92·4	90·0	+2·4
Bengal	Chittagong	91·4	86·2	+5·2
	Barisal	92·1	87·9	+4·2
	Mymensingh	89·0	86·5	+2·5
	Calcutta	92·7	90·4	+2·3
Assam	Silchar	92·5	85·3	+7·2

Over the whole of the remainder of India the maximum temperature, on the mean of the month, was lower than usual. The deficiency was large and more than 3° in amount at a few stations in the east Punjab and the west of the North-Western Provinces. The following gives data for these stations :—

Province.	Station.	Mean maximum temperature.		
		Actual, March 1901.	Normal, March.	Variation of actual from normal, March. 1901.
		°	°	°
East Punjab	Ludhiana	81·9	85·2	−3·3
North-Western Provinces, West.	Roorkee	82·3	85·8	−3·5

The deficiency was considerable to large over an area which included west Bengal, the east of the North-Western Provinces, the Central Provinces, part of the Madras Coast and the Deccan. The following gives comparative data for the stations within this area where the variations were −3° or more :—

Province.	Station.	Mean maximum temperature.		
		Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
		°	°	°
West Bengal	Chaibassa	90·3	94·1	−3·8
	Patna	87·9	91·1	−3·2
	Hazaribagh	85·6	88·7	−3·1
N.-W. Provinces, East.	Benares	89·5	93·3	−3·8
	Allahabad	89·9	93·3	−3·4
Central Provinces.	Sambalpur	90·6	97·0	−6·4
	Raipur	91·1	96·5	−5·4
	Chanda	96·0	100·2	−4·2
	Seoni	89·5	93·5	−4·0
	Jubbulpore	89·7	93·1	−3·4
	Hoshangabad	92·7	96·1	−3·4
	Saugor	89·0	92·3	−3·3
	Nagpur	95·3	98·5	−3·2
Deccan	Hyderabad (Dn.).	94·4	97·7	−3·3
Madras Coast	Nellore	92·7	96·0	−3·3

The deficiency was also considerable to large in parts of the south of the Peninsula and the north of Ceylon. The following gives data for the stations in this area :—

Province.	Station.	Mean maximum temperature.		
		Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
		°	°	°
South of the Peninsula.	Tinnevelly	92·3	96·4	−4·1
	Madura	93·5	96·9	−3·4
North of Ceylon	Trincomalee	86·4	91·0	−4·6

The highest day temperatures of the month were generally registered during the last week of the month and at several stations on the last day, but along the West Coast the warmest period occurred about the middle of the month. The following gives the absolute maximum temperature recorded during the month in each division

of India with the name of the station recording it and the date :—

Province or Division.	Station.	Highest maximum temperature recorded in March 1901.	Date on which recorded.	Highest maximum temperature recorded in March previous to 1901.	Year in which recorded.
		°		°	
Burma	Minbu	104·6	26th	106·6	1894
	Mandalay	104·6	,,	106·6	1896
Assam	Silchar	99·6	31st	99·4	1892
Bengal	Noakhali	105·4	,,	94·3	1900
Orissa	Balasore	103·0	,,	103·5	1889 and 1898
Bihar	Gaya	100·7	23rd	106·6	1878
Chota Nagpur	Daltonganj	100·1	24th, 30th and 31st.	106·1	1899
N.-W. P. and Oudh.	Jhansi	103·3	30th	110·0	1892
Punjab	Montgomery	101·5	,,	106·9	1892
Sind	Jacobabad	107·2	,,	111·8	1892
Rajputana	Deesa	107·1	,,	114·5	1892
Gujarat	Surat	107·1	18th	110·1	1892
Central India	Neemuch	100·1	30th	107·5	1892
Central Provinces.	Khandwa	100·2	22nd	109·7	1892
Berar	Akola	104·7	,,	111·6	1892
West Coast	Ratnagiri	100·8	13th	101·9	1889
Bombay Deccan	Malegaon	103·3	20th, 28th and 29th.	113·8	1889
Mysore	Chitaldroog	97·2	6 days	100·2	1899 and 1900.
Madras Coast	Cocanada	100·1	26th	108·4	1891
Madras Deccan	Cuddapah	103·2	6 days	110·3	1892
South India	Salem	101·2	4 days	107·5	1892

The above shows that there were no remarkable extremes of temperature during the month, but that at Silchar in Assam and Noakhali in Bengal the maximum temperature was higher during March 1901 than had been previously recorded during March.

The mean day temperature was in defect at the hill stations in the Himalayas, in the Central Provinces and in South India and was in excess in Baluchistan. At Srinagar (Kashmir) the maximum temperature was in large local excess.

The mean minimum temperature exhibited approximately the same distribution as the maximum temperature, relatively to the normal. It was lower than usual over a large area including the North-Western Provinces, the east of the Central Provinces, the Madras coast, Bengal, Assam and part of Burma. The deficiency was more than 2°0 within two small areas in north-east India. Comparative data for the stations within these two areas are given below :—

Area.	Station.	Mean minimum temperature. Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
		°	°	°
First Area	False Point	69·5	72·2	—2·7
	Balasore	67·5	69·8	—2·3
Second Area	Jessore	64·6	68·3	—3·7
	Dinajpur	57·9	61·5	—3·6
	Dhubri	61·3	64·5	—3·2
	Bogra	61·1	63·6	—2·5
	Narayanganj	66·1	68·4	—2·3
	Berhampore	63·7	66·0	—2·3
	Chittagong	65·4	67·7	—2·3

Over the whole of the remainder of India and of Burma the mean night temperature was in excess of the normal. The excess was greatest and more than 2°0 in amount in four areas, the first including the central and south-west Punjab and Upper Sind, the second including part of Gujarat, the third including part of the Deccan and the fourth including part of Lower Burma and of Tenasserim. The following gives comparative data for the stations within these four areas :—

Province.	Station.	Mean minimum temperature. Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
		°	°	°
Punjab	Khushab	60·3	56·2	+4·1
	Mooltan	61·2	58·0	+3·2
	Lahore	57·5	54·8	+2·7
	Sialkot	57·8	55·3	+2·5
	Montgomery	58·4	55·9	+2·5
Upper Sind	Jacobabad	62·3	59·4	+2·9
Gujarat	Surat	68·4	65·7	+2·7
Deccan	Belgaum	66·7	64·1	+2·6
	Sholapur	71·2	68·8	+2·4
Lower Burma	Diamond Island	77·5	74·7	+2·8
	Bassein	73·0	70·2	+2·8
Tenasserim	Mergui	74·8	71·5	+3·3
	Tavoy	73·0	70·1	+2·9
	Moulmein	74·8	72·3	+2·5

The night temperature was nearly normal at several of the hill stations, but was in excess at the hill stations

in Baluchistan and Rajputana, and in defect at Darjeeling, Pachmarhi and Wellington. This is shown below:—

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	°	°	°
Chaman	47·9	42·8	+5·1
Quetta	40·9	39·7	+1·2
Mount Abu	64·0	61.8	+2·2
Darjeeling	41·5	43·0	—1·5
Pachmarhi	58·9	60·4	—1·5
Wellington	51·3	52·8	—1·5

The lowest night temperatures occurred generally, in the first ten days of the month, but in Upper India there was another cold period about the 15th. The following gives a few of the more important minima, but none are in any way remarkable:—

STATION.	Lowest Minimum temperature recorded in March 1901.	Date on which recorded.	Lowest minimum temperature recorded in March previous to 1901.	Year in which recorded.
Peshawar	41·4	7th	37·9	1891-92 and 1898
Dera Ismail	45·1	„	38·9	1878.
Debra Dun	46·0	8th	38·5	1898
Montgomery	48·0	„	39·5	1898
Umballa	48·0	2nd and 16th	44·0	1898
Lahore	48·0	15th	40·2	1898
Sirsa	48·6	1st	37·7	1898
Mainpuri	48·6	„	43·1	1898
Roorkee	49·3	5 days	40·0	1898
Patiala	49·5	8th	42·0	1898
Cawnpore	49·5	1st	45·0	1898
Meerut	49·8	„	41·1	1898
Dras	—17·9	14th and 15th	—22·5	1899
Minimarg	6·0	8th	3·0	1896
Leh	9·0	2nd	—1·5	1878
Yatung	16·9	9th	18·9	1899
Astor	19·0	8th	11·7	1897

The mean temperature of the month was generally in excess of the normal to the west of the meridian of 77° as well as over the greater part of Burma and Assam, while it was lower than usual in the intervening region. The excess was more than 2° over the centre and south-west of the Punjab, Baluchistan and the Indus Valley as well as in part of Gujarat and in Cachar. The following gives comparative data for these three areas:—

PROVINCE.	STATION.	MEAN DAILY TEMPERATURE.		
		Actual, March 1901.	Normal, March.	Variation of actual from Normal, March 1901.
		°	°	°
PUNJAB	Khushab	72·4	68·0	+4·4
	Mooltan	75·0	72.1	+2·9
	Sialkot	70·8	68·6	+2·2
	Montgomery	72·7	70·6	+2·1
BALUCHISTAN	Chaman	60·1	54·7	+5·4
	Quetta	54·9	52·1	+2·8
SIND	Jacobabad	78·8	75·3	+3·5
	Kurrachee	79·3	76·8	+2·5
GUJARAT	Ahmedabad	84·9	82·1	+2·8
	Surat	83·5	80·9	+2·6
	Bhavnagar Para	82·5	80·1	+2·4
CACHAR	Silchar	77·1	74·4	+2·7

The deficiency was greatest and more than 2° in amount over the east of the North-Western Provinces, the west of Bengal and the east of the Central Provinces. The following gives data:—

PROVINCE.	STATION.	MEAN DAILY TEMPERATUTE.		
		Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
NORTH-WESTERN PROVINCES EAST	Benares	75.0	77·9	—2·9
	Allahabad	75·3	77·8	—2·5
WEST BENGAL.	Chaibassa	77·9	80·7	—2·8
	Gaya	77·6	80·0	—2·4
	Hazaribagh	74·2	76·3	—2·1
CENTRAL PROVINCES EAST	Raipur	78·9	82·5	—3·6
	Sambalpur	78·7	82·2	—3·5
	Seoni	76·2	78·6	—2·4

The mean temperature was also in moderate defect at Tinnevelly and Trincomalee (each—2°·0).

The principal abnormal features of the temperature conditions were as follows:—

(1) Both the day and night temperatures and consequently also the mean temperature were in excess over the greater part of North-West India and of the west of the Peninsula.

(2) The excess of the day temperature was greatest over North Bombay and Cachar and the excess of the night temperature was greatest in the Central Punjab.

(3) Both the day and night temperatures and also the mean temperature were below the normal over the Gangetic Plain and part of the Central Provinces.

(4) The defect of the day temperature was large over the Central Provinces.

(5) The day temperature was lower and the night temperature higher than usual over the east of the Peninsula, the mean temperature having been in slight defect.

(6) The day temperature was considerably above and the night temperature below the normal in North-East India, the resulting mean temperature having been in slight excess.

The following table gives comparative data of the month for 56 meteorological divisions of India:—

Province.	Division.	Actual temperature.					Variation from normal of month.		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	92·7	74·2	83·5	18·5	25·5	0	+2·9	—2·9
	Lower Burma (Deltaic)	91·5	74·4	83·0	17·2	27·7	—0·6	+2·4	—3·0
	Central do.	97·3	66·3	81·8	31·0	46·3	—1·5	—0·6	—0·9
	Upper do.	95·8	65·0	80·5	30·8	44·5	+1·2	0	+1·2
	Arakan	89·9	65·6	77·8	24·3	41·3	?	?	?
Bengal and Assam	Eastern Bengal	91·8	64·8	78·3	27·1	44·2	+3·3	—2·0	+5·3
	Assam (Surma)	92·5	61·6	77·1	30·9	44·2	+7·2	—1·8	+9·0
	Do. (Brahmaputra)	83·6	60·2	71·9	23·5	37·6	+0·8	—2·2	+3·0
	Deltaic Bengal	91·7	66·6	79·2	25·0	42·7	+1·2	—2·1	+3·3
	Central do.	91·8	64·1	77·9	27·7	44·1	+0·5	—2·1	+2·6
	North do.	87·3	59·2	73·3	28·1	43·7	+0·6	—1·9	+2·5
	Bengal Hills	56·4	33·0	44·8	23·4	36·6	—1·0	—1·5	+0·5
	Orissa	91·1	70·6	80·9	20·5	36·2	+0·3	—2·2	+2·5
	Chota Nagpur	88·5	62·7	75·6	25·8	43·8	—3·1	—1·2	—1·9
	Bihar (South)	89·2	63·4	76·3	25·8	46·4	—3·0	—1·2	—1·8
	Do. (North)	87·8	60·1	74·0	27·7	44·5	—1·5	—1·5	0
North-Western Provinces and Oudh.	North-Western Provinces (East)	89·7	60·5	75·2	29·2	51·0	—3·6	—1·8	—1·8
	Oudh (South)	89·8	59·0	74·4	30·8	49·6	—1·6	—1·6	0
	Do. (North)	88·1	58·4	73·3	29·7	47·1	?	?	?
	North-Western Provinces (Central)	90·3	60·8	75·6	29·4	49·4	—0·6	+0·3	—0·9
	Do. do. (West)	87·7	59·6	73·7	28·1	47·2	—1·3	—0·1	—1·2
	Do. do. (Submontane, East).	88·4	61·0	74·7	27·4	43·9	—2·4	—1·5	—0·9
	Do. do. (Submontane, West).	82·1	55·6	68·9	26·5	42·7	—2·1	—1·3	—0·8
	Do. do. (Hills)	60·6	45·3	53·0	15·3	39·6	—2·4	—0·5	—1·9
Punjab	Punjab, (South-East)	85·2	62·3	73·8	22·9	44·1	—3·0	+0·2	—3·2
	Do. (South)	84·8	57·5	71·2	27·3	46·6	—0·7	+0·8	—1·5
	Do. (Central)	84·4	57·5	71·0	26·9	46·2	+0·7	+2·7	—2·0
	Do. (Submontane)	82·4	56·7	69·6	25·7	42·1	—0·7	+1·5	—2·2
	Do. (Hills)	54·7	33·4	44·1	21·2	44·8	—0·2	+0·4	—0·6
	Do. (North)	76·9	53·3	65·1	23·6	46·7	+0·2	+1·6	—1·4
	Do. (West)	86·2	59·0	72·6	27·2	49·7	+2·9	+3·3	—0·4
Bombay and Malabar Coast Districts (Madras).	Malabar	90·1	76·8	83·5	13·2	20·8	+0·8	+1·1	—0·3
	Madras (South Central)	96·5	71·5	84·0	25·0	32·2	—0·9	+1·3	—2·2
	Coorg	84·5	63·1	73·9	21·4	27·3	0	+1·9	—1·9
	Mysore	91·8	66·7	79·2	25·1	32·7	—0·3	+0·5	—0·8
	Konkan	87·7	74·2	81·0	13·4	27·2	+1·2	+0·9	+0·3
	Bombay Deccan	96·6	68·7	82·7	27·8	39·6	—0·3	+1·8	—2·1
	Hyderabad (North)	94·3	69·8	82·1	24·5	35·9	...	...	...
	Khandesh	97·0	64·2	80·6	32·8	47·4	+1·6	+1·2	+0·4

Province.	Division.	Actual temperature.					Variation from normal of month.		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Central Provinces and Berar.	Berar	97·3	67·4	82·4	30·0	44·9	−1·6	+0·9	−2·5
	Central Provinces (West)	95·5	66·2	80·8	29·3	44·9	−1·9	+0·6	−2·5
	Do. (Central)	91·1	64·8	77·9	26·3	41·4	−3·7	+0·7	−4·4
	Do. (East)	90·9	66·8	78·8	24·1	39·4	−5·9	−1·2	−4·7
Bombay (North)	Gujarat	99·4	69·0	84·2	30·4	46·4	+3·1	+2·4	+0·7
	Kathiawar and Cutch	93·0	66·1	79·5	27·0	43·0	+1·6	+0·6	+1·0
	Sind	94·2	65·0	79·6	29·2	49·4	+3·7	+1·5	+2·2
	Baluchistan Hills	69·4	41·3	55·4	28·0	49·6	+5·0	+3·2	+1·8
Rajputana and Central India.	Central India (East)	90·5	61·6	76·1	28·9	45·8	−0·3	+0·8	−1·1
	Rajputana (East), Central India (West)	92·1	62·2	77·2	29·9	47·8	+1·2	+0·9	+0·3
	Do. (West)	94·4	63·3	78·9	31·1	50·9	+2·0	+0·3	+1·7
Madras	East Coast (North)	88·4	73·5	81·0	14·9	24·4	+0·1	−1·1	+1·2
	Hyderabad (South)	95·9	71·9	83·9	24·0	33·7	−2·6	+0·7	−3·3
	Madras (Central)	99·3	73·2	86·3	26·2	35·1	−1·2	+0·4	−1·6
	East Coast (Central)	91·0	73·0	82·0	18·1	25·9	−2·7	+0·5	−3·2
	Do. (South)	90·6	73·9	82·2	16·7	23·1	−0·8	+0·1	−0·9
	Madras (South)	92·2	73·8	82·9	18·4	25·7	−3·8	+0·9	−4·7

The following gives a summary of the chief features and changes of the temperature conditions of the month. The major abnormal conditions of temperature during the month were mainly due to the unusual amount and distribution of the rainfall of the month and to the late snowfall on the Himalayas. To the former were due the low temperatures prevailing over the Central Provinces and neighbouring regions and to the latter the large changes which occurred at different times in North-West India.

The temperature conditions, relatively to the normal, at the commencement of the month differed only slightly from the mean abnormal conditions. The mean temperature was in excess over the greater part of North-West India, over the south of the Peninsula and over part of Burma, while it was lower than usual over the whole of the intervening region, but more particularly so over West Bengal and the adjacent parts of the North-Western Provinces and the Central Provinces. These conditions lasted from the 1st to the 6th and were accompanied with anticyclonic conditions of pressure over Northern India, while shallow depressions were crossing the head of the Peninsula and giving showers to some of the central districts. Taking the 4th as a representative day of this period, the following gives comparative temperature data for the different divisions of India:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 4th March.	Mean minimum temperature, 4th March.	Mean daily temperature, 4th March.
	°	°	°
Burma	0	+1·1	+0·6
Assam	+2·4	−4·0	−0·8
Bengal	+0·7	−5·2	−2·3
Orissa	−3·4	−5·7	−4·6
Bihar	−1·8	−3·6	−2·7
Chota Nagpur	−5·3	−3·5	−4·4
North-Western Provinces and Oudh	+0·6	+0·6	+0·6
Punjab	+3·6	+7·1	+5·4
Sind	+7·2	−0·5	+3·4
Rajputana	+4·2	+5·6	+4·9
Gujarat	+2·7	+2·2	+2·5
Central India	−0·5	+3·6	+1·6
,, Provinces	−6·4	+1·5	−2·5
Berar	−4·4	+4·4	0
West Coast	−1·0	−0·4	−0·7

Province or Division.	Variation from normal		
	Mean maximum temperature, 4th March.	Mean minimum temperature, 4th March.	Mean daily temperature, 4th March.
	°	°	°
Bombay Deccan	−1·8	+3·3	+0·8
Mysore	−2·9	+1·3	−0·8
Madras Coast	−2·3	+0·2	−1·1
„ Deccan	−6·7	−1·6	−4·2
South India	−3·1	+2·8	−0·2

On the 5th and 6th a largish double depression advanced from the North-West frontier of India eastward through the Punjab and Rajputana. Rain fell on the plains and more or less heavy snow on the hills of North-West India, as the storm advanced eastward and this fall was succeeded by a rapid decrease of temperature in the North-West Punjab on the 7th. The following table shows the stations at which the fall between the 6th and 7th was more than 5°:—

Station.	Mean temperature change in 24 hours preceding 8 A.M. of 7th March.
	°
Peshawar	−16·7
D. I. Khan	−9·0
Khushab	−7·5
Montgomery	−6·0
Chaman	−6·2
Murree	−6·1
Srinagar	−5·5

A well marked area of low temperature appeared in the north-west of the Punjab on the 7th and spread all over North-Western India on the 8th, coalescing with the central area of relatively low temperature. The following gives comparative data of mean temperature for all the north-western and central divisions from the 6th to the 8th to illustrate the changes caused by this fall of rain and snow:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	6th March.	7th March.	8th March.
	°	°	°
North-West Provinces and Oudh	−0·3	+2·4	−4·2
Punjab	+5·3	+0·2	−3·4
Sind	+4·1	+2·4	+0·5
Rajputana	+1·9	+2·9	−2·1
Central India	−1·2	+2·7	−2·2
Central Provinces	−3·9	−0·2	−1·4
Berar	−3·2	−0·5	−1·4

On the 9th the influence of the snowfall was passing away from North-West India and a rapid recovery of temperature was in progress. The following gives data for those stations where the rise of the mean temperature between the 8th and 9th amounted to 5° or more:—

Station.	Mean temperature change in 24 hours preceding 8 A.M. of 9th March.
	°
Chaman	+9·5
Ranikhet	+8·4
Chakrata	+7·8
Quetta	+6·5
Khushab	+6·0
Simla	+5·9
Mussooree	+5·7
Peshawar	+5·5

These changes resulted in the re-establishment of the conditions prevailing at the commencement of the month; thus on the 10th higher temperatures than usual prevailed over North-West India, over the south of the Peninsula and over Burma while the whole of the intervening region was occupied by relatively low temperatures, the deficiency having been greatest over the centre of the North-Western Provinces. The following gives data for all divisions for this day:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 10th March.	Mean minimum temperature, 10th March.	Mean daily temperature, 10th March.
	°	°	°
Burma	+0·7	+1·4	+1·1
Assam	−1·1	−2·9	−2·0
Bengal	−0·9	−2·6	−1·8

Province or Division.	Variation from normal of Mean maximum temperature, 10th March.	Mean minimum temperature, 10th March.	Mean daily temperature, 10th March.
	°	°	°
Orissa	−2·2	−1·0	−1·6
Bihar	−6·7	−1·0	−3·9
Chota Nagpur	−3·1	−2·2	−2·7
North-Western Provinces and Oudh	−5·9	−2·9	−4·4
Punjab	−2·1	+3·0	+0·5
Sind	+0·4	−3·2	−1·4
Rajputana	−0·9	+1·5	+0·3
Gujarat	+3·5	+0·6	+2·1
Central India	−6·3	−1·4	−3·9
Central Provinces	−5·9	−1·8	−3·9
Berar	−2·4	+0·8	−0·8
West Coast	−0·6	−0·2	−0·4
Bombay Deccan	+1·7	+1·0	+1·4
Mysore	+0·6	+0·2	+0·4
Madras Coast	−0·6	+0·9	+0·2
Madras Deccan	−1·1	+0·9	−0·1
South India	−0·3	+0·5	+0·1

The weather became disturbed over Kashmir and the North-West Punjab Hills on the 10th and 11th. Snow fell on the hills and this snowfall was followed by cool northerly winds over the Punjab plains. Temperature consequently fell again briskly over Baluchistan and the Indus Valley and the mean temperature fell to below the normal in this area. There was not much extension of this cool area on the 12th, but on the 13th it extended eastward and south-eastward and joined the existing low temperature area lying over the central parts of the country. The following gives mean temperature variation data for North-Western and Central India from the 11th to the 13th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 11th March.	12th March.	13th March.
	°	°	°
Punjab	−0·5	−0·2	−1·5
Sind	+2·6	+0·7	−0·2
Rajputana	+1·2	+5·1	−1·0
North-Western Provinces and Oudh	−3·4	−0·2	−1·2
Central India	−3·1	−0·5	−0·3
Central Provinces	−2·6	−2·8	−1·6
Berar	+0·7	−0·8	−2·2

One of the most marked features of the abnormal conditions of temperature was the excess over Gujarat and the West Coast on the 13th. This was one of the most marked features of the temperature distribution of the next few days. The excess gradually extended northward between the 13th and the 17th by which date it had reached the Punjab. The following gives comparative data for the West Coast, Gujarat, Sind and Punjab divisions from the 13th to the 17th and shows this northerly extension:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 13th March.	14th March.	15th March.	16th March.	17th March.
	°	°	°	°	°
West Coast	+3·0	+3·1	+2·1	+0·4	+0·4
Gujarat	+5·8	+3·1	+2·8	+3·3	+3·8
Sind	−0·2	+0·6	+4·1	+6·0	+2·6
Punjab	−1·5	−1·4	−1·8	−1·5	+1·4

This excess of temperature was much more marked in the case of the day than in the case of the night temperature. This is shown in the following table which gives comparative data of the day and night temperatures for representative stations from the 13th to the 17th:—

Date.	Station.	Variation from normal of Maximum temperature of date.	Minimum temperature of date.
		°	°
13th March	Veraval	+13·6	+10·4
	Ratnagiri	+13·1	+ 3·1
	Surat	+ 8·9	+ 6·1
	Bombay	+10·7	+ 3·7
14th „	Veraval	+11·5	+ 5·1
	Bombay	+ 7·6	+ 4·5
	Ratnagiri	+10·6	+ 1·0
15th „	Kurrachee	+13·6	+ 2·7
	Veraval	+ 6·2	+ 1·7
	Bhuj	+ 4·9	+ 2·2
16th „	Kurrachee	+16·1	+ 6·1
	Veraval	+11·8	+ 1·5
	Jacobabad	+ 5·5	+ 7·1
17th „	Veraval	+15·4	— 1·5
	Surat	+ 9·4	+ 2·6
	Mooltan	+ 4·5	+ 4·6
	Jacobabad	+ 6·5	+ 2·5

During this period pressure was uniform with light variable winds over a large part of the country and there occurred a very general and gradual rise of temperature. On the 18th the mean temperature was in excess all over North-West India, the west and head of the Peninsula and parts of Burma, Bengal and Assam, but remained lower than usual over the North-Western Provinces and the adjacent parts of the Central Provinces and of Bengal. The following gives comparative data for all divisions of India for this day:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 18th March.	Mean minimum temperature, 18th March.	Mean daily temperature, 18th March.
	°	°	°
Burma	+0·5	+0·2	+0·4
Assam	+3·9	−3·4	+0·3
Bengal	+2·2	−3·5	−0·7
Orissa	+2·0	+0·3	+1·2
Bihar	−2·3	−4·4	−3·4
Chota Nagpur	−2·8	−3·2	−3·0
North-Western Provinces and Oudh	−2·1	−2·8	−2·5
Punjab	+3·0	+1·7	+2·4
Sind	+7·1	+6·2	+6·7
Rajputana	+4·7	+1·4	+3·1
Gujarat	+8·7	+0·7	+4·7
Central India	+0·2	−1·9	−0·9
Central Provinces	−0·7	+0·9	+0·1
Berar	+2·7	+5·8	+4·3
West Coast	+0·6	+1·7	+1·2
Bombay Deccan	+3·5	+3·7	+3·6
Mysore	−0·5	+1·1	+0·3
Madras Coast	−0·3	+1·0	+0·4
Madras Deccan	−0·1	+1·6	+0·8
South India	−4·4	+0·5	−2·0

This rise of temperature continued during the next day or two and was most marked within the area of relatively low temperature noticed above. In consequence by the 20th this area of deficient temperature had practically disappeared and the mean temperature was in excess almost everywhere. This is shown below:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 20th March.	Mean minimum temperature, 20th March.	Mean daily temperature, 20th March.
	°	°	°
Burma	−0·1	+1·0	+0·5
Assam	+3·3	−0·4	+1·5
Bengal	+3·2	+1·5	+2·4
Orissa	+2·4	+1·2	+1·8
Bihar	+2·2	+1·1	+1·7
Chota Nagpur	+0·7	+1·3	+1·0
North-Western Provinces and Oudh	+2·4	+0·8	+1·6
Punjab	+4·2	+4·9	+4·6
Sind	+5·5	+6·8	+6·2
Rajputana	+4·7	+4·9	+4·8
Gujarat	+3·1	+3·0	+3·1
Central India	+1·9	+2·8	+2·4
Central Provinces	−2·3	+2·9	+0·3
Berar	−2·0	+0·9	−0·6
West Coast	−0·1	+2·3	+1·1
Bombay Deccan	−0·9	+6·0	+2·6
Mysore	+0·4	+0·3	+0·4
Madras Coast	+0·4	+1·3	+0·9
Madras Deccan	−0·3	+5·0	+2·4
South India	−1·1	+0·3	−0·4

Unsettled weather, occasioning rain and snow appeared in Kashmir on the 21st and during the 22nd, 23rd and 24th spread over the North-West Himalayas. A rapid fall of temperature set in simultaneously over Baluchistan, the West Punjab and Sind. This fall extended quickly right across Northern and Central India and an area of lower temperature than usual was shown all over the north-western and central divisions by the 26th. The following gives comparative temperature data for this section of the country from the 22nd to the 26th and illustrates the extension of the cool wave:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	22nd March.	23rd March.	24th March.	25th March.	26th March.
	°	°	°	°	°
Baluchistan	+6·5	+0·8	−3·9	−2·3	+5·6
Punjab	+2·0	+1·0	−8·2	−6·6	−3·0
Sind	+4·0	−4·1	−4·9	+0·3	+0·7
Gujarat	+3·2	+2·1	−0·7	+0·3	+0·4
Rajputana	+3·0	+2·5	−4·7	−4·6	−3·0
Central India	+4·4	+4·3	−1·8	−4·7	−4·9
Central Provinces	+3·1	+1·7	−0·7	−4·0	−3·8
Berar	+4·0	+2·9	+0·9	−3·1	−3·0

As this cool wave extended eastward the warm wave advanced in the same direction and the temperature changes in North-East India and Burma were the opposite of those occurring in the north-west. The following gives comparative data from the 22nd to the 26th for the Bengal divisions, Assam and Burma :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	22nd March.	23rd March.	24th March.	25th March.	26th March.
	°	°	°	°	°
Chota Nagpur . .	+0·8	+2·5	+2·4	+0·4	—3·9
Bihar . . .	+1·5	+2·0	+2·5	+1·8	—3·1
Orissa . . .	+2·1	+2·5	+2·2	+0·8	+2·4
Bengal . . .	+1·2	+2·4	+2·8	+3·1	+0·9
Assam . . .	—2·8	—0·4	+2·1	+1·1	+4.1
Burma . . .	—0·3	—0·7	+0·5	+2·4	+1·8

On the 27th a rapid rise of temperature commenced in the extreme north-west and gradually extended over the whole of North-Western and Western India, and from that date till the end of the month the heat was excessive all over North-Western and Western India. The following gives comparative data for this region for the last five days of the month :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	27th March.	28th March.	29th March.	30th March.	31st March.
	°	°	°	°	°
Punjab . . .	+1·4	+2·4	+3·4	+5·3	+2·5
Sind . . .	+3·8	+6·5	+6·5	+7·0	+3·9
Rajputana . .	+0·4	+2·6	+5·1	+7·1	+4·1
Gujarat . . .	+2·2	+3·6	+1·3	+1·4	—1·9
West Coast . .	+1·5	+1·1	+0·5	+0·8	+0·2
Bombay Deccan .	+0·3	+1·1	+1·0	+2·5	+0·8

A shallow depression appeared in Sind on the 28th. During the two following days it was practically unchanged, but on the 31st it suddenly intensified and this change was accompanied with showers in Kashmir and the North-West Himalayas, and as a consequence a brisk fall of temperature occurred in Baluchistan and the extreme north-west of the Punjab and a cool wave appeared which will be traced in next month's review

At the same time the heat was steadily higher than usual during the last five days of the month over North-East India and Burma as is shown by the following table which gives comparative temperature data for the north-east of India and Burma for the last five days of the month :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	27th March.	28th March.	29th March.	30th March.	31st March.
	°	°	°	°	°
Burma	+2·2	+0·4	+0·1	+1·3	+0·8
Assam	+2·4	+2·5	+3·9	+5·6	+3·3
Bengal	—0·8	+0·7	+1·1	+1·8	+1·8

The preceding tables show that the heat at the end of the month was greater than usual both in North-Western and Western India and in the north-east, but in the intervening region there was a large area of deficient temperature covering the North-Western Provinces, West Bengal, the Central Provinces and Central India and the east and south of the Peninsula. The following gives comparative data for this area from the 27th to the 31st :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	27th March.	28th March.	29th March.	30th March.	31st March.
	°	°	°	°	°
Orissa	—1·0	—1·0	—1·1	—0·4	+0·2
Bihar	—2·9	—3·2	—0·9	+0·1	—0·9
Chota Nagpur	—4·0	—2·8	—1·4	—0·8	—1·1
North-Western Provinces and Oudh.	—2·8	—0·9	—0·7	0	+1·3
Central India	—3·3	—1·0	+0·5	+4·4	+1·0
Central Provinces . . .	—3·8	—2·2	—0·6	+0·9	—1·4
Berar	—1·2	+0·1	+1·8	+0·5	—2·3
Madras Coast	—1·2	—1·4	—1·0	—1·1	—1·9
Madras Deccan	—0·9	—2·0	—1·7	—0·8	—1·6
South India	—2·7	—1·5	—2·0	—1·2	—2·3

The following table gives the variations of the mean daily temperature from the normal week by week during

the month and for the whole month for the different provinces or divisions of the empire:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE FOR WEEK ENDING				
	9th March 1901.	16th March 1901.	23rd March 1901.	30th March 1901.	For whole month, March 1901.
	°	°	°	°	°
Burma	−0·2	+1·5	+0·3	+1·2	+0·7
Assam	−1·9	+0·4	0	+3·1	+0·5
Bengal	−1·2	−1·2	+0·8	+1·4	−0·2
Orissa	−3·0	−1·9	+1·5	+0·3	−1·0
Bihar	−2·5	−3·0	−0·2	−0·8	−1·8
Chota Nagpur	−3·7	−2·8	−0·2	−1·4	−2·2
North-Western Provinces and Oudh.	−1·0	−3·1	+0·4	−1·9	−1·5
Punjab	+1·8	−0·9	+1·7	−0·8	+1·3
Sind	+2·4	+1·8	+3·8	+2·8	+2·6
Rajputana	+0·6	+0·2	+3·1	+0·4	+1·1
Gujarat	+0·4	+3·6	+3·5	+1·2	+1·8
Central India	−0·4	−2·6	+1·9	−1·5	+0·3
Central Provinces	−2·6	−2·4	+1·0	−2·0	−1·7
Berar	−1·9	−1·0	+2·1	−0·6	−0·4
West Coast	−0·7	+1·6	+1·4	+1·2	+1·0
Bombay Deccan	+0·1	+0·9	+2·4	+0·7	+1·0
Mysore	−0·1	−0·4	+0·5	+0·2	+0·1
Madras Coast	−0·5	−0·2	+0·2	−0·8	−0·6
Madras Deccan	−0·7	−1·3	+0·5	−1·0	−0·7
South India	+0·1	+0·1	−1·3	−1·5	−0·6

The excess of temperature noticed in North-West India was equally strongly marked over Baluchistan, Afghanistan and the countries to the westward, *i.e.*, in Persia and Turkish Arabia. The following gives data for the stations in this area and shows that on the mean of the month there was an excess both by day and night all over this area:—

STATION.	VARIATION FROM NORMAL OF		
	Mean Maximum temperature, March 1901.	Mean Minimum temperature, March 1901.	Mean temperature, March 1901.
	°	°	°
Quetta	+4·3	+1·2	+2·8
Chaman	+5·6	+5·1	+5·4
Jask	+4·5	+3·2	+3·9
Bushire	+1·5	+3·8	+2·7
Meshed	...	+4·0	...
Teheran	+11·3	+5·4	+8·4
Ispahan	+6·5	+5·2	+5·9
Muscat	+1·5	+1·7	+1·6
Baghdad	+7·3	+7·6	+7·5

On the other hand at Aden the temperature, on the mean of the month, was in slight defect and in the South-East Trades region the variations were irregular. This is shown below:—

STATION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, March 1901.	Mean minimum temperature, March 1901.	Mean temperature, March 1901.
	°	°	°
Aden	−2·3	−1·4	−1·9
Zanzibar	...	...	+1·3
Seychelles	...	...	−0·1

Winds.

In Burma the air movement was weaker than usual except at Diamond Island where the wind was about 30 per cent. stronger than the normal. The winds were also more unsteady than the average more particularly at Rangoon. The wind was more northerly than the average at Port Blair, but in Burma the directions varied

irregularly from the average direction. The following gives comparative data of direction and strength for Burma and the Bay Islands:—

STATION.	MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, March 1901.	Normal, March.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	°	°			
Rangoon	S 10 E	S 22 W	105	114	− 9
Diamond Island . . .	N 58 W	N 42 W	273	206	+67
Akyab	N 5 W	N 53 W	78	93	−15
Port Blair	N 46 E	N 62 E	97	103	− 6
Cocos Island . . .	N 10 E	N 9 W	72	399	−327

In Bengal and Orissa the wind was slightly below the normal strength, while the steadiness varied irregularly from the normal. The following gives comparative data regarding velocity and steadiness:—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Chittagong . .	37	20	+17	121	129	− 8
Calcutta . .	49	49	0	104	118	−14
Saugor Island .	47	61	−14	270	309	−39
False Point . .	45	37	+ 8	189	266	−77

The wind was more westerly than usual at all the Bengal stations more particularly at Calcutta, but at False Point the mean direction was abnormally southerly. This is shown below:—

STATION.	MEAN WIND DIRECTION.	
	Actual, March 1901.	Normal, March.
	°	°
Chittagong	N 77 W	S 36 W
Calcutta	S 88 W	S 36 W
Saugor Island	S 47 W	S 26 W
False Point	S 19 W	S 50 W

In the Gangetic Plain and Chota Nagpur the winds were fairly normal as regards direction and steadiness except at Allahabad where the steadiness was much below the normal. The following gives data for this division:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual from March 1901.	Actual, March 1901.	Normal, March.	Westerly Deflection.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
				°	°	°			
Hazaribagh	56	54	+ 2	N 57 W	N 74 W	−17	180	194	−14
Darbhanga .	23	31	− 8	S 77 W	S 78 W	− 1	80	113	−33
Allahabad .	14	40	−26	N 72 W	N 64 W	+10	120	110	+10

In the Upper Sub-Himalayas the winds were generally more westerly than usual. This is shown below:—

STATION.	MEAN WIND DIRECTION.		
	Actual, March 1901.	Normal, March.	Westerly deflection.
	°	°	°
Dehra Dun	N 71 W	N 80 W	− 9
Roorkee	N 59 W	N 64 W	− 5
Meerut	N 81 W	N 60 W	+21
Lahore	N 43 W	N 10 W	+33
Ludhiana	N 53 W	N 45 W	+ 8

The steadiness of the wind in this division was generally above and the velocity generally below the normal. The following gives comparative data of velocity and steadiness for the different stations in this division:—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, March 1901.	Normal percentage, March	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Dehra Dun . .	58	27	+31	47	50	− 3
Roorkee . .	23	25	− 2	51	72	−21
Meerut . .	53	44	+ 9	39	66	−27
Lahore . . .	35	31	+ 4	60	70	−10
Ludhiana . .	40	34	+ 6	65	50	+15

The wind was more westerly in the Upper Indus Valley and less westerly than usual at Kurrachee. The wind was very unsteady at Jacobabad and was lighter than

usual on the mean of the month at all three stations. This is shown below :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual from normal, March, 1901.	Actual, March 1901.	Normal, March.	Westerly Deflection.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
				°	°	°			
Peshawar .	19	16	+ 3	N 24 W	N 18 E	+42	68	91	−23
Jacobabad.	1	15	−14	N 2 W	N 87 E	+89	61	91	−30
Kurrachee .	60	60	0	S 60 W	S 77 W	−17	213	281	−68

The wind was south-westerly in East Rajputana and north-westerly in Southern Rajputana and was generally lighter and less steady than the normal. The following gives comparative data for Jaipur and Deesa :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
				°	°			
Jaipur . .	18	32	−14	S 48 W	N 39 W	77	113	−36
Deesa . .	13	35	−22	N 46 W	N 66 W	209	209	0

The following gives comparative data of the mean air movement over the Bay Islands, Burma and the different divisions of Northern India :—

Province or Division.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual normal, March 1901.	Actual, March, 1901.	Normal, March.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
				°	°			
Bay Islands .	75	67	+8	N 28 E	N 27 E	85	251	−166
Burma . .	42	54	−12	N 54 W	N 78 W	152	138	+14
Bengal . .	44	43	+ 1	S 79 W	S 33 W	165	185	−20
Orissa . .	45	37	+ 8	S 19 W	S 50 W	189	266	−77
Chota Nagpur .	56	54	+ 2	N 57 W	N 74 W	180	194	−14
Bihar . .	23	31	− 8	S 77 W	S 78 W	80	113	−33
North-Western Provinces.	37	34	+ 3	N 71 W	N 67 W	64	75	−11
Punjab . .	31	27	+ 4	N 40 W	N 13 W	64	70	− 6
Sind . . .	31	38	− 7	N 61 W	S	137	186	−49
Rajputana . .	16	35	−19	W	N 53 W	143	161	−18

The above shows that the wind was lighter than usual over the whole of Northern India.

The wind was unusually easterly over a large part of the Deccan. This is shown in the following table :—

Station.	Mean wind direction.	
	Actual, March 1901.	Normal, March.
	°	°
Belgaum	S 70 E	N 81 W
Sholapur	S 50 E	N 44 E
Poona	N 89 W	N 63 W
Akola	N 50 E	N 43 W
Buldana	N 16 W	N 28 W
Khandwa	N 35 W	N 45 W
Nagpur	S 77 E	N 1 E
Hyderabad (Deccan)	S 59 E	S 41 E

The variations from the normal in the case of velocity and steadiness were very irregular, but on the whole the velocity was lower than usual in the North Deccan. Comparative data are given below :—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, March 1901.	Normal percentage, March	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Belgaum . . .	13	17	− 4	258	272	−14
Sholapur . . .	45	5	+40	162	190	−28
Poona . . .	45	43	+ 2	223	190	+33
Akola . . .	10	42	−32	112	113	− 1
Buldana . . .	15	47	−32	167	176	− 9
Khandwa . . .	21	45	−24	135	116	+19
Nagpur . . .	18	12	+ 6	139	133	+ 6
Hyderabad (Deccan) .	48	23	+25	111	105	+ 6

Along the West Coast the variations from the normal conditions were irregular ; thus at Bombay the wind was lighter, less steady and more westerly than usual, while at

Karwar it was stronger, steadier and less westerly than the normal. This is shown below :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Westerly Deflection.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
				°	°				
Bombay .	48	52	— 4	N 43 W	N 31 W	+12	208	270	—62
Karwar .	91	77	+14	N 68 W	N 75 W	— 7	119	96	+23

In South India as in the Deccan the wind was unusually easterly—more particularly at Bellary, Madras and Bangalore. The following gives comparative data as regards direction :—

Station.	Mean wind direction.	
	Actual, March 1901.	Normal, March.
	°	°
Salem	N 74 E	S 66 E
Chitaldroog	N 86 E	N 87 E
Bangalore	S 78 E	S 27 E
Hassan	N 84 E	S 84 E
Mysore	S 87 E	N 84 E
Madras	S 75 E	S 46 E
Bellary	S 65 E	S 35 E

The wind was at the same time much steadier than the normal generally, while the velocity was above the average at most stations. The following gives comparative data for velocity and steadiness :—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual, percentage, March 1901.	Normal, percentage, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March	Variation of actual from normal, March 1901.
Salem	61	38	+23	152	126	+26
Chitaldroog . . .	55	27	+28	165	154	+11
Bangalore . . .	76	46	+30	195	100	+95
Hassan . . .	81	51	+30	62	74	—12
Mysore . . .	63	37	+26	192	182	+10
Madras . . .	82	81	+ 1	129	150	—21
Bellary . . .	48	19	+29	142	109	+33

The following gives comparative data of wind direction, steadiness and velocity for the different divisions of the Peninsula :—

Province or Division.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
				°	°			
Central Provinces .	20	29	— 9	N 34 E	N 24 W	137	125	+12
Berar . . .	13	45	—32	N 20 E	N 36 W	140	145	— 5
Bombay Deccan .	34	22	+12	S 38 E	N 41 W	214	217	— 3
West Coast .	70	65	+ 5	N 56 W	N 53 W	164	183	—19
Madras Deccan .	48	21	+27	S 62 E	S 38 E	127	107	+20
Mysore . .	69	40	+29	S 89 E	S 74 E	154	128	+26
Madras Coast .	82	81	+ 1	S 75 E	S 46 E	129	150	—21
South India .	61	38	+23	N 74 E	S 66 E	152	126	+26

The above shows steadier winds than usual in most divisions of the Peninsula. At Quetta the wind was fairly normal with respect to direction, but was only about half its normal force. This is shown below :—

Station.	Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual, March 1901.	Normal, March.	Westerly deflection.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	°	°	°			
Quetta . . .	S 87 W	S 74 W	+13	56	102	—46

In Kashmir the wind direction, on the mean of the month, varied between south-south-west and west-south-west and the wind was generally stronger than usual. The following gives data :—

Station.	Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual, March 1901.	Normal, March.	Actual, March 1901.	Normal, March,	Variation of actual from normal, March 1901.
	°	°			
Leh	S 24 W	S 40 W	64	45	+19
Srinagar	S 83 W	N 7 W	102	83	+19

In the Himalayas the wind's direction varied irregularly from the average. It was very steady, however, at Chakrata and Ranikhet, where also it was stronger than usual. The following gives comparative data :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
				°	°			
Kailang . .	63	73	−10	S 59 W	S 70 W	14	32	− 18
Simla . . .	11	8	+ 3	S 6 W	S 37 W	80	136	− 56
Chakrata . .	53	11	+42	S 22 E	S 52 W	258	150	+108
Ranikhet . .	48	27	+21	S 75 W	S 57 W	92	78	+ 14
Katmandu . .	29	48	−19	S 60 W	N 82 W	23	32	− 9
Darjeeling . .	40	44	− 4	S 28 W	S 75 W	109	187	−78

At the central hill stations the wind was somewhat more northerly than usual. The following gives data of direction :—

STATION.	MEAN WIND DIRECTION.		
	Actual, March 1901.	Normal, March.	Northerly, deflection.
	°	°	°
Mount Abu	N 52 W	N 81 W	+29
Pachmarhi	N 72 W	N 57 W	−15
Chikalda	N	N 53 W	+53

Both at Mount Abu and Pachmarhi the wind was stronger than usual, but this increased velocity did not extend to Chikalda. This is shown below.—

STATION.	MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Mount Abu	189	164	+25
Pachmarhi	151	115	+36
Chikalda	164	173	− 9

At Wellington as on the plains of South India the wind was abnormally easterly, while it was about normal in strength and steadiness. The following gives data for this station :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Easterly Deflection.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Wellington	64	65	−1	S 74° E	S 49° E	+25°	63	61	+2

At Aden and Perim the air movement was about normal. At Zanzibar the wind blew from the north of east instead of from the south of east and the velocity was low, while at the Seychelles the air movement was about normal. The following gives comparative data for the two stations in the South-East Trades region :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, March 1901.	Normal percentage, March.	Variation of actual from normal March 1901.	March Actual 1901.	Normal March.	Actual, March 1901.	Normal March.	Variation of actual from normal, March 1901.
Zanzibar . .	18	21	− 3	N 31° E	S 34° E	109	141	−32
Seychelles . .	37	56	−19	N 48 W	N 31 W	125	127	− 2

The following table gives comparative data of the mean air movement for the various provinces based on Table I :—

PROVINCE OR DIVISION.	MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Burma	91	103	−12
Assam	91	98	− 7
Bengal	74	132	−58
Orissa	144	173	−29
Bihar	89	89	0
Chota Nagpur	96	178	−82
North-Western Provinces and Oudh .	58	89	−31
Punjab	74	67	+ 7
Sind	142	192	−50
Rajputana	113	132	−19
Gujarat	194	182	+12
Central India	84	125	−41
Central Provinces	103	86	+17
Berar	115	101	+14
West Coast	154	199	−45
Bombay Deccan	175	202	−27
Mysore	154	86	+68
Madras Coast	168	151	+17
Madras Deccan	158	115	+43
South India	110	101	+ 9

Humidity and Cloud.

The air was drier than usual on the mean of the month over Rajputana, North Bombay and over the west of the Peninsula. The deficiency was greatest and amounted to 5% or more at the three following stations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Hassan . . .	·412	·454	—·042	49	56	—7
Kurrachee . . .	·577	·591	—·014	59	65	—6
Deesa	·233	·299	—·066	24	29	—5

The air was also drier than usual over the Bay Islands, Burma, Assam, Bengal (proper), Orissa and the North Madras coast. The deficiency was greatest and 5% or more in amount around the head of the Bay. The following gives data :—

STATION.	ABSOLUTE HUMIDITY			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Chittagong . . .	·593	·683	—·090	62	74	—12
Calcutta . . .	·528	·634	—·106	54	66	—12
Saugor Island . .	·735	·811	—·076	71	78	— 7
False Point . . .	·745	·786	—·041	75	81	— 6

Over the whole of the intervening region, including the Punjab, the North-Western Provinces, West Bengal, the central parts of the country, the Deccan and the east of the Peninsula (except North Madras), the air was damper than the average. The excess was greatest and large over the central parts of the country where it exceeded 5% at the following stations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Nagpur . . .	·494	·355	+·139	49	34	+15
Akola	·353	·301	+·052	36	29	+ 7
Allahabad . . .	·402	·359	+·043	48	42	+ 6
Hazaribagh . . .	·322	·284	+·038	40	34	+ 6

At Port Blair the absolute humidity was in excess of the normal, but the temperature was high and the relative humidity was slightly lower than usual. At the Burma stations both the absolute and relative humidities were lower than the average. The following gives data for these stations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Port Blair . . .	·912	·863	+·049	75	76	—1
Rangoon . . .	·656	·671	—·015	60	64	—4
Diamond Island . .	·759	·765	—·006	71	75	—4

In Bengal and Orissa the absolute humidity was in considerable to large defect, while the mean temperature was about normal, so that the relative humidity was in large defect. This is shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Chittagong . . .	·593	·683	—·090	62	74	—12
Calcutta . . .	·528	·634	—·106	54	66	—12
Saugor Island . .	·735	·811	—·076	71	78	— 7
False Point . . .	·745	·786	—·041	75	81	— 6

At Darbhanga the humidity conditions were about normal, but both at Hazaribagh and Allahabad the absolute humidity was in excess and the mean temperature below the normal, so that the relative humidity was in considerable excess. This is shown in the following table :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Darbhanga . . .	·445	·447	—·002	54	54	0
Hazaribagh . . .	·322	·284	+·038	40	34	+6
Allahabad . . .	·402	·359	+·043	48	42	+6

Similar conditions prevailed in Upper India, where the absolute humidity was higher than usual and the mean temperature generally below the normal, so that the relative humidity was higher than the average. The following gives comparative data for the stations in this region :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Dehra Dun . .	·334	·293	+·041	54	48	+6
Roorkee . .	·358	·328	+·030	53	49	+4
Meerut . . .	·379	·357	+·022	53	49	+4
Lahore . . .	·412	·354	+·058	56	50	+6
Ludhiana . .	·425	·364	+·061	60	54	+6

In the Indus Valley the conditions were less regular. At Peshawar both the absolute and relative humidities were in excess. At Jacobabad the absolute humidity was in excess and the relative humidity in defect, while at Kurrachee both were in defect. At all three stations the mean temperature was excessive. The humidity conditions at these stations are shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Peshawar . . .	·370	·328	+·042	60	57	+3
Jacobabad . . .	·338	·301	+·037	36	37	−1
Kurrachee . . .	·577	·591	−·014	59	65	−6

In North Rajputana the humidity conditions were about normal, but in the south of the province both the absolute and relative humidities were in defect. The following gives data for Jaipur and Deesa:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Jaipur	·314	·305	+·009	36	37	− 1
Deesa	·233	·299	−·066	24	29	− 5

The following gives mean comparative data for the Bay Islands and Burma and the different divisions of Northern India :—

PROVINCE OR DIVISION.	MEAN ABSOLUTE HUMIDITY.			MEAN RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Bay Islands . . .	·834	·815	+·019	72	75	− 3
Burma	·708	·719	−·011	66	70	− 4
Bengal . . .	·619	·710	−·091	62	73	−11
Bihar . . .	·445	·447	−·002	54	54	0
Orissa	·745	·786	−·041	75	81	− 6
Chota Nagpur . .	·322	·284	+·038	40	34	+ 6
North-Western Provinces.	·368	·334	+·034	52	47	+ 5
Punjab . . .	·402	·349	+·053	59	54	+ 5
Sind	·458	·446	+·012	48	51	− 3
Rajputana . . .	·274	·302	−·028	30	33	− 3

In the Deccan the absolute and relative humidities were almost everywhere in excess, while the mean temperature was approximately normal. The excess was most marked at Nagpur, where it amounted to 15 %. The following gives data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Belgaum . . .	·408	·400	+·008	44	41	+ 3
Sholapur . . .	·387	·344	+·043	34	31	+ 3
Poona	·291	·312	−·021	31	30	+ 1
Akola	·353	·301	+·052	36	29	+ 7
Buldana . . .	·296	·282	+·014	31	28	+ 3
Khandwa . . .	·359	·302	+·057	34	31	+ 3
Nagpur . . .	·494	·355	+·139	49	34	+15
Hyderabad (Deccan) .	·506	·465	+·041	49	45	+ 4

At Bombay and Karwar the variations of the absolute humidity were small, while the mean temperature was in

slight excess. The relative humidity at these two stations was consequently, as is shown below, in defect:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Bombay . . .	·702	·712	—·010	70	72	— 2
Karwar . . .	·755	·753	+·002	71	74	— 3

In South India the variations were irregular. At Salem, Hassan and Bangalore the absolute humidity was in defect and the relative humidity in defect except at Salem. The following gives comparative data for these three stations:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Salem . . .	·614	·638	—·024	57	56	+ 1
Bangalore . . .	·403	·455	—·052	48	50	— 2
Hassan . . .	·412	·454	—·042	49	56	— 7

At the remaining stations in South India both the absolute and relative humidities were in excess. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Chitaldroog . . .	·475	·397	+·078	42	38	+ 4
Mysore . . .	·457	·455	+·002	48	48	0
Madras . . .	·782	·772	+·010	74	74	+ 2
Bellary . . .	·432	·421	+·011	36	36	+ 2

The following gives mean comparative data for the different divisions of the Peninsula:—

PROVINCE OR DIVISION.	MEAN ABSOLUTE HUMIDITY.			MEAN RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual, from normal, March 1901.
	"	"	"	%	%	
Central Provinces. .	·418	·319	+·099	42	33	+ 9
Berar	·325	·292	+·033	34	29	+ 5
Bombay Deccan . .	·362	·352	+·010	36	34	+ 2
West Coast . . .	·729	·733	—·004	71	73	— 2
Madras Deccan . .	·469	·443	+·026	44	41	+ 3
Mysore . . .	·437	·441	—·004	47	48	— 1
Madras Coast . .	·782	·772	+·010	76	74	+ 2
South India . . .	·614	·638	—·024	57	56	+ 1

At Quetta the air contained more aqueous vapour than usual, but the mean temperature was in excess and the relative humidity was in defect by a moderate amount. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Quetta . . .	·216	·214	+·002	53	57	—4

At Leh the absolute humidity was in moderate defect, but the temperature at this station was very low and slightly lower than usual, so that the relative humidity was in large defect—more so than at any other station in the Indian area. The following gives data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Leh	·061	·102	—·041	32	58	—26

At the remaining hill stations in Northern India the absolute humidity was almost everywhere and relative humidity everywhere above the normal. At Srinagar and Simla the excess was considerable. The following gives data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Srinagar . . .	·311	·232	+·079	85	77	+8
Kailang . . .	·112	·117	—·005	71	70	+1
Simla	·198	·185	+·013	56	50	+6
Chakrata . . .	·208	·194	+·014	57	53	+4
Ranikhet . . .	·234	·232	+·002	55	53	+2
Katmandu . . .	·322	·305	+·017	63	61	+2
Darjeeling . . .	·262	·252	+·010	76	73	+3

At all the central hill stations the absolute humidity was in excess, but while at Mount Abu the temperature was in excess and the relative humidity in defect, the mean temperature at the two remaining stations was in defect and the relative humidity in moderate to considerable excess. This is shown below ;—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Mount Abu . .	·221	·219	+·002	29	32	—3
Pachmarhi . . .	·301	·245	+·056	42	34	+8
Chikalda . . .	·302	·287	+·015	37	33	+4

At Wellington both the absolute and relative humidities were in slight defect. At Aden the air was very dry, so that, though the mean temperature was lower than usual, the relative humidity was in considerable defect. At Perim, on the contrary, both the absolute and relative humidities were in excess. The following gives data for these two stations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Aden	·603	·705	—·102	64	71	—7
Perim	·777	·736	+·041	78	72	+6

In the South-East Trades region the air was generally damper than usual, particularly at the Seychelles where the relative humidity was in excess. The following gives data for the Trades area :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
	"	"	"	%	%	
Zanzibar . . .	·890	·889	+·001	75	78	—3
Seychelles . . .	·854	·814	+·040	82	79	+3

The sky was more cloudy than usual over the interior of the Peninsula and the Central Provinces. Both on the east and west coasts of the Peninsula the cloud amount was exactly normal. The following gives data for the coast stations :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Bombay	1·6	1·6	0
Karwar	1·4	1·4	0
Madras	2·4	2·4	0

Towards the interior, however, the excess in the cloud amount increased and was greatest at stations in Berar, the Deccan and Mysore. The following table gives

comparative data for the stations in this region where the cloud amount was 1·0 or more above the normal :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Mysore	4·7	2·3	+2·4
Bellary	4·3	2·2	+2·1
Belgaum	3·7	1·9	+1·8
Sholapur	3·9	2·4	+1·5
Hyderabad (Deccan)	2·8	1·8	+1·0
Nagpur	3·5	2·5	+1·0
Akola	2·7	1·7	+1·0

Cloud was also in excess at Port Blair and part of Lower Burma. The excess in this case was small as is shown below :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Port Blair	3·2	2·9	+0·3
Rangoon	2·6	2·1	+0·5

Over the whole of the remainder of the Indian area the sky was clearer of cloud than usual. In general the deficiency was small, but was considerable and more than 1·0 in amount in three areas. The first of these areas covered the Burma and Bengal coasts and the following gives comparative data for this area :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Diamond Island	0·7	2·9	—2·0
Saugor Island	2·1	3·7	—1·6
Chittagong	2·1	3·2	—1·1

The second area lay over the south of Rajputana, Lower Sind and part of Gujarat, and the cloud amount was more than 1·0 in defect at the following two stations :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Deesa	0·6	2·3	—1·7
Kurrachee	1·4	2·7	—1·3

The third area of deficient cloud amount lay over the East Punjab and was represented by the station of Ludhiana for which comparative data are given below :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Ludhiana	2·5	4·1	—1·6

At the western hill stations the sky, on the mean of the month, was clearer of cloud than usual, the deficiency having been greatest at Ranikhet and Leh. The following gives data for the western stations :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Leh	4·9	6·3	—1·4
Srinagar	4·6	5·6	—1·0
Ranikhet	2·5	3·7	—1·2
Kailang	5·5	6·2	—0·7
Simla	4·2	4·8	—0·6
Chakrata	3·4	3·9	—0·5

At Katmandu and Darjeeling, on the contrary, the sky was slightly more cloudy than usual. This is shown below :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Katmandu	3·7	3·6	+0·1
Darjeeling	5·4	5·2	+0·2

At Mount Abu and Chikalda the sky; as over the neighbouring plains, was less cloudy, while at Pachmarhi and Wellington it was more cloudy than the average. The following gives data:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Mount Abu	0·8	2·5	—1·7
Chikalda	1·7	2·4	—0·7
Pachmarhi	2·5	2·1	+0·4
Wellington	3·2	3·0	+0·2

At Zanzibar the sky was more, and at the Seychelles less, cloudy than the average as is shown below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, March 1901.	Normal, March.	Variation of actual from normal, March 1901.
Zanzibar	6·2	4·9	+1·3
Seychelles	5·8	6·7	—0·9

Rainfall.

The normal rainfall of the month of March is small in amount over by far the greater part of India, ranging between an average of a hundredth of an inch and an inch in amount over the whole of India, except the following districts:—

1st.—South Madras, where it slightly exceeds an inch.

2nd.—Bengal, Orissa and Assam, in which it ranges from an inch in Orissa and Central Bengal to 3 inches in East Bengal, 4 inches in the Assam Valley and 9 inches in Cachar.

3rd.—The hill districts of the North-Western Provinces and the hill, submontane and north-west divisions of the Punjab in which it ranges between one inch in the submontane districts and three inches on the outer ranges of the Punjab hills.

The rainfall of the month under review was actually or practically *nil* (*i.e.*, was less than one-tenth of an inch in amount) over the South-West Punjab, the greater part of Rajputana, nearly the whole of the Bombay Presidency and across the centre of the Peninsula between Lats. 12° and 16° N. The rainfall was also *nil* over the greater part of Burma. Elsewhere more or less rain was received during the month and the total fall was moderately heavy in the three following areas, *viz.*:—

(*a*) Ceylon and the extreme south of the Peninsula.

(*b*) Tenasserim.

(*c*) The North Punjab and the adjacent hills.

The heaviest rainfall was received on the north-east coast of Ceylon where Trincomalee reported a fall of 7·79″ during the month.

Rain fell as follows during the month:—

(1) Between the 1st and the 5th when showers were received over the Central Provinces, Central India, Rajputana, Berar and Khandesh.

(2) Between the 6th and the 8th when snow fell on the hills and rain occurred on the plains from the Punjab in the west to Bengal in the east.

(3) The 11th when rain and snow fell over the North-West Himalayas and rain on the adjacent plains.

(4) The 19th and 20th when showers fell in Berar, the Central Provinces and Chota Nagpur.

(5) The 21st and 22nd when showers fell over North-East India.

(6) The 24th when general showers were received over Upper India and the Central Provinces.

(7) The 30th and 31st when snow was reported from the North-West Himalayas and showers of rain from the Punjab plains and from Berar and the Deccan.

The rainfall was much lighter than is usual in Assam and Bengal during March, while, on the contrary, the showers were more heavy and frequent than the normal over the central districts and in parts of North-West India. Thunder showers occurred at intervals throughout the month in Ceylon and about the middle of the month in South India.

The following table gives comparative rainfall data for the 56 meteorological or rainfall divisions of the Empire:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, March 1901.	Average normal, March.	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	...	...	0·26	0·33	−0·07
	Lower Burma (Deltaic)*	...	...	0·39	0·14	+0·25
	Central ditto*	...	...	0	0·05	−0·05
	Upper ditto*	...	...	0·08	0·58	−0·50
	Arakan*	...	...	0	0·32	−0·32
Bengal and Assam	Eastern Bengal	0·8	3·3	0·38	2·61	−2·23
	Assam (Surma)	3·0	8·0	1·23	7·36	−6·13
	Do. (Hills)	2·5	5·6	1·13	3·99	−2·86
	Do. (Brahmaputra)	3·5	6·2	1·08	3·35	−2·27
	Deltaic Bengal	0·3	2·6	0·12	1·68	−1·56
	Central do.	0·5	1·8	0·18	1·02	−0·84
	North do.	1·0	1·8	0·32	1·23	−0·91
	Bengal Hills	4·3	3·2	1·73	1·84	−0·11
	Orissa	1·0	2·1	0·44	1·21	−0·77
	Chota Nagpur	1·3	1·9	0·45	0·93	−0·48
	Bihar (South)	0·9	0·9	0·46	0·45	+0·01
	Do. (North)	1·0	0·9	0·45	0·45	0
North-Western Provinces and Oudh.	North-Western Provinces (East)	1·2	0·7	0·69	0·26	+0·43
	Oudh (South)	0·7	0·7	0·21	0·30	−0·09
	Do. (North)	0·6	0·9	0·19	0·43	−0·24
	North-Western Provinces (Central)	0·6	0·7	0·15	0·28	−0·13
	Do. do. (West)	0·6	1·1	0·17	0·42	−0·25
	Do. do. (East Submontane)	0·9	0·7	0·33	0·29	+0·04
	Do. do. (West do.)	1·9	1·8	0·89	0·88	+0·01
	Do. do. (Hills)	3·1	3·8	1·46	2·20	−0·74
Punjab	Punjab (South-East)	1·1	0·9	0·36	0·47	−0·11
	Do. (South)	1·4	0·9	0·56	0·49	+0·07
	Do. (Central)	1·5	1·5	0·86	0·89	−0·03
	Do. (Submontane)	2·0	1·7	1·37	1·14	+0·23
	Do. (Hills)	2·9	4·4	3·15	3·45	−0·30
	Do. (North)	5·3	3·0	2·68	1·93	+0·75
	Do. (West)	1·7	1·0	0·50	0·54	−0·04
Bombay and Malabar Coast Districts (Madras).	Malabar	1·8	1·0	1·14	0·54	+0·60
	Travancore	4·4	...	2·81	...	...
	Madras (South Central)	0·4	0·9	0·19	0·52	−0·33
	Coorg	1·5	...	0·50	...	...
	Mysore	0·2	0·7	0·10	0·32	−0·22
	Konkan	0·2	0·2	0·10	0·07	+0·03
	Bombay Deccan	1·0	0·4	0·36	0·18	+0·18
	Khandesh	0·7	0·1	0·19	0·03	+0·16
Central Provinces and Berar.	Berar	1·4	...	0·65	0·48	+0·17
	Central Provinces (West)	2·1	0·6	0·86	0·28	+0·58
	Do. (Central)	2·1	0·8	1·23	0·41	+0·82
	Do. (East)	2·4	1·1	1·12	0·53	+0·59
Bombay (North)	Gujarat	0	0	0·03	0·01	+0·02
	Kathiawar and Cutch	0	0·1	0·01	0·05	−0·04
	Sind	0·4	...	0·14	0·28	−0·14
	Baluchistan Hills	2·3	...	0·89	1·12	−0·23
Rajputana and Central India.	Central India (East)	0·4	...	0·19	0·25	−0·06
	Rajputana (East), Central India (West)	0·4	...	0·11	0·24	−0·13
	Do. (West)	0·1	...	0·03	0·14	−0·11
Madras	East Coast (North)	0·6	1·2	0·30	0·59	−0·29
	Hyderabad (South)*	...	...	0·14	...	...
	Madras (Central)	0	0·5	0·01	0·19	−0·18
	East Coast (Central)	0	0·1	0	0·17	−0·17
	Do. (South)	0·6	0·4	0·21	0·30	−0·09
	Madras (South)	3·5	1·4	2·11	0·99	+1·12

* The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

There was very little rain in Burma during the month. Tenasserim, Lower Burma and Upper Burma received occasional showers at intervals during the month, but Arakan and Central Burma received no rain. In Lower Burma the normal fall of the month was exceeded, but in all the remaining divisions the rainfall was more or less in defect. The following gives data for the five divisions of the province:—

Division.	Rainfall.			
	Average actual, March 1901.	Average normal, March	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Tenasserim	0·26	0·33	—0·07	— 21
Lower Burma (Deltaic)	0·39	0·14	+0·25	+179
Central Burma	0	0·05	—0·05	—100
Upper Burma	0·08	0·58	0·50	— 86
Arakan	0	0·32	0·32	—100

In Assam there were only two periods of moderately general showers. The first lasted from the 4th to the 9th, when the showers were fairly general in the Brahmaputra Valley and very partial in the Surma Valley. The only instances of falls exceeding 1″ in 24 hours during this period were as follows:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Sibsagar	Atabari	6th March	1·09
Lakhimpur	Harmati	„ „	1·05
Do	Balijan	„ „	1·03

The second showery period lasted from the 20th to the 26th and during this interval the showers were fairly numerous in both valleys. They were, however lighter than usual and only exceeded 1″ in 24 hours at the following stations:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Lushai Hills	Champhai	22nd March	1·10
Do	Lungleh	„	1·08
Goalpara	Bijni	23rd „	1·50
Cachar	Mahur Siddle	25th „	2·27
Khasi and Jaintia Hills	Cherrapoonjee	„	2·24
Cachar	Haflong	„	1·48
Do	Paiding	„	1·45
Sylhet	Chandpur	„	1·09
Sibsagar	Dinapur	26th „	1·09

The following table gives comparative data of the total rainfall of the month for each of the eight plains district of the province:—

District.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cachar	1·34	8·32	—6·98	—84
Sylhet	1·02	6·49	—5·47	—84
Goalpara	1·03	1·92	—0·89	—46
Kamrup	1·19	2·28	—1·09	—48
Darrang	0·73	2·57	—1·84	—72
Nowgong	0·69	2·43	—1·74	—72
Sibsagar	0·94	4·52	—3·58	—79
Lakhimpur	1·79	5·52	—3·73	—68

At Cherrapoonjee the total rainfall of the month was 3·48″ in place of the normal 10·58″ and in all the districts of the province the rainfall was only from one-third to one-sixth of the normal.

In Bengal also there were two periods of rain, the first lasting from the 7th to the 9th and the second from the 20th to the 26th. The first fall was the heavier of the two

and amounts exceeding 1″ in 24 hours were recorded at the following stations:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
ANGUL	Chhendipada	8th March	1·70
SHAHABAD	Bassowan	,, ,,	1·65
PURI	Nayagarh	,, ,,	1·36
ANGUL	Pal-Lahara	,, ,,	1·20
SHAHABAD	Mohanea	,, ,,	1·20
MIDNAPORE	Midnapore	,, ,,	1·18
BALASORE	Soro	,, ,,	1·14
SHAHABAD	Sikraul	,, ,,	1·10
TIBET	Yatung	,, ,,	1·08
BALASORE	Akhyapada	,, ,,	1·07
HAZARIBAGH	Pachamba	9th ,,	1·40
ORISSA TRIBUTARY MAHALS.	Kunjabangarh	,, ,,	1·25
SONTHAL PARGANAS	Deoghur	,, ,,	1·15

The second fall was light and scattered and the only places recording amounts exceeding 1″ in 24 hours were those given below:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
TIPPERA	Brahmanbara	26th March	1·80
BACKERGUNGE	Ba isal	,, ,,	1·55

The total rainfall of the month was hence much below the normal in all parts of Bengal (proper), Chota Nagpur and Orissa, but in Bihar the fall was about the normal. The following statement shows the distribution of rain and its variations from the normal during the month in Bengal.

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS	
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.	Average actual, March 1901.	Average normal, March.
	Inches.	Inches.	Inches.			
Eastern Bengal	0·38	2·61	—2·23	—85	0·8	3·3
Deltaic Do	0·12	1·68	—1·56	—93	0·3	2·6
Central Do	0·18	1·02	—0·84	—82	0·5	1·8
North Do	0·32	1·23	—0·91	—74	1·0	1·8
Bengal Hills	1·73	1·84	—0·11	—6	4·3	3·2
Orissa	0·44	1·21	—0·77	—64	1·0	2·1
Chota Nagpur	0·45	0·93	—0·48	—52	1·3	1·9
South Bihar	0·46	0·45	+0·01	+2	0·9	0·9
North Bihar	0·45	0·45	0	0	1·0	0·9

The greatest percentage deficiency was thus experienced in Eastern Bengal, Deltaic Bengal and Central Bengal, where the total for the month was very trifling.

The rainfall was irregularly distributed over the North-Western Provinces. There was general rain in all divisions of the North-Western Provinces on the 7th and 8th, when the rainfall was particularly heavy in the submontane divisions. During this period the following amounts exceeding 1″ in 24 hours were recorded.:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
DEHRA DUN	Mussooree	7th March	1·50
GARHWAL	Joshimath	,,	1·15
DEHRA DUN	Chakrata Tahsil (kalsi.)	,,	1·10
GARHWAL	Pauri	,,	1·10
MUZAFFARNAGAR	Muzaffarnagar	,,	1·09
GARHWAL	Srinagar	,,	1·09
NAINI TAL	Naini Tal	,,	1·08
MUZAFFARNAGAR	Budhana	,,	1·05
Do	Jauli-Jansath	,,	1·05
GARHWAL	Okhimath	,,	1·05
BIJNOR	Bijnor	,,	1·01
BENARES	Benares	8th ,,	1·50
Do	Chandauli	,,	1·40
MIRZAPUR	Chakia	,,	1·38
GHAZIPUR	Zamania	,,	1·28
BENARES	Gangapur	,,	1·21
ALLAHABAD	Meja	,,	1·19
ALMORA	Champawat	,,	1·12

Rain again fell over the North-Western Provinces between the 22nd and 26th, but on this occasion the showers were partial and scattered and except in the submontane districts were very light. The following gives a list of the only stations which received over 1″ of rain in 24 hours during this second showery period:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Dehra Dun	Mussooree	23rd arch	1·18
Do	Chakrata Tahsil (Kalsi)	24th ,,	1·40
Do	Chakrata (Obsty.)	,, ,,	1·26

The following gives comparative rainfall data for the eight rainfall divisions of the North-Western-Provinces.

Division.	Rainfall.				Number of rainy days.	
	Average actual March 1901.	Average normal, March.	Variation of actual, from normal March 1901.	Percentage variation from normal.	Average actual March 1901.	Average normal March.
	Inches.	Inches.	Inches.			
N. W. P. (East)	0·69	0·26	+0·43	+165	1·2	0·7
South Oudh	0·21	0·30	−0·09	− 30	0·7	0·7
North Oudh	0·19	0·43	−0.24	− 56	0·6	0·9
N. W. P. (Central)	0·15	0·28	−0·13	− 46	0·6	0·7
N. W. P. (West)	0·17	0·42	−0·25	− 60	0·6	1·1
N. W. P. East Submontane	0·33	0·29	+0·04	+ 14	0·9	0·7
N. W. P. West Submontane	0·89	0·88	+0·01	+ 1	1·9	1·8
N. W. P. Hills	1·46	2·20	−0·74	− 34	3·1	3·8

The above shows that the rainfall was irregularly distributed. The eastern division received more than twice the normal amount of rain and the submontane divisions about the normal amount, but in all the remaining divisions the rainfall was light, more particularly so in the hills, North Oudh and the west divisions.

Rain was received in all parts of the Punjab during the month, but as was the case in the North-Western Provinces, the rainfall was irregularly distributed. Two periods of rainfall were recorded, the first lasting from the 6th to the 8th and the second from the 21st to the 24th. During both periods practically all parts of the province received rain, but on the whole the second period gave more general and more protracted rainfall. Local falls of rain were also recorded over the North-West Punjab on the 11th and on the 30th and 31st.

The first fall of rain was heavy over the submontane, hill and north-west divisions, and the following large number of stations recorded amounts exceeding 1″ in 24 hours during this rainy period:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Simla	Kotgarh	6th March	3·70
Hazara	Haripur	,,	2·70
Peshawar	Swabi	,,	1·72
Hazara	Abbottabad	,,	1·59
Peshawar	Lahore	6th March	1·50
Peshawar	Nabakki	,,	1·50
Umballa	Kasauli	,,	1·39
Gurdaspur	Dalhousie	,,	1·28
Peshawar	Peshawar	,,	1·26
Simla	Barauli	,,	1·15
Peshawar	Mardan	,,	1·05
Peshawar	Charsadda	,,	1·04
Kangra	Dharmsala	7th March	1·65
Kangra	Nurpur	,,	1·65
Kangra	Nagar	,,	1·61
Simla	Kilba	,,	1·46
Kangra	Kangra	,,	1·40
Ludhiana	Samrala	,,	1·25
Simla	Simla	,,	1·22
Hoshiarpur	Hoshiarpur	,,	1·20
Gurdaspur	Pathankot	,,	1·19
Hazara	Mansahra	,,	1·19
Ferozepore	Moga	,,	1·19
Sialkot	Zafarwal	,,	1·18
Kangra	Dera	,,	1·16
Jind State	Dhaneta	,,	1·15
Kangra	Hamirpur	,,	1·13
Peshawar	Mardan	,,	1·13
Gurdaspur	Madhopur	,,	1·10
Kangra	Palampur	,,	1·10
Hoshiarpur	Sadr station	,,	1·06
Kangra	Kulu	,,	1·03

During the second rainy period the rainfall was heavy in the Lahore district and very heavy in the hill and submontane districts. The following gives the record of falls exceeding one and a half inches in 24 hours during the second rainy period:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date
			Inches.
Gurdaspur	Dalhousie	23rd March	2·07
Umballa	Kasauli	,, ,,	1·90
Simla	Barauli	,, ,,	1·90
Simla	Kotgarh	,, ,,	

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Gurdaspur	Shakargarh	24th March	3.62
Kangra	Kulu	,, ,,	2'57
Simla	Simla	,, ,,	2'48
Gurdaspur	Madhopur	,, ,,	2'15
	Pathankot	,, ,,	2'10
	Tibri	,, ,,	2'05
Kangra	Palampur	,, ,,	2'00
Gurdaspur	Gurdaspur	,, ,,	1'96
	Batala	,, ,,	1'81
Kangra	Dharmsala	,, ,,	1'80
Sialkot	Zafarwal	,, ,,	1'70
Kangra	Nurpur	,, ,,	1'59
Gurdaspur	Aliwal	,, ,,	1'55

Of the local falls in the North-West Punjab on the 11th and 30th and 31st there is nothing of importance to record, as they were generally light and only in a few instances exceeded half an inch and only in one case exceeded 1 inch.

The following gives comparative data for the different divisions of the Punjab and shows that the month's rainfall was excessive in the case of the north and submontane districts of the Punjab, deficient in the South-East Punjab and about normal elsewhere :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.	Average actual, March. 1901.	Average normal, March.
	Inches.	Inches.	Inch.			
South-East Punjab	0'36	0'47	—0'11	—23	1'1	0'9
South Punjab	0'56	0'49	+0'07	+14	1'4	0'9
Central ,,	0'86	0'89	—0'03	— 3	1'5	1'5
Punjab Submontane	1'37	1'14	+0'23	+20	2'0	1'7
,, Hills	3'15	3'45	—0'30	— 9	2'9	4'4
North Punjab	2'68	1'93	+0'75	+39	5'3	3'0
West ,,	0'50	0'54	—0'04	— 7	1'7	1'0

In Baluchistan the rainfall was similar to that in the Punjab. There were two showery periods, one lasting from the 9th to the 11th, the other from the 20th to the 23rd. The first fall was light and scattered, the second heavier and more general. During the latter fall the following amounts exceeding 1″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Baluchistan	Fort Sandeman	22nd March	1'55
	Loralai (Staff Office)	,, ,,	1'38
	Loralai (Hospital)	,, ,,	1'19
	Khanai	,, ,,	1'17
	Mach (Hospital)	,, ,,	1'12
	Shalabagh	23rd ,,	1'41
	Shahrig	,, ,,	1'10
	Mach (Ry. Station)	,, ,,	1'02

The general rainfall of the whole month was apparently slightly below the normal. The following gives comparative data :—

Division.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inch.	Inches.	Inch.	
Baluchistan Hills	0'89	1'12	—0'23	—21

In Kashmir the weather was more or less showery throughout the month, but there were three periods of fairly general rain; the first lasting from the 5th to the 7th, the second from the 21st to the 25th, and the third on the 30th and 31st. The second fall was the heaviest and between the 21st and 25th the following amounts exceeding 1″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jummoo	Jummoo	23rd March	3'12
	Riasi	,, ,,	3'00
	Jasmairgarh	,, ,,	2'87
	Kathua	,, ,,	2'65
	Kishtwar	,, ,,	2'53
	Akhnur	,, ,,	2'45
	Ramban	,, ,,	2'43
	Udumpur	,, ,,	2'00
	Sambha	,, ,,	1'90

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kashmir	Sri Ranbir Singh Pora	23rd March	1·50
Jummoo	Punch	„ „	1·30
	Bhimber	„ „	1·14
Kashmir	Vantipore	„ „	1·02
Jummoo	Doda	24th „	1·23
	Ramnagar	„ „	1·17
	Sri Ranbir Singh Pora	25th „	2·20

The rainfall of Kashmir was thus generally similar to that in the North-West Punjab and apparently the rainfall was slightly heavier than usual. Western Rajputana had practically no rain though a few local showers were received between the 3rd and the 5th and again on the 22nd and 23rd. In Eastern Rajputana the distribution of rain was very similar, but the showers at the beginning of the month were slightly more general and heavier. The following gives comparative data for some of the larger States and shows that the month's rainfall was very deficient in this region except in Kotah and Udaipur where the small monthly normal was exceeded :—

State.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Jodhpur	0·03	0·14	−0·11	−79
Jaipur	0·08	0·32	−0·24	−75
Alwar	0·01	0·30	−0·29	−97
Bharatpur	0·03	0·27	−0·24	−89
Karauli	0·15	0·19	−0·04	−21
Kotah	0·19	0·10	+0·09	+90
Ajmer Merwara	0·15	0·21	−0·06	−29
Udaipur	0·09	0·05	+0·04	+80
Sirohi	0·07	0·13	−0·06	−46

In Central India there were showers on the 4th and 5th, on the 19th and 20th and in Bhopal on the 30th and 31st. The following gives comparative data for some of the larger States and shows that the rainfall except in the case of Bhopal Agency was very short of the average :—

State.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Bhopal Agency	0·72	0·19	+0·53	+279
Gwalior	0·02	0·12	−0·10	− 83
Nagode	0·13	0·32	−0·19	− 59
Rewah	0·36	0·44	−0·08	− 18
Maihar	0·03	0·33	−0·30	− 91
Bundelkhand	0·13	0·24	−0·11	− 46

The Central Provinces received fairly general and heavy showers between the 1st and the 8th, and light showers between the 19th and 24th. During the latter fall the rainfall amounts were small, in no instance exceeding ¾ inch, but during the rainy period of the first week of the month some large amounts were registered—more particularly in the Chanda and Sambalpur districts. The following gives the falls exceeding 1 inch in 24 hours during the first rainy period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chanda	Armori	1st March	2·78
	Chimur	„ „	1·10
	Mul	2nd „	3·17
	Warora	„ „	2·12
	Chanda	„ „	1.29
Nagpur	Katol	4th „	1·14
Betul	Betul	5th „	2·06
Chanda	Chimur	„ „	1·68
Betul	Chicholi	„ „	1.42
Narsinghpur	Mohpani	„ „	1·16
Bilaspur	Bilaspur	6th „	1·45
Sambalpur	Raigarh State	8th „	1·86
Bilaspur	Janjgir	„ „	1·28

In nearly all parts of the Central Provinces the month's rainfall largely exceeded the normal, but particularly so in the districts of Balaghat, Betul and Chanda where it was 3 per cent. or more above the normal.

The following gives comparative data for each of the districts of the Central Provinces :—

District.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901	Percentage Variation from normal.
	Inches.	Inches.	Inches.	
Sambalpur	1·50	0·68	+0·82	+121
Bilaspur	1·25	0·45	+0·80	+178
Raipur	0·55	0·47	+0·08	+ 17
Chanda	2·28	0·57	+1·71	+300
Bhandara	1·56	0·55	+1·01	+184
Balaghat	1·34	0·29	+1·05	+362
Seoni	1·50	0·73	+0·77	+105
Mandla	0·76	1·21	−0·45	−37
Narsinghpur	0·94	0·24	+0·70	+292
Saugor	0·79	0·21	+0·58	+276
Damoh	0·55	0.14	+0·41	+293
Jubbulpore	0·45	0·32	+0·13	+ 41
Wardha	0·55	0·27	+0·28	+104
Nagpur	1·39	0·40	+0·99	+248
Chhindwara	0·78	0·47	+0·31	+ 66
Hoshangabad	0·16	0·08	+0·08	+100
Betul	1.66	0·39	+1·27	+326
Nimar	0 21	0·06	+0·15	+250

In Berar the rainfall conditions and distribution were similar to those in the Central Provinces. Showers were received in most districts between the 1st and the 5th, on the 19th, on the 25th, and on the 30th. The following gives comparative data for Berar and shows that the month's rainfall was in some excess :—

Division.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Berar	0·65	0·48	+0·17	+35

The Bombay Presidency received scattered showers during the second half of the month. In the Karnatak the showers were heaviest on the 28th and in the Belgaum district the rainfall was excessive. The following gives comparative data for the three districts in this division :—

District.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inches.	Inch.	Inch.	
Dharwar	0·14	0·24	−0·10	−42
Bijapur	0·22	0·17	+0·05	+29
Belgaum	1·09	0·35	+0·74	+211

In the South Deccan light showers occurred on the 11th and during the last ten days of the month. The following gives data for the districts of this division :—

District.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Satara	0·55	0·16	+0·39	+244
Sholapur	0·27	0 09	+0·18	+200
Poona	0 08	0·07	+0·01	+ 14

In Khandesh the showers were lighter than in the Deccan and fell on the 4th and during the last ten days of the month. The total rainfall exceeded the normal as is shown in the following table which gives data for the districts in this division :—

District.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Ahmednagar	0·34	0·05	+0·29	+580
Nasik	0·05	0·01	+0·04	+400
Khandesh	0·20	0	+0·20	...

Gujarat received light showers on the 23rd, but the small normal rainfall of the month was exceeded. The following gives data for the different districts:—

District.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Surat	0·01	0	+0·01	...
Broach	0·02	0·02	0	0
Kaira	0·01	0·01	0	0
Panch Mahals	0·03	0·01	+0·02	+200
Ahmedabad	0·08	0·01	+0·07	+700

In Kathiawar there was practically no rain during the month, but Sind received light showers on the 23rd. The following gives comparative data for the different divisions of the Presidency and shows that in the Peninsular divisions the small normal rainfall of the month was exceeded:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.	Average actual, March 1901.	Average normal, March.
	Inch.	Inch.	Inch.			
Konkan	0·10	0·07	+0·03	+ 43		0·2
Bombay Deccan	0·36	0·18	+0·18	+100	1·0	0·4
Khandesh	0·19	0·03	+0·16	+533	0·7	0·1
Gujarat	0·03	0·01	+0·02	+200	0	0
Kathiawar and Cutch	0·01	0·05	−0·04	− 80	0	0·1
Sind	0·14	0·28	−0·14	− 50	0·4	...

Mysore received showers on the 17th and again on the 28th, while Coorg had showers between the 1st and the 3rd and again on the 17th. The following gives comparative data for these two provinces:—

Province.	Rainfall.				Number of rainy days.	
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.	Average actual, March 1901.	Average normal, March.
	Inch.	Inch.	Inch.			
Mysore	0·10	0·32	−0·22	−69	0·2	0·7
Coorg	0·50	...	...	...	1·5	...

Parts of Madras had a showery period about the middle of the month, but in general the rainfall of the Presidency was below the normal. The Travancore State, Malabar and South Kanara had general heavy showers between the 15th and the 19th, and scattered showers towards the beginning and end of the month. Amounts exceeding 1″ in 24 hours were received at the following stations on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Travancore State	Mavelikara	15th March	2·83
	Shencottah	" "	1·90
	Kottayam Engineer's office.	" "	1·74
	Chengannur	16th "	3·68
	Alangad	" "	2·20
	Parur	" "	1·72
Malabar	Angadipuram	" "	1·67
Travancore State	Meenachil	" "	1·55
	Ettamanur	" "	1·54
	Kartigapally	" "	1·47
Malabar	Tirurangadi	" "	1·42
Travancore State	Ambalapuzha	" "	1·07
Malabar	Ponnani	" "	1·05
Travancore State	Ettamanur	17th "	2·64
Malabar	Manantoddy	" "	1·46
	Badagara	" "	1·32
Travancore State	Alangad	" "	1·20
	Shertalley	" "	1·13
South Canara	Puttur	" "	1·07
Travancore State	Parur	18th "	2·34
South Canara	Kasaragod	" "	1·48
Malabar	Quilandi	" "	1·45
Travancore State	Chengannur	19th "	1·08

The following gives comparative data for the districts in this division:—

District.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Malabar	1·34	0·77	+0·57	+ 74
South Canara	0·74	0·13	+0·61	+469

In Madras South there were scattered showers at the beginning of the month and again on the 28th and 29th, and a generally showery period between the 15th and 18th. Amounts exceeding 1″ in 24 hours were recorded in this division at the following stations on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Tinnevelly	Srivilliputtur	1st March	1·28
	Sattur	2nd „	2·25
	Nanguneri	„ „	1·72
	Ambasamudram	„ „	1·65
Madura	Periyakulam	„ „	1·38
	Usilampatti	„ „	1·02
Tinnevelly	Kuttanguli	4th „	1·06
	Nanguneri	15th „	1·49
	Srivaikuntam	„ „	1·47
	Kulasekarapatnam	„ „	1·34
Madura	Uttamapalaiyam	„ „	1·21
Tinnevelly	Nanguneri	16th „	2·40
	Sankaranayanarkoyil	„ „	1·36
	Srivaikuntam	„ „	1·36
Madura	Tirumangalam	„ „	1·35
Tinnevelly	Ambasamudram	„ „	1·16
	Tenkasi	17th „	2·59
Madura	Melur	„ „	1·68
Tinnevelly	Radhapuram	„ „	1·32
Madura	Nelakkottai	„ „	1·15
	Tirumangalam	„ „	1·12
Tinnevelly	Palamcottah	18th „	1·55
	Srivaikuntam	28th „	2·28
	Tuticorin	„ „	1·24
	Kuttanguli	29th „	1·25

The month's rainfall was heavier than usual as is shown by the following table which gives data for the two districts in this division:—

District.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inches.	Inches	Inches.	
Madura	0·97	0·70	+0·27	+ 39
Tinnevelly	3·48	1·32	+2·16	+164

In South Central Madras there were a few showers of no importance about the middle of the month, and in Central Madras there was practically no rain throughout. In the north division of the east coast there were a few light scattered showers between the 1st and the 11th and the 20th and the 27th, but the total fall was only about half the average, while in the central division of the east coast there was no rain throughout. In the south division there was rain between the 15th and the 18th, but the amounts were not generally heavy and the total for the division was below the normal.

The following gives comparative data for the different districts of this division:—

District.	Rainfall.			
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Madras	0·03	0·38	—0·35	—92
Chingleput	0·02	0·16	—0·14	—88
North Arcot	0	0·26	—0·26	—100
South „	0·18	0·25	—0·07	—28
Tanjore	0·60	0·40	+0·20	+50
Trichinopoly	0·20	0·40	—0·20	—50

The following gives comparative data for the different divisions of the Madras Presidency:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, March 1901.	Average normal, March.	Variation of actual from normal, March 1901.	Percentage variation from normal.	Average actual.	Average normal.
	Inches.	Inch.	Inches.			
Malabar	1·14	0·54	+0·60	+111	1·8	1·0
Madras, South Central	0·19	0·52	—0·33	—63	0·4	0·9
East Coast, North	0·30	0·59	—0·29	—49	0·6	1·2
Madras, Central	0·01	0·19	—0·18	—95	0	0·5
East Coast Central	0	0·17	—0·17	—100	0	0·1
„ „ South	0·21	0·30	—0·09	—30	0·6	0·4
adras, South	2·11	0·99	+1·12	+113	3·5	1·4

At the stations in the Persian area the rainfall of the month was light; thus at Baghdad the total rainfall was 0·28″, at Muscat 1·10″, at Bushire 1·09″, at Bussrah 1·94″, and at Jask 0·00″. Equally light rainfall was reported from Meshed (0·31″) and Kabul (2·23″). This light rainfall

at the close of the winter compared with the heavy rainfall at the commencement is interesting, as it appears to show that a zone of heavier rain than usual passed over the Indian area travelling from west to east during the past winter. The following table shows the variation of rain fall from the normal for each month from October 1900 to March 1901, for the whole area stretching from Persia in the west to Assam in the east.

MONTH.	VARIATION OF RAINFALL FROM NORMAL IN												
	Persia.	Meshed and Kashgar.	Baluchistan.	Sind.	Punjab.	Rajputana.	North-Western Provinces.	Central India.	Central Provinces.	Chota-Nagpur.	Bihar.	Bengal.	Assam.
	Inches.	Inch.	Inches.	Inch.	Inch.	Inch.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
October 1900 .	+0·27	—0·39	—0·10	—0·03	—0·16	—0·17	—0·29	—1·22	—0·74	—0·73	—0·20	—2·61	—3·39
November „ .	+0·18	+0·19	+0·47	—0·02	—0·17	—0·04	—0·06	—0·32	—0·40	—0·48	—0·19	—0·67	—0·74
December „ .	+0·66	+0·02	+2·23	+0·51	+0·81	+0·23	+0·99	+0·62	—0·03	+0·77	+0·47	—0·11	—0·23
January 1901 .	—1·12	—0·27	—0·19	0	+0·79	+0·29	+1·58	+0·56	+1·17	+3·01	+1·40	+0·30	—0·05
February „ .	—1·29	...	—1·76	—0·20	+0·38	+0·09	+0·82	+0·23	+1·95	+1·98	+0·23	+0·04	—1·01
March „ .	...	...	—0·23	—0·14	+0·15	—0·12	—0·03	—0·06	+0·66	—0·48	+0·01	—1·39	—4·20

The preceding data show that the zone of excessive rain was appearing in Persia in the month of October 1900, the whole of the remaining divisions exhibiting a deficiency. By November the zone had extended to Baluchistan, all the divisions to the eastward still exhibiting a deficiency. Between November and December, a rapid extension had occurred and the rainfall zone had extended eastward as far as Bihar. By January the zone had passed over and left Persia, Meshed, Baluchistan and Sind behind, while it had advanced eastward into Bengal. In February there was no important change though the zone continued well marked, but in March it apparently disappeared as the rainfall variations were small except in the extreme east.

In the South-East Trades region the rainfall during March varied irregularly from the normal, thus at Zanzibar the total rainfall of the month was 4·67″ against a normal of 5·15″ while the total rainfall at the Seychelles was 14·60″ against a normal of 12·46″.

Table

Abstract of Observations taken at 8 A.M. at 221 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.				+·016								92·0	—0·5	73·6	+2·3	82·8	+0·9	18·4					28·0
1	Tenasserim and Bay Islands,	Car Nicobar	25	29·859‡		29·811‡	29·915	22nd	29·804	13th & 25th,	·111	82·2‡	89·5‡		78·5‡		84·0‡		11·0	91·8	29th	75·1	23rd & 24th.	16·7
		Port Blair	61	29·933	+·025	29·925	30·002	21st	29·869	12th	·133	81·5	91·8		78·7*		85·2*		13·1	94·2	30th	74·6	29th	19·6
		Mergui	96	29·886	?	29·913	29·955	21st	29·826	29th	·129	80·3	91·0	−0·3	74·8	+3·3	82·7	+1·5	16·2	94·1	13th & 21st.	72·4	1st & 2nd	21·7
		Tavoy	26	29·950	+·001	29·907	30·006	22nd	29·890	11th	·116	77·7	91·7	−1·3	73·0	+2·9	82·4	+0·8	18·7	94·2	12th, 21st & 30th.	69·5	28th	24·7
		Moulmein	94	29·894	+·006	29·925	29·959	2nd & 22nd.	29·831	28th	·128	80·3	95·4	+1·5	74·8	+2·5	85·1	+2·0	20·6	98·5	12th	68·3	1st	30·2
2	Lower Burma	Rangoon	41	29·938	+·007	29·916	30·014	21st	29·862	11th	·152	76·4	96·5	+0·2	72·6	+1·7	84·6	+1·0	23·9	100·6	12th	65·3	1st	35·3
		Bassein	27	29·961	+·026	29·923	30·035	21st	29·889	29th	·146	77·3	93·4	−0·9	73·0	+2·8	83·2	+1·0	20·4	97·7	30th	64·3	1st	33·4
		Diamond Island	41	29·949	+·015	29·925	30·024	21st	29·874	11th	·150	80·2	84·7	−1·0	77·5	+2·8	81·1	+0·9	7·2	87·6	12th & 15th.	73·2	1st	14·4
5	Arakan	Akyab	20	29·971	+·015	29·934	30·040	22nd	29·814	12th	·126	73·3	89·9	+1·0	65·6	?	77·8	?	24·3	96·4	30th	55·1	1st	41·3
3	Central Burma	Toungoo	183	29·798	+·035	29·925	29·866	2nd	29·725	28th	·141	77·9	96·1	−1·6	67·3	−0·2	81·7	−0·9	28·8	100·6	27th & 31st.	58·1	1st	42·5
	II.—Burma Inland				+·054								96·2	+0·8	65·1	+0·1	80·7	+0·5	31·2					45·5
3	Central Burma	Thayetmyo	130	29·857	+·047	29·930	29·922	22nd	29·779	28th	·143	76·7	98·4	−1·3	65·3	−0·9	81·9	−1·1	33·1	103·4	27th	53·3	3rd	50·1
4	Upper Burma	Minbu	165	29·813	+·027	29·924	29·887	2nd & 22nd.	29·747	27th	·140	76·4	98·9	−0·4	69·0	+0·2	84·0	−0·1	29·9	104·6	26th	57·0	2nd	47·6
		Yamethin	657	29·301	+·055	29·915	29·369	2nd	29·250	28th	·119	77·0	99·9	+1·5	68·9	+1·2	84·4	+1·4	31·0	104·0	31st	58·2	1st	45·8
		Mandalay	250	29·730	+·068	29·932	29·819	22nd	29·669	28th	·150	78·4	98·9	+1·8	69·0	+1·4	84·0	+1·6	29·9	104·6	26th	60·7	2nd	43·9
		Kindat	377	29·614	+·068	29·961	29·677	2nd	29·554	13th	·123	65·9	92·4	+2·4	59·1	−1·5	75·8	+0·5	33·3	97·8	29th	54·3	6th	43·5
		Bhamo	381	29·592	+·061	29·942	29·662	2nd	29·525	28th	·137	66·8	88·9	+0·6	59·2	−1·1	74·1	−0·3	29·7	95·5	31st	53·7	8th	41·8
4 (a)	Burma Hill Stations,	Maymyo		26·506			26·561	2nd	26·457	28th	·104	64·3	83·1		51·2		67·1		31·9	87·5	31st	42·2	1st	45·3
		Taunggyi										67·3	82·4	−0·1	52·5	−0·8	67·5	−0·5	29·9	87·1	19th	41·1	1st	46·0
		Lashio										63·0	85·6	+0·4	55·3	−0·3	70·5	+0·1	30·3	91·5	13th	43·5	1st	43·0
	III.—Assam				+·052								86·6	+2·9	60·6	−2·0	73·6	+0·4	25·9					39·8
7	Surma	Silchar	100	29·907	+·042	29·967	29·988	2nd	29·858	28th & 31st.	·130	70·3	92·5	+7·2	61·6	−1·8	77·1	+2·7	30·9	99·6	31st	55·4	2nd & 5th.	44·2
9	Brahmaputra	Sibsagar	333	29·688	+·052	29·991	29·782	10th	29·570	25th	·212	64·0	80·4	+1·2	59·0	−1·1	69·7	+0·1	21·4	88·7	30th	53·9	5th & 11th.	34·8
		Dhubri	115	29·871	+·062	29·946	29·974	2nd & 10th.	29·773	25th	·201	67·5	86·8	+0·3	61·3	−3·2	74·1	−1·5	25·5	96·2	30th	55·8	4th	40·4
	IV.—Bengal and Orissa				+·053								91·0	+1·1	64·8	−2·0	77·9	−0·4	26·2					42·8
6	East Bengal	Chittagong	87	29·903	+·026	29·940	29·970	2nd	29·841	29th	·129	74·2	91·4	+5·2	65·4	−2·3	78·4	+1·5	26·0	99·5	31st	55·6	1st	43·9
		Noakhali	43	29·948		29·938	30·024	2nd	29·880	25th & 31st.	·144	75·5	93·8		64·7		79·3		29·1	105·4	31st	53·6	1st	51·8
		Comilla	36	29·857		29·941	30·046	2nd	29·874	25th	·172	74·8	93·0		65·1		79·1		27·9	99·8	31st	55·0	1st	44·8
		Sirajganj	49	29·913?		29·913?	30·021	2nd	29·835	25th	·186	70·4	92·3		61·9		77·1		30·4	101·1	31st	54·4	4th	46·7
		Narayanganj	26	29·953	+·036	29·928	30·046	2nd	29·861	25th	·188	72·8	91·3	+1·3	66·1	−2·3	78·8	−0·5	25·2	97·6	30th & 31st.	58·3	4th	39·3
		Barisal	13	29·969	+·037	29·927	30·055	2nd	29·886	25th	·169	76·1	92·1	+4·2	67·6	−1·6	79·9	+1·3	24·5	98·3	31st	57·7	5th	40·6
		Mymensingh	59	29·916	+·032	29·928	30·003	2nd	29·850	25th	·153	69·9	89·0	+2·5	62·3	−1·8	75·7	+0·4	26·7	96·3	31st	54·2	4th	42·1
10	Deltaic Bengal	Faridpur	46	29·937		29·931	30·038	2nd	29·849	31st	·189	72·5	91·0		62·2		76·6		28·8	100·8	31st	50·5	1st	50·3
		Jessore	33	29·939	+·040	29·920	30·046	3rd	29·855	25th	·191	74·9	92·9	+0·4	64·6	−3·7	78·8	−1·7	28·3	102·0	31st	56·6	4th	45·4
		Calcutta	21	29·970	+·059	29·937	30·078	3rd	29·880	25th	·198	75·1	92·7	+2·3	67·9	−1·8	80·3	+0·3	24·8	100·7	31st	59·1	3rd	41·6
		Saugor Island	25	29·963?	+·056	29·932?	30·057	3rd	29·889	25th	·168	77·6	88·0	+0·8	74·2	−0·8	81·1	0	13·8	97·4	26th	65·6	3rd & 11th.	31·8
		Krishnagar	47	29·943		29·939	30·053	3rd	29·849	25th	·204	75·1	92·6		63·5		78·2		29·1	100·9	31st	55·5	4th	45·4
		Midnapore	149	29·838		29·937	29·943	3rd	29·766	29th	·177	76·2	92·7		67·4		80·1		25·3	102·3	31st	60·7	3rd	41·6

* Mean of 26 days.

† Mean of 25 days.

I.

in India, Burma, etc., in March, 1901.

WIND DIRECTION. Number of Winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind resultant.	WIND VELOCITY. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	HYGROMETRY, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	RAINFALL. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st March 1901.	Normal rainfall for period, 1st to 31st March.	Variation from normal of period, 1st to 31st March.	Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.
																				1·15	0·66	+0·40					I.—Burma Coast and Bay Islands.
1	4	11	6	3	1				N 61° E	5·4	5·4			78‡	·860‡	8·1‡	3			1·60			1·90			0·80	Car Nicobar	TENASSERIM AND BAY ISLANDS.
1	6	10	1	2	1			10	N 6° E	4·1		4·4	− 7	83	·904	3·5	3			1·15	0·47	+ 0·68	1·15	0·47	+0·68	0·50	Port Blair .	
30	1								N	3·3	2·9	2·0	+ 45	83	·844	3·4	7			3·24	3·37	− 0·13	3·21	3·37	−0·13	0·92	Mergui,	
31									Calm	1·2				89	·846	0·5	8			4·98	0·92	+ 4·06	4·98	0·92	+4·06	1·99	Tavoy,	
	2	1	3	8	4	7	1	5	S 1° W	3·0	3·3	3·0	+ 10	74	·769	2·0	0	0·36	−0·36	0·06	0·41	− 0·35	0·06	0·41	−0·35	0·06	Moulmein,	
1	1			2	2	12	12	1	S 63° W	4·3		5·0	− 14	80	·743	1·2	0	0·36	−0·36	0·12	0·28	− 0·16	0·12	0·28	−0·16	0·08	Rangoon .	LOWER BURMA.
10	2				1		2	16	N 47° W	5·1		4·9	+ 4	84	·791	1·0	0	0	0	0	0·02	− 0·02	0	0·02	−0·02	0	Bassein,	
8	11						3	9	N 28° W	11·4	11·4	7·9	+ 44	77	·798	1·2	0	0	0	0	0·01	− 0·01	0	0·01	−0·01	0	Diamond Island,	
	21	6	4						N 18° E	3·1		3·7	− 16	83	·691	1·2	0	0·82	−0·82	0	0·42	− 0·42	0	0·42	−0·42	0	Akyab .	ARAKAN.
6	3	4	2	12	2			2	S 75° W	3·0	3·0	2·8	+ 7	69	·671	1·3	0	0·18	−0·18	0	0·05	− 0·05	0	0·05	−0·05	0	Toungoo .	CENTRAL BURMA.
																				0·06	0·41	−0·35					II.—Burma Inland.
25	1			1	3	1			S	3·8		5·2	− 27	67	·623	0·4	0	0	0	0	0·05	− 0·05	0	0·05	− 0·05	0	Thayetmyo.	CENTRAL BURMA.
4	3	1	2	13			1	7	S 85° E	4·3	5·1			54	·498	0·7	0			0	0	0	0	0	0	0	Minbu .	UPPER BURMA.
8				14	8			1	S 28° E	4·4	4·6			62	·574	0·3	0			0	0·11	− 0·11	0	0·11	− 0·11	0	Yamethin,	
17	1		1	2	9	1			S 39° E	1·9	1·9			49	·473	0·3	0			0·07	0·21	− 0·14	0·07	0·21	− 0·14	0·07	Mandalay,	
31									Calm	0·6	0·6			81	·522	1·7	1			0·17	1·27	− 1·10	0·17	1·27	− 1·10	0·17	Kindat,	
17	2	5	2			1	2	2	N 12° E	3·7	3·2			77	·507	2·1	1			0·10	0·79	− 0·69	0·10	0·79	− 0·69	0·10	Bhamo,	
25				3	2	1			S 27° W	3·3†				67	·404	1·0	0			0·05			0·05			0·05	Maymyo .	BURMA HILL STATIONS.
	1			3	10	15	2		S 26° W					76	·509	1·3	0			0	0	0	0	0	0	0	Taunggyi.	
	3	13	5	6		2		2	N 63° E	0·7				73	·420	2·8	4			1·91	0·77	+ 1·14	1·91	0·77	+ 1·14	1·22	Lashio.	
																				0·61	5·24	−4·62					III.—Assam.
26		1	3	1					N	2·3	4·0	3·3	+ 21	70	·525	2·0	2	10·00	−8·00	0·57	8·71	− 8·14	0·57	8·71	− 8·14	0·24	Silchar .	SURMA.
13	1	15	1	1					N 48° E	2·3	2·1	2·8	− 25	91	·543	4·2	3	9·96	−6·86	0·66	5·07	− 4·41	0·66	5·07	− 4·41	0·23	Sibsagar .	BRAHMAPUTRA.
3	1	7	12	1	1	3		3	N 73° E	4·6	5·4	6·3	− 14	74	·504	1·9	2	2·07	−0·07	0·61	1·93	− 1·32	0·61	1·93	− 1·32	0·49	Dhubri.	
																				0·35	1·55	−1·20					IV.—Bengal and Orissa.
	1	12	5	5	4	1		3	N 78° E	5·1	5·0	5·8	− 14	72	·618	1·8‡	1	2·92	−1·92	0·30	2·52	− 2·22	0·30	2·52	− 2·22	0·30	Chittagong.	EAST BENGAL.
	8	3	4	1	3	4	6	2	N 31° W	3·7	3·4			71	·711	1·9	0	3·46	−3·46	0·03	3·40	− 3·37	0·03	3·40	− 3·37	0·03	Noakhali,	
1	2		1	2	22	1		2	S 1° E	4·7				72	·632	2·5	1	4·22	−3·22	0·25	3·16	− 2·81	0·35	3·16	− 2·81	0·28	Comilla,	
28			1					2	N 17° W	0·6	0·7			71	·533	P	0	2·40	−2·40	0·08	1·38	− 1·30	0·08	1·38	− 1·30	0·08	Sirajganj,	
7	1		1	6	6	2	4	4	S 21° W	3·5		4·7	− 26	77	·634	2·5§	3	3·50	−0·50	0·61	2·67	− 2·06	0·61	2·67	− 2·06	0·32	Narayanganj	
2	2	2		4	6	8	2	5	S 41° W	3·4				78	·722	2·5‡	2	3·27	−1·27	1·56	2·52	− 0·96	1·56	2·52	− 0·96	1·07	Barisal.	
11	1		9	9				1	S 72° E	0·8	0·8			68	·517	P	3	3·54	−0·54	1·12	2·02	− 0·90	1·12	2·02	− 0·90	0·75	Mymensingh.	
23	2				6				S	1·1	1·0			74	·920	1·2‡	1	3·73	−2·73	0·40	2·60	− 2·20	0·40	2·60	− 2·20	0·38	Faridpur .	DELTAIC BENGAL.
31									Calm	1·4	1·4	3·2	− 56	71	·626	1·4	0	3·27	−3·27	0	2·15	− 2·15	0	2·15	− 2·15	0	Jessore.	
5	3	2	2		2	7	7	3	S 88° W	4·4	1·7	5·5	− 15	73	·646	2·3‡	0	2·36	−2·36	0	1·57	− 1·57	0	1·57	− 1·57	0	Calcutta.	
	3	2			2	12	8	4	S 81° W	11·3		12·3	− 8	78	·752	2·5	0	1·92	−1·92	0·08	1·24	− 1·16	0·08	1·24	− 1·16	0·08	Saugor Island.	
	2	1	1	1	5	3	9	9	N 86° W	3·3				58	·508	1·5	1	2·00	−1·00	0·15	1·33	− 1·18	0·15	1·33	− 1·18	0·15	Krishnagar.	
7	12				3	2	1	6	N 20° W	2·8	3·6			67	·560	1·1‡	2	2·42	−0·42	1·11	1·52	− 0·41	1·11	1·52	− 0·41	1·10	Midnapur	

‡ Mean of 30 days. § Mean of 28 days. ‖ Wind variable 3.

Table

Abstract of Observations taken at 8 A.M. at 221 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°.)	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·675?		29·930?	29·798	2nd	29·617	31st	·181	75·4*	92·7		67·8		80·3		24·9	101·6	31st	60·7	4th	40·9
		Raniganj	334	29·639		29·931	29·747	3rd	29·565	25th	·182	73·5	92·7		65·9		79·3		26·8	102·0	24th & 31st.	58·4	3rd	43·6
		Burdwan	99	29·887	+·061	29·936	29·998	2nd	29·811	25th	·187	74·3	94·2	+0·6	66·9	−1·6	80·6	−0·5	27·3	103·4	31st	60·3	4th	43·1
		Naya Dumka	489	29·484?		29·944?	29·591	10th	29·406	25th	·185	74·5	91·0		64·2		77·6		26·8	98·5	4 days	55·0	1st	44·5
		Berhampore	67	29·913	+·061	29·930	30·035	2nd	29·835	25th	·200	72·4	92·1	−0·7	63·7	−2·3	77·9	−1·5	28·4	100·3	25th & 31st.	56·2	4th	44·1
		Rampur Boalia.	70	29·906		29·927	30·013	2nd	29·811	25th	·202	73·7	90·4		62·5		76·4		27·9	98·1	31st	55·1	1st	43·0
		Malda	72	29·902		29·928	30·024	2nd	29·799	25th	·225	70·9	90·1		60·4		75·3		29·7	98·2	30th	52·1	1st	46·1
		Bogra†	61	29·916		29·931	30·013	2nd	29·850	31st	·163	69·8	91·1	+1·6	61·1	−2·5	76·1	−0·5	30·0	100·6	31st	53·2	17th	47·4
12	North Bengal	Dinajpur	123	29·849	+·063	29·931	29·963	2nd	29·751	25th	·212	67·9	89·9	+0·7	57·9	−3·6	73·9	−1·5	32·0	98·3	30th & 31st.	49·9	3rd, 4th, & 15th.	48·4
		Rangpur	123	29·860		29·942	29·959	2nd & 10th.	29·752	25th	·207	68·2	88·4		59·7‡		74·0‡		28·7	96·2	30th & 31st.	52·1	4th	44·1
		Jalpaiguri	284	29·703	+·072	29·956	29·808	10th	29·597	25th	·211	66·4	85·4	+0·4	59·1	−0·1	72·3	+0·2	26·3	92·9	31st	52·1	1st & 3rd.	40·8
		Cooch Behar	156	29·837		29·955	29·943	10th	29·735	25th	·208	67·9	85·4		60·1		72·8		25·3	93·5	31st	52·2	1st	41·3
17	North Bihar	Purnea	125	29·847	+·065	29·931	29·973	2nd	29·754	25th	·219	67·0	88·3	−1·9	59·3	−1·1	73·8	−1·5	29·0	97·0	30th	52·5	4th	44·5
14	Orissa	Balasore	46	29·949	+·074	29·942	30·072	3rd	29·883	25th	·189	75·5	92·9	+1·8	67·5	−2·3	80·2	−0·3	25·4	103·0	31st	59·1	3rd	43·9
		False Point.	21	29·977	+·056	29·940	30·079	3rd	29·915	25th	·164	77·0	87·3	−0·3	69·5	−2·7	78·4	−1·5	17·8	98·5	26th	61·0	3rd	37·5
		Cuttack	80	29·914	+·058	29·938	30·024	3rd	29·836	29th	·188	76·0	96·2	−0·6	71·2	−1·5	83·7	−1·1	25·0	102·4	3 days	63·7	3rd	38·7
		Puri	20	29·978		29·941	30·080	3rd	29·912	29th	·168	78·8	87·9		74·3		81·1		13·6	91·2	13th	65·6	3rd	25·6
	V.—Gangetic Plain and Chota Nagpur.				+·064								88·7	−2·5	61·2	−1·4	75·0	−2·0	27·5					46·4
15	Chota Nagpur	Hazaribagh.	2,007	27·964	+·061	29·952	28·053	3rd	27·910	8th	·143	71·8	85·6	−3·1	62·8	−1·1	74·2	−2·1	22·8	95·2	24th	52·4	1st	42·8
		Ranchi	2,128	27·840	+·061	29·947	27·926	3rd	27·788	8th	·138	71·2	84·7	−2·4	62·4	−0·7	73·6	−1·6	22·3	93·9	31st	54·2	1st	39·7
		Daltonganj.	730?	29·254		29·962	29·370	3rd	29·174	8th	·196	70·1	90·6		57·4		74·0		33·2	100·1	24th, 30th & 31st.	48·5	1st	51·6
		Purulia		29·148		29·929	29·262	3rd	29·095	29th	·167	72·8	91·3		65·6		78·5		25·7	100·6	31st	57·5	1st	43·1
		Chaibassa	760	29·213		29·942	29·313	3rd	29·152	29th	·161	72·3	90·3	−3·8	65·4	−1·8	77·9	−2·8	24·9	99·2	24th	57·5	3rd	41·7
16	South Bihar	Gaya	375	29·603	+·059	29·943	29·723	3rd	29·526	19th	·197	72·6	90·9	−2·8	64·3	−1·9	77·6	−2·4	26·6	100·7	23rd	52·8	1st	47·9
		Dehri	351	29·622		29·940	29·742	10th	29·546	29th	·196	71·2	89·5		65·3		77·4		24·2	99·9	31st	55·1	1st	44·8
		Patna	183	29·795	+·059	29·937	29·917	10th	29·731	25th	·186	72·3	87·9	−3·2	63·1	−0·5	75·5	−1·9	24·8	97·3	31st	52·4	1st	44·9
		Arrah	190	29·774?		29·923?	29·897	10th	29·713	29th	·184	70·2	88·7		61·4		75·0		27·3	98·5	23rd & 31st.	51·0	1st	47·5
		Buxar	239	29·736		29·938	29·859	10th	29·664	29th	·195	72·2	89·0		62·7		75·9		26·3	99·0	23rd	51·9	1st	47·1
17	North Bihar	Bhagalpur	160	29·815		29·933	29·932	2nd & 10th.	29·727	25th	·205	71·7	89·6		62·1		75·8		27·5	98·4	30th	53·2	1st	45·2
		Darbhanga.	166	29·804	+·059	29·930	29·936	10th	29·714	25th	·222	69·6	86·7	−1·0	61·3	−1·9	74·0	−1·5	25·4	95·1	30th	53·8	1st	41·3
		Muzaffarpur	178	29·803		29·941	29·940	10th	29·726	25th	·214	69·1	86·4		59·7		73·1		26·7	94·2	29th, 30th & 31st.	50·1	1st	44·1
		Motihari	224	29·755		29·944	29·879	2nd	29·665	25th	·214	69·7	86·8		57·3		72·1		29·5	95·0	25th	48·9	1st	46·1
		Chapra	181	29·790		29·932	29·916	10th	29·727	25th	·189	69·9	89·0		60·8		74·9		28·2	97·4	31st	51·7	1st	45·7
18	N.-W. Provinces, (East).	Benares	267	29·702	+·056	29·935	29·826	10th	29·633	29th	·193	70·3	89·5	−3·8	60·4	−1·9	75·0	−2·9	29·1	100·8	31st	51·0	1st	49·8
		Allahabad	309	29·665	+·055	29·938	29·787	2nd	29·572	29th	·215	71·8	89·9	−3·4	60·6	−1·6	75·3	−2·5	29·3	102·6	31st	50·4	1st	52·2
23	N.-W. Provinces, (East Sub-montane),	Gorakhpur	256	29·711	+·073	29·934	29·842	2nd	29·638	25th	·204	69·7	88·4	−2·4	61·0	−1·5	74·7	−2·0	27·4	96·5	25th, 29th & 31st.	52·6	1st	43·9
19	South Oudh	Lucknow	368	29·590	?	29·930	29·719	10th	29·511	7th	·208	69·0	89·8	−1·6	59·0	−1·6	74·4	−1·6	30·8	100·3	23rd & 31st.	50·7	1st	49·6
20	North Oudh	Bahraich	403	29·552	+·074	29·931	29·681	2nd	29·488	25th	·193	68·3	88·1	−0·2	58·4	P	73·3	P	29·7	99·1	31st	52·0	14th	47·1
21	N.-W. Provinces, (Central).	Cawnpore	416	29·555	+·077	29·940	29·665	10th	29·463	7th	·202	69·7	89·6	−0·3	57·9	P	73·8	P	31·7	100·4	31st	49·5	1st	50·9
		Mainpuri	516	29·448	+·066	29·943	29·563	3rd	29·366	29th	·197	67·2	88·9	−0·4	57·5	−1·0	73·2	−0·7	31·4	101·3	31st	48·6	1st	52·7

* Mean of 30 days.

† Mean of 28 days.

I—*continued.*

in India, Burma, etc., in March, 1901—continued.

WIND DIRECTION. Number of Winds from									Wind Resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st March 1901.	Normal rainfall for period 1st to 31st March.	Variation from normal of period, 1st to 31st March.				
	2	1		1		2	15	10	N 70° W	1·3	1·5			48*	·411*	1·7	1	1·85	− 0·85	0·14	1·18	− 1·04	0·14	1·18	− 1·04	0·12	Bankura .	Central Bengal	11
14	2					4	11		N 50° W	1·2				51	·416	1·0	0	1·58	− 1·58	0·01	0·82	− 0·81	0·01	0·82	− 0·81	0 01	Raniganj .		
14	2	2			1	2	4	6	N 58° W	2·3	2 3	3·4	−32	61	·514	1·7	0	2·31	− 2·31	0	1·58	− 1·58	0	1·58	− 1·58	0	Burdwan .		
13	2			1		1	4	10	N 54° W	1·0*	1·1*			50	·417	1·4	1	1·54	− 0·54	0·31	0·85	− 0·54	0·31	0·85	− 0·54	0·31	Naya Dumka		
23					1	1	3	3	N 86° W	1·0	1·0	3·4	−71	60	·473	1·4	1	1·96	− 0·96	0·50	1·05	− 0·55	0·50	1·05	− 0·55	0·50	Berhampur.		
13	4	2	1		1	3	3	4	N 50° W	1·3	1·3			58	·477	0·7	1	1·65	− 0·65	0·17	0·93	− 0·76	0·17	0·93	− 0·76	0·17	Rampur Boalia.		
	7	4	2	1	4	5	5	3	N 51° W	2·5	2·3			66	·497	1·1	0	1·19	− 1·19	0·09	0·80	− 0·71	0·09	0·80	− 0·71	0·09	Malda .		
														62	·459	0·9	1	1·80	− 0·80	0·23	1·06	− 0·83	0·23	1·06	− 0 83	0·16	Bogra .		
	1	6	1	1	1	8	7	6	N 80° W	7·9	9·1			68	·459	1·2	1	1·23	− 0·23	0·10	0·87	− 0·77	0·10	0·87	− 0·77	0·10	Dinajpur .	North Bengal .	12
5	1	7	8	1	2	2	2	3	S 53° E	3·5*	3·7*			72	·498	0·3§	1	1·57	− 0·57	0·17	1·24	− 1·07	0·17	1·24	− 1·07	0·17	Rangpur .		
	9	6	4	1		1	3	7	N 1° E	1·3	1·7			76	·493	0·6	1	1·96	− 0·96	0·59	1·50	− 0·91	0·59	1·50	− 0·91	0·56	Jalpaiguri .		
2		7	14	7	1				S 88° E	2·1	2·2			79	·546	2·0	2			0·64	1·63	− 0·99	0·64	1·63	− 0·99	0·36	Cooch Behar		
7	1	6	4	2		7	1	3	N 63° E	3·5	3·1	3·4‡	− 9	74*	·488*	1·1	1	0·80	+ 0·20	0·64	0·40	+ 0·24	0·64	0·40	+ 0·24	0·64	Purnea .	North Bihar .	17
7	5				5	7	2	5	S 85° W	5·0				77	·687	1·4	3	2·96	+ 0·04	0·69	1·45	− 0·76	0·69	1·45	− 0·76	0·29	Balasore .	Orissa.	14
	2				1	7	16	5	S 89° W	8·0	7·6	10·9	−30	84	·785	2·3*	1	1·54	− 0·54	0·20	0·93	− 0·73	0·20	0·93	− 0·73	0·20	False Point.		
21			1			6	3		S 56° W	2·0		3·5	−43	75	·673	1·7§	0	1·96	− 1·96	0	1·41	− 1·41	0	1·41	− 1·41	0	Cuttack.		
9	5					10		7	N 76° W	10·1	9·5			79	·783	1·4	1	1·00	0	0·24	0·61	− 0·37	0·24	0·61	− 0·37	0·22	Puri.		
																				0·38	0·50	−0·12					V.—Gangetic Plain and Chota Nagpur.		
3	1	1	1	1	5	8	6	5	S 65° W	8·4	7·5	7·4	+ 1	45	·354	1·4	1	1·88	− 0·88	0·35	0·75	− 0·40	0·35	0·75	− 0·40	0·18	Hazaribagh.	Chota Nagpur.	15
5	1	2	2	3	2	3	5	8	N 74° W	5·3	6·2			51	·387	1·7	2	2·80	− 0·80	0·44	1·38	− 0·94	0·44	1·38	− 0·94	0·27	Ranchi.		
16			2	10	1	1	1	0	S 38° E	2·9	3·5			51	·378	0·6	2	1·80	+ 0·20	0·20	0·70	− 0·50	0·20	0·70	− 0·50	0·10	Daltonganj.		
25							4	2	N 79° W	1·2				52	·412	1·0	1			0·32			0·32			0·22	Purulia.		
13	3	2	2	1	1	4	2	3	N 56° W	1·6	1·4			71	·547	1·1	0	2·42	− 2·42	0·21	1·27	− 1·06	0·21	1·27	− 1·06	0·09	Chaibassa.		
2	1			2	12	12	2		S 23° W	7·3	6·6	3·3	+100	56	·445	1·7	1	1·07	− 0·07	0·22	0·43	− 0·21	0 22	0·43		0·22	Gaya .	South Bihar.	16
1			2		14	13	1		S 19° W	5·3	4·8			56	·422	1·3	1	1·17	+ 0·17	0·25	0·69	− 0·44	0·25	0·69	− 0·44	0·24	Dehri.		
		1	3	2	4	8	13		S 54° W	3·5	4·1	3·4	+21	56	·446	0·9	1	0·81	+ 0·19	0·48	0·38	+ 0·10	0·48	0·38	+ 0·10	0·48	Patna.		
3	3		3		2	5	14	1	S 82° W	2·7	2·8			63	·461	0·8	1	0·88	+ 0·12	0·70	0·40	+ 0·30	0·70	0·40	+ 0·30	0·70	Arrah.		
		1	3	1	3	6	17		S 68° W	6·4	5·8			57	·450	1·3	1	1·00	0	0·54	0·32	+ 0·22	0·54	0·32	+ 0 22	0·54	Buxar.		
9		5	1	1	2	7	4	2	S 59° W	3·0	2·8			56	·430	0·8	1	0·76	+ 0·24	0·36	0·40	− 0·04	0·36	0·40	− 0·04	0·35	Bhagalpur .	North Bihar.	17
	1	3	6	5	1	4	8	3	S 27° W	3·3		4·5	−27	64	·460	0·4	1	0·76	+ 0·24	0·45	0·32	+ 0·13	0·45	0·32	+ 0·13	0·45	Darbhanga.		
22		2	3	1			2	1	N 63° E	0·9	0·8			78	·565	0·3	1	1·00	0	0·50	0·40	+ 0·10	0·50	0·40	+ 0·10	0·50	Muzaffarpur		
		3	9	3	2	2	7	5	N 87° E	3·3				82	·585	0·6	1	0·78	+ 0·22	0·66	0·41	+ 0·25	0 66	0·41	+ 0·25	0·66	Motihari.		
7		1	3		1	12	6	1	S 56° W	2·3	2·8			65	·467	1·2	1	0·80	+ 0·20	0·61	0·37	+ 0·24	0·61	0·37	+ 0·24	0·61	Chapra.		
15			1	2		8	5		S 50° W	2·5	2·9	4·8	−40	62	·454	1·3	1	0·64	+ 0·36	1·20	0·28	+ 0·92	1·20	0·28	+ 0·92	1·18	Benares .	N.-W. Provinces (East).	18
5	1	1	4	2	1	5	8	4	S 81° W	4·3	4·9	4·6	+ 7	59	·453	1·5	1	0·73	+ 0·27	0·35	0·32	+ 0·03	0·35	0·32	+ 0·03	0·32	Allahabad.		
3	6	4	2	1	2	2	9	2	N 46° W	2·0		3·6	−44	63	·454	1·4	1	0·73	+ 0·27	0·14	0·42	− 0·28	0·14	0·42	− 0·28	0·12	Gorakhpur	N.-W. Provinces (East Sub-Montane).	23
12	2		2		2	2	11		S 85° W	1·9	2·1	4·0	−48	59	·414	1·7	0	1·00	− 1·00	0·09	0·37	− 0·28	0·09	0·37	− 0·28	0·09	Lucknow .	South Oudh.	19
12	2	2	3			3	5	4	N 53° W	2·1	2·0			73	·502	0·9	0			0·08	0·47	− 0·39	0·08	0·47	− 0·39	0·08	Bahraich .	North Oudh.	20
24		1		1		1	4		S 78° W	1·0				58	·421	0·5	1	0·80	+ 0·20	0·17	0·27	− 0·10	0·17	0·27	− 0·10	0·10	Cawnpore .	N.-W. Provinces (Central).	21
13	1		1		3	2	9	2	S 70° W	1·6	1·6			59	·393	2·1	0			0·04	0·24	− 0·20	0·04	0·24	− 0·20	0·04	Mainpuri.		

‡ Mean of 25 days.

§ Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 221 Stations

Number of district.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas.				+·063								83·5	−1·4	57·1	+0·4	70·3	−0·5	26·3					44·2
24	N.-W. Provinces (West Sub-montane).	Bareilly	569	29·380	+·064	29·935	29·507	2nd	29·318	6th	·189	65·8	85·9	−1·7	57·8	−1·2	71·9	−1·5	28·1	96·4	31st	51·7	14th & 15th.	44·7
		Dehra Dun	2,233	27·703	?	29·954	27·819	2nd	27·635	6th	·184	61·7	78·2	−1·2	54·4	−0·9	66·3	−1·1	23·8	86·5	23rd & 31st.	46·0	8th	40·5
		Roorkee	887	29·059	+·061	29·954	29·182	2nd	28·992	7th & 28th.	·190	61·8	82·3	−3·5	54·7	−1·7	68·5	−2·6	27·6	92·2	31st	49·3	5 days	42·9
22	N.-W. P. West.	Meerut	738	29·208	+·057	29·944	29·330	10th	29·130	29th	·200	64·3	85·2	−1·7?	56·5	−1·3	70·9	−1·5?	28·7	98·1	31st	49·8	1st	48·3
26	South-East Punjab.	Delhi	718	29·259	+·075	29·968	29·374	10th	29·154	29th	·220	68·2	85·2	−3·0	62·3	+0·2	73·8	−1·4	22·3	95·7	31st	51·6	13th	44·1
28	Central Punjab.	Lahore	702	29·255	+·055	29·959	29·383	3rd	29·108	6th	·275	64·0	84·4	+0·7	57·5	+2·7	71·0	+1·7	26·9	94·2	30th	48·0	15th	46·2
27	South Punjab	Sirsa	662	29·302	+·059	29·956	29·427	3rd	29·170	6th	·257	66·8	88·0	−0·7	57·9	+0·8	73·0	+0·1	30·1	101·3	30th	48·6	1st	52·7
		Patiala	818	29·146		29·967	29·257	3rd	29·032	29th	·225	64·1	81·5		57·1		69·3		24·4	89 9	23rd, 29th & 30th.	49·5	8th	40·4
29	Punjab Sub-montane.	Ludhiana	812	29·141	+·061	29·960	29·252	3rd	29·017	7th	·235	63·1	81·9	−3·3	57·7	+0·5	69·8	−1·4	24·2	92·1	30th	51·2	4 days	40·9
		Sialkot	830	29·118	+·058	29·957	29·232	10th	28·999	29th	·233	63·7	83·7	+1·9	57·8	+2·5	70·8	+2·2	25·9	93·6	29th & 30th.	50·2	8th & 12th.	43·4
		Umballa	892	29·055	+·073	29·958	29·173	2nd	29·947	7th	·226	61·5	81·7	−1·7	54·7	?	68·2	?	27·0	90·0	22nd	48·0	2nd & 16th.	42·0
31	North Punjab	Rawalpindi	1,676	28·281	+·066	30 001	28·406	10th	28·069	6th	·317	59·8	76·7	0	?	?	?	?	?	93·1	30th	?	?	?
	VII.—Indus Valley and North-West Rajputana.				+·038								89·8	+2·8	61·3	+2·0	75·5	+2·4	28·5					49·7
31	North Punjab	Peshawar	1,110	28·894	+·045	30·039	29·031	12th	28·735	6th	·296	60·8	76·9	+0·2	53·3	+1·6	65·1	+0·9	23·6	88·1	29th	41·4	7th	46·7
32	West Punjab	Khushab	612	29·362	+·073?	29·971	29·499	12th	29·201	6th	·298	65·7	84·5	+4·7	60·3*	+4·1*	72·4*	+4·4	24·2	97·3	29th	52·7	7th	44·6
		Montgomery	558	29·403	+·043	29·950	29·551	12th	29·198	6th	·353	68·2	86·9	+1·6	58·4	+2·5	72·7	+2·1	28·5	101·5	30th	48·0	8th	53·5
		D. I. Khan	594	29·405	+·035	29·972	29·559	12th	29·224	6th	·335	64·4	84·4	−0·1	56·1	?	70·3	?	28·3	97·2	30th	45·1	7th	52·1
		Mooltan	420	29·553	+·036	29·960	29·725	12th	29·357	6th	·368	66·6	88·8	+2·5	61·2	+3·2	75·0	+2·9	27·6	101·4	29th & 30th.	52·9	14th	48·5
47	Sind	Jacobabad	186	29·769	+·034	29·922	29·955	12th	29·581	29th	·374	71·7	95·2	+4·1	62·3	+2·9	78·8	+3·5	32·9	107·4	30th	52·0	4th	55·4
		Hyderabad	96	29·874	?	29·926	30·043	12th	29·721	30th	·322	73·2	96 2	+2·9	65·0	+0·5	80·6	+1·7	31·2	105·6	30th	58·5	3rd	47·1
		Kurrachee	30	29·968	+·030	29·950	30·094	12th	29·829	29th	·265	74·0	91·1	+4·0	67·5	+1·0	79·3	+2·5	23·6	102·9	16th	57·2	1st & 9th.	45·7
51	West Rajputana	Bikaner	771	29·185	+·045	29·948	29·341	12th	29·054	6th	·287	70·8	91·4	+2·0	63·4	+0·3	77·4	+1·2	28·0	103·6	30th	54·1	2nd	49·5
		Pachpadra	380	29·585		29·933	29·717	12th	29·454	30th	·263	73·2	97·4		61·4		79·4		36·0	106·3	29th	51·6	1st	54·7
		Jodhpur	782	29·171		29·955	29·285	12th	29·055	30th	·232	72·9	94·5		65·1		79·8		29·4	103·7	30th	55·2	13th	48·5
	VIII.—East Rajputana, Central India and Gujarat.				+·040								92·9	+1·0	64·3	+1·0	78·6	+1·1	28·6					45·5
41	East Rajputana	Jaipur	1,431	28·549	+·054	29·974	28·658	3rd	28·410	7th	·248	71·5	90·7	+0·7	62·2	+1·3	76·4	+1·0	28·5	101·2	30th	52·5	13th	48·7
		Kotah	819	29·139			29·257	3rd	29·009	7th	·248	74·2	93·5		66·3		79·9		27·2	103·5	30th	57·5	1st	46·0
		Sambhar	1,254	28·727	+·059	29·976	28·833	3rd	28·572	7th	·261	67·0	90·0	+1·8	59·4	+0·1	74·7	+2·0	30·6	100·5	30th & 31st.	52·9	1st, & 15th,	47·6
		Ajmer	1,611	28·363?	+·035	29·984?	28·467	3rd	28·224	7th	·243	68·1	89·5	+0·2	60·4	+1·2	75·0	+0·7	29·1	99·9	30th & 31st.	52·8	1st, 2nd & 3rd.	47·1
		Udaipur	1,925	28·052		29·971	28·136	12th	27·962	18th	·174	71·2	90·7		60·1		75·4		30·6	98·5	29th	52·2	9th	46·3
		Deesa	466	29·504	+·022?	29·934	29·594	12th	29·392	29th	·202	76·3	98·1	+2·2	65·0	+1·1	81·6	+1·7	33·1	107·1	30th	56·1	8th	51·0
46	Kathiawar and Cutch.	Bhuj	395	29·504	+·037	29·950	29·701	12th	29·473	29th	·228	76·5	95·5	+1·8	66·2	+0·4	80·8	+1·1	29·3	101·3	4 days	59·5	1st & 8th.	41·8
		Jamnagar	61	29·935		29·942	30·037	24th	29·842	29th	·195	74·2	94·5		64·7		79·6		29·8	100·1	16th, 17th & 18th.	56·3	8th	43·8
		Rajkot	429	29·563	+·031	29·954	29·641	24th	29·476	29th	·165	73·7	97·1	+0·8	62·3	−0·3	79·7	+0·3	34·8	101·9	16th	52·5	1st	49·4
		Veraval		29·966	+·031	29·926	30·036	23rd	29·894	18th	·142	74·9	88·3	+2·2	66·5	+1·7	77·4	+2·0	21·8	102·2	17	59·3	1st, 2nd & 9th.	42·9
		Dwarka	37	29·976		29·950	30·070	24th	29·894	29th	·176	76·2	84·7		69·9		77·3		14·8	97·4	12th	61·6	9th	35·8
		Bhavnagar Para	35	29·943	+·017	29·923	30·025	24th	29·841	29th	·184	76·8	98·1	+5·0?	66·8	−0·2	82·5	+2·4?	31·3	103·6	28th	59·2	9th	44·4
49	Central India	Nowgong	757	29·218	+·049	29·956	29·337	3rd	29·108	7th	·229	69·8	88·9	−4·4?	60·4	−0·4	74·7	−2·4?	28·5	99·0	30th	51·5	1st	47·5
		Indore	1,823	28·168	+·056	29·963	28·240	24th	28·088	29th	·152	74·7	92·5	−0·1	61·8	+1·2	77·2	+0·6	30·7	98·8	4 days	54·6	8th & 14th.	44·2
		Neemuch	1,630	28·3?7	+·063?	29·977	28·451	3rd	28·252	7th	·199	72·3	91·5	−0·4	62·0	+0·4	76·8	0	29·5	100·0	30th	55·1	8th	44·9
45	Gujarat	Surat	39	29·948	+·012	29·930	30·024	24th	29·856	29th	·168	77·2	98·6	+2·5	68·4	+2·7	83·5	+2·6	30·2	107·1	18th	59·0	9th	48·1
		Ahmedabad*	164	29·817	+0·31	29·930	29·892	24th	29·692	29th	·200	78·4	100·1	+3·6	69·6	+2·0	84·9	+2·8	30·5	106·8	29th	62·1	6th	44·7

* Mean of 30 days.

I—*continued.*

in India, Burma, etc., in March, 1901—continued.

WIND DIRECTION. Number of Winds from									Wind resultant.	Wind velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st March 1901.	Normal rainfall for period, 1st to 31st March.	Variation from normal of period, 1st to 31st March.				
																				1·12	0·89	+0·16					VI.—Upper Sub-Himalayas.		
22	1		1			2	2	3	N 69° W	1·7	1·6	4·3	−63	65	·409	1·2	1	1·82	−0·82	0·54	0·94	−0·40	0·54	0·94	− 0·40	0·25	Bareilly	N.-W. Provinces (West Sub-montane).	24
18		1	1	1		1	7	2	N 84° W	2·0		2·3	−13	63	·344	1·9	2	2·64	−0·64	1·33	1·07	+0·26	1·33	1·07	+ 0·26	0·85	Dehra Dun.		
19	1	1	2		2	1	1	4	N 38° W	2·2		2·9	−24	73	·409	1·4	2	1·82	+0·18	0·98	0·72	+0·26	0·98	0·72	+ 0·26	0·68	Roorkee.		
16		1		1		2	7	4	N 81° W	1·6	1·6	2·7	−41	66	·406	1·4	2	1·55	+0·45	0·44	0·77	−0·33	0·44	0·77	− 0·33	0·31	Meerut	N.-W. Provinces West.	22
8			2	1		1	9	10	N 68° W	2·8	2·6	3·9	−33	57	·385	2·1	2	1·18	+0·82	0·56	0·56	0	0·56	0·56	0	0·38	Delhi	South-East Punjab.	26
9	6	3		3		2	4	4	N 30° W	2·4		3·1	−23	70	·429	3·2	1	1·36	−0·36	1·33	0·73	+0·60	1·33	0·73	+ 0·60	1·27	Lahore	Central Punjab	28
5	2	1	2	12	2	6		1	S 29° E	4·1	4·8	3·8	+26	73	·478	2·0	1	0·55	+0·45	0·32	0·37	−0·05	0·32	0·37	− 0·05	0·32	Sirsa	South Punjab.	27
16	4		1	3		1	3	3	N 45° W					76	·459	2·3	3			1·84			1·84			0·73	Patiala.		
1	2	4	3	4		3	9	5	N 61° W	3·0	2·7	1·8	+50	72	·420	2·2	2	2·36	−0·36	0·59	0·99	−0·40	0·59	0·99	− 0·40	0·34	Ludhiana	Punjab (Sub-montane).	29
6	3	9	1			1	3	8	N 8° W	2·3		1·9	+21	69	·404	2·1	4	2·64	+1·36	1·50	1·18	+0·32	1·50	1·18	+ 0·32	0·54	Sialkot.		
22				1				8	N 45° W	1·7				83	·450	1·8	3			1·81	0·73	+1·08	1·81	0·73	+ 1·08	0·83	Umballa.		
24		3				1	3		S 31° W	4·1	3·8	2·6	+46	72	·374	2·1	5	3·91	+1·09	2·16	1·76	+0·40	2·16	1·76	+ 0·40	0·97	Rawalpindi	North Punjab.	31
																				0·58	0·42	+0·16					VII.—Indus Valley and North-West Rajputana.		
22	1	1		1	2	1	1	2	S 78° W	1·8	2·0	3·7	−46	74	·399	2·9	6	3·55	+2·45	3·12	1·70	+1·42	3·12	1·70	+1·42	1·25	Peshawar	North Punjab.	31
15	2	6	2		1	2	3		N 27° E	5·4	6·3			58	·369	2·4	3	1·60	+1·40	0·69	0·54	+0·15	0·69	0·54	+0·15	0·32	Khushab	West Punjab.	32
2	4	3	4	10	5	1	1	1	S 61° E	6·3	5·4			49	·333	2·5	2	1·00	+1·00	0·64	0·51	+0·13	0·64	0·51	+0·13	0·54	Montgomery		
22	3	4						2	N 11° E	1·0	1·1	2·1	−48	74	·459	2·9	4	1·55	+2·45	0·83	0·63	+0·20	0·83	0·63	+0·20	0·25	D. I. Khan.		
10	1	7		3	2	2	1	5	N 14° E	1·3	1·6	2·1	−24	55	·365	2·4	0	1·18	−1·18	0·05	0·38	−0·33	0·05	0·38	−0·33	0·05	Mooltan.		
15	1	2	9		1			3	N 67° E	2·4	2·5	3·9	−36	44	·342	2·5	1	0·73	+0·27	0·92	0·14	+0·78	0·92	0·14	+0·78	0·92	Jacobabad	Sind.	47
3	9	1		2	2	7	4	3	N 69° W	5·9	6·2	8·3	−25	44	·358	1·1	0	0·50	−0·50	0	0·14	−0·14	0	0·14	−0·14	0	Hyderabad.		
1	1	7	5	1		3	6	7	N 17° W	7·1	8·9	11·8	−25	67	·571	1·5	0	0·55	−0·55	0·03	0·23	−0·20	0·03	0·23	−0·20	0·03	Kurrachee.		
	3	5	4	4	4	1	7	3	N 26° E	7·2		4·3	+67	50	·376	1·8	0			0·05	0·20	−0·15	0·05	0·20	−0·15	0·05	Bikaner	West Rajputana	51
1	2	8	7	3	2	3	2	3	N 66° E	5·0	5·7	4·1	+39	37	·306	1·4	0	0	0	0·02	0·07	−0·05	0·02	0·07	−0·05	0·02	Pachpadra.		
10	1	7	6		1	2	2	2	N 14° E	3·6*	3·2*			31	·251	2·0	0			0	0·03	−0·03	0	0·03	−0·03	0	Jodhpur.		
																				0·07	0·15	−0·06					VIII.—East Rajputana, Central India and Gujarat.		
8	4	10	5	1				3	N 44° E	3·3		5·7	−42	47	·354	2·0	0	0·50	−0·50	0·09	0·39	−0·30	0·09	0·39	− 0·30	0·09	Jaipur	East Rajputana	50
11	4	2	2	3		1	3	5	N 6° E	3·7	4·4			40	·334	1·6	0			0	0·07	−0·07	0	0·07	− 0·07	0	Kotah.		
24	2	1	3	1					N 65° E	3·0		6·2	−52	54	·350	1·6	0	0·64	−0·64	0·09	0·36	−0·27	0·09	0·36	− 0·27	0·09	Sambhar.		
16	1	4		4	1	3		2	S 72° E	3·5		3·6	− 3	54	·369	1·9	1	0·27	+0·73	0·22	0·17	+0·05	0·22	0·17	+ 0·05	0·22	Ajmer.		
26	1				1	1	2		S 75° W	3·2	3·2			46	·351	0·7	0			0·06			0·06			0·06	Udaipur.		
	4	11	6	2	4		1	3	N 55° E	8·8		8·9	− 1	33	·286	0·7	0	0·18	−0·18	0·03	0·05	−0·02	0·03	0·05	− 0·02	0·02	Deesa.		
	2			1		8	16	4	S 87° W	8·5		8·3	+ 2	50	·453	0·5	0			0·05	0·09	−0·04	0·05	0·09	− 0·04	0·05	Bhuj	Kathiawar and Cutch.	46
	3	4	1	1	7	9	5	1	N 45° W	10·2	10·9			63	·530	0·8	0			0			0			0	Jamnagar.		
	2	4	5	2	1	1	8	8	N 35° W	7·1	7·0	8·1	−14	49	·409	1·2	0	0	0	0	0·01	−0·01	0	0·01	− 0·01	0	Rajkot.		
	15	5	1	1			1	8	N 3° W	7·1	8·4	6·6	+27	57	·480	1·1	0			0	0	0	0	0	0	0	Veraval.		
	7	4	1			2	6	11	N 35° W	13·2				75	·674	2·1	0			0			0			0	Dwarka.		
	13		2	2	1		8	5	N 30° W	5·7	5·9			35	·320	0·9	0			0	0·09	−0·09	0	0·09	− 0·09	0	Bhavnagar Para.		
10	2	1	3	1	1	4	6	3	N 88° W	2·0	2·0	2·3	−13	57	·407	1·5	1	0·55	+0·45	0·22	0·27	−0·05	0·22	0·27	− 0·05	0·22	Nowgong	Central India.	49
14	1	4	1	4	2		1	4	N 56° E	2·0		3·7	−46	54	·457	1·4	0	0	0	0·11	0·02	+0·09	0·11	0·02	+ 0·09	0·06	Indore.		
1	2	9	14	1		1	1	2	N 64° E	6·4	5·8	9·1	−36	38	·294	0·7	0	0·18	−0·18	0·07	0·08	−0·01	0·07	0·08	− 0·01	0·04	Neemuch.		
1	6	3	3	3	8	5	2		S 18° E	5·1†	8·4†	6·5	+29	61	·568	0·8	0	0	0	0·01	0	+0·01	0·01	0	+ 0·01	0·01	Surat	Gujarat.	45
	6	4	9	2	2	4		3	N 60° E	2·7				37	·343	0·9	0			0	0·07	−0·07	0	0·07	− 0·07	0	Ahmedabad		

† Mean of 19 days.

Table

Abstract of Observations taken at 8 A.M. at 221 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar: cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
22	N.-W. P., West	Agra	555	29·408	+·048	29·943	29·519	3rd	29·286	7th	·233	69·8	90·2	−1·3	62·7	−0·1	76·5	−0·7	27·5	102·0	31st	55·9	1st & 8th.	46·1
21	N.-W.P., Central	Jhansi	858	29·135	+·057	29·973	29·250	3rd	29·002	7th	·248	73·4	92·3	−0·8	67·1	+1·6	79·7	+0·4	25·2	103·3	30th	58·6	1st	44·7
	IX.—Deccan				+·050								94·6	−2·1	67·6	+0·8	81·1	−0·7	27·0					40·3
38	Bombay, Deccan	Belgaum	2,539	27·441	+·025	29·903	27·503	3rd	29·388	1st	·115	76·6	92·5	−1·3	66·9	+2·8	79·7	+0·8	25·6	95·3	25th & 26th.	61·9	5th & 9 h.	33·4
		Sholapur	1,590	28·385	+·035	29·926	28·455	3rd	28·310	1st	·145	80·2	98·4	−2·1	71·2	+2·4	84·8	+0·2	27·2	103·2	24th	63·1	8.h	40·1
		Poona	1,840	28·145	+·025	29·951	28·192	24th	28·090	18th	·102	73·9	98·2	+1·1	65·0	+0·7	81·6	+0·9	33·2	103·0	18th	51·5	8th	51·5
		Bijapur	1,946	28·037	+·050	29·928	28·102	3rd	27·978	29th	·124	78·3	96·8	+0·8	72·0	+1·3	84·4	+1·1	24·8	101·2	18th	69·3	2nd	31·9
40	Khandesh	Malegaon	1,430	28·548	+·030	29·946	28·612	24th	28·479	29th	·133	76·6	98·5	+1·2	64·7	+1·0	81·6	+1·1	33·8	103·3	20th, 28th & 29th.	53·5	9th	49·8
		Ahmednagar	2,152	27·851	?	29·952	27·909	12th	27·784	1st	·125	76·8	95·4	+1·9	63·7	+1·3	79·6	+1·6	31·7	99·4	18th & 23rd.	54·5	8th	44·9
41	Berar	Akola	930	29·055	+·059	29·952	29·154	3rd	28·979	29th	·175	75·2	97·9	−0·9	65·3	?	81·6	?	32·6	104·7	22nd	57·5	6th & 9th.	47·2
		Amraoti	1,215	28·774	?	29·956	28·872	2nd	28·711	29th	·161	77·4	96·7	−1·6	69·4	+0·9	83·1	−0·4	27·3	103·3	22nd.	60·8	2nd	42·5
42	Central Provinces, West.	Khandwa	1,044	28·938	+·047	29·955	29·015	3rd.	28·853	18th	·162	76·5	98·5	+1·0	65·5	+0·5	82·0	+0·8	33·0	105·2	22nd	56·1	8th & 9th.	49·1
		Hoshangabad	1,006	28·994	?	29·981?	29·097	3rd	28·916	29th	·181	74·2	92·7	−3·4	65·4	+1·1	79·0	−1·2	27·3	101·9	23rd	58·3	2nd	43·6
		Nagpur	1,025	28·957	+·058	29·957	29·047	3rd	28·881	7th	·166	74·7	95·3	−3·2	67·7	+0·1	81·5	−1·6	27·6	101·6	24th	59·7	2nd	41·9
43	Central Provinces, Central.	Chanda	634	29·369	+·055	29·958	29·466	3rd	29·322	29th	·144	77·7	96·0	−4·2	69·9	+2·7	82·9	−0·8	26·1	101·2	24th & 29th.	62·3	12th	38·9
		Seoni	2,053	27·959	+·058	29·968	28·043	3rd	27·895	7th	·148	71·1	89·5	−4·0	62·8	−0·7	76·2	−2·4	26·7	96·8	29th	57·0	1st & 2nd.	39·8
		Jubbulpore	1,327	28·643	?	29·961	28·747	3rd	28·567	7th	·180	69·8	89·7	−3·4	60·8	−0·3	75·3	−1·9	28·9	98·0	30th	52·4	1st	45·6
		Saugor	1,807	28·180	+·061?	29·964	28·280	3rd	28·096	7th	·184	74·0	89·0	−3·3	65·5	+1·1	77·3	−1·1	23·5	99·4	28th	58·1	5 days.	41·3
49	Central India	Sutna	1,040	28·935	+·056	29·962	29·050	3rd	28·835	7th	·215	71·9	89·0	−2·6	62·0	?	75·5	?	27·0	98·5	23rd & 30th.	51·8	1st	46·7
44	Central Provinces, East.	Raipur	970	29·020	+·073	29·961	29·085	3rd	28·957	8th	·128	74·2	91·1	−5·4	66·7	−1·8	78·9	−3·6	24·4	98·9	30th & 31st.	60·2	3rd	38·7
		Sambalpur	486	29·521	+·077	29·969	29·629	2nd	29·469	29th	·160	73·8	90·6	−6·4	66·8	−0·6	78·7	−3·5	23·8	99·6	31st	59·6	3rd	40·0
39	Hyderabad (North).	Indur		28·705			28·806	3rd	28·645	29th	·161	78·8	94·5		69·0		81·7		25·5	99·7	24th	63·2	1st	36·5
		Bidar	2,165?	27·828		29·932	27·943	3rd	27·747	29th	·196	78·6	94·1		70·7		82·4		23·4	98·3	19th	63·1	2nd	35·2
52	Hyderabad (South),	Gulbarga	1,502	28·478		29·932	28·560	3rd	28·401	1st	·159	79·7	98·1		72·6		85·4		25·5	102·3	25th	64·4	13th	37·9
		Raichur	1,309	28·652	?	29·933	28·720	3rd.	28·605	29th	·115	80·4	96·6	−2·0	74·8	+0·8	85·7	−0·6	21·8	100·1	31st	69·6	5th	30·5
		Hyderabad (Deccan).	1,690	28·305	+·038?	29·957	28·363	3rd	28·253	1st	·110	75·8	94·4	−3·3	70·4	+0·9	82·5	−1·2	24·0	98·4	5 days	65·2	2nd & 3rd.	33·2
		Secunderabad	1,787	28·206	+·038?	29·957	28·262	3rd	28·151	1st	·111	74·8	95·1	−2·6	70·0	+0·5	82·5	−1·1	25·1	99·2	18th & 31st.	64·6	3rd	34·6
		Hanumkonda	865	29·115		29·961	29·197	3rd.	29·056	29th	·141	77·7	95·3		71·7		83·5		23·6	99·8	31st	67·3	3rd	32·5
	X.—West Coast				+·013								88·7	+1·0	75·4	+1·0	82·1	+1·0	13·3					24·3
37	Konkan	Bombay	37	29·955	+·019	29·932	30·005	21st	29·876	17th	·129	77·3	86·2	+0·6	74·0	+0·5	80·2	+0·6	12·2	96·5	13th	68·0	2nd.	28·5
		Ratnagiri	110	29·858	+·014	29·907	29·908	3rd	29·788	29th	·110	79·6	89·2	+1·5	73·8	+1·5	81·5	+1·5	15·4	100·8	13th	67·4	2nd	33·4
		Mormugao	60	29·927	?	29·922	29·993	3rd	29·877	25th	·116	80·4	88·6	+1·8	76·8	+1·3	82·7	+1·6	11·8	94·0	14th	71·9	2nd & 9th.	22·1
		Goa	198	29·771	+·023	29·908	29·826	23rd	29·719	29th	·107	79·7	85·9	−1·5	73·3*	?	79·7*	?	12·6	92·0	12th	65·0	5th	27·0
		Karwar	44	29·938	+·020	29·914	30·003	3rd	29·893	29th	·110	76·4	88·5	+0·7	73·3	+0·2	80·9	+0·5	15·2	92·3	13th	67·5	1st & 7th.	24·8
33	Malabar	Cochin	11	29·967	+·009	29·905	30·029	22nd	29·922	13th	·107	82·5	92·0	+1·4	78·1	+1·4	85·1	+1·4	13·9	95·5	10th & 25th.	73·7	16th	21·8
		Calicut	27	29·945	+·001	29·901	29·997	22nd	29·907	1st	·090	81·9	90·8	+0·3	76·3	+0·4	83·6	+0·4	14·5	93·9	29th	73·5	13th	20·4
		Mangalore	65	29·913	+·007	29·910	29·965	23rd	29·868	29th.	·098	81·6	90·8	+1·9	77·0	+1·2	83·9	+1·6	13·8	98·8	12th	73·4	8th	25·4
		Trivandrum	198	29·758	?	29·888	25·823	22nd	29·703	13th	·120	78·9	86·6	−0·5	75·9	+1·4	81·3	+0·5	10·7	89·0	13th	73·5	2nd & 3rd.	15·5
	XI.—South India				+·038								92·5	−1·2	72·1	+0·3	82·3	−0·5	20·4					28·2
57	Madras (South).	Pamban	37	29·947		29·911	29·989	3rd	29·903	14th	·086	82·1	90·1		75·4		82·8		14·7	91·8	13th & 29th.	74·2	6 days	17·6
		Tinnevelly	168	29·833	?	29·932	29·888	22nd	29·787	29th	·101	80·0	92·3	−4·1	75·9	+0·1	84·1	−2·0	16·4	95·7	24th	72·9	2nd & 18th.	22·8
		Madura	447	29·519	+·023	29·935	29·604	22nd	29·504	13th	·100	80·7	93·5	−3·4	74·1	+1·6	83·8	−0·9	19·4	96·4	7th, 8th & 30th.	70·0	8th	26·4
		Periyakulam		29·057			29·120	22nd	29·060	13th	·120	76·6	92·6		69·6		80·7		23·0	97·0	30th	61·7	11th	35·3

* Mean of 30 days.

1—*continued.*

in India, Burma, etc., in March, 1901—continued.

WIND DIRECTION. Number of Winds from									Wind Resultant.	WIND VELOCITY.				HYGROMETRY, 8A.M.		Mean cloud amount.	RAINFALL.								Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity, corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st March 1901.	Normal rainfall for period 1st to 31st March.	Variation from normal of period 1st to 31st March.				
4		2		10		11		4	S 10° W	3·7	4·4	4·5	− 2	54	·388	1·1	1	0·82	+0·18	0·28	0·31	− 0·03	0·28	0·31	− 0·03	0·26	Agra . .	N.-W. P., WEST	22
9	3	1	1	2	6	3	6		S 41° W	2·8		3·4	−18	50	·403	0·7	1	1·00	0	0·19	0·35	− 0·16	0·19	0·35	− 0·16	0·15	Jhansi .	N.-W. P., CENTRAL	21
																				0·52	0·48	+0·05					IX.—Deccan.		
10	2	4	5	3	1	2	2	2	N 71° E	10·2†		11·6	−12	45	·415	2·9	2	1·00	+1·00	0·49	0·35	+ 0·14	0·49	0·35	+ 0·14	0·30	Belgaum .	BOMBAY DECCAN.	33
1	2	1	5	13	1	3	1	4	S 53° E	9·4	6·8	7·4	− 8	39	·409	2·6	1	0·36	+0·64	0·26	0·34	− 0·08	0·26	0·34	− 0·08	0·11	Sholapur.		
7		1	4	2	2	2	5	8	N 75° W	8·2	9·3	8·3	+12	40	·243	1·9	0	0·36	−0·36	0·08	0·05	+ 0·03	0·08	0·05	+ 0·03	0·04	Poona.		
1	3	2	7	6	1	2	5	4	N 80° E	4·5	4·4			51	·504	1·8	2	0·03	+1·97	0·29	0·30	− 0·01	0·29	0·30	− 0·01	0·19	Bijapur.		
	4	4			1	3	9	10	N 55° W	5·5	6·3	6·4	− 2	32	·297	0·9	0	0	0	0·08	0·03	+ 0·05	0·08	0·03	+ 0·05	0·07	Malegaon .	KHANDESH.	10
7	6	1	2	4	2	1	2	6	N 15° W	5·6	6·8			48	·447	0·6	1			0·39	0·36	+ 0·03	0·39	0·36	+ 0·03	0·32	Ahmednagar.		
7		5	8	6		1	3	1	S 86° E	4·2	4·5	4·4	+ 2	47	·400	2·2	2	0·82	+1·18	1·11	0·55	+ 0·56	1·11	0·55	+ 0·56	0·80	Akola .	BERAR.	41
	2	12	7	3	2	3	1	1	N 70° E	5·7	5·1	4·0	+28	51	·469	2·1	2	0·45	+1·55	0·42	0·40	+ 0·02	0·42	0·40	+ 0·02	0·24	Amraoti.		
5		5	3	4	4	2	2	6	S 71° E	5·7		4·6	+24	40	·362	1·7	1	0·18	+0·82	0·13	0·13	0	0·13	0·13	0	0·10	Khandwa .	CENTRAL PROVINCES, WEST.	42
		18		3		7		3	N 45° E	4·6	4·7	2·6	+81	52	·433	0·8	0	0·36	−0·36	0·11	0·23	− 0·12	0·11	0·23	− 0·12	0·06	Hoshangabad.		
12	3	4	1	4	3	1		3	N 69° E	5·6		5·5	+ 2	57	·484	2·5	4	1·00	+3·00	0·99	0·61	+ 0·38	0·99	0·61	+ 0·38	0·36	Nagpur.		
8	3	3	8	4	3	1		1	S 87° E	1·7		3·2	−47	58	·558	3·0	1			1·44	1·49	− 0·05	1·44	1·49	− 0·05	1·29	Chanda .	CENTRAL PROVINCES, CENTRAL.	43
	7	8	1	3	3	1	4	4	N 7° E	3·9		3·4	+15	53	·401	1·8	3	1·73	+1·27	1·59	0·70	+ 0·89	1·59	0·70	+ 0·89	0·83	Seoni.		
4	1	2	3	10	8	1	1	1	S 36° E	2·8		3·0	+27	60	·440	0·7	1	0·82	+0·18	0·53	0·51	+ 0·02	0·53	0·51	+ 0·02	0·52	Jubbulpore.		
	2	1	5	10	4	3	5	1	S 27° E	5·8	6·6	3·2	+106	44	·365	1·0	1	0·64	+0·36	0·85	0·26	+ 0·59	0·85	0·26	+ 0·59	0·85	Saugor.		
4	4	1	2	1		2	7	10	N 48° W	2·7	4·0	5·5	−27	48	·368	1·1	1	0·91	+0·09	0·14	0·50	− 0·36	0·14	0·50	− 0·36	0·14	Sutna	CENTRAL INDIA	49
8	3	2	5	1	1	4	3	4	N 30° W	5·2	4·8	4·7	+ 2	64	·525	2·1	4	1·00	+3·00	0·58	0·81	− 0·23	0·58	0·81	− 0·23	0·20	Raipur .	CENTRAL PROVINCES, EAST.	44
	9	9	3	1		2	1	6	N 11° E	2·6	2·5	2·0	+25	67	·561	1·5	3			0·86	1·20	− 0·34	0·86	1·20	− 0·34	0·43	Sambalpur.		
11	1	9	3	3	1	3			N 77° E	5·8	5·6			67	·661	3·0	3			1·60	0·27	+ 1·33	1·60	0·27	+ 1·33	0·80	Indur .	HYDERABAD (NORTH).	33
2	2	1	5	4	2	9	5	1	S 27° W	8·2	6·9			66	·638	0	0			0·09	0·34	− 0·25	0·09	0·34	− 0·25	0·09	Bidar.		
9		4	5	2	7	4			S 37° E	8·7	8·4			62	·641	2·6	1			0·12	0·21	− 0·09	0·12	0·21	− 0·09	0·12	Gulbarga .	HYDERABAD (SOUTH).	53
4	1		1	16	4	4		1	S 28° E	8·1	7·9			53	·554	2·6	0			0	0·41	− 0·41	0	0·41	− 0·41	0	Raichur.		
21			7	3					S 77° E	4·6	4·5			64	·566	2·2	1			0·28	0·75	− 0·47	0·28	0·75	− 0·47	0·11	Hyderabad (Deccan).		
2	5	4	14	6					N 80° E	5·4		5·0	+ 8	66	·566	2·3	2			0·32	0·75	− 0·43	0·32	0·75	− 0·43	0·16	Secunderabad.		
3			1	17	9		1		S 30° E	9·3	7·9			69	·655	3·6	1			0·16			0·16			0·15	Hanumkonda.		
																				0·89	0·51	+0·37					X.—West Coast.		
1	8	9	6	2	2	1		2	N 15° E	8·5		11·5	−26	76	·711	2·9	0	0·07	−0·09	0	0·03	− 0·03	0	0·03	− 0·03	0	Bombay .	KONKAN.	27
8	7	3	7	3	1			2	N 53° E	4·5	4·5	9·9	−55	72	·710	2·6	0	0	0	0·05	0·01	+ 0·04	0·06	0·01	+ 0·01	0·05	Ratnagiri.		
7	8	1	5	5	4			1	N 77° E	7·8				77	·803	2·1	0			0	0	0	0	0	0	0	Mormugao.		
1		14	10		3	2		1	N 71° E	8·0				75	·768	3·1	0			0	0	0	0	0	0	0	Goa.		
4	13	3	9				2		N 31° E	4·9				80	·731	1·9	0	0	0	0	0	0	0	0	0	0	Karwar.		
4	13	9	1			3		1	N 15° E	5·6				78	·860	3·4	6	2·45	+3·55	3·90	2·44	+ 1·46	3·90	2·44	+ 1·46	1·40	Cochin .	MALABAR.	33
3	3	18	4	2				1	N 49° E	8·5	10·7			78	·846	3·1	3	0·63	+2·37	2·02	0·52	+ 1·50	2·02	0·52	+ 1·50	0·87	Calicut.		
9	1	3	11	7					S 85° E	2·9		3·4	−15	75	·809	3·2	1	0·10	+0·90	0·17	0·06	+ 0·11	0·17	0·06	+ 0·11	0·10	Mangalore.		
9	5	8	6	1		1		1	N 48° E	4·6				79	·792	3·1	5			1·86	1·57	+ 0·29	1·86	1·57	+ 0·29	0·75	Trivandrum.		
																				0·48	0·52	−0·12					XI.—South India.		
		13	18						N 72° E	9·3	9·8			77	·845	2·6	3	1·30	+1·70	0·56	0·79	− 0·23	0·56	0·79	− 0·23	0·26	Pamban .	MADRAS (SOUTH)	57
	16	6	1				1	7	N 2° W	4·2	4·0			82	·849	4·7	11	2·40	+8·60	5·19	1·41	+ 3·78	5·19	1·41	+ 3·78	1·55	Tinnevelly.		
4	7	10	4	4				2	N 45° E	2·8	2·8	4·1	−32	76	·799	5·0	3	0·36	+2·64	1·25	0·61	+ 0·64	1·25	0·61	+ 0·64	0·80	Madura.		
22	1	1		3			3	1	N 70° W	2·0	2·2			71	·652	3·6	3			2·13			2·13			1·38	Periyakulam.		

† Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 221 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
24	Madras, (South Central).	Salem	940	29·081	+·020	29·967	29·130	3rd	29·038	1st	·092	79·3	98·2	−0·2	71·3	+0·7	84·8	+0·3	26·9	101·2	4 days	66·9	11th	24·3
		Coimbatore	1,348	28·651	+·023	29·955	28·701	3rd	28·611	1st	·090	76·9	94·7	−1·6	71·6	+1·8	83·1	+0·1	23·1	97·4	26th	67·3	11th	30·1
25	Coorg	Mercara	3,781	26·303	+·034		26·348	22nd & 23rd	26·271	1st	·077	69·0	84·5	0	63·1	+1·9	73·9	+1·0	21·4	89·0	30th	61·7	4 days	27·3
26	Mysore	Chitaldroog	2,405	27·593?	+·038	29·906?	27·639	23rd	27·540	1st	·099	79·6	94·5	+0·2	71·4	+1·0	82·9	+0·6	23·1	97·2	6 days	65·9	5th	31·3
		Bangalore	3,021	27·014	+·019	29·939	27·053	23rd	26·971	1st	·082	72·8	89·8	−0·5	64·2	−0·1	77·0	−0·3	25·6	93·3	25th, 29th & 31st.	59·9	12th	33·4
		Hassan	3,091	26·950		29·935	26·986	22nd	26·905	1st	·081	75·9	89·8		62·9		76·4		26·9	92·1	26th	56·6	15th	35·5
		Mysore	2,518	27·501	?	29·937	27·558	22nd	27·450	1st	·108	75·8	92·9	−0·7	68·2	+0·7	80·6	0	24·7	95·1	5 days	64·5	11th	30·6
56	Madras, East Coast, South.	Negapatam	31	29·962	+·018	29·922	30·019	22nd	29·912	13th	·107	83·0	88·5	−0·2	78·1	P	83·3	P	10·4	92·2	25th	71·9	6th	20·3
		Cuddalore	12	29·996	P	29·937	30·048	3rd	29·951	29th	·097	79·3	87·9	−1·5	72·9	+0·4	80·4	−0·6	15·0	89·7	29th & 30th.	70·2	7th	19·5
		Trichinopoly	255	29·753	+·026	29·944	29·810	21st	29·710	13th	·100	79·8	96·1	−1·4	73·0	+0·4	84·6	−0·5	23·1	99·6	30th	69·9	9th & 27th,	29·7
		Madras	22	29·989	+·031	29·941	30·048	3rd	29·946	29th	·102	80·9	89·7	+0·5	71·6	−0·4	80·6	+0·1	18·1	92·0	16th	69·0	7th	23·0
		Vellore	707	29·302		29·955	29·347	3rd	29·263	1st	·084	78·7	94·3		69·3*		82·0*		25·0	97·4	26th & 30th.	64·5	21st	32·9
55	Madras, East Coast, Central.	Nellore	71	29·942	P	29·947	30·013	3rd	29·885	29th	·128	79·6	92·7	−3·3	72·7	+0·2	82·7	−1·6	20·0	96·3	31st	70·1	2nd & 14th.	26·2
		Masulipatam	15	30·004	+·049?	29·954	30·080	3rd	29·948	29th	·132	80·8	89·3	−2·1	73·2	+0·8	81·3	−0·7	16·1	95·1	26th	69·6	14th	25·5
54	Madras, Central	Cuddapah	433	29·554	+·057	29·928	29·631	3rd	29·492	29th	·139	83·2	99·5	−1·7	74·7	−0·3	87·1	−1·0	24·8	103·2	6 days	69·6	3rd, 14th & 15th.	33·6
		Kurnool	924	29·054	+·052	29·929	29·127	3rd	28·998	8th	·129	78·8	98·8	−1·9	71·8	P	85·3	P	27·0	102·2	25th & 27th.	64·8	4th	37·4
		Bellary	1,475	28·506	+·042	29·927	28·571	3rd	28·446	1st	·125	81·0	99·7	−0·6	75·0	+1·1	86·4	+0·3	26·7	103·0	25th, 29th & 30th.	68·7	4th	34·3
52	Madras, East Coast, North.	Cocanada	26	29·991	+·059	29·952	30·065	3rd	29·939	29th	·126	80·4	90·4	−0·8	74·1	+0·4	82·3	−0·2	16·3	100·1	26th	70·0	14th	30·1
		Waltair (Vizag.)	226	29·786	+·053	29·956	29·871	3rd	29·733	29th	·138	79·8	87·2	0	74·9	−1·7	81·1	−0·9	12·3	89·9	25th & 26th.	71·9	4th & 15th.	18·0
		Gopalpur	21	29·977	+·072	29·938	30·076	3rd	29·910	29th	·166	78·4	87·5	+1·2	71·4	−2·0	79·5	−0·4	16·1	91·3	29th	66·1	3rd	25·2
	XII.—Hill Stations.																							
48	Baluchistan	Pishin											70·8		?		P	P	P	81·0	27th, 28th & 29th.	P	?	?
		Quetta	5,502	24·732	+·083		24·854	12th	24·617	5th	·237	51·5	68·8	+4·3	40·9	+1·2	54·9	+2·8	27·9	78·7	29th	31·8	1st & 11rh.	46·9
		Kalat										49·1	67·0		35·2		51·1		31·8	77·1	27th	23·0	7th	54·1
		Chaman	4,311	P	?		. P	P	P	P	P	57·4	72·3	+5·6	47·9	+5·1	60·1	+5·4	24·4	83·3	29th	35·6	25th	47·7
30	Punjab	Leh	11,503	19·787	+·089		19·917	28th	19·502	7th	·415	27·5	42·5	−3·9	20·2	−1·4	31·4	−2·7	22·3	56·5	29th	9·0	2nd	47·5
		Srinagar	5,204	24·991	+·066		25·127	12th	24·799	7th	·328	43·3	60·3	+5·5	39·2	+2·4	49·8	+4·0	21·1	72·8	29th & 30th.	30·6	1st	42·2
		Astor (Kashmir)		22·736			22·876	12th	22·498	7th	·378	32·5	48·9		29·0		39·0		19·9	61·3	27th, 28th & 29th.	19·0	8th	42·3
		Minimarg		21·406			21·532	31st	21·210	6th	·322	27·7	42·9		17·8		30·4		25·1	49·0	24th & 30th.	6·0	8th	43·0
		Skardu		23·004			23·150	3rd	22·726	7th	·424	37·8	51·8		33·7		42·8		18·1	66·4	30th	22·1	1st	44·3
		Dras		20·913			21·063	28th	20·592	7th	·471	13·4	32·6		0·9		16·8		31·7	45·8	25th	−17·9	14th & 15th.	63·7
		Gilgit		25·281			25·467	12th	25·090	24th	·377	52·7	66·3		47·6		57·0		18·7	80·1	29th	39·5	8th	40·6
		Chitral		24·697			24·850	31st	24·500	6th	·350	42·3	67·1†		41·9		55·0†		25·2	78·1	1st & 20th.	34·0	8th	44·1
		Killa Drosh										46·9	65·7		41·2		53·5		24·5	78·3	28th	33·8	5th	44·5
		Para Chinar	6,000									50·2	61·9		42·0		52·0		19·9	74·4	28th	35·2	8th	39·2
		Cherat		25·758	+·048		25·899	31st	25·595	6th	·304	52·6	67·9	+7·1	?	P	P	P	P	75·8	30th & 31st.	P	P	P
		Murree	6,333	23·907	+·069		24·027	31st	23·697	6th	·330	49·8	57·5	−1·2	44·7	+0·9	51·1	−0·2	12·8	70·2	29th	31·5	7th	38·7
		Poo											51·7		32·2		42·0		19·5	64·9	29th	25·2	2nd	39·7
		Simla	7,224	23·163	+·053		23·269	31st	23·008	7th	·261	48·8	55·6	−1·3	44·3	−0·2	50·0	−0·8	11·3	65·8	31st	30·2	7th	35·6
28	N.-W. Provinces	Chakrata	7,022	23·322	+·036		23·424	31st	23·194	7th	·230	47·5	59·0	−2·9	43·6	−0·4	51·3	−1·7	15·4	66·2	22nd	31·8	7th	34·4
		Mussooree	6,705	23·607	+·057		23·697	31st	23·468	7th	·229	50·7	59·6		46·3		53·0		13·3	77·3	4th	35·0	7th	42·3
		Ranikhet	6,069	24·159	+·054		24·232	31st	24·086	6th & 8th.	·146	53·0	63·3	−1·8	48·4	−0·5	56·0	−1·2	14·9	73·0	31st	33·5	8th	39·5
		Muktesar		22·897			22·992	31st	22·797	8th	·195	49·8	60·5		43·0		51·7		17·5	72·2	23rd	29·9	8th	42·3

* Mean of 28 days.

† Mean of 21 days.

I—*continued.*

in India, Burma, etc., in March, 1901—continued.

WIND DIRECTION. Number of Winds from										Wind resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Provinces or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 31st March 1901.	Normal rainfall for period, 1st to 31st March.	Variation from normal of period, 1st to 31st March.				
10		10	10	1					N 71° E	7·1	6·4	5·5	+16	68	·696	2·5	0	1·64	−1·64	0	0·88	− 0·88	0	0·88	− 0·88	0	Salem .	Madras, (South Central).	34
		7	24						N 80° E	3·5	3·1	3·3	− 6	80	·716	5·6	2	1·18	+0·82	0·34	0·59	− 0·25	0·34	0·59	− 0·25	0·20	Coimbatore.		
10	4		14				3		N 70° E	5·4	5·0	3·4	+47	83	·591	5·9	3	2·00	+1·00	0·85	0·87	− 0·02	0·85	0·87	− 0·02	0·45	Mercara .	Coorg,	35
	1	2	7	8	3	4	3	3	S 42° E	7·9	6·9			57	·578	1·0	0			0	0·22	− 0·22	0	0·22	− 0·22	0	Chitaldroog.	Mysore,	36
1		3	10	12	2	2	1		S 62° E	9·2	8·0	3·6	+122	61	·491	0·8	0	0·82	−0·82	0	0·54	− 0·54	0	0·54	− 0·54	0	Bangalore.		
1	1	5	9	12	2		1		S 73° E	2·9	2·5			58	·515	2·1	1			0·28	0·51	− 0·23	0·28	0·51	− 0·23	0·28	Hassan.		
		2	4	8	5	9	2	1	S 8° E	7·4	8·0			68	·608	4·4	0			0	0·67	− 0·67	0	0·67	− 0·67	0	Mysore.		
8	1	20	2						N 47° E	12·5	11·0	3·6	+206	75	·857	4·4	2	0·73	+1·27	0·30	0·54	− 0·24	0·30	0·54	− 0·24	0·17	Negapatam	Madras, East Coast, South.	56
25	4		1					1	N 3° E	1·9	2·4			81	·813	2·9	1	1·50	−0·50	0·17	0·37	− 0·20	0·17	0·37	− 0·20	0·17	Cuddalore.		
20	2	8							N 41° E	3·8		3·8	0	76	·775	2·2	1	0·82	+0·18	0·15	0·55	− 0·40	0·15	0·55	− 0·40	0·15	Trichinopoly		
	6	2	4		8	9	2		S 24° W	5·5		6·4	−14	75	·796	2·1	0	0·64	−0·64	0·03	0·39	− 0·36	0·03	0·39	− 0·36	0·03	Madras.		
20			1		4	4	2		S 30° W	6·0				77	·691	2·2	0			0			0			0	Vellore.		
1	3		1	7	17			2	S 15° E	4·9				81	·822	1·8	0	0·40	−0·40	0	0·21	− 0·21	0	0·21	− 0·21	0	Nellore .	Madras, East Coast, Central.	55
12	2	2	1	8	5	1			S 43° E	5·9		6·8	−13	78	·813	2·8	0	0·27	−0·27	0	0·12	− 0·12	0	0·12	− 0·12	0	Masulipatam.		
		12	6	12		1			S 88° E					59	·674	1·2	0	0·20	−0·20	0	0·06	− 0·06	0	0·06	− 0·06	0	Cuddapah.	Madras, Central	54
22	1		4	2	2				S 68° E					55	·540	1·7	0	0·67	−0·67	0	0·54	− 0·54	0	0·54	− 0·54	0	Kurnool.		
4			3	12	6			6	S 35° E	5·7	6·0	4·6	+30	46	·492	3·8	0	0·73	−0·73	0	0·22	− 0·22	0	0·22	− 0·22	0	Bellary.		
16	1	2	1	1		2	5	3	N 66° W	7·2	6·0			76	·782	2·8	0	0·60	−0·60	0	0·53	− 0·53	0	0·53	− 0·53	0	Cocanada .	Madras, East Coast, North.	52
2	1	2	2		1	4	14	5	N 83° W	9·6				71	·710	2·1	0			0	0·39	− 0·39	0	0·39	− 0·39	0	Waltair (Vizag.).		
1	7					10	1	12	N 66° W	12·0	11·8	11·8	0	74	·713	0·3	1	1·13	−0·13	0·19	0·78	− 0·59	0·19	0·78	− 0·59	0·14	Gopalpur.		
																											XII.—Hill Stations.		
																	3			0·87	1·61	− 0·74	0·87	1·61	− 0·74	0·42	Pishin.	Baluchistan .	48
26			1	1	3				S 27° E	2·2	2·3	4·8	−52	59	·228	2·9	3	4·91	−1·91	1·15	1·70	− 0·55	1·15	1·70	− 0·55	0·43	Quetta.		
			1		29				S 2° E					?	?		4			1·00	1·55	− 0·55	1·00	1·55	− 0·55	0·44	Kalat.		
	1	1	11	11	3	4			S 54° E	8·1	8·6			73	·346	2·3	2			0·79	1·39	− 0·60	0·79	1·39	− 0·60	0·43	Chaman.		
		9	11	3	4	3	1		S 83° E	2·6				39	·063	5·0	0			0·05	0·23	− 0·18	0·05	0·23	− 0·18	0·02	Leh . .	Punjab.	33
6	3	1	1	9	7	1	2	1	S 26° E	3·8	4·1			88	·249	5·4	6			2·76	2·50	+ 0·26	2·76	2·50	+ 0·26	1·00	Srinagar.		
2					12	14	3		S 31° W	8·0				61	·115	4·4	6			4·04			4·04			1·79	Ashtor (Kashmir).		
18	1	5	2	4	1				N 77° E	6·5				75	·114	4·3	7			3·56			3·58			1·18	Minimarg.		
21	1	1	1		2	2	2	1	S 67° W	4·2	5·0			88	·202	6·1	2			0·29	1·52	− 1·23	0·29	1·52	− 1·23	0·13	Skardu.		
30				1					S 45° E	0·2	0·2			87	·077	5·5	7			2·86			2·86			1·24	Dras.		
24	1					2	4		S 85° W	2·3	2·2			48	·186	5·8	1			0·15	0·29	− 0·14	0·15	0·29	− 0·14	0·15	Gilgit.		
	6						25		N 76° W					73	·200	?	7			4·09			[illegible]			1·01	Chitral.		
3	1	1	5	3	8	3	7		S 5° W					63	·199	4·3	10			4·37			4·37			0·95	Killa Drosh.		
	12	3	2			1	5	6	N 19° W	4·5				58	·207	3·7	10			6·06			6·06			1·60	Para Chinar.		
	7	9		2	1	1		11	N 2° W	9·7	9·0			54	·210	1·0	8			4·25	4·93	− 0·68	4·25	4·93	− 0·68	1·33	Cherat.		
23	2	2	1	2	1				N 76° E	3·6	4·4	9·4	−53	55	·193	4·0	5	5·36	−0·36	4·53	3·65	+ 0·88	4·53	3·65	+ 0·88	1·30	Murree.		
14	1	2	5	8	1				S 72° E							2·4	1			0·35	4·11	− 3·76	0·35	4·11	− 3·76	0·26	Poo.		
8	4	11	3	2	1			1	N 48° E	3·5		2·8	+25	46	·158	2·9	3	4·64	−1·64	4·76	2·24	+ 2·52	4·76	2·24	+ 2·52	2·48	Simla.		
29					1	1			S 25° W	10·5		5·9	+78	59	·194	2·2	2	4·80	−2·80	2·25	2·39	− 0·14	2·25	2·39	− 0·14	1·26	Chakrata .	N.-W. Provinces	25
2	16	1	3	4	2	1		2	N 17° E					53	·197	1·2	2			2·00	2·58	− 0·58	2·00	2·58	− 0·58	1·10	Mussooree.		
13	2	6	1	4		1	3	1	N 46° E	3·3	3·8	2·6	+46	64	·261	2·5	5	4·00	+1·00	2·10	2·24	− 0·14	2·10	2·24	− 0·14	0·77	Ranikhet.		
	2	2	3	5	2	3	1	13	N 39° W	6·5	6·0			53	·187	1·8	6			1·75			1·75			0·74	Muktesar.		

Table

Abstract of Observations taken at 8 A.M. at 221 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
13	Bengal	Yatung	10,480P										47·5		28·4		38·0		19·1	53·1	24th	16·9	9th	36·2
		Darjeeling	7,409	23·065	+·097		23·134	30th	22·972	6th	·162	47·9	55·7	−1·0	41·5	−1·5	48·7	−1·3	14·2	63·3	31st	35·0	8th	28·3
		Gantok*	5,660	24·467			24·519	11th	24·426	24th	·093	52·0	66·1		?		?		P	69·2	9 days	?	P	P
	Central India	Mount Abu	3,945	26·114	+·022		26·212	12th	25·995	7th	·217	70·0	78·8	+0·3	64·0	+2·2	71·4	+1·3	14·8	88·2	30th	55·4	8th	32·8
		Pachmarhi	3,528	26·545	+·048		26·615	3rd	26·474	7th	·141	71·8	82·2	−2·3	58·9	−1·5	70·6	−1·9	23·3	89·7	22nd	51·2	14th	38·5
	South India	Wellington	6,200	24·316	+·006		24·359	22nd	24·258	13th	·101	62·0	73·2	−0·5	51·3	−1·5	62·3	−1·0	21·9	75·7	26th	45·7	5th	30·0
		Kodai Kanal	7,688	22·881			22·924	24th	22·842	2nd	·082	58·3	66·3		49·8		56·6		16·5	70·4	25th	46·8	12th	23·6
	XIII.—Extra India.																							
	Ceylon	Trincomalee	12	29·986	+·043	29·924	30·034	22nd	29·936	1st	·098	80·6	86·4	−4·6	76·5	+0·7	81·5	−2·0	9·9	88·0	5 days	73·5	3rd	14·5
		Colombo	40	29·932	−·001	29·898	30·006	24th	29·875	13th	·131	79·6	90·4	+1·3	74·3	−0·4	82·4	+0·5	16·1	93·0	12th	71·0	10th	22·0
	Persia	Meshed	3,104									49·6			41·9							33·6	10th	
		Teheran		26·044‖			26·300	13th	25·850	2nd 3rd & 5th.	·450	§												
				25·346¶			25·580	29th	25·160	3rd	·420	56·9	69·5§		43·9§		56·7§		25·6	82·5	29th	22·0	6th & 25th.	60·5
		Ispahan		24·359‖			24·600	26th	24·200	9th	·400	51·5	68·5		42·1		55·3		26·4	78·5	29th	30·7	10th	47·8
		Bushire	14	30·017	+·021	29·990	30·097	14th	29·871	31st	·226	66·5	74·1	+1·5	62·0	+3·8	68·0	+2·7	12·1	84·6	31st	55·8	10th & 11th.	28·8
		Jask‡		29·293	+·008		30·114	13th	29·891	30th	·223	74·9	82·9	+4·5	69·1	+3·2	76·0	+3·9	13·8	92·3	31st	63·2	4th	29·1
		Muscat	20	29·991		29·959	30·120	13th	29·901	29th	·219	76·4	78·3		73·8		76·1		4·5	87·3	30th	70·1	1st	17·2
	Arabia	Baghdad	220	29·909	−·026	30·113	30·126	9th	29·709	7th	·417	61·7	82·0	+7·3	54·7	+7·6	68·4		27·3	98·8	30th & 31st.	46·8	3rd	52·0
		Bussrah		30·055			20·216	12th	29·873	31st	·343		77·2		61·1		69·1		16·1	91·9	31st	50·0	10th & 11th.	41·9
		Aden	94	29·923	+·021	29·950	29·975	21st	29·829	31st	·146	75·9	82·9	−2·3	73·3	−1·4	78·1	−1·9	9·6	86·8	18th, 19th & 24th.	67·4	2nd	19·4
		Perim	201	29·777§		29·913§	29·844	21st	29·682	31st	·162	78·1§	84·0§		74·6§		79·3§		9·4	87·1	31st	72·4	9th	14·7
	Afghanistan	Kabul										42·2 ††	62·5 ††		37·4 ††		49·9 ††		25·1	80·2	28th & 29th.	26·4	1st	53·8
	Central Asia	Kashgar		25·705**			25·858	15th	25·471	7th	·384	38·5	59·8		32·0		45·9		27·8	64·4	9th	26·2	3rd	38·2
	Arabian Sea Islands.	Amini Devi	13	29·975		29·916	30·025	3rd & 23rd	29·922	29th	·103	85·2	90·0		77·8		83·9		12·2	94·0	30th	74·6	13th	19·4
		Minicoy	7	29·977		29·909	30·044	5th	29·921	17th	·123	83·3	86·9							88·3	23rd			
	Africa	Zanzibar	73	29·918	+·014	29·918	29·975	1st	29·861	12th	·114	82·5	87·5		80·3		83·9		7·2	91·0	12th	75·8	20th	15·2
		Do. Dunga		29·846			29·899	1st	29·789	12th	·110	80·3	90·6		71·5		81·1		19·1	94·3	31st	68·1	31st	26·2

* Mean of 29 days.

‡ Mean of 21 days.

§ Mean of 30 days.

NOTE.—When a query is inserted against any reading or in the variation returns for any station, the

I—*concluded.*

***in India, Burma, etc., in March, 1901*—concluded.**

WIND DIRECTION. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Resultant.	WIND VELOCITY. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	HYDROMETRY, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	RAINFALL. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March 1901.	Normal rainfall for period, 1st to 31st March.	Variation from normal of period, 1st to 31st March.	Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
																	10			3·58									
10		7	6	4		1	2	1	N 79° E	4·8	4·5	6·6	−32	76	·255	2·5¶	5	3·38	+1·62	2·34	1·65	+0·69	2·34	1·65	+0·69	1·08	Yatung .	BENGAL.	13
29									Calm					75	·293	3·3§	11			6·28†	5·05	+1·23	6·28†	5·05	+1·23	0·85	Darjeeling.		
3	6	12		2		2	2	4	N 14° E	7·6	7·9	6·7	+18	33	·243	0·5	1	0·27	+0·73	0·14	0·12	+0·02	0·14	0·12	+0·02	1·25	Gantok.		
9	1	1	3	3	3	8	2	1	S 17° W	6·2	6·4	4·6	+39	44	·338	1·7	4	0·73	+3·27	1·38	0·32	+1·06	1·38	0·32	+1·06	0·12	Mount Abu	CENTRAL INDIA.	
18	1	9	3						N 52° E	2·5		2·8	−11	60	·334	3·1	4	3·13	+0·87	2·92	2·81	−0·09	2·72	2·81	−0·09	0·82	Pachmarhi.		
	4	19	4	3				1	N 50° E	15·6‡				47	·226	2·5	3			4·47			4·47			1·29	Wellington	SOUTH INDIA.	
																										3·71	Kodai Kanal		
20		4				7			S 45° W	1·0				87	·909	3·3	11			7·79	1·40	+6·39	7·79	1·40	+6·39		**XIII.—Extra India.**		
	3	5	20	2	1				N 81° E	6·0		5·0	+20	88	·892	3·1	8			5·62	4·65	+0·97	5·62	4·65	+0·97	2·32	Trincomalee	CEYLON.	
														72	·259	4·0	1			0·31	2·20	−1·89	0·31	2·20	−1·89	1·60	Colombo.		
1	9	7	4		1	7		1	N 18° E	1·3§	1·6§			42§	·191§	3·2§	1			0·32	3·03	−2·71	0·32	3·03	−2·71	0·28	Meshed .	PERSIA.	
										2·1	2·8			45	·176	3·2	4			1·36	1·21	+0·15	1·36	1·21	+0·15	0·20	Teheran.		
10	3	7	3	2	1			5	N 33° E	6·8	8·1	8·9	− 9	73	·474	2·8	2			1·09	1·43	−0·34	1·09	1·43	−0·34	0·61	Ispahan.		
7			13	1		2		8	N 62° E	9·9	11·5			79	·698	1·3	0			0	1·21	−1·21	0	1·21	−1·21	0·51	Bushire.		
12	1			6			4	8	N 68° W	5·0	5·2			68	·615	1·9	2			1·10	1·09	+0·01	1·10	1·09	+0·01	0	Jask.		
12	11			1	1	1	1	4	N 20° W	2·8	3·6			61	·334	2·6	1			0·28	1·93	−1·65	0·28	1·93	−1·65	0·20	Muscat.		
																	2			1·94			1·94			0·28	Baghdad .	ARABIA.	
7		11	11	1				1	N 68° E	14·0	13·7	14·9	− 8	78	·688	4·8	0			0·03	1·16	−1·13	0·03	1·16	−1·13	1·05	Bussrah.		
		2	10	17	1				S 62° E	23·2*	21·5*			80§	·775§	5·1§	1			0·24	0·13	+0·11	0·24	0·13	+0·11	0·03	Aden.		
	7	4					7	13	N 34° W					73	·199	2·3	8			2·23	5·94	−3·71	2·23	5·94	−3·71	0·16	Perim.		
11	3				1		1	2	N 34° W	3·3††	2·9††					4·2††	0			0	0·25	−0·25	0	0·25	−0·25	0·48	Kabul .	AFGHANISTAN.	
	11	3	2	1			3	11	N 17° W					70	·856	3·1	1			0·70			0·70			0	Kashgar .	CENTRAL ASIA.	
	19	6	3	3					N 23° E	4·0	4·3			77	·881	3·6	6			4·52			4·52			0·70	Amini Devi.	ARABIAN SEA ISLANDS.	
	4	10	4	2	4	4	1	2	N 60° E	4·9	4·6			83	·922	6·5	6			4·67	5·15	−0·48	4·67	5·15	−0·48	1·93	Minicoy .		
5	1	3	3		1	5	5	8	N 66° W	4·5	4·4			89	·926	5·7	10			5·20			5·20			1·65	Zanzibar .	AFRICA.	
																										1·99	Do. Dunga.		

data for that station are not utilized in calculating the provincial variations.

† Rainfall of 30 days. ‖ Aneroid uncorrected. ¶ Mountain barometer uncorrected. ** Aneroid corrected. †† Mean of 18 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M.

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair		29·948	29·841	·107	29·884	+·033	29·875	91·9	78·7†	13·2	94·2	74·6	19·6	87·0	89·9	83·7†	+2·2	75·3	80·2	81·0	78·8
	Rangoon		·959	·807	·152	·885	+·027	·862	96·6	72·6	24·0	100·5	65·1	35·4	85·5	93·6	82·1	+1·6	69·0	74·5	74·2	72·6
	Diamond Island		·968	·857	·111	·902	+·022	·878	84·9	77·5	7·4	87·6	73·2	14·4	83·1	83·2	79·7	+1·3	72·0	75·6	75·6	74·4
	Cocos Island	111	·935	·835	·100	·875	+·079	·918	88·6	77·7	10·9	91·2	74·9	16·3	84·9	85·1	81·2	+1·6	72·3	75·9	75·7	74·6
	Akyab		·990§	·861§	·129	·921	+·023	·883§	90·2	65·6	24·6	96·6	54·9	41·7	81·4§	85·2§	76·9§	−1·1	P	72·3§	74·7§	P
Bengal and Orissa.	Chittagong		·918	·804	·114	·855	+·031	·890	91·9	65·4	26·5	99·7	55·7	44·0	84·9	87·7	78·1	+1·3	63·5	71·6‡	72·7‡	69·3
	Calcutta (Alipore)		·987	·849	·138	·911	+·058	·878	93·2	68·0	25·2	101·7	59·3	42·4	84·2	92·1	79·9	+0·7	65·2	70·6	69·5	68·4
	Saugor Island		·986	·861	·125	·917	+·061	·886	88·4	74·2	14·2	97·3	65·7	31·6	82·2	85·2	79·4	0	70·3	74·6	75·1	73·3
	False Point		·997	·875	·122	·935	+·054	·898	87·8	69·5	18·3	98·5	61·0	37·5	84·7	84·3	76·7	−1·0	68·8	74·9	76·0	73·2
Gangetic Plain and Chota Nagpur.	Hazaribagh		27·985	27·869	·116	27·922	+·060	·870	86·2	62·8	23·4	95·2	52·4	42·8	78·7	84·5	74·4	−1·0	55·1	61·2	62·4	59·6
	Darbhanga		29·827	29·682	·145	29·750	+·064	·871	87·4	61·3	26·1	97·3	53·8	43·5	79·5	86·8	74·6	−1·0	58·4	66·1	67·4	64·0
	Allahabad		·682	·558	·124	·609	+·059	·872	89·9	60·6	29·3	102·6	50·6	52·0	82·2	89·7	75·3	−2·5	56·3	66·1	67·3	63·2
Upper Sub-Himalayas.	Dehra Dun		27·739	27·652	·087	27·688	+·058	·801	78·7	54·3	24·4	89·4	45·9	43·5	70·4	75·2	65·6	−1·3	50·5	58·6	59·8	56·3
	Roorkee		29·087	28·984	·103	29·029	+·073	·896	83·0	54·7	28·3	94·6	49·0	45·6	72·4	81·1	68·3	−1·4	50·9	61·8	62·9	58·5
	Meerut		·233	29·128	·105	·173	+·058	·884	85·9	56·5	29·4	98·8	49·8	49·0	75·6	83·8	70·5	−0·8	53·3	62·9	64·3	60·2
	Lahore		·276	·189	·087	·226	+·058	·908	85·0	57·4	27·6	96·9	48·0	48·9	74·5	83·3	70·6	+2·8	53·8	63·5	66·1	61·1
	Ludhiana		·167	·078	·089	·117	+·067	·911	82·6	57·8	24·8	96·1	51·2	44·9	72·2	81·3	69·7	+0·9	55·4	61·7	65·7	60·9
Indus Valley and N.-W. Rajputana.	Peshawar		28·913	28·827	·086	28·864	+·052	·982	76·7	53·3	23·4	87·9	41·6	46·3	69·8	75·0	64·4	+1·4	50·0	59·8	61·2	57·0
	Jacobabad		29·792	29·660	·132	29·720	+·035	·864	55·6	62·2	33·4	107·4	52·0	55·4	83·9	93·8	78·2	+3·3	53·7	64·4	69·2	62·1
	Kurrachee		·985	·882	·103	·930	+·034	·911	91·5	67·5	24·0	102·7	57·2	45·5	84·7	85·9	78·2	+2·7	62·5	70·9	72·9	68·8
E. Rajputana, C. India and Gujarat.	Jaipur		28·568	28·453	·115	28·504	+·054	·891	91·2	62·1	29·1	101·2	52·7	48·5	81·6	89·5	76·2	+1·6	53·5	62·7	64·3	60·2
	Udaipur		·076	27·954	·122	·015		·874	91·2	60·1	31·1	98·8	52·0	46·8	82·9	89·9	75·3		54·0‡	63·2	65·5	60·9
	Deesa		29·517	29·392	·125	29·448	+·026	·862	98·2	65·0	33·2	106·9	56·3	50·6	88·5	96·6	82·2	+1·5	53·0	63·8	64·6	60·4
	Jamnagar		·948	·817	·131	·882		·890	94·6	64·7	29·9	100·3	56·3	44·0	84·1	91·7	78·9		59·2	67·1	67·4	64·6
Deccan.	Belgaum		27·448§	27·322	·126	27·384	+·024	·792§	92·7	66·9	25·8	95·6	61·8	33·8	84·9	89·0	78·3	+1·2	61·2	64·7	66·6	64·1
	Sholapur		28·392	28·239	·153	28·312	+·030	·814	98·6	71·3	27·3	103·2	63·3	39·9	89·0	96·0	84·3	+0·2	59·9	67·4	68·9	65·4
	Poona		·145	·005	·140	·081	+·030	·821	98·1	64·9	33·2	102·8	51·4	51·4	87·1	96·0	81·3	+1·4	56·4	62·8	65·2	61·5
	Akola		29·072	·913	·159	·987	+·059	·858	98·3	65·2	33·1	104·5	57·5	47·0	86·8	96·9	82·3	−0·4	56·6	66·9	68·3	64·0
	Buldana	2,132	27·868	27·734	·134	27·796	+·041	·832	93·4	68·0	25·4	99·6	58·7	40·9	84·8	90·5	80·9	−1·2	55·9	63·4	63·9	61·1
	Khandwa		28·949	28·791	·158	28·865	+·045	·848	98·8	65·5	33·3	105·2	56·1	49·1	87·9	97·2	82·2	+1·2	55·5	66·8	69·0	63·8
	Nagpur		·977	·821	·156	·894	+·072	·864	95·9	67·7	28·2	101·5	59·7	41·8	83·8	93·6	82·1	−1·2	61·0	69·1	71·4	67·2
	Do. (Sanitary Commr.'s Office)		·996	·848	·148	·917		·878	96·3	67·8	28·5	102·5	6·02	42·3	84·9	94·8	81·7		60·8	68·6	70·0	66·5
	Hyderabad (Deccan).		·311	·178	·133	·241	+·061	·846	94·9	70·5	24·4	99·4	65·4	34·0	85·8	93·0	82·2	+0·1	65·1	69·2	70·1	68·1
West Coast.	Bombay		29·966	29·843	·123	29·899	+·025	·876	86·4	74·0	12·4	96·4	67·8	28·6	81·1	82·9	79·5	+0·7	69·0	72·8	74·8	72·2
	Karwar		·958	·837	·121	·891	+·028	·867	88·7	73·3	15·4	92·1	67·4	24·7	84·9	86·8	80·7	+0·7	70·8	74·9	77·0	74·2

† Mean of 26 days. ‡ Mean of 30 days. § Mean of 29 days.

II.

at 65 Stations in India, Burma, etc., for March, 1901.

Vapour Tension.					Humidity.					Cloud.				WIND DIRECTION. Number of Winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·846†	·942	·949	·912	+·049	86†	73	67	75	− 1	3·1	3·3	3·2	+0·3		9	30	5	9	2			7	N 46° E	N 62° E	61	64	97	103			Port Blair .	Burma Coast and Bay Islands.
·666	·711	·591	·656	−·015	83	58	38	60	− 4	1·8	3·4	2·6	+0·5		6	6	7	11	10	10	7	4	S 10° E	S 22° W	19	56	105‡	114			Rangoon .	
·708	·779	·790	·759	−·006	75	69	69	71	− 4	0·7	0·7	0·7	−2·0	3	5	2		2			22	28	N 58° W	N 42° W	74	83	273*	206			Diamond Island	
·727	·777	·764	·756	−·012	76	65	63	68	− 4	0·7	0·9	0·8	−0·8		44	11	4				3		N 10° E	N 9° W	89	70	72	399	0·20	0·20	Cocos Island .	
?	·679§	·721§	?	?	?	63§	59§	?	?	2·6§	3·6§	3·1	+1·1			17	12			2	17	10	N 5° W	N 53° W	32	24	78¶	93			Akyab . .	
·568	·604‡	·608‡	·593	−·090	89	50‡	47‡	62	−12	2·3	1·9	2·1	−1·1		1	9	2	3	5	12	11	19	N 77° W	S 36° W	37	20	121*	129			Chittagong .	Bengal and Orissa.
·591	·573	·421	·528	−·106	86	49	29	53	−12	1·2	2·1	1·7	−0·8		7	3	2	2	1	24	10	13	S 88° W	S 36° W	49	49	104	118			Calcutta (Alipore).	
·699	·762	·744	·735	−·076	82	69	62	71	− 7	2·0	2·1	2·1	−1·6		8	1		1	22	17	4	9	S 47° W	S 26° W	47	61	270	309			Saugor Island.	
·704	·740	·792	·745	−·041	96	62	67	75	− 6	2·3	3·6	3·0	−0·2		4	3	6	4	26	10	6	3	S 9° W	S 50° W	45	37	189*	286			False Point .	
·343	·328	·294	·322	+·038	60	34	25	40	+ 6	1·5	2·8	2·2	−0·5		8		3	2	6	3	11	29	N 57° W	N 74° W	56	54	180*	194			Hazaribagh .	
·454	·466	·415	·445	−·002	83	47	33	54	0	0·4	0·5	0·5	−0·8	1	2	3	10	8	1	10	18	9	S 77° W	S 78° W	23	31	80	113			Darbhanga .	Gangetic Plain and Chota Nagpur.
·402	·432	·372	·402	+·043	76	40	27	48	+ 6	1·1	1·7	1·4	−0·6	2	4	2	5	3	4	7	15	20	N 72° W	N 62° W	14	40	120*	110			Allahabad .	
·325	·351	·326	·334	+·041	76	47	38	54	+ 6	2·1	3·2	2·7	−0·3	1		1	4	5	3	14	28	6	N 71° W	N 80° W	58	27	47	50			Dehra Dun .	
·327	·410	·337	·358	+·030	76	52	32	53	+ 4	1·3	1·8	1·6	−0·9	17	3	2		10	4		7	19	N 59° W	N 64° W	23	25	51	72			Roorkee .	Upper Sub-Himalayas.
·374	·412	·350	·379	+·022	81	47	31	53	+ 4	1·3	1·9	1·6	−0·9	15			2	1	1	9	15	19	N 81° W	N 60° W	53	44	39*	66			Meerut .	
·376	·445	·417	·412	+·058	78	52	38	56	+ 6	2·3	3·2	2·8	−0·4	7	13	2	7	2	3		19	9	N 43° W	N 10° W	35	31	60	70			Lahore .	
·412	·416	·446	·425	+·061	85	53	41	60	+ 6	2·2	2·8	2·5	−1·6	3	4	7	3	6	1	1	20	17	N 53° W	N 45° W	40	34	65*	50			Ludhiana .	
·332	·400	·379	·370	+·042	79	56	45	60	+ 3	3·2	4·7	4·0	−0·8	23	6	9	2	3	1	3	9	6	N 24° W	N 18° E	19	16	68*	91			Peshawar .	
·310	·350	·353	·338	+·037	56	31	23	36	− 1	2·5	3·1	2·8	−0·2	24	3		11	3	5	1	8	7	N 2° W	N 87° E	1	15	61*	91			Jacobabad .	Indus Valley and N.-W. Rajputana.
·513	·580	·639	·577	−·014	75	49	53	59	− 6	1·4	1·4	1·4	−1·3			3	3	4	3	25	20	4	S 60° W	S 77° W	60	60	213*	281			Kurrachee .	
·308	·341	·292	·314	+·009	55	32	21	36	− 1	2·1	2·6	2·4	−0·6	2	2	4	8	8	8	8	12	10	S 48° W	N 39° W	18	32	77	113			Jaipur .	E. Rajputana, C. India and Gujarat.
·349‡	·342	·331	·341		66‡	30	23	40		0·8	1·3	1·1		8	4	5	8	9	4	6	12	6	S 43° W		6		89*				Udaipur .	
·251	·265	·183	·283	−·066	40	21	11	24	− 5	0·3	0·9	0·6	−1·7		9	7	8	5	5	10	8	10	N 46° W	N 66° W	13	35	209	209			Deesa . .	
·438	·441	·348	·409		71	38	25	45		0·7	0·9	0·8			10	8	1			8	20	14	N 55° W		57		262*				Jamnagar** .	
·473	·268	·379	·408	+·008	72	31	29	44	+ 3	1·9§	5·5	3·7	+1·3		6	9	10	9	5	8	8	3	S 70° E	N 81° W	13	17	258‖	272			Belgaum .	Deccan.
·383	·406	·371	·387	+·043	49	30	22	34	+ 3	2·3	5·4	3·9	+1·5	4	2	5	6	23	6	4		7	S 50° E	N 44° E	45	5	162*	190			Sholapur .	
·357	·274	·241	·291	−·021	57	21	14	31	+ 1	1·7	3·3	2·5	+0·4	1	1	6	5	3		13	24	9	N 89° W	N 63° W	45	43	223*	190			Poona . .	
·352	·395	·312	·353	+·052	57	32	18	36	+ 7	2·1	3·3	2·7	+1·0	6	4	9	12	10	2	5	5	9	N 50° E	N 43° W	10	42	112*	113			Akola . .	
·305	·321	·262	·296	+·014	46	28	19	31	+ 3	1·5	3·3	2·4	+0·2	1	11	6	6	9	6	2	10	11	N 16° W	N 28° W	15	47	167*	176	1·48	0·81	Buldana . .	
·326	·394	·356	·359	+·057	51	31	21	34	+ 3	1·2	2·4	1·8	+0·1		2	13	2	10	3	5	9	18	N 35° W	N 45° W	21	45	135	116			Khandwa . .	
·459	·531	·493	·494	+·139	68	47	32	49	+15	2·4	4·5	3·5	+1·0	2	7	9	8	12	8	6	3	7	S 77° E	N 1° E	18	12	139	133			Nagpur . .	
·454	·503	·428	·462		67	43	26	45		1·7	3·5	2·6				21		19		11	1	10	N 87° E		19		55*				Do. (Sanitary Commr.'s Office)	
·557	·511	·451	·506	+·041	75	42	29	49	+ 4	2·0	3·6	2·8	+1·0	23		2	14	17	4	1	1		S 59° E	S 41° E	48	23	111*	105			Hyderabad (Deccan).	
·649	·699	·759	·702	−·010	77	66	67	70	− 2	1·7	1·4	1·6	0			4	5	6	3	3	1	11	29	N 33° W	N 31° W	48	52	208	270			Bombay . .	West Coast.
·728	·733	·804	·755	+·002		61	63	71	− 3	1·3	1·5	1·4	0		1					2	29	30	N 68° W	N 75° W	91	77	119	96			Karwar . .	

‖ Mean of 27 days. ¶ Mean of 28½ days. **Wind variable 1. * Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 65 Stations

Meteorological Province	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Temperature of Air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
South India.	Periyakulam		29·063	28·909	·154	28·989			92·7	69·6	23·1	97·0	61·7	35·3	83·1	90·8	80·7		66·0	72·2	72·9	70·4
	Salem		·087	·918	·169	29·009	+·027	29·871	98·4	71·3	27·1	101·5	66·8	34·7	86·4	95·2	82·8	+0·3	68·4	72·8	73·7	71·6
	Chitaldroog		27·596	27·461	·135	27·527	+·040	·801	94·8	71·3	23·5	97·7	65·8	31·9	86·2	92·7	82·5	+0·9	61·4	69·5	69·9	66·9
	Bangalore		·025	28·896	·129	26·963	+·025	·828	90·1	64·2	25·9	93·8	59·7	34·1	80·8	88·0	76·6	−0·3	59·6	64·6	64·1	62·8
	Hassan		26·955	·830	·125	·895	+·039	·820	90·0	62·9	27·1	93·4	56·6	36·8	82·3	87·6	75·9	−0·1	59·9	65·3	63·7	63·0
	Mysore		27·504	27·357	·147	27·431	+·038	·817	93·2	68·2	25·0	96·8	64·3	32·5	83·2	91·1	80·2	+0·2	63·7	67·7	66·3	65·9
	Madras		30·005	29·886	·124	29·945	+·041	·897	89·8	71·6	18·2	92·0	69·2	22·8	86·2	85·7	80·1	−0·7		75·8	75·9	74·5
	Bellary		28·515	28·367	·148	28·439	+·037	·828	99·9	73·0	26·9	103·0	68·9	34·1	88·5	96·0	85·5	−0·1	63·2	68·3	69·5	67·0
	Waltair		29·798	29·681	·117	29·740		·907	87·4	74·9	12·5	89·8	71·9	17·9	83·9	84·1	80·8		68·4	74·1	74·3	72·3
Hill Station, Baluchistan.	Quetta		24·741	24·656	·085	24·692	+·073		69·0	41·0	28·0	78·6	31·9	46·7	59·9	66·1	54·3	+3·2	38·3	48·4	50·6†	45·8
Hill Stations, Northern India.	Leh		19·786	19·695	·091	19·745	+·085		43·5	20·1	23·4	57·1	9·0	48·1	33·3	40·9	31·7	−0·2	14·2	24·5	29·4	22·7
	Srinagar		25·009	24·933	·076	24·965	+·066		60·6	39·0	21·6	73·0	30·5	42·5	49·8	58·4	49·3	+3·9	37·6	47·6	55·1	46·8
	Kailang	10,087	21·055	20·975	·080	21·026	P		42·2	18·2	24·0	48·5	7·0	41·5	31·0	36·5	27·8	−1·3	17·0	26·9	30·9	24·9
	Simla (Ridge)		23·192	23·146	·046	23·162	+·065		56·3	44·1	12·2	67·5	30·2	37·3	52·0	53·6	49·7	−0·8	38·5†	42·8	45·5	42·3
	Chakrata		·353	·302	·051	·321	+·043		59·5	43·7	15·8	68·7	31·8	36·9	54·1	54·7	50·6	−0·7	38·8	45·3	45·9	43·3
	Ranikhet		24·186	24·112	·074	24·143	+·060		63·9†	48·4	15·5	74·2	33·6	40·6	58·2	60·6	55·5†	−1·0	42·9	48·1	49·6	46·9
	Muktesar		22·927	22·863	·064	22·895			61·2	43·0	18·2	73·5	29·9	43·6	54·4	56·5	50·9		37·4	44·6	47·2	43·1
	Katmandu	4,388	25·663	25·624	·139	25·595	P		76·7	45·9	30·8	85·4	36·6	48·8	65·1	71·5	60·0	−0·5	44·6	56·0	57·9	52·8
	Darjeeling		23·071	23·004	·067	23·036	+·082		56·2	41·5	14·7	66·0	35·0	31·0	51·1	53·4	48·2	0	39·8	46·5	48·1	44·8
Hill Stations, Central India.	Mount Abu		26·142	26·054	·088	26·092	+·024		79·2	64·0	15·2	88·2	55·4	22·8	78·9	77·3	71·1	+2·2	50·1	55·2	56·9	54·0
	Pachmarhi		·564	·465	·099	·510	+·048		82·6	58·9	23·7	89·9	51·2	38·7	77·0	80·4	72·1	−1·7	52·2	59·5	59·6	57·1
	Chikalda	3,642	·442	·336	·106	·384	+·038		85·4	65·6	19·8	90·6	55·3	35·3	77·6	83·3	76·9	−0·3	54·6	59·6	61·5	58·6
Hill Stations, South India	Wellington		24·332	24·257	·075	24·295	+·029		73·4	51·3	22·1	76·2	45·5	30·7	68·9	70·0	61·5	−0·7	48·0	55·0	57·8	53·6
	Kodai Kanal		22·906	22·837	·069	22·863			66·4	49·8	16·6	70·6	46·8	23·8	62·5	60·8	56·6		42·7	50·6	54·1	49·2
Extra India.	Aden		29·935	29·822	·113	29·867	+·021	·893	83·1	73·3	9·8	89·3	67·4	21·9	79·0	81·6	78·0	−1·2	67·5	71·0	69·1	69·2
	Perim		·790†	·675	·115	·721	+·044	·856†	84·1	74·5	9·6	87·1	72·4	14·7	81·1†	81·5	78·6	−1·3	71·3	75·1†	75·2	73·9
	Minicoy		·989	·896	·093	·933		·865	87·0			88·3			85·4	85·2				78·5	78·2	
	Zanzibar		·922	·802†	·120	·862	+·016	·860†	87·5	80·3	7·2	91·0	75·8	15·2	84·4	87·1	83·8	+1·3	75·8	79·3	79·3	78·1
	Port Victoria (Seychelles)	15	·970	·873	·097	·922	+0·17	·860	84·5	75·3	9·2	86·5	72·2	14·3	82·7	83·9	79·8	−0·1	74·0	77·1	77·7	76·3
	Mauritius (Pamplemousses)	181				·752	−·036	·878				90·3	67·7	22·6			78·1	+0·5				

† Mean of 30 days. ‡ Mean of 22 days. § Mean of 29 days.

II—*concluded.*

in India, Burma, etc., for March, 1901—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·591	·647	·566	·601		82	58	41	60		3·2	4·0	3·6		7	4	4	9	6	11	6	14		S 9° W		21	51*				Periykulam	South India.
·656	·635	·552	·614	—·024	86	50	34	57	+ 1	2·2	3·3	2·8	+0·4	16	2	18	20	5	1				N 74° E	S 66° E	61	38	152*	126			Salem	
·458	·515	·452	·475	+·078	55	41	29	42	+ 4	1·5	2·4	2·0	−0·3		4	9	24	15	1	1	3	5	N 86° E	N 87° E	55	27	165*	154			Chitaldroog	
·460	·424	·324	·403	−·052	77	41	25	48	− 2	0·6	2·1	1·4	−0·9			10	28	18	4		2		S 78° E	S 27° E	76	46	195*	100			Bangalore	
·487	·431	·317	·412	—·042	84	39	24	49	− 7	2·5	5·7	4·1	+0·2		1	18	29	12	1			1	N 84° E	S 84° E	81	51	62*	74			Hassan	
·542	·488	·341	·457	+·002	78	43	23	48	0	4·7	4·6	4·7	+2·4		2	15	23	13	4	3	1	1	S 87° E	N 84° E	63	37	192*	182			Mysore	
	·753	·763	·782	+·010		60	62	76	+ 2	3·1	1·6	2·4	0			11	21	29	1				S 75° E	S 46° E	82	81	129	150			Madras	
·460	·443	·394	·432	+·011	57	33	23	38	+ 2	2·9	5·7	4·3	+2·1	2	2	1	23	16	7	3	1	7	S 65° E	S 35° E	48	19	142*	109			Bellary	
·608	·717	·719	·681		70	62	61	64		2·0	3·0	2·5				1	6	9	7	38	1		S 20° W		68		122				Waltair	
·209	·225	·213†	·216	+·002	30	46	34†	53	− 4	2·7	3·5	3·1	−1·0	32	2		1	2	5	2	11	7	S 87° W	S 74° W	24	33	56	102			Quetta	Hill Station, Baluchistan.
·041	·067	·075	·061	−·041	36	33	28	32	−26	4·5	5·3	4·9	−1·4			5	4	6	15	22	9	1	S 24° W	S 40° W	53	22	64	45			Leh	Hill Stations, Northern India.
·214	·311	·409	·311	+·079	88	85	81	85	+ 8	4·1	5·0	4·6	−1·0	11	5	2	2	8	9	5	5	15	S 83° W	N 7° W	16	8	102*	83			Srinagar	
·088	·118	·131	·112	−·005	86	67	60	71	+ 1	4·9	6·0	5·5	−0·7				4	11	21	16	10	S 59° W	S 70° W	63	73	14	32	1·61	1·02	Kailang	
·179†	·185	·226	·198	+·013	63†	48	55	56	+ 6	3·1	5·2	4·2	−0·6	9	12	8	2	1	18	9	2	1	S 6° W	S 37° W	11	8	80§	136			Simla (Ridge)	
·188	·214	·222	·208	+·014	66	52	53	57	+ 4	2·5	4·3	3·4	−0·5		9	4	2	12	34		1		S 22° E	S 52° W	53	11	258	150			Chakrata	
·222	·236	·244	·234	+·002	67	50	47	55	+ 2	1·7	3·2	2·5	−1·2	7	1	4	5		3	15	24	3	S 75° W	S 57° W	48	27	92*	78			Ranikhet	
·168	·198	·233	·200		63	49	52	55		2·3	4·4	3·4			2	5	4	9	7	4	4	27	N 55° W		24		143*				Muktesar	
·286	·351	·329	·322	+·017	90	57	43	63	+ 2	2·4	4·9	3·7	+0·1		1	2	4	15	3	7	20	10	S 60° W	N 82° W	29	48	23	32	1·69	1·00	Katmandu	
·231	·272	·283	·262	+·010	87	72	70	76	+ 3	4·3	6·5	5·4	+0·2	1		4	5	11	6	21	9	5	S 28° W	S 75° W	40	44	109*	187			Darjeeling	
·205	·225	·233	·221	+·002	35	27	25	29	− 3	0·4	1·1	0·8	−1·7		14	6	2	1	4	12	8	15	N 52° W	N 81° W	41	38	189*	164			Mount Abu	Hill Stations, Central India.
·321	·310	·272	·301	+·056	65	34	28	42	+ 8	1·6	3·3	2·5	+0·4	6	10	5	2	5	5	11	8	10	N 72° W	N 57° W	23	32	151*	115			Pachmarhi	
·304	·306	·297	·302	+·015	49	34	27	37	+ 4	0·8	2·6	1·7	−0·7	48	9	2			1	1		1	N	N 53° W	15	30	164*	173	0·38	0·16	Chikalda	
·304	·296	·358	·319	−·015	80	42	49	57	− 3	2·9	3·5	3·2	+0·2	3	7	8	12	29	3				S 74° E	S 49° E	64	65	63	61			Wellington	Hill Stations, South India.
·211	·254	·354	·273		59	46	67	57		3·3	5·3	4·3			7	18	9	9	1			4	N 60° E		48		379‡				Kodai Kanal‖	
·603	·657	·549	·603	−·102	73	66	52	64	− 7	3·4	2·9	3·2	0	8		26	21	5	1		1		N 72° E	N 86° E	71	72	327 † ¶	366			Aden	Extra India.
·731	·802†	·798	·777	+·041	85	75†	73	78	+ 6	2·2	1·4‖	1·8	−0·2			1	13	39	8				S 50° E	S 63° E	88	55	519*	441			Perim	
	·884	·872				73	72			4·0	4·7	4·4			37	15	4	5				1	N 21° E		77		104*				Minicoy	
·835	·936	·900	·890	+·001	80	77	68	75	− 3	6·5	5·8	6·2	+1·3		12	14	8	3	8	6	8	3	N 31° E	S 34° E	18	21	109*	141			Zanzibar	
·828	·862	·871	·854	+·040	94	77	75	82	+ 3	5·7	5·9	5·8	−0·9	5	6	3	3	6	4	3	7	25	N 48° W	N 31° W	37	56	125	127	14·60	3·50	Port Victoria (Seychelles).	
			·797	+·047				82	+ 2																		182	237	9·68	3·24	Mauritius (Pamplemousses).	

‖ Wind variable 14.

¶ Mean of 29½ days.

* Corrected.

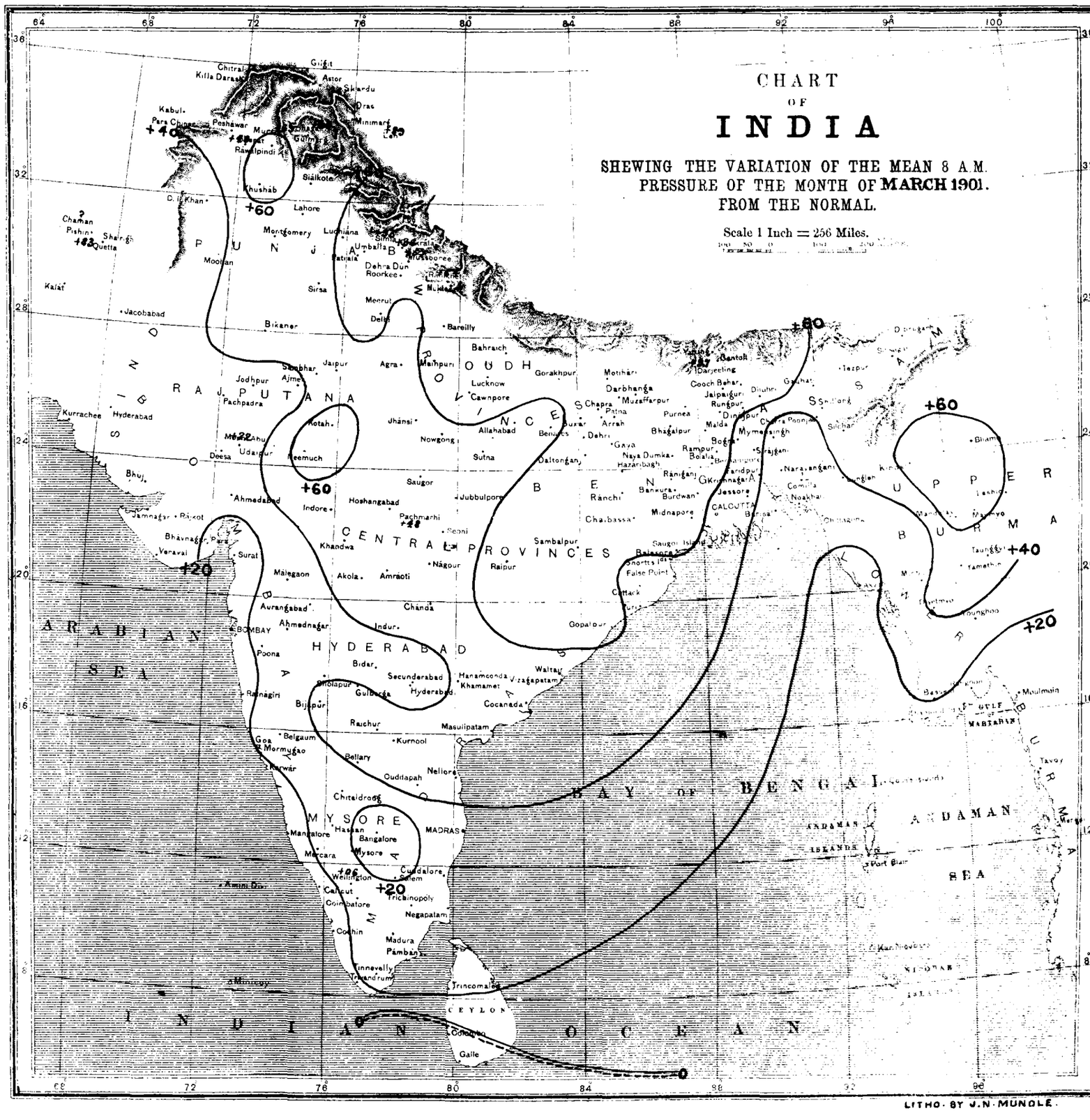
LITHO. BY J. N. MUNDLE.

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one feather added to the wind arrow
„ „	2 to 5 „ „ „	...	two feathers „ „ „ „
„ „	5 to 10 „ „ „	...	three „ „ „ „ „
	10 to 20		four



Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

CHART SHEWING THE VARIATION OF THE MEAN MAXIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.

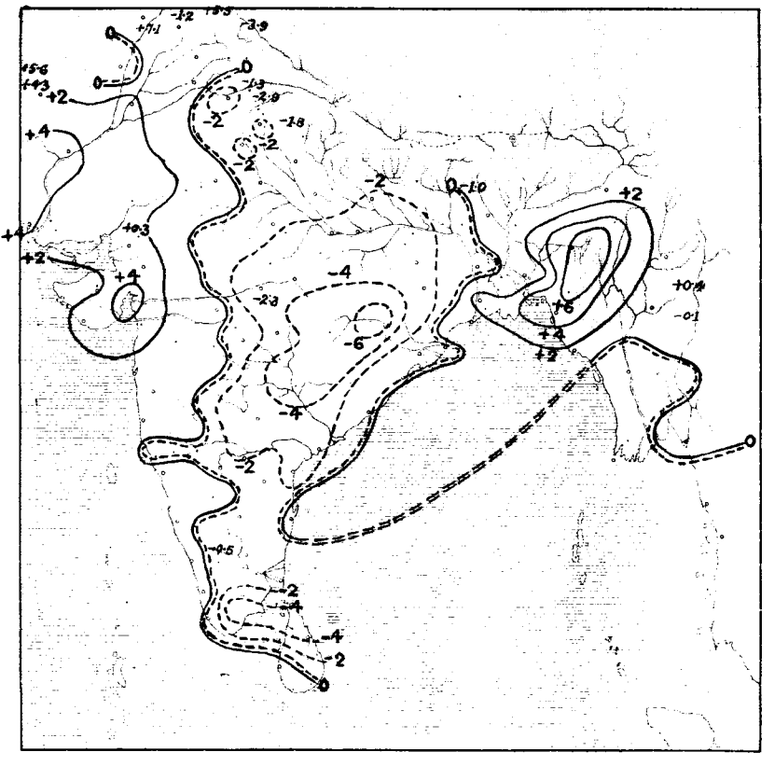
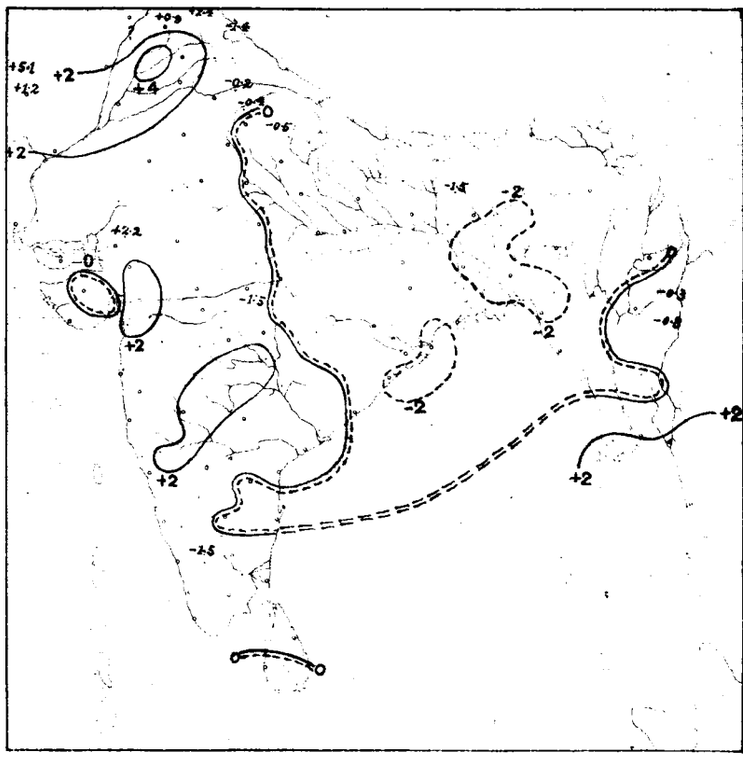


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

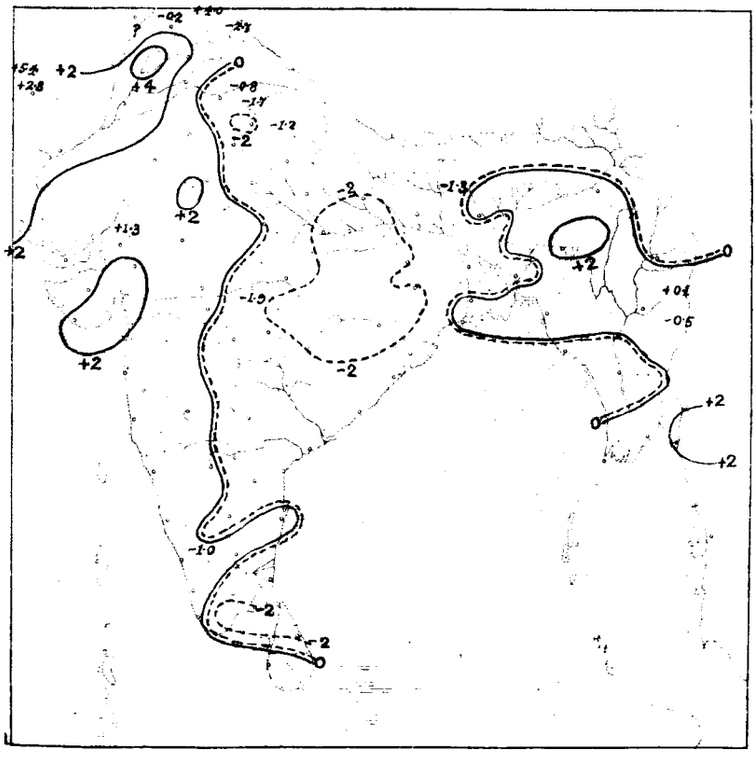
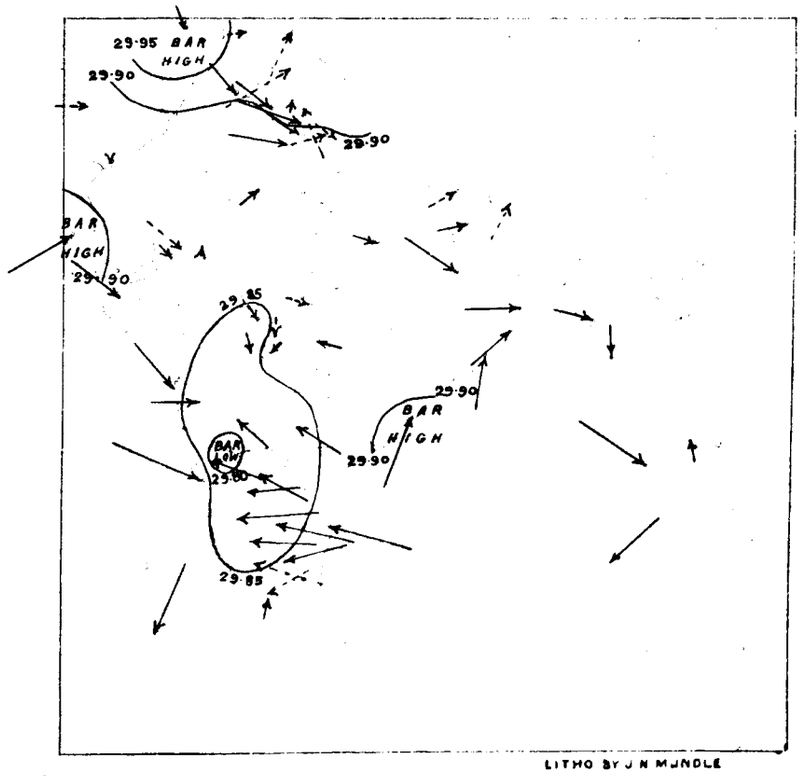


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF MARCH 1901.



LITHO BY J N MUNDLE

Explanation.

Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India 182 in number except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line fixes the area of no rainfall.

Reg. No. 218, Wr., I.—July 00.—5,000.

LITHO. BY J. N. MUNDLE.

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small standing red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
33. Malabar
33a. [illegible]
34. [illegible]
35. Coorg
36. Mysore
37. [illegible]
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. [illegible]
42. Central Provinces, West
43. Do. Central
44. Do. East
45. Gujarat
46. Kathiawar
[illegible]
[illegible]
[illegible]
[illegible] Central India
[illegible]
[illegible] Coast, North
[illegible] (a)
[illegible] South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South

LIBRARY
SEP 25 1901
Weather Bureau.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, APRIL, 1901.

INTRODUCTION.

THIS review of the weather in India during the month of April 1901 is based on observations taken daily at 8 A.M. at 218 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 65 stations. In the rainfall summary the rainfall data of the meteorological observatories and the weekly rainfall telegrams received during the month from the District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review, are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given.

Summary of the chief features of the weather in India during the month of April, 1901.

The weather was drier than usual over the greater part of the country. A series of shallow depressions passed from west to east across Northern India giving snow and rain to the Himalayas and rain to the submontane areas of Northern India, but the most important depression of the month was the cyclonic storm over the Arabian Sea which occasioned heavy rain along the west side of the Peninsula. The formation of a cyclone in the Arabian Sea so early as the 24th of April is an unusual occurrence. The history of this storm, remarkable alike for its extraordinary course over the Arabian Sea and for the unprecedented rainfall it occasioned over Noth-West India, will be given in the monthly weather review for May.

The hail and thunderstorms over Assam and North-East India were, on the whole, less severe and less frequent than usual, but there was a marked excess of rain around the head of the Bay, in the divisions of Ganjam, Orissa, Deltaic Bengal and East Bengal.

At the commencement of the month the pressure and temperature were in excess of the normal over a large part of the country, but on the 2nd the barometer was falling briskly in the north-west and a depression was shown over the South-West Punjab. This depression lay over the Punjab until the 5th, when it commenced to move eastward, reached the North-Western Provinces on the 7th and practically disappeared on the 8th. During the existence of this depression rain fell over a large area in North-West and North-East India, in the Central Provinces and in the Bombay Deccan, but the amounts were not large except in the Central Provinces where the following amounts were recorded on the 3rd and 4th:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Hoshangabad	Pachmarhi	3rd April	0·88
Balaghat	Katangi	" "	0·79
Seoni	Seoni	4th "	1·08
Nagpur	Nagpur	" "	0·95
Bhandara	Sakoli	" "	0·55

Two slight cold waves passed across Northern India during this week, but the temperature changes and distribution were irregular. On the 8th and 9th, the weather was quiet except for a few thundershowers in Assam and East Bengal, but on the latter date a fresh depression appeared in Sind. This depression traversed the whole of Northern India reaching Rajputana, on the 11th, the North-Western Provinces on the 12th and Bengal on the 13th. Another shallow depression followed in quick succession appearing over the western desert on the 13th, reaching the North-Western Provinces on the 14th, and Bengal and Assam on the 15th. On the last date yet another depression appeared over the western desert whence it passed into the Punjab and filled up on the 17th. These three depressions were accompanied with showers of rain and snow over the North-West Himalayas, with heavy rain in the Punjab and with showers in Assam and Bengal. The rain reported in the Punjab on the 14th was particularly heavy and the following large amounts in 24 hours were recorded on that day:—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 14th April 1901.
		Inches.
Rawalpindi	Murree	2·52
Do.	Kahuta	2·18
Peshawar	Katlang	1·38
Hazara	Abbottabad	1·32
Jhelum	Chakwal	1·23
Hazara	Haripur	1·20
Do.	Mansahra	1·12
Rawalpindi	Rawalpindi	1·09
Do.	Pindigheb	1·04

This disturbed weather was followed by large changes of temperature. From the 8th to the 11th, the mean temperature was low over the central parts of the country and of the Peninsula and was high elsewhere. The following gives comparative temperature data for the 10th for all districts of India and shows the distribution of temperature, relatively to the average, over India at this time:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 10th April.	Mean minimum temperature, 10th April.	Mean daily temperature, 10th April.
	°	°	°
Burma	+0·8	+1·0	+0·9
Assam	+6·9	−0·8	+3·1
Bengal	+4·3	+0·8	+2·6
Orissa	+2·6	+0·9	+1·8
Bihar	+2·3	+0·6	+1·5
Chota Nagpur	−0·6	+1·8	+0·6
North-Western Provinces and Oudh.	+0·6	−1·4	−0·4
Punjab	+2·5	+2·5	+2·5
Sind	+4·7	+4·3	+4·5
Rajputana	+3·0	+0·4	+1·7
Gujarat	+1·1	+0·8	+1·0
Central India	−0·7	−1·3	−1·0
Central Provinces	−2·7	+0·1	−1·3
Berar	+0·1	−1·5	−0·7
West-Coast	+0·2	−0·5	−0·2
Bombay Deccan	+1·2	−3·2	−1·0
Mysore	−0·2	+1·3	+0·6
Madras Coast	−0·9	+0·4	−0·3
Madras Deccan	−2·2	+1·0	−0·6
South India	−1·4	+1·6	+0·1

About this time the heat was very great over the western desert, as is shown by the following data for Bikaner, Jacobabad and Hyderabad for the 11th:—

Station.	Variation from normal of		
	Maximum temperature, 11th April.	Minimum temperature, 11th April.	Mean temperature, 11th April.
	°	°	°
Bikaner	+5·3	+8·4	+6·9
Jacobabad	+5·3	+13·7	+9·5
Hyderabad	+7·3	+6·0	+6·7

On the 11th a cold wave appeared in the extreme north-west, advanced through the Punjab during the 12th, but commenced to disappear on the 13th. The following gives mean temperature data for the Punjab stations from the 10th to the 13th in illustration:—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	10th April.	11th April.	12th April.	13th April.
	°	°	°	°
Peshawar	+7·6	−2·4	+1·9	−0·4
Rawalpindi	?	−2·8	−2·4	−1·4
Murree	+5·2	−1·7	−2·8	−4·8
Srinagar	+1·9	−1·9	−2·2	−2·1
Sialkot	+4·7	+4·7	+1·4	+2·5

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	10th April.	11th April.	12th April.	13th April.
	°	°	°	°
Khushab	+2·8	—2·6	—6·0	—2·7
D. I. Khan	+6·5	+0·9	—1·3	—0·1
Mooltan	+5·9	+4·5	+1·0	—0·5
Montgomery	+0·2	+2·8	—3·6	—2·6
Lahore	+1·6	+5·0	—2·8	+1·9
Ludhiana	—0·2	+6·3	—5·0	+1·1
Umballa	—1·5	+0·6	—6·3	—3·8
Simla	—0·1	+0·6	—6·1	+2·0
Sirsa	+0·3	+3·5	—1·5	+0·5
Delhi	+0·6	+2·2	—0·7	+1·1

On the 14th, and accompanying the heavy fall of rain in the Punjab noticed above, a fresh and large fall of temperature occurred over the Punjab and a cold wave spread from the Punjab all over Rajputana and the North-Western Provinces. The following gives mean temperature data from the 14th to the 16th for North-West India :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	14th April.	15th April.	16th April.
	°	°	°
Sind	+2·9	—1·3	+3·2
Punjab	—2·9	—4·9	—2·7
Rajputana	+6·9	+1·3	—3·0
North-Western Provinces and Oudh	+3·3	+4·7	—2·3

On the 17th a fresh fall of temperature occurred over the Punjab and Baluchistan where temperature became very low for the time of year. The following gives mean temperature data for the stations in Baluchistan and the Punjab for the 16th and 17th and shows the extent of this fresh fall :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	16th April.	17th April.
	°	°
Chaman	—13·1	—14·5
Quetta	—7·3	—12·6
Peshawar	—4·4	—14·9
Cherat	—7·6	—8·5

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	16th April.	17th April.
	°	°
Rawalpindi	—5·5	—14·4
Murree	—12·2	—16·1
Srinagar	+0·2	—8·9
Sialkot	—0·7	—8·1
Khushab	—2·9	—10·6
D. I. Khan	—1·0	—7·6
Mooltan	+0·6	—5·4
Montgomery	—4·5	—8·2
Lahore	—0·4	—8·2
Ludhiana	—1·2	—2·6
Umballa	—4·7	—3·8
Simla	—1·1	—3·3
Sirsa	—4·8	—5·5
Delhi	—3·1	—2·5

The fresh cold wave, shown above, carried low temperatures through Rajputana and the North-Western Provinces on the 18th and as far as Bengal on the 19th, and from that date onward till the 26th the mean temperature was lower than usual over the whole of Northern India while it was higher than usual over the southern half of the Peninsula and Burma. The following gives the variations of the mean temperature from the normal for all districts from the 20th to the 26th, showing the steady defect of temperature over Northern India and the steady excess over the two peninsulas :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	20th April.	21st April.	22nd April.	23rd April.	24th April.	25th April.	26th April.
	°	°	°	°	°	°	°
Burma	+0·5	+2·7	+1·0	+2·0	—0·1	+0·7	+3·1
Assam	+2·2	+0·8	—1·3	—6·2	—3·3	—1·5	—2·5
Bengal	+1·0	—0·5	—3·3	—3·7	—3·3	—0·2	—0·7
Orissa	—4·2	—2·7	—2·6	+0·4	—2·1	—2·8	—1·4
Behar	—2·2	—0·4	—2·4	—4·5	—3·6	—1·6	—1·7
Chota Nagpur	—3·4	—4·2	—3·8	—3·3	—4·9	—2·5	—4·1
N.-W. P & Oudh	—5·4	—4·0	—5·2	—8·0	—7·4	—7·4	—5·2
Punjab	—12·2	—10·1	—9·2	—8·2	—8·3	—5·5	—2·8
Sind	—1·4	—0·5	—1·6	—3·6	—3·4	—1·4	+0·8
Rajputana	—4·6	—6·5	—8·3	—4·4	—4·4	—4·0	—3·3
Gujarat	—0·5	—1·2	—1·5	—0·9	—1·2	—2·0	+0·1

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	20th April.	21st April.	22nd April.	23rd April.	24th April.	25th April.	26th April.
	°	°	°	°	°	°	°
Central India	—2·2	—3·2	—5·3	—4·7	—3·7	—5·1	—3·9
Central Provinces	—2·0	—2·6	—3·4	—3·9	—2·3	—1·7	—2·1
Berar	—0·6	—3·0	—4·5	—3·1	—2·1	—1·7	+0·6
West Coast	+0·2	+0·2	+0·2	+0·1	—0·5	—0·5	+0·2
Bombay Deccan	—1·1	—1·4	—3·4	—1·3	—0·9	—0·7	+2·1
Mysore	+2·8	+1·7	+1·5	+0·9	+1·3	+0·6	+1·2
Madras Coast	+2·4	+1·3	+1·5	+0·8	+0·8	+0·8	0
Madras Deccan	+2·6	+1·2	+0·5	+1·6	+2·6	+2·2	+1·5
South India	+2·5	+2·1	+2·0	+0·3	—0·5	—0·9	—2·7

On the 21st there had been some snow in Kashmir, and during the whole time there were thundershowers over North-East India and in Malabar, but otherwise there was very little rain over India during this period.

On the 27th and 28th there was fairly general rain over the Peninsula and this rainfall was accompanied with a marked fall of temperature, more particularly in the south. The following gives mean temperature data from the 26th to the 28th for the divisions in the Peninsula and shows the decrease occasioned by this fall of rain :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	26th April.	27th April.	28th April.
	°	°	°
Central Provinces	—2·1	—1·7	—0·9
Berar	+0·6	—1·5	—9·0
West Coast	+0·2	—0·1	—0·6
Bombay Deccan	+2·1	+1·4	—3·4
Mysore	+1·2	+1·0	—2·2
Madras Coast	0	—0·6	—2·0
Madras Deccan	+1·5	0	—1·7
South India	—2·7	—5·7	—8·7

Showers continued over the Peninsula and extended to some of the central stations on the 29th, and the temperature variation returns showed that the heat was less than usual all over the central parts of India, while it was excessive, relatively to the average, over Burma, Assam, Bengal, the West Coast, North Bombay, Western Rajputana and the Central Punjab. The following gives variation data of temperature for all the divisions of India for the two last days of the month and exhibits the large departures from the normal existing at this time :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF	
	29th April.	30th April.
	°	°
Burma	+ 3·2	+2·8
Assam	+ 2·8	—2·7
Bengal	+ 2·7	—0·2
Orissa	+ 0·9	—5·1
Bihar	+ 0·7	—0·9
Chota Nagpur	— 4·8	—9·3
North-Western Provinces and Oudh	— 2·4	—3·5
Punjab	— 1·8	—0·1
Sind	+ 3·7	+4·9
Rajputana	— 1·6	—1·7
Gujarat	+ 2·0	+3·0
Central India	— 5·3	—2·7
Central Provinces	— 7·8	—6·6
Berar	—12·3	—5·1
West Coast	0	+1·3
Bombay Deccan	— 7·9	—4·9
Mysore	— 2·6	—1·4
Madras Coast	— 1·6	—2·2
Madras Deccan	— 6·2	—6·5
South India	— 4·4	—2·6

Pressure.—The mean pressure of the Indian land area was 0·004″ below the normal. Pressure, relatively to this general condition, was in slight to moderate excess over the greater part of North-West India and over Upper and Central Burma, and was in slight excess over Northern and Central India and the east of the Peninsula. It was, on the contrary, in slight to moderate defect over Gujarat and the west, centre and south of the Peninsula. The variations were generally slight or small, but the excess was more than 0·02″ in the North Punjab and Upper Burma, while the deficiency was more than 0·02″ in Gujarat and in Malabar and Ceylon. The vertical pressure anomalies were generally negative but were small in amount.

The following table gives the mean pressure variations

and anomalies of the month for eleven meteorological provinces :—

METEOROLOGICAL PROVINEC.	Variation from normal of mean 8 A.M. pressure of April 1901.	Pressure anomaly, April 1901.
	"	"
Burma Coast and Bay Islands	—·014	—·010
Burma Inland	+·018	+·022
Assam	—·003	+·001
Bengal and Orissa	—·006	—·002
Gangetic Plain and Chota Nagpur	—·002	+·002
Upper Sub-Himalayas	+·007	+·011
Indus Valley and North-West Rajputana	+·010	+·014
East Rajputana, Central India and Gujarat	—·013	—·009
Deccan	—·004	0
West Coast	—·023	—·019
South India	—·002	+·002

Temperature.—The variations of the mean temperature conditions of the month were mainly determined by the distribution of the rainfall of the month and by the unusual snowfall in the hills. The mean temperature of the month was in slight to large defect of the normal over Baluchistan and the North-West Himalayas. It was in considerable defect over the Punjab and the west of the North-Western Provinces and was in slight defect over Upper Sind, Rajputana, Central India, the Central Provinces, the east of the North-Western Provinces, Orissa and Ganjam. The mean temperature was also in defect in the Upper Assam Valley. The deficiency was greatest in the north-west at the stations of Rawalpindi (−4°·3), Umballa (−4°·8) and Roorkee (−4°·4). Over the remainder of the Indian region the mean temperature was in excess. The excess was slight or small except in Sind (Kurrachee +3°·5) and in Burma (Yamethin +2°·9, Minbu +2°·7 and Toungoo +2°·7).

The mean maximum or day temperature was in defect within a broad band running from the Punjab and Upper Sind through Rajputana, the North-Western Provinces, and the Central Provinces as far as the Madras Coast. The greatest deficiency within this broad band was reported from the East Punjab where Ludhiana reported a deficiency of 4° and Umballa of 5°. Over the remainder of the Indian region the mean day temperature was in excess. The excess was considerable in Lower Sind (Kurrachee +4°·4) and moderate to considerable in Bengal and part of Burma.

The mean minimum or night temperature of the month was below the normal at nearly all stations to the north of Lat. 25° N. and was above at nearly all stations to the south of that line. The deficiency was considerable to large in Baluchistan and in the west, north and east Punjab, both on the hills and plains, while the excess was moderate over Burma and Tenasserim.

The following table gives temperature variation data for eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	VARIATION OF ACTUAL FROM NORMAL OF		
	Mean maximum temperature, April 1901.	Mean minimum temperature, April 1901.	Mean daily temperature, April 1901.
	°	°	
Burma Coast and Bay Islands	+1·6	+2·5	+2·1
Burma Inland	+1·3	+1·6	+1·4
Assam	+0·7	−0·5	+0·1
Bengal and Orissa	+1·6	+0·4	+1·0
Gangetic Plain and Chota Nagpur.	−0·6	−0·4	−0·5
Upper Sub-Himalayas	−3·3	−2·4	−2·9
Indus Valley and North-West Rajputana.	−0·2	−1·0	−0·6
East Rajputana, Central India and Gujarat.	−0·6	−0·1	−0·3
Deccan	−1·1	+0·7	−0·2
West Coast	+0·9	+1·0	+1·0
South India	−0·3	+1·0	+0·4

Winds.—There was a well marked westerly to north-westerly wind on the plains in Northern India extending from Baluchistan as far as West Bengal, but on the hills the wind directions were variable and at Chakrata there was a strong abnormal south-south-east wind. In Bengal the wind was more westerly than usual, but over the east of the Bay there was an east-south-east instead of an east-north-east wind. On the coasts of the Peninsula the wind was steady from west-north-west on the West Coast and from south-south-east at Madras, but in the interior of the Peninsula the wind was variable and more or less unsteady.

Humidity.—The mean humidity of the month was in excess over the central parts of India as well as over a large part of the Deccan and Mysore. The excess was greatest at Nagpur (+14) but was considerable at Sholapur (+8), Belgaum (+7) and at Chitaldroog (+6). In addition local areas of more or less excessive humidity were shown over South-East Bengal, South Madras and the Central Punjab. In other parts of the country the air was drier than usual but particularly so at Kurrachee (−14), Darbhanga (−9), Deesa (−8) and Hassan (−8). In Kashmir the mean humidity was slightly to considerably in excess of the normal, but at the other hill stations in the Himalayas there was a considerable deficiency. In the South-East Trades region the air was damper than usual.

The following table gives variation data of the mean aqueous vapour pressure and mean humidity of nine meteorological provinces for the month :—

Meteorological Province.	Mean Absolute Humidity.		Mean Relative Humidity.	
	Average actual, April 1901.	Variation of actual from normal, April 1901.	Average actual, April 1901.	Variation of actual from normal, April 1901.
	"	"	%	
Burma Coast and Bay Islands.	·864	+·011	70	—3
Bengal and Orissa . .	·859	—·003	75	—2
Gangetic Plain and Chota Nagpur.	·399	—·021	34	—3
Upper Sub-Himalayas .	·326	—·040	36	—2
Indus Valley and North-West Rajputana.	·445	—·056	44	—7
East Rajputana, Central India and Gujarat.	·256	—·087	21	—7
Deccan	·448	+·040	38	+5
West Coast . . .	·840	+·017	72	—2
South India . . .	·613	+·003	55	—1

Cloud.—The sky was more cloudy than usual over the greater part of the Indian region. The only places where the sky was clearer than usual were Burma (Diamond Island —1·8), the hill and submontane regions of the Eastern Himalayas (Katmandu —2·2), the Punjab (Peshawar —1·1), Baluchistan (Quetta —0·2) and part of the West Coast (Karwar —0·3). Over the whole of the remainder of India the cloud amount was excessive. The amount of the excess increased from the coast towards the interior and was greatest at Hazaribagh (+2·2), Allahabad (+2·1), Pachmarhi (+3·3), Nagpur (+2·2), Bellary (+3·0) and Mysore (+3·0). Cloud was also in excess of the average in Arabia and in the South-East Trades region.

The following table gives variation data of the mean cloud amount of nine meteorological provinces for the month under review :—

Meteorological Province.	Mean Cloud Amount.	
	Average actual, April 1901.	Variation of actual from normal, April 1901.
Burma Coast and Bay Islands . . .	2·8	—0·6
Bengal and Orissa	5·2	+1·5
Gangetic Plain and Chota Nagpur . . .	3·2	+1·4
Upper Sub-Himalayas	2·8	+0·3
Indus Valley and North-West Rajputana .	2·7	—0·2
East Rajputana, Central India and Gujarat .	3·1	+1·1
Deccan	4·0	+1·4
West Coast	2·4	0
South India	5·5	+1·7

Rainfall.—April 1901 was drier than usual over a large part of the country. The only important exceptions were, Assam, East Bengal, Deltaic Bengal, Orissa, Chota Nagpur, the North Punjab, the west and south of the Peninsula and the Central Provinces, in all of which areas the rainfall was normal or in excess of the normal. The excess in the case of the west of the Peninsula and of the central parts of the country was very large, relatively to the small normal fall and in the former area was due to the cyclonic storm over the Arabian Sea. On the other hand, over the greater part of Northern India from Bihar westward to the Punjab and Rajputana as well as over parts of the east of the Peninsula, the month's rainfall was very small and in several places actually or practically nil. A series of slight depressions entered North-West India from the westward during the month, occasioning snow on the hills and some rain in the submontane areas, but otherwise the influence of these depressions was small. Towards the close of the month the barometer rose over Northern and Central India while it was low over the Peninsula and the Arabian Sea both of which localities having been affected by a cyclonic storm. As a consequence moderately heavy rain fell over the Peninsula—more particularly in the west and the month's rainfall was above the normal average in that area.

The principal features in the rainfall distribution were deficiency of rain in Burma, Northern India, (except Assam, and in the areas around the head of the Bay) and in the east of the Peninsula, and excess of rain over the west of the Peninsula, the central parts of the country and in Orissa and Deltaic and East Bengal. The following table gives rainfall data of the month for eleven meteorological divisions :—

Meteorological Province.	Rainfall.			
	Mean actual for April 1901.	Mean normal for April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands.	0·73	2·53	—1·80	— 71
Burma Inland . .	0·96	1·38	—0·42	— 30
Assam	8·84	9·51	—0·67	— 7
Bengal and Orissa .	2·48	2·64	—0·16	— 6
Gangetic Plain and Chota Nagpur.	0·17	0·35	—0·24*	— 69
Upper Sub-Himalayas .	0·22	0·60	—0·36*	— 60
Indus Valley and North-West Rajputana.	0·18	0·40	—0·21	— 53
East Rajputana, Central India and Gujarat.	0·13	0·06	+0·08*	+133
Deccan	1·63	0·44	+1·20*	+273
West Coast . . .	3·41	1·57	+1·85	+118
South India . . .	0·95	1·14	—0·30*	— 26

* A reference to Table I will show that the means in columns 2 and 3 are derived from a smaller number of stations than the means in the 1st column. The sum of the figures in columns 2 and 3 therefore will not agree with that of the figures in column 1.

Atmospheric Pressure.

The mean pressure of the Indian land area for the month of April 1901 was 0·004″ below the normal, a smaller variation from the average than for some months past. Relatively to this general condition pressure was in slight or very slight excess over the greater part of North-West India, Northern India, the central parts of the country, the east of the Peninsula, Assam and Upper and Central Burma. It was in very trifling defect over Bengal and was in slight to moderate defect over the south, centre and west of the Peninsula as well as over Gujarat and the southern districts of Rajputana. The excess was greatest and more than 0·02″ in two areas, one comprising the North Punjab, the second Upper Burma. The following gives comparative pressure data for these two areas :—

Province or Division.	Station.	Variation from normal of mean 8 A.M. pressure of April 1901.	Pressure anomaly, April 1901.
		″	″
North Punjab	Rawalpindi	+·026	+·030
	Sialkot	+·023	+·027
	Peshawar	+·022	+·026
	Lahore	+·020	+·024
Upper Burma	Kindat	+·030	+·034
	Mandalay	+·025	+·029
	Bhamo	+·017	+·021
	Yamethin	+·017	+·021

The deficiency was greatest and more than 0·02″ in amount over Gujarat, part of Rajputana and of the West Coast as well as along the Malabar coast and over Ceylon. The following gives pressure variation data for these two areas :—

Province or Division.	Station.	Variation from normal of mean 8 A.M. pressure of April 1901.	Pressure anomaly, April 1901.
		″	″
Gujarat	Bhavnagar Para	—·042	—·038
	Surat	—·038	—·034
Rajputana	Deesa	—·030	—·026
West Coast	Bombay	—·025	—·021
Malabar Coast	Calicut	—·031	—·027
Ceylon	Colombo	—·027	—·023

In all other parts of the country the variations were unimportant.

The chart of actual barometric distribution shows that pressure was highest in the extreme north of the Punjab and was lowest within a large area which covered the North-Western Provinces, Bihar and a considerable part of Bengal. Elsewhere pressure was very uniform.

Pressure was in slight excess at the Baluchistan hill stations, as well as at Srinagar, Murree, Simla and Ranikhet but was in slight defect at the remaining hill stations. At Darjeeling the variations from the normal appear very doubtful. Except in North-East India where the Darjeeling observations are doubtful, and in the Baluchistan-Sind area the vertical pressure anomalies, though small, were generally negative. This condition is shown in the following table which gives comparative data for the ten pairs of stations :—

Hill Station.	Variation from normal pressure, April 1901.	Plain Station.	Variation from normal pressure, April 1901.	Vertical pressure anomaly (Hill—Plain.)
	″		″	″
Leh	—·013	Lahore	+·020	—·033
Quetta	+·024	Jacobabad	0	+·024
Murree	+·009	Rawalpindi	+·026	—·017
Simla	+·010	Ludhiana	+·011	—·001
Chakrata	—·004	Roorkee	+·002	—·006
Ranikhet	+·010	Bareilly	0	+·010
Darjeeling	+·044	Dhubri	—·002	+·046
Pachmarhi	—·008	Hoshangabad	—·002	—·006
Mount Abu	—·035	Deesa	—·030	—·005
Wellington	—·019	Coimbatore	—·009	—·010

Barometric depressions and cyclonic storms of the month.

As was the case in the same month last year the weather during the month under review has been disturbed and a series of depressions has passed from west to east across Northern India while a very early example of a cyclonic storm formed over the south-east of the Arabian Sea and thence passed north-westward towards the Arabian Coast. The account of this storm will be found in the May Review.

Depression of 2nd to 8th.—On the 1st the weather was fine, but on the 2nd pressure was giving way in Baluchistan and the West Punjab and a shallow depression was shown between Jacobabad, Mooltan and Quetta. Its effect on the weather on this date was slight and unimportant. The following gives data for the depression area:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"					
Quetta .	...	—·034	+·091	Calm	1	0	...	
Chaman .	...	—·038	+·097	NW	21	2	...	Dusthaze.
Jacobabad .	29·879	—·067	+·054	Calm	1	0	...	
Mooltan .	·871	—·085	+·025	SE	1	0	...	
D. I. Khan .	·870	—·081	+·010	Calm	1	0	...	Dusthaze.
Khushab .	·881	—·042	+·051	ENE	5	0	...	
Montgomery	·882	—·034	+·061	SSE	5	0	...	
Sialkot .	·885	+·002	+·058	SW	4	0	...	
Lahore .	·885	+·002	+·058	SW	4	0	...	
Ludhiana .	·884	+·018	+·059	W	4	0	...	
Delhi . .	·876	+·050	+·066	W	5	0	...	
Sirsa . .	·891	+·027	+·072	NW	5	0	...	
Bikaner .	·921	+·014	+·078	NW	8	0	...	

3rd April.—On this day pressure was falling briskly to rapidly over Baluchistan, Sind, the Punjab and Western Rajputana and the depression was shown over the South-West Punjab where pressure was in considerable defect. The winds were cyclonic over the Punjab and the fall of the barometer over Sind was practically as large as over the Punjab, showing probably that another depression had entered or was forming in that region. The following gives data for the depression area:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"					
Chaman .	...	—·078	+·016	SW	16	2	...	Dust haze.
Quetta .	...	—·068	+·025	Calm	4	1	...	
Jacobabad .	29·756	—·123	—·065	NW	3	7	...	
Hyderabad .	·795	—·121	—·043	SW	5	3	...	
Kurrachee .	·839	—·094	—·005	WSW	8	5	...	
Jodhpur .	·854	—·078	...	Calm	2	9	...	
Bikaner .	·799	—·122	—·029	W	5	2	...	
Sirsa . .	·805	—·086	—·004	S	3	0	...	
Ludhiana	·811	—·073	—·005	SE	3	5	...	
Lahore .	·765	—·123	—·054	SE	3	6	...	Strong wind
Sialkot .	·766	—·119	—·048	E	3	2	...	
Montgomery	·742	—·140	—·073	SSW	8	6	...	
Mooltan .	·760	—·111	—·083	Calm	3	8	...	
D. I. Khan .	·741	—·129	—·118	NNE	1	7	...	Dusthaze.
Khushab .	·730	—·151	—·095	NE	8	4	...	Gale.
Rawalpindi .	·775	—·142	—·077	Calm	2	0	...	

April 4th.—The barometer had risen briskly over the West Punjab while it had been steady over other parts of North-West India. A large shallow low pressure area composed of the two depressions noticed above covered the eastern districts of the Punjab, Western Rajputana and Sind. Pressure within this depression area was in moderate defect. The winds were cyclonic but not strong. The following gives data for the depression area:—

STATION	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"					
Jacobabad .	29·778	+·022	—·040	NNW	3	0	...	
Hyderabad .	·792	—·003	—·038	NW	9	0	..	
Kurrachee .	·827	—·012	—·013	NNW	11	0	...	
Jodhpur .	·832	—·022	...	WSW	2	7	...	
Ajmer .	·840	—·038	—·016	Calm	2	3	...	

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"					
Sambhar .	29·834	—·042	—·001	Calm	2	8	...	
Bikaner .	·781	—·018	—·055	SSW	9	2	...	
Sirsa .	·773	—·032	—·035	SW	6	5	...	
Ludhiana .	·778	—·033	—·025	SE	4	1	...	
Lahore .	·777	+·012	—·031	Calm	4	0	...	
Sialkot .	·791	+·025	—·012	NNE	5	0	...	
Montgomery	·760	+·018	—·053	NE	6	0	...	
Mooltan .	·818	+·058	—·024	Calm	1	0	...	

April 5th.—The depression over North-West India had closed up and was shown as a fairly well defined depression lying over the region represented by the stations of Khushab, Lahore, Montgomery, Ludhiana and Sirsa. The winds were irregularly cyclonic in the Punjab, but there was no rain. The following gives 8 A.M. data for the depression area :—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"					
Khushab .	29·748	—·061	—·062	NNE	10	0	...	
Lahore .	·737	—·040	—·068	N	4	5	...	
Montgomery	·721	—·039	—·086	W	5	0	...	
Ludhiana .	·733	—·045	—·067	N	5	6	...	
Sirsa .	·724	—·049	—·078	S	4	0	...	

April 6th.—On this day the barometer was rising briskly to rapidly in North-West India and the depression was filling up while at the same time it was moving slowly eastward. The centre apparently lay over the North-Western Provinces whence it drifted eastward into Bengal and disappeared on the 8th.

Depression of the 9th to the 13th.—On the 8th pressure was giving way slowly in the West Punjab, Western Rajputana and Upper Sind and on the 9th a shallow depression was shown over Sind where, however, the barometer had commenced to rise slowly. On the 10th the barometer was again falling over North-West India—more particularly in the West Punjab and Upper Sind and the depression over the Indus Valley was better defined. The following gives 8 A.M. data for this day :—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"					
Jacobabad .	29·709	—·078	—·051	Calm	4	10		
Mooltan .	·753	—·107	—·036	S	1	4		
D. I. Khan.	·747	—·104	—·053	NE	1	7		
Khushab .	·762	—·089	—·016	ENE	5	9		
Montgomery	·751	—·078	—·008	SSE	5	5		
Lahore .	·760	—·068	—·006	Calm	2	2		
Sialkot .	·766	—·051	+·004	NNE	2	2		
Rawalpindi.	·801	—·069	—·015	Calm	2	6		

April 11th.—The depression had advanced eastward and pressure had decreased briskly over Rajputana and the adjacent parts of the Punjab, the North-Western Provinces and Central India. At the same time pressure had given way briskly to rapidly over the inner ranges of the Himalayas and the weather was unsettled all over the north-west frontier of India and over the North-West Punjab. The following gives 8 A.M. data for this day :—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inch.	
Jacobabad .	29·701	—·008	—·061	ESE	4	8	...	
Hyderabad.	·732	—·036	—·059	SW	10	7	...	
Jodhpur .	·755	—·054	...	SW	1	8	...	
Sambhar .	·759	—·062	—·024	WNW	1	6	...	
Bikaner .	·694	—·082	...	WSW	8	6	...	

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Sirsa	·706	—·072	—·049	NE	2	6	...	
Sialkot	·813	+·047	+·038	E	3	8	0·06	
Ludhiana	·731	—·036	—·024	NW	4	6	...	
Lahore	·786	+·026	+·011	N	2	10	...	
Montgomery	·744	—·007	—·026	NNE	10	10	...	Gale.
Delhi	·703	—·073	—·048	W	4	9	...	Dusthaze.
Agra	·723	—·058	—·038	SW	3	6	...	...
Mainpuri	·718	—·054	—·041	Calm	2	8	...	...
Bahraich	·689	—·033	...	NW	4	4	...	...
Bareilly	·705	—·026	—·032	Calm	3	7	...	...
Gorakhpur	29·706	—·024	—·020	W	5	8	...	...
Lucknow	·707	—·042	—·033	W	3	9	...	...
Cawnpore	·717	—·079	—·028	Calm	2	2	...	...
Nowgong	·749	—·054	—·031	SW	1	2	...	...
Sutna	·753	—·041	—·015	NNW	4	2	...	...
Srinagar	...	—·021	—·018	WNW	9	10	0·77	Showery.
Skardu	...	—·094	...	Calm	4	8	0·13	...
Dras	...	—·144	...	Calm	1	10	0·40	Snowstorm.
Leh	...	—·104	0	NE	3	10	0·05	Snowing.
Murree	...	—·040	+·009	SE	10	10	0·27	Showery.
Quetta	...	—·014	—·018	Calm	1	7	0·10	Showery.
Chaman	...	+·003	+·002	SE	17	8	0·25	Duststorm with rain.

April 12th.—The depression noticed over Rajputana on the 11th had advanced quickly eastwards and was shown over Bihar and the east of the North-Western Provinces. There had been some further showers in the North-West Himalayas but the depression had ceased to influence the weather to any important extent.

Depression of April 13th to 15th.—On April the 12th pressure was giving way briskly to rapidly in Baluchistan and the West Punjab and another shallow depression was advancing eastwards from Afghanistan. Light showers had commenced in Baluchistan.

April 13th.—The barometer was falling slightly to briskly over North-West India and a shallow depression lay over the western desert and, as was the case with the previous storm, the advance of the depression had been accompanied with a rapid fall of the barometer over the higher ranges in Kashmir. The winds were irregular, but there had been a moderate fall of snow and rain in Baluchistan and the North-West Himalayas. The following gives 8 A.M. data of the storm area for this day :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"						
Jacobabad	29·683	—·070	—·080	SE	2	10	...	
Jodhpur	·734	—·041	...	WSW	1	6	...	Hot wind.
Ajmer	·731	—·026	—·063	SE	2	5	...	
Sambhar	·714	—·034	—·049	E	3	6	...	
Bikaner	29·687	—·067	—·086	ENE	6	3	...	
Sirsa	·699	—·057	—·054	SE	3	0	...	
Montgomery	·738	—·027	—·030	NNE	4	9	...	
Mooltan	·747	—·018	—·047	Calm	1	10	...	
Khushab	·746	—·030	—·020	ESE	9	6	...	
Lahore	·744	—·016	—·014	NW	1	9	...	
Sialkot	·744	—·021	—·017	NNE	2	8	...	
Srinagar	...	—·011	—·052	WNW	6	10	0·69	Showery.
Skardu	...	—·084	...	Calm	6	10	0·09	Showery.
Dras	...	—·214	...	Calm	0	10	0·31	Snowstorm.
Leh	...	—·132	—·091	ENE	2	10	...	
Murree	...	—·026	—·017	Calm	6	0	0·88	Nor'wester with rain.
Cherat	...	+·002	+·077	SE	6	2	0·10	

April 14th.—This depression, like the preceding one, advanced very quickly eastward and coalesced with the low pressure area lying over the submontane regions of the North-Western Provinces where pressure was considerably below the normal. The winds were between north and west in Upper India, and unusually heavy rain had fallen over the Punjab and North-West Himalayas. The following gives the more noteworthy falls of rain in this area which, it will be observed, were exceptionally large for the time of year :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 14th April 1901.
		Inches.
Jummoo	Kishtwar	4·90
Kashmir	Karnah	3·34
Kashmir	Uri	3·06
Rawalpindi	Murree	2·52
Kashmir	Domel	2·27
Rawalpindi	Kahuta	2·18

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 14th April 1901.
		Inches.
Jummoo	Kotli	2·10
Kashmir	Sri Protap Singh Pora	1·47
Peshawar	Katlang	1·38
Hazara	Abbottabad	1·32
Kashmir	Vantipore	1·25
	Srinagar	1·25
Jummoo	Udumpore	1·23
Jhelum	Chakwal	1·23
Hazara	Haripore	1·20
	Mansahra	1·12
Rawalpindi	Rawalpindi	1·09
	Pindigheb	1·04

The following gives 8 A.M. data for the Punjab, Rajputana and the North-Western Provinces for this day and shows the conditions prevailing at this time :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Peshawar	29·806	—·021	—·068	N	3	3	0·63	Thunder-storm with hail.
Sialkot	·701	—·043	—·069	N	6	6	0·39	
Rawalpindi	·761	—·018	—·059	Calm	3	0	1·09	Thunder-storm.
Khushab	·746	0	...	SSW	11	0	0·55	Dust-storm with rain.
Dera Ismail Khan.	·747	—·014	—·060	Calm	2	0	0·10	
Mooltan	·738	—·009	—·057	N	1	0	0·17	
Montgomery	·702	—·036	—·074	ENE	10	1	0·35	Thunder-storm with hail.
Lahore	·701	—·043	—·068	N	6	0	0·19	Thunder-storm.
Ludhiana	·664	—·043	—·097	NW	6	2	0·30	Showery.
Sirsa	·663	—·036	—·094	NE	5	0	...	Dust-storm
Bikaner	·665	—·022	—·103	NW	10	0	...	Dust haze.
Jaipur	·685	—·055	—·092	W	5	9	...	
Sambhar	·680	—·034	—·087	WNW	9	6	...	Strong wind.
Ajmer	·711	—·020	—·085	W	10	8	...	
Nowgong	·660	—·090	—·111	W	1	7	...	
Sutna	·637	—·084	—·109	WNW	4	8	...	
Jhansi	·668	—·081	—·096	WNW	1	2	...	
Agra	·617	—·093	—·133	SW	4	6	...	
Meerut	·634	—·050	—·106	Calm	2	10	...	
Roorkee	·626	—·065	—·104	Calm	2	5	...	Dust haze.
Bareilly	·629	—·038	—·094	Calm	4	8	...	
Bahraich	5·93	—·074	...	W	3	1	...	
Lucknow	·605	—·076	—·126	W	3	9	...	
Mainpuri	·620	—·075	—·117	WSW	2	6	...	
Allahabad	·610	—·087	—·130	SSW	6	3	...	
Gorakhpur	·623	—·039	—·096	NNE	2	2	...	

April 15th.—A large shallow low pressure area continued to be shown over the North-Western Provinces and Bengal on the 15th, but the depression was no longer clearly defined.

Depression of the 15th to 17th.—On the 15th a very shallow depression was shown over the Indus Valley, and on the following day (the 16th) a deepish depression lay over the Central Punjab where the deficiency of pressure was more than 0·20". The winds were cyclonic and moderately strong in the Punjab and some light showers had fallen. The following gives 8 A.M. data for the storm area on this day :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inch.	
Bikaner	29·672	—·109	—·092	W	7	7	...	
Sirsa	·617	—·140	—·143	S	4	6	...	
Ludhiana	·599	—·157	—·154	SE	5	2	...	
Lahore	·519	—·237	—·239	ESE	5	0	...	
Sialkot	·514	—·235	—·234	E	4	4	...	Gale.
Montgomery	·573	—·193	—·198	NNW	8	0	...	Dusthaze.
Khushab	·577	—·206	—·174	N	17	3	...	Dust-storm.
Mooltan	·632	—·118	—·159	NW	3	0	...	Dusthaze.
Rawalpindi	·668	—·123	—·167	NW	8	6	0·16	Thunder-storm with hail.
Murree	...	—·163	—·230	Calm	7	10	0·38	Thunder-storm.
Cherat	...	—·101	—·112	SW	4	1	0·60	
Srinagar	...	—·166	—·218	SSE	4	8	...	Distant lightning.
Skardu	...	—·129	...	Calm	16	10	...	
Dras	...	—·162	...	Calm	1	10	0·03	

April 17th.—A very rapid recovery of pressure took place after 8 A.M. on the 16th and by the next morning the storm had filled up after having given a few more light showers among the North-West Himalayas. The following table gives the 8 A.M. data for this day and shows the magnitude of the change :—

STATION.	PRESSURE.			WIND.				WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inch.	
Bikaner .	29·794	+·122	+·025	SSE	11	5	...	
Sirsa . .	·797	+·180	+·038	SE	6	0	...	
Ludhiana .	·796	+·197	+·032	W	6	4	...	Gale of wind
Lahore .	·841	+·322	+·077	NW	5	0	...	Ditto.
Umballa .	29·748	+·112	—·016	W	2	4	...	
Sialkot .	·841	+·327	+·082	NNW	6	0	...	Gale of wind.
Rawalpindi.	·901	+·233	+·084	Calm	1	0	...	
Peshawar .	·980	+·215	+·110	Calm	1	0	...	
Khushab .	·862	+·285	+·115	NE	12	0	...	
Montgomery	·837	+·264	+·075	NNE	10	3	...	Wind variable.
Mooltan .	·847	+·215	+·065	NNE	2	5	...	Dust haze.
Srinagar .	...	+·238	+·029	SSE	12	2	0·09	Thunderstorm.
Dras . .	...	+·072	...	W	2	6	0·31	Snow-storm.
Murree .	...	+·233	+·004	Calm	13	0	...	
Cherat .	...	+·211	+·098	NW	13	1	0·03	Foggy.

Between the 19th and the 23rd another depression drifted eastward from North-West India as far as Bengal but the storm was at no time of any importance.

Cyclonic Storm of the 24th April to the 6th May in the Arabian Sea.—The full account of this remarkable storm will be found in the May Review.

The account of this storm has been transferred to the May Review. The letter-press and tables may be kept standing or be transferred at once to the May Review under section "Barometric depressions and cyclonic storms" just as is most convenient.

Summary of the reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

I.—AFGHAN MOUNTAIN DISTRICTS.

(1) *Kurram* :—Snow fell as under during April—

Aprll 10th :—Snow fell down to 11,000 ft. on the Sufed Koh.
11th — Do. 10,000 ft. Do.
12th— Do. 7,000 ft. Do.
13th— Do. 7,000 ft. Do.
19th— Do. 10,000 ft. Do.

The snowfall was greater than usual :—

(2) *Kohat* :—There was no snow.

(3) *Chitral* :—The observer at Chitral states that heavy snow fell during the week ending the 24th.

(4) *Dera Ismail Khan.*—The Deputy Commissioner, Dera Ismail Khan, sends the following snowfall reports for the period, 1st January to 30th April 1901 :—

January 1901 :—Snow fell to a depth of 16 feet on the peaks of Kat, Opashta, Nawa Tir, Murmuzh, Mirza Garh, Takht Suleman and Sharyala on the 5th, 16th, 17th and 22nd to 24th.

February 1901 :—Snow fell to a depth of 15 feet on the 5th and 14th on the Kat, Opashta, Takht Suleman, Sharyala, Nawa Tir, Mirza Garh and Murmuzh peaks.

March 1901 :—Snow fell to a depth of 8 feet on the 12th and 18th on the peaks of Mirza Garh, Opashta, Nawa Tir, Muzagarh and Sharyala.

April 1901 :—Snow fell to a depth of 3 feet on the 9th on the peaks of Opashta, Nawa Tir and Mirza Garh.

II.—KASHMIR AND PUNJAB HIMALAYAS.

(1) *Kashmir* :—There was a fresh fall of snow on the Affervative mountains on the 20th.

(2) *Murree and Kahuta* :—No snow fell.

(3) *Leh* :—Snow fell as under at Leh :—
April 11th :—Snow fell intermittently.
20th :—½ inch snow fell.

All through the month there had been very frequent snowfalls on the surrounding hills.

(4) The Deputy Conservator of Forests, Chamba Division, sends the following record of the snowfall at Kilar (elevation 8,400 ft.) during the past winter :—

December 1900 :—There were ten falls of snow giving a total of 5 ft. 4 inches. The snow line descended to 6,400 ft.

January 1901 :—There were twelve falls of snow, the heaviest having been on the 13th. The total amount was 4 ft. 5 inches and the snow line descended to 6,400ft.

February 1901 :—Ten falls of snow during the month, the month's fall amounting to 4 feet.

March 1901 :—There were three falls of snow amounting to 1 ft. 7 inches.

April 1901 :—There were six falls of snow but the month's fall only amounted to 11 inches.

The snowfall occurred earlier than usual everywhere and was greater than the normal.

(5) *Kulu.*—Rain fell slightly on the 10th, 11th, 13th and 14th April in the Kulu Tahsil and on the 11th, 12th 14th and 15th in the Plach Tahsil. During this period there was a fall of snow on three days, the fall descending to about 10,000 feet. The Rotang Pass was closed for seven or eight days.

The following table shows the reported depth of snow on the higher passes in the Sub-Division at the end of April :—

Kulu Tahsil.		Plach Tahsil.	
Rotang	6 ft.	Sirikhand	10 ft.
Hamta	2 ft.	Chul	4 ft.
Barsai	4 ft.	Maghini	4 ft.
Bujadhar	2½ft.	Dundku	5 ft.
Chandarkhani	8 ft.	Tikar	4 ft.
Lohri Achhri	3 ft.	Nunu	1 ft.
Bhubu	4 ft.	Jalori	4 ft.
Pashtari	2 ft.	Raghopur	4 ft.
Sari	3 ft.	Lambri	4 ft.
		Sakiran	4 ft.
		Gargarasan	6 ft.
		Supakun	5 ft.
		Bashleo	4 ft.
		Pashtari	5 ft.
		Tirath	6 ft.

The snowfall during the month under review is said to exceed that of the same month last year in the Plach Tahsil and to be in defect in the Kulu Tahsil.

(6) *Simla* :—At Bashahr, Simla, there were falls of snow on the following dates :—

April 11th :—Snow fell down to		11,000 ft.
12th	ditto	11,000 ft.
14th	ditto	11,000 ft.
20th	ditto	11,000 ft.
21st	ditto	10,000 ft.
22nd	ditto	8,500 ft.
23rd	ditto	8,500 ft.

The snowfall on each occasion was about 6 inches:—

The following accumulations were reported :—

Rupin pass	16,000 ft.	12 ft.
Burenda pass	16,000 ft.	12 ft.
Harang pass	12,000 ft.	1½ft.
Shatul pass	15,000 ft.	12 ft.
Buldar pass	16,000 ft.	14 ft.
Runang pass	14,000 ft.	6 ft.

All the passes except the Harang were still closed at the end of April.

III NORTH-WESTERN PROVINCES HIMALAYAS.

(1) *Garhwal* :—There were light falls of snow on the perpetual snows on the 14th and 15th April. The snowfall was lighter than that in the same month of the previous year.

(2) *Almora*:—Snow fell as under.

Peak of Utadhura.

April 1st	2 ft.
„ 5th	2 ft.
„ 11th	2 ft.
	6 feet.

Peaks of Pindari, Kaphini, and Kantela.

April 21st	2½inches.

Byans, Chandas and Darma.

April 14th	1 ft.
„ 20th	½ft.
„ 21st	½ft.
	2 ft.

Summary of Special Storm Reports.

With the increasing heat the number of local storms increases very rapidly and in April thunder and hail-storms are ordinarily very frequent in Assam, Bengal, the North-Western Provinces, the Deccan and Madras, while dust-storms sometimes followed by rain are common in the hot dry districts of the north-west more especially in the Punjab, Rajputana and Sind. In Assam and North-East India generally the thunder and hail-storms were less frequent and less severe than usual during the month under review while, on the contrary, in North-West India late examples of cold weather storms gave unsettled weather to parts of Upper India and the North-West Himalayas :—

April 1st.—Dust-storm at Saugor at 4 P.M. The wind was strong to a gale but there was no rain.

Dust-storm at Malegaon between 6-7 and 6-22 A.M. followed by rain, thunder and lightning.

April 2nd.—Violent dust and thunder-storms with hail at Nagpur at 8 P.M., the hail was the size of a lemon.

A very heavy dust-storm passed over Hoshangabad from north-west to south-east at 2-30 P.M.

" *3rd.*—A dust-storm passed over Srinagar between 1 P.M. and 7 P.M.

A thunder-storm with hail was experienced at Belgaum from 2-10 P.M. to 3-35 P.M.

Nagpur reported a "tornado" between 5 and 6 P.M. with violent dust-storm, heavy rain and hailstones of the size of betelnuts. The storm lasted 8 minutes but did great damage. The wind velocity was at the rate of 80 miles per hour.

Thunder-storm with hail at Pachmarhi at 2 P.M. lasted 10 minutes.

" *4th.*—A thunder-storm with hail and rain occurred at Srinagar between 4-35 P.M. and 5-35 P.M.

" *5th.*—A thunder-storm with hail passed over Belgaum at 5 P.M.

" *7th.*—Thunder-storm passed over Srinagar between 3 P.M. and 7 P.M.

Terrific thunder-storm at Nagpur between 7 and 9 P.M.

" *10th.*—Violent dust-storm at Salem between 3 and 4 P.M. with some rain.

" *13th.*—A storm accompanied with thunder, lightning and rain passed over Lahore between 8 A.M. and 10 P.M.

" *15th.*—A thunder-storm occurred about 4-38 P.M. at Belgaum and continued till 4-56 P.M.

" *16th.*—Thunder-storm at Srinagar at 2 P.M.

Thunder-storm at Belgaum at 6 P.M.

" *17th.*—Another thunder-storm passed over Belgaum at 2 P.M.

" *20th.*—Severe Nor'wester with very heavy rain passed over Burdwan at 5-45 P.M. lasting 40 minutes.

Violent dust-storm at Boalia at 7 P.M.

A thunder-storm occurred at Srinagar at 2-15 P.M.

" *21st.*—A thunder-storm accompanied with hail passed over Srinagar.

" *23rd.*—A dust-storm of extraordinary violence passed over Mandalay at 4 P.M. with heavy rain.

" *28th.*—Dust-storm at Saugor between 1-15 P.M. and 1-45 P.M. with a gale of wind and light showers.

April 30th.—Dust-storm with strong wind at Khandwa at 2-15 P.M.

EARTHQUAKES.

An earthquake was felt at Mount Abu at 10-26 P.M. Madras time on the 2nd and lasted for 22 seconds followed by a rumbling noise. This is the fifth earthquake report from this station this year. On the 7th another earthquake shock was felt at Mount Abu at 8-28 P.M., Madras time, lasting 47 seconds. On the 27th at 7-13 A.M., Local time, there was an earthquake at Sambhar lasting seven seconds.

The following reports of hail-storms have been received.

April 1st.—A severe hail-storm occurred in the Katigorah Tahsil, Cachar, Assam. A hail-storm with thunder occurred in the villages of Bhatkhedee and Hopakheda in the Khasgi Pergana of the Dewas state. The storm lasted only 10 minutes and the hail was the size of maize.

" *1st, 6th, 7th, 16th and 26th.*—Hail-storms occurred in parts of Belgaum on the dates given. The hail-stones were from ¼ to 1" in diameter.

" *2nd.*—A hail-storm passed over Chikalda between 7-35 and 7-40 P.M. accompanied with thunder, lightning and heavy rain.

" *2nd, 3rd and 4th.*—Moderately severe hail-storms occurred at Seetaburdy and at the Jail (Nagpur) and the hail-stones varied in size between a lemon and a betelnut.

" *3rd and 4th.*—Hail-storms passed over the Nagpur district accompanied with rain, high wind and lightning. The storms lasted from 5 to 15 minutes and the hailstones varied in size between a pea and a small nut.

" *5th.*—A very severe hail-storm was experienced in the Karad Sub-division of Satara. The hail-stones were of the size of betelnuts.

A hailstorm occurred in the Mandla Tahsil (Nagpur) and the stones ranged between gram and wild plum.

" *7th.*—A slight hail-storm occurred in parts of Cachar (Assam). It lasted five minutes and the hail-stones were the size of peas.

April 11th.—A hail-storm lasting 10 minutes occurred in Akhtear, Wasir and Latif Wah of the Shikarpur district The stones were of the size of small berries.

„ *13th.*—A slight hail-storm was felt in some perganas of the Sadr Tahsil of Cachar (Assam). The storm only lasted 2 or 3 minutes.

„ *13th, 14th and 15th.*—Hail-storms with heavy thunder and lightning occurred in Katigorah (Assam) on the above dates.

„ *16th.*—A hail-storm commencing at 9 P.M. and lasting half an hour occurred in Kapaguda (Vizagapatam).

„ *18th.*—A violent hail-storm passed over Jessore. It commenced at 5 P.M. and lasted half-an-hour causing great destruction. The storm advanced from north.

„ *20th.*—A hail-storm commencing at 4 P.M. and lasting half-an-hour was experienced at Rayaghada (Vizagapatam). The stones were as big as gooseberries.

April 22nd.—Hail-storm at Srungavarapukota (Vizagapatam). It lasted half-an-hour.

A hail-storm passed over Bhamo and extended as far as the Kachin Hills. The wind was very violent and the hail-stones as large as sparrows' eggs.

Burdwan was visited by a severe hail-storm. The storm lasted five minutes and the stones were six inches in circumference.

„ *24th.*—The Roha Tahsil in Nowgong (Assam) had a slight hail-storm. The stones were about one inch in circumference.

„ *end.*—Hail-storms were experienced in the Tori-Fatehpur and Dhurwai Jagirs. The storms lasted about one hour and were accompanied with heavy thunder.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea:—During the first three weeks of the month fairly steady normal north-westerly winds obtained along the east and north coasts of the Arabian Sea, east to north-east winds over the centre and west and very unsteady, irregular winds over the south. The air movement during this period was feeble, its mean daily force ranging on most days between 1·7 and 2·4. This feature was most strikingly exhibited on the 17th and 18th, days typical of the period when the great majority of vessels contributing information reported winds of force 1 to 2. Weather was generally fine except in the neighbourhood of the Malabar and west Ceylon coasts where squalls were of occasional occurrence. An important change occurred in the extreme south and south-east of the sea during the 18th when west to south-west winds set in.

These winds intensified slowly during the next three days and weather became disturbed with occasional heavy squalls in that area. Westerly winds of force 2 to 6 obtained at 8 A. M. of the 22nd over the south and south-east of the Arabian Sea as far north as Lat. 8° N. Weather was unsettled with heavy squalls in this area and cloudy over the rest of the sea. The mean wind intensity was 2·7 or exactly normal. A storm was generated in the area of disturbed weather in the south-east of the sea during the next two days. It marched slowly along a north-westerly track towards the Arabian coast during the remainder of the month and occasioned very heavy weather, more especially on the 27th and 28th when vessels within the storm area reported "terrific squalls," "thick rain" and a "tremendous high confused sea, and one vessel *viz.* the "S. Ensenada" in Lat. 8° 21′ N. and Long. 69° 06′ E. at 8 A.M. of the 27th experienced a furious hurricane at 10 A. M.

The mean strength of the air movement was 3·5 on the 27th, 3·6 on the 28th and 3·4 at the end of the month as compared with 2·7, the normal of the month.

Bay of Bengal:—Ordinary winds of indraught to the heated land area prevailed along the coasts of the Bay throughout the month. Out in the open sea the winds were chiefly from between north and east during the first fifteen days and very variable during the second half of the month. There were but few instances of westerly winds.

Weather was even finer than usual except in the vicinity of Ceylon where showers and squalls were of frequent occurrence.

The mean air movement of the month for the whole of the Bay agreed closely with the normal, being only 0·1 feebler than usual.

Equatorial Belt: — Abnormal northerly winds obtained generally over the western half of this area from the 11th to the 20th instead of the normal south-east winds. During the remainder of the month the air movement over this region did not differ to any important extent from that which usually obtains in that area in April. Weather was more disturbed than usual during the greater part of the month. This is fully borne out by the data of Zanzibar and the Seychelles, both of which stations obtained rainfall largely in excess of the normal.

Temperature of the air.

The month of April was perhaps more disturbed than usual in North-West India, and these disturbances were accompanied with some snow on the North-West Himalayas, though there was but little rain on the plains. As a result the weather was cooler than usual over a considerable part of North-West India, more particularly in Baluchistan, the Punjab, and the west of the North-West Provinces. On the other hand, the weather was more settled than usual over Bengal, North-East India and Burma generally, and the mean temperature in that area was markedly in excess.

The mean maximum or day temperature of the month was generally in excess over Western India and over North-East India and Burma, while between these two areas there was a broad band of lower day temperature than usual. Within the western area of excess, an area which included Sind, Gujarat and the western half of the Peninsula, the variations of the day temperature from the normal were slight generally and it was only at Kurrachee that the observations showed any considerable departure form the normal. The following gives cemparative data for this station: —

Station.	Mean maximum temperature.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	°	°	°
Kurrachee	95·7	91·3	+4·4

At all the remaining stations in this area the excess was less than 2°.

The second area of excess was shown in the north-east and included Bengal (proper), the greater part of Bihar, the Orissa and Ganjam Coast districts and Burma, except the extreme north. In this area the variations from the normal were larger than in the western area and exceeded 2° at the following stations in Burma, Bengal and Assam:—

Province.	Station.	Mean maximum temperature.		
		Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
		°	°	°
Bengal	Bogra	100·8	95·6	+5·2
	Dinajpur	98·5	94·6	+3·9
	Jalpaiguri	92·4	89·0	+3·4
	Mymensingh	93·3	90·4	+2·9
	Calcutta	98·2	95·4	+2·8
	Chittagong	91·1	88·6	+2·5
	Barisal	93·3	91·2	+2·1
Bihar	Purnea	99·3	97·2	+2·1
Assam	Dhubri	91·3	88·1	+3·2
Burma	Yamethin	104·5	101·1	+3·4
	Mandalay	104·1	101·5	+2·6
	Minbu	105·2	102·7	+2·5
	Toungoo	102·5	100·1	+2·4

Upper Assam and Upper Burma did not participate in this excess, and at the following three stations there was some deficiency. This is shown below:—

Province.	Station.	Mean maximum temperature.		
		Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
		°	°	°
Upper Assam	Sibsagar	80·4	82·6	—2·2
Upper Burma	Bhamo	91·5	93·0	—1·5
	Kindat	94·7	95·5	—0·8

Over the whole of the remainder of India, *i.e.*, over Baluchistan, Upper Sind, the Punjab, Rajputana, the North-Western Provinces, Central India, the Central Provinces, West Bengal, the Madras coast and the south of the Peninsula the mean day temperature was in defect. Within this large region there were five areas within which the deficiency was more than 2°. Comparative data for the stations in these areas are given below :—

Area.	Province.	Station.	Mean maximum temperature. Actual, April 1901.	Normal, April.	Variation of actual, from normal, April 1901.
			°	°	°
First area.	Baluchistan	Chaman	76·8	81·6	−4·8
Second area.	Punjab	Umballa	92·8	97·8	−5·0
		Ludhiana	93·5	97·6	−4·1
		Delhi	96·4	100·4	−4·0
		Lahore	92·8	96·6	−3·8
		Rawalpindi	84·3	87·9	−3·6
		Khushab	91·8	95·1	−3·3
		Sirsa	97·2	100·5	−3·3
		Peshawar	84·1	86·6	−2·5
	North-Western Provinces West.	Roorkee	94·0	98·1	−4·1
		Agra	100·0	102·8	−2·8
		Dehra Dun	87·6	90·2	−2·6
Third area.	Central India	Nowgong	99·8	103·8	−4·0
	„ Provinces	Saugor	99·1	101·5	−2·4
Fourth area.	Central Provinces	Sambalpur	101·6	104·9	−3·3
		Seoni	98·3	101·3	−3·0
		Raipur	101·4	104·3	−2·9
		Nagpur	103·2	105·7	−2·5
		Chanda	104·7	107·1	−2·4
	Chota Nagpur	Chaibassa	101·6	104·1	−2·5
Fifth area.	South of the Peninsula.	Madura	96·5	100·1	−3·6
		Tinnevelly	96·2	98·3	−2·1

The preceding tables show that the greatest deficiency was recorded over the East Punjab and the greatest excess in North Bengal. The highest maximum temperatures of the month were registered during the second or third week of the month over the greater part of the country, but quite at the close of the month in North-West India. The following gives the highest maximum temperatures (exceeding 110°) registered in India during the month and the highest temperatures previously recorded in this month at the same stations :—

Province or Division.	Station.	Highest maximum temperature recorded in April 1901.	Date on which recorded.	Highest maximum temperature recorded in April previous to 1901.	Year in which recorded.
		°		°	
Burma	Yamethin	112·6	17th	109·6	1896
	Mandalay	110·6	„	110·6	1900
Bengal	Midnapur	112·4	16th	115·4	1889
	Raniganj	112·3	„	114·5	1898
	Bankura	111·6	„	116·1	1889
	Burdwan	111·5	15th & 16th.	113·0	1897
Chota Nagpur	Daltonganj	110·1	15th	113·1	1898
North-Western Provinces.	Allahabad	110·1	„	114·5	1876
Sind	Jacobabad	112·2	30th	117·1	1893
	Kurrachee	111·4	„	107·7	1893, 1894
	Hyderabad	110·2	„	118·1	1886
Rajputana	Deesa	110·1	28th	115·0	1897
Gujarat	Surat	113·5	27th	111·5	1897
	Ahmedabad	112·3	28th	115·3	1897
Berar	Akola	111·1	15th	114·5	1898
	Amraoti	110·4	15th & 16th.	114·5	1896, 1898
Central Provinces.	Chanda	111·7	16th	116·1	1879
	Nagpur	110·2	16th, 17th & 18th.	114·9	1892

The above shows that except in parts of Burma and of North Bombay higher temperatures than those reported this month have been recorded in previous years.

The maximum temperatures at the hill stations were lower than usual except at Cherat, Darjeeling and Wellington. The following gives comparative data for the hill stations :—

Hill Station.	Mean maximum temperature. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	°	°	°
Quetta	72·0	73·6	−1·6
Chaman	76·8	81·6	−4·8
Cherat	76·2	75·5	+0·7
Murree	63·0	68·4	−5·4

Station.	Mean maximum temperature. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	°	°	°
Srinagar	64·8	68·8	—4·0
Leh	51·8	57·0	—5·2
Simla	63·6	66·8	—3·2
Chakrata	66·9	70·6	—3·7
Ranikhet	73·3	74·4	—1·1
Darjeeling	64·0	61·4	+2·6
Pachmarhi	90·7	92·3	—1·6
Mount Abu	85·3	85·6	—0·3
Wellington	76·5	75·9	+0·6

The variations of the mean minimum temperature from the normal differed in several respects from those of the maximum temperature, but were alike in so far that the greatest deficiency in both cases was reported from the East Punjab. The mean minimum temperature of the month was above the normal at nearly all stations to the south of Lat. 25° N. The excess was small over India amounting to more than 1°·5 only at Kurrachee (+2°·6), Bhuj (+1°·8), Rajkot (+1°·6), Malegaon (+1°·8), Khandwa (+2°·1), Saugor (+1°·8), Chanda (+1°·7), Ratnagiri (+1°·6), Bellary (+1°·6), Chitaldroog (+1°·9), and Trichinopoly (+1°·6), but was considerable and more than 2°·0 in Burma. The following gives comparative data for the Burma stations :—

Province.	Station.	Mean minimum temperature. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
		°	°	°
Burma	Toungoo	76·3	73·3	+3·0
	Minbu	78·2	75·6	+2·6
	Diamond Island	80·8	78·1	+2·7
	Mergui	75·7	73·1	+2·6
	Yamethin	77·1	74·7	+2·4
	Moulmein	78·0	75·8	+2·2

To the north of Lat. 25° N. nearly all stations reported a deficiency which was more than 2° at the stations for which comparative data are given below :—

Province.	Station.	Mean minimum temperature. Actual, April 1901.	Normal, April.	Variation of actual from normal April 1901.
		°	°	°
North-Western Provinces West.	Roorkee	62·0	66·6	—4·6
	Dehra Dun	60·9	64·3	—3·4
	Meerut	64·8	67·9	—3·1
Punjab	Umballa	61·9	66·5	—4·6
	Peshawar	57·7	60·7	—3·0
	Dera Ismail Khan	62·7	64·9	—2·2

The mean minimum temperature of the month was below the normal at all the hill stations with the exception of Darjeeling and Mount Abu. The deficiency was large in Baluchistan and was considerable in the North-West Himalayas. The following gives comparative data for the stations at which the deficiency exceeded 1°·5 :—

Hill Station.	Mean minimum temperature. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	°	°	°
Chaman	51·7	57·3	—5·6
Quetta	41·4	46·4	—5·0
Murree	49·0	52·0	—3·0
Leh	27·8	30·8	—3·0
Srinagar	43·4	45·6	—2·2
Simla	50·3	52·5	—2·2
Chakrata	50·4	52·0	—1·6

The following were the lowest temperatures recorded during the month in the North-West Punjab, but in no case were the temperatures lower than those previously recorded. The following gives comparative data :—

Station.	Lowest minimum temperature recorded in April 1901.	Date on which recorded.	Lowest minimum temperature recorded in April previous to 1901.	Year in which recorded.
	°		°	
Rawalpindi	47·0	20th	42·0	1876
Peshawar	48·5	18th	42·2	1886
Dera Ismail Khan	52·6	20th	43·8	1886
Montgomery	54·0	20th	53·0	1900
Sialkot	55·2	19th	49·0	1876
Lahore	56·0	20th	47·8	1886

The distribution of the mean temperature of the month, relatively to the normal, approximated closely to that of the maximum. The mean temperature was in excess of the average over Sind, Gujarat and the Peninsula, except the extreme south and the north-east. The excess was small except at Kurrachee and exceeded 1° only at the following stations for which comparative data are given below :—

Province.	Station.	Mean daily temperature.		
		Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
		°	°	°
Sind	Kurrachee	85·8	82·3	+3·5
Gujarat	Bhuj	87·4	85·6	+1·8
	Malegaon	88·4	86·9	+1·5
	Rajkot	86·7	85·6	+1·1
Peninsula	Chitaldroog	86·1	84·3	+1·8
	Mysore	83·5	82·1	+1·4
	Ratnagiri	84·8	83·4	+1·4
	Bombay	84·1	82·8	+1·3
	Bellary	91·7	90·5	+1·2
	Khandwa	90·5	89·3	+1·2
	Karwar	84·9	83·8	+1·1

The mean temperature of the month was also in excess of the average over the greater part of Burma, Assam and Bengal. In this area the greatest excess was reported from Burma and amounted to 2° or more at the following stations :—

Province.	Station	Mean daily temperature.		
		Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
		°	°	°
Burma	Yamethin	90·8	87·9	+2·9
	Minbu	91·7	89·1	+2·6
	Toungoo	89·4	86·7	+2·7
	Mandalay	91·7	89·4	+2·3
	Moulmein	87·2	85·1	+2·1
Bengal	Calcutta	87·5	85·5	+2·0

Over the remainder of India including the Punjab, Upper Sind, Rajputana, the North-Western Provinces, the greater part of the Central Provinces, part of Central India, Chota Nagpur, Orissa and Ganjam the mean temperature was lower than usual. The deficiency was greatest in the Punjab and the west of the North-Western Provinces and amounted to 2° or more at the following stations for which comparative data are given below :—

Province.	Station.	Mean daily temperature.		
		Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
		°	°	°
Punjab	Umballa	77·3	82·1	−4·8
	Delhi	84·0	86·9	−2·9
	Peshawar	70·9	73·7	−2·8
	Khushab	79·1	81·7	−2·6
	Ludhiana	79·7	82·2	−2·5
	Lahore	78·7	80·7	−2·0
North-Western Provinces.	Roorkee	78·0	82·4	−4·4
	Dehra Dun	74·3	77·3	−3·0
	Meerut	80·6	83·2	−2·6
	Agra	86·2	88·2	−2·0
Central India	Nowgong	84·5	87·5	−3·0

The mean temperature at the hill stations was lower than usual except at Darjeeling, Wellington, Pachmarhi, Ranikhet and Mount Abu, where it was normal or in some excess. The following gives data for these five stations :—

Hill station.	Mean daily temperature.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	°	°	°
Darjeeling	56·2	54·4	+1·8
Wellington	65·7	66·0	−0·3
Pachmarhi	79·9	80·8	−0·9
Mount Abu	78·0	77·0	+1·0
Ranikhet	64·9	65·8	−0·9

At all the remaining stations the mean temperature

was low and at most the deficiency was considerable. This is shown below:—

HILL STATION.	MEAN DAILY TEMPERATURE.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	°	°	°
Chaman	64·3	69·5	—5·2
Quetta	56·7	60·0	—3·3
Murree	56·0	60·2	—4·2
Leh	39·9	44·0	—4·1
Srinagar	54·1	57·2	—3·1
Simla	57·0	59·7	—2·7
Chakrata	58·7	61·4	—2·7

The following gives a summary of the chief abnormal features of the temperature conditions of the month:—

(1) The mean day and mean night temperatures and consequently also the mean temperature were slightly to largely below the normal over the Punjab, Upper Sind, Rajputana and the North-Western Provinces.

(2) Both the day and night temperatures and consequently also the mean temperature were above the normal over North Bombay.

(3) The day temperature was below, the night temperature normal and the mean temperature consequently below the normal over the central parts of the country.

(4) Both the day and night temperatures and consequently also the mean temperature were above the normal over the west and centre of the Peninsula.

(5) Both the day and night temperatures and consequently also the mean temperature were generally above the normal over the greater part of Burma and North-East India.

(6) The temperature was below the normal in the Assam Valley.

(7) Both the day and night temperatures and consequently also the mean temperature were slightly to largely below the normal at the hill stations in the north-west.

The following table gives comparative data of the mean temperature conditions of the month in 56 meteorological divisions of the Empire:—

PROVINCE.	DIVISION.	ACTUAL TEMPERATURE.					VARIATION FROM NORMAL OF MONTH OF		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
BURMA	Tenasserim	94·7	77·4	86·1	17·3	24·2	+1·2	+2·4	—1·2
	Lower Burma (Deltaic)	94·9	78·1	86·5	16·8	24·2	+1·4	+2·0	—0·6
	Central do.	103·5	76·8	90·1	26·7	36·8	+1·9	+2·4	—0·5
	Upper do.	100·0	73·9	87·0	26·1	39·9	+1·2	+1·5	—0·3
	Arakan	93·4	75·5	84·5	17·9	26·9	?	?	?
BENGAL AND ASSAM	Eastern Bengal	94·2	74·2	84·2	19·9	34·5	+1·9	+1·2	+0·7
	Assam (Surma)	88·6	68·7	78·6	19·9	35·7	+1·0	—0·2	+1·2
	Do. (Brahmaputra)	85·9	67·8	77·2	18·1	32·1	+0·5	—0·7	+1·2
	Deltaic Bengal	97·5	76·2	86·8	21·3	36·7	+1·4	+0·8	+0·6
	Central do.	101·2	74·7	88·0	26·5	40·4	+1·0	+0·4	+0·6
	North do.	94·6	69·0	81·7	25·6	40·5	+3·9	—1·5	+5·4
	Bengal Hills	63·1	39·6	51·3	23·5	35·2	+2·6	+1·0	+1·6
	Orissa	94·4	77·9	86·2	16·5	28·8	+0·6	+0·3	+0·3
	Chota Nagpur	99·9	73·1	86·5	26·7	40·7	—1·7	+0·7	—2·4
	Bihar (South)	101·9	74·1	88·0	27·8	39·3	—0·3	+0·8	—1·1
	Do. (North)	99·0	69·7	84·4	29·3	41·0	+1·8	—0·7	+2·5
NORTH-WESTERN PROVINCES AND OUDH.	North-Western Provinces (East)	102·5	70·8	86·7	31·7	45·1	—1·3	—1·4	+0·1
	Oudh (South)	101·8	69·2	85·5	32·6	45·0	—0·5	—1·8	+1·3
	Do. (North)	101·0	68·7	84·9	32·3	45·6	+0·9	—1·4	+2·3
	North-Western Provinces (Central)	101·5	70·9	86·2	30·5	42·3	—1·3	+0·3	—1·6
	Do. do. (West)	98·2	68·6	83·4	29·7	40·5	—2·4	—2·2	—0·2
	Do. do. (Submontane, East)	100·5	71·6	86·1	28·9	41·4	—0·3	—0·8	+0·5
	Do. do. (Submontane, West)	93·1	63·6	78·4	29·6	43·3	—2·8	—3·0	+0·2
	Do. do. (Hills)	69·7	52·7	61·2	17·1	30·4	—2·4	—1·1	—1·3
PUNJAB	Punjab (South-East)	96·4	71·5	84·0	24·9	39·1	—4·0	—1·8	—2·2
	Do. (South)	94·9	64·8	79·9	30·1	43·5	?	?	?
	Do. (Central)	92·8	64·5	78·7	28·3	45·6	—3·8	—0·2	—3·6
	Do. (Submontane)	93·2	64·4	78·8	28·7	44·1	—4·6	—2·8	—1·8
	Do. (Hills)	62·0	41·7	51·9	20·2	39·5	—4·5	—2·6	—1·9
	Do. (North)	84·2	56·2	70·2	28·1	49·3	—2·5	—3·0	+0·5
	Do. (West)	93·7	65·6	79·7	28·1	47·5	—2·0	—2·0	0

Provinces.	Division.	Actual temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bombay and Malabar Coast Districts (Madras).	Malabar	91·3	78·8	85·1	12·5	21·8	+0·8	+0·8	0
	Madras (South Central)	99·5	75·9	87·7	23·7	34·2	−0·1	+1·3	−1·4
	Coorg	84·9	65·2	75·1	19·7	28·3	+0·4	+1·1	−0·7
	Mysore	95·4	70·8	83·1	24·6	33·5	+1·3	+1·3	0
	Konkan	90·0	78·8	84·4	11·2	19·7	+1·0	+1·2	−0·2
	Bombay Deccan	100·4	72·1	86·3	28·3	40·4	+1·2	+0·1	+1·1
	Hyderabad (North)	100·6	75·0	87·9	25·6	38·0	...	...	...
	Khandesh	102·0	71·0	86·5	31·0	43·2	+1·2	+1·8	−0·6
Central Provinces and Berar.	Berar	104·4	75·6	90·0	28·9	40·7	−1·1	+0·8	−1·9
	Central Provinces (West)	103·8	75·2	89·5	28·5	40·5	−1·3	+0·6	−1·9
	Do. (Central)	100·6	73·3	86·9	27·3	38·9	−2·4	+0·5	−2·9
	Do. (East)	101·5	76·9	89·2	24·7	38·2	−3·1	+0·6	−3·7
Bombay (North)	Gujarat	103·8	76·0	89·9	27·9	42·1	+0·2	+1·4	−1·2
	Kathiawar	96·5	73·5	85·0	22·9	36·3	+1·2	+1·2	0
	Sind	100·3	71·6	86·0	28·7	48·4	+1·9	+0·3	+1·6
	Baluchistan Hills	73·3	41·2	57·2	32·1	55·3	−3·2	−5·3	+2·1
Rajputana and Central India.	Central India (East)	99·7	70·4	85·0	29·3	42·1	−1·8	−0·1	−1·7
	Rajputana (East), Central India (West)	100·2	70·5	85·4	29·8	43·2	+0·1	−0·8	+0·9
	Do. (West)	102·1	71·0	86·6	31·2	44·0	−1·0	−0·7	−0·3
Madras	East Coast (North)	91·1	78·1	84·6	13·0	19·3	−0·7	+0·6	−1·3
	Hyderabad (South)	102·5	77·3	89·9	25·2	37·9	−0·2	+1·0	−1·2
	Madras (Central)	105·1	80·0	92·5	25·1	35·9	+0·5	+1·3	−0·8
	East Coast (Central)	96·5	77·9	87·3	18·6	29·4	−1·5	+0·6	−2·1
	Do. (South)	95·5	78·0	86·8	17·5	29·7	−0·6	+0·9	−1·5
	Madras (South)	95·2	76·4	85·8	18·8	27·8	−3·6	+0·7	−4·3

At the commencement of the month tempatature was unsteady and the distribution, relatively to the normal, irregular. On the 1st the mean temperature was low over the east of the Peninsula and high in most other parts of the country, though a feeble low temperature wave was appearing in the north-west of the Punjab. This cold wave subsequently passed eastward into the east of the Punjab where it filled up. The following gives comparative data of mean temperature for the stations in Baluchistan and the Punjab for the 1st and 2nd:—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st April.	2nd April.
	°	°
Chaman	−3·4	+3·4
Quetta	−1·9	+3·1
Peshawar	−4·5	+0·6
Rawalpindi	−0·6	−2·3
Murree	−0·4	+3·6
Srinagar	+1·1	+0·3
Sialkot	+3·3	+2·3

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st April.	2nd May.
	°	°
Khushab	−0·8	+1·6
Dera Ismail Khan	+0·7	+4·0
Mooltan	+2·8	+3·1
Montgomery	−1·7	−2·8
Lahore	+4·3	+0·5
Ludhiana	−3·0	−1·4
Umballa	+0·1	−2·1
Simla	+4·8	+1·7
Sirsa	+5·9	+1·9
Delhi	+3·4	−2·3

On the 2nd, 3rd and 4th rain occurred over the central parts of India and on the 3rd and 4th in Assam and Upper Burma. These showers modified the temperature conditions and the mean temperature fell to below the normal over the central parts of the country and subsequently over North-East India and Upper Burma. The following

gives temperature data for the different divisions of Northern and Central India and Burma from the 2nd to the 4th:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	2nd April.	3rd April.	4th April.
	°	°	°
Punjab	+0·3	+2·8	+1·3
Rajputana	+4·2	+1·0	+3·2
North-Western Provinces and Oudh	+3·3	−1·7	−1·5
Central India	+1·5	−1·0	−1·8
Central Provinces	+0·7	−1·4	−1·1
Berar	+0·2	+0·9	−0·3
Orissa	+1·4	+1·5	−0·4
Chota Nagpur	+2·3	−0·7	−0·7
Bihar	+4·4	−1·3	−1·7
Bengal	+3·6	+1·9	−0·7
Assam	+3·6	+2·7	−4·6
Burma	+0·2	0	−1·3

On the 5th the weather was fine with only a few scattered showers and the mean temperature was rising and was generally above the normal average. The following gives comparative data for all divisions on this day:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 5th April.	Mean minimum temperature, 5th April.	Mean daily temperature, 5th April.
	°	°	°
Burma	−0·4	+1·1	+0·4
Assam	−2·2	−0·8	−1·5
Bengal	−0·2	+1·5	+0·7
Orissa	−1·3	+1·5	+0·1
Bihar	−1·7	+0·4	−0·7
Chota Nagpur	−0·8	+1·8	+0·5
North-Western Provinces and Oudh.	+1·1	−0·2	+0·5
Punjab	+3·6	+3·1	+3·4
Sind	+4·2	−0·6	+1·8
Rajputana	+4·5	+2·7	+3·6
Gujarat	+2·5	+1·6	+2·1
Central India	+0·5	+2·2	+1·4
Central Provinces	−2·5	+2·5	0
Berar	+0·3	+3·3	+1·8
West Coast	+0·6	+2·1	+1·4
Bombay Deccan	+1·6	+2·1	+1·9
Mysore	+0·6	+0·9	+0·8
Madras Coast	−0·8	+1·2	+0·2
Madras Deccan	−0·3	+2·3	+1·0
South India	+0·1	+3·0	+1·6

On the 6th and 7th there were showers of snow on the mountains around the north-west frontier of India and showers of rain in Assam, the Central Provinces and the Deccan, and on the latter date the distribution of temperature was very irregular. There were three areas of relatively low temperature shown, the first lying over Rajputana and the adjacent districts of the Punjab and North-Western Provinces, the second over the Deccan and the Central Provinces, and the third over parts of Bengal, Assam and Burma. The following gives data for those stations within these three areas where the deficiency was more than 2°:—

AREA.	STATION.	VARIATION FROM NORMAL OF		
		Maximum temperature, 7th April.	Minimum temperature, 7th April.	Mean temperature, 7th April.
		°	°	°
1ST AREA	Sambhar	+0·9	−8·7	−3·9
	Ajmer	+0·3	−7·5	−3·6
	Roorkee	−1·6	−3·2	−2·4
	Sirsa	−0·5	−4·1	−2·3
	Delhi	−1·3	−2·9	−2·1
2ND AREA	Ahmednagar	−2·8	−8·9	−5·9
	Sholapur	−7·9	−2·7	−5·3
	Nagpur	−7·5	−3·0	−5·3
	Sambalpur	−8·3	−0·7	−4·5
	Chanda	−5·8	−2·8	−4·3
	Raipur	−6·1	−0·6	−3·4
	Nellore	−5·4	−1·7	−3·6
	Bijapur	−3·6	−2·7	−3·2
	Cuddapah	−3·4	−2·5	−3·0
	Belgaum	−7·6	+1·9	−2·9
	Seoni	−4·2	−1·2	−2·7
	Hyderabad (Dn.)	−4·2	−0·6	−2·4
	Raichur	−2·3	−2·1	−2·2
3RD AREA	Silchar	−6·0	+0·7	−2·7
	Dinajpur	+2·1	−7·0	−2·5

These three areas subsequently amalgamated and a large low temperature area overlay the central parts of the country from the 8th to the 11th. The following gives mean temperature comparative data for all divisions for these four days :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	8th April.	9th April.	10th April.	11th April.
	°	°	°	°
Burma	+1·6	+1·9	+0·9	+1·2
Assam	+2·3	+2·2	+3·1	+2·5
Bengal	+3·6	+1·2	+2·6	+1·6
Orissa	+3·1	—0·2	+1·8	+0·9
Bihar	+1·6	+0·6	+1·5	+1·4
Chota Nagpur	+1·8	—1·2	+0·6	—1·1
North-Western Provinces and Oudh.	—0·9	—0·6	—0·4	+0·7
Punjab	+0·7	+1·5	+2·5	+1·9
Sind	+2·1	+3·6	+4·5	+6·8
Rajputana	+0·1	+1·0	+1·7	+2·7
Gujarat	—0·4	+0·6	+1·0	+1·4
Central India	—1·6	—1·9	—1·0	—0·5
Central Provinces	—1·8	—2·5	—1·3	—0·4
Berar	—0·8	—1·4	—0·7	+0·2
West Coast	+1·1	—0·7	—0·2	+0·4
Bombay Deccan	—1·9	—0·8	—1·0	+0·1
Mysore	+1·2	+2·4	+0·6	+2·3
Madras Coast	+1·6	+1·3	—0·3	+0·3
Madras Deccan	+1·1	0	—0·6	+1·7
South India	+0·3	—1·0	+0·1	+0·1

On the 11th the heat was, relatively to the normal, very great over the western desert. The following gives comparative data of maximum and minimum temperatures for the three stations of Jacobabad, Hyderabad and Bikaner on this day :—

Station.	Variation from normal of	
	Maximum temperature, 11th April.	Minimum temperature, 11th April.
	°	°
Jacobabad	+5·3	+13·7
Hyderabad	+7·3	+ 6·0
Bikaner	+5·3	+ 8·4

On the 11th and 12th there were showers over the North-West Himalayas and the North-West Punjab and the temperature fell decidedly over the Punjab on these dates. The following gives comparative data for the 11th and 12th for the Punjab stations :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	11th April.	12th April.
	°	°
Peshawar	—2·4	+1·9
Rawalpindi	—2·8	—2·4
Murree	—1·7	—2·8
Srinagar	—1·9	—2·2
Sialkot	+4·7	+1·4
Khushab	—2·6	—6·0
Dera Ismail Khan	+0·9	—1·3
Mooltan	+4·5	+1·0
Montgomery	+2·8	—3·6
Lahore	+5·0	—2·8
Ludhiana	+6·3	—5·0
Umballa	+0·6	—6·3
Simla	+0·6	—6·1
Delhi	+2·2	—0·7
Sirsa	+3·5	—1·5

On the 13th there were showers in Assam and the mean temperature fell fast in that province. The following gives comparative data for Assam for the 12th and 13th :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	12th April.	13th April.
	°	°
Assam	+1·9	—4·3

On the 14th there was heavy rain in the Punjab and fresh snow on the Himalayas and a sudden and large fall of temperature occurred over the Punjab—more particularly the central Punjab. This cold wave gradually

spread from the Punjab through Rajputana into the North-Western Provinces. In the mean time showers had continued over the North-West Himalayas and a fresh rapid fall of temperature occurred over the Punjab on the 17th. This fresh cold wave spread like its predecessor through Rajputana and the North-West Provinces and reached Bengal on the 19th, and from that date on to the 26th a prolonged and, relatively to the normal, severe cold period prevailed over the whole of Northern India. The following table gives comparative temperature data for all divisions of Northern and Central India for each alternate day from the 14th to the 26th:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	14th April.	16th April.	18th April.	20th April.	22nd April.	24th April.	26th April.
	°	°	°	°	°	°	°
Punjab . .	−2·9	−2·7	−7·7	−12·2	−9·2	−8·3	−2·8
Rajputana .	+6·9	−3·0	−3·7	− 4·6	−8·3	−4·4	−3·3
North-Western Provinces and Oudh.	+3·3	−2·3	−2·3	− 5·4	−5·2	− 7·4	−5·2
Central India .	+5·6	+0·2	−2·4	− 2·2	−5·3	−3·7	−4·0
Berar . .	+5·7	+4·4	+2·8	− 0·6	−4·5	−2·1	+0·6
Central Provinces.	+4·5	+3·9	+1·3	− 2·0	−3·4	−2·3	−2·1
Chota Nagpur	+4·2	+4·6	+2·1	− 3·4	−3·8	−4·9	−4·1
Bihar . .	+1·0	+2·7	+3·7	− 2·2	−2·4	−3·6	−1·7
Orissa . .	+1·5	+3·4	+0·9	− 4·2	−2·6	−2·1	−1·4
Bengal . .	+2·3	+3·6	+3·6	+ 1·0	−3·3	−3·3	−0·7
Assam . .	−6·1	−4·1	+4·1	+ 2·2	−1·3	−3·3	−2·5

During this cold period the variations from the normal were frequently very large. The following gives comparative data for all stations, where, between the 14th and the 26th the variation of the mean temperature from the normal exceeded 10°:—

DATE.	STATION.	VARIATION FROM NORMAL OF		
		Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
14th April .	Montgomery . .	−22·4	+ 0·1	−11·2
17th ,, .	Peshawar . .	−20·7	− 9·1	−14·9
	Rawalpindi . .	−20·4	− 8·3	−14·4
	Khushab . .	−12·8	− 8·3	−10·6
18th ,, .	Peshawar . .	−11·9	−13·9	−12·9
	Dera Ismail Khan .	− 9·7	−13·9	−11·8
19th ,, .	Dehra Dun . .	−15·7	−10·3	−13·0
	Rawalpindi . .	−13·7	−10·2	−12·0
19th April .	Sialkot . . .	− 9·0	−13·3	−11·2
	Sirsa . . .	−10·2	−11·8	−11·0
	Ludhiana . .	− 9·1	−11·8	−10·5
	Roorkee. . .	− 6·1	−14·6	−10·4
20th ,, .	Rawalpindi . .	−20·3	−15·2	−17·8
	Sialkot . . .	−19·4	−13·6	−16·5
	Montgomery . .	−15·7	−16·3	−16·0
	Lahore . . .	−17·7	−12·2	−15·0
	Dera Ismail Khan .	− 9·9	−16·4	−13·2
	Peshawar . .	− 9·7	−13·7	−11·7
	Khushab . .	−14·3	− 8·9	−11·6
	Sirsa . . .	−11·6	−10·6	−11·1
	Mooltan. . .	−11·2	− 9·4	−10·3
21st ,, .	Montgomery . .	−14·7	−10·2	−12·5
	Sirsa . . .	−14·5	−10·0	−12·3
	Rawalpindi . .	−10·8	−12·6	−11·7
	Delhi . . .	−12·8	− 9·1	−11·0
	Roorkee. . .	−11·3	−10·0	−10·7
	Umballa . .	− 9·4	−11·6	−10·5
	Ludhiana . .	−13·2	− 7·3	−10·3
22nd ,, .	Montgomery . .	−12·0	−11·4	−11·7
	Dehra Dun . .	−10·0	−10·7	−10·4
	Lahore . . .	−11·0	− 9·3	−10·2
	Sambhar . .	− 8·3	−12·0	−10·2
	Rawalpindi . .	− 8·4	−11·7	−10·1
23rd ,, .	Rawalpindi. .	− 9·4	−14·3	−11·9
	Roorkee . .	− 9·3	−12·8	−11·1
	Meerut . . .	− 9·0	−11·6	−10·3
24th ,, .	Kindat . . .	−21·9	− 2·2	−12·1
	Rawalpindi . .	−12·2	−11·6	−11·9
	Dehra Dun . .	−10·2	−12·7	−11·5
	Roorkee. . .	−11·4	−11·1	−11·3
	Montgomery . .	− 9·2	−12·0	−10·6
	Meerut . . .	− 8·6	−12·1	−10·4
25th ,, .	Umballa . .	− 8·8	−13·0	−10·9
	Roorkee. . .	− 9·9	−11·0	−10·5

This depression of temperature was one of the most prolonged and intense which has been experienced in April for many years and appears to have followed falls of snow in the Kashmir hills about the 15th and 20th.

The depression of temperature was more marked in the day than in the night temperature and the following were the records of maximum temperatures 20° or more lower than usual during this period :—

DATE.	STATION.	MAXIMUM TEMPERATURE.		
		Actual of date.	Normal of date.	Variation of actual from normal of date.
		°	°	°
14th April .	Montgomery . .	78·5	100·9	—22·4
17th „ .	Peshawar . .	68·2	88·9	—20·7
	Rawalpindi . .	69·5	89·9	—20·4
20th „ .	Rawalpindi . .	71·0	91·3	—20·3
24th „ .	Kindat . . .	73·8	95·7	—21·9

While temperature was thus steadily low over Northern and Central India from the 14th to the 26th, it was equally steadily high over Burma and the Peninsula. The following gives comparative data for Burma and for the Peninsular districts for each alternate day from the 14th to the 26th :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	14th April.	16th April.	18th April.	20th April.	22nd April.	24th April.	26th April.
	°	°	°	°	°	°	°
Burma . .	+0·2	+1·0	+3·0	+0·5	+1·0	—0·1	+0·1
West Coast .	+1·3	+2·3	+2·0	+0·2	+0·2	—0·5	+0·2
Bombay Deccan.	+3·3	+3·7	+3·5	—1·1	—3·4	—0·9	+2·1
Mysore . .	+2·3	+3·3	+2·9	+2·8	+1·5	+1·3	+1·2
Madras Coast.	—0·2	+0·8	+0·1	+2·4	+1·5	+0·8	0
Madras Deccan	+2·4	+4·2	+2·7	+2·6	+0·5	+2·6	+1·5
South India .	+1·2	+2·2	+1·5	+2·5	+2·0	—0·5	—2·7

On the 27th thunderstorms connected with the cyclonic storm over the Arabian Sea gave very general showers to the Peninsula and the temperature fell in that area—more particularly in South India. On the 28th the temperature distribution was very irregular and low temperature areas were shown, one over the south of the Peninsula, a second over the North Deccan and south of the Central Provinces and a third over the Punjab and the west of the North-Western Provinces. The depression of temperature within these cool areas was considerable to large—more particularly in the south. The following were the stations in each area at which the depression of temperature exceeded 5° :—

AREA.	STATION.	VARIATION FROM NORMAL OF		
		Maximum temperature, 28th April.	Minimum temperate, 28th April.	Mean temperature, 28th April.
		°	°	°
FIRST AREA .	Tinnevelly . .	—17·9	—5·5	—11·7
	Trichinopoly . .	—19·8	—2·9	—11·4
	Madura . . .	—18·0	—2·6	—10·3
	Trincomalee . .	—12·7	—2·0	— 7·4
	Negapatam . .	— 9·7	—4·2	— 7·0
	Salem . . .	— 9·9	—1·2	— 5·6
SECOND AREA .	Akola . . .	—15·3	—4·3	— 9·8
	Amraoti . .	—11·5	—4·8	— 8·2
	Sholapur . .	— 7·4	—5·0	— 6·2
	Nagpur . . .	— 6·8	—4·9	— 5·6
THIRD AREA .	Umballa . .	— 8·5	—8·6	— 8·6
	Sirsa . . .	— 7·5	—5·6	— 6·6

At the same time temperature was high over Sind, Gujarat and Rajputana on the one hand and over Burma and Bengal on the other. This is shown below:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 28th April.	Mean minimum temperature, 28th April.	Mean daily temperature, 28th April.
	°	°	°
Sind	+3·5	+1·9	+2·7
Gujarat	+2·5	+3·3	+2·9
Rajputana	+1·3	+1·4	+1·4
Burma	+4·8	+2·4	+3·6
Bengal	+4·8	+3·1	+4·0
Bihar	+4·3	+1·9	+3·1
Chota Nagpur	—1·0	+4·1	+1·6

A fall of temperature occurred over the greater part of the country during the 29th and 30th and very low temperatures were experienced over the central parts of India. The following gives details for those stations where this depression amounted to 10° or more :—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
29th April	Nagpur . . .	—12·5
„	Akola	—12·4
„	Amraoti . . .	—12·2
„	Sholapur . . .	—10·2
30th „	Nagpur . . .	—13·9
„	Sambalpur . . .	—12·7
„	Chaibassa . . .	—11·2

At this time temperature remained steadily higher than usual over Burma, Bengal and the head of the Bay on the one hand and over North Bombay on the other, while the whole of the intervening region was occupied by a large area of low temperature. The following gives comparative data for all divisions for the 29th and 30th and shows the abnormal distribution prevailing at the close of the month:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	29th April.	30th April.
	°	°
Burma	+3·2	+2·8
Assam	+2·8	−2·7
Bengal	+2·7	−0·2
Orissa	+0·9	−5·1
Bihar	+0·7	−0·9
Chota Nagpur	−4·8	−9·3
North-Western Provinces and Oudh	−2·4	−3·5
Punjab	−1·8	−0·1
Sind	+3·7	+4·9
Rajputana	−1·6	−1·7
Gujarat	+2·0	+3·0
Central India	−5·3	−2·7
Central Provinces	−7·8	−6·6
Berar	−12·3	−5·1
West Coast	0	+1·3
Bombay Deccan	−7·9	−4·9
Mysore	−2·6	−1·4
Madras Coast	−1·6	−2·2
Madras Deccan	−6·2	−6·5
South India	−4·4	−2·6

The following table gives the variations of the mean temperature, week by week, and also for the month:—

Province or Division.	Variation from normal of mean temperature for week ending				
	6th April.	13th April.	20th April.	27th April.	For whole month, April 1901.
	°	°	°	°	°
Burma	+0·2	+1·3	+1·3	+1·8	+1·7
Assam	+1·3	+0·9	−0·4	−2·2	+0·1
Bengal	+1·7	+2·6	+2·5	−0·8	+1·2
Orissa	+0·6	+1·2	+1·0	−1·6	+0·3
Bihar	+0·2	+1·8	+1·6	−2·1	+0·4
Chota Nagpur	+0·2	+0·7	+2·1	−3·6	−0·5
North-Western Provinces and Oudh.	+0·6	0	−1·2	−5·7	−1·7
Punjab	+1·8	+0·6	−6·7	−6·5	−2·7
Sind	+2·7	+4·0	0	−1·7	+1·1
Rajputana	+3·2	+1·9	−1·6	−4·3	−0·5
Gajarat	+2·0	+1·4	+0·5	−0·1	+1·3
Central India	+0·8	+0·2	+0·1	−4·1	−1·0
Central Provinces	−0·4	−0·7	+1·9	−2·5	−0·8
Berar	+0·4	+0·1	+3·5	−2·2	−0·2
West Coast	+1·1	+0·5	+1·7	−0·1	+1·0
Bombay Deccan	+1·4	+0·1	+2·8	−0·6	+1·0
Mysore	+0·5	+1·7	+2·9	+1·2	+1·3
Madras Coast	−1·3	0	+0·7	+0·7	−0·2
Madras Deccan	−0·5	+0·6	+3·4	+1·4	+0·7
South India	−0·2	+0·2	+1·8	−0·8	+0·1

The relatively low temperatures which the charts and data show to have prevailed over the north-west of India on the mean of the month extended westward to Baluchistan but did not extend into Persia where temperature was in slight excess. This is shown in the following table which gives the variations of temperature from the normal for the stations in Baluchistan, Persia, etc.:—

Station.	Variation from normal of		
	Mean maximum temperature, April 1901.	Mean minimum temperature, April 1901.	Mean temperature, April 1901.
	°	°	
Chaman	−4·8	−5·6	−5·2
Quetta	−1·6	−5·0	−3·3
Jask	+1·9	+1·1	+1·5
Bushire	+1·2	+3·8	+2·5
Teheran	+2·3	−0·8	+0·8
Ispahan	+1·7	+0·5	+1·1
Aden	−1·4	+0·7	−0·4

Winds.

The winds were slightly more southerly than usual at Port Blair, but were fairly normal in direction at the stations on the Burma coast. The following gives comparative data of direction for this area :—

Station.	Mean wind direction.	
	Actual, April 1901.	Normal April.
	°	°
Port Blair	S 71 E	N 89 E
Cocos Island	N 3 W	N 39 W
Rangoon	S 28 W	S 25 W
Diamond Island	N 66 W	N 60 W
Akyab	S 46 W	S 65 W

The wind was stronger than usual at Diamond Island and Rangoon and weaker at Port Blair and Akyab. The percentage of steadiness varied irregularly from the normal. This is shown below :—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Port Blair	59	41	+18	91	116	−25
Rangoon	45	58	−13	143	136	+ 7
Diamond Island	85	73	+12	239	187	+52
Akyab	32	37	− 5	57	96	−39

In Lower Bengal and Orissa the wind exhibited slightly increased westing as compared with the normal and was generally steadier than the average while the velocity varied irregularly from the normal. The following gives comparative data for direction, steadiness and velocity for the stations in this division :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Westerly deflection.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
				°	°	°			
Chittagong	70	44	+26	S 26 W	S 9 W	+17	213	165	+48
Calcutta	77	71	+ 6	S 21 W	S 7 W	+14	161	169	− 8
Saugor Island	87	78	+ 9	S 11 W	S 14 W	− 3	496	419	+77
False Point	89	79	+10	S 32 W	S 31 W	+ 1	303	341	−38

In the Gangetic Plain unsteady north-westerly winds prevailed and the velocity was low except at Allahabad. This is shown below :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Westerly deflection.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
				°	°	°			
Darbhanga	17	15	+ 2	S 52 W	S 46 E	+96	109	142	−33
Hazaribagh	62	46	+16	N 54 W	N 74 W	−20	195	216	−21
Allahabad	7	35	−28	N 84 W	N 54 W	+30	143	117	+26

In the Upper Sub-Himalayas division the wind was also north-westerly but was steadier than the average while the velocity was about normal. The following gives data :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
				°	°			
Dehra Dun	57	28	+29	N 89 W	N 82 W	50	54	− 4
Roorkee	32	20	+12	N 41 W	N 72 W	83	78	+ 5
Meerut	57	45	+12	N 62 W	N 60 W	31	60	−29
Lahore	32	27	+ 5	N 12 W	N 23 W	69	77	− 8
Ludhiana	47	28	+19	N 44 W	N 54 W	78	54	+24

In the west Punjab and Upper Sind the wind was more westerly than usual but was light and at Jacobabad very unsteady. This is shown below :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
				°	°			
Peshawar	33	25	+8	N 6 W	N 8 E	48	104	−56
Jacobabad	6	13	−7	N 18 W	S 65 E	82	100	−18

At Kurrachee the wind was lighter than usual, but blew from about the normal direction and with the average steadiness. The following gives data for this station :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
				°	°			
Kurrachee . .	73	81	−8	S 60 W	S 69 W	265	329	−64

In East Rajputana the wind was more southerly and in South Rajputana more northerly than the average while the steadiness and velocity were both lower than usual. The following gives data for Jaipur and Deesa :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
				°	°			
Jaipur . .	18	52	−34	S 73 W	N 52 W	90	124	−34
Deesa . .	45	57	−12	N 81 W	S 85 W	207	228	−21

The following gives comparative data of direction, steadiness and velocity for the different divisions of Northern India, Burma and the Bay Islands :—

Province or Division.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal April.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
				°	°			
Burma . .	54	56	− 2	S 60 W	S 69 W	146	140	+ 6
Bay Islands . .	66	40	+26	N 49 E	N 27 E	82	116	−34
Bengal . . .	78	64	+14	S 19 W	S 10 W	290	251	+39
Orissa . .	89	79	+10	S 32 W	S 31 W	303	341	−38
Bihar . . .	17	15	+ 2	S 52 W	S 46 E	109	142	−33
Chota Nagpur .	62	46	+16	N 54 W	N 74 W	195	216	−21
N.-W. Provinces .	38	32	+ 6	N 69 W	N 67 W	77	77	0
Punjab . .	37	27	+10	N 31 W	N 24 W	65	78	−13
Sind . . .	40	47	− 7	N 65 W	S	174	215	−41
Rajputana . .	32	55	−23	S 87 W	N 70 W	149	176	−27

The above shows a steady north-westerly wind over Northern India and the usual south-westerly winds in Bengal and Burma.

The wind was in most cases more westerly than usual over the Deccan though at Sholapur there was a north-easterly and at Hyderabad a south-easterly wind. The following gives comparative direction data for this division :—

Station.	Mean wind direction.	
	Actual, April 1901.	Normal, April.
	°	°
Belgaum	S 72 W	N 77 W
Sholapur	N 36 E	N 5 E
Poona	S 78 W	N 62 W
Akola	N 57 W	N 48 W
Buldana	N 66 W	N 33 W
Khandwa	N 66 W	N 49 W
Nagpur	S 78 W	N 65 W
Hyderabad (Deccan)	S 59 E	N58 W

The velocity was lower than usual at Sholapur and Belgaum, higher than usual at Poona and Khandwa, and about normal elsewhere, while the steadiness of the wind varied irregularly from the average. The following gives data of velocity and steadiness :—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Belgaum . . .	23	35	−12	270	320	−50
Sholapur . . .	13	13	0	153	213	−60
Poona	64	55	+ 9	296	234	+62
Akola	28	58	−30	143	139	+ 4
Buldana . . .	41	58	−17	216	212	+ 4
Khandwa . . .	48	62	−14	191	148	+43
Nagpur . . .	28	22	+ 6	159	161	− 2
Hyderabad (Deccan) .	23	2	+21	114	113	+ 1

Along the West Coast the wind was steady from west-north-west while in South India the direction varied between south-east and north-east. At Waltair there was

a south-west wind. The following gives direction data for the South India division :—

Station.	Mean wind direction. Actual, April 1901.	Normal, April.
	°	
Salem	S 46 E	S
Chitaldroog	N 59 E	N 32 W
Bangalore	S 81 E	S 33 W
Hassan	N 85 E	N 21 E
Mysore	S 74 E	S 79 E
Madras	S 25 E	S 37 E
Bellary	N 49 E	S 63 W
Waltair	S 45 W	...

The wind was as usual very steady at Madras and Waltair but was unsteady at the remaining stations while the velocity varied irregularly from the average. This is shown below:—

Station.	Mean steadiness. Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Mean wind velocity in miles per diem. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Salem	18	30	−12	116	110	+ 6
Chitaldroog	27	16	+11	159	178	−19
Bangalore	25	40	−15	168	101	+67
Hassan	38	12	+26	71	95	−24
Mysore	25	2	+23	202	189	+13
Madras	84	83	+ 1	192	185	+ 7
Bellary	17	8	+ 9	148	127	+21
Waltair	95	...	...	174	...	...

The following table gives comparative data for all the divisions of the Peninsula for direction, steadiness and velocity:—

Province or Division.	Mean steadiness. Actual percentage, April 1901.	Normal percentage, April.	Variation of actual, normal, from April 1901.	Mean wind direction. Actual, April 1901.	Normal, April.	Mean wind velocity in miles per diem. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
				°	°			
Central Provinces	38	42	− 4	N 84 W	N 57 W	175	155	+20
Berar	35	58	−23	N 62 W	N 41 W	180	176	+ 4
Bombay Deccan	33	34	− 1	N 76 W	N 47 W	240	256	−16
Madras Deccan	20	5	+15	N 83 E	W	131	120	+11
West Coast	68	66	+ 2	N 74 W	N 71 W	181	181	0
Mysore	25	2	+23	N 89 E	N 30 E	202	189	+13
Madras Coast	84	83	+ 1	S 25 E	S 37 E	192	185	+ 7
South India	18	30	−12	S 46 E	S	116	110	+ 6

The wind, as is usual during the month, was more or less variable over the Peninsula except along the West Coast where the direction was steady from west-north-west.

At Quetta the wind was lighter than usual, but otherwise was about normal. This is shown below:—

Station.	Mean steadiness. Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Mean wind direction. Actual, April 1901.	Normal, April.	Westerly deflection.	Mean wind velocity in miles per diem. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
				°	°	°			
Quetta	42	34	+8	N 84 W	N 81 W	+3	49	92	−43

In Kashmir and the Himalayas the winds varied irregularly from the normal. At Chakrata the direction was south-south-easterly instead of west-south-westerly while in the Eastern Himalayas the direction was abnormally southerly. The following gives comparative direction data for the hill stations in the Himalayas:—

Station.	Mean wind direction. Actual, April 1901.	Normal, April.
	°	°
Leh	S 64 W	S 62 W
Srinagar	N 58 W	N 5 W
Kailang	S 56 W	S 63 W
Chakrata	S 21 E	S 64 W
Ranikhet	N 78 W	S 85 W
Katmandu	S 82 W	N 86 W
Darjeeling	S 50 W	S 71 W

The steadiness was generally above the average and the velocity was in excess at most of the stations—more particularly at Chakrata. This is shown below :—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Leh	47	25	+22	98	70	+ 28
Srinagar	17	12	+ 5	124	96	+ 28
Kailang	75	73	+ 2	40	50	− 10
Chakrata	48	24	+24	267	156	+111
Ranikhet	53	43	+10	97	89	+ 8
Katmandu	59	44	+15	35	36	− 1
Darjeeling	77	44	+33	225	206	+19

The wind was more westerly than usual at the central hill stations with the exception of Chikalda where the wind was nearly northerly and was lighter and less steady than the average. The following gives data for the central hill stations:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal April 1901.	Actual, April 1901.	Normal, April.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Mount Abu	48	56	− 8	S 89° W	S 87° W	198	193	+ 5
Pachmarhi	33	43	−10	N 72 W	N 62 W	181	138	+43
Chikalda	23	40	−17	N 16 W	N 47 W	164	194	−30

In the south the wind at the level of the hills was about normal blowing steadily from east-south-east. The following gives comparative data for Wellington :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Wellington	57	61	−4	S 63° E	S 58° E	56	64	−8

At Aden the wind was east-north-easterly and at Perim south-south-easterly while at both stations both the velocity and steadiness were below the average. There was an unusual amount of westing in the wind in the South-East Trades region. The following gives direction data for Zanzibar and the Seychelles in illustration :—

STATION.	MEAN WIND DIRECTION.	
	Actual, April 1901.	Normal, April.
	°	°
Zanzibar	S 4 W	S 5 E
Seychelles	N 12 W	S 69 E

The wind in this region was somewhat stronger than usual, while the steadiness, which was actually very low at the Seychelles, was about the normal. This is shown below :—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, April 1901.	Normal percentage, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Zanzibar	73	81	−8	184	174	+10
Seychelles	17	10	+7	104	...	...

The following gives comparative data of the daily mean air movement in the different divisions of India based on Table I :—

PROVINCE OR DIVISION.	MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Burma	115	115	0
Assam	115	115	0
Bengal	127	180	−53
Orissa	230	221	+ 9
Bihar	120	101	+19
Chota Nagpur	122	202	−80
North-Western Provinces and Oudh	72	96	−24
Punjab	86	74	+12
Sind	178	226	−48
Rajputana	120	146	−26
Gujarat	216	240	−24
Central India	106	146	−40
Central Provinces	125	103	+22
Berar	151	118	+33
West Coast	170	209	−39
Bombay Deccan	197	233	−36
Mysore	132	84	+48
Madras Coast	230	218	+12
Madras Deccan	161	127	+34
South India	98	96	+ 2

Humidity and Cloud.

There was more moisture in the air than usual at Port Blair and Diamond Island, but over the whole of the Bay Islands and Burma the mean temperature was in excess of the normal and the mean relative humidity was in defect. This is shown in the following table:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Cocos Island . .	·845	·847	—·002	69	74	—5
Port Blair . . .	·978	·929	+·049	74	77	—3
Rangoon . . .	·773	·784	—·011	63	66	—3
Diamond Island . .	·859	·851	+·008	74	76	—2

The moisture was less than usual, on the mean of the month, at Calcutta and more than usual at False Point, but the temperature was above the normal in most parts of this area and except at Calcutta, where it was in defect, the relative humidity at the Bengal and Orissa stations was normal or nearly so. This is shown below:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Chittagong . . .	·809	·816	—·007	75	74	+1
Calcutta . . .	·753	·791	—·038	61	68	—7
Saugor Island . .	·941	·935	+·006	79	79	0
False Point . .	·934	·905	+·029	83	83	0

In West Bengal, the Gangetic Plain and the Upper Sub-Himalayas divisions, the aqueous vapour in the air was generally below the normal, so that, notwithstanding the low temperature which prevailed, the relative humidity was less than usual. The following gives comparative data:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Hazaribagh . .	·302	·303	—·001	27	28	—1
Darbhanga . . .	·484	·572	—·088	43	52	—9
Dehra Dun . .	·271	·322	—·051	34	37	—3
Roorkee . . .	·267	·326	—·059	30	34	—4
Meerut . . .	·343	·386	—·043	34	37	—3
Ludhiana . . .	·356	·412	—·056	38	43	—5

There were, however, two exceptions to this condition, *viz.*, Allahabad and Lahore, where both the aqueous vapour and the relative humidity were in excess. Comparative data for these two stations are given below:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Allahabad . . .	·411	·384	+·027	33	31	+2
Lahore . . .	·394	·384	+·010	42	37	+5

In the Indus Valley and Rajputana the air was drier than usual. This was particularly the case at Kurrachee where not only was the vapour tension in marked defect,

but the mean temperature was in considerable excess. This is shown in the following table:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April. 1901.	Normal, April	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Peshawar . . .	·364	·410	—·046	49	52	— 3
Jacobabad . . .	·314	·363	—·049	27	32	— 5
Kurrachee . . .	·658	·732	—·074	56	70	—14
Jaipur . . .	·271	·326	—·055	22	28	— 6
Deesa	·241	·359	—·118	20	28	— 8

The following table gives comparative data of the absolute and relative humidities for all the divisions of Northern India and for Burma and the Bay Islands:—

Province or Division.	Mean absolute humidity.			Mean relative humidity		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Burma . . .	·816	·818	—·002	69	72	— 3
Bay Islands . .	·912	·888	+ 024	72	76	— 4
Bengal . . .	·834	·847	—·013	72	74	— 2
Bihar . .	·484	·572	—·088	43	52	— 9
Chota Nagpur .	·302	·303	—·001	27	28	— 1
Orissa	·934	·905	+·029	83	83	0
North-Western Provinces, Punjab . .	·371	·402	—·031	43	44	— 1
Sind . . .	·486	·548	—·062	42	52	—10
Rajputana . .	·256	·343	—·087	21	28	— 7

In the Deccan division both the absolute and relative humidities were in excess at the majority of stations, but particularly so at Nagpur, where also, the mean temperature was lower than usual. This is shown below:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Belgaum . .	·562	·520	+·042	58	51	+7
Sholapur . .	·473	·399	+·074	38	30	+8
Poona . . .	·383	·374	+·009	36	31	+5
Buldana . .	·322	·301	+·021	28	24	+4
Khandwa . .	·330	·339	—·009	24	26	—2
Nagpur. . .	·542	·385	+·157	42	28	+14
Hyderabad . .	·523	·536	—·013	43	44	—1

Along the West Coast the absolute humidity was greater than usual, but the mean temperature was in excess of the average and the relative humidity was hence in slight defect. The following gives data:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Bombay . .	·828	·816	+·012	72	74	—2
Karwar . .	·852	·831	+·021	71	73	—2

In South India the variations of humidity were irregular. At Salem, Chitaldroog and Madras both the absolute and relative humidities were in excess, as is shown by the following table:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Salem	·739	·731	+·008	60	59	+1
Chitaldroog . . .	·598	·480	+·118	51	45	+6
Madras . . .	·892	·870	+·022	76	74	+2

At the remaining stations both were in defect. This is shown below:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Bangalore . .	·528	·536	—·008	53	53	0
Mysore . . .	·553	·566	—·013	54	58	—4
Hassan . . .	·508	5 59	—·051	53	61	—8
Bellary . . .	·470	·522	—·052	35	39	—4

The following table gives comparative data of the mean absolute and relative humidities for the different divisions of the Peninsula:—

Province or Division.	Mean Absolute Humidity.			Mean Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April. 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Central Provinces .	·436	·362	+·074	33	27	+6
Berar . . .	·322	·301	+·021	28	24	+4
Bombay Deccan .	·473	·431	+·042	44	37	+7
Madras Deccan .	·497	·530	—·033	39	42	—3
West Coast . .	·840	·823	+·017	72	74	—2
Mysore . . .	·547	·535	+·012	53	56	—3
Madras Coast .	·892	·870	+·022	76	74	+2
South India . .	·739	·731	+·008	60	59	+1

At Quetta the absolute humidity was in defect of the normal, but the mean temperature was low and the relative humidity was in slight excess. This is shown below:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Quetta . . .	·233	·258	—·025	51	50	+1

At the Himalayan hill stations there was some excess of relative humidity at Srinagar and Kailang, but a deficiency at all the remaining stations. The deficiency was considerable at Simla, Ranikhet, Katmandu and Darjeeling. The following gives comparative data:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Leh . . .	·106	·110	—·004	43	44	— 1
Srinagar . .	·377	·328	+·049	85	71	+14
Kailang . .	·142	·154	—·012	65	61	+ 4
Simla . . .	·161	·228	—·067	35	44	— 9
Chakrata . .	·185	·220	—·035	38	43	— 5
Ranikhet . .	·211	·265	—·054	35	44	— 9
Katmandu . .	·327	·373	—·046	52	60	— 8
Darjeeling . .	·306	·326	—·020	67	76	— 9

At the central and southern hill stations both the absolute and relative humidities were generally excessive, but at Mount Abu there was a local deficiency. The following gives data of the central and southern hill stations:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Mount Abu . .	·205	·254	—·049	21	28	—7
Pachmarhi . .	·298	·248	+·050	31	26	+5
Chikalda . .	·319	·278	+·041	32	26	+6
Wellington . .	·418	·395	+·023	67	64	+3

The general abnormal features of the distribution of the relative humidity were as follows:—Humidity was in excess of the normal over the central parts of India and a large part of the Deccan. The excess was greatest in the centre of the Central Provinces, but was considerable over

parts of the Deccan and of Mysore. The following shows the stations at which the excess amounted to 5 or more :—

Station.	Relative humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	%	%	
Nagpur	42	28	+14
Sholapur	38	30	+ 8
Belgaum	58	51	+ 7
Chitaldroog	51	45	+ 6
Poona	36	31	+ 5

Humidity was also in slight local excess in three other areas, *viz.*, (1) South-East Bengal, (2) South Madras, and (3) the Central Punjab. The following shows the humidity conditions at the stations within these three areas :—

Station.		Relative humidity.		
		Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
		%	%	
South-East Bengal	Chittagong	75	74	+1
South Madras	Madras	76	74	+2
	Salem	60	59	+1
Central Punjab	Lahore	42	37	+5

In all other parts of the country the relative humidity was below the normal. The deficiency was generally slight, but was 5 or more over the East Punjab, North Bombay and Rajputana, over Bengal and over part of Mysore. This is shown below :—

Station.		Relative humidity.		
		Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
		%	%	
North Bombay and Rajputana.	Kurrachee	56	70	—14
	Deesa	20	28	— 8
	Jaipur	22	28	— 6
	Jacobabad	27	32	— 5
East Punjab	Ludhiana	38	43	— 5
Bengal	Darbhanga	43	52	— 9
	Calcutta	61	68	— 7
Mysore	Hassan	53	61	— 8

At Aden the relative humidity was in slight defect, while at Perim it was in large excess. In the South-East Trades region both the absolute and relative humidities were higher than usual. The following gives comparative data for the Seychelles and Zanzibar :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
	"	"	"	%	%	
Seychelles	·874	·821	+·053	82	77	+5
Zanzibar	·855	·847	+·008	82	81	+1

Cloud was above the average at Port Blair and Akyab, but was less than usual in other parts of Burma. The following gives data :—

Station.	Mean cloud amount.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Cocos Island	1·7	3·1	—1·4
Port Blair	4·9	4·3	+0·6
Rangoon	2·1	3·4	—1·3
Diamond Island	1·6	3·4	—1·8
Akyab	3·9	3·2	+0·7

The cloud amount was in moderate to considerable excess at all the Bengal and Orissa stations, as is shown below :—

Station.	Mean cloud amount.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Calcutta	4·4	2·7	+1·7
Chittagong	5·7	4·1	+1·6
False Point	5·0	3·4	+1·6
Saugor Island	5·6	4·7	+0·9

The cloud amount was in excess over West Bengal and thence as far west as Roorkee, but was in defect over the Central and West Punjab and in the Indus Valley, except locally at Jacobabad. The deficiency was greatest at Peshawar. In Rajputana as in the North-Western Provinces the cloud amount was excessive. The following

gives comparative data for Burma, the Bay Islands and for the different divisions of Northern India :—

Province or Division.	Mean cloud amount.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Bay Islands	3·3	3·7	—0·4
Burma	2·5	3·3	—0·8
Bengal	5·2	3·8	+1·4
Bihar	1·0	1·0	0
Chota Nagpur	5·0	2·8	+2·2
Orissa	5·0	3·4	+1·6
North-Western Provinces	3·1	2·0	+1·1
Punjab	2·7	3·3	—0·6
Rajputana	3·1	2·0	+1·1
Sind	2·4	2·1	+0·3

All over the Deccan the cloud amount was in excess—at some places considerably so—while along the West Coast the variations from the normal were small and irregular. This excess of cloud also extended southward all over South India, and was largest at Mysore and Bellary. The following gives data for the different divisions of the Peninsula :—

Province or Division.	Mean cloud amount.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Central Provinces	4·4	2·4	+2·0
Berar	3·7	2·1	+1·6
Bombay Deccan	4·1	2·9	+1·2
West Coast	2·4	2·4	0
Madras Deccan	4·9	2·9	+2·0
,, Coast	4·0	3·0	+1·0
Mysore	5·8	4·1	+1·7
South India	5·1	3·7	+1·4

At Quetta there was a slight deficiency of cloud. At Leh the amount was exactly normal, but at the remaining stations in the North-West Himalayas the sky was more cloudy than usual. The excess was greatest and more than 1·0 in amount at Kailang and Ranikhet. The following gives comparative data for the stations in the North-West Himalayas :—

Hill Station.	Mean cloud amount.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Leh	6·2	6·2	0
Srinagar	5·2	4·3	+0·9
Kailang	6·9	5·7	+1·2
Simla	4·5	4·1	+0·4
Chakrata	4·0	3·5	+0·5
Ranikhet	4·6	3·2	+1·4

On the other hand, in the Eastern Himalayas the sky was clearer than the average. This was particularly the case at Katmandu. The following gives data for the eastern Himalayan stations :—

Station.	Mean cloud amount.		
	Actual, April 1901.	Normal April.	Variation of actual from normal, April 1901.
Katmandu	2·1	4·3	—2·2
Darjeeling	5·0	6·1	—1·1

At the central and southern hill stations the sky was very cloudy, but particularly so at Pachmarhi where the excess was very large. This is shown below :—

Station.	Mean cloud amount.		
	Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Mount Abu	3·5	1·9	+1·6
Pachmarhi	5·5	2·2	+3·3
Chikalda	3·6	2·6	+1·0
Wellington	4·9	4·7	+0·2

The principal abnormal features of the cloud distribution were as follows :—There was a moderate deficiency of cloud over Lower Burma, over and along the foot of

the Eastern Himalayas and in the North-West Punjab. The defect was more than 1 at the following stations:—

Station.	Mean cloud amount. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Diamond Island	1·6	3·4	−1·8
Rangoon	2·1	3·4	−1·3
Katmandu	2·1	4·3	−2·2
Darjeeling	5·0	6·1	−1·1
Peshawar	3·3	4·4	−1·1

There was a slight deficiency of cloud, relatively to the normal, over the Central Punjab, over Baluchistan and on the Sind and South Konkan Coasts. Over the whole of the remainder of the Indian region there was an excess which was largest at the central stations of India and of the Peninsula. The excess was more than 2 at the stations, for which comparative data are given below:—

Station.	Mean cloud amount. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Mysore	7·5	4·5	+3·0
Bellary	6·4	3·4	+3·0
Nagpur	5·2	3·0	+2·2
Hazaribagh	5·0	2·8	+2·2
Allahabad	3·5	1·4	+2·1

At Aden and Perim the cloud amount was in slight to moderate excess of the normal, while in the South-East Trades region there was a considerable excess. The following gives data for the Seychelles and Zanzibar:—

Station.	Mean cloud amount. Actual, April 1901.	Normal, April.	Variation of actual from normal, April 1901.
Seychelles	6·4	5·1	+1·3
Zanzibar	7·5	5·7	+1·8

Rainfall.

Unlike April 1900 the month under review was drier than usual over the greater part of the country. This unusual dryness was particularly marked over Burma, the greater part of Bengal, the North-Western Provinces, the Punjab, Rajputana and Central India and part of North Bombay. The rainfall of the month was, on the contrary, in excess around the head of the Bay, over the west of the Peninsula and in the central parts of India.

The chief periods of rainfall were as follows:—

(1) From the 2nd to the 4th, when the Bombay Deccan, the Central Provinces and Central India received light to heavy rain and Assam received showers.

(2) The 6th and 7th, when the same regions again received showers.

(3) The 11th to the 16th, when showers were received over the Himalayas, Assam had constant showers and the Punjab received heavy rain.

(4) The 19th, when thunderstorms were reported in North-East India and in Malabar.

(5) The 21st to the 25th, when thunderstorms were of daily occurrence over North-East India, and

(6) The 26th to the 30th, when the Peninsula and particularly the West Coast received rain from thunderstorms connected with the cyclonic storm over the Arabian Sea.

The following table gives the mean actual, mean normal and variation rainfall data of the month for the 56 meteorological divisions of the Empire:—

Province.	Division.	Number of rainy days. Average actual, April 1901.	Average normal, April.	Rainfall. Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.
				Inch.	Inches.	Inch.
Burma	Tenasserim	1·9	...	0·96	...	...
	Lower Burma (Deltaic)	0·3	...	0·36	...	...
	Central do.	0·1	...	0·07	...	...
	Upper do.	1·6	...	0·75	1·25	−0·50
	Arakan	0·5	...	0·24	...	...

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, April 1901.	Average normal, April.	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.
				Inches.	Inches.	Inches.
Bengal and Assam	Eastern Bengal	6·4	5·3	4·92	4·38	+ 0·54
	Assam (Surma)	15·1	11·4	14·99	12·46	+ 2·53
	Do. (Hills)	9·9	8·5	9·29	8·30	+ 0·99
	Do. (Brahmaputra)	12·4	11·0	6·89	7·92	− 1·03
	Deltaic Bengal	4·4	3·5	3·68	2·36	+ 1·32
	Central do.	1·8	2·6	1·17	1·48	− 0·31
	North do.	1·4	4·9	0·89	3·78	− 2·89
	Bengal Hills	6·0	8·1	2·50	5·17	− 2·67
	Orissa	3·3	1·9	1·73	1·13	+ 0·60
	Chota Nagpur	1·4	1·1	0·62	0·58	+ 0·04
	Bihar (South)	0·1	0·5	0·04	0·22	− 0·18
	Do. (North)	0·2	1·3	0·06	0·76	− 0·70
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·1	0·4	0·03	0·14	− 0·11
	Oudh (South)	0·3	0·3	0·05	0·12	− 0·07
	Do. (North)	0·2	0·4	0·04	0·17	− 0·13
	North-Western Provinces (Central)	0·2	0·3	0·04	0·09	− 0·05
	Do. do. (West)	0	0·4	0	0·14	− 0·14
	Do. do. (Submontane, East)	0·1	0·5	0·02	0·27	− 0·25
	Do. do. (Do. West)	0·1	0·7	0·02	0·27	− 0·25
	Do. do. (Hills)	0·2	2·6	0·12	0·90	− 0·78
Punjab	Punjab (South-East)	0	0·6	0	0·25	−0·25
	Do. (South)	0·1	0·7	0·04	0·35	−0·31
	Do. (Central)	1·0	1·5	0·44	0·64	−0·20
	Do. (Submontane)	0·5	1·3	0·12	0·70	−0·58
	Do. (Hills)	1·5	3·5	0·61	2·39	−1·78
	Do. (North)	2·9	2·6	1·38	1·48	−0·10
	Do. (West)	0·7	0·9	0·29	0·41	−0·12
Bombay and Malabar Coast Districts (Madras).	Malabar	5·6	4·8	4·03	3·35	+ 0·68
	Travancore	8·9	...	6·72	...	...
	Madras (South Central)	1·9	2·8	0·88	1·70	− 0·82
	Coorg	5·2	...	3·06	...	...
	Mysore	2·3	2·3	1·17	1·21	− 0·04
	Konkan	1·8	0·6	1·03	0·29	+ 0·74
	Bombay Deccan	4·1	1·8	2·45	0·80	+ 1·65
	Khandesh	0·8	0·3	0·35	0·13	+ 0·22
Central Provinces and Berar.	Berar	1·3	...	0·48	0·25	+ 0·23
	Central Provinces (West)	1·8	0·5	0·57	0·19	+ 0·38
	Do. do. (Central)	1·8	0·7	0·72	0·28	+ 0·44
	Do. do. (East)	1·1	1·0	0·42	0.56	− 0·14
Bombay (North)	Gujarat	0·2	0	0·09	0·01	+ 0·08
	Kathiawar and Cutch	0·1	0·1	0·02	0·08	− 0·06
	Sind	0·1	...	0·02	0·21	− 0·19
	Baluchistan Hills	0·5	...	0·16	0·43	− 0·27
Rajputana and Central India.	Central India (East)	0·4	...	0·10	0·11	− 0·01
	Rajputana (East) and Central India (West)	0·1	...	0·02	0·06	− 0·04
	Do. (West)	0	...	0	0·05	− 0·05
Madras	East Coast (North)	1·5	1·5	1·01	0·84	+ 0·17
	Hyderabad (South)*	...	...	1·68	...	...
	Madras (Central)	1·2	1·3	0·58	0·61	− 0·03
	East Coast (Central)	0	0·9	0·01	0·46	− 0·45
	Do. (South)	1·1	1·4	0·58	0·92	− 0·34
	Madras (South)	3·9	3·4	2·63	2·22	+ 0·41

* Note.—The figures entered against division marked with an asterisk have been obtained from the Weekly Telegraphic Reports.

The total actual rainfall of the month was one-tenth of an inch or less over North Bombay, Rajputana, the South-East and South Punjab, Bihar, and the North-Western Provinces. It was equally light over the Mid-Madras coast and the Cuddapah district, as well as over part of Burma. It amounted to over three inches in the north of the Punjab, in Malabar and Ceylon and in Deltaic Bengal, and was heaviest and amounted to between seven and sixteen inches in Assam (see Pl. IV).

From the table given above it appears that the total rainfall of the month was one-tenth of an inch or less in 21 divisions; between one-tenth of an inch and half an inch in 9 divisions; between half an inch and one inch in 8 divisions; between one inch and three inches in 11 divisions; between three inches and five inches in 4 divisions and over five inches in 4 divisions.

The rainfall was less than usual in 33 divisions; normal, *i.e.*, varied by less than 20% from the average in 9 divisions and was excessive in 12 divisions. The deficiency amounted to 100% in the divisions for which comparative data are given below and which represent the driest areas during April 1901 :—

Division.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inch.	Inches.	Inches.	
Central Burma	0	1·01	—1·01	—100
North-Western Provinces West.	0	0·14	—0·14	—100
South-East Punjab	0	0·25	—0·25	—100
West Rajputana	0	0·05	—0·05	—100

The excess was more than 100% in the following divisions which, therefore, represent the areas where, relatively to the normal, the month's rainfall was most excessive :—

Division.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Konkan	1·03	0·29	+0·74	+255
Bombay Deccan	2·45	0·80	+1·65	+206
Khandesh	0·35	0·13	+0·22	+169
Central Provinces, West.	0·57	0·19	+0·38	+200
Central Provinces, Central	0·72	0·28	+0·44	+157
Gujarat	0·09	0·01	+0·08	+800

The weather was feebly unsettled in Lower Burma on the 1st and 2nd, in Central Burma on the 11th, and in Upper Burma on the 4th, 23rd and 24th, and on these dates in the above regions showers were received. The total rainfall was much below the normal in all divisions, and practically no rain whatever was received over the greater part of the province. This is shown below :—

Division.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Tenasserim	1·76	3·64	—1·88	— 52
Lower Burma, Deltaic	0·02	1·70	—1·68	— 99
Central Burma	0	1·01	—1·01	—100
Upper Burma	0·22	1·59	—1·37	— 86
Arakan	0·10	1·98	—1·88	— 95

In Assam there was frequent rain. The first rainfall period extended from the 2nd to the 8th. The showers were not, however, heavy but exceeded 1″ in 24 hours at the following stations on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sylhet	Dullabcherra	2nd April	1·59
Cachar	Hailakandi	" "	1·03
Sylhet	Chandpur	3rd "	1·80
Sibsagar	Diflu	" "	1·75
Khasi and Jaintia Hills.	Mauphlang	" "	1·35
Kamrup	Rani	" "	1·12
Khasi and Jaintia Hills.	Laitlyngkot	" "	1·10
Kamrup	Mandakata	5th "	1·90
Cachar	Bedarpur	6th "	2·62
Cachar	Dewan	" "	2·37
Cachar	Barkhola	" "	2·28
Cachar	Jatinga Valley	" "	2·14
Kamrup	Tumbulpur	" "	1·71
Kamrup	Sonapur	" "	1·60
Cachar	Silchar	" "	1·36
Naga Hills	Tamlu	" "	1·26
Kamrup	Gauhati	" "	1·24
Sibsagar	Golaghat	" "	1·16
Naga Hills	Wokha	" "	1·10
Sibsagar	Dimapur	" "	1·08
Cachar	Nemotha	" "	1·02
Sylhet	Lalakhal	" "	1·02

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cachar	Bikrampur	7th April	2·11
Sylhet	Karimganj	,, ,,	1·69
Cachar	Badarpur	,, ,,	1·64
	Barkhola	,, ,,	1·57
	Nemotha	,, ,,	1·45
	Hailakandi	,, ,,	1·42
Lakhimpur	Sadiya	,, ,,	1·32
Nowgong	Kuturi	,, ,,	1·23
Sibsagar	Sonari	,, ,,	1·22
Nowgong	Sekoni	,, ,,	1·02
Cachar	Koyah	8th ,,	1·22
Lakhimpur	Wilton	,, ,,	1·08
	Dum Duma	,, ,,	1·02

The second rainfall period, during which the rainfall was heavier and more extensive than during the previous one, lasted from the 12th to the 19th, and between these dates the following amounts exceeding 3″ in 24 hours were measured :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Cachar	Jatinga Valley	13th April	4·82
Sylhet	Habiganj	,, ,,	3·50
	Chandpur	,, ,,	3·25
Khasi and Jaintia Hills.	Cherrapoonjee	14th ,,	12·90
Sylhet	Lalakhal	,, ,,	8·50
Cachar	Badarpur	,, ,,	5·77
	Barkhola	,, ,,	5·05
	Bikrampur	,, ,,	4·89
Sylhet	Karimgang	,, ,,	4·80
Cachar	Silchar	,, ,,	4·50
	Nemotha	,, ,,	3·85
Sylhet	Lalakhal	15th ,,	10·75
Khasi and Jaintia Hills.	Cherrapoonjee	,, ,,	9·63
Naga Hills	Wokha	,, ,,	6·50
Cachar	Badarpur	,, ,,	5·55
Sylhet	Karimganj	,, ,,	5·09
Cachar	Nemotha	,, ,,	3·15
Sylhet	Lalakhal	16th ,,	7·41
Khasi and Jaintia Hills.	Cherrapoonjee	,, ,,	6·20
Lakhimpur	Jaipur	18th ,,	3·13
	Wilton	19th ,,	4·20
Lakhimpur	Dibrugarh	,, ,,	4·03
	Balijon	,, ,,	3·20

The third showery period lasted from the 21st to the end of the month. The rainfall was less heavy than during the second period, but was equally extensive. The principal amounts exceeding 3″ in 24 hours were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Khasi and Jaintia Hills.	Cherrapoonjee	21st April	3·90
Lushai Hills	Sairang	22nd ,,	5·16
Sylhet	Maulvi Bazar	,,	3·20
Lushai Hills	Aijal	23rd ,,	4·20
	Lungleh	24th ,,	4·59
Lushai Hills	Tenzol	,, ,,	3·82
	Demagiri	,, ,,	3·67

The total rainfall of the month for the whole province was approximately normal, as is shown by the following table which gives comparative rainfall data of the eight plains districts of the province :—

District.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of Actual from normal, April 1901.	Percentage variation from normal
	Inches.	Inches.	Inches.	
Cachar	14·85	12·52	+2·33	+19
Sylhet	15·18	12·40	+2·78	+22
Goalpara	2·85	8·07	—5·22	—65
Kamrup	6·08	7·56	—1·48	—20
Darrang	4·73	6·84	—2·11	—31
Nowgong	6·49	5·03	+1·46	+29
Sibsagar	8·56	8·64	—0·08	—1
Lakhimpur	11·29	10·19	+1·10	+11

At Cherrapoonjee the total rainfall of the month amounted to 44·76″, the normal rainfall of the month being 39·58″. The largest amount received in one day was 12·90″ reported on the 14th.

The principal periods of rainfall in Bengal were between the 2nd and the 5th; between the 17th and the 19th and between the 21st and the 26th, but in Chota Nagpur

showers were also received on the 6th and 7th. During the first rainfall period the rainfall was only heavy in East Bengal where the following falls exceeding 1″ in 24 hours were recorded :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 4th April 1901.
		Inches.
Backergunge	Bauphal	3·50
Tippera	Laksam	2·45
Mymensingh	Madaripur	1·65
Dacca	Jaydebpur	1·20

The second burst of rain was more extensive and heavier, rain having been received in South-West Bengal, North Bengal, East Bengal, Orissa and Chota Nagpur. The following amounts exceeding 1″ in 24 hours were recorded during this period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bankura	Khatra	17th April	1·40
Khulna	Khulna	19th ,,	2·23
	Bagerhat	,, ,,	2·00
Noakhali	Noakhali	,, ,,	1·80
Khulna	Mollahat	,, ,,	1·75
Chittagong	Mirsarai	,, ,,	1·70
Jessore	Narail	,, ,,	1·65
Khulna	Dumuria	,, ,,	1·58
Backergunge	Barisal	,, ,,	1·55
Midnapore	Kukarhaty	,, ,,	1·46
24-Parganas	Diamond Harbour	,, ,,	1·26
Jessore	Jessore	,, ,,	1·23
Chittagong	Fenoa	,, ,,	1·18
Backergunge	Doulatkhan	,, ,,	1·12
Hooghly	Hooghly	,, ,,	1·04
Midnapore	Contai	,, ,,	1·02
Puri	Nayagarh	20th ,,	2·19
	Ranpur	,, ,,	1·55
Balasore	Balasore	,, ,,	1·50

The third rainfall period was still more extensive and still heavier. Rain fell during this period over South-West Bengal, North Bengal, East Bengal, Orissa and Chota Nagpur, or in the same areas as the former fall, but rain was more general during the period under review than during the preceding period. The heaviest amounts were received in South-West Bengal, as is shown by the following table which gives all the falls exceeding 2″ in 24 hours during this time :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Khulna	Mollahat	21st April	3·15
24-Parganas	Dum Dum	,, ,,	2·88
Burdwan	Kalna	,, ,,	2·09
Khulna	Mollahat	22nd ,,	4·02
Nadia	Ranaghat	,, ,,	3·82
Noakhali	Ramganj	,, ,,	2·93
Rajshahi	Nator	,, ,,	2·48
Pabna	Serajganj	,, ,,	2·45
Mymensingh	Kishorganj	,, ,,	2·22
Tippera	Brahmanbaria	23rd ,,	4·44
	Kasba	,, ,,	3·82
Cooch Behar	Cooch Behar	,, ,,	3·68
Hill Tippera	Agartala	,, ,,	3·50
Nadia	Meherpur	,, ,,	2·35
Chittagong	Fenoa	,, ,,	2·24
Tippera	Nasirnagar	,, ,,	2·20
	Laksam	24th ,,	4·93
Noakhali	Chhagalnaya	,, ,,	3·18
Chittagong	Mirsarai	,, ,,	2·76
Noakhali	Fenny	,, ,,	2·29
Chittagong Hill Tracts.	Barkal	,, ,,	2·11
Khulna	Mollahat	,, ,,	2·05
Chittagong	Kodala	25th ,,	2·96
Backergunge	Patuakhali	,, ,,	2·76
Noakhali	Hatya	,, ,,	2·76
Backergunge	Bhola	,, ,,	2·50
Chittagong	Cox's Bazar	,, ,,	2·08
Balasore	Baripada	26th ,,	3·42
Khulna	Mollahat	,, ,,	3·25
24-Parganas	Barasat	,, ,,	2·76
	Barrackpore	,, ,,	2·47

The following is a comparative statement of the rainfall in the nine divisions of Bengal :—

Division	Rainfall. Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.	Number of rainy days. Average actual, April 1901.	Average normal, April.
	Inches.	Inches.	Inches.			
Eastern Bengal . .	4·92	4·38	+0·54	+12	6·4	5·3
Deltaic ,, . .	3·68	2·36	+1·32	+56	4·4	3·5
Central ,, . .	1·17	1·48	−0·31	−21	1·8	2·6
North ,, . .	0·89	3·78	−2·89	−76	1·4	4·9
Bengal Hills . .	2·50	5·17	−2·67	−52	6·0	8·1
Orissa	1·73	1·13	+0·60	+53	3·3	1·9
Chota Nagpur . .	0·62	0·58	+0·04	+ 7	1·4	1·1
South Bihar . .	0·04	0·22	−0·18	−82	0·1	0·5
North Bihar . .	0·06	0·76	−0·70	−92	0·2	1·3

The total rainfall of the month was normal in East Bengal and Chota Nagpur, excessive in Deltaic Bengal and Orissa and less than usual in the remaining divisions, more particularly in North Bengal and the two divisions of Bihar. In Bihar the total fall of the month was less than one-tenth of an inch.

The North-West Provinces received hardly any rain during the month. A few showers fell on the 5th and 6th, the 28th and 29th, and in the sub-montane division between the 10th and the 14th. The total rainfall of the month was even less than the small normal quantity and was less than one-tenth of an inch in all except the hills division. This is shown in the following statement :—

Division.	Rainfall. Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.	Number of rainy days. Average actual, April 1901.	Average normal April.
	Inch.	Inch.	Inch.			
North-Western Provinces, East.	0·03	0·14	−0·11	−79	0·1	0·4
South Oudh . .	0·05	0·12	−0·07	−58	0·3	0·3
North Oudh . .	0·04	0·17	−0·13	−76	0·2	0·4
North-Western Provinces, Central.	0·04	0·09	−0·05	−56	0·2	0·3
North-Western Provinces, West.	0	0·14	−0·14	−100	0	0·4
North-Western Provinces, East Sub-montane.	0·02	0·27	−0·25	−93	0·1	0·5
North-Western Provinces, West Sub-montane.	0·02	0·27	−0·25	−93	0·1	0·7
North-Western Provinces, Hills.	0·12	0·90	−0·78	−87	0·2	2·6

Over the greater part of the Punjab the weather was equally dry. Only one showery period occurred, *viz.*, between the 11th and the 16th. On this occasion showers were received in most parts of the province, but except in the sub-montane, hill, north-west and west divisions, they were generally light and unimportant. In the four divisions mentioned above the rainfall was comparatively heavy and extensive, and amounts exceeding 1″ in 24 hours were recorded at the following stations on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Peshawar . .	Abazai . . .	13th April .	1·85
Shahpur . .	Naushahra . .	,, ,, .	1·63
	Sakesar . . .	,, ,, .	1·50
	Miani . . .	,, ,, .	1·25
Rawalpindi . .	Murree . . .	,, ,, .	1·09
	,, . .	14th ,, .	2·52
Ditto . .	Kahuta . . .	,, ,, .	2·18
Peshawar . .	Katlang . . .	,, ,, .	1·38
Hazara . . .	Abbottabad . .	,, ,, .	1·32
Jhelum . . .	Chakwal . .	,, ,, .	1·23
Hazara . .	Haripur . . .	,, ,, .	1·20
	Mansahra . .	,, ,, .	1·12
Rawalpindi . .	Rawalpindi . .	,, ,, .	1·09
Ditto . .	Pindegheb . .	,, ,, .	1·04

The following gives comparative data for the different divisions of the province :—

Division.	Rainfall Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.	Number of rainy days. Average actual, April 1901.	Average normal, April.
	Inches.	Inches.	Inches.			
South-East Punjab .	0	0·25	−0·25	−100	0	0·6
South Punjab . .	0·04	0·35	−0·31	− 89	0·1	0·7
Central Punjab . .	0·44	0·64	−0·20	− 31	1·0	1·5
Punjab Submontane .	0·12	0·70	−0·58	− 83	0·5	1·3
Punjab Hills . .	0·61	2·39	−1·78	− 74	1·5	3·5
North Punjab . .	1·38	1·48	−0·10	− 7	2·9	2·6
West Punjab . .	0·29	0·41	−0·12	− 29	0·7	0·9

The above shows that no rain whatever fell during the month in the South-East Punjab and that the rainfall was in defect in all divisions except the north where it was about normal.

Baluchistan received fairly general, though light, showers between the 10th and the 13th and very light showers on the 26th and 27th. The total for the month was probably less than half the small normal fall. In Kashmir there was a good deal of rain and snow. The first showery period ran from the 4th to the 7th, and during that time the following amounts exceeding 1″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kashmir . . .	Utar Machhipore .	5th April	1·08
Jummoo . .	Doda . . .	6th „	2·10
	Pader . . .	7th „	1·17

During the second rainy period which lasted from the 10th to the 15th the fall was both heavy and extensive and the following heavy falls of rain, exceeding 1″ in 24 hours were measured :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kashmir . . .	Utar Machhipore .	10th April	1·09
Jummoo . .	Kishtwar . . .	11th „	3·17
	Doda	„	2·13
Kashmir . .	Domel . . .	„	1·71
	Sri Ranbir Singh Pora	13th „	2·15
	Utar Machhipore .	„	2·02
Jummoo . .	Punch . . .	„	1·89
	Ramban . . .	„	1·50
Kashmir . . .	Uri	„	1·08
Jummoo . . .	Meerpore . . .	„	1·05
Kashmir . .	Haripore . . .	„	1·04
	Lalphak . . .	„	1·03
Jummoo . . .	Kishtwar . . .	14th „	4·90
Kashmir . .	Karnah . . .	„	3·34
	Uri	„	3·06
	Domel . . .	„	2·27
Jummoo . . .	Kotli	„	2·10
Kashmir . .	Sri Protap Singh Pora	„	1·47
	Vantipore . . .	„	1·25
	Srinagar . . .	„	1·25
Jummoo . .	Udumpur . . .	„	1·23
	Kishtwar . . .	15th „	5·20
Kashmir . . .	Pattan . . .	„	1·22

The third and last rainy period lasted from the 20th to the 23rd. The showers at this time were scattered and light and the fall was unimportant.

Western Rajputana had no rain throughout the month and in Eastern Rajputana the only rainfall recorded was a few light showers between the 27th and the 29th. Similar conditions prevailed in Central India, where the only rainfall was a light shower or two towards the end of the month. The whole of this area including the south-east of the Punjab, Rajputana and Central India was hence practically rainless throughout the month.

In Berar there were showers between the 1st and the 8th and on the 27th and 28th, and on both occasions the rainfall was heavier and more general than usual.

The following gives details of the falls exceeding 1″ in 24 hours which occurred during the month :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 27th April 1901
		Inches.
Buldana	Chikli	1·74
Amraoti	Karinja	1·20

The rainfall in the Central Provinces was similar in character. Showers were received between the 3rd and the 10th and again between the 27th and the 29th. The amounts were generally moderate, but exceeded 1″ in 24 hours at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Seoni . . .	Seoni . . .	4th April .	1·08
Mandla . . .	Tikaria . . .	5th „ .	1·10
Chanda . .	Armori . . .	28th „ .	1·44
	Brahmapuri . .	„ „ .	1·08
	Sironcha . . .	29th „ .	2·30

The following statement shows the total rainfall of the month for the different divisions of Berar and the Central Provinces :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.	Average actual, April 1901.	Average normal, April.
	Inch.	Inch.	Inch.			
Berar	0·48	0·25	+0·23	+ 92	1·3	...
Central Provinces, West	0·57	0·19	+0·38	+200	1·8	0·5
„ „ Central	0·72	0·28	+0·44	+157	1·8	0·7
„ „ East	0·42	0·56	—0·14	— 25	1·1	1·0

The preceding data show that the total rainfall of the month largely exceeded the normal in all divisions except the east of the Central Provinces.

Mysore received a few scattered showers during the first three weeks of the month and a good deal of rain between the 21st and the end of the month. During these ten days the following amounts exceeding 1″ in 24 hours were recorded at the following places :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bangalore	Devanhalli	21st April	4·57
	Hoskot	" "	1·05
Mysore	Gundlupet	22nd "	1·50
Bangalore	Dodbalbapur	24th "	1·30
Hassan	Channarayapatna	26th "	1·90
Kadur	Sringeri	" "	1·20
Shimoga	Tirthahalli	27th "	1·90
Kadur	Koppa	" "	1·67
	Sringeri	" "	1·55
Kolar	Goribidnur	" "	1·48
Shimoga	Nagar	" "	1·44
Chitaldroog	Davangeri	28th "	1·25
	Harihar	" "	1·20
Tumkur	Sira	29th "	1·85
Chitaldroog	Challakere	" "	1·03
	Molakalmuru	30th "	3·43
Bangalore	Nelamangala	" "	1·10

The following gives comparative rainfall data for the province and shows that the month's rainfall was about normal :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.	Average actual, April 1901.	Average normal, April.
	Inches.	Inches.	Inch.			
Mysore	1·17	1·21	—0·04	— 3	2·3	2·3

In Coorg the rainfall was similar to that in Mysore.

Over the greater part of the Bombay Presidency the rainfall of the month was in excess of the normal. In the Konkan there were a few scattered light showers between the 1st and the 26th and a burst of showery weather between the 27th and the 29th. These showers were light in Kolaba and Thana, but were moderately heavy in Ratnagiri, Savantvadi and North Kanara, where the following falls exceeding 1″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
North Kanara	Supa	27th April	1·60
Ratnagiri	Rajapur	28th "	2·76
Savantvadi	Kudal	" "	1·98
North Kanara	Supa	" "	1·70
Ratnagiri	Chiplun	" "	1·55
Savantvadi	Savantvadi	" "	1·36
Ratnagiri	Sangameshvar	" "	1·21
	Malvan	" "	1·10
	Dapoly	29th "	1·41
	Guhagar	" "	1·13
North Kanara	Mundgod	30th "	2·65

The following gives comparative rainfall data for the districts in the Konkan division and shows the very large relative excess :—

District.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
North Kanara	1·61	0·87	+0·74	+ 85
Ratnagiri	1·73	0·06	+1·67	+2,783
Kolaba	0·56	0·04	+0·52	+1,300
Thana	0·07	0·01	+0·06	+ 600

In the Karnatak similar rainfall conditions prevailed. Scattered showers were received up to the 26th, and thereafter a brust of fairly general rain. During this burst the following amounts exceeding 1″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Belgaum	Gokak	27th April	1·48
	Hukeri	" "	1·23
Kolhapur, etc.	Sangli	" "	1·10
Belgaum	Saundatti	" "	1·06
	Chandbad	28th "	3·15
	Belgaum	" "	1·92

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Kolhapur, etc.	Gandhinglaj	28th April	1·85
	Gargoti	,, ,,	1·80
Bijapur	Indi	,, ,,	1·75
Kolhapur, etc.	Kurundvadi	,, ,,	1·65
	Mudhol	,, ,,	1·60
Belgaum	Gokak	,, ,,	1·57
	Sampgaon	,, ,,	1·40
	Hukeri	,, ,,	1·37
Kolhapur, etc.	Shirol	,, ,,	1·35
Dharwar	Haveri	,, ,,	1·20
	Navalgund	,, ,,	1·15
	Ranebennur	,, ,,	1·11
Belgaum	Athni	,, ,,	1·08
Bijapur	Sindgi	,, ,,	1·05
Belgaum	Murgod	,, ,,	1·05
Kolhapur, etc.	Miraj	,, ,,	1·05
Dharwar	Dharwar	,, ,,	1·02
	Nargund	29th ,,	4·00
	Haveri	,, ,,	3·35
Kolhapur, etc.	Sangli	,, ,,	2·50
Dharwar	Dharwar	,, ,,	2·29
Kolhapur, etc.	Ramdurg	,, ,,	2·15
Bijapur	Bagevadi	,, ,,	1·96
Dharwar	Hubli	,, ,,	1·93
	Gadag	,, ,,	1·03

The rainfall was considerably heavier than usual, as is shown by the following comparative data for the districts in this division :—

District.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dharwar	1·98	1·24	+0·74	+ 60
Bijapur	2·18	0·78	+1·40	+179
Belgaum	3·81	1·23	+2·58	+210

In the South Deccan there were showers on the 6th and 7th and between the 27th and 30th, the latter having been the only general fall. During the latter fall the following amounts exceeding 1" in 24 hours were measured :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Satara	Koregaon	27th April	1·72
	Patan	,, ,,	1·52
	Tasgaon	,, ,,	1·33
	Pusesavli	,, ,,	1·01
	Islampur	28th ,,	1·68
Sholapur	Pandharpur	,, ,,	1·50
	Sholapur	,, ,,	1·21
Satara	Vaduj	,, ,,	1·10
Sholapur	Sangola	,, ,,	1·10
	Madha	,, ,,	1·08
Satara	Shirala	,, ,,	1·05
	Karad	,, ,,	1·05
	Medha	29th ,,	3·34
Poona	Sasvad	,, ,,	1·99
	Dhond	,, ,,	1·80
Satara	Mhasvad	,, ,,	1·69
	Vita	,, ,,	1·50
	Wai	,, ,,	1·32
	Panchgani	,, ,,	1·27
Sholapur	Sangola	,, ,,	1·04
Poona	Alandi	,, ,,	1·02
Satara	Mhasvad	30th ,,	2·90
Sholapur	Malsiras	,, ,,	1·69

The rainfall, as in other parts of the Presidency, was heavier than usual. The following gives data for the three districts in this division :—

District.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Satara	3·09	0·71	+2·38	+335
Sholapur	2·49	0·38	+2·11	+555
Poona	0·97	0·30	+0·67	+223

In the North Deccan there was very little rain except in the Ahmednagar district, where moderate showers were received towards the close of the month. Gujarat had a few moderate showers on the 30th, and the total fall of the month in this district was in excess of the small

normal amount. In Kathiawar and Sind there was practically no rain throughout. The following is a comparative statement of the rainfall of the month in the six divisions of the Presidency:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.	Average actual, April 1901.	Average normal, April.
	Inches.	Inch.	Inches.			
Konkan . . .	1·03	0·29	+0·74	+255	1·8	0·6
Bombay Deccan . .	2·45	0·80	+1·65	+206	4·1	1·8
Khandesh . . .	0·35	0·13	+0·22	+169	0·8	0·3
Gujarat . . .	0·09	0·01	+0·08	+800	0·2	0
Kathiawar and Cutch .	0·02	0·08	−0·06	− 75	0·1	0·1
Sind	0·02	0·21	−0·19	− 90	0·1	...

In Madras except in the extreme north and the extreme south the rainfall was generally below the normal. There was one period of fairly general rain, *viz.*, between the 26th and the 29th, and scattered showers at other times.

In Malabar there were general showers on the 9th and rain between the 24th and 29th, while at other times there were occasional scattered falls of rain. The only heavy falls occurred between the 24th and 29th when the following amounts exceeding 2″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Travancore State .	Thadupuzha . .	24th April .	3·30
Malabar . . .	Cherpulcherry . .	,, .	2·84
Travancore State	Meenachil . .	,, .	2·59
	Pattanapuram . .	,, .	2·45
	Ettamanur . .	25th ,, .	2·60
	Kottarakaray . .	,, .	2·43
Malabar . .	Chowghat . .	,, .	2·39
	Manjeri . . .	,, .	2·38
	Angadipuram . .	,,	2·35
	Mankara . . .	,, .	2·15
Travancore State .	Chirayinkil . .	26th ,, .	2·42
Malabar . . .	Cannanore . .	27th ,, .	3·67
Travancore State.	Padmanabhapuram .	,, .	3·65
	Nagercoil . .	,,	2·18
	Tamaracolum . .	28th ,,	2·30
	Variyur . . .	,, .	2·29

The following gives comparative data for the two districts making up this division and shows that the total rainfall was slightly above the normal:—

District.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Malabar	4·68	4·09	+0·59	+14
South Canara	2·85	2·04	+0·81	+40

In Madras South, light rain fell between the 7th and the 10th and general moderate rain between the 25th and the 29th, on the latter occasion the following falls of over 2″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Madura . . .	Uttamapalaivam .	25th April .	2·37
Tinnevelly . .	Watrap . . .	,, ,, .	2·15
Madura. . .	Melur . . .	27th ,, .	2·74
	Tiruppattur . .	,, ,, .	2·40
	Usilampatti . .	,, ,, .	2·05
	Theethandathanam .	28th ,, .	2·58
	Vattanam . . .	,, ,, .	2·28

The following table gives data for the two districts forming this division and shows that the month's rainfall was about normal:—

District.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madura . . .	2·67	2·37	+0·30	+13
Tinnevelly . . .	2·64	2·22	+0·42	+19

Madras, South Central, received very little rain until the 22nd, but between that date and the 29th there were fairly general showers. The general rainfall of the month was lighter than usual, as is shown by the following

table, which gives comparative data for the two districts forming this division :—

Division.	Rainfall.			
	Average actual, April. 1901.	Average normal, April.	Variation of actual from normal, April. 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Salem	0·71	1·34	—0·63	— 47
Coimbatore	1·05	2·00	—0·95	— 48

In Madras, Central, practically the only rainfall received was during the fall at the end of the month, but the showers on this occasion were moderately heavy in Bellary, and the general rainfall of the division was about normal. The following gives comparative data for the four districts in this division :—

District.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April. 1901.	Percentage variation from normal.
	Inches.	Inch.	Inch.	
Cuddapah	0·40	0·51	—0·11	—22
Anantapur	0·33	0·63	—0·30	—48
Bellary	1·25	0·76	+0·49	+64
Kurnool	0·43	0·59	—0·16	—27

The north division of the East Coast received general rain on the 30th, when the following amounts exceeding 2″ in 24 hours were recorded :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 30th April 1901.
		Inches.
Vizagapatam	Gajapatinagaram	3·40
Godavari	Kovvur	2·53
Vizagapatam	Jeypore	2·35
Godavari	Polavaram	2·15

The general rainfall of the month in the north division was in slight excess of the normal. The following gives comparative data for the different districts composing this division :—

Division.	Rainfall.			
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Ganjam	1·00	1·02	—0·02	— 2
Vizagapatam	1·19	0·82	+0·37	+45
Godavari	0·90	0·58	+0·32	+55
Kistna	0·38	0·45	—0·07	—16

In the central division of the East Coast there was practically no rain. This is shown below :—

Division.	Rainall.				Number of Rainy days.	
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.	Average actual, April 1901.	Average normal, April.
	Inch.	Inch.	Inch.			
East Coast, Central	0·01	0·46	—0·45	—98	0	0·9

In the south division of the East Coast there were heavy showers between the 26th and the 29th though the rainfall only partially extended into south and north Arcot. In Tanjore and Trichinopoly, on the contrary, the showers were heavy and the following amounts exceeding 2″ in 24 hours were registered :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Tanjore	Vedaranniyam	27th April	2·51
	Magilankattai	28th ,,	4·00
	Kattumavadi	,, ,,	2·72
	Vegaranniyam	,, ,,	2·30

The following gives comparative data for the six districts composing this division :—

DISTRICT.	RAINFALL.			
	Average actual, April 1901.	Average normal, April.	Vartiaion of actual from normal, April 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Madras	0	0·60	—0·60	—100
Chingleput	0·05	0·59	—0·54	— 91
North Arcot	0·27	0·65	—0·38	— 58
South Arcot	0·19	0·74	—0·55	— 74
Tanjore	1·65	1·23	+0·42	+ 34
Trichinopoly	0·52	1·50	—0·98	— 65

The above shows that the division received only about two-thirds of the normal rainfall.

The following gives rainfall data for the seven divisions of the Madras Presidency :—

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS.	
	Average actual, April 1901.	Average normal, April.	Variation of actual from normal, April 1901.	Percentage variation from normal.	Average actual, April 1901.	Average normal April.
	Inches.	Inches.	Inch.			
Malabar . . .	4·03	3·35	+0·68	+20	5·6	4·8
Madras, South Central	0·88	1·70	—0·82	—48	1·9	2·8
East Coast, North .	1·01	0·84	+0·17	+20	1·5	1·5
Madras, Central . .	0·58	0·61	—0·03	— 5	1·2	1·3
East Coast, Central .	0·01	0·46	—0·45	—98	0	0·9
East Coast. South .	0·58	0·92	—0·34	—37	1·1	1·4
Madras, South . .	2·63	2·22	+0·41	+18	3·9	3·4

Table

Abstract of Observations taken at 8 A.M. at 218

Number of District.	Meteorological Province or District.	Station.	Elevation of barometer above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.				−·014								95·4	+1·6	77·3	+2·5	86·4	+2·1	18·1					25·5
1	Tenasserim and Bay Islands.	Port Blair	61	29·856	+·002	29·848	29·923	5th	29·783	24th	·140	84·6	94·8	?	81·1‡	?	88·0‡	?	13·7	97·0	25th	78·7	12th	18·3
		Mergui	96	29·804	−·019	29·832	29·893	5th	29·728	19th	·165	82·8	92·3	+0·4	75·7	+2·6	84·0	+1·5	16·6	95·6	13th	72·4	29th	23·2
		Tavoy	26	29·874	−·039	29·831	29·946	5th	29·795	25th	·151	81·3	95·5	+1·9	74·8	?	85·2	?	20·7	99·7	24th	71·0	9th	28·7
		Moulmein	94	29·815	−·022	29·846	29·900	1st & 5th.	29·722	25th	·178	84·1	96·3	+2·0	78·0	+2·2	87·2	+2·1	18·3	99·4	4 days	72·8	1st	26·6
2	Lower Burma	Rangoon	41	29·858	−·018	29·836	29·954	5th	29·770	19th	·184	80·6	99·6	+1·6	76·4	?	88·0	?	23·2	104·1	24th & 26th.	72·9	4th	31·2
		Bassein	27	29·877	+·003	29·838	29·961	4th	29·797	20th	·164	82·7	97·3	+1·4	77·1	+2·0	87·2	+1·7	20·2	101·2	26th	72·7	3rd	28·5
		Diamond Island	41	29·866	−·011	29·842	29·945	1st	29·794	24th	·151	83·5	87·2	?	80·8	+2·7	84·0	?	6·4	90·6	25th	79·2	4th, 5th & 15th.	11·4
5	Arakan	Akyab	20	29·877	−·003	29·840	29·975	5th	29·813	20th	·162	83·0	93·4	+1·5	75·5	?	84·5	?	17·9	97·9	28th	71·0	2nd	26·9
3	Central Burma	Toungoo	183	29·692	−·017	29·816	29·785	5th	29·616	25th	·169	86·2	102·5	+2·4	76·3	+3·0	89·4	+2·7	26·2	106·1	18th	71·1	4th	35·0
	II.—Burma Inland				+·018								100·7	+1·3	74·5	+1·6	87·6	+1·4	26·3					39·6
3	Central Burma	Thayetmyo	130	29·747	+·006	29·817	29·848	2nd	29·657	20th	·191	85·0	104·4	+1·4	77·2	+1·8	90·8	+1·6	27·2	108·4	18th	69·9	20th	38·5
4	Upper Burma	Minbu	165	29·703	+·013	29·811	29·824	2nd	29·608	19th	·216	83·8	105·2	−2·5	78·2	+2·6	91·7	+2·6	27·0	109·6	18th	72·1	23rd	37·5
		Yamethin	657	29·202	+·017	29·803	29·300	5th	29·107	19th	·193	85·1	104·	+3·4	77·1	+2·4	90·8	+2·9	27·4	112·6	17th	71·2	24th	41·4
		Mandalay	250	29·618	+·025	29·815	29·725	5th	29·460	19th	·265	86·9	104·1	+2·6	79·3	+2·0	91·7	+2·3	24·8	110·6	17th	71·6	15th	39·0
		Kindat	377	29·493	+·030	29·829	29·636	4th	29·323	15th	·313	76·0	94·7	−0·8	68·3	+1·4	81·5	+0·3	26·4	105·8	19th	60·8	4th	45·0
		Bhamo	381	29·485	+·017	29·828	29·612	4th	29·326	19th	·286	73·1	91·5	−1·5	66·6	−0·8	79·1	−1·2	24·9	98·5	4 days	62·1	1st	36·4
4(a)	Burma Hill Stations.	Maymyo		26·420	*		26·517	4th	26·308	19th	·209	73·2	88·0		62·0		75·1		26·0	93·0	17th	55·4	10th	37·6
		Taunggyi										72·9	84·6	−0·8	60·3	+0·2	72·5	−0·3	24·3	91·6	18th	51·0	2nd & 3rd.	40·6
		Lashio										70·1	89·6	+0·8	62·9	+0·6	76·3	+0·7	26·7	96·5	17th	57·0	5th	39·5
	III.—Assam				−·003								86·8	+0·7	68·1	−0·5	77·6	+0·1	18·7					33·3
7	Surma	Silchar	104	29·777	−·002	29·835	29·902	4th	29·665	19th	·237	74·7	88·6	+1·0	68·7	−0·2	78·6	+0·4	19·9	99·1	1st	63·4	4th	35·7
9	Brahmaputra	Sibsagar	333	29·547	−·005	29·845	29·688	4th	29·388	15th	·300	68·9	80·4	−2·2	65·3	−1·1	72·9	−1·7	15·1	91·2	1st	62·0	25th	29·2
		Dhubri	115	29·711	−·002	29·783	29·872	4th	29·541	15th	·331	75·9	91·3	+3·2	70·3†	−0·2†	81·4†	+1·5	21·0	100·7	18th	65·7	3rd	35·0
	IV.—Bengal and Orissa				−·006								97·0	+1·6	74·4	+0·4	85·7	+1·0	22·6					36·9
6	East Bengal	Chittagong	87	29·787	−·008	29·823	29·897	5th	29·693	15th	·204	81·0	91·1	+2·5	73·9	+0·4	82·5	+1·5	17·2	99·0	1st	67·6	25th	31·4
		Noakhali	43	29·812		29·801	29·929	5th	29·693	15th	·236	82·6	95·6		73·7		84·7		21·9	103·5	1st	65·0	19th	38·5
		Comilla	36	29·818		29·802	29·940	5th	29·690	14th	·250	80·7	93·8		74·4		84·1		19·4	102·3	1st	67·8	4th, 23rd & 26th.	34·5
		Sirajganj	49	29·7477		29·7477	29·879	4th	29·614	14th	·265	78·9	98·7		73·5		86·1		25·2	106·5	15th	66·7	22nd	39·8
		Narayanganj	26	29·810	−·008	29·784	29·944	5th	29·677	14th	·267	80·3	93·4	+0·2	75·8	+1·5	84·6	+0·9	17·6	100·1	1st & 2nd.	68·2	23rd	31·9
		Barisal	13	29·824	−·004	29·782	29·953	5th	29·702	15th	·251	82·6	93·3	+2·1	75·7	+0·8	84·5	+1·5	17·6	100·3	1st	67·1	19th	32·2
		Mymensingh	59	29·769	−·018	29·780	29·894	5th	29·637	14th	·257	78·1	93·3	+2·9	72·7	+0·9	83·0	+1·9	20·6	99·4	8th	66·9	1st	32·5
10	Deltaic Bengal	Faridpur	46	29·781		29·775	29·910	5th	29·642	14th	·268	79·6	95·6		73·8		84·7		21·8	101·8	2nd	65·9	11th	35·9
		Jessore	33	29·785	−·011	29·765	29·908	5th	29·670	14th & 15th.	·238	83·5	98·8	+1·5	76·2	+1·1	87·5	+1·3	22·6	105·5	16th	67·2	1st	38·3
		Calcutta	21	29·798	−·003	29·765	29·916	5th	29·672	15th	·244	82·9	98·2	+2·8	76·8	+1·1	87·5	+2·0	21·4	103·7	17th	69·2	21st	34·5
		Sangor Island	25	29·801	−·003	29·770	29·912	5th	29·685	15th	·227	83·3	90·7	−0·1	79·9	+0·1	85·3	0	10·8	91·4	1st	69·1	19th	25·3
		Krishnagar	47	29·762		29·757	29·883	5th	29·633	15th	·250	83·5	100·5		75·3		87·9		25·2	109·1	15th	67·3	1st	41·8
		Midnapore	149	29·659		29·755	29·765	5th	29·531	15th	·234	83·4	101·3		75·0		88·2		26·3	112·4	16th	67·2	19th	45·2

* Mean of 23 days.

† Mean of 28 days.

I.

Stations in India, Burma, etc., in April, 1901.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 30th April incl.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period, 1st March to 30th April.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				0·73	2·53	−1·80					I.—Burma Coast and Bay Islands.		
4	2	5	1	2	1		4	11	N 29° W	3·8		4·9	−22	81	·975	4·9	0			0·09	2·18	− 2·09	1·24	2·65	− 1·41	0·05	Port Blair .	Tenasserim and Bay Islands.	1
30									Calm	3·3	2·9	2·1	+38	82	·911	3·5	6			3·55	6·07	− 2·52	6·79	9·44	− 2·65	1·60	Mergui.		
29								1	N 45° W	1·1				85	·908	0	3			1·02	3·91	− 2·89	6·00	4·83	+ 1·17	0·47	Tavoy.		
			2	6	6	15	1		S 15° W	3·5		3·2	+ 9	76	·894	2·2	2	4·00	− 2·00	1·38	2·95	− 1·57	1·44	3·36	− 1·92	0·88	Moulmein.		
1			1		1	12	13	1	S 70° W	6·0		4·0	+50	82	·855	2·0	1	2·82	− 1·82	0·52	1·83	− 1·31	0·64	2·11	− 1·47	0·52	Rangoon .	Lower Burma.	2
1							6	23	N 54° W	6·3		5·7	+11	79	·879	2·2	0	2·18	− 2·18	0	1·48	− 1·48	0	1·50	− 1·50	0	Bassein.		
4	2	2				1	8	13	N 54° W	10·1	10·1	5·1	+98	76	·870	2·3	0	2·09	− 2·09	0	1·16	− 1·16	0	1·17	− 1·17	0	Diamond Island.		
8		9	4	4	3		2		N 87° E	2·3		7·2	−68	79	·892	3·3	0	1·09	− 1·09	0	1·08	− 1·08	0	1·50	− 1·50	0	Akyab .	Arakan.	5
2	1	2		18	7				S 39° E	6·0	5·9	4·0	+48	67	·849	2·6	0	1·00	− 1·00	0	2·09	− 2·09	0	2·14	− 2·14	0	Toungoo .	Central Burma.	3
																				0·96	1·38	−0·42					II.—Burma Inland.		
3	1	1		2	12	5	3	3	S 26° W	6·5		7·0	− 7	68	·813	0·3	0	1·09	− 1·09	0·02	0·80	− 0·78	0·02	0·85	− 0·83	0·02	Thayetmyo .	Central Burma.	3
1		1	1	23		1		3	S 47° E	7·1	8·1			55	·647	1·3	0			0	0·69	− 0·69	0	1·13	− 1·13	0	Minbu .	Upper Burma.	4
4				18	8				S 31° E	5·3	5·6			62	·754	0·9	1			0·25	1·75	− 1·50	0·25	1·86	− 1·61	0·16	Yamethin.		
	6			3	20	1			S 4° E	3·7	3·7			49	·614	0·2	1			0·68	1·37	− 0·69	0·75	1·55	− 0·80	0·68	Mandalay.		
25	3	1					1		N 5° W	1·2	1·2			71	·631	4·3	4			3·37	1·82	+ 1·55	3·54	3·09	+ 0·45	1·42	Kindat.		
14	1	12	3						N 51° E	3·7	4·3			71	·579	4·1	3			1·43	1·83	− 0·40	1·53	2·70	− 1·17	0·93	Bhamo.		
19					6	3	1	1	S 30° W	5·5				61	·496	2·9*	3			1·01			1·06			0·52	Maymyo .	Burma Hill Stations.	4(a)
	1		1	1	8	13	5	1	S 39° W					86	·706	2·4	2			0·51	1·60	− 1·09	0·51	1·64	− 1·13	0·36	Taunggyi.		
	3	10	5	1	4	5		2	N 67° E	0·6				71	·524	7·8	3			1·51	3·30	− 1·79	3·42	4·07	− 0·65	0·61	Lashio.		
																				8·84	9·51	−0·67					III.—Assam.		
24		1	5						N 83° E	1·8	3·1	3·4	− 9	82	·713	6·4	18	14·29	+ 3·71	16·50	14·34	+ 2·16	17·07	23·05	− 5·98	4·50	Silchar .	Surma.	7
5		23			1			1	N 44° E	3·2	2·9	2·9	0	91	·639	8·5	15	14·04	+ 0·96	7·49	9·37	− 1·88	8·15	14·44	− 6·29	1·23	Sibsagar .	Brahmaputra.	9
		6	19		2	3			N 90° E	7·2	8·5	8·0	+ 6	74	·663	5·1	3	7·67	− 4·67	2·54	4·83	− 2·29	3·15	6·76	− 3·61	1·72	Dhubri.		
																				2·48	2·64	−0·16					IV.—Bengal and Orissa.		
	1	3	2	13	10	1			S 37° E	8·9	8·8	7·1	+24	78	·820	5·3	7	4·65	+ 2·35	5·01	3·85	+ 1·16	5·31	6·37	− 1·06	1·95	Chittagong .	East Bengal.	6
			5	3	14	6	2		S 3° E	6·2	5·7			80	·892	3·4	10	4·62	+ 5·38	6·02	4·92	+ 1·10	6·05	8·32	− 2·27	1·80	Noakhali.		
				2	25	3			S 2° W	9·3				79	·833	6·4	8	6·70	+ 1·30	3·42	5·61	− 2·19	3·77	8·77	− 5·00	1·59	Comilla.		
21				2	6	1			S 7° E	1·4	1·4			83	·821	6·3	2	4·56	− 2·56	3·31	3·05	+ 0·26	3·39	4·43	− 1·04	2·45	Sirajganj.		
1			2	6	17	4			S 7° E	8·3		6·7	+24	85	·884	6·8	6	7·08	− 1·08	2·55	5·17	− 2·62	3·16	7·84	− 4·68	0·94	Narayanganj.		
				10	15	5			S 9° E	6·6				83	·930	6·7	8	4·50	+ 3·50	5·64	3·23	+ 2·41	7·20	5·75	+ 1·45	1·67	Barisal.		
2			9	17	1	1			S 55° E	2·2	2·3			80	·779	6·7*	3	6·23	− 3·23	2·50	4·34	− 1·84	3·62	6·46	− 2·84	0·95	Mymensingh.		
5				5	13	2			S 5° E	1·8	1·6			88	·892	4·2	9	6·23	+ 2·77	6·30	4·20	+ 2·10	6·70	6·80	− 0·10	1·33	Faridpur .	Deltaic Bengal.	10
26					1	1	2		S 56° W	4·3	4·2	4·5	− 7	79	·914	3·6	4	4·73	− 0·73	4·78	3·71	+ 1·07	4·78	5·86	− 1·08	1·47	Jessore.		
3					7	19	1		S 35° W	6·7		7·5	−11	78	·877	4·1	2	2·92	− 0·92	1·55	1·74	− 0·19	1·55	3·31	− 1·76	1·33	Calcutta.		
				2	16	11	1		S 16° W	20·5		16·7	+23	94	·963	6·4	4	2·00	+ 2·00	4·01	1·13	+ 2·88	4·09	2·37	+ 1·72	1·98	Saugor Island.		
		1		2	8	12	7		S 37° W	4·8				71	·807	3·4	3	3·35	− 0·35	3·79	2·38	+ 1·41	3·91	3·71	+ 0·23	1·40	Krishnagar.		
3	2			4	19	2			S 3° E	4·6	6·0			67	·756	2·1	5	2·85	+ 2·15	3·52	1·50	+ 2·02	4·63	3·02	+ 1·61	1·00	Midnapore.		

* Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 218

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·484		29·731	29·593	2nd	29·344	15th	·249	85·1	103·0		77·3*		90·3*		25·7	111·6	16th	69·6	21st	42·0
		Raniganj	334	29·460		29·743	29·580	5th	29·317	15th	·263	83·0	103·0		76·2		89·6		26·8	112·3	16th	70·1	1st	42·2
		Burdwan	99	29·707	−·006	29·754	29·811	4th & 5th.	29·578	15th	·233	82·2	102·1	+1·5	75·8	+0·2	89·0	+0·9	26·3	111·5	15th & 16th.	68·6	21st	42·9
		Naya Dumka	489	29·303		29·746	29·420	5th	29·168	15th	·252	85·7	101·5		74·7		88·1		26·8	108·4	15th	67·9	4th & 5th.	40·5
		Berhampore	67	29·732	−·010	29·748	29·856	5th	29·602	14th	·254	81·6	100·6	+0·4	74·9	+0·5	87·8	+0·5	25·7	107·5	17th	68·7	21st	38·8
		Rampur Boalia.	70	29·725		29·745	29·862	4th	29·590	14th	·272	82·5	98·9		73·9		86·4		25·0	106·0	17th	67·7	23rd	38·3
		Malda	72	29·711		29·736	29·842	5th	29·577	19th	·265	80·2	99·4		71·2		85·3		28·2	106·4	13th	66·1	1st	40·3
		Bogra	61	29·736		29·750	29·857	4th	29·599	19th	·258	79·1	100·8	+5·2?	73·4	+1·5	87·1	+3·4?	27·4	106·3	13th & 17th.	68·5	7th	37·8
12	North Bengal	Dinajpur	123	29·666	?	29·746	29·813	4th	29·512	19th	·301	76·3	98·5	+3·9	68·9	−1·5	83·7	+1·2	29·6	106·2	19th	60·9	9th	45·3
		Rangpur	123	29·706		29·785	29·848	4th	29·544	19th	·304	77·4	96·7		69·9†		83·1†		26·8	105·2	19th	63·3	23rd	41·9
		Jalpaiguri	284	29·538	−·002	29·784	29·686	4th	29·365	19th	·321	75·2	92·4	+3·4	67·8	?	80·1	?	24·6	98·7	19th	60·1	19th	38·6
		Cooch Behar	156	29·675		29·790	29·834	4th	29·512	19th	·322	75·7	90·7		69·2		80·0		21·5	98·6	19th	62·4	20th	36·2
17	North Bihar	Purnea	125	29·659	−·015	29·740	29·795	5th	29·497	19th	·298	77·0	99·3	+2·1	69·2	−0·4	84·3	+0·8	30·1	105·8	19th	62·3	8th & 26th.	43·5
14	Orissa	Balasore	46	29·775	+·014	29·768	29·880	5th	29·648	15th	·232	83·5	99·0	+1·6	76·1	0	87·6	+0·8	22·9	107·5	15th	65·8	20th	41·7
		False Point.	21	29·821	0	29·784	29·921	3 days	29·724	15th	·197	82·9	88·9	?	78·1	+0·4	83·6	?	10·8	95·3	1st	72·1	1st	23·2
		Cuttack	80	29·751	−·003	29·774	29·868	30th	29·650	19th	·218	83·2	101·9	−0·4	78·6	+0·6	90·3	+0·1	23·3	106·4	13th	74·2	6th, 24th	32·2
		Puri	20	29·827		29·790	29·931	5th	29·722	15th	·209	81·4	87·9		78·7		83·3		9·2	91·2	1st	73·1	30th, 6th	18·1
	V.—Gangetic Plain and Chota Nagpur.				−·002								100·6	−0·6	71·5	−0·4	86·1	−0·5	29·1					41·6
15	Chota Nagpur	Hazaribagh	2,007	27·816	+·006	29·747	27·922	2nd	27·691	15th	·231	83·6	97·3	−0·9	73·0	+0·8	85·2	−0·1	24·3	104·3	16th	68·1	21st	36·2
		Ranchi	2,128	27·698	+ ·006	29·749	27·795	4th	27·590	19th	·205	82·0	95·8	−1·7	72·5	+0·9	84·2	−0·4	23·3	103·2	15th	66·5	9th	36·7
		Daltonganj	730?	29·072		29·761	29·182	4th	28·948	15th	·234	79·5	102·4		68·1		85·3		34·3	110·1	15th	62·2	9th	47·9
		Purulia	?	28·975		29·733	29·089	4th	28·851	15th	·238	83·9	102·2		75·9		89·0		26·3	111·7	16th	70·4	21st	41·3
		Chaibassa	760	29·042		29·749	29·156	4th	28·915	20th	·241	83·1	101·6	−2·5	76·2	+0·4	88·9	−1·1	25·4	110·0	16th	68·8	1st	41·2
16	South Bihar	Gaya	375	29·413	−·003	29·740	29·540	5th	29·277	15th	·263	85·1	102·8	−0·8	75·9	+1·5	89·4	+0·4	26·9	108·8	15th	69·8	4th & 23rd.	39·0
		Dehri	351	29·437		29·743	29·550	4th	29·306	15th	·244	83·3	102·3		75·6		89·0		26·7	109·4	15th	69·0	4th & 4th &	40·4
		Patna	183	29·600	−·008	29·736	29·728	5th	29·471	19th	·257	82·8	101·2	+0·3	73·3	0	87·3	+0·2	27·9	105·7	13th	68·2	21st.	37·5
		Arrah	190	29·584		29·727	29·703	4th & 5th.	29·461	14th	·242	82·4	101·7		72·2		87·0		29·5	106·9	15th & 16th.	65·0	4th	41·9
		Buxar	239	29·544		29·738	29·666	4th	29·419	15th	247	83·5	101·3		73·5		87·4		27·8	105·5	15th	67·6	4th	37·9
17	North Bihar	Bhagalpur	160	29·629		29·742	29·763	5th	29·493	19th	·270	81·5	99·8		71·8		85·8		28·0	106·5	13th	67·3	1st & 4th	39·2
		Darbhanga	166	29·615	−·012	29·737	29·758	5th	29·462	19th	·296	79·3	97·8	+1·5	70·9	−0·9	84·4	+0·3	26·9	102·8	13th	64·4	26th	38·4
		Muzaffarpur	178	29·611		29·744	29·755	4th	29·465	19th	·290	79·7	97·9		69·2		83·6		28·7	102·5	13th	62·8	8th & 26th.	39·7
		Motihari	224	29·547		29·731	29·705	4th	29·370	19th	·335	78·2	98·1		66·5		82·3		31·6	104·0	13th	57·9	20th	46·1
		Chapra	181	29·598		29·734	29·722	4th	29·471	19th	·251	81·3	101·1		70·8		86·0		30·3	105·2	13th	66·3	19th	38·9
18	N.-W. Provinces (East).	Benares	267	29·518	+·004	29·741	29·627	2nd & 4th.	29·388	21st	·239	82·6	102·3	−1·2	70·5	−1·7	86·4	−1·5	31·8	109·3	15th	63·8	4th	45·5
		Allahabad	309	29·477	−·001	29·740	29·586	2nd	29·337	21st	·249	84·4	102·6	−1·4	71·1	−1·0	86·9	−1·2	31·5	110·1	15th	65·4	4th & 20th.	44·7
23	N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·516	+·003	29·731	29·655	4th	29·373	19th	·282	81·0	100·5	−0·3	71·6	−0·8	86·1	−0·6	28·9	105·1	15th	63·7	4th & 20th.	41·4
19	South Oudh	Lucknow	368	29·404	−·005	29·731	29·506	4th	29·276	20th	·230	81·8	101·8	−0·5	69·2	−1·8	85·5	−1·2	32·6	107·3	15th	62·3	25th	45·0
20	North Oudh	Bahraich	403	29·352	−·017	29·716	29·482	4th	29·207	19th	·275	81·9	101·0	+0·9	68·7	−1·4	84·9	−0·3	32·3	107·1	15th	61·5	3rd	45·6
21	N.-W. Provinces (Central).	Cawnpore	416	29·374?	+·021?	29·745?	29·504?	2nd	29·230?	20th	·274	81·6	100·7	−1·0	69·0	?	84·9	?	31·7	105·9	15th	61·0	25th	44·9
		Mainpuri	516	29·2	+·004	29·743	29·359	2nd & 4h.	29·138	20th	·221	80·0	101·2	−1·3	67·6	?	84·4	?	33·6	106·8	15th & 29th.	61·5	3rd	45·3

*Mean of 29 days.

I—*continued.*

Stations in India, Burma, etc., in April 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 30th April 1901.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period, 1st March to 30th April.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
1	1	1		9	1	13	3	1	S 23° W	2·8	3·2			47°	·563	3·0	3	2·73	+0·27	1·38	1·34	+0·04	1·52	2·52	— 1·00	0·95	Bankura .	Central Bengal.	11
20	1	1			2	2	1	3	N 34° W	1·6				52	·562	1·3	3	2·27	+0·73	1·27	1·27	0	1·28	2·09	— 0·81	0·80	Raniganj.		
		1	1	1	3	13	9	2	S 57° W	4·5	4·4	4·8	— 8	70	·766	3·9	4	3·54	+0·46	2·51	2·06	+0·45	2·51	3·64	— 1·13	0·90	Burdwan.		
4	1		2	3	3	4	5	8	S 84° W	1·3	1·4			43	·511	3·6	1	2·46	−1·46	0·51	0·96	−0·45	0·82	1·81	— 0·99	0·43	Naya Dumka.		
7			2		11	5	4	1	S 23° W	2·6	2·8	5·2	−46	69	·744	3·4*	3	2·64	+0·36	1·41	1·50	−0·09	1·91	2·55	— 0·64	0·73	Berhampore.		
7		1	1	3	3	10	4	1	S 36° W	2·8	2·9			65	·715	2·4	2	2·88	−0·88	1·30	1·69	−0·39	1·47	2·62	— 1·15	0·70	Rampur Boalia.		
		4	10	3	8	3		2	S 54° E	2·9	2·7			69	·708	2·7	2	1·81	+0·19	0·92	1·12	−0·20	1·01	1·92	— 0·91	0·55	Malda.		
														83	·830	3·8	1	3·88	−2·88	0·28	2·45	−2·17	0·51	3·51	— 3·00	0·23	Bogra.		
		17	2	3	2	5	1		N 72° E	7·7	8·9			71	·646	4·1	1	3·12	−2·12	0·78	2·08	−1·30	0·88	2·95	— 2·07	0·70	Dinajpur .	North Bengal.	12
1		7	8	5	6	2	1		S 67° E	6·2	6·5			78	·732	1·2	1	4·69	−3·69	0·69	3·37	−2·68	0·86	4·61	— 3·75	0·65	Rangpur.		
	1	15	11	2				1	N 63° E	1·8	2·2			71	·622	1·6	2	5·92	−3·92	0·87	4·11	−3·24	1·46	5·61	— 4·15	0·41	Jalpaiguri.		
3		6	10	8	3				S 79° E	3·1	3·2			77	·682	5·1	2			4·32	5·35	−1·03	4·96	6·98	— 2·02	3·68	Cooch Behar.		
	1	4	14	3		4	1	3	N 86° E	5·0	4·4	3·6	+22	59	·540	2·7	0	2·04	− 2·04	0	1·43	−1·43	0·64	1·83	− 1·19	0	Purnea .	North Bihar.	17
6					7	17			S 32° W	9·1				72	·820	3·4	7	3·62	+3·38	4·47	2·27	+2·20	5·16	3·72	+ 1·44	1·71	Balasore .	Orissa.	14
1	1				3	21	4		S 48° W	13·4	12·9	13·3	− 3	83	·941	6·1	1	1·73	−0·73	0·24	1·77	−1·53	0·44	2·70	— 2·26	0·16	False Point.		
5	1				8	13	3		S 37° W	4·6		5·1	−10	76	·872	4·2	2	1·77	+0·23	0·91	1·15	−0·24	0·91	2·56	— 1·65	0·51	Cuttack.		
1		1			2	24	1	1	S 45° W	12·4	11·6			87	·934	3·3	1	0·81	+0·19	0·21	0·45	−0·24	0·45	1·06	— 0·61	0·13	Puri.		
																				0·17	0·35	−0·24					V.—Gangetic Plain and Chota Nagpur.		
3	1	1			1	8	8	8	N 87° W	9·2	8·2	8·4	−2	30	·343	3·5	0	1·15	−1·15	0·08	0·41	−0·33	0·43	1·16	− 0·73	0·08	Hazaribagh	Chota Nagpur.	15
3	1	1			4	5	9	7	S 87° W	6·5	7·7			41	·447	3·4	2	1·81	+0·19	1·09	0·64	+0·45	1·53	2·02	− 0·49	0·49	Ranchi.		
14			5	9	1		1		S 55° E	4·0	4·8			43	·435	1·6	2	0·64	+1·36	0·45	0·24	+0·21	0·65	0·94	− 0·29	0·23	Daltonganj.		
19						2	7	2	W	2·5				42	·484	2·1	3			1·42			1·74			0·67	Puralia.		
7	1	1	1		1	10	8	1	S 67° W	2·5	2·2			61	·692	2·4	2	1·69	+0·31	0·39	0·87	−0·48	0·60	2·14	− 1·54	0·20	Chaibassa.		
8				2	5	12	3		S 34° W	8·0	7·3	3·8	+92	43	·503	3·7	0	0·54	−0·54	0	0·26	−0·26	0·22	0·69	− 0·47	0	Gaya . .	South Bihar.	16
1				1	15	11		2	S 22° W	6·0	5·3			36	·391	3·2	0	0·25	−0·25	0·03	0·08	−0·05	0·28	0·77	− 0·49	0·02	Dehri.		
	1	2	8	1	2	6	10		S 39° W	4·6	5·4	4·4	+23	48	·517	2·1	0	0·62	−0·62	0·03	0·26	−0·23	0·51	0·64	− 0·13	0·03	Patna.		
3	1	1	3	2	2	2	15	1	S 81° W	3·8	4·9			40	·436	1·8	0	0·46	−0·46	0·01	0·23	−0·22	0·71	0·63	+ 0·08	0·01	Arrah.		
	3	1	1	4		5	16		S 79° W	3·7	7·9			36	·413	2·8	0	0·25	−0·35	0	0·16	−0·16	0·54	0·48	+ 0·06	0	Buxar.		
6	2	8	3	1	1	6	2	1	N 45° E	4·2	3·9			51	·542	3·0	1	1·42	−0·42	0·22	0·90	−0·68	0·58	1·30	− 0·72	0·22	Bhagalpur .	North Bihar.	17
2	2	2	8	7	1	3	3	2	S 69° E	4·5		5·1	−12	52	·521	1·3	0	1·44	−1·44	0	0·61	−0·61	0·45	0·93	− 0·48	0	Darbhanga.		
13		3	6	3	1		2	2	N 87° E	2·1	1·9			77	·785	0·4	0	0·96	−0·96	0	0·48	−0·48	0·50	0·88	− 0·38	0	Muzaffarpur.		
			13	3	3	6	5		S 34° E	5·3				90	·875	0·5	0	1·17	−1·17	0	0·70	−0·70	0·66	1·11	− 0·45	0	Motihari.		
2			6	5	1	9	5	2	S 17° W	3·8	4·6			43	·459	2·6	0	0·54	−0·54	0	0·22	−0·22	0·61	0·59	+ 0·02	0	Chapra.		
		1	1	2	2	12	6	2	S 52° W	3·0	3·4	5·0	−32	35	·392	2·7	0	0·27	−0·27	0	0·08	−0·08	1·20	0·36	+ 0·84	0	Benares .	N.-W. Provinces (East).	18
3	1			3	3	7	10	3	S 65° W	5·2	5·9	4·9	+20	29	·458	3·1	0	0·55	−0·55	0	0·11	−0·11	0·35	0·43	− 0·08	0	Allahabad.		
4	9	3	1		3	4	5	1	N 42° W	2·8		4·4	−36	44	·467	3·7	0	0·73	−0·73	0	0·43	−0·43	0·14	0·85	− 0·71	0	Gorakhpur .	N.-W. Provinces (East Submontane).	23
4	2	1	1	1	1	2	17	1	N 89° W	2·5	2·7	4·4	−39	35	·381	4·8	0	0·27	−0·27	0	0·02	−0·02	0·09	0·39	− 0·30	0	Lucknow .	South Oudh.	19
9	2		2	1	2	1	2	11	N 50° W	3·0	2·8			45	·499	2·0	0			0	0·34	−0·34	0·06	0·81	− 0·73	0	Bahraich .	North Oudh.	20
27							1	2	N 60° W	3·1				37	·403	1·3	0	0·50	−0·50	0	0·13	−0·13	0·17	0·40	− 0·23	0	Cawnpore .	N.-W. Provinces (Central).	21
9	2		4		2	2	8	3	N 34° W	1·9	1·9			35	·358	4·5	0			0	0·12	−0·12	0·04	0·36	− 0·32	0	Mainpuri.		

† Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 218

Number of District.	Meteorological Province or District.	Station.	Elevation of barometer above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas				+·007								93·3	−3·3	64·1	−2·4	78·7	−2·9	29·2					44·0
24	N.-W. Provinces (West Submontane).	Bareilly	569	29·193	0	29·730	29·297	4th	29·074	19th	·223	77·9	97·8	−1·7	67·8	−0·9	82·8	−1·3	30·0	103·4	15th	58·7	3rd	44·7
		Debra Dun	2,223	27·566	−·013	29·772	27·668	4th	27·428	19th	·240	69·5	88·0	−2·2	60·9	−3·4	74·5	−2·8	27·1	93·5	29th	54·0	24th	39·5
		Roorkee	887	28·883	+·002	29·749	28·989	4th	28·756	20th	·233	74·0	94·0	−4·1	62·0	−4·6	78·0	−4·4	32·0	99·7	29th & 30th.	53·9	19th	45·8
22	N.-W. P. (West)	Meerut	738	29·025	−·004	29·738	29·127	4th	28·899	20th	·228	75·3	96·6	−1·8	64·8	−3·1	80·7	−2·5	31·8	101·2	29th	57·8	24th	43·4
26	South-East-Punjab.	Delhi	718	25·060	+·001	29·748	29·183	2nd	28·942	20th	·241	77·9	96·4	−4·0	71·5	−1·8	84·0	−2·9	24·9	101·2	29th	62·1	2nd	39·1
28	Central Punjab.	Lahore	702	29·088	+·020	29·773	29·200	1st	28·843	16th	·357	74·3	92·8	−3·8	64·5	−0·2	78·7	−2·0	28·3	101·6	30th	56·0	20th	45·6
27	South Punjab	Sirsa	682	29·124	+·010	29·760	29·251	2nd	28·986	16th	·265	77·7	97·2	−3·3	65·2	?	81·2	?	32·0	102·8	30th	58·1	19th	44·7
		Patiala	818	28·981		29·775	29·063	2nd	28·804	20th	·259	76·8	92·6		64·4		78·5		28·2	98·0	27th, 29th & 30th	55·7	19th	42·3
29	Punjab (Submontane).	Ludhiana	812	28·969	+·011	29·763	29·076	2nd	28·809	20th	·267	74·2	93·6	−4·0	65·8	−0·9	79·7	−2·5	27·8	100·5	30th	57·2	19th	43·3
		Sialkot	830	28·957	+·023	29·771	29·059	1st	28·712	16th	·347	74·8	93·2	?	65·6	−0·4	79·4	?	27·6	102·2	30th	55·2	19th	47·0
		Umballa	892	28·879	+·006	29·755	28·976	2nd	28·750	20th	·226	72·1	92·8	−5·0	61·9	−4·6	77·3	−4·8	30·9	98·0	27th & 30th.	56·0	23rd	42·0
31	North Punjab	Rawalpindi	1,676	28·141	+·026	29·821	28·259	1st	27·943	20th	·316	69·5	84·3	−3·6	54·6	?	69·5	?	29·7	97·1	30th	47·0	20th	50·1
	VII.—Indus Valley and North-West Rajputana.				+·010								96·9	−0·2	68·0	−1·0	82·5	−0·6	28·9					46·9
31	North Punjab	Peshawar	1,110	28·750	+·022	29·870	28·906	1st	28·559	20th	·347	69·8	84·1	−2·5	57·7	−3·0	70·9	−2·8	26·4	97·0	30th	43·5	18th	48·5
32	West Punjab	Khushab	612	29·198	+·038	29·789	29·327	1st	28·982	16th	·345	76·8	91·8	−3·3	66·3	−1·8	79·1	−2·6	25·5	102·8	30th	59·5	17th	43·3
		Montgomery	558	29·233	+·014	29·765	29·277	1st	29·038	16th	·339	78·1	94·2	?	65·7	?	80·0	?	28·5	103·5	30th	54·0	20th	49·5
		D. I. Khan	594	29·241	+·008	29·796	29·397	1st	29·093	20th	·304	74·5	92·6	−0·6	62·7	−2·2	77·6	−1·4	29·9	104·2	30th	52·6	20th	51·6
		Mooltan	420	29·391	+·011	29·788	29·555	1st	29·236	16th	·319	76·0	96·2	−1·6	67·8	?	82·0	?	28·4	106·4	30th	60·9	20th	45·5
47	Sind	Jacobabad	186	29·604	0	29·753	29·795	1st	29·513	20th	·282	80·1	102·0	−0·1	67·5	−1·4	84·8	−0·8	34·5	112·2	30th	57·5	6th & 23rd.	54·7
		Hyderabad	96	29·725	0	29·774	29·882	1st	29·607	19th	·275	82·0	103·3	+1·4	71·6	−0·4	87·5	+0·5	31·7	110·2	30th	64·0	7th	46·2
		Kurrachee	30	29·822	−·003	29·803	29·959	1st	29·726	20th	·233	82·3	95·7	+4·4	75·7	+2·6	85·8	+3·5	20·0	111·4	30th	67·2	1st	44·2
51	West Rajputana	Bikaner	771	29·021	−·003	29·766	29·172	2nd	28·898	19th	·274	82·0	99·6	−1·0	72·9	−0·7	86·3	−0·9	26·7	105·1	14th & 27th.	65·0	20th	40·1
		Pachpadra	360	29·431		29·769	29·569	2nd	29·317	19th	·252	82·6	104·5		67·7		86·1		36·8	109·1	27th	60·1	6th	49·0
		Jodhpur	782	29·029		29·792	29·166	2nd	28·911	19th	·255	82·5	102·3		72·3		87·3		30·0	107·2	28th	64·3	7th	42·9
	VIII.—East Rajputana, Central India, and Gujarat.				−·013								99·4	−0·6	72·3	−0·1	85·9	−0·3	27·1					40·2
50	East Rajputana	Jaipur	1,431	28·396	+·001	29·781	28·520	2nd	28·289	21st	·231	83·3	99·9	−0·6	70·1	+0·8	85·0	+0·1	29·8	105·2	14th	62·1	3rd	43·1
		Kotah	819	28·977			29·086	2nd	28·900	14th	·186	85·6	102·0		75·4		88·7		26·6	108·6	14th & 28th.	70·1	2nd	38·5
		Sambhar	1,254	28·567	+·012	29·791	28·690	2nd	28·459	21st	·231	78·2	99·1	0	67·1	−3·2	83·2	−1·6	32·0	105·5	28th	57·8	7th	47·7
		Ajmer	1,611	28·224	−·006	29·801	28·348	2nd	28·112	20th	·236	79·7	98·4	−0·2	68·7	−1·6	83·6	−0·9	29·7	103·4	28th	59·7	7th	43·7
		Udaipur	1,925	27·923		29·791	28·041	2nd	27·819	20th	·222	81·8	97·9		69·7		83·9		28·2	103·0	13th & 28th.	62·3	19th	40·7
		Deesa	466	29·361	−·030	29·780	29·448	6th	29·263	19th	·185	84·5	104·0	+1·1	72·3	+1·4	88·2	+1·3	31·7	110·1	28th	64·5	6th	45·6
46	Kathiawar and Cutch.	Bhuj	395	29·449	−·006	29·796	29·561	2nd	29·336	20th	·225	83·5	102·0	+1·8	72·8	+1·8	87·4	+1·8	29·2	108·2	29th	67·9	6th	40·4
		Jamnagar	61	29·792		29·799	29·886	1st	29·694	20th	·192	81·9	98·4		72·4		85·4		26·0	108·7	29th	68·2	5 days	40·5
		Rajkot	429	29·424	−·024	29·807	29·512	1st	29·291	19th	·221	81·4	102·8	+0·6	70·6	+1·6	86·7	+1·1	32·2	108·4	28th, & 29th.	64·9	6th	43·5
		Veraval		29·840	−·021	29·800	29·935	1st	29·764	19th	·171	79·7	86·3	?	73·0	? +0·6	79·9	?	13·8	104·7	27th	67·8	9th	36·9
		Dwarka	37	29·839		29·822	29·936	2nd	29·749	20th	·187	81·0	85·6		77·3		81·5		8·3	91·4	29th	74·7	3rd & 6th.	16·7
		Bhavnagar Para.	35	29·802	−·042	29·782	29·885	1st	29·707	19th	·178	84·9	103·2	?	75·1	0	89·1	?	28·1	108·7	15th	68·8	18th	39·9
49	Central India	Nowgong	757	29·052	−·001	29·768	29·170	2nd	28·902	20th	·268	80·9	99·8	−4·0	69·2	−1·9	84·5	−3·0	30·6	105·5	28th	62·0	4th	43·5
		Indore	1,823	28·033	0	29·786	28·114	6th	27·941	20th	·173	84·1	99·8	−0·4	70·1	+1·0	84·9	+0·3	29·7	104·8	14th & 15th.	62·6	19th	42·2
		Neemuch	1,630	28·213	?	29·792	28·321	2nd	28·120	20th	·201	82·5	99·0	−1·4	69·8*	−0·9*	84·5*	−1·2	29·2	105·0	13th &	63·0	19th	42·0

* Mean of 29 days.

I—*continued.*

Stations in India, Burma, etc., in April, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 30th April 1901.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period, 1st March to 30th April.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				0·22	0·60	−0·36					VI.—Upper Sub-Himalayas.		
23		1		1			1	4	N 45° W	2·1	2·0	4·5	− 56	39	·374	3·6	0	0·45	− 0·45	0	0·17	−0·17	0·54	1·11	− 0·57	0	Bareilly	N.-W. Provinces (West, Sub-montane),	24
17		3		1	1	2	4	2	N 84° W	2·1		2·6	− 19	46	·331	4·1	0	1·45	− 1·45	0	0·53	−0·53	1·33	1·60	− 0·27	0	Debra Dun,		
22	2				1	1		4	N 48° W	3·5		3·2	+ 9	42	·355	2·7	0	1·18	− 1·18	0·04	0·42	−0·38	1·02	1·14	− 0·12	0·04	Roorkee,		
19			1			1	2	7	N 57° W	1·3		2·4	− 46	43	·387	3·0	0	0·73	− 0·73	0	0·24	−0·24	0·44	1·01	− 0·57	0	Meerut,	N.-W. P. (West).	22
7	2		2	1	1		13	4	N 77° W	3·6	3·3	3·9	− 15	38	·365	2·9	0	0·64	− 0·64	0	0·24	−0·24	0·56	0·80	− 0·24	0	Delhi	South-East Punjab.	26
16	4	2		2				6	N 10° W	3·1		3·3	− 6	50	·425	2·3	1	1·45	− 0·45	0·19	0·46	−0·27	1·52	1·19	+ 0·33	0·19	Lahore	Central Punjab	28
1	2	8	3	5	4	4		3	S 85° E	4·2	4·9	4·0	+ 23	43	·410	1·1	0	0·64	− 0·64	0	0·31	−0·31	0·32	0·68	− 0·36	0	Sirsa	South Punjab.	27
4	12			6		1	2	5	N 10° W					45	·416	2·5	0			0			1·84			0	Patiala,		
6	4	3	1	4		3	4	5	N 38° W	3·7	3·3	2·1	+ 57	47	·387	2·2	1	1·55	−0·55	0·30	0·85	−0·55	0·89	1·84	− 0·95	0·30	Ludhiana	Punjab (Submontane),	29
2	8	11	4			1	1	3	N 25° E	3·4		2·3	+ 48	46	·390	2·0	1	2·09	−1·09	0·47	0·91	−0·44	1·97	2·09	− 0·12	0·39	Sialkot,		
20			1				3	6	N 61° W	2·0				55	·429	1·3	0			0	0·53	−0·53	1·81	1·26	+ 0·55	0	Umballa,		
27		1					1	1	N 45° W	1·9	1·7	2·8	− 39	53	·380	1·5	4	3·27	+0·73	1·66	1·95	−0·29	3·82	3·71	+ 0·11	1·09	Rawalpindi,	North Punjab.	31
																				0·18	0·40	−0·21					VII.—Indus Valley and North-West Rajputana.		
20	3	1			3	1	2		W	1·9	2·1	4·2	− 50	58	·425	2·2	2	3·36	− 1·36	0·84	1·84	−1·00	3·96	3·54	+ 0·42	0·63	Peshawar	North Punjab.	31
1	4	13	5	1	3	1		2	N 51° E	8·3	9·6			39	·349	2·1	1	1·30	− 0·30	0·55	0·62	−0·07	1·24	1·16	+ 0·08	0·55	Khushab	West Punjab.	32
2	5	9	3	3	3	2		3	N 49° E	6·7	5·8			31	·296	2·2	1	0·70	+ 0·30	0·35	0·24	+0·11	0·99	0·75	+ 0·24	0·35	Montgomery,		
20	2	6						2	N 20° E	1·6	1·7	2·4	− 29	64	·550	2·2	1	1·61	− 0·64	0·10	0·77	−0·67	0·93	1·40	− 0·47	0·10	D. I. Khan,		
13	3	3		5	1			5	N 28° E	1·4	1·7	2·5	− 32	45	·396	2·1	1	0·36	+0·64	0·17	0·07	+0·10	0·22	0·45	−0·23	0·17	Mooltan,		
14	1	2	4	3	1			5	N 59° E	3·3	3·4	3·9	− 13	34	·348	3·5	0	0·27	−0·27	0	0·20	−0·20	0·92	0·34	+0·58	0	Jacobabad	Sind.	47
	6	1	1	1	4	10	3	4	S 78° W	7·1	7·7	10·2	− 24	32	·341	1·7	0	0	0	0	0·01	−0·01	0	0·18	−0·18	0	Hyderabad,		
	1	3	4	1	1	4	10	6	N 74° W	8·8	11·0	14·0	− 21	61	·659	1·9	0	0·45	−0·45	0	0·33	−0·33	0·03	0·56	−0·53	0	Kurrachee.		
	2	6	6	5	2	1	4	4	N 65° E	7·3		4·7	+ 55	43	·474	2·4	0			0	0·17	−0·17	0·05	0·37	− 0·32	0	Bikaner	West Rajputana	51
	4	6	9		3	4	2	2	N 60° E	5·5	6·3	4·5	+ 40	25	·289	2·1	0			0	0·01	−0·01	0·02	0·08	− 0·06	0	Pachpadra,		
15		3	3	1	1	3	3	1	S	2·7†	2·4†			20	·219	2·9	0			0	0·06	−0·06	0	0·09	− 0·09	0	Jodhpur.		
																				0·13	0·06	+0·08					VIII.—East Rajputana, Central India and Gujarat.		
2	8	12	3				2	3	N 21° E	3·7		5·7	− 35	27	·310	3·6	0	0·30	− 0·30	0	0·09	−0·09	0·09	0·48	− 0·39	0	Jaipur	East Rajputana.	50
7	5	3	2	2	1	2	3	5	N 12° W	4·0	4·7			22	·275	2·6	1			0·16	0·02	+0·14	0·16	0·09	+ 0·07	0·16	Kotah,		
20	1	3	2	1		1	1	1	N 45° E	4·0		7·0	− 43	32	·312	3·2	0	0·30	−0·30	0	0·08	−0·08	0·09	0·44	− 0·35	0	Sambhar,		
12	1	4		4	4		2	3	S 61° E	4·4		5·1	− 12	40	·410	2·7	0	0·18	− 0·18	0	0·06	−0·06	0·22	0·23	− 0·01	0	Ajmer,		
18	2			2		1	3	4	N 62° W	3·8	3·8			35	·387	2·9	0			0·09			0·15			0·09	Udaipur,		
	4	8	4	3	1	3	4	3	N 28° E	8·4		9·4	− 11	31	·357	2·2	0	0	0	0	0·01	−0·01	0·03	0·06	− 0·03	0	Deesa,		
	3					3	21	3	N 83° W	10·6		10·9	− 3	54	·616	1·2	0			0	0·18	−0·18	0·05	0·27	− 0·22	0	Bhuj	Kathiawar and Cutch.	46
	1	1	1	1	2	11	10	3	S 65° W	13·1	14·0			68	·735	1·7	0			0			0			0	Jamnagar,		
	1	5				1	10	13	N 52° W	9·5	9·4	11·1	− 15	54	·578	1·7	0	0·10	0·10	0	0·02	−0·02	0	0·03	−0·03	0	Rajkot,		
	3	1		2	1		9	14	N 56° W	8·8	10·4	7·2	+ 44	74	·747	3·2	0			0	0	0	0	0	0	0	Veraval,		
	2		1		1	1	13	12	N 68° W	11·4				81	·865	2·8	0			0·04			0·04			0·04	Dwarka,		
	6	1			1	2	7	13	N 52° W	7·1	7·3			37	·434	1·9	0			0	0·01	−0·01	0	0·10	− 0·10	0	Bhavnagar Kara,		
6	2	1	1	1	3	5	9	2	S 75° W	2·1	1·2·1	2·8	− 25	36	·371	3·5	0	0	0	0·04	0·06	−0·02	0·26	0·33	− 0·07	0·04	Nowgong	Central India.	49
5		1	1	5	3	1	9	5	S 69° W	3·9		4·4	− 11	46	·543	2·6	1	0	+ 1·00	0·15	0·06	+0·09	0·26	0·08	+ 0·18	0·12	Indore,		
	4	9	3	3	1	2	4	4	N 20° E	7·4	6·7	1	− 35	34	·383	1·8	1	0·09	+ 0·91	0·24	0·09	+0·15	0·31	0·17	+ 0·14	0·24	Neemuch.		

† Mean of 27 days. ‡ Mean of 22 days.

Table

Abstract of Observations taken at 8 A.M. at 218

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
45	Gujarat	Surat	39	29·820	−·038	29·801	29·905	1st	29·763	19th	·169	84·5	101·8	+1·6	75·0	?	88·4	?	26·8	113·5	27th	70·0	8th	43·5
		Ahmedabad	164	29·669	−·024	29·77 9	29·752	2nd	29·574	20th	·178	86·0	105·8	+0·2	76·9	+1·4	91·4	+0·8	28·9	112·3	28th	71·6	17th	40·7
22	N.-W. P. (West)	Agra	556	29·234	−·004	29·751	29·341	2nd	29·111	14th	·230	81·1	100·0	−2·8	72·3	−1·2	86·2	−2·0	27·7	105·9	12th	67·4	3rd & 25th.	37·6
21	N.-W.P. (Central)	Jhansi	858	28·969	+·008	29·780	29·082	2nd	28·839	20th	·243	84·8	102·5	−1·3	76·2	+0·3	89·4	−0·5	26·3	108·8	28th	72·1	19th, 25th & 29th.	36·7
	IX.—Deccan				−·004								101·8	−1·1	74·5	+0·7	88·2	−0·2	27·3					39·6
38	Bombay Deccan	Belgaum	2,539	27·353	−·007	29·810	27·424	1st	27·286	20th	·138	76·4	94·7	−1·7?	68·2	+0·9	81·5	−0·4?	26·5	100·3	14th	62·9	6th	37·4
		Sholapur	1,590	28·269	−·011	29·790	28·360	1st	28·189	25th	·171	84·6	103·5	−1·7?	75·3	+0·3	89·4	−0·7?	28·2	109·7	16th	68·1	6th	41·6
		Poona	1,840	28·042	−·017	29·821	28·117	6th	27·976	19th	·141	79·6	102·2	+1·1	70·1	+0·3	86·2	+0·7	32·1	108·1	16th	64·4	20th	43·7
		Bijapur	1,946	27·933	0	29·800	28·013	1st	27·842	19th	·171	82·4	101·3	+1·3	74·9	−0·1	83·1	+0·6	26·4	105·9	26th	66·9	6th	39·0
40	Khandesh	Malegaon	1,430	28·417	−·024	29·784	28·501	1st	28·329	20th	·172	85·8	104·0	+1·2	72·8	+1·8	88·4	+1·5	31·2	109·3	17th & 18th.	67·3	8th & 10th.	42·0
		Ahmednagar	2,152	27·742	−·002	29·809	27·834	6th	27·657	20th	·177	82·8	99·9	+0·8	69·2	?	84·6	?	30·7	104·9	15th	60·5	8th	44·4
41	Berar	Akola	930	28·914	+·007	29 787	29·026	29th	28·806	20th	·220	85·5	104·7	−1·0	74·3	+0·3	89·5	−0·4	30·4	111·1	15th	69·4	4th, 9th & 10th.	41·7
		Amraoti	1,215	28·641	?	29·800	28·758	28th	28·526	20th	·232	84·9	104·1	−1·2	76·3	+1·3	90·5	+0·1	27·3	110·4	15th & 16th.	70·8	4th & 22nd.	39·6
42	Central Provinces (West).	Khandwa	1,044	28·788	−·016	29·780	28·881	2nd	28·676	20th	·205	86·2	104·5	+0·2	76·4	+2·1	90·5	+1·2	28·1	109·2	15th	70·1	18th, 19th & 25th.	39·1
		Hoshangabad	1,006	28·823	−·002	29·786	28 917	6th	28·718	20th	·199	82·9	103·6	−1·6	73·9	+0·3	88·8	−0·7	29·7	107·9	14th	68·2	19th & 23rd.	39·7
		Nagpur	1,025	28·813	+·010	29·790	28·922	6th	28·671	20th	·251	83·5	103·2	−2·5	75·4	−0·5	89·3	−1·5	27·8	110·2	16th, 17th & 18th.	67·1	4th	43·1
43	Central Provinces (Central)	Chanda	634	29·221	+·005	29·794	29·318	6th	29·081	19th	·237	86·6	104·7	−2·4	78·0	+1·7	91·4	−0·4	26·7	111·7	16th	71·3	7th,	40·4
		Seoni	2,038	27·824	+·008	29·781	27·927	28th	27·692	20th	·235	82·2	98·3	−3·0	71·1	−0·6	84·7	−1·8	27·2	104·9	4 days.	65·0	4th	39·9
		Jubbulpore	1,327	28·490	−·011	29·772	28·586	28th	28·353	20th	·233	80·8	100·1	−1·7	69·7	−0·9	84·9	−1·3	30·4	106·0	15th	64·7	19th	41·3
		Saugor	1,807	28·036	−·005	29·776	28·126	2nd	27·905	20th	·221	84·3	99·1	−2·1	74·2	+1·8	86·6	−0·3	24·9	104·4	14th	70·6	9th	33·8
49	Central India	Sutna	1,040	28·765	+·005	29·760	28·886	2nd	28·627	20th	·259	84·5	100·2	−1·4	72·4	+1·4	86·3	0	27·8	107·6	15th	67·1	3rd	40·5
44	Central Provinces (East).	Raipur	970	28·863	+·014	29·778	28·966	5th	28·733	20th	·233	84·3	101·4	−2·9	77·9	+1·1	89·7	−0·9	23·5	107·5	15th & 17th.	72·0	6th	35·5
		Sambalpur	486	29·344	+·006	29·779	29·463	30th	29·225	14th	·238	83·9	101·6	−3·3	75·8	+0·1	88·7	−1·6	25·8	109·1	16th	68·2	1st	40·9
39	Hyderabad (North).	Indur		28·575			28·677	1st	28·440	19th	·237	85·9	102·2		75·0		88·7		27·2	107·6	19th	69·2	7th & 15th.	38·4
		Bidar	2,165	27·701		29·775	27·783	1st	27·612	25th	·171	83·2	98·9		75·0		87·0		23·9	104·4	19th	66·8	6th	37·6
53	Hyderabad (South).	Gulbarga	1,502	28·357		29·789	28·460	1st	28·261	25th	·199	85·7	103·9		76·6		90·2		27·3	108·4	15th	65·2	11th	43·2
		Raichur	1,309	28·533	?	29·793	28·633	6th	28·422	25th	·211	86·4	102·7	0	80·3	+0·9	91·5	+0·5	22·4	107·6	15th	70·6	30th	37·0
		Hyderabad (Dn.)	1,690	28·183	−·020	29·804	28·272	1st	28·054	19th	·218	82·4	101·4	+0·8	76·3	+1·2	88·9	+0·2	25·1	106·9	20th	70·2	26th	36·7
		Secunderabad	1,787	28·086	−·017	29·805	28·176	1st	27·954	19th	·222	81·9	102·4	+0·2	75·9	+0·8	89·2	+0·5	26·5	109·3	20th	70·0	29th	39·3
		Hanumkonda	565	28·978		29·812	29·078	6th	28·835	19th	·243	82·6	101·9		77·4		89·6		24·5	105·7	16th & 19th.	72·3	30th	33·4
	X.—West Coast				−·023								90·6	+0·9	78·8	+1·0	84·7	+1·0	11·8					20·6
37	Konkan	Bombay	37	29·842	−·025	29·818	29·915	1st	29·780	20th & 25th.	·135	82·4	89·3	+1·1	78·8	+1·5	84·1	+1·3	10·5	93·5	30th	76·0	1st	17·5
		Ratnagiri	110	29·758	−·018	29·806	29·836	6th	29·693	25th	·143	83·4	91·1	+1·2	78·4	+1·6	84·8	+1·4	12·7	96·9	8th	75·9	2nd & 10th.	21·0
		Mormugao	60	29·817	−·023	29·811	29·881	9th	29·754	25th	·127	85·1	91·0	+0·6	80·5	+0·2	85·7	+0·5	10·5	95·0	28th & 30th.	74·4	28th	20·6
		Goa	199	29·674	−·019	29·809	29·747	1st	29·607	25th	·140	83·3	87·7	?	77·2‡	?	82·5‡	?	10·4	91·0	28th	70·0	27th	21·0
		Karwar	44	29·864†	?	29·840†	29·897	1st	29·806	16th	·091	82·0	90·8	+1·0	79·0	+1·2	84·9	+1·1	11·8	93·8	8th	75·5	27th	18·3
33	Malabar	Cochin	11	29·879	−·024	29·817	29·965	1st	29·800	25th	·165	83·8	93·4	?	78·7	+0·4	86·1	?	14·7	96·0	19th	74·7	8th	21·3
		Calicut	27	29·853	−·031	29·809	29·939	1st	29·761	25th	·178	83·8	91·7	+0·4	78·6	+0·8	85·2	+0·6	13·1	94·4	18th	76·5	9th	23·9
		Mangalore	65	29·819	−·023	29·815	29·898	1st	29·723	25th	·175	81·2	91·9	+1·1	79·6	+0·8	85·8	+1·0	12·3	94·3	18th	72·4	9th	21·9
		Trivandrum	198	29·675	?	29·803	29·750	1st	29·602	25th	·148	81·7	88·1	+0·5	78·1	?	83·1	?	10·0	91·5	17th 18th, & 19th.	71·5	9th	20·0

* Mean of 27 days. † Mean of 16 days. ‡ Mean of 29 days.

I—*continued.*

Stations in India, Burma, etc., in April, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 30th April 1901.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period, 1st March to 30th April.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
1	6	1		1	11	4	4	2	S 46° W	6·5‡	6·1‡	8·0	− 24	64	·761	2·2	1	0	+ 1·00	1·26	0·01	+1·25	1·27	0·01	+ 1·26	1·26	Surat . .	Gujarat.	54
	7	6				3		13	N 21° W	2·7				39	·475	2·9	0			0	0	0	0	0·07	−0·07	0	Ahmedabad		
1		2		4		15		8	S 63° W	4·1	4·8	4·7	+2	34	·361	2·1	0	0·55	−0·55	0	0·14	−0·14	0·28	0·45	−0·17	0	Agra . .	N.-W. P. (West).	22
19	3		2	1	1	1	2	1	N 30° W	2·3	2·7	4·2	−36	37	·440	1·3	2	0·55	+1·45	0·44	0·13	+0·31	0·63	0·48	+0·15	0·22	Jhansi, .	N.-W.P. (Central).	21
																				1·63	0·44	+1·20					IX.—Deccan.		
9	2	2	2	3	2	4	5	1	S 47° W	10·8		13·1	−18	65	·584	3·6	8	3·36	+4·64	6·69	1·72	+4·97	7·18	2·07	+5·11	2·60	Belgaum .	Bombay Deccan.	38
1	1	5		10	1	1		11	N 31° E	7·7	5·5	8·2	−33	45	·512	2·7	3	1·20	+1·80	1·76	0·57	+1·19	2·02	0·91	+1·11	1·21	Sholapur,		
			2	3		4	13	8	N 88° W	11·1	12·5	9·9	+26	45	·446	2·6	3	1·09	+1·91	1·15	0·54	+0·61	1·23	0·59	+0·64	0·60	Poona,		
8	1	2	1	2	1	3	8	4	N 85° W	2·9	2·8			58	·635	2·3	5	1·80	+3·20	1·65	0·58	+1·07	1·94	0·88	+1·06	1·02	Bijapur.		
	1	1			4	2	15	7	N 86° W	7·8	9·0	7·7	+17	33	·410	1·7	0	0·18	−0·18	0·09	0·10	−0·01	0·17	0·13	+0·04	0·05	Malegaon .	Khandesh.	40
8	8	2	1	3	3	1	1	8	N 17° W	7·2	8·8			48	·523	2·2	4			1·30	0·21	+1·09	1·69	0·57	+1·12	0·78	Ahmednagar.		
2			2	3	3	5	6	9	S 79° W	5·4	5·8	5·4	+7	34	·396	2·1	1	0·36	+0·64	0·19	0·16	+0·03	1·30	0·71	+0·59	0·12	Akola . .	Berar.	41
	1	1	3	4	3	6	8	4	S 57° W	7·6§	6·8§	4·4	+55	42	·499	2·7	2	0·41	+1·59	0·43	0·25	+0·18	0·85	0·65	+0·20	0·25	Amraoti,		
2		2	2		1	7	4	12	N 74° W	7·9		5·6	+41	30	·369	3·1	0	0·18	−0·18	0·09	0·17	−0·08	0·22	0·30	−0·08	0·06	Khandwa .	Central Provinces (West).	42
		6		5		16			S 19° W	4·3	4·4	2·9	+52	42	·473	1·3	1	0·09	+0·91	0·17	0·16	+0 01	0·28	0·39	−0·11	0·17	Hoshangabad		
17	1	1	1	2	1	2	2	3	W	6·5		6·7	−3	50	·556	4·8	4	0·82	+3·18	2·46	0·34	+2·12	3·45	0·95	+2·50	0·95	Nagpur,		
9	2	1	6	5	3		3	1	S 64° E	2·2		3·6	−42	47	·563	4·3	4			0·96	0·38	+0 58	2·40	1·87	+0·53	0·37	Chanda .	Central Provinces (Central).	43
	4	4	1	4	6	5	3	3	S 31° W	4·8		2·8	+26	44	·480	3·1	4	0·45	+3·55	1·65	0·35	+1·30	3·21	1·05	+2·19	1·08	Seoni,		
3	1	2	2	6	6	5	2	3	S	3·2		3·5	−9	45	·466	2·4	2	0·27	+1·73	0·31	0·18	+0·13	0·84	0·69	+0·15	0·16	Jubbulpore.		
		1	10	6	4	2	7		S 36° E	6·3	7·2	3·7	+95	41	·477	2·3	0	0·09	−0·09	0	0·10	−0·10	0·85	0·36	+0·49	0	Saugor,		
3	3	1	3	1	1	3	7	8	N 62° W	4·7	5·0	6·8	−26	27	·310	3·3	0	0·27	−0·27	0·06	0·12	−0·06	0·20	0·62	−0·42	0·06	Sutna . .	Central India.	49
3		1	1	2	2	11	3	2	S 45° W	7·7	7·1	5·9	+20	48	·552	2·9	3	1·00	+2·00	0·41	0·47	−0·06	0·99	1·28	−0·29	0·17	Raipur .	Central Provinces (East).	44
	7	4	4	3	2	5	4	1	N 14° E	3·8	3·7	2·6	+42	57	·662	1·6	2			1·44	0·51	+0·93	2·30	1·71	+0·59	0·79	Sambalpur.		
6	3	6	2	4		4		4	N 37° E	5·8	5·5			65	·802	3·1				4·23	0·31	+3·92	5·83	0·58	+5·25	2·90	Indur,	Hyderabad (North).	39
2	4	3	2	3	3	9	2	2	S 45° W	7·1	6·0			57	·634	2·8	5			2·99	0·83	+2·16	3·08	1·17	+1·91	0·94	Bidar,		
4	3	6	2	3	4	6	1	1	S 45° E	9·3	8·9			61	·747	2·7	3			1·07	0·71	+0·36	1·19	0·92	+0·27	0·43	Gulbarga .	Hyderabad (South).	53
2	3		3	7	2	5	2	6	S 30° W	8·4	8·2			50	·625	5·0	3			4·60	0·53	+4·07	4·60	0·94	+3·66	3 77	Raichur,		
15	1	2	2	4	1	1	3	1	S 52° E	4·8	4·7			54	·614	2·6	3			3·09	0·67	+2·42	3·37	1·42	+1·95	1·64	Hyderabad (Dn.),		
	2	5	10	5		1	4	3	N 71° E	5·5		5·3	+4	58	·630	2·5	3			2·68	0·67	+1·99	2·98	1·42	+1·56	1·47	Secunderabad		
3	1		2	17	6	1			S 37° E	10·4	8·8			65	·737	4·5	1			1·37			1·53			1·36	Hanumkonda		
																				3·41	1·57	+1 85					X.—West Coast.		
1	5	5	4	5	3	3	1	3	N 71° E	8·8		11·3	−22	76	·848	2·7	0	0	0	0·01	0·01	+0·03	0·04	0·04	0	0·04	Bombay .	Konkan.	37
6	4	2	7	5		1		5	N 58° E	5·7	5·6	11·1	−50	70	·796	3·2	4	0·09	+3·91	0·92	0·07	+0·85	0 97	0·08	+0·89	0·40	Ratnagiri,		
6	3	4	7	2	3	4		1	S 85° E	8·5				73	·890	3·6	3			4·99	0·29	+4·70	4·99	0·29	+4 70	4·63	Mormugao,		
1	3	11	7	1	3	2	1	1	N 63° E	9·4				74	·843	4·7	2			5·21	0·07	+5·14	5·21	0·07	+5·14	4·14	Goa.		
	11	5	7	2			5		N 28° E	6·1				75	·835	3·2	3	0·36	+2·64	1·05	0·41	+0·64	1·05	0·41	+0·64	0·70	Karwar.		
2	12	9	2	1	1		1	2	N 20° E	6·0				77	·904	5·3	9	5·55	+3·45	4·38	4·27	+0·01	8·28	6·81	+1·47	1·20	Cochin .	Malabar.	33
6	7	10	2	4				1	N. 38° E	8·9	11·2			78	·895	4·6	8	3·13	+4·87	5·00	3·17	+1·83	7·02	3·69	+3·33	1·33	Calicut.		
12	2	3	9	2	1	1			N 85° E	3·2		3·7	−14	76	·896	5·3	6	1·00	+5·00	3·62	1·13	+2·49	3·79	1·19	+2·60	1·27	Mangalore.		
13	6	2	5	2			1	1	N 43° E	5·0				79	·862	5·1	9			5·52	4·58	+0·94	7·38	6·15	+1·23	1·53	Trivandrum.		

§ Mean of 17 days.

Table

Abstract of Observations taken at 8 A.M. at 218

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	XI.—South India				−·002								96·5	−0·3	76·5	+1·0	86·6	+0·4	20·0				29·8
57	Madras (South)	Pamban	37	29·856		29·820	29·930	6th	29·777	20th	·153	84·3	92·2		76·9		84·6		15·3	94·8	14th	75·2	9th, 11th & 12th.	19·6
		Tinnevelly	168	28·723	?	29·820	29·816	1st	29·649	20th & 21st.	·167	84·1	96·2	−2·1	78·0	?	87·1	?	18·2	101·4	22nd	71·9	11th	29·5
		Madura	447	29·441	−·008	29·822	29·528	1st	29·365	19th	·163	84·0	96·5	−3·6	76·9	+0·7	86·7	−1·5	19·6	102·0	22nd	71·5	9th	30·5
		Periyakulam		28·950			29·039	1st	28·875	19th	·164	81·0	95·8		73·8		84·8		22·0	100·2	20th	68·5	1st	31·7
34	Madras, (South Central).	Salem	940	28·975	−·013	29·849	29·063	1st	28·881	25th	·182	83·8	100·8	−0·3	76·9	+1·3	88·9	+0·5	23·9	105·7	17th	70·0	1st	35·7
		Coimbatore	1,348	28·547	−·009	29·836	28·642	1st	28·463	25th	·179	80·7	98·2	+0·1	74·8	+1·2	86·5	+0·7	23·4	102·4	15th & 17th.	69·8	25th	32·6
35	Coorg	Mercara	3,781	26·228?	+·001?		26·305	1st	26·156	25th	·149	70·9	84·9	+0·4	65·2	+1·1	75·1	+0·8	19·7	90·0	2nd & 16th.	61·7	9th	28·3
36	Mysore	Chitaldroog	2,405	27·502	−·008	29·804	27·566	1st	27·418	25th	·148	80·4	98·3	+1·7	73·9	+1·9	86·1	+1·8	24·4	102·7	16th	70·9	29th	31·8
		Bangalore	3,021	26·930	−·013	29·825	26·993	1st	26·855	25th	·138	76·3	94·1	+0·9	69·8	+0·6	81·9	+0·8	24·3	97·8	15th, 16th & 17th.	61·9	1st	35·9
		Hassan	3,091	26·865		29·829	26·941	1st	26·786	25th	·155	77·8	93·4		68·1		80·8		25·3	97·9	15th	63·4	1st	34·5
		Mysore	2,518	27·414	−·010	29·839*	27·490	1st	27·325	25th	·165	77·9*	95·6	+1·4	71·4	+1·3	83·5	+1·4	24·2	100·1	11th	68·5	1st & 23rd.	31·6
56	Madras, East Coast, South.	Negapatam	31	29·861	−·009	29·820	29·945	2nd	29·777	19th	·168	85·3	91·3	−1·3	79·8	+1·0	85·6	−0·2	11·5	96·2	22nd	72·9	2nd	23·3
		Cuddalore	12	29·882	?	29·823	29·967	1st	29·793	19th	·174	84·8	92·3	−0·6	77·7	+0·6	85·0	0	14·6	97·7	20th	69·2	1st	28·5
		Trichinopoly	255	29·643	−·004	29·830	29·744	1st	29·556	25th	·188	84·2	100·6	−0·5	78·9	+1·6	89·8	+0·6	21·7	105·7	17th	71·4	1st	34·3
		Madras	22	29·874	−·003	29·827	29·969	1st	29·785	20th	·184	85·2	92·8	−0·1	77·5	+0·3	85·2	+0·1	15·3	95·5	20th	71·0	1st & 2nd.	24·5
		Vellore	707	29·181		29·825	29·281	1st	29·090	19th	·191	82·8	100·6		76·2		88·4		24·4	105·3	20th	67·5	1st	37·8
55	Madras, East Coast, Central.	Nellore	71	29·811	+·016	29·815	29·920	6th	29·701	19th	·219	85·0	98·8	−2·3	77·7	+0·3	88·3	−1·0	21·1	104·3	20th, 22nd & 24th.	72·1	1st	32·2
		Masulipatam	15	29·873	+·009	29·823	29·981	6th	29·771	19th	·210	85·5	94·2	−0·7	78·1	+0·8	86·2	+0·1	16·1	97·6	22nd	71·1	2nd	26·5
54	Madras, Central	Cuddapah	433	29·428	−·006	29·795	29·522	1st	29·333	19th	·189	89·5	105·3	+0·2	81·7	+1·1	93·5	+0·7	23·6	109·8	16th	73·8	1st	36·0
		Kurnool	924	28·934	−·009	29·790	29·050	6th	28·828	19th	·222	86·3	105·1	+0·5	79·6	+1·3	92·4	+0·9	25·5	108·3	15th	73·0	2nd	35·3
		Bellary	1,475	28·396	−·003	29·801	28·474	1st & 6th.	28·315	25th	·159	85·7	104·7	+0·8	78·6	+1·6	91·7	+1·2	26·1	109·0	15th & 16th.	72·7	29th & 30th.	36·3
52	Madras, East Coast, North.	Cocanada	26	29·864	+·018	29·825	29·961	1st	29·746	19th	·215	84·9	94·9	−0·7	78·9	+0·6	86·9	−0·1	16·0	99·6	8th	74·5	1st	25·1
		Waltair (Vizag).	226	29·652	+·014	29·819	29·773	6th	29·532	19th	·241	83·9	89·9	+0·2	78·7		84·3		11·2	92·4	29th	75·9	1st & 2nd.	16·5
		Gopalpur	21	29·821	+·007	29·782	29·923	5th	29·703	19th	·220	81·8	88·4	+0·8	76·6		82·5		11·8	90·3	4 days	74·1	4 days	16·2
	XII.—Hill Stations.																							
48	Baluchistan	Pishin											73·3		36·3		54·8		37·0	82·0	29th	27·0	6th & 18th.	55·0
		Quetta	5,502	24·645	+·024		24·763	1st	24·519	20th	·244	58·7	72·0	−1·6	41·4	−5·0	56·7	−3·3	30·6	83·2	30th	31·8	18th	51·4
		Kalat										53·3?	71·0?		35·3?		53·1?		35·7?	84·0?	30th	19·7?	14th	64·3?
		Chaman	4,311	25·703	+·010		25·839	1st	25·589	20th	·250	63·2	76·8	−4·8	51·7	−5·6	64·3	−5·2	23·1	91·2	30th	40·6	3rd	50·6
30	Punjab	Leh	11,503	19·701	−·013		19·830	30th	19·466	2th	·414	37·1	51·9	−5·2	27·8	−3·0	39·9	−4·1	24·1	61·6	14th	20·5	23rd & 24th.	41·1
		Srinagar	5,204	24·910	+·003		25·046	1st	24·696	16th	·350	50·1	64·8	−4·0	43·4	−2·2	54·1	−3·1	21·4	76·8	30th	36·1	23rd	40·7
		Minimarg		21·360			21·523	30th	21·183	20th	·340	32·9	49·2		23·8		36·5		25·4	54·1	30th	13·1	23rd	40·7
		Skardu		22·870			23·061	9th	22·650	20th	·411	48·4	60·6		41·9		51·3		18·7	71·4	30th	33·6	23rd	37·8
		Dras		20·811			20·990	30th	20·584	20th	·406	30·1	45·6		18·5		32·0		27·1	52·8	30th	6·1	7th	46·7
		Gilgit		25·151			25·395	1st	24·930	20th	·465	58·2	70·7		51·5		61·1		19·2	84·5	30th	45·3	18th	39·2
		Chitral		24·619			24·850	1st	24·550	4 days	·300	47·3	64·1		47·1		55·6		17·0	72·1	30th	39·0	1st, 3rd & 18th.	33·1
		Killa Drosh										52·4	72·6		45·9		59·3		26·7	86·2	30th	34·8	17th	51·4
		Para Chinar	6,000									56·1	66·8		45·4		56·1		21·4	80·2	30th	37·8	17th	42·4
		Cherat		25·721	+·046		25·848	28th	25·516	20th	·332	58·7	76·2	+0·7						80·8	30th			

* Mean of 26 days.

† Mean of 29 days.

I—*continued.*

Stations in India, Burma, etc., in April, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 30th April 1901.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period, 1st March to 30th April.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				0·95	1·14	−0·30					**XI.—South India.**		
1		7	6	16					S 75° E	7·5	7·9			76	·895	2·7	5	1·30	+2·70	1·09	4·13	−3·04	1·65	4·92	−3·27	0·37	Pamban	Madras (South).	57
	4	4	1	2	2	2	3	12	N 36° W	4·3	4·1			76	·889	3·1	5	3·40	+1·60	2·43	1·89	+0·54	7·62	3·30	+4·32	1·09	Tinnevelly.		
6	3	3	5	9	2	1		1	S 75° E	1·9	1·9	3·6	−47	74	·868	4·0	6	1·82	+4·18	3·37	1·88	+1·49	4·62	2·49	+2·13	0·78	Madura.		
16	7	2		2				3	N 6° E	2·2	2·4			72	·764	4·6	6			3·57			5·70			1·07	Periyakulam.		
8		7	6	1	3	5			S 74° E	5·5	5·0	5·0	0	69	·815	4·4	3	2·27	+0·73	1·77	1·58	+0·19	1·77	2·46	−0·69	0·91	Salem	Madras (South Central).	34
1		7	12		7	1	2		S 79° E	3·1	2·8	3·5	−20	82	·863	5·3	3	2·18	+0·82	3·06	1·71	+1·35	3·10	2·30	+1·10	1·38	Coimbatore.		
23	3		3				1		N 24° E	3·7	3·4	3·8	−11	87	·650	6·5	3	4·70	−1·70	1·39	2·72	−1·33	2·24	3·59	−1·35	0·71	Mercara	Coorg.	35
	1	3	2	2	1	7	8	6	W	7·7	7·0			69	·740	4·1	2			0·29	1·20	−0·91	0·29	1·42	−1·13	0·13	Chitaldroog	Mysore.	36
2			2	3	5	14	4		S 29° W	8·1	7·0	3·5	+100	73	·686	5·1	3	1·18	+1·82	0·96	1·15	−0·19	0·96	1·69	−0·73	0·52	Bangalore.		
1		3	3	6	3	6	5	3	S 16° W	3·4	3·0			63	·596	4·8	2			0·58	1·65	−1·07	0·86	2·16	−1·30	0·28	Hassan.		
	1	1	1	2	2	14	8	1	S 55° W	4·6	5·0			71*	·674*	6·0	2			0·44	2·26	−1·82	0·44	2·93	−2·49	0·21	Mysore.		
10		3	5	4	6	1	1		S 48° E	11·2	9·9	5·2	+90	75	918	4·1	2	0·55	+1·45	0·54	0·35	+0·19	0·84	0·89	−0·05	0·37	Negapatam	Madras, East Coast, South.	56
27					2	1			S 15° W	1·1	1·4			77	·931	6·1	0	0·60	−0·60	0	0·82	−0·82	0·17	1·19	−1·02	0	Cuddalore.		
20		3	1	2	2	2			S 49° E	4·6		4·0	+15	71	·835	3·5	2	1·27	+0·73	0·49	1·53	−1·04	0·64	2·08	−1·44	0·27	Trichinopoly.		
				2	21	4	3		S 10° W	7·8		7·9	−1	72	·883	5·2	0	0·27	−0·27	0	0·62	−0·62	0·03	1·01	−0·98	0	Madras.		
6			4	4	10	4	2		S 7° E					81	·925	3·4	1			0·51			0·51			0·51	Vellore.		
	1				27	1		1	S 3° W	9·1				73	·882	3·6	0	0·30	−0·30	0	0·12	−0·12	0	0·33	−0·33	0	Nellore	Madras, East Coast, Central.	55
2	1			8	15	4			S 7° E	8·4		8·8	−5	78	·953	5·3	1	0·27	+0·73	0·16	0·15	+0·01	0·16	0·27	−0·11	0·16	Masulipatam.		
		5	3	15		4	1	2	S 54° E					54	·755	3·6	0	0·70	−0·70	0·02	0·38	−0·36	0·02	0·44	−0·42	0·01	Cuddapah	Madras, Central	54
14	3		5	1	2		1	4	N 32° E					47	·589	3·8	1	1·33	−0·32	0·21	0·65	−0·44	0·21	1·19	−0·98	0·20	Kurnool.		
6	2	3	1	1	3	1	2	11	N 42° W	5·8	6·1	5·2	+17	40	·494	6·1	2	1·27	+0·73	0·77	0·58	+0·19	0·77	0·80	−0·03	0·51	Bellary.		
7			1	5	3	12	1	1	S 21° W	7·1	6·0			76	·920	5·3	2	0·50	+1·50	0·92	0·21	+0·70	0·92	0·74	+0·18	0·62	Cocanada.	Madras, East Coast, North.	52
			1	1	1	2	24	1	S 84° W	16·2†				71	·822	4·9	1			0·50	0·49	+0·01	0·50	0·88	−0·38	0·50	Waltair (Vizag).		
3	1				7	17		2	S 39° W	18·1†	17·7†	14·5	+22	81	·865	1·1	0	0·78	−0·78	0·10	0·67	−0·57	0·29	1·45	−1·16	0·05	Gopalpur.		
																											XII.—Hill Stations.		
																	1			0·21	0·94	−0·73	1·08	2·55	−1·47	0·21	Pishin.	Baluchistan.	18
27					1		1	1	S 79° W	1·9	2·0	4·8	−58	49	·248	1·9	1	3·55	−2·55	0·19	1·20	−1·01	1·34	2·90	−1·56	0·10	Quetta.		
	8		8		14				S 53° E					45	·193		1			0·24	0·51	−0·27	1·24	2·06	−0·82	0·18	Kalat.		
		1	2	6	7	11	2	1	S 11° W	9·6	10·2			48	·278	1·8	1			0·25	0·42	−0·17	1·04	1·81	−0·77	0·25	Chaman.		
		3	4		10	8	5		S 19° W	4·1				54	·120	5·5	0			0·20	0·11	+0·09	0·25	0·34	−0·09	0·08	Leh	Punjab.	30
4		1	1	7	8	1	4	4	S 5° W	4·8	5·1			88	·321	4·7	9			4·36	1·15	+3·21	7·12	3·65	+3·47	1·25	Srinagar.		
16	3	7	1	1	1			1	N 41° E	2·2†	2·3†			72	·135	5·3	11			7·44			11·00			1·87	Minimarg.		
11	2	1	1		3	6	5	1	S 65° W	9·0	10·7			48	·160	5·2	2			0·50	3·88	−3·38	0·79	5·40	−4·61	0·24	Skardu.		
26	1					1	2		N 83° W	1·3	1·3			78	·130	5·8	10			4·26			7·12			0·90	Dras.		
24	1	1				2	2		N 84° W	2·3	2·3			40	·189	6·5	1			0·28	1·18	+0·90	0·43	1·47	−1·04	0·15	Gilgit.		
	3						26		N 83° W	?				77	·254	4·0	9			4·22			8·31			1·04	Chitral.		
5	6	3	3	2	3	1	4	3	N 4° W					71	·280	3·2	11			3·67			8·04			0·71	Killa Drosh.		
	10	3	1	1	1	2	4	8	N 25° W	4·0				53	·240	1·7	5			1·87			7·93			0·80	Para Chinar.		
	7	7		2	1	2	1	10	N 11° W	10·7	0·0			44	·212	0·6	5			1·44	2·30	−0·86	5·69	7·23	−1·54	0·60	Cherat.		

† Mean of 16 days.

Table

Abstract of Observations taken at 8 A.M. at 218

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.									Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	Punjab—*concld.*	Murree	6,333	23·828	+·009		23·947	1st	23·605	16th	·342	56·0	63·0	−5·4	49·0	−3·0	56·0	−4·2	14·0	75·7	30th	38·0	16th	37·7
		Poo											57·9		38·2		48·1		19·7	67·7	2nd	29·8	23rd	37·9
		Simla	7,224	23·112	+·010		23·209	1st	22·896	20th	·313	55·6	63·6	−3·2	50·3	−2·2	57·0	−2·7	13·3	69·2	30th	42·4	22nd	26·8
25	N.-W. Provinces.	Chakrata	7,022	23·271	−·004		23·371	4th	23·118	20th	·253	56·1	66·9	−3·7	50·4	−1·6	58·7	−2·7	16·5	72·2	30th	41·3	23rd & 24th.	30·9
		Mussooree	6,705	23·544	−·016		23·655	4th	23·389	20th	·266	58·4	68·1		53·6		60·9		14·5	74·3	29th	45·5	25th	28·8
25		Ranikhet	6,069	24·093	+·010		24·196	4th	23·943	19th	·253	62·2	73·3	−1·1	56·4	−0·6	64·9	−0·9	16·9	78·0	28th & 30th.	49·0	4 days	29·0
		Muktesar		22·852			22·965	28th	22·709	19th	·256	58·3	70·6		50·2		60·4		20·4	75·5	14th	42·8	22nd, 23rd & 24th.	32·7
13	Bengal	Yatung	10,480?										53·6		33·7		43·7		19·9	62·1	16th	28·9	11th, 25th & 26th.	33·2
		Darjeeling	7,409	22·999	+·044		23·114	2nd	22·875	19th	·239	55·5	64·0	+2·6	48·5	+1·0	56·2	+1·8	15·5	70·3	18th	43·1	22nd	27·2
		Gantok	5,660	24·415			24·492	2nd	24·367	4 days.	·125	58·6	71·6		36·6		54·1		35·0	75·2	19th	30·0	24th & 25th.	45·2
	Central India	Mount Abu	3,945	26·019	−·035		26·111	2nd	25·884	20th	·227	77·0	85·3	−0·3	70·6	+2·3	78·0	+1·0	14·7	90·7	28th	66·3	21st & 23rd.	24·4
		Pachmarhi	3,528	26·134	−·008		26·515	1st	26·328	20th	·187	79·5	90·7	−1·6	69·1	−0·2	79·9	−0·9	21·6	96·9	14th	61·9	10th	35·0
	South India	Wellington	6,200	24·259	−·019		24·313	5th	24·204	25th	·109	66·2	76·6	+0·7	54·9	−1·1	65·8	−0·2	21·7	80·7	21st.	48·7	1st	32·0
		Kodai Kanal	7,688	22·941			22·887	2nd	22·773	25th	·114	60·8	68·8		53·5		61·2		15·3	73·6	17th	49·0	1st	24·6
	XIII.—Extra India.																							
	Ceylon	Trincomalee	12	29·891	P	29·829	29·975	1st	29·828	24th	·147	82·1	90·6	P	78·1	+0·8	84·4	P	12·5	94·0	22nd	74·5	29th	19·5
		Colombo	40	29·858	−·027	29·824	29·947	27th	29·809	20th	·138	81·1	90·3	+1·5	75·2	−0·7	82·7	+0·4	15·1	93·5	17th & 18th	73·0	7th & 28th.	20·5
	Persia	Meshed	3,104									59·8			47·0							37·9	13th	
		Teheran		25·889¶ †† 25·319¶			26·170	15th	25·760	9th	·410	¶ 61·4	¶ 75·5		¶ 48·5		¶ 62·1		27·0	83·5	1st	28·0	12th	55·5
							25·500	17th	25·140	10th	·360													
		Ispahan		24·335*			24·500	3rd	24·100	9th	·400	59·9	76·0		47·8		61·9		28·2	89·0	30th	37·3	10th	51·7
		Bushire	14	29·880	−·005	29·853	29·991	13th	29·791	8th	·200	76·4	82·8	+1·2	69·9	+3·8	76·4	+2·5	12·9	92·1	19th	63·2	11th	28·9
		Jask		27·864	−·015		29·988	2nd	29·756	21st	·232	81·7	89·1	+1·9	74·5	+1·1	81·8	+1·5	14·6	93·3	1st	69·2	2nd	24·1
		Muscat	20	29·858		29·826	29·982	2nd	29·792	24th & 29th.	·190	82·9	85·7		80·2		83·0		5·5	95·9	30th	74·5	6th	21·4
	Arabia	Baghdad	220	29·774†	−·075	29·972†	29·915	25th	29·554	7th	·361	71·7†	89·3‡	+8·4	61·5‡	+7·1	75·4‡	+7·8	27·8	99·1	2nd	52·9	13th	46·2
		Bussrah		29·923			30·105	27th	29·772	22nd	·333		89·7		70·3		80·0		19·4	99·9	29th & 30th.	61·9	10th, 12th & 13th.	38·0
		Aden	94	29·823	−·022	29·849	29·910	2nd	29·744	30th	·166	81·8	89·2	−1·4	78·3	+0·7	83·8	−0·4	10·9	94·3	30th	73·4	6th	20·9
		Perim	201	29·698		29·833	29·779	2nd	29·630	30th	·149	81·9	89·1		78·6		83·9		10·5	94·7	23rd & 24th.	76·6	2nd	18·1
	Afghanistan	Kabul										49·7	69·5		42·2		55·8		27·3	82·2	30th	29·6	18th	52·6
	Arabian Sea Islands.	Amini Devi	13	29·881		29·822	30·039	7th	29·739	28th	·300	86·2	92·2		79·7		86·0		12·5	96·0	18th & 19th, 7th	74·0	4th	22·0
		Minicoy	7	29·878		29·810	29·963	2nd	29·734	26th	·229	84·9	89·3							98·0				
	Africa	Zanzibar	73	29·921	−·019	29·921	30·014	28th	29·835	14th	·179	79·5	84·1		77·5		80·8		6·6	88·1	4th	72·9	14th	15·2
		Do. Dunga		29·854			29·944	28th	29·761	14th	·183	77·3	86·2		70·5		78·4		15·7	91·3	1st	66·1	1st	25·2

NOTE.—When a query is inserted against any reading or in the variation returns for any station, the data for that

* Aneroid uncorrected. † Mean of 21 days. ‡ Mean of 18 days. § Mean of 20 days. ‖ Mean of 19 days.
†† Mountain barometer uncorrected.

I—*concluded.*

Stations in India, Burma, etc., in April 1901—concluded.

Wind Direction. Number of winds from: Calm	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variations.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 30th April 1901.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period, 1st March to 30th April.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
22	2			4	2				S 45° E	5·3	6·5	8·7	−25	48	·214	2·1	5	6·64	−1·64	4·60	3·40	+1·20	9·13	7·05	+2·08	2·42	Murree.	Punjab—*concld.*	
26		1	1	2					S 72° E					3·8			3			1·79	1·72	+0·07	2·14	5·83	−3·69	1·37	Poo.		
9	11	1		2	5			1	N 13° E	?		2·9	?	33	·150	3·4	0	4·09	−4·09	0·09	1·90	−1·81	4·85	4·14	+0·71	0·04	Simla.		
1	23	3	1	2					N 10° E	11·3		6·1	+85	39	·181	3·9	0			0·10	1·48	−1·38	2·30	3·87	−1·57	0·05	Chakrata .	North-Western Provinces.	25
3	10	2	3	6	3			3	N 46° E					36	·182	3·2	2	1·10	+0·90	0·50	1·42	−0·92	2·50	4·00	−1·50	0·35	Mussooree.		
12	3	6		1		1	5	2	N 17° W	3·6	4·1	3·0	+37	43	·241	4·3	0	2·55	−2·55	0·12	1·11	− 0·99	2·22	3·35	−1·13	0·09	Ranikhet.		25
2		4	2	7	1	2	1	11	N 8° W	7·3	6·7			34	·168	3·0	1			0·19			1·94			0·10	Muktesar.		
																	12			5·11			8·69			0·82	Yatung .	Bengal.	13
9			2	4	1	8	5	1	S 38° W	10·1	9·4			66	·288	3·2¶	3	8·46	−5·46	1·53	4·61	− 3·08	3·87	6·26	− 2·39	0·64	Darjeeling.		
30									Calm	10·1†	12·0†			67	·335	3·9	14			11·06	10·33	+ 0·73	17·34	15·38	+ 1·96	2·04	Gantok.		
	3	8		2		8	4	5	N 50° W	7·9	8·2	7·7	+ 6	24	·219	3·0	0	0·09	−0·09	0	0·06	+ 0·06	0·14	0·18	− 0·04	0	Mount Abu.	Central India.	
7	1	2	2	3	2	4	4	5	S 78° W	7·4	7·6	5·3	+43	32	·315	4·4	1	0·15	+0·55	1·28	0·23	+ 1·05	2·68	0·55	+ 2·11	1·11	Pachmarhi.		
21	2	2	2	3					N 77° W	2·4		2·9	−17	71	·459	4·4	7	4·50	+2·50	3·68	2·78	+ 0·88	6·38	5·59	+ 0·79	1·83	Wellington .	South India.	
	6	11	5	4	2			2	N 54° E	14·0				57	·297	3·9	9			4·70			9·17			1·57	Kodai Kanal.		
																											XIII.—Extra India.		
12						18			S 45° W	1·4				86	·950	2·4	4			2·41	1·93	+ 0·48	10·20	3·33	+ 6·87	1·94	Trincomalee	Ceylon.	
	1	1	13	11	2	2			S 65° E	6·1		5·6	+ 9	89	·949	3·8	14			8·54	12·32	− 3·78	14·16	16·97	− 2·81	1·78	Colombo .		
														68	·354	2·5	5			0·90	1·93	− 1·03	1·21	4·13	− 2·92	0·23	Meshed .	Persia.	
4	3	6	2	1	2	6	1	3	N 11° W	0·8‡‡	1·0‡‡			46¶	·245¶	3·0¶	3			0·94	0·76	+ 0·18	1·26	3·79	− 2·53	0·39	Teheran.		
										1·6	2·0			43	·219	2·9	3			0·47	1·15	− 0·68	1·83	2·36	− 0·53	0·22	Ispahan.		
8	3	6	2	4		1		6	N 30° E	6·1	7·3	9·1	−20	61	·541	2·9	1			0·27	0·34	− 0·07	1·36	1·77	−0·41	0·18	Bushire.		
7	2	1	7	1	2			10	N 11° E	9·8	11·4			79	·867	1·5	0			0	0·04	− 0·04	0	1·25	− 1·25	0	Jask.		
5		6		10		2	1	5	S 79° E	3·8	4·0			62	·684	1·8	0			0	0·05	− 0·05	1·10	1·14	− 0·04	0	Muscat** .		
8	4	2			3		1	3	N 22° W	2·5§	3·3§			52‖	·397‖	3·5†	1			0·22	1·19	− 0·97	0·50	3·12	− 2·62	0·15	Baghdad.	Arabia.	
	17				12	1			N 14° W								1			0·17			2·11			0·17	Bussrah .		
2		19	5	1	1		1	1	N 55° E	12·5	12·3	14·8	−17	75	·811	4·8	1			0·13	0·66	− 0·53	0·16	1·82	− 1·66	0·13	Aden.		
		1	5	15	1	1	7		S 37° E	16·3	15·7			84	·921	4·5	2			0·31	0·03	+ 0·28	0·55	0·16	+ 0·39	0·21	Perim.		
	12	1	1			1	9	6	N 37° W					55	·201	0·7	4			3·38	2·21	+ 1·17	5·61	8·15	− 2·54	2·10	Kabul .	Afghanistan.	
	7	2		2	1	1		17	N 30° W					71	·890	4·7	5			9·71			10·41			4·80	Amini Devi.	Arabian Sea Islands.	
	11	4	4	2	2	2	1	4	N 14° E	6·3	6·8			78	·932	5·3	8			10·39			14·91			3·06	Minicoy .		
				1	18	10	1		S 15° W	8·1	7·6			88	·891	7·2	11			18·10	11·84	+ 6·26	22·77	16·99	+5·78	4·47	Zanzibar .	Africa.	
3			1	1	11	11	2	1	S 25° W	5·4	5·2			93	·872	6·6	15			19·01			24·21			6·35	Dunga (Zanzibar.)		

station, are not utilized in calculating the provincial variations. ¶ Mean of 28 days. ** Observations for 29 days. ‡‡ Mean of 27 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair		29·870	29·766	·104	29·811	+·012	29·802	94·7	81·1†	13·6	97·0	78·7	18·3	90·5	92·2	86·5†	+2·7	78·0	82·6	82·7	81·1
	Rangoon		·8397	·7427	·138	·8157	+·018?	·7927	99·9	76·6	23·3	104·0	73·0	31·0	89·1	95·2	86·0	+1·3	73·8	77·4	78·0	76·4
	Diamond Island		·881	·775	·106	·820	−·002	·795	87·5	80·6	6·9	90·4	79·2	11·2	85·6	85·7	82·8	+0·9	75·6	78·6	78·5	77·6
	Cocos Island	111	·847‖	·756	·091	·795	+·068	·837‖	92·6	80·6‖	12·0	96·4	78·6	17·8	88·6‖	88·4	84·8‖	+2·5	75·7‖	78·9‖	78·6	77·7
	Akyab		·890	·771	·119	·828	−·002	·790	93·7	75·5	18·2	98·3	71·1	27·2	89·0	88·8	83·5	+0·8	?	79·8	79·1	?
Bengal and Orissa.	Chittagong		·797	·689	·108	·737	−·008	·771	90·5	73·9	16·6	92·7	67·5	25·2	86·3	85·9	81·3	+0·8	72·1	77·4	77·5	75·7
	Calcutta (Alipore)		·810	·678	·132	·742	−·006	·708	97·9	76·9	21·0	103·7	69·2	34·5	89·5	93·4	86·6	+1·6	72·2	78·4	77·1	75·9
	Saugor Island		·820	·701	·119	·756	+·003	·725	90·4	79·9	10·5	92·8	69·3	23·5	86·2	87·2	83·6	+0·1	76·5	80·8	80·9	79·4
	False Point		·835	·723	·112	·777	−·001	·739	88·6	78·1	10·5	90·5	72·1	18·4	86·1	84·9	81·6	−0·3	76·4	80·2	80·0	78·9
Gangetic Plain and Chota Nagpur.	Hazaribagh		27·827	27·713	·114	27·772	+·002	·668	97·4	73·0	24·4	104·3	68·1	36·2	90·1	94·6	84·9	+0·7	59·3	64·8	65·4	63·2
	Darbhanga		29·631	29·489	·142	29·558	−·011	·674	97·9	70·9	27·0	102·8	64·4	38·4	88·2	97·0	84·0	−0·1	63·2	71·2	71·5	68·6
	Allahabad		·485	·353	·132	·414	−·005	·668	102·6	71·1	31·5	110·2	65·4	44·8	94·3	101·2	87·0	−0·7	60·1	70·9	72·4	67·8
Upper Sub-Himalayas.	Dehra Dun		27·588	27·512	·076	27·538	+·001	·702	86·3	60·9	27·4	97·2	54·2	43·0	79·5	85·0	74·4	−2·7	52·2	60·7	60·3	57·7
	Roorkee		28·902	28·810	·092	28·847	+·016	·686	94·3	61·8	32·5	102·1	54·1	48·0	86·0	92·5	78·2	−3·2	53·3	63·8	63·4	60·2
	Meerut		29·045	·947	·098	·989	−·002	·679	96·7	64·8	31·9	102·2	57·8	44·4	88·1	93·8	80·6	−1·9	55·5	66·7	67·6	63·3
	Lahore		·101	29·020	·084	29·057	+·019	·721	93·2	64·5	28·7	106·3	56·2	50·1	84·1	91·3	78·8	−0·8	57·3	66·8	68·0	64·0
	Ludhiana		28·991	28·906	·085	28·943	+·025	·714	93·8	65·7	28·1	104·2	57·2	47·0	84·0	91·4	79·7	−1·2	58·9	63·6	66·5	63·0
Indus Valley and N.-W. Rajputana.	Peshawar		·760	·666	·094	·708	+·020	·805	85·0	57·6	27·4	100·0	48·5	51·5	77·2	82·3	71·1	−2·0	52·5	62·7	63·2	59·5
	Jacobabad		29·625	29·499	·126	29·557	+·008	·697	102·5	67·5	35·0	113·2	57·5	55·7	92·0	100·5	84·9	−1·1	55·2	66·8	70·1	64·0
	Kurrachee		·832	·730	·102	·780	−·012	·760	96·0	75·8	20·2	111·3	67·2	44·1	90·1	89·2	83·4	+3·7	67·5	74·1	75·7	72·8
E. Rajputana, Central India, and Gujarat.	Jaipur		28·411	28·300	·111	28·350	+·004	·703	100·1	70·2	29·9	106·2	62·3	43·9	92·0	97·6	85·1	0	55·1	65·2	66·5	62·3
	Udaipur		27·933	27·816	·117	27·875		·696	98·2	69·7	28·5	103·3	62·5	40·8	91·3	96·5	83·6		60·5	67·0	69·5	65·7
	Deesa		29·366	29·244	·122	29·300	−·023	·706	104·0	72·4	31·6	109·9	64·3	45·6	94·4	102·3	88·5	+0·5	57·0	66·5	66·4	63·3
	Jamnagar		·802	·685	·117	·743		·750	98·4	72·4	26·0	108·6	68·0	40·6	89·0	94·9	84·6		67·1	73·1	72·6	70·9
Deccan.	Belgaum		27·353	27·230	·123	27·294	−·014	·694	94·4	68·2	26·2	100·1	62·8	37·3	85·6	89·0	79·2	0	65·9†	68·0	72·0	68·8
	Sholapur		28·267	28·115	·152	28·190	−·013	·672	103·3	75·2	28·1	109·5	68·1	41·4	93·2	99·5	88·0	−0·9	63·9	71·0	72·9	69·2
	Poona		·035	27·905	·130	27·976	−·013	·699	101·9	70·1	31·8	108·1	64·2	43·9	91·1	98·2	85·5	+0·6	62·1	66·7	68·5	65·8
	Akola		·920	28·768	·152	28·839	+·006	·683	104·6	74·2	30·4	111·2	69·4	41·8	94·7	102·4	89·6	−0·9	?	69·0	70·2	?
	Buldana	2,132	27·747	27·615	·132	27·676	−·003	·681	99·5	75·3	24·2	104·7	68·4	36·3	89·8	97·0	87·6	−0·7	60·0	65·7	67·1	64·3
	Khandwa		28·793	28·645	·148	28·714	−·014	·680	104·5	76·4	28·1	109·2	70·1	39·1	94·3	102·7	91·0	+1·1	59·9	68·4	69·3	65·9
	Nagpur		·817	·666	·151	·737	+·016	·688	103·2	75·5	27·7	110·2	67·1	43·1	91·6	100·1	89·3	−1·2	64·6	73·4	74·9	71·0
	Do. (Sanitary Commr.'s Office).		·839	·690	·149	·760		·701	103·7	74·5	29·2	111·3	68·2	43·1	93·0	100·8	88·4		64·5	72·3	73·8	70·2
	Hyderabad (Deccan).		·185	·049	·136	·114	+·008	·694	101·0	76·3	24·7	107·0	70·1	36·9	91·3	98·9	88·1	0	68·7	71·1	71·9	70·6
West Coast.	Bombay		29·845	29·733	·112	29·787	−·023	·763	89·6	78·8	10·8	93·6	76·0	17·6	85·6	86·6	83·4	+0·8	74·2	77·5	78·3	76·7
	Karwar		?	?	?	?	?	?	90·9	79·0	11·9	94·0	75·3	18·7	88·0	89·0	84·4	+1·4	75·4	79·3	79·6	77·7

† Mean of 28 days.

‡ Mean of 28½ days.

II.

65 Stations in India, Burma, etc., in April, 1901.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Provinces.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·930†	1·011	·993	·978	+·049	88†	70	65	74	− 3	4·8	5·0	4·9	+0·6		3	15	4	30	5		1	2	S. 71° E.	N. 89° E.	59	41	91	116			Port Blair	Burma Coast and Bay Islands.
·801	·784	·733	·773	−·011	87	57	45	63	− 3	1·3	2·8	2·1	−1·3		3	2	1	12	14	12	12	4	S. 26° W.	S. 25° W.	45	58	143	136			Rangoon	
·814	·885	·877	·859	+·008	78	72	71	74	− 2	1·7	1·5	1·6	−1·8	4	1						27	28	N. 66° W.	N. 60° W.	85	73	239*	187			Diamond Island, Cocos Island	
·827‖	·859‖	·850	·845	−·002	79‖	64‖	63	69	− 5	1·4‖	1·9	1·7	−1·4		31	10	1			3		1	13	N. 3° W.	N. 39° W.	73	39	72	P	Nil	Nil		
P	·896	·865	P	?	P	65	64	P	P	3·8	3·9	3·9	+0·7			3	4	14	5	8	18	8	S. 46° W.	S. 65° W.	32	37	57	96			Akyab	
·770	·823	·833	·809	−·007	92	66	67	75	+ 1	6·3	5·0	5·7	+1·6		1		2	6	17	23	2	4	S. 26° W.	S. 9° W.	70	44	213*	165			Chittagong	Bengal and Orissa.
·733	·823	·703	·753	−·038	79	60	44	61	− 7	4·2	4·6	4·4	+1·7	1		1	2	2	26	24	3	1	S. 21° W.	S. 7° W.	77	71	161	169			Calcutta (Alipore), Saugor Island, False Point	
·870	·979	·975	·941	+·006	85	78	75	79	0	5·7	5·5	5·6	+0·9				1	3	38	16	1	1	S. 11° W.	S. 14° W.	87	78	498	419				
·889	·953	·961	·934	+·029	92	76	80	83	0	4·6	5·3	5·0	+1·6		1			1	17	40	1		S. 32° W.	S. 31° W.	89	79	303*	341				
·239	·302	·264	·302	−·001	42	22	16	27	− 1	2·8	7·1	5·0	+2·2	2	11	4			1	9	11	22	N. 54° W.	N. 75° W.	62	46	195*	216			Hazaribagh	Gangetic Plain and Chota Nagpur.
·482	·541	·430	·484	−·088	63	42	25	43	− 9	1·0	1·0	1·0	0	5	1	2	10	10	2	6	18	6	S. 52° W.	S. 46° E.	17	15	109	142			Darbhanga	
·376	·445	·410	·411	+·027	49	28	21	33	+ 2	3·0	3·9	3·5	+2·1	3	1	1	2	1	2	8	27	15	N. 84° W.	N. 54° W.	7	35	142*	117			Allahabad	
·290	·303	·221	·271	−·051	53	30	19	34	− 3	4·0	3·5	3·8	+1·0		4	4	1	1		12	22	11	N. 89° W.	N. 82° W.	57	28	50	54			Dehra Dun	
·298	·303	·200	·267	−·059	54	24	13	30	− 4	2·7	2·4	2·6	+0·6	18	4	6		5		4	5	18	N. 41° W.	N. 72° W.	32	20	83‡	78			Roorkee	Upper Sub-Himalayas.
·321	·376	·331	·343	−·043	52	28	21	34	− 3	2·3	2·8	2·6	+0·6	14	1		1	2		5	9	28	N. 62° W.	N. 60° W.	57	45	31*	60			Meerut	
·380	·427	·375	·394	+·010	62	37	26	42	+ 5	2·0	2·3	2·2	−0·2	4	14	9	5	3	5	1	11	8	N. 12° W.	N. 23° W.	32	27	69	77			Lahore	
·317	·323	·327	·356	−·056	65	28	22	38	− 5	2·1	3·0	2·6	−0·4	3	10	3	4	4		5	10	21	N. 44° W.	N. 54° W.	47	28	78*	54			Ludhiana	
·338	·401	·353	·364	−·046	70	44	34	49	− 3	2·3	4·3	3·3	−1·1	11	18	8	4	1	4	2	9	3	N. 6° W.	N. 8° E.	33	25	48*	104			Peshawar	Indus Valley and N.-W. Rajputana.
·294	·325	·333	·314	−·049	41	22	17	27	− 5	3·3	2·9	3·1	+0·6	19	2	3	9	4	3	5	3	12	N. 18° W.	S. 65° E.	6	13	82*	100			Jacobabad	
·577	·642	·755	·658	−·074	65	47	56	56	−14	1·3	1·9	1·6	0·1		2	3		2	3	25	20	6	S. 60° W.	S. 69° W.	73	81	265*	329			Kurrachee	
·253	·294	·265	·271	−·055	34	19	14	22	− 6	2·9	4·3	3·6	+1·3	3	3	5	7	7	4	9	14	8	S. 73° W.	N. 52° W.	18	52	90	124			Jaipur	
·421	·368	·390	·393		57	25	23	35		2·3	3·3	3·3		9	3	5	6	4	2	7	14	10	N. 74° W.		23		104*				Udaipur	E. Rajputana, Central India, and Gujarat.
·269	·281	·174	·241	−·118	33	18	9	20	− 8	2·2	2·8	2·5	+0·8		6	5	2	3	2	11	19	11	N. 81° W.	S. 88° W.	45	57	207	228			Deesa	
·599	·605	·507	·571		75	45	32	51		1·4	1·5	1·5			4	3			1	11	20	11	N. 83° W.		73		332*				Jamnagar	
·6121	·469	·586	·562	+·042	87†	40	46	58	+ 7	3·1	5·3	4·5	+1·7		4	4	6	8	1	12	14	6	S. 72° W.	N. 77° W.	23	35	270	320			Belgaum	
·457	·484	·476	·473	+·074	53	33	27	38	+ 8	3·1	5·7	4·4	+1·0	3	5	10	2	17	2	2	5	14	N. 36° E.	N. 5° E.	13	13	§153*	213			Sholapur	
·465	·355	·328	·383	+·009	63	26	20	36	+ 5	2·5	4·0	3·3	+0·8		1	1	1	2	1	11	32	6	S. 78° W.	N. 62° W.	64	56	296*	234			Poona	
P	·368	·310	P	P	P	24	16	P	P	2·7	4·4	3·6	+1·6	3	4	6	4	6	4	4	12	17	N. 57° W.	N. 48° W.	28	58	143*	139			Akola	
·333	·338	·294	·322	+·021	40	25	18	28	+ 4	3·2	4·3	3·8	+1·5		6	2	4	5	5	3	16	19	N. 66° W.	N. 33° W.	41	58	216*	212	0·22	0·14	Buldana	Deccan.
·318	·373	·298	·330	−·009	34	24	15	24	− 2	2·9	4·3	3·6	+1·7	3	3	1	1	8	1	6	10	27	N. 66° W.	N. 49° W.	48	62	191	148			Khandwa	
·417	·589	·551	·542	+·157	55	42	30	42	+14	3·8	6·5	5·2	+2·2	6	4	3	5	2	9	10	10	11	S. 78° W.	N. 65° W.	28	22	159	161			Nagpur	
·491	·543	·499	·511		58	37	27	41		3·0	6·0	4·5		2		18		16		12		12	N. 79° E.		12		54*				Do. (Sanitary Commr.'s Office).	
·612	·511	·446	·523	−·013	68	36	26	43	− 1	2·8	3·8	3·3	+1·0	23	3	3	8	12	4	1	5	1	S. 59° E.	N. 58° W.	23	2	114*	113			Hyderabad (Deccan).	
·790	·836	·858	·828	+·012	80	68	68	72	− 2	2·4	2·5	2·5	+0·3		2	3	1	2	6	4	18	26	N. 72° W.	N. 57° W.	59	55	213	264			Bombay	West Coast.
·833	·839	·885	·852	+·021	84	63	65	71	− 2	2·2	2·1	2·2	−0·3		2			3		6	27	22	N. 76° W.	N. 84° W.	77	76	149	98			Karwar	

§ Mean of 24 days. ‖ Mean of 29 days. * *Corrected.*

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hours.	Pressure. Mean of 16 hours.	Pressure. Mean daily range.	Pressure. Mean daily pressure.	Pressure. Variation from normal.	Pressure. Mean reduced to S.L. and for gravity 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
South India.	Periyakulam		28·953	28·813	·140	28·891			95·8	73·8	22·0	100·2	68·5	31·7	86·3	92·1	83·5		70·3	75·6	74·8	73·6
	Salem		·974	·809	·165	·901	−·016	29·756	109·7	76·9	23·8	105·5	70·1	35·4	89·5	95·7	86·4	+0·3	72·8	77·1	77·1	75·7
	Chitaldroog		27·501	27·358	·143	27·429	−·010	·685	98·2	73·8	24·4	103·0	70·7	32·3	87·5	95·7	85·4	+2·2	76·8	73·8	73·6	71·4
	Bangalore		26·934	26·805	·129	26·874	−·006	·713	94·1	69·8	24·3	98·0	62·1	35·9	83·4	91·2	81·2	+1·1	63·8	70·9	68·7	67·8
	Hassan		·867	·742	·125	·809	−·010	·715	93·3	68·1	25·2	97·9	62·4	31·5	84·7	88·6	79·5	+1·9	64·7	68·7	67·5	67·0
	Mysore		27·410	27·270	·140	27·340	−·013	·718‡	95·5	71·3	24·2	99·7	68·3	31·4	83·9‡	92·6‡	82·8‡	+2·0	66·9	71·7	69·7	69·4
	Madras		29·878	29·752	·133	29·823	+·004	·774	92·8	77·8	15·0	95·4	71·2	24·2	90·2	87·9	84·1	−0·6		79·0	79·2	78·3
	Bellary		28·400	28·285	·155	28·322	−·013	·694	104·4	78·6	25·8	109·0	72·7	36·3	92·5	99·8	90·0	+0·8	66·4	70·3	72·2	69·6
	Waltair		29·661	29·542	·119	29·602		·767	89·8	78·7	11·1	92·5	76·0	16·5	87·0	86·1	83·4		73·4	77·8	78·8	76·7
Hill Stations, Baluchistan.	Quetta		24·655	24·581	·074	24·610	+·018		72·5	41·4	31·1	85·4	31·6	53·8	65·4	70·3	56·4	−3·1	38·9	51·3	53·5	47·9
Hill Stations, Northern India.	Leh		19·695	19·615	·080	19·661	−·026		52·1	27·8	24·3	62·6	20·5	42·1	43·2	48·7	40·4	−2·6	22·4	33·0	37·0	30·8
	Srinagar		24·917	24·833	·084	24·867	+·013		65·4	43·4	22·0	80·0	36·0	44·0	55·8	63·3	53·9	−3·4	41·6	53·5	60·0	51·7
	Kailang	10,087	20·977	20·911	·066	20·956	P		47·6	29·1	18·5	59·7	24·0	35·7	40·5	43·2	37·1	−3·0	27·4	33·9	35·7	32·3
	Simla (Ridge)		23·133	23·086	·047	23·102	+·014		63·8	50·2	13·6	71·6	42·4	29·2	58·9	60·8	56·3	−3·5	40·6	44·8	46·4	43·9
	Chakrata		·294	·246	·048	·262	−·009		67·1	50·4	16·7	74·2	41·2	33·0	62·5	62·4	57·6	−2·1	41·9	48·1	47·8	45·9
	Ranikhet		24·112	24·041	·071	24·066	+·003		73·5	56·3	17·2	81·0	49·0	32·0	67·8	69·7	64·0	−0·9	45·9	51·9	51·8	49·9
	Muktesar		22·875	22·812	·063	22·844			70·7	50·2	20·5	76·7	42·8	33·9	63·6	65·3	59·1		40·8	48·1	48·3	45·7
	Katmandu	4,388	25·528	25·418	·110	25·471	P		85·8	51·0	34·8	91·6	42·9	48·7	75·5	79·7	66·9	+0·4	48·9	40·1	60·1	49·7
	Darjeeling		23·004	22·935	·069	22·968	+·021		63·9	48·5	15·4	70·3	43·1	27·2	59·0	61·0	55·5	+1·6	44·0	52·3	54·0	50·1
Hill Stations, Central India.	Mount Abu		26·038	25·959	·079	25·993	−·035		85·5	70·6	14·9	90·7	66·3	34·4	80·7	82·8	77·3	+0·8	52·5	57·4	58·5	56·2
	Pachmarhi		·450	26·348	·102	26·394	−·003		90·6	69·2	21·4	96·5	61·7	34·8	84·2	88·4	80·9	−0·8	56·3	62·1	62·9	60·4
	Chikalda	3,642	·339	·229	·110	·279	−·005		90·7	71·9	18·8	97·4	66·3	31·1	82·7	89·0	82·4	−0·8	57·9	61·8	64·3	61·3
Hill Stations, S. India.	Wellington		24·269	24·195	·074	24·232	−·007		76·6	54·9	21·7	80·8	48·7	32·1	72·3	71·7	64·5	−0·3	53·3	60·5	61·8	58·5
	Kodaikanal		22·859	22·790	·069	22·819			68·6	53·5	15·1	73·6	49·0	24·6	65·3	61·8	59·4		46·7	55·3	57·4	53·1
Extra India.	Aden		29·834	29·718	·116	29·767	−·017	·792	89·4	78·3	11·1	94·1	73·6	20·5	85·2	87·0	83·4	+0·6	71·0	76·5	75·7	74·3
	Perim		·709	·588	·121	·640	+·010	·773	89·3	78·6	10·7	94·9	76·6	18·3	85·3	86·5	83·2	+0·1	75·6	79·8	79·7	78·4
	Minicoy		·887	·813	·074	·843		·775	89·3			98·0			86·3	85·8				7·99	79·4	
	Zanzibar		·822†	·833	·089	·878	−·007	·877†	84·2	77·5	6·7	88·4	72·9	15·5	81·2‡	83·2	80·6	+0·1	73·8	77·4‡	77·8	76·3
	Port Victoria (Seychelles).	15	·923	·769	·154	·846	−·060	·785	85·0	76·2	8·8	88·0	73·1	14·9	83·5	84·2	80·4	−0·3	74·3	78·5	78·0	76·9
	Mauritius (Pamplemousses)	181				·802	−·033	·830				89·5	58·2	31·3			75·5	−0·9				

† Mean of 28 days.

‡ Mean of 27 days.

II.—*concluded.*

65 Stations in India, Burma, etc., in April, 1901—concluded.

Vapour Tension.					Humidity.				Cloud.				Wind Direction.										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
													Number of winds from																	
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%							
·695	·744	·635	·691		84	60	45	63		4·7	6·3	5·5		12	5	3	12	12	6	2	8		S. 57° E.		27		57*				Periyakulam	South India.
·755	·770	·691	·739	+·008	81	55	43	60	+ 1	4·4	5·7	5·1	+1·4	11		11	12	3	6	11	5	1	S. 46° E.	S	18	30	116*	110			Salem	
·574	·661	·558	·598	+·118	69	51	34	51	+ 6	4·2	5·5	4·9	+1·4		5	9	17	9	1	3	7	9	N. 59° E.	N. 32° W.	27	16	159*	178			Chitaldroog	
·527	·615	·442	·528	−·008	72	56	32	53	0	4·3	4·9	4·6	+1·3	2	1	15	11	10	4	7	7	3	S. 81° E.	S. 33° W.	25	40	168*	101			Bangalore	
·575	·516	·432	·508	−·051	83	43	34	53	− 8	5·0	7·3	6·2	+1·0		1	18	13	11	4	4	5	4	N. 85° E.	N. 21° E.	38	12	71*	95			Hassan	
·609	·6201	·4371	·555	−·013	79	531	301	54	− 4	7·4	7·6	7·5	+3·0		1	10	13	13	5	4	7	7	S. 74° E.	S. 79° E.	25	2	202*	189			Mysore	
	·840	·883	·892	+·022		59	66	76	+ 2	4·4	3·5	4·0	+1·0				4	30	20	6			S. 25° E.	S. 37° E.	84	83	192	185			Madras	
·497	·468	·446	·470	−·052	51	31	24	35	− 4	5·5	7·3	6·4	+3·0	3	2	4	19	4	6	1	5	16	N. 49° E.	S. 63° W.	17	8	148*	127			Bellary	
·753	·833	·888	·824		77	65	71	71		3·8	4·4	4·1					1		1	56	1	1	S. 45° W.		95		174				Waltair	
·221	·237	·242	·233	−·025	81	38	33	51	+ 1	2·1	3·9	3·0	−0·2	27				1	3	1	18	10	N. 84° W.	N. 81° W.	42	34	49*	92			Quetta	Hill Station, Baluchistan.
·079	·111	·128	·106	−·004	51	41	36	43	− 1	5·3	7·0	6·2	0		3	4	5		8	19	17	4	S. 64° W.	S. 62° W.	47	25	98	70			Leh	Hill Stations, Northern India.
·246	·389	·495	·377	+·049	86	86	83	85	+14	4·8	5·5	5·2	+0·9	9	7	3	2	10	4	4	7	14	N. 55° W.	N. 5° W.	17	12	124*	96			Srinagar	
·137	·143	·147	·142	−·012	85	57	54	65	+ 4	5·7	8·1	6·9	+1·2				2	1	7	30	15	5	S. 56° W.	S 63° W	75	73	40	50	1·55	0·13	Kailang	
·157	·154	·171	·161	−·067	43	31	32	35	− 9	4·1	4·9	4·5	+0·4										?	S. 84° W.	?	12	?	138			Simla(Ridge)	
·180	·191	·184	·185	−·035	48	33	38	38	− 5	3·8	4·1	4·0	+0·5		9	6	1	8	35		1		S. 21° E.	S. 64° W.	48	24	267	156			Chakrata	
·205	·226	·202	·211	−·054	45	33	28	35	− 9	4·6	4·6	4·6	+1·4	5	5	2	1	3		12	17	15	N. 78° W.	S. 85° W.	53	43	97*	89			Ranikhet	
·162	·177	·167	·169		44	31	27	34		3·1	4·2	3·7			2	5	6	11	4	4	4	24	N. 38° W.		17		161*				Muktesar	
·329	·349	·301	·326	−·047	87	40	30	52	− 8	1·6	2·5	2·1	−2·2	1			2	9	2	3	35	8	S. 82° W.	N. 86° W.	59	44	35	36	0·80	0·34	Katmandu	
·245	·325	·348	·306	−·020	71	65	65	67	− 9	4·1‖	5·8	5·0	−1·1	3			1	4	3	34	14	1	S. 50° W.	S. 71° W.	77	44	225*	206			Darjeeling	
·193	·207	·215	·205	−·049	26	20	19	21	− 7	3·1	3·9	3·5	+1·6		3	8		4		18	18	9	S. 89° W.	S. 87° W.	48	56	198*	193			Mount Abu	Hill Stations, C. India.
·311	·304	·280	·298	+·050	44	27	22	31	+ 5	5·1	5·9	5·5	+3·3		4	5	2	7	3	11	7	21	N. 72° W.	N. 62° W.	33	43	181*	138			Pachmarhi	
·322	·314	·320	·319	+·041	42	30	24	32	+ 6	2·6	4·6	3·6	+1·0	42	13					2	1	2	N. 16° W.	N. 47° W.	23	40	164*	194	0·80	0·42	Chikalda	
·394	·408	·451	·418	+·023	91	52	59	67	+ 3	4·3	5·4	4·9	+0·2	5	5	10	4	28	7	1			S. 63° E.	S. 58° E.	57	61	56	64			Wellington	Hill Stations, S. India.
·255	·340	·430	·342		62	56	78	66		5·0	6·6	5·8			6	10	8	14	4		1		S. 89° E.		40		332				Kodaikanall	
6·66	·797	·733	·732	−·020	69	66	57	64	− 4	3·6	2·9	3·3	+1·0	2	1	22	11	11	1	7	2	3	N. 79° E.	N. 86° E.	43	62	293*	363			Aden	Extra India.
·855	·956	·932	·914	+·117	87	78	89	85	+15	3·1	1·1	2·1	+0·4		1		4	33	6	1	13	2	S. 24° E.	S. 62° E.	50	55	373*	417			Perim	
	·937	·923				75	75			5·6	6·5	6·1			22	9	4	2	8	3	3	9	N. 1° W.		38		163*				Minicoy	
·786	·894†	·884	·855	+·008	84	84†	78	82	+ 1	7·5†	7·4	7·5	+1·8		1	1		12	29	10	4	1	S. 4° W.	S. 5° E.	73	81	184*	174			Zanzibar	
·827	·911	·885	·874	+·053	91	79	75	82	+ 5	6·1	6·7	6·4	+1·3	10	5	8	5	7	3	2	8	12	N. 12° W.	S. 69° E.	17	10	104	?	9·66	1·80	Port Victoria (Seychelles).	
			·701	−·003				80	+ 1																		226	255	3·43	0·85	Mauritius (Pamplemouses)	

† Mean of 29 days. ‖ Wind variable 17. * Corrected.

G. I. C. P. O.—No. 20 Meteor.—23-6-1

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are fixed only by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	one feather added to the wind arrow
,, ,,	2 to 5 ,, ,, ,,	two feathers ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	three ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	four ,, ,, ,, ,,

Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

CHART SHEWING THE VARIATION OF THE MEAN MAXIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.

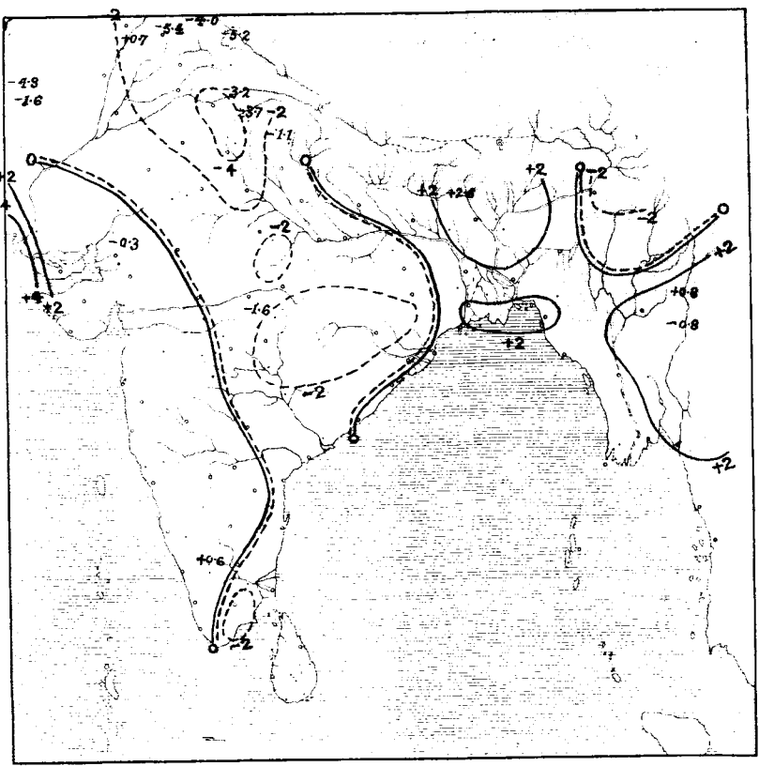
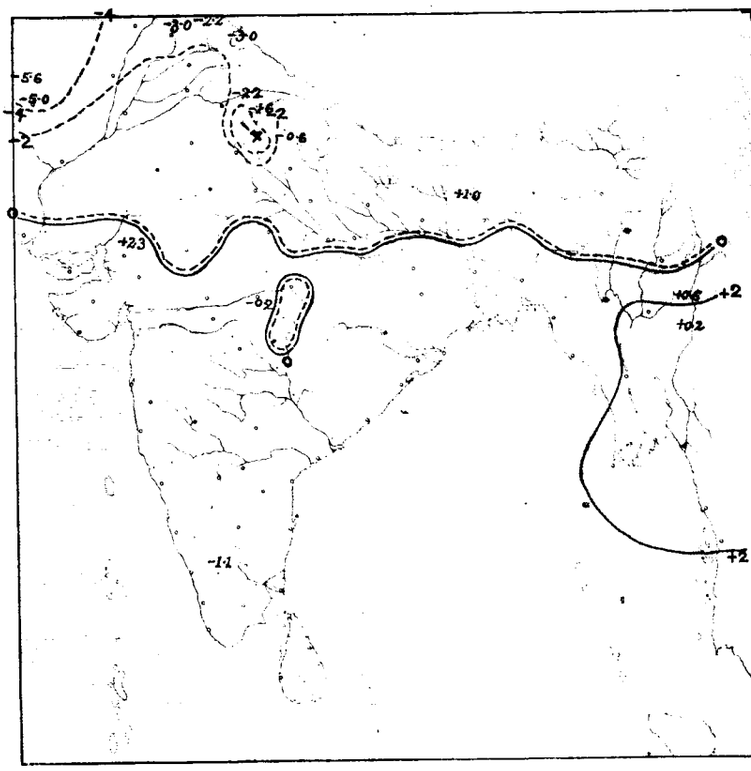


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

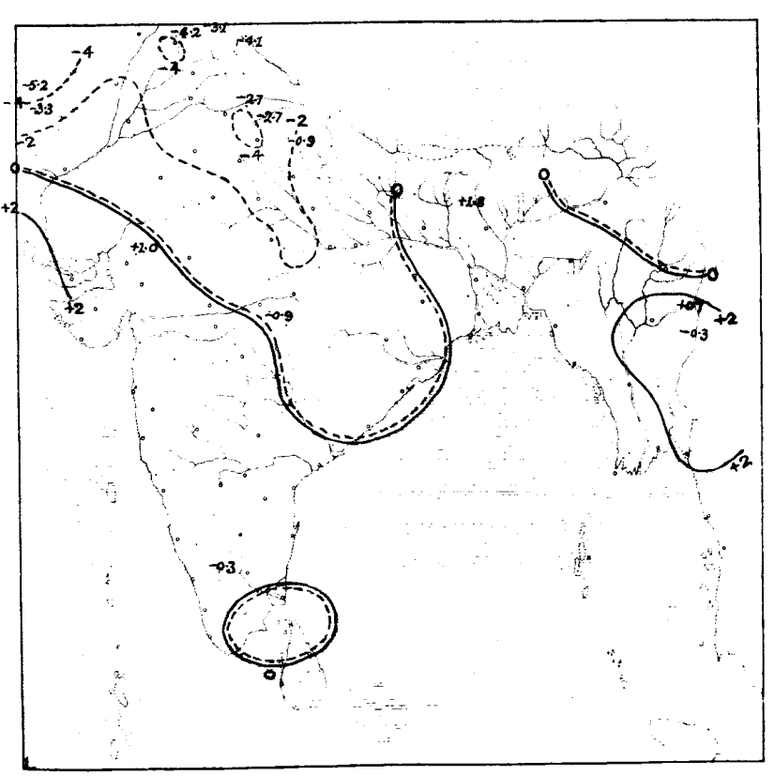
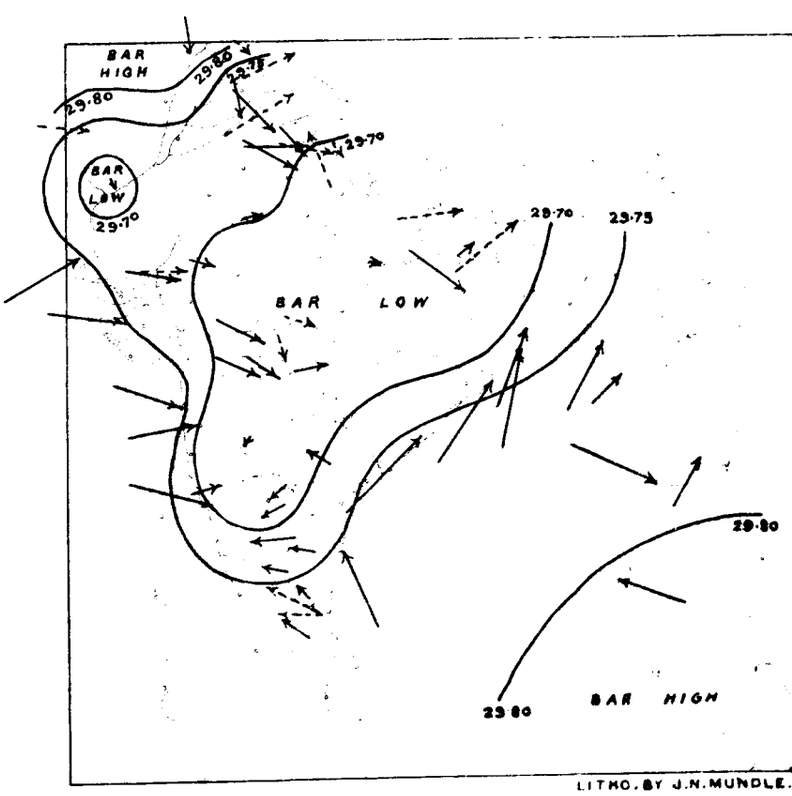


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF APRIL 1901.



Explanation.

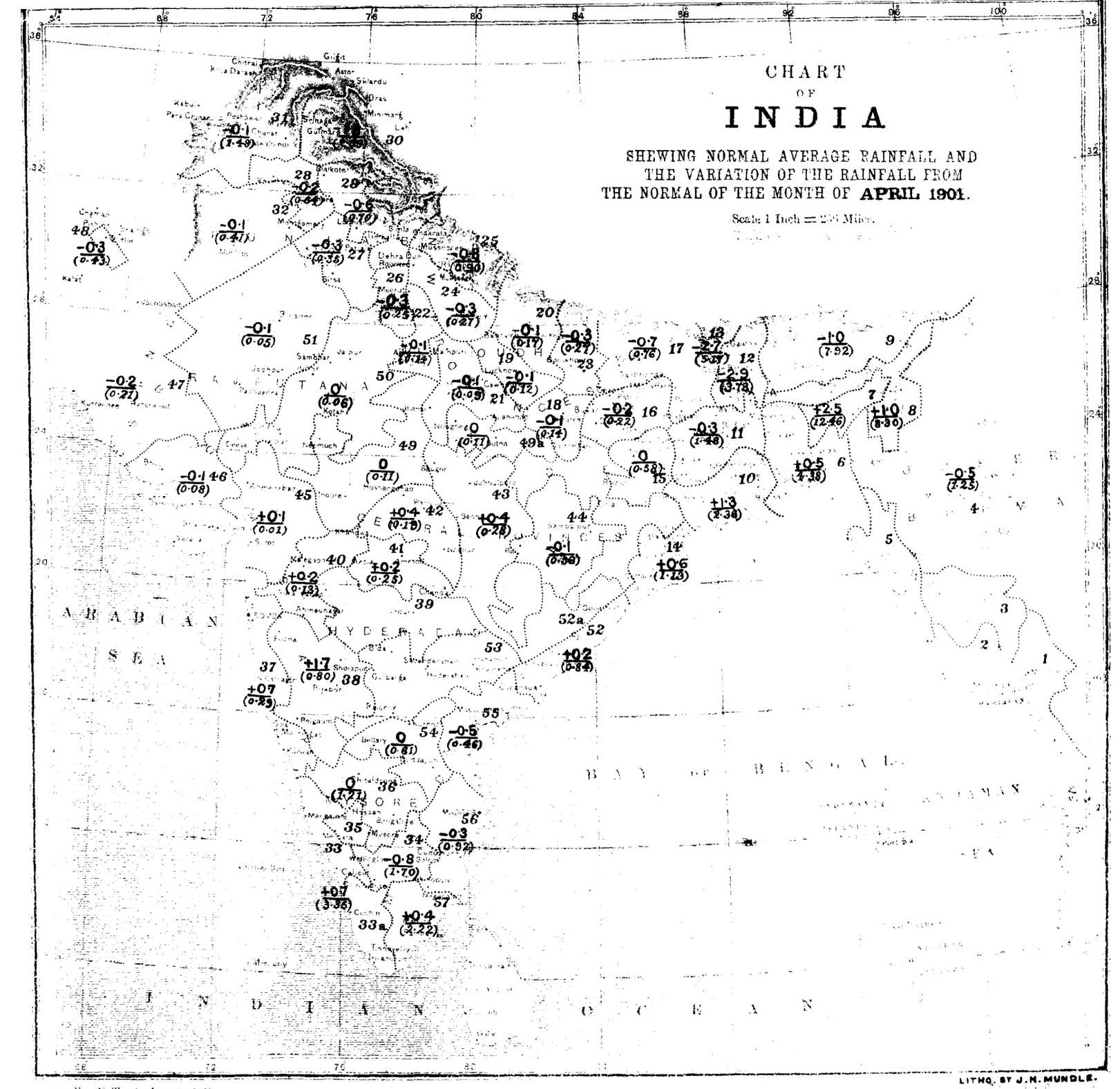
Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the direction of the resultants of the wind recorded at 10 and 16 hours, and by their lengths the percentage of the observations expressing the numerical valu

LITHO. BY J.N. MUNDLE.

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India (182 in number), except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.



Explanation.

The Chart gives the variations of the rainfall of the month in tenths of an inch from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated for each. The numbers given in the centre of each division usually with a + or − sign attached, give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be ascertained by referring in the following list to the number given near the right hand boundary of each district in small size figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
16. South Bihar
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
32. West do.
33. Malabar
33a. [illegible]
34. [illegible]
35. Ceded
36. Mysore
37. Bombay Deccan
38. Hyderabad North
39. Khandesh
40. Berar
41. Central Provinces, West
42. Do. Central
43. Do. East
44. Gujarat
45. Kathiawar
46. Sind
47. [illegible]
48. [illegible]
49. [illegible]
49a. [illegible]
50. [illegible]
51. [illegible]
52. Madras, East Coast, North
52a. [illegible] (a)
53. [illegible]
54. Madras, [illegible]
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, MAY 1901.

INTRODUCTION.

THIS review of the weather in India during the month of May 1901 is based on observations taken daily at 8 A.M. at 217 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 65 stations. In the rainfall summary the rainfall data of the meteorological observatories and the weekly rainfall telegrams received during the month from District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review, are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given.

Summary of the chief features of the weather in India during the month of May, 1901.

May is usually the last month of the hot weather season in India and the temperature and pressure conditions, essential to the establishment of the south-west monsoon circulation, are ordinarily completed during this month. The area of maximum temperature at the commencement of the month usually includes the Central Provinces, Berar and the South Gangetic Plain, but as the month advances, this area is transferred north-westward to the South-West Punjab and Western Rajputana. Similar changes occur in pressure. The barometer falls quickly over Northern India during the latter half of the month and a large range or difference of pressure is established over India at this time. When these conditions are fully established there usually occur one or two strongish advances of moist humid winds towards the south of India, which advances give moderate to heavy rain to Ceylon, Malabar and the south of the Peninsula and occasionally give rise to cyclones in the south of the Bay or the south-east of the Arabian Sea.

During the month under review the above conditions were departed from to a considerable extent and ordinary hot weather conditions were less well marked than is usually the case. During the first three days of the month the weather was relatively quiet, with showers over the Peninsula and in North-East India and a large area of relatively low temperature was shown over the central parts of India and the east and centre of the Peninsula. During the 1st, 2nd and 3rd the depression of

temperature amounted to over 5° at the following stations in the Peninsula :—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
1st May	Hyderabad (Deccan)	−12·5
	Raichur	−10·7
	Cuttack	−10·7
	Raipur	−9·5
	Balasore	−7·5
	Sholapur	−7·4
	Chaibassa	−5·8
	Bellary	−5·6
	Kurnool	−5·4
	Sambalpur	−5·2
2nd „	Hyderabad (D).	−7·0
	Sholapur	−6·1
3rd „	Raichur	−5·8
	Bangalore	−5·5
	Hyderabad (D).	−5·1

On the 2nd and 3rd very high temperatures were recorded in the extreme north-west of India, the excess amounting to more than 8° at the stations for which comparative data are given below :—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
2nd May	Mooltan	+10·4
3rd „	Mooltan	+12·0
	Sialkot	+10·6
	Jacobabad	+9·5
	D. I. Khan	+9·2
	Sirsa	+9·1
	Lahore	+9·0

These high temperatures preceded the appearance of the most important storm of the month. This storm apparently advanced from the north of the Arabian Sea across Mekran and Baluchistan and entered Sind and the Punjab on the 4th and 5th. The fall of the barometer over the Punjab and Kashmir between the 4th and 5th amounted to over one quarter of an inch at the stations for which data are given below :—

STATION.		Pressure change in 24 hours preceding 8 A.M. of 5th May 1901.
		"
PUNJAB	Dera Ismail Khan	−·370
	Khushab	−·359
	Montgomery	−·264
	Lahore	−·251
KASHMIR	Cherat	−·323
	Srinagar	−·314
	Skardu	−·272

Strong winds and gales surrounded the storm and the rainfall accompanying it was phenomenally heavy for the time of year. The following gives some of the more remarkable falls in Sind, Baluchistan, the Punjab and Kashmir :—

	DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 5th May 1901.
			Inches.
SIND	KURRACHEE	Tatta	0·60
BALUCHISTAN		Loralai (Staff Office)	3·49
		Bellput	3·00
		Shahrig	2·80
PUNJAB	KOHAT	Fort Lockhart	11·40
	PESHAWAR	Katlang	8·25
	DERA ISMAIL KHAN	Shekh Budin	7·40
	KOHAT	Kohat	7·10
	PESHAWAR	Nowshera	5·50
	HAZARA	Attock	5·12
	BANNU	Marwat	4·95
	Do.	Isa Khel	4·78
	PESHAWAR	Swabi	4·26
	Do.	Khan Mahi	4·20
	Do.	Abazai	4·05
	DERA GHAZI KHAN	Fort Monro	4·00
	DERA ISMAIL KHAN	Kulachi	3·94
	Do.	Dera Ismail Khan	3·70
	PESHAWAR	Mardan	3·65
	BANNU	Bannu	3·58
KASHMIR	JUMMOO	Ramnagar	5·00
	Do.	Punch	4·40

The storm filled up on the 6th when the barometer rose very rapidly over the Punjab. On parts of the Kashmir hills the precipitation took the form of snow and a very remarkable cold wave passed across Northern India between the 5th and the 9th. The following gives comparative temperature data for the divisions of Northern India from the 5th to the 9th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	5th May.	6th May.	7th May.	8th May.	9th May.
	°	°	°	°	°
Punjab . . .	−6·8	−13·0	−12·8	−9·0	−8·5
Sind	−10·5	−4·4	−2·0	−0·3	+0·5
Rajputana . .	−2·9	−4·0	−4·2	−4·2	−1·3
North-Western Provinces and Oudh.	+1·8	−1·7	−1·7	−2·7	−2·1
Gujarat . . .	−2·9	−1·4	−1·1	−0·8	−0·5
Central India . .	+3·6	−2·8	−1·4	−1·7	−1·6

During this period the mean temperature was high over Bihar, Assam, Bengal and the Madras Coast, as is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	5th May.	6th May.	7th May.	8th May.	9th May.
	°	°	°	°	°
Bihar . . .	+4·1	+4·6	+2·8	+4·9	+3·7
Assam . . .	+3·5	+6·2	+5·1	+3·3	+3·2
Bengal . . .	+1·7	+3·2	+3·1	+5·2	+2·9
Madras Coast . .	+3·2	+5·7	+4·3	+2·6	+3·6

From the 10th to the 16th the weather was generally quiet over the Indian region. There were slight thunderstorms and showers in parts of Assam and Bengal and the mean temperature was very unsteady during these seven days. This is shown in the following table which gives the mean temperature variations for Bengal and Assam from the 10th to the 16th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	10th May.	11th May.	12th May.	13th May.	14th May.	15th May.	16th May.
	°	°	°	°	°	°	°
Bengal	+5·3	+4·9	+2·0	−0·6	+3·1	+1·6	−0·8
Assam	+3·2	+2·4	−0·1	+1·1	+3·0	+0·4	−4·3

During these seven days the weather was also feebly unsettled over the Peninsula where thundershowers were experienced along the West Coast and occasional showers in other places. As a result the mean temperature was also unsteady in this area. This is shown by the following table which gives mean temperature variation data for the Peninsular divisions from the 10th to the 16th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	10th May.	11th May.	12th May.	13th May.	14th May.	15th May.	16th May.
	°	°	°	°	°	°	°
Central Provinces . .	+0·4	−0·5	+0·5	+1·2	+1·9	+0·6	+1·1
Berar	−1·1	−0·9	+0·4	+2·0	+2·9	+1·1	+1·5
West Coast. . . .	+0·1	+0·2	+0·8	+0·4	+0·2	−0·4	−0·9
Bombay Deccan . .	−2·0	−1·1	+1·6	+3·5	+1·6	−0·3	+1·3
Mysore	+0·6	+1·3	+3·6	+2·0	+1·3	+1·0	+0·5
Madras Coast . . .	+3·4	+1·3	−0·3	−2·6	−2·6	−2·4	−1·3
Madras Deccan . . .	+0·5	+0·4	+2·5	−0·9	−0·9	−1·8	−2·5
South India	+1·6	+1·8	+1·9	+1·1	+0·8	+0·3	+1·0

On the 16th and 17th the weather again became unsettled over the North-West Himalayas where showers of rain and snow were experienced. A brisk to rapid fall of temperature hence commenced in Baluchistan and the North-West Himalayas on the 16th and the second cold wave of the month made its appearance in the extreme north-west on the 16th. This cold wave spread rather to the southward than to the eastward, but it was never very extensive and except in the Punjab was of brief duration. The following gives comparative data for Baluchistan, the Punjab, Rajputana, Sind and Gujarat from the 15th to the 20th and illustrates the extension of this cold wave :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	15th May.	16th May.	17th May.	18th May.	19th May.	20th May.
	°	°	°	°	°	°
Baluchistan . .	+1·7	−4·4	−5·8	−0·7	+1·5	+1·4
Punjab . . .	+4·9	+2·2	−7·5	−7·0	−4·1	−0·9
Rajputana . .	+4·8	+3·6	+0·6	+0·1	+1·2	+4·7
Sind	+1·5	+1·1	−1·0	+0·7	+2·6	+3·9
Gujarat . . .	+2·7	+1·4	+0·5	0	0	+0·7

During the period from the 16th to the 20th, there were also showers in the Peninsula and the temperature in that area remained very unsteady and the mean temperature

was more than 5° below the normal at the following stations on the following dates :—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
17th May	Bellary	−6·6
	Raichur	−6·2
	Chitaldroog	−5·9
18th „	Chitaldroog	−6·7
	Bangalore	−6·7
	Belgaum	−5·9
	Bellary	−5·3
	Kurnool	−5·2
	Cuddapah	−5·2
19th „	Cocanada	−9·4
	Kurnool	−7·9
20th „	Trichinopoly	−5·9
	Raichur	−5·2

On the 20th, 21st and 22nd there were heavyish thundershowers in Assam and Bengal, and an area of low temperature was produced which subsequently spread westward and coalesced with the low temperature area already existing over North-West India. In this manner an area of relatively low temperature was produced overlying the greater part of Northern India, a condition which prevailed from the 21st to the 23rd. The following gives comparative temperature data for the Punjab, the North-Western Provinces, the Bengal divisions and Assam for these four days :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	20th May.	21st May.	22nd May.	23rd May.
	°	°	°	°
Punjab	−0·9	+1·1	−2·8	−5·5
North-Western Provinces and Oudh.	+0·1	+1·6	−3·0	−3·5
Bengal	−2·1	−3·5	−1·9	−2·4
Bihar	+2·2	−0·7	−5·8	−2·5
Chota Nagpur	+0·4	−1·0	−3·9	−5·1
Orissa	−0·4	−0·4	+0·3	−3·1
Assam	−1·7	−1·8	−1·0	+2·3

In the meantime temperature was very high over Burma on the 21st, the excess having been greatest at Minbu where it amounted to 8½°. This high temperature preceded the formation of a cyclonic storm over the east of the Bay. The storm apparently began to form on the 21st, and had become a moderate disturbance by the 23rd, on which day the storm apparently lay close to the Andamans. On the 24th it commenced to move northward and on the night of the 24th or morning of the 25th, it struck the Arakan coast close to Akyab. The storm during its formation and advance gave general and moderately heavy rain to Burma and the rainfall thus initiated continued until the close of the month. As a consequence there was a marked fall of temperature over Burma, the fall spreading with the rainfall from the south towards the north. The following gives mean temperature variation data for Burma for each alternate day from the 21st to the end of the month :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	21st May.	23rd May.	25th May.	27th May.	29th May.	31st May.
	°	°	°	°	°	°
Burma	+3·6	+0·3	−2·4	−1·5	0	+0·5

During the 24th, 25th and 26th the weather was generally quiet over India, but there was a slight fall of snow in Kashmir on the 24th and showers over the Peninsula on that and the following days. In consequence temperature was lower than usual in the Punjab and over the Madras districts, as is shown below :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	24th May.	25th May.	26th May.
	°	°	°
Punjab	−4·2	−4·7	−1·3
Madras Coast	−1·7	−2·0	−2·3
Madras Deccan	−1·2	−3·2	−4·1

On the 27th the temperature rose almost everywhere and on the 27th, 28th and 29th was above the average in most

parts of India. The following gives data for all the divisions of India for these three days :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	27th May.	28th May.	29th May.
	°	°	°
Assam	+0·7	+1·4	+0·9
Bengal	+3·1	+2·9	+0·4
Orissa	+4·6	+4·7	+2·4
Bihar	+4·2	+4·7	−1·3
Chota Nagpur	+6·1	+6·4	+2·6
North-Western Provinces and Oudh	+1·2	+4·1	+2·4
Punjab	+0·7	+3·4	+3·5
Sind	+3·3	+1·3	+2·1
Rajputana	+2·5	+5·8	+5·3
Gujarat	+1·6	+1·6	+1·1
Central India	+2·7	+3·7	+5·9
Central Provinces	+2·5	+3·9	+6·2
Berar	+3·9	+4·9	+8·1
West Coast	+0·5	+1·6	+2·3
Bombay Deccan	+3·0	+3·3	+3·1
Mysore	−1·0	+1·9	+3·0
Madras Coast	−0·8	+0·3	+1·0
Madras Deccan	+0·3	+0·7	+2·9
South India	+0·5	+1·6	+2·4

During the last two days of the month the weather was again feebly unsettled in various parts of the country and showers fell in North-East India, in North-West India and in the Central Provinces and the Peninsula. In consequence the month closed with a very irregular distribution of temperature relatively to the normal.

Pressure.—The mean pressure of the Indian land area was 0·012″ above the normal. At all stations in India except those on the Burma coast, in Upper Assam, in West Bengal and the adjacent parts of the North-West and Central Provinces, and in the centre of the western desert the pressure, on the mean of the month, exceeded the normal average, but the excess was generally small or moderate. Compared with the general condition pressure was in slight excess over Deltaic Bengal, practically the whole of the Peninsula, and the greater part of the Central Provinces, Central India, Rajputana, Gujarat and Lower Sind. Over nearly the whole of the remainder of India, as well as in Burma, the mean pressure of the month was, compared with the general condition, in slight defect. The mean pressure of the month was in excess at all the hill stations, but the vertical pressure anomalies, except in the Baluchistan-Sind area, were generally slight.

The following table gives the mean pressure variations and anomalies of the month for the eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	Variation from normal of mean 8 A.M. pressure of May 1901.	Pressure anomaly, May 1901.
	″	″
Burma Coast and Bay Islands	−·007	−·019
Burma Inland	+·006	−·006
Assam	+·002	−·010
Bengal and Orissa	+·013	+·001
Gangetic Plain and Chota Nagpur	+·003	−·009
Upper Sub-Himalayas	+·009	−·003
Indus Valley and North-West Rajputana	+·007	−·005
East Rajputana, Central India and Gujarat	+·017	+·005
Deccan	+·016	+·004
West Coast	+·028	+·016
South India	+·017	+·005

Temperature.—The temperature variations of the month of May 1901 were rather irregular, the most marked feature having been a large depression of temperature which succeeded the heavy fall of rain, on the hills and plains of North-West India, during the first week.

The mean maximum temperature of the month was below the normal over the Punjab, over Gujarat, over nearly the whole of the interior of the Peninsula and over Lower Burma. The deficiency was more than 2° over the north-west, west and centre of the Punjab and was as much as 4°·4 at Montgomery and 5° at Umballa. It was likewise more than 2° in the Central Deccan, at Hyderabad (−3°·2), at Raichur (−3°·1), and at Belgaum (−3°·9) and locally at Rangoon (−2°·4). In other parts of the country the mean day or maximum temperature exceeded the average. The principal area of excess was shown within a large region, including the South-West Punjab, Upper Sind, Rajputana and parts of the North-West Provinces, the Central Provinces and Central India. The greatest excess was, however, reported from North and Central Bengal where Dinajpur showed an excess of 3°·4 and Purnea of 3°·5.

The mean minimum or night temperature exhibited a similar distribution. There was a deficiency over the greater part of the Punjab (Khushab −2°·6), the North-West Provinces (Mainpuri −2°·8), and the interior of the Peninsula (Raichur −2°·6) while there were small local areas of defect over Central Bengal, Upper and Lower

Burma and the extreme south-east of the Peninsula (Negapatam —2°·5). Elsewhere the mean night temperature was in excess. The principal area of excess covered the South-West Punjab, Sind, Rajputana and parts of the North-Western Provinces, the Central Provinces and Central India and the greatest excess throughout India was 4°·5 at Ajmer.

The mean temperature of the month was very similar in distribution to that of the maximum and to that of the minimum temperatures. There was the same marked excess over the western desert, Rajputana and the adjacent parts of the North-Western Provinces, the Central Provinces and Central India, and the same marked defect over the west and Central Punjab and the interior districts of the Peninsula. The largest excess of temperature, on the mean of the month, was 3°·3 at Ajmer and the largest deficiency 3°·3 at Montgomery.

The following table gives comparative temperature variation data of the month for the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	VARIATION OF ACTUAL FROM NORMAL OF		
	Mean maximum temperature, May 1901.	Mean minimum temperature, May 1901.	Mean daily temperature, May 1901.
	°	°	°
Burma Coast and Bay Islands	—0·7	+0·5	—0·1
Burma Inland	—0·1	+0·5	+0·2
Assam	+1·7	+0·5	+1·1
Bengal and Orissa	+1·7	+0·4	+1·1
Gangetic Plain and Chota Nagpur.	+1·0	+0·3	+0·7
Upper Sub-Himalayas	0	+0·2	+0·1
Indus Valley and North-West Rajputana.	+0·1	+0·6	+0·4
East Rajputana, Central India and Gujarat.	+0·9	+1·8	+1·4
Deccan	+0·1	+1·1	+0·6
West Coast	+0·8	+0·9	+0·9
South India	—0·1	+0·1	0

Winds.—The wind was generally steadier than usual over Northern India, but the velocity varied irregularly from the normal. The wind was considerably lighter than usual in Chota Nagpur and Orissa and slightly lighter than usual in Sind and Rajputana. The direction was more westerly than the average at the Bay Islands, but less westerly in Burma. An unusual east-south-east wind prevailed in Bihar and a north-westerly wind in Chota Nagpur and in the North-Western Provinces the direction was more southerly than the normal. Along the West Coast and over the Central Provinces and the Deccan the wind was unusually steady and both in Berar and the Bombay Deccan was stronger than the average. In South India and on the Madras coast, on the contrary, the wind was both lighter and more unsteady than the average. The wind was more westerly than usual over the northern half of the Peninsula.

Humidity.—The air was damper than usual over the interior districts of the Peninsula, the Punjab, Upper Sind and Lower Burma, the excess of humidity having been greatest over the northern half of the Peninsula where it amounted to 8% at Poona and to 7 % at Belgaum and Hyderabad (Deccan). Over other parts of the country the humidity was less than the normal, more particularly over Deltaic Bengal, Eastern Rajputana and the Bombay coast. The deficiency in humidity amounted to 7% at Chittagong, 6% at Calcutta, 5% at Jaipur and Bombay and 4 % at Karwar. Elsewhere the variations from the normal were slight and generally unimportant.

The following gives comparative data for nine meteorological provinces:—

METEOROLOGICAL PROVINCE.	MEAN ABSOLUTE HUMIDITY.		MEAN RELATIVE HUMIDITY.	
	Average actual, May 1901.	Variation of actual from normal, May 1901.	Average actual, May 1901.	Variation of actual from normal May 1901.
	"	"	%	
Burma Coast and Bay Islands.	·896	—·001	79	0
Bengal and Orissa	·906	—·022	74	—5
Gangetic Plain and Chota Nagpur.	·568	—·018	45	—1
Upper Sub-Himalayas	·439	—·014	37	0
Indus Valley and North-West Rajputana.	·617	+·030	49	+1
East Rajputana, Central India and Gujarat.	·470	—·032	34	—2
Deccan	·512	+·026	42	+3
West Coast	·844	—·021	69	—5
South India	·664	+·008	62	+1

Cloud.—The variations in the cloud amount, relatively to the normal, agreed to a certain extent with the variations in the humidity conditions. Thus the sky was clearer than usual at the head of the Bay and along the Bombay coast, while there was, on the other hand, an excess of cloud over the greater part of the Central Provinces and of the interior of the Peninsula. The maximum excess was reported over the centre of the south of the Peninsula and amounted to 2·6 at Mysore, to 1·2 at Hassan and to 1·1 at Bellary. Over the Gangetic Plain and Upper India the cloud amount was in slight defect generally, while at most of the northern hill stations the sky, on the mean of the month, was slightly clearer than usual.

The following table gives variation data of the mean cloud amount of the month for nine meteorological provinces:—

METEOROLOGICAL PROVINCE.	MEAN CLOUD AMOUNT.	
	Average actual, May 1901.	Variation of actual from normal, May 1901.
Burma Coast and Bay Islands	6·7	+0·4
Bengal and Orissa	4·2	—0·9
Gangetic Plain and Chota Nagpur	2·2	—0·2
Upper Sub-Himalayas	1·7	—0·4
Indus Valley and North-West Rajputana	2·3	+0·3
East Rajputana, Central India and Gujarat	1·7	—0·2
Deccan	3·4	+0·3
West Coast	2·9	—0·6
South India	5·4	+0·8

Rainfall:—During the month under review the weather was more showery and disturbed than usual over the greater part of the interior of the Peninsula and, in Mysore, the Bombay Deccan and part of Madras, the rainfall of the month was in excess of the normal, more particularly in Central Madras. At the beginning of the month there occurred a severe storm in the extreme north-west, and the rainfall from this storm was exceptionally heavy and widespread so that, at the end of the month, the rainfall was, relatively to the normal, in large excess in Baluchistan, Sind, the greater part of the Punjab and the east submontane division of the North-Western Provinces. In other parts of the country the rainfall of the month was at the best about normal and at the worst in large defect. In North-East India and Assam, or where the spring storm rainfall is ordinarily heavy, the storms were both lighter and fewer than usual, and in Arakan, East Bengal, Assam, and Chota Nagpur the rainfall of the month was only about half the normal average. In parts of the North-Western Provinces the rainfall was very light, and for the whole month averaged only 0·05″ in the western division. Central India and Rajputana had almost equally light rainfall, the average for the month over those areas ranging between 0·10″ and 0·16″ which was only a little more than one quarter of the normal amount. No advances of monsoon winds occurred over the south of the Peninsula, but a storm which struck the Arakan coast on the 25th brought up the monsoon with it over the east of the Bay and Burma, and from about the 21st onward to the end of the month steady monsoon rainfall was received over Tenasserim and Burma.

The following table gives data for the eleven meteorological provinces of the empire:—

METEOROLOGICAL PROVINCE.	RAINFALL.			
	Mean actual for May 1901.	Mean normal for May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands	13·79	12·68	+1·11	+9
Burma Inland	9·26	4·89	+4·37	+89
Assam	7·64	14·52	—6·88	—47
Bengal and Orissa	5·11	7·26	—2·15	—30
Gangetic Plain and Chota Nagpur	2·21	1·66	+0·52*	+31
Upper Sub-Himalayas	1·36	1·07	+0·35*	+33
Indus Valley and North-West Rajputana.	1·64	0·47	+1·17	+249
East Rajputana, Central India and Gujarat.	0·30	0·43	—0·15*	—35
Deccan	0·89	1·01	—0·11*	—11
West Coast	3·13	5·59	—2·46	—44
South India	2·26	2·58	—0·31*	—12

* A reference to Table I will show that the means in columns two and three are derived from a smaller numbe- of stations than the means in the 1st column. The sum of the figures in columns two and three will therefore not agree with the figures in column 1.

Atmospheric Pressure.

The mean pressure of the Indian land area for the month of May 1901 was 0·012″ above the normal. Pressure was, relatively to this general condition, in defect over Burma, Assam, North Bengal, the Gangetic Plain, a large part of the Punjab, of Rajputana and of Sind. The negative anomalies within these areas were small generally, but exceeded 0·02″ at some stations in Tenasserim and Lower Burma, as well as locally at Allahabad and

Jacobabad. The following gives comparative data for the stations at which the deficiency was more than 0·02″ in amount:—

PROVINCE OR DIVISION.	STATION.	Variation from normal of mean 8 A.M. pressure of May 1901.	Pressure anomaly, May 1901.
		″	″
LOWER BURMA	Rangoon	—·018	—·030
	Diamond Island	—·016	—·028
TENASSERIM	Moulmein	—·013	—·025
	Mergui	—·010	—·022
GANGETIC PLAIN	Allahabad	—·015	—·027
UPPER SIND	Jacobabad	—·010	—·022

In addition to the areas enumerated above, pressure was, relatively to the general condition, in defect at the Coromandel coast stations, as well as over South Ceylon and at one or two places in Kathiawar. At all these places the anomalies were small and unimportant.

Over the whole of the remainder of India the pressure was, relatively to the general condition, in excess. The principal area of excess included nearly the whole of the Peninsula, Orissa, Deltaic Bengal, the Central Provinces, the greater part of Central India, Gujarat, Lower Sind and Eastern Rajputana. The excess was generally small and the only places where it exceeded 0·02″ were the two stations for which comparative data are given below:—

STATION.	Variation from normal of mean 8 A.M. pressure of May 1901.	Pressure anomaly, May 1901.
	″	″
Ratnagiri	+·037	+·025
Goa	+·035	+·023

In addition to the above large area of slight excess the chart exhibits small areas of excess, one at the foot of the North-Western Provinces Himalayas, a second in the Peshawar district, and a third over the South Punjab. In the case of these three small areas the excess was small at all the contained stations.

The most marked feature in the pressure conditions of the month was the small departures from the normal all over the country. The chart of barometric variations shows that, on the mean of the month, the pressure was above the normal average except over the Upper Assam Valley and within three small areas, one including the Burma coast districts, the second West Bengal and the east of the North-Western Provinces and the third the central parts of the western desert. But, though the pressure was generally excessive, the individual variations were generally small and were hence in marked contrast with the pressure conditions prevailing during May 1900.

The mean pressure of the month was high along the West Coast and over South Ceylon and the south of the Bay while it was lowest in Upper Sind. A slight high pressure area was, however, also shown in the North Punjab, an indirect effect probably, of the late snowfall over the North-West Himalayas.

At the hill stations in all parts of the Indian region the pressure, on the mean of the month, was above the average. At Darjeeling the variation was doubtful, but at the remaining stations the pressure variations from the normal were generally similar at the elevation of the hill stations to those at the stations on the plains at the foot of the hills. Hence the vertical pressure anomalies were generally small except in the Sind-Baluchistan area where there was a considerable positive difference. The following gives data for ten pairs of stations:—

HILL STATION.	Variation from normal pressure, May 1901.	PLAIN STATION.	Variation from normal pressure, May 1901.	Vertical pressure anomaly (Hill–Plain).
	″		″	″
Leh	+·017	Lahore	+·014	+·003
Quetta	+·026	Jacobabad	—·010	+·036
Murree	+·012	Peshawar	+·015	—·003
Simla	+·022	Ludhiana	+·002	+·020
Chakrata	+·023	Roorkee	+·003	+·020
Ranikhet	+·021	Bareilly	+·009	+.012
Darjeeling	+·069	Dhubri	+·007	+·062
Mount Abu	+·008	Deesa	+·027	—·019
Pachmarhi	+·020	Seoni	+·017	+·003
Wellington	+·010	Coimbatore	+.025	—·015

The following is a brief summary of the abnormal features of the pressure conditions of the month:—

(1) Pressure was in general slight excess, except in parts of Burma, of West Bengal, the Upper Assam Valley and the east of the North-Western Provinces and of the western desert where it was in trifling defect.

(2) The mean pressure of the whole Indian area was 0·012″ above the normal.

(3) Pressure, in relation to this general condition, was in defect over Burma, Assam and the greater part of Northern India.

(4) Pressure, relatively to the general condition, was in slight excess over the Peninsula, the central parts of the country and the greater part of Gujarat.

(5) Pressure was in excess at all the hill stations in India, but except in the Baluchistan-Sind area the excess at the level of the hill stations was generally similar to the excess at the stations on the plains at the foot of the hills.

Barometric depressions and cyclonic storms of the month.

Disturbed weather prevailed to a considerable extent over India during May, but with the exception of the storm in the north-west during the first week, the intensity of the storms was slight, and the effect of the storms on the weather was feeble and generally brief. The sky was more cloudy and the humidity greater than usual over a large part of the Peninsula, a condition which was the opposite of that prevailing during May 1900, and apparently indicated that over the south of the Indian region and the south of the Arabian Sea the unsettled conditions, which in the previous month had resulted in the production of an unusually early cyclonic storm, were still present, though probably in a mdified form.

During the first three days of the month the weather was comparatively quiet over the Indian land area. The ordinary hot weather depression covered the western desert during this time, but pressure was higher than usual over the whole country and only local dust and thunderstorms prevailed in any part of the country, while over the interior of India, fine dry weather with increasing temperature prevailed generally. On the 3rd pressure began to fall fast over Baluchistan and Sind, and on the following day a deep storm was shown over the Indus Valley and pressure had decreased nearly 0·20″ over Baluchistan and Sind. The history of this storm is given in the following paragraphs:—

Cyclonic storm of the 24th April to May 5th.—This storm appeared over the south-east of the Arabian Sea on the 24th or 25th of April and was remarkable alike for its course during the latter half of its existence and for the unprecedented rainfall which it caused over the Indus Valley and adjacent districts. On the 24th April pressure was giving way slowly over the whole of the Peninsula and apparently over the Indian seas. The winds along the West Coast were light from the northward, but over the south of the Arabian Sea there apparently existed a large shallow area of low pressure, the area extending from Long. 62° to Long. 80° E. along Lat. 8° N. The weather in this region was overcast and showery, as is shown by the following marine data:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Bombay Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S. S. *Onda* .	6 5	79 31	29·091	WSW	2	North-west swel and cloudy. 4 A.M. frequent rain squalls.
S. *Ensenada* .	6 09	61 51	...	N	4 to 5	
S. S. *Commilla* .	7 27	77 49*	·695	W	5	Moderate sea and cloudy.
S. S. *Venus* .	8 19	77 00	...	NW	2	Cloudy. Midnight squally.
S. S. *City of Perth.*	8 21	68 48	·803	N	2	Drizzling rain.
S. S. *Itria.* .	8 37	70 59	·778	NE	5	Squally. 4 P.M. rain and wind squalls.
S. S. *Pindari* .	10 5	61 55	...	W	4	Sea smooth, and cloudy.
S. S. *Assyria* .	12 06	75 02	·755	N	2	
S. S. *Vadala* .	12 09	62 19	·808	N	2	
S. S. *Yanariva* .	13 31	74 27	·739	NW	4	Noon cloudy.
S. S. *Urlana* .	15 10	73 32	·717	NNW	4	Cloudy.
S. *Esmeralda* .	15 27	72 14	...	NNW	2	

* Noon position.

April 25th.—On this day the barometer was falling along the West Coast of the Peninsula, more particularly at Minicoy, and the winds had shifted to the eastward at several of the West Coast stations and the weather in Malabar was cloudy and showery. The following gives 8 A.M. data for the West Coast stations:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inch.	
Minicoy .	29·688	—·090	...	ENE	7	9	0·12	Cloudy.
Cochin .	·738	—·032	—·097	SE	4	7	0·03	Distant lightning.
Calicut .	·717	—·040	—·118	Calm	5	9	0·89	Thunderstorm.
Mangalore .	·719	—·058	—·112	NNE	4	9	...	Sea slight.
Karwar .	...	...	...	E	8	0	...	
Goa . .	·749	—·050	—·061	ENE	...	0	...	Sea slight.
Ratnagiri .	·740	—·048	—·076	NW	8	0	...	Sea smooth.
Bombay .	·757	—·051	—·080	N	10	0	...	
Surat .	·755	—·024	—·068	N	5	0	...	
Veraval .	·763	—·018	—·017	NW	10	1	...	Sea smooth.

There had been some concentration in the low pressure area over the south-east of the Arabian Sea and a centre had apparently been developed in Lat. 6½° N. and Long. 73°¾ E. The winds had increased in strength and were blowing freshly on board some of the ships with frequent squalls and a confused sea. The following gives marine data for this day :—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Bombay Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Clan Macintyre.*	5 18	79 27	29·847	Var.	2	Squally.
S. *Ensenada* .	7 10	64 41	...	NNW	5	Passing clouds.
S.S. *City of Perth*	7 30	72 25	·683	NE	5	Heavy squalls and confused sea.
S.S. *Itria* . .	7 55	74 32	·688	SE	5	Squally with rain.
S.S. *Pindari* .	9 7	66 27	...	NW	5	Cloudy and slight north-west sea.
S.S. *Commilla* .	9 18	76 13	·697	Var.	2	4 A.M. cloudy.
S.S. *Venus* .	11 18	75 24	...	ENE	2	Cloudy.
S.S. *Assyria* .	15 24	73 35	·655	N	2	
S.S. *Lochtay* .	15 43	73 26	...	W	2	Fine.
S. *Esmeralda* .	15 46	71 40	...	NNW	4	
S.S. *Yanariva* .	16 25	73 18	·719	NW	4	Hazy.
S.S. *Caledonia* .	17 40	67 25	·729	NNW	4	Passing clouds.
S.S. *Urlana* .	Bombay.		·656	N	4	Cloudy.
S.S. *Khandalla* .	19 31	71 59	·745	NW	2	

April 26th.—Pressure had increased over the Peninsula, but less so along the West Coast than in the interior. Fresh easterly winds were blowing at the West Coast ports and a south-east wind at Minicoy with heavy rain, while the sky was becoming cloudy all along the coast. The following gives 8 A.M. data for the West Coast for this day :—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				inches	
Minicoy .	29·666	—·022	...	SE	15	10	2·00	Drizzling.
Amini Divi .	·753	—·006	...	NNE	...	7	4·80	Squally.
Cochin .	·766	+·028	—·068	ENE	4	9	...	Sea slight.
Calicut .	·764	+·047	—·068	E	4	7	0·08	Distant lightning.
Mangalore .	·773	+·054	—·057	ESE	3	7	0·59	Thunderstorm and sea slight.
Karwar .	...	...	...	E	6	3	...	
Goa . .	·763	+·021	—·047	NE	11	2	...	
Ratnagiri .	·761	+·021	—·053	N	6	7	...	
Bombay .	·761	+·004	—·070	ESE	13	7	...	
Surat .	·755	0	—·066	N	7	3	...	
Veraval .	·768	+·005	—·012	NNE	9	5	...	Sea smooth.

Over the east and centre of the Arabian Sea the winds exhibited an irregular cyclonic circulation. A moderate westerly gale was blowing on board the *Pindari* in Lat. 8° 17′ N. and Long. 70° 43′ E. and heavy squalls of wind and rain were reported from all the ships in this neighbourhood, the *Bombay* reporting squalls of hurricane force at midnight on the 26th. This is shown below :—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Bombay Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *City of Perth*	7 6	75 48	29·833	S	5	Fine and moderate sea. Noon squally.
S.S. *Itria* . .	7 32	78 6	·805	SE	...	Heavy continuous rain and sharp squalls.
S.S. *Investigator*	7 49	77 51	·702	S by W	4	Overcast and slight S. W. swell. 8 P.M. squally.
S.S. *Pindari* .	8 17	70 43	...	W	7	Thick rain. Noon heavy rain and hard squalls.
S. *Ensenada* .	8 18	67 51	...	N	4	4 P.M. heavy squalls and rain and lightning.
S.S. *Bombay* .	8 36	72 04*	...	SE	5	Midnight strong gale and very frequent squalls of hurricane force.
S.S. *Patna* .	9 11	76 20*	·752	ESE	2	
S.S. *Bengal* .	11 09	75 29	·739	SE	2 to 4	High S. swell. 4 A.M. occasional rain.
S.S. *Barcelona* .	11 55	63 22	·922	N	2	
S.S. *Lochtay* .	12 4	74 50	...	SE	2	Cloudy.
S.S. *Commilla* .	12 04	74 59	·698	Var.	1	Cloudy Midnight squally and rainy.
S.S. *Venus* .	14 38	73 55	...	NW	2	4 P.M. cloudy.
S. *Esmeralda* .	16 33	71 51	...	NNW	4	
S.S. *Wartburg* .	16 58	64 53	·816	N	2	
S.S. *Methley Hall*	17 12	65 33	...	N	4	
S.S. *Assyria* .	18 21	72 52	·695	NNW	2	
S.S. *Naseri* .	Bombay*		·718	Var.	2	

* Noon position.

The centre of the disturbance was probably between the *Pindari* and the *Bombay* in about Lat. 8°45′ N and Long. 72°·0′ E.

27th April.—Pressure was increasing in Malabar and decreasing slightly in the Konkan and briskly at Amini Divi. The wind was south-easterly all over the Peninsula and the sky was cloudy with squalls and thundershowers. The wind was rising and the weather was unsettled at Minicoy where 1·06″ of rain had fallen.

The following gives 8 A.M. data for the West Coast ports :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches.	
Minicoy .	29·711	+·045	...	SSE	28	10	1·6	Overcast.
Amini Divi.	·700	—·053	...	NNE	...	7	1·93	Squally and high sea.
Cochin .	·818	+·052	—·013	S	6	9	0·04	Sea rough.
Calicut .	·809	+·045	—·018	SE	7	10	0·46	Sea slight and thunderstorm.
Mangalore .	·796	+·023	—·030	Calm	2	10	0·20	Thunderstorm.
Karwar .	...	...	...	E	6	3	0·70	Do.
Goa . .	·743	—·020	—·063	S	9	6	1·00	Do.
Ratnagiri .	·742	—·019	—·068	Calm	6	9	0·17	Duststorm and sea smooth.
Bombay .	·773	+·012	—·054	SSW	11	6	...	
Surat .	·763	+·008	—·053	S	6	6	...	
Veraval .	·743	—·025	—·037	WNW	10	7	...	Sea smooth.

The marine observations showed that the storm over the Arabian Sea had concentrated and that a well-defined centre lay in about Lat. 9° 50′ N. and Long. 71° 10′ E. The ships nearest this centre were the *Ensenada* in Lat. 8° 21′ N. and Long. 69° 6′ E. with a north-north-west furious hurricane at 10 A.M.; the *Louise Roth* in Lat. 9° 5′ N. and Long. 68° 24′ E. with a hard north-west gale and terrific squalls and the *Bombay* in Lat. 7° 26′ N. and Long. 69° 48′ E. with a fresh south-west gale and furious squalls. Fresh southerly winds and rain prevailed to the east of the centre. The following gives the marine data for this day :—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Bombay Office	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Pindari* .	7 8	74 51	...	S	5	Cloudy and moderate south sea. 8 P.M. heavy rain squalls.
S.S. *Yarrowdale*	7 25	78 33	...	Var.	4	Cloudy and heavy confused sea. 4 A.M. heavy rain squalls.
S.S. *Bombay* .	7 26	69 48*	...	SW by W	8	Strong gale with furious squalls of wind and rain.

* Noon position.

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Bombay Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S. *Ensenada* .	8 21	69 06	...	NNW	9	Tremendous high confused sea. 10 A.M. blowing a furious hurricane.
S.S. *Okara* .	8 46	76 44	29·690	E	4	Squally. 4 A.M. dull rainy.
S.S. *Louise Roth*	9 05	68 24	...	NW	9	Tremendous sea. Noon terrific rain squalls.
S.S. *Lochtay* .	9 11	76 15	...	S	4	Fine. 4 A.M. rain squalls.
S.S. *Nawab* .	Alleppey*		·775	NNW	3	
S.S. *Investigator*	9 33	76 20	·825	SSE	3 to 4	Overcast. 4 A.M. rainy.
S.S. *Chusan* .	10 19	76 07	·742	S	3	West south-west swell. 2·20 A.M. heavy rain squalls.
S.S. *Knight Bachelor.*	10 30	64 39	...	N	5	Fine and moderate sea.
S.S. *Barcelona* .	10 33	67 19	·695	NNW	4	
S.S. *Commilla* .	15 01	73 40	·713	Var.	2	Midnight rainy
S. *Esmeralda* .	17 26	72 12	...	Var.	1	
S.S. *Wartburg* .	18 00	69 12	·784	E	3	

* Noon position.

28th April.—The barometer was rising very slightly along the West Coast where, however, strong easterly winds and rain continued. At Minicoy also pressure was increasing and the wind had shifted to south-south-west. The sea had risen very quickly and was "tremendous" along the Malabar coast. The following gives 8 A.M. data for the West Coast ports :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Minicoy .	29·757	+·046	...	SSW	10	4	1·86	Cloudy.
Amini Divi.	·680	—·020	...	SE	...	9	2·13	High sea and squally.
Cochin .	·818	0	—·008	W	4	10	...	Sea tremendous.
Calicut .	·835	+·026	+·013	ESE	9	6	0·08	Do.
Mangalore .	·813	+·017	—·009	SW	4	9	0·80	Sea very rough.
Karwar .	...	...	...	N	6	7	0·16	Thunderstorm.
Goa . .	·788	+·045	—·012	NE	9	10	4·14	Do.
Ratnagiri .	·789	+·047	—·017	E	6	10	0·18	Sea slight.
Bombay .	·803	+·030	—·019	SE	8	10	0·04	Thunderstorm.
Surat .	·817	+·054	+·008	S	12	6	...	
Veraval .	·800	+·057	+·024	SE	7	9	...	Sea smooth.
Dwarka .	·772	—·007	...	NNW	12	8	...	Do.
Kurrachee .	·803	—·010	+·058	WSW	7	0	...	

The marine observations showed that the storm had continued to move north-westward and that the centre lay in about Lat. 11° 20′ N. and Long. 70° 30′E. There were no ships in the immediate neighbourhood of the storm, but the *Ensenada* in Lat. 8° 12′N. and Long. 70° 16′E. reported a hard westerly gale and the *Louise Roth* in Lat. 8° 9′N. and Long. 71° 49 E. a hard south-west gale. The winds were cyclonic in direction and under the influence of the storm all over the Arabian Sea. This is shown by the following marine data:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Bombay Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Louise Roth*.	8 09	71 49	...	SSW	9	Heavy cross sea
S. *Ensenada* .	8 12	70 16	...	W	10	
S.S. *Onipenta* .	8 34	76 41	29·807	SW	2	4 A.M. heavy rain at times.
S.S. *Barcelona* .	8 51	70 0	·770	SW	4	
S.S. *South Gate* .	9 05	75 35*	...	WSW	4	Cloudy.
S.S. *Islanda* .	Alleppey		·778	ESE	4	Squally and rainy.
S.S *Knight Bachelor*.	9 31	68 39	...	Var.	6	Heavy squalls and high sea.
S.S. *Yarrowdale* .	9 40	76 16	...	S	4	Cloudy and heavy west swell. Noon heavy squalls and rain.
S.S. *Logician* .	9 41	63 54	...	WNW	3	Fine and moderate sea.
S.S. *Patna*. .	Cochin*		·886	SW	4	Very heavy sea.
S.S. *Okara* . .	11 51	75 11	·750	SW	4	Heavy rain squalls.
S.S. *Hensada* .	13 43	74 15	·719	ESE	6	High head sea and heavy cyclonic squalls.
S.S. *Bucentaur* .	14 19	73 55	·759	SE	4	Rough head sea. 4 A.M. rain and wind squalls and heavy thunder and lightning.
S.S. *Chusan* .	14 54	73 46	·762	SE	3	Cloudy. 4 A.M. rain at times.
S.S. *Peninsular* .	17 44	67 38*	·735	S	1	
S.S. *Commilla* .	18 13	70 57	·741	Var.	4	Cloudy. 4 A.M. continuous rain.
S.S. *Shandon* .	18 14	65 06	...	N	5	Cloudy.

* Noon position.

April 29th—The barometer was falling along the West Coast of the Peninsula where the winds still varied between south and east, the sea was very rough and the weather rainy and unsettled but at Amini Divi pressure had begun to recover. The following gives 8 A.M. data for the West Coast ports :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inch.	
Amini Divi.	29·740	+·060	...	SE	...	8	0·65	Squally and high sea.
Cochin .	·799	—·019	—·022	ENE	4	0	0·02	Sea very rough.
Calicut .	·790	—·045	—·026	SE	16	3	0·29	Sea rising.
Mangalore	·781	—·032	—·034	SSE	5	1	0·08	Sea rough.
Karwar .	...	...	...	SE	10	5	0·17	Sea very rough.
Goa . .	·759	—·029	—·034	E	9	2	0·03	Sea slight.
Ratnagiri .	·746	—·043	—·055	E	7	8	0·40	Sea slight.
Bombay .	·775	—·028	—·042	ESE	10	10	...	
Surat .	·778	—·039	—·026	S	6	3	...	
Veraval .	·759	—·041	—·021	SSE	5	8	...	Sea rough.
Dwarka .	·742	—·030	...	SSW	8	7	...	Sea smooth.
Kurrachee.	·757	—·046	+·022	NE	7	0	...	

The marine data showed that the cyclonic storm had continued to march north-westward and that the centre lay in Lat. 16° N. and Long. 68° E. The storm was apparently less severe, but cyclonic winds with rainy, squally and unsettled weather continued over the Arabian Sea. The following shows the marine observations for this day :—

NAME OF VESSEL.	8 A.M. POSITION		Barometer as corrected by Bombay Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Logician* .	8 58	68 6	...	WSW	6	Dull, cloudy and high confused sea.
S.S. *Onipenta* .	11 31	75 11	29·772	var	2	4 A.M. heavy rain at times.
S.S. *Bucentaur* .	11 41	75 19	·755	SE	6	Rough head sea and heavy squalls of rain.
S.S. *South Gate*.	12 08	74 37	...	WSW	5	Cloudy, 4 A.M. frequent showers of rain.
S.S *Yarrowdale* .	12 48	74 33	...	SSW	6	Moderating sea.
S.S. *Hensada* .	Mangalore		·709	...	...	4 A.M. passing heavy squalls.
S.S. *Investigator*	13 23	74 31*	·759	SE	5	Fine and clear and heavy south swell; 4 A.M. squally with lightning.

* Noon position.

NAME OF VESSEL.	8A.M. POSITION. Lat. N.	Long. E.	Barometer as corrected by Bombay Office.	WIND. Direction.	Force.	WEATHER.
	° ′	° ′	″			
S.S *Okara* .	15 12	73 38	29·670	SE	6	Midnight occasional rain squalls.
S.S. *Peninsular*.	16 42	62 28	·681	NW	2	
S.S. *Natal* .	18 12	66 27	...	NE	4	Cloudy.
S.S. *Shandon* .	18 39	68 33	...	ENE	6	Cloudy 8 P.M. heavy rain showers.
S.S. *Ikhona* .	Bombay		·787	...	...	8 P.M. cloudy.
H.M.S. *Pigeon* .	20 17	68 18	·805	E	1	Moderate SE. swell.
S.S. *Pachumba* .	21 02	70 08*	·715	S	2	4 P.M. overcast.
S.S. *Argo* . .	23 26	64 47	...	var	2	

* Noon position.

April 30th.—A brisk recovery of pressure had taken place on the West Coast, but the winds remained easterly and the weather rainy and unsettled while the sea was rough or very rough at most ports. The following gives 8 A.M. data for the West Coast ports for the 30th :—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	WIND. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	″	″	″				Inches	
Cochin .	29·863	+·064	+·047	NE	4	0	...	Sea very rough.
Calicut .	·860	+·070	+·051	SE	12	1	0·05	Sea slight.
Mangalore .	·857	+·076	+·045	E	4	2	...	Sea rough.
Karwar .	...	...	...	SE	13	5	...	Gale of wind.
Goa . .	·836	+·077	+·047	NE	13	9	...	Sea rising.
Ratnagiri .	·821	+·075	+·025	ESE	6	0	0·14	Sea rough.
Bombay .	·819	+·044	+·007	ESE	9	1	...	
Surat .	·824	+·046	+·025	S	6	9	1·26	
Veraval .	·785	+·026	+·001	SE	6	8	...	Sea very rough.
Dwarka .	814	+·072	...	ENE	4	10	0·04	Sea smooth.
Kurrachee .	·773	+·016	+·049	SSW	6	4	...	

Over the Arabian Sea there had apparently not been much change, but the storm was apparently somewhat slighter and had not moved much.

The following gives the marine observations on this day :—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	Long. E.	Barometer as corrected by Bombay Office.	WIND. Direction.	Force.	WEATHER.
	° ′	° ′	″			
S.S. *Labuan* .	10 06	60 20	29·770	W	4	N N.E. swell and cloudy.
S.S. *Goldenfels* .	10 32	59 13	·731	SW	4	
S.S. *Matiana* .	10 33	61 59	·778	WNW	5	Cloudy and following sea.
S.S. *Arabia* .	15 0	55 21	·721	W	2	8 P.M. lightning to east.
S.S. *Metis* . .	15 07	61 45	...	NW	6	Midnight squally.
S.S. *Peninsular* .	15 17	55 33	·714	NW	3	
S.S. *Endeavour* .	16 14	61 20	·695	NE	6	4 P.M. thick rain
S.S. *Yarrowdale*	16 22	73 15	...	S	4	
S.S. *Ikhona* .	17 08	72 50	·794	SE	5	Fine and head sea.
S.S. *Shandon* .	18 54	71 46	...	SE	6	Passing showers and strong sea.
H.M.S. *Pigeon* .	19 56	70 06	·815	SE	2 to 3	Heavy swell from SE.

The above data show that the winds were still cyclonic all over the sea, but the force was not generally strong though there was a good deal of sea running and the weather was unsettled and showery.

There were no ships in the immediate vicinity of the storm centre on this day, but apparently the centre lay in Lat. 17° N. and Long. 64° E., so that rate of the movement had decreased considerably.

May 1st.—On this day the barometer was rising quickly along the West Coast of India, but abnormal easterly and south-easterly winds prevailed at the coast stations with a rough sea and slightly cloudy weather. The following gives 8 A.M. data for this day for the West Coast stations as well as for Jask and Bushire :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	WIND. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	″	″	″					
Mangalore .	29·907	+·050	+·094	WNW	3	9	...	Sea rough.
Karwar .	...	...	...	E	7	5	...	
Goa . .	·859	+·023	+·070	E	10	3	...	Sea slight.
Ratnagiri .	·892	+·071	+·097	ESE	7	0	...	Do.

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"					
Bombay .	29·891	+·072	+·079	SSE	11	0	...	
Surat .	·895	+·071	+·099	SE	5	1	...	
Veraval .	·859	+·074	+·069	SSE	13	2	...	Sea very rough.
Dwarka .	·881	+·057	...	SSE	12	4	...	Sea rising.
Kurrachee .	·854	+·081	+·120	SSW	7	7	...	
Jask . .	·842	+·086	+·065	E	14	0	...	
Bushire .	·798	+·019	—·017	E	5	0	...	Sea slight.

The marine observations on this day were very few in number, but they showed distinctly the presence of a cyclonic storm in Lat. 17° 0′ N. and Long. 63° 10′ E. which was approximately the position occupied by the storm on the closing day of the previous month. The following gives the marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Bombay Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
SS. *Comeric* .	5 39	54 52	...	SW	4 to 5	4 P.M., passing rain squalls.
S. *Safari* . .	8 32	60 00	29·804	W by S	3 to 4	Noon fine.
S. *Ensenada* .	8 49	70 23	...	S	5	
S.S. *Labuan* .	9 41	63 45	·790	SW	5	Rough sea.
S.S. *Goldenfels* .	9 51	63 05	·761	SW	5	
S.S. *Metis* . .	15 57	64 33	...	SSE	6	High cross sea.
S.S. *Arabia* .	16 17	61 08	·166	NW	5 to 6	Considerable confused sea and frequent heavy rain squalls.
S.S. *Endeavour* .	17 02	63 00	·045	NNE	7	Thick rain.
S.S. *Onipenta* .	18 14	72 54	·873	Var.	2	Moderate swell.
H.M.S. *Pigeon* .	19 11	72 13	·923	SE	1	Moderate swell. and fine.

The *Arabia*, in Lat. 16°17′N. and Long. 61°8′E., the *Metis* in Lat. 15°57′ N. and Long. 64°33′E. and the *Endeavour* in Lat. 17°2′ N. and Long. 63°0′ E. were the three ships in the immediate neighbourhood of the storm and all showed squally disturbed weather with strongish winds. The above data also showed that all over the south of the sea there was a well marked southerly or south-south-westerly wind bringing up moisture to the depression area.

May 2nd.—On this day the barometer was falling along the West Coast, but the winds had returned to westerly or variable directions and there were no signs of the influence of the Arabian Sea storm on the observations of the coast ports. The following gives 8 A.M. data for the West Coast stations and also for Bushire and Jask:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inch.	
Mangalore.	29·889	—·018	+·078	Calm	2	3	0·77	Thunderstorm.
Karwar .	...	...	...	NE	5	2	...	
Goa . .	·865	+·006	?+·077	NE	6	1	...	
Ratnagiri .	·864	—·028	+·070	Calm	4	0	...	
Bombay .	·876	—·015	+·065	NW	7	5	...	
Surat .	·861	—·034	+·067	SW	7	4	...	
Veraval .	·855	—·004	+·065	WSW	9	3	...	Sea slight.
Dwarka .	·868	—·003	...	SW	11	3	...	Do.
Kurrachee .	·846	—·008	+·115	WSW	10	5	...	
Jask . .	816	—·026	+·052	E	13	0	...	Sea slight.
Bushire .	·851	+·053	+·045	NW	6	8	...	Duststorm.

The following gives marine observations for this day:—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Bombay Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Pemba* .	14 50	57 43	29·686	SW	2	Heavy confused sea. Noon overcast.
S.S. *St. Oswald* .	15 28	57 08	·571	NW	6	Beam swell and cloudy.
S.S. *D. Balduino*	16 14	61 01	·785	SE	4	
S.S. *Nairung* .	16 46	73 04	·830	Calm	0	Fine.
S.S. *Kirkdale* .	16 54	73 02	·850	NW	2	Midnight cloudy.
S.S. *Rajah* .	17 13	73 02	·805	N	2	
S.S. *Arabia* .	17 41	66 50	·776	SE	4	Southerly swell. 4 A.M. cloudy.
S.S. *Endeavour* .	17 52	64 09	...	SE	6	Heavy sea.
S.S. *Metis* . .	18 00	67 48	...	SSE	4	
S.S. *Java* . .	20 09	71 08	·809	S	2	Heavy southerly swell.
S.S. *Vadala* .	20 43	70 24	·836	S	2	

The above data show that south-east winds prevailed over the eastern half of the Arabian Sea and southerly and south-westerly winds over the western half, while the *St. Oswald* in Lat. 15°28′N, and Long. 57°8′E. had a strong north-west wind. The storm had apparently followed a very unusual course and had moved west-south-westward and the centre lay apparently in Lat. 16°N. and Long. 58°E., having travelled 380 miles west-south-west since the previous morning. At Jask the barometer was falling slightly with an easterly wind.

May 3rd.—On this day a brisk fall of the barometer was in progress over Sind and Baluchistan where also the sky had become cloudy to overcast, but this change was apparently connected with local pressure changes over North-West India. The barometer had fallen rapidly at Muscat and the storm had moved quickly along the Arabian coast in a north-north-easterly direction and was central off Ras-ul-Had. The following gives 8 A.M. data for the stations in the extreme north-west of India and in Baluchistan :—

Station.	Pressure.			Wind.			Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.		
	"	"	"					
Jacobabad	29·623	—·098	—·028	S	6	10	...	Hot wind.
Kurrachee	·775	—·071	+·046	SW	11	7	...	
Hyderabad	·761	—·034	+·075	SW	11	7	...	
Mooltan	·648	—·044	—·014	SW	3	10	...	
Bikaner	·724	—·044	+·049	WNW	9	6	...	
Ajmer	·768	—·040	+·069	NW	6	8	...	
Jaipur	·740	—·052	+·057	NW	4	4	...	
Sambhar	·745	—·042	+·078?	NNW	5	6	...	
Chaman	...	—·093	—·006	NW	5	10	...	
Quetta	...	—·093	+·014	Calm	1	10	...	Dust haze.
Muscat	·674	—·138	...	Calm	7	0	...	Sea smooth.
Jask	·754	—·062	—·003	Calm	14	0	...	Sea smooth.
Bushire	·754	—·097	—·044	NW	12	0	...	Sea rough.

The following gives marine data for this day :—

Name of Vessel.	8 A.M. Position.		Barometer as corrected by Bombay Office.	Wind.		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S.S. *Pemba*	15 35	61 11	29·801	S	4	Moderate confused sea.
S.S. *St. Oswald*	16 20	60 36	·691	S	4	High swell.
S.S. *Yanariva*	16 52	73 06	·818	SW	2	Fine.
S.S. *D. Balduino*	17 17	65 42	·825	SE	2	
S.S. *Endeavour*	18 33	66 57	...	S	5	Heavy sea. Midnight showery.
S.S. *Khandalla*	19 51	70 34*	·820	W	4	
S.S. *Chanda*	21 03	70 03	·838	WNW	4	Heavy swell from north-west. Midnight smart rain squalls.
S.S. *Dumra*	21 51	69 12*	·689	S by W	5	High south-west swell.
H.M.S. *Sphinx*	24 50	64 16*	...	S	2 to 4	Southerly swell and squally. 5-30 P.M. heavy rain squalls.

* Noon position.

The preceding data show that the barometer had commenced to fall briskly at Jask and rapidly at Muscat. The wind was southerly and the weather rainy all over the centre of the Arabian Sea, but the observations gave no definite indication of the storm over the north of the Arabian Sea. At 8 A.M. the storm was probably close to the Mekran coast, but it was probably a small and concentrated disturbance with only a small area of stormy winds. H. M. S. *Sphinx* in Lat. 24°50′N. and Long. 64°16′E. at noon experienced only light to moderate southerly winds, but later in the day as she was progressing towards the entrance to the Persian Gulf she encountered the full force of the gale. The following gives her log for this day :—

Hour.	Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	"			
4 A.M.	H.M.S *Sphinx*	...	...	...	W	2	S. W. swell and overcast.
8 A.M.	Ditto	...	...	...	S	2 to 4	Southerly swell and squally.
Noon	Ditto	24 50	64 16	...	E	2 to 4	Ditto.
4 P.M.	Ditto	...	...	...	E	4	Moderate swell and squally with rain.
4-30 P.M.	Ditto	...	...	...	ENE	5 to 6	Heavy sea and squally with rain.

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
5 P.M.	H. M. S. *Sphinx*	...	...	...	ENE	5 to 6	Heavy sea and squally with rain.
5-30 P.M.	Ditto . .	...	...	...	ENE	5 to 6	Ditto.
6-30 P.M.	Ditto . .	...	...	...	NE	8 to 11	Very, high and confused sea with hard squalls and heavy rain.
7 P.M.	Ditto . .	...	...	...	...	...	Hard squalls with rain and very high and confused sea.
8 P.M.	Ditto . .	...	...	—	N	8 to 9	Ditto.
Mid-night.	Ditto . .	...	...	..	NNW	7	Moderating sea and squally.

May 4th.—Pressure had given way rapidly to very rapidly in Baluchistan and Sind, and a deep depression and storm lay over these areas. The following gives 8 A.M. observations for the stations in North-West India and in Baluchistan as well as for Jask, Bushire and Muscat.

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inch.	
Kurrachee .	29·593	—·182	—·136	SW	23	8	0·24	Severe gale.
Hyderabad .	·605	—·156	—·080	SW	19	9	0·78	Raining.
Jacobabad	·513	—·110	—·141	SE	11	10	0·05	
Bhuj . .	·730	—·087	—·009	SW	21	5	0·30	Nor'wester with rain.
Rajkot .	·779	—·051	+·018	S	17	4	...	
Dwarka .	·748	—·081	...	SSW	24	2	0·04	Sea rough.
Veraval .	·793	—·046	+·005	SSW	16	4	...	Sea slight.
Chaman .	...	—·191	—·197	Calm	8	10	0·18	Raining.
Quetta .	...	—·194	—·180	Calm	1	10	0·16	Showery.
Jask . .	·654	—·100	—·097	W	12	0	...	
Bushire .	·704	—·050	—·088	NW	13	0	...	Sea rough.
Muscat .	·664	—·010	...	SE	4	0	...	Ditto.

The above shows that pressure had decreased very rapidly in North-West India, that the winds had increased to a strong gale on the Sind and Kathiawar coasts and that rain had fallen in Sind, the South-West Punjab Kashmir and Baluchistan. The following were the principal falls of rain during the 24 hours ending at 8 A.M. on the 4th :—

Province or Division.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 4th May 1901.
			Inches.
Baluchistan	Baluchistan .	Fort Sandeman .	3·11
		Loralai (Hospital) .	3·09
		Sibi (Hospital) .	2·80
		Sibi (Ry. Station) .	2·80
		Nasak . . .	2·50
		Panir . . .	2·40
		Nari . . .	2·40
		Sunari . . .	2·00
Kashmir	Jummoo . . .	Bhimber . .	4·81
	Kashmir . . .	Utar Machhipore .	2·56
Punjab	Shahpur . . .	Naushahra . .	4·60
	Do. . . .	Sahiwal . .	2·33
	D. I. Khan . .	Bhakkar . .	1·73
	Rawalpindi . .	Gujarkhan . .	1·67

The following is a record of the marine observations on this day :—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Bombay Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S. S. *Pemba* .	16 34	64 50	29·872	SbyW	2	Heavy swell, 8 P.M. cloudy
S. S. *St. Oswald* .	17 24	64 08	·711	S	2	High beam swell.
S. S. *Bormida* .	17 44	72 50	...	ENE	2	
S. S. *D. Balduino*	18 01	70 51	·865	SSW	2	
S. S. *Endeavour* .	18 49	70 08	...	SW	4	4 A.M. showery.
S. S. *Khandalla* .	20 55	68 24	·750	WSW	5	Heavy south west swell.
S. S. *Kola* . .	21 52	69 11*	·694	WSW	2	High beam sea. 4 P.M. squally.
S. S. *Chanda* .	23 37	66 52	·607	SW	9	High sea.
H. M. S. *Sphinx* .	25 0	62 39	...	W	3 to 4	Slight sea, fine and clear. 4 A.M. squally.

* Noon position.

The preceding data are very fragmentary, but the observations show that the barometer had fallen fast at Jask, and that the wind had changed from east to west along the Mekran coast and to south-west off the Sind and Kathiawar coasts. The Telegraph Master at Ormara on the Mekran coast reported a terrific storm there at 8 A.M.

May 5th.—Pressure had commenced to rise in Lower Sind, but was decreasing briskly to very rapidly over other parts of North-West India. The following gives 8 A.M. data for North-West India for this day:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches.	
Kurrachee.	29·646	+·053	—·082	W	23	0	...	Gale.
Hyderabad	·607	+·002	—·078	SW	17	0	0·13	Do.
Jacobabad.	·415	—·098	—·235	SW	8	0	0·60	
Deesa .	·672	—·102	—·074	SW	25	4	0·67	Severe gale.
Jodhpur .	·599	—·168	...	WSW	...	9	...	Do.
Ajmer .	·633	—·101	—·092	SW	12	8	0·20	Gale.
Jaipur .	·655	—·055	—·069	SW	4	9	0·51	Dust storm with rain.
Bikaner .	·510	—·193	—·169	SSW	20	4	...	Dust storm.
Sirsa. .	·520	—·153	—·135	SW	8	10	0·13	
Montgomery.	·410	—·264	—·240	SSW	19	10	1·35	Dust storm with rain.
Mooltan .	·381	—·244	—·286	SSW	4	0	0·81	Do.
Dera Ismail Khan.	·263	—·370	—·415	...	...	3	3·70	Raining.
Khushab .	·278	—·359	—·372	ESE	21	10	2·72	Dust storm with rain.
Peshawar .	·480	—·195	—·275	NW	5	10	3·85	Raining.
Rawalpindi	·416	—·235	—·289	E	1	10	2·00	Continuous rain.
Sialkot .	·480	—·202	—·180	SSE	9	9	0·57	Gale.
Lahore .	·440	—·251	—·211	SE	8	8	0·61	Dust storm with rain.
Ludhiana .	·540	—·159	—·135	SE	5	8	0·19	Do.
Umballa .	·585	—·096	?	ESE	2	3	0·15	
Murree .	...	—·382	—·350	SE	12	10	1·41	Severe gale.
Srinagar .	...	—·314	—·285	WNW	6	10	0·48	Showery.

The preceding data show that the barometer had fallen three-tenths of an inch in parts of the Punjab, and that a storm of considerable intensity lay over that province. Strong cyclonic winds and gales prevailed all over the north-west while phenomenally heavy rain was reported. The following gives some of the principal amounts reported on this day:—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 5th May 1901.
		Inches.
Kohat	Fort Lockhart . . .	11·40
Peshawar	Katlang	8·25
Dera Ismail Khan . . .	Shekh Budin . . .	7·40
Kohat	Kohat	7·10
Peshawar	Nowshera	5·50
Hazara	Attock	5·12
Bannu	Marwat	4·95
Do.	Isakhel	4·78
Peshawar	Swabi	4·26
Do.	Khanmahi	4·20
Do.	Abazai	4·05
D. G. Khan.	Fort Monro . . .	4·00
D. I. Khan	Kulachi	3·94
Do.	Dera Ismail Khan . .	3·70
Peshawar	Mardan	3·65
Bannu	Bannu	3·58
Peshawar	Nabakki	3·50
Do.	Peshawar	3·45
Kohat	Hangu	3·45
Rawalpindi	Gujar Khan . . .	3·41
Peshawar	Charsadda	3·40
Kohat	Banda Daud Shah . .	3·16
Shahpur	Shahpur	3·14
Kohat	Thal	3·05
Baluchistan	Loralai (Staff Office) . .	3·49
	Bellput	3·00
Jummoo	Ramnagar	5·00
	Punch	4·40

The marine observations gave no information of any importance.

May 6th.—The storm had disappeared and a very rapid recovery of pressure had occurred in the Punjab. The

following gives 8 A.M. data for the storm area on this day :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches.	
Mooltan	29·610	+·229	—·059	NW	4	0	...	Dust storm.
Montgomery	·577	+·167	—·078	N	14	0	...	
Dera Ismail Khan.	·642	+·379	—·046	Calm	...	0	0·15	
Khushab	·619	+·341	?	NNE	18	4	0·93	Dust storm with rain.
Peshawar	·708	+·228	—·050	Calm	2	8	0·99	Showery.
Rawalpindi	·662	+·246	—·076	Calm	1	10	1·87	Continuous rain.
Sialkot	·575	+·095	—·097	N	9	8	2·51	Showery.
Lahore	·539	+·099	—·113	SE	8	0	0·07	
Ludhiana	·573	+·033	—·104	SE	6	0	1·03	Continuous rain.
Murree	...	+·153	—·202	SE	4	10	4·08	Do.
Srinagar	...	+·108	—·175	NNE	6	10	1·05	Showery.

The above shows that pressure had increased with great rapidity, that the winds had fallen light and the weather partially cleared. Very heavy rain had again been experienced of which the most remarkable falls are given in the table below :—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 6th May 1901.
		Inches.
KOHAT	Fort Lockhart	5·60
RAWALPINDI	Murree	4·80
PESHAWAR	Swabi	3·78
GUJRAT	Sadr	3·27
JHELUM	Sadr	3·14
GURDASPUR	Dalhousie	3·00
HAZARA	Attock	2·92
RAWALPINDI	Kahuta	2·74
PESHAWAR	Mardan	2·68
SIALKOT	Sialkot	2·51
PESHAWAR	Nowshera	2·38
GUJRAT	Kharian	2·34
Do.	Phalia	2·30
HAZARA	Haripur	2·26
KOHAT	Banda Daud Shah	2·22
HAZARA	Abbottabad	2·15
PESHAWAR	Khan Mahi	2·10
JHELUM	Pind Dadan Khan	2·02

There was some doubt as to the origin of the above storm when it first appeared over Sind and the Punjab. At the time of its occurrence it was supposed to have advanced from Persia or to have been a subsidiary to a storm which had advanced into India from the Persian area, but the collection of fresh data and material shows that the storm was a continuation of the storm which passed north-westward up the Arabian Sea between the 25th and the 30th April. There was very little marine information for April 30th, but on May 1st the observations showed clearly that a storm existed in Lat. 17° 0′ N. and Long. 63° 10′ E. which was approximately the position which the storm of the previous month was supposed to occupy on the 30th of April. For the 2nd and 3rd of May the information was very scanty, but H. M. S. *Sphinx* encountered the centre on the evening of the 3rd in Lat. 25° N. and Long. 63¾° E., where winds of force 11 from north-east were experienced. The next intimation of the storm was conveyed in a message from the Telegraph Master at Ormara, a small station on the Mekran coast, stating that a terrific storm was prevailing there on the morning of the 4th. On the following day, the 5th, the storm had reached the Punjab, and by the morning of the 6th it had disappeared. If this be the history of the storm then the following shows the approximate positions and rate of movement of the centre of the storm between the 25th April and the 5th of May :—

DATE.	POSITION OF CENTRE AT 8 A.M. Lat. N.		Long. E.		Distance travelled in 24 hours.	Average hourly rate of motion.
	°	′	°	′	Miles.	Miles.
25th April	6	30	73	40		
26th "	8	45	72	0	210	9
27th "	9	50	71	10	100	4
28th "	11	20	70	30	110	5
29th "	16	0	68	0	370	15
30th "	17	0	64	0	290	12
1st May	17	11	63	10	50	2
2nd "	16	0	58	0	380	16
3rd "	23	45	60	40	560	23
4th "	28	0	68	0	580	24
5th "	32	0	72	0	370	15

One very significant feature about the storm was the extraordinary rain which accompanied its progress. This heavy rainfall appears to strengthen the argument that the storm advanced from the Arabian Sea and drew with it humid winds of oceanic origin while the complete absence of all indications of its passage through Persia seems to negative the idea of its having advanced into the Punjab from countries to the westward.

From the 5th to the 13th the weather, though feebly disturbed at times, was generally quiet, and no depression

of any importance was developed during that period. On the 14th pressure was giving way briskly over a large part of Northern India and a shallow complicated depression having one centre over the western desert and a second over the North-West Provinces was shown over North-West India, where the mean temperature was very excessive.

May 15th.—A further fall of the barometer and a further increase of temperature were reported on this day and a shallow irregularly shaped depression was shown extending from the South-East Punjab through the North-West Provinces. The winds blew towards this low pressure area and rain had fallen at some Kashmir and the Punjab stations. The following gives 8 A.M. data for the stations in Northern India:—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Sialkot	29·639	—·012	+·003	ENE	4	2	0·06	
Ludhiana	·646	—·025	—·007	NE	3	8	0·10	Showery.
Khushab	·646	—·010	+·032	NE	11	0	0·01	Dust storm with rain.
Sirsa	·606	—·063	—·011	E	4	0	...	
Mooltan	·648	—·016	+·018	Calm	2	0	...	Dust storm.
Montgomery	·620	—·053	+·006	ENE	9	1	...	
Bikaner	·643	—·071	—·017	WSW	13	0	...	Do.
Jacobabad	·602	—·062	—·012	NNE	1	3	...	Hot wind.
Delhi	·593	—·075	—·043	SE	2	6	...	Do.
Bareilly	·633	—·067	—·007	SE	4	0	...	
Roorkee	·612	—·081	—·031	SE	5	0	...	Dust haze.
Meerut	·625	—·059	—·016	E	2	0	...	
Agra	·597	—·072	—·043	SW	5	0	0·05	Hot wind.
Mainpuri	·589	—·083	—·031	Calm	1	4	...	
Cawnpore	·594	—·102	—·029	Calm	2	0	...	
Allahabad	·578	—·099	—·070	S	5	0	...	Distant lightning.
Benares	·605	—·101	—·043	S	3	0	...	
Sutna	·628	—·042	—·008	WSW	6	5	0·12	Thunderstorm.
Gaya	·624	—·082	—·031	Calm	9	3	...	Dust storm.
Hazaribagh	·643	—·069	—·015	SSW	9	1	...	
Patna	·685	—·044	+·012	NW	7	7	0·05	

May 16th.—Pressure had decreased briskly over the Central Punjab and had increased elsewhere. The low pressure conditions over the Punjab had intensified into a well marked depression while, on the contrary, the depression over the North-Western Provinces had partly filled up. The winds were irregularly cyclonic in Upper India. The following gives 8 A.M. data for the stations in North-West India:—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches	
Bikaner	29·621	—·022	—·045	SSW	13	0	...	Dust storm.
Mooltan	·577	—·071	—·049	Calm	2	2	...	
D. I. Khan	·615	—·066	—·031	Calm	3	7	...	
Montgomery.	·552	—·068	—·059	NW	5	8	...	
Khushab	·613	—·033	—·002	WW	7	6	...	
Rawalpindi	·660	—·013	—·019	NE	5	10	0·10	Thuderstorm.
Sialkot	·553	—·086	—·072	SE	4	5	...	
Lahore	·550	—·070	—·071	NE	3	7	...	Dust haze.
Ludhiana	·570	—·076	—·067	SE	3	1	...	
Umballa	·588	—·042	—·026	ESE	1	4	...	
Sirsa	·536	—·070	—·079	E	4	0	...	
Delhi	·577	—·016	—·053	WNW	4	6	...	Hot wind.
Srinagar	...	—·095	—·033	WNW	3	10	...	Thunderstorm
Murree	...	—·046	—·011	Calm	5	10	1·25	Do.

May 17th.—On this day the barometer was rising rapidly in the Punjab and the depression noticed over that province had filled up.

From the 16th onward to the 24th there was no important change in the weather. The usual hot weather depression existed over the western desert and a trough of relatively low pressure extended from the Punjab south-eastward down the Gangetic Plain. On the 24th this arm or trough of low pressure extended across the head of the Bay where pressure became uniform and off the Lower Burma Coast considerably lower than usual. The following gives 8 A.M. data for the Bay coast stations and shows the distribution of pressure at 8 A.M. on the 24th:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches	
Rangoon	29·706	+·013	—·059	SE	5	10	1·19	Showery.
Diamond Island.	·648	—·004	—·096	S	16	8	0·24	Sea falling.
Bassein	·664	+·002	—·084	SE	6	8	0·47	

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Akyab .	29·684	+·002	—·038	E	2	10	2·00	
Chittagong	·659	—·010	—·049	SE	5	8	...	
Barisal .	·666	—·008	...	SSW	2	5	...	
Calcutta .	·655	...	+·008	SE	3	3	...	
Saugor Island.	·637	—·013	—·008	S	11	6	...	Distant Lightning.
False Point	·638	+·002	—·007	W	8	5	...	Ditto.
Cuttack .	·626	—·005	—·014	Calm	1	6	...	
Gopalpur .	·629	+·005	+·006	NE	7	0	...	
Waltair .	·636	—·012	—·015	W	13	4	...	Sea smooth.
Cocanada .	·647	+·008	+·004	SW	5	9	...	Ditto.
Masulipatam	·654	—·057	—·002	WNW	8	10	...	Distant Lightning.
Nellore .	·651	—·082	—·037	NNW	6	2	...	
Madras .	·665	—·082	—·029	WSW	6	2	...	Sea smooth.

The following gives marine observations on this day :—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S. S. *Putiala* .	11 34	97 11	29·742	SW	5	Moderate sea and cloudy. 4 A.M. passing squalls.
S. S. *Okara* .	12 15	84 47	·761	WSW	2	Fine; 8 P.M. overcast.
S. S. *Umta* .	13 13	94 10	·586	SW	6	Overcast; 8 P.M., hard rain squalls.
S. S. *Ikhona* .	13 46	85 07	·651	SSW	4	Moderate head sea and cloudy.
S. S. *Okhla* .	14 46	85 32	·656	S	4	Cloudy.
S. S. *Lalpoora* .	15 45	94 00	·670	S	5	Rough sea and squally. 8 P.M. rainy.
S. S. *Shahjehan*.	16 09	96 13	·673	SE	...	Heavy rain and wind squalls.
S. S. *Africa* .	16 12	97 00	·713	...	...	Noon occasional heavy rain and wind squalls.
S. S. *Sirdhana* .	16 30	82 00	·642	Calm	0	Fine.
S. S. *Fonar* .	18 14	86 59	·423	Var.	1	Fine.
S. S. *Kistna* .	19 00	93 30	·638	E	2	Drizzling rain; 8 P.M. heavy rain squalls.
S. S. *Kasara* .	20 14	92 32	·616	SE	4	Rainy.
S.S. *Maharaja* .	Kedgeree		·624	WSW	2	Fine.

The above tables show that while uniform pressures prevailed over the northern half of the Bay with variable winds on the Ganjam and Bengal coasts, moderately strong south to south-east winds prevailed across the south of the Bay and were occasioning moderate rain over Burma.

May 25th.—On this day pressure was beginning to increase over the south of the Bay, while it was decreasing briskly to very rapidly in the north, the barometer at Akyab having fallen 0·200". The following gives 8 A.M. data for the Bay ports :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Rangoon .	29·726	+·020	—·042	SSE	7	7	0·26	Showery.
Diamond Island.	·693	+·045	—·056	S	19	9	0·40	Sea falling.
Bassein .	·708	+·044	—·044	SE	11	8	0·58	
Akyab .	·484	—·200	—·240	SE	3	10	4·06	Continuous rain.
Chittagong .	·605	—·054	—·102	E	5	10	...	
Barisal .	·598	—·068	—·072	WNW	2	8	...	
Calcutta .	·564	—·091	—·080	SW	2	2	...	
Saugor Island.	·581	—·056	—·063	SSW	12	6	...	Sea smooth
Balasore .	·592	—·051	—·029	SSW	4	2	...	
False Point	·609	—·029	—·033	SSE	7	7	...	
Cuttack .	·600	—·026	—·047	Calm	2	6	...	
Gopalpur .	·612	—·017	—·011	S	9	0	...	Sea smooth.
Waltair .	·647	+·011	—·007	W	13	9	2·25	Continuous rain.

The following is the marine information for this day :—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S. S. *Shahjehan*	13 55	94 36	29·673	SSW	6	Fine; 4 A.M heavy rain squalls.
S. S. *Africa* .	15 46	93 58	·648	SSW	4	Slight sea and fine. Noon cloudy.
S. S. *Okara* .	15 51	86 23	·731	SW	4	Moderate sea and cloudy.
S. S. *Maharani*.	16 11	96 14*	·601	...	...	Overcast; 4 P.M. squally with heavy rain.
S. S. *Putiala* .	16 12	96 30	·702	SE	4	Moderate sea and overcast.
S. S. *Umta* .	16 44	91 15	·507	SW	4	Cloudy noon squally.
S. S. *Kasara* .	17 13	93 06	·595	SW	4	Moderate sea and cloudy; 4 P.M. frequent light rain squalls.
S. S. *Lalpoora* .	18 25	90 47	·670	SW	4	Moderate sea and cloudy.
S. S. *Taunton* .	20 29	87 56	·724	SW	4	Fine.
S. S. *Fonar* .	Saugor Island		·563	SW	2	Fine.

* Noon position.

The above data show that a cyclonic storm was crossing the Arakan Coast near Akyab where four inches of rain had fallen with a strong south-east wind. Rain was falling all over Burma.

May 26th.—The storm broke up considerably while crossing the hills to the east of Akyab and at 8 A.M. on the 26th only a shallow residual depression was shown over Upper Burma. The following gives 8 A.M. data for the Burma stations for this day :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Moulmein .	29·788	+·016	+·011	NW	5	8	..	
Rangoon .	·772	+·046	+·003	SSE	7	8	0·55	Showery.
Diamond Island.	·735	+·042	—·019	S	11	7	0·34	Sea slight.
Bassein .	·754	+·046	+·001	Calm	4	9	0·06	
Akyab .	·718	+·234	—·006	E	4	10	1·49	Showery.
Toungoo .	·778	+·054	?	SE	9	10	0·33	Ditto.
Thayetmyo	·746	+·074	?	S	11	10	0·48	
Minbu .	·727	+·080	+·005	SE	11	6	0·22	
Yamethin .	29·749	+·080	+·009	SSE	14	10	1·23	
Mandalay .	·683	—·003	—·020	S	...	8	...	
Bhamo .	·664	—·034	—·038	SE	5	10	1·20	Showery.
Kindat .	·700	+·015	?	N	2	6	6·04	Continuous rain.

The above shows that heavy rain had been received over parts of Burma, but that the barometer had generally risen briskly and the depression had almost filled up.

Ordinary hot weather conditions prevailed over the Indian region from the 27th to the end of the month.

The preceding discussion has shown that while at the commencement of the month there occurred a storm of exceptional intensity and course in the extreme north-west of the Indian region, the weather generally throughout the month was singularly free from serious disturbances. The storm which formed in the Bay on the 22nd to 24th was only a slight disturbance and only affected the weather over the east of the Bay and over Burma while the remaining depressions and storms were very slight and unimportant.

Summary of the Reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

I.—Afghan Mountain Districts.

There were two periods of disturbance and of snowfall during May. Thus a heavy fall of snow occurred on the 5th and 6th and another and slighter fall on the 16th and 17th.

The snowfall accumulation at the end of May was probably in some excess in parts of the North-West Himalayas and was probably less than usual in Baluchistan, Afghanistan, etc.

The following is a statement of the information relating to the snowfall in the Himalayan Mountain areas for May 1901, as received up to date :—

(1) *Wana.*—No snow fell during the months of April and May in the Wana district.

(2) *Drosh.*—On the 5th there was a heavy snowfall in the Chitral Valley, the snow line descending to 6,000 feet above mean sea-level.

II.—Kashmir and Punjab Himalayas.

(1) *Murree.*—No snow fell at Murree or on the Kahuta hills during May.

(2) *Leh.* (*Ladakh*).—Snow fell in Leh on the morning of May 24th to a depth of about one inch. The fall extended to at least 1,000 feet below Leh. The snowline at the end of the month was at about 16,000 feet.

(3) *Simla.*—On the 5th of May a light fall of snow occurred on the upper slopes down to 11,000 feet; on the 6th and 7th similar falls occurred. On the 16th and 17th May a heavier fall took place giving about 1½ inches at 10,000 feet. On the 20th a sprinkling of snow was recorded down to 11,000 feet, and on the 21st the snow line descended to 10,000 feet giving about one inch of snow. At the end of the month there were large accumulations of snow on all passes and on the higher ranges, but travellers had crossed passes as high as 16,000 feet.

The snowfall in this district has been largely in excess of the previous two years.

(4) *Kulu.*—Rain fell on the 4th, 6th, 7th, 16th, 17th and 20th in the Kulu Tahsil and on the 5th, 6th, 7th, 16th and 17th in the Plach Tahsil. During these falls of rain there were slight falls of snow on the higher passes and peaks. The falls were not below 12,000 feet elevation.

The following table shows the reported depth of snow on the higher passes of the sub-division at the end of May:—

Kulu Tahsil.		Plach Tahsil.	
Rotang	6 feet.	Sirikhand	5 feet.
Bar Sai	2 „	Gargrasan	1 foot.
Bujadhar	1 foot.	Tirath	1 „
Chandarkhani	4 feet.		

The snowfall of the month was about the same as last year.

III.—NORTH-WESTERN PROVINCES. HIMALAYAS.

(1) *Almora.*—Snow fell as under:—

Malla Johar.

5th May	2 feet.
6th „	2 „
18th „	2 „
19th „	2 „
29th „	2 „
TOTAL	10 „

This was the depth of snow on the peak of Utadhura.

Malla Danpur.

3rd May	2 inches.
17th to 19th May	3 „
22nd and 23rd May	3 „
TOTAL	8 inches.

This was the depth of snow on the peaks of Pindari, Kaphini and Kantela.

Byans, Chandas and Darma.

No snow fell.

The depth of snow at the end of the month was 10 feet on Utadhura, 5 feet on Ralamdhura, and 8 inches on Pindari, Kaphini and Kantela.

In Malla Johar the snowfall was greater and in Malla Danpur less than in the previous year.

(2) *Garhwal.*—There were slight snowfalls of about three or four inches on the perpetual snows on the 5th 6th, 10th, 24th and 25th of May.

Summary of the snowfall data of the cold weather for 1900-1901. The chief features of the snowfall of the cold weather were:—

(1) The winter commenced in November and hence earlier than usual in Afghanistan and Baluchistan. Weather was fine and free from winter storms in the first-half of December. The latter half of December and January were more stormy than usual and these areas received frequent rain and snow during this period. March April and May were, on the other hand, drier than usual. The snowfall of the period hence melted rapidly in these months and the accumulation disappeared except on the highest ranges of Afghanistan.

(2) The number of cold-weather disturbances in Upper India in November and the first-half of December was less than usual and the storms were of very slight intensity. A large number of storms formed in the second-half of December and in January. They advanced along more southerly tracks than usual and failed, in the great majority of cases, to give rise to well-marked secondary depressions in the Punjab. The precipitation accompanying them was hence generally moderate in amount. The snowfall up to the end of January in that area was probably somewhat greater than usual but was nowhere excessive.

(3) The number of depressions in February, April and May was larger than usual. In consequence of their origin in North-Western India or Baluchistan, they chiefly affected the Punjab and the Gangetic Plain. The Punjab hills, Kashmir and Chitral had frequent light to moderate precipitation during these months. A disturbance of moderate intensity extending from the 12th to the 15th April gave heavy snow in the Chitral and Kashmir Himalayas. The snowfall during the period from February to May was in moderate to considerable excess in the Western Himalayas, more especially in Kashmir and Chitral, where it was chiefly due to late and abnormally heavy falls in April and May, the excess being probably most marked on the interior and higher ranges.

(4) The chief feature of the season was the frequent snowfall in January, February and April over the whole of the Western Himalayas, west of Nepal. The number of disturbances or storms was much larger than usual, but the storms were generally of feeble intensity and the accompanying precipitation light to moderate in amount. The fall was heavy in the Chitral, Kashmir and Punjab hills, but was very unequally distributed. Snow fell down occasionally to unusually low levels in April (5,000 feet) and May and caused extensions of the snow-clad surface in the hills for brief periods which affected the meteorological conditions in Upper India and, more especially, reduced temperature largely below the normal. The snow melted rapidly during the hot weather of the last fortnight of May and the snow-line on the 31st May was at a mean elevation of from 13,000 feet to 14,000 feet in the Punjab Himalayas and 15,000 feet in Ladakh.

(5) The snowfall of the past season up to the end of May was, so far as can be judged from the data, below the normal to a moderate extent in Persia, chiefly due to the early termination of the winter.

(6) The snowfall in Baluchistan was normal in amount and fell chiefly in November, December, January and February. It was hence favourable in all respects.

(7) The precipitation in Afghanistan was generally less than usual.

(8) The snowfall in Chitral was, so far as can be judged by a comparison of the past year with the previous three years, considerably below the normal in the earlier part of the winter, but was heavy in April and the first-half of May.

(9) The snowfall was heavier than usual in Kashmir. It commenced on the higher ranges somewhat earlier than usual. The chief feature was the heavy and late fall of the 13th, 14th, 20th and 21st April.

(10) In Chamba, Lahoul and the Simla hill states the winter commenced earlier than usual. Moderately heavy snow fell in the latter half of December, January and February and heavy and frequent snow in April. The total snowfall of the season appears to have been

considerably above the average in Chamba and the Simla hill states and in slight defect in Lahoul. The accumulation at the end of May was probably greater than usual, chiefly due to the abnormal prevalence of cloudy weather.

(11) The winter began earlier than usual in Kulu and the precipitation was above the normal during the winter up to the end of March. It was small in amount in April and May and the accumulation melted more rapidly than usual, as the depth of snow on the passes at the end of April was less than the average of past years.

(12) The snowfall in Kumaon and Garhwal during the period from the middle of December to the end of March was greater than usual and was about normal in April and May. The total fall of the season was hence above the normal to a moderate extent.

(13) No information has been received for Sikkim and Nepal.

(14) The information, relative to the snowfall in the Assam Himalayas, is as usual scanty, but appears to indicate that the fall was below the normal in that area. The deficiency was apparently most marked in Upper Assam and hence probably also in the hills to the north of Upper Burma.

Summary of special Storm Reports.

The following gives the reports of the chief local storms notices of which were received during the month. The storms were of the ordinary hot weather type and were apparently most numerous in the Deccan and the Central Provinces. There were no reports of hailstorms received from Assam, but in Kashmir the weather appears to have been unusually disturbed for the time of year.

May 2nd.—Severe thunderstorm at Vellore commencing at 2-10 P.M. and continuing till 2-30 P.M.
A very heavy duststorm passed over Hoshangabad at 3-10 P.M. and lasted three quarters of an hour.
A duststorm passed over Srinagar at 5 P.M.
A thunderstorm passed over Belgaum at 5 P.M.

" *3rd.*—A severe duststorm was experienced at Hoshangabad at 1-20 P.M. and lasted about half an hour.
A thunderstorm was experienced at Srinagar at 5 P.M.

" *4th.*—A slight thunderstorm was experienced at Udaipur between 3-10 P.M. and 3-45 P.M.
A duststorm passed over Lahore between 6 P.M. and 8 P.M., accompanied with light rain, thunder and lightning.
At Khandwa there was a duststorm without rain between 3-45 P.M. and 4-45 P.M.
A thunderstorm occurred at Jaipur between 2-28 and 2-38 P.M.

" *5th.*—A thunderstorm occurred at Simla at 3 P.M. and lasted half an hour.
A storm came up from west-south-west at Allahabad at about 5-10 P.M. and lasted for about one hour and a half. It was a duststorm of the ordinary hot weather type.

" *7th.*—A very heavy duststorm passed over Hoshangabad at 11 A.M. and lasted about one hour and a half.
A severe gale from north-west was felt at Jubbulpore at 8-30 P.M.; it lasted half an hour and light rain fell.

May 8th.—A heavy duststorm passed over Hoshangabad at about 2-10 P.M.

" *10th.*—Dust and thunderstorms were experienced at Hoshangabad at about 5-30 P.M. and 7-20 P.M. when a few drops of rain fell.
A duststorm lasting eight minutes only passed over Pachmarhi at 4-12 P.M.
A severe thunderstorm was experienced at Jaipur between 7-55 P.M. and 11 P.M.; light rain fell.

" *11th.*—A duststorm accompanied with rain occurred at Ajmer.
A thunderstorm occurred at Cuddapah between 5 and 6 P.M.
A thunderstorm passed over Jaipur between 1-30 P.M. and 1-45 P.M.

" *12th.*—Nor'westers passed over Burdwan between 6-45 and 7 P.M. and between 7-15 P.M. and 8 P.M.
A duststorm with hot wind was experienced at Khandwa at 4-50 P.M.
A thunderstorm with light rain was felt at Cuddapah at about 5 P.M.

" *13th.*—A duststorm passed over Jodhpur at 3-43 P.M. The wind blew with the force of a gale, but there was no rain.
A gale of wind was felt at Jubbulpore from 4-40 P.M. to 5 P.M. with light rain.

" *14th.*—A heavy duststorm was experienced at Hoshangabad with much thunder and a few drops of rain.
A violent nor'wester was experienced at Burdwan lasting thirty minutes.
A thunderstorm with lightning and rain occurred at Gulbarga between 3-45 P.M. and 4-5 P.M.

May 14th.—A slight thunderstorm occurred near Cuddapah between 10 A.M. and 6 P.M.

„ *15th.*—A violent duststorm passed over Jacobabad at 7 P.M. and lasted one hour and a half.

A thunderstorm with rain passed over Agra at 3-30 A.M.

A slight duststorm passed over Mainpuri between 5 P.M. and 5-28 P.M.

A slight thunderstorm at Cuddapah at 5 P.M.

„ *16th.*—A thunderstorm passed over Belgaum between 4 P.M. and 5 P.M.

A series of thunderstorms occurred at Simla between 6-30 P.M. and 10-10 P.M.

A duststorm passed over Cuddapah at about 7 P.M.

A severe duststorm passed over Malegaon with rain and a high wind.

„ *17th.*—A thunderstorm at Simla between 0-40 A.M. and 1-30 A.M.

A duststorm passed over Hoshangabad at about 9-40 A.M. and abated in about half an hour.

A severe nor'wester was experienced at Burdwan between 5-15 P.M. and 6-15 P.M.

A slight thunderstorm passed near Cuddapah at 5 P.M.

„ *18th.*—A severe nor'wester passed over Burdwan at 9 P.M. and lasted 20 minutes.

A duststorm with much thunder and lightning passed over Cuddapah between 7 P.M. and midnight.

„ *19th.*—A severe thunderstorm was experienced at Salem between 10-30 P.M. and 11-5 P.M.

A duststorm with high winds passed over Saugor between 5-40 and 6-20 P.M.

A thunderstorm passed near Cuddapah between 3 P.M. and 5 P.M.

„ *20th.*—A thunderstorm passed over Allahabad at 7-50 A.M. and lasted forty-five minutes. A few drops of rain fell.

A very heavy duststorm passed over Hoshangabad at 6-40 P.M., from west to east.

A thunderstorm was experienced at Cuddapah between 7 P.M. and 8 P.M.

„ *21st.*—A duststorm passed over Mainpuri between 3-15 P.M. and 5-25 P.M.

A duststorm with thunder and lightning occurred at Cuddapah about 4 P.M.

A duststorm was experienced at Srinagar between 5 P.M. and 6 P.M.

A severe dust and thunderstorm was experienced at Allahabad between 8 P.M. and 9-25 P.M. Light showers of rain fell.

May 22nd.—A very heavy duststorm passed over Hoshangabad at 5-35 P.M. The storm lasted twenty minutes.

„ *23rd.*—A very heavy duststorm passed over Hoshangabad, but lasted only one quarter of an hour.

„ *24th, 25th.*—A duststorm passed over Cuddapah with rain and strong winds; the storm lasted from 4-20 P.M., 24th to 2-30 A.M., 25th.

„ *26th.*—A thunderstorm with rain and hail was experienced over the Belgaum district over an area 120 miles long and sixty miles wide.

„ *27th.*—A heavy storm with thunder, lightning and rain swept over Poona between 3-25 P.M. and 3-42 P.M.

A duststorm was experienced at Khandwa between 3-45 P.M. and 4-30 P.M.; hot winds prevailed throughout.

A thunderstorm with hail and rain occurred in the neighbourhood of Kolhapur.

„ *28th.*—A whirlwind accompanied with much thunder, lightning and heavy rain was recorded in the neighbourhood of Kolhapur.

A small duststorm commenced at Allahabad at 8-30 P.M. and ended at 9-15 P.M.

„ *29th.*—A very heavy duststorm passed over Hoshangabad at 9-30 P.M. and lasted half an hour.

„ *30th.*—A duststorm commenced at Saugor at 9-45 A.M. and lasted about twenty minutes.

A violent storm with heavy rain passed over Raipur in the evening.

A violent duststorm was experienced at Kurnoal at 5 P.M. with thunder and lightning. The storm lasted forty minutes.

A slight duststorm passed over Cuddapah between 5-45 and 5-50 P.M.

„ *31st.*—A slight thunderstorm was experienced at Srinagar and heavy rain fell in the neighbourhood.

A slight thunderstorm was experienced at Gulmarg between 4-30 and 5-30 P.M.

A thunderstorm occurred at Simla at 5-40 P.M. The wind was very strong, travelling at the rate of 35 miles per hour. The wind travelled 70 miles between 5-40 P.M. and 8 P.M. and the temperature fell from 65° at the former hour to 50° at 6 P.M.

May 31st.—Duststorms passed over Hoshangabad at 9-10 A.M. and 0 40 P.M., giving a few drops of rain.

A thunderstorm passed over Patiala between 6-34 P M. and 7-4 P.M.

Hailstorms:—

May 15th.—A violent hailstorm passed over Boalia at 4-30 P.M. and lasted one hour causing much damage.

May 16th.—A sharp hailstorm occurred at Mandla (Nagpur) and was followed by high wind and rain.

Earthquakes—

May 24th.—A shock of earthquake was felt at Hanamconda Village at 3 P.M. on the 24th.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea:—The cyclonic storm, which was the chief feature of the meteorology of the Arabian Sea during the last week of the previous month, was central in about Lat. 17° N and Long. 63° E at the commencement of the month under review. It marched along a curved path during the next two days towards the Mekran coast which it crossed during the 3rd. It was apparently a small storm of considerable intensity and its influence over the weather was hence not very extensive. The strongest winds during its existence actually reported by vessels were of force 11. Light to moderate humid southerly winds obtained over the south and centre of the Arabian Sea on the first four days of the month and weather was hence more or less unsettled over those areas during that period. The mean intensity of the air movement averaged 3·0 or 0·4 below the normal on the 3rd and 4th. Winds fell off slightly in strength during the 4th and 5th and became very unsteady except in the vicinity of the Indian and Arabian coasts where they continued to be influenced by the pressure conditions prevailing over the heated interior districts. No significant change occurred until the 14th when northerly winds set in over the centre of the Arabian Sea. These abnormal winds extended slowly southwards and were established over nearly the whole of the Arabian Sea to the south of Lat. 17° N by the 18th. These abnormal conditions held until the 26th or 27th when fairly normal westerly winds set in and prevailed during the rest of the month. There were slight indications on the 30th and 31st of a feeble advance of monsoon winds up the extreme south-west of the Arabian Sea where the S. S. *Nevasa* and *Pemba* experienced south westerly winds of force 6 to 7 with a high sea and occasional squalls.

The air movement was feeble and considerably below its normal strength on at least 22 days during the period from the 6th to the 31st and hence, on the mean of the whole month, it was 0.6 below the normal *viz* 3.4.

Bay of Bengal:—During the first three weeks of the month the winds and weather over the Bay were such as usually obtain in that area during the month of May. A change occurred on the 21st and 22nd when a feeble temporary advance of humid south-west winds occurred over the extreme south of the Bay. These winds advanced northwards up the centre and south-east of the Bay during the next two days and, as usually happens, a storm was developed in front of the advancing current. It passed inland across the Arakan coast near Akyab on the morning of the 25th. It was a feeble disturbance and did not affect the weather to any extent. Fairly normal conditions obtained generally over the Bay during the next four days. On the 30th and 31st a change commenced in the south and east where unsteady irregular winds set in.

The air movement over the Bay varied considerably from day to day during the month. It was of normal strength on the 4th and 26th, stronger than usual on the 5th to the 11th, the 16th to the 20th, the 24th, 25th, 27th and 30th, and below its normal intensity on all other days It was strongest during the month on the 18th (4·3) and feeblest on the 1st and 13th (2·1).

On the mean of the whole month, the air movement over the Bay averaged 3·1 or 0·1 above the normal.

Equatorial Belt.—The available data for this region indicate that the western half of the belt was on several days of the month occupied by a belt of light winds and calms which shifted considerably in position from day to day. All the vessels which crossed the belt during the last week of the month experienced light airs and calms between Lat 3°S. and the Equator, thus indicating that the south-east trade winds did not extend as far north as usual towards the end of May. A noteworthy feature of the meteorology of the month was the excessive rainfall at Zanzibar which station received a total of 17·47 inches or 8·63 inches more than its normal fall.

The preceding summary of the weather in the Indian seas shows that conditions were very abnormal both in the Arabian Sea and the western half of the Equatorial belt, being in fact such as are associated with an abnormally prolonged winter in North-Western India and the high lands to the west.

Temperature of the Air.

In May 1901 hot weather conditions were much less strongly marked over the Indian area than is ordinarily the case. The day temperatures were in considerable defect of the normal over the Punjab on the one hand and over the central parts of the Peninsula on the other, and though over the western desert and the adjacent districts, both the day and night temperatures were in excess this was a more or less local effect of abnormally dry weather.

The mean maximum or day temperatures were below the normal over Baluchistan, the greater part of the Punjab and at most of the hill stations in the North-West Himalayas. The deficiency was greatest over the centre and east of the Punjab but was considerable also at Murree. The following gives comparative data for those stations at which the deficiency exceeded 2°:—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	°
Umballa	100·0	105·1	—5·1
Montgomery	104·2	108·6	—4·4
Khushab	101·0	104·5	—3·5
Murree	72·6	75·9	—3·3
Rawalpindi	94·3	97·2	—2·9
Peshawar	95·0	97·8	—2·8
Chaman	91·5	93·8	—2·3
D. I. Khan	99·9	102·2	—2·3
Ludhiana	101·8	103·9	—2·1

The mean maximum temperature was also below the normal over part of Gujarat, but with the doubtful exception of Bhavnagar, the deficiency in this area was small and unimportant. The mean day temperature of the month was also below the normal average at most of the interior stations of the Peninsula. The deficiency was larger than in Kathiawar, but exceeded 1°·5 only at the following stations:—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	°
Belgaum	89.2	93·1	—3.9
Hyderabad Deccan	99·7	102·9	—3·2
Raichur	100·4	103·5	—3·1
Bellary	100·6	102·4	—1·8
Madura	98·3	100·1	—1·8
Cocanada	99·0	100·7	—1·7

Finally the mean maximum temperature was lower than usual over Lower Burma, the deficiency having been greatest at Rangoon. The following gives comparative data for this station:—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	°
Rangoon	90·1	92·5	—2·4

Over the whole of the remainder of the Indian land area the mean maximum temperature of the month was in excess of the normal average. In the southern districts the only cases of important excess were reported from Madras and Colombo. The following gives comparative data for these two stations:—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, May 1901.	Normal, May	Variation of actual from normal, May 1901.
	°	°	°
Colombo	90 ·4	87·6	+2·8
Madras	100·0	97·8	+2·2

In Northern India, on the contrary, the day temperature, on the mean of the month, was in considerable excess of the normal in three separate areas, as well as locally at several stations. The first area included Cachar and

South-East Bengal. The following gives comparative data for the two stations in this area :—

Province or Division.	Station.	Mean maximum temperature.		
		Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
		°	°	°
Cachar	Silchar	90·7	88·0	+2·7
South-East Bengal.	Chittagong	91·1	88·0	+3·1

The second area included North Bengal and for the stations in this area the following table gives comparative data :—

Station.	Mean maximum temperature.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	°
Purnea	98·0	94·5	+3·5
Dinajpur	94·5	91·1	+3·4
Bogra	95·1	92·2	+2·9
Jalpaiguri	90·3	87·6	+2·7

The third and largest area of excess included the South Punjab, Upper Sind, the greater part of Rajputana, part of Central India, the Jhansi district of the North-Western Provinces and the Khandwa district of the Central Provinces. The following gives data for the stations in this area :—

Province or Division.	Station.	Mean maximum temperature.		
		Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
		°	°	°
Rajputana	Sambhar	107·1	104·3	+2·8
	Jaipur	107·7	105·5	+2·2
	Bikaner	108·6	106·4	+2·2
	Ajmer	105·2	103·2	+2·0
Upper Sind	Jacobabad	113·0	110·4	+2·6
South Punjab	Mooltan	107·1	104·7	+2·4
North-Western Provinces.	Jhansi	109·7	107·4	+2·3
Central Provinces	Khandwa	108·1	106·1	+2·0

In addition, at the following stations, for which comparative data are given below, the excess of the day temperature was locally more than 2° on the mean of the month :—

Station.	Mean maximum temperature.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	°
Calcutta	96·3	93·5	+2·8
Lucknow	106·3	104·1	+2·2
Sutna	106·8	104·7	+2·1

The highest day temperatures of the month were generally recorded during the last week of the month over the greater part of the country, but in Bengal proper there was some exception and at several stations the absolute maximum was recorded during the first fifteen days. The following gives the highest day temperatures recorded in the different divisions of India together with the highest previously recorded at these stations in May :—

Province or Division.	Station.	Highest maximum temperature recorded in May 1901.	Date on which recorded.	Highest maximum temperature recorded in May previous to 1901.	Year in which recorded.
		°		°	
Burma	Yamethin	110·0	20th	110·2	1895
Assam	Silchar	95·6	25th	101·8	1886
Bengal	Raniganj	109·8	13th	115·5	1889
Orissa	Cuttack	107·4	19th	118·0	1872
Bihar	Dehri	111·4	21st	116·3	1897
Chota Nagpur	Daltonganj	113·1	28th	116·1	1897
N.-W. P. and Oudh.	Jhansi	115·4	29th	118·0	1869
Punjab	Mooltan	118·9	31st	120·5	1895
Sind	Jacobabad	123.0	30th	123·0	1888 and 1895
Rajputana	Kotah	117·1	31st	115·6	1897 and 1899
Gujarat	Ahmedabad	113·3	31st	114·3	1895
Central India	Nowgong	114·0	29th	116·5	1881 and 1883
Central Provinces.	Khandwa	117·2	30th	115·2	1889
Berar	Akola	116·4	30th	116·0	1898
West Coast	Mormugao	94·0	1st	95·0	1892 and 1896
Bombay Deccan	Malegaon	110·8	30th	110·8	1883, 1895 and 1897
Mysore	Chitaldroog	98·7	12th and 13th	103·0	1897
Madras Coast	Masulipatam	110·7	9th	115·7	1898
Madras Deccan	Hanamconda	109·2	29th	112·2	1900
South India	Trichinopoly	107·7	11th	110·2	1896

The above shows that the highest temperatures recorded during the month under review have been previously exceeded in May except in the case of Akola, Kotah, Malegaon, Khandwa and Jacobabad.

The mean minimum temperature of the month exhibited the same general distribution, relatively to the normal, as the mean maximum temperature. In Burma and Bengal the variations from the normal were generally small and varied above and below the average. The following gives the three largest negative and three largest positive anomalies in these areas :—

VARIATION FROM NORMAL OF MEAN TEMPERATURE, MAY 1901.

PROVINCE.	STATION.	Positive.	STATION.	Negative.
		°		°
BURMA	Diamond Island	+1·7	Toungoo	—1·0
	Bassein	+1·2	Kindat	—0·9
	Thayetmyo	+1·0	Moulmein	—0·3
BENGAL	Saugor Island	+1·5	Burdwan	—0·6
	Purnea	+1·5	Dinajpur	—0·3
	Jalpaiguri	+1·0	Berhampore	—0·1

In North-Western and Central India the variations were irregular, but were much larger than in North-East India. A large area within which the mean minimum temperature was more than 2° above the normal covered the greater part of the Central Provinces, Central India, Berar, Rajputana and the western desert. This is shown below :—

PROVINCE OR DIVISION.	STATION.	MEAN MINIMUM TEMPERATURE		
		Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
		°	°	°
CENTRAL PROVINCES	Khandwa	83·3	80·2	+3·1
	Saugor	80·6	77·6	+3·0
	Hoshangabad	82·4	79·7	+2·7
	Chanda	83·3	80·8	+2·5
CENTRAL INDIA	Neemuch	79·1	76·4	+2·7
	Sutna	80·7	78·1	+2·6
	Indore	77·6	75·4	+2·2
BERAR	Amraoti	82·4	79·2	+3·2
RAJPUTANA	Ajmer	82·2	77·7	+4·5
	Sambhar	80·6	78·1	+2·5
	Jaipur	78·5	76·2	+2·3
WESTERN DESERT	Bikaner	83·0	79·8	+3·2
	Kurrachee	81.8	78·8	+3·0
	Mooltan	78·0	75·9	+2·1

At the same time areas of lower night temperature than usual covered the North Gangetic Plain, the submontane districts of the Kumaon Himalayas, and the West and Central Punjab. At the following stations the deficiency was more than 2° :—

PROVINCE OR DIVISION.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, May, 1901.	Normal, May.	Variation of actual from normal, May 1901.
		°	°	°
NORTH GANGETIC PLAIN.	Mainpuri	76·6	79·4	—2·8?
	Cawnpore	77·3	79·9	—2·6?
SUBMONTANE DISTRICTS OF THE KUMAON HIMALAYAS.	Roorkee	71·3	74·0	—2·7
WEST PUNJAB	Khushab	74·4	77·0	—2·6
	Dera Ismail Khan	71·3	73·4	—2·1
CENTRAL PUNJAB	Montgomery	75·9	78·0	—2·1

Over the inland parts and the east coast of the Peninsula the mean night temperature was generally in defect, but the deficiency was generally small and only exceeded 1° at the following places :—

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal. May 1901,
	°	°	°
Raichur	77·1	79·7	—2·6?
Cocanada	80·7	82·9	—2·2?
Kurnool	78·9	80·4	—1·5
Bijapur	73·4	74·7	—1·3
Nellore	80·8	82·1	—1·3

In addition to the above there were small areas of deficiency in parts of the south-west and south-east coasts, but Negapatam was the only station at which the variation was of any importance. The following gives comparative data for this station :—

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, May 1901.	Normal, May	Variation of actual from normal, May 1901.
	°	°	°
Negapatam	77·4	79·9	?—2·5

Over the remainder of the Peninsula the mean night temperature was in excess of the normal. The excess was greatest and 2° or more on the Bombay-Surat coast. This is shown below:—

Station.	Mean minimum temperature.		
	Actual, May 1901.	Normal May.	Variation of actual from normal, May 1901.
	°	°	°
Bombay	82·5	80·4	+2·1
Surat	79·6	77·6	+2·0

Cold periods were reported as follows:—On the 1st over the east of the Peninsula; on the 5th to the 10th in North-West India; on the 17th, 18th and 19th in the Deccan and the east of the Peninsula, and on the 22nd and 23rd in Northern India. The following were the dates on which minima, more than 10° below the normal, were recorded in the above areas:—

Date.	Province or Division.	Station.	Minimum temperature.		
			Actual of date.	Normal of date.	Variation of actual from normal of date.
			°	°	°
5th May	North-West India.	Cherat	50·0	67·8	—17·8
		Chaman	53·1	64·3	—11·2
6th ,,		Murree	43·9	58·8	—14·9
		Chaman	52·1	64·6	—12·5
		Chakrata	44·2	54·8	—10·6
7th ,,		Cherat	45·1	68·0	—22·9
		Rawalpindi	51·0	67·2	—16·2
		Murree	43·9	59·0	—15·1
		Mussooree	45·0	56·4	—11·4
		Montgomery	64·0	74·8	—10·8
		Umballa	66·0	76·1	—10·1?
8th ,,		Rawalpindi	53·0	67·8	—14·8
		Murree	43·9	58·5	—14·6
		Cherat	55·1	67·9	—12·8
		Peshawar	57·5	68·1	—10·6
		Roorkee	62·8	73·1	—10·3
9th May	North-West India	Rawalpindi	53·0	67·7	—14·7
		Umballa	65·0	76·1	—11·1?
		Peshawar	58·0	68·5	—10·5
		Khushab	65·9	76·3	—10·4
10th ,,		Rawalpindi	53·0	67·8	—14·8
17th ,,	Deccan	Bellary	67·2	77·6	—10·4
19th ,,		Cocanada	72·0	84·2	—12·2
22nd ,,	Northern India.	Khushab	68·4	81·0	—12·6
		Gaya	68·8	79·9	—11·1
23rd ,,		Hazaribagh	65·8	76·2	—10·4
		Khushab	67·4	80·9	—13·5
		Dera Ismail Khan	64·1	75·7	—11·6
		Rawalpindi	58·2	69·1	—10·9

On the hills the mean of the night temperatures varied irregularly from the normal. In Baluchistan and at Murree, Simla and Wellington, it was slightly below the average, while at the remaining stations it was above. The following gives comparative data for those stations where the variations exceeded 1°:—

Hill Station.	Mean minimum temperature.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	°
Mussooree	59·5	57·2	+2·3
Ranikhet	61·0	59·4	+1·6
Mount Abu	72·5	70·9	+1·6
Pachmarhi	76·0	74·6	+1·4
Cherat	65·3	68·2	—2·9
Wellington	56·9	58·3	—1·4

The following gives the lowest minimum temperatures recorded at the Himalayan hill stations during the month

under review together with the lowest readings recorded in May previously :—

HILL STATION.	Lowest Minimum temperature recorded in May 1901.	Date on which recorded.	Lowest minimum temperature recorded in May, previous to 1901.	Year in which recorded.
	°		°	
Leh	28·0	24th	23·6	1886
Srinagar	46·1	8th	41·8	1898
Skardu	37·6	22nd	32·7	1897
Dras	20·6	1st	14·1	1897
Gilgit	45·9	7th	50·1	1900
Chitral	45·0	6th	44·5	1900
Cherat	45·1	7th	47·5	1898
Murree	43·9	6th, 7th and 8th	32·0	1875
Simla	45·9	17th	42·0	1876
Chakrata	44·2	6th	37·2	1876
Mussooree	45·0	7th	41·0	1891
Ranikhet	51·0	6th and 8th	42·7	1871
Darjeeling	47·1	21st	38·8	1882

At Gilgit and Cherat the minimum temperatures were lower than those previously recorded.

The mean temperature of the month of May 1901 was generally more or less excessive, but there were two large areas and three small areas in which it was in defect of the normal. The first large area included the greater part of the Punjab and the deficiency exceeded 2° at the following stations :—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	
Montgomery	90·1	93·4	—3·3?
Khushab	87·7	90·8	—3·1
Dera Ismail Khan	85·6	87·8	—2·2

The second large area included the greater part of the interior of the Peninsula and some of the east coast stations. The deficiency in this area exceeded 1·°5 at the following stations :—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	
Cocanada	89·9	91·9	—2·0
Hyderabad	88·7	90·5	—1·8
Belgaum	79·0	80·6	—1·6

Of the three small areas one lay over Lower Burma, the second over part of the west and of the centre of the North-Western Provinces and the third over part of Gujarat. The following gives comparative data for the stations contained within these areas :—

PROVINCE.	STATION.	MEAN DAILY TEMPERATURE.		
		Actual, May 1901.	Normal, May.	Variation of actual from Normal, May 1901.
		°	°	°
LOWER BURMA	Rangoon	83·7	84·9	—1·2
	Toungoo	85·3	86·4	—1·1
	Moulmein	82·1	82·9	—0·8
	Thayetmyo	88·3	88·5	—0·2
NORTH-WESTERN PROVINCES.	Roorkee	86·4	88·1	—1·7
	Mainpuri	92·3	93·5	—1·2?
	Dehra Dun	81·3	81·8	—0·5?
	Cawnpore	92·3	92·7	—0·4?
GUJARAT	Bhuj	88·4	89·1	—0·7?

Over the whole of the remainder of India the mean temperature exceeded the normal. The excess was generally slight or small, but exceeded 2° at the following stations :—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	
Ajmer	93·7	90·4	+3·3
Jhansi	97·7	94·9	+2·8
Sambhar	93·9	91·2	+2·7
Bikaner	95·8	93·1	+2·7
Khandwa	95·7	93·1	+2·6
Purnea	86·6	84·1	+2·5
Jaipur	93·1	90·8	+2·3
Mooltan	92·6	90·3	+2·3
Amraoti	95·4	93·2	+2·2

The most important area of excess was thus shown in part of North-West and Central India and this area roughly coincided with an area of very light rainfall (*see* Pl. IV.). With the exception of Murree, Cherat and Ranikhet the variations of the mean temperature from the normal at

the northern hill stations were small and unimportant. This is shown below :—

Hill Station.	Mean daily temperature.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	
Ranikhet	70·4	68·1	+2·3
Darjeeling	57·7	56·7	+1·0
Mussooree	67·0	66·4	+0·6
Cherat	76·2	79·9	—3·7
Murree	65·3	67·4	—2·1
Simla	63·6	64·5	—0·9
Srinagar	63·4	64·0	—0·6
Chakrata	64·4	64·9	—0·5
Chaman	78·4	79·8	—1·4
Quetta	67·2	67·5	—0·3

At the central hill stations the temperature, on the mean of the month, was in excess and at the southern hill station in defect of the normal The following gives comparative data : —

Hill Station	Mean daily temperature.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	°	°	
Pachmarhi	86·0	84·6	+1·4
Mount Abu	80·5	79·7	+0·8
Wellington	65·9	67·0	—1·1

The following gives temperature data for 56 meteorological divisions of the empire :—

Province.	Division.	Actual temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	88·7	75·5	82·1	13·2	23·5	—0·6	+0·8	—1·4
	Lower Burma (Deltaic)	89·7	78·5	84·1	11·2	22·2	—1·4	+1·0	—2·4
	Central do.	96·6	77·0	86·8	19·6	34·2	—1·3	0	—1·3
	Upper do.	97·1	75·7	86·4	21·4	35·6	+0·5	+0·2	+0·3
	Arakan	92·2	77·0	84·6	15·2	23·9	+1·7	—0·8	+2·5
Bengal and Assam	Eastern Bengal	92·6	75·0	83·8	17·7	29·4	+1·9	+0·3	+1·6
	Assam (Surma)	90·7	73·3	82·0	17·4	27·3	+2·7	+1·2	+1·5
	Do. (Brahmaputra)	87·3	72·3	79·8	15·0	27·4	+1·2	+0·1	+1·1
	Deltaic Bengal	94·9	77·1	86·1	17·8	31·1	+1·3	+0·6	+0·7
	Central do.	98·0	76·0	87·0	21·9	37·9	+1·8	—0·2	+2·0
	North do.	91·3	72·6	82·0	18·7	31·6	+3·1	+0·4	+2·7
	Bengal Hills	68·5	44·8	56·7	23·7	31·2	+1·8	+0·2	+1·6
	Orissa	94·9	79·8	87·4	15·2	27·2	+0·2	+0·5	—0·3
	Chota Nagpur	102·4	76·2	89·3	26·2	39·5	+0·9	+0·5	+0·4
	Bihar (South)	103·3	78·2	90·7	25·1	40·1	+1·1	+0·5	+0·6
	Do. (North)	98·0	75·5	86·8	22·5	37·5	+2·0	+1·1	+0·9
North-Western Provinces and Oudh	North-Western Provinces (East)	106·8	78·4	92·6	28·5	41·8	+1·5	—0·3	+1·8
	Oudh (South)	106·3	76·1	91·2	30·2	44·5	+2·2	—0·6	+2·8
	Do. (North)	104·1	76·6	90·4	27·5	41·6	+0·7	—1·1	+1·8
	North-Western Provinces (Central)	108·3	79·8	94·1	28·5	41·7	+2·3	+3·3	—1·0
	Do. do. (West)	105·4	77·5	91·4	27·9	42·5	+1·1	—0·4	+1·5
	Do. do. (Submontane, East).	101·6	76·8	89·2	24·8	37·0	+1·1	+0·1	+1·0
	Do. do. (Submontane, West).	99·9	71·9	85·9	28·0	42·2	+0·4	—1·2	+1·6
	Do. do. (Hills)	75·5	57·9	66·7	17·6	36·1	+0·1	+1·5	—1·4
Punjab	Punjab, (South-East)	104·3	80·7	92·5	23·6	40·6	0	+1·5	—1·5
	Do. (South)	103·6	75·2	89·4	28·4	46·1	—0·1	+0·7	—0·8
	Do. (Central)	102·5	73·8	88·2	28·7	49·7	—0·3	+1·6	—1·9
	Do. (Submontane)	101·2	73·7	87·5	27·5	47·2	—1·4	+1·1	—2·5
	Do. (Hills)	74·4	52·7	63·4	21·7	46·0	—2·2	—0·8	—1·4
	Do. (North)	94·7	65·1	79·9	29·6	55·3	—2·8	—0·2	—2·6
	Do. (West)	103·1	74·9	89·0	28·2	50·9	—1·1	—0·9	—0·2

PROVINCE.	DIVISION.	ACTUAL TEMPERATURE. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	VARIATION FROM NORMAL OF MONTH OF Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
BOMBAY AND MALABAR COAST DISTRICTS (MADRAS).	Malabar	89·5	78·3	83·9	11·2	17·7	+1·0	+0·7	+0·3
	Madras (South Central)	96·8	75·6	86·2	21·3	30·7	0	+1·1	—1·1
	Coorg	80·4	64·9	72·7	15·5	24·3	—0·5	+0·4	—0·9
	Mysore	91·2	69·3	80·2	21·9	32·1	—0·5	+0·2	—0·7
	Konkan	90·8	81·2	86·0	9·6	18·4	+0·7	+1·2	+0·5
	Bombay Deccan	97·8	72·2	85·1	25·6	37·0	—1·2	—0·4	—0·8
	Hyderabad (North)	101·1	75·5	88·4	25·6	36·7	...	...	...
	Khandesh	102·7	73·9	88·3	28·8	41·6	+1·1	+0·7	+0·4
CENTRAL PROVINCES AND BERAR.	Berar	108·5	81·9	95·2	26·6	39·0	+1·3	+2·0	—0·7
	Central Provinces (West)	108·1	82·4	95·3	25·8	40·0	+0·7	+2·0	—1·3
	Do. (Central)	106·0	80·0	92·9	26·0	38 5	+0·5	+1·6	—1·1
	Do. (East)	106·5	82·3	94·4	24·2	38·7	0	+1·3	—1·3
BOMBAY (NORTH).	Gujarat	102·3	80·2	91·3	22·1	35·4	—0·5	+1·7	—2·2
	Kathiawar and Cutch	97·7	77·6	87·7	20·1	29·5	—0·4	+0·9	—1·3
	Sind	105·3	79·4	92·3	25·9	47·6	+1·6	+1·4	+0·2
	Baluchistan Hills	85·9	54·4	70·2	31·4	51·7	—1·2	—0·4	—0·8
RAJPUTANA AND CENTRAL INDIA.	Central India (East)	105·9	79·2	92·6	26·7	40·2	+1·3	+2·0	—0·7
	Rajputana (East), Central India (West)	106·4	81·2	93·8	25·3	40·7	+1·8	+2·6	—0·8
	Do. (West)	108·5	81·5	95·0	27·0	41·8	+2·2	+3·2	—1·0
MADRAS	East Coast (North)	94·3	80·7	87·5	13·5	26·7	+1·2	—0·1	+1·3
	Hyderabad (South)	101·4	77·9	89·7	23·5	35·9	—3·2	—0·3	—2·9
	Madras (Central)	102·9	79·6	91·3	23·3	36·7	—1·0	—0·7	—0·3
	East Coast (Central)	102·7	81·4	92·0	21·3	36·9	—0·1	—0·3	+0·2
	Do. (South)	99·8	79·3	89·6	20·4	32·7	+0·7	+0·4	+0·3
	Madras (South)	96·9	77·8	86·9	19·1	28·3	—1·1	+0·1	—1·2

During the first four days of the month the weather was generally fine with a few scattered showers principally in North-East India and the Peninsula. During this time the temperature was lower than usual over the centre and east of the Peninsula and in Upper Burma, and generally higher than usual elsewhere—more particularly in the West Punjab. The following gives comparative data for the 2nd for all divisions of India as representative of this period :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF Mean maximum temperature, 2nd May.	Mean minimum temperature, 2nd May.	Mean daily temperature, 2nd May.
	°	°	°
Burma	—1·7	0	—0·9
Assam	+1·3	+0·5	+0·9
Bengal	—1·5	+1·4	—0·1
Orissa	—2·4	+0·4	—1·0
Bihar	+1·2	+3·7	+2·5
Chota Nagpur	—2·1	+1·9	—0·1
North-Western Provinces and Oudh	+3·0	—1·1	+1·0

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF Mean maximum temperature, 2nd May.	Mean minimum temperature, 2nd May.	Mean daily temperature, 2nd May.
Punjab	+7·4	+3·3	+5·4
Sind	+2·0	+4·4	+3·2
Rajputana	+3·5	+6·2	+4·9
Gujarat	—3·0	+2·5	—0·3
Central India	+0·6	+1·1	+0·9
„ Provinces	—4·1	+1·9	—1·1
Berar	—4·1	+3·4	—0·4
West Coast	0	+1·7	+0·9
Bombay Deccan	—7·2	+2·3	—2·5
Mysore	+0·3	+1·6	+1·0
Madras Coast	—3·0	—0·9	—2·0
„ Deccan	—7·3	—0·9	—4·1
South India	—2·0	+1·0	—0·5

The above shows that the principal deficiency of temperature was in the Deccan, but the temperature in parts of Upper Burma was almost equally low. The following shows the stations at which the deficiency in the mean

temperature was 5° or more during the 1st, 2nd, 3rd and 4th :—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
1st May	Hyderabad	—12·5
	Raichur	—10·7
	Cuttack	—10·7
	Raipur	—9·5
	False Point	— 7·5
	Sholapur	— 7·4
	Chaibassa	— 5·8
	Bellary	— 5·6
	Bhamo	— 5·5
	Kurnool	— 5·4
	Sambalpur	— 5·2
2nd „	Mandalay	—10·0
	Akyab	— 7·9
	Hyderabad	— 7·0
	Sholapur	— 6·1
3rd „	Raichur	— 5·8
	Bangalore	— 5·5
	Hyderabad	— 5·1
	Bellary	— 5·0
4th „	Tavoy	— 7·5
	Bangalore	— 6·2
	Salem	— 6·0
	Raichur	— 5·2

The principal excess of temperature at this time was reported from Baluchistan, Upper Sind and the West Punjab and amounted to 6° or more at the following stations during the four days under review :—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
1st May	Mooltan	+ 6·2
2nd „	Do.	+10·4
	Sialkot	+ 7·8
	Peshawar	+ 7·1
	Jacobabad	+ 6·9
2nd May	Ajmer	+ 6·8
	Lahore	+ 6·8
	Khushab	+ 6·1
3rd „	Mooltan	+ 12·0
	Sialkot	+10·6
	Quetta	+10·4
	Jacobabad	+ 9·5
	D. I. Khan	+ 9·2
	Sirsa	+ 9·1
	Lahore	+ 9·0
	Chaman	+ 8·5
	Ludhiana	+ 8·0
	Ajmer	+ 7·6
	Bikaner	+ 7·2
	Peshawar	+ 7·1
	Meerut	+ 6·7
	Rawalpindi	+ 6·4
	Sambhar	+ 6·4
	Jaipur	+ 6·1
4th „	Lahore	+10·5
	Sialkot	+10·2
	Peshawar	+ 9·9
	Ludhiana	+ 8·5
	Rawalpindi	+ 7·1
	Mcoltan	+ 6·8
	Jhansi	+ 6·4
	Ajmer	+ 6·3

On the 3rd the barometer commenced to give way briskly in Baluchistan and Sind, and on the following day, the 4th, a deep depression giving strong gales and heavy rain was shown over Sind. This storm advanced into the North Punjab on the 5th and apparently broke up among the North-West Himalayas on the 6th. The storm carried heavy rain with it into the Punjab and North-West Himalayas thus occasioning a very rapid fall of temperature all over North-West India. The following gives the mean temperature for the 4th and 5th and the change in 24 hours

for those stations in North-West India where the change amounted to or exceeded 10° :—

Date.	Station.	Mean temperature of date.	
		Actual.	Change in past 24 hours.
		°	°
4th May	Chaman	69·5	—16·4
	Jacobabad	87·8	—12·3
5th „	Peshawar	71·6	—19·1
	Rawalpindi	70·1	—16·8
	Sialkot	81·9	—14·5
	Jacobabad	74·3	—13·5
	Khushab	79·4	—13·4
	Lahore	83·5	—12·5
	Ludhiana	83·4	—12·2
	Dera Ismail Khan	76·7	—11·8
	Mooltan	82·7	—11·6
	Murree	56·1	—11·5
	Quetta	54·3	—11·3
	Chaman	58·2	—11·3
	Montgomery	83·5	—11·0
	Udaipur	81·2	—10·2
	Ajmer	85·0	—10·0

The reduction of temperature occasioned by the unsettled weather due to this storm was at its greatest extent on the 7th when it was only in the extreme southern and north-eastern divisions that any excess of temperature was recorded. The following gives comparative data for this day for all the divisions of India and illustrates the conditions prevailing over India at this time :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 7th May.	Mean minimum temperature, 7th May.	Mean daily temperature, 7th May.
	°	°	°
Burma	—2·3	+0·9	—0·7
Assam	+5·0	+5·1	+5·1
Bengal	+2·8	+3·3	+3·1
Orissa	—2·6	—3·2	—2·9
Bihar	+2·3	+3·3	+2·8
Chota Nagpur	—5·8	—0·7	—3·3
North-Western Provinces and Oudh	—2·2	—1·2	—1·7
Punjab	—17·1	—8·4	—12·8
Sind	—3·2	—0·8	—2·0
Rajputana	—5·1	—3·2	—4·2
Gujarat	—2·3	+0·1	—1·1
Central India	—4·9	+2·1	—1·4
Central Provinces	—4·5	+0·1	—2·2
Berar	—5·6	—0·3	—3·0
West Coast	—0·5	—0·1	—0·3
Bombay Deccan	—5·7	—3·0	—4·4
Mysore	—1·6	—0·2	—0·9
Madras Coast	+6·1	+2·5	+4·3
Madras Deccan	—5·0	—1·3	—3·2
South India	+0·3	+2·6	+1·5

The reduction of temperature was, as is usually the case during rainfall in the hot weather, much more marked in the day than in the night temperature, and during the period from the 4th to the 9th the following day temperatures, 20° or more below the normal, were recorded :—

Date.	Station.	Maximum temperature of date.		
		Actual.	Normal.	Variation of actual from normal.
		°	°	°
5th May	Chaman	63·3	93·5	—30·2
	Jacobabad	81·4	108·9	—27·5
	Hyderabad	85·1	106·4	—21·3
	Quetta	58·7	80·0	—21·3
6th „	Montgomery	77·2	104·4	—27·2
	Rawalpindi	70·0	96·3	—26·3
	Peshawar	70·2	96·0	—25·8
	Sialkot	77·5	101·8	—24·3
	Murree	53·2	75·4	—22·2
	Srinagar	57·9	79·0	—21·1
	Ludhiana	82·6	102·6	—20·0
7th „	Montgomery	84·0	109·0	—25·0
	Khushab	79·7	104·2	—24·
	Rawalpindi	73·0	96·4	—23·4
	Sialkot	81·5	101·9	—20·4
	Peshawar	76·1	96·1	—20·0

After the 7th the temperature began to rise, but it was not until the 9th that the effects of the storm began to disappear. On that day, the 9th, temperature rose quickly

in Rajputana and from the 10th to the 16th the distribution of temperature, relatively to the normal, over India was irregular and exhibited no very important features. The following gives comparative data for all divisions of India for the 12th and illustrates the general conditions prevailing during this period :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 12th May.	Mean minimum temperature, 12th May.	Mean daily temperature, 12th May.
	°	°	°
Burma	+0·4	—0·4	0
Assam	+0·9	—1·1	—0·1
Bengal	+4·8	—0·9	+2·0
Orissa	—0·4	+0·5	+0·1
Bihar	+5·8	+0·6	+3·2
Chota Nagpur	+4·7	+1·3	+3·0
North-Western Provinces and Oudh	+4·5	+1·4	+3·0
Punjab	+0·9	+1·0	+1·0
Sind	+2·5	+2·4	+2·5
Rajputana	+1·2	+0·3	+0·8
Gujarat	+1·2	—0·2	+0·5
Central India	+1·6	+1·5	+1·6
Central Provinces	—0·1	+1·1	+0·5
Berar	—0·1	+0·9	+0·4
West Coast	—0·1	+1·7	+0·8
Bombay Deccan	+2·4	+0·7	+1·6
Mysore	+3·9	+3·2	+3·6
Madras Coast	—0·3	—0·3	—0·3
Madras Deccan	+2·2	+2·7	+2·5
South India	+2·1	+1·7	+1·9

The weather was very hot in Bengal on the 11th when the following maxima more than 10° higher than usual were recorded :—

Station.	Maximum temperature.		
	Actual, 11th May.	Normal, 11th May.	Variation of actual from normal, 11th May.
Berhampore	106·8	93·8	+13·0
Purnea	106·3	93·6	+12·7
Dinajpur	102·3	90·8	+11·5
Bogra	103·8	92·7	+11·1
Dhubri	93·7	83·1	+10·6
Patna	107·0	96.7	+10·3
Burdwan	106·4	96·3	+10·1

It was also hotter than usual over North-West India from the 13th to the 16th, but in this instance the excess was more pronounced at night than during the day. The following gives mean day and night temperature variation data for the different divisions of North-West India from the 13th to the 16th :—

Date.	Province or Division.	Variation from normal of	
		Mean maximum temperature of date.	Mean minimum temperature of date.
		°	°
13th May	North-Western Provinces and Oudh.	+3·5	+1·5
	Punjab	+2·9	+4·1
	Sind	+1·3	+1·6
	Rajputana	+2·0	+4·9
	Gujarat	+3·0	+0·6
14th „	North-Western Provinces and Oudh.	+2·0	+3·0
	Punjab	+3·6	+5·1
	Sind	+1·0	+2·7
	Rajputana	+3·6	+6·6
	Gujarat	+6·0	+1·4
15th „	North-Western Provinces and Oudh.	+4·6	+5·1
	Punjab	+5·3	+4·4
	Sind	+2·0	+0·9
	Rajputana	+4·4	+5·2
	Gujarat	+5·4	0
16th „	North-Western Provinces and Oudh.	+2·8	+1·9
	Punjab	+0·2	+4·2
	Sind	—0·1	+2·2
	Rajputana	+3·5	+3·7
	Gujarat	+1·8	+1·0

During this period the mean temperature was steadily low over the east of the Peninsula. The following gives data for the Peninsular divisions from the 13th to the 16th in illustration :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	13th May.	14th May.	15th May.	16th May
	°	°	°	°
Central Provinces	+1·2	+1·9	+0·6	+1·1
Berar	+2·0	+2·9	+1·1	+1·5
West Coast	+0·4	+0·2	—0·4	—0·9
Bombay Deccan	+3·5	+1·6	—0·3	+1·3
Mysore	+2·0	+1·3	+1·0	+0·5
Madras Coast	—2·6	—2·6	—2·4	—1·3
Do. Deccan	—0·9	—0·9	—1·8	—2·5
South India	+1·1	+0·8	+0·3	+1·0

Between the 17th and the 20th there were showers over the North-West Himalayas and the submontane districts of North-West India and in Assam, Bengal and the Peninsula. The mean temperature was consequently very unsteady over these areas. The showers of rain and snow in the North-West Himalayas on the night of the 16–17th were followed by a rapid fall of temperature over North-West India and this reduction of temperature was maintained at least over the Punjab until the 20th. The following gives comparative temperature data for the different divisions of North-West India from the 16th to the 20th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	16th May.	17th May.	18th May.	19th May.	20th May.
	°	°	°	°	°
Punjab	+2·2	−7·5	−7·0	−4·1	−0·9
Sind	+1·1	−1·0	+0·7	+2·6	+3·9
Rajputana	+3·6	+0·6	+0·1	+1·2	+4·7
North-Western Provinces and Oudh.	+2·4	+0·3	−1·1	−2·3	+0·1
Gujarat	+1·4	+0·5	0	0	+0·7

The mean temperature was also steadily low over the greater part of the Peninsula during this period. The following gives data of the Peninsular divisions from the 17th to the 20th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	17th May.	18th May.	19th May.	20th May.
	°	°	°	°
West Coast	+0·1	−1·8	−0·2	+0·5
Bombay Deccan	−0·3	−1·4	−0·8	−0·3
Mysore	−3·0	−4·3	−1·5	−0·7
Madras Coast	−1·6	−0·8	−2·4	−0·3
„ Deccan	−4·3	−4·6	−4·3	−2·2
South India	−0·6	−2·6	−1·9	−2·7

Across the head of the Peninsula and in Burma the mean temperature was, on the contrary, generally higher than usual. The following gives comparative data for the central divisions of India and for Burma for the four days under review:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	17th May.	18th May.	19th May.	20th May.
	°	°	°	°
Central India	+2·3	+0·7	+0·8	+1·3
Central Provinces	+1·5	−2·0	+0·1	+0·8
Berar	+2·4	−1·4	+0·3	+2·1
Burma	+2·2	+2·8	+4·0	+3·3

There was again rain and snow over the North-West Himalayas between the 20th and 22nd and this was followed by a rapid fall of temperature over the Punjab on the 22nd. At the same time showers of rain occurred over the North-Western Provinces and Bengal and Assam on the 22nd and in North Madras on the 23rd. As a result of these showers a considerable reduction of temperature took place over Northern India and the Madras coast districts, and this condition was maintained until the 26th. The following gives comparative temperature data from the 21st to the 26th for the Punjab, the North-Western Provinces, the Bengal divisions, Assam and the Madras Divisions:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	21st May.	22nd May.	23rd May.	24th May.	25th May.	26th May.
	°	°	°	°	°	°
Punjab	+1·1	−2·8	−5·5	−4·2	−4·7	−1·3
North-Western Provinces and Oudh.	+1·6	−3·0	−3·5	−2·2	−1·2	−1·4
Bengal	−3·5	−1·9	−2·4	+1·6	+1·8	+1·7
Orissa	−0·4	+0·3	−3·2	−0·8	−1·1	+4·4
Bihar	−0·7	−5·8	−2·5	−0·1	+2·3	+3·0
Chota Nagpur	−1·0	−3·9	−5·1	+0·1	+1·8	+4·6
Assam	−1·8	−1·0	+2·3	+3·0	+2·1	−0·2
Madras Coast	+1·0	+2·5	−0·8	−1·7	−2·0	−2·3
Mysore	−0·7	+0·8	+1·0	+1·3	−1·5	−1·1
Madras Deccan	+0·3	+0·4	+1·9	−1·2	−3·2	−4·1
South India	−2·7	−0·2	+2·0	+1·8	−0·5	0

Over the remainder of India the mean temperature was generally in excess. This is shown below:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	21st May.	22nd May.	23rd May.	24th May.	25th May.	26th May.
	°	°	°	°	°	°
Sind	+3·7	+4·2	+4·9	+2·1	+4·6	+1·3
Rajputana	+6·0	+5·3	+2·3	+2·1	+1·0	+2·0
Gujarat	−0·2	+0·4	+0·9	+0·8	+0·3	+0·4
Central India	+2·3	+1·2	+1·4	+1·3	+2·2	+1·3
Central Provinces	+2·1	+3·0	+2·2	+1·5	+0·7	+1·5
Berar	+2·7	+2·5	+3·3	+2·2	+1·4	+2·9
West Coast	+0·5	+1·3	+1·8	+2·4	+1·6	+1·6
Bombay Deccan	−0·4	−0·6	+1·3	+1·5	+1·1	+1·5

Heavyish rain set in over Burma on the 23rd and a cyclonic storm giving general heavy rain struck the Arakan coast on the 25th. This general rainfall occasioned a sudden and large reduction of temperature and the mean temperature over Burma was lower than usual from the

25th to the 28th. The following gives comparative data :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	25th May.	26th May.	27th May.	28th May.
	°	°	°	°
Diamond Island	−1·0	−0·5	−0·9	0
Bassein	−1·4	+0·3	−3·3	−2·8
Rangoon	−5·2	−2·6	−1·8	−1·3
Toungoo	−5·0	−3·6	−4·1	−2·2
Thayetmyo	−5·3	−2·7	−8·7	−5·0
Akyab	−5·0	−4·6	+1·0	+1·4
Minbu	−2·8	−2·2	+0·4	0
Yamethin	+0·4	−1·2	−4·6	−0·4
Mandalay	−1·4	+0·5	+0·4	+1·5
Bhamo	−2·5	−1·6	−5·3	−1·2
Kindat	−6·1	−9·4	−1·5	−1·7

From the 27th to the 29th the temperature over India was generally excessive. The following gives comparative data for all districts for the 28th in illustration of the conditions existing at this time :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 28th May.	Mean minimum temperature, 28th May.	Mean daily temperature, 28th May.
	°	°	°
Burma	−0·5	0	−0·3
Assam	+2·8	−0·1	+1·4
Bengal	+3·5	+2·2	+2·9
Orissa	+4·7	+4·6	+4·7
Bihar	+4·9	+4·5	+4·7
Chota Nagpur	+8·7	+4·0	+6·4
North-Western Provinces and Oudh	+5·8	+2·3	+4·1
Punjab	+3·1	+3·6	+3·4
Sind	+2·3	+0·3	+1·3
Rajputana	+6·3	+5·2	+5·8
Gujarat	+3·4	−0·2	+1·6
Central India	+5·7	+1·6	+3·7
Central Provinces	+5·6	+2·1	+3·9
Berar	+6·6	+3·1	+4·9
West Coast	+1·8	+1·3	+1·6
Bombay Deccan	+4·7	+1·9	+3·3
Mysore	+1·6	+2·2	+1·9
Madras Coast	+0·9	−0·4	+0·3
Madras Deccan	+1·9	−0·5	+0·7
South India	+1·9	+1·2	+1·6

The heat at this time was great in parts of Bengal and the Gangetic Plain, as is shewn by the following table which gives comparative data for those stations at which the day temperature was more than 7° above the normal :—

Date.	Station.	Variation from normal of		
		Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
27th May	Balasore	+10·6	+3·8	+7·2
	Chaibassa	+10·5	+1·2	+5·9
	Ranchi	+9·2	+4·5	+6·9
	Berhampore	+8·9	+4·9	+6·9
	Bogra	+8·7	+3·5	+6·1
	Lucknow	+8·6	−3·2	+2·7
	Burdwan	+8·0	+5·2	+6·6
	Benares	+7·9	−5·2	+1·4
	Patna	+7·5	+2·0	+4·8
	Purnea	+7·1	+4·0	+5·6
28th May	Chaibassa	+10·7	+4·0	+7·4
	Lucknow	+10·2	+4·8	+7·5
	Hazaribagh	+8·5	+3·8	+6·2
	Allahabad	+8·0	+4·2	+6·1
	Benares	+7·6	+4·6	+6·1
	Purnea	+7·3	+5·1	+6·2
	Meerut	+7·3	−1·7	+2·8
	Balasore	+7·1	+4·6	+5·9
29th May	Ranchi	+8·0	−0·1	+4·0
	Chaibassa	+7·1	+2·2	+4·7

During the two last days of the month there were thundershowers over Burma, North-East India and the east of the Peninsula and the mean temperature was low over these areas while it was very high over the west and centre of India. The following gives comparative data for all divisions of India for the 31st :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 31st May.	Mean minimum temperature, 31st May.	Mean daily temperature, 31st May.
	°	°	°
Burma	+0·3	+0·6	+0·5
Assam	−0·1	−0·3	−0·2
Bengal	−0·2	−0·5	−0·4
Orissa	+2·0	−2·3	−0·2
Bihar	−6·9	−0·7	−3·8

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 31st May.	Mean minimum temperature, 31st May.	Mean daily temperature, 31st May.
	°	°	°
Chota Nagpur	−1·5	−0·7	−1·1
North-Western Provinces and Oudh	−1·0	+1·9	+0·5
Punjab	+2·4	+3·6	+3·0
Sind	+5·4	+2·3	+3·9
Rajputana	+7·6	+5·1	+6·4
Gujarat	+3·3	−2·2	+0·6
Central India	+4·6	+5·6	+5·1
Central Provinces	+4·4	−0·7	+1·9
Berar	+9·2	+1·3	+5·3
West Coast	+1·7	+3·2	+2·5
Bombay Deccan	+5·7	+2·4	+4·1
Mysore	−0·5	+0·9	+0·2
Madras Coast	−3·8	−1·1	−2·5
Madras Deccan	+1·7	+1·2	+1·5
South India	+1·7	0	+0·9

The following table gives the variations of the mean temperature, week by week, during the month and also for the whole month :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE FOR WEEK ENDING					
	4th May.	11th May.	18th May.	25th May.	1st June.	For whole month.
	°	°	°	°	°	°
Burma	+1·3	−1·6	+1·2	+1·3	−0·1	−0·1
Assam	+0·9	+3·8	−0·5	+0·1	+0·7	+1·1
Bengal	+0·9	+3·8	+0·8	−1·1	+0·7	+1·1
Orissa	−2·6	+0·2	+1·9	−0·4	+2·0	+0·4
Bihar	+1·6	+4·3	+0·1	−0·4	−0·3	+1·1
Chota Nagpur	−2·0	+0·8	+1·6	−1·1	+1·8	+0·7
North-Western Provinces and Oudh.	−0·2	−1·0	+1·1	−1·5	+0·2	+0·4
Punjab	+2·5	−8·2	+0·2	−3·0	+2·3	−0·3
Sind	+2·7	−2·0	+1·2	+3·7	+2·9	+1·5
Rajputana	+2·3	−2·4	+2·6	+3·2	+4·7	+2·3
Gujarat	+1·4	−1·3	+1·5	+0·4	+1·1	+0·5
Central India	+0·3	−0·6	+2·2	+1·5	+3·6	+1·7
Central Provinces	−2·4	−0·4	+0·7	+1·5	+3·6	+1·1
Berar	−3·5	−1·5	+1·3	+2·1	+5·9	+1·7
West Coast	+0·6	0	−0·2	+1·1	+1·9	+0·9
Bombay Deccan	−3·9	−3·3	+0·9	+0·3	+3·4	−0·3
Mysore	−1·5	−0·6	+0·2	−0·2	+0·5	−0·2
Madras Coast	−1·6	+3·4	−1·7	−0·5	−1·4	+0·3
Madras Deccan	−4·8	−1·4	−1·8	−1·2	+0·7	−1·1
South India	−2·9	+0·5	+0·3	−0·6	+1·1	+0·3

Winds.

At the Bay Islands the wind was generally stronger than usual and contained a strong westerly component, as is shown by the following data :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Westerly Deflection.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°				
Port Blair	55	41	+14	S 58 W	S 38 W	+20	219	171	+48
Cocos Island	42	58	−16	S 64 W	S 51 W	+13	168	?	?

On the Burma coast the wind was more southerly than usual. It was lighter than the average at Akyab but was of about the normal strength at the other stations. The following gives comparative data for the coast stations :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Southerly Deflection.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°				
Rangoon	45	58	−13	S 2 E	S 21 W	+21	106	113	−7
Diamond Island.	37	47	−10	S 62 W	S 72 W	+10	177	177	0
Akyab	37	30	+7	S 2 W	S 24 W	+22	59	89	−30

At Akyab a cyclonic storm was experienced on the evening of the 24th or morning of the 25th but the wind force was only slightly affected. At Chittagong the wind was considerably more westerly than usual but was of the normal steadiness and strength. This is shown below :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual, from normal, May 1901.	Actual, May 1901.	Normal, May.	Westerly deflection.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°				
Chittagong.	42	42	0	S 38 W	S 1 E	+39	147	150	—3

At the stations in Deltaic Bengal and Orissa, on the contrary, the wind, as on the Burma Coast, was more southerly than the average. It was also steadier than usual and at Saugor Island the velocity was greater than usual. The following gives comparative data for the stations in this area :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Southerly deflection	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°				
Calcutta .	75	63	+10	S 5 E	S 7 E	+ 2	159	172	—13
Saugor Island,	85	73	+12	S 10 E	S 8 W	+ 8	448	394	+54
False Point.	84	73	+11	S 4 W	S 23 W	+19	300	338	—38

At the stations in West Bengal and the east of the North-Western Provinces the wind varied irregularly from the normal, but was steadier than usual. The velocity was higher than the average at Allahabad, but was lower at the other two stations in this region. The following gives data :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°			
Hazaribagh .	29	15	+14	N 44 W	S 83 W	184	222	—38
Darbhanga .	68	60	+ 8	S 73 E	S 82 E	136	152	—16
Allahabad . .	32	24	+ 8	N 25 W	N 3 W	179	149	+30

The wind, on the mean of the month, was north-westerly at Lahore and northerly at Ludhiana. At the remaining stations in the Upper-Sub-Himalayas group the mean direction was very nearly normal. The steadiness was, on the whole, greater than usual while the velocity varied irregularly from the normal. These variations are shown below :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°			
Dehra Dun . .	52	25	+27	S 76 W	S 80 W	47	54	— 7
Roorkee . .	10	11	— 1	S 60 W	S 53 W	96	90	+ 6
Meerut . .	18	22	— 4	N 52 W	N 54 W	58	64	— 6
Lahore . .	37	17	+20	N 46 W	N 11 E	77	79	— 2
Ludhiana . .	20	11	+ 9	N	N 61 W	84	58	+26

At Peshawar the wind, as at Lahore, was abnormally north-westerly, while at Jacobabad it was unusually southerly and at Kurrachee the direction was about normal. The following gives direction data for the stations in this area :—

Station.	Mean wind direction.	
	Actual, May 1901.	Normal, May.
	°	°
Peshawar	N 22 W	N 17 E
Jacobabad	S 3 W	S 40 E
Kurrachee	S 63 W	S 66 W

The steadiness was about the average but the velocity was lower than usual. This is shown below :—

Station.	Mean Steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal May.	Variation of actual from normal, May 1901.
Peshawar . .	32	29	+ 3	99	116	—17
Jacobabad . .	20	10	+10	83	112	—29
Kurrachee . .	85	86	— 1	396	407	—11

In Eastern Rajputana the wind was west-south-west instead of west-north-west, while in South-Western Rajputana the direction was normal. This is shown below:—

Station.	Mean wind direction.	
	Actual, May 1901.	Normal, May.
	°	°
Jaipur	S 87 W	N 66 W
Deesa	S 59 W	S 60 W

The wind was steadier than usual in this area. Comparative data for Jaipur and Deesa are given below:—

Station.	Mean Steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Jaipur	60	49	+11	124	156	—32
Deesa	79	68	+11	323	325	— 2

The following gives comparative wind data for Burma the Bay Islands and the different divisions of Northern India:—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May, 1901.	Normal, May.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°			
Bay Islands	49	50	— 1	S 61 W	S 45 W	219	171	+48
Burma	40	45	— 5	S 20 W	S 39 W	114	126	—12
Bengal	67	60	+ 7	S 7 W	S	251	239	+12
Bihar	68	60	+ 8	S 73 E	S 82 W	136	152	—16
Chota Nagpur	29	15	+14	N 44 W	S 83 W	184	222	—38
Orissa	84	73	+11	S 4 W	S 23 W	300	338	—38
North-Western Provinces.	28	21	+ 7	S 88 W	N 73 W	95	89	+ 6
Punjab	30	19	+11	N 23 W	N 9 W	87	84	+ 3
Sind	53	48	+ 5	S 33 W	S 15 W	240	260	—20
Rajputana	70	59	+11	S 73 W	S 86 W	224	241	—17

The above shows that the winds were on the whole steadier than usual, but the velocity was low in Chota Nagpur, Orissa, Sind and Rajputana. An unusual east-south-east wind prevailed in Bihar and a north-west wind in Chota Nagpur.

In the Deccan the wind direction was very nearly normal, though there was slightly more westing in the direction at some of the stations than the average. This is shown in the following table:—

Station.	Mean wind direction.		
	Actual, May 1901.	Normal, May.	Westerly deflection.
	°	°	°
Belgaum	S 83 W	S 88 W	— 5
Sholapur	N 37 W	N 49 W	—12
Poona	N 85 W	N 74 W	+11
Akola	N 54 W	N 50 W	+ 4
Buldana	N 51 W	N 49 W	+ 2
Khandwa	N 45 W	N 62 W	—17
Nagpur	N 82 W	N 46 W	+36
Hyderabad (Deccan)	N 69 W	N 57 W	+12

The wind was lighter and less steady than usual at Nagpur and Hyderabad, but was generally more steady and stronger than the normal at the remaining stations. The following gives comparative data:—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual, percentage, May 1901.	Normal, percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Belgaum	78	60	+18	384	424	— 40
Sholapur	72	55	+17	382	255	+127
Poona	83	78	+ 5	424	342	+ 82
Akola	76	75	+ 1	243	224	+ 19
Buldana	82	69	+13	306	286	+ 20
Khandwa	81	72	+ 9	282	241	+ 41
Nagpur	37	41	— 4	184	228	— 44
Hyderabad	45	50	— 5	129	173	— 44

Along the West Coast the wind was slightly steadier than usual, but was practically normal in direction. This is shown below:—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Westerly deflection.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°				
Bombay	84	70	+14	N 84 W	N 83 W	+1	214	247	—33
Karwar	88	82	+ 6	N 70 W	N 67 W	+3	145	128	+17

In South India also the wind's direction was practically normal. The wind blew from between west-north-west and west-south-west except at Madras where the direction

was S 11° E. The following gives direction data for the stations in this area :—

STATION.	MEAN WIND DIRECTION.	
	Actual, May 1901.	Normal, May.
	°	°
Salem	S 80 W	S 47 W
Chitaldroog	N 79 W	N 80 W
Bangalore	N 82 W	S 78 W
Hassan	N 85 W	N 85 W
Mysore	S 81 W	S 83 W
Madras	S 11 E	S 13 E
Bellary	N 71 W	N 73 W

The wind was steadier and stronger than usual at Bellary and stronger than usual at Bangalore, but elsewhere it was relatively light and unsteady. The following gives data :—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, percentage, May 1901.	Normal, percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Salem	50	55	− 5	92	98	− 6
Chitaldroog	69	75	− 6	196	232	−36
Bangalore	63	68	− 5	168	143	+25
Hassan	63	72	− 9	84	109	−25
Mysore	50	64	−14	210	271	−61
Madras	40	65	−25	200	219	−19
Bellary	68	55	+13	220	201	+19

The following gives comparative data of direction, steadiness and velocity for the different Peninsular divisions :—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°			
Central Provinces	59	57	+ 2	N 64 W	N 54 W	233	235	− 2
Berar	79	72	+ 7	N 53 W	N 50 W	275	255	+20
Bombay Deccan	78	64	+14	N 72 W	N 70 W	397	340	+57
West Coast	86	76	+10	N 77 W	N 75 W	180	188	− 8
Madras Deccan	57	53	+ 4	N 70 W	N 65 W	175	187	−12
Mysore	61	70	− 9	N 87 W	W	165	189	−24
Madras Coast	40	65	−25	S 11 E	S 13 E	200	219	−19
South India	50	55	− 5	S 80 W	S 47 W	92	98	− 6

The wind was light and unsteady in the extreme south, but was stronger than usual in Berar and the Bombay Deccan where also it was slightly more westerly than the normal.

At Quetta the wind was only about half the normal velocity and the steadiness was less than usual, but the direction was about normal. The following gives comparative data for this station :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Actual May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Quetta	40	47	−7	N 65° W	N 68° W	41	91	−50

At the Western Himalayan stations the wind was generally steadier than the normal and the velocity at several stations higher than usual, but the direction varied irregularly from the normal. The following gives comparative data :—

HILL STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Actual, May 1901.	Normal May.	Variation of actual from normal, May 1901.
				°	°			
Leh	34	31	+ 3	S 70 W	S 71 W	96	73	+ 23
Srinagar	47	11	+36	S 37 E	S 78 E	94	95	− 1
Kailang	79	69	+10	S 51 W	S 58 W	34	56	− 22
Simla	31	33	− 2	N 47 W	N 12 W	173	143	+ 30
Chakrata	53	33	+20	S 13 E	S 65 W	283	164	+119
Ranikhet	64	46	+18	S 86 W	S 65 W	103	94	+ 9

At the Eastern Himalayan stations the principal abnormal feature was the increased southing in the winds. This is shown below :—

HILL STATION.	MEAN WIND DIRECTION.		
	Actual, May 1901.	Normal, May.	Southerly deflection.
	°	°	
Katmandu	S 4 W	S 88 W	+84
Darjeeling	S 31 W	S 74 W	+43

At Mount Abu the wind was stronger and steadier than usual, but the direction was about normal while, at the other central hill stations the wind was abnormally northerly. Comparative data for the central hill stations are given below:—

HILL STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual, from normal, May 1901.	Actual, May 1901.	Normal, May.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°			
Mount Abu . .	76	71	+5	S 69 W	S 67 W	278	247	+31
Pachmarhi . .	63	58	+5	N 33 W	N 66 W	193	170	+23
Chikalda . .	60	65	−5	N 2 W	N 36 W	143	239	−96

At Perim the wind was fairly normal, but at Aden it blew from east-north-east instead of from east-south-east and was stronger and steadier than the average. At Zanzibar the wind blew from the west of south and was stronger and steadier than usual, while at the Seychelles, on the contrary, the direction was more easterly than usual and the wind lighter and less steady than the normal. The following gives data for the stations in the Southern Trades region:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, May 1901.	Normal percentage, May.	Variation of actual from normal May 1901.	Actual, May 1901.	Normal, May.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
				°	°			
Zanzibar . .	87	85	+ 2	S 1 W	S 5 E	225	194	+31
Seychelles . .	56	58	− 2	S 53 E	S 44 E	142	173	−31

The following gives comparative data of the mean air movement for the various provinces based on Table I:—

PROVINCE OR DIVISION.	MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1061.
Burma	106	110	− 4
Assam	77	106	−29
Bengal	113	175	−62
Orissa	226	214	+12
Bihar	142	108	+34
Chota Nagpur	127	211	−84
North-Western Provinces and Oudh .	103	106	− 3
Punjab	94	79	+15
Sind	264	278	−14
Rajputana	211	211	•
Gujarat	302	341	−39
Central India	158	180	−22
Central Provinces	146	137	+ 9
Berar	218	175	+43
West Coast	190	206	−16
Bombay Deccan	281	317	−36
Mysore	166	132	+34
Madras Coast	214	204	+10
Madras Deccan	197	190	+ 7
South India	115	118	− 3

Humidity and Cloud.

The humidity distribution, relatively to the normal, agreed generally with the abnormal temperature distribution. Within the areas of relatively low temperature over the interior districts of the Peninsula, as well as over the Punjab and Upper Sind, and over lower Burma, the relative humidity was higher than the normal. The excess was greatest across the north of the Deccan and was more than 5% at the following stations:—

STATION.	RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	%	%	
Poona	52	44	+8
Belgaum	68	61	+7
Hyderabad (Deccan)	48	41	+7

Over other parts of the country the relative humidity was less than usual—more particularly over Deltaic Bengal, Eastern Rajputana and the Bombay Coast. The following gives comparative data of the stations within these three areas:—

Province or Division.	Station.	Relative humidity.		
		Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
		%	%	
Deltaic Bengal.	Chittagong	73	80	—7
	Calcutta	68	74	—6
Eastern Rajputana.	Jaipur	27	32	—5
Bombay Coast.	Bombay	69	74	—5
	Karwar	69	73	—4

Both the absolute and relative humidities slightly exceeded the normal at the stations on the Burma Coast. The following gives data:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Rangoon	·871	·870	+·001	79	78	+1
Diamond Island	·892	·891	+·001	77	74	+3

In Bengal and Orissa the absolute humidity was generally in defect and the mean temperature in excess, so that the relative humidity was generally in considerable defect. At False Point, however, the absolute humidity was in trifling excess, but the temperature having been also in excess the relative humidity was in defect. Comparative data for the stations in this area are given below:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Chittagong	·839	·871	—·032	73	80	—7
Calcutta	·835	·883	—·048	68	74	—6
Saugor Island	·976	·987	—·011	76	80	—4
False Point	·974	·970	+·004	78	82	—4

In West Bengal both the absolute and relative humidities were in defect, (in the case of Hazaribagh by small amounts) but at Allahabad the absolute humidity was in excess though owing to the excess of temperature the relative humidity was in defect. This is shown below:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal May 1901.
	"	"	"	%	%	
Hazaribagh	·460	·467	—·007	40	40	0
Darbhanga	·716	·765	—·049	60	62	—2
Allahabad	·528	·526	+·002	35	37	—2

In the Upper Sub-Himalayas the relative humidity was generally in defect, but at Lahore both the absolute and relative humidities, and at Dehra the relative humidity were in some excess. The following gives data:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Dehra Dun	·394	·407	—·013	40	39	+1
Roorkee	·390	·428	—·038	34	35	—1
Meerut	·473	·494	—·021	36	40	—4
Lahore	·460	·441	+·019	37	33	+4
Ludhiana	·477	·495	—·018	40	41	—1

In the upper part of the Indus Valley, at Peshawar and Jacobabad, both the absolute and relative humidities were in excess. At Kurrachee also the absolute humidity was in excess, but owing to the high temperature the relative humidity was lower than usual. The following gives comparative data for the three stations in this area:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Peshawar	·428	·423	+·005	43	39	+4
Jacobabad	·524	·448	+·076	33	30	+3
Kurrachee	·898	·889	+·009	70	73	—3

In Eastern Rajputana the absolute humidity was lower than usual and the mean temperature having been excessive the relative humidity was in large defect. On the other hand at Deesa though the absolute humidity was in defect the relative humidity was in slight excess. This is shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Jaipur	·402	·436	—·034	27	32	—5
Deesa	·537	·566	—·029	41	40	+1

The following gives mean humidity data for the Bay Islands, Burma and the different divisions of Northern India :—

PROVINCE OR DIVISION.	MEAN ABSOLUTE HUMIDITY.			MEAN RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Bay Islands	·910	·914	—·004	81	83	— 2
Burma	·882	·881	+·001	78	76	+ 2
Bengal	·883	·913	—·030	72	78	— 6
Bihar	·716	·765	—·049	60	62	— 2
Orissa	·974	·970	+·004	78	82	— 4
Chota Nagpur	·460	·467	—·007	40	40	0
North-Western Provinces.	·446	·464	—·018	36	38	— 2
Punjab	·455	·453	+·002	40	38	+ 2
Sind	·711	·668	+·043	52	52	0
Rajputana	·470	·502	—·032	34	36	— 2

In the Deccan both the absolute and relative humidities were generally in excess, but at Buldana and Khandwa both were in defect. The following gives data for the stations in this area :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Belgaum	·627	·595	+·032	68	61	+7
Sholapur	·509	·471	+·038	41	37	+4
Poona	·547	·508	+·039	52	44	+8
Akola	·462	·408	+·054	31	28	+3
Buldana	·401	·425	—·024	31	34	—3
Khandwa	·462	·466	—·004	30	33	—3
Nagpur	·478	·448	+·030	32	29	+3
Hyderabad	·606	·561	+·045	48	41	+7

Along the West Coast the amount of moisture in the air was less than usual while the mean temperature was in excess. In consequence the relative humidity was in considerable defect. This is shown bellow :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Bombay	·870	·877	—·007	69	74	—5
Karwar	·818	·853	—·035	69	73	—4

In South India the variations of humidity were irregular; at Hassan and Bellary there was some deficiency while at the remaining stations the humidity was normal or in excess. The following gives data for this area :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation o actualf from, normal May 1901.
	"	"	"	%	%	
Salem	·790	·762	+·028	64	63	+1
Chitaldroog	·623	·567	+·056	60	56	+4
Bangalore	·596	·594	+·002	63	62	+1
Hassan	·602	·610	—·008	68	70	—2
Mysore	·651	·605	+·046	67	64	+3
Madras	·894	·877	+·017	68	68	0
Bellary	·495	·577	—·082	41	44	—3

The following gives mean humidity data for the different divisions of the Peninsula:—

PROVINCE OR DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Central Provinces	·470	·457	+·013	31	31	0
Berar	·432	·417	+·015	31	31	0
Bombay Deccan	·561	·525	+·036	54	47	+7
West Coast	·844	·865	—·021	69	74	—5
Madras Deccan	·551	·569	—·018	45	43	+2
Mysore	·618	·594	+·024	65	63	+2
Madras Coast	·894	·877	+·017	68	68	0
South India	·790	·762	+·028	64	63	+1

At Quetta both the absolute and relative humidities were in excess. This is shown below:—

HILL STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual, from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Quetta	·316	·276	+ ·040	49	41	+8

At the Himalayan stations the variations of humidity were irregular. At Srinagar there was a large and at Kailang and Chakrata a slight excess. The following gives data for these stations:—

HILL STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual, from normal May 1901.
	"	"	"	%	%	
Srinagar	·521	·431	+·090	85	71	+14
Kailang	·190	·184	+·006	58	56	+ 2
Chakrata	·299	·276	+·023	52	48	+ 4

At the remaining stations in the Himalayas both the absolute and relative humidities were in defect, as is shown below:—

HILL STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Leh	·114	·128	—·014	36	39	—3
Simla	·255	·279	—·024	45	46	—1
Ranikhet	·305	·334	—·029	44	50	—6
Katmandu	·469	·496	—·027	65	68	—3
Darjeeling	·400	·408	—·008	83	87	—4

At all the central and southern hill stations the absolute humidity, on the mean of the month, was in excess of the normal, but at Mount Abu and Pachmarhi the relative humidity was in defect while at the remaining two stations it was in excess. The following gives comparative data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal May 1901.
	"	"	"	%	%	
Mount Abu	·356	·354	+·002	35	37	—2
Pachmarhi	·354	·349	+·005	30	32	—2
Chikalda	·406	·373	+·033	37	35	+2
Wellington	·449	·439	+·010	71	69	+2

Relative humidity was in large excess at Perim and in moderate defect at Aden. This is shown below:—

STATION.	RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
		%	%
Perim	80	69	+11
Aden	64	68	— 4

In the South-East Trades region the variations of humidity were irregular. At all three stations the absolute

lute humidity was in excess, but at Mauritius the relative humidity was in defect. The following gives data for the three stations in this area :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
	"	"	"	%	%	
Zanzibar	·805	·795	+·010	84	82	+2
Seychelles	·843	·812	+·031	80	76	+4
Mauritius	·635	·617	+·018	76	77	—1

The air was very dry at times during the month, more particularly on the following dates, the 1st, 10th, 14th and 19th to the 30th. On these occasions the following very low humidities were recorded :—

Station.	Date.	Hour.	Lowest humidity recorded during May 1901.
			%
Leh	1st.	10 A.M.	6
Roorkee	10th.	4 P.M.	7
Deesa	14th.	,,	7
Leh	19th.	From Min.	6
	,,	10 A.M.	0
Peshawar	21st.	8 ,,	8
	,,	10 ,,	7
	,,	4 P.M.	8
Jacobabad	,,	,,	7
	,,	10 A.M.	8
Peshawar	22nd.	8 ,,	8
	,,	10 ,,	7
Jacobabad	,,	4 P.M.	8
Dehra Dun	24th.	,,	8
Roorkee	,,	,,	2
Montgomery	25th.	8 A.M.	0
Allahabad	,,	4 P.M.	8
Deesa	,,	,,	7
Roorkee	,,	,,	4
Meerut	,,	,,	6
Hazaribagh	26th.	,,	6
Roorkee	,,	,,	8
Jaipur	,,	,,	8
Hazaribagh	27th.	4 P.M.	7
Deesa	,,	,,	7
Akola	28th.	,,	6
Buldana	,,	,,	7
Deesa	,,	,,	8
Akola	29th.	,,	8
Buldana	,,	,,	6
Nagpur	,,	,,	8
Buldana	30th.	,,	8

The cloud distribution, relatively to the normal, agreed to a certain extent with the variations from the normal in the humidity distribution. Thus there was a deficiency in cloud amount at the head of the Bay in about the same position as the area of deficient humidity in the same region. The deficiency was greatest at the two following stations :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Saugor Island	4·6	5·8	—1·2
False Point	3·7	4·8	—1·1

There was also a marked but more or less local deficiency of cloud, as of humidity, on the North Konkan coast. The following gives the cloud variation at Bombay in illustration :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Bombay	2·5	3·8	—1·3

On the other hand, there was an excess of cloud over the greater part of the Central Provinces and of the Peninsula. The maximum excess was reported in the

centre of the south of the Peninsula and was more than 1·0 at the following stations :—

Station.	Mean cloud amount. Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Mysore	8·0	5·4	+2·6
Hassan	6·6	5·4	+1·2
Bellary	6·0	4·9	+1·1

The cloud amount, on the mean of the month, was in excess of the normal at Port Blair and Diamond Island and was about normal at the remaining stations in the Burma Coast and Bay Islands division. This is shown below :—

Station.	Mean cloud amount. Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Port Blair	7·3	6·7	+0·6
Cocos Island	6·8	6·5	+0·3
Diamond Island	7·3	6·3	+1·0
Rangoon	6·9	6·9	0
Akyab	5·4	5·5	−0·1

On the other hand, over Bengal, Orissa, the Gangetic Plain and Chota Nagpur (with the exception of Hazaribagh) and the Upper Sub-Himalayas the cloud amount was more or less in defect. The following gives comparative data :—

Province or Division.	Station.	Mean cloud amount. Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Bengal	Saugor Island	4·6	5·8	−1·2
	Calcutta	3·4	4·3	−0·9
	Chittagong	4·9	5·4	−0·5
Orissa	False Point	3·7	4·8	−1·1
Gangetic Plain and Chota Nagpur.	Hazaribagh	4·3	3·6	+0·7
	Allahabad	0·8	1·6	−0·8
	Darbhanga	1·6	2·0	−0·4
Upper Sub-Himalayas.	Lahore	1·6	2·2	−0·6
	Ludhiana	1·7	2·1	−0·4
	Roorkee	1·2	1·6	−0·4
	Meerut	1·4	1·7	−0·3
	Dehra Dun	2·4	2·7	−0·3

At Peshawar and in Upper Sind and Eastern Rajputana the sky was more cloudy than usual, while in Lower Sind and Southern Rajputana it was clearer. The following gives data :—

Station.	Mean cloud amount. Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Peshawar	3·5	2·9	+0·6
Jacobabad	1·9	1·1	+0·8
Jaipur	2·6	2.2	+0·4
Kurrachee	1·6	2·1	−0·5
Deesa	0·7	1·5	−0·8

In the Deccan with the exception of Buldana and Poona the sky was more clouded than usual, but the excess was not large except at Khandwa. This is shown below :—

Station.	Mean cloud amount. Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Khandwa	3·1	2·1	+1·0
Nagpur	4·6	3·8	+0·8
Akola	2·9	2·4	+0·5
Hyderabad	3·2	2·9	+0·3
Belgaum	3·9	3·6	+0·3
Sholapur	4·3	4·1	+0·2
Poona	3·0	3·0	0
Buldana	2·1	2·5	−0·4

Along the West Coast the variations in cloud amount were irregular; for while the maximum deficiency throughout India was reported from Bombay the cloud amount at Karwar was about normal, as is shown below :—

Station.	Mean cloud amount. Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Bombay	2·5	3·8	−1·3
Karwar	3·3	3·2	+0·1

In South India there were two stations, *viz.*, Bangalore and Madras, at which the cloud amount was less than usual. Comparative data of these stations are given below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Bangalore	3·9	4·4	−0·5
Madras	3·3	3·8	−0·5

In general, however, over this area the cloud amount was in excess of the normal and the maximum excess for the whole of India was recorded at Mysore.

The following gives data for the stations in this area at which the sky was more clouded than usual:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Mysore	8·0	5·4	+2·6
Hassan	6·6	5·4	+1·2
Bellary	6·0	4·9	+1·1
Salem	5·5	4·6	+0·9
Chitaldroog	4·7	4·2	+0·5

At Quetta the cloud amount was greater than the average, but at most of the Himalayan hill stations the sky was clearer than usual more particularly at Leh, Simla and Darjeeling. This is shown below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Quetta	2·4	1·2	+1·2
Leh	5·3	6·3	−1·0
Srinagar	3·9	3·5	+0·4
Kailang	5·1	5·9	−0·8
Simla	2·8	3·8	−1·0
Chakrata	3·2	3·5	−0·3
Ranikhet	2·6	3·4	−0·8
Katmandu	6·1	5·4	+0·7
Darjeeling	6·3	7·4	−1·1

At the central and southern hill stations the variations from the normal were irregular and generally small. The following gives data:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Pachmarhi	3·6	2·8	+0·8
Mount Abu	1·4	1·4	0
Chikalda	2·7	2·9	−0·2
Wellington	6·4	5·8	+0·6

At Aden there was a slight excess and at Perim a slight deficiency in the cloud amount, while at Zanzibar there was a large excess and at the Seychelles the amount was about normal. The following gives data for the South-East Trades region:—

STAION.	MEAN CLOUD AMOUNT.		
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.
Zanzibar	7·8	5·8	+2·0
Seychelles	5·0	5·1	−0·1

Rainfall.

With the exception of the severe disturbance which affected the extreme north-west of the country during the first week, the weather was less disturbed than usual during May. Thunderstorms were lighter and less frequent than usual in North-East India while dust and other local storms were relatively slight over North-Western and Central India.

As a general rule the rainfall of the month of May over a large part of India is small and occurs as scattered showers during thunder and duststorms. This area of light, irregular rainfall includes the Punjab, Rajputana, the North-Western-Provinces, Central India, Berar, the Central Provinces, North Bombay and the North Deccan. On

the other hand, in Bengal and Assam, in Lower Burma and Tenasserim and in Southern India, more especially Malabar, the rainfall, though also falling mainly during thunderstorms, is usually moderate to heavy in amount and is of considerable economic importance. The rainfall of Bengal and Assam, in the month of May, is due wholly to thunder-showers, which are heaviest and most frequent in East and North Bengal and Assam. The average rainfall of the month in Bengal Proper ranges from 4 inches in the western districts to 11 inches at Mymensingh and 15 inches in Cooch Behar. In Assam the rainfall ranges from 9 inches in the Central Assam Valley districts to 52 inches at Cherrapoonjee. In Burma and Southern India, though most of the rainfall is ordinarily due to thunder-showers, there frequently occur, in the latter part of the month, advances of south-west monsoon winds which occasion more or less heavy rain.

During May 1901 the rainfall was lighter than usual over the greater part of the country, the only important exceptions having been the Punjab, North Bombay and some parts of the west and centre of the Peninsula, where the rainfall was in slight to very large excess of the normal. In North-East India where, as mentioned above, moderate to heavy rain is ordinarily received, the month's rainfall was in places only about half the normal amount.

The chief periods of disturbed weather and of rainfall were as follows:—

1st.—From the 1st to the 3rd when showers were received over the Peninsula and North-East India.

2nd.— The 4th to the 6th when very heavy rain was received in parts of North-West India and in Baluchistan and the frontier districts.

3rd.—The 7th and 8th, when showers were received in Burma.

4th.—The 13th to the 16th, when the West Coast and some central stations received showers.

5th.—The 17th, when the North-West Himalayas and the adjoining districts received showers.

6th.—The 18th to the 21st, when the Peninsula received scattered showers.

7th.—The 23rd to the 31st, when Burma received moderately general rain.

8th.—The 26th to the 30th when the Peninsula received scattered showers.

9th.—From the 1st to the 21st when parts of Assam and Bengal received showers almost daily.

From the above it will be seen that parts of the Peninsula received fairly frequent showers which resulted in the slight excess noticed in that region, and that in Assam and Bengal there were frequent but light showers. The only other important fall of rain was that due to the severe storm in the north-west in the first week of the month. There were no advances of monsoon winds into the south of the Peninsula, but Burma apparently experienced monsoon weather and rainfall from the 23rd to the end of the month.

The following table gives comparative rainfall data for 56 meteorological or rainfall divisions of India:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, May 1901.	Average normal, May.	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	...	...	14·28	21·73	−7·45
	Lower Burma (Deltaic)*	...	...	5·82	12·77	−6·95
	Central ditto*	...	...	5·66	7·59	−1·93
	Upper ditto*	...	...	6·29	6·05	+0·24
	Arakan*	...	...	8·08	22·96	−14·88
Bengal and Assam	Eastern Bengal	7·5	10·8	5·71	10·36	−4·65
	Assam (Surma)	9·3	16·3	8·03	18·80	−10·77
	Do. (Hills)	12·4	15·3	8·19	15·15	−6·96
	Do. (Brahmaputra)	10·2	14·8	6·56	12·20	−5·64
	Deltaic Bengal	7·6	7·9	5·58	6·14	−0·56
	Central do.	6·5	6·7	4·99	5·21	−0·22
	North do.	10·9	11·2	8·25	10·82	−2·57
	Bengal Hills	13·5	13·4	7·03	11·38	−4·35
	Orissa	5·5	5·2	2·98	4·46	−1·48
	Chota Nagpur	3·1	3·8	1·45	2·56	−1·11
	Bihar (South)	2·6	2·2	1·71	1·70	+0·01
	Do. (North)	3·9	4·2	3·15	3·15	0
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·8	1·0	0·28	0·51	−0·23
	Oudh (South)	0·6	1·2	0·19	0·57	−0·38
	Do. (North)	1·2	1·8	0·44	0·95	−0·51
	North-Western Provinces (Central)	0·3	0·9	0·10	0·36	−0·26
	Do. do. (West)	0·1	1·2	0·05	0·48	−0·43
	Do. do. (East Submontane)	2·0	1·9	1·52	1·21	+0·31
	Do. do. (West do.)	1·6	1·9	0·86	0·96	−0·10
	Do. do. (Hills)	5·0	5·4	2·22	2·36	−0·14

* The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

PROVINCE.	DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
		Average actual, May 1901.	Average normal, May.	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.
				Inches.	Inches.	Inches.
PUNJAB	Punjab (South-East)	0·6	1·5	0·18	0·57	−0·39
	Do. (South)	1·3	1·3	0·40	0·56	−0·16
	Do. (Central)	2·5	1·8	2·00	0·83	+1·17
	Do. (Submontane)	2·6	1·9	1·51	0·86	+0·65
	Do. (Hills)	4·5	5·3	3·35	2·66	+0·69
	Do. (North)	3·7	2·0	6·33	1·49	+4·84
	Do. (West)	1·8	1·0	1·99	0·45	+1·54
BOMBAY AND MALABAR COAST DISTRICTS (MADRAS).	Malabar	7·8	7·9	4·82	7·12	−2·30
	Travancore	8·9	...	5·71	...	...
	Madras (South Central)	5·3	5·6	4·42	3·68	+0·74
	Coorg	6·5	...	3·48	...	...
	Mysore	7·0	5·7	4·36	3·65	+0·71
	Konkan	0·9	2·4	0·97	1·72	−0·75
	Bombay Deccan	4·3	3·4	2·43	1·80	+0·63
	Khandesh	1·2	1·7	0·65	1·07	−0·42
CENTRAL PROVINCES AND BERAR.	Berar	0·6	...	0·21	0·52	−0·31
	Central Provinces (West)	0·8	1·0	0·23	0·48	−0·25
	Do. (Central)	1·1	1·3	0·32	0·57	−0·25
	Do. (East)	1·5	1·6	0·50	0·85	−0·35
BOMBAY (NORTH)	Gujarat	0·5	0·5	0·21	0·30	−0·09
	Kathiawar and Cutch	0·5	0·4	0·21	0·24	−0·03
	Sind	0·7	...	0·35	0·11	+0·24
	Baluchistan Hills	1·8	...	1·62	0·13	+1·49
RAJPUTANA AND CENTRAL INDIA.	Central India (East)	0·4	...	0·10	0·39	−0·29
	Rajputana (East), Central India (West)	0·6	...	0·16	0·51	−0·35
	Do. (West)	0·3	...	0·15	0·53	−0·38
MADRAS	East Coast (North)	4·0	3·4	2·55	2·18	+0·37
	Hyderabad (South)*	...	...	2·91	...	...
	Madras (Central)	4·7	2·8	2·54	1·66	+0·88
	East Coast (Central)	1·6	1·7	1·23	1·28	−0·05
	Do. (South)	3·2	2·8	2·02	2·18	−0·16
	Madras (South)	2·9	2·8	1·71	1·71	0

* The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

The rainfall chart (Plate IV) shows that the total actual rainfall of the month was one-tenth of an inch or less within four areas. The first included the central districts of the North-Western Provinces, the second included parts of Rajputana, Central India, the Central Provinces and Berar, the third the Bombay and Kathiawar coast districts, and the fourth the mid-Madras coast district. From these areas the amount of rain increased in all directions and the total fall of the month exceeded 5″ in the North Punjab and in parts of Mysore and South Madras; 11″ in North Bengal; 16″ in East Bengal; 14″ in Upper Burma and 19″ in Tenasserim.

From the above table it will be seen that the total rainfall of the month was one-tenth of an inch or less in three divisions, *viz.*, North-Western Provinces (Central), North-Western Provinces (West), and Central India (East); between one-tenth of an inch and a quarter of an inch in eight divisions; between one quarter of an inch and one inch in nine divisions, between one inch and five inches in 23 divisions and over five inches in 14 divisions.

The rainfall was less than usual in 30 divisions; normal (*i.e.* varied by less than 20 °/₀ from the average) in 13 divisions and was excessive in 11 divisions. The deficiency amounted to over 70 °/₀ in the divisions for which comparative data are given below and which hence represent the driest areas (relatively to the normal) during May:—

DIVISION.	RAINFALL.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
North-Western Provinces, West	0·05	0·48	−0·43	−90
North-Western Provinces, Central	0·10	0·36	−0·26	−72
Central India, East	0·10	0·39	−0·29	−74
West Rajputana	0·15	0·53	−0·38	−72

The excess was more than 100 % in the following divisions which therefore represent the areas where, relatively to the normal, the month's rainfall was most excessive :—

Division.	Rainfall. Average Actual, May 1901.	Average Normal, May	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Central Punjab	2·00	0·83	+1·17	+141
North Punjab	6·33	1·49	+4·84	+325
West Punjab	1·99	0·45	+1·54	+342
Sind	0·35	0·11	+0·24	+218
Baluchistan Hills	1·62	0·13	+1·49	+1146

The weather was fairly fine in Burma for the first three days, but on the 4th showers commenced in Tenasserim and subsequently extended over Burma. These showery conditions continued till the 7th, when the weather again became fine. Rain recommenced in Tenasserim on the 9th, and general showers extended to Lower Burma on the 12th and to Upper Burma by the 14th. Fine weather with a few local scattered showers prevailed from the 15th to the 20th. On the 21st rain increased and became heavy by the 23rd. On the 25th a storm crossed the Arakan coast from the Bay and the following large falls of rain were recorded at this time :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 25th May 1901.
		Inches.
Upper Chindwin	Mingin	5·95
Thayetmyo	Mindon	4·13
Akyab	Akyab	4·06
Katha	Kyaukpazat	3·81
Akyab	Maungdaw	3·58
Upper Chindwin	Paungbyin	3·50
Minbu	Salin	3·42
Akyab	Rathedaung	3·35
Upper Chindwin	Homalin	3·32
	Maingkaing	3·21
Shwebo	Kyunhla	3·11
Sandoway	Sandoway	3·10
Shwebo	Kanbalu	3·07
Kyaukpyo	An	3·07

General rain continued over Burma till the 28th or 29th when it ceased more or less in Lower Burma, though it continued to fall heavily in Upper Burma. The total rainfall of the month was much below the normal except in Upper Burma where it was about normal. This is shown below :—

Division.	Rainfall. Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Tenasserim	14·28	21·73	−7·45	−34
Lower Burma, Deltaic	5·82	12·77	−6·95	−54
Central Burma	5·66	7·59	−1·93	−25
Upper Burma	6·29	6·05	+0·24	+4
Arakan	8·08	22·96	−14·88	−65

In Assam there was frequent rain throughout the month but the periods of principal and most general rainfall were the 7th to the 11th; the 16th to the 19th and the 25th to the end of the month. During the first period the rainfall was light and scattered in the Surma Valley, but was general and heavy in the Brahmaputra Valley and the following amounts exceeding one and a half inches were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cachar	Jatinga Valley	7th May	3·12
Lakhimpur	Sadiya	,, ,,	2·14
	Wilton	8th ,,	2·60
Cachar	Nemotha	,, ,,	2·50
Sylhet	Lalakhal	,, ,,	2·50
Lakhimpur	North Lakhimpur	,, ,,	2·10
	Balijan	,, ,,	1·66
Sibsagar	Seleng	,, ,,	1·65
Lakhimpur	Dibrugarh	,, ,,	1·62
	Sadiya	,, ,,	1·60
	Harmati	,, ,,	1·55
Sibsagar	Sibsagar	,, ,,	1·52
Darrang	Attarikat	9th ,,	1·82
	Gahpur	,, ,,	1·58
Kamrup	Sambulpur	10th ,,	2·33
Sylhet	Lalakhal	,, ,,	1·90
Kamrup	Bajali	,, ,,	1·52
Nowgong	Kuturi	11th ,,	2·31
Darrang	Kerkeriya	,, ,,	1·75

The second fall was general throughout the whole province, and the rainfall amounts were heavier than during

the first fall. The following is a record of all falls exceeding 3″ in 24 hours at this time :—

DISTRICT.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
KHASI AND JANTIA HILLS	Cherrapoonjee	16th May	5·33
DARRANG	Majbat	„ „	3·72
SYLHET	Langla	„ „	3·18
	Dullabcherra	17th „	5·31
CACHAR	Kukicherra	„ „	3·37
SYLHET	Sephinjuri Bil	„ „	3·07
CACHAR	Koyah	„ „	3·05
LAKHIMPUR	Wilton	18th „	4·40
	Jaipur	„ „	4·28
SYLHET	Sunamganj	„ „	4·00
LAKHIMPUR	Dhakuakhana	„ „	3·92
	Moran	„ „	3·72
SYLHET	Lalakhal	„ „	3·66
SIBSAGAR	Atabari	„ „	3·58
LAKHIMPUR	Pathalipam	„ „	3·57
GOALPARA	Damra	„ „	3·29
LAKHIMPUR	Harmati	„ „	3·23

Fairly fine weather prevailed from the 20th to the 24th, but on the 25th the third rainfall period commenced. The fall continued till the close of the month, but was scattered and generally light over the Brahmaputra Valley. The following gives the falls exceeding 2″ in 24 hours at this time :—

DISTRICT.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
LUSHAI HILLS	Lungleh	25th May	2·64
NAGA HILLS	Wokha	„ „	2·45
LUSHAI HILLS	Tenzal	„ „	2·10
CACHAR	Dewan	„ „	2·01
KHASI AND JANTIA HILLS.	Jowai	26th „	3·08
	Cherrapoonjee	„ „	2·34
	Mauphlang	„ „	2·15
	Cherrapoonjee	27th „	2·72
SYLHET	Sunamganj	28th „	3·93
LAKHIMPUR	Wilton	„ „	3·00
GOALPARA	Kachugaon	29th „	2·06
SYLHET	Lalakhal	30th „	2·11
NAGA HILLS	Wokha	31st „	2·61

The total rainfall for the month for the whole province was rather more than half the normal amount, as is shown by the following table which gives comparative rainfall data of the eight plains districts of the province :—

DISTRICT.	RAINFALL.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cachar	6·74	17·23	—10·49	—61
Sylhet	9·86	20·36	—10·50	—52
Goalpara	11·85	18·19	—6·34	—34
Kamrup	5·14	11·74	—6·60	—56
Darrang	6·30	12·02	—5.72	—48
Nowgong	3·63	7·96	—4·33	—54
Sibsagar	5·91	10·08	—4·17	—41
Lakhimpur	8·73	14·25	—5·52	—39

At the Cherrapoonjee station the total rainfall of the month amounted to 26·10″, which was less than half the normal amount (52·32″), and the largest fall in any one day was 6·35 inches on the 15th.

The principal periods of rainfall in Bengal were between the 3rd and the 9th, the 13th and the 19th, the 21st and the 23rd and the 29th and 31st.

During the first rainfall period practically all parts of the province received showers, but the rainfall was not heavy or general except in parts of Orissa and of South-West Bengal. The following gives a record of the principal falls during this period :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
BALASORE	Bhadrak	3rd May	3·55
BOGRA	Bogra	„	2·25
SONTHAL PARGANAS	Rajmahal	„	2·13
BIRBHUM	Rampur Hat	„	2·04
ORISSA TRIBUTARY MAHALS.	Kunjabengarh	„	1·55
JESSORE	Magura	4th „	2·32
MALDA	Chaachal	„	1·80
DARJEELING	Baxa	„	1·68
BURDWAN	Kulna	5th „	2·60
DARJEELING	Baxa	„	1·72
JALPAIGURI	Kalchini	6th „	3·86
BANKURA	Raipur	„	2·00
ANGUL	Talchar	„	1·55
RANGPUR	Peerganj	7th „	2·35
TIPPERA	Nasirnagar	9th „	2·22
KHULNA	Dumuria	„	1·70
	Nakipur	„	1·68

The second fall, which lasted from the 13th to the 19th, exhibited much more general and heavier rainfall, except in Bihar and Chota Nagpur, where the rainfall remained scattered and generally light. The following gives the principal falls (over 2″ in 24 hours) at this time :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Tippera	Daudkandi	13th May	3·44
Burdwan	Kulna	,, ,,	2·62
Angul	Chhendipadi	,, ,,	2·60
Jalpaiguri	Kalchini	,, ,,	2·57
Bogra	Nowkhilla	15th ,,	2·50
24-Parganas	Barasat	,, ,,	2·32
Champaran	Burhurwa	,, ,,	2·29
Burdwan	Katwa	,, ,,	2·28
Rajshahi	Bolia	,, ,,	2·23
Birbhum	Lalipur	,, ,,	2·13
Murshidabad	Azamganj	,, ,,	2·12
	Lalbagh	,, ,,	2·06
Khulna	Dumuria	16th ,,	3·71
Rangpur	Bagdogra	,, ,,	3·30
	Kurigaon	,, ,,	3·02
Cooch Behar	Fulbari	,, ,,	2·62
Muzaffarpur	Sitamarhi	,, ,,	2·58
Champaran	Motihari	,, ,,	2·55
Jessore	Magura	,, ,,	2·32
Dinajpur	Nawabganj	,, ,,	2·20
24-Parganas	Basirhat	,, ,,	2·18
Khulna	Rampal	,, ,,	2·16
Chittagong	Mirsarai	,, ,,	2·04
Cooch Behar	Dinhatta	,, ,,	2·03
Nadia	Krishnagar	,, ,,	2·02
Backergunge	Pirojpur	,, ,,	2·02
Rangpur	Ulipur	17th ,,	2·35
	Kurigaon	,, ,,	2·16
Khulna	Rampal	18th ,,	3·16
	Morellganj	,, ,,	2·54
Jalpaiguri	Kalchini	,, ,,	2·35
Khulna	Dumuria	19th ,,	3·10
Backergunge	Patuakhali	,, ,,	3·02
Midnapore	Ghatal	,, ,,	2·96
24-Parganas	Alipur	,, ,,	2·94
Midnapore	Kukrahaty	,, ,,	2·88
24-Parganas	Diamond Harbour	19th May	2·67
Rajshahi	Lalpur	,, ,,	2·42
Khulna	Bagerhat	,, ,,	2·34
Midnapore	Tamluck	,, ,,	2·30
Khulna	Morellganj	,, ,,	2·08

The third fall which occurred between the 21st and 23rd extended to all parts of the province, a general though not very heavy fall having been received over Bihar. The amounts were not, however, very heavy and exceeded one and a half inches only at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Darjeeling	Darjeeling	21st May	3·69
Bankura	Kotalpur	,,	2·55
Bogra	Sherpur	,,	1·71
Jessore	Jhenidah	,,	1·69
Mymensingh	Kishorganj	,,	1·59
Nadia	Chuadanga	,,	1·51
Gaya	Sherghati	22nd May	1·59
Hazaribagh	Hazaribagh	,,	1·52
Bankura	Indas	23rd May	2·07
Puri	Nayagarh	,,	2·01
Angul	Chhendipara	,,	1·77
Cuttack	Salepur	,,	1·60
Singhbhum	Monahorpur	,,	1·51

The last fall of the season was also general, and was, in addition, heavier than the two preceding falls. This is shown by the following table which gives all falls exceeding 2·50″ in 24 hours at this time :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Rangpur	Peerganj	29th May	3·16
Muzaffarpur	Hajipur	,,	3·11
Bankura	Indas	,,	3·07
Muzaffarpur	Muzaffarpur	,,	2·86
Rangpur	Kurigaon	,,	2·78
Patna	Bikram	,,	2·68

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
JALPAIGURI	Alipur Duar	30th May	4·13
HOOGHLY	Arambagh	,,	3·53
BANKURA	Kotalpur	,,	3·00
MYMENSINGH	Nalitabari	,,	2·92
MYMENSINGH	Kishorganj	31st ,,	5·17
MYMENSINGH	Jamalpur	,,	4·84
MURSHIDABAD	Azamganj	,,	4·55
MURSHIDABAD	Laibagh	,,	4·25
MYMENSINGH	Mymensingh	,,	4·04
RANGPUR	Bhowaniganj	,,	3·83
MURSHIDABAD	Kandi	,,	3·58
MYMENSINGH	Netrakona	,,	3·21
MALDA	Gajol	,,	3·15
TIPPERA	Brahmanbaria	,,	3·10
BOGRA	Bogra	,,	3·06
MALDA	Malda	,,	3·05
RAJSHAHI	Naugaon	,,	3·02
BOGRA	Pubna	,,	2·68
MURSHIDABAD	Berhampore	,,	2·68
SONTHAL PARGANAS	Sarath	,,	2·62
MYMENSINGH	Sherpur Town	,,	2·58

The month's rainfall was exactly normal in Bihar and was about normal in Central and Deltaic Bengal, but in all the remaining divisions the fall was less than usual—most so in the Chota Nagpur and Eastern Bengal divisions. The following gives comparative data for the different divisions:—

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS.	
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.	Average actual, May 1901.	Average normal, May.
	Inches.	Inches.	Inches.			
Eastern Bengal	5·71	10·36	−4·65	− 45	7·5	10·8
Deltaic Bengal	5·58	6·14	−0·56	− 9	7·6	7·9
Central Bengal	4·99	5·21	−0·22	− 4	6·5	6·7
North Bengal	8·25	10·82	−2·57	− 24	10·9	11·2
Bengal Hills	7·03	11·38	−4·35	− 38	13·5	13·4
Orissa	2·98	4·46	−1·48	− 33	5·5	5·2
Chota Nagpur	1·45	2·56	−1·11	− 43	3·1	3·8
South Bihar	1·71	1·70	+0·01	+ 1	2·6	2·2
North Bihar	3·15	3·15	0	0	3·9	4·2

In the North-Western Provinces there were four showery periods during the month, but the showers were generally light and in most cases were by no means general. The first showery period occurred on the 5th and 6th, and though showers were received on this occasion in most parts of the North-Western Provinces, the amounts were altogether unimportant except in the submontane division where the following amounts exceeding 1″ in 24 hours were recorded:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
DEHRA DUN	Rajpur	5th May	2·47
DEHRA DUN	Mussooree	,,	1·91
GARHWAL	Okhimath	,,	1·26
DEHRA DUN	Chakrata (observatory)	,,	1·20
ALMORA	Champawat	,,	1·18
GARHWAL	Birankhal	6th ,,	3·28
GARHWAL	Lansdowne	,,	2·40
DEHRA DUN	Chakrata (Tahsil Kalsi)	,,	1·64
GARHWAL	Pauri	,,	1·61
DEHRA DUN	Chakrata (observatory)	,,	1·57
GARHWAL	Joshimath	,,	1·55
GARHWAL	Karnaprayag	,,	1·40
GARHWAL	Srinagar	,,	1·01

The second showery period occurred on the 15th and 16th. On this occasion a few moderate showers were measured in the submontane and north-east divisions, but in general the rainfall was insignificant. The following gives the only falls exceeding ¾ inch in 24 hours at this time:—

DISTRICT.	Station.	Rainfall during 24 hours preceding 8 A.M. of 16th May 1901.
		Inches.
AZAMGARH	Azamgarh	1·10
BASTI	Basti	1·05
BASTI	Haraiya	0·86
BASTI	Khalilabad	0·85

On the 21st and 22nd showers recommenced, but though fairly general throughout the province the amounts recorded were exceedingly small. The last rainy period during the month was between the 29th and 31st, on which occasion

the rainfall was confined to the submontane and north-east divisions where the following amounts exceeding one inch in 24 hours were recorded:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
GORAKHPUR . .	Gorkhpur . . .	29th May	3·53
	Padrauna . . .	,,	2·83
	Bansgaon . . .	,,	1·64
	Hata	,,	1·60
BASTI . .	Khalilabad . . .	,,	1·38
	Domariaganj . .	,,	1·15
GHAZIPUR . .	Mohammadabad . .	30th ,,	1·12

The total rainfall of the month was exceedingly small over the west and central divisions of the North-Western Provinces and the South Oudh division, but was about normal in the hills and west submontane divisions and in excess in the east submontane division. This is shown in the following statement:—

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS.	
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.	Average actual, May 1901.	Average normal May.
	Inches.	Inches.	Inch.			
North-Western Provinces East.	0·28	0·51	—0·23	—45	0·8	1·0
South Oudh . .	0·19	0·57	—0·38	—67	0·6	1·2
North Oudh . .	0·44	0·95	—0·51	—54	1·2	1·8
North-Western Provinces Central.	0·10	0·36	—0·26	—72	0·3	0·9
North-Western Provinces West.	0·05	0·48	—0·43	—90	0·1	1·2
North-Western Provinces East Submontane.	1·52	1·21	+0·31	+26	2·0	1·9
North-Western Provinces West Submontane.	0·86	0·96	—0·10	—10	1·6	1·9
North-Western Provinces Hills.	2·22	2·36	—0·14	—6	5·0	5·4

There were two periods of rainfall over the Punjab, the first and most important extending from the 5th to the 7th and the second from the 15th to the 17th. At other times in the month any rainfall received was light and unimportant. The first burst of rain was due to the very severe storm noticed in the depression section which apparently passed from the Arabian Sea through Mekran and Baluchistan as far as the Punjab. This storm apparently carried with it humid winds from the Arabian Sea as far as the North Punjab with the result that a most exceptional and probably unprecedented fall of rain occurred over the North Punjab and the surrounding frontier districts. The rainfall extended to all parts of the province but was heaviest in the north-west and west, where the following amounts exceeding 3″ in 24 hours were recorded:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
KOHAT	Fort Lockhart .	5th May .	11·40
PESHAWAR . . .	Katlang . . .	,, .	8·25
DERA ISMAIL KHAN .	Shekh Budin . .	,, .	7·40
KOHAT	Kohat	,, .	7·10
PESHAWAR . . .	Nowshera . .	,, .	5·50
HAZARA	Attock . . .	,, .	5·12
BANNU . . .	Marwat . . .	,, .	4·95
	Isa Khel . . .	,, .	4·78
PESHAWAR . . .	Swabi . . .	,, .	4·26
	Khan Mahi . .	,, .	4·20
	Abazai . . .	,, .	4·05
DERA GHAZI KHAN .	Fort Monro . .	,, .	4·00
DERA ISMAIL KHAN .	Kulachi . . .	,, .	3·94
	Dera Ismail Khan .	,, .	3·70
PESHAWAR . . .	Mardan . . .	,, .	3·65
BANNU	Bannu . . .	,, .	3·58
PESHAWAR . .	Nabakki . . .	,, .	3·50
	Peshwar . . .	,, .	3·45
KOHAT	Hangu . . .	,, .	3·45
RAWALPINDI . . .	Gujarkhan . .	,, .	3·41
PESHAWAR . . .	Charsadda . .	,, .	3·40
KOHAT	Banda Daud Shah .	,, .	3·16
SHAHPUR . . .	Shahpur . . .	,, .	3·14
KOHAT . . .	Thal	,, .	3·05
	Fort Lockhart .	6th May .	5·60
RAWALPINDI . . .	Murree . . .	,, .	4·80
PESHAWAR . . .	Swabi . . .	,, .	3·78
GUJRAT . . .	Sadr	,, .	3·27
JHELUM	,, ...	,, .	3·14

This heavy burst of rain was especially felt in the Rawalpindi, Peshawar, Hazara, Kohat, Bannu, Shahpur and Dera Ismail Khan districts and the following table gives the total rainfall received between the 5th and the 7th at the stations within these districts :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 5th May.	6th May.	7th May.	Total rainfall from 5th to 7th May.
		Inches.	Inches.	Inches.	Inches.
Rawalpindi	Pindigheb	2·40	0·42	...	2·82
	Fatahjang	2·34	1·72	...	4·06
	Rawalpindi	2·00	1·87	0·15	4·02
	Gujar Khan	3·41	...	...	3·41
	Kahuta	1·60	2·74	0·43	4·77
	Murree	2·21	4·80	1·10	8·11
Peshawar	Swabi	4·26	3·78	...	8·04
	Lahore	2·00	1·00	...	3·00
	Nowshera	5·50	2·38	...	7·88
	Mardan	3·65	2·68	...	6·33
	Katlang	8·25	0·30	...	8·55
	Charsadda	3·40	1·72	...	5·12
	Nabakki	3·50	1·57	...	5·07
	Peshawar	3·45	1·07	...	4·52
	Abazai	4·05	1·00	...	5·05
	Khan Mahi	4·20	2·10	...	6·30
	Para Chinar	4·23	0·84	...	5·07
Hazara	Abbottabad	1·63	2·15	0·21	3·99
	Mansahra	1·60	1·40	0·23	3·23
	Haripur	1·50	2·26	...	3·76
	Attock	5·12	2·92	...	8·04
Kohat	Kohat	7·10	0·70	...	7·80
	Hangu	3·45	1·75	...	5·20
	Thal	3·05	1·00	...	4·05
	Banda Daud Shah	3·16	2·22	...	5·38
	Fort Lockhart	11·40	5·60	...	17·00
Bannu	Mianwali	2·65	...	...	2·65
	Isa Khel	4·78	0·24	...	5·02
	Bannu	3·58	1·01	...	4·59
	Marwat	4·95	1·18	...	6·13
Shahpur	Midh	1·47	...	...	1·47
	Sahiwal	0·35	...	...	0·35
	Nurpur	0·18	1·50	...	1·68
	Mitha Tiwana	0·50	...	...	0·50
	Sakesar	3·00	0·23	...	3·23
	Naushahra	0·27	...	...	0·27
Shahpur—*contd.*	Khushab	2·72	0·93	...	3·65
	Shahpur	3·14	0·86	...	4·00
	Bhera	1·25	...	...	1·25
	Miani	2·22	0·15	...	2·37
Dera Ismail Khan	Tank	2·00	0·37	...	2·37
	Kulachi	3·94	1·12	...	5·06
	Dera Ismail Khan	3·70	0·15	...	3·85
	Bhakkar	0·51	...	...	0·51
	Leiah	2·48	...	...	2·48
	Shekh Budin	7·40	0·12	...	2·52

The second rainfall period lasted from the 15th to the 17th. This fall also extended to almost all parts of the province but the amounts recorded were small in comparison with those of the last fall. The following gives data for those stations at which falls exceeding 1″ in 24 hours were recorded at this time :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Gujranwala	Firoz	15th May	1·10
Kohat	Fort Lockhart	»	1·04
Hazara	Abbottabad	16th »	1·84
Simla	Kilba	»	1·56
Hazara	Mansahra	»	1·53
Gurdaspur	Dalhousie	»	1·30
Rawalpindi	Murree	»	1·14
Gurdaspur	Gurdaspur	»	1·10
Ludhiana	Jagraon	17th »	2·23
	Ludhiana	»	2·22
Kangra	Nagar	»	1·95
	Kulu	»	1·58
	Dharmsala	»	1·50
Gurdaspur	Aliwal	»	1·45
Kangra	Plach	»	1·30
	Palampur	»	1·30
Dera Ismail Khan	Skekh Budin	»	1·14
Kangra	Kangra	»	1·07

The following gives comparative data for the different divisions of the province:—

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS.	
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.	Average actual, May 1901.	Average normal, May.
	Inches.	Inches.	Inches.			
South-East Punjab .	0·18	0·57	—0·39	— 68	0·6	1·5
South Punjab . .	0·40	0·56	—0·16	— 29	1·3	1·3
Central „ . .	2·00	0·83	+1·17	+141	2·5	1·8
Punjab Submontane .	1·51	0·86	+0·65	+ 76	2·6	1·9
„ Hills . .	3·35	2·66	+0·69	+ 26	4·5	5·3
North Punjab . .	6·33	1·49	+4·84	+325	3·7	2·0
West „ . .	1·99	0·45	+1·54	+342	1·8	1·0

The above shows that the total rainfall of the month was more or less deficient over the South-East and South Punjab, but was excessive in the remaining divisions, more particularly in the north and west of the province where the actual rainfall was about four times the normal.

Baluchistan like the Punjab had two rainfall periods during the month. During the first which lasted from the 3rd to the 6th and was occasioned by the deep depression in the north-west, noticed above, heavy general rain fell, every station in the province receiving some rain and most stations exceptionally heavy amounts. The following table gives the amounts exceeding 1″ in 24 hours on this occasion:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
BALUCHISTAN .	Fort Sandeman . .	4th May .	3·11
	Lora Lai (Hospital) .	„ „ .	3·09
	Sibi (Hospital) . .	„ „ .	2·80
	„ (Railway station) .	„ „ .	2·80
	Nasak	„ „ .	2·50
	Panir	„ „ .	2·40
	Nari	„ „ .	2·40
	Sunari	„ „ .	2·00
	Spintangi . . .	„ „ .	2·00
	Babar Kach . . .	„ „ .	2·00
BALUCHISTAN—*contd*	Mach (Hospital) . .	4th May .	1·94
	Abegum	„ „ .	1·68
	Mangi	„ „ .	1·56
	Lora Lai (Staff office) .	5th „ .	3·49
	Bellput	„ „ .	3·00
	Shahrig	„ „ .	2·80
	Killa Saifulla . . .	„ „ .	2·47
	Peshi	„ „ .	2·31
	Mittri	„ „ .	2·00
	Mach (Railway station) .	„ „ .	1·83
	Nuttal	„ „ .	1·80
	Dirgi	„ „ .	1·75
	Mushkof	„ „ .	1·70
	Mudgorge	„ „ .	1·20
	Khost	6th „ .	2·60
	Harnai	„ „ .	2·10

A second rainy period occurred between the 11th and the 16th, but on this occasion the rainfall was light and scattered and in no case amounted to as much as half an inch in 24 hours. As a result of the heavy fall in the first week, however, the total fall of the month was about twelve times as heavy as usual. The following gives comparative data for the whole area:—

DIVISION.	RAINFALL.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Baluchistan Hills . . .	1·62	0·13	+1·49	+1,146

In Kashmir the rainfall of the month was similar to that in the Punjab and Baluchistan, but in addition to the two major falls, one between the 4th and the 7th and the second between the 15th and the 17th, there were scattered showers between the 20th and 24th. The largest amounts were recorded during the heavy fall between the

4th and the 7th, when the following amounts exceeding 1" in 24 hours were recorded :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
JUMMOO	Bhimber	4th May	4·81
KASHMIR	Utar Machhipore	„	2·56
KASHMIR	Karnah	„	1·64
KASHMIR	Sri Protap Singh Pora	„	1·23
JUMMOO	Ramban	„	1·21
JUMMOO	Punch	„	1·12
JUMMOO	Kishtwar	„	1·05
JUMMOO	Ramnagar	5th „	5·00
JUMMOO	Punch	„	4·40
JUMMOO	Ramban	„	2·91
JUMMOO	Meerpore	„	2·82
JUMMOO	Riasi	„	2.32
KASHMIR	Domel	„	2·11
JUMMOO	Kathua	„	2·00
JUMMOO	Udumpur	„	1·78
JUMMOO	Akhnur	„	1·77
KASHMIR	Uri	„	1·66
JUMMOO	Kishtwar	„	1·60
KASHMIR	Karnah	„	1·51
JUMMOO	Pader	„	1·41
KASHMIR	Utar Machhipore	„	1·40
JUMMOO	Bisolee	„	1·15
KASHMIR	Haripore	„	1·12
KASHMIR	Vantipore	„	1·10
KASHMIR	Nagam	„	1·09
KASHMIR	Sri Ranbir Singh Pora	„	1·04
JUMMOO	Jasmairgarh	„	1·02
KASHMIR	Pattan	„	1·01
JUMMOO	Rampore Rajauri	6th „	3 70
KASHMIR	Uri	„	2·66
KASHMIR	Domel	„	2·50
JUMMOO	Kotli	„	2·23
JUMMOO	Doda	„	2·00
JUMMOO	Sri Ranbir Singh Pora	„	1·63
JUMMOO	Pader	„	1·53
JUMMOO	Sambha	„	1·10
KASHMIR	Srinagar	„	1·05
JUMMOO	Kotli	7th „	1·17
KASHMIR	Domel	„	1·02

The second fall was relatively heavier in Kashmir than in the Punjab and Baluchistan and much snow was received on the higher hills. The following gives the principal falls between the 15th and 17th:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
	Sri Ranbir Singh Pora	15th May	1·23
KASHMIR	Do.	16th „	2·84
KASHMIR	Utar Machhipore	„	2·22
KASHMIR	Anantnag	„	2·01
KASHMIR	Lal Pakh	„	1·57
KASHMIR	Vantipore	„	1·57
KASHMIR	Haripore	„	1·52
JUMMOO	Ramban	„	1·40
KASHMIR	Nagam	„	1·36
KASHMIR	Domel	„	1·31
JUMMOO	Riasi	„	1·13
JUMMOO	Punch	„	1·09
KASHMIR	Uri	„	1·08
KASHMIR	Do	17th „	3·06
JUMMOO	Kishtwar	„	1·90
KASHMIR	Karnah	„	1·87
KASHMIR	Dras	„	1·78
KASHMIR	Srinagar	„	1·50

The total fall of the month was probably considerably in excess of the normal.

Rajputana received a few showers during the first fortnight. The showers were very light and scattered in the western states, but were somewhat heavier and more general in the east. The falls were almost everywhere small and the general rainfall of the month was less than half the normal. The following gives comparative data for some of the larger states:—

STATE.	RAINFALL.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Jodhpur	0·18	0·55	—0·37	—67
Jaipur	0·21	0·42	—0·21	—50
Alwar	0·21	0·96	—0·75	—78
Bharatpur	0·22	0·57	—0·35	—61
Kotah	0·05	0·79	—0·74	—94
Ajmer	0·16	0·53	—0·37	—70
Udaipur	0·42	0·54	—0·12	—22
Sirohi	0·07	0·90	—0·83	—92

In Central India a few light scattered showers occurred about the middle of the month and the total rainfall was as deficient as in the case of Rajputana except locally in the Indore state. This is shown in the following table which gives data for some of the larger states:—

STATE.	RAINFALL. Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Indore	0·77	0·51	+0·26	+51
Rutlam	0·36	0·41	—0·05	—12
Bhopal Agency	0·07	0·36	—0·29	—81
Gwalior	0·09	0·41	—0·32	—97
Nagode	0	0·39	—0·39	—100
Maihar	0·04	0·41	—0·37	—90
Rewah	0·14	0·37	—0·23	—62
Bundelkhand	0·07	0·33	—0·26	—79

In Berar the rainfall occurred as light showers scattered throughout the month, the amounts seldom reaching half an inch. The total rainfall of the month was only about half the small normal amount. This is shown below:—

DIVISION.	RAINFALL. Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Berar	0·21	0·52	—0·31	—60

In the Central Provinces the rainfall was similar to that recorded in Berar, but was slightly heavier relatively to the normal. The following gives comparative data for the three divisions of the Central Provinces:—

DIVISION.	RAINFALL. Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Central Provinces West	0·23	0·48	—0·25	—52
Do. Do. Central	0·32	0·57	—0·25	—44
Do. Do. East	0·50	0·85	—0·35	—41

There was fair rain in Coorg where moderate showers were reported throughout the month. Mysore had three periods of general rain; the first lasting from the 1st to the 5th; the second from the 13th to the 20th and the third from the 25th to the end of the month. During the first fall the rain was scattered but amounted to more than 2″ in 24 hours at the following stations on the following dates:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
BANGALORE	Dodballapur	2nd May	3·26
	Kankanhalli	,, ,,	3·00
KOLAR	Sidlaghatta	,, ,,	2·40
BANGALORE	Anekal	4th ,,	2·80
MYSORE	Nagamangala	,, ,,	2·40

The second fall was heavier and more extensive and on the 17th rain was reported from almost every station. The following were the principal amounts during this fall:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
HASSAN	Manjabarabad	13th May	1·35
MYSORE	T. Narsipur	,, ,,	1·10
KOLAR	Goribidnur	,, ,,	1·05
SHIMOGA	Shimoga	16th ,,	1·52
CHITALDROOG	Jagalur	,, ,,	1·40
SHIMOGA	Channagiri	,, ,,	1·20
CHITALDROOG	Davangere	,, ,,	1·15
	Harihar	,, ,,	1·10
TUMKUR	Chiknayakanhalli	17th ,,	2·85
MYSORE	Krishnarajpete	,, ,,	2·80
TUMKUR	Tiptur	,, ,,	2·70
	Huliyar	,, ,,	2·46
	Sira	,, ,,	2·35
SHIMOGA	Kumsi	,, ,,	2·25
BANGALORE	Closepet	,, ,,	2·21
KADUR	Tarikere	,, ,,	2·17
TUMKUR	Turubekere	,, ,,	2·15
KOLAR	Sedlaghatta	,, ,,	2·10
BANGALORE	Bangalore	,, ,,	2·09
CHITALDROOG	Harihar	,, ,,	1·95
	Chitaldroog	,, ,,	1·91
HASSAN	Channarayapatna	,, ,,	1·83
TUMKUR	Tumkur	,, ,,	1·80
KOLAR	Chikballapur	,, ,,	1·75
HASSAN	Manjarabad	,, ,,	1·63
KOLAR	Bowringpet	18th ,,	1·62
	Do.	19th ,,	1·11

During the last week the rainfall was again general, but the amounts were smaller and only exceeded 1″ at the following stations :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kolar	Siddaghatta	25th May	3·60
	Kolar	„ „	2·42
	Srinivaspur	„ „	2·36
	Goribidnur	„ „	2·20
Tumkur	Maddagiri	„ „	1·90
Mysore	T. Narsipur	„ „	1·88
Bangalore	Hoskote	„ „	1·80
Kolar	Chintamani	„ „	1·70
Bangalore	Devanhalli	„ „	1·61
	Kankanhalli	„ „	1·50
Tumkur	Koratagere	„ „	1·45
Kolar	Bowringpet	„ „	1·35
Bangalore	Anekal	„ „	1·30
Tumkur	Pavagada	„ „	1·28
Kolar	Chikballapur	„ „	1·08
Chitaldroog	Hosdurga	26th „	1·44
Mysore	Yedatore	„ „	1·38
Shimoga	Shikarpur	„ „	1·33
Kolar	Gudibanda	„ „	1·20
Mysore	Seringapatam	„ „	1·06
Shimoga	Tirthahalli	27th „	1·04
Hassan	Arkalgud	29th „	1·25
Mysore	Chamrajnagar	30th „	1·84
Chitaldroog	Harihar	„ „	1·20
Tumkur	Koratagere	„ „	1·10

The following gives comparative data for the whole province and shows that the month's rainfall was equal to the normal :—

Division.	Rainfall.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Mysore	4·36	3·65	+0·71	+19

Over the greater part of the Bombay Presidency the rainfall of the month was short of the normal, but in the Deccan there were numerous thunderstorms and the total rainfall of the month, in that division, exceeded the average. In the Konkan there were three showery periods ; the first between the 2nd and 6th, the second between the 13th and the 18th and the third on the 27th and 28th. The showers were generally light and scattered and only exceeded 1″ in 24 hours at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Thana	Mokhada	3rd May	1·20
North Kanara	Mundged	„ „	1·03
Ratnagiri	Vengurea	14th „	1·30
Thana	Murbad	„ „	1·30
	Shahapur	„ „	1·25
North Kanara	Haliyal	15th „	1·51
Ratnagiri	Ratnagiri	„ „	1·07
North Kanara	Yellapur	„ „	1·02
Thana	Murbad	16th „	1·06
North Kanara	Kumta	18th „	2·06
	Do.	27th „	1·30

The general rainfall of the Konkan was only about half the normal. This is shown in the following table which gives comparative data for the districts in this division :—

District.	Rainfall.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
North Kanara	2·03	3·35	—1·32	— 39
Ratnagiri	0·79	1·56	—0·77	— 49
Kolaba	0·31	0·97	—0·66	— 68
Thana	0·78	0·62	+0·16	+ 26

In the Karnátak the rainfall was considerably heavier than on the West Coast ; light to moderate showers fell on the 2nd and 3rd, general moderate showers between the 13th and 19th and scattered light showers between the 25th and the end of the month. These showers generally accompanied thunderstorms and amounted to more than

one inch in 24 hours at the following places and on the following dates during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bijapur	Ilkal	1st May	1·24
Belgaum	Saundatti	2nd „	1·68
Dharwar	Hubli	3rd „	3·95
	Savnur (state)	„	3·15
Bijapur	Bagalkot	„	1·91
Dharwar	Navalgund	„	1·80
	Kalghatgi	„	1·60
Kolhapur, etc.	Ramdrug	„	1·59
Dharwar	Bankapur	„	1·48
Belgaum	Gokak	„	1·36
Dharwar	Hangal	„	1·33
Belgaum	Saundatti	„	1·18
Dharwar	Dharwar	15th „	1·65
	Haveri	„	1·42
Belgaum	Chikodi	„	1·35
Dharwar	Navalgund	„	1·20
Kolhapur, etc	Kolhapur	„	1·17
Dharwar	Kalghatgi	„	1·06
Belgaum	Hukeri	„	1·02
	Murgod	„	1·01
	Murgod	16th „	1·90
Dharwar	Nargund	„	1·70
Bijapur	Ilkal	„	1·35
Dharwar	Ranebennur	17th „	1·36
	Kod	„	1·06
	Nargund	„	1·01
Bijapur	Bilgi	18th „	1·80
Kolhapur, etc.	Miraj	19th „	1·50
Bijapur	Sindgi	„	1·45
Dharwar	Haveri	„	1·02
Bijapur	Bagevadi	25th „	1·80
	Badami	„	1·80
Belgaum	Athni	„	1·36
Bijapur	Muddebihal	„	1·24
Kolhapur, etc.	Miraj	27th „	2·33
	Shirol	„	1·70
	Sangli	„	1·45
	Mudhol	„	1·25
	Kolhapur	„	1·04
Belgaum	Belgaum	28th May	1·25
Kolhapur etc.,	Kurundvad	29th „	1·41
	Miraj	„	1·16
	Shirol	„	1·05

The following gives comparative data for the different districts in this division and shows that the month's rainfall was in excess of the normal :—

District.	Rainfall.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dharwar	3·60	2·71	+0·89	+ 32
Bijapur	2·76	1·21	+1·55	+128
Belgaum	2·89	2·16	+0·73	+34

In the South Deccan the rainfall was generally similar to that in the Karnatak, showers falling about the beginning, middle and end of the month. Amounts exceeding one inch in 24 hours were recorded at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sholapur	Pandharpur	1st May	1·10
Satara	Pusesavli	2nd „	1·49
	Karad	3rd „	1·30
	Panchga	„	1·15
	Karad	15th „	2·40
	Vita	„	1·04
Poona	Khed	16th „	3·78
	Paud	„	1·05
Satara	Koregaon	25th „	1·48
	Islampur	27th „	1·30
	Shirala	„	1·21
	Karad	28th „	1·36
	Koregaon	„	1·19

The month's rainfall was in excess of the normal in the Satara district of this division and about normal in the remaining districts. The following gives data :—

DISTRICT.	RAINFALL. Average actual May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Satara	2·62	1·56	+1·06	+68
Sholapur	0·95	1·23	—0·28	—23
Poona	1·26	1·30	—0·04	— 3

In Khandesh the only important rainfall occurred in the Nasik district the other districts having been almost rainless. The following gives comparative data for the different districts :—

DISTRICT.	RAINFALL. Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Ahmednagar	0·63	1·05	—0·42	—40
Nasik	1·35	1·15	+0·20	+17
Khandesh	0·17	0·39	—0·22	—56

Gujarat, Kathiawar and Sind all received rain during the first week under the influence of the severe storm which passed through Baluchistan. In Sind the total rainfall of the month was largely in excess of the small normal average fall, while in Kathiawar it was normal and in Gujarat less than usual. The following gives variation data for these three divisions :—

DIVISION.	RAINFALL. Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Gujarat	0·21	0·30	—0·09	—30
Kathiawar & Cutch	0·21	0·24	—0·03	—13
Sind	0·35	0·11	+0·24	+218

In Madras the rainfall distribution during May was irregular. Along the Malabar Coast there were showers more or less throughout the month, but the principal rainy periods were between the 3rd and the 8th, the 17th and the 20th and the 25th to the end of the month. The falls were heaviest in Travancore during the first rainfall period, in Malabar in the second period and in South Canara in the third period. This is shown in the following table which gives the falls exceeding 2″ in 24 hours in the different districts :—

DISTRICT.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
TRAVANCORE	Ettamanur	2nd May	2·40
	Parur	3rd ,,	2·55
MALABAR	Ponnani	,, ,,	2·04
TRAVANCORE	Karunagapally	5th ,,	3·56
	Shertalley	6th ,,	2·72
	Quilon	7th ,,	4·00
	Chirayinkil	,, ,,	2·64
	Alleppey	8th ,,	2·64
	Shertalley	,, ,,	2·25
	Chengannur	,, ,,	2·18
SOUTH CANARA	Kasaragod	16th ,,	2·02
	Hosdrug	17th ,,	2·55
MALABAR	Mannarghat	,, ,,	2·26
TRAVANCORE	Parur	18th ,,	2·40
	Velavencodde	19th ,,	2·33
	Peermade	21st ,,	3·75
	Kunnatnad	,, ,,	2·46
	Parur	26th ,,	2·10
SOUTH CANARA	Karkal	28th ,,	3·12
	Baindur	,, ,,	2·56
MALABAR	Quilandi	30th ,,	3·65

The month's rainfall in Malabar was less than usual. This is shown in the following table which gives comparative data for the two districts in this division :—

DISTRICT.	RAINFALL. Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Malabar	4·75	7·77	—3·02	—39
South Canara	4·96	5·84	—0·88	—15

The Madura district of Madras South received fairly frequent showers during the month of which the principal amounts (over 1″ in 24 hours) were as follows:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Madura	Tiruvadanai	1st May	2·00
	Madura	4th ,,	1·23
	Usilampatti	17th ,,	2·80
	Vedasandur	20th ,,	4·45
	Dindigul	,, ,,	1·90
	Madura	,, ,,	1·10
	Sivaganga	,, ,,	1·07
	Mutturaghuna-dapatnam	24th ,,	3·26
	Tiruchuli	,, ,,	2·64
	Paramagudi	,, ,,	1·35
	Ramnad	,, ,,	1·21
	Manakkudi	,, ,,	1·18
	Madura	26th ,,	1·35

Tinnevelly, on the contrary, reported only a few light scattered showers and the only moderate falls were as follows:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Tinnevelly	Sattur	4th May	1·45
	Virudupatti	5th ,,	1·43
	Ottappidaram	15th ,,	1·40
	Virudupatti	24th ,,	2·36
	Do.	31st ,,	1·34

The general rainfall of this division was hence normal. The following gives comparative data for the two districts:—

District.	Rainfall			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches	Inch.	
Madura	2·38	2·19	+0·19	+ 9
Tinnevelly	1·05	1·38	—0·33	—24

In the south central division of Madras there were three days of general rain, *viz.*, the 4th, the 17th and the 20th, and scattered showers at other times. The rainfall was heavy on all three days of general rain when the following amounts exceeding 2″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Salem	Denkanikota	4th May	3·50
Coimbatore	Talavadi	,, ,,	2·90
Salem	Pennagaram	,, ,,	2·84
	Palakode	,, ,,	2·04
	Sendamangalam	17th ,,	3·80
	Rasipuram	,, ,,	3·57
Coimbatore	Bhavani	,, ,,	3·45
	Gopichettipalayam	,, ,,	3·18
Salem	Sankaridrug	,, ,,	3·14
Coimbatore	Avanashi	,, ,,	2·64
	Kangayam	,, ,,	2·50
	Aravakurchi	,, ,,	2·50
	Erode	,, ,,	2·40
	Perundurai	,, ,,	2·35
	Palladam	,, ,,	2·08

The total rainfall of the month for this division was slightly heavier than usual, as is shown by the following comparative data for the two districts forming the division:—

District.	Rainfall			
	Actual, May 1901.	Normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Salem	4·92	4·09	+0·83	+20
Coimbatore	3·79	3·18	+0·61	+19

Central Madras received showers about the beginning, the middle and the end of the month and general rain on the 3rd, 17th and 20th. On the following dates and at the following stations amounts exceeding 1·50″ in 24 hours were recorded:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
BELLARY	Bellary	2nd May	1·65
ANANTAPUR	Dharmavaram	3rd „	2·85
BELLARY	Harpanahalli	„ „	1·90
	Kampli	„ „	1·65
KURNOOL	Ramallakota	„ „	1·58
BELLARY	Harpanahalli	17th „	2·57
	Kampli	„ „	2·15
ANANTAPUR	Madakasira	„ „	1·89
KURNOOL	Kalva	18th „	2·60
	Atmakur	„ „	1·80
ANANTAPUR	Yadaki	19th „	1·58
BELLARY	Kampli	„ „	1·57
	Hospet	„ „	1·52
CUDDAPAH	Jammalamadugu	21st „	2·45
ANANTAPUR	Bukkapatnam	24th „	1·68
BELLARY	Rayadrug	25th „	1·78
ANANTAPUR	Madakasira	„ „	1·70

The total rainfall of the month in this division was considerably in excess of the normal average, as is shown by the following table, which gives comparative data for the districts in this division :—

DISTRICT.	RAINFALL.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuddapah	1·48	1·72	—0·24	—14
Anantapur	2·77	1·92	+0·85	+44
Bellary	3·80	1·84	+1·96	+107
Kurnool	2·40	1·19	+1·21	+102

Along the East Coast the month's rainfall was approximately normal. In the north division there was general rain on the 1st, the 19th and the 23rd to 25th, and showers at other times. The heaviest rainfall was recorded during the last period as will be seen from the following statement of the falls exceeding 1·50″ in 24 hours during the month:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
GANJAM	Gumma	23rd May	1·80
	Pundi	„ „	1·80
	Parlakimedi	„ „	1·63
	Surada	„ „	1·55
VIZAGAPATAM	Parvatipuram	„ „	1·55
GODVARI	Peddapuram	25th „	2·20
KISTNA	Mangalagiri	„ „	2·01
VIZAGAPATAM	Waltair	„ „	2·00
GANJAM	Ramagiri	„ „	1·65
VIZAGAPATAM	Waltair	27th „	2·00

The general rainfall of the month was in slight excess of the normal in all the districts of this division; this is shown below:—

DISTRICT.	RAINFALL.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ganjam	2·92	2·52	+0·40	+16
Vizagapatam	2·82	2·63	+0·19	+ 7
Godavari	2·93	1·74	+1·19	+68
Kistna	1·54	1·43	+0·11	+ 8

In the central division of the East Coast there was light local rainfall on the 13th, 19th and 25th, when the following amounts exceeding 1·50″ in 24 hours were recorded:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
NELLORE	Udayagiri	13th May	1·68
	Kandukur	19th „	1·71
	Iskapalle	25th „	2·95

At other times the rainfall was quite insignificant, but the total rainfall of the month was approximately normal. This is shown below :—

District.	Rainfall.			
	Average actual, May 1901.	Average normal, May	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Nellore	1·23	1·28	—0·05	—4

In the south division there were showers between the 3rd and the 7th, the 16th and the 21st, and the 24th to the 27th. The showers were generally light or moderate, but were moderately heavy and exceeded 1·50″ in 24 hours at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
South Arcot	Vanur	6th May	2·28
	Gingee	,, ,,	1·98
	Panruti	17th ,,	2·91
North Arcot	Tiruvettiyur	,, ,,	2·30
Chingleput	Conjeeveram	,, ,,	2·25
	Madurantakam	20th ,,	1·70
North Arcot	Tiruvettiyur	25th ,,	1·52

The total rainfall of the whole division was also approximately normal, as is shown by the following statement of the comparative data of the different districts, but in Madras the fall was very light and in Chingleput and North Arcot deficient : —

District.	Rainfall.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madras	0·06	2·00	—1·94	—97
Chingleput	0·90	1·36	—0·46	—34
North Arcot	1·86	2·49	—0·63	—25
South Arcot	2·40	2·13	+0·27	+13

The following gives rainfall data of the seven divisions of the Madras Presidency :—

Division.	Rainfall.			
	Average actual, May 1901.	Average normal, May.	Variation of actual from normal, May 1901.	Percentage Variation from normal.
	Inches.	Inches.	Inches.	
Malabar	4·82	7·12	—2·30	—32
Madras, South Central	4·42	3·68	+0·74	+20
East Coast, North	2·55	2·18	+0·37	+17
Madras, Central	2·54	1·66	+0·88	+53
East Coast, Central	1·23	1·28	—0·05	— 4
East Coast, South	2·02	2·18	—0·16	— 7
Madras, South	1·71	1·71	0	0

Table

Abstract of Observations taken at 8 A.M. at 217

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.				−·007								90·1	−0·7	77·0	+0·5	83·6	−0·1	13·1					23·6
1	Tenasserim and Bay Islands.	Port Blair	61	29·800	+·012	29·792	29·937	1st	29·692	6th & 22nd.	·245	81·7	88·2		78·4*		83·4*		9·8	93·0	2nd	75·3	24th	17·7
		Mergui	96	29·773	−·010	29·800	29·882	1st	29·622	5th	·260	80·9	88·9	−0·5	75·7	+2·3	82·3	+0·9	13·2	93·6	28th	72·9	25th	20·7
		Tavoy	26	29·827	?	29·784	29·943	1st	29·670	5th	·273	79·9	88·5	+0·1	75·5	+0·4	82·0	+0·3	13·0	94·7	1st & 2nd.	72·0	4th & 11th.	22·7
		Moulmein	94	29·755	−·013	29·786	29·869	1st	29·617	5th	·252	79·3	88·7	−1·3	75·4	−0·3	82·1	−0·8	13·3	97·4	1st	70·3	6th	27·1
2	Lower Burma	Rangoon	41	29·796	−·018	29·774	29·929	1st	29·673	5th	·256	80·6	90·1	−2·4	77·3	+0·1	83·7	−1·2	12·8	100·6	2nd	72·9	5th	27·7
		Bassein	27	29·806	−·007	29·768	29·946	1st	29·652	6th	·294	82·2	91·1	−0·9	78·1	+1·2	84·6	+0·2	13·0	97·2	1st, 2nd & 17th.	73·7	5th	23·5
		Diamond Island.	41	29·786	−·016	29·762	29·924	1st	29·645	6th	·279	81·0	88·0	−1·0	80·2	+1·7	84·1	+0·4	7·8	91·6	14th	76·2	22nd & 23rd.	15·4
5	Arakan	Akyab	20	29·791	−·005	29·754	29·950	1st	29·521	25th	·429	83·0	2	+1·7	77·0	−0·8	84·6	+0·5	15·2	96·4	12th	72·5	2nd & 4th.	23·9
3	Central Burma	Toungoo	183	29·646	+·001	29·771	29·755	1st	29·528	6th	·227	83·7	95·1	−1·1	75·4	−1·0	85·3	−1·1	19·7	103·6	1st	70·1	5th	33·5
	II.—Burma Inland.				+·006								97·3	−0·1	76 2	+0·5	86·7	+0·2	21·1					35·5
3	Central Burma	Thayetmyo	130	29·684	0	29·755	29·813	1st	29·547	6th	·266	84·5	98·0	−1·4	78·5	+1·0	88·3	−0·2	19·5	105·7	19th & 21st.	70·9	5th	34·8
4	Upper Burma	Minbu	165	29·648	+·015	29·755	29·795	1st	29·509	6th	·286	84·2	99·2	+1·9	79·0	?	89·1	?	20·2	107·1	4 days	74·1	4th & 5th.	33·0
		Yamethin	657	29·157	P+·022	29·761	29·281	1st	29·011	6th	·270	82·4	98·5	?+2·9	75·2	?	86·9	?	23·3	110·0	20th	68·2	5th	41·8
		Mandalay	250	29·542	+·003	29·741	29·697	1st	29·405	6th	·292	85·5	99·4	0	79·1	+0·5	89·3	+0·3	20·3	106·6	19th	71·6	2nd	35·0
		Kindat	377	29·427	?	29·760	29·593	1st	29·273	6th	·320	79·0	93·9	?	72·6	−0·9	83·2	?	21·3	101·3	22nd & 23rd.	68·8	2nd & 5th.	32·5
		Bhamo	381	29·410	+·006	29·748	29·588	1st	29·274	6th	·314	79·6	94·5	+1·0	72·5	−0·1	83·5	+0·5	22·0	103·5	19th & 20th.	67·6	2nd	35·9
4(a)	Burma Hill Stations.	Maymyo		26·383			26·510	1st	26·255	6th	·255	71·4	82·0		64·3		73·2		17·7	89·0	8th	56·0	2nd	33·0
		Taunggyi										69·2	79·9	−0·4	61·9	−0·8	70·9	−0·6	18·0	85·2	10th, 13th & 14th.	50·5	3rd	34·7
		Lashio										73·6	87·5	+0·8	66·0	−0·1	76·8	+0·4	21·5	93·5	4 days	58·0	2nd	35·5
	III.—Assam.				+·002								88·4	+1·7	72·6	+0·5	80·5	+1·1	15·8					27·3
7	Surma	Silchar	104	29·710	+·005	29·766	29·876	1st	29·565	25th	·311	80·0	90·7	+2·7	73·3	+1·2	82·0	+2·0	17·4	95·6	25th	68·3	5th	27·3
9	Brahmaputra	Sibsagar	333	29·475	−·005	29·767	29·652	1st	29·302	6th	·350	76·7	86·6	+0·3	71·5	0	79·1	+0·2	15·1	93·2	7th, 24th & 25th.	66·0	1st	27·2
		Dhubri	115	29·672	+·007	29·743	29·869	1st	29·523	7th	·346	77·5	87·9	+2·0	73·0	+0·2	80·5	+1·1	14·9	95·2	10th	67·7	20th	27·5
	IV.—Bengal and Orissa.				+·013								94·8	+1·7	76·0	+0·4	85·4	+1·1	18·8					32·4
6	East Bengal	Chittagong	87	29·709	+·001	29·744	29·874	1st	29·569	25th	·305	82·8	91·1	+3·1	75·4	+0·3	83·3	+1·7	15·7	96·0	24th	70·1	5th	25·9
		Noakhali	43	29·747		29·736	29·905	1st	29·625	6th	280	83·1	95·6		73·8		84·7		21·8	104·7	22nd	65·9	12th & 13th.	38·8
		Comilla	36	29·755		29·739	29·935	1st	29·623	25th	·312	82·2	94·2		74·6		84·4		19·6	97·3	10th & 25th.	67·8	12th	29·5
		Sirajganj	49	29·713		29·713	29·855	1st	29·577	7th	·278	79·8	92·7		74·3		83·5		18·4	100·3	8th	68·1	21st	32·2
		Narayanganj	26	29·761	+·017	29·735	29·923	1st	29·630	6th	·293	82·4	92·0	+1·2	75·6	+0·1	83·8	+0·7	16·4	96·1	8th	69·2	9th & 21st.	26·9
		Barisal	13	29·768	?	29·726	29·941	1st	29·640	25th	·301	85·0	92·7	+1·6	77·0	+0·4	84·9	+1·0	15·7	96·3	24th	72·1	4 days	24·2
		Mymensingh	59	29·729	+·008	29·739	29·884	2nd	29·601	6th & 7th.	·283	79·5	90·0	+1·7	74·0	+0·5	82·0	+1·1	16·0	95·7	8th	67·1	1st	28·6
10	Deltaic Bengal	Faridpur	46	29·738		29·732	29·939	1st	29·610	7th	·329	81·3	92·6		74·6		83·6		18·0	97·3	8th	66·4	21st	30·9
		Jessore	33	29·736	+·018	29·716	29·926	1st	29·609	25th	·317	83·8	94·3	+0·1	76·3	−0·1	85·3	0	18·0	99·5	8th	70·7	16th	28·8
		Calcutta	21	29·735	+·018	29·701	29·922	1st	29·598	25th	·324	84·6	96·3	+2·8	77·2	+0·3	86·8	+1·6	19·1	104·2	10th	70·2	19th	34·0
		Saugor Island	25	29·728	+·011	29·697	29·903	1st	29·609	5th	·294	86·0	92·6	+1·1	82·0	+1·5	87·3	+1·3	10·6	95·9	24th	74·1	4th & 13th	21·8
		Krishnagar	47	29·710		29·705	29·905	1st	29·566	25th	·339	82·8	95·2		75·5		85·4		19·7	102·2	10th & 11th.	67·7	21st	34·5
		Midnapore	149	29·592		29·687	29·762	1st	29·496	26th	·266	83·9	98·6		77·2		88·0		21·4	105·9	27th	69·2	4th	36·7

* Mean of 30 days.

I.

Stations in India, Burma, etc., in May, 1901.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW	W.	NW	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 31st May 1901.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st May.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				13·79	12·68	+1·11					I.—Burma Coast and Bay Islands.		
2				2	2	6	14	5	S 79° W	9·2		7·3	+26	87	·942	7·4	19			20·81	15·74	+ 5·07	22·05	18·39	+ 3·66	3·24	Port Blair .	Tenasserim and Bay Islands.	1
28				1	2				S 15° E	2·4	2·1	2·1	0	88	·916	4·5	17			19·39	18·04	+ 1·35	26·18	27·48	− 1·30	3·57	Mergui,		
30						1			S 45° W	1·1				89	·909	4·6	18			12·08	18·49	− 6·41	18·08	23·32	− 5·24	1·61	Tavoy.		
			3	11	1	13	2	1	S 3° W	2·9	3·1	3·1	0	86	·861	6·7	19	15·45	+3·55	14·85	17·45	− 2·60	16·29	20·81	− 4·52	6·53	Moulmein		
	1	3	5	5	5	7	4	1	S 6° E	4·5		3·9		88	·922	5·8	14	9·36	+4·64	14·97	9·42	+ 5·55	15·61	11·53	+ 4·08	6·24	Rangoon .	Lower Burma.	2
15		1	1	5		1	2	6	N 66° W	4·3		5·0		84	·926	6·0	11	12·27	−1·27	8·21	8·33	− 0·12	8·21	9·83	− 1·62	2·46	Bassein.		
8		1	4	2	5	2	4	5	S 38° W	7·5	7·5	4·5	+67	79	·932	7·4	13	11·18	+1·82	9·29	8·55	+ 0·74	9·29	9·72	− 0·43	3·94	Diamond Island.		
	1	12	14	2	1			1	N 72° E	2·5	2·4	7·0	−66	79	·894	4·8	10	10·18	−0·18	12·85	12·30	+ 0·55	12·85	13·80	− 0·95	4·06	Akyab. .	Arakan.	5
8		1	1	13	6	1		1	S 33° E	5·3	5·2	3·5	+49	78	·911	6·5	15	10·09	+4·91	11·66	5·77	+ 5·89	11·68	7·91	+ 3·75	2·64	Toungoo .	Central Burma.	3
																				9·26	4·89	+4·37					II.—Burma Inland.		
4	1	1		4	16	5			S	6·1		7·3	−16	70	·822	3·8	12	6·64	+5·36	10·37	3·72	+ 6·65	10·39	4·57	+ 5·82	4·00	Thayetmyo .	Central Burma.	3
		1	1	23	2	1	1	2	S 41° E	7·1	8·4			70	·820	4·6	6			7·84	4·25	+ 3·59	7·84	4·94	+ 2·90	3·59	Minbu .	Upper Burma.	4
2	1		1	19	8				S 35° E	5·2	5·5			74	·817	5·9	11			8·68	4·07	+ 4·61	8·93	5·93	+ 3·00	2·50	Yamethin.		
	1		3		17	8	2		S 12° W					63	·768	1·9	8			6·67	5·56	+ 1·11	7·42	7·14	+ 0·28	3·01	Mandalay.		
22	3	2			1	1	2		N 26° W	1·1	1·1			79	·788	4·6	10			14·32	5·72	+ 8·59	17·86	7·82	+10·04	6 04	Kindat.		
17	1	3	3	2		1	2	2	N 45° E	2·9	3·4			73	·724	5·3	9			7·68	6·02	+ 1·66	9·21	8·64	+ 0·57	1·75	Bhamo.		
25					6				S	5·1				82	·624	5·2	12			10·57						2·05	Maymyo .	Burma Hill Stations.	1) a)
			2	4	12	2	9	2	S 26° W					81	·583	7·9	18			11·90	10·51	+ 1·39	12·41	12·11	+ 0·30	1·47	Taunggyi.		
	2	11	2	3	1	6	1	5	N 28° E	0·4				79	·653	7·2	13			10·62	5·67	+ 4·95	14·04	9·74	+ 4·30	1·75	Lashio.		
																				7·64	14·52	−6 88					III.—Assam.		
29			1					1	N 23° E	1·2	2·1	3·4	−38	81	·832	5·9	8	16·46	−8·46	6·28	16·95	−10·67	23·35	40·00	−16·65	1·79	Silchar .	Surma.	7
10	1	10		3		3		4	N 28° E	2·4	2·2	2·9	−24	89	·820	6·9	10	16·26	−6·26	8·50	12·63	− 4·13	16·65	27·07	−10·42	2·62	Sibsagar .	Brahmaputra.	9
1	4	6	15	3			1	1	N 71° E	4·6	5·4	7·0	−23	94	·803	4·9	17	15·20	+1·80	8·14	13·97	− 5·83	11·29	20·73	− 9·44	1·36	Dhubri.		
																				5·11	7·26	−2·15					IV.—Bengal and Orissa.		
		3	7	14	5	1		1	S 54° E	6·2	6·2	6·4	− 3	76	·857	4·5	3	10·69	−7·69	1·17	10·48	− 9·31	6·48	16·85	−10·37	0·77	Chittagong .	East Bengal.	6
		3	8	6	8	4	1	1	S 40° E	3·8	3·3			79	·898	2·9	6	10·46	−4·46	3·57	10·31	− 6·74	9·62	18·63	− 9·01	1·16	Noakhali.		
2				6	20	3			S 4° E	7·0				78	·856	3·6	7	12·09	−5·09	3·41	11·46	− 8·05	7·18	20·23	−13·05	1·60	Comilla.		
17	1		5	2	6				S 45° E	1·3	1·3			83	·846	4·6	10	10·23	−0·23	4·91	8·04	− 3·13	8·30	12·47	− 4·17	1·15	Sirajganj.		
2		2	7	9	7	3		1	S 43° E	6·5		6·2	+ 5	81	·905	5·1	7	10·85	−3·85	4·76	10·28	− 5·54	7·92	18·12	−10·20	1·57	Narayanganj.		
1		1	1	8	14	5		1	S 8° E	4·5	4·5			78	·947	5·4	8	10·08	−2·08	3·52	8·09	− 4·57	10·72	13·84	− 3·12	0·82	Barisal.		
13	1		7	8				2	S 75° E	0·9	0·9			82	·831	6·8†	13	13·35	−0·35	16·83	11·75	+ 5·08	20·45	18·21	+ 2·24	4·60	Mymensingh.		
11	1		2	3	12	2			S 11° E	1·4	1·3			87	·939	3·0	10	10·73	−0·73	5·86	8·74	− 2·88	12·56	15·54	− 2·98	1·38	Faridpur .	Deltaic Bengal.	13
22	1			1	5			2	S 18° W	3·0	2·9	4·9	−41	82	·955	4·1	11	9·58	+1·42	8·09	8·74	− 0·65	12·87	13·48	− 0·61	1·58	Jessore.		
1	1		4	7	12	6			S 14° E	6·6		7·1	− 7	78	·938	4·3	6	7·24	−1·24	6·22	7·62	− 1·40	7·77	8·74	− 0·97	2·94	Calcutta.		
			1	3	20	6	1		S 4° W	18·7		15·3	+22	81	1·004	5·1	4	6·73	−2·73	1·38	5·43	− 4·05	5·47	6·99	− 1·52	0·86	Sangor Island		
			4	4	19	2	2		S 7° E	5·8				80	·904	4·5	10	7·62	+2·38	7·81	5·76	+ 2·05	11·75	9·47	+ 2·28	2·02	Krishnagar.		
	1	1		3	23	2	1		S 1° E	6·9	6·1			78	·903	2·3	7	7·00	9	4·00	5·07	− 1·07	8·63	8·09	+ 0·54	1·15	Midnapore.		

† Mean of 19 days.

Table

Abstract of Observations taken at 8 A.M. at 217 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M. in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal.	Bankura .	298	29·408		29·655	29·558	1st	29·305	25th	·253	83·6	101·3		77·1*		89·2*		23·9	109·1	27th	69·9	22nd	39·2
		Raniganj .	334	29·388		29·670	29·544	1st	29·274	25th	·270	82·9	101·4		77·1		89·3		24·3	109·8	13th	69·4	30th	40·4
		Burdwan .	99	29·650	+·015	29·697	29·841	1st	29·537	25th	·304	82·5	98·2	+1·0	76·6	−0·6	87·4	+0·2	21·6	106·4	10th & 11th.	69·8	15th, 22nd & 23rd.	36·6
		Naya Dumka.	489	29·239		29·683	29·410	13th	29·130	25th	·280	83·6	98·9		76·4		87·7		22·5	107·0	27th	66·4	22nd	40·6
		Berhampore .	67	29·687	+·019	29·703	29·875	1st	29·570	25th	·305	82·1	97·2	+1·5	75·9	−0·1	86·6	+0·7	21·3	106·8	11th	68·2	21st	38·6
		Rampur Boalia	70	29·686		29·705	29·870	1st	29·557	7th	·313	82·3	95·1		75·2		85·2		19·9	104·5	11th	68·1	3rd	36·4
		Malda . .	72	29·668		29·692	29·845	1st	29·539	7th	·306	82·0	96·5		75·4		86·0		21·1	105·1	11th	69·5	21st	35·6
		Bogra . .	61	29·706		29·719	29·858	1st	29·562	7th	·296	80·4	95·1	+2·9	74·2	0	84·7	+1·5	20·9	103·8	11th	67·7	3rd	36·1
12	North Bengal .	Dinajpur .	123	29·631	+·010	29·709	29·804	1st	29·491	7th	·313	79·3	94·5	+3·4	73·4	−0·3	84·0	+1·6	21·1	103·3	9th	66·0	12th	37·3
		Rangpur .	123	29·673?	P	29·751	29·881	12th	29·531	7th	·350	78·8	91·0		72·1		81·6		18·9	99·2	8th	66·3	12th & 13th.	32·9
		Jalpaiguri .	284	29·502	+·007	29·747	29·700	1st	29·363	7th & 25th.	·337	77·8	90·3	+2·7	72·1	+1·0	81·2	+1·9	18·2	96·9	9th	69·1	12th, 13th & 17th.	27·8
		Cooch Behar .	156	29·637		29·750	29·822	1st	29·482	7th	·340	77·8	89·4		72·7		81·1		16·7	95·9	9th	67·6	20th	28·3
17	North Bihar .	Purnea . .	125	29·621	+·009	29·700	29·784	1st & 13th.	29·488	7th	·296	80·2	98·0	+3·5	75·1	+1·5	86·6	+2·5	22·9	107·3	9th	67·2	9th	40·1
14	Orissa . .	Balasore .	46	29·697	P	29·689	29·873	1st	29·584	5th	·289	85·2	96·3	+0·7	78·1	+0·2	87·2	+0·5	18·2	105·0	26th	72·8	21st	32·2
		False Point .	21	2.·739	+·019	29·702	29·917	1st	29·586	5th	·331	86·3	91·1	0	79·9	+0·7	85·5	+0·4	11·2	92·5	7 days	72·6	25th	19·9
		Cuttack .	80	29·670	+·015	29·692	29·855	1st	29·520	5th	·335	85·6	101·4	0	80·2	+0·7	90·8	+0·4	21·2	107·4	19th	73·2	4th	34·2
		Puri . .	20	29·738		29·700	29·913	1st	29·570	5th	·343	85·1	90·9		80·9		85·9		10·0	94·2	10th	71·6	25th	22·6
	V.—Gangetic Plain and Chota Nagpur.				+·003								102·7	+1·0	76·8	+0·3	89·8	+0·7	25·9					39·9
15	Chota Nagpur .	Hazaribagh .	2,007	27·728	+·005	29·654	27·879	1st	27·618	6th	·231	83·4	99·0	+0·7	75·2	+0·9	87·2	+0·8	23·8	105·1	28th	65·8	22nd	39·3
		Ranchi . .	2,128	27·615	+·007	29·654	27·760	1st	27·536	6th	·224	83·7	98·8	+0·8	74·6	+0·7	86·8	+0·8	24·2	106·3	28th	69·4	7th	36·9
		Daltonganj .	730?	28·964		29·645	29·117	1st	28·868	20th	249	83·3	107·3		75·9		91·6		31·4	113·1	28th	68·5	9th	44·6
		Purulia . .		28·902		29·658	29·044	13th	28·804	6th	·240	84·3	102·4		76·4		88·4		26·0	109·7	27th & 28th.	69·9	22nd	39·8
		Chaibassa .	760	28·958		29·660	29·119	1st	28·859	5th	·260	86·0	104·6	+1·2	78·8	0	91·7	+0·6	25·8	110·8	21st	74·0	4th & 23rd.	36·8
16	South Bihar .	Gaya . .	375	29·315	−·005	29·639	29·459	1st	29·223	25th	·236	88·2	104·8	+0·7	78·9	+0·8	91·9	+0·8	25·9	111·3	21st	68·8	22nd & 29th.	42·5
		Dehri . .	351	29·335		29·636	29·474	1st	29·243	20th	·231	87·4	105·2		79·0		92·1		26·2	111·4	21st	70·0	22nd	41·4
		Patna . .	183	29·523	−·002	29·657	29·664	1st & 13th	29·416	26th	·248	85·0	101·0	+1·4	77·3	+0·1	89·1	+0·8	23·7	107·5	26th	69·2	29th	38·3
		Arrah . .	190	29·509		29·649	29·633	1st	29·409	26th	·224	86·1	102·5		77·8		90·2		24·7	108·9	27th	68·0	29th	40·9
		Buxar . .	239	29·451		29·643	29·583	1st	29·343	26th	·240	86·5	103·0		77·8		90·4		25·2	108·5	27th	71·1	16th & 29th.	37·4
17	North Bihar .	Bhagalpur .	160	29·569		29·681	29·722	13th	29·446	7th	·276	83·5	98·9		76·3		87·6		22·6	107·8	11th	70·6	22nd	37·2
		Darbhanga .	166	29·559	−·002	29·678	29·710	1st	29·445	25th	·265	82·7	95·8	+0·4	76·4	+0·6	86·2	+0·5	19·4	103·3	10th	70·5	17th & 29th	32·8
		Muzaffarpur .	178	29·545		29·676	29·700	1st	29·436	7th & 26th.	·264	83·1	97·1		75·2		86·2		21·9	104·2	10th	68·7	15th & 16th.	35·5
		Motihari .	224	29·492		29·674	29·650	13th	29·362	7th	·288	81·3	96·4		73·4		84·9		23·0	104·0	10th	61·8	8th	42·2
		Chapra . .	181	29·529		29·663	29·666	1st	29·422	26th	·244	84·6	101·8		76·6		89·2		25·2	107·9	27th	70·6	16th	37·3
18	N.-W. P., East .	Benares . .	267	29·418	−·001	29·637	29·556	1st	29·315	20th	·241	86·8	105·9	+1·3	77·7	−0·8	91·8	+0·3	28·2	111·8	27th	70·1	10th	41·7
		Allahabad .	308	29·362	−·015	29·620	29·490	1st	29·263	20th	·227	90·1	107·8	+1·6	79·0	+0·3	93·4	+1·0	28·8	114·2	28th	72·3	9th & 10th.	41·9
23	N.-W. P. (East Submontane).	Gorakhpur .	256	29·455	+·015	29·667	29·500	13th	29·336	26th	·254	84·9	101·6	+1·1	76·8	+0·1	89·2	+0·6	24·8	107·2	27th	70·2	29th	37·0
19	South Oudh .	Lucknow .	368	29·319	+·004	29·641	29·447	13th	29·220	26th	·227	87·0	106·3	+2·2	76·1	−0·6	91·2	+0·8	30·2	113·8	28th	69·3	1st	44·5
20	North Oudh .	Bahraich .	403	29·290	+·023	29·649	29·422	13th	29·172	26th	·250	87·1	104·1	+0·7	76·6	−1·1	90·4	−0·2	27·5	110·1	27th	68·5	10th	41·6
21	N.-W. Provinces (Central).	Cawnpore .	416	·9·270	P	29·634	29·422	1st	29·165	21st	·251	89·3	107·2	+1·8	77·3	−2·6?	92·3	−0·4?	29·9	113·6	28th	70·0	10th	43·6
		Mainpuri .	516	29·161	P	29·628	29·294	1st	29·042	21st	·252	88·3	108·0	+0·5	76·6	−2·8?	92·3	−1·2?	31·4	114·2	28th	69·5	8th	44·7

* Mean of 17 days.

I—*continued.*

in India, Burma, etc., in May, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 31st May 1901.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st May.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
12		1	3	7	5	1	2		S 31° E	3·9	4·5			70*	·796*	2·8	3	6·54	− 3·54	2·71	4·41	− 1·70	4·23	6·93	− 2·70	1·10	Bankura .	Central Bengal	11
7	2		6	7	4	4	1		S 35° E	2·1				72	·819	2·4	5	5·23	− 0·23	4·34	3·68	+ 0·66	5·62	5·77	− 0·15	1·41	Raniganj.		
		2	6	1	9	11	1	1	S 4° W	5·0	5·0	5·5	− 9	79	·885	4·1	8	7·31	+ 0·69	4·77	5·73	− 0·96	7·28	9·37	− 2·09	1·25	Burdwan.		
2			4	13	9	1	1	1	S 31° E	2·2				68	·762	4·0	4	5·16	− 1·16	1·72	3·59	− 1·87	2·54	5·40	− 2·86	0·74	Naya Dumka.		
13			5		11	2			S 18° E	2·8	3·0	5·5	−45	79	·865	5·5	6	7·82	− 1·82	5·71	5·36	+ 0·35	7·62	7·91	− 0·29	2·68	Berhampore.		
6		2	1	9	5	6	2		S 12° E	4·6	4·6			77	·855	2·8	9	7·61	+ 1·39	8·02	5·25	+ 2·77	9·49	7·87	+ 1·62	2·68	Rampur Boalia.		
		4	13	7	5			2	S 72° E	3·3	3·0			79	·860	3·5	5	5·61	− 0·61	4·86	4·08	+ 0·78	5·87	6·00	− 0·13	3·05	Malda.		
11			12	1	7				S 58° E					79	·822	2·9	9	9·42	− 0·42	8·12	8·08	+ 0·04	8·63	11·59	− 2·96	3·06	Bogra.		
		22	5	2	1	1			N 60° E	4·9	5·7			76	·765	5·6	7	7·96	− 0·96	2·98	7·46	− 4·48	3·90	10·41	− 6·51	0·53	Dinajpur .	North Bengal.	12
8	1	3	10	3	5		1		S 73° E	3·6	3·8			84	·831	3·4	12	10·69	+ 1·31	9·19	9·83	− 0·64	10·05	14·44	− 4·39	2·20	Rangpur.		
	3	6	10	8	1	1		2	N 87° E	1·9	2·4			81	·775	2·4	16	12·20	+ 3·80	11·25	11·90	− 0·65	12·71	17·51	− 4·80	2·03	Jalpaiguri.		
9		5	11	4	1	1			S 87° E	2·1	2·2			83	·797	6·6	16			7·91	14·57	− 6·66	12·87	21·55	− 8·68	1·87	Cooch Behar		
		8	19	4					N 84° E	5·4	4·8	3·4	+41	73	·755	3·5	4	5·08	− 1·08	2·21	4·49	− 2·28	2·85	6·32	− 3·47	0·89	Purnea .	North Bihar.	17
3		1		1	9	16	1		S 29° W	7·7				72	·881	3·3	6	7·92	− 1·92	1·04	5·36	− 4·32	6·20	9·08	− 2·88	0·23	Balasore .	Orissa.	14
1			1	1	7	17	4		S 35° W	13·0	12·6	12·6	0	78	·986	5·2†	1	4·24	−3·24	0·16	4·83	− 4·67	0·60	7·53	− 6·93	0·10	False Point.		
10		1	1		8	9	2		S 27° W	4·0		5·1	−22	76	·940	4·6	7	5·31	+ 1·69	3·03	4·41	− 1·38	3·94	6·97	− 3·03	1·06	Cuttack.		
8	1			1	1	19		1	S 45° W	13·8	13·0			85	1·026	3·6	5	3·19	+ 1·81	3·65	3·02	+ 0·63	4·10	4·08	+ 0·02	1·86	Puri.		
																				2·21	1·66	+0·52					V.—Gangetic Plain and Chota Nagpur.		
3		1	2	2	5	14	3	1	S 34° W	8·7	7·7	8·8	−13	47	·538	2·3	5	4·20	+ 0·80	3·38	2·26	+ 1·12	3·81	3·42	+ 0·39	1·52	Hazaribagh.	Chota Nagpur.	15
		2	1	1	9	9	5	4	S 43° W	7·0	8·3			49	·571	2·3	4	5·00	− 1·00	2·41	2·89	− 0·48	3·94	4·91	− 0·99	1·45	Ranchi.		
18	1		5	3			1	3	N 76° E	5·2	6·3			47	·536	1·1	1	2·32	− 1·32	0·25	1·15	− 0·90	0·90	2·09	− 1·19	0·12	Daltonganj.		
18			6	2	3	2			S 1° E	2·0				62	·723	2·1	6			2·79			4·53			0·83	Purulia.		
11			1		1	11	7		S 57° W	2·6	2·3			62	·762	2·3	3	5·80	− 2·80	1·80	3·86	− 2·06	2·40	6·00	− 3·60	0·98	Chaibassa.		
2	1	8	1	7	4	6	1	1	S 45° E	8·6	7·7	3·9	+97	55	·720	3·5	3	2·11	+ 0·89	2·21	1·13	+ 1·08	2·43	2·02	+ 0·41	0·86	Gaya . .	South Bihar.	16
		3	10	5	6	5	2		S 42° E	8·7				45	·575	2·8	3	1·67	+ 1·33	1·01	0·98	+ 0·03	1·29	1·75	− 0·46	0·70	Dehri.		
		8	15	2	2		2	2	N 78° E	6·5	7·7	4·8	+60	61	·718	2·7	3	2·88	+ 0·12	2·80	1·97	+ 0·83	3·31	2·61	+ 0·70	2·08	Patna.		
	1	1	16	2	1	1	4	5	N 79° E	4·5	4·6			56	·689	2·3	1	2·53	− 1·53	2·46	1·63	+ 0·83	3·17	2·26	+ 0·91	2·33	Arrah.		
	1		21	1	1		6	1	E	7·1	6·5			52	·639	2·0	2	2·03	− 0·03	1·57	0·91	+ 0·66	2·11	1·39	+ 0·72	1·18	Buxar.		
10		5	8	3		2	2	1	N 84° E	4·9	4·6			67	·765	3·6	5	1·26	+ 0·74	6·41	2·81	+ 3·60	6·99	4·11	+ 2·58	2·23	Bhagalpur .	North Bihar.	17
		3	15	11	1	1			S 74° E	5·6		5·9	− 5	67	·754	2·2	4	3·96	+ 0·04	5·21	2·52	+ 2·69	5·66	3·45	+ 2·21	2·30	Darbhanga.		
9		2	10	9				1	S 77° E	3·6	3·2			75	·853	1·4	2	3·42	− 1·42	4·39	2·35	+ 2·04	4·89	3·23	+ 1·66	2·83	Muzaffarpur		
	1		27	2		1			S 88° E	6·2				96	1·025	2·0	5	4·26	+ 0·74	5·18	2·81	+ 2·37	5·84	3·92	+ 1·92	2·55	Motihari.		
		3	17	3		4	2	2	S 86 E	4·7	5·8			61	·720	3·3	3	2·19	+ 0·81	2·09	1·45	+ 0·64	2·70	2·04	+ 0 66	1·48	Chapra.		
5		1	13	3	1	3	5		S 54° E	3·1	3·5	5·2	−33	52	·653	1·7	1	1·45	− 0·45	0·17	0·72	− 0·55	1·37	1·08	+ 0·29	0·17	Benares .	N.-W. P., East.	18
2	1	1	11	3	2	2	5	4	S 77° E	6·5	7·4	6·2	+19	43	·600	1·2	0	1·18	− 1·18	0·05	0·39	− 0·34	0·40	0·82	− 0·42	0·05	Allahabad.		
5	3	11	7	2	1		1	1	N 57° E	2·9		3·9	−26	61	·721	1·7	3	2·64	+ 0·36	3·92	1·37	+ 2·55	4·06	2·22	+ 1·84	3·53	Gorakhpur .	N.-W. P. (East Submontane).	3
3			17	1	2	3	5		S 66° E	3·3	3·6	4·3	−16	45	·576	1·3	1	1·91	− 0·91	0·18	1·10	− 0·92	0·27	1·49	− 1·22	0·18	Lucknow .	South Oudh.	9
3		1	13	9			1	4	S 79° E	7·7	7·3			56	·727	0·7	1			0·22	1·42	− 1·20	0·30	2·23	− 1·93	0·16	Bahraich .	North Oudh	20
14		2	2	6	1	1	2	3	S 49° E	3·4				44	·599	0·3	0	1·10	− 1·10	0·03	0·47	− 0·44	0·20	0·87	− 0·67	0·03	Cawnpore .	N.-W. Provinces (Central).	21
14	1		6	2	1		6	1	S 45° E	2·2	2·2			38	·501	1·8	0			0	0·66	− 0·66	0·04	1·02	− 0·98	0	Mainpuri.		

† Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 217 Stations

Number of district.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°.)	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas				+·009								101·3	0	73·1	+0·2	87·2	+0·1	28·2				46·1
24	N.-W. Provinces, (West Submontane).	Bareilly	569	29·114	+·009	29·642	29·248	13th	29·015	26th	·233	85·1	103·8	+1·3	76·1	+0·7	90·1	+1·0	27·7	109·0	27th	69·2	1st	39·8
		Dehra Dun	2,233	27·497	?	29·663	27·624	1st	27·380	26th	·244	77·5	91·4	+0·7	68·2	−1·7	81·3	−0·5	26·2	102·5	27th	61·5	6th & 8th.	41·0
		Roorkee	887	28·794	+·003	29·640	28·930	13th	28·672	26th	·258	83·7	101·4	−0·7	71·3	−2·7	86·4	−1·7	30·1	108·7	28th	62·8	8th	45·9
22	N.-W. P., West	Meerut	738	28·927	?	29·623	29·060	1st	28·806	21st	·254	85·3	103·7	+1·8	74·2	−0·8	88·9	+0·5	29·5	110·2	28th	64·3	9th	45·9
26	South-East Punjab.	Delhi	718	28·955	+·003	29·627	29·077	1st	28·845	21st	·232	86·6	104·3	0	80·7	+1·5	92·5	+0·8	23·6	112·2	29th	71·6	10th	40·6
28	Central Punjab.	Lahore	702	28·959	+·014	29·625	29·083	17th	28·764	5th	·319	85·0	102·5	−0·3	73·8	+1·6	88·2	+0·7	28·7	114·6	30th	64·9	7th	49·7
27	South Punjab	Sirsa	662	29·006	+·012	29·622	29·149	1st	28·875	21st	·274	89·7	106·1	−0·1	76·7	+0·7	91·4	+0·3	29·4	115·3	30th	66·6	7th	48·7
		Patiala	818	28·868		29·645	29·007	13th	28·752	21st	·255	85·4	101·0		73·6		87·3		27·4	109·0	28th & 29th.	65·5	7th & 9th.	43·5
29	Punjab (Submontane).	Ludhiana	812	28·855	+·002	29·630	28·977	1st	28·739	21st	·238	84·0	101·8	−2·1	74·7	+0·9	88·3	−0·6	27·1	110·9	29th	65·6	7th	45·3
		Sialkot	830	28·830	+·007	29·624	28·965	17th	28·668	5th	·297	84·5	101·8	−0·6	75·3	+1·3	88·6	+0·4	26·5	115·4	30th	64·1	6th	51·3
		Umballa	892	28·782	+·028	29·638	28·917	13th	28·667	21st	·250	81·1	100·0*	−5·1*	71·1	?	85·7*	?	28·9	110·0	28th	65·0	9th	45·0
31	North Punjab	Rawalpindi	1,676	28·017	+·006	29·655	28·144	1st	27·745	5th	·399	80·5	94·3	−2·9	61·0	?	77·7	?	33·3	108·0	30th	51·0	7th	57·0
	VII.—Indus Valley and North-West Rajputana.				+·007								104·4	+0·1	77·4	+0·6	90·9	+0·4	27·0					47·8
31	North Punjab	Peshawar	1,110	28·612	+·015	29·701	28·730	1st & 17th,	28·356	5th	·374	81·8	95·0	−2·8	69·2	−0·2	82·1	−1·5	25·8	111·0	31st	57·5	8th	53·5
32	West Punjab	Khushab	612	29·057	?	29·633	29·188	17th	28·690	5th	·498	87·1	101·0	−3·5	74·4	−2·6	87·7	−3·1	26·6	112·4	30th	65·4	6th	47·0
		Montgomery	558	29·106	?	29·622	29·234	13th	28·876	5th	·358	89·1	104·2	−4·4?	75·9	−2·1	90·1	−3·3	28·3	117·0	30th	64·0	6th & 7th.	53·0
		D. I. Khan	594	29·101	+·002	29·639	29·245	17th	28·718	5th	·527	83·3	99·9	−2·3	71·3	−2·1	85·6	−2·2	28·6	113·2	31st	61·6	6th	51·6
		Mooltan	420	29·245	+·010	29·628	29·371	17th	28·988	5th	·383	87·7	107·1	+2·4	78·0	+2·1	92·6	+2·3	29·1	118·9	31st	67·0	6th	51·9
47	Sind	Jacobabad	186	29·453	−·010	29·597	29·611	1st	29·269	5th	·342	89·5	113·0	+2·6	78·0	+1·1	95·5	+1·9	35·0	123·0	30th	67·1	5th & 6th.	55·9
		Hyderabad	96	29·606	+·021	29·654	29·785	1st	29·491	21st	·294	87·0	107·9	+1·1	78·4	0	93·2	+0·6	29·5	119·2	22nd	73·0	4th & 5th.	46·2
		Kurrachee	30	29·725	+·020	29·705	29·874	1st	29·588	21st	·286	85·6	94·9	+1·1	81·8	+3·0	88·3	+2·1	13·1	116·4	25th	75·7	4th	40·7
51	West Rajputana	Bikaner	771	28·911	−·006	29·634	29·060	1st	28·741	21st	·319	91·4	108·6	+2·2	83·0	+3·2	95·8	+2·7	25·6	116·3	31st	70·0	7th	46·3
		Pachpadra	380	29·361		29·692	29·514	2nd	29·197	21st	·317	89·6	108·7		79·7		94·2		29·0	115·5	25th	74·3	7th	41·2
		Jodhpur	782	28·939		29·690	29·097	1st	28·809	21st	·288	88·4	108·3		81·8		95·1		26·5	113·3	4 days	75·3	5th	38·0
	VIII.—East Rajputana, Central India and Gujarat.				+·017								103·3	+0·9	79·8	+1·8	91·5	+1·4	23·5					36·4
50	East Rajputana	Jaipur	1,431	28·305	+·014	29·667	28·454	1st	28·182	21st	·272	90·4	107·7	+2·2	78·5	+2·3	93·1	+2·3	29·2	115·2	31st	71·1	5th	44·1
		Kotah	819	28·885		29·670	29·024	1st	28·758	21st	·266	95·9	109·8		87·2		98·5		22·6	117·1	31st	81·2	8th	35·9
		Sambhar	1,254	28·473	+·024	29·665	28·614	1st	28·343	21st	·271	90·2	107·1	+2·8	80·6	+2·5	93·9	+2·7	26·5	114·5	31st	69·5	8th	45·0
		Ajmer	1,611	28·143	+·020	29·687	28·293	1st	28·027	21st	·266	88·8	105·2	+2·0	82·2	+4·5	93·7	+3·3	23·0	111·9	28th	70·6	8th	41·3
		Udaipur	1,925	27·862		29·703	28·002	1st	27·775	22nd	·227	88·4	102·6		80·0		91·3		22·6	109·1	30th	69·3	5th	39·8
		Deesa	466	29·317	+·027	29·735	29·469	1st	29·225	21st	·244	85·1	106·2	0	78·6	+1·1	92·4	+0·6	27·6	112·1	30th & 31st.	74·0	6th	38·1
46	Kathiawar and Cutch.	Bhuj	395	29·383	+·028	29·728	29·527	1st	29·269	21st	·258	85·3	101·8	+0·3	75·0	?	88·4	?	26·8	109·3	28th	67·9	5th	41·4
		Jamnagar	61	29·739		29·746	29·867	1st	29·626	22nd	·241	85·0	98·6		77·1		87·9		21·5	105·2	14th	73·2	13th	32·0
		Rajkot	429	29·378	+·032	29·758	29·494	1st	29·279	25th	·215	84·5	105·2	−0·2	75·5	+0·3	90·4	+0·1	29·7	110·9	26th & 30th.	72·8	15th	38·1
		Veraval		29·818	+·007	29·778	29·903	14th	29·725	25th	·178	82·8	86·4	−0·5	79·7	+1·4	83·1	+0·5	6·7	90·6	14th	75·3	13th	15·3
		Dwarka	37	29·786		29·769	29·898	1st	29·666	22nd	·232	83·6	87·8		80·2		84·0		7·6	90·4	31st	78·8	10th, 13th & 14th.	11·6
		Bhavnagar	35	29·792	+·001	29·771	29·894	1st	29·707	25th	·187	86·6	106·2	?	78·1	?	92·1	?	28·1	111·2	29th	72·8	24th	38·4
49	Central India	Para. Nowgong	757	28·944	+·006	29·642	29·092	1st	28·836	21st	·256	91·0	107·8	+0·5	79·4	+0·3	93·6	+0·4	28·4	114·0	29th	70·0	8th	44·0
		Indore	1,823	27·979	+·030	29·721	29·109	1st	27·990	25th	·209	86·5	103·8	+1·4	77·6	+2·2	90·7	+1·8	26·2	111·3	30th	70·6	15th	40·7
		Neemuch	1,630	28·143	?	29·703	28·285	1st	28·049	21st	·236	87·1	105·1	+1·2	79·1	+2·7	92·1	+2·0	26·0	112·1	31st	73·5	6th	38·6

* Mean of 30 days.

I—*continued.*

in India, Burma, etc., in May 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 31st May 1901.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st May.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				1·36	1·07	+0·35					VI.—Upper Sub-Himalayas.		
7		2	6	9				7	E	2·5	2·4	5·2	− 54	47	·567	1·2	1	2·27	−1·27	0·33	0·84	−0·51	0·87	1·95	− 1·08	0·28	Bareilly	N.-W. Provinces (West Submontane).	24
17	2			1	2	1	6	2	W	2·0		2·5	− 20	46	·433	3·0	3	4·09	−1·09	1·77	1·95	−0·18	3·10	3·55	− 0·45	1·10	Dehra Dun.		
12	1	1	3	6	5			3	S 47° E	3·8		3·7	+ 3	41	·471	1·4	3	2·00	+1·00	1·18	0·86	+0·32	2·20	2·00	+ 0·20	0·68	Roorkee.		
7	1	1	4	5		3	4	6	N 81° W	5·6	5·6	2·6	+115	46	·540	1·4	0	1·64	−1·64	0	0·69	−0·69	0·44	1·70	− 1·26	0	Meerut	N.-W. P., West.	22
1	2	2	3	7	1		12	3	S 85° W	3·8	3·6	4·5	− 22	37	·457	1·9	1	1·64	−0·64	0·58	0·78	−0·20	1·14	1·58	− 0·44	0·50	Delhi	South-East Punjab.	26
11	7	3	1	4	1		1	3	N 23° E	3·2		3·3	− 3	44	·522	1·5	3	2·00	+1·00	1·34	1·03	+0·31	2·86	2·22	+ 0·64	0·61	Lahore	Central Punjab.	28
9	1	3	6	4	2	1	2	3	S 87° E	3·4	4·0	4·8	− 17	34	·464	0·6	1	1·82	−0·82	0·13	0·81	−0·68	0·45	1·49	− 1·04	0·13	Sirsa	South Punjab.	27
2	6	3	6	5	2		3	4	N 50° E	5·4	5·4			44	·534	0·9	2			0·74			2·58			0·51	Patiala.		
6	3	7	1	8	1	1	3	1	N 82° E	3·7	3·3	2·2	+ 50	45	·516	1·6	4	1·91	+2·09	1·50	0·78	+0·72	2·39	2·62	− 0·23	1·03	Ludhiana	Punjab (Submontane).	29
5	5	8	4	3	1		1	4	N 36° E	3·4		2·5	+ 36	46	·531	1·2	4	2·73	+1·27	3·68	1·23	+2·45	5·65	3·32	+ 2·33	2·51	Sialket.		
18			2	8				3	S 56° E	1·7				54	·556	0·5	3			0·92	0·97	−0·05	2·73	2·23	+ 0·50	0·40	Umballa.		
27		1	1					2	N 9° E	3·4	3·1	2·8	+ 11	47	·462	1·5	4	3·00	+1·00	4·18	1·80	+2·38	8·00	5·51	+ 2·49	2·00	Rawalpindi.	North Punjab.	31
																				1·64	0·47	+1·17					VII.—Indus Valley and North-West Rajputana.		
18	2	1	2	1			1	6	N 18° W	3·8	4·1	4·8	− 15	46	·474	2·2	3	2·09	+0·91	5·16	0·75	+ 4·41	9·12	4·29	+ 4·83	3·85	Peshawar	North Punjab.	31
	5	9	7	2	1	3	3	1	N 48° E	7·4	8·6			39	·468	1·2	3	1·00	+2·00	3·78	0·41	+ 3·37	5·02	1·57	+ 3·45	2·72	Khushab	West Punjab.	32
	5	6	3	5	7	3	1	1	S 67° E	7·5	6·5			31	·387	1·5	2	1·10	+0·90	1·71	0·47	+ 1·24	2·70	1·22	+ 1·48	1·35	Montgomery.		
16	6	6		1	1				N 29° E	1·9	2·0	2·3	− 13	62	·698	1·6	2	0·82	+1·18	3·85	0·40	+ 3·45	4·78	1·80	+ 2·98	3·70	D. I. Khan.		
14		5		5	2	4		1	S 41° E	1·6	2·0	2·9	− 31	45	·572	0·8	1	0·82	+0·18	0·81	0·42	+ 0·39	1·03	0·87	+ 0·16	0·81	Mooltan.		
6		6	7	5	4	3			S 66° E	3·3	3·4	4·7	− 28	42	·594	1·5	1	0·45	+0·55	0·65	0·10	+ 0·55	1·57	0·44	+ 1·13	0·60	Jacobabad	Sind.	1
	1				1	26	2	1	S 50° W	11·7	12·2	12·7	− 4	51	·677	0·9	2	0·45	+1·55	0·91	0·25	+ 0·66	0·91	0·43	+ 0·48	0·78	Hyderabad.		
	1		1		1	11	16	1	S 73° W	13·8	17·3	17·5	− 1	72	·870	3·0	1	0	+1·00	0·24	0	+ 0·24	0·27	0·56	− 0·29	0·24	Kurrachee.		
		2	3	4	3	7	10	2	S 49° W	10·5		6·5	+ 62	45	·659	3·3	1			0·91	1·08	− 0·17	0·96	1·45	− 0·49	0·85	Bikaner	West Rajputana	51
		1			12	12	5	1	S 36° W	9·8	10·8	8·8	+ 23	51	·688	0·3	0			0·05	0·83	− 0·78	0·07	0·91	− 0·84	0·05	Pachpadra.		
4				1	3	15	6	2	S 54° W					40	·538	1·4	0			0	0·47	− 0·47	0	0·55	− 0·55	0	Jodhpur.		
																				0·30	0·43	−0·15					VIII.—East Rajputana, Central India and Gujarat.		
1	4	4	1			5	10	6	N 61° W	5·2		6·9	− 25	33	·462	1·9	1	1·20	−0·20	0·62	0·45	+ 0·17	0·71	0·93	− 0·22	0·51	Jaipur	East Rajputana.	50
2	4	2				5	6	12	N 58° W	7·7	9·1			24	·401	0·5	0			0	1·11	− 1·11	0·16	1·20	− 1·04	0	Kotah.		
8	4				1		12	6	N 66° W	6·5		9·9	− 34	38	·538	1·9	0	1·27	−1·27	0·04	0·80	− 0·76	0·13	1·24	− 1·11	0·02	Sambhar.		
2		2				11	15	1	S 76° W	8·7		7·1	+ 23	47	·625	2·0	2	2·09	−0·09	0·45	0·75	− 0·30	0·67	0·98	− 0·31	0·25	Ajmer.		
5	2				2	7	9	6	S 88° W	6·4	6·5			48	·640	0·9	4			0·82			0·97			0·46	Udaipur.		
					10	12	5	4	S 46° W	13·4		13·4	0	61	·716	2·1	1	0·55	+0·15	0·69	0·25	+ 0·44	0·72	0·31	+ 0·41	0·67	Deesa.		
						16	15		S 67° W	19·0		15·4	+ 23	72	·880	0·5	1			0·13	0·13	0	0·18	0·40	− 0·22	0·13	Bhuj	Kathiawar and Cutch.	46
					10	17	4		S 36° W	18·0	19·2			72	·870	1·5	1			0·23			0·23			0·23	Jamnagar.		
					3	7	17	4	S 79° W	13·2	13·1	14·6	− 10	64	·761	0·7	1	0·36	+0·64	0·35	0·25	+ 0·10	0·35	0·28	+ 0·07	0·35	Rajkot.		
					3	9	17	2	S 72° W	12·0	14·2	9·5	+ 49	82	·919	2·7	0			0·03	0·02	+ 0·01	0·03	0·02	+ 0·01	0·03	Veraval.		
	1				6	15	6	3	S 54° W	18·7				81	·938	2·2	0			0·04			0·08			0·04	Dwarka.		
5		1				15	8	2	S 66° W	8·9†	9·2†			55	·680	1·5	1			0·22	0·12	+ 0·10	0·22	0·22	0	0·22	Bhavnagar Para.		
5			6	1	1	2	14	2	S 67° W	2·6	2·6	3·4	− 24	31	·451	2·0	0	1·09	−1·09	0·15	0·42	− 0·27	0·41	0·75	− 0·34	0·09	Nowgong	Central India.	49
2							27	2	N 87° W	6·0		6·1	− 2	55	·698	2·4	2	1·36	+0·64	0·77	0·75	+ 0·02	1·03	0·83	+ 0·20	0·44	Indore.		
	3	1				8	16	3	N 90° W	12·9	11·6	12·4	− 6	49	·626	0·9	0	1·18	−1·18	0	0·59	− 0·59	0·31	0·76	− 0·45	0	Neemuch.		

† Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 217 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
45	Gujarat	Surat	39	29·805	+·021	29·786	29·914	1st	29·714	25th	·200	87·0	97·2	−1·0	79·6	+2·0	88·5	+0·5	17·6	108·6	14th	74·5	10th	34·1
		Ahmedabad	164	29·635	?	29·745	29·765	1st	29·545	25th	·220	87·4	107·3	+0·1	80·7	+1·3	94·0	+0·7	26·6	113·3	31st	76·6	6th & 8th.	36·7
22	N.-W. P., West	Agra	555	29·128	+·003	29·633	29·265	1st	28·996	21st	·269	90·1	107·0	+0·3	80·8	+0·1	93·9	+0·2	26·2	112·5	29th	73·4	8th	39·1
21	N.-W.P., Central	Jhansi	858	28·859	+·009	29·652	29·012	1st	28·743	21st	·269	93·7	109·7	+2·3	85·6	+3·3	97·7	+2·8	24·1	115·4	29th	78·7	7th	36·7
	IX.—Deccan				+·016								103·6	+0·1	78·1	+1·1	90·9	+0·6	25·5					38·0
38	Bombay (Deccan)	Belgaum	2,539	27·343	+·030	29·803	27·431	1st	27·263	26th	·168	75·6	89·2	−3·9	68·7	+0·8	79·0	−1·6	20·5	96·3	12th	64·8	11th	31·5
		Sholapur	1,590	28·245	+·022	29·771	28·348	1st	28·172	26th	·176	82·5	103·1	−1·2	75·6	−0·4	89·4	−0·8	27·5	108·7	24th	71·5	6th, 7th & 11th.	37·2
		Poona	1,840	28·030	+·029	29·807	28·103	1st	27·956	25th	·147	80·2	98·8	+0·3	71·2	−0·7	85·0	−0·2	27·6	105·5	13th	65·4	10th	40·1
		Bijapur	1,946	27·913	+·014	29·767	28·003	1st	27·844	25th & 26th,	·159	80·2	100·2	−0·1	73·4	−1·3	86·8	−0·7	26·8	104·4	24th	66·3	22nd	38·1
40	Khandesh	Malegaon	1,430	28·387	+·018	29·750	28·509	1st	28·290	25th	·219	86·4	104·9	+1·2	76·1	+1·4	90·5	+1·3	28·8	110·8	30th	71·2	11th	39·6
		Ahmednagar	2,152	27·708	+·014	29·772	27·804	1st	27·631	25th	·173	83·4	100·4	+0·9	71·7	0	86·1	+0·5	28·7	108·0	30th	64·5	7th	43·5
41	Berar	Akola	930	28·853	+·023	29·714	29·000	1st	28·774	26th	·226	90·5	108·6	+1·5	81·3	+0·7	95·0	+1·1	27·3	116·4	30th	77·9	8th	38·5
		Amraoti	1,215	28·564	+·031?	29·706	28·715	1st	28·481	26th	·234	91·2	108·3	+1·1	82·4	+3·2	95·4	+2·2	25·9	115·5	29th & 30th,	76·0	6th & 7th.	39·5
42	Central Provinces (West).	Khandwa	1,044	28·732	+·018	29·717	28·872	1st	28·651	25th	·221	88·6	108·1	+2·0	83·3	+3·1	95·7	+2·6	24·8	117·2	30th	79·1	5th	38·1
		Hoshangabad	1,006	28·754	+·020	29·697	28·904	1st	28·656	25th	·248	91·9	107·6	+0·1	82·4	+2·7	95·0	+1·4	25·2	115·0	29th	75·2	11th	39·8
		Nagpur	1,025	28·723	+·022	29·682	28·893	1st	28·645	24th	·248	91·2	108·7	0	81·4	+0·3	95·1	+0·2	27·3	115·7	30th	73·6	18th	42·1
43	Central Provinces (Central).	Chanda	634	29·139	+·022	29·705	29·305	1st	29·058	24th	·247	91·0	108·8	−0·4	83·3*	+2·5*	95·5*	+1·1	25·5	115·7	29th	76·3	7th	39·4
		Seoni	2,033	27·741	+·017	29·669	27·901	1st	27·663	22nd	·238	88·3	103·5	+0·3	77·8	+1·2	90·7	+0·8	25·7	109·9	22nd, 28th & 29th.	71·0	7th	38·9
		Jubbulpore	1,327	28·398	0	29·653	28·555	1st	28·310	25th	·245	89·8	106·3	+1·4	78·1	−0·3	92·2	+0·6	28·2	112·0	30th	71·6	8th & 10th.	40·4
		Saugor	1,807	27·954	+·016	29·669	28·089	1st	27·864	25th	·225	90·1	105·3	+0·6	80·6	+3·0	93·0	+1·8	24·7	111·5	30th	76·1	7th, 8th & 11th.	35·4
49	Central India	Sutna	1,040	28·653	+·001	29·629	28·815	1st	28·564	21st	·251	92·4	106·8	+2·1	80·7	+2·6	93·8	+2·4	26·1	113·1	29th	75·6	8th	37·5
44	Central Provinces (East).	Raipur	970	28·770	+·020	29·669	28·957	1st	28·676	5th	·281	91·1	106·6	+0·1	82·7	+1·6	94·7	+0·9	23·9	113·0	29th	73·1	31st	39·9
		Sambalpur	486	29·242	−·002	29·669	29·442	1st	29·128	5th	·314	89·8	106·3	−0·1	81·8	+0·9	94·1	+0·4	24·5	112·1	29th	74·7	9th	37·4
39	Hyderabad (North).	Indur		28·518			28·643	1st	28·462	23rd	·181	87·4	102·6		76·3		89·5		26·3	108·8	29th	72·2	23rd	36·6
		Bidar	2,165?	27·676		29·756	27·777	1st	27·585	26th	·192	81·3	99·6		74·7		87·2		24·9	106·4	30th	69·7	1st	36·7
53	Hyderabad (South).	Gulbarga	1,562	28·326		29·761	28·441	1st	28·249	26th	·152	84·0	102·9		76·3		89·6		26·6	108·3	30th	72·3	25th	36·0
		Raichur	1,309	28·505	+·019	29·772	28·609	1st	28·424	10th	·185	83·1	100·4	−3·1	77·1	−2·6?	88·8	−2·9?	23·3	105·0	29th & 30th.	69·1	25th	35·9
		Hyderabad (Deccan).	1,690	28·130	+·018	29·748	28·259	1st	28·047	24th	·212	83·6	99·7	−3·2	77·6	−0·3	88·7	−1·8	22·1	105·9	29th & 30th.	73·2	1st & 25th.	32·7
		Secunderabad	1,787	28·036	+·002	29·748	28·163	1st	27·959	22nd	·204	82·9	101·4	−1·5?	77·2	−0·7	83·3	−1·1?	24·2	108·8	29th	70·0	1st	38·8
		Hanumkonda	865	28·903		29·726	29·058	1st	28·810	24th	·248	87·7	102·6		81·5		92·1		21·1	109·2	29th	73·3	25th	35·9
	X.—West Coast				+·028								90·1	+0·8	79·7	+0·9	84·9	+0·9	10·4					17·9
37	Konkan	Bombay	37	29·842	+·029	29·818	29·915	1st	29·761	25th	·154	85·4	91·5	+1·5	82·5	+2·1	87·0	+1·8	9·0	93·5	1st & 15th.	80·0	10th	13·5
		Ratnaghi	110	29·765	+·037	29·813	29·844	1st	29·688	26th	·156	85·1	91·4	+0·5	80·2	+1·2	85·8	+0·9	11·2	93·9	15th	71·9	27th	22·0
		Mormugao	60	29·823	?	29·818	29·905	1st	29·751	26th	·154	84·8	90·1†	+0·2†	81·6	+0·4	86·0†	+0·3	8·5	94·0	1st	74·4	15th	19·6
		Goa	199	29·675	+·035	29·809	29·731	2nd, 4th & 8th,	29·598	26th	·133	83·9	87·5?	?	80·3	0	*83·9?	?	7·2?	92·5?	26th	75·0	15th	17·5
		Karwar	44			Barometer out		of order.				83·2	90·1	+0·4	80·4	+1·2	85·2	+0·8	9·7	92·8	30th	74·5	15th	18·3
33	Malabar	Cochin	11	29·889	+·021	29·827	29·971	1st	29·821	11th	·150	82·5	90·5	+1·3	78·3	+1·1	84·4	+1·2	12·2	93·5	2nd & 14th.	75·6	4 days	17·9
		Calicut	27	29·865	+·019	29·821	29·943	1st	29·795	11th & 25th.	·148	83·6	91·2	+1·4	78·3	+1·0	84·8	+1·2	12·9	92·3	7 days	75·0	4th, 8th & 30th,	17·3
		Mangalore	65	29·833	+·027	29·830	29·910	1st	29·772	25th	·138	83·0	90·1	+0·3	78·3	−0·1	84·2	+0·1	11·8	92·3	4th	71·9	13th	20·4
		Trivandrum	198	29·681	+·029	29·809	29·762	1st	29·597	11th	·165	81·4	86·2	−0·2	78·2	?	82·2	?	8·6	88·0	3rd	73·0	20th	15·0

*Mean of 22 days.
† Mean of 30 days.

I—*continued.*

in India, Burma, etc., in May, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by aemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 31st May 1901.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st May.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
1	3	1		1	7	13	5		S 44° W	9·8	9·2	12·7	− 28	66	·848	2·9	0	0·45	−0·45	0·08	0·19	−0·11	1·35	0·20	+ 1·15	.0·08	Surat .	Gujarat.	45
	2					17	3	9	S 80° W	4·6				57	·720	2·6	1			0·46	0·03	+0·43	0·46	0·10	+ 0·36	0·46	Ahmedabad		
		1		6		15		9	S 57° W	4·7	5·5	5·9	− 7	37	·519	0·3	1	1·91	−0·91	0·35	0·60	−0·25	0·63	1·05	− 0·42	0·30	Agra . .	N.-W. P., West	22
10	1		4	1		3	11	1	S 84° W	5·8		4·8	+ 21	32	·494	0·7	1	1·36	−0·36	0·20	0·49	−0·29	0·83	0·97	− 0·14	0·18	Jhansi . .	N.-W.P., Central.	21
																				0·89	1·01	−0·11					IX.—Deccan.		
5	1				1	8	15	1	S 77° W	10·6		18·1	− 41	174	·657	4·8	7	4·36	+ 2·64	3·24	2·62	+ 0·62	10·42	4·69	+ 5·73	1·42	Belgaum .	Bombay (Deccan).	38
1				1		1	7	21	N 58° W	13·2	9·5	10·0	− 5	55	·614	3·2	6	2·18	+ 3·82	1·34	1·15	+ 0·19	3·36	2·06	+ 1·30	0·35	Sholapur.		
		1			1	8	14	7	N 88° W	15·5	17·5	14·2	+ 23	59	·608	2·3	4	2·00	+2·00	3·05	1·65	+ 1·40	4·28	2·24	+ 2·04	2·10	Poona.		
6		1			1	5	12	6	N 86° W	5·5	5·4			64	·662	2·1	2	3·10	− 1·10	0·83	1·05	− 0·22	2·77	1·93	+ 0·84	0·50	Bijapur.		
						3	23	5	N 87° W	13·4	15·4	10·4	+ 48	44	·550	0·7	1	1·27	− 0·27	0·99	0·95	+ 0·04	1·16	1·08	+ 0·08	0·92	Malegaon .	Khandesh.	46
2	10		1		1	1	3	13	N 34° W	9·4	11·5			48	·542	2·2	1			0·18	0·86	− 0·68	1·87	1·43	+ 0·44	.0·11	Ahmednagar.		
1	1	1					14	14	N 63° W	9·4	10·2	8·6	+ 19	41	·575	1·6	0	0·91	− 0·91	0·01	0·48	− 0·47	1·31	1·19	+ 0·12	0·01	Akola .	Berar.	41
	1			1	2	6	14	7	S 87° W	8·9	7·9	6·0	+ 32	47	·683	1·8	0	1·73	− 1·73	0	0·75	− 0·75	0·85	1·40	− 0·55	0	Amraoti.		
	1						8	22	N 55° W	11·7		9·1	+ 29	43	·563	2·0	0	1·09	− 1·09	0·01	0·45	− 0·44	0·23	0·75	− 0·52	0·01	Khandwa .	Central Provinces (West).	42
1	1	1				21		7	S 67° W	4·4	4·5	3·8	+ 18	42	·633	1·5	0	1·18	− 1·18	0·09	0·73	− 0·64	0·37	1·12	− 0·75	0·06	Hoshangabad.		
8	1			3	7	2	4	6	S 54° W	7·9†		9·5	− 17	37	·532	2·9	3	2·09	+ 0·91	0·58	0·80	− 0·22	4·03	1·75	+ 2·28	0·30	Nagpur.		
3	1			6	4	5	7	5	S 54° W	3·5		4·9	− 29	38	·558	3·9	2			0·65	0·89	− 0·24	3·05	2·76	+ 0·29	0·48	Chanda .	Central Provinces (Central).	43
	6	2	1	1	6	7	2	6	W	3·2		4·6	− 30	39	·512	1·7	4	2·36	+ 1·64	0·88	0·76	+ 0·12	4·12	1·81	+ 2·31	0·44	Seoni.		
				5	7	5	11	3	S 47° W	3·5		4·5	− 22	35	·488	0·8	0	1·45	− 1·45	0·06	0·71	− 0·65	0·90	1·40	− 0·50	0·05	Jubbulpore.		
		2	4	1	2	5	14	3	S 79° W	6·3	7·2	4·4	+ 64	42	·592	1·5	1	1·27	− 0·27	0·27	0·69	− 0·42	1·12	1·05	+ 0·07	0·20	Saugor.		
	2	3	5	1		2	10	8	N 50° W	5·7	6·1	8·1	− 25	27	·409	1·6	1	1·64	− 0·64	0·21	0·39	− 0·18	0·41	1·01	− 0·60	0·12	Sutna .	Central India	49
6		1				15	5	4	S 69° W	9·2	8·5	7·4	+ 15	38	·534	2·6	3	2·91	+ 0·09	1·29	1·04	+ 0·25	2·28	2·32	− 0·04	0·68	Raipur .	Central Provinces (East).	44
	1	2	4	4	6	7	6	1	S 18° W	4·6	4·5	3·0	+ 50	53	·746	0·2	2			0·71	2·05	− 1·34	3·01	3·76	− 0·75	0·49	Sambalpur.		
4				1		11		15	N 84° W	8·1	7·8			66	·852	2·8	0			0·05	0·33	− 0·28	5·88	0·91	+ 4·97	0·05	Indur.	Hyderabad (North).	39
1	4	1				8	10	7	N 79° W	7·3	6·2			59	·627	1·4	2			0·45	1·07	− 0·62	3·53	2·24	+ 1·29	0·15	Bidar.		
2	5	3				3	4	14	N 43° W	11·0	10·5			65	·762	2·0	2			1·17	1·39	− 0·22	2·36	2·31	+ 0·05	0·71	Gulbarga .	Hyderabad (South).	53
2			2		2	7	11	7	S 84° W	10·2	10·0			61	·688	1·8	2			1·79	1·05	+ 0·74	6·39	1·99	+ 4·40	1·54	Raichur.		
12						1	15	3	N 85° W	5·5	5·3			56	·640	2·8	4			2·23	1·15	+ 1·08	5·60	2·57	+ 3·03	1·00	Hyderabad (Deccan).		
	3		1	3		4	8	12	N 68° W	7·4		7·4	0	60	·670	2·9	3			1·56	1·15	+ 0·41	4·54	2·57	+ 1·97	0·74	Secunderabad.		
1				10	6	2	6	6	S 25° W	11·2	9·5			50	·648	3·7	1			0·58			2·11			0·57	Hanumkonda.		
																				3·13	5·59	−2·46					X.—West Coast.		
	3	2	1		2	7	11	5	N 87° W	8·9		9·9	− 10	72	·833	4·0	0	1·00	−1·00	0·01	0·94	−0·93	0·05	0·98	− 0·93	0·01	Bombay .	Konkan.	37
6	3	1	1	2		1	6	11	N 51° W	6·5	6·4	11·2	− 43	70	·846	3·5	3	1·64	+1·36	1·85	1·89	− 0·04	2·82	1·97	+ 0·85	0·92	Ratnagiri.		
5	2	3	1	1	1	1	9	8	N 58° W	10·9				75	·901	4·4	2			0·44	2·00	−1·56	5·43	2·29	+ 3·14	0·18	Mormugao.		
	7	3	2	1		2	10	6	N 44° W	10·5				76	·886	5·7	2			1·97	2·81	−0·84	7·18	2·88	+ 4·30	1·02	Goa.		
6	11	4	2			1	1	5	N	5·9				73	·826	4·2	3	4·09	−1·09	1·29	3·85	− 2·56	2·34	4·26	− 1·92	0·44	Karwar.		33
1	11	8	1			1	3	6	N 4° W	7·2‡				82	·912	6·9	15	13·45	+1·55	8·85	12·30	− 4·45	17·13	20·11	− 2·98	1·76	Cochin .	Malabar.	
6	8	3	2	1	1		1	9	N 10° W	10·1	12·7			76	·869	5·8	6	9·00	− 3·00	4·86	8·05	− 3·19	11·88	11·74	+ 0·14	1·49	Calicut.		
13	2	1	4	4	1	1		5	N 62° E	3·1		4·6	−33	76	·861	6·8	9	6·80	+2·20	3·61	7·67	− 4·06	7·40	8·86	− 1·46	0·89	Mangalore.		
4	7	2	2	1				15	N 19° W	5·8				81	·867	6·7	8			5·27	9·80	− 4·53	12·65	15·95	− 3·30	1·60	Trivandrum.		

‡ Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 217 Stations

No. of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	XI.—South India				+·017								97·5	−0·1	77·4	+0·1	87·4	0	20·1					31·7
57	Madras (South)	Pamban	37	29·814		29·778	29·951	1st	29·738	24th	·212	87·5	92·2		80·0		86·1		12·2	94·3	13th	77·7	1st	16·6
		Tinnevelly	168	29·683	+·004	29·780	29·810	1st	29·590	24th	·220	87·7	100·5	−0·4	80·1	−0·6	90·3	−0·5	20·4	104·5	23rd	73·9	20th	30·6
		Madura	447	29·395	+·008	29·775	29·534	1st	29·310	24th	·224	84·7	98·3	−1·8	77·5	+0·7	87·9	−0·6	20·8	102·5	24th	73·0	20th	29·5
		Periya Kulam		28·913			29·019	1st	28·843	24th	·176	81·4	96·5		73·5		83·4		23·0	102·3	30th	65·9	9th	36·4
34	Madras (South Central)	Salem	940	28·941	+·015	29·815	29·062	1st	28·862	25th	·200	83·2	99·3	+0·5	76·9	+1·4	88·1	+1·0	22·4	103·2	10th & 29th.	70·0	20th	33·2
		Coimbatore	1,348	28·525	+·025	29·814	28·623	1st	28·442	11th	·181	79·8	94·3	−0·5	74·2	+0·7	84·3	+0·1	20·1	97·9	13th & 29th.	69·8	9th	28·1
35	Coorg	Mercara	3,781	26·225	+·038?		26·293	1st	26·166	26th	·127	68·5	80·4	−0·5	64·9	+0·4	72·7	−0·1	15·5	86·0	13th	61·7	13th & 18th.	24·3
36	Mysore	Chitaldroog	2,405	27·482	+·004	29·797	27·559	2nd	27·415	26th	·144	77·4	93·4	−0·6	71·7	+0·8	82·5	+0·1	21·7	98·7	12th & 13th.	65·9	17th	32·8
		Bangalore	3,021	26·914	+·026?	29·817	27·002	1st	26·847	26th	·155	74·8	90·1	−1·1	68·9	−0·2	79·5	−0·7	21·2	96·8	12th	64·8	25th	32·0
		Hassan	3,091	26·858		29·833	26·934	1st	26·800	26th	·134	76·0	88·7		66·8		77·8		21·9	95·4	13th	63·1	27th	32·3
		Mysore	2,518	27·409	+·013	29·836	27·487	1st	27·345	26th	·142	76·0	92·4	+0·1	69·7	0	81·1	+0·1	22·7	97·1	12th	66·0	25th & 26th.	31·1
56	Madras (East Coast, South)	Negapatam	31	29·802	+·006	29·761	29·941	1st	29·725	10th & 22nd.	·216	86·2	97·0	+0·9	77·4	−2·5?	87·2	−0·8?	19·6	104·1	23rd	69·4	8th	34·7
		Cuddalore	12	29·816	+·020	29·757	29·964	1st	29·733	24th	·231	86·6	98·5	−0·5	80·4	0	89·5	−0·3	18·1	106·2	23rd	77·2	4th, 17th & 20th	29·0
		Trichinopoly	255	29·594	+·014	29·780	29·730	1st	29·513	24th	·218	85·1	101·6	+0·5	79·3	+1·1	90·4	+0·8	22·3	107·7	11th	71·4	21st	36·3
		Madras	22	29·794	+·008	29·747	29·957	1st	29·699	22nd	·258	88·2	100·0	+2·2	80·9	+0·1	90·4	+1·2	19·1	107·0	10th & 22nd.	77·0	1st & 25th.	30·0
		Vellore	707	29·129		29·767	29·263	1st	29·054	21st	·209	86·4	101·8		78·7		90·3		23·1	105·8	12th	72·5	3rd	33·3
55	Madras (East Coast, Central)	Nellore	71	29·731	+·029	29·734	29·886	1st	29·648	24th	·238	89·5	105·0	−1·2	80·8	−1·3	92·9	−1·3	24·2	110·3	5 days	72·6	25th	37·7
		Masulipatam	15	29·783	+·027	29·732	29·955	1st	29·652	6th	·303	88·8	100·3	+1·1	82·0	+0·8	91·1	+1·0	18·3	110·7	9th	74·6	25th	36·1
54	Madras (Central)	Cuddapah	433	29·396	+·018	29·762	29·495	1st	29·315	11th	·180	89·6	105·3	+0·1	83·3	0	94·3	+0·1	22·0	109·8	12th	73·2	25th	36·6
		Kurnool	924	28·905	+·016	29·764	29·006	1st	28·819	11th	·187	84·6	102·9	−1·4	78·9	−1·5	90·9	−1·5	24·0	109·3	12th	73·5	19th	35·8
		Bellary	1,475	28·376	+·031	29·784	28·473	1st	28·302	11th	·171	83·4	100·6	−1·8	76·6	−0·6	88·6	−1·2	24·0	105·0	12th	67·2	17th	37·8
52	Madras (East Coast, North)	Cocanada	26	29·762	+·024	29·723	29·931	1st	29·620	6th	·311	87·3	99·0	−1·7	80·7	−2·2?	89·9	−2·0?	18·3	110·0	9th	76·0	12th, & 23rd.	34·0
		Waltair (Vizag.)	226	29·555	+·021	29·720	29·729	1st	29·406	5th	·323	86·8	92·6	+0·8	81·2	+0·1	86·9	+0·5	11·4	99·9	6th	71·4	25th	28·5
		Gopalpur	21	29·733	+·030?	29·693	29·905	1st	29·571	5th	·334	85·7	91·2	+1·5	80·3	−0·3	85·8	+0·6	10·9	93·8	10th	76·1	1st & 30th.	17·7
	XII.—Hill Stations.																							
48	Baluchistan	Pishin											86·5							98·0	29th	41·9	7th	49·2
		Quetta	5,502	24·603	+·026		24·738	1st	24·382	5th	·356	70·1	82·8	−0·1	51·6	−0·4	67·2	−0·3	31·2	91·1	28th	49·0	6th & 7th.	56·7
		Kalat										66·5	83·3		46·5		64·9		36·8	95·7	31st	52·1	6th	49·1
		Chaman	4,311	25·640	+·021		25·798	1st	25·444	5th	·354	78·1	91·5	−2·3	65·2	−0·4	78·4	−1·4	26·3	101·2	30th & 31st,	28·0	24th	46·1
30	Punjab	Leh	11,503	19·735	+·017		19·925	1st	19·507	5th	·418	47·6	63·5	−0·6	36·5	+0·3	50·0	−0·2	27·0	74·1	31st	46·1	8th	40·7
		Srinagar	5,204	24·852	+·006		24·990	1st	24·583	5th	·407	60·0	75·0	−1·3	51·9	+0·4	63·5	−0·5	23·1	86·3				
		Skardu		22·859			23·090	1st	22·566	5th	·524	57·4	71·2		49·8		60·5		21·4	84·5	31st	37·6	22nd	46·9
		Dras		20·789			21·628	1st	20·539	5th	·489	47·5	63·0		33·2		48·1		29·8	75·9	31st	20·6	1st	55·3
		Gilgit		25·108			25·333	18th	24·639	21st	·694	67·0	82·3		59·6		71·0		22·7	97·7	31st	45·9	7th	51·8
		Chitral		24·578			24·675	30th	24·500	4 days	·175	62·8	78·2		61·9		70·1		16·3	89·2	31st	45·0	6th	44·2
		Killa Drosh										55·2	81·0		58·3		69·7		22·7	95·2	30th	34·8	5th	60·4
		Para Chinar	6,000									68·1	77·5		55·2		66·4		22·3	89·4	29th, 30th & 31st.	46·9	7th	42·5
		Cherat		25·625	+·030		25·731	13th	25·338	5th	·393	69·2	89·7	−4·5	65·3	−2·9	76·2	−3·7	24·4	95·4	31st	45·1	7th	50·3

I—*continued.*

in India, Burma, etc., in May, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 31st May 1901.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st May.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				2·26	2·58	−0·31					XI.—South India.		
	1		1	9	2	8	10		S 32° W	9·9	10·5			82	1·074	2·8	1	2·30	− 1·30	0·15	2·21	− 2·06	1·80	7·13	− 5·33	0·10	Pamban .	Madras (South).	57
	3	2	1	2	3	4	9	7	N 80° W	5·7	5·5			62	·811	3·0	1	3·80	− 2·80	0·27	1·65	− 1·38	7·89	4·95	+ 2·94	0·27	Tinnevelly.		
12	5	1		1	1	1	1	9	N 35° W	2·5	2·5	3·7	− 32	70	·845	4·2	8	4·00	+ 4·00	6·06	2·67	+ 3·19	10·68	5·36	+ 5·32	1·43	Madura.		
20	4			3			3	1	N 34° W	2·5	2·8			71	·752	4·2	7			1·70			7·40			0·74	Per ya Kulam		
10		2	2			9	6	2	S 71° W	4·2	3·8	4·4	− 14	72	·825	4·1	7	3·64	− 1·64	4·74	5·20	− 0·46	6·51	7·66	− 1·15	1·94	Salem .	Madras (South Central).	34
				1	3	19	8		S 51° W	4·0	3·6	5·3	− 32	83	·859	5·6	4	6·45	− 2·45	1·29	2·61	− 1·32	4·69	4·91	− 0·22	0·46	Coimbatore.		
17	4						1	9	N 35° W	4·4	4·1	5·3	− 23	90	·621	7·0	4	10·00	− 6·00	2·15	6·59	− 4·44	4·39	10·18	− 5·79	1·06	Mercara .	Coorg.	35
1					1	8	14	7	S 86° W	9·4	8·2			72	·685	5·4	5			4·09	3·69	+ 0·40	4·38	5·11	− 0·73	1·91	Chitaldroog .	Mysore.	36
				1	4	7	15	4	S 73° W	8·0	7·0	5·5	+ 27	76	·682	4·2	10	7·55	+ 2·45	5·75	4·02	+ 1·73	6·71	5·71	+ 1·00	1·98	Bangalore.		
	1	1	2		1	5	11	10	N 78° W	4·0	3·5			70	·629	5·5	8			4·34	4·55	− 0·21	5·20	6·71	− 1·51	1·12	Hassan.		
	2	2	1			8	12	6	N 84° W	8·1	8·7			77	·685	7·8	9			3·80	5·67	− 1·87	4·24	8·60	− 4·36	0·74	Mysore.		
2			1	5	3	13	6	1	S 37° W	8·8	7·7	7·4	+ 4	71	·894	3·5	5	2·18	+ 2·82	3·22	1·94	+ 1·28	4·06	2·83	+ 1·23	1·95	Negapatam .	Madras (East Coast, South).	56
23	1					1	6		N 88° W	0·9	1·1			69	·866	5·0	0	1·50	− 1·50	0·03	1·26	− 1·23	0·20	2·45	− 2·25	0·02	Cuddalore.		
9	1				1	8	7	5	S 83° W	5·2		6·0	− 13	68	·816	2·9	5	3·91	+ 1·09	2·74	3·04	− 0·30	3·38	5·12	− 1·74	1·12	Trichinopoly.		
	1	1	1	1	12	5	10		S 37° W	8·3		9·2	− 10	64	·853	3·9	0	1·45	− 1·45	0·06	2·12	− 2·06	0·09	3·13	− 3·04	0·03	Madras.		
3	3		1	3	5	3	5	8	S 84° W					83	1·023	3·5	4			2·78			3·29			1·04	Vellore.		
1	6				15		2	7	S 59° W	8·5				59	·816	3·6	1	2·10	− 1·10	0·29	1·11	− 0·82	0·29	1·44	− 1·15	0·29	Nellore .	Madras (East Coast, Central).	55
2				5	7	4	5	8	S 52° W	9·2		8·9	+ 3	77	1·046	5·1	2	2·73	− 0·73	0·27	1·55	− 1·28	0·43	1·82	− 1·39	0·13	Masulipatam		
	1	2		2	1	3	9	13	N 68°.W					55	·768	3·8	1	3·40	− 2·40	1·13	1·60	− 0·47	1·15	2·04	− 0·89	0·99	Cuddapah .	Madras (Central).	54
7	1		2	1	1	1	13	5	N 82° W					57	·674	3·4	4	2·67	+ 1·33	1·21	1·16	+ 0·05	1·42	2·35	− 0·93	0·70	Kurnool.		
5			1		2	3	7	13	N 74° W	8·7	9·2	8·4	+ 10	45	·517	5·0	6	3·36	+ 2·64	2·77	1·70	+ 1·07	3·54	2·50	+ 1·04	1·65	Bellary.		
6		1		1		13	7	3	S 68° W	7·3	6·1			72	·941	4·4	6	3·60	+ 2·40	2·03	1·22	+ 0·81	2·95	1·96	+ 0·99	0·54	Cocanada .	Madras (East Coast, North).	52
1	1		1			8	19	1	S 81° W	14·0				69	·876	5·7	2			2·70	2·62	+ 0·08	3·20	3·50	− 0·30	2·25	Waltair (Vizag.).		
1		3	2		9	15	1		S 23° W	16·5*	16·2*	13·3	+22	79	·965	0·9	2	3·44	− 1·44	0·62	2·35	− 1·73	0·91	3·80	− 2·89	0·50	Gopalpur.		
																											XII.—Hill Stations.		
																	2			0·68	0·19	+ 0·49	1·76	2·74	− 0·98	0·56	Pishin.	Baluchistan.	48
29		1					1		N 23° W	1·6	1·7	4·7	− 64	54	·396	1·7	3	1·18	+ 1·82	1·23	0·41	+ 0·82	2·57	3·31	− 0·74	0·79	Quetta.		
	2				28		1		S 2° W					48	·310		3			1·15	0·16	+ 0·99	2·39	2·22	+ 0·17	0·51	Kalat.		
	3	1	2	4	5	12	1	3	S 24° W	5·6	5·9			35	·328	1·4	2			0·42	0	+ 0·42	1·46	1·81	− 0·35	0·24	Chaman.		
	2	4	2	1	11	8	2	1	S 14° W	3·9				35	·116	3·7	1			0·22	0·09	+ 0·13	0·47	0·43	+ 0·04	0·15	Leh . .	Punjab.	30
11	3	1	3	4	3	2	2	2	S 39° E	3·6	3·9			88	·463	3·4	6			3·65	2·31	+ 1·34	10·77	5·96	+ 4·81	1·50	Srinagar.		
17	2	5	1			2	3	1	N 7° W	7·5	8·9			53	·249	4·5	3			0·85	1·01	− 0·16	1·64	6·41	− 4·77	0·40	Skardu.		
22				1		5	3		S 56° W	4·4	4·5			58	·189	3·4	7			3·73			10·85			1·78	Dras.		
27						2	1		S 63° W	1·7				45	·282	4·8	3			0·87	0·41	+ 0·46	1·30	1·88	−0·58	0·61	Gilgit.		
	15		2		1		13		N 38° W	P				45	·241	1·9	4			2·42			10·73			1·07	Chitral.		
9	3	3		4	1	3		8	N 31° W					82	·528	1·7	6			5·45			13·49			2·00	Killa Drosh.		
	9	4	3	1	3	1	3	7	N 10° W	4·5				49	·221	2·1	8			5·61			13·54			2·35	Para Chinar.		
	6	11		2		2		10	N 2° E	11·8	11·0			38	·247	1·8	4			11·61	1·45	+10·16	17·30	8·68	+8·62	7·70	Cherat.		

* Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 217 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
30	Punjab—(*concld.*)	Murree	6,333	23·794	+·012		23·948	1st	23·442	5th	·506	65·5	72·6	−3·3	57·9	−0·9	65·3	−2·1	14·7	84·3	30th	43·9	6th, 7th & 8th,	40·4
		Poo											67·9		46·0		57·0		21·9	78·2	30th	38·2	17th	40·0
		Simla	7,224	23·093	+·022		23·219	1st	22·986	6th	·233	63·1	70·5	−1·1	56·7	−0·7	63·6	−0·9	13·8	79·0	30th	45·9	17th	33·1
25	North-Western Provinces.	Chakrata	7,022	23·254	+·023		23·368	1st	23·168	19th	·200	63·1	72·2	−1·6	56·5	+0·6	64·4	−0·5	15·7	79·8	28th & 29th,	44·2	6th	35·6
		Mussooree	6,709	23·522	+·008		23·646	1st	23·432	19th	·214	64·8	74·5	−1·1	59·5	+2·3	67·0	+0·6	15·0	82·3	27th & 28th,	45·0	7th	37·3
		Ranikhet	6,069	24·062	+·021		24·179	1st	23·972	10th	·207	67·8	79·8	+2·9	61·0	+1·6	70·4	+2·3	18·8	86·1	28th	51·0	6th & 18th,	35·1
		Muktesar		22·835			22·954	1st	22·752	10th	·202	63·5	75·5		54·6		65·1		20·9	83·3	28th	47·0	18th	36·2
13	Bengal	Yatung	10,480?										57·9							63·1	6th			
		Darjeeling	7,409	23·011	+·069		23·117	2nd	22·889	7th	·228	57·0	64·5	+1·8	50·9	+0·2	57·7	+1·0	13·6	69·2	9th & 10th	47·1	21st	22·1
		Gantok	5,660	24·405			24·482	2nd	24·268	8th	·214	60·9*	72·5*		38·7*		55·6*		33·8	74·2	10 days	34·0	1st, 2nd & 21st.	40·2
	Central India	Mount Abu	3,945	25·983	+·008		26·119	1st	25·863	5th	·256	79·4	88·5	−0·1	72·5	+1·6	80·5	+0·8	16·0	93·2	6 days	61·9	5th	31·3
		Pachmarhi	3,528	26·380	+·020		26·505	1st	26·293	25th	·212	83·7	96·0	+1·4	76·0	+1·4	86·0	+1·4	20·0	102·7	30th & 31st	68·2	3rd	34·5
	South India	Wellington	6,200	24·246	+·010		24·328	1st	24·183	25th	·145	67·3	74·8	−0·8	56·9	−1·3	65·9	−1·1	17·9	78·2	23rd & 24th,	49·2	25th	29·0
		Kodaikanal	7,688	22·837			22·911	1st	22·782	25th	·129	60·9	67·1		54·3		59·6		12·8	71·1	30th	50·7	14th	20·4
	XIII.—Extra India.																							
	Ceylon	Trincomalee	12	29·845	+·025	29·783	29·978	1st	29·764	26th	·214	83·1	92·5	P	73·8	+0·7	85·6	P	13·7	96·5	4th	75·5	16th	21·0
		Colombo	40	29·860	+·006	29·825	29·950	1st	29·787	11th	·163	83·2	90·4	+2·8	77·3	−1·1	83·9	+0·9	13·1	92·5	13th & 16th,	70·5	30th	22·0
	Persia	Meshed	3,104									71·9			59·4							50·9	5th	
		Teheran		†25·879¶			26·020	13th	25·750	25th & 27th,	·270	71·3¶	83·5¶		53·7¶		68·6¶		29·8	93·5	17th, 24th & 31st.	28·0	12th	65·5
				§25·204¶			25·340	13th & 15th.	25·100	25th, 26th & 27th.	·240													
		Ispahan		24·299†			24·425	15th	24·100	11th	·325	68·0	84·3		53·1		68·7		31·2	93·0	31st	45·6	13th	47·4
		Bushire	14	29·762	−·002	29·735	29·888	9th	29·629	6th	·259	84·9	92·8	+3·0	78·4	+3·1	85·6	+3·1	14·4	105·5	8th	72·0	2nd & 31st.	33·5
		Jask		29·748	−·002		29·872	1st	29·615	26th	·257	87·0	94·2	+2·0	80·8	+2·6	87·5	+2·3	13·4	104·3	21st	75·2	7th & 8th,	29·1
		Muscat	20	29·746		29·713	29·878	14th	29·624	26th	·254	87·7	91·3		84·7		88·0		6·6	100·7	22nd	78·1	3rd	22·6
	Arabia	Baghdad	220	29·702	−·010	29·697	29·931	20th	29·506	11th	·426	78·8	95·1	+3·6	67·2	−0·8	81·2	+1·4	27·9	107·5	31st	56·5	9th	51·0
		Bussrah		29·846			30·050	14th	29·667	6th	·383		96·8		76·4		86·6		20·4	106·9	31st	68·9	9th	38·0
		Aden	94	29·748	−·022	29·773	29·820	20th	29·668	2nd	·152	86·5	93·6	−0·1	82·5	+1·8	88·1	+0·9	11·1	97·3	12th	78·8	3rd & 5th,	18·5
		Perim	201	29·636		29·769	29·711	8th	29·559	11th	·152	86·9	92·9		83·1		83·0		9·8	98·3	28th	80·2	4th	18·1
	Afghanistan	Kabul										62·0	78·1		51·1		64·6		27·0	88·1	29th	41·4	7th	46·7
	Central Asia	Kashgar		25·557			25·879	8th	25·281	4th	·598	63·0	75·1		54·0		64·6		21·1	93·0	30th	42·5	8th	50·5
	Arabian Sea Island.	Minicoy	7	29·913		29·845	29·961	1st	29·847	26th	·114	84·8	88·8							91·9	30th			
	Africa	Zanzibar	73	29·991	−·022	29·991	30·062	28th	29·912	6th	·150	77·2	81·8		75·6		78·7		6·2	86·7	6th	72·4	19th	14·3
		Dunga (Zanzibar).		29·923			29·991	28th	29·845	6th	·146	75·7	83·1		69·6		76·4		13·5	89·5	3rd	64·6	31st	24·9

* Mean of 27 days. † Aneroid uncorrected. § Mountain barometer uncorrected. ¶ Mean of 28 days. NOTE.—When a query is inserted against any reading or in the variation returns for any

I—*concluded.*

in India, Burma, etc., in May 1901—concluded.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 31st May 1901.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st May.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
21	1	1		5	3				S 40° E	5·0	6·2	8·3	− 25	50	·304	1·9	5	5·55	−0·55	8·22	3·50	+ 4·72	17·35	10·55	+ 68·0	4·08	Murree.	Punjab—(*concld.*)	30
25					1	3	1	1	S 63° W							2·2	3			1·67	0·71	+ 0·96	3·81	6·54	− 2·73	1·08	Poo.		
2	11		1	3	3		1	7	N 15° W	17·2		2·9	+148	44	·250	1·7	3	6·18	−3·18	2·14	3·64	− 1·50	6·99	7·78	− 0·79	0·89	Simla.		
3	10			9	7	1		1	S 59° E	11·8		6·0	+ 97	51	·290	2·5	5			3·74	2·62	+ 1·12	6·09	6·49	− 0·40	1·57	Chakrata .	North-Western Provinces.	25
1	11	3	1	5	4	2	1	3	N 18° E					49	·301	2·4	4	4·55	−0·55	2·47	2·51	− 0·04	4·97	6·51	− 1·54	1·20	Mussooree.		
8		2	4	3		5	3	6	W	3·7	4·2	3·3	+ 27	51	·338	1·4	6	6·00	0	2·12	2·71	−0·59	4·34	6·06	− 1·72	0·82	Ranikhet.		
		1	1	7	8	3	1	10	S 30° W	6·2	5·7			54	·307	1·3	6			3·95			5·89			1·64	Muktesar.		
																	9			4·27			12·96			0·86	Yatung .	Bengal.	13
11		5	4	2	1	2	3	1	N 84° E	5·7	5·3	6·2	−15	87	·405	5·6*	14	13·56	+0·44	8·81	8·50	+ 0·31	12·68	14·76	− 2·08	3·69	Darjeeling.		
										?	?	?		79*	·427*	5·9*	21			14·70	26·66	−11·96	32·04	42·04	−10·00	3·25	Gantok.		
	2				6	9	6	8	S 75° W	11·0	11·4	9·4	+ 21	35	·330	0·8	1	1·45	−0·45	0·12	1·18	− 1·06	0·26	1·36	− 1·10	0·12	Mount Abu	Central India.	
2	7			1		1	5	15	N 44° W	7·7	7·9	6·8	+ 16	36	·407	2·8	0	2·09	−2·09	0·06	0·66	− 0·60	2·72	1·21	+ 1·51	0·04	Pachmarhi.		
23	5	1						2	N 6° W	2·8		3·0	− 7	69	·459	4·8	8	8·48	−0·48	6·50	3·95	+ 2·55	12·88	9·54	+ 3·34	2·18	Wellington.	South India.	
	4	6	5	2			2	12	N	11·7				70	·373	4·6	8			5·33			14·50			1·53	Kodaikanal.		
																											XIII.—Extra India.		
3						28			S 45° W	10·4				84	·954	2·7	2			2·10	4·97	− 2·87	12·30	8·30	+ 4·00	1·76	Trincomalee	Ceylon.	
	1		2	7	4	8	8	1	S 30° W	8·5		8·5	0	85	·975	5·4	11			5·82	11·79	− 5·97	19·98	28·76	− 8·78	1·49	Colombo.		
														60	·459	2·8	4			1·89	0·81	+ 1·08	3·10	4·94	− 1·84	0·77	Meshed .	Persia.	
2	3	8	5	1		7		2	N 51° E	0·8**	1·0**			60¶	·483¶	1·9¶	2			0·39	0·34	+ 0·05	1·65	4·13	− 2·48	0·22	Teheran.‖		
										1·7	2·2			46	·308	1·7	3			0·82	0·17	+ 0·65	2·65	2·53	+ 0·12	0·42	Ispahan.		
2	7	5	1		2	1	1	12	N 19° W	10·1	12·0	8·9	+25	55	·669	2·1	0			0	0·03	− 0·03	1·36	1·80	− 0·44	0	Bushire.		
5			13			2	2	9	N 34° E	10·9	12·6			84	1·093	0	0			0	0	0	0	1·25	− 1·25	0	Jask.		
9		1	4	2			4	11	N 41° W	3·6	3·8			68	·877	0·3	0			0	0	0	1·10	1·14	− 0·04	0	Muscat.		
16	5	3		1		2		4	N 7° W	2·7	3·6			40	·396	2·2	1			0·17	0·26	− 0·09	0·67	3·38	− 2·71	0·10	Baghdad .	Arabia.	
	25				4		2		N 5° W											0			1·21			0	Bussrah.		
2		19	4	1		5			N 58° E	12·4	12·2	10·6	+ 15	71	·898	3·4	0			0	0·21	− 0·21	0·16	2·03	− 1·87	0	Aden.		
3		3	9	7	1		4	4	S 84° E	14·1	12·7			84	1·082	0·8	0			0	0·15	− 0·15	0·55	0·31	+ 0·24	0	Perim.		
	9	1			1	2	12	6	N 55° W					53	·296	1·0	6			2·28	0·27	+ 2·01	7·89	8·42	− 0·53	1·30	Kabul .	Afghanistan.	
16	2	1	5	1	3	1	1	1	S 76° E	3·8	3·4			53	·290	5·1	5			3·29	1·65	+ 1·64	3·29‡	2·02	?	1·30	Kashgar .	Central Asia.	
	1				3	2	7	18	N 67° W	6·9	7·4			76	·914	4·5	5			1·47			16·38			0·69	Minicoy .	Arabian Sea Island.	
					19	12			S 18° W	10·0	9·4			90	·844	7·5	20			17·47	8·84	+ 8·63	40·24	25·83	+14·41	2·44	Zanzibar .	Africa.	
			1	1	16	13			S 17° W	6·8	6·5			94	·839	7·4	25			20·80			45·01			2·76	Dunga (Zanzibar.)		

Station, the data for that station are not utilized in calculating the provincial variations. ‡ Rainfall for the months of March and May only. ‖ Wind observation of 28 days. ** Mean of 25 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 65

Meteorological Province.	Station.	Elevation of barometer above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45°Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair		29·807	29·717	·090	29·760	+·007	29·752	88·1	78·4*	9·7	93·0	75·3	17·7	84·8	84·0	81·9	− 0·3	75·8	80·2	79·3	78·4
	Rangoon		·816?	·688?	·128	·756?	+·001	·739?	89·9	77·2	12·7	100·6	72·9	27·7	84·8	86·1	81·7	− 0·8	74·8	78·6	78·7	77·4
	Diamond Island		·799	·702	·097	·749	−·017	·724	88·1	80·2	7·9	91·6	76·2	15·4	85·8	85·5	83·2	+ 0·5	75·7	79·8	79·0	78·2
	Cocos Island	111	·771	·683	·088	·725	+·068	·768	90·2	78·9	11·3	96·8	72·5	24·3	86·8	85·3	83·0	+ 0·9	74·6	80·5	79·2	78·1
	Akyab		·806	·696	·110	·755	−·003	·717	92·2	76·9	15·3	96·4	72·3	24·1	87·7	88·2	83·5	+ 0·3	?	78·6	79·2	?
Bengal and Orissa.	Chittagong		·719	·595	·124	·658	−·011	·692	91·4	75·4	16·0	96·0	70·1	25·9	87·5	88·4	82·6	+ 1·6	72·9	78·5	79·3	76·9
	Calcutta (Alipore)		·740	·613	·127	·678	+·020	·644	96·3	77·0	19·3	104·0	70·2	33·8	89·2	93·6	86·4	+ 1·0	73·9	79·9	79·2	77·7
	Saugor Island		·758	·623	·130	·690	+·023	·659	92·9	82·0	10·9	95·7	74·1	21·6	88·8	90·3	86·5	+ 1·3	77·7	82·2	82·7	80·9
	False Point		·744	·628	·116	·688	+·004	·650	91·3	79·8	11·5	92·7	72·7	20·0	89·4	88·7	84·6	+ 0·6	77·0	82·4	82·1	80·5
Gangetic Plain and Chota Nagpur.	Hazaribagh		27·736	27·626	·110	27·685	+·002	·574	98·9	75·2	23·7	105·0	65·9	39·1	89·8	95·6	86·1	+ 0·5	64·8	69·8	69·6	68·1
	Darbhanga		29·585	29·134	·131	29·498	0	·613	95·5	76·5	19·0	103·3	70·5	32·8	87·4	94·7	85·4	+ 0·8	71·0	76·5	76·7	74·7
	Allahabad		·371	·240	·131	·306	−·011	·555	107·9	79·0	28·9	114·4	72·3	42·1	99·0	106·6	93·6	+ 1·2	67·6	75·3	76·0	73·0
Upper Gangetic Himalayas.	Dehra Dun		27·514	27·422	·092	27·458	−·002	·590	94·2	68·2	26·0	102·8	61·3	41·5	85·1	90·7	80·7	− 1·9	59·1	66·3	67·0	64·1
	Roorkee		28·808	28·696	·112	28·746	+·012	·572	101·4	71·2	30·2	108·7	62·7	46·0	91·6	99·4	86·1	− 1·8	60·9	69·8	69·5	66·7
	Meerut		·939	·827	·112	·875	−·003	·552	103·8	74·2	29·6	110·4	64·3	46·1	94·6	101·4	98·7	+ 0·2	63·2	72·9	73·2	69·8
	Lahore		·972	·890	·082	·924	+·017	·571	102·8	73·8	29·0	114·6	64·9	49·7	93·8	101·3	88·2	+ 0·8	64·1	71·3	73·0	69·5
	Ludhiana		·874	·762	·092	·821	+·019	·576	102·0	74·6	27·4	110·9	65·5	45·4	92·0	100·1	88·2	+ 0·3	66·8	70·4	71·9	69·7
Indus Valley and N.-W. Rajputana.	Peshawar		·615	·536	·079	·569	+·026	·640	95·3	69·2	26·1	111·0	57·5	53·5	88·1	91·9	81·7	− 1·7	59·5	67·6	69·4	65·5
	Jacobabad		29·461	29·347	·114	29·397	−·011	·531	113·3	77·9	35·4	124·0	67·1	56·9	101·3	111·3	95·4	+ 1·2	64·9	76·0	79·0	73·3
	Kurrachee		·739	·650	·089	·693	+·017	·673	94·8	81·8	13·0	116·3	75·7	40·6	90·4	89·9	86·2	+ 2·2	76·5	80·5	81·0	79·3
East Rajputana, Central India, and Gujarat.	Jaipur		28·310	28·200	·110	28·254	+·009	·585	107·9	78·5	29·4	115·1	71·1	44·0	98·3	105·3	92·7	+ 2·1	62·6	71·9	72·0	68·9
	Udaipur		27·863	27·770	·093	27·817		·625	102·8	80·1	22·7	109·0	69·5	39·5	95·1	97·8	90·2		70·7	74·9	76·7	74·1
	Deesa		29·315	29·183	·132	29·248	+·014	·652	106·5	78·6	27·9	112·3	74·0	38·3	92·7	104·9	91·9	+ 0·7	69·7	74·6	73·0	72·4
	Jamnagar		·745	·649	·096	·697		·704	99·0	77·1	21·9	105·0	73·2	31·8	92·3	94·2	86·8		73·6	78·8	79·3	77·2
Deccan.	Belgaum		27·348	27·245	·103	27·300	+·022	·720	89·3	68·7	20·6	96·4	64·9	31·5	81·7	83·3	76·3	− 1·4	66·5	70·7	71·9	69·7
	Sholapur		28·239	28·093	·146	28·168	+·016	·652	103·7	75·6	28·1	109·1	71·5	37·6	90·7	99·8	88·3	− 0·9	66·3	71·8	72·2	70·1
	Poona		·025	27·912	·113	27·976	+·027	·711	99·1	71·0	28·1	105·6	65·5	40·1	88·8	93·6	83·9	− 0·5	67·5	70·7	70·9	69·7
	Akola		·852	28·699	·153	28·774	+·015	·619	109·0	81·3	27·7	116·3	78·1	38·2	98·2	107·1	95·0	+ 1·2	69·3	73·4	72·4	71·7
	Buldana	2,132	27·696	27·568	·128	27·631	+·013	·622	102·9	78·0	24·9	110·3	72·8	37·5	91·5	100·4	90·1	+ 1·4	64·4	70·1	68·4	67·6
	Khandwa		28·735	28·588	·147	28·661	+·012	·620	108·4	83·4	25·0	117·2	79·1	38·1	96·1	106·3	95·3	+ 2·8	67·4	73·6	72·3	71·1
	Nagpur		·722	·583	·139	·652	+·020	·589	109·1	81·4	27·7	115·6	73·6	42·0	98·8	104·8	94·5	− 0·1	67·3	73·5	73·3	71·4
	Nagpur (Sanitary Commr.'s Office)		·741	·597	·144	·668		·595	110·2	81·4	28·8	116·4	75·5	40·9	99·6	106·0	94·8		68·0	75·9	76·2	73·4
	Hyderabad (Deccan).		·132	27·999	·133	·066	+·019	·645	100·5	77·6	22·9	106·2	73·2	33·0	90·7	98·5	88·6	− 2·5	69·9	73·7	74·4	72·7
West Coast.	Bombay		29·846	29·744	·102	29·793	+·024	·769	91·4	82·4	9·0	93·3	80·0	13·3	87·7	88·7	86·2	+ 1·5	76·2	79·2	79·8	78·4
	Karwar			Not recorded.					90·0	80·1	9·9	92·7	74·7	18·0	86·4	88·4	84·5	+ 0·6	75·3	77·4	78·0	76·9

II.

Stations in India, Burma, etc., in May, 1901.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind steadiness.		Wind velocity.		Rainfall.		Station.	Meteorological Province
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·863*	·973	·940	·925	−·012	88*	81	81	83	0	7·3	7·3	7·3	+0·6				1	9	10	11	22	9	S. 58° W.	S. 38° W.	55	41	219	171				
·832	·897	·884	·871	+·001	89	76	72	79	+1	6·5	7·2	6·9	0		1	3	7	13	17	10	8	3	S. 2° E.	S. 21° W.	45	58	106	113			Port Blair	Burma Coast and Bay Islands.
·824	·944	·909	·892	+·001	80	76	75	77	+3	6·9	7·6	7·3	+1·0	6	1	2	2	6	10	11	12	12	S. 62° W.	S. 72° W.	37	47	177†	177			Rangoon	
·801	·961	·923	·895	+·005	81	76	76	78	−3	6·6	7·0	6·8	+0·2		5	2	3	7	5	18	16	6	S. 64° W.	S. 51° W.	42	58	168	P	8·99	1·15	Diamond Island, Cocos Island, Akyab	
P	·866	·876	P	P	P	66	66	P	P	5·2	5·6	5·4	−0·1		1	1	12	14	6	14	12	2	S. 9° W.	S. 24° W.	37	30	59†	89				
·782	·856	·880	·839	−·032	88	66	65	73	−7	5·5	4·2	4·9	−0·5		1	4	4	8	7	24	6	3	S. 36° W.	S. 1° E.	42	42	147†	150			Chittagong	
·799	·901	·805	·835	−·048	86	66	52	68	−6	3·8	3·0	3·4	−0·9	1		1	4	13	30	11	2		S. 5° E.	S. 7° E.	75	65	159	172			Calcutta (Alipore)	Bengal and Orissa.
·897	1·015	1·016	·976	−·011	81	75	71	76	−4	5·6	3·5	4·6	−1·2			1	2	15	38	6			S. 10° E.	S. 8° W.	85	73	448	394			Saugor Island	
·897	1·015	1·011	·974	+·004	88	73	74	78	−4	3·6	3·8	3·7	−1·1		1		1	9	36	15			S. 4° W.	S. 23° W.	84	73	300†	338			False Point	
·490	·483	·406	·460	−·007	57	36	26	40	0	3·1	5·4	4·3	+0·7	1	17	4	4	2	7	9	7	11	N. 44° W.	S. 83° W.	29	15	164†	222			Hazaribagh	
·694	·772	·682	·716	−·049	76	60	44	60	−2	1·9	1·2	1·6	−0·4	2	2	3	28	21	1	1	4		S. 73° E.	S. 82° E.	68	60	136	152			Darbhanga	Gangetic Plain and Chota Nagpur.
·532	·562	·490	·528	+·002	53	31	22	35	−2	0·7	0·9	0·8	−0·8	1	8	8	10	2	3	2	14	14	N. 25° W.	N. 3° W.	32	24	179†	149			Allahabad	
·393	·416	·372	·394	−·013	57	35	27	40	+1	1·9	2·9	2·4	−0·2	3	4	1	2	4	6	11	25	6	S. 78° W.	S. 80° W.	52	25	47	54			Dehra Dun	
·406	·440	·324	·390	−·038	53	30	18	34	−1	1·0	1·3	1·2	−0·4	8		3	4	16	3	2	11	15	S. 60° W.	S. 58° W.	10	11	96	90			Roorkee	Upper Sub-Himalayas.
·444	·528	·447	·473	−·021	52	33	23	36	−4	1·5	1·2	1·4	−0·3	6	1	4	6	12		4	9	20	N. 52° W.	N. 54° W.	18	22	58†	64			Meerut	
·474	·469	·437	·460	+·019	57	31	23	37	+4	1·9	1·3	1·6	−0·6	9	13	1	2	5	4	2	10	16	N. 46° W.	N. 11° E.	37	17	77	79			Lahore	
·559	·463	·410	·477	−·018	65	32	22	40	−1	1·5	1·9	1·7	−0·4	1	8	14	3	11	2	1	15	7	N.	N. 61° W.	29	11	84†	58			Ludhiana	
·396	·433	·454	·428	+·005	58	38	34	43	+4	2·4	4·6	3·5	+0·6	25	12	5	3		1		10	6	N. 22° W.	N. 17° E.	32	29	99†	116			Peshawar	Indus Valley and N.-W. Rajputana.
·446	·566	·561	·524	+·076	47	29	22	33	+3	1·6	2·2	1·9	+0·8	19		1	10	5	8	8	5	6	S. 3° W.	S. 40° E.	20	10	83†	112			Jacobabad	
·345	·909	·941	·898	+·009	78	64	67	70	−3	1·5	1·7	1·6	−0·5			1		1	3	29	28		S. 63° W.	S. 66° W.	85	86	396†	407			Kurrachee	
·378	·457	·371	·402	−·034	39	25	17	27	−5	1·9	3·3	2·6	+0·4		4	4	2		3	17	24	8	S. 87° W.	N. 66° W.	60	49	124	156			Jaipur	East Rajputana, Central India, and Gujarat.
·636	618	·665	·640		63	38	38	46		0·7	3·3	2·0		1	2	1				14	33	11	N. 89° W.		81		181†				Udaipur	
·612	·615	·385	·537	−·029	63	42	18	41	+1	0·5	0·9	0·7	−0·8						11	25	21	5	S. 58° W.	S. 60° W.	79	68	363	325			Deesa	
·784	·803	·802	·796		84	53	50	62		0·4	0·3	0·4							5	37	19	1	S. 56° W.		89		472†				Jamnagar	
·624	·616	·642	·627	+·032	89	57	57	68	+7	3·7	4·1	3·9	+0·3		3	1			2	18	31	7	S. 83° W.	S. 88° W.	78	60	334	124			Belgaum	Deccan.
·527	·548	·444	·509	+·038	60	39	24	41	+4	2·3	6·2	4·3	+0·2		13	4		2	2		8	33	N. 37° W.	N. 49° W.	72	55	382†	255			Sholapur	
·632	·533	·476	·547	+·039	83	30	32	52	+8	2·2	3·7	3·0	0			1		2		6	40	13	N. 85° W.	N. 74° W.	83	78	424†	342			Poona	
·559	·494	·333	·462	+·054	53	28	14	31	+3	1·9	3·8	2·9	+0·5	1	9	1			2	3	15	31	N. 54° W.	N. 50° W.	76	75	243†	224			Akola	
·437	·469	·296	·401	−·024	46	22	16	31	−3	1·2	2·9	2·1	−0·4		10	2				1	19	30	N. 51° W.	N. 49° W.	82	69	306†	286	0·03	0·03	Buldana	
·477	·541	·368	·462	−·004	42	33	16	30	−3	1·8	4·3	3·1	+1·0	1	9	2		1		1	11	37	N. 45° W.	N. 62° W.	81	72	282	241			Khandwa	
·494	·510	·426	·477	+·029	47	28	20	32	+3	2·4	6·8	4·6	+0·8	4	6	2	2	3	9	8	10	18	N. 82° W.	N. 46° W.	37	41	184‡	228			Nagpur	
·523	·603	·535	·554		49	32	23	35		2·1	6·7	4·4				13		14		15		20	N. 62° W.		10		72†				Do. (Sanitary Commr.'s Office)	
·641	·624	·552	·606	+·045	68	44	31	48	+7	2·9	3·5	3·2	+0·3	26	3		1	1			20	11	N. 69° W.	N. 57° W.	45	50	129†	173			Hyderabad (Deccan)	
·825	·885	·899	·870	−·007	74	67	66	69	−5	2·8	2·1	2·5	−1·3		1		1			10	34	16	N. 84° W.	N. 83° W.	84	70	214	247			Bombay	West Coast.
·815	·819	·819	·818	−·035	80	65	61	69	−4	3·8	2·8	3·3	+0·1		2					3	31	26	N. 70° W.	N. 67° W.	88	82	145	128			Karwar	

† Corrected.

‡ Mean of 29½ days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 65

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure. Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Temperature of Air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
South India.	Periyakulam		28·917	28·785	·122	28·865			96·6	73·5	23·1	102·3	65·9	36·4	87·6	90·5	83·4		70·4	75·1	75·7	73·7
	Salem		·942	·787	·155	·877	+·002	29·729	99·1	76·9	22·2	103·1	70·1	33·0	88·3	93·9	86·0	+1·1	74·1	77·5	79·0	76·9
	Chitaldroog		27·486	27·356	·130	27·422	+·001	·696	93·5	71·6	21·9	99·1	65·7	33·4	83·2	92·0	82·2	+0·9	68·7	72·3	72·1	71·0
	Bangalore		26·915	26·791	·124	26·860	+·015	·716	90·1	68·9	21·2	97·0	64·8	32·2	80·8	87·1	78·8	+0·2	65·7	70·9	70·2	66·9
	Hassan		·862	·755	·107	·816	+·005	·749	88·6	66·8	21·8	95·4	63·1	32·3	81·7	82·4	76·2	+0·8	65·2	69·9	70·3	68·5
	Mysore		27·408	27·276	·132	27·342	0	·732	92·3	69·7	22·6	97·3	65·8	31·5	81·5	88·0	80·0	+0·9	67·9	72·1	72·7	70·9
	Madras		29·790	29·675	·122	29·742	+·010	·692	100·0	80·7	19·3	107·2	77·0	30·2	94·8	91·0	87·9	+0·5		79·7	80·8	79·5
	Bellary		28·380	28·237	·143	28·310	+·020	·691	100·8	76·5	24·3	105·0	67·2	37·8	89·1	96·3	87·2	−1·4	67·3	69·8	71·0	69·4
	Waltair		29·557	29·444	·113	29·501		·664	92·7	81·3	11·4	100·0	71·3	28·7	89·3	89·0	86·1		73·4	79·9	80·4	77·9
Hill Station, Baluchistan.	Quetta		24·611	24·538	·073	24·566	+·019		83·0	51·7	31·3	91·3	42·1	49·2	76·9	79·8	66·5	−0·6	47·7	59·5	60·1	55·8
Hill Stations, Northern India.	Leh		19·718	19·635	·083	19·689	−·004		63·8	36·5	27·3	74·1	28·0	46·1	54·2	60·3	49·6	+1·2	30·9	38·7	41·9	37·2
	Srinagar		24·846	24·765	·081	24·797	−·007		75·3	51·8	23·5	87·0	46·0	41·0	65·2	73·5	63·1	−1·5	49·9	62·2	69·3	60·5
	Kailang	10,087	20·972	20·912	·060	20·954	P		61·6	36·7	24·9	72·8	32·0	40·8	52·9	56·7	47·6	−0·6	33·8	43·1	45·0	40·6
	Simla (Ridge)		23·114	23·069	·045	23·083	+·022		70·6	56·6	14·0	79·0	45·9	33·1	65·7	67·5	63·2	−1·9	47·6	52·3	53·5	51·1
	Chakrata		·270	·222	·048	·237	+·011		72·0	56·2	15·8	79·8	44·2	35·6	66·2	67·9	63·5	−1·3	48·4	54·9	55·7	53·0
	Ranikhet		24·075	24·006	·069	24·029	+·015		79·6	61·0	18·6	86·3	51·0	35·3	73·0	75·2	69·6	+1·4	51·9	57·2	58·2	55·8
	Muktesar		22·854	22·792	·062	22·823			75·4	54·6	20·8	83·3	47·0	36·3	68·1	69·3	63·5		48·4	55·9	57·2	53·8
	Katmandu	4,388	25·485	25·396	·089	25·437	P		85·3	59·5	25·8	92·4	53·6	38·8	76·2	78·5	70·7	0	57·7	64·5	64·9	62·4
	Darjeeling		23·016	22·945	·071	22·976	+·054		64·5	50·9	13·6	69·3	47·1	22·2	60·2	62·0	57·1	+0·8	49·0	56·8	57·9	54·6
Hill Stations, Central India.	Mount Abu		25·997	25·928	·069	25·961	+·001		88·6	72·5	16·1	93·4	61·9	31·5	83·5	86·5	80·0	+1·0	58·4	63·4	65·5	62·4
	Pachmarhi		26·392	26·292	·100	26·341	+·012		96·3	76·0	20·3	102·9	68·4	34·5	88·7	94·4	85·8	+1·5	60·4	66·8	66·0	64·4
	Chikalda	3,642	·292	·189	·103	·239	+·019		94·7	74·3	20·4	102·4	68·1	34·3	84·8	92·4	84·0	+1·1	62·4	65·4	67·4	65·1
Hill Stations, S. India.	Wellington		24·254	24·179	·075	24·217	+·012		74·8	57·0	17·8	78·2	49·2	29·0	71·2	70·3	64·8	−0·9	54·8†	62·0	61·8	59·5
	Kodaikanal		22·850	22·780	·070	22·811			67·1	54·3	12·8	71·1	50·7	20·4	64·1	61·6	59·6		50·1	56·7	56·9	54·6
Extra India.	Aden		29·766	29·648	·118	29·704	−·013	·728	93·6	82·4	11·2	97·1	78·6	18·5	89·1	91·7	87·8	+1·7	75·7	79·9	78·7	78·1
	Perim		·638	·532	·106	·582	−·004	·714	93·0	83·1	9·9	97·2	80·2	17·0	89·3	90·4	87·4	+0·8	79·2	84·0	84·6	82·6
	Minicoy		·921	·865	·056	·891		·823	88·7			91·9			86·5	86·4				79·4	79·3	
	Zanzibar		30·011†	·920	·091	·966	−·009	·964†	81·8	75·6	6·2	86·9	72·4	14·5	78·5	80·3	78·3	+0·3	72·2	75·6	75·4	74·4
	Port Victoria (Seychelles).	15	29·962	·884	·078	·923	−·018	·862	84·6	75·5	9·1	86·5	71·1	15·4	82·9	83·7	79·8	−1·1	73·7	77·2	77·2	76·0
	Mauritius (Pamplemousses).	181				·895	−·012	30·024				88·0	60·6	27·4			74·1	+1·5				

† Mean of 30 days. ‡ Mean of 22 days. § Mean of 29 days. ‖ Mean of 27½ days.

II—*concluded.*

Stations in India, Burma, etc., in May, 1901—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind direction.										Wind steadiness.		Wind velocity.		Rainfall.		Station.	Meteorological Province.
														Number of winds from																	
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·707	·708	·686	·700		86	54	50	63		4·2	6·6	5·4		11	9	4	5	2	9	6	8	7	N. 75° W.		13		67*				¶ Periyakulam	South India.
·806	·806	·759	·790	+·028	88	60	44	64	+ 1	4·6	6·4	5·5	+0·9	12	3	2	1		4	17	14	9	S. 80° W.	S. 47° W.	50	55	94*	98			Salem.	
·667	·660	·541	·623	+·056	86	58	37	60	+ 4	4·2	5·2	4·7	+0·5		1	1	2	2	1	8	26	21	N. 79° W.	N. 80° W.	69	75	196*	232			Chitaldroog.	
·598	·642	·548	·596	+·002	84	61	44	63	+ 1	2·4	5·4	3·9	−0·5	1	4	2	1	2	2	11	23	16	N. 82° W.	S. 78° W.	63	68	168*	143			Bangalore.	
·607	·594	·605	·602	−·008	92	56	55	68	− 2	5·3	7·8	6·6	+1·2		1	3	3	2		12	27	14	N. 85° W.	N. 85° W.	63	72	81*	109			Hassan.	
·664	·673	·616	·651	+·046	91	63	48	67	+ 3	7·5	8·5	8·0	+2·6		3	4	2	3	5	15	20	10	S. 81° W.	S. 83° W.	50	64	210*	271			Mysore.	
	·810	·912	·894	+·017		50	63	68	0	3·3	3·2	3·3	−0·5		1	1	4	24	11	6	7	8	S. 11° E.	S. 13° E.	40	65	200	219			Madras.	
·555	·487	·443	·495	−·082	61	36	27	41	− 3	4·3	7·7	6·0	+1·1	2	2	1	1	1	3	6	19	27	N. 71° W.	N. 73° W.	68	55	220*	201			Bellary.	
·723	·897	·925	·848		68	65	68	67		3·9	4·9	4·4					2		6	50	4		S. 42° W.		90		161				Waltair.	
·298	·331	·320	·316	+·040	77	37	33	49	+ 8	1·7	3·0	2·4	+1·2	28	4			1	2		14	13	N. 65° W.	N. 68° W.	40	47	41*	91			Quetta.	Hill Station, Baluchistan.
·129	·103	·111	·114	−·014	60	26	21	36	− 3	4·3	6·3	5·3	−1·0		4	6	4	4	7	14	17	6	S. 70° W.	S. 71° W.	34	31	96	73			Leh.	
·342	·535	·686	·521	+·090	87	85	82	85	+14	2·5	5·3	3·9	+0·4	15	12	5		1	2	1	10	16	S. 37° E.	S. 78° E.	47	11	94*	95			Srinagar.	
·172	·196	·202	·190	+·006	79	49	45	58	+ 2	3·8	6·4	5·1	−0·8		2		1	2	6	37	13	1	S. 51° W.	S. 58° W.	79	69	34	56	4·18	2·32	Kailang.	
·240	·257	·267	·255	−·024	53	42	41	45	− 1	2·3	3·3	2·8	−1·0	1	16	2	1	2	9	4	6	12	N. 47° W.	N. 12° W.	31	33	173‡	143			Simla (Ridge).**	Hill Stations, Northern India.
·261	·316	·320	·299	+·023	59	50	48	52	+ 4	2·5	3·9	3·2	−0·3	1	10	2	1	9	37	1		1	S. 13° E.	S. 65° W.	53	33	283	164			Chakrata.	
·295	·308	·313	·305	−·029	57	39	36	44	− 6	2·2	3·0	2·6	−0·8	3	1	3	1	1	2	14	27	10	S. 86° W.	S. 65° W.	64	46	103*	94			Ranikhet.	
·277	·326	·351	·318		66	49	51	55		2·3	3·7	3·0		2	2	9	1	14	1	6	5	22	N. 40° W.		19		137*				Muktesar.	
·461	·482	·464	·469	−·027	90	57	49	65	− 3	5·5	6·6	6·1	+0·7		1	1	26	2		10	20	2	S. 4° W.	S. 88° W.	10	49	39 †	43	3·30	0·87	Katmandu.	
·330	·430	·441	·400	−·008	88	82	80	83	− 4	5·6	6·98	6·3	−1·1	6		4	4	8	4	23	9	1	S. 31° W.	S. 74° W.	44	38	122*	170			Darjeeling.	
·328	·354	·388	·356	+·002	43	32	31	35	− 2	0·8	1·9	1·4	0		2	1			4	29	19	7	S. 69° W.	S. 67° W.	76	71	278*	247			Mount Abu.	Hill Stations, Central India.
·349	·403	·310	·354	+·005	39	30	20	30	− 2	2·3	4·8	3·6	+0·8	3	13	7	1	1	1	3	7	26	N. 33° W.	N. 66° W.	63	58	193*	170			Pachmarhi.	
·428	·408	·381	·406	+·033	51	35	25	37	+ 2	1·2	4·1	2·7	−0·2	23	33	2					4		N. 2° W.	N. 36° W.	60	65	143*	239	0·67	0·24	Chikalda.	
·410†	·471	·467	·449	+·010	89†	61	63	71	+ 2	5·5	7·2	6·4	+0·6	10	19	5	3	16	5	2		2	N. 68° E.	N. 87° E.	26	19	67	71			Wellington	Hill Stations, S. India.
·325	·388	·421	·378		77	65	77	73		5·5	7·5	6·5			7	7	8	8	1	2	1	13	N. 28° E.		24		285				Kodai kanal ††	
·803	·899	·809	·837	−·609	72	66	54	64	− 4	2·2	1·7	2·0	+0·4	1	2	26	7	12	3	9		2	N. 82° E.	S. 60° E.	43	40	292*	266			Aden.	Extra India.
·949	1·105	1·119	1·058	+·183	83	80	78	80	+11	0·3	1·5	0·9	−0·7	3		9	16	14	3	2	9	6	S. 78° E.	S. 82° E.	29	32	305*	337			Perim.	
	·910	·911				72	72			4·5	5·7	5·1			3	1			4	5	15	34	N. 64° W.		76		177*				Minicoy.	
·749	·849	·818	·805	+·010	84	87	79	84	+ 2	8·3	7·3	7·8	+2·0	1				10	41	9	1		S. 1° W.	S. 5° E.	87	85	225*	194			Zanzibar.	
·810	·865	·853	·843	+·031	91	77	73	80	+ 4	4·7	5·3	5·0	−0·1	5	2	6	11	22	12	2		2	S. 53° E.	S. 44° E.	56	58	142	173	4·72	2·96	Port Victoria (Seychelles).	
			·635	+·018				76	− 1																		286	248	1·94	1·51	Mauritius (Pamplemouses).	

** Wind variable 4. ¶ Wind variable 1. †† Wind variable 15. * Corrected.

G. I. C. P. O—No. 44 Meteor.—11-9-1901.—385.

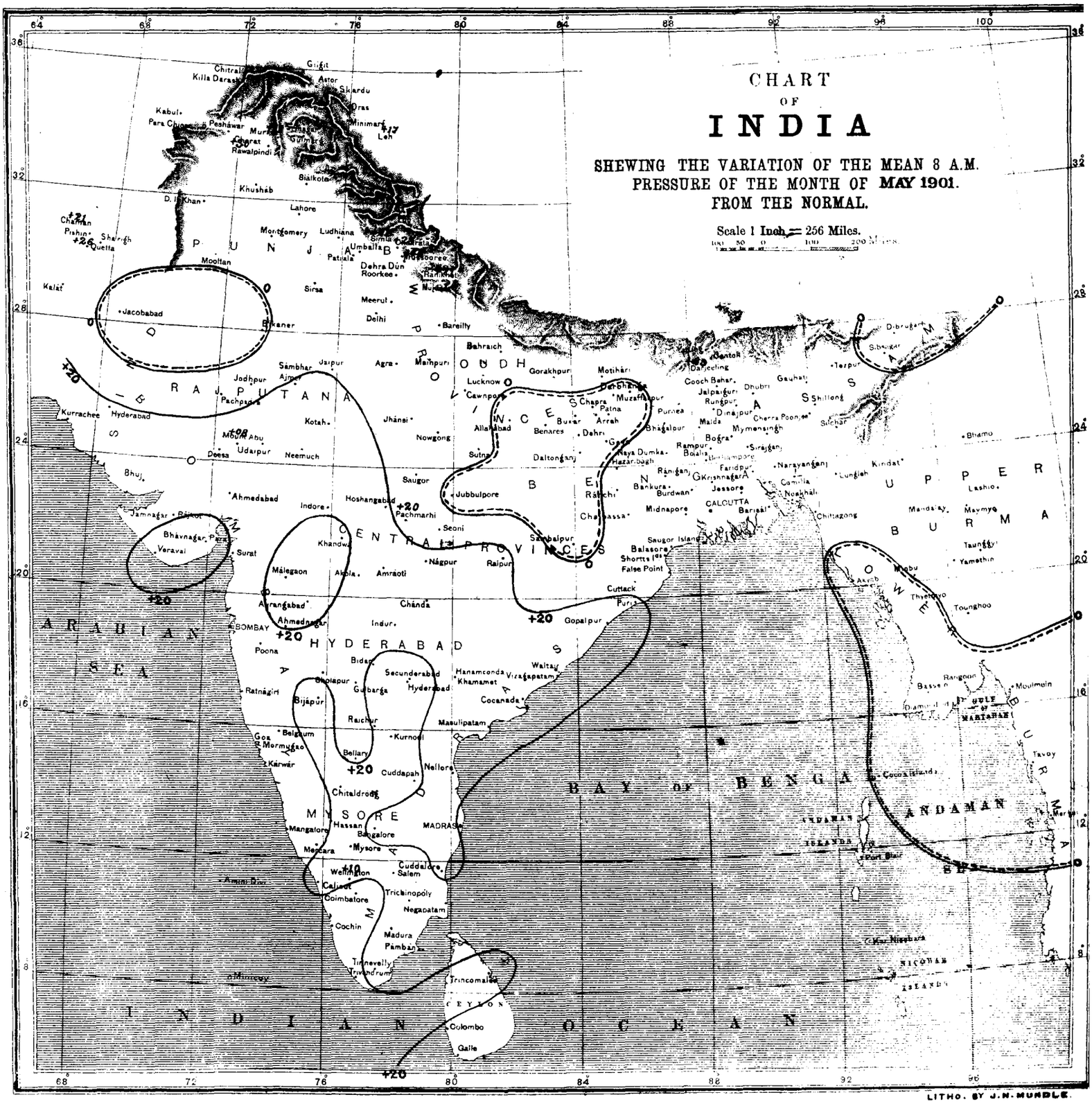
LITHO. BY J. N. MUNDLE.

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one feather added to the wind arrow
,, ,,	2 to 5 ,, ,, ,,	...	two feathers ,, ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	...	three ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	...	four ,, ,, ,, ,, ,,
	over 20 ,, ,, ,,	...	five ,, ,, ,, ,, ,,



Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

CHART SHEWING THE VARIATION OF THE MEAN MAXIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.

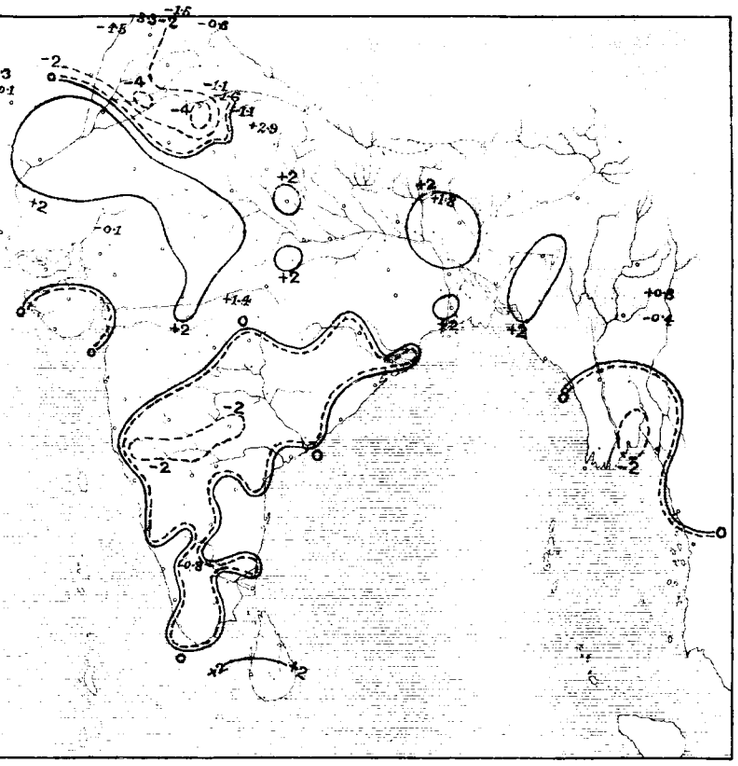
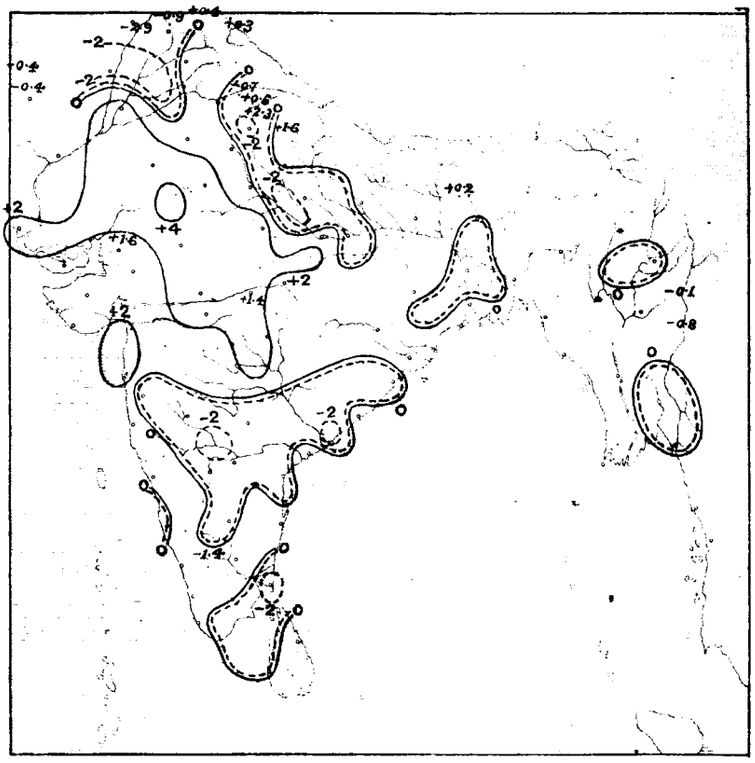


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

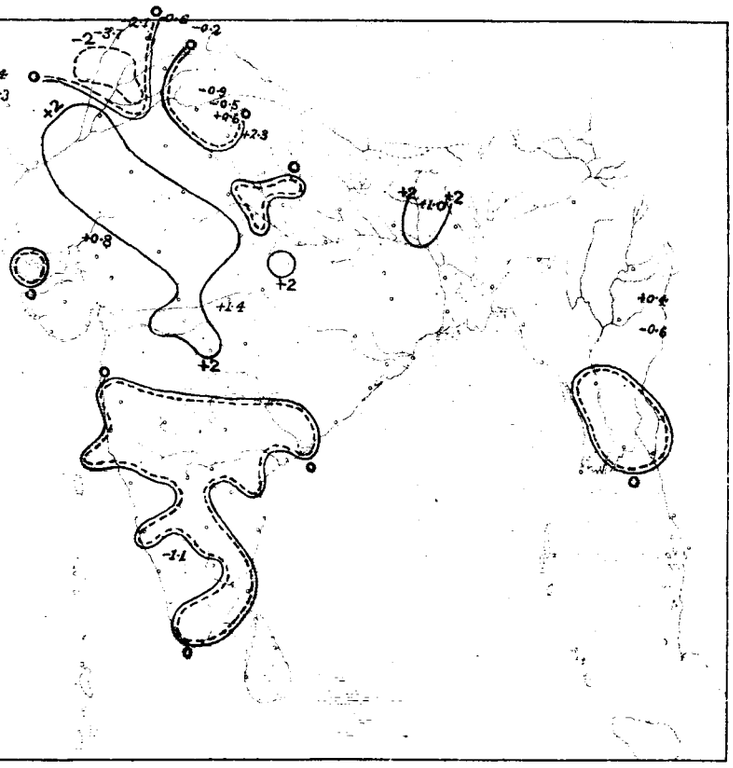
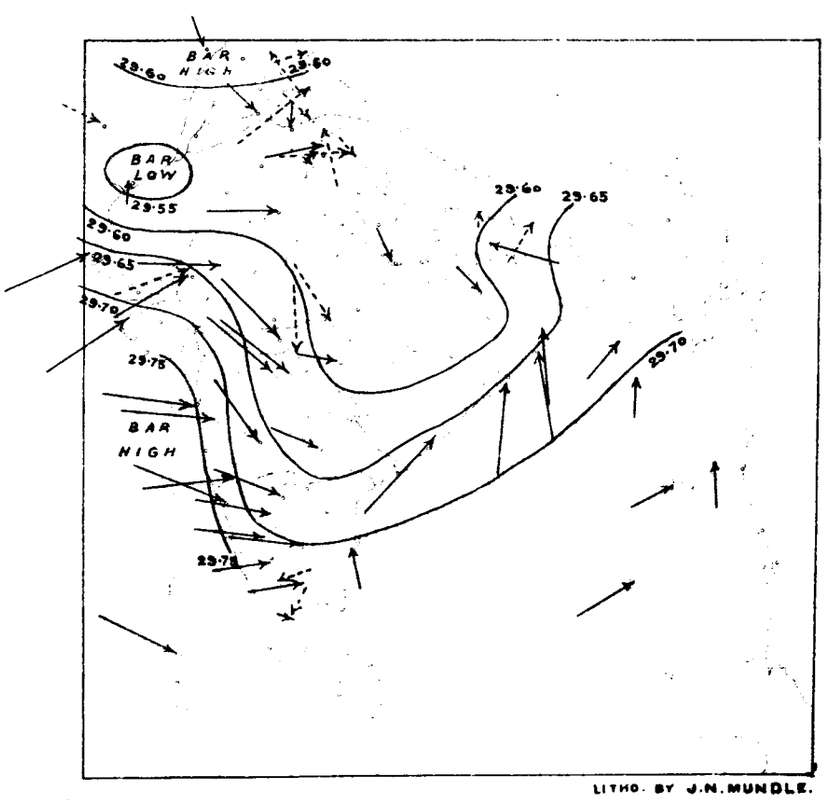


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF MAY 1901.



LITHO. BY J.N. MUNDLE.

Explanation.

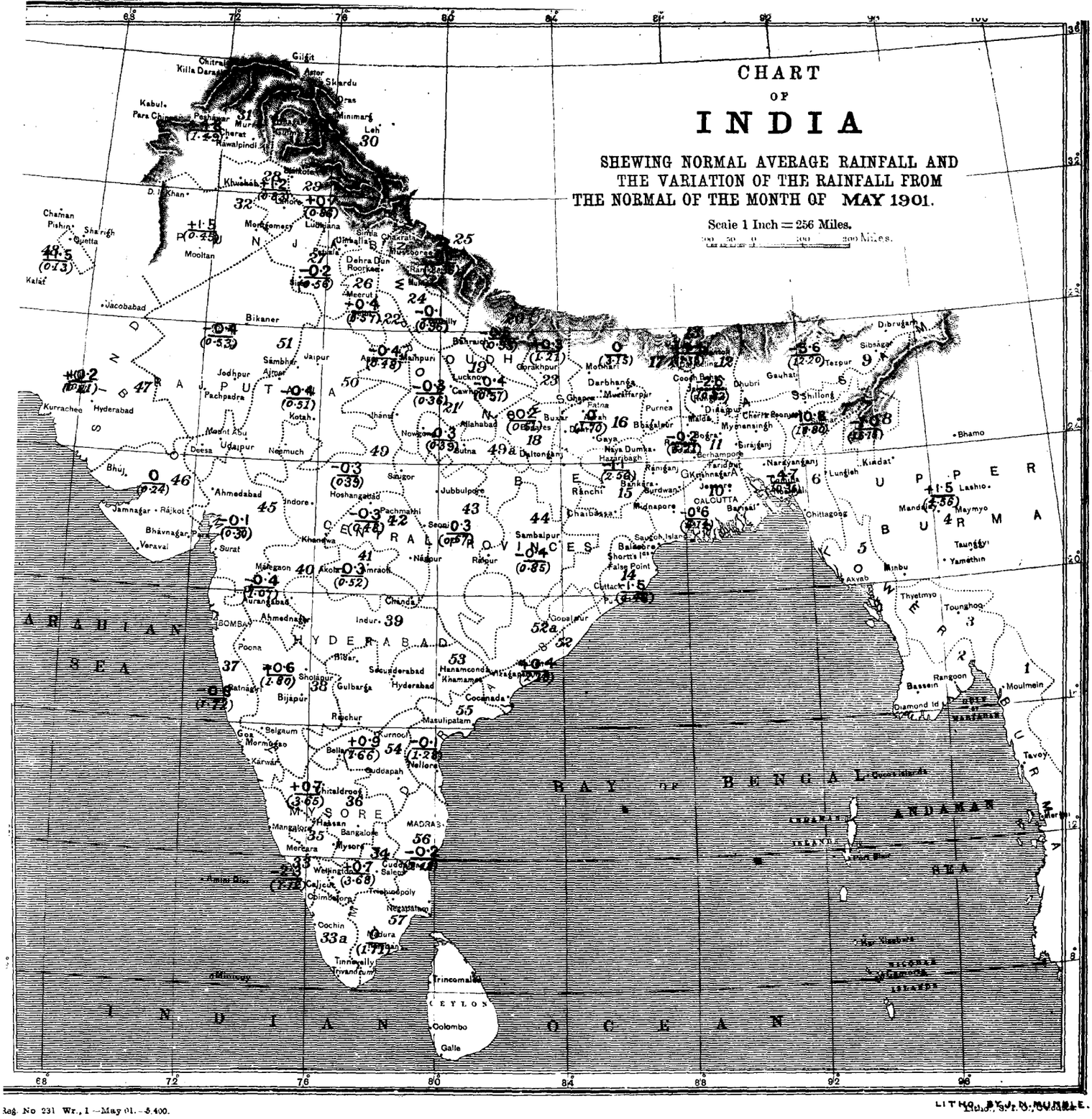
Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions of the resultants of the wind recorded at 10 and 16 hours, and by their

LITHO. BY J.N. MUNDLE.

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India (182 in number), except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.



Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
33. Malabar
33a Travancore
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar
48. Baluchistan Hills
49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. Madras, East Coast, North
52(a). Do. do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South

LIBRARY
DEC 2 1901
Weather Bureau.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JUNE, 1901.

INTRODUCTION.

THIS review of the weather in India during the month of June 1901 is based on observations taken daily at 8 A.M. at 219 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 65 stations. In the rainfall summary the rainfall data of the meteorological observatories and the weekly rainfall telegrams received during the month from the District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review, are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given.

Summary of the chief features of the weather in India during the month of June, 1901.

The following is a brief sketch of the chief features of the meteorology of the month :—

At the commencement of the month the weather was slightly unsettled over Southern India, Burma and North-East India and series of thunderstorms gave moderate rain to those areas. Temperature was generally below the normal over the east of the Peninsula and a large part of Northern India, the relative coolness in some districts having been considerable. These conditions continued during the 1st and 2nd and the depression of temperature in these areas is shown in the following table :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	1st June.	2nd June.
	°	°
Benagl	−3·0	−0·2
Orissa	−0·4	−1·9
Bihar	−3·4	−0·3
Chota Nagpur	−1·9	−4·7
N.-W. Provinces and Oudh	−3·2	−6·3
Mysore	−0·8	−0·6
Madras Coast	−2·3	−1·1

On the 3rd rain fell over the hills and plains of North-West India, and these showers were accompanied and followed by a large fall of temperature in the north-west. This fall was particularly marked in the Punjab and Baluchistan and the depression of temperature thus initiated continued until the 9th in the former and the 10th in the latter region. The following gives comparative temperature data for Baluchistan and the Punjab from the 3rd to the 10th :—

Province or Division.	Variation from Normal of Mean Temperature of 24 hours preceding 8 A.M. of							
	3rd June.	4th June.	5th June.	6th June.	7th June.	8th June.	9th June.	10th June.
	°	°	°	°	°	°	°	°
Baluchistan . .	+0·2	−4·1	−7·5	−7·1	−6·5	−6·5	− 5	−2·4
Punjab . . .	−7·0	−7·5	−4·5	−5·2	−4·6	−2·0	−0·3	+1·5

During this period the mean temperature was generally excessive elsewhere, but particularly so over Sind, Central India, Gujarat and the Central Provinces. This is shown below :—

Province or Division.	Variation from Normal of Mean Temperature of 24 hours preceding 8 A.M. of							
	3rd June.	4th June.	5th June.	6th June.	7th June.	8th June.	9th June.	10th June.
	°	°	°	°	°	°	°	°
Sind . . .	+1·6	+2·4	+3·8	+2·7	+0·5	+1·1	+0·4	+4·8
Central India . .	+0·9	+1·3	+0·5	+1·7	+2·8	+4·4	+5·2	+7·1
Gujarat . . .	+0·5	+0·1	+0·2	+0·1	+0·1	+1·3	+4·6	+8·7
Central Provinces .	+2·8	+2·1	+4·0	+5·2	+6·1	+6·6	+6·9	+8·7

In the mean time the weather became unsettled over the south-east of the Arabian Sea. On the 5th the isobaric lines were opening out along the West Coast and the winds had shifted to south in that region. This disturbance accompanied the first advance of the monsoon current over the Arabian Sea. The storm slightly intensified and moved very slowly northward along the coast. It was throughout a very slight disturbance and apparently disappeared on the 11th. It, however, occasioned a burst of monsoon rainfall along the West Coast, the heaviest falls in 24 hours during this burst having been as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Trivandrum State	Nedumangad . .	5th June.	7·46
	Kottarakaray . .	6th ,,	5·98
	Rajakamangalam .	,, ,,	5·50
	Padmanabhapuram .	,, ,,	5·40
	Pattamapuram . .	,, ,,	5·30
	Nagercoil . . .	,, ,,	5·05
	Eraniel . . .	,, ,,	5·04
	Peermade . . .	7th ,,	5·83
	Trivandrum . . .	,, ,,	5·41
	Alleppey . . .	,, ,,	5·20
Malabar . .	Payyanur . . .	8th ,,	10·63
South Canara . .	Hosdrug . . .	,, ,,	9·10
	Kasaragod . . .	,, ,,	8·22
Malabar . . .	Talipparamba . .	,, ,,	7·62
	Tellicherry . . .	,, ,,	7·15
	Quilandi . . .	,, ,,	6·85
	Badagara . . .	,, ,,	5·46
South Canara . .	Mangalore . . .	,, ,,	5·34
Trivandrum State . .	Peermade . . .	,, ,,	5·20
South Canara . . .	Karkal . . .	9th ,,	8·19
Malabar	Vayittiri . . .	,, ,,	6·66
South Canara . .	Kasaragod . . .	,, ,,	6·22
	Baniwal . . .	,, ,,	6·00
Trivandrum State . .	Chengannur . .	,, ,,	5·96
South Canara . . .	Udipi	,, ,,	5·54
Malabar . . .	Talipparamba . .	,, ,,	5·13

The course of events over the Bay area at this time was very similar. On the 4th an advance of monsoon winds occurred and resulted in the formation of a shallow low pressure area in front of the advancing current. The disturbance formed over the east of the Bay, midway between Port Blair and Diamond Island, on the 5th, and thence advancing slowly up the east of the Bay crossed the East Bengal coast on the morning of the 9th.

On the 11th pressure was lowest along the foot of the North-West Himalayas and was highest in Malabar and Ceylon ; the intervening pressure gradients were very steep and unusually strong westerly and south-westerly winds prevailed with fine and dry weather except along the West Coast and in Assam and Burma where some rain was falling. In consequence very hot weather was reported and the mean temperature was very excessive,

more particularly in Bengal and the Gangetic Plain. The following gives comparative temperature data for the 12th:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 12th June.	Mean minimum temperature, 12th June.	Mean daily temperature, 12th June.
	°	°	°
Bengal	+6·3	+1·9	+4·1
Orissa	+11·6	+6·2	+8·9
Chota Nagpur	+13·5	+7·4	+10·5
Bihar	+10·0	+6·2	+8·1
North-Western Provinces and Oudh.	+12·1	+8·0	+10·1
Punjab	+8 6	+3·2	+5·9
Sind	+5·4	+1·8	+3·6
Rajputana	+7·8	+6·3	+7·1
Gujarat	+1·5	+1·8	+1·7
Central India	+7 7	+6·0	+6·9
Central Provinces	+7·4	+2·4	+4 9
Berar	+6 1	−0·9	+2·6
Madras Coast	+4·9	+2·4	+3·7
Madras Deccan	+2·3	+2·5	+2·4

On the 13th a fresh advance of monsoon winds commenced along the West Coast and the pressure conditions and winds around the Bay showed that an advance of monsoon winds was taking place over the Bay also. On the following day a shallow depression was shown over the head of the Bay and an advance of monsoon winds took place on both sides of India which carried rain over a large part of the country. As a consequence there was a fall of temperature over a large part of India and on the 15th the heat was less than usual in many districts. The following gives comparative data for all divisions of India:—

Province or Division.	Variation from normal of		
	Mean maximum temperature 15th June.	Mean minimum temperature, 15th June.	Mean daily temperature 15th June.
	°	°	°
Burma	+ 1·8	+1·2	+1·5
Assam	+ 0·9	+0·7	+0·8
Bengal	+ 0·6	−0·5	+0·1
Orissa	+ 6·4	+2·4	+4·4
Bihar	— 3·0	−1·3	−2·2
Chota Nagpur	+ 5·6	+1·2	+3·4
North-Western Provinces and Oudh	+ 1·0	−5·2	−2·1
Punjab	— 0·1	−2·8	− 1·5
Sind	+ 3·0	+1·5	+2·3
Rajputana	+ 2·3	+3·9	+3·1
Gujarat	+ 2·5	+3·1	+2·8
Central India	+ 2·8	+1·5	+2·2
Central Provinces	+ 1·8	−1·4	+0·2
Berar	+ 2·9	−1·3	+0·8
West Coast	+ 0·1	+1·4	+0·8
Bombay Deccan	— 4·2	−1·2	−2·7
Mysore	— 4·4	−0·6	−2·5
Madras Coast	+ 1·3	−1·6	−0·2
Madras Deccan	— 2·4	0	−1·2
South India	— 0·4	+0·6	+0·1

Rain continued to fall heavily along the West Coast until the 19th, the following having been the largest falls in 24 hours reported during this advance:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Thana	Bombay	13th June	7·76
Kolaba	Roha	,, ,,	6·63
North Kanara	Karwar	,, ,,	6·52
Savantvadi	Savantvadi	,, ,,	6·38
Kolaba	Alibag	,, ,,	5·82
Thana	Vada	14th ,,	11·89
Thana	Thana	,, ,,	6·28
North Kanara	Ankola	,, ,,	6·10
North Kanara	Sirsi	,, ,,	6·00
Thana	Shahapur	,, ,,	5·66
Kolaba	Alibag	,, ,,	5·60
North Kanara	Karwar	,, ,,	5·56
Ratnagiri	Dapoli	15th ,,	9·40
Ratnagiri	Mandangad	,, ,,	5·90
Ratnagiri	Rajapur	,, ,,	5·72
Ratnagiri	Khed	,, ,,	5·60
Ratnagiri	Gohagar	,, ,,	5·51

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
North Kanara	Karwar	16th June.	11·90
Ratnagiri	Vengurla	,, ,,	7·70
Savantvadi	Banda	,, ,,	6·25
	Savantvadi	,, ,,	5·13
North Kanara	Karwar	17th ,,	11·95
	Ankola	,, ,,	6·00
Kolaba	Uran	18th ,,	8·45
North Kanara	Kumta	,, ,,	7·82
Savantvadi	Banda	,, ,,	7·82
	Savantvadi	,, ,,	6·88
Kolaba	Alibag	,, ,,	6·75
North Kanara	Karwar	,, ,,	6·60
	Ankola	,, ,,	6·45
	Honavar	,, ,,	6·00
	Bhatkal	,, ,,	5·83
Thana	Kurla	,, ,,	5·61
Ratnagiri	Vengurla	19th ,,	13·06
	Devgad	,, ,,	6·52
	Malvani	,, ,,	6·25
Savantvadi	Banda	,, ,,	5·60
	Kudal	,, ,,	5·53
	Savantvadi	,, ,,	5·49

The extension of rain into the interior of India did not last long. The moist currents retreated and by the 21st the mean temperature was again in large excess except in Assam, Burma and the west, centre and south of the Peninsula. This is shown below :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 21st June.	Mean minimum temperature, 21st June.	Mean daily temperature, 21st June.
	°	°	°
Burma	+0·1	+1·1	+0·9
Assam	—2·4	—1·9	—2·2
Bengal	+3·1	+1·2	+2·2
Orissa	+9·9	+4·8	+7·4
Bihar	+8·3	+1·8	+5·1
Chota Nagpur	+11·4	+5·0	+8·2
North-Western Provinces and Oudh	+9·1	+7·3	+8·2
Punjab	+9·6	+5·1	+7·4
Sind	+3·8	+0·9	+2·4
Rajputana	+8·4	+2·2	+5·3
Gujarat	+4·4	+2·3	+3·4
Central India	+9·3	+6·7	+8·0
Central Provinces	+6·6	+3·0	+4·8
Berar	+6·9	+3·8	+5·4
West Coast	—1·0	—0·6	—0·8
Bombay Deccan	+1·7	—0·2	+0·8
Mysore	+3·7	—1·3	+1·2
Madras Coast	+5·1	+1·5	+3·3
Madras Deccan	+1·2	+0·4	+0·8
South India	+1·4	—0·2	+0·6

On this day pressure was again lowest along the foot of the Himalayas and highest in Malabar, the intervening gradients being very steep and what were practically hot weather conditions prevailing over the greater part of the country. On this day also the rainfall took off considerably along the West Coast, and was only moderate in amount in that region from the 22nd to the end of the month.

Between the 22nd and the 26th light showers fell over the North-West Himalayas, and some snow on the Kashmir hills, and this was followed by a sudden decrease of temperature over the Punjab and Baluchistan ; the depression of temperature lasting till the 27th and having been greatest on the 25th and 26th. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	22nd.	23rd.	24th.	25th.	26th.	27th.
	°	°	°	°	°	°
Baluchistan	—3·9	—4·0	—10·3	—13·6	—11·6	—7·2
Punjab	+6·2	+2·9	+ 1·3	— 0·9	— 1·2	—0·2

During this period—June 22nd to 27th—very hot weather was again experienced over the Gangetic Plain, West Bengal and the adjacent parts of Central India and of the Central Provinces as the depression of temperature over

Baluchistan and the Punjab never extended eastward down the Gangetic Plain. The following gives data:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	22nd.	23rd.	24th.	25th.	26th.	27th.
	°	°	°	°	°	°
Bihar	−2·4	−1·7	+0·5	−1·1	+0·3	+1·7
Chota Nagpur	+7·0	+7·6	+6·3	+7·1	+5·9	+4·1
North-Western Provinces and Oudh.	+7·4	+7·0	+7·2	+6·1	+7·1	+7·1
Central India	+7·8	+7·5	+6·7	+6·6	+5·3	+4·7
Central Provinces	+7·1	+6·8	+4·5	+3·4	+5·0	+6·3

During the last three days of the month the weather was generally quiet and there was comparatively little rainfall over Northern India except over Burma, Assam and East and North Bengal. In consequence the reduction of temperature over the Punjab disappeared, and the heat was greater than usual in nearly all parts of Northern India. The following gives comparative temperature data for the different divisions of Northern India:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	28th June.	29th June.	30th June.
	°		°
Bengal	0	− 0·2	+ 1·4
Orissa	+3·4	+ 2·9	+ 4·6
Bihar	+2·3	+ 3·8	+ 5·5
Chota Nagpur	+1·4	+ 5·9	+ 8·5
North-Western Provinces and Oudh	+7·8	+10·2	+11·9
Punjab	+2·8	+ 6·1	+ 6·3
Central India	+5·4	+ 7·0	+ 8·4
Rajputana	+5·5	+ 6·7	+ 5·3

In the Peninsula though the rainfall was relatively light along the West Coast, the weather was more or less showery and unsettled generally and the distribution of temperature, relatively to the normal, was somewhat irregular. The following gives variation data for the different divisions of the Peninsula:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	28th June.	29th June.	30th June.
	°	°	°
Central Provinces	+4·0	+2·4	+3·5
Berar	+2·7	−3·0	−1·6
West Coast	−0·1	−0·3	+1·1
Bombay Deccan	+0·7	−0·9	−2·4
Mysore	+2·6	+2·7	+2·1
Madras Coast	+1·7	+1·8	+0·8
Madras Deccan	+2·3	+1·7	+1·7
South India	+0·7	+2·5	+2·0

Pressure.—The mean pressure of the Indian land area was 0·002″ below the normal for the month of June 1901. Relatively to this general condition pressure was in local defect over Burma, Assam and the greater part of Northern India. The deficiency was greatest in the North Western Provinces and amounted to 0·045″ at Allahabad to 0·042″ at Meerut and to 0·041″ at Dehra Dun. Pressure was locally in excess over Lower Sind, the central parts of the country and the Peninsula. The excess was considerable and more than 0·02″ in amount on the Madras coast (Cocanada +0·033″) and in the Deccan districts (Raichur + 0·035″). The vertical pressure anomalies were positive in the Baluchistan and Himalayan hill regions, but were negative over Southern India.

The following table gives the mean pressure variations and anomalies of the month for the eleven meteorological provinces:—

Meteorological Province.	Variation from normal of mean 8 A.M. pressure of June 1901.	Pressure anomaly, June 1901.
	″	″
Burma Coast and Bay Islands	−·012	−·010
Burma Inland	−·013	−·011
Assam	−·024	−·022
Bengal and Orissa	−·014	−·012
Gangetic Plain and Chota Nagpur	−·030	−·028
Upper Sub-Himalayas	−·031	−·029
Indus Valley and North-West Rajputana	−·008	−·006
East Rajputana, Central India and Gujarat	+·010	+·012
Deccan	+·017	+·019
West Coast	+·013	+·015
South India	+·020	+·022

Temperature—was on the mean of the month in very general excess, due mainly to the failure of the monsoon rainfall to extend from the coast inland.

The mean maximum temperature of the month was above the normal over the whole of India with the exception of Peshawar, part of North and East Bengal, the Brahmaputra Valley and a few stations in the west and centre of the Peninsula. The variations from the normal in these areas were small and only exceeded 2° at Sibsagar (−2°·2) and Goa (−2°·1). The mean day temperature was only in slight excess over the Central Punjab, Burma, and the remaining parts of the west and south of the Peninsula, but over the remainder of India was considerably to largely above the normal. The excess was greatest over West Bengal (Hazaribagh + 8°·0), the east of Central India (Sutna + 9°·0) and the Gangetic Plain (Allahabad +8°·5, Cawnpore +10°·5 and Mainpuri +9°·5).

The mean night temperature of the month was about normal over the greater part of the Peninsula, Burma, Assam, Bengal and the north-west frontier. At some stations in this area and locally at Umballa (−1°·9) and Roorkee (−1°·2); the night temperature was below the normal, but the only important variations were −2°·0 at Bijapur and −1°·7 at Negapatam, Dera Ismail Khan and Peshawar. Over the remainder of India the mean night temperature was in excess, the greatest excess having been reported over the central parts of the country and part of West Bengal, where the variations were at Sutna +4°·9, at Saugor +4°·4, at Raipur +4°·2, at Indore + 4°·0, at Jhansi + 5°·4, at Bikaner + 5°·1 and at Gaya +5°·0.

The mean temperature of the month was in defect over East Bengal and the Brahmaputra Valley, over the West Punjab and over part of the Peninsula, but was in excess in all other places. The excess was greatest within a broad band running east-south-east from Mooltan to Balasore. Within this broad band, the excess was greatest at Jhansi (+6°·3), Cawnpore (+6°·8) and Sutna (+7°·0). Over the Baluchistan and Kashmir hills the mean temperature was considerably to largely below the normal, but at the remaining hill stations the heat, on the mean of the month, was generally in excess. The deficiency in the case of the Baluchistan and Kashmir hills was probably due to the late snowfall in those localities.

The following table gives temperature variation data for the month of June 1901 for eleven meteorological provinces of the empire:—

Meteorological Province.	Variation of actual from normal of		
	Mean maximum temperature, June 1901.	Mean minimum temperature, June 1901.	Mean daily temperature, June 1901.
	°	°	°
Burma Coast and Bay Islands	+0·8	+1·0	+0·9
Burma Inland	+0·6	+0·6	+0·6
Assam	−0·8	−0·5	−0·6
Bengal and Orissa	+1·6	+0·4	+1·0
Gangetic Plain and Chota Nagpur.	+6·4	+2·2	+4·3
Upper Sub-Himalayas	+4·3	+1·0	+2·7
Indus Valley and North-West Rajputana.	+3·3	+0·9	+2·1
East Rajputana, Central India and Gujarat.	+4·9	+3·1	+4·0
Deccan	+4·5	+1·9	+3·3
West Coast	+0·3	+0·2	+0·3
South India	+1·4	+0·7	+1·0

Winds.—The winds were somewhat stronger and more westerly than usual at the Bay Islands and on the Lower Burma coast while they were more southerly and less easterly than the normal on the Bengal coast where also the strength was more or less above the average. The first strong burst of the monsoon current over the Bay apparently occurred between the 11th and 16th when strong winds were reported from Port Blair and Saugor Island. The wind was generally more westerly than usual over Northern India and was very steady, but at Peshawar there was an unusual northerly wind probably due to the snowfall and abnormal conditions existing over the North-West Himalayas. The Arabian Sea monsoon current apparently set in about the 11th along the West Coast, but the current was generally weak and the mean winds of the month were generally below the normal strength in the coast districts. Over the Deccan, on the contrary, the wind was generally stronger than usual and over Southern India the velocity was about normal. In the South-East Trades region the winds were very nearly normal in direction but were somewhat lighter than usual at Zanzibar and the Seychelles.

Humidity.—The air was slightly to moderately drier than usual over the greater part of Burma and of the Peninsula, but there were two areas where the relative humidity was in excess of the normal. The first included that part of the Arakan coast in the neighbourhood of Akyab, the second included the south of the Bombay Deccan and

part of Mysore. Over the whole of Northern and Central India the air was drier than usual, in part due to the deficiency in the absolute humidity and in part to the excessive temperatures prevailing. The deficiency in the humidity was greatest and very large over West Bengal, the east of the Central Provinces and the North-Western Provinces over which area the variation generally amounted to about 20 %. This abnormal dryness of the air also extended to the hill stations in the Kumaun Himalayas.

The following gives variation data of the mean aqueous vapour pressure and mean humidity for nine meteorological provinces for the month under review.:—

Meteorological Province.	Mean absolute humidity.		Mean relative humidity.	
	Average actual, June 1901.	Variation of actual from normal June 1901.	Average actual, June 1901.	Variation of actual from normal, June 1901.
	"	"	%	
Burma Coast and Bay Islands.	·917	+·008	85	<— 2
Bengal and Orissa . .	·981	+·028	80	— 4
Gangetic Plain and Chota Nagpur.	·709	—·082	52	—14
Upper Sub-Himalayas .	·501	—·153	36	—15
Indus Valley and North-West Rajputana.	·713	0	47	— 4
East Rajputana, Central India and Gujarat.	·610	—·099	41	—11
Deccan	·676	—·009	61	— 4
West Coast . . .	·873	—·014	82	— 1
South India . . .	·671	—·003	67	— 3

Cloud.—The mean cloud amount of the month was in greater or less excess over most of the divisions in the Peninsula as well as over the Bay Islands and Burma. In most places the excess was moderate or small and only equalled or exceeded 1·0 at Bellary (+1·0), Bangalore (+1·4) and Mysore (+1·6). The sky was also more cloudy than usual at Peshawar (+0·1), Srinagar (+1·0), Kailang (+0·5), Meerut (+0·2), and Katmandu (+0·6). Over the whole of the remainder of India the cloud amount was in defect of the normal, on the mean of the month. The deficiency was large and more than 2·0 in two areas. One included the hill and submontane portions of the East Punjab and of the west of the North-West Provinces and extended over the east of the North-Western Provinces. Within this large area the greatest instances of defect were 3·9 at Ranikhet, 3·6 at Simla, 2·6 at Chakrata and Dehra Dun and 2·7 at Allahabad. The second area included Southern Rajputana and Gujarat, where Deesa reported a deficiency of 2·8 and Mount Abu of 2·6. In other places the deficiency of cloud was generally small.

The following gives variation data of the mean cloud amount of nine meteorological provinces:

Meteorological Province.	Mean cloud amount.	
	Average actual, June 1901.	Variation of actual from normal, June 1901.
Burma Coast and Bay Islands . . .	8·5	+0·5
Bengal and Orissa	7·2	—0·3
Gangetic Plain and Chota Nagpur . . .	4·3	—1·3
Upper Sub-Himalayas	1·7	—1·7
Indus Valley and North-West Rajputana .	1·8	—0·7
East Rajputana, Central India and Gujarat .	2·7	—2·1
Deccan	6·4	—0·4
West Coast	7·5	0
South India	7·8	+0·6

Rainfall.—The chief features in the meteorology of the month were the delay in the extension of the Bombay monsoon current into North Bombay and the interior of the Peninsula, and of the Bengal monsoon current into West Bengal and the Gangetic Plain. Monsoon rainfall commenced in Malabar on the 6th and extended into the Konkan on the 11th or 12th, but the fall never extended freely to the northward of Bombay, so that, though Gujarat received irregular but at times heavy rainfall, Kathiawar and Sind received no rain of importance throughout the month. Also the monsoon never extended properly inland over Berar, the Central Provinces, the east of Rajputana and the west of the North-Western Provinces. These areas received a feeble burst of rain between the 13th and 16th coinciding with the establishment of the monsoon on the Konkan coast, but at other times all the rainfall received was from thunder and dust storms. On about the 21st the rains fell off somewhat along the West Coast, and this decrease was slightly reproduced over parts of the interior of the country where the showers became lighter and less general. The Bay monsoon advanced into Bengal about the 13th having been ushered in by a feeble and shallow storm. As in the case on the opposite side of India there was a general though moderate burst of rain over West Bengal and the Gangetic Plain between the 13th and the 16th, coinciding with the establishment of the monsoon current on both sides of India, but this was the only monsoon rainfall during the month, the remaining rainfall following or accompanying dust and thunderstorms. In the North and West Punjab there was a rather severe showery period unconnected with the monsoon but due to

unsettled weather over the Kashmir Himalayas. Owing to the want of power to extend in the monsoon currents the rainfall of the interior of the country was almost everywhere deficient. This is shown in the following table which gives data for the eleven meteorological provinces of the empire:—

METEOROLOGICAL PROVINCE.	RAINFALL. Mean actual for June 1901.	Mean normal for June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands.	25·48	27·32	−0·53*	− 2
Burma Inland	7·32	8·35	−1·03	− 12
Assam	20·52	19·65	+0·87	+ 4
Bengal and Orissa	13·37	13·75	−0·38	− 3
Gangetic Plain and Chota Nagpur.	2·01	6·58	−4·65*	− 71
Upper Sub-Himalayas	0·88	3·65	−2·74*	− 75
Indus Valley and North-West Rajputana.	0·32	0·76	−0·44	− 58
East Rajputana, Central India and Gujarat.	0·66	4·49	−3·78*	− 84
Deccan	4·81	6·45	−1·67*	− 26
West Coast	39·82	27·73	+12·08	+ 44
South India	1·72	2·81	−1·11*	− 40

* A reference to Table I will show that the means in columns 2 and 3 are derived from a smaller number of stations than the means in the 1st column. The sum of the figures in columns 2 and 3 will therefore not agree with the figures in column 1.

Atmospheric Pressure.

The mean pressure of the Indian land area averaged ·002″ below the normal in June 1901.

The pressure anomalies were generally similar in character to those of the preceding month.. As a genera rule, when the monsoon currents come up stronger than usual, the pressure anomalies of June are the reverse of those of May, but when the monsoon currents are weak the May anomalies are maintained and intensified in June This was the case in June 1901, when both the excess of pressure over the Peninsula and the deficiency over Northern India were more marked than during May. This was due to the delay and weakness of the Bombay current.

Pressure was, relatively to the general condition, in excess to the south of a line running from the neighbourhood of Jacobabad through Jaipur to Jubbulpore and thence to Balasore. The anomalies were moderately large and exceeded ·020″ at the following large number of stations:—

STATION.	Variation from normal of mean 8 A.M. pressure of June 1901.	Pressure anomaly, June 1901.
	″	″
Ahmedabad	+·037	+·039
Trincomalee	+·036	+·038
Tinnevelly	+·033	+·035
Raichur	+·033	+·035
Veraval	+·032	+·034
Bijapur	+·031	+·033
Cocanada	+·031	+·033
Masulipatam	+·029	+·031
Amraoti	+·029	+·031
Indore	+·029	+·031
Nellore	+·028	+·030
Hyderabad (Dn.)	+·027	+·029
Waltair	+·026	+·028
Mysore	+·026	+·028
Chitaldroog	+·024	+·026
Bhuj	+·023	+·025
Akola	+·023	+·025
Hoshangabad	+·021	+·023
Ahmednagar	+·021	+·023
Poona	+·021	+·023
Bellary	+·021	+·023
Rajkot	+·020	+·022
Cuddalore	+·020	+·022
Coimbatore	+·020	+·022
Hyderabad (Sind)	+·019	+·021
Cuddapah	+·019	+·021
Trichinopoly	+·019	+·021
Raipur	+·019	+·021

Pressure was relatively to the general condition, in defect to the north of the above line as well as over Assam

and Burma. The negative anomalies were somewhat larger than the positive more particularly in parts of the North-Western Provinces. The following gives data for the stations in these areas at which the deficiency of pressure was more than 0·02″ :—

STATION.	Variation from normal of mean, 8 A.M. pressure of June 1901.	Pressure anomaly, June 1901.
	″	″
Allahabad	—·047	—·045
Meerut	—·044	—·042
Dehra Dun	—·043	—·041
Bahraich	—·041	—·039
Umballa	—·039	—·037
Bikaner	—·037	—·035
Sibsagar	—·037	—·035
Gaya	—·036	—·034
Benares	—·036	—·034
Roorkee	—·036	—·034
Bareilly	—·035	—·033
Lucknow	—·035	—·033
Patna	—·035	—·033
Mainpuri	—·034	—·032
Agra	—·032	—·030
Bhamo	—·030	—·028
Delhi	—·030	—·028
Dinajpur	—·030	—·028
Ludhiana	—·029	—·027
Mymensingh	—·027	—·025
Sirsa	—·026	—·024
Dhubri	—·026	—·024
Darbhanga	—·026	—·024
Sialkot	—·025	—·023
Cawnpore	—·025	—·023

The chart giving the actual distribution of pressure shows that pressure, on the mean of the month, was lowest over the western desert and was highest over Malabar, Ceylon and the south of the Bay. This is the normal distribution at this season, but owing to the variations from the normal noticed above, *viz.*, a deficiency of pressure in the northern and an excess in the southern half of the Indian area the pressure differences or gradients between the area of high and the area of low pressure were steeper than usual.

Pressure was generally in excess at the hill stations in Baluchistan and the Himalayas as well as locally at the central hill station of Pachmarhi, while it was normal at Mount Abu and Wellington and in defect at Darjeeling. The vertical pressure anomalies were positive in the northern and central hill districts, while they were negative at Mount Abu and Wellington. This is shown in the following statement which gives information for ten pairs of stations :—

HILL STATION.	Variation of actual from normal pressure, June 1901.	PLAIN STATION.	Variation of actual from normal pressure, June 1901.	Vertical pressure anomaly (Hill—Plain).
	″		″	″
Leh	+·028	Lahore	—·020	+·048
Quetta	+·039	Jacobabad	—·013	+·052
Murree	+·008	Rawalpindi	—·017	+·025
Simla	+·015	Ludhiana	—·029	+·044
Chakrata	+·015	Roorkee	—·036	+·051
Ranikhet	+·006	Bareilly	—·035	+·041
Darjeeling	—·015	Dhubri	—·026	+·011
Pachmarhi	+·034	Seoni	+·018	+·016
Mount Abu	—·009	Deesa	+·018	—·027
Wellington	+·007	Coimbatore	+·020	—·013

The following is a summary of the chief abnormal features of the pressure distribution :—

(1) Pressure was in defect over the Indian area by amounts averaging ·002″.

(2) Pressure was in relative defect over Burma, Assam and Northern India. The deficiency was most marked in the North-Western Provinces.

(3) Pressure was relatively in excess over the Peninsula and the central parts of the country. The excess was greatest on the Madras Coast and over the Deccan.

(4) Pressure was relatively in excess or the vertical pressure anomalies were positive over the Baluchistan and Himalayan regions.

Barometric depressions and cyclonic storms of the month.

The barometric depressions and cyclonic storms of the month were very slight.

The first three days of the month were marked by an intensification of the depression over North-West India and its passage eastward. The weather was consequently disturbed over the Punjab where showers of rain were reported.

Disturbance and cyclonic storm in the Arabian Sea.—On June 4th the barometer began to fall along the West Coast where the winds were light and unsteady and

showed a tendency to draw into southerly directions. The following gives data for this day for the West Coast ports:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	"	"	"				Inch.	
Colombo .	29·842	+·032	+·019	SSW	...	7	0·05	Sea rough.
Trivandrum .	·811	+·015	?	N	3	5	0·17	Showery.
Cochin .	·816	+·017	+·011	SSW	3	9	0·49	Distant lightning.
Calicut .	·803	+·012	+·015	ENE	5	1	0·06	Ditto.
Mangalore .	·794	—·005	+·021	ESE	2	5	0·56	Thunderstorm.
Karwar .	...	...	...	S	4	3	...	
Mormugao .	·760	—·009	?	Calm	7	3	...	
Goa . .	·753	—·010	+·032	SW	9	4	...	
Ratnagiri .	·746	—·026	+·032	W	3	4	...	Sea slight.
Bombay .	·751	—·006	+·046	SSW	9	7	...	
Surat . .	·704	—·018	+·025	SW	14	7	...	

June 5th.—Pressure had continued to give way along the West Coast and southerly winds were reported in Malabar and the South Konkan where rain was falling and the sea rising. The following gives 8 A.M. data for the West Coast ports for this day:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks
	"	"	"				Inches.	
Colombo .	29·814	—·028	—·009	SW	12	10	0·27	Sea rough.
Trivandrum .	·797	—·014	?	NNW	5	10	0·48	Showery.
Cochin .	·813	—·003	+·010	SW	4	10	2·45	Sea very rough.
Calicut .	·779	—·024	—·003	SE	5	10	0·21	Sea slight.
Mangalore .	·761	—·033	—·00)	SSE	2	8	0·73	Sea rising.
Karwar .	...	...	...	W	4	5	...	
Goa . .	·725	—·028	+·008	WSW	8	4	...	Distant lightning.
Mormugao	·724	—·036	—·017	SSW	4	6	0·39	
Ratnagiri .	·704	—·042	—·001	W	2	8	...	
Bombay .	·712	—·039	+·014	WSW	8	3	...	
Surat . .	·691	—·013	+·020	S	15	5	...	
Veraval .	·664	—·014	—·025	WSW	14	3	...	Sea smooth.
Dwarka .	·637	—·009	...	SSW	20	3	...	Sea rough.
Kurrachee .	·535	—·010	—·047	ESE	9	0	...	

There was very little information for the east of the sea on this day. The *Aphrodite* near Mangalore reported a fresh southerly wind and heavy rain, and strong westerly winds and heavy rain were reported from the neighbourhood of Ceylon, but these were the only indications of cyclonic actions. The following gives marine data for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.		Long. E.		Barometer as corrected by Bombay Office.	Wind. Direction.	Wind. Force.	Weather.
	°	′	°	′	"			
S.S. *Musician* .	6	24	78	12	...	W	6	Following sea and violent squalls and heavy rain.
S.S. *Urlana* .	6	26	79	58	29·828	WSW	6	Moderate sea and heavy squalls with rain.
S.S. *Ockenfels* .	7	10	75	47	·867	W	7	
S.S. *Sumatra* .	7	19	77	43	·789	W	6	Occasional rain squalls.
S.S. *Nadir* .	8	31	78	36*	·666	W	5	Heavy sea, midnight rain squalls.
S.S. *Bedouin* .	9	25	67	10	·782	WSW	6	Confused sea and cloudy, midnight heavy squalls.
S.S. *Rajput* .	Cochin				·998	...	...	4 A.M. rainy.
S.S. *Kerbela* .	Calicut				·604	...	...	Midnight strong rain squalls.
S.S. *Aphrodite* .	12	12	75	11	...	S	5	Sea smooth and heavy rain.
S.S. *Oriental* .	15	23	57	5(	·736	SW by W	5	Moderate sea and fine.
S.S. *Wennington Hall.*	16	43	62	04	...	W	6	High sea and cloudy.
S.S *Umballa* .	16	55*	73	08	·730	NW	2	Light showers.
S S. *Venus* .	17	59	73	00	...	NW	2	Sea smooth and clear.
S S. *Mascotte* .	Bombay*				·725	W	2	Sea smooth and fine.
S.S. *Yanariva* .	Bombay				·785	...	...	4 P.M. fine
S.S. *Trocus* .	20	10	70	20	...	SW	5	Heavy sea and cloudy.
S.S. *Simla* .	21	02	70	09	·661	SW	4	South-westerly swell and hazy.

* Noon position.

June 6th:—The pressure continued to give way along the West Coast, the barometric fall having been greatest and brisk between Mangalore and Goa. The winds were south-easterly and southerly all along the coast. The ollowing gives 8 A.M. data for this day:—

Station	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	"	"	"				Inches.	
Colombo .	29·803	—·011	—·018	WSW	12	10	0·07	Sea rough.
Trivandrum	·810	+·013	?	NNW	5	10	1·47	Continuous rain.
Cochin .	·807	—·006	+·005	Calm	2	10	4·76	Sea very rough.
Calicut .	·765	—·014	—·013	SE	10	10	1	Sea rough.

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches.	
Mangalore .	29·706	—·055	—·059	SE	4	9	0·01	Sea rough.
Karwar .	...	...	...	SSW	4	9	3·34	
Goa . .	·655	—·070	—·053	S	9	6	...	Sea slight.
Mormugao .	·675	—·049	—·059	SSE	8	7	0·03	
Ratnagiri .	·668	—·036	—·033	SSE	3	9	0·21	Sea slight.
Bombay .	·686	—·026	—·003	SSW	6	8	...	
Surat . .	·666	—·025	+·003	S	10	+	...	

The above shows moderate to fresh southerly winds along the West Coast with moderate to heavy rain and a rough to very rough sea. The following gives marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Bombay Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Kohinur* .	7 27	79 18	29·695	NW	7	Squalls with passing rain showers.
S.S. *Urlana* .	7 33	77 46	·834	W	6	High sea and heavy rain. Noon strong rain squalls.
S.S. *Bedouin* .	8 35	69 55	·732	WSW	7	High sea and heavy rain.
S.S. *Kerbela* .	Cochin		·643	...	...	4 A.M. strong squalls and heavy rain.
S.S. *Rajput* .	Cochin		·988	...	...	Midnight rainy.
S.S. *Tullochmoor.*	15 10	58 53	...	WSW	6	High sea and cloudy.
S.S. *Yanariva* .	15 46	73 34	·705	S	3	South-westerly swell and cloudy, 8 P.M. squally and rainy.
S.S. *Aphrodite* .	16 14	73 20	...	WSW	2	Sea smooth and clear. Noon cloudy.
S.S. *Oriental* .	16 27	63 13	·702	WSW	4	Moderate sea and overcast.
S.S. *Wennington Hall.*	17 31	64 55	...	W	6	Cloudy.
S.S. *Haidari* .	18 01	63 47	·621	SW	4	High swell.
S.S. *India* .	Bombay		·649	...	...	Midnight occasional light showers.
S.S. *Java* .	20 03	71 11	·572	SSE	2	Heavy swell from south-west, noon fine.
H.M.S. *Sphinx.*	20 32	67 05	...	WSW	3	Moderate south-west swell.
S.S. *Bhundara.*	21 02	69 37	·645	SW	2	Do.

There was again no information of importance for the east of the sea and the disturbance was hence undefined.

The *Bedouin* in Lat. 8° 35′ N. and Long. 69° 55′ E. reported a west-south-west moderate gale, a high sea and heavy rain and the *Yanariva* in Lat. 15° 46′ N. and Long. 73° 34′ E. a light southerly wind, but these were the only indications of a cyclonic circulation afforded by ships' observations.

June 7th.—On the 7th the barometer was falling briskly all along the West Coast, but particularly at Goa and Mormagao where pressure was low and largely below the normal. The cyclonic storm over the Arabian Sea had apparently intensified and was lying to the west of Karwar.

The following gives 8 A.M. data for the West Coast ports for this day:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches.	
Trivandrum	29·743	—·067	?	Calm	2	10	5·41	Continuous rain.
Cochin .	...	—·076	—·070	Calm	3	10	4·50	Sea very rough.
Calicut .	·731	—·091	—·098	ENE	3	10	4·32	Ditto.
Mangalore .	·674	—·069	—·125	SSE	4	10	0·26	
Karwar .	·637	...	...	W	9	7	0·08	Showery.
Goa . .	·572	—·083	—·130	NE	12	7	...	Sea slight.
Mormugao .	·586	—·089	—·143	ENE	15	4	...	
Ratnagiri .	·597	—·071	—·098	Calm	3	9	0·52	Showery.
Bombay .	·615	—·071	—·071	WNW	8	10	0·63	Thunderstorm.
Surat	·638	—·028	—·018	SW	8	5	...	

Rain had been heavy in Malabar and had extended up the coast while the winds had increased in strength at several places. The following gives marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Bombay Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Bedouin* .	7 21	74 23	29·732	W	7	High sea, heavy squalls and incessant rain.
S.S. *Rajput* .	8 03	77 36	·938	W	4	High rain squalls.
S.S. *Nadir* .	9 16	76 18*	·647	W	4	Rough sea and heavy squalls with rain.
S.S. *Clan Gordon.*	12 13	56 54	·715	SW	6	High sea and fine.
S.S. *Yanariva* .	12 54	74 37	·645	SE	6	Choppy head sea and rainy. Midnight squally.

* Noon position.

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Bombay Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *Inchdune* .	14 54	57 30	...	SW	6	Heavy beam sea.
S.S. *Haidari* .	15 49	65 27	29·601	WSW	4	Heavy swell. 8 P.M. heavy rain squalls.
S.S. *India* .	15 54	73 26	·541	SE	2	Light cross swell and cloudy. Midnight frequent violent wind and rain squalls.
S.S. *Tullochmoor.*	16 12	62 00	...	WSW	6	High sea and cloudy.
S.S. *Oriental* .	17 36	68 18	·664	WNW	3	Overcast.
S.S. *Valentia* .	18 12	58 19	·500	SW	5	Rough sea.
S.S. *Wennington Hall.*	18 12	67 45	...	N	2	Cloudy.
H.M.S. *Sphinx* .	19 17	70 53	...	SSE	1 to 2	Moderate south-west swell.
S.S. *Chanda* .	21 23	69 36*	·609	W	2	Hazy overland.

* Noon position.

There was more evidence of cyclonic action on this than on the preceding day, but the action was confined to the east of the sea, as all over the west, north and centre of the sea the wind was south-westerly and quite unaffected by the disturbance. The *India* and the *Yanariva* in the extreme east reported south-east winds, a choppy sea and rainy weather and the *Sphinx* in Lat. 19° 17′ N. and Long. 70° 53′ E. a light south-south-east wind, while the *Wennington Hall* in Lat. 18° 12′ N. and Long. 67° 45′ E. experienced a light northerly wind and the *Oriental* in Lat. 17° 36′ N. and Long. 68° 18′ E. a west-north-west wind. These ships defined the area of cyclonic winds over the east of the sea, but there were no ships within the intervening area, where the storm apparently lay, so that no strong winds were reported from any vessel.

June 8th.—Pressure had again given way briskly along part of the West Coast but the storm had not moved during the previous 24 hours. Pressure was lowest to the west of Goa where the barometer read about 0·25″ below the normal. The following gives 8 A.M. data for the coast ports :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	″	″	″				Inches	
Trivandrum	29·742	—·001	?	NNW	4	10	1·65	Showery.
Cochin .	·739	+·008	—·061	W	6	10	2·41	Sea very rough.
Calicut .	·681	+·007	—·091	ESE	4	10	3·09	Overcast with rain.
Mangalore .	29·586	—·051	—·173	WSW	3	10	5·34	Overcast with rain.
Karwar .	...	...	...	WSW	8	8	...	Sea very rough.
Goa . .	·452	—·120	—·247	ESE	11	8	...	Sea rising.
Mormugao .	·522	—·064	—·199	ENE	14	7	0·03	Sea rough.
Ratnagiri .	·536	—·061	—·153	Calm	4	2	0·29	Sea slight.
Bombay .	·581	—·034	—·097	NNE	12	10	0·16	Thunderstorm.
Surat .	·599	—·039	—·050	Calm	8	8	...	

Rain had fallen all along the West Coast and had been heavy at Mangalore while the winds exhibited an irregular indraught towards a centre in Lat. 16° N. and Long. 72° E. The following gives marine information for this day :—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Bombay Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S. *Fryd* . .	5 18	58 27	29·790	SW	6 to 7	Rain squalls.
S.S. *Vulcan* .	7 12	77 42	·750	W	5	High head sea and heavy rain squalls.
S.S. *Yanariva* .	9 55	75 42	·695	WSW	6	High confused sea and heavy rain squalls.
S.S. *Nadir* .	Cochin*		·760	Var.	1 to 2	Very high swell and continuous rain squalls.
S.S. *Kerbela* .	Cochin		·553	...	...	Noon violent wind and rain squalls.
S.S. *Clan Gordon.*	11 8	61 06	·745	SW	4	Moderate sea and fine. Midnight showery.
S.S. *India* .	12 56	74 37	·463	WSW	10	Very high west south-west sea and dull, overcast. 4 A.M. violent wind and rain squalls.
S.S. *Haidari* .	13 37	67 06	·641	W	6	High sea.
S.S. *Elax* .	14 26	59 08	...	SW	6	Rough sea. Noon cloudy.
S.S. *Inchdune* .	15 38	61 00	...	SW	6	Heavy following sea and clear.
S.S. *Crewe Hall*	15 47	59 48	·675	SW	5	High sea, cloudy and hazy.
S.S. *Stanley Hall.*	15 52	59 49	·655	SW	6	High rough sea and cloudy.
S.S. *Prudentia*	15 59	57 35	·705	SSW	6	High sea. Midnight cloudy.
S.S. *Tullochmoor.*	17 10	64 59	...	W	4	Cloudy.
S.S. *Kola* . .	Bombay*		·555	NE	4	Hazy.
S.S. *Dumra* .	19 13	72 15*	·600	NW	4	Moderate sea and fine.
S.S. *Goa* . .	19 28	71 56	·468	E	2	Heavy swell and overcast.

* Noon position.

The above observations apparently point to the disturbance having moved slightly to the northward of the position it occupied on the 7th, but there were no ships within the area supposed to be occupied by the storm and most of the surrounding winds were not strong. The *India*, however, in Lat. 12°56′ N. and Long. 74°37′ E. reported a west-south-west hard gale while the *Goa* in Lat. 19°28′N. and Long. 71°56′E. had a light easterly wind. The storm consequently probably existed between these two vessels and nearer to the former than to the latter. Over the west, centre and north of the sea the influence of the storm was not felt.

June 9th.—Pressure had increased slightly to rapidly over the south of the Peninsula, but had fallen briskly on the Bombay coast. The following gives 8 A.M. data of the West Coast stations:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Remarks.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"					Inches.	
Trivandrum	29·786	+·044	?	NW	5	10	2·41	Continuous rain.
Cochin .	·759	+·020	—·042	W	6	1	1·16	Sea rough.
Calicut .	·718	+·037	—·054	SW	10	10	2·05	Sea very rough.
Mangalore .	·707	+·121	—·053	WNW	6	10	2·83	Do.
Goa . .	·433	—·019	—·266	S	14	10	0·50	Sea rough.
Mormugao .	·496	—·026	—·223	SSE	25	10	0·25	Sea very rough.
Karwar .	...	...	...	SW	9	10	1·15	Showery.
Ratnagiri .	·477	—·059	—·212	ENE	5	4	0·43	Sea slight.
Bombay .	·521	—·060	—·156	NE	13	3	0·40	Thunderstorm.

The storm had again intensified and pressure at Goa was 0·27″ below the normal. Apparently the storm had hardly moved. West to south winds prevailed along the coast to the south of Karwar and east to north winds along the coast to the north. Rain had fallen at all the West Coast ports, but the amounts were light except in Malabar where they were moderate. The following gives marine data for this day:—

Name of Vessel.	8 A.M. Position.		Barometer as corrected by Bombay Office.	Wind.		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S. *Fryd* . .	7 44	59 58	29·796	SW	8	Cloudy. 4 P.M. squally with rain.
S.S. *Kerbela* .	8 08	77 40	·530	SW	6	Moderate sea and cloudy. 4 A.M. occasional squalls.
S.S. *Bengal* .	8 39	76 36*	29·747	SW	5	Considerable south-west swell. 4 A.M. hard squalls.
S.S. *Vulcan* .	9 00	76 25	·790	WNW	5	High sea and squally.
S.S. *India* .	9 55	75 57	·688	WSW	6	High west-south-west sea and frequent hard squalls.
S.S. *Clan Gordon.*	10 04	65 18	·775	SW	5	Moderate sea and overcast.
S.S. *Haidari* .	11 28	69 05	·701	WNW	6	High sea and squally with rain.
S.S. *Persia* (*a*) .	11 45	58 57	·764	SW	6	High sea.
S.S. *Jelunga* .	12 13	57 15	·714	WSW	6	High sea and fine.
S.S. *Elax* . .	15 26	62 41	...	SW	5	High following sea and fine.
S.S. *Prudentia* .	15 47	60 47	·725	SW	5	Fine.
S.S. *Inchdune* .	16 40	64 26	...	W	5	Heavy following sea and clear.
S.S. *Stanley Hall.*	16 49	63 47	·675	W	5	Rough sea and hazy.
S.S. *Crewe Hall*	17 06	64 00	·681	W	5	Moderate sea and hazy.
S.S. *Tullochmoor*	17 51	68 30	...	NW	5	Rainy.
S.S. *Persia* (b) .	18 08	68 31*	·532	NW by W.	5	Confused sea and cloudy.
S.S. *Lawada* .	20 37	70 40*	·460	NW	4	Moderate sea 4 A.M. showery.

* Noon position.

North-westerly winds had appeared over the north-east of the sea and in Long. 65°E. while over the centre of the sea the wind was shifting to west. There were no ships off the West Coast of India, and the only ship in this neighbourhood reporting a strong wind was the *Haidari* with a strong west-north-west wind and rain squalls.

June 10th.—The barometer had risen briskly to very rapidly over the west and south of the Peninsula and the winds were returning to the normal monsoon directions at most of the West Coast ports though at Bombay a strong south-east wind was blowing. The following gives 8 A.M. data for the West Coast:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Remarks.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Trivandrum	29·856	+·010	?	NNE	3	9	0·95	Showery.
Cochin .	·836	+·077	+·034	W	7	10	0·87	Sea rough.
Calicut .	·808	+·090	+·032	W	14	7	2·33	Showery.
Mangalore .	·784	+·077	+·021	Calm	2	9	1·47	Sea rough.

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches	
Karwar .	...	...	...	SW	11	10	1·86	Showery.
Goa . .	29·688	+·255	—·016	Calm	21	10	2·54	Sea rough.
Marmugao .	·710	+·214	—·008	WSW	15	10	2·25	Ditto.
Ratnagiri .	·647	+·170	—·046	Calm	6	10	1·26	Ditto.
Bombay .	·591	+·070	—·085	SE	10	10	0·71	Distant lightning.
Surat .	·584	+·050	—·062	S	8	6	...	

Rain and a rough sea continued to be reported from the West Coast and the wind was still strong in some places. The following shows the marine information for this day:—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Bombay Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Clan Gordon.*	9 04	69 37	29·785	SE	2	Moderate sea and fine. 4 A.M. passing rain squalls.
S.S. *Nowshera* .	9 28	76 26	·726	WSW	4	Heavy swell.
S.S. *Haidari* .	9 31	71 12	·771	WNW	6	High confused sea. 4 P.M. heavy rain squalls.
S.S. *Fryd* .	9 57	61 41	·769	SW	7	High sea, and cloudy. Midnight squally with rain.
S.S. *Persia* (a).	10 39	62 35	·764	SW	6	High south-west sea and fine.
S.S. *Jelunga* .	11 02	61 58	·774	WSW	5	High sea and hazy. 4 P.M. occasional showers.
S.S. *Vulcan* .	11 29	75 17	·790	NW	2	Moderate sea, hazy and cloudy.
S.S. *Urlana* .	12 51	74 39	·795	SW	4	Cloudy. 4 P.M. occasional rain squalls.
S.S. *Steinberger*	15 38	59 25	·660	WSW	6	Hazy.
S.S. *Prudentia*	16 21	63 46	·725	W	5	Moderate following sea, noon cloudy.
S.S. *Elax* . .	16 38	65 56	...	W	5	Confused sea and overcast.
S.S. *Inchdune* .	17 38	67 56	...	NW	5	Showery.
S.S. *Persia* (b) .	17 39	64 39	·572	W by N	4	Decreasing sea and cloudy.
S.S. *Stanley Hall.*	17 50	67 51	·630	W	5	Rainy.
S.S. *Crewe Hall*	18 06	68 39	·627	WNW	4	Moderate sea and light rain. 8 P.M. heavy thunder and lightning with heavy continuous rain.
S.S. *Tullochmoor.*	18 25	71 28	...	ENE	6	High head sea and showery.
S.S. *Ikhona* .	Bombay.		·518	...	...	4 P.M. heavy rain squalls.
S.S. *Simla*	19 51	71 26	·511	SE	2	Heavy swell 8 P.M. squally.

The storm had apparently moved northward and apparently lay in about Lat. 18°20′ and Long. 70° where the winds were irregularly cyclonic and the weather very rainy and unsettled. The *Crewe Hall* apparently encountered the storm at about 8 P M., but the observations showed that the disturbance was very small ... ! the central storm area, if one existed, was very restricted.

June 11th.—Pressure had increased slightly all along the West Coast. The following gives 8 A.M. data for this day:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches	
Trivandrum	29·856	0	+·098	Calm	4	10	0·20	
Cochin .	·857	+·021	+·049	Calm	4	10	0 98	Sea rough.
Calicut .	·848	+·040	+·065	NE	11	10	2·91	Sea rising.
Mangalore .	·811	+·027	+·042	S	4	10	1·74	Showery.
Karwar .	...	...	...	W	11	10	0·14	Ditto.
Goa . .	·730	+·042	+·027	SSE	15	10	2·83	Sea rough.
Mormugao.	·730	+·020	+·009	SSE	14	10	2·89	Showery.
Ratnagiri .	·675	+·028	—·020	Calm	3	10	1·88	Sea rough.
Bombay .	·634	+·043	—·043	S	32	10	0·18	Gale of wind.
Surat . .	·578	—·006	—·066	S	12	6	0·01	

The winds along the West Coast were still southerly and light to moderate rain was falling at most stations. The following is the marine information for this day:—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Bombay Office.	WIND Direction.	WIND Force.	WEATHER.
	° ′	° ′	"			
S.S. *Persia* (a)	9 31	66 25	29·794	SW	5	High south-west sea and fine.
S.S. *Jelunga* .	9 53	66 41	·784	W by S	4	Fine. Midnight passing showers.
S.S. *City of Sparta.*	11 47	57 59	·767	SW	7	Heavy sea.
S.S. *Drachenfels*	11 59	59 40	·808	S	6	
S *Fryd* . .	12 04	63 51	·700	SW	7	Squally with rain.
S.S. *Bengal* .	14 54	73 48	·702	WSW	3	Heavy westerly swell and rain squalls.
S.S. *Urlana* .	16 23	73 18	·696	W	2	Moderate sea and heavy squalls of rain at times.

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Bombay Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *Steinberger*	16 30	62 59	29·670	WSW	6	Heavy sea and cloudy.
S.S. *Ikhona* .	16 32	72 37	·651	SSW	5	Rough sea and passing squalls of wind and rain.
S.S. *Hispania* .	16 40	62 28	·809	WSW	5	Heavy sea. 4 A.M. cloudy.
S.S. *Prudentia* .	17 04	66 43	·665	W by N	5	Following sea and dull weather.
S.S. *Elax* .	17 43	69 13	...	WNW	6	High confused sea and overcast.
S.S. *Inchdune* .	18 29	71 29	...	SW	5	Moderate sea and showery.
S.S. *Stanley Hall.*	18 36	71 55	·505	SW	5	Rough sea and rainy. 4 A.M. squally with heavy rain and thunder and lightning.
S.S. *Crewe Hall*	Bombay.*		·570	SSW	5	Heavy showers 4 A.M. squally with vivid lightning.
S.S. *Marquis Bequeham.*	19 35	59 52	·545	SW	5	Cloudy.

* Noon position.

The small storm had apparently moved very slowly northward and the centre apparently lay in about Lat. 19° N and Long. 70° E. The weather was very unsettled and rainy over the north-east of the sea and along the West Coast, but the south-east wind had disappeared from Bombay and the winds generally were assuming the normal monsoon directions over the sea, and this resumption of normal conditions spread to the West Coast ports on the following day.

Disturbance and cyclonic storm in the Bay. June 5th to 9th:—On the 5th the barometer was falling slightly to briskly over the Bay. The winds were easterly and east-north-easterly on the Pegu and Arakan coasts and strongish south-westerly winds and rain were reported from Ceylon. The following gives 8 A.M. data for the Bay Coasts:—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	″	″	″				Inch.	
Port Blair .	29·657	—·035	—·090	WNW	12	9	0·28	Cloudy.
Mergui .	·692	—·033	—·099	Calm	3	6	0·85	
Tavoy .	·685	—·045	?	Calm	1	10	0·32	Distant lightning.
Moulmein	·687	—·040	—·061	ESE	2	1	...	
Rangoon .	29·672	—·030	—·056	SE	3	10	...	
Diamond Island.	·639	—·053	—·074	ENE	2	6	...	
Bassein .	·666	—·032	—·044	Calm	3	5	0·03	
Akyab .	·644	—·031	—·022	E	2	7	...	
Chittagong	·624	—·009	—·020	SSE	9	8	0·29	
Barisal .	·600	+·010	+·002	SSW	7	2	0·91	Dust-storm with rain.
Saugor Island.	·571	+·010	—·001	S	23	9	...	Sea rough.
Balasore .	·553	+·012	—·002	S	19	8	...	
False Point.	·568	—·004	—·013	SSE	15	6	...	
Cuttack .	·542	—·028	—·024	Calm	3	8	...	
Gopalpur .	·528	—·056	?	SW	15	0	...	Sea smooth.
Waltair .	·555	—·063	—·034	W	8	10	0·05	Ditto.
Cocanada .	·568	—·065	—·039	SSE	9	9	...	
Masulipatam	·583	—·074	—·043	NW	15	8	0·02	
Colombo .	·814	—·028	—·009	SW	12	10	0·27	Sea rough,

The available marine observations gave no indication of cyclonic conditions over the Bay at this time as the winds were generally south-westerly and south-south-westerly and of moderate force. This is shown below:—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *Onda* .	16 23	86 19	29·533	SW	2	Sea smooth and fine.
S.S. *Kapurthala*	Rangoon.		·688	...	...	Noon rain squalls.
S.S. *Labuan* .	17 25	86 34	...	SW by S	6	Head sea and cloudy.
S.S. *Vortigern* .	17 55	85 15	...	SSW	6	Heavy head sea and fine.
S.S. *Louise Roth*	18 25	86 00	...	S by W	5	Moderate sea and clear.
S.S. *Politana* .	18 55	90 21	·621	WSW	2	Cloudy.
S.S. *Purulia* .	19 35	89 51	·617	SW	4	Fine. 4 A.M. overcast.
S.S. *Kasara* .	River Hooghly		·507	SW	4	Fine and hazy. 4 A.M. overcast.
S.S. *Kistna* .	Chittagong.		·596	...	...	4 P.M. fine.
S.S. *Shahsada* .	Chittagong.		·618	...	...	Ditto.

June 6th:—The barometer had fallen briskly over the Andaman Sea, but elsewhere the pressure changes were slight and unimportant. The winds were unchanged except at Gopalpur where the direction had shifted to north-east. A strong west-south-west wind prevailed at

Port Blair and an east-north-east wind at Diamond Island, thus indicating that a depression was in process of formation between these two stations. The following gives data for the Bay ports :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	REMARKS.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Port Blair .	29·640	—·017	—1·04	WSW	13	7	1·14	Cloudy.
Mergui .	·696	+·004	—·093	Calm	4	7	0·97	Raining.
Tavoy .	·688	+·003	—·112	S	1	10	1·57	Showery.
Moulmein .	·647	—·040	—·098	SE	2	10	0·28	
Rangoon .	·621	—·051	—·104	S	5	10	0·58	Showery.
Bassein .	·605	—·060	—·099	Calm	3	9	...	
Diamond Island.	·583	—·056	—·126	ENE	11	10	0·49	Sea slight.
Akyab .	·620	—·024	—·044	E	2	6	...	
Chittagong	·617	—·007	—·023	S	7	2	...	
Calcutta .	·549	—·013	—·019	SSE	7	6	...	
Saugor Island.	·549	—·022	—·020	S	17	4	...	Sea slight.
Balasore .	·527	—·026	—·025	SSW	12	2	0·72	
False Point	·545	—·023	—·036	S	11	2	...	
Cuttack .	·538	—·004	—·025	Calm	3	0	...	
Gopalpur .	·519	—·009	?	NE	8	0	...	
Waltair .	·563	+·008	—·022	SE	8	7	...	Sea smooth.
Cocanada .	·578	+·010	—·022	SW	7	9	...	Sea slight.
Masulipatam.	·597	+·009	—·032	WNW	14	10	...	

Light variable winds and rain were shown over the centre and east of the Bay and the *Congella* in Lat. 17°52′ N and Long. 87°12′ E reported a light north-north-west wind so that a slight depression or storm had apparently formed. The following gives marine data for this day :—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long E.		Direction.	Force.	
	° ′	° ′	"			
S.S. *Louise Roth*	16 06	85 00	...	S by W.	6	Strong south-west sea.
S.S. *Kapurthala.*	16 27	93 56	29·604	ESE	4	Westerly swell and slight showers 4 A.M. occasional squalls.
S.S. *Purulia* .	16 39	92 56	·587	Var.	2	Fine. Noon rain squalls.
S.S. *Maharaja.*	Rangoon		·583	...	...	Midnight strong squalls and heavy rain.
S.S. *Congella* .	17 52	87 12	29·525	NNW	1	Cloudy.
S.S. *Caln Monroe*	17 54	84 41	·466	SW	1	Fine.
S.S. *City of Dublin.*	18 43	90 15	...	Var.	2	Ditto.
S.S. *City of Oxford.*	20 07	87 45	...	SE	4	Ditto.
S.S. *Onda* .	20 22	88 01	·506	Var.	1	Sea smooth and fine, 8 P.M. cloudy
S.S. *Kistna* .	Akyab		·680	...	...	4 A.M. fine.
S.S. *Shahzada* .	21 07	89 24	·598	SSW	3	Fine.

June 7th.—Pressure had again decreased over the north of the Bay, the change having been greatest and brisk at Akyab. The wind had shifted to west-south-west at Diamond Island, but remained easterly at Akyab. The storm had consequently moved northward over the east of the Bay. The following gives data for the ports around the north of the Bay :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	REMARKS.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Port Blair .	29·635	—·005	...	WSW	16	7	0·48	Cloudy.
Cocos Island	·639	+·056	...	SSW	24	10	1·18	Overcast.
Mergui .	·743	+·047	—·040	Calm	4	6	3·25	Raining.
Tavoy .	·708	+·020	...	Calm	3	10	2·43	Showery.
Moulmein .	·666	+·019	—·074	SE	3	6	0·47	
Rangoon .	·627	+·006	—·093	SSE	5	10	3·34	Showery.
Bassein .	·569	—·037	—·132	SE	8	8	1·05	Raining.
Diamond Island .	·560	—·023	—·144	WSW	17	10	2·49	Continuous rain.
Akyab .	·567	—·053	—·091	ENE	2	6	...	Distant lightning.
Chittagong .	·584	—·033	—·053	SE	5	9	...	
Barisal .	·570	—·012	—·026	SSE	5	9	...	
Calcutta .	·537	—·012	—·028	SSE	6	6	...	
Saugor Island.	·541	—·008	—·024	SSW	17	7	...	Distant lightning.
Balasore .	·525	—·002	—·023	SSW	9	4	...	
False Point .	·537	—·008	—·039	S	11	9	...	Distant lightning.
Cuttack .	·524	—·014	—·036	SSW	1	6	...	
Gopalpur .	·525	+·006	...	SW	9	6	...	
Waltair .	·536	—·027	·043	W	11	9	...	Sea smooth.

The marine data for this day were very scanty and gave very little indication of the presence of the storm. This is shown below:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Purulia* .	16 00	95 54	29·617	SE	2	Dull rainy. 4 A.M. rain squalls.
S.S. *Kapurthala*	Kyouk phyoo		·579	...	...	4 A.M. cloudy.
S.S. *Kistna* .	19 58	92 40	·555	SE	2	Moderate sea and cloudy.
S.S. *Clan Monroe.*	20 47	87 48	·486	var	1	Fine.
S.S. *City of Dublin.*	Saugor Island *		...	var	2	Fine.
S.S. *Congella* .	Near Diamond Harbour *		...	var	2	Fine.

* Noon position.

June 8th:—The barometer was rising over the Bay except in the extreme north where it was steady. The wind remained easterly at Akyab where three inches of rain had fallen, but the winds were changing in direction in the north-west angle of the Bay and had increased in strength at Saugor Island and False Point. The following gives 8 A.M. data for the Bay ports:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	REMARKS.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches.	
Moulmein .	29·741	+·075	+·006	SE	7	10	1·03	
Rangoon .	·671	+·044	—·043	S	6	10	1·06	Distant lightning.
Bassein .	·650	+·081	—·045	Calm	5	9	0·07	
Diamond Island .	·639	+·079	—·059	WSW	12	8	0·07	
Akyab. .	·578	+·011	—·073	E	3	10	3·05	Raining.
Chittagong .	·581	—·003	—·048	NE	4	10	...	
Barisal .	·566	—·004	—·027	ENE	2	10	...	
Calcutta .	·547	+·010	—·013	SE	5	10	...	Distant lightning.
Saugor Island	·540	—·001	—·020	SE	11	9	...	
Balasore .	·530	+·005	—·013	SW	5	4	...	
False Point.	·542	+·005	—·028	NW	7	9	...	Distant lightning.
Cuttack .	·535	+·011	—·019	Calm	2	8	...	Ditto.
Puri . .	·537	+·004	...	Calm	8	7	...	Sea very rough.
Gopalpur .	·529	+·004	...	SSW	8	4	...	

The following gives marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Hensada* .	Masulipatam.		29·565	WSW	2	4 A.M. fine.
S.S. *Barenfels* .	16 24	83 22	·641	SW	3	
S.S. *Ujina* .	16 30	85 13	·557	SSW	4	Slight south-west-swell and overcast.
S.S. *Zibenghla*.	Rangoon.		·844	...	...	Midnight heavy rain squalls.
S.S. *Kistna* .	17 00	93 55	·627	S by W	4	South-south west swell and cloudy. 4 A.M. occasional rain squalls.
S.S. *Deepdale* .	19 06	86 35	·447	SW	4	Dull cloudy.
S.S. *Kt Bachelor.*	19 57	87 43*	...	SE	4	Cloudy.
S.S. *Lalpoora* .	Calcutta.		·496	...	...	4 P.M. fine.

* Noon position.

There was very little information for this day and what observations were received gave no indication of the presence of the storm which was apparently exceedingly small and slight.

June 9th:—Pressure was increasing briskly over the greater part of the Bay, but was decreasing in the north-east angle. The following gives 8 A.M. data for the ports in the north of the Bay:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	REMARKS.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches.	
Mergui .	29·813	+·056	+·029	Calm	2	7	1·55	
Tavoy .	·802	+·030	...	Calm	1	10	2·77	Showery.
Moulmein .	·751	+·010	+·017	SE	2	10	1·07	Drizzling.
Rangoon .	·712	+·041	—·001	S	6	10	0·20	Showery.
Diamond Island.	·719	+·080	+·025	SSW	13	9	0·09	Showery.
Bassein .	·703	+·053	+·010	SW	7	4	0·45	
Akyab .	·630	+·052	—·016	E	3	10	1·94	Showery.
Chittagong	·550	—·031	—·074	SE	8	10	1·14	Showery.
Barisal .	·540	—·026	—·050	NNW	4	10	1·12	Raining.
Calcutta .	·562	+·015	+·007	SE	5	10	...	
Saugor Island.	·554	+·014	+·001	SSW	17	10	...	Sea slight.
Balasore .	·548	+·018	+·010	SW	9	5	...	
False Point	·569	+·027	+·003	SW	13	5	...	
Cuttack .	·561	+·026	+·015	SSW	4	4	...	
Puri . .	·579	+·042	...	SW	18	4	...	Sea very rough.
Gopalpur .	·563	+·034	...	SW	23	0	...	Sea rough.

The above shows that the storm had advanced to the north-east of the Bay and was approaching Chittagong and Barisal where pressure was 0·074″ and 0·050″ respectively below the normal. The storm was hence very slight and by the following day had entirely disappeared.

Ordinary hot weather conditions prevailed over the interior of India during the next three days but on the 13th easterly winds appeared in Deltaic Bengal.

Disturbance and cyclonic storm of the 13th to the 17th in Bengal and the north of the Bay.—On the 14th pressure was rising over Bengal, but was falling over the east of the Bay. A shallow low pressure area had appeared over the head of the Bay and South-West Bengal, but the influence of the storm was very slight, and very little rain was falling. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE.			WIND.				REMARKS.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	″	″	″				Inches	
Cuttack	29·557	+·033	+·045	WNW	4	9	0·04	Distant lightning.
Puri	·542	+·023	...	NW	14	0	...	Thunder and lightning.
False Point	·537	+·018	+·015	W	15	9	0·99	Thunder storm.
Balasore	·528	+·034	+·043	Calm	6	7	...	
Saugor Island.	·542	+·063	+·040	WNW	18	5	...	Sea slight.
Barisal	·570	+·048	+·033	SSE	3	8	...	
Calcutta	·560	+·085	+·059	NE	5	10	...	
Jessore	·573	+·077	+·049	E	3	10	1·80	
Midnapore	·551	+·051	+·049	NE	5	1	...	
Burdwan	·559	+·074	+·058	Calm	3	10	0·02	Showery.
Bankura	·536	+·075	...	Calm	0	7	...	
Chaibassa	·537	+·103	...	WSW	4	2	...	

June 15th:—On this day the barometer was falling over the whole of the east of India, but particularly across the centre of the Bay. The depression at the head of the Bay was a feeble and diffused disturbance of very little importance. The following gives 8 A.M. data for the storm area.

STATION.	PRESSURE.			WIND.				REMARKS.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	″	″	″				Inches	
Gopalpur	29·538	—·025	+·006	SE	8	6	...	
Puri	·536	—·006	...	NW	8	8	...	Thunder and lightning.
Cuttack	·530	—·027	+·018	WNW	3	3	0·02	
False Point	·531	—·005	+·009	WNW	6	2	...	Wind variable.
Balasore	·506	—·022	+·021	Calm	5	0	...	
Saugor Island.	·516	—·026	+·014	SSE	12	4	...	Wind variable.
Barisal	·560	—·010	+·025	Calm	2	8	1·63	
Calcutta	·549	—·011	+·048	N	3	10	0·39	Drizzling.
Jessore	·549	—·024	+·027	Calm	1	8	0·04	
Midnapore	·530	—·021	+·029	Calm	5	2	...	
Burdwan	·534	—·025	+·035	Calm	2	8	0·65	Thunderstorm.
Bankura	·496	—·040	...	E	5	0	...	
Chaibassa	·513	—·024	...	SE	3	0	0·44	Showery
Ranchi	·516	—·042	+·055	WNW	7	2	...	
Hazaribagh	·530	—·034	+·049	Calm	8	10	...	

Over the south of the Bay the winds were strong from west and south-west, while in the north they were variable and light. The centre of the storm was apparently close to the Orissa Coast.

June 16th:—The barometer continued to fall over the east of the Indian region and a shallow low pressure area continued to be shown over Bengal and the head of the Bay. The depression was very slight and unimportant as is shown in the following table which gives 8 A.M. data for the storm area:—

STATION.	PRESSURE.			WIND.				REMARKS.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	″	″	″				Inches	
Cuttack	29·456	—·074	—·061	SW	4	10	0·10	
Puri	·476	—·057	...	W	11	8	0·72	Dark, gloomy.
False Point	·452	—·079	—·071	WSW	5	9	0·31	Nor'wester with rain.
Balsore	·421	—·085	—·067	Calm	3	3	0·04	
Saugor Island.	·436	—·080	—·067	WSW	8	8	0·29	Sea slight.
Barisal	·449	—·111	—·090	Calm	2	8	0·25	
Calcutta	·446	—·103	—·057	Calm	3	7	0·08	
Jessore	·450	—·099	—·076	Calm	1	8	1·05	Continuous rain.

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inch.	
Midnapore.	29·462	—·068	—·043	Calm	3	2	0·63	Thunder and lightning.
Burdwan .	·436	—·098	—·063	Calm	2	8	0·65	
Chaibassa .	·444	—·069	—·045	SSE	1	4	0·03	Distant lightning
Ranchi .	·442	—·074	—·024	NW	9	4	...	Hot wind.
Hazaribagh	·438	—·092	—·035	NNW	8	0	0·02	Showery.
Bankura .	·398	—·098	...	Calm	2	0	...	
Raniganj .	·438	—·093	...	SE	2	3	...	
Naya Dumka	·446	—·107	—·035	NE	1	5	0·21	Threatening.
Gaya . .	·451	—·077	—·024	Calm	6	2	...	

June 17th:—The barometer had fallen briskly over the Gangetic Plain and the shallow storm had moved north-westward. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inch.	
Saugor Island	29·381	—·055	—·130	SSW	13	10	...	
Barisal .	·415	—·034	—·133	SE	3	10	0·14	
Calcutta .	·380	—·066	—·131	SW	2	4	...	
Jessore .	·395	—·055	—·139	Calm	1	8	...	
Midnapore .	·381	—·081	—·132	S	2	1	...	
Chaibassa .	·382	—·062	—·088	WSW	2	3	0·10	
Ranchi .	·381	—·061	—·076	WNW	7	6	...	
Burdwan .	·380	—·056	—·126	Calm	1	6	...	
Bankura .	·351	—·047	...	Calm	2	0	...	
Raniganj .	·371	—·067	...	Calm	1	4	...	
Hazaribagh	·386	—·052	—·087	NW	8	10	...	
Naya Dumka	·386	—·060	—·099	Calm	1	8	...	
Gaya . .	·387	—·064	—·093	NW	8	3	0·03	Nor, wester with rain.
Benares .	·398	—·069	—·077	Calm	4	0	...	Dusthaze.
Patna .	·386	—·063	—·109	Calm	2	0	...	

This was the last day of the existence of the storm which became merged in the large low pressure area lying over the submontane regions of Upper India. From this date till the close of the month the weather was generally quiet over the Indian seas and there were no disturbances of any importance recorded, but on the 22nd a small depression appeared on the north-west frontier within the large low pressure area overlying the Punjab and the west of the North-West Provinces.

Land-formed disturbance of June 22nd to 26th:—On the 21st pressure was giving way briskly at Jacobabad and in Baluchistan. At Jacobabad the wind was south-easterly and the maximum temperature (123°5) was twelve and-a-half degrees above the average. On the following day, the 22nd, the storm had appeared between Dera Ismail Khan and Mooltan where pressure was in considerable defect. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"					
Jacobabad .	29·393	+·003	—·065	ESE	5	0	...	Hot wind.
D. I. Khan .	·332	—·033	—·117	NE	3	0	...	Dusthaze.
Mooltan .	·352	—·002	—·110	SSW	2	0	...	Do.
Montgomery	·364	+·015	—·086	S	11	0	...	Strong wind.
Khushab .	·364	—·007	...	ENE	6		...	Dusthaze.

The winds were cyclonic and strong over the Punjab, and some showers had been received over the hills though elsewhere the sky was still generally clear.

June 23rd:—Pressure had increased rapidly all over the Punjab and the storm was less well defined than on the preceding day. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inch.	
Jacobabad .	29·416	+·023	—·040	SSE	4	0	...	Hot wind.
D. I. Khan .	·470	+·138	+·009	NE	11	0	...	Dusthaze.
Mooltan .	·437	+·085	—·023	Calm	3	0	...	Do.
Montgomery	·431	+·067	—·025	ENE	16	0	...	Duststorm.
Khushab .	·444	+·080	+·037	N	13	0	...	Do.
Sialkot .	·422	+·071	—·052?	ESE	6	0	...	...
Lahore .	·438	+·067	—·040	NE	5	10	0·06	Dust storm.
Ludhiana .	·475	+·105	—·024	E	3	0	...	Thunder-storm.

The winds had shifted to the northward over the west and north of the Punjab and were blowing strongly and rain had again fallen at several hill stations and snow on the

higher mountains near Gulmarg. Apparently the storm was travelling eastward through the Punjab.

June 24th:—The barometer had again risen all over the Punjab, but the rise was less uniform than on the preceding day and the storm had increased in definiteness. The following gives 8 A.M. data for this day:—

STATION.	PRESSURE.			WIND.				REMARKS.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inch	
Dera Ismail Khan.	29·593	+·123	+·130	NE	3	0	...	Dusthaze.
Mooltan .	·496	+·059	+·038	NE	1	0	...	Do.
Montgomery	·477	+·046	+·028	NE	9	0	...	Do.
Sirsa . .	·504	+·045	+·020	SW	...	0	...	
Khushab .	·546	+·102	+·137	N	19	0	...	Duststorm.
Lahore .	·522	+·084	+·044	NE	6	0	...	Dusthaze.
Sialkot .	·537	+·115	+·047	NE	7	0	0·12	Do.
Ludhiana .	·511	+·036	+·027	SE	3	0	...	Do.
Rawalpindi.	·625	+·159	+·113	NE	6	8	0·25	Thunderstorm.
Peshawar .	·735	+·164	+·201	Calm	3	8	0·10	Showery.
Murree .		+·068	+·060	Calm	12	10	0·25	
Srinagar .		+0·72	+·203	SSE	7	10	0·10	Thunderstorm.
Skardu .		+·050	...	Calm	5	10	0·01	Duststorm with rain.

The storm lay over the south of the Punjab between Mooltan, Montgomery and Sirsa. Northerly and north-easterly winds prevailed throughout the west and north of the province and dust and thunderstorms were reported from many places. Rain had fallen at Sialkot, Rawalpindi, Peshawar and several hill stations, while the Observer at Gulmarg, again reported snow on the higher hills.

June 25th:—Pressure continued to increase over the Punjab, the barometric rise having, however, been greater in the west than in the east. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE.			WIND.				REMARKS.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inch.	
Montgomery	29·618	+·141	+·164	N	11	0	...	Dusthaze.
Sirsa . .	·574	+·070	+·087	SW	...	0	...	
Ludhiana .	·583	+·072	+·093	SE	2	2	0·03	Duststorm with rain.
Umballa .	·607	+·085	...	ESE	1	0	0·28	Showery.

The depression had continued to drift slowly eastward and lay over the area represented by the stations of Montgomery, Sirsa and Ludhiana. A complete cyclonic circulation of the wind prevailed around the storm, and the force of the wind was very strong over the Central Punjab. Further scattered showers of rain and snow on the hills and of rain on the plains were reported.

June 26th:—The storm apparently drifted through the west of the North-West Provinces and broke up during the day among the Kumaun Himalayas.

The disturbance was interesting as it is unusual for a storm to come in from the westward and travel eastward across the Punjab at this time of year. The storm occasioned a good deal of snow and rain over the hills and gave rain to several stations on the Punjab plains.

This rainfall was followed by a very sudden and large fall of temperature in the North-West Punjab. The principal rainfall amounts in Kashmir, and the Punjab during this period were as follows:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
SHAHPUR . . .	Sahiwal . . .	22nd June .	1·50
JUMMOO . . .	Riasi . . .	23rd ,, .	0·75
SHAHPUR . . .	Nurpur . . .	,, ,, .	0·58
JUMMOO . . .	Ramban . . .	,, ,, .	0·54
KASHMIR . . .	Sri Ranbir Singh Pora	,, ,, .	0·53
GUJRANWALA . .	Gujranwala . .	24th ,, .	0·94
	Wazirabád . .	,, ,, .	0·72
KASHMIR . . .	Sri Ranbir Singh Pora	,, ,, .	0·65
PESHAWAR . . .	Para Chinar . .	,, ,, .	0·58
KASHMIR . . .	Vantipur . . .	,, ,, .	0·58
	Gulmarg . . .	,, ,, .	0·58
	Uri	25th ,, .	1·20
	Anantnag . . .	,, ,, .	1·03
HAZARA . . .	Abbottabad . .	,, ,, .	0·53
KASHMIR . . .	Haripore . . .	,, ,, .	0·51

Between the 27th and the 30th another small storm in many ways similar to that described above passed into the Punjab. Its influence on the weather was very slight but it was apparently accompanied with a slight disturbance in the Kashmir hills and on the 30th the following

heavy amounts of snow and rain were reported from Kashmir:

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
KASHMIR.	Karnah . . .	28th June.	1·13
	Vantipore . . .	30th „	2·11
	Sri Ranbir Singh Pora	„ „	2·03
KASHMIR.	Nagam . . .	30th June.	1·81
	Lal Phak . . .	„ „	1·45
	Sri Protap Singh Pora.	„ „	1·37
	Anantnag . . .	„ „	1·36
	Pattan . . .	„ „	1·32

Summary of the reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

The information relating to the snowfall in the Himalayan area is generally small for June as it is unusual for heavy snow to fall even on the higher ranges in that month, but during June 1901 a considerable amount appears to have been received on the Kashmir Himalayas.

The following are the records of snow during the month under review:—

(I) KASHMIR AND PUNJAB HIMALAYAS.

(1) *Kashmir*:—The following telegrams were received from the Observer at Gulmarg:—

June 1st.—Higher mountains covered yesterday with a great deal of fresh snow.

„ *5th.*—Slight fresh snow fell all over the higher mountains to-day.

„ *15th.*—Slight snow fell yesterday on the top of higher mountains.

„ *16th.*—Slight snow fell over the upper portion of Affervative yesterday.

„ *17th.*—Slight snow fell yesterday over the upper portion of higher mountains.

„ *22nd.*—Slight snow fell yesterday over the top of higher mountains.

„ *23rd.*—Slight snow fell over the tops of higher mountains yesterday and to-day.

„ *24th.*—Slight snow fell yesterday over the upper portion of the higher mountains.

„ *25th.*—Fresh snow fell, four inches, over upper portions of higher mountains yesterday.

„ *29th.*—Slight snow fell over the upper portions of higher mountains to-day with severe gales.

Dr. Mittra, the Meteorological Reporter, Kashmir, forwarded the following snowfall report:—It appears that there have been eight feet of snow on the higher ranges near Minimarg of which about seven feet of snow fell in June, sothat the Tragbal, Burzil and other heights on the Gilgit road received a considerable amount of snow during that period. At Dras during June 1·45" of snow (melted as water) was measured at the observatory and on 30th June heavy snow fell on the higher mountains. The Skardu Observer reported that slight snow fell on the higher mountains during June. From all reports it appears that there has not been any heavy snowfall on the higher mountains near Kashmir in June, but the Pir Punjab and the higher mountains on the Gilgit road received a certain amount of snow during the month.

The Chitral Observer reported that snow fell on the higher hills in the vicinity as follows:—

June 5th,
„ 14th,
„ 24th,
„ 25th,

(2) *Chamba.*—The Forest Ranger at Pangi reported as follows:—On June 3rd it rained the whole day at the Pangi villages and travellers reported that about 1½ feet of fresh snow fell on Sach Pass (14,400 feet) the snowline coming down to about 11,000 feet. It began to rain again on the evening of the 13th and continued the whole day on the 14th in Pangi and again 1½ feet of fresh snow fell on the Sach Pass. Snow also fell on the higher hills about 12,000 feet on the 21st and 28th, but disappeared after a few hour's sun. The weather was unusually cool throughout the month.

(3) *Kulu.*—A slight fall of snow occurred on the higher passes of Lahoul and Spiti in the month of June.

(4) *Simla.*—On the 13th June the snowline descended to 11000 feet when there was a slight fall of about ½ inch. On the Rupin Pass the snow is said to be 15 feet in depth at the end of the month.

(II) NORTH-WESTERN PROVINCES HIMALAYAS.

(1) *Almora.* Snow fell as under during June.

Malla Johar.

8th June 1901	1 foot
15th do.	1 foot
26th do.	1 foot
Total .	3 feet.

The snowfall was greater than in the previous year.

Gharwal.—There was a light snowfall on the perpetual snows on the 25th June measuring about one inch.

Summary of snowfall information.—The information given in the previous Reviews showed that the snowfall of the preceding winter was nowhere excessive in the western Himalayas and over the greater part of the area was normal in amount or in defect. It commenced somewhat earlier than usual and continued somewhat later than usual, there being moderately heavy and late falls in April. So far as could be judged from the data the snowfall was locally in slight to considerable excess in the Chamba and Simla hills and in some parts of Kashmir. The snow accumulation at the end of May was probably about normal in Kumaun and Garhwal and also in Baluchistan, in moderate excess in Chitral, Kashmir and Bashahr and in moderate to considerable defect in Afghanistan. The snowfall reports for June indicate clearly that there has been even less snow than usual generally, during the month in the Western Himalayas.

As no reports have been received from officers in the North-West Frontier, it is almost certain no snow has fallen on the higher ranges of North Afghanistan.

The period from May to June was drier and hotter than usual in the Western Himalayas, and it is hence almost certain that the snow accumulation melted more rapidly than usual, and that it was generally below the normal at the end of the month over the whole of the Western Himalayas with perhaps the exception of Bashahr and parts of Kashmir.

Summary of special Storm Reports.

A number of local disturbances occurred during the month, of which reports have been received from various observing stations, and the principal facts with reference to them are detailed below. The majority of these local disturbances were duststorms and thunderstorms such as almost invariably accompany the advance of the south-west monsoon over the drier districts of the country.

June 1st.—A very heavy duststorm passed over Hoshangabad at 1 P.M. from north-west to south-east, the storm lasted about 15 minutes.

A thunderstorm with gales and light rain passed over Gulmarg between 2 P.M. and 6 P.M.

A duststorm of some intensity and long duration occurred about 6-25 P.M. at Allahabad and continued till 1-30 P.M., no rain fell.

A thunderstorm was experienced at Cuddapah at 11 P.M. Heavy rain fell at intervals.

" *2nd.*—A very heavy duststorm passed over Hoshangabad at 7-20 P.M. The storm lasted about 20 minutes. A few hours earlier at noon another very heavy duststorm had been experienced.

" *3rd.*—A thunderstorm with rain occurred at Gulmarg between 0·30 P. M. and 3-30 P.M. Snow fell on the higher hills. Storms occurred at Jaipur between 2 P. M. and 3 P. M. and again between 6 and 6-30 P. M.

June 3rd.—A moderate duststorm passed over, Allahabad. The storm came on suddenly at 5-50 P. M. and lasted about half an hour.

A thunderstorm was experienced at Srinagar between 2 and 4 A.M. A thunderstorm passed over Cuddapah between 6 P.M. and midnight giving heavy rain at intervals.

A duststorm visited Ajmer at 5-45 A.M.

" *4th.*—A severe duststorm passed over Burdwan travelling from west to south. The storm lasted 15 minutes.

A thunderstorm without rain occurred at Jaipur between 6-5 and 6-35 P.M.

" *5th.*—A thunderstorm with rain was experienced at Gulmarg between 4 A.M and noon. Snow again fell on the higher hills.

A thunderstorm was also experienced at Srinagar between 10 A.M. and 5 P.M. Light rain fell.

" *6th.*—A very heavy duststorm passed over Hoshangabad at 8-10 P.M., the storm lasting half an hour.

" *7th.*—A thunderstorm was experienced at Jodhpur at 4 P.M. The storm lasted about 20 minutes during which heavy rain fell.

June 8th.—A slight thunderstorm accompanied with rain passed over Poona between 9 P.M. and 9-13 P.M.

A thunderstorm giving a few drops of rain was experienced at Malegaon at 10-30 P.M.

„ *10th.*—A duststorm with lightning and strong winds occurred at Khandwa at 10 P.M.

A heavy duststorm passed over Hoshangabad lasting for half an hour from 5-10 P.M.

„ *11th.*—A very heavy duststorm again occurred at Hoshangabad at 3-20 P.M.

There was a thunderstorm with lightning at Khandwa at 3 P.M.

„ *12th.*—A duststorm occurred at Hoshangabad at 3-5 P.M. The storm only lasted 15 minutes.

At 5-30 P.M. a nor'wester was experienced at Burdwan, lasting 30 minutes, and again at 2 A.M. on the 13th. Heavy rain fell and there was some damage done.

A thunderstorm giving heavy rain for a short time passed over Srinagar. The storm began at 2 P.M. and lasted till 4 P.M.

A dust and thunderstorm of some intensity occurred at Allahabad between 2 P.M. and 5 P.M. There was hardly any rainfall.

A slight storm was experienced at Cuddapah between 3 P.M. and 6 P.M.

„ *13th.*—A thunderstorm occurred at Simla between 10-20 P.M. and 11 P.M. The storm came up from west.

A heavy duststorm passed over Hoshangabad at 11-40 P.M. The storm abated in ¾ of an hour.

There was a thunderstorm with light rain at Gulmarg between 1-30 and 5 P.M. Light snow again fell on the hills.

A thunderstorm giving a few drops of rain occurred at Khandwa between 4 P.M. and 5-15 P.M.

There was a slight thunderstorm at Srinagar at 7 P.M.

There was a slight thunderstorm accompanied with strong winds at Cuddapah at 7-20 P.M.

„ *14th.*—There was a slight duststorm at Srinagar.

A thunderstorm occurred at Simla commencing at 6-5 P.M. and lasting till 7 P.M. Heavy rain fell.

June 14th.—A duststorm came up from west at Sutna accompanied with drops of rain. The storm lasted 15 minutes.

„ *15th.*—A severe duststorm passed over Agra at 3 A.M.

A local storm occurred at Saugor, high winds blowing for about twenty-five minutes from 4-13 P.M.

A moderately severe thunderstorm was reported from Gulmarg between 3 P.M. and 5-30 P.M. Light fresh snow fell on the higher mountains.

A thunder and duststorm passed over Jaipur between 6-10 P.M. and 8-30 P.M.

A thunderstorm giving heavy rain at intervals passed over Cuddapah between 3 P.M. and 8 P.M.

„ *16th.*—A thunderstorm with gales of wind and some rain was experienced at Srinagar between 2-45 P.M. and 6-15 P.M. Rain and hail fell. Light snow fell on the higher hills.

A thunderstorm giving showers was reported from Cuddapah between 7 P.M. and 7-40 P.M.

„ *17th.*—A duststorm of short duration commenced at Allahabad at 4 P.M. and lasted till 5 P.M.

A duststorm with strong winds and rain was experienced at Khandwa at 7 P.M.

A heavy duststorm passed over Hoshangabad at 6-40 P.M., half an inch of rain fell and the storm lasted half an hour.

„ *18th.*—At 7 P.M. a nor'wester with dust and rain was experienced at Burdwan. The storm lasted 35 minutes.

„ *19th.*—A thunderstorm with lightning and strong winds occurred at Khandwa at 8-30 P.M.

A duststorm passed over Hoshangabad at 11-30 P.M.

„ *20th.*—At Gulmarg a slight thunderstorm was experienced between 3-50 P.M. and 6-30 P.M. giving light rain.

„ *21st.*—A slight thunderstorm was felt at Srinagar between 8 P.M. and 10 P.M. The rainfall was very light.

„ *22nd.*—A thunderstorm occurred between noon and 3-30 P.M. at Gulmarg. Subsequently fresh snow fell on the higher ranges.

Dust and thunderstorms were experienced at Patiala between 5-50 P.M. and 6-20 P.M. There was a passing shower at 6 P.M.

June 23rd.—Another thunderstorm occurred at Gulmarg giving rain to the station and snow on the hills. The storm lasted from 2-30 to 8-30 P.M.

„ *24th.*—Another but severe thunderstorm was reported from Gulmarg. The storm lasted from 11-35 A.M. to 6 P.M. and heavy snow fell on the mountains and moderate rain in the station.

Srinagar experienced the same storm, the disturbance lasting from noon to 5 P.M.

At Simla a thunderstorm commenced at 2-20 P.M. and continued till 3-30 P.M.

„ *25th.*—A thunderstorm occurred at Simla at 2-32 P.M. and lasted till 3-20 P.M., The rainfall was heavy at intervals.

A duststorm passed over Jodhpur between 4-32 P.M. and 5-22 P.M. accompanied with a few light showers.

„ *26th.*—A very heavy duststorm was experienced at Hoshangabad. The storm lasted from 4-10 to 4-40 P.M.

„ *28th.*—Srinagar was visited by another thunderstorm which lasted from 6 A.M. to 3 P.M Light rain fell.

June 29th.—A slight thunderstorm was experienced near Gulmarg when fresh snow fell on the higher hills.

Pachmarhi had a slight thunderstorm at night lasting thirty-two minutes.

A duststorm passed over Srinagar between 4 P.M. and 8 P.M. There was no rain.

„ *30th.*—A local storm passed near Belgaum at 4-40 P.M.

Gulmarg was visited by another thunderstorm between 8 A.M. and noon which gave rain to the station and snow to the higher hills.

Srinagar also experienced a thunderstorm between 11-30 A.M. and 2-30 P.M.

HAILSTORMS.

The Satara district of the Bombay Presidency was visited by a series of six hailstorms between the 14th and 27th May 1901, but the intensity and extent of the storms were slight.

June 1st.—At 5-10 P.M. a storm came up from north west at Ajmer and hail and rain continued till 6 P.M.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea:—At the beginning of the month a strong advance of humid monsoon winds was in progress in the extreme south-west of the Arabian Sea. These winds continued to march eastwards during the next three days and by the morning of the 5th were established over the whole of the south of the sea as far north as Lat 9° or 10°N. Weather was very squally in front of the advancing current and, as frequently happens, a small cyclonic whirl was generated in the area of disturbed squally weather on the 6th and 7th. The whirl intensified slowly and drifting northwards parallel to the coast broke up during the 11th off the coast of Kathiawar. With its disintegration the winds, which had been cyclonic in direction in the east of the sea, during the period from the 7th to the 11th, returned to their normal monsoon conditions so that on the morning of the 12th, ordinary monsoon winds of force 3 to 7 prevailed generally over the Arabian Sea.

The air movement over the Arabian Sea was 20 to 40 per cent. below its normal strength from the 1st to the 4th and of about normal intensity during the rest of the period, *i. e.*, up to the 12th

No important change occurred from the 13th to the 15th a moderate monsoon prevailing generally. The current increased rapidly in strength during the 15th and blew with an average force of 5·0 on the 16th and 17th. This increase in the strength of the current was, however, only temporary as winds began to fall off again and averaged 4·2 on the 18th and 3·8 on the 19th as compared with 4·5, their normal strength in June. During the remainder of the month the monsoon was feeble, its average strength ranging between 4·1 and 3·1. The feebleness, it may be noted, was most marked in the east of the sea off the coast of Konkan where on most days winds ranged in strength between 1 and 4 and were very unsteady and variable.

On the mean of the month the monsoon current in the Arabian Sea was at least 10 per cent. weaker than usual.

Bay of Bengal:—At the commencement of the month pressure was exceedingly uniform over the Bay and the winds were in consequence light, averaging only 2·6 in force as compared with 4·0, their normal June strength. Weather was generally fine with passing clouds. The pressure conditions changed largely during the next three

days, more especially, over the south of the Bay where gradients steepened considerably. The winds hence rose rapidly in force and averaged 4·4 at 8 A.M. of the 4th. Weather was on this day fine both in the extreme north and south and squally with occasional heavy rain over the intervening region. A further increase in the strength of the winds took place in the south of the Bay during the 4th, so that on the morning of the 5th the vessels in that area reported winds of force 5 to 7 with frequent hard squalls and a high rough sea. There was on this day a tendency to the generation of a depression in the centre of the Bay which, however, failed to develop into a storm and passed inland across the East Bengal coast as a slight low pressure area on the 9th. The air movement over the Bay during the period from the 5th to the 9th was more or less stronger than usual, varying between 4·2 and 5·0. Fresh to strong south-west winds obtained generally over the Bay until the 12th, at 8 A.M. of which day the mean strength of the air movement, as deduced from the data of 17 vessels, was 5·5 or 1·5 above the normal. Weather was very disturbed with thick rain and a high confused sea in the centre and east of the sea and fine elsewhere. The disturbed weather in the centre of the Bay extended northwards to the head of the Bay during the next two days and resulted in the formation of a depression which passed inland on the 16th as a diffused shallow disturbance of no importance. A moderate to strong monsoon prevailed over the whole Bay area until the 22nd when it began to take off in strength and was more or less below its normal strength during the next seven days. It began to increase again during the 29th and was 0·1 stronger than the normal at the end of the month.

Unlike the current in the Arabian Sea, the Bay branch of the monsoon current was about eight per cent. above its normal intensity on the mean of the whole month.

Equatorial Belt.—The data of the few ships which passed through the western half of this region during the month show that the south-east trades winds were strong (force 4 to 8) from the 1st to the 7th and much below their normal strength during the remainder of the month, with, however, a tendency to strengthen again towards the end of the month. The air movement at the Seychelles and Zanzibar was also of the same general character, being more or less above the normal intensity during the first fortnight and exceedingly light during the second half of the month. The rainfall of the month was 61 per cent. in excess of the normal at Zanzibar and about 20 per cent. in defect at the Seychelles.

From the preceding summary of the weather in the Indian seas it will be seen that the meteorology of the month in these areas was characterized by several abnormal features of which the following were the most noteworthy:—

(1) The monsoon current set in about its normal date over both the Arabian Sea and the Bay of Bengal.

(2) The disturbed conditions in front of the advancing currents failed to develop into regular cyclonic whirls and hence weather was much less disturbed over the sea area than usual.

(3) The contrast between the conditions in the east and the west of the Arabian Sea during the second fortnight of the month, as shown by the prevalence of light unsteady winds in the former and of moderately strong south-west winds in the latter region.

(4) The current over the Bay blew more directly from the west than usual over the centre and south-east, thus indicating a stronger determination than usual to Tenasserim and Lower Siam.

(5) A rather rapid decrease of the air movement over the whole sea area during the last eight or ten days of the month, most marked in the Arabian Sea and the western half of the equatorial belt.

Temperature of the Air.

The mean temperature conditions of the month were mainly determined by the prolonged delay in the extension inland of the monsoon currents. Rain commenced along the West Coast between the 6th and the 10th, but rain only occasionally extended into the interior during the month and was more or less below the normal over the whole of the interior of the Peninsula and North-Western and Central India. The Bay monsoon current failed to advance beyond West Bengal during the month and intensely hot and dry weather prevailed in the Gangetic plain.

The mean maximum or day temperature of the month was above the normal average except over the Brahmaputra Valley, East Bengal, part of the south of the Peninsula, part of the West Coast and locally at Peshawar. The deficiency was generally slight or small and exceeded 2°

only at the two stations for which comparative data are given below :—

Station.	Mean maximum temperature.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	°	°	°
Sibsagar	87·5	89·7	−2·2
Goa	83·2	85·3	−2·1

The excess was small over Burma but was more than 1·0° at the following stations :—

Station.	Mean maximum temperature.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	°	°	°
Moulmein	85·8	84·3	+1·5
Mergui	86·6	85·4	+1·2
Akyab	87·1	85·9	+1·2
Bassein	87·2	86·1	+1·1

The excess was considerable to large over the greater part of India and ranged between 2° and 10° over a large part of the country including the East Punjab, Sind, Rajputana, Gujarat, Central India, the Central Provinces, the North-Western Provinces, West Bengal and the Centre and east of the Peninsula. It was more than 5° at the following large number of stations :—

Station.	Mean Maximum temperature.		
	Actual, June 1901.	Normal, June	Variation of actual from normal, June 1901.
	°	°	°
Cawnpore	111·2	100·7	+10·5
Mainpuri	110·7	101·2	+ 9·5
Sutna	107·8	98·8	+ 9·0
Allahabad	110·9	102·4	+ 8·5
Hazaribagh	100·5	92·5	+ 8·0

Station.	Mean Maximum temperature.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	°	°	°
Balasore	100·4	92·6	+7·8
Seoni	101·2	93·6	+7·6
Lucknow	109·1	101·5	+7·6
Hoshangabad	105·5	98·0	+7·5
Ranchi	99·2	91·8	+7·4
Jhansi	110·4	103·2	+7·2
Benares	108·2	101·0	+7·2
Jacobabad	119·0	111·9	+7·1
Jubbulpore	103·7	96·7	+7·0
Sambhar	108·3	101·7	+6·6
Raipur	103·3	96·7	+6·6
Sambalpur	103·9	97·3	+6·6
Nowgong	108·8	102·5	+6·3
Jaipur	109·1	102·8	+6·3
Meerut	107·7	101·4	+6·3
Bahraich	103·5	97·2	+6·3
Ahmedabad	105·6	99·3	+6·3
Cuttack	102·1	95·9	+6·2
Dehra Dun	99·3	93·4	−5·9
Gaya	105·7	99·9	+5·8
Amraoti	102·4	96·7	+5·7
Indore	99·8	94·2	+5·6
Saugor	104·0	98·5	+5·5
Khandwa	102·8	97·3	+5·5
Akola	102·9	97·5	+5·4
Nagpur	103·2	97·8	+5·4
Bhavnagar Para	103·6	98·2	+5·4
Bikaner	111·3	106·0	+5·3
Cocanada	100·3	95·0	+5·3
Hyderabad (Sind)	108·4	103·2	+5·2
Mooltan	111·9	106·7	+5·2
Chaibassa	102·2	97·0	+5·2
Ajmer	105·5	100·3	+5·2

The excess was hence most pronounced over West Bengal and the Gangetic Plain where the day temperatures were excessively high.

The highest maximum temperatures of the year were recorded about the 12th over North-West India. The greatest heat of the year in India is ordinarily experienced in the fourth week of May and hence the maximum heat

in the present year occurred about a fortnight later than usual in North-West India. The following gives the highest maximum temperature recorded in the different provinces of India together with the highest previously recorded in the month of June :—

Province or Division.	Station.	Highest maximum temperature recorded in June 1901.	Date on which recorded.	Highest maximum temperature recorded in June previous to 1901.	Year in which recorded.
		°		°	
Burma . .	Minbu .	99·6	7th	103·6	1900
Assam . .	Silchar .	99·1	17th	99·6	1895, 1900
Bengal . .	Raniganj .	113·8	12th	112·5	1888
Orissa . .	Balasore .	112·5	„	113·0	1888
Bihar . .	Dehri . .	116·5	„	115·5	1889
Chota Nagpur .	Purulia .	115·8	„	109·7	1900
North-Western Provinces and Oudh.	Lucknow .	118·8	„	118·0	1873
Punjab . .	Sialkot .	119·0	21st	120·0	1876
Sind . .	Jacobabad .	125·0	12th	126·0	1897
Rajputana .	Pachpadra .	121·0	11th	122·1	1897
Gujarat . .	Ahmedabad .	115·4	10th	116·9	1897
Central India .	Nowgong .	115·0	11th	117·2	1878
Central Provinces.	Chanda .	113·2	7th	117·9	1878
Berar . .	Akola . .	113·5	1st	113·7	1889
West Coast .	Bombay .	98·5	10th	94·0	1895
Bombay Deccan	Sholapur .	109·2	1st	109·2	1898, 1900
Mysore . .	Chitaldroog .	95·1	„	99·2	1900
Madras Coast .	Cocanada .	111·0	6th	110·4	1891
Madras Deccan	Cuddapah .	108·3	2nd	111·3	1894, 1900
South India .	Trichinopoly .	105·7	4th	110·5	1888

The following is a statement of all the readings of 120° or more recorded during the month :—

Station.	Highest maximum temperature, June 1901.
Jacobabad	125·0
Pachpadra	121·0
Hyderabad (Sind)	120·7

The mean minimum or night temperature of the month was lower than usual over the Upper Indus Valley, the north-west of the North-Western Provinces, Assam and East and Central Bengal, part of the West Coast and of the Bombay Deccan and the extreme south of the Peninsula. In most of these areas the deficiency was slight and only exceeded 1° at the following stations :—

Area.	Station.	Mean minimum temperature. Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
		°	°	
Upper Indus Valley.	Peshawar . . .	74·9	76·6	—1·7
	D. I. Khan . . .	79·1	80·8	—1·7
N.-W. Provinces, West.	Roorkee . . .	77·7	78·9	—1·2
Bombay Deccan .	Bijapur . . .	70·2	72·2	—2·0
South of the Peninsula.	Negapatam . . .	77·2	78·9	—1·7

Over the whole of the remainder of India the night temperature, on the mean of the month, was above the normal. The excess was large and between 2° and 5° in amount over the Gangetic Plain, Rajputana and the central parts of the country.

The following gives comparative data for those stations at which the excess was more than 3° in amount :—

Station.	Mean minimum temperature. Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	°	°	°
Jhansi	89·3	83·9	+5·4
Bikaner	87·6	82·5	+5·1
Gaya	84·5	79·5	+5·0
Sutna	85·9	81·0	+4·9
Delhi	87·6	83·4	+4·2
Raipur	82·3	78·1	+4·2
Saugor	81·5	77·1	+4·4
Indore	78·9	74·9	+4·0
Jaipur	84·0	80·1	+3·9
Khandwa	81·8	78·1	+3·7
Amraoti	79·7	76·2	+3·5
Hoshangabad	82·5	79·0	+3·5
Hazaribagh	79·4	75·9	+3·5
Ranchi	78·0	74·7	+3·3
Nowgong	86·0	82·7	+3·3
Mooltan	85·6	82·3	+3·3
Allahabad	86·1	82·9	+3·2
Cawnpore	84·7	81·6	+3·1
Ahmedabad	83·3	80·2	+3·1
Bhavnagar Para	83·4	80·3	+3·1
Ajmer	83·1	80·0	+3·1

The mean temperature of the month was below the normal in the West Punjab, East Bengal, the Brahmaputra Valley and locally at a few stations on the coasts and in the centre of the Peninsula. The variation from the normal in these areas was almost everywhere small only exceeding 1° at the following stations:—

Province or Division.	Station.	Mean daily temperature.		
		Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
		°	°	°
West Punjab	Peshawar	90·0	91·1	—1·1
Brahmaputra Valley.	Sibsagar	81·8	83·2	—1·4
West Coast	Goa	80·4	81·7	—1·3

Over the whole of the remainder of India the mean temperature was in excess and over a large part of the country this excess was considerable to large (2° to 5°).

The following gives comparative data for stations at which the excess was more than 4° in amount:—

Station.	Mean daily temperature.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	°	°	°
Sutna	96·9	89·9	+7·0
Cawnpore	98·0	91·2	+6·8
Jhansi	99·9	93·6	+6·3
Allahabad	98·5	92·6	+5·9
Mainpuri	97·2	91·4	+5·8
Hazaribagh	90·0	84·2	+5·8
Hoshangabad	94·0	88·5	+5·5
Raipur	92·8	87·4	+5·4
Ranchi	88·6	83·2	+5·4
Gaya	95·1	89·7	+5·4
Balasore	90·9	85·7	+5·2
Bikaner	99·5	94·3	+5·2
Jaipur	96·6	91·5	+5·1
Saugor	92·8	87·8	+5·0
Behares	96·6	91·7	+4·9
Jubbulpore	92·2	87·4	+4·8
Indore	89·4	84·6	+4·8
Sambhar	96·4	91·6	+4·8
Nowgong	97·4	92·6	+4·8
Ahmedabad	94·5	89·8	+4·7
Khandwa	92·3	87·7	+4·6
Amraoti	91·1	86·5	+4·6
Sambalpur	93·5	89·0	+4·5
Mooltan	98·8	94·5	+4·3
Bhavnagar Para	93·3	89·0	+4·3
Ajmer	94·3	90·1	+4·2
Lucknow	95·7	91·5	+4·2
Cuttack	92·1	88·0	+4·1

A noteworthy feature of the month was the unusually low temperature prevailing in the Baluchistan and Afghanistan plateau and the Kashmir mountain districts where both by day and night the temperature was considerably to largely below the normal. This was almost certainly due to late snow on the higher ranges of hills. At the other hill stations in India the temperature, on the mean of the month, was in excess of the normal.

The following table gives temperature data for 56 Meteorological divisions of the empire:—

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	86·0	75·8	80·9	10·2	19·5	+1·3	+1·4	−0·1
	Lower Burma (Deltaic)	86·7	78·1	82·4	8·6	18·4	+0·8	+1·2	−0·4
	Central do.	90·4	76·7	83·6	13·7	24·3	?	?	?
	Upper do.	92·2	77·1	84·7	15·2	23·7	+0·6	+0·6	0
	Arakan	87·1	77·1	82·1	10·0	20.4	?	?	?

Province.	Division.	Actual temperature					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bengal and Assam	Eastern Bengal	88·6	76·7	82·7	11·9	24·6	—0·1	0	—0·1
	Assam (Surma)	89·3	76·0	82·7	13·3	28·8	+0·6	—0·1	+0·7
	Do. (Brahmaputra)	86·3	75·9	81·1	10·5	22·1	—1·4	—0·7	—0·7
	Deltaic Bengal	93·4	79·4	86·4	14·1	31·7	+1·8	+0·3	+1·5
	Central do.	94·2	78·5	86·4	15·7	34·0	+0·5	—0·5	+1·0
	North do.	87·9	76·0	81·9	11·9	25·7	+0·3	+0·1	+0·2
	Bengal Hills	67·2	49·4	58·3	17·8	31·8	+1·8	+1·7	+0·1
	Orissa	96·2	81·8	89·1	14·4	29·9	+5·2	+1·9	+3·3
	Chota Nagpur	102·2	79·9	91·1	22·3	39·6	+6·9	+2·9	+4·0
	South Bihar	103·4	83·0	93·2	20·4	36·6	+4·2	+2·8	+1·4
	North do.	95·7	79·0	87·4	16·7	31·5	+2·3	+0·7	+1·6
North-Western Provinces and Oudh.	North-Western Provinces (East)	109·6	85·5	97·6	24·1	41·4	+7·9	+2·9	+5·0
	Oudh (South)	109·1	82·3	95·7	26·8	46·0	+7·6	+0·8	+6·8
	Do. (North)	103·5	80·7	92·1	22·8	46·2	+6·3	+1·6	+4·7
	North-Western Provinces (Central)	110·8	85·9	98·4	24·9	41·5	+9·1	+3·5	+5·6
	Do. do. (West)	108·4	84·0	96·3	24·4	38·8	+5·3	+4·2	+1·1
	Do. do. (East Sub-montane)	100·1	80·5	90·3	19·6	41·5	+2·4	+0·7	+1·7
	Do. do. (West do.)	103·6	77·8	90·7	25·8	44·6	+5·1	0	+5·1
	Do. do. (Hills)	80·5	63·2	71·9	17·4	37·4	+4·2	+3·2	+1·0
Punjab	Punjab (South-East)	107·1	87·6	97·4	19·5	44·1	+2·9	+4·2	—1·3
	Do. (South)	108·5	82·7	95·6	25·8	42·9	+4·1	+2·2	+1·9
	Do. (Central)	109·2	80·7	95·0	28·5	47·7	+3·6	+0·9	+2·7
	Do. (Submontane)	108·0	80·8	94·4	27·2	46·2	+3·7	+0·7	+3·0
	Do. (Hills)	78·4	56·4	67·4	22·0	41·1	—2·3	—1·0	—1·3
	Do. (North)	104·7	70·7	87·7	34·1	54·3	—0·4	—1·7	+1·3
	Do. (West)	109·6	82·7	96·1	26·9	44·8	+2·3	+0·5	+1·8
Bombay and Malabar Coast Districts (Madras).	Malabar	85·1	75·4	80·2	9·7	18·5	+1·3	+0·7	+0·6
	Madras (South Central)	92·8	73·9	83·4	18·9	28·2	+0·8	+1·4	—0·6
	Coorg	71·9	63·8	67·9	8·1	21·3	—0·2	+0·6	—0·8
	Mysore	84·5	68·0	76·2	16·5	26·0	+0·7	+0·3	+0·4
	Konkan	85·8	77·5	81·7	8·3	20·3	—0·3	0	—0·3
	Bombay Deccan	90·2	71·4	80·8	18·8	33·8	+2·2	+0·1	+2·1
	Hyderabad (North)	95·7	73·9	84·9	21·7	40·1	...	...	...
	Khandesh	96·2	74·0	85·1	22·2	36·4	+3·7	+0·6	+3·1
Central Provinces and Berar.	Berar	102·7	79·1	90·9	23·6	42·1	+5·6	+2·3	+3·3
	Central Provinces (West)	103·8	81·6	92·7	22·2	37·8	+6·1	+3·2	+2·9
	Do. (Central)	102·6	80·1	91·1	22·6	38·1	+5·5	+2·7	+2·8
	Do. (East)	103·6	82·8	93·2	20·9	37·2	+6·6	+3·3	+3·3
Bombay (North)	Gujarat	101·0	82·8	91·9	18·3	37·6	+4·5	+3·1	+1·4
	Kathiawar and Cutch	96·9	81·5	89·2	15·4	26·1	+3·2	+2·4	+0·8
	Sind	108·1	83·2	95·6	24·9	41·9	+4·8	+0·7	+4·1
	Baluchistan Hills	92·1	55·7	74·0	36·5	51·9	—2·5	—5·3	+2·8
Rajputana and Central India.	Central India (East)	104·7	82·7	93·7	22·0	37·5	+6·2	+3·8	+2·4
	Rajputana (East), Central India (West)	106·5	83·7	95·1	22·8	37·2	+5·7	+3·0	+2·7
	Do. (West)	109·5	84·8	97·2	24·8	40·2	+5·3	+5·1	+0·2
Madras	East Coast (North)	94·8	81·4	88·1	13·4	29·6	+3·1	+0·6	+2·5
	Hyderabad (South)	96·0	76·2	86·1	19·8	35·7	+1·8	+0·7	+1·1
	Madras (Central)	98·0	78·1	88·0	19·8	34·3	+1·6	+0·9	+0·7
	East Coast (Central)	101·4	82·2	91·9	19·2	35·9	+1·8	+1·1	+0·7
	Do. (South)	99·5	79·5	89·5	20·0	30·5	+1·6	+0·6	+1·0
	Madras (South)	94·9	76·8	85·5	18·0	25·6	—0·8	—0·2	+0·6

The following is a summary of the larger changes of the temperature conditions in India during the month.

During the first four days of the month there were showers in the north-west of India, rain falling heavily over the Punjab, hills and plains, on the 3rd. This had the effect of reducing temperature to below the normal over Baluchistan and the Punjab and this reduction of temperature held from the 1st to the 10th. It was pro-

bably in part due to the actual rainfall over the plains of the Punjab, but was also due to stormy weather, accompanied with snow, on the hills to the north of the Punjab. The following gives comparative temperature data for these two areas from the 1st to the 10th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of									
	1st June.	2nd June.	3rd June.	4th June.	5th June.	6th June.	7th June.	8th June.	9th June.	10th June.
	°	°	°	°	°	°	°	°	°	°
Baluchistan.	+2·8	+3·3	+0·2	−4·1	−7·5	−7·1	−6·5	−6·5	−4·5	−2·4
Punjab .	+2·1	−1·8	−7·0	−7·5	−4·5	−5·2	−4·6	−2·0	−0·3	+1·5

During these days there were also constant daily showers over Burma and Assam and scattered occasional showers over the east of the Peninsula. As a result the mean temperature of Assam, Bengal and the east of the Peninsula was unsteady and on many days was lower than usual. The following gives comparative temperature data for these areas and shows the changes which occurred during these ten days :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of									
	1st June.	2nd June.	3rd June.	4th June.	5th June.	6th June.	7th June.	8th June.	9th June.	10th June.
	°	°	°	°	°	°	°	°	°	°
Burma .	+1·9	+1·8	+2·3	+3·2	+3·0	+3·1	+1·5	+1·1	+0·2	+0·3
Assam .	+0·6	+0·7	−0·7	−2·8	−4·8	−1·6	−1·3	+2·5	+3·1	+0·7
Bengal .	−3·0	−0·2	+0·8	+2·5	−1·2	+1·2	+2·9	+2·9	+2·0	+1·1
Madras Coast.	−2·3	−1·1	−1·1	+0·8	+2·5	+2·9	+1·6	+1·4	+1·4	+2·3

During this period there were showers along the West Coast of the Peninsula, but the usual heavy downpour of rain, which ordinarily occurs in this region during the first ten days of the month, did not take place during the month under review and the mean temperature of the West Coast was steadily excessive at this time. This is shown below :—

Province or Division.	Variation from normal of mean temperture of 24 hours preceding 8 A.M. of									
	1st June.	2nd June.	3rd June.	4th June.	5th June.	6th June.	7th June.	8th June.	9th June.	10th June.
	°	°	°	°	°	°	°	°	°	°
West Coast.	+2·7	+3·4	+3·8	+3·8	+3·3	+1·9	+0·8	+0·9	+1·0	+1·2

On the 6th, however, heavy rain commenced in Malabar and during the two following days extended inland over the south of the Peninsula, a change which was accompanied with marked reduction of temperature over South India. Comparative temperature data are given below for this division from the 1st to the 10th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of									
	1st June.	2nd June.	3rd June.	4th June.	5th June.	6th June.	7th June.	8th June.	9th June.	10th June.
	°	°	°	°	°	°	°	°	°	°
South India.	+0·1	+1·5	+2·6	+2·5	+2·0	−0·2	−0·9	−3·3	−2·5	−0·8

The reduction of temperature in this area was greatest on the 8th and 9th and was most marked in the day temperature. The following gives comparative data for the stations in South India on the above dates and shows the considerable deficiency in the day temperatures :—

Date.	Station.	Maximum temperature.		
		Actual, of date.	Normal, of date.	Variation of actual from normal, of date.
		°	°	°
8th June 1901	Tinnevelly	85·7	97·5	−11·8
	Madura	88·4	98·4	−10·0
	Coimbatore	83·9	89·4	− 5·5
	Negapatam	94·2	97·0	− 2·8
	Trichinopoly	96·1	98·8	− 2·7
9th „	Tinnevelly	89·2	97·2	− 8·0
	Madura	91·4	98·2	− 6·8
	Coimbatore	83·9	89·1	− 5·2
	Trichinopoly	94·0	98·2	− 4·2
	Cuddalore	95·2	98·4	− 3·2

Over the remainder of India the mean temperature was steadily excessive during these ten days. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of									
	1st June.	2nd June.	3rd June.	4th June.	5th June.	6th June.	7th June.	8th June.	9th June.	10th June.
	°	°	°	°	°	°	°	°	°	°
Orissa	−0·4	−1·9	+0·1	+2·3	+4·8	−0·6	+2·9	+1·3	+2·5	+4·8
Bihar	−3·4	−0·3	+2·4	+4·0	+2·0	+1·3	+4·3	+5·7	+5·7	+5·7
Chota Nagpur.	−1·9	−4·7	−0·6	+1·6	+3·6	+4·8	+5·0	+4·9	+5·7	+6·5
North-Western Provinces and Oudh.	−3·2	−6·3	−1·5	+1·6	+1·4	+1·9	+1·9	+1·1	+1·9	+2·9
Sind	+3·8	+3·5	+1·6	+2·4	+3·8	+2·7	+0·5	+1·1	+0·4	+4·8
Rajputana	+5·5	+0·6	−1·1	+0·4	+1·0	+1·9	+2·7	+4·5	+6·0	+7·6
Gujarat	+0·6	+0·4	+0·5	+0·1	+0·2	+0·1	+0·1	+1·3	+4·6	+8·7
Cental India	+3·3	+0·3	+0·9	+1·3	+0·5	+1·7	+2·8	+4·4	+5·2	+7·1
„ Provinces	+3·8	+3·7	+2·8	+2·1	+4·0	+5·2	+6·1	+6·6	+6·9	+8·7
Berar	+6·1	+4·8	+5·4	+4·8	+3·8	+5·4	+7·8	+7·3	+5·2	+6·5
Bombay Deccan	+3·6	+3·9	+3·8	+4·0	+3·4	+4·3	+3·6	+2·5	+2·8	+3·1
Mysore	−0·8	−0·6	+1·6	+3·0	+1·6	+1·9	+0·5	+1·0	−0·7	0
Madras Deccan	+0·6	+0·7	+3·2	+1·7	+1·8	+3·1	+2·6	+3·0	+2·4	+2·8

The above shows that the area of greatest excess lay over the Central Provinces, Berar and the Bombay Deccan from the 1st to the 3rd, over the Deccan and the east of the Peninsula from the 4th to the 7th. On the 8th the area of greatest excess began to move northward and by the 10th lay over Rajputana, Gujarat and Central India. The following shows for each day the two stations within the above areas at which the mean temperature was in greatest excess from the 1st to 10th:—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
1st June 1901	Sholapur	+ 7·6
	Nagpur	+ 6·4
2nd ,,	Khandwa	+ 7·0
	Sholapur	+ 6·5
3rd ,,	Amraoti	+ 6·2
	Seoni	+ 6·0
4th ,,	Sholapur	+ 6·2
	Amraoti	+ 5·9
5th ,,	Cocanada	+ 6·5
	Chanda	+ 6·4
6th ,,	Cocanada	+ 9·9
	Chanda	+ 7·9
7th ,,	,,	+10·2
	Khandwa	+ 8·2
8th ,,	Indore	+10·1
	Khandwa	+ 9·9
9th ,,	,,	+10·6
	Deesa	+10·6
10th ,,	Surat	+12·2
	Deesa	+11·6

On the 10th the mean temperature was increasing in nearly all parts of the country. On the 11th there was a brisk fall taking place in Burma and a slight fall along the West Coast, but in most other places the rise continued to hold and in some parts of the country was maintained until the 12th. On this day the maximum temperature of the month was recorded at many stations in Northern India. The following gives comparative data for the different divisions of Northern and Central India for the 11th, 12th and 13th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	11th June.	12th June.	13th June.
	°	°	°
Bengal	+2·7	+4·1	−0·6
Orissa	+7·6	+8·9	+7·5
Bihar	+5·7	+8·1	+3·4
Chota Nagpur	+11·1	+10·5	+6·9
North-Western Provinces and Oudh	+5·4	+10·1	+10·0
Punjab	+4·1	+5·9	+7·8
Sind	+7·2	+3·6	+3·7
Rajputana	+7·7	+7·1	+6·1
Gujarat	+4·2	+1·7	+1·2
Central India	+9·3	+6·9	+5·0
Central Provinces	+8·6	+4·9	+3·4
Berar	+7·0	+2·6	−0·6

This excess was due to high temperatures, both by day and night, but in general the excess was much more marked in the day than in the night temperature. This is shown in the following table which gives comparative data of day and night temperatures for those stations at which the maximum was 12° or more in excess on the 12th and 13th:—

Date.	Station.	Variation from normal of	
		Maximum temperature, of date.	Minimum temperature, of date.
		°	°
12th June	Balasore	+19·0	+ 8·8
	Burdwan	+16·5	+ 3·3
	Bahraich	+15·5	+ 6·1
	Lucknow	+15·0	+12·6
	Calcutta	+14·9	+ 5·9
	Mainpuri	+14·8	+14·0
	Ranchi	+14·8	+ 9·2
	Cuttack	+14·5	+ 6·0
	Cawnpore	+14·0	+16·9
	Hazaribagh	+13·7	+ 8·0
	Benares	+13·5	+ 9·0
	Gaya	+12·9	+13·5
	Allahabad	+12·9	+10·8
	Bareilly	+12·8	+ 5·0
	Jacobabad	+12·3	+ 2·8

DATE.	STATION.	VARIATION FROM NORMAL OF Maximum temperature, of date.	Minimum temperature, of date.
		°	°
13th June	Bahraich	+17·6	+ 5·3
	Mainpuri	+15·9	+10·7
	Balasore	+14·9	+ 7·2
	Burdwan	+14·7	— 5·5
	Cawnpore	+14·6	+11·8
	Lucknow	+14·5	+10·0
	Bareilly	+12·6	+ 8·8
	Calcutta	+12·5	— 5·4
	Meerut	+12·1	+14·5

During these three days the mean temperature was steadily lower than usual over Burma and Assam. This is shown below:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF 11th June.	12th June.	13th June.
	°	°	°
Burma	—1·9	—2·0	—0·5
Assam	—1·7	—3·4	—4·4

At the same time the rainfall became heavier along the West Coast and extended inland, so that temperature fell over the West Coast districts as is shown below:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF 11th June.	12th June.	13th June.
	°	°	°
West Coast	—0·1	—0·1	—1·2

The following gives variation data for the whole Indian region for the 13th illustrating the temperature conditions prevailing at this time:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF Mean maximum temperature, 13th June.	Mean minimum temperature, 13th June.	Mean daily temperature, 13th June.
	°	°	°
Burma	—1·5	+0·5	—0·5
Assam	—4·7	—4·1	—4·4
Bengal	+4·0	—5·1	—0·6
Orissa	+9·8	+5·1	+7·5
Bihar	+9·0	—2·3	+3·4
Chota Nagpur	+9·0	+4·8	+6·9
North-Western Provinces and Oudh.	+12·1	+7·8	+10·0
Punjab	+8·6	+6·9	+7·8
Sind	+3·8	+3·5	+3·7
Rajputana	+8·1	+4·1	+6·1
Gujarat	+0·9	+1·5	+1·2
Central India	+7·0	+3·0	+5·0
Central Provinces	+2·9	+3·8	+3·4
Berar	—0·7	—0·5	—0·6
West Coast	—2·2	—0·2	—1·2
Bombay Deccan	—1·8	—0·1	—1·0
Mysore	—0·7	+0·4	—0·2
Madras Coast	+4·7	—1·2	+1·8
Madras Deccan	+1·8	+1·7	+1·8
South India	+2·1	+1·5	+1·8

On the 14th temperature was falling decidedly in nearly all provinces and scattered showers of rain were reported from most parts of the country except the north-west. These showers continued and extended on the 15th on which day the mean temperature was reduced to below the normal over a large part of the Peninsula and over the submontane regions of Northern India.

The following gives variation data for this day and illustrates the temperature conditions then prevailing:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF Mean maximum temperature, 15th June.	Mean minimum temperature, 15th June.	Mean daily temperature, 15th June.
	°	°	°
Burma	+1·8	+1·2	+1·5
Assam	+0·9	+0·7	+0·8
Bengal	+0·6	—0·5	+0·1
Orissa	+6·4	+2·4	+4·4
Bihar	—3·0	—1·3	—2·2
Chota Nagpur	+5·6	+1·2	+3·4
North-Western Provinces and Oudh.	+1·0	—5·2	—2·1

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 15th June.	Mean minimum temperature, 15th June.	Mean daily temperature, 15th June.
	°	°	°
Punjab	—0·1	—2·8	—1·5
Sind	+3·0	+1·5	+2·3
Rajputana	+2·3	+3·9	+3·1
Gujarat	+2·5	+3·1	+2·8
Central India	+2·8	+1·5	+2·2
Central Provinces	+1·8	—1·4	+0·2
Berar	+2·9	—1·3	+0·8
West Coast	+0·1	+1·4	+0·8
Bombay Deccan	—4·2	—1·2	—2·7
Mysore	—4·4	—0·6	—2·5
Madras Coast	+1·3	—1·6	—0·2
Madras Deccan	—2·4	0	—1·2
South India	—0·4	+0·6	+0·1

During the 16th and 17th there was comparatively little change, but the temperature rose slowly over Northern India while it was steady or fell slightly over the Peninsula. As a result the mean temperature on the latter date exceeded the normal in all the provinces of Northern India, but remained more or less below the average in the south. Between the 18th and the 22nd another very hot period was experienced over North-West India and the Gangetic Plain, several stations reporting an excess of more than 10° in the mean temperature. The following gives comparative data for the different provinces of Northern India for these five days:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	18th June.	19th June.	20th June.	21st June.	22nd June.
	°	°	°	°	°
North-Western Provinces and Oudh.	+4·2	+6·5	+8·1	+8·2	+7·4
Punjab	+3·8	+6·3	+7·7	+7·4	+6·2
Sind	+5·4	+3·5	+3·5	+2·4	+1·8
Rajputana	+5·8	+7·0	+6·5	+5·3	+4·1
Gujarat	+4·1	+4·5	+4·2	+3·4	+2·7
Central India	+6·2	+8·4	+8·7	+8·0	+7·8
Bihar	+4·4	+4·4	+5·9	+5·1	—2·4
Chota Nagpur	+5·4	+6·6	+6·1	+8·2	+7·0
Orissa	+1·1	+3·9	+4·8	+7·4	+7·5

As mentioned above the mean temperature was 10° or more above the normal at several stations during this interval the excess having been chiefly in the day temperatures. The following gives comparative data for these stations:—

DATE.	STATION.	VARIATION FROM NORMAL OF		
		Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
19th June	Sutna	+11·4	+11·0	+11·2
	Mainpuri	+13·9	+ 7·8	+10·9
	Jhansi	+10·3	+11·2	+10·8
20th ,,	Jhansi	+12·8	+11·6	+12·2
	Sutna	+13·9	+10·2	+12·1
	Nowgong	+11·8	+11·8	+11·8
	Sirsa	+11·4	+11·4	+11·4
	Lahore	+13·4	+ 9·3	+11·4
	Mooltan	+12·1	+ 8·2	+10·2
21st ,,	Sialkot	+14·4	+10·5	+12·5
	Sutna	+12·1	+12·4	+12·3
	Mainpuri	+13·0	+10·7	+11·9
	Jhansi	+13·9	+ 9·0	+11·0
	Cawnpore	+11·6	+10·3	+11·0
	Nowgong	+11·3	+10·2	+10·8
	Ludhiana	+11·5	+ 9·6	+10·6
	Allahabad	+13·3	+ 7·8	+10·6
	Agra	+10·4	+10·4	+10·4
	Balasore	+14·9	+ 5·8	+10·4
	Lahore	+13·5	+ 7·1	+10·3
	Roorkee	+11·4	+ 9·0	+10·2
	Gya	+11·2	+ 8·9	+10·1
22nd ,,	Sutna	+13·4	+11·0	+12·2
	Cawnpore	+13·8	+ 9·8	+11·8
	Balasore	+15·1	+ 8·0	+11·6
	Mainpuri	+13·2	+ 9·8	+11·5
	Sialkot	+10·9	+10·9	+10·9
	Nowgong	+ 9·9	+10·2	+10·1

Showers of rain and snow occurred on the higher ranges of the North-West Himalayas on the 22nd and this was followed by a rapid fall of temperature over the Punjab and Baluchistan on the 23rd and subsequent days. This fall never extended eastwards beyond the Punjab, but

was very marked over parts of that province from the 23rd to the 27th. This is shown below:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	23rd June.	24th June.	25th June.	26th June.	27th June.
	°	°	°	°	°
Quetta	−2·6	−9·6	−13·6	−12·7	−10·5
Chaman	−5·3	−10·9	−13·6	−10·5	−3·8
Peshawar	−4·4	−7·4	−12·8	−8·0	−4·9
Murree	−9·9	−7·6	−11·8	−2·1	+0·8
Rawalpindi	−7·2	−4·0	−13·9	−7·6	−5·9
Sialkot	+6·3	−0·4	+2·1	+3·9	+1·2
Khushab	+1·0	−1·3	−3·5	−4·6	0
D. I. Khan	+1·9	−1·5	−8·8	−6·8	−3·6
Mooltan	+5·5	+3·8	−0·3	−0·2	+3·4
Montgomery	+1·5	+0·6	−2·2	−6·4	−1·6
Lahore	+2·9	+3·2	+5·0	−1·9	−0·5
Ludhiana	+5·2	+4·2	+6·1	+3·7	+0·6
Umballa	+6·8	+5·5	+4·5	+4·5	+2·5
Delhi	+8·2	+8·1	+7·1	+5·6	+5·3
Sirsa	+7·4	+4·7	+5·7	+3·5	+1·1

During this period very high temperatures continued to be reported over West Bengal, the North-Western Provinces, the Central Provinces, Berar and Central India. This is shown in the following statement:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	23rd June.	24th June.	25th June.	26th June.	27th. June.
	°	°	°	°	°
Chota Nagpur	+7·6	+6·3	+7·1	+5·9	+4·1
North-Western Provinces and Oudh.	+7·0	+7·2	+6·1	+7·1	+7·1
Central Provinces	+6·8	+4·5	+3·4	+5·0	+6·3
Central India	+7·5	+6·7	+6·6	+5·3	+4·7
Berar	+6·0	+6·0	+1·2	+2·1	+3·9

Daily rain fell during this interval along the West Coast and the mean temperature of that area was steadily below the normal. The following gives comparative temperature data for this region:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	23rd June.	24th June.	25th June.	26th June.	27th June.
	°	°	°	°	°
West Coast	−0·8	+0·1	−0·9	−0·3	−1·3

In Bengal also showers were received and the mean temperature of that province was low from the 23rd to the 26th, when it rose to about the normal. This is shown below:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	23rd June.	24th June.	25th June.	26th June.	27th June.
	°	°	°	°	°
Bengal	−3·2	−2·1	−2·5	−2·0	−0·6

The low temperatures disappeared from the Punjab and Bengal on the 27th, but continued to prevail on parts of the West Coast and across the head of the Peninsula, while in all other parts of the country the mean temperature was steadily in excess. The following gives comparative data for all the divisions for the last three days of the month and illustrates the temperature conditions then existing:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	28th June.	29th June.	30th June.
	°	°	°
Burma	+1·7	+0·8	+0·5
Assam	+0·8	+0·1	−2·3
Bengal	0	−0·2	+1·4
Orissa	+3·4	+2·9	+4·6
Bihar	+2·3	+3·8	+5·5
Chota Nagpur	+1·4	+5·9	+8·5
North-Western Provinces and Oudh.	+7·8	+10·2	+11·9
Punjab	+2·8	+6·1	+6·3
Sind	+1·2	+2·1	+2·5
Rajputana	+5·5	+6·7	+5·3
Gujarat	+2·6	+3·2	+3·1
Central India	+5·4	+7·0	+8·4
Central Provinces	+4·0	+2·4	+3·5
Berar	+2·7	−3·0	−1·6
West Coast	−0·1	−0·3	+1·1
Bombay Deccan	+0·7	−0·9	−2·4
Mysore	+2·6	+2·7	+2·1
Madras Coast	+1·7	+1·8	+0·8
Madras Deccan	+2·3	+1·7	+1·7
South India	+0·7	+2·5	+2·0

The following table gives the variations of the mean temperature, week by week, during the month and also for the whole month:—

Province or Division.	Variation from normal of mean temperature for week ending				
	8th June.	15th June.	22nd June.	29th June.	For whole month.
		°	°	°	°
Burma	+2·3	−0·3	+0·7	+0·9	+0·9
Assam	−1·1	−1·1	−0·1	−0·1	−0·6
Bengal	+1·3	+1·0	+0·5	−1·5	+0·3
Orissa	+1·3	+5·6	+4·3	+3·7	+3·6
Bihar	+2·8	+3·7	+3·3	+0·8	+2·5
Chota Nagpur	+2·1	+6·9	+5·5	+5·5	+4·9
North-Western Provinces and Oudh.	0	+4·6	+4·4	+7·5	+4·1
Punjab	−4·7	+3·9	+4·5	+2·7	+1·9
Sind	+2·2	+3·6	+3·3	+1·9	+2·8
Rajputana	+1·4	+6·1	+5·5	+4·8	+4·5
Gujarat	+0·4	+3·7	+3·7	+3·0	+3·2
Central India	+1·7	+5·5	+6·5	+6·2	+5·0
Central Provinces	+4·4	+5·0	+4·4	+4·6	+4·5
Berar	+5·6	+3·3	+4·3	+2·7	+4·0
West Coast	+2·6	+0·2	−1·0	−0·5	+0·3
Bombay Deccan	+3·6	+0·4	+0·8	+1·0	+1·4
Mysore	+1·3	−0·7	−0·4	+2·1	+0·5
Madras Coast	+1·0	+1·8	+1·7	+2·1	+1·5
Madras Deccan	+2·3	+1·6	−1·2	+2·0	+1·3
South India	+0·6	0	−0·3	+1·5	+0·5

In Persia and Arabia the heat was nearly as excessive as in India. The following gives comparative data for the various stations in the Persian area and in Arabia:—

Station.	Variation from normal of		
	Mean maximum temperature, June 1901.	Mean minimum temperature, June 1901.	Mean daily temperature June 1901.
	°	°	°
Bushire	+1·5	+1·4	+1·5
Jask	+1·9	+1·3	+1·6
Baghdad	+6·4	+2·6	+4·5
Aden	−0·3	+1·5	+0·6

In the south-east Trades region, on the contrary, where the rainfall was in excess of the normal the mean temperature of the month was more or less below the normal. The following gives temperature data for the Seychelles, Zanzibar and Mauritius:—

Station.	Variation from normal of mean temperature, June 1901.
	°
Seychelles	−1·2
Zanzibar	−0·9
Mauritius	−0·3

Winds.

The Bay monsoon current was stronger than usual over the Bay and on the surrounding coasts, but did not penetrate to any extent inland, its limits on most days of the month having been defined by West Bengal.

Winds were more westerly than usual, on the mean of the month, at the Bay Islands and on the Lower Burma coast, while they were more easterly than usual on the Arakan coast. The following gives direction data for this area:—

Station.	Mean wind direction.		
	Actual, June 1901.	Normal, June.	Westerly deflection.
	°	°	
Port Blair	S 86 W	S 43 W	+43
Cocos Island	S 43 W	S 34 W	+ 9
Rangoon	S 27 W	S 23 W	+ 4
Diamond Island	S 47 W	S 35 W	Easterly.
Akyab	S 17 E	S 3 E	+14

The velocity exceeded the normal except at Akyab the excess having been most marked at Port Blair where the wind was 48 per cent. above the average. The steadiness was about the average. The following gives data of steadiness and velocity in illustration :—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, percentage, June 1901.	Normal, percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June
Port Blair . . .	78	79	— 1	343	231	+112
Cocos Island . .	72	90	—18	312	?	?
Rangoon . . .	73	71	+ 2	124	123	+ 1
Diamond Island . .	73	74	— 1	227	216	+ 11
Akyab	68	57	+11	58	97	— 39

Around the head of the Bay the wind was a trifle more southerly than is usually the case and was stronger and steadier than the average. The following gives data :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Southerly deflection.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901
				°	°				
Chittagong .	67	60	+ 7	S 8 E	S 24 E	+16	213	160	+ 53
Calcutta . .	69	59	+10	S 1 E	S 3 E	+ 2	148	142	+ 6
Saugor Island .	82	68	+14	S 3 W	S 12 W	+ 9	487	372	+115
False Point .	84	64	+20	S 38 W	S 37 W	— 1	331	303	+ 28

The wind register for Port Blair shows that at the commencement of the month the wind was light and below the normal during the first three days. The wind then gradually increased in strength and between the 12th and the 16th averaged over 26 miles per hour, from the 17th to the 24th the wind remained stronger than usual, but after the 24th the force diminished and was generally less than usual up to the close of the month. At Saugor Island the wind was stronger than usual throughout, but was most excessive between the 11th and 13th so that judging from the registers of these two stations the first strong burst of the monsoon over the Bay occurred between the 11th and the 16th, which is about or a little ahead of the normal date.

In the Gangetic Plain the wind was also generally stronger than usual and was very steady, but the direction varied irregularly from the average, the wind at Hazaribagh having been west-north-west instead of south-west and at Allahabad north-west by west instead of north by west. The following gives data for this area :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
				°	°			
Hazaribagh .	45	15	+30	N 64 W	S 38 W	231	225	+ 6
Darbhanga . .	75	70	+ 5	S 73 E	S 85 E	109	148	—39
Allahabad . .	65	15	+50	N 59 W	N 9 W	231	166	+65

In the Upper Sub-Himalayas region the wind was unusually westerly at most stations. This is shown below :—

STATION.	MEAN WIND DIRECTION.		
	Actual, June 1901.	Normal, June.	Westerly deflection.
	°	°	
Dehra Dun	S 83 W	S 53 W	+30
Roorkee	S 70 W	S 10 E	+80
Meerut	N 73 W	N 6 W	+57
Lahore	N 43 W	N 19 E	+62
Ludhiana	N 58 W	S 64 W	...

The steadiness in this area was generally excessive while the velocity varied irregularly from the normal. The following gives comparative data :—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Dehra Dun . . .	50	16	+34	50	40	+10
Roorkee . . .	15	17	— 2	93	95	— 2
Meerut . . .	45	10	+35	61	64	— 3
Lahore . . .	15	6	+ 9	78	88	—10
Ludhiana . . .	18	8	+10	74	64	+10

In the north of the Indus Valley, the wind was more northerly than the average, while in Upper and Lower Sind

the direction was more westerly than the normal. This is shown below:—

Station.	Mean wind direction.	
	Actual, June 1901.	Normal, June.
	°	
Peshawar	N 1 E	N 41 E
Jacobabad	S 55 W	S 33 E
Kurrachee	S 65 W	S 62 W

The velocity in this region was generally low while the steadiness was about the normal or somewhat above. The following gives data:—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual, percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Peshawar	32	31	+ 1	75	113	−38
Jacobabad	82	45	+37	79	125	−46
Kurrachee	87	85	+ 2	406	423	−17

The wind was strong and steady from about south-west in Southern Rajputana, and was steadier than usual, but weaker than the normal, in Eastern Rajputana. The following gives data for Jaipur and Deesa:—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual, from normal, June 1901.	Actual, June 1901.	Normal, June.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
				°	°			
Jaipur	77	45	+32	S 74 W	N 76 W	159	165	− 6
Deesa	87	70	+17	S 40 W	S 42 W	427	397	+30

The wind's direction in this area did not depart much from the average.

The following gives mean comparative data for the month for the Bay Islands, Burma, and the different divisions of Northern India:—

Province or Division.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
				°	°			
Bay Islands	75	85	−10	S 56 W	S 39 W	328	231	+97
Burma	71	67	+ 4	S 20 W	S 19 W	136	145	− 9
Bengal	73	62	+11	S	S 6 E	283	225	+58
Bihar	75	70	+ 5	S 73 E	S 85 E	109	148	−39
Orissa	84	64	+20	S 38 W	S 37 W	331	303	+28
Chota Nagpur	45	15	+30	N 64 W	S 38 W	231	225	+ 6
N.-W. Provinces	44	15	+29	N 84 W	N 69 W	109	91	+18
Punjab	22	15	+ 7	N 32 W	N 5 E	76	88	−12
Sind	85	65	+20	S 60 W	S 19 W	243	274	−31
Rajputana	82	58	+24	S 57 W	S 78 W	293	281	+12

The above shows that the wind, on the mean of the month, was generally steadier than usual and that the velocity was above the normal at the Bay Islands and in Bengal.

In the Deccan the wind's direction and steadiness were very nearly normal, but the velocity very generally exceeded the average. The following gives comparative data for the stations in this region:—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual, from normal, June 1901.	Actual, June 1901.	Normal, June.	Actual, June 1901.	Normal, June.	Variation of actual, from normal, June 1901.
				°	°			
Belgaum	75	78	− 3	S 57 W	S 62 W	480	556	−76
Sholapur	61	70	− 9	S 79 W	S 86 W	414	316	+98
Poona	73	78	− 5	S 80 W	S 80 W	433	360	+73
Akola	72	72	0	N 75 W	N 68 W	288	223	+65
Buldana	69	66	+ 3	N 80 W	N 73 W	278	253	+25
Khandwa	70	72	− 2	N 75 W	N 79 W	287	234	+53
Nagpur	63	52	+11	S 60 W	N 83 W	259	240	+19
Hyderabad (D.)	82	70	+12	S 89 W	N 84 W	200	217	−17

The Arabian Sea monsoon current set in at Colombo and Minicoy about the 7th or 8th. At Calicut on the 10th

and at Bombay about the 11th or 12th. It was of moderate intensity till about the 21st when it fell off again and remained light till the close of the month. The mean velocity of the winds at Colombo was generally above and at the West Coast ports was generally below the normal, as is shown by the following data:—

STATION.	MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Colombo	271	245	+ 26
Cochin	125	...	...
Calicut	214	...	...
Mangalore	70	89	— 19
Karwar	151	...	...
Goa	221	...	...
Ratnagiri	98	288	—190
Bombay	288	389	—101
Surat	250	374	—124

Along the West Coast the variations were irregular. At Bombay the wind was slightly more westerly and slightly less steady and less strong than the average, while at Karwar the reverse was the case.

Over South India the wind was about normal in direction, steadiness and velocity. The following gives data for the stations in South India:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Westerly deflection.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
				°	°				
Salem	72	76	— 4	S 71 W	S 54 W	+17	142	113	+29
Chitaldroog	73	77	— 4	S 73 W	S 76 W	— 3	242	261	—19
Bangalore	85	87	— 2	S 64 W	S 72 W	— 8	266	209	+57
Hassan	87	82	+ 5	S 83 W	S 80 W	+ 3	115	125	—10
Mysore	87	77	+10	S 72 W	S 75 W	— 3	347	365	—18
Madras	40	61	—21	S 42 W	S 36 W	+ 6	228	212	+16
Bellary	80	78	+ 2	S 82 W	S 86 W	— 4	241	251	—10

The following gives mean comparative data for the different divisions of the Peninsula:—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
				°	°			
Central Provinces	67	62	+ 5	S 83 W	N 81 W	273	237	+36
Berar	71	69	+ 2	N 78 W	N 71 W	283	238	+45
Bombay Deccan	70	75	— 5	S 72 W	S 76 W	442	411	+31
West Coast	73	70	+ 3	S 69 W	S 69 W	220	252	—32
Madras Deccan	81	74	+ 7	S 86 W	W	221	234	—13
Mysore	83	81	+ 2	S 73 W	S 76 W	243	240	+ 3
Madras Coast	40	61	—21	S 42 W	S 36 W	228	212	+16
South India	72	76	— 4	S 71 W	S 54 W	142	113	+29

The above shows that winds of about the normal steadiness, but generally somewhat stronger than usual prevailed while the directions were nearly normal though slightly more westerly than usual at some places.

At Quetta the wind was lighter than usual, but the steadiness exceeded the normal and the direction was about the average. This is shown below:—

HILL STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Westerly deflection.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
				°	°	°			
Quetta	60	39	+21	N 70 W	N 75 W	—5	51	84	—33

The winds were generally strong and steady in the Himalayan area as is shown below:—

HILL STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Leh	60	31	+29	100	57	+ 43
Srinagar	27	5	+22	112	86	+ 26
Kailang	63	65	— 2	43	49	— 6
Simla	38	18	+20	148	97	+ 51
Chakrata	87	52	+35	274	153	+121
Ranikhet	73	46	+27	139	84	+ 55
Katmandu	45	23	+22	37	31	+ 6
Darjeeling	59	8	+51	109	124	— 15

The directions at the northern hill stations varied irregularly from the average. At the central hill stations the winds blew from about the normal directions, except at Chikalda, where the wind blew from north-by-east instead of from north-west. The following gives comparative direction data for these stations:—

Hill Station.	Mean wind direction.	
	Actual, June 1901.	Normal, June.
	°	°
Mount Abu	S 47 W	S 40 W
Chikalda	N 6 E	N 45 W
Pachmarhi	N 70 W	N 80 W

At Chikalda also the wind was lighter than the normal while at the two remaining stations it was stronger. This is shown below:—

Hill Station.	Mean wind velocity in miles per diem.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Mount Abu	318	254	+64
Chikalda	155	234	−79
Pachmarhi	282	206	+76

At Wellington the wind was more southerly and lighter and less steady than the average. This shown below:—

Hill Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, June 1901.	Normal percentage, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Southerly deflection.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
				°	°				
Wellington	48	52	−4	S 28 W	S 71 W	+43	96	111	−15

At Aden and Perim the winds were abnormally easterly and were lighter than usual. The following gives data:—

Station.	Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual June 1901.	Normal, June.	Easterly deflection.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	°	°				
Aden	S 26 E	S	+26	202	216	−14
Perim	N 60 E	N 39 W	+99	297	347	−50

In the South-East Trades region the wind was very nearly normal in direction, but was somewhat lighter than usual in force at Zanzibar and the Seychelles. The following gives comparative data of direction and velocity:—

Station.	Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual, June 1901.	Normal, June.	Easterly deflection.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	°	°				
Zanzibar	S 3 E	S 4 E	−1	202	216	−14
Seychelles	S 27 E	S 21 E	+6	214	278	−64

The following table gives comparative data of the mean air movement for the various provinces based on Table I:—

Province or Division.	Mean wind velocity in miles per diem.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Burma	115	120	− 5
Assam	72	84	−12
Bengal	110	173	−63
Orissa	242	187	+55
Bihar	118	86	+32
Chota Nagpur	149	214	−65
North-Western Provinces and Oudh	120	106	+14
Punjab	103	84	+19
Sind	288	307	−19
Rajputana	269	254	+15
Gujarat	365	379	−14
Central India	228	211	+17
Central Provinces	209	156	+53
Berar	274	197	+77
West Coast	175	254	−79
Bombay Deccan	334	386	−52
Mysore	242	202	+40
Madras Coast	245	197	+48
Madras Deccan	276	274	+ 2
South India	170	161	+ 9

Humidity and Cloud.

The variations in the humidity conditions of the month were determined by the delay in the extension of the monsoon currents. The Arabian Sea monsoon winds hardly extended during the whole month beyond the West Coast districts while the Bay monsoon was weak over the land and the rainfall from it was limited to Bengal and Burma. In consequence the air was unusually dry in most parts of the country and the mean temperature very high, so that the relative humidity was in more or less large defect in almost all districts. There were only two areas in which the relative humidity was greater than usual, one including the south of the Bombay Deccan, the other the part of the Arakan Coast in the neighbourhood of Akyab. Over the whole of the remainder of the Indian region the air was drier than the normal the amount of the humidity deficiency increasing from the coast inland and having been very large over West Bengal, the east of the Central Provinces and the east of the North-Western Provinces. Another very dry area was shown over the extreme north-west of the North-West Provinces where Dehra Dun exhibited the greatest deficiency registered by any station in the Indian region. The following gives comparative data for the stations in these three areas:—

STATION.	RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	%	%	
Dehra Dun	39	63	−24
Hazaribagh	45	66	−21
Allahabad	35	56	−21

The absolute humidity of the air, as measured by the aqueous vapour pressure, was somewhat greater than usual at the stations in the Bay Islands and on the Burma Coast, but except at Akyab the mean temperature at these stations was in excess of the normal and the relative humidity was hence in defect of the normal. The following table gives comparative data for this area:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Port Blair	·916	·916	0	83	86	−3
Cocos Island	·919	·918	+·001	85	86	−1
Rangoon	·917	·902	+·015	87	89	−2
Diamond Island	·904	·888	+·016	82	86	−4
Akyab	·931	·923	+·008	88	87	+1

In Orissa and Lower Bengal similar conditions prevailed. The aqueous vapour pressure was in slight to moderate excess at all stations within this area, but the mean temperature was in considerable excess and the relative humidity in considerable defect. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Chittagong	·905	·869	+·036	84	86	−2
Calcutta	·965	·957	+·008	77	83	−6
Saugor Island	1·057	1·019	+·038	81	83	−2
False Point	·997	·969	+·028	78	83	−5

The excess in the absolute humidity extended as far as Darbhanga, but at Hazaribagh and Allahabad a sudden and large change took place and at both these stations the aqueous vapour pressure, on the mean of the month, was in considerable to large defect. Temperature conditions showed an even greater excess of heat at these two stations than at those in Bengal, so that as a consequence West Bengal and the east of the North-West Provinces were the seat of an area of very large defect of relative humidity. The following gives comparative data for the stations in this area:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Hazaribagh	·593	·692	−·099	45	66	−21
Darbhanga	·922	·912	+·010	75	76	−1
Allahabad	·613	·769	−·156	35	56	−21

In the Upper Sub-Himalayas area the deficiency in the absolute humidity was larger than in West Bengal and the adjacent regions, but the temperature in Upper India was somewhat less excessive than in the former area, so that with the exception of Dehra Dun the deficiency in relative

humidity though very large was nevertheless less than at Allahabad and Hazaribagh. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Dehra Dun . .	·466	·650	—·184	39	63	—24
Roorkee . .	·491	·656	—·165	36	52	—16
Meerut . . .	·492	·693	—·201	33	52	—19
Lahore . . .	·514	·617	—·103	34	40	— 6
Ludhiana . .	·543	·654	—·111	37	49	—12

At Peshawar the absolute humidity was very low, but the mean temperatere was 1° lower than usual so that the relative humidity was only in moderate defect. At the two other stations in the Indus Valley the air was damper than the normal, but the temperature was considerably higher than the average, so that the relative humidity was in slight to moderate defect. The following gives comparative data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Peshawar . . .	·431	·519	—·088	32	38	—6
Jacobabad . . .	·738	·659	+·079	39	40	—1
Kurrachee . . .	·969	·959	+·010	70	75	—5

In Rajputana the heat was greater than usual and both the absolute and relative humidities were below the average. In East Rajputana the variations were very large, but at Deesa they were only moderate:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Jaipur . . .	·532	·667	—·135	34	50	—16
Deesa . . .	·687	·732	—·045	48	54	— 6

The following table gives comparative data of the absolute and relative humidities for the Bay Islands, Burma and the different divisions of Northern India:—

PROVINCE OR DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Bay Islands . .	·918	·917	+·001	84	86	— 2
Burma . . .	·917	·904	+ 013	86	88	— 2
Bengal . . .	·976	·949	+·027	81	84	— 3
Bihar . .	·922	·912	+·010	75	76	— 1
Chota Nagpur .	·593	·692	—·099	45	66	—21
Orissa . . .	·997	·969	+·028	78	83	— 5
North-Western Provinces.	·516	·693	—·177	36	56	—20
Punjab . .	·496	·597	—·101	34	42	— 8
Sind . . .	·854	·809	+·045	55	58	— 3
Rajputana . .	·610	·700	—·090	41	52	—11

In the Deccan the humidity variations were much smaller than in Northern India. At Belgaum, Sholapur and Hyderabad, the absolute humidities were in excess of the normal and at the first of these three stations the relative humidity was also in excess, but at the remaining stations in this region both the absolute and relative humidities were more or less in defect in consequence of the mean temperature being in excess. The following gives comparative data for the Deccan stations:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Belgaum . .	·679	·666	+·013	84	82	+ 2
Sholapur . .	·659	·632	+·027	59	60	— 1
Poona . . .	·682	·684	—·002	69	70	—1
Akola . . .	·692	·695	—·003	54	58	— 4
Buldana . .	·616	·664	—·048	57	65	— 8
Khandwa . .	·695	·714	—·019	52	60	— 8
Nagpur . .	·677	·718	—·041	52	60	— 8
Hyderabad (Daccan)	·711	·707	+·004	64	65	— 1

Along the West Coast the variations were small and unimportant. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Bombay . . .	·914	·924	—·010	81	82	—1
Karwar . . .	·832	·850	—·018	82	83	—1

In South India the variations of humidity were irregular. Thus at Bellary the absolute humidity was in considerable and at Bangalore in slight defect while at the remaining stations it was in excess. The mean temperature was, however, more or less in excess in this area and with the exception of Chitaldroog and Mysore the relative humidity was in defect of the normal. The following gives comparative data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual, from normal June 1901.
	"	"	"	%	%	
Salem . . .	·763	·761	+·002	64	69	—5
Chitaldroog . .	·670	·634	+·036	72	71	+1
Bangalore . . .	·610	·619	—·009	72	73	—1
Hassan . . .	·612	·608	+·004	76	79	—3
Mysore . . .	·642	·628	+·014	74	74	0
Madras . . .	·830	·815	+·015	62	65	—3
Bellary . . .	·568	·650	—·082	51	58	—7

The following gives comparative data of the mean absolute and relative humidities for the different divisions of the Peninsula:—

PROVINCE OR DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June. 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Central Provinces .	·686	·716	—·030	52	60	—8
Berar . . .	·654	·680	—·026	56	62	—6
Bombay Deccan .	·673	·660	+·013	71	71	0
Madras Deccan .	·640	·679	—·039	58	62	—4
West Coast . .	·873	·887	—·014	82	83	—1
Mysore . .	·634	·622	+·012	74	74	0
Madras Coast .	·830	·815	+·015	62	65	—3
South India . .	·763	·761	+·002	64	69	—5

The air was drier than usual at most of the Western Himalayan stations, but in Kashmir where the mean temperature was low the relative humidity was in slight excess. The following gives data for the Baluchistan and western hill stations:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Quetta . . .	·278	·356	—·078	39	40	— 1
Leh . . .	·140	·172	—·032	36	38	— 2
Srinager . .	·572	·557	+·015	83	73	+10
Kailang . .	·226	·249	—·023	56	55	+ 1
Simla . . .	·297	·408	—·111	44	63	—19
Chakrata . .	·345	·416	—·071	50	67	—17
Ranikhet . .	·372	·472	—·100	45	66	—21

In the Eastern Himalayas the air was somewhat damper than the normal, but the temperature was in excess and the relative humidity was hence in defect of the normal. The following gives data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Katmandu . . .	·631	·630	+·001	73	75	—2
Darjeeling . . .	·506	·492	+·014	92	94	—2

At the central and southern hill stations the relative humidity was more or less in defect as is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Mount Abu . . .	·560	·573	—·013	61	68	— 7
Pachmarhi . . .	·620	·600	+·020	59	66	— 7
Chikalda . . .	·566	·599	—·033	59	72	—13
Wellington . . .	·445	·444	+·001	74	75	— 1

The abnormal dryness of the air was most pronounced within an area including West Bengal, the North-Western Provinces and part of the Central Provinces, but very dry periods were experienced at different times during the month in most parts of the country. The following gives the lowest humidities recorded at stations at which the relative humidity percentages below 10 were registered during the month:—

Station.	Date.	Hour.	Lowest humidity recorded during June 1901.
			%
Roorkee	7th June	4 P.M.	3
Do.	6th ,,	Do.	5
Do.	8th ,,	Do.	6
Do.	9th ,,	Do.	6
Do.	11th ,,	Do.	6
Do.	10th ,,	Do.	7
Montgomery	6th ,,	8 A.M.	7
Meerut	6th ,,	4 M.P.	8
Jaipur	7th ,,	Do.	8
Do	9th ,,	Do.	8
Deesa	9th ,,	Do.	8
Meerut	19th ,,	Do.	8
Roorkee	27th ,,	Do.	8
Do.	28th ,,	Do.	8
Do.	29th ,,	Do.	8
Meerut	7th ,,	Do.	9
Do.	8th ,,	Do.	9
Allahabad	9th ,,	Do.	9
Jaipur	10th ,,	Do.	9
Jacobabad	11th ,,	Do.	9
Dehra Dun	11th ,,	Do.	9
Meerut	27th ,,	Do.	9
Peshawar	28th ,,	Do.	9

At Perim the air was very damp, the mean temperature slightly below the normal and the relative humidity in large excess, while at Aden the air was drier than usual and the relative humidity normal. This is shown below:—

Division.	Absolute humidity.			Relative humidity.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, April 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June. 1901.
	"	"	"	%	%	
Perim	·989	·844	+·145	72	61	+11
Aden	·815	·846	—·031	59	59	0

In the South-East trades region the variations were irregular as is shown in the following table:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
	"	"	"	%	%	
Zanzibar	·660	·710	—·050	73	76	— 3
Seychelles	·765	·750	+·015	79	76	+ 3
Mauritius	·533	·532	+·001	75	75	0

The chief features of the hygrometric conditions of the air for the month were as follows:—

(1) Slight excess of humidity in part of the south of the Bombay Deccan and in part of Mysore as well as locally at Akyab.

(2) Abnormal dryness of the air due to deficiency of aqueous vapour and excessive temperature over the whole of Northern and Central India.

(3) Excessive dryness over West Bengal and the North-Western Provinces, more particularly at Hazaribagh, Allahabad and Dehra Dun.

(4) Slight deficiency over the greater part of the Peninsula.

The cloud amount was generally in excess of the normal over the greater part of the Peninsula and the whole of Burma, while it was in defect over Northern and Central India. The deficiency was large over the submontane regions of the Punjab and over the submontane and eastern regions of the North-Western Provinces and was greatest over Southern Rajputana, so that the abnormal variations of the cloud amount were not very similar to the abnormal variations of humidity. The following gives comparative data for those stations in Northern India where the cloud variation exceeded —2:—

Station.	Mean cloud amount.		
	Actual, June 1901.	Normal, June	Variation of actual from normal, June 1901.
Deesa	2·2	5·0	—2·8
Allahabad	2·0	4·7	—2·7
Dehra Dun	1·8	4·4	—2·6
Ludhiana	1·1	3·2	—2·1
Lahore	0·9	3·0	—2·1

Over Eastern Rajputana and the west of the Central Provinces there was also an area of considerable cloud deficiency where the variation exceeded −1. The following gives data for the stations within this area:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Jaipur	3·1	4·5	−1·4
Khandwa	4·9	6·0	−1·1

In Lower Sind the sky was equally clear of cloud relatively to the normal. The following gives data for Kurrachee:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Kurrachee	2·8	4·3	−1·5

In nearly all other parts of Northern and Central India the cloud deficiency was slight, but at two stations, *viz.*, Meerut and Peshawar, there was shown a slight local excess of cloud. This is shown below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Meerut	3·6	3·4	+0·2
Peshawar	2·3	2·2	+0·1

The excess of cloud over the south of the Peninsula was most marked at Bellary and at some stations in Mysore where the variation was +1·0 or more. Comparative data for these stations are given below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Mysore	9·4	7·8	+1·6
Bangalore	7·4	6·0	+1·4
Bellary	8·6	7·6	+1·0

Over the Bay Islands and Burma the sky was also abnormally cloudy, but the excess was moderate or slight. The following gives comparative data for the stations in this area:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Port Blair	7·9	7·5	+0·4
Cocos Island	8·4	8·2	+0·2
Rangoon	9·4	8·7	+0·7
Diamond Island	8·4	8·1	+0·3
Akyab	8·3	7·5	+0·8

At the northern hill stations the variations in the cloud amount were very irregular, but over the Kumaun Himalayas the sky was remarkably clear of cloud. This is shown below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Simla	2·3	5·9	−3·6
Chakrata	2·5	5·1	−2·6
Ranikhet	1·6	5·5	−3·9

At the Central hill stations the sky was much clearer than usual, while at Wellington in the south the cloud amount was in excess of the normal. The following gives data:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Mount Abu	2·6	5·2	−2·6
Pachmarhi	4·7	6·6	−1·9
Chikalda	5·2	6·9	−1·7
Wellington	8·1	7·5	+0·6

There was less cloud than usual, on the mean of the month at Perim, and slightly more than usual at Aden. This is shown below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Perim	0·6	1·8	—1·2
Aden	1·7	1·3	+0·4

At the Seychelles the sky was much clearer than usual, as is shown below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1901.	Normal, June.	Variation of actual from normal, June 1901.
Seychelles	5·0	7·1	—2·1

In the following table are given comparative data (1) for those stations at which the cloud amount, on the mean of the month, exceeded 8·0 and (2) for those stations at which the mean cloud amount was 2·0 or less. This defines the areas of greatest and of least cloudiness on the mean of the month:—

STATION.	Amount of greatest cloudiness in June 1901.	STATION.	Amount of least cloudiness in June 1901.
Mysore . . .	9·4	Allahabad . . .	2·0
Rangoon . . .	9·4	Dehra Dun . .	1·8
Hassan . . .	8·7	Roorkee . . .	1·3
Bellary . . .	8·6	Ludhiana . . .	1·1
Belgaum . . .	8·5	Lahore . . .	0·9
Diamond Island . .	8·4	Jacobabad . .	0·2
Cocos Island . .	8·4		
Chittagong . .	8·4		
Akyab . . .	8·3		
Chitaldroog . .	8 2		

Rainfall.

The advance of the south-west monsoon current from the Arabian Sea inland over the interior of India, was considerably delayed. The first advance of the monsoon on to the Malabar Coast apparently occurred on the 6th, but the advance was weak and it was not till the 10th or 11th that the current came up strongly and extended to the Konkan. The current fell off again after the 21st and was weak from that date till the close of the month. Monsoon winds only occasionally extended inland into the interior of the Peninsula and practically no rain was received to the north of Khandesh, the Konkan and the Central Provinces.

Over the Bay there occurred an advance of monsoon winds on the 12th corresponding with the advance recorded at the same time on the West Coast. A feeble depression formed in the north of the Bay in front of the advancing current on the 13th and following days. This depression passed inland on the 16th and subsequently filled up in Bihar on the 8th. Its formation and advance were accompanied and followed by moderate rain over North-East India and Burma. The indraught of monsoon winds, thus set up, gave moderate rain to Burma, East and North Bengal and Assam until the end of the month, but the monsoon current failed to advance beyond Bengal and hot weather conditions prevailed over the Gangetic Plain throughout the month.

The preceding remarks show that the monsoon currents were delayed and weak on both sides of India; that they failed to penetrate inland; and that hot weather conditions prevailed throughout the month over the interior of the country. The approximate dates of the commencement of the monsoon over those areas which received monsoon rainfall during the month were hence as follows:—

Malabar	6th June
Konkan	11th ,,
Bengal	13th ,,

To the remaining provinces monsoon rainfall never extended during the month under review.

Consequently the distribution of rainfall during the month was abnormal and irregular, determind by:—

(1) The delay in the extension of the monsoon currents inland.

(2) The strength of the monsoon currents along the West Coast between the 16th and the 21st.

(3) The weakness of the Arabian Sea current from the 21st to the end of the month.

The chief periods of rainfall were:—

(1) The 1st to the 4th, when showers were experienced in the Punjab and the North-West Himalayas.

(2) The 5th to the 7th, when the east of the Peninsula received showers.

(3) The 8th and 9th, when rain was received in the Deccan.

(4) The 14th to 19th, when the Central Provinces and part of the North-West Provinces had showers.

(5) The 22nd to the 29th, when the Himalayas and parts of North-West India and of the Central Provinces received scattered showers.

Burma, Assam and East and North Bengal received more or less rain almost daily throughout the month and in the Malabar Coast and the west of the Peninsula similar conditions prevailed from the 6th to the end of the month, though from the 22nd onward the West Coast rainfall was lighter than usual.

The chief abnormal features of the rainfall distribution of the month were:—

(1) Excess of rain in East Bengal.

(2) Deficiency of rain in nearly all other parts of the country except Lower Burma, Assam, Bengal (proper) the West Coast districts and the south of the Peninsula where the month's total was about normal.

The following table gives comparative rainfall data of June 1901 for the 56 meteorological divisions of India:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, June 1901.	Average normal, June.	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	...	...	33·49	40·49	− 7·00
	Lower Burma (Deltaic)*	...	...	15·83	19·32	− 3·49
	Central do.*	...	...	12·45	12·09	+ 0·36
	Upper do.*	...	...	6·16	10·04	− 3·88
	Arakan*	...	...	40·16	52·96	− 12·80
Bengal and Assam	Eastern Bengal	16·9	15·9	24·78	17·34	+ 7·44
	Assam (Surma)	19·9	20·6	25·67	24·42	+ 1·25
	Do. (Hills)	20·7	20·7	22·77	28·03	− 5·26
	Do. (Brahmaputra)	17·6	15·3	15·31	14·46	+ 0·85
	Deltaic Bengal	9·6	12·8	9·82	10·66	− 0·84
	Central do.	9·0	11·8	8·01	10·05	− 2·04
	North do.	16·8	15·7	19·36	21·66	− 2·30
	Bengal Hills	21·5	20·5	21·93	27·22	− 5·29
	Orissa	5·1	10·4	3·09	9·38	− 6·29
	Chota Nagpur	5·4	10·2	2·93	8·34	− 5·41
	Bihar (South)	2·4	7·4	1·15	6·11	− 4·96
	Do. (North)	4·6	9·3	4·14	8·89	− 4·75
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·6	5·0	4·13	4·29	− 0·16
	Oudh (South)	0·7	4·6	0·53	4·39	− 3·86
	Do. (North)	1·5	5·6	1·31	4·93	− 3·62
	North-Western Provinces (Central)	1·2	4·4	0·47	3·53	− 3·06
	Do. do. (West)	1·3	3·2	0·72	2·35	− 1·63
	Do. do. (Submontane, East)	2·1	6·2	1·47	5·62	− 4·15
	Do. do. (Do. West)	2·5	5·4	1·45	5·17	− 3·72
	Do. do. (Hills)	3·4	10·6	1·46	7·60	− 6·14
Punjab	Punjab (South-East)	1·3	2·9	0·65	2·52	− 1·87
	Do. (South)	0·8	2·2	0·31	1·62	− 1·31
	Do. (Central)	1·8	2·2	070	1·58	− 0·88
	Do. (Submontane)	1·7	3·1	0·59	2·73	− 2·14
	Do. (Hills)	4·1	6·9	1·52	4·78	− 3·26
	Do. (North)	2·2	1·6	0·92	0·89	+ 0·03
	Do. (West)	1·0	1·3	0·48	0·67	− 0·19
Bombay and Malabar Coast Districts (Madras).	Malabar	23·5	23·9	37·53	35·53	+ 2·00
	Travancore	19·7	...	25·38	...	...
	Madras (South Central)	2·4	3·7	1·22	1·87	− 0·65
	Coorg	22·2	...	21·10	...	...
	Mysore	6·3	6·6	3·62	4·18	− 0·55
	Konkan	19·4	19·2	26·87	27·14	− 0·27
	Bombay Deccan	6·6	8·2	4·26	5·80	− 1·54
	Khandesh	6·4	7·6	4·26	5·69	− 1·43

NOTE:—The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, June 1901.	Average normal, June.	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.
				Inches.	Inches.	Inches.
Central Provinces and Berar.	Berar	7·3	...	5·78	7·17	− 1·39
	Central Provinces (West)	6·0	8·8	3·98	7·49	− 3·51
	Do. do. (Central)	5·8	9·1	3·37	8·22	− 4·85
	Do. do. (East)	4·6	9·2	2·69	8·31	− 5·62
Bombay (North)	Gujarat	2·4	6.6	3·14	6·26	− 3·12
	Kathiawar and Cutch	1·2	3·6	1·15	3·26	− 2·11
	Sind	0	...	0	0·20	− 0·20
	Baluchistan Hills	0	...	0	0·45	− 0·45
Rajputana and Central India.	Central India (East)	2·1	...	1·02	6·35	− 5·33
	Rajputana (East) and Central India (West)	1·5	...	0·65	3·27	− 2·62
	Do. (West)	0·4	...	0·12	1·73	− 1·61
Madras	East Coast (North)	5·2	7·2	3·02	5·18	− 2·16
	Hyderabad (South)*	...	...	4·30	...	...
	Madras (Central)	3·9	4·5	2·42	2·54	− 0·12
	East Coast (Central)	2·8	2·9	1·18	1·64	− 0·46
	Do. (South)	2·2	3·3	1·14	1·93	− 0·79
	Madras (South)	2·3	2·0	1·16	0·97	+ 0·19

* NOTE.—The figures entered against division marked with an asterisk have been obtained from the Weekly Telegraphic Reports.

The above shows that the actual rainfall of the month exceeded the normal only in two divisions, *viz.*, Eastern Bengal (+43%) and South Madras (+20%). The fall was normal in 16 divisions *viz.*, Tenasserim, Lower Burma Deltaic, Central Burma, Assam Surma, Assam Hills, Assam Brahmaputra, Deltaic Bengal, North Bengal, Bengal Hills, North-Western Provinces East, North Punjab, Malabar, Mysore, Konkan, Berar and Madras Central and was deficient over the whole of the remainder of India. The deficiency was large and important, amounting to —75% or more, in the divisions for which comparative data are given below :—

Division.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
South Bihar	1·15	6·11	−4·96	− 81
South Oudh	0·53	4·39		− 88
North Western Provinces (Central).	0·47	3·53	−3·06	− 87
North Western Provinces (Hills).	1·46	7·60	−6·14	− 81
South Punjab	0·31	1·62	−1·31	− 81
Punjab Submontane	0·59	2·73	−2·14	− 78
Sind	0	0·20	−0·20	−100
Baluchistan Hills	0	0·45	−0·45	−100
Central India, East	1·02	6·35	−5·33	− 84
Rajputana East, Central India West.	0·65	3·27	−2·62	− 80
West Rajputana	0·12	1·73	−1·61	− 93

The third column of the table shows that less than an inch of rain fell during the month in South Oudh, the central and west divisions of the North-Western Provinces, all the plains divisions of the Punjab, Sind, Baluchistan, West Rajputana and Rajputana East and Central India West. These divisions hence define the area of lightest rainfall just as the preceding table defines the area of greatest deficiency of rainfall relatively to the normal. More than 40 inches of rain fell in Arakan during the month, more than 30 inches in Tenasserim and Malabar, and more than 25 inches in Assam (Surma), Travancore and the Konkan which divisions define the area of heaviest rainfall.

Rain fell almost daily throughout the month in Tenasserim and the greater part of Burma. The total fall was less than usual over Upper Burma and Arakan, but was about the average in the remaining divisions. This is shown below :—

Division.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Tenasserim	33·49	40·49	− 7·00	−17
Lower Burma, Deltaic	15·83	19·32	− 3·49	−18
Central Burma	12·45	12·09	+ 0·36	+ 3
Upper Burma	6·16	10·04	− 3·88	−39
Arakan	40·16	52·96	−12·80	−24

In Assam there was a partial break in the rains on the 6th, 7th and 8th as well as on the 14th, 15th and 16th, but with these exceptions rain fell daily throughout the province. In the Surma Valley the fall was heavy on the 3rd, the

12th, and the 21st, when the following falls of over 3″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sylhet	Lalakhal	3rd June	6·80
	Sonamganj	" "	5·36
	Sylhet	" "	4·03
Cachar	Nemotha	" "	3·20
	Barkhola	" "	3·10
	Hailakandi	12th "	4·32
	Bikrampur	" "	4·30
	Koyah	" "	3·92
Sylhet	Karimganj	" "	3·87
	Lalakhal	" "	3·70
Cachar	Badarpur	" "	3·66
	Monierkhal	" "	3·35
	Mahursaddle	" "	3·25
	Barkhola	" "	3·17
Sylhet	Sonamganj	21st "	7·20
	Maulvi Bazar	" "	6·11
	Karimganj	" "	5·90
	Sylhet	" "	5·48
	Habiganj	" "	5·20
	Langla	" "	4·61
	Samanbagh	" "	4·60
	Lalakhal	" "	4·16
	Sephinjuri Bil	" "	4·09
Cachar	Nemotha	" "	4·08
Sylhet	Adamtila	" "	3·95
Cachar	Badarpur	" "	3·92
	Kukicherra	" "	3·80
	Bikrampur	" "	3·32

In the Brahmaputra Valley there were some heavy falls between the 3rd and the 5th, when the following amounts exceeding 3″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Lakhimpur	North Lakhimpur	4th June	4·04
	Harmati	" "	3·80

The principal fall in this area was, however, reported between the 17th and the 21st when the rainfall was heavy and general. The following shows the amounts exceeding 3″ in 24 hours during this rainy period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sibsagar	Daflating	17th June	5·85
Goalpara	Dhubri	" "	5·15
Nowgong	Sekoni	" "	3·90
Darrang	Barpukhuri	" "	3·12
Lakhimpur	Dhakuakhana	" "	3·05
Sibsagar	Golaghat	18th "	4·13
Goalpara	Bijni	" "	4·05
Darrang	Singrimari	" "	3·09
Goalpara	Kachugaon	19th "	5·85
Darrang	Orangajuli	" "	5·00
	Kerkeriya	" "	4·92
Kamrup	Bajali	" "	3·72
Darrang	Attarikhat	" "	3·33
Lakhimpur	Wilton	" "	3·15
Darrang	Majbat	" "	3·07
Goalpara	Marnai	20th "	7·25
	Bijni	" "	4·80
Darrang	Orangajoli	" "	3·80
Goalpara	Kachugaon	" "	3·63
Darrang	Attarikhat	" "	3·52
Goalpara	Bijni	21st "	4·05
	Marnai	" "	3·75
	Kachugaon	" "	3·08

On the Assam Hills rain fell almost daily, but the total amount was only about normal and at Cherrapoonjee was somewhat less than the normal. The total rainfall at that station was 82·79″ instead of the normal 91·21″ and the heaviest amount in 24 hours was 13·19″ on the 21st. The following gives comparative data for the plains districts of the province :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June	Variation of Actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cachar	20·79	22·00	−1·21	−6
Sylhet	32·58	26·85	+5·73	+21
Goalpara	29·93	23·29	+6·64	+29
Kamrup	12·24	12·31	−0·07	−1
Darrang	14·80	13·69	+1·11	+8
Nowgong	8·18	9·68	−1·50	−15
Sibsagar	13·79	12·43	+1·36	+11
Lakhimpur	19·04	18·00	+1·04	+6

Bengal obtained frequent showers from the 1st to the 12th, due chiefly to series of thunderstorms and nor'-westers. These storms were most frequent in North and East Bengal to which divisions they gave moderately heavy rain. Bihar and Chota Nagpur received practically no rain during this period.

On the 13th the South-West monsoon rains commenced in Bengal and were ushered in by a shallow storm which formed over the head of the Bay and Deltaic Bengal. South-West Bengal received general rain on the 13th on which day the following falls exceeding 2″ in 24 hours were recorded:—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 13th June 1901.
		Inches.
Khulna	Molahat	5·25
	Bagerhat	3·60
Nadia	Ranaghat	3·08
Burdwan	Katwa	2·90
Khulna	Khulna	2·49
Jessore	Bangaon	2·38
Birbhum	Lalipur	2·37

Rain fell off on the 15th and scattered showers only were experienced on the 16th and 17th. On the 18th and 19th there occurred another general fall when the following heavy falls (exceeding 3″) were recorded.—

District.	Station	Date.	Rainfall during 24 hours preceding 8 AM. of date.
			Inches.
Jessore	Jhenidah	18th June	3·45
Midnapore	Kukrahaty	19th ,,	7·21
	Tamluk	,, ,,	6·70
Howrah	Mohesreka	,, ,,	4·50
Midnapore	Panskura	,, ,,	4·20
Howrah	Amta	,, ,,	4·08
24-Parganas	Budge Budge	,, ,,	3·80
Howrah	Ulubaria	,, ,,	3·20
24-Parganas	Diamond Harbour	,, ,,	3·05

Another showery period then set in, lasting until the 24th and on the 25th, 26th and 27th there occurred the last general fall of the month. During this fall the following amounts exceeding 2″ were registered:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Khulna	Kaliganj	25th June	5·00
	Jhenidah	,, ,,	2·80
	Dumuria	,, ,,	2·41
Murshidabad	Lalbagh	26th ,,	6·65
	Azimganj	,, ,,	5·22
24-Parganas	Basirhat	,, ,,	3·92
Khulna	Nakipur	,, ,,	3·49
Murshidabad	Dumkal	,, ,,	3·30
Howrah	Ulubaria	,, ,,	2·50
Birbhum	Rampurhat	,, ,,	2·40
Murshidabad	Akriganj	,, ,,	2·31
Burdwan	Katwa	27th ,,	4·43
24-Parganas	Saugor Island	,, ,,	4·04
Bankura	Raipur	,, ,,	3·60
Burdwan	Mankur	,, ,,	3·35
24-Parganas	Barrackpore	,, ,,	2·62
Bankura	Sonamukhi	,, ,,	2·33

On the last three days of the month only scattered showers were received in this division.

In North Bengal the rainfall was generally similar The showers during the first twelve days were much more general and heavier than in the south-west division, but the regular rains set in on the 13th. Continuous rain commenced on the 18th and the fall continued practically till the end of the month. There were no very heavy cyclonic downpours, but the following amounts exceeding 3″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jalpaiguri	Alipur Duar	19th June	3·78
Cooch Behar	Cooch Behar	,, ,,	3·35
Jalpaiguri	Kalchini	20th ,,	6·53
	Alipur Duar	,, ,,	4·39
Cooch Behar	Dinhatta	21st ,,	8·55
Dinajpur	Thakurgaon	,, ,,	6·35
Rangpur	Bagdogra	,, ,,	6·22
Darjeeling	Mungpoo	,, ,,	5·15
Rangpur	Ulipur	,, ,,	4·91

DISTRICT.	STATION.	DATE.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
COOCH BEHAR	Mickliganj	21st June	4·11
RANGPUR	Sunderganj	22nd ,,	7·05
RAJSHAHI	Natur	,, ,,	6·80
BOGRA	Pabna	,, ,,	6·52
RANGPUR	Ulipur	,, ,,	5·75
RAJSHAHI	Lalpur	,, ,,	4·83
RANGPUR	Bagdogra	,, ,,	4·12
BOGRA	Bogra	24th ,,	3·87
DARJEELING	Kalimpong	,, ,,	3·82
PABNA	Serajganj	25th ,,	5·15
JALPAIGURI	Alipur Duar	27th ,,	4·77
COOCH BEHAR	Fulbari	,, ,,	4·24
RANGPUR	Kurigaon	,, ,,	4·20
DARJEELING	Siliguri	28th ,,	5·64
	Kurseong	,, ,,	5·56
	Kalimpong	,, ,,	5·23
JALPAIGURI	Alipur Duar	,, ,,	4·27
DARJEELING	Darjeeling	,, ,,	4·03
COOCH BEHAR	Dinhatta	29th ,,	3·77
PABNA	Serajganj	,, ,,	3·06
DAJEELING	Baxa	30th ,,	3·63

In East Bengal there were frequent heavy showers between the 1st, and the 12th of which the heaviest (exceeding 3″) were as follows:—

DISTRICT.	STATION.	DATE.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
BACKERGUNGE	Gaurnadi	1st June	4·25
	Bauphal	,, ,,	3·32
MYMENSINGH	Natrakona	2nd ,,	4·40
NOAKHALI	Ramganj	4th ,,	6·10
MYMENSINGH	Durgapur	,, ,,	3·10
NOAKHALI	Lakhmipur	5th ,,	5·10
MYMENSINGH	Durgapur	,, ,,	3·50
FARIDPUR	Faridpur	,, ,,	3·50
	Madaripur	,, ,,	3·16
NOAKHALI	Chhalgalnaya	9th ,,	3·12
CHITTAGONG	Kutubdia	10th ,,	8·50
	Fenoa	,, ,,	7·22
	Cox's Bazar	,, ,,	6·51
	Satkania	,, ,,	6·28
CHITTAGGNG HILL TRACTS.	Bundarban	10th June	6·22
	Barkal	,, ,,	5·40
CHITTAGONG	Chittagong	,, ,,	5·35
	Mirsarai	,, ,,	4·17
BACKERGUNGE	Dolatkhan	,, ,,	3·79
CHITTAGONG	Kodala	,, ,,	3·75
,, HILL TRACTS.	Rangamati	,, ,,	3·29
NOAKHALI	Hatya	,, ,,	3·12
	Harishpur	,, ,,	3·10

On the 13th general rain fell over the whole division and the following amounts exceeding 4″ were registered:—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 13th June 1901.
		Inches.
CHITTAGONG	Cox's Bazar	7·35
	Kutubdia	5·17
NOAKHALI	Hatya	4·75
BACKERGUNGE	Bauphal	4·72
	Dolatkhan	4·15
	Barisal	4·15
	Bhola	4·02

This was succeeded by light showers on the 14th, 15th and 16th after which the heaviest and most continuous rain of the month commenced. This fall lasted from the 17th to the 25th during which the following heavy falls were recorded:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
MYMENSINGH	Nalitabari	17th June	3·40
	Sherpur Town	,, ,,	3·23
	Kishorganj	18th ,,	5·54
	Mymensingh	,, ,,	3·87
DACCA	Dacca	,, ,,	3·53
	Munshiganj	19th ,,	3·54
MYMENSINGH	Durgapur	20th ,,	3·30
	Nalitabari	,, ,,	3·21
	Natrakona	21st ,,	10·30

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Hill Tippera	Agartala	21st July	8·70
Chittagong	Fenoa	,, ,,	7·56
Mymensingh	Mymensingh	,, ,,	6·62
Hill Tippera	Kasba	,, ,,	6·15
Noakhali	Harishpur	22nd ,,	12·53
Hill Tippera	Agartala	,, ,,	7·81
Noakhali	Fenny	,, ,,	7·63
Chittagong	Mirsarai	,, ,,	7·44
Dacca	Narayanganj	,, ,,	6·85
Noakhali	Noakhali	,, ,,	6·82
Dacca	Munshiganj	,, ,,	6·55
	Manikganj	,, ,,	5·85
Noakhali	Lakhimpur	,, ,,	5·45
Chittagong	Satkania	,, ,,	5·25
	Cox's Bazar	,, ,,	5·17
Dacca	Dacca	23rd ,,	9·50
	Jaydebpur	,, ,,	6·50
	Manikganj	,, ,,	6·45
	Munshiganj	,, ,,	5·35
Hill Tippera	Brahmanbari	,, ,,	5·25
	Comilla	24th ,,	7·60
	,,	25th ,,	7·04

After the 25th the weather again became showery, though on the 29th there was general rain over the whole division.

Bihar had general rain on the 13th, 14th and 15th and showers from the 21st to the 27th. The rainfall was not heavy any where, and the following were the only falls exceeding 2·50" during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Sonthal Parganas	Assenboni	13th June	3·65
Bhagalpur	Banka	14th ,,	2·70
	Bansil	,, ,,	2·69
Saran	Siwan	,, ,,	2·59
Champaran	Bettiah	21st ,,	3·83
	Motihari	,, ,,	3·15
Darbhanga	Darbhanga	,, ,,	2·75
Malda	Gajol	24th ,,	2·90
Sonthal Parganas	Bario	25th ,,	2·82
Purnea	Kaliaganj	27th ,,	3·40

The district area was the western half of the Patna division and the following gives comparative data for the three districts in this area :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Patna	1·59	7·02	—5·43	—77
Gaya	0·61	5·60	—4·99	—89
Shahabad	0·21	5·47	—5·26	—96

Orissa obtained showers between the 1st and the 8th the 14th and the 17th and the 26th to the 29th, but the amounts were not large and only exceeded 2" on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date
			Inches.
Balasore	Bhadrak	2nd June	4·10
	Jellasore	3rd ,,	2·45

In Chota Nagpur light showers were received between the 1st and the 3rd, the 13th and the 16th and the 21st to the 29th, but the amounts were small and the total rainfall was much below the average :—

The following gives comparative data for the different divisions of the province :—

Division	Rainfall.				Number of rainy days.	
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.	Average actual, June 1901.	Average normal, June.
	Inches.	Inches.	Inches.			
Eastern Bengal	24·78	17·34	+7·44	+43	16·9	15·9
Deltaic ,,	9·82	10·66	—0·84	— 8	9·6	12·8
Central ,,	8·01	10·05	—2·04	—20	9·0	11·8
North ,,	19·36	21·66	—2·30	—11	16·8	15·7
Bengal Hills	21·93	27·22	—5·29	—19	21·5	20·5
Orissa	3·09	9·38	—6·29	—67	5·1	10·4
Chota Nagpur	2·93	8·34	—5·41	—65	5·4	10·2
South Bihar	1·15	6·11	—4·96	—81	2·4	7·4
North Bihar	4·14	8·89	—4·75	—53	4·6	9·3

Thunderstorms were received over the North-Western Provinces between the 1st and the 5th except over the east of the Provinces and South Oudh. The total rainfall of these disturbances was generally slight to moderate though Maharajganj in the Gorakhpur district obtained a heavy local downpour. The following gives the instances on which the rainfall exceeded 1·50″ in 24 hours:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Gorakhpur . .	Maharajganj . .	1st June .	4·26
Kheri . . .	Kheri . . .	„ „ .	1·93
Basti . . .	Bansi . . .	„ „ .	1·72
Bareilly . .	Choreli . .	„ „ .	1·67
	Baheri . . .	„ „ .	1·53
Dehra Dun . .	Rajpur . . .	3rd „ .	1·90

Practically the whole province received a moderate burst of rain between the 14th and 16th coinciding with the establishment of the monsoon at the head of the Bay and along the West Coast. The rain on this occasion was heaviest in Oudh and in the submontane division. This is shown in the following table which gives the falls exceeding 2″ in 24 hours:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Budaun . . .	Bisauli . . .	15th June .	3·05
Shahjahanpur . .	Jalalabad . .	„ „ .	2·43
Gonda . . .	Utraula . . .	„ „ .	2·39
Sitapur . . .	Misrikh . . .	„ „ .	2·35
Budaun . . .	Budaun . . .	„ „ .	2·34
Shahjahanpur . .	Shahjahanpur . .	„ „ .	2·02
Bahraich . . .	Nanpara . . .	16th „ .	2·31

After the 16th this burst of rain ceased and except for a few showers mainly in the submontane divisions there was no more rain during the month. As a consequence the total rainfall of the month was everywhere deficient. The following gives comparative data of the rainfall of the month in the eight rainfall divisions of the province:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, June. 1901.	Average normal, June	Variation of actual from normal, June 1901.	Percentage variation from normal.	Average actual, June 1901.	Average normal, June.
	Inches	Inches	Inches			
North-Western Provinces, East.	4·13	4·29	−0·16	− 4	0·6	5·0
South Oudh . .	0·53	4·39	−3·86	−88	0·7	4·5
North Oudh . .	1·31	4·93	−3·62	−73	1·5	5·6
North-Western Provinces Central.	0·47	3·53	−3·06	−87	1·2	4·4
North-Western Provinces West.	0·72	2·35	−1·63	−69	1·3	3·2
North-Western Provinces, East Submontane.	1·47	5·62	−4·15	−74	2·1	6·2
North-Western Provinces, West Submontane.	1·45	5·17	−3·72	−72	2·5	5·4
North-Western Provinces Hills.	1·46	7·60	−6·14	−81	3·4	10·6

The rainfall of the month was less than half in all divisions except the east where it was normal and was less than one-fifth in some places. The following gives data for the districts in South Oudh, in the centre of the North-West-Provinces and in the hills division where the deficiency relatively to the normal was greatest:—

Province or Division.	District.	Rainfall.			
		Average actual, June 1901.	Average normal, June.	Variation of actual, from normal, June 1901.	Percentage variation from normal.
		Inches.	Inches.	Inches.	
South Oudh .	Sultanpur .	0·28	4·54	−4·26	−94
	Partabgarh .	0·04	4·35	−4·31	−99
	Rae Bareli .	0·15	4·27	−4·12	−96
	Unao . .	0·25	4·21	−3·96	−94
	Lucknow .	1·19	4·51	−3·32	−74
	Hardoi .	1·34	4·49	−3·15	−70
North-Western Provinces Central.	Banda .	0·32	4·31	−3·99	−93
	Fatehpur .	0·32	3·72	−3·40	−91
	Hamirpur .	0·70	4·20	−3·50	−83
	Cawnpore .	0·16	3·60	−3·44	−96
	Jalaun .	0·57	2·99	−2·42	−81
	Etawah .	0·20	2·53	−2·33	−92
	Farukhabad .	0·50	3·19	−2·69	−84
	Mainpuri .	0·15	3·18	−3·03	−95
	Etah . .	0·65	2·87	−2·22	−77
North-Western Provinces Hills.	Almora .	0·98	8·35	−7·37	−88
	Garhwal .	1·43	5·02	−3·59	−72
	Naini Tal .	2·07	8·62	−6·55	−76

In the Punjab the rainfall distribution was generally similar to that in the North-Western Provinces, except that the burst of rain between the 14th and 16th was much slighter and did not extend beyond the south-east, centre and submontane divisions of the province.

There were three periods of rainfall.

The first period was from the 1st to the 5th when thunder showers were received in all parts of the province. Moderate rain was received at some stations during this period, the following falls having exceeded 1″ :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Umballa	Kharar	1st June	1·26
Shahpur	Midh	2nd ,,	1·22
	Sahiwal	,, ,,	1·02
Kangra	Palampur	3rd ,,	1·65
Gujranwala	Khangah Dogran	,, ,,	1·54
Kohat	Banda Daud Shah	,, ,,	1·48
Shahpur	Khushab	,, ,,	1·30
	Nurpur	,, ,,	1·16
Peshawar	Lahore	4th ,,	2·00
Jind State	Jind	,, ,,	1·60
Gurgaon	Tauru	5th ,,	1·40
Kohat	Hangu	,, ,,	1·25

The second period extended from the 14th to the 16th. This fall was light and never extended all over the province, and the only places which received falls of over 1″ in 24 hours were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Gurgaon	Gurgaon	14th June	1·45
Delhi	Sadr	15th ,,	1·52
Sialkot	Pasrur	,, ,,	1·30
Karnal	Panipat	,, ,,	1·28
Jullundur	Nawashahr	,, ,,	1·04
Kangra	Dharmsala	16th ,,	1·25

During the third period which extended from the 22nd to the 26th the submontane and north-west divisions received light rain, but other parts of the province were practically rainless. The total rainfall of the month was normal in the north division but was largely deficient elsewhere. The following gives comparative data for each district of the province :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Hissar	0·19	1·75	−1·56	−89
Ferozepore	0·32	1·45	−1·13	−78
Montgomery	0·07	0·91	−0·84	−92
Gurgaon	0·82	2·17	−1·35	−62
Rohtak	0·47	2·12	−1·65	−78
Delhi	0·82	2·99	−2·17	−73
Karnal	0·36	3·01	−2·65	−88
Lahore	0·58	1·65	−1·07	−65
Umballa	1·13	3·76	−2·63	−70
Ludhiana	0·70	2·20	−1·50	−68
Jullundur	0·91	2·33	−1·42	−61
Hoshiarpur	0·47	2·76	−2·29	−83
Gurdaspur	0·33	3·32	−2·99	−90
Amritsar	0·24	1·95	−1·71	−88
Simla	1·32	4·83	−3·51	−73
Kangra	1·71	4·64	−2·93	−63
Gujranwala	0·94	1·52	−0·58	−38
Sialkot	0·91	2·43	−1·52	−63
Gujrat	0·40	1·88	−1·48	−79
Jhelum	0·69	1·28	−0·59	−46
Rawalpindi	0·97	1·38	−0·41	−30
Peshawar	0·93	0·30	+0·63	+210
Hazara	1·06	1·51	−0·45	−30
Kohat	1·18	0·91	+0·27	+30
Bannu	0·36	0·68	−0·32	−47
Shahpur	1·40	0·88	+0·52	+59
Jhang	0·38	0·85	−0·47	−55
Dera Ismail Khan	0·25	0·39	−0·14	−36
Dera Ghazi Khan	0·04	0·64	−0·60	−94
Muzaffargarh	0·04	0·40	−0·36	−90
Mooltan	0·16	0·43	−0·27	−63

It will be seen from the above that the distribution of rainfall was unusual. Disturbed weather in the Kashmir hills gave heavier rain than usual to the northern districts,

including Peshawar, Kohat and Shahpur and about normal rain to the Rawalpindi and Hazara districts in the west division. Over the whole of the remainder of the province the rainfall was in large defect. The deficiency was greatest in the south division and part of the west division, and, as shown above, amounted to 92 per cent. in Montgomery, 89 per cent. in Hissar, 78 per cent. in Ferozepore, 94 per cent. in Dera Ghazi Khan and 90 per cent. in Muzaffargarh.

Baluchistan was rainless throughout the month. Kashmir received rain during three showery periods. The first lasted from the 1st to the 6th, the second from the 13th to the 15th and the third from the 21st to the 30th. The rainfall amounts were moderate during the first period, when the following falls exceeding 1" were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jummoo	Udumpur	1st June	3·30
Kashmir	Uri	2nd ,,	1·20
Jummoo	Kishtwar	4th ,,	1·15
Kashmir	Uri	,, ,,	1·01

Very light during the second period and light to moderate during the third. The heaviest amounts during the month were recorded on the last day of the month. This is shown below :—

District.	Station.	Rainfall during 24 hours preceding 8 AM.. of 30th June.
		Inches.
Kashmir.	Vantipore	2·41
	Sri Ranbir Singh Pora	2·03
	Nagam	1·80
	Lal Pakh	1·45
	Sri Protap Singh Pora	1·37
	Anantnag	1·36
	Pattan.	1·32

The total rainfall of the month was probably heavier than usual.

Western Rajputana received a few light local showers during the first and last weeks of the month, and Eastern Rajputana had in addition a moderate burst of rain between the 15th and 17th when the following amounts 1" or more in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bharatpur	Nagar	15th June	1·10
Dholpur	Baseri	16th ,,	1·10
Alwar	Alwar	17th ,,	1·35

The following gives comparative information for some of the larger States :—

State.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jodhpur	0·12	1·82	—1·70	—93
Bikaner	0·20	1·91	—1·71	—90
Jaipur	0·14	2·65	—2·51	—95
Alwar	0·60	3·53	—2·93	—83
Bharatpur	0·76	2·20	—1·44	—65
Karaoli	0·46	3·63	—3·17	—87
Kotah	0·93	4·05	—3·12	—77
Ajmer-Merwara	1·09	2·35	—1·26	—54
Udaipur	0·71	4·30	—3·59	—83
Sirohi	0·33	4·97	—4·64	—93

The rainfall of the month was hence in large defect in all the Rajputana states.

In Central India there was a moderate burst of rain between the 13th and 16th, coinciding with the establishment of the monsoon and thunder showers, both at the beginning and end of the month. The total rainfall of the month was largely below the normal as is shown by the following table which gives comparative data for some of the larger States :—

State.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of *actual from* normal, June 1901.	Percentage variation from normal
	Inches.	Inches.	Inches.	
Indore	1·70	6·65	—4·95	—74
Rutlam	0·81	5·41	—4·60	—85
Bhopal Agency	1·88	7·39	—5·51	—75
Gwalior	0·80	4·61	—3·81	—83
Rewah	1·68	7·73	—6·05	—78
Bundelkhand	0·49	6·00	—5·51	—92
Nagode	0·38	5·97	—5·59	—94
Maihar	0·89	7·85	—6·96	—89

The Central Provinces received no general rain during the month. Up to the 12th or 13th the weather, except for a few local showers, was practically rainless, but on the 13th the showers became heavier and somewhat more general, and these showers continued till the close of the month. The following table gives a summary of the rainfall data of the month for the three rainfall divisions of the Central Provinces :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.	Average actual, June 1901.	Average normal, June.
	Inches.	Inches.	Inches.			
Central Provinces West	3·98	7·49	—3·51	—47	6·0	8·8
„ „ Central	3·37	8·22	—4·85	—59	5·8	9·1
„ „ East .	2·69	8·31	—5·62	—68	4·6	9·2

The above shows that only about half the usual rainfall was received during the month under review, and the only heavy falls (exceeding 2″) reported were as follows:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chanda . . .	Sironcha . .	12th June .	3·12
Narsinghpur . .	Narsinghpur . .	14th „ .	2·22
Wardha . . .	Hinganghat . .	15th „ .	2·90
Narsinghpur . .	Gadarwara . .	28th „ .	3·53
Hoshangabad . .	Seoni . . .	„ „ .	2·90
Betul . . .	Betul . . .	„ „ .	2·65
Chanda . . .	Sironcha . . .	„ „ .	2·40
Chhindwara . .	Sausar . . .	„ „ .	2·35
Raipur . . .	Raipur . . .	29th „ .	2·96
Betul . . .	Multai . . .	30th „ .	3·54

The rainfall in Berar was similar to that in the Central Provinces. There was no rain of importance up to the 12th, after which showers set in and the weather was more or less showery up to the end of the month. There was not, however, any burst of general rain such as marks the establishment of the monsoon. The total rainfall of the month was, however, nearly normal. This is shown below :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.	Average actual, June 1901.	Average normal, June.
	Inches.	Inches.	Inches.			
Berar	5·78	7·17	—1·39	—19	7·3	...

In the Bangalore, Kolar, Tumkur, Mysore and Chitaldroog districts of the Mysore State there were general showers between the 1st and the 5th; light scattered showers between the 16th and 18th, and a few showers between the 22nd and the 30th. In the districts of Hassan, Shimoga and Kadur, there was, on the contrary, very little rainfall during the first week, but general rain from the 8th to the 21st and fair showers from the 22nd to the 30th. The total rainfall of the month was about normal as is shown by the following table which gives comparative data for the eight districts of the province :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Vartiaion of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Bangalore	2·26	2·26	0	0
Kolar	3·16	2·31	+0·85	+37
Tumkur	1·80	2·17	—0·37	—17
Mysore	2·72	1·54	+1·18	+76
Hassan	2·71	4·16	—1·45	—35
Shimoga	7·01	13·03	—6 02	—46
Kadur	9·92	10·19	—0·27	— 3
Chitaldroog	2·80	1·56	+1·24	+80

In Coorg there was very little rain during the first four days, but on the 5th general rain commenced and continued till the end of the month. The total fall for the month was 21·10″ as is shown below :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.	Average actual, June 1901.	Average normal, June.
	Inches.	Inches.	Inches.			
Coorg	21·10	...	...	...	22·2	...

There was practically no rain along the Konkan coast from the 1st to the 7th. On the 8th showers commenced and on the 9th moderate to heavy rain set in. Rain continued to fall until the close of the month but after the 21st the amounts were not heavy. The heaviest rainfall was between the 13th and the 20th, and the following gives the average daily fall in the coast districts for that period :—

District.	Average actual rainfall during 24 hours preceding 8 A.M., of								
	13th June.	14th June.	15th June.	16th June.	17th June.	18th June.	19th June.	20th June.	Total rainfall of period.
North Kanara	2·48	3·72	2·00	3·20	3·33	3·19	1·32	0·86	20·10
Savantvadi .	5·21	3·21	3·61	5·14	2·39	5·75	5·54	3·33	34·18
Ratnagiri .	2·59	1·59	4·25	1·84	0·52	2·31	3·67	1·79	18·56
Kolaba .	3·45	2·27	1·47	0·24	0·44	3·08	0·92	0·65	12·52
Thana . .	2·55	3·56	1·50	0·06	0·13	1·49	0·37	0·58	10·24

The following shows the falls of over 5″ in 24 hours during the above eight days :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Thana . . .	Bombay . . .	13th June .	7·76
Kolaba . . .	Roha . . .	,, ,, .	6·63
North Kanara . .	Karwar . . .	,, ,, .	6·52
Savantvadi . .	Savantvadi . .	,, ,, .	6·38
Kolaba . . .	Alibag . . .	,, ,, .	5·82
Thana . . .	Uada . . .	14th ,, .	11·89
	Thana . . .	,, ,, .	6·28
North Kanara .	Ankola . .	,, ,, .	6·10
	Sirsi	,, ,, .	6·00
Thana . . .	Shahapur . . .	,, ,, .	5·66
Kolaba . . .	Alibag . . .	,, ,, .	5·60
North Kanara .	Karwar . . .	,, ,, .	5·56
Ratnagiri . .	Dapoli . . .	15th ,, .	9·40
	Mandangad . .	,, ,, .	5·90
	Rajapur . . .	,, ,, .	5·72
	Khed . . .	,, ,, .	5·60
	Gohagar . . .	,, ,, .	5·51
North Kanara .	Karwar . . .	16th ,, .	11·90
Ratnagiri . .	Vengurla . . .	,, ,, .	7·70
Savantvadi . .	Banda . . .	,, ,, .	6·25
	Savantvadi . .	,, ,, .	5·13
North Kanara .	Karwar . . .	17th June .	11·95
	Ankola . . .	,, ,, .	6·00
Kolaba . . .	Uran . . .	18th ,, .	8·45
North Kanara .	Kumta . . .	,, ,, .	7·82
Savantvadi . .	Banda . . .	,, ,, .	7·82
	Savantvadi . .	,, ,, .	6·88
Kolaba . . .	Alibag . . .	,, ,, .	6·75
North Kanara .	Karwar . . .	,, ,, .	6·60
	Ankola . . .	,, ,, .	6·45
	Honavar . . .	,, ,, .	6·00
	Bhatkal . . .	,, ,, .	5·83
Thana . . .	Kurla . . .	,, ,, .	5·61
Ratnagiri . .	Vengurla . . .	19th ,, .	13·06
	Devgad . . .	,, ,, .	6·52
	Malvan . . .	,, ,, .	6·25
Savantvadi . .	Banda . . .	,, ,, .	5·60
	Kudal . . .	,, ,, .	5·53
	Savantvadi . .	,, ,, .	5·49
Ratnagiri . .	Vengurla . . .	20th ,, .	7·07

The following gives comparative rainfall data for the four districts of the Konkan division :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
North Kanara	29·06	25·70	+3·36	+13
Ratnagiri	34·40	34·98	—0·58	— 2
Kolaba	22·48	28·56	—6·08	—21
Thana	17·10	19·66	—2·56	—13

The above shows that the total monthly rainfall was about the normal in all the districts.

In the Karnâtak there were light to moderate thunder showers—more general than usual—during the first twelve days. On the 13th monsoon rainfall extended into this division and continued until the 18th, the rain then fell off and was light until the close of the month. The total fall of the month was slightly below the normal, as is shown

by the following table which gives comparative data for the four districts of this division :—

District.	Rainfall. Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dharwar	3·52	3·54	—0·02	— 1
Bijapur	2·81	3·59	—0·78	—22
Belgaum	7·25	8·24	—0·99	—12
Kolhapur, etc.	3·36	5·61	—2·25	—40

Nearly all the heavy falls of rain recorded in this division were registered during the burst of rain between the 13th and the 18th. The following gives particulars of the falls exceeding 2″ :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Belgaum	Chandgad	13th June	4·73
	Belgaum	,, ,,	2·76
	Khanapur	,, ,,	2·48
Kolhapur, etc.	Gargoti	,, ,,	2·46
	Gadhinglaj	,, ,,	2·45
Belgaum	Chandgad	14th June	5·70
	Khanapur	,, ,,	4·92
Dharwar	Hangal	,, ,,	3·90
Kolhapur, etc.	Gadhinglaj	,, ,,	2·95
Belgaum	Belgaum	,, ,,	2·90
Kolhapur, etc.	Gargoti	,, ,,	2·24
Belgaum	Khanapur	15th ,,	3.20
	Chandgad	,, ,,	2·39
Bijapur	Bijapur	17th ,,	4·17

In the South Deccan there was general rain on the 7th and bursts of showery weather between the 11th and 16th and from the 20th to the 30th. The rainfall was not generally heavy and total for the month was in slight to moderate defect. The following gives comparative data for the different districts in this division :—

District.	Rainfall. Average actual, June. 1901.	Average normal, June.	Variation of actual from normal, June. 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Satara	2·79	7·09	—4·30	— 61
Sholapur	2·68	4·64	—1·96	— 42
Poona	4·98	7·84	—2·86	— 36

The only heavy falls exceeding 2″ in this division were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Poona	Alandi	7th June.	2·60
	Paud	8th ,,	2·99
	Talegaon Dabhada	,, ,,	2·40
	Alandi	,, ,,	2·32
Satara	Patan	,, ,,	2·05
	Malcolmpeth	12th ,,	2·09
	Ditto	13th ,,	3·95
Poona	Lanoli	,, ,,	2·61
Satara	Malcolmpeth	14th ,,	4·40
Poona	Lanoli	,, ,,	2·22
Satara	Malcolmpeth	15th ,,	2·80
Sholapur	Sholapur	17th ,,	5·23
Satara	Malcolmpeth	,, ,,	2·46
Poona	Lanoli	18th ,,	2·64
	Paud	25th ,,	2·07
Satara	Malcolmpeth	29th ,,	2·05

In the North Deccan showers were fairly general from the 8th to the 14th and from the 25th to the 30th. In Nasik these showers were frequently heavy the principal falls having been as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Nasik	Igatpuri	14th June	4·90
	Peint	,, ,,	3·18
	Malegaon	25th ,,	2·87
	Nandgaon	,, ,,	2·86

The general rainfall of the whole division was about normal as is shown in the following table which gives data for the three districts in this division :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ahmednagar	3·53	4·27	—0·74	—17
Nasik	4·62	6·89	—2·27	—33
Khandesh	4·41	5·12	—0·71	—14

In Gujarat with the exception of the Surat district there was very little rain. In Surat there were showers from the 11th onward, the rain falling very heavily on the 12th and 13th, but in Broach, Kaira and Ahmedabad, with the exception of a slight burst between the 25th and 27th there was no rain during the month. The total rainfall of the month was only about half the normal. The following gives data for the different districts :—

District.	Rainfall.			
	Average actual June 1901.	Averge normal June.	Variation of actual from normal June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Surat	6·44	11·08	—4·64	—42
Broach	0·15	5·61	—5·46	—97
Kaira	1·38	4·55	—3·17	—70
Panch Mahals	2·66	4·76	—2·10	—44
Ahmedabad	0·95	4·11	—3·16	—77

The rainfall was irregularly distributed as is shown below. The following gives heavy local falls that occurred in parts of Surat :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Surat . . .	Chikhli . . .	12th June .	3·32
	Pardi . . .	13th „ .	12·69
	Balsar . . .	„ „ .	4·06
Surat Agency . .	Bansda . . .	14th „ .	14·71
Surat . . .	Pardi . . .	14th June .	8·56
	Balsar . . .	„ „ .	6·20
„ Agency . .	Dharmpur . . .	„ „ .	5·28
Surat . . .	Bardoli . . .	„ „ .	3·43
„ Agency . .	Bansda . . .	26th „ .	2·20
Surat . . .	Balsar . . .	29th „ .	2·09
	Valod . . .	30th „ .	9·20

In Kathiawar there were only a few local showers during the month and no monsoon rainfall. The following gives data for the different districts in this division :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Rewa Kantha	2·73	6·03	—3·30	—55
Mahi Kantha	2·09	3·94	—1·85	—47
Palanpur	1·93	2·93	—1·00	—34
Kathiawar	0·53	3·66	—3·13	—86
Cutch	0·43	2·18	—1·75	—80

In Sind there was no rain.

The preceding discussion has shown that monsoon rainfall was received in normal amount along the West Coast and in nearly normal amount over the Deccan, but that in Gujarat the fall was irregular and lighter than usual and that in Kathiawar and Sind there was no monsoon rainfall. This is shown in the following table which gives comparative data of the rainfall of the month in the six divisions of the Bombay Presidency .—

Division.	Rainfall				Number of rainy days.	
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.	Average actual, June 1901.	Average normal, June.
	Inches.	Inches.	Inches.			
Konkan . . .	26·87	27·14	—0·27	— 1	19·4	19·2
Bombay Deccan . .	4·26	5·80	—1·54	— 27	6·6	8·2
Khandesh . . .	4·26	5·69	—1·43	— 25	6·4	7·6
Gujarat . . .	3·14	6·26	—3·12	— 50	2·4	6·6
Kathiawar and Cutch .	1·15	3·26	—2·11	— 65	1·2	3·6
Sind	0	0·20	—0·20	—100	0	...

The rainfall in the Madras Presidency was irregularly distributed.

The Malabar Coast and South Canara and Travancore received no important rain from the 1st to the 4th. On the 5th general monsoon rainfall set in and continued till the 19th when the fall decreased both in amount and extent in Travancore and in extent in Malabar and South Canara. The burst was hardly so heavy as usual in this area, but the following falls exceeding 5″ in 24 hours were recorded in this division between the 5th and the 19th:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Travancore State	Nedumangod	5th June	7·46
	Kottarakaray	6th ,,	5·98
	Raja Kamangalam	,, ,,	5·50
	Padmanabhapuram	,, ,,	5·40
	Pattanapuram	,, ,,	5·30
	Nagercoil	,, ,,	5·05
	Eraniel	,, ,,	5·04
	Peermade	7th ,,	5·83
	Trivandrum	,, ,,	5·41
	Alleppey	,, ,,	5·20
Malabar	Payyanur	8th ,,	10·63
South Canara	Hosdrug	,, ,,	9·10
	Kasaragod	,, ,,	8·22
Malabar	Talipparamba	,, ,,	7·62
	Tellicherry	,, ,,	7·15
	Quilandi	,, ,,	6·85
	Badagara	,, ,,	5·46
South Canara	Mangalore	,, ,,	5·34
Travancore State	Peermade	,, ,,	5·20
South Canara	Karkal	9th ,,	8·19
Malabar	Vayittiri	,, ,,	6·66
South Canara	Kasaragod	,, ,,	6·22
	Baniwal	,, ,,	6·00
Travancore State	Chengannur	,, ,,	5·96
South Canara	Udipi	,, ,,	5·54
Malabar	Talipparamba	,, ,,	5·13
	Vayittiri	10th ,,	8·05
Travancore State	Chengannur	,, ,,	6·14
Malabar	Vayittiri	11th ,,	5·80
Travancore State	Peermade	12th ,,	5·15
South Canara	Baindur	16th ,,	6·10
	Baniwal	17th ,,	9·93
	Puttur	,, ,,	9·32
Malabar	Talipparamba	17th June	8·04
South Canara	Karkal	,, ,,	6·57
Malabar	Quilandi	,, ,,	5·82
	Kuttiadi	,, ,,	5·50
South Canara	Mulki	,, ,,	5·50
Malabar	Vayittiri	,, ,,	5·22
South Canara	Mulki	18th ,,	7·48
	Kasaragod	,, ,,	6·25
	Udipi	,, ,,	5·81
	Coondapoor	,, ,,	5·64
	Hosdrug	,, ,,	5·26

The total fall of the two districts forming this division was about normal as is shown below:—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Malabar	33·25	33·23	+0·02	0
South Canara	46·09	39·64	+6·45	+16

In Madras South there was a moderate burst of rain between the 6th and the 9th and scattered showers at other times. The rainfall is not ordinarily heavy at this time, but the following table shows that Tinnevelly received more and Madura less than the normal amount:—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madura	0·72	1·05	—0·33	—31
Tinnevelly	1·68	0·87	+0·81	+93

In South Central Madras there was a fairly general fall of rain on the 5th and scattered showers at other times The total rainfal of the month was in some defect. The

following gives comparative data for the districts of Coimbatore and Salem :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inhces.	Inches.	
Coimbatore	0·92	1·59	—0·67	—42
Salem	1·52	2·24	—0·72	—32

In Central Madras there were two bursts of showery weather, the first on the first four days of the month and the second between the 16th and 18th. During the second period some heavy local falls of rain were reported as is shown below :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bellary . .	Adoni . . .	16th June .	3·33
	Hospet . . .	,, ,, .	2·36
	Kudligi . . .	,, ,, .	2·17
	Kampli . . .	17th ,, .	2·75
Anantapur . .	Yadaki . . .	18th ,, .	2·00

The total fall of the month was abo ut normal in this division. The following gives data for the different districts :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuddapah	2·13	2·30	—1·17	—51
Anantapur	1·39	2·35	—0·96	—41
Bellary	2·99	2·59	+0·40	+15
Kurnool	3·12	2·95	+0·17	+6

Along the East Coast the rainfall was short of the normal. In the north division there were three periods of rainfall, *viz.*, from the 1st to the 9th, from the 14th to the 19th and from the 26th to the 30th. The showers were not generally heavy but exceeded 2″ at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Ganjam . . .	Udayagiri . .	3rd June .	2·20
Godavari . . .	Kovvur . . .	8th ,, .	2·01
Kistna . . .	Mangalagiri . .	15th ,, .	2·20
Godavari . . .	Ellore . . .	17th ,, .	2·80
Vizagapatam . .	Nowrangapur . .	23rd ,, .	2·15
Ganjam . . .	Sompeta . . .	27th ,, .	3·50

The total rainfall of the month for the north division was in moderate defect. The following gives data for the different districts :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ganjam . . .	2·91	5·73	— 2·82	—49
Vizagapatam . .	3·11	4·69	—1·58	—34
Godavari . . .	3·49	4·65	—1·16	—25
Kistna	2·67	3·94	—1·27	—32

In the central division of the East Coast the rainfall was much lighter than in the northern division, but the normal was small and the deficiency slight. The following gives data for Nellore :—

District.	Rainfall.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Nellore	1·18		—0·45	—28

In the south division of the East Coast there were also three showery periods, but the showers were light and the

rainfall in defect. The following gives comparative data for the various districts :—

DISTRICT.	RAINFALL.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madras . . .	0·38	2·08	−1·70	−82
Chingleput . . .	0·62	2·11	−1·49	−71
North Arcot . . .	1·49	2·72	−1·23	−45
South Arcot . . .	1·82	1·94	−0·12	− 6
Tanjore . . .	0·50	1·39	−0·89	−64
Trichinopoly . . .	1·32	1·40	−0·08	− 6

The preceding discussion has shown that the general rainfall over Madras was lighter than usual, except in the south and in Malabar. This is shown in the following table of the normal and actual rainfall of the different rainfall divisions :—

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS.	
	Average actual, June 1901.	Average normal, June	Variation of actual from normal, June 1901.	Percentage variation from normal.	Average actual, June 1901.	Average normal, June.
	Inches.	Inches.	Inches.			
Malabar . . .	37·53	35·53	+2·00	+ 6	23·5	23·9
Madras South Central .	1·22	1·87	−0·65	+35	2·4	3·7
East Coast North .	3·02	5·18	−2·16	−42	5·2	7·2
Madras Central . .	2·42	2·54	−0·12	− 5	3·9	4·5
East Coast Central .	1·18	1·64	−0·46	−28	2·8	2·9
East Coast South .	1·14	1·93	−0·79	−41	2·2	3·3
Madras South . .	1·16	0·97	+0·19	+20	2·3	2·0

In Persia and Arabia there was as usual no rain during the month. This is shown below :—

STATION.	RAINFALL.			
	Average actual, June 1901.	Average normal, June.	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Jask	0	0·13	−0·13	−100
Bushire . . .	0	0	0	0
Ispahan	0·01	0	+0·01	...
Baghdad . . .	0	0·01	−0·01	−100
Muscat	0	0	0	0

At Zanzibar the rainfall of the month was in considerable excess, while it was about normal at the Seychelles and Mauritius. This is shown below :—

STATION.	RAINFALL.			
	Average actual, June 1901.	Average normal, June	Variation of actual from normal, June 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Zanzibar . . .	2·06	1·24	+0·82	+66
Seychelles . . .	4·77	5·80	−1·03	−18
Mauritius . . .	1·90	2·06	−0·16	− 7

Table

Abstract of Observations taken at 8 A.M. at 219 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.				−·012								86·8.	+0·8	77·0	+1·0	81·9	+0·9	9·8					19·4
1	Tenasserim and Bay Islands.	Car Nicobar§	25	29·752		29·705	29·884	19th	29·632	5th	·252	80·7	86·8		77·9		82·4		8·9	69·8	25th	74·9	6th	14·9
		Port Blair	61	29·765	+·004	29·757	29·855	20th	29·644	7th	·211	82·3	87·0		78·3*		82·7*		8·7	91·8	3rd	74·3	16th	17·5
		Mergui	96	29·760	−·012	29·788	29·837	19th	29·665	5th	·172	79·5	86·6	+1·2	75·7	+3·4?	81·2	+2·3?	10·9	93·1	4th	72·4	12th	20·7
		Tavoy	26	29·826	−·017	29·774	29·910	24th	29·728	5th	·182	79·3	85·7	+1·0	75·8	+1·2	80·7	+1·1	9·9	92·2	5th	73·5	11th & 12th	18·7
		Moulmein	94	29·711	−·016	29·743	29·828	24th	29·616	6th	·212	79·2	85·8	+1·5	76·0	+1·5	80·9	+1·5	9·8	92·5	6th	73·3	14th, 15th & 23rd.	19·2
2	Lower Burma	Rangoon	41	29·737	?	29·715	29·849	25th	29·623	15th	·226	78·9	86·7	+0·5	77·2	+0·8	82·0	+0·7	9·5	92·6	2nd, 3rd & 4th.	73·9	12th & 23rd.	18·7
		Bassein	27	29·743	−·015	29·705	29·864	25th	29·604	15th	·260	80·5	87·2	+1·1	77·7	+1·5	82·5	+1·3	9·5	92·7	3rd	73·7	12th	19·0
		Diamond Island	41	29·727	−·019	29·703	29·844	25th	29·584	7th	·260	82·4	86·1	+0·6	79·4	+3·6?	82·8	+2·1?	6·7	89·6	4 days	72·2	12th	17·4
5	Arakan	Akyab	20	29·688	−·013	29·651	29·828	25th	29·513	16th	·315	81·2	87·1	+1·2	77·1	?	82·1	?	10·0	93·9	8th	73·5	22nd	20·4
3	Central Burma.	Toungoo	183	29·585	−·009	29·709	29·674	25th	29·482	16th	·192	81·6	89·3	+0·9	74·9	?	82·1	?	14·4	97·6	6th	70·6	23rd	27·0
	II.—Burma Inland				−·013								92·1	+0·6	77·3	+0·6	84·7	+0·6	14·8					23·5
3	Central Burma.	Thayetmyo	130	29·611	0	29·682	29·731	25th	29·483	16th	·248	81·9	91·5	+0·5	78·5	?	85·0	?	13·0	98·7	6th	76·1	24th	22·6
4	Upper Burma	Minbu	165	29·559	−·011	29·666	29·672	24th	29·433	16th	·239	82·2	93·5	+0·9	78·8	+1·4	86·2	+1·2	14·7	99·6	7th	76·6	22nd & 26th.	23·0
		Yamethin	657	29·081	−·003	29·685	29·201	25th	28·983	16th	·218	80·8	91·9	?	76·1	+0·8	84·0	?	15·8	98·5	5th	69·7	12th	28·8
		Mandalay	250	29·455	−·020	29·652	29·582	25th	29·352	17th	·230	83·9	94·7	+0·1	78·8	+0·5	86·8	+0·3	15·9	97·5	5th	75·3	2nd	22·2
		Kindat	377	29·308	−·013	29·638	29·424	24th & 25th.	29·181	17th	·243	80·7	90·1	?	76·9	+0·7	83·5	?	13·2	94·3	7th	74·8	7th & 24th.	19·5
		Bhamo	381	29·299	−·030	29·633	29·402	1st	29·186	17th	·216	79·9	91·0	+0·7	74·8	0	82·9	+0·4	16·2	97·0	16th	72·1	2nd	24·9
4(a)	Burma Hill Stations.	Maymyo		26·293*			26·407	25th	26·210	12th	·197	71·9	80·0		66·9		73·5		13·1	83·0	15th	63·2	12th & 26th.	19·8
		Taunggyi										69·2	78·7	+0·5	64·7	+0·5	71·7	+0·5	14·0	82·7	15th	62·0	1st	20·7
		Lashio										75·4	85·8	+1·0	69·8	+0·8	77·8	+0·9	16·0	92·5	15th	66·0	13th	26·5
	III.—Assam				−·024								87·3	−0·8	75·9	−0·5	81·6	−0·6	11·4					24·3
7	Surma	Silchar	104	29·577	−·008	29·632	29·720	25th	29·424	16th	·296	79·7	89·3	+0·6	76·0	−0·1	82·7	+0·3	13·3	99·1	17th	70·3	12th	28·8
9	Brahmaputra	Sibsagar	333	29·319?	−·037?	29·608	29·450	1st	29·212	17th	·238	79·0	87·5	−2·2	76·1	−0·5	81·8	−1·4	11·4	93·2	9th & 17th.	71·0	4th	22·2
		Dhubri	115	29·503	−·026	29·572	29·670	1st	29·371	17th	·299	78·3	85·1	−0·5	75·6	−0·8	80·4	−0·7	9·5	92·7	17th	70·7	12th	22·0
	IV.—Bengal and Orissa				−·014								92·2	+1·6	78·3	+0·4	85·3	+1·0	13·9					29·6
6	East Bengal	Chittagong	87	29·581	−·017	29·615	29·720	1st	29·418	16th & 17th.	·302	81·3	87·6	+1·4	76·6	+0·1	82·1	+0·8	11·0	93·5	8th	70·6	12th & 13th.	22·9
		Noakhali	43	29·610		29·600	29·740	25th	29·456	17th	·284	82·0	93·7		75·1		84·4		18·6	102·2	12th	69·9	13th	32·3
		Comilla	36	29·613		29·597	29·750	1st	29·469	16th	·281	80·9	88·6		76·5		82·6		12·1	95·3	8th	65·8	13th	25·5
		Sirajganj	49	29·551		29·550	29·712	1st	29·427	12th	·285	80·1	87·7		76·5		82·1		11·2	95·3	13th	71·7	4th	23·6
		Narayanganj	26	29·602	−·017	29·576	29·746	1st	29·453	17th	·293	82·3	88·5	−0·5	78·1	−0·2	83·3	−0·4	10·4	93·6	7th, 8th & 12th.	73·2	13th & 22nd.	20·4
		Barisal	13	29·614	−·012	29·572	29·761	25th	29·457	17th	·304	83·5	88·5	−0·5	78·3	+0·5	83·4	0	10·2	95·3	8th	70·6	13th	24·7
		Mymensingh	59	29·566	−·027	29·576	29·721	1st	29·426	12th	·295	79·8	86·3	−0·9	76·0	−0·5	81·2	−0·7	10·3	93·2	9th	70·6	4th	22·6
10	Deltaic Bengal	Faridpur	46	29·577		29·571	29·724	1st	29·427	12th	·297	82·1	90·0		77·3		83·7		12·7	96·8	12th	72·4	13th	24·4
		Jessore	33	29·573	−·018	29·552	29·725	25th	29·412	12th	·313	83·3	92·2	+0·6	78·6	−0·3	85·4	+0·2	13·6	103·0	12th	73·2	13th	29·8
		Calcutta	21	29·572	−·012	29·538	29·729	2nd	29·415	17th	·314	84·6	94·6	+3·3	79·0	+0·2	86·8	+1·8	15·6	108·2	12th	73·1	1st & 19th.	35·1
		Saugor Island	25	29·573	−·009	29·542	29·715	2nd	29·413	17th	·302	86·3	92·3	+1·6	83·0	+1·1	87·7	+1·4	9·3	99·4	15th	73·1	3rd	26·3
		Krishnagar	47	29·545		29·540	29·714	1st	29·383	12th	·331	83·6	93·4		78·3		85·9		15·1	107·2	12th	72·2	13th & 14th.	35·0
		Midnapore	149	29·438		29·532	29·582	2nd	29·288	17th	·294	84·8	98·1		80·2		89·2		17·9	112·3	12th	72·7	3rd	39·6

Mean of 29 days.

§ Observations of 29 days.

I.

in India, Burma, etc., in June, 1901.

WIND DIRECTION. Number of Winds from										WIND VELOCITY.				HYGROMETRY, 8 A.M.			RAINFALL.											STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind resultant.	Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 30th June 1901.	Normal rainfall for period, 1st to 30th June.	Variation from normal of period, 1st to 30th June.	Heaviest rainfall during month.		
																				25·48	27·32	−0·53						
1				3	5	10	3	1	S 33° W	6·0‡	6·0‡			88	·922	9·1	10			13·59			13·59			5·93	Car Nicobar	I.—Burma Coast and Bay Islands. TENASSERIM AND BAY ISLANDS.
1				2	1	10	13	3	S 72° W	14·2		10·0	+42	85	·942	4·6	17			20·37	18·79	+ 1·58	20·37	18·79	+1·58	4·20	Port Blair.	
30						·			Calm	2·5	2·2	1·9	+ 16	93	·917	5·5	22			35·29	30·13	+ 5·16	35·29	30·13	+5·16	4·15	Mergui.	
25					3	2			S 18° W	1·2				92	·924	7·3	25			40·79	39·39	+ 1·40	40·79	39·39	+1·40	4·31	Tavoy.	
1	2		1	6	1	14	4	1	S 37° W	3·4	3·8	3·4	+ 12	90	·891	8·2	26	27·00	−1·00	33·53	35·72	− 2·19	33·53	35·72	−2·19	3·80	Moulmein.	
			1	1	12	13	3		S 25° W	5·1		5·3	− 4	92	·913	9·3	23	23·27	− 0·27	17·04	17·51	− 0·47	17·04	17·51	−0·47	3·34	Rangoon .	LOWER BURMA.
15			1	2	1	8	2	1	S 39° W	4·1		4·0	+ 3	90	·914	6·6	17	24·82	−7·82	17·87	22·56	− 4·69	17·87	22·56	−4·69	4·53	Bassein.	
5		1	1		4	11	8		S 52° W	9·4	9·4	8·5	+ 11	84	·943	8·7	15	21·73	−6·73	16·44	23·20	− 6·76	16·44	23·20	−6·76	5·56	Diamond Island.	
	2	6	12	3	4	2	1		S 86° E	2·5	2·4	3·9	− 38	92	·988	8·7	22	23·09	−1·09	46·65	43·99	+ 2·66	46·65	43·99	+2·66	7·85	Akyab .	ARAKAN.
	1		1	21	7				S 43° W	6·3	6·2	4·8	+ 29	87	·944	9·3	18	20·91	−2·91	13·18	14·61	− 1·43	13·18	14·61	−1·43	3·08	Toungoo .	CENTRAL BURMA
																				7·32	8·35	−1·03						II.—Burma Inland.
2				9	16	2	1		S 10° E	7·2		8·2	− 12	80	·874	6·3	14	15·00	−1·00	6·36	6·94	− 0·58	6·36	6·94	− 0·58	1·35	Thayetmyo.	CENTRAL BURMA.
				20	10				S 43° E	8·9	10·6			82	·910	6·6	5			1·83	3·90	− 2·07	1·83	3·90	− 2·07	0·54	Minbu .	UPPER BURMA.
1				20	9				S 31° E	6·6	6·9			84	·887	8·7	11			6·39	4·50	+ 1·89	6·39	4·50	+ 1·89	1·47	Yamethin.	
	1			8	19	2			S 9° E					77	·892	1·9	8			9·42	6·21	+ 3·21	9·42	6·21	+ 3·21	2·87	Mandalay.	
23				1	4	1		1	S 9° W	0·9	0·9			89	·936	8·6	12			10·55	14·87	− 4·32	10·55	14·87	− 4·32	3·66	Kindat.	
13	3	3				2	6	3	N 52° W	2·0	2·3			89	·912	7·6	18			9·38	13·66	− 4·28	9·38	13·66	− 4·28	1·25	Bhamo.	
22					4	3	1		S 27° W	5·2				87	·678	8·7†	16			11·49			11·49			2·21	Maymyo .	BURMA HILL STATIONS.
1				7	10	6	5	1	S 27° W					86	·623	9·6	16			6·87	11·56	− 4·69	6·87	11·56	− 4·69	1·26	Taunggyi.	
	3	4	3	1	8	6	1	4	S 20° W	1·4				85	·752	8·5	9			7·07	10·23	− 3·16	7·07	10·23	− 3·16	2·02	Lashio.	
																				20·52	19·65	+0·87						III.—Assam.
25		1	1		1		1	1	N	0·9	1·5	3·1	− 52	91	·938	9·2	19	21·33	−2·33	19·53	20·73	− 1·20	19·53	20·73	− 1·20	2·37	Silchar .	SURMA.
7	1	14		3		3		2	N 46° E	2·7	2·5	2·6	− 4	94	·930	9·1	21	16·70	+4·30	15·73	13·69	+ 2·04	15·73	13·69	+ 2·04	3·75	Sibsagar .	BRAHMAPUTRA.
	1	9	9	5	4	2			N 86° E	4·3	5·1	4·9	+ 4	92	·899	8·5	24	17·87	+6·13	26·30	24·53	+ 1·77	26·30	24·53	+ 1·77	5·15	Dhubri.	
																				13·37	13·75	−0·38						IV.—Bengal and Orissa.
	2	2	2	17	6	1			S 45° E	9·0	8·9	6·9	+ 29	85	·903	8·4	17	16·62	+0·38	19·00	22·69	− 3·69	19·00	22·69	− 3·69	4·10	Chittagong.	EAST BENGAL.
		2	7	7	10	4			S 34° E	5·8	5·4			87	·956	5·0	20	18·35	+1·65	28·84	24·19	+ 4·45	28·64	24·19	+ 4·45	6·82	Noakhali.	
3		2	2	1	22				S 11° E	9·5				86	·905	8·6	18	17·30	+0·70	29·71	17·65	+12·06	29·71	17·65	+12·06	7·60	Comilla.	
12		2	3	6	6	1			S 39° E	1·7	1·8			92	·945	7·7	12	13·09	−1·09	22·12	11·12	+11·00	22·12	11·12	+11·00	5·12	Sirajganj.	
1			4	9	14	2			S 22° E	7·9		7·2	+ 10	89	·990	8·8	13	15·08	−2·08	24·47	13·06	+11·41	24·47	13·06	+11·41	6·10	Narayanganj	
2	1	2	1	8	10	5		1	S 14° E	5·2				87	1·009	8·4	16	16·88	−0·88	20·02	16·02	+ 4·00	20·02	16·02	+ 4·00	4·45	Barisal.	
14			5	7	2	2			S 48° E	1·3	1·4			91	·927	8·1‡	22	18·42	+3·58	32·23	18·18	+14·05	32·23	18·18	+14·05	6·62	Mymensingh.	
11					19				S	1·3	1·2			91	1·008	6·5	12	14·12	−2·12	18·78	12·38	+ 6·40	18·78	12·38	+ 6·40	4·52	Faridpur .	DELTAIC BENGAL.
20	1	1	1	3	4				S 45° E	2·8	2·7	4·9	− 45	89	1·018	7·2	11	14·54	−3·54	11·28	12·50	− 1·22	11·28	12·50	− 1·22	1·80	Jessore.	
3	1	1		7	11	7			S 3° E	6·2		6·2	0	83	·999	7·5	9	12·77	−3·77	8·85	10·74	− 1·89	8·85	10·74	− 1·89	1·64	Calcutta.	
	1		1	1	15	10	1	1	S 18° W	20·4		14·6	+ 40	85	1·071	7·7	9	12·19	−3·19	9·91	9·84	+ 0·07	9·91	9·84	+ 0·07	4·04	Saugor Island.	
		3	4	4	16	2	1		S 21° E	5·1				85	·975	6·7	9	12·15	−3·15	6·33	9·33	− 3·00	6·33	9·33	− 3·00	2·09	Krishnagar.	
2		1	1	4	22				S 12° E	4·9	4·3			80	·946	3·9	8	11·35	−3·35	6·59	9·42	− 2·83	6·59	9·42	− 2·83	1·93	Midnapur.	

† Mean of 27 days. ‡ Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 219 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·254?		29·499?	29·417	1st	29·100	12th	·317	85·1	99·7		79·2		89·5		20·5	113·6	12th	69·9	19th	43·7
		Raniganj	334	29·237		29·516	29·407	1st	29·065	12th	·342	84·2	98·0		79·6		88·8		18·4	113·8	12th	73·9	27th	39·9
		Burdwan	99	29·485	−·014	29·531	29·644	1st	29·310	12th	·334	84·2	95·3	+1·2	76·9	−0·6	87·1	+0·3	16·4	111·5	12th	74·3	13th	37·2
		Naya Dumka	489	29·084		29·524	29·254	1st	28·915	12th	·339	84·6	96·2		79·9		88·1		16·3	112·4	12th	72·9	14th	39·5
		Berhampore	67	29·520	−·021	29·535	29·691	1st	29·359	12th	·332	82·6	93·3	+0·7	78·2	−0·3	85·8	+0·2	15·1	102·3	13th	72·3	1st & 13th,	30·0
		Rampur Boalia, Malda	70	29·517		29·535	29·658	1st	29·344	12th	·344	83·5	91·0		77·6		84·3		13·4	99·1	13th	71·1	13th	28·0
		Bogra	72	29·504		29·527	29·693	1st	29·348	12th	·345	82·1	91·1		78·1		84·6		13·0	98·6	13th	71·0	13th	27·6
			61	29·536		29·549	29·704	1st	29·409	17th	·295	80·2	88·8	−0·5	76·3	−0·7	82·6	−0·6	12·5	95·2	4th, 7th & 9th.	69·2	7th	26·0
12	North Bengal	Dinajpur	123	29·470	−·030	29·547	29·649	1st	29·324	12th	·325	79·8	89·5	+0·3	76·4	−0·6	83·0	−0·2	13·1	96·8	21st	69·0	13th	27·8
		Rangpur	123	29·506		29·584	29·678	1st	29·366	12th	·312	79·9	87·4		76·0*		81·6*		11·4	96·2	17th	69·8	4th	26·4
		Jalpaiguri	284	29·341	−·022	29·583	29·511	1st	29·182	12th	·329	79·2	87·7	+0·2	75·5	+0·7	81·7	+0·5	12·2	94·9	17th	71·1	5th	23·8
		Cooch Behar	156	29·472		29·584	29·640	1st	29·319	12th	·321	79·0	86·8		75·9		81·4		10·9	95·9	17th	71·1	12th	24·8
17	North Bihar	Purnea	125	29·467	?	29·545	29·651	1st	29·295	12th	·356	81·9	94·9	+2·6	77·8	+0·9	86·4	+1·8	17·1	103·3	9th & 10th.	71·2	13th	32·1
14	Orissa	Balasore	46	29·543	0	29·535	29·681	1st	29·417	12th	·267	87·1	100·4	+7·8	81·1†	+2·5†	90·9†	+5·2	19·3	112·5	12th	70·9	6th	41·6
		False Point	21	29·596	−·001	29·558	29·730	25th	29·447	17th	·283	87·0	92·3	+1·5	81·6	+1·4	87·0	+1·5	10·7	101·5	16th	74·1	1st & 16th,	27·4
		Cuttack	80	29·534	+·002	29·556	29·676	25th	29·413	17th	·263	86·7	102·1	+6·2	82·1	+1·9	92·1	+4·1	20·0	111·5	12th	77·2	2nd & 23rd.	34·3
		Puri	20	29·604		29·566	29·731	25th	29·475	17th	·256	85·6	90·1		82·5		86·3		7·6	92·2	6th, 7th & 8th.	76·1	2nd	16·1
	V.—Gangetic Plain and Chota Nagpur.				−·030								102·8	+6·4	81·5	+2·2	92·2	+4·3	21·2					38·2
15	Chota Nagpur	Hazaribagh	2,007	27·592	−·018	29·497	27·724	1st	27·467	12th	·257	86·4	100·5	+8·0	79·4	+3·5	90·0	+5·8	21·1	108·1	12th	72·9	2nd	35·2
		Ranchi	2,128	27·488	−·002	29·512	27·614	1st	27·379	17th	·235	84·7	99·2	+7·4	78·0	+3·3	88·6	+5·4	21·2	107·8	12th	69·9	2nd	37·9
		Daltonganj	730?	28·822		29·492	28·954	25th	28·696	12th	·258	87·5	107·7		81·0		94·4		26·7	115·6	12th	71·0	22nd	44·6
		Purulia		28·758		29·508	28·922	1st	28·605	12th	·317	85·4	101·5		79·8		90·7		21·7	115·8	12th	74·4	2nd	41·4
		Chaibassa	760	28·816		29·511	28·948	1st	28·690	12th	·258	87·2	102·2	+5·2	81·3	+1·8	91·8	+3·5	20·9	111·4	12th	72·5	2nd	38·9
16	South Bihar	Gaya	375	29·165	−·036	29·485	29·320	1st	29·006	12th	·314	90·9	105·7	+5·8	84·5	+5·0	95·1	+5·4	21·2	115·3	12th	78·8	23rd	36·5
		Dehri	351	29·184		29·480	29·348	1st	29·007	12th	·341	91·8	106·8		84·7		95·8		22·1	116·5	12th	79·5	1st	37·0
		Patna	183	29·369	−·035	29·502	29·546	1st	29·184	12th	·362	85·7	99·2	+2·6	80·7	+0·6	90·0	+1·6	18·5	110·0	12th	73·2	14th	36·8
		Arrah	190	29·350		29·489	29·519	1st	29·167	12th	·352	88·1	101·9		82·2		92·0		19·7	112·0	12th	74·0	14th	38·0
		Buxar	239	29·296		29·485	29·497	1st	29·104	12th	·393	89·1	103·4		83·0		93·3		20·4	112·9	12th	78·1	1st	34·8
17	North Bihar	Bhagalpur	160	29·409		29·520	29·604	1st	29·241	12th	·363	84·2	91·6		79·4		87·0		15·2	103·8	12th	71·6	13th	32·2
		Darbhanga	166	29·407	−·026	29·525	29·583	1st	29·214	12th	·369	83·1	94·2	+1·9	79·5	+0·5	86·9	+1·2	14·7	100·8	5 days	75·5	21st	25·3
		Muzaffarpur	178	29·397		29·527	29·586	1st	29·201	12th	·365	83·7	95·2		78·4†		86·7†		16·8	103·7	8th	73·7	14th	30·0
		Motihari	224	29·340		29·520	29·502	1st	29·143	12th	·359	82·8	94·5		78·1		86·4		16·4	104·0	12th	71·8	1st & 21st.	32·2
		Chapra	181	29·371		29·503	29·546	1st	29·182	12th	·364	86·3	100·7		80·7		90·8		19·8	110·0	12th	73·1	14th	36·9
18	N.-W. Provinces, (East).	Benares	267	29·260	−·036	29·476	29·435	1st	29·095	12th	·340	91·2	108·2	+7·2	84·9	+2·6	96·6	+4·9	23·3	117·3	12th	75·5	9th	41·8
		Allahabad	309	29·208	−·047	29·462	29·385	1st	29·048	12th	·347	94·6	110·9	+8·5	86·1	+3·2	98·5	+5·9	24·8	118·2	12th	77·3	28th	40·9
23	N.-W. Provinces, (East Sub-montane),	Gorakhpur	256	29·300	?	29·510	29·471	1st	29·104	12th	·367	85·4	100·1	+2·4	80·5	+0·7	90·3	+1·6	19·6	109·2	11th	67·7	1st	41·5
19	South Oudh	Lucknow	368	29·158	−·035	29·476	29·335	1st	28·970	12th	·365	90·6	109·1	+7·6	82·3	+0·8	95·7	+4·2	26·8	118·8	12th	72·3	1st	46·0
20	North Oudh	Bahraich	403	29·137	−·041	29·493	29·307	2nd	28·937	12th	·370	87·8	103·5	+6·3	80·7	+1·6	92·1	+4·0	22·8	114·2	13th	68·0	1st	46·2
21	N.-W. Provinces (Central).	Cawnpore	416	29·119	−·025	29·476	29·233	2nd	28·953	12th	·330	93·8	111·2	+10·5	84·7	+3·1	98·0	+6·8	26·5	117·1	11th	74·5	16th	42·6
		Mainpuri	516	29·007	−·034	29·465	29·166	2nd	28·836	12th	·330	94·3	110·7	+9·5	83·6	+2·1	97·2	+5·8	27·1	117·7	12th	73·0	15th	44·7

* Mean of 28 days.

I—*continued.*

in India, Burma, etc., in June, 1901—continued.

WIND DIRECTION. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Resultant.	WIND VELOCITY. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	HYGROMETRY, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	RAINFALL. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 30th June 1901.	Normal rainfall for period, 1st to 30th June.	Variation from normal of period, 1st to 30th June.	Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.
14		1	2	7		6			S 18° E	2·5	3·0			74	·383	5·4	10	12·08	− 2·08	6·96	9·96	− 3·00	6·96	9·96	− 3·00	2·57	Bankura	CENTRAL BENGAL
15		1	2	4	3	4		1	S 16° E	2·1				78	·903	5·9	8	11·65	− 3·65	4·37	9·27	− 4·90	4·37	9·27	− 4·90	1·65	Raniganj	
7		1	4		7	8	3		S 18° W	4·1	4·1	4·9	−16	83	·968	7·6	10	12·38	− 2·38	6·42	8·92	− 2·50	6·42	8·92	− 2·50	1·44	Burdwan	
2		3	6	9	6	2	2		S 43° E	2·0	2·3			77	·908	6·8	7	12·13	− 5·13	2·95	9·22	− 6·27	2·95	9·22	− 6·27	0·69	Naya Dumka	
19					9	2			S 6° W	1·0	1·1	5·5	−80	87	·967	7·6	11	11·88	− 0·38	7·85	9·38	− 1·53	7·85	9·38	− 1·53	1·63	Berhampur	
10		2	1	6	8	3			S 21° E	3·5	3·6			84	·967	4·1	12	12·15	− 0·15	11·52	9·91	+ 1·61	11·52	9·91	+ 1·61	1·78	Rampur Boalia.	
		2	15	7	4	1		1	S 68° E	2·5	2·3			88	·967	7·1	8	11·96	− 3·96	6·90	10·34	− 3·44	6·90	10·34	− 3·44	1·99	Malda	
15			14	1					S 86° E					89	·923	7·3	15	14·23	+ 0·77	19·08	13·56	+ 5·52	19·08	13·56	+ 5·52	3·87	Bogra	
		26	2		1			1	N 48° E	5·3	6·2			89	·909	8·7	15	14·08	+ 0·92	9·88	15·49	− 5·61	9·88	15·49	− 5·61	2·53	Dinajpur	NORTH BENGAL
4		6	11	1	7	1			S 75° E	3·5	3·7			93	·950	6·7	18	15·38	+ 2·62	18·84	18·62	+ 0·22	18·84	18·62	+ 0·22	3·34	Rangpur	
	3	9	12	5	1				N 77° E	0·5	0·7			91	·905	3·8	23	19·00	+ 4·00	23·76	26·42	− 2·66	23·76	26·42	− 2·66	3·19	Jalpaiguri	
14	1	7	5	3					N 72° E	1·7	1·8			92	·912	8·8	23			30·13	35·67	− 5·54	30·13	35·67	− 5·54	3·68	Cooch Behar	
		12	9	8		1			N 85° E	2·8	2·5	3·3	−24	83	·898	5·5	3	11·48	− 8·48	4·20	10·71	− 6·51	4·20	10·71	− 6·51	1·44	Purnea	NORTH BIHAR
3					9	17	1		S 32° W	3·0				67	·870	4·9	6	10·81	− 4·81	3·04	9·07	− 6·03	3·04	9·07	− 6·03	0·98	Balasore	ORISSA.
					4	16	8	2	S 56° W	14·0	13·5	11·5	+17	79	1·016	7·1	5	9·32	− 4·32	2·39	9·37	− 6·98	2·39	9·37	− 6·98	1·10	False Point	
5					4	15	5	1	S 49° W	3·8		4·0	− 5	75	·952	6·5	6	11·54	− 5·54	4·00	11·53	− 7·53	4·00	11·53	− 7·53	1·25	Cuttack	
3		1				22	2	2	S 54° W	16·0	15·1			83	1·013	4·9	2	8·04	− 6·04	0·92	8·06	− 7·14	0·92	8·06	− 7·14	0·72	Puri	
																				2·01	6·58	−4·65					V.—Gangetic Plain and Chota Nagpur.
3	1	1			4	10	9	2	S 65° W	10·8	9·6	8·9	+ 8	52	·656	6·1	0	10·92	−10·92	0·25	7·63	− 7·38	0·25	7·63	− 7·38	0·07	Hazaribagh	CHOTA NAGPUR.
				2	4	16	5	3	S 49° W	9·4	11·1			59	·716	5·1	4	12·50	− 8·50	1·27	8·48	− 7·21	1·27	8·48	− 7·21	0·55	Ranchi	
22			1			7			S 39° W	4·1	5·0			52	·672	1·8	5	8·27	− 3·27	2·33	6·03	− 3·70	2·33	6·03	− 3·70	1·02	Daltonganj	
21			2		1	2	2	2	S 72° W	2·6				69	·788	4·3	8			3·64			3·64			0·98	Purulia	
10				4	2	5	7	2	S 52° W	3·1	2·7			63	·812	3·7	6	11·46	− 5·46	1·86	8·53	− 6·67	1·86	8·53	− 6·67	0·56	Chaibassa	
2	1	9	1	4	1	9	2	1	S 27° E	7·8	7·0	3·4	+106	60	·865	4·1	1	8·04	− 7·04	0·32	6·56	− 6·24	0·32	6·56	− 6·24	0·20	Gaya	SOUTH BIHAR.
2		2	7	4	4	7	2		S 31° E	8·5	7·5			48	·699	3·9	0	7·92	− 7·92	0·03	5·91	− 5·88	0·03	5·91	− 5·88	0·02	Dehri	
2		11	14	2			1		N 75° E	5·2	6·2	4·2	+48	77	·944	3·5	5	7·85	− 2·85	4·02	7·34	− 5·32	2·02	7·34	− 5·32	1·12	Patna	
	6		4			2	12	6	N 57° W	4·1	4·3			72	·943	1·0	2	8·15	− 6·15	0·28	6·14	− 5·86	0·28	6·14	− 5·86	0·16	Arrah	
	1	3	19	1	1		5		N 87° E	6·5	6·0			63	·845	3·1	2	7·88	− 5·88	0·22	5·20	− 4·98	0·22	5·20	− 4·98	0·12	Buxar	
2		5	12	10		1			S 80° E	4·3	4·0			82	·956	5·7	5	9·69	− 4·69	3·53	7·54	− 4·01	3·53	7·54	− 4·01	0·69	Bhagalpur	NORTH BIHAR.
		2	15	11			1	1	S 75° E	4·5		3·3	+36	80	·915	5·4	6	8·64	− 2·64	7·30	7·56	− 0·26	7·30	7·56	− 0·26	2·75	Darbhanga	
11	1	4	8	6					S 88° E	1·8	1·6			86	·893	2·8	5	8·00	− 3·00	2·88	7·65	− 4·77	2·88	7·65	− 4·77	1·12	Muzaffarpur	
		3	24	2				1	N 88° E	4·8	4·6			94	1·056	2·3	7	9·57	− 2·57	10·63	9·18	+ 1·45	10·63	9·18	+ 1·45	3·15	Motihari	
2	1	3	20	3			1		N 88° E	4·3	5·2			76	·950	3·8	2	7·42	− 5·42	1·18	6·28	− 5·10	1·18	6·28	− 5·10	0·97	Chapra	
9	1	3	7		1	3	6		E	3·8	4·3	5·1	−16	51	·741	3·5	0	4·64	− 4·64	0·02	5·13	− 5·11	0·02	5·13	− 5·11	0·02	Benares	N.-W. PROVINCES (EAST).
1	2	1	4		5	6	6	5	S 72° W	8·2	9·3	6·9	+35	43	·691	1·7	0	4·73	− 4·73	0·02	5·69	− 5·67	0·02	5·69	− 5·67	0·01	Allahabad	
3	1	14	8	3	1				N 68° E	2·5		3·6	−31	77	·934	4·7	2	7·00	− 5·00	1·95	9·68	− 7·73	1·95	9·68	− 7·73	1·03	Gorakhpur	N.-W. PROVINCES (EAST SUB-MONTANE).
2	4	1	13	2	2	1	4	1	N 84° E	3·4	3·7	4·2	−12	53	·736	2·1	2	5·64	− 3·64	1·12	5·43	− 4·31	1·12	5·43	− 4·31	0·74	Lucknow	SOUTH OUDH.
1	1		21	6		1			S 81° E	9·1	8·6			70	·925	2·4	4			3·18	5·64	− 2·46	3·18	5·61	− 2·46	1·45	Bahraich	NORTH OUDH
3	2	2	2	2	1	5	9	4	N 88° W	5·7				44	·679	1·6	0	4·30	− 4·30	0·08	3·54	− 3·46	0·08	3·54	− 3·46	0·06	Cawnpore	N.-W. PROVINCES (CENTRAL).
8			4	1			15	2	N 87° W	3·1	3·1			34	·577	3·5	1			0·10	3·00	− 2·90	0·10	3·00	− 2·90	0·10	Mainpuri	

† Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 219 Stations

Number of district.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas.				−·031								106·9	+4·3	81·0	+1·0	94·0	+2·7	25·9					45·9
24	N.-W. Provinces (West Submontane).	Bareilly	569	28·953	−·035	29·473	29·123	2nd	28·765	12th	·358	88·0	105·4	+4·7	80·7	+0·8	93·1	+2·8	24·7	115·0	12th	67·7	1st	47·3
		Dehra Dun	2,233	27·359	−·042	29·492	27·500	2nd	27·170	12th	·330	83·0	99·3	+5·9	75·0	+0·4	87·2	+3·2	24·3	107·5	13th	67·5	1st	40·0
		Roorkee	887	28·638	−·036	29·472	28·801	1st	28·435	12th	·366	88·1	106·0	+4·6	77·7	−1·2	91·9	+1·7	28·3	114·7	13th	68·2	8th	46·5
22	N.-W. P. West.	Meerut*	738	28·772	−·044	29·456	28·944	1st	28·580	12th	·364	91·2	107·7	+6·3	81·4	+0·6	94·7	+3·5	26·3	114·8	12th & 13th.	74·8	15th	40·0
26	South-East Punjab.	Delhi	718	28·804	−·030	29·466	28·960	25th	28·626	12th	·334	92·1	107·1	+2·9	87·6	+4·2	97·4	+3·6	19·5	114·2	13th	70·1	15th	44·1
28	Central Punjab.	Lahore	702	28·800	−·020	29·454	28·998	2nd	28·578	13th	·420	90·7	109·2	+3·6	80·7	+0·9	95·0	+2·3	28·5	118·1	20th	70·4	3rd	47·7
27	South Punjab	Sirsa	662	28·851	−·026	29·457	28·987	2nd	28·683	13th	·304	94·1	110·6	+4·1	85·1	+2·2	97·9	+3·2	25·5	116·8	12th	77·1	15th	39·7
		Patiala	818	28·718		29·483	28·872	2nd	28·534	12th	·338	90·2	106·3		80·2		93·3		26·1	115·0	12th	69·0	1st	46·0
29	Punjab Sub-montane.	Ludhiana	812	28·700	−·029	29·458	28·858	2nd	28·494	12th	·364	90·7	108·2	+2·4	81·9	+1·8	95·1	+2·1	26·3	116·8	13th	71·6	15th	45·2
		Sialkot	830	28·673	−·025	29·451	28·874	2nd	28·463	12th	·411	91·6	109·8	+4·2	82·4	+2·3	96·1	+3·3	27·4	119·0	21st	72·1	6th	46·9
		Umballa	892	28·626	−·039	29·467	28·781	2nd	28·426	12th	·355	87·3	106·1	+4·4	78·1	−1·9	92·1	+1·3	28·0	114·9	13th	68·0	1st	46·9
31	North Punjab	Rawalpindi	1,676	27·870	−·017	29·478	28·047	25th	27·675	13th	·372	87·7	104·3	+1·6	66·4?	?	85·4?	?	37·9?	115·0	21st	55·0	6th	60·0
	VII.—Indus Valley and North-West Rajputana.				−·008								108·7	+3·3	82·7	+0·9	95·7	+2·1	26·0					43·1
31	North Punjab	Peshawar	1,110	28·454	+·011	29·522	28·678	25th	28·251	12th	·427	89·2	105·1	−0·4	74·9	−1·7	90·0	−1·1	30·2	114·0	12th	65·5	6th & 7th.	48·5
32	West Punjab	Khushab	612	28·891	−·008	29·456	29·071	25th	28·670	13th	·401	92·8	108·1	+0·8	81·7	−0·2	94·9	+0·3	26·4	117·4	20th	71·4	3rd & 4th.	46·0
		Montgomery	558	28·930	−·014	29·437	29·099	25th	28·717	13th	·382	95·2	110·5	+0·9?	84·2	+0·8	97·4	+0·9?	26·3	118·5	12th	73·5	3rd	45·0
		D. I. Khan	594	28·926	−·018	29·451	29·137	25th	28·721	12th	·416	89·6	107·7	+0·8	79·1	−1·7	93·4	−0·5	28·6	116·2	21st	69·6	3rd, 6th & 7th.	46·6
		Mooltan	420	29·062	−·018	29·445	29·257	25th	28·890	13th	·367	91·4	111·9	+5·2	85·6	+3·3	98·8	+4·3	26·3	118·5	20th	77·0	3rd	41·5
47	Sind	Jacobabad	186	29·305	−·013	29·446	29·473	25th	29·162	12th	·311	93·4	119·0	+7·1	83·0	−0·5	101·0	+3·3	36·0	125·0	12th	74·6	5th	50·4
		Hyderabad	96	29·466	+·019	29·512	29·566	25th	29·395	12th & 13th.	·171	88·9	108·4	+5·2	82·3	+0·8	95·4	+3·0	26·1	120·7	11th	77·5	9th	43·2
		Kurrachee	30	29·577	+·009	29·557	29·673	25th	29·477	12th	·196	87·6	96·8	+2·1	84·2	+1·9	90·5	+2·0	12·6	111·4	5th	79·2	7th	32·2
51	West Rajputana	Bikaner	771	28·771	−·037	29·489	28·885	25th	28·627	13th	·258	92·7	111·3	+5·3	87·6	+5·1	99·5	+5·2	23·7	116·3	11th	75·5	3rd	40·8
		Pachpadra	380			U	ntrustw	orthy.				91·3	109·1		83·4		96·2		25·7	121·0	11th	80·1	13th	40·9
		Jodhpur	782	28·812		29·559	28·917	25th	28·709	13th	·208	88·5	108·2		83·3		95·8		24·9	118·3	11th	79·3	30th	39·0
	VIII.—East Rajputana, Central India and Gujarat.				+·010								102·8	+4·9	83·0	+3·1	92·9	+4·0	19·7					33·7
50	East Rajputana	Jaipur	1,431	28·180	−·002	29·534	28·285	25th	28·066	12th	·219	91·1	109·1	+6·3	84·0	+3·9	96·6	+5·1	25·1	115·7	11th	78·1	5th & 7th.	37·6
		Kotah	819	28·781		29·568	28·887	25th	28·675	13th	·212	93·1	109·6		88·2		98·9		21·4	117·1	11th	80·1	6th	37·0
		Sambhar	1,254	28·348	+·009	29·543	28·457	25th	28·228	12th	·229	90·8	108·3	+6·6	84·6	+3·0	96·4	+4·8	23·7	115·0	11th	79·4	3rd, & 5th.	35·6
		Ajmer	1,611	28·020	+·002	29·560	28·127	25th	27·909	12th	·218	88·0	105·5	+5·2	83·1	+3·1	94·3	+4·2	22·4	114·4	11th	77·6	2nd	36·8
		Udaipur	1,925	27·748		29·593	27·839	25th	27·654	13th	·185	85·1	100·5		79·9		90·2		20·6	110·1	10th	71·8	26th	35·3
		Deesa	466	29·195	+·018	29·609	29·296	25th	29·098	10th	·198	87·3	106·1	+4·5	82·4	+1·9	94·2	+3·2	23·7	117·1	11th	76·5	26th	40·6
46	Kathiawar and Cutch.	Bhuj	395	29·259	+·023	29·601	29·354	25th	29·168	12th	·186	87·1	99·4	+2·2	79·1?	?	89·3?	?	20·3?	114·8	11th	73·4	4th	41·4
		Jamnagar	61	29·609		29·616	29·705	25th	29·517	13th	·188	87·5	98·3		81·5		89·9		16·8	103·1	2nd & 12th.	76·2	7th	26·9
		Rajkot	429	29·253	+·020	29·629	29·330	25th	29·166	13th	·164	86·1	102·9	+3·0	79·6	+2·3	91·3	+2·7	23·3	109·9	11th	75·2	27th	34·7
		Veraval		29·691	+·032	29·651	29·778	25th	29·590	9th & 12th.	·188	84·6	97·7	+1·3	82·7	+1·8	85·2	+1·6	5·0	91·1	10th	80·8	8th	10·3
		Dwarka	37	29·653		29·635	29·738	25th	29·565	12th	·168	85·3	89·3		82·4		85·9		6·9	91·4	13th	80·8	8th	10·6
		Bhavnagar Para	35	29·668	+·013	29·647	29·756	25th	29·564	12th	·192	88·2	103·6	+5·4	83·4‡	+3·1‡	93·3‡	+4·3	20·2	112·7	10th	80·3	28th	32·4
49	Central India	Nowgong	757	28·814	−·019	29·506	28·942	2nd	28·713	12th	·229	92·7	108·8	+6·3	86·0	+3·3	97·4	+4·8	22·8	115·0	11th	76·0	2nd	39·0
		Indore	1,823	27·880	+·029	29·622	27·975	25th	27·795	13th	·180	84·5	99·8	+5·6	78·9	+4·0	89·4	+4·8	20·9	109·3	10th	73·1	24th	36·2
		Neemuch	1,630	28·034	?	29·595	28·120	25th	27·936	13th	·184	85·2	102·3	+3·9	80·0	+2·8	91·2	+3·4	22·3	111·1	10th & 11th.	74·0	26th	37·1
45	Gujarat	Surat	39	29·686	+·018	29·667	29·765	25th	29·553	9th	·212	86·8	96·4	+2·7	82·2	+3·0	89·3	+2·9	14·2	114·0	10th	77·1	13th	36·9
		Ahmedabad†	164	29·516	+·037	29·624	29·606	25th	29·403	9th	·203	89·5	105·6	+6·3	83·3	+3·1	94·5	+4·7	22·3	115·4	10th	77·1	26th	38·3

* Mean of 29 days.

† Mean of 28 days.

I—*continued.*

in India, Burma, etc., in June, 1901—continued.

WIND DIRECTION. Number of Winds from									Wind resultant.	Wind velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 30th June 1901.	Normal rainfall for period, 1st to 30th June.	Variation from normal of period 1st to 30th June.			
																				0·88	3·65	−2·74					VI.—Upper Sub-Himalayas.	
10		7	7	1				5	N 50° E	3·2	3·0	4·9	−39	59	·773	1·4	2	4·91	−2·91	1·81	5·67	−3·83	1·84	5·67	− 3·83	1·15	Bareilly .	N.-W. Provinces (West Sub-Montane).
20			1	2	1		4	2	S 72° W	2·1		1·6	+31	47	·530	1·1	3	8·91	−5·91	1·77	9·25	−7·48	1·77	9·25	− 7·48	0·74	Dehra Dun.	
16			1	11	1	1			S 41° E	4·2		3·9	+ 8	43	·601	1·2	4	5·64	−1·64	1·10	4·71	−3·61	1·10	4·71	−3·61	0·33	Roorkee.	
11			3	2		4	3	6	W	2·6	2·6	2·6	0	40	·566	1·7	1	3·64	−2·64	0·35	2·44	−2·09	0·35	2·44	− 2·09	0·35	Meerut .	N.-W. Provinces West.
2			1	3		2	19	3	S 86° W	4·3	4·0	4·9	−18	40	·588	1·6	1	4·00	−3·00	1·55	3·35	−1·80	1·55	3·35	−1·80	1·52	Delhi .	South-East Punjab.
10	6	3	1	5	2	1	1	1	N 58° E	3·1		3·5	−11	40	·573	1·7	1	2·73	−1·73	0·56	1·84	−1·28	0·56	1·84	−1·28	0·48	Lahore .	Central Punjab
		5		7		15		3	S 22° W	?	?	5·2	?	35	·548	0	0	3·18	−3·18	0·02	1·91	−1·89	0·02	1·91	− 1·89	0·02	Sirsa .	South Punjab.
1	5	1	5	5	1	2	5	5	N 18° W	5·9	5·9			43	·590	1·9	2			0·45			0·45			0·25	Patiala.	
5	4	2	3	9		1	3	3	N 84° E	3·5	3·1	2·4	+29	41	·579	0·7	2	3·64	−1·64	0·43	2·41	−1·98	0·43	2·41	−1·98	0·30	Ludhiana .	Punjab (Sub-Montane).
5	7	6	7	3				2	N 48° E	3·9		2·4	+63	38	·547	0·7	3	3·73	−0·73	0·49	3·08	−2·59	0·49	3·08	− 2·59	0·12	Sialkot.	
18			2	6				4	S 67° E	1·3				49	·627	0·3	3			1·10	3·83	−2·73	1·10	3·83	−2·73	0·50	Umballa.	
21	3	5				1			N 27° E	3·7	3·4	2·6	+31	33	·419	2·2	3	3·55	−0·55	0·86	1·71	−0·85	0·86	1·71	−0·85	0·36	Rawalpindi	North Punjab.
																				0·32	0·76	−0·44					VII.—Indus Valley and North-West Rajputana.	
21	2				1		3	3	N 59° W	3·0	3·3	4·3	−23	37	·504	2·1	2	0·73	+1·27	0·40	0·35	+0·05	0·40	0·35	+0·05	0·30	Peshawar .	North Punjab.
2	4	8	7		4	3	2		N 80° E	7·9	9·2			33	·503	0·5	2	1·20	+0·80	1·43	0·70	+0·73	1·43	0·70	+0·73	1·20	Khushab .	West Punjab.
	5	5	2	3	10	5			S 30° E	10·2	8·8			29	·468	0	0	2·00	−2·00	0	1·24	−1·24	0	1·24	−1·24	0	Montgomery	
10	5	11		1	1		1	1	N 30° E	2·8	3·0	2·4	+25	51	·708	0·2	2	0·91	+1·09	1·07	0·54	+0·53	1·07	0·54	+0·53	0·95	D. I. Khan.	
9	1	4	1	2	1	10		2	S 20° W	1·9	2·3	3·8	−39	50	·729	0·3	1	1·45	−0·45	0·10	0·59	−0·49	0·10	0·59	−0·49	0·10	Mooltan.	
11	1		4	11	2			1	S 54° E	3·0	3·1	4·7	−34	52	·808	0·1	0	0·09	−0·09	0	0·12	−0·12	0	0·12	−0·12	0	Jacobabad.	Sind.
	1				2	26	1		S 45° W	15·3	15·9	15·2	+ 5	59	·783	0·7	0	0·45	−0·45	0	0·33	−0·33	0	0·33	−0·33	0	Hyderabad.	
			2	1	10	15	2		S 70° W	13·6	17·0	18·5	− 8	75	·977	4·7	0	0·18	−0·18	0	0·52	−0·52	0	0·52	−0·52	0	Kurrachee.	
		2		2	5	9	10	2	S 52° W	13·4		7·8	+72	54	·825	0·8	1			0·20	1·66	−1·46	0·20	1·66	−1·46	0·19	Bikaner .	West Rajputana
				18	10	2			S 20° W			12·0		55	·785	4·7	0			0	0·69	−0·69	0	0·69	−0·69	0	Pachpadra.	
1		1		1	3	17	7		S 50° W	11·3†	10·2†			56	·731	2·1	1			0·30	1·59	−1·29	0·30	1·59	−1·29	0·25	Jodhpur.	
																				0·66	4·49	−3·78					VIII.—East Rajputana, Central India and Gujarat.	
	1	1		1		10	13	4	S 81° W	6·6		7·3	−10	46	·660	2·8	0	3·70	−3·70	0·05	2·49	−2·44	0·05	2·49	− 2·44	0·05	Jaipur .	East Rajputana
1	1					13	11	4	S 77° W	8·9	10·5			46	·696	1·2	2			1·68	3·57	−1·69	1·88	3·57	− 1·69	0·93	Kotah.	
2	3	2			1	1	18	3	N 76° W	10·9		11·2	− 3	53	·747	2·1	1	3·10	−2·10	0·40	1·40	−1·00	0·40	1·40	− 1·00	0·32	Sambhar.	
		2	1	1		7	19		S 78° W	11·3		8·3	+36	59	·762	2·4	3	3·73	−0·73	1·11	2·28	−1·17	1·11	2·28	− 1·17	0·72	Ajmer.	
5						12	12	1	S 70 W	8·5	8·6			62	·730	1·9	3			1·08			1·08			0·51	Udaipur.	
	1				10	17	2		S 34° W	17·7		16·8	+ 5	61	·777	5·3	0	2·18	−2·18	0·06	2·16	−2·10	0·06	2·16	− 2·10	0·06	Deesa.	
						14	14	2	S 71° W	21·6		16·1	+34	71	·906	3·0	0			0	1·94	−1·94	0	1·94	− 1·94	0	Bhuj .	Kathiawar and Cutch.
				7	18	4	1		S 42° W	19·6	21·0			69	·904	3·5	0			0			0			0	Jamnagar.	
	1					9	19	1	S 80° W	14·9	14·8	15·6	− 5	64	·803	4·6	1	5·27	−4·27	1·70	4·73	−3·03	1·70	4·73	− 3·03	1·62	Rajkot.	
	1			1	1	11	15	1	S 71° W	14·0	16·5	10·6	+56	82	·967	6·2	1			0·20	6·33	−6·13	0·20	6·33	− 6·13	0·19	Veraval.	
				3	18	8	1		S 55° W	20·5				80	·978	4·4	0			0·01			0·01			0·01	Dwarka.	
		1		3	16	3	7		S 65° W	10·8	11·1			60	·795	6·5	0			0·06	5·15	−5·09	0·06	5·15	− 5·09	0·06	Bhavnagar Para.	
2	2		1		1	2	20	2	N 87° W	5·1	5·2	4·4	+18	45	·677	3·9	4	5·91	−1·91	0·87	5·83	−4·96	0·87	5·83	− 4·96	0·33	Nowgong .	Central India.
1						6	21	2	S 84° W	7·4		7·0	+ 6	67	·773	4·9	3	8·27	−5·27	1·70	6·79	−5·09	1·70	6·79	− 5·09	0·93	Indore.	
						14	15	1	S 70° W	17·6	15·8	14·2	+11	65	·766	2·7	1	5·09	−4·09	0·53	4·27	−3·74	0·53	4·27	− 3·74	0·34	Neemuch.	
2	1				8	7	9	3	S 59° W	11·1	10·4	15·6	−33	73	·930	6·2	1	8·18	−7·18	0·21	10·12	−9·91	0·21	10·12	− 9·91	0·10	Surat .	Gujarat.
					1	22	2	3	S 54° W	5·8				60	·814	5·8	2			1·57	7·32	−5·75	1·57	7·32	− 5·75	1·45	Ahmedabad	

‡ Mean of 19 days.

Table

Abstract of Observations taken at 8 A.M. at 219 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
22	N.-W. P., West	Agra	555	28·976	−·032	29·473	29·115	2nd	28·824	12th	·291	93·0	109·0	+4·2	86·8	+2·0	97·9	+3·1	22·2	114·5	11th, 12th & 13th.	78·9	15th	35·6
21	N.-W.P., Central	Jhansi	858	28·723	−·015	29·510	28·863	25th	28·614	12th	·249	95·1	110·4	+7·2	89·3	+5·4	99·9	+6·3	21·1	115·4	12th	78·1	2nd	37·3
	IX.—Deccan				+·017								98·6	+4·5	77·3	+1·9	87·9	+3·3	21·2					37·3
38	Bombay, Deccan	Belgaum	2,559	27·270	+·018	29·741	27·351	20th	27·103	9th	·248	72·0	80·7	0	68·3	+0·5	74·5	+0·3	12·4	92·3	3rd	65·8	25th	26·5
		Sholapur	1,590	28·181	+·014	29·711	28·259	20th	28·067	8th	·192	79·9	97·1	+2·8	75·0	+2·4	86·1	+2·6	22·1	109·2	1st	72·0	17th	37·2
		Poona	1,840	27·933	+·021	29·711	27·995	20th & 25th.	27·812	9th	·183	77·7	90·4	+1·9	72·3	−0·3	81·4	+0·8	18·1	100·5	7th	69·4	7th	31·1
		Bijapur	1,946	27·846	+·031	29·729	27·921	20th	27·723	8th	·198	76·6	92·6	+2·2	70·2	−2·0	81·4	+0·1	22·4	103·4	1st	63·7?	23rd	39·7?
40	Khandesh	Malegaon	1,430	28·286	+·005	29·654	28·364	25th	28·206	9th	·158	82·9	98·8	+4·3	75·9	+1·2	87·4	+2·8	22·9	108·3	1st & 2nd	72·1	29th	36·2
		Ahmednagar	2,152	27·616	+·021	29·692	27·691	25th	27·521	10th	·170	78·5	93·5	+3·1	72·1	−0·1	82·8	+1·5	21·4	104·9	2nd & 11th.	68·4	25th	36·5
41	Berar	Akola	930	28·772	+·023	29·640	28·860	25th	28·690	7th	·170	85·4	102·9	+5·4	78·4	+1·1	90·7	+3·3	24·5	113·5	1st	70·9	30th	42·6
		Amraoti	1,215	28·482	+·029	29·634	28·566	25th	28·402	7th	·164	85·2	102·4	+5·7	75·7	+3·5	91·1	+4·6	22·7	112·5	1st	71·0	30th	41·5
42	Central Provinces, West.	Khandwa	1,044	28·641	+·015	29·629	28·735	25th	28·562	13th	·173	85·5	102·8	+5·5	81·8	+3·7	92·3	+4·6	21·0	112·2	10th	74·6	30th	37·6
		Hoshangabad	1,006	28·656	+·021	29·602	28·774	25th	28·584	12th	·190	88·8	105·5	+7·5	82·5	+3·5	94·0	+5·5	23·0	112·0	2nd & 10th.	75·2	14th	36·8
		Nagpur	1,025	28·638	+·018	29·604	28·745	25th	28·551	7th	·194	85·8	103·2	+5·4	80·5	+2·4	91·8	+3·9	22·7	112·2	1st, 7th & 8th.	73·1	30th	39·1
43	Central Provinces, Central.	Chanda	634	29·065	+·016	29·634	29·165	25th	28·963	7th	·202	86·8	101·6	+3·9	81·3†	+1·3†	90·4†	+2·6	20·3	113·2	7th	73·5	24th	39·7
		Seoni	2,033	27·646	+·018	29·577	27·759	25th	27·564	17th	·195	85·5	101·2	+7·6	76·8	P	89·0	P	24·4	108·9	3rd	70·5	15th	38·4
		Jubbulpore	1,327	28·293	−·001	29·548	28·427	25th	28·220	17th	·207	88·0	103·7	+7·0	80·7	+2·5	92·2	+4·8	23·0	111·0	1st	74·1	15th	36·9
		Saugor	1,807	27·844	+·012	29·560	27·960	25th	27·760	12th	·200	87·8	104·0	+5·5	81·5	+4·4	92·8	+5·0	22·5	111·5	1st	74·1	15th	37·4
49	Central India	Sutna	1,040	28·527	−·010	29·498	28·643	25th	28·424	12th	·219	92·4	107·8	+9·0	85·9	+4·9	96·9	+7·0	21·9	113·6	11th	76·1	14th	37·5
44	Central Provinces, East.	Raipur	970	28·671	+·019	29·573	28·796	25th	28·591	17th	·202	87·6	103·3	+6·6	82·3	+4·2	92·8	+5·4	21·0	110·0	7th	71·1	23rd	38·9
		Sambalpur	486	29·132	+·003	29·558	29·244	25th	29·027	17th	·217	88·4	103·9	+6·6	83·2	+2·3	93·5	+4·5	20·7	111·6	10th	76·2	14th	35·4
39	Hyderabad (North).	Aurangabad	1,905	27·853		29·68?	27·930	25th	27·778	9th	·152	79·3	96·1		72·2§		84·4§		23·9	106·4	2nd	62·7	19th	43·7
		Indur*		28·428			28·505	25th	28·325	6th	·180	82·3	96·5		77·0		86·7		19·5	107·7	4th	70·4	14th	37·3
		Bidar	2,165	27·611?		29·702?	27·709	24th	27·491	8th	·218	77·4	94·4		72·6		83·5		21·8	105·4	1st	66·0	16th	39·4
53	Hyderabad (South).	Gulbarga	1,502	28·269		29·714	28·345	20th & 24th.	28·136	8th	·209	79·6	97·2		75·1		86·2		22·1	108·3	1st	70·3	16th	38·0
		Raichur	1,326	28·454	+·033	29·726	28·545	20th	28·302	8th	·243	80·4	95·7	+1·3	75·5	+0·4	85·6	+0·9	20·2	105·0	4th	68·1	17th	36·9
		Hyderabad (Deccan).	1,690	26·069	+·027	29·695	28·147	25th	27·564	7th	·183	79·7	94·0	P	75·6	+1·6	84·8	P	18·4	103·9	1st	71·2	16th	32·7
		Secunderabad	1,787	27·975	P	29·697	28·057	24th	27·864	7th	·193	79·0	95·5	+2·2	74·9	+0·9	85·3	+1·6	20·6	106·7	4th	69·0	1st	37·7
		Hanumkonda	865	28·844		29·670	28·948	20th	28·724	7th	·224	84·5	97·5		79·7		88·6		17·8	107·2	4th	73·8	23rd	33·4
	X.—West Coast				+·013								85·5	+0·3	76·6	+0·2	81·1	+0·3	8·9					19·5
37	Konkan	Bombay	37	29·727	+·015	29·701	29·808	20th	29·545	9th	·263	82·4	88·2	+0·9	79·5	+0·2	83·9	+0·6	8·7	98·5	10th	75·0	13th & 30th.	23·5
		Ratnagiri	110	29·673	+·012	29·721	29·766	20th	29·431	9th	·335	81·2	86·9	+0·7	77·1	+0·4	82·1	+0·6	9·8	92·9	5th	73·9	4 days.	19·0
		Mormugao	60	29·750	+·012	29·744	29·850	20th	29·502	5th	·348	81·0	86·0	−1·1	77·6	−0·8	81·8	−0·9	8·4	94·0	7th	71·9	17th	22·1
		Goa	159			Barometer out of order.						80·0	83·2	−2·1	77·3‡	−0·4‡	80·4‡	−1·3	5·9	91·0	9th	74·0	18th & 25th.	17·0
		Karwar	44			Barometer out of order.						79·2	84·8	−0·1	75·9	+0·2	80·4	+0·1	8·9	91·3	3rd & 5th.	71·5	9th & 17th.	19·8
33	Malabar	Cochin	11	29·894	+·017	29·832	29·971	15th	29·793	7th	·178	78·9	86·8	+2·3	75·2	+0·8	81·0	+1·6	11·6	92·5	4th	72·7	17th, 24th & 25th.	19·8
		Calicut	27	29·854	+·011	29·810	29·974	15th	29·718	7th	·256	78·4	85·1	+1·2	74·9	+0·6	80·0	+0·9	10·2	91·8	1st, 2nd & 3rd.	71·5	17th	20·3
		Mangalore	65	29·795	+·012	29·736	29·894	20th	29·589	8th	·305	78·6	84·9	+0·5	75·5	+0·7	80·2	+0·6	9·4	92·3	3rd	71·9	17th	20·4
		Trivandrum	198	29·696	P	29·826	29·774	15th	29·612	7th & 8th.	·162	77·7	83·4	+0·4	76·0	P	79·7	P	7·4	87·5	1st	74·0	5 days.	13·5
	XI.—South India				+·020								94·8	+1·4	76·8	+0·7	85·8	+1·0	18·0					29·8
57	Madras (South)	Pamban	37	29·806		29·769	29·870	14th	29·719	7th	·151	83·7	94·2		79·8		85·6		11·4	92·3	17th, 19th & 21st.	78·2	8th	14·1
		Tinnevelly	168	29·764	+·033	29·781	29·766	15th	29·593	8th	·173	85·4	96·2	−1·0	78·7	−1·0	87·5	−1·0	17·5	101·9	1st & 3rd.	74·9	7th	27·0
		Madura	447	29·380	+·016	29·760	29·460	15th	29·278	7th	·182	84·4	98·2	−0·5	77·3	+0·6	87·8	+0·1	20·9	102·5	5th	74·0	8th	28·5
		Periyakulam		28·894			28·977	14th	28·778	7th	·199	79·8	93·8		71·5		81·2		22·3	98·8	21st	65·9	21st	32·9

* Mean of 8 days.

† Mean of 26 days.

I—*continued.*

in India, Burma, etc., in June, 1901—continued.

WIND DIRECTION. Number of Winds from									Wind Resultant.	Wind Velocity.				Hygrometry, 8A.M.		Mean cloud amount.	Rainfall.									Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 30th June 1901.	Normal rainfall for period 1st to 30th June.	Variation from normal of period, 1st to 30th June.				
				5		16		9	S 58° W	6·4	7·6	5·7	+33	44	·672	1·2	1	3·64	−2·64	0·80	2·54	− 1·74	0·80	2·54	− 1·74	0·62	Agra	N.-W. P., West	22
	1	2	1	1	1	4	19	1	S 85° W	7·9	8·8	5·8	+52	44	·712	1·4	1	6·09	−5·09	0·17	4·89	− 4·72	0·17	4·89	− 4·72	0·10	Jhansi	N.-W. P., Central	21
																				4·81	6·45	−1·67					IX.—Deccan.		
2			1	1	2	12	12		S 59° W	19·9‡		24·3	−18	89	·697	8·9	11	12·27	−1·27	10·21	6·59	+ 3·62	10·21	6·59	+ 3·62	2·80	Belgaum	Bombay Deccan	38
		1		1		16	3	9	S 75° W	10·4	7·5	12·2	−39	68	·693	7·8	7	7·82	−0·82	7·81	5·01	+ 2·80	7·81	5·01	+ 2·80	5·23	Sholapur.		
	1		2	1		9	13	4	S 80° W	15·9	18·0	16·0	+13	75	·705	6·7	7	7·18	−0·18	5·75	4·73	+ 1·02	5·75	4·73	+ 1·02	2·38	Poona.		
1			1			10	17	1	S 75° W	9·1	8·9			78	·717	6·9	6	6·30	−0·30	5·76	2·69	+ 3·07	5·76	2·69	+ 3·07	2·95	Bijapur.		
				1	1	7	20	1	S 77° W	15·1	17·4	11·9	+46	65	·733	2·3	7	7·82	−0·82	6·36	4·72	+ 1·64	6·36	4·72	+ 1·64	2·87	Malegaon	Khandesh.	10
1	1	1		2	2	6	12	5	S 82° W	9·6	11·7			75	·722	6·7	11			7·15	5·16	+ 1·99	7·15	5·16	+ 1·99	1·97	Ahmednagar.		
				1		7	12	10	N 87° W	11·0	11·9	8·9	+34	63	·744	4·8	10	8·55	+1·45	4·78	5·47	− 0·69	4·78	5·47	− 0·69	1·51	Akola	Berar.	41
	1		1			8	15	5	S 88° W	12·3	10·9	7·4	+47	73	·871	5·5	5	10·36	−5·36	3·56	6·84	− 3·28	3·56	6·84	− 3·28	1·46	Amraoti.		
				2		3	15	10	N 82° W	12·0		9·2	+30	62	·740	5·3	6	7·91	−1·91	2·48	6·05	− 3·57	2·48	6·05	− 3·57	0·82	Khandwa	Central Provinces, West.	42
1						28		1	S 46° W	7·8	8·0	4·6	+74	47	·633	3·9	4	10·09	−6·09	2·38	8·20	− 5·82	2·38	8·20	− 5·82	1·05	Hoshangabad.		
4	1			4	11	7	3		S 63° W	10·7		10·0	+ 7	61	·719	5·7	8	12·73	−4·73	5·99	8·74	− 2·75	5·99	8·74	− 2·75	2·00	Nagpur.		
4				1	4	8	10	3	S 64° W	4·2		6·3	−22	61	·751	6·8	7			4·27	7·85	− 3·58	4·27	7·85	− 3·58	1·31	Chanda	Central Provinces, Central.	43
	2	1	1	1	5	10	6	4	S 62° W	7·1		5·7	+25	57	·661	3·5	9	13·00	−4·00	3·16	10·57	− 7·41	3·16	10·57	− 7·41	0·73	Seoni.		
1				1	3	9	11	5	S 72° W	5·6		5·3	+ 6	52	·675	2·5	3	11·18	−8·18	1·53	9·10	− 7·57	1·53	9·10	− 7·57	0·83	Jubbulpore.		
			1			4	24	1	S 86° W	9·5	10·8	5·2	+108	57	·732	2·3	4	9·73	−5·73	1·25	7·40	− 6·15	1·25	7·40	− 6·15	0·59	Saugor.		
		1	1		1	10	14	3	S 76° W	9·8	10·5	9·6	+ 9	40	·584	3·2	2	5·91	−3·91	0·81	6·54	− 5·73	0·81	6·54	− 5·73	0·30	Sutna	Central India A	49
				2	1	24	2	1	S 44° W	12·8	11·8	8·7	+36	56	·705	5·5	5	11·55	−6·55	6·34	8·92	− 2·58	6·34	8·92	− 2·58	3·96	Raipur	Central Provinces, East.	44
	1	2	1		1	18	7		S 57° W	7·7	7·5	3·4	+121	63	·830	2·0	5			2·85	11·13	− 8·28	2·85	11·13	− 8·28	1·65	Sambalpur.		
				2	1	7	17	3	S 87° W					71	·699	5·8	7			7·51	6·34	+ 1·17	7·51	6·34	+ 1·17	2·97	Aurangabad	Hyderabad (North).	39
				1		14		13	S 87° W	11·2§	10·9§			76	·839	5·3	8			5·73	4·60	+ 1·13	5·73	4·60	+ 1·13	2·80	Indur		
	1			1		19	8	1	S 60° W	10·6	8·9			74	·685	3·5	2			2·33	6·30	− 3·97	2·33	6·30	− 3·97	1·76	Bidar.		
1	2				1	7	11	8	N 85° W	15·8	15·2			73	·736	7·3	7			4·87	4·82	+ 0·05	4·87	4·82	+ 0·05	2·16	Gulbarga	Hyderabad (South).	53
				1	1	17	7	4	S 63° W	16·1	15·8			72	·747	4·4	3			5·24	3·90	+ 1·34	5·24	3·90	+ 1·34	4·65	Raichur.		
1							28	1	N 89° W	8·5	8·2			71	·716	6·2	8			4·62	4·85	− 0·23	4·62	4·85	− 0·23	1·17	Hyderabad (Deccan).		
	1					10	17	2	S 80° W	11·8		12·3	− 4	72	·716	5·1	8			6·98	4·85	+ 2·13	6·98	4·85	+ 2·13	1·53	Secunderabad.		
2				1	3	4	15	5	S 82° W	11·6	9·9			64	·755	6·0	9			5·38			5·38			1·43	Hanumkonda.		
																				39·82	27·73	+12·08					X.—West Coast.		
	1	2		3	4	6	11	3	S 67° W	12·0		16·2	−26	84	·938	8·3	22	14·84	+7·16	24·74	19·37	+ 5·37	24·74	19·37	+ 5·37	5·46	Bombay	Konkan.	37
10		1	1		1	1	11	5	N 79° W	4·1‡	4·1‡	12·0	−66	85	·897	8·2	24	21·45	+2·55	28·76	31·26	− 2·50	28·76	31·26	− 2·50	3·65	Ratnagiri.		
2		3	1	4	2	6	10	2	S 60° W	11·2				86	·905	8·2	23			53·01	22·02	+30·99	53·01	22·02	+30·99	11·66	Mormugao.		
1	2	4	7		3	7	4	2	S 19° W	9·2				88	·899	8·7	21			59·30	30·09	+29·21	59·30	30·09	+29·21	10·10	Goa.		
8	3			2	1	12	4		S 55° W	6·3				85	·836	8·2	23	24·36	−1·36	71·41	37·24	+34·17	71·41	37·24	+34·17	13·76	Karwar.		
8	4	5	1		1	4	6	1	N 49° W	5·2				87	·870	7·8	24	24·80	−0·80	31·32	28·41	+ 2·91	31·32	28·41	+ 2·91	4·76	Cochin	Malabar.	33
5	5	7	3	4		3	2	1	N 46° E	7·1	8·9			89	·849	8·4	24	25·00	−1·00	32·69	33·22	− 0·53	32·69	33·22	− 0·53	4·32	Calicut.		
9	1		6	7	2		2	3	S 51° E	2·9		3·7	−22	89	·870	8·8	25	25·60	−0·60	39·51	35·03	+ 4·48	39·51	35·03	+ 4·48	5·34	Mangalore.		
6	14	1					1	8	N 16° W	5·5				87	·833	8·3	19			17·60	12·95	+ 4·65	17·60	12·95	+ 4·65	5·41	Trivandrum.		
																				1·72	2·81	−1·11					XI.—South India.		
				2	1	23	4		S 45° W	13·9	14·8			90	1·041	2·5	0			0	0·04	− 0·04	0	0·04	− 0·04	0	Pamban	Madras (South)	57
	2	1	1			5	13	8	N 77° W	6·9	6·6			65	·793	4·2	5	1·60	+3·40	1·48	0·71	+ 0·77	1·48	0·71	+ 0·77	0·62	Tinnevelly.		
2	5				2	9	1	11	N 74° W	3·7	3·7	4·8	−23	66	·790	5·6	1	2·00	−1·00	0·62	1·50	− 0·88	0·62	1·50	− 0·88	0·51	Madura.		
15	7	3	1				2	2	N	3·8	4·2			69	·706	6·0	5			1·48			1·48			0·75	Periyakulam.		

‡ Mean of 29 days.

§ Mean of 27 days.

Table

Abstract of Observations taken at 8 A.M. at 219 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
34	Madras, (South Central).	Salem	940	28·909	+·006	29·785	28·979	14th & 15th.	28·797	8th	·182	81·7	96·9	+2·6	75·3	+1·8	86·1	+2·2	21·6	100·7	3rd & 4th.	71·0	17th	29·7
		Coimbatore	1,348	28·499	+·020	29·792	28·588	14th	28·374	7th	·214	78·0	88·7	−1·1	72·5	+1·0	80·6	−0·1	16·2	96·4	5th	69·8	27th	26·6
35	Coorg	Mercara	3,781	26·185	+·027		26·262	14th & 20th.	26·019	8th	·243	65·5	71·9	−0·2	63·8	+0·6	67·9	+0·2	8·1	81·5	2nd	60·2	17th	21·3
36	Mysore	Chitaldroog	2,405	27·930	+·024	29·751	27·510	25th	27·276	8th	·234	74·9	87·1	+1·6	69·9	+0·4	78·5	+1·0	17·2	95·1	1st	65·4	1st & 2nd.	29·7
		Bangalore	3,021	26·867	+·008	29·780	26·936	20th	26·744	7th	·192	72·1	84·2	−0·4	67·1	+0·5	75·7	+0·1	17·1	89·3	2nd	64·8	9 days	24·5
		Hassan	3,091	26·809		29·797	26·886	14th	26·657	8th	·229	72·7	81·1		66·5		73·8		14·6	89·1	3rd	63·2	23rd	25·9
		Mysore	2,518	27·369?	+·026	29·805?	27·449	20th	27·229	8th	·220	73·7	85·4	+0·9	68·3	+0·1	76·9	+0·5	17·1	94·1	4th	65·5	21st	28·6
56	Madras, East Coast, South.	Negapatam	31	29·782	+·012	29·741	29·876	14th	29·683	7th	·193	86·3	98·0	+1·4	77·2	−1·7	87·7	−0·2	20·8	102·1	4th & 5th.	72·4	19th	29·7
		Cuddalore	12	29·786	+·020	29·727	29·875	14th	29·687	8th	·188	86·2	99·1	+0·8	80·7	+1·0	89·9	+0·9	18·4	104·2	5th	76·2	5th & 30th.	28·0
		Trichinopoly	255	29·574	+·019	29·760	29·650	14th & 15th.	29·472*	8th	·178	84·5	100·1	+1·6	78·9	+0·9	89·5	+1·3	21·2	105·7	4th	71·4	4th	34·3
		Madras	22	29·755	+·008	29·707	29·839	14th	29·640	8th	·199	88·8	101·0	+2·7	82·6	+2·3	91·8	+2·5	18·4	108·5	5th	78·5	27th	30·0
		Vellore	707	29·063		29·722	29·142	25th	28·965	8th	·177	85·1	99·1		77·9		88·6		21·2	104·9	3rd	74·5	17th, 25th & 30th.	30·4
55	Madras, East Coast, Central.	Nellore	71	29·685	+·028	29·689	29·779	25th	29·562	7th	·217	89·4	102·7	+1·0	83·2	+1·1	93·0	+1·1	19·5	109·8	4th	78·6	16th	31·2
		Masulipatam	15	29·715	+·029	29·664	29·816	25th	29·603	7th	·213	87·7	100·1	+2·6	81·2	+1·1	90·7	+1·9	18·9	109·7	6th	69·1	14th	40·6
54	Madras, Central	Cuddapah	433	29·350	+·019	29·717	29·438	20th	29·213	8th	·225	87·0	101·5	+2·8	81·2	+1·2	91·3	+2·0	20·3	108·3	2nd	72·2	4th	36·1
		Kurnool	924	28·854	+·018	29·715	28·947	20th	28·708	8th	·239	82·0	98·0	+2·4	77·8	+1·6	87·9	+2·0	20·2	106·3	4th	71·9	4th	34·4
		Bellary	1,475	28·324	+·021	29·738	28·403	20th	28·186	8th	·217	80·3	94·4	−0·3	75·4	−0·1	84·9	−0·2	19·0	101·5	1st	69·2	17th	32·3
52	Madras, East Coast, North.	Cocanada	26	29·679	+·031	29·640	29·784	25th	29·558	17th	·226	87·1	100·3	+5·3	82·1	+1·3	91·2	+3·3	18·2	111·0	6th	74·0	13th	37·0
		Waltair (Vizag.)	226	29·447	+·026	29·612	29·566	25th	29·309	17th	·257	86·1	92·5	+1·6	81·1	0	86·8	+0·8	11·4	98·4	15th	72·9	1st	25·5
		Gopalpur	21	29·607	+·007	29·567	29·730	25th	29·468	17th	·262	85·5	91·6	+2·5	81·1	+0·5	86·4	+1·5	10·5	101·3	13th	75·1	3rd	26·2
	XII.—Hill Stations.																							
48	Baluchistan	Pishin											92·6		54·7		73·7		37·9	98·4	12th	45·1	11th	53·3
		Quetta	5,502	24·516	+·039		24·606	25th	24·406	12th	·200	74·6	88·9	−1·7	52·6	−6·6	70·8	−4·2	36·3	95·1	12th	46·4	26th	48·7
		Kalat										72·4	89·9		48·0		69·0		41·9	99·9	12th	39·4	6th & 26th.	60·5
		Chaman	4,311	25·536	+·057		25·632	25th	25·391	12th	·241	81·7	97·1	−3·3	67·4	−3·9	82·3	−3·6	29·7	104·2	12th	59·1	5th & 25th.	45·1
30	Punjab	Leh	11,503	19·702	+·026		19·798	9th	19·584	3rd	·214	51·3	68·0	−5·1	40·6	−3·5	54·3	−4·3	27·4	73·1	20th	33·0	7th	40·1
		Srinagar	5,204	24·768	+·037		24·939	25th	24·655	12th	·284	64·7	79·1	−4·1	55·9	−2·6	67·5	−3·4	23·2	88·3	20th	50·2	6th	38·6
		Astor (Kashmir)		22·499†			22·616	25th	22·365	3rd	·251	55·9	69·4		46·8		58·1		22·6	79·4	20th & 21st.	37·2	6th	42·2
		Gulmarg		21·806			21·934	25th	21·731	4th	·203	55·7	61·9		41·2		51·6		20·7	71·6	21st	32·2	6th	39·4
		Skardu		22·811			22·931	25th	22·628	3rd	·303	61·2	75·1		53·2		64·2		21·9	84·5	20th	41·1	6th	43·4
		Dras		20·769			20·874	25th	20·630	3rd	·244	53·1	69·6		38·4		54·0		31·2	77·9	13th & 22nd.	30·7	7th	47·2
		Gilgit		25·028			25·182	25th	24·801	3rd	·381	70·2	85·8		61·6		73·8		24·2	98·1	20th	46·7	5th	51·4
		Chitral		24·495			24·700	25th	24·400	18th	·300	74·4	88·8		72·2		80·5		16·6	96·2	18th	58·0	25th	38·2
		Killa Drosh										71·9	88·9		65·4		77·2		23·5	96·2	19th	54·9	24th	41·3
		Para Chinar	6,000									75·1	85·8		61·7		73·8		24·1	93·5	21st	51·9	5th & 25th.	41·6
		Cherat		25·526	+·020		25·690	25th	25·352	12th	·338	77·5	91·5	−2·7	72·7	−0·4	82·1	−1·6	18·8	100·4	13th & 22nd.	60·1	25th	40·4
		Murree	6,333	23·728	+·008		23·842	2nd	23·612	13th	·230	71·9	81·1	−0·9	64·3	−0·1	72·7	−0·5	16·8	91·4	20th & 21st.	49·9	30th	41·8
		Poo											75·3		52·3		63·8		23·0	82·2	20th	46·1	5th	36·1
		Simla	7,224	23·022	+·015		23·122	25th	22·910	12th	·212	68·0	76·8	+1·5	62·3	+1·7	69·6	+1·6	14·5	83·7	14th	50·2	1st	33·5
25	N.-W. Provinces	Chakrata	7,022	23·174	+·015		23·271	25th	23·066	12th	·205	69·3	77·3	+2·4	61·9	+1·9	69·6	+2·2	15·4	85·3	13th	48·2	1st	37·1
		Mussooree	6,705	23·445	+·005		23·554	25th	23·324	12th	·230	70·4	80·4	+4·4	65·0	+4·5	72·7	+4·5	15·4	88·8	13th	51·0	1st	37·8
		Ranikhet	6,069	23·962	+·006		24·076	25th	23·832	12th	·244	73·1	83·9	+5·9	66·3	+3·2	75·1	+4·6	17·6	89·6	13th	53·0	1st	36·6
		Muktesar		22·755			22·863	25th	22·637	12th	·226	67·7	80·5		59·5		70·0		21·0	86·4	30th	48·3	2nd	38·1

† Mean of 29 days.

—continued.

n India, Burma, etc., in June, 1901—continued.

WIND DIRECTION. Number of Winds from									Wind resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 30th June 1901.	Normal rainfall for period, 1st to 30th June.	Variation from normal of period, 1st to 30th June.				
4					1	16	9		S 59° W	6·5	5·9	4·9	+20	74	·804	5·9	4	6·00	−2·00	2·27	3·68	− 1·41	2·27	3·68	− 1·41	1·52	Salem	Madras, (South Central).	34
						11	19		S 74° W	7·7	6·9	7·7	−10	79	·768	5·8	5	4·55	+0·45	1·66	1·43	+ 0·23	1·66	1·43	+ 0·23	0·74	Coimbatore.		
7					1	4	12	6	N 89° W	6·2	5·8	9·0	−36	96	·813	8·8	25	25·00	0	21·59	25·71	− 4·12	21·59	25·71	− 4·12	2·85	Mercara	Coorg.	35
		1	1		1	14	11	2	S 67° W	11·6	10·1			79	·683	8·7	4			2·02	3·10	− 1·08	2·02	3·10	− 1·08	0·71	Chitaldroog.	Mysore.	36
8						16	13		S 65° W	12·6	11·0	8·4	+31	78	·622	7·5	7	5·91	+1·09	1·88	3·45	− 1·57	1·88	3·45	− 1·57	0·55	Bangalore.		
					1	11	12	6	S 78° W	5·5	4·8			79	·635	8·6	6			1·21	4·12	− 2·91	1·21	4·12	− 2·91	0·23	Hassan.		
						18	12		S 63° W	13·3	14·4			78	·646	8·4	4			1·21	2·12	− 0·91	1·21	2·12	− 0·91	0·41	Mysore.		
2					1	17	10		S 59° W	9·6	8·4	8·3	+1	62	·787	3·4	0	3·09	−3·09	0·03	1·74	− 1·71	0·03	1·74	− 1·71	0·03	Negapatam	Madras, East Coast, South.	56
17					3	6	3	1	S 51° W	0·9	1·1			62	·780	6·7	1	3·30	−2·30	1·10	1·48	− 0·38	1·10	1·48	− 0·38	1·04	Cuddalore.		
5						8	10	7	S 88° W	7·8		9·2	−15	63	·749	4·4	2	2·00	0	1·89	1·62	+ 0·27	1·89	1·62	+ 0·27	1·65	Trichinopoly.		
			2			10	17	1	S 74° W	9·6		9·0	+7	56	·760	4·7	1	4·18	−3·18	0·38	2·11	− 1·73	0·38	2·11	− 1·73	0·16	Madras.		
2	1				1	17	4	4	S 65° W					70	·849	3·9	4			2·37			2·37			1·15	Vellore.		
			1		4	1	13	11	N 81° W	10·0				55	·758	6·4	2	3·10	−1·10	0·63	1·50	− 0·87	0·63	1·50	− 0·87	0 31	Nellore	Madras, East Coast, Central	55
	1				2	2	12	13	N 73° W	11·4		9·4	+22	77	1·008	6·1	4	7·00	−3·00	2·91	5·52	− 2·61	2·91	5·52	− 2·61	0·85	Masulipatam.		
	1					2	19	8	N 79° W					58	·737	5·4	4	5·50	−1·50	2·12	4·11	− 1·99	2·12	4·11	− 1·99	0·92	Cuddapah	Madras, Central	54
1	3					3	11	12	N 67° W					63	·693	6·6	3	5·50	−2·50	4·00	3·95	+ 0·05	4·00	3·95	+ 0·05	3·20	Kurnool.		
1			1		1	7	18	2	S 79° W	10·6	11·2	10·5	+7	57	·585	8·1	5	3·64	+1·36	3·99	1·85	+ 2·14	3·99	1·85	+ 2·14	1·72	Bellary.		
2					1	18	8	1	S 58° W	9·2	7·7			71	·917	7·0	3	6·00	−3·00	1·75	5·37	− 3·62	1·75	5·37	− 3·62	1·11	Cocanada	Madras, East Coast, North.	52
				1		1	26	2	W	14·9				70	·869	8·6	5			3·15	3·49	− 0·34	3·15	3·49	− 0·34	0·88	Waltair (Vizag.).		
		1		1	8	20			S 30° W	18·5	18·1	11·6	+56	81	·979	3·1	3	7·44	−4·44	1·45	6·09	− 4·64	1·45	6·09	− 4·64	0·61	Gopalpur.		
																											XII.—Hill Stations.		
																				0	0·06	− 0·06	0	0·06	− 0·06	0	Pishin.	Baluchistan	48
27							1	2	N 60° W	2·0	2·1	4·7	−55	43	·368	0·1	0	0·36	−0·36	0	0·12	− 0·12	0	0·12	− 0·12	0	Quetta.		
17	6		4				3		N 9° E					25	·200					0	0·21	− 0·21	0	0·21	− 0·21	0	Kalat.		
	1	1	2	4	3	14	3	2	S 35° W	5·8	6·1			40	·429	0	0			0	0·15	− 0·15	0	0·15	− 0·15	0	Chaman.		
		3	3	1	9	9	2	3	S 20° W	4·1		2·4	+71	33	·129	3·4	1			0·11	0·21	− 0·10	0·11	0·21	− 0·10	0·10	Leh	Punjab.	30
2	3	1	4	4	4	1	7	4	S 72° W	4·6	4·9			88	·544	3·9	5			1·62	4·12	− 2·50	1·62	4·12	− 2·50	0·50	Srinagar.		
3		3	1	1	10	11	1		S 17° W	6·0	5·5			62	·279	5·3*	10			4·81			4·81			1·46	Ashtor (Kashmir).		
11	1	8	2	2		3	2	1	N 48° E	3·8				85	·389	3·9	10			3·57			3·57			0·62	Gulmarg.		
16	2	4	2		1	2	3		N 10° E	7·4	8·8			54	·291	4·0	4			4·6	0·54	+ 0·92	1·46	0·54	+ 0·92	0·84	Skardu.		
24			2		1	1	2		S 24° W	4·7	4·8			56	·221	4·2	10			2·40			2·40			0·38	Dras.		
25						4	1		S 53° W	2·4	2·4			45	·320	4·0	4			0·81	0·16	+ 0·65	0·81	0·16	+ 0·65	0·27	Gilgit.		
	12				2		16		N 58° W	?				36	·300	1·3	1			0·80			0·80			0·80	Chitral.		
15		2	5	6		1		1	S 72° E					65	·498	1·6	2			0·84			0·84			0·52	Killa Drosh.		
	12	3	2	1		1	4	7	N 16° W	4·4				37	·297	2·3	4			1·52			1·52			0·60	Para Chinar.		
	6	9	1	2		4		8	N 1° E	7·8	7·3			29	·262	1·9	2			1·93	0·48	+ 1·45	1·93	0·48	+ 1·45	1·63	Cherat.		
24	2		1	2				1	N 52° E	2·9	3·6	6·6	−45	38	·284	2·6	4	4·55	−0·55	1·45	2·87	− 1·42	1·45	2·87	− 1·42	0·80	Murree.		
25						2	2		S 72° W							1·7	0			0	0·27	− 0·27	0	0·27	− 0·27	0	Poo.		
5	11	2		2	3		1	6	N 11° W	6·3		2·3	+174	45	·300	1·8	7	10·00	−3·00	2·43	6·79	− 4·36	2·43	6·79	− 4·36	0·71	Simla.		
2	8	2		12	6				S 63° E	11·4		5·7	+100	47	·334	1·6	7			2·13	6·91	− 4·78	2·13	6·91	− 4·78	0·58	Chakrata	N.-W. Provinces	25
3	1	2		3			10	11	N 60° W					43	·346	1·1	6	10·20	−4·20	2·78	8·70	− 5·92	2·78	8·70	− 5·92	1·15	Mussooree.		
1				2		6	6	4	S 73° W	5·0	5·7	3·2	+78	48	·385	0·9	5	9·12	−4·12	1·08	5·94	− 4·86	1·08	5·94	− 4·86	0·49	Ranikhet.		
	1	1	2	1		3	3	19	N 51° W	6·3	5·8			50	·335	1·1	5			1·58			1·58			0·72	Muktesar.		

* Mean of 19 days.

Table

Abstract of Observations taken at 8 A.M. at 219 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constantgravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
13	Bengal	Yatung	10,180?										60·5		47·2		53·9		13·3	65·1	8th	30·9	1st	34·2
		Darjeeling	7,409	22·871	−·015		23·033	1st	22·790	12th	·243	60·4	66·5	+1·3	57·0	+1·7	61·8	+1·5	9·5	72·2	8th & 17th.	53·1	14th	19·1
		Gantok	5,660	24·329			24·413	1st, 2nd & 14th.	24·209	12th	·204	64·6	74·0		43·9		58·9		30·1	77·2	5 days	40·0	1st & 4th.	37·2
	Central India	Mount Abu	3,945	25·860	−·009		25·948	25th	25·785	13th	·163	74·5	87·1	+3·8	69·6	+1·6	78·4	+2·7	17·5	98·2	10th	65·3	21st, 22nd & 30th.	32·9
		Pachmarhi	3,528	26·284	+·034		26·373	25th	26·212	13th	·161	79·1	92·1	+6·5	74·4	+2·7	83·3	+4·6	17·7	101·7	11th	68·2	15th	33·5
	South India	Wellington	6,200	24·200	+·007		24·268	15th	24·082	8th	·186	65·2	72·9	+1·1	57·1	−1·1	65·1	0	15·8	79·2	3rd	49·7	21st	29·5
		Kodai Kanal	7,688	22·795			22·845	20th & 21th.	22·690	7th & 8th.	·155	59·2	65·4		53·5		57·9		11·9	70·2	3rd	50·6	17th	19·6
	XIII.—Extra India.																							
	Ceylon	Trincomalee	12	29·839	+·036	29·777	29·920	15th	29·743	8th	·177	82·6	90·8	P	78·7	+0·9	84·7	P	12·1	95·0	2nd	77·5	24th	17·5
		Colombo	40	29·881	+·019	29·847	29·954	15th	29·784	1st	·170	80·6	86·5	+0·9	76·5	−0·8	81·6	+0·1	10·0	89·0	1st & 16th	73·0	8th	16·0
	Persia	Meshed	3,104									77·6			63·0							56·4	30th	
		Ispahan		24·270			24·400	4th & 6th.	24·150	7th & 16th.	·250	77·8	94·8		62·8		78·8		32·0	100·8	21st & 28th.	56·9	12th	43·9
		Bushire	14	29·610	+·033	29·583	29·714	4th	29·520	30th	·194	88·4	93·7	+1·5	81·7	+1·4	87·7	+1·5	12·0	97·5	28th	75·5	3rd	22·0
		Jask*		29·590	+·033		29·706	25th	29·435	12th	·271	90·5	97·8	+1·9	84·5	+1·3	91·2	+1·6	13·3	103·2	22nd	79·7	7th	23·5
		Muscat	20	29·589		29·556	29·721	6th	29·457	23rd	·264	93·4	97·0		90·6		93·8		6·4	106·6	23rd	83·4	10th	23·2
	Arabia	Baghdad	220	29·583	−·096	29·771	29·699	1st	29·444	30th	·255	90·7	108·8	+6·4	78·2	+2·6	93·6	+4·5	30·6	117·6	25th	71·0	16th	46·6
		Bussrah		29·696			29·827	2nd	29·529	27th	·298		105·5		84·2		94·9		21·3	109·4	19th & 20th, 5 days	79·9	3rd	29·5
		Aden	94	29·699	+·038	29·723	29·825	4th	29·634	13th	·191	88·9	93·7	−0·3	84·5	+1·5	89·1	+0·6	9·2	95·3		76·4	4th	18·9
		Perim	201	29·573		29·704	29·704	4th	29·478	26th	·226	88·4	95·4		84·2		89·8		11·2	101·7	30th	72·1	3rd	29·6
	Afghanistan	Kabul										71·0	86·1		54·7		70·4		31·4	94·1	11th	45·4	5th	48·7
	Central Asia	Kashgar		25·435			25·549	8th	25·284	28th	·265	71·7	83·9		60·7		72·4		23·2	92·0	1st, 12th & 20th	42·6?	6th	49·4
	Africa	Zanzibar	73	30·099	+·024	30·099	30·171	5th	30·008	2nd	·163	73·9	80·5		72·8		76·7		7·7	82·8	4th	71·0	25th	11·8
		Do. Dunga		30·029			30·090	15th	29·934	2nd	·156	71·6	83·2		64·8		74·0		18·4	85·9	19th	61·1	18th	24·8

* Mean of 28 days.

† Mean of 22 days.

NOTE.—When a query is inserted against any reading or in the variation returns for any station, the

—*concluded.*

India, Burma, etc., in June 1901—concluded.

WIND DIRECTION. Number of winds from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 30th June 1901.	Normal rainfall for period, 1st to 30th June.	Variation from normal of period, 1st to 30th June.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																24			8·08			8·08			0·76	Yatung .	Bengal.	13
3	2	1	1	1	6	5	1	S 60° W	4·8	4·5	4·7	−4	95	·499	9·2†	18	21·04	−3·04	19·71	23·69	−3·98	19·71	23·69	−3·98	4·03	Darjeeling.		
0								Calm	9·3	11·0			84	·519	8·9	27			31·03	21·76	+9·27	31·03	21·76	+9·27	3·26	Gantok.		
	1	1		2	2	21	2	1	S 44° W	13·0	13·5	10·1	+34	71	·580	3·6	2	6·70	−4·70	0·89	6·13	−5·24	0·89	6·13	−5·24	0·59	Mount Abu	Central India.	
2	2					2	12	12	N 68° W	11·4	11·7	7·7	+52	67	·646	4·6	6	11·64	−5·64	3·32	9·80	−6·48	3·32	9·80	−6·48	1·60	Pachmarhi.		
2	1	1	2			11	2	1	S 55° W	4·1		5·1	−20	71	·445	5·3	9	7·22	+1·78	3·97	3·73	+0·24	3·97	3·73	+0·24	1·34	Wellington	South India.	
3	2				1	4	8	12	W	14·9				73	·267	6·2	14			6·35			6·35			1·67	Kodai Kanal		
																											XIII.—Extra India.		
						30			S 45° W	19·2				83	·928	3·1	2			1·00	2·05	−1·05	1·00	2·05	−1·05	0·85	Trincomalee	Ceylon.	
					2	18	10		S 57° W	11·3		10·2	+11	90	·945	7·1	13			6·01	7·24	−1·23	6·01	7·24	−1·23	1·30	Colombo.		
														64	·611	1·3	3			2·06	0·22	+1·84	2·06	0·22	+1·84	1·04	Meshed .	Persia.	
										1·0	1·4			33	·316	0·2	0			0·01	0	+0·01	0·01	0	+0·01	0·01	Ispahan.		
7	3		1	1	1	1		16	N 41° W	10·5	12·5	10·8	+16	69	·919	0·1	0			0	0	0	0	0	0	0	Bushire.		
5			8	5			3	7	N 68° E	10·4	12·1			78	1·094	0·2	0			0	0·13	−0·13	0	0·13	−0·13	0	Jask.		
	1	1	1	12			7	8	S 72° W	5·5‡	5·8‡			61	·926	1·1	0			0	0	0	0	0	0	0	Muscat.		
7	12	4						7	N 6° W	3·1	4·1			32	·459	0·2	0			0	0·01	−0·01	0	0·01	−0·01	0	Baghdad .		
																	0			0			0			0	Bussrah.	Arabia.	
4		12	2	5	1	6			S 88° E	8·6	8·4	7·6	+11	66	·897	3·7	2			1·34	0·01	+1·33	1·34	0·01	+1·33	1·00	Aden.		
2		6	5	2	1	1	3	10	N 1° W	13·9	12·5			79	1·064	1·0	1			0·59	0	+0·59	0·59	0	+0·59	0·50	Perim.		
	10	1	1	1		2	6	9	N 36° W					37	·283	0	0			0·07	0·37	−0·30	0·07	0·37	−0·30	0·07	Kabul .	Afghanistan.	
1	10	1	1	3	1		1	1	N 14° E	4·9	4·4			39	·297	3·9	2			0·46	0·53	−0·07	0·46	0·53	−0·07	0·26	Kashgar .	Central Asia.	
1				2	12	14		1	S 21° W	8·9	8·4			84	·709	5·3	5			2·06	1·24	+0·82	2·06	1·24	+0·82	0·94	Zanzibar .	Africa.	
1				2	8	18	1		S 29° W	6·7	6·5			92	·716	4·9§	7			2·40			2·40			0·54	Do. Dunga.		

ta for that station are not utilised in calculating the provincial variations.

(‡) Mean of 27 days.

(§) Mean of 29 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M.

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet	Pressure. Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Temperature of Air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair		29·780	29·698	·082	29·735	+·011	29·726	86·7	78·3†	8·4	91·8	74·3	17·5	84·4	83·5	81·2†	+0·4	76·0	79·6	78·9	78·2
	Rangoon		·748	·654	·094	·711	−·024	·689	86·5	77·2	9·3	92·8	73·9	18·9	82·6	83·2	80·2	+0·8	75·6	79·3	78·7	77·9
	Diamond Island		·740	·660	·080	·696	−·024	·672	86·0	79·5	6·5	89·6	72·2	17·4	83·7	83·9	81·7	+2·2	75·6	79·3	79·2	78·0
	Cocos Island	111	·722	·646	·076	·680	+·032	·723	85·8	78·1	7·7	91·8	72·3	19·5	83·0	83·7	80·9	+0·2	75·3	79·3	79·6	78·1
	Akyab		·701	·610	·091	·659	−·018	·621	86·8	77·2	9·6	94·1	73·3	20·8	83·2	82·8	80·7	−0·5	76·1	79·3	79·1	78·2
Bengal and Orissa.	Chittagong		·585	·490	·095	·544	−·023	·578	87·4	76·7	10·7	93·4	70·6	22·8	83·8	84·1	80·9	+0·4	75·2	79·1	78·9	77·7
	Calcutta (Alipore)		·576	·482	·094	·534	−·013	·501	94·6	75·3	15·3	108·4	73·2	35·2	88·6	91·6	86·8	+2·3	76·5	81·9	82·9	80·4
	Saugor Island		·579	·488	·091	·540	−·010	·508	92·2	83·0	9·2	99·4	73·3	26·1	88·5	90·5	86·7	+2·0	79·8	83·6	84·4	82·6
	Balse Point		·596	·510	·086	·557	−·017	·519	92·3	81·6	10·7	101·5	74·1	27·4	90·3	88·5	85·5	+1·8	78·4	82·7	82·6	81·2
Gangetic Plain and Chota Nagpur.	Hazaribagh		27·602	27·503	·099	27·562	−·016	·435	100·8	79·4	21·4	107·9	72·9	35·0	92·7	96·2	88·6	+6·7	70·1	73·8	73·9	72·6
	Darbhanga		29·418	29·296	·122	29·363	−·025	·479	94·3	79·5	14·8	100·8	75·7	25·1	87·1	93·1	85·6	+1·1	77·2	80·1	81·6	79·6
	Allahabad		·214	·086	·128	·152	−·052	·398	110·9	86·4	24·5	118·3	77·6	40·7	[illegible]·9	109·9	97·8	+7·2	72·8	77·9	79·0	76·5
Upper Sub-Himalayas.	Dehra Dun		27·375	27·286	·089	27·321	−·034	·422	99·7†	75·1	24·6	107·8	67·6	40·2	89·4	96·2	86·9†	+2·9	64·0†	69·6	70·7†	68·1
	Roorkee		28·651	28·536	·115	28·589	−·031	·401	106·5	77·7	28·8	114·7	68·2	46·5	95·0	101·7	91·8	+1·9	66·9	73·8	73·0	71·2
	Meerut		·778	·678	·100	·719	−·045	·391‖	107·9‖	81·5†	26·4	114·8	74·8	40·0	98·7‖	104·9‖	93·9‖	+3·3	67·9†	74·4‖	74·1‖	72·1
	Lahore		·807	·719	·088	·757	−·016	·392	109·1	80·7	28·4	118·2	70·3	47·9	99·2	107·3	94·1	+2·9	68·3	74·7	76·0	73·0
	Ludhiana		·710	·619	·091	·659	−·022	·399	108·4	81·9	26·5	116·8	71·5	45·3	98·2	106·3	94·4	+3·2	70·9	74·3	75·5	73·6
Indus Valley and N.-W. Rajputana.	Peshawar		·461	·366	·095	·408	+·021	·453	104·9	74·9	30·0	114·0	65·5	48·5	96·6	102·4	88·9	−1·0	62·2	71·3	72·3	68·6
	Jacobabad		29·314	29·197	·117	29·249	−·010	·380	118·8	83·0	35·8	125·0	74·4	50·6	104·3	117·4	100·1	+3·0	71·5	82·0	84·9	79·5
	Kurrachee		·581	·498	·083	·540	+·004	·520	96·7	84·3	12·4	111·4	79·4	32·0	92·3	92·1	89·0	+2·2	78·6	82·6	83·1	81·4
E. Rajputana, C. India and Gujarat.	Jaipur		28·184	28·081	·103	28·132	−·001	·455	199·0	83·9	25·1	115·9	78·1	37·8	97·9	106·7	95·8	+5·2	69·6	76·0	73·8	73·1
	Udaipur		27·751	27·661	·090	27·706		·516	100·3	79·9	20·4	110·0	74·7	35·3	90·5	97·0	89·3		73·4	77·0	79·2	76·5
	Deesa		29·190	29·059	·131	29·129	+·006	·532	105·8	82·3	23·5	116·9	76·4	40·5	93·2	104·3	93·1	+3·3	73·9	77·2	78·2	76·4
	Jamnagar		·611	·516	·095	·563		·571	98·3	81·6	16·7	102·9	76·2	26·7	93·2	95·3	89·1		77·1	80·6	82·0	79·9
Deccan.	Belgaum		27·278	27·206	·072	27·246	+·015	·692	80·4	68·2	12·2	92·5	65·8	26·7	75·4	76·2	72·9	+0·3	67·2	70·9	70·6	69·6
	Sholapur		28·177	28·046	·131	28·121	+·007	·620	96·3	75·2	21·1	106·4	71·8	34·6	85·9	92·5	83·9	+2·0	70·3	73·7	74·1	72·7
	Poona		27·932	27·847	·085	27·896	+·021	·649	89·8	72·4	17·4	100·4	69·4	31·0	83·1	85·6	79·8	+0·5	70·4	72·8	72·8	72·0
	Akola		28·771	28·631	·140	28·706	+·017	·560	102·0	78·4	23·6	110·8	71·0	39·8	91·4	100·0	88·8	+3·2	73·0	76·8	76·7	75·5
	Buldana	2,132	27·610	27·492	·118	27·556	+·018	·568	95·6	74·1	21·5	105·4	68·1	37·3	85·0	93·4	83·4	+2·7	69·0	72·7	72·7	71·5
	Khandwa		28·640	28·504	·136	28·577	+·009	·543	102·2	81·8	20·4	112·2	74·6	37·6	91·2	99·7	91·2	+4·4	72·9	76·8	76·9	75·5
	Nagpur		·643	·516	·127	·585	+·022	·532	102·5	80·5	22·0	112·2	73·1	39·1	91·9	98·2	89·5	+3·5	71·3	76·8	76·6	74·9
	Do. (Sanitary Commr.'s Office)		·656	·525	·131	·596		·532	103·5	80·8	22·7	114·0	72·6	41·4	93·2	98·8	91·0		72·5	78·1	78·3	76·3
	Hyderabad (Deccan).		·071	27·953	·118	·019	+·028	·616	93·4	75·6	17·8	103·9	71·2	32·7	84·4	91·8	84·1	+0·9	71·3	74·1	76·0	73·8
West Coast.	Bombay		29·732	29·653	·079	29·692	+·023	·668	87·9	79·4	8·5	98·4	75·1	23·3	84·2	85·1	83·2	0	75·9	79·4	79·6	78·3
	Karwar				Not recorded.				84·6	75·6	9·0	91·5	70·9	20·6	81·7	82·5	79·7	−0·4	73·3	76·6	76·9	75·6

† Mean of 29 days. ‡ Mean of 20 days. § Mean of 22 days.

I.

at 65 Stations in India, Burma, etc., for June, 1901.

Vapour Tension.					Humidity.					Cloud.				WIND DIRECTION. Number of Winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·867†	·953	·929	·916	0	89†	80	81	83	− 3	7·7	8·0	7·9	+0·4					4	2	23	26	5	S 68° W	S 43° W	78	79	343	231			Port Blair	Burma Coast and Bay Islands.
·864	·961	·927	·917	+·015	93	86	82	87	− 2	9·2	9·5	9·4	+0·7				2	5	20	22	9	1	S 27° W	S 23° W	73	71	124†	123			Rangoon	
·827	·945	·939	·904	+·016	83	81	81	82	− 4	8·3	8·5	8·4	+0·3	1		2	1	1	12	26	17		S 47° W	S 35° W	73	74	227*	216			Diamond Island	
·841	·956	·961	·919	+·001	88	84	83	85	− 1	8·4	8·4	8·4	+0·2		2	4	1		8	40	5		S 43° W	S 34° W	72	90	312	?	27·49	5·77	Cocos Island	
·887	·956	·951	·931	+·008	95	84	85	88	+ 1	8·2	8·3	8·3	+0·8			1	11	14	21	12	1		S 17° E	S 3° E	68	57	58*	97			Akyab	
·859	·936	·920	·905	+·036	93	81	79	84	− 2	8·7	8·0	8·4	+0·8			2	2	19	22	11	1	3	S 8° E	S 24° E	67	60	213*	160			Chittagong	Bengal and Orissa.
·880	1·003	1·013	·965	+·008	88	75	69	77	− 6	6·9	6·0	6·5	−0·6		1	1	4	10	29	12	1	2	S 1° E	S 3° E	69	59	148	142			Calcutta (Alipore).	
·979	1·088	1·104	1·057	+·038	86	81	77	81	− 2	7·6	6·8	7·2	−0·5		1		1	11	32	14	1		S 3° W	S 12° W	82	68	487	372			Saugor Island.	
·935	1·020	1·037	·997	+·028	86	72	77	78	− 5	6·1	6·9	6·5	−0·7		1				18	34	5	2	S 38° W	S 37° W	84	64	331*	303			False Point	
·624	·596	·558	·593	−·099	62	40	34	45	−21	5·5	8·2	6·9	−0·6		13	3	1	1	7	8	13	14	N 64° W	S 38° W	45	15	231*	225			Hazaribagh	
·907	·935	·924	·922	+·010	90	73	61	75	− 1	5·0	3·0	4·0	−0·7	1	1	4	26	24	1		2	1	S 73° E	S 85° E	75	70	109	148			Darbhanga	Gangetic Plain and Chota Nagpur.
·629	·636	·574	·613	−·156	50	32	23	35	−21	0·8	3·2	2·0	−2·7	1	11	2	3	1		2	20	20	N 59° W	N 9° W	65	15	231*	166			Allahabad	
·471†	·482	·444†	·466	−·184	54†	36	28†	39	−24	1·7‡	1·9§	1·8	−2·6	2	1	2	3	6	3	6	29	6	S 83° W	S 53° W	50	16	50	40			Dehra Dun	Upper Sub-Himalayas.
·522	·556	·394	·491	−·165	55	35	19	36	−16	1·4	1·2	1·3	−2·0	14	3			16	2	4	7	14	S 70° W	S 10° E	15	17	93†	95			Roorkee	
·507†	·535‖	·435‖	·492	−·201	48†	31‖	21‖	33	−19	2·8	4·3	3·6	+0·2	9	1		6	2		9	12	21	N 73° W	N 16° W	45	10	61*	64			Meerut	
·530	·532	·480	·514	−·103	51	30	21	34	− 6	1·4	0·4	0·9	−2·1	8	8	7	4	7	4	1	16	5	N 43° W	N 19° E	15	6	78	58			Lahore	
·611	·536	·482	·543	−·111	58	31	21	37	−12	0·6	1·5	1·1	−2·1	3	7	2	2	14	4	2	8	18	N 58° W	S 64° W	18	8	74*	64			Ludhiana	
·408	·465	·427	·433	−·086	48	28	22	33	− 5	1·9	2·7	2·3	+0·1	17	16	6	5	2	2	1	7	4	N 1° E	N 41° E	32	31	75*	113			Peshawar	
·640	·804	·770	·738	+·079	55	38	24	39	− 1	0·1	0·3	0·2	−0·7	19	5	1	2	12	5	6	6	4	S 12° W	S 33° E	16	45	79*	125			Jacobabad	Indus Valley and N.-W. Rajputana.
·907	·926	1·013	·969	+·010	77	65	67	70	− 5	2·8	2·7	2·8	−1·5						4	28	26	2	S 65° W	S 62° W	87	85	406*	423			Kurrachee	
·551	·623	·422	·532	−·135	47	36	18	34	−16	2·4	3·7	3·1	−1·4		3	1		1	2	22	28	3	S 74° W	N 66° W	77	45	159	165			Jaipur	
·742	·769	·783	·765		73	54	46	58		1·3	2·9	2·1		3	1	1	1	1	3	26	21	3	S 64° W		72		230*				Udaipur	E. Rajputana, C. India and Gujarat.
·729	·721	·613	·687	−·045	67	47	29	48	− 6	3·4	1·0	2·2	−2·8		1	1			11	43	4		S 40° W	S 42° W	87	70	427	397			Deesa	
·871	·878	·921	·890		81	57	56	65		2·2	1·1	1·7							11	25	22	2	S 56° W		82		515*				Jamnagar	
·656	·699	·681	·679	+·013	95	81	77	84	+ 2	8·5	8·4	8·5	+0·6		1	1	1	2	6	27	21	1	S 57° W	S 62° W	75	78	480	556			Belgaum	Deccan.
·682	·678	·616	·659	+·027	79	55	42	59	− 1	7·4	7·9	7·7	+0·5		1	1	1	3	2	24	10	18	S 79° W	S 86° W	61	70	414*	316			Sholapur	
·720	·679	·618	·682	−·002	91	61	55	69	− 1	6·4	6·8	6·6	−0·9			1	3	2		13	36	5	S 80° W	S 80° W	73	78	433*	360			Poona	
·743	·727	·606	·692	−·003	77	51	34	54	− 4	5·2	6·1	5·7	−0·9		2		2	1	1	9	21	24	N 75° W	N 68° W	72	72	288*	223			Akola	
·647	·653	·548	·616	−·048	78	56	38	57	− 8	5·9	5·2	5·6	−0·7		3	1		3	2	8	26	17	N 80° W	N 73° W	69	66	278*	253	7·64	3·42	Buldana	
·701	·743	·640	·695	−·019	66	52	37	52	− 8	4·4	5·3	4·9	−1·1	1	1	1		4		7	22	24	N 75° W	N 79° W	70	72	287	234			Khandwa	
·654	·734	·644	·677	−·041	65	52	39	52	− 8	5·4	7·0	6·2	−0·9		1	1	2	2	8	23	16	7	S 60° W	N 83° W	63	52	259	240			Nagpur	
·697	·776	·719	·731		68	52	42	54		5·1	7·1	6·1		2	1	6		16		27		8	S 25° W		37		71*				Do. (Sanitary Commr.'s Office)	
·714	·719	·700	·711	+·004	81	62	48	64	− 1	6·1	5·6	5·9	0	9	1					3	47		S 89° W	N 34° W	82	70	200*	217			Hyderabad (Deccan).	
·852	·949	·942	·914	−·010	85	81	78	81	− 1	7·4	7·3	7·4	−0·4		1	2	1	3	6	13	27	7	S 75° W	S 64° W	63	65	290	376			Bombay	West Coast.
·795	·848	·854	·832	−·018	90	79	77	82	− 1	8·0	7·0	7·5	+0·4	3	1					27	14	5	S 63° W	S 73° W	82	74	149	128			Karwar	

‖ Mean of 28 days.

* Corrected.

Table

Abstract of Obsevations recorded at 10 A.M. and 4 P.M. at 65 Stations

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
South India.	Periyakulam		28·894	28·787	·107	28·854			93·7	71·5	22·2	98·8	65·9	32·9	86·0	87·9	81·3		68·5	73·7	74·1	72·2
	Salem		·909	·786	·123	·861	−·001	29·718†	96·8	75·3	21·5	100·6	71·0	29·6	87·8	93·9†	84·8†	+2·1	71·7	75·4	79·7	75·6
	Chitaldroog		27·431	27·343	·091	27·398	+·024	·695	86·8	69·9	16·9	94·4	65·3	29·1	79·6	83·5	77·5	+1·3	67·6	71·8	72·7	70·7
	Bangalore		26·871	26·782	·089	26·838	+·016	·718	84·1	67·1	17·0	89·3	64·6	24·7	76·9	81·5	75·0	+0·8	65·3	69·1	70·0	68·1
	Hassan		·815	·749	·066	·793	+·025	·755	80·9	66·5	14·4	89·1	63·2	25·9	76·6	76·6	72·7	+1·4	65·1	69·0	68·7	67·6
	Mysore		27·374	27·290	·084	27·332	+·026	·747	85·2	68·3	16·9	94·1	65·6	28·5	78·7	80·2	75·5	+0·5	67·1	70·0	70·8	69·3
	Madras		29·757	29·645	·119	29·711	+·014	·660	101·0	82·6	18·4	108·5	78·5	30·0	93·9	90·7	88·6	+1·3		78·1	80·1	78·3
	Bellary		28·329	28·214	·115	28·281	+·012	·672	94·1	75·4	18·7	101·0	69·2	31·8	85·2	90·8	83·0	+0·1	68·1	70·5	71·7	70·1
	Waltair		29·448	29·349	·099	29·399		·561	92·3	81·1	11·2	98·2	73·0	25·2	88·5	88·7	85·8		73·5	79·6	79·7	77·6
Hill Station, Baluchistan.	Quetta		24·520	24·457	·063	24·482	+·045		88·8	52·7	36·1	95·0	46·3	48·7	81·9	87·4	70·4	−3·6	47·4	59·6	61·5	56·2
Hill Stations, Northern India.	Leh		19·685	19·614	·071	19·656	+·017		67·8	40·6	27·2	73·1	33·0	40·1	58·8	64·1	52·9	−3·0	34·6	42·6	44·6	40·6
	Srinagar		24·769	24·717	·052	24·736	+·047		78·7	55·7	23·0	89·0	50·0	39·0	69·7	75·8	66·5	−4·0	53·8	65·9	71·1	63·6
	Kailang	10,087	20·919	20·862	·057	20·902	P		69·2	41·4	27·8	75·8	35·0	40·8	59·1	63·5	53·3	−2·3	38·3	48·0	49·3	45·2
	Simla (Ridge)		23·033	22·991	·042	23·005	+·015		77·0	62·1	14·9	83·7	50·2	33·5	71·4	73·9	69·3	+1·4	51·9†	56·4	57·1	55·2
	Chakrata		·190	23·144	·046	·160	+·004		77·8	61·8	16·0	85·3	48·2	37·1	71·7	74·1	69·4	+2·3	52·9	58·5	59·6	57·0
	Ranikhet		·973	·910	·063	·930	−·007		84·4	66·3	18·1	89·9	53·0	36·9	78·6	80·3	74·9	+4·4	56·3	61·3	63·0	60·2
	Muktesar		22·767	22·714	·053	22·741			81·0	59·5	21·5	87·4	48·3	39·1	72·9	75·7	68·9		51·2	58·6	62·1	57·3
	Katmandu	4,388	25·364	25·280	·084	25·321	P		86·6	66·6	20·0	93·2	58·8	34·4	79·5	80·5	75·1	+0·4	65·2	70·4	70·6	68·7
	Darjeeling		22·911	22·852	·059	22·880	+·011		66·8	56·9	9·9	72·3	53·2	19·1	62·9	64·6	61·3	+1·5	56·7	61·0	62·3	60·0
Hill Stations, Central India.	Mount Abu		25·877	25·814	·063	25·850	+·004		86·9	69·6	17·3	98·2	65·1	23·1	79·1	85·6	77·9	+2·7	63·7	68·9	70·2	67·6
	Pachmarhi		26·300	26·205	·095	26·258	+·026		91·6	74·3	17·3	101·5	68·0	33·5	82·9	89·9	82·4	+4·5	67·2	72·1	73·0	70·8
	Chikalda	3,642	·189	·092	·097	·145	+·017		89·5	71·1	18·4	98·0	65·8	32·2	81·7	87·2	79·5	+4·2	65·9	69·0	70·6	68·5
Hill Stations, South India.	Wellington		24·210	24·155	·055	24·183	+·019		73·0	57·1	15·9	79·4	49·9	29·5	69·1	67·3	63·7	−0·1	54·6	61·0	61·1	58·9
	Ootacamund		23·042‖	22·984¶	·058	23·015‖			63·2§	51·8§	11·4	68·0	48·6	19·4	59·9§	58·8§	56·4§		50·6§	56·2§	56·1§	54·3
	Kodai Kanal		22·809	22·754	·055	22·776			65·3	53·5	11·8	70·2	50·6	19·6	62·0	59·6	57·8		49·3	56·3	56·6	54·0
Extra India.	Aden		29·711	29·602	·109	29·653	+·058	·676	93·6	84·5	9·1	95·5	76·4	19·1	92·0	91·9	88·9	+0·8	75·0	80·3	79·1	78·1
	Perim		·579	·479	·100	·525	+·048	·655	95·0	84·2	10·8	101·8	72·1	29·7	91·3	92·7	89·1	−0·1	78·1	83·6	83·4	81·7
	Zanzibar		30·125†	30·016	·109	30·071	+·036	30·072†	80·6	72·8	7·8	82·9	71·0	11·9	75·5	80·3	76·6	−0·9	67·8†	71·1	71·2	70·0
	Port Victoria (Seychelles).	15	·022	29·945	·077	29·984	+·037	29·923	81·4	74·0	7·4	83·7	69·4	14·3	80·1	80·7	77·5	−1·2	71·4	74·4	74·4	73·4
	Mauritius (Pamplemousses).	181				·973	−·009	30·104				84·0	55·2	28·8			69·3	−0·3				

† Mean of 29 days. ‡ Mean of 27 days. § Mean of 23 days. ‖ Mean of 21 days.

II—*concluded.*

in India, Burma, etc., for June, 1901—concluded.

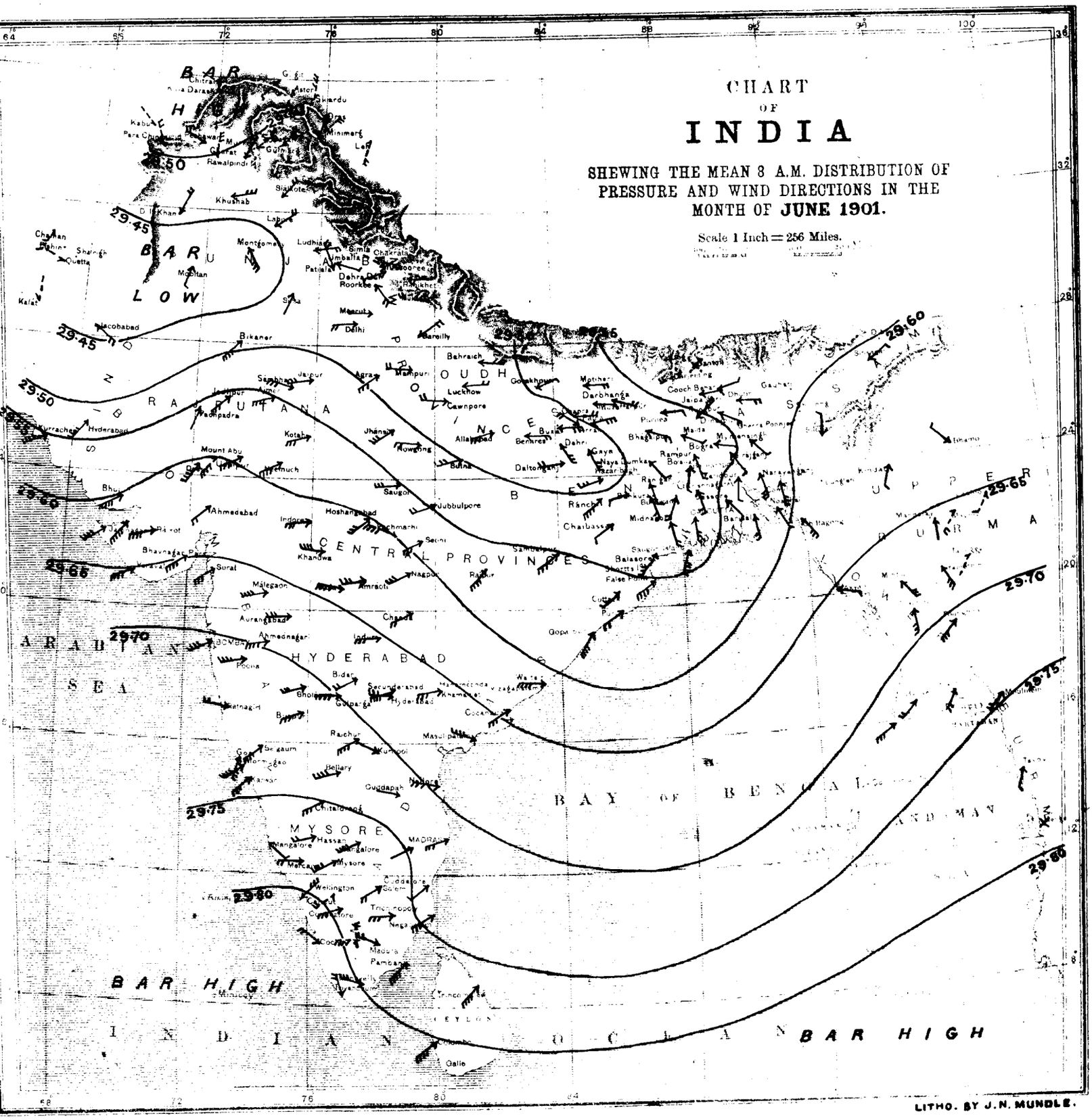
Vapour Tension.					Humidity.					Cloud.				WIND DIRECTION. Number of Winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
·665	·666	·661	·664		86	54	50	63		5·3	7·5	6·4		6	10	4		1	10	12	10	7	S 86° W		% 33	%	105*				Periykulam .	South India.
·735	·718	·836†	·763	+·002	84	54	53†	64	− 5	5·6	7·1	6·4	+0·4	4	3			7	16	28	2	S 71° W	S 54° W	72	76	142*	113			Salem . .	
·653	·685	·673	·670	+·036	89	68	60	72	+ 1	8·1	8·2	8·2	+0·2		1	1		2	4	20	25	7	S 73° W	S 76° W	73	77	242*	261			Chitaldroog .	
·605	·624	·601	·610	−·009	91	68	57	72	− 1	6·9	7·3	7·4	+1·4		1				3	31	22	3	S 61° W	S 72° W	85	87	265*	209			Bangalore .	
·601	·622	·614	·612	+·004	92	68	68	76	− 3	8·5	8·9	8·7	+0·4		1					18	34	7	S 83° W	S 80° W	87	82	115*	125			Hassan . .	
·651	·631	·643	·642	+·014	94	64	63	74	0	9·4	9·4	9·4	+1·6			1			1	24	32	2	S 72° W	S 75° W	87	77	347*	365			Mysore . .	
	·749	·881	·830	+·015		47	61	62	− 3	5·2	6·4	5·8	−0·5		1	1	3	14	7	9	19	6	S 42° W	S 36° W	40	61	228	212			Madras . .	
·598	·566	·540	·568	−·082	68	47	38	51	− 7	8·2	8·9	8·6	+1·0	4			1			15	34	6	S 82° W	S 83° W	80	78	241*	251			Bellary . .	
·729	·896	·895	·840		68	67	66	67		7·5	7·4	7·5			1		3	1	1	33	21		S 60° W		78		152				Waltair . .	
·275	·281	·277	·278	−·078	69	26	21	39	− 1	0·2	0·4	0·3	−0·8	20	1					23	16	N 70° W	N 75° W	60	39	51*	81			Quetta . .	Hill Station, Baluchistan.
·153	·137	·131	·140	−·032	59	27	22	36	− 2	3·7	5·4	4·6	−0·2		2		3	2	9	17	21	6	S 65° W	S 81° W	60	31	100	57			Leh . . .	Hill Stations, Northern India.
·394	·599	·723	·572	+·015	88	82	80	83	+10	3·9	5·7	4·8	+1·0	9	7	6	3	4	4	4	9	14	N 45° W	S 69° E	27	5	112	86			Srinagar .	
·207	·241	·229	·226	−·023	79	48	41	56	+ 1	4·5	7·0	5·8	+0·5		3	1	1	6	10	26	12	1	S 42° W	S 63° W	63	65	43	49	0·77	0·31	Kallang . .	
·285†	·302	·296	·297	−·111	54†	41	37	44	−19	1·9	2·6	2·3	−3·6	6	15	2		3	8	2	5	17	N 41° W	N 12° W	38	18	148	97			Simla (Ridge)**	
·312	·357	·366	·345	−·071	58	47	45	50	−17	1·4	3·5	2·5	−2·6	1	1		1	21	36				S 18° E	S 73° W	87	52	274	153			Chakrata .	
·353	·364	·399	·372	−·100	55	39	40	45	−21	1·7	1·5	1·6	−3·9	1	5	1			2	11	29	11	N 85° W	S 67° W	73	46	139*	84			Ranikhet .	
·291	·347	·422	·353		59	44	48	50		1·6	3·7	2·7			4	4	1	5	2	6	6	32	N 52° W		53		139*				Muktesar .	
·610	·642	·640	·631	+·001	92	64	62	73	− 2	6·6	6·9	6·8	+0·6		2		13	1		11	30	3	S 81° W	N 86° W	45	23	37	131	5·53	1·40	Katmandu .	
·458	·520	·541	·506	+·014	98	90	88	92	− 2	7·6‡	8·0§	7·8	−1·0	5			3	5	7	24	12	4	S 46° W	S 9° W	59	8	109*	124			Darjeeling .	
·526	·590	·563	·560	−·013	75	61	47	61	− 7	2·5	2·6	2·6	−2·6		1	1		2	4	44	7	1	S 47° W	S 49° W	83	67	318*	254			Mount Abu .	Hill Stations, Central India.
·583	·662	·614	·620	+·020	71	61	46	59	− 7	4·1	5·2	4·7	−1·9	14	4	2	1			4	22	13	N 70° W	N 80° W	57	60	282*	206			Pachmarhi .	
·577	·564	·557	·566	−·033	77	53	45	59	−13	3·9	6·4	5·2	−1·7	27	29	2		2					N 6° E	N 45° W	49	60	155*	234	4·61	1·43	Chikalda .	
·401	·457	·475	·445	+·001	86	64	71	74	− 1	7·5	8·7	8·1	+0·6	7	3	1	1	11	6	24	5	2	S 28° W	S 71° W	48	52	96	111			Wellington .	Hill Stations, South India.
·358§	·416§	·425§	·400		92§	81§	85§	86		8·2§	8·7§	8·5		1		1	1			25	12	6	S 69° W		51		217§				Ootacamund .	
·318	·399	·431	·383		77	72	85	78		6·6	7·9	7·3			2	7		5		1	2	17	N 23° W		27		357				Kodai Kanal††	
·742	·881	·823	·815	−·031	63	59	55	59	0	2·2	1·2	1·7	+0·4	3		6	2	29	4	16			S 26° E	S	59	55	202*	216			Aden . .	Extra India.
·885	1·054	1·028	·989	+·145	76	72	67	72	+11	0·5	0·7	0·6	−1·2	1		11	14	10	1	4	6	13	N 60° E	N 39° W	20	42	297*	317			Perim . .	
·617†	·707	·643	·656	−·054	76†	80	62	73	− 3	6·0	4·9	5·5	+1·0			1		15	32	11	1		S 3° E	S 4° E	84	86	202*	216			Zanzibar . .	
·738	·781	·775	·765	+·015	88	76	74	79	+ 3	5·2	4·7	5·0	−2·1	2		4	3	24	23	3	1		S 27° E	S 21° E	73	79	214	278	4·77	0·95	Port Victoria (Seychelles).	
			·533	+·001				75	0																		271	271	1·90	0·57	Mauritius (Pamplemousses).	

¶ Mean of 22 days.

** Wind variable 2.

†† Wind variable 26.

* Corrected.



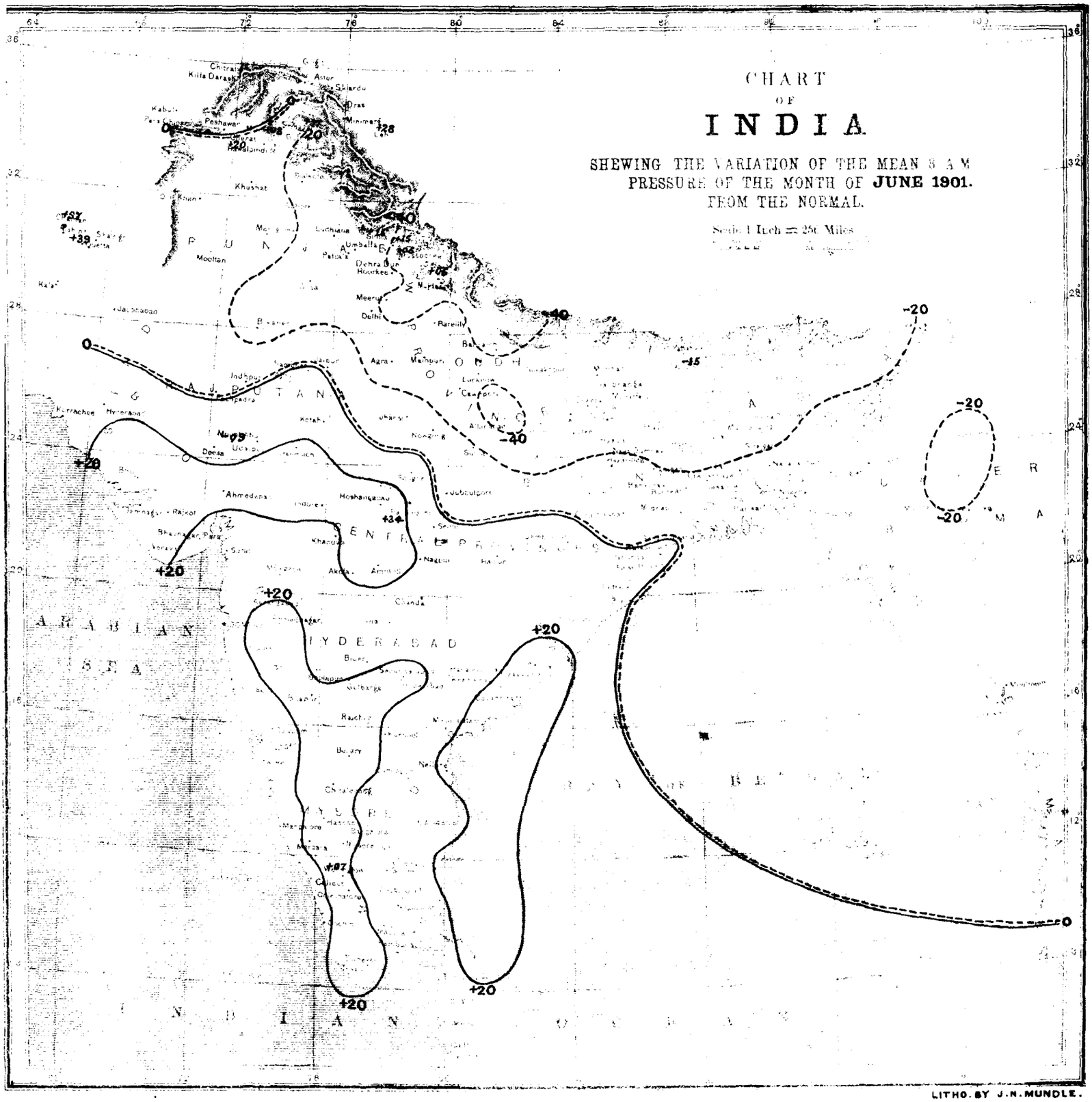
LITHO. BY J.N. MUNDLE.

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the [illegible] barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal [illegible] shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the [illegible] of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but are probably [illegible] from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind and are obtained by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	... one feather added to the wind arrow
„	2 to 5 „ „ „	... two feathers „ „ „ „
	5 to 10	three „ „ „ „ „

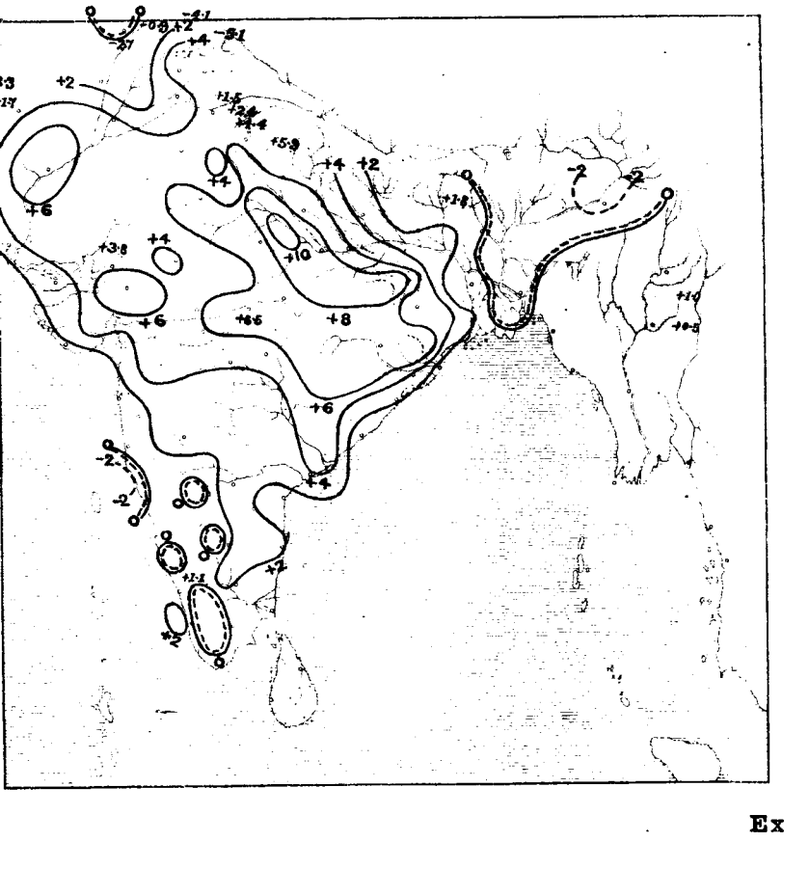


LITHO. BY J.N. MUNDLE.

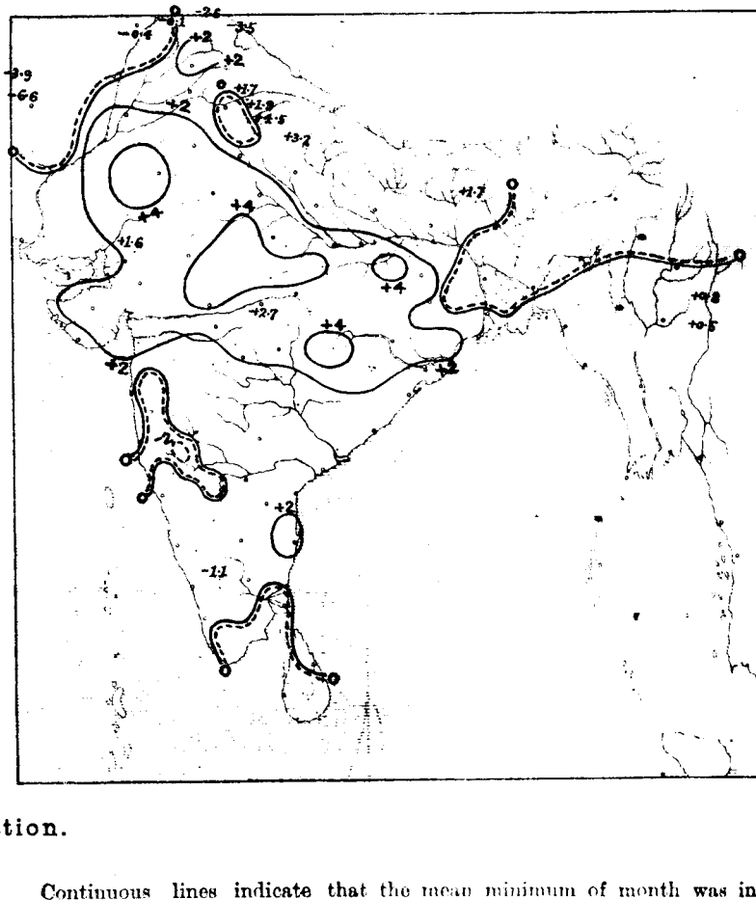
Explanation

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by [illegible] lines drawn at equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, so 20 represents ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts expressed by the numbers attached to the lines, and broken or dotted lines that it was in deficiency by amounts expressed by the numbers attached. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

FROM THE NORMAL.



FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

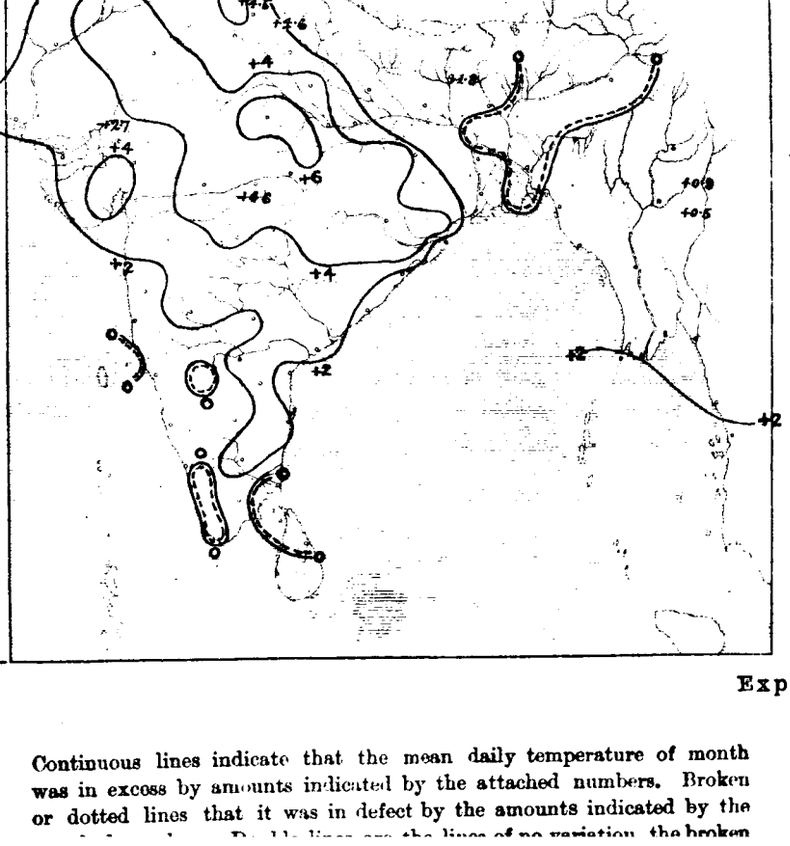
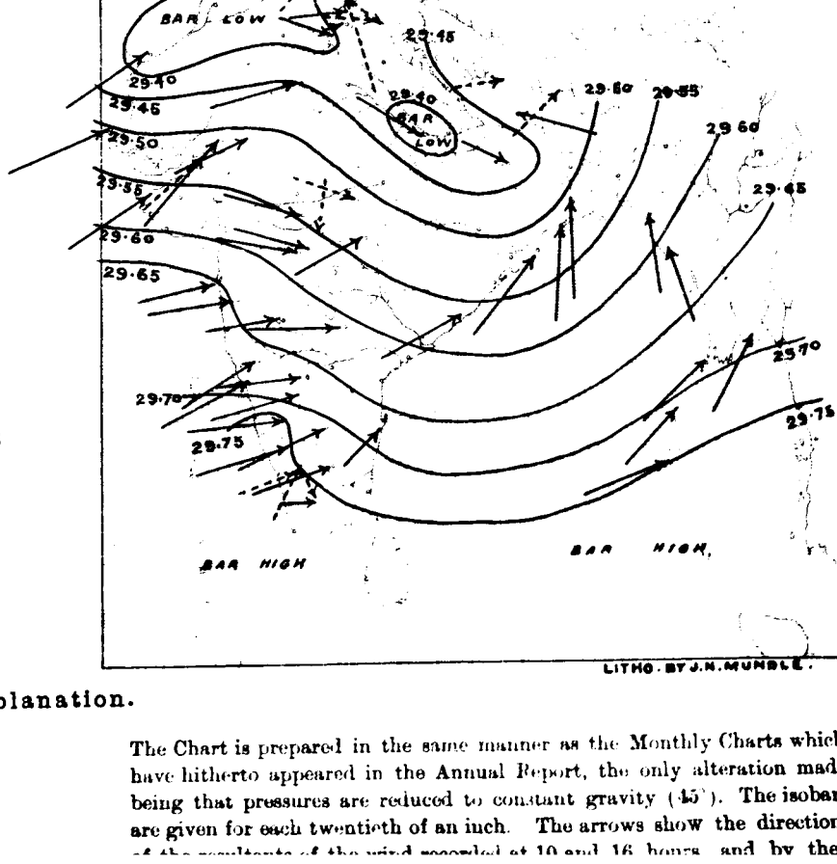


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF JUNE 1901.



LITHO. BY J.N. MUNDLE.

Explanation.

Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the direction

LITHO. BY J. N. MUNDLE.

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India (382 in number), except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.

OF

INDIA

SHEWING NORMAL AVERAGE RAINFALL AND THE VARIATION OF THE RAINFALL FROM THE NORMAL OF THE MONTH OF JUNE 1901.

Scale 1 Inch = 256 Miles.

LITHO. BY J. N. MUNDLE, Litho., S. I. O., Calcutta.

Reg. No. 231. Wr., I.—May 01.—5,400.

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
33. Malabar
33a Travancore
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar
48. Baluchistan Hills
49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. Madras, East Coast, North
52(a). Do. do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South

LIBRARY
JAN 6 1902
Weather Bureau.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JULY 1901.

INTRODUCTION.

THIS review of the weather in India during the month of July 1901 is based on observations taken daily at 8 A.M. at 223 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 65 stations. In the rainfall summary the rainfall data of the meteorological observatories, the weekly rainfall telegrams received during the month from District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review, are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given.

Summary of the chief features of the weather in India during the month of July, 1901.

The following is a brief sketch of the chief features of the meteorology of the month.

At the commencement of the month under review both branches of the monsoon current were feebler than usual and failed to extend beyond the West Coast on the one hand and Central Bengal on the other. As a consequence while the weather was showery in the West Coast districts, Lower Burma and parts of Bengal, only a few passing showers were being received in the interior of the country and no rain whatever in the north-west. The result was that while the mean temperature was about normal over the Peninsula, Burma and part of North-East India, it was in large to very large excess over Northern India and the north of the Central Provinces. These conditions of rainfall and of temperature lasted until the 6th and during these six days the heat was very intense in the various districts of Northern India. This is shown below:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	1st July.	2nd July.	3rd July.	4th July.	5th July.	6th July.
	°	°	°	°	°	°
Bengal	+ 1·9	+ 1·5	+ 1·7	+ 2·3	+ 2·7	+ 2·4
Orissa	+ 3·2	+ 1·3	+ 1·6	+ 3·0	+ 5·1	+ 2·9
Bihar	+ 5·4	+ 4·2	+ 4·7	+ 6·2	+ 3·8	+ 1·6
Chota Nagpur	+ 8·2	+ 4·4	+ 2·5	+ 4·0	+ 6·8	+ 4·6
North-Western Provinces and Oudh.	+ 12·1	+ 11·3	+ 9·9	+ 10·3	+ 10·9	+ 7·1
Punjab	+ 4·8	+ 4·1	+ 5·7	+ 6·9	+ 7·9	+ 9·6
Rajputana	+ 6·2	+ 7·7	+ 10·0	+ 12·1	+ 13·9	+ 10·0
Central India	+ 7·7	+ 9·4	+ 9·5	+ 11·0	+ 10·8	+ 7·5
Central Provinces	+ 3·3	+ 2·2	+ 3·7	+ 4·5	+ 5·0	+ 2·1

The excess was chiefly in the day temperature, as is shown by the following statement which gives the two stations on each day where the excess was greatest:—

DATE.	STATION.	VARIATION FROM NORMAL OF Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
1st July	Allahabad	+20·2	+12·4	+16·3
	Lucknow	+19·5	+ 9·4	+14·5
2nd „	Roorkee	+18·8	+ 9·0	+13·9
	Jhansi	+17·1	+10·6	+13·9
3rd „	Jhansi	+17·5	+12·6	+15·1
	Agra	+14·5	+ 9·8	+12·2
4th „	Ajmer	+16·8	+10·1	+13·5
	Jhansi	+13·6	+13·1	+13·4
5th „	Jhansi	+19·7	+16·5	+18·1
	Jaipur	+22·2	+13·3	+17·8
6th „	Jhansi	+22·0	+13·6	+17·8
	Jaipur	+18·9	+10·0	+14·5

On the 7th the winds became strong on the Konkan and Gujarat coasts and rain extended suddenly into North Bombay and thence across Rajputana into the Punjab. At the same time a small depression passed from the head of the Bay into Bengal and thence up the Gangetic Plain as far west as the Kumaun Himalayas where it filled up on the 11th. It carried the Bay monsoon and rain with it into Upper India and the combined rainfall was followed by a brisk fall of temperature over Northern India. The following gives comparative temperature data for all the divisions of Northern India from the 7th to the 11th:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF 7th July.	8th July.	9th July.	10th July.	11th July.
	°	°	°	°	°
Bengal	+1·2	+0·7	+1·5	+1·2	+0·1
Orissa	−0·5	−1·3	+1·0	+0·3	−0·6
Bihar	+2·1	−1·9	−0·2	+1·7	+0·7
Chota Nagpur	+1·7	+0·5	−1·2	+0·3	+1·1
North-Western Provinces and Oudh.	+6·7	+3·9	+4·6	+2·1	−1·0
Punjab	+7·6	+2·4	−2·1	−2·3	+0·4
Rajputana	+7·9	+4·7	−2·3	+0·2	+1·8
Central India	+5·7	+4·4	+3·9	+1·3	+1·4

During these periods showery weather prevailed over the Peninsula and steady fairly continuous rain over Burma. In consequence, the mean temperature was very unsteady over the Peninsula but changed little from day to day over Burma. The following gives comparative temperature data for Burma and for the different divisions of the Peninsula for each alternate day from the commencement of the month till the 11th:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF 1st July.	3rd July.	5th July.	7th July.	9th July.	11th July.
	°	°	°	°	°	°
Burma	−0·3	+2·0	+1·6	+1·1	+0·7	+0·7
Central Provinces	+3·3	+3·7	+5·0	−0·7	+3·6	+1·3
Berar	−2·3	+3·3	+1·8	−2·1	+1·2	+3·7
West Coast	+0·9	+0·5	+0·5	+1·1	+0·9	−0·1
Bombay Deccan	−1·3	+0·3	+0·5	−0·6	+1·0	+2·4
Mysore	+0·5	−2·2	+0·1	−0·9	−1·4	+1·5
Madras Coast	−1·4	−3·1	+2·7	+0·9	+3·3	+1·8
Madras Deccan	+0·7	−5·0	+1·6	+1·4	0	+3·1
South India	+2·0	−0·6	+0·8	+0·4	+1·7	−0·9

On the 12th pressure gave way briskly over Northern India while it rose slightly over the Peninsula. Hence the area of lowest pressure was transferred northward to the foot of the Himalayas and gradients for westerly winds were established over the greater part of the country. With the establishment of these winds the rain fell off all over North-Western and Central India and high temperatures were again experienced over this area. The following gives temperature data for North-Western India (except the Punjab), Central India and the Peninsula except Mysore and South India from the 12th to the 17th during the whole of which time the break in the rains continued:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF 12th July.	13th July.	14th July.	15th July.	16th July.	17th July.
	°	°	°	°	°	°
North-Western Provinces and Oudh.	−3·8	−1·3	+1·7	+3·0	+2·5	+4·6
Sind	+2·9	+2·4	+1·0	+1·8	+2·0	+1·7
Gujarat	+2·3	+2·5	+3·2	+3·8	+3·6	+3·9
Rajputana	+2·5	+3·6	+4·5	+4·0	+5·5	+7·1
Central India	+2·1	+4·9	+5·4	+4·9	+5·2	+7·1
Central Provinces	+3·4	+2·8	+3·9	+4·2	+5·1	+1·0
Berar	+4·9	+2·8	+2·9	+3·5	+5·8	+5·2
West Coast	+0·3	+0·7	+1·1	+0·9	+0·4	+0·9
Bombay Deccan	+2·4	+2·0	+2·3	+1·4	+2·3	+3·7
Madras Coast	+2·7	+2·1	+2·5	+0·2	+0·8	+0·3
Madras Deccan	+3·5	+2·6	+2·7	+1·6	+1·4	+1·7

Very high day temperatures were again recorded while the break lasted as is shown by the following statement which gives for each day the two stations at which the excess was most pronounced :—

DATE.	STATION.	VARIATION FROM NORMAL OF		
		Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
12th July	Cuddapah	+ 9·6	+3·8	+6·7
	Amraoti	+ 9·9	+2·4	+6·2
13th „	Jacobabad	+14·2	—0·9	+6·7
	Chanda	+ 9·4	+1·1	+5·3
14th „	Hoshangabad	+10·3	+4·0	+7·2
	Nagpur	+ 8·6	+3·4	+6·0
15th „	Nowgong	+ 7·9	+8·0	+8·0
	Jhansi	+ 6·3	+6·9	+6·6
16th „	Hoshangabad	+11·1	+7·1	+9·1
	Nagpur	+11·0	+5·8	+8·4
17th „	Indore	+12·6	+4·0	+8·3
	Neemuch	+10·3	+6·0	+8·2

During this period, *viz.*, from the 12th to the 17th, rain continued to fall over Burma and North-East India and occasional falls of rain took place over the Punjab. Hence in these areas the weather remained cool. The following gives comparative temperature data :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	12th July.	13th July.	14th July.	15th July.	16th July.	17th July.
	°	°	°	°	°	°
Burma	+0·2	+0·3	—0·4	—0·4	+0·5	+0·7
Assam	—1·3	—2·2	—1·9	—0·9	+0·5	—0·5
Bengal	—1·0	—2·0	—1·6	—0·9	—0·1	0
Bihar	—1·9	—2·3	—2·3	—0·5	—1·0	+0·4
Punjab	—1·7	—1·0	—1·7	—0·4	+1·5	+4·2

On the 17th the second advance of monsoon winds and rainfall commenced. A shallow storm passed from the Bay into the Central Provinces. Rain then commenced over the central parts of the country and thence spread until by the 20th it had reached all parts of the Indian area except the extreme north-west. The fall was moderately heavy along the line of the hills but was light and scattered over the central parts of the country, so that on the 21st, while the heat was generally less than usual in Assam, Burma, the Gangetic Plain, and the Punjab, it was greater than usual elsewhere. The following gives comparative data for the 21st in illustration :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 21st July.	Mean minimum temperature, 21st July.	Mean daily temperature, 21st July.
	°	°	°
Burma	+0·3	—0·6	—0·2
Assam	—3·9	—1·0	—2·5
Bengal	+0·1	0	+0·1
Orissa	+4·3	+1·2	+2·8
Bihar	—0·5	—0·8	—0·7
Chota Nagpur	+2·1	+2·1	+2·1
North-Western Provinces and Oudh	—6·2	—2·1	—4·2
Punjab	—8·1	—5·2	—6·7
Sind	+0·8	—0·8	0
Rajputana	+4·6	+3·3	+4·0
Gujarat	+2·1	+0·9	+1·5
Central India	+1·0	+0·8	+0·9
Central Provinces	+0·2	0	+0·1
Berar	+2·6	+0·7	+1·7
West Coast	+2·7	+2·4	+2·6
Bombay Deccan	+3·9	+0·9	+2·4
Mysore	+5·2	+1·0	+3·1
Madras Coast	+3·2	+0·5	+1·9
Madras Deccan	+4·6	+1·9	+3·3
South India	+3·5	+0·9	+2·2

On the 22nd a shallow storm was shown over West Bengal and the east of the North-Western Provinces and rain was falling all over North-Eastern and Central India, but there was very little rain in the Peninsula. This storm advanced through the North-Western and Central Provinces during the 23rd, 24th, 25th and 26th, and during the same period the low pressure area in the north-west intensified. In consequence rain became much heavier over Western, Central and North-West India and the Deccan, while it fell off over North-East India. In consequence low temperatures were reported from the Punjab and part of the Peninsula on the 27th, while there was a large excess of temperature over North-East India, the Gangetic Plain

and part of Central India. The following gives temperature data for the 27th for all divisions :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 27th July.	Mean minimum temperature, 27th July.	Mean daily temperature, 27th July.
	°	°	°
Burma	−0·5	+0·1	−0·2
Assam	+5·3	+0·9	+3·1
Bengal	+4·9	+0·8	+2·9
Orissa	+1·1	−0·6	+0·3
Bihar	+6·9	+4·2	+5·6
Chota Nagpur	+3·2	+2·1	+2·7
North-Western Provinces and Oudh	+4·3	+3·1	+3·7
Punjab	−8·5	−1·8	−5·2
Sind	+0·3	+0·3	+0·3
Rajputana	+2·9	+3·2	+3·1
Gujarat	−1·4	+0·4	−0·5
Central India	+4·6	+3·0	+3·8
Central Provinces	+3·0	+1·0	+2·0
Berar	+0·8	−0·6	+0·1
West Coast	0	+1·4	+0·7
Bombay Deccan	−2·3	+1·6	−0·4
Mysore	−1·7	+0·8	−0·5
Madras Coast	−2·5	−0·5	−1·5
Madras Deccan	−2·1	+0·3	−0·9
South India	+0·4	+1·0	+0·7

On the 27th another shallow depression was shown over the north-west of the Bay reintroducing rain into North-East India. This storm passed slowly north-westward into North-West India where it filled up so that during the last four days of the month gradually decreasing showers and increasing temperature prevailed all over the country.

Pressure.—The pressure variations of the month were generally slight or small and averaged, on the mean of all stations, 0·014″ in defect. Relatively to this general condition pressure was in slight local defect over the Bay area and within a broad band running west-north-west from the Ganjam and Orissa coasts as far as the West Punjab and Upper Sind. There were also small areas of deficient pressure over the Madras Deccan and over Mysore and part of Malabar, but within these two areas the variations from the normal were very small. Over the whole of the remainder of India pressure was in excess but except over Sind, Gujarat and the adjoining parts of Central India and of Rajputana the excess was only slight. The pressure at the level of the hills was in excess over the Baluchistan and Himalayan hill areas but was in defect in Central and Southern India, so that the vertical pressure anomalies were positive in the north and negative in the centre and south of the country.

The following table gives the mean pressure variations and anomalies for the month of the eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	Variation from normal of mean 8 A.M. pressure of July 1901.	Pressure anomaly, July 1901.
	″	″
Burma Coast and Bay Islands	−·026	−·012
Burma Inland	−·017	−·003
Assam	−·010	+·004
Bengal and Orissa	−·018	−·004
Gangetic Plain and Chota Nagpur	−·022	−·008
Upper Sub-Himalayas	−·014	0
Indus Valley and North-West Rajputana	−·012	+·002
East Rajputana, Central India and Gujarat	−·002	+·012
Deccan	−·010	+·004
West Coast	−·013	+·001
South India	−·014	0

Temperature.—The temperature conditions were, as is usual in July, determined by the rainfall distribution. There was no general rain during the first week of the month, and it was not till the 18th that monsoon rainfall extended so as to include most parts of the country and even then portions of North-West India received only partial showers.

In consequence of the delay in the full establishment of the rains the heat was generally greater than usual. The mean maximum or day temperature of the month was above the normal over by far the greater part of the country though in parts of Assam, of Burma and of the Peninsula there were small areas of trifling deficiency. The only places at which this deficiency exceeded 1° were Sibsagar (−1°·1), Cocanada (−1°·2), and perhaps Ludhiana (−1°·5). The excess was considerable to large over the north-western and central parts of the country and was greatest at Sutna (+7°·4), Jhansi (+7°·3), Jaipur (+7°·9), Sambhar (+7°·4), and Deesa (+7°·8). These stations hence defined the area of greatest excess of the day temperature on the mean of the month.

The mean minimum or night temperature of the month exhibited the same general distribution, relatively to the

normal. The mean minimum temperature was in trifling defect over parts of Burma and of the Peninsula as well as locally over the East Punjab, but in general it exceeded the normal—more particularly over the north-western divisions of India and the Gangetic Plain. The excess in the case of this element was greatest at Nowgong (+4°·0), at Jhansi (+4°·5), at Agra (+4°·3), at Jaipur (+4°·0) and at Bikaner (+5°·5). The area of greatest excess thus extended along a line running from Central India to the West Punjab and from that line the amount of the excess decreased north and south.

The mean temperature of the month was in slight defect of the normal over the Brahmaputra Valley as well as within some small areas over Burma and the Peninsula, but was in excess in all other parts of India. The excess was greatest and considerable to large within a large area overlying the Gangetic Plain and a large part of North-Western and Central India. The deficiency did not exceed 1° at any station within the small areas noticed above, but the excess was more than 5° at the following stations within the large area of excessive heat, *viz.*, at Sutna (+5°·3), at Nowgong (+5°·5), at Jhansi (+5°·9), at Agra (+5°·4), at Jaipur (+6°·0), at Sambhar (+5°·5), at Ajmer (+5°·1) and at Deesa (+5°·4).

These stations hence defined the area of greatest excess of the mean temperature of the month.

The mean temperature of the Baluchistan and Kashmir hill stations as well as of Wellington in South India was below the normal, but at all the remaining hill stations the heat, on the mean of the month, was greater than usual.

The following table gives variation data of the month for the eleven meteorological provinces:—

Meteorological Province.	Variation of actual from normal of		
	Mean maximum temperature, July 1901.	Mean minimum temperature, July 1901.	Mean daily temperature, July 1901.
	°	°	°
Burma Coast and Bay Islands	+0·2	+0·6	+0·4
Burma Inland	+1·4	+0·4	+0·9
Assam	+0·1	+0·1	+0·1
Bengal and Orissa	+1·1	+0·7	+0·9
Gangetic Plain and Chota Nagpur.	+3·5	+1·6	+2·5
Upper Sub-Himalayas	+2·4	+0·9	+1·7
Indus Valley and North-West Rajputana.	+2·7	+1·6	+2·1
East Rajputana, Central India and Gujarat.	+5·7	+2·6	+4·2
Deccan	+2·2	+0·8	+1·5
West Coast	+0·9	+1·0	+1·0
South India	+1·0	+0·5	+0·8

Winds.—The monsoon current was apparently stronger and more westerly than usual over the centre of the Bay while it was slightly more southerly than usual in Bengal and considerably more southerly than usual in Upper India both on the hills and plains.

The Bombay monsoon current was generally lighter than usual at most of the coast stations but was strong and steady over the interior of India and of the Peninsula. In the South-East Trades region the winds varied irregularly from the normal.

Humidity.—The distribution of humidity, relatively to the normal, was irregular. There was an area of excessive humidity covering the greater part of the Peninsula, the maximum excess having been reported from Mysore where Chitaldroog reported a variation of +6 and Hassan a variation of +3. There was likewise an area of excessive dampness over the western desert, but in this case the greatest variation was +2 at Jacobabad. Between these two areas there existed a large area of abnormal dryness, the line of greatest deficiency extending from Gujarat east-north-eastward as far as the east of the North-Western Provinces. Within this area of abnormal dryness the largest variations were at Allahabad (−10 %), Jaipur (−12 %) and Deesa (−12 %). In addition the relative humidity was less than usual over parts of the south-west, south and centre of the Peninsula, the greatest variation in this area having been −7 % at Bellary. In Burma, Bengal and the Bay Islands the air was generally drier than usual, but the variations were small. The air was also very dry on the Kumaun Himalayas.

The following table gives variation data for nine meteorological provinces:—

Meteorological Province.	Mean Absolute Humidity.		Mean Relative Humidity.	
	Average actual, July 1901.	Variation of actual from normal, July 1901.	Average actual, July 1901.	Variation of actual from normal, July 1901.
	"	"	%	
Burma Coast and Bay Islands.	·906	+·007	87	0
Bengal and Orissa	·959	+·007	85	−2
Gangetic Plain and Chota Nagpur.	·898	−·012	77	−6
Upper Sub-Himalayas	·811	−·046	68	−5
Indus Valley and North-West Rajputana.	·844	+·020	59	−2
East Rajputana, Central India and Gujarat.	·784	−·050	62	−12
Deccan	·741	+·014	78	0
West Coast	·871	+·002	85	−2
South India	·671	+·010	73	0

Cloud.—The cloud amount, on the mean of the month, was less than usual over a large area including the

Bombay Coast, part of the Bombay Deccan, the greater part of the Central Provinces and the whole of North-West India. The variations in the cloud amount over this large area were generally small, but at Kurrachee (—2·5) the deficiency was large and at Roorkee (—1·4), at Ludhiana (—1·4), at Simla (—1·5) and at Lahore (—1·2) it was considerable. On the Arakan coast and over South-East Bengal the cloud amount was normal or in slight defect, but in all other parts of India the sky was more cloudy than usual. The maximum cloudiness, relatively to the normal, was reported from Mysore and parts of Madras where Bangalore reported a variation of +2·3, Salem of +1·2, Wellington of +1·1, and Bellary of +1·0.

The following table gives variation data for nine meteorological provinces:—

Meteorological Province.	Mean cloud amount.	
	Average actual, July 1901.	Variation of actual from normal, July 1901.
Burma Coast and Bay Islands	8·7	+0·3
Bengal and Orissa	8·4	+0·2
Gangetic Plain and Chota Nagpur	7·7	—0·1
Upper Sub-Himalayas	5·1	—1·1
Indus Valley and North-West Rajputana	2·7	—1·3
East Rajputana, Central India and Gujarat	6·9	—0·9
Deccan	8·8	+0·4
West Coast	8·5	0
South India	8·9	+0·9

Rainfall.—The rainfall of the month of July was irregularly distributed. Rain did not extend properly over the country during the first week but was confined to the West Coast as far north as Bombay, to Burma and to North-East India, the whole of the interior of the country, with the exception of a few scattered showers, having been almost rainless. About the 8th slight cyclonic storms or whirls appeared in different parts of Northern India and a sudden extension of rainfall occurred. Fairly general rain prevailed from the 8th to the 12th, but after the latter date a break in the rains set in and continued up to the 16th or 17th during which period rain was again confined to the West Coast, to Burma and to North-East India, the whole of the central and north-western districts of the country having been practically rainless. Between the 17th and the end of the month a series of very shallow and diffused depressions passed from the Bay into North West India and during that time rain fell daily over a large part of Northern India. The amounts were not, however, generally heavy, so that the deficiency due to the delay in the full establishment of the rains and to the partial break between the 12th and the 17th was not obliterated by the more general rainfall between the 18th and the close of the month. It was only in Orissa, part of the East Coast, the central and submontane districts of the Punjab, Baluchistan, Malabar, Mysore and the Konkan that the total rainfall of the month was in any excess, but though in other parts of the country the total rainfall was short of the normal the deficiency was not generally large or important and in the majority of cases was less than —20%. The area of greatest defect of rainfall included a large part of Northern India where the deficiency ranged from —24% in the Assam hills to —54% in Kathiawar and Cutch.

The following table gives the rainfall data of the month for the eleven meteorological provinces:—

Meteorological Province.	Rainfall.			
	Mean *actual* for *July* 1901.	Mean normal for July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	"	"	"	
Burma Coast and Bay Islands	30·13	31·57	+1·20*	+ 4
Burma Inland	6·60	8·15	—1·55	—19
Assam	13·14	17·46	—3·27*	—19
Bengal and Orissa	11·27	14·65	—3·38	—23
Gangetic Plain and Chota Nagpur	8·64	12·37	—3·89*	—31
Upper Sub-Himalayas	9·19	11·49	—2·22*	—19
Indus Valley and North-West Rajputana.	1·64	2·86	—1·23	—43
East Rajputana, Central India and Gujarat.	5·76	10·64	—6·33*	—59
Deccan	8·77	11·02	—2·19*	—20
West Coast	24·54	28·96	—4·42	—15
South India	2·45	3·44	—0·89*	—26

* A reference to Table I will show that the means in columns 2 and 3 are derived from a smaller number of stations than the means in the first column. The sum of the figures in columns 2 and 3 will therefore not agree with the figures in column 1.

Atmospheric Pressure.

The mean pressure of the Indian land area averaged c·014" below the normal

Compared with this general condition pressure was in local defect over the West and South Punjab, Upper Sind,

Northern Rajputana, the Gangetic Plain, Central India East and South-West Bengal, Orissa, Ganjam, Arakan, Lower Burma and Tenasserim or within a broad band stretching from Tenasserim across the Bay west-north-westward as far as the Upper Indus Valley. The deficiency was slight in most parts of this band and was more than 0·02″ only at the following three stations:—

STATION.	Variation from normal of mean 8 A.M. pressure of July 1901.	Pressure anomaly, July 1901.
	″	″
Bikaner	—·041	—·027
Diamond Island	—·037	—·023
Rangoon	—·035	—·021

There were likewise small areas of trifling deficiency over Mysore and part of Malabar and over the Madras Deccan. In these two cases the variations were very small. In all other parts of the Indian land area the mean pressure was in local excess. In the case of the excess also the variations were generally small, but over Lower Sind, Gujarat and the south-west and east of Rajputana the excess amounted to 0·02″ or more. This is shown below:—

PROVINCE OR DIVISION.	STATION.	Variation from normal of mean 8 A.M. pressure of July 1901.	Pressure anomaly, July 1901.
		″	″
LOWER SIND	Hyderabad	+·014	+·028
	Kurrachee	+·007	+·021
GUJARAT	Bhuj	+·009	+·023
	Veraval	+·009	+·023
RAJPUTANA	Sambhar	+·013	+·027
	Deesa	+·010	+·024

In addition over the west of Central India as represented by the station of Indore there was a local excess of over 0·02″. The following gives data for this station:—

STATION.	Variation from normal of mean 8 A.M. pressure of July 1901.	Pressure anomaly, July 1901.
	″	″
Indore	+·012	+·026

The excess of pressure over Sind and Gujarat has been a marked abnormal feature of the pressure distribution during the past two months.

The general pressure distribution of the month, apart from this one abnormal feature, was hence approximately normal in all parts of the country. Pressure was highest (Pl. I) over Malabar, South Ceylon and the south and south-east of the Bay, and was lowest over the western desert, while a well marked trough of low pressure extended from the South-East Punjab south-eastward down the Gangetic Plain as far as Chota Nagpur, and the only marked abnormal feature was, as mentioned above, the slight excess over Gujarat, Sind and the adjoining parts of Rajputana and Central India, a feature which was equally pronounced in July of 1900.

The pressure, on the mean of the month, was in excess at all the hill stations in Baluchistan and the Himalayas, the excess having been most marked at the high level station of Leh. At the other hill stations, in Central and Southern India, on the contrary, the mean pressure was in defect. The vertical pressure anomalies of the month were consequently positive in the case of the northern hill districts and negative in the case of the central and southern hill districts. This is shown below:—

HILL STATION.	Variation from normal pressure, July 1901.	PLAIN STATION.	Variation from normal pressure, July 1901.	Vertical pressure anomaly (Hill—Plain).
	″		″	″
Quetta	+·015	Jacobabad	—·015	+·030
Leh	+·038	Lahore	—·011	+·049
Murree	+·009	Peshawar	—·006	+·015
Simla	+·020	Ludhiana	—·015	+·035
Chakrata	+·022	Roorkee	—·016	+·038
Ranikhet	+·009	Bareilly	—·009	+·018
Darjeeling	+·021	Dhubri	—·019	+·040
Pachmarhi	—·004	Hoshangabad	+·005	—·009
Mount Abu	—·021	Deesa	+·010	—·031
Wellington	—·020	Coimbatore	—·008	—·012

Barometric depressions and cyclonic storms of the month.

At the commencement of the month, *i.e.*, from the 1st to the 6th a well marked break in the rains obtained over Northern India. Temperature throughout the period was in considerable to very large excess, while pressure was in

defect of the normal, more particularly along the foot of the hills. Dry westerly winds obtained over nearly the whole of the Gangetic Plain.

The weather during this period was fine and clear over the interior and north-west of the country, while it was showery in Burma, Bengal and the Peninsula. On the 6th a change began to appear, the barometer was falling practically in all parts of the country and on the 7th a depression had appeared at the head of the Bay.

Depression and cyclonic storm of the 6th to the 11th.—On July 6th the barometer was falling over Burma, Bengal and the Bay area. The winds were somewhat more south-easterly than usual, but the rainfall was not heavy or general. Over the Bay strong squally south-west winds prevailed up to Lat. 20° N, to the north of which the wind's direction drew into south-east while the force fell light.

July 7th.—On the 7th the barometer was still falling slightly over the head of the Bay and rain had become more general. A shallow depression lay over Deltaic Bengal with its centre near Calcutta and cyclonic winds were reported over a large part of Bengal. The following gives data for the storm area:—

STATION.	PRESSURE.			WIND.		CLOUD.	RAINFALL.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				"	
Cuttack	29·425	+·001	—·137	Calm	2	8	0·71	
False Point	·409	—·008	—·160	W	9	9	0·63	
Balasore	·404	—·024	—·134	WSW	3	8	0·05	
Saugor Island	·382	—·036	—·169	W	14	10	1·13	Thunder.
Calcutta	·396	—·022	—·158	Calm	3	8	0·04	
Barisal	·421	—·040	—·156	S	5	10	0·55	Showery.
Jessore	·404	—·045	—·166	Calm	3	6	...	
Midnapore	·400	—·030	—·156	NW	3	4	0·11	
Burdwan	·404	—·024	—·145	ENE	3	8	0·96	Thunder-storm.
Krishnagar	·408	—·020	...	NE	4	6	0·20	

Over the Bay there were no changes of importance. Normal south-westerly winds with rainy squally weather prevailed over the north of the Bay. The following gives marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S. S. *Goa*	17 00	92 44	29·506	SSW	6	High sea. Noon occasional squalls.
S. S. *Pongola*	18 22	87 01	·468	SW	4	4 A.M. occasional heavy rain.
S. S. *Haidari*	18 24	86 22	·445	NW	5	Head sea and rain at intervals.
S. S. *Chelydra*	18 54	89 30	·482	SW	5	4 A.M. squally and rainy.
S. S. *Pundua*	19 15	90 11	·545	SW	6	Rough sea. 4 A.M. heavy rain squalls.
S. S. *Purulia*	19 20	90 00	·432	SW	5	High sea and heavy squalls of wind and rain.
S. S. *Kerbela*	19 35	85 42*	·696	SW	4	Heavy south-west swell and overcast.
S. S. *Kistna*	Akyab		·583	...	...	4 P.M. cloudy.
S. S. *City of Bombay.*	Saugor Island*		...	SW	5	Moderate sea and overcast.
S. S. *Shahzada*	Chittagong		·453	...	...	4 A.M. squally.
S. S. *Kapurthala*	Calcutta		·447	...	...	4 P.M. light rain.
S. S. *Madura*	Calcutta		·356	...	...	,, frequent heavy rain squalls.

* Noon position.

July 8th.—Pressure had increased slightly but the depression over Bengal had increased in size and extended from the head of the Bay north-westward as far as the east of the North-Western Provinces. An irregular cyclonic circulation of the winds continued and rain was falling generally over Bengal. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE.			WIND.		CLOUD.	RAINFALL.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				"	
False Point	29·439	+·030	—·120	WSW	11	10	0·13	Drizzling.
Balasore	·449	+·045	...	Calm	1	9	1·08	Drizzling.
Saugor Island	·416	+·034	—·127	WNW	7	9	0·11	Sea smooth.
Barisal	·469	+·048	—·102	SSE	5	4	0·15	
Calcutta	·424	+·028	—·123	SSW	2	8	0·34	Showery.
Jessore	·449	+·045	—·115	Calm	2	8	2·30	Continuous rain.
Midnapore	·433	+·033	—·117	Calm	2	10	0·46	Drizzling rain.
Burdwan	·430	+·026	—·112	SE	3	10	0·15	Showery.
Berhampore	·433	+·020	—·120	Calm	0	10	0·32	Showery.
Bankura	·388	+·017	...	W	3	10	0·15	
Raniganj	·395	+·009	...	Calm	1	6	0·18	Passing showers.

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				"	
Hazaribagh	29·439	+·008	—·099	N	10	10	0·77	Showery.
Ranchi .	·438	+·019	—·090	WNW	5	10	0·12	
Chaibassa .	·425	+·025	—·116	WSW	2	9	3·20	Drizzling.
Rampur Boalia.	·439	+·027	—·112	SE	2	4	0·54	
Patna .	·447	+·042	—·087	ENE	4	10	1·24	Showery.
Gaya .	·442	+·021	—·086	NE	5	10	0·50	Showery.
Daltonganj	·456	+·026	...	SW	4	7	0·30	
Benares .	·450	+·026	—·057	ESE	3	9	...	
Buxar .	·443	+·036	—·071	E	4	8	0·08	Showery.
Arrah .	·443	+·035	...	W	2	4	...	
Allahabad .	·450	+·066	—·055	ENE	8	9	...	

There was nothing of importance in progress over the Bay where moderate to strong south-west to south-east monsoon winds were reported with rain over the centre of the Bay. The following gives marine data for this day :—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force	WEATHER.
	° ′	° ′	"			
S.S. *Borneo* .	6 12	86 04	29·553	WSW	5 to 6	Overcast. 8 P.M. light rain.
S.S. *Haidari* .	16 35	84 51	·505	W	6	Heavy sea, 4 A.M. squally.
S.S. *Monsoori* .	17 52	90 35	·451	SSW	4	Severe rain squalls.
S.S. *Madura* .	19 21	89 39	·320	SSW	4	Light rain.
S.S. *Shahzada* .	20 13	92 03	·515	SSE	4	4 P.M. squally with rain.
S.S. *Kapurthala* .	21 11	90 08	·397	SW	4	4 A.M. light rain.
S.S. *Pongola* .	Saugor Island*		...	Var.	...	Rainy.
S.S. *Kistna* .	Chittagong		·517	...	...	4 A.M. cloudy.

* Noon position.

July 9th.—The barometer had continued to rise over North-East India and the depression had partly filled up without changing its position to any important extent. Rain had fallen off somewhat over Bengal. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				"	
Midnapore .	29·440	+·007	—·105	NE	2	4	0·10	
Calcutta .	·452	+·028	—·091	E	3	10	0·01	
Burdwan .	·445	+·015	—·095	ENE	3	8	...	
Saugor Island.	·449	+·033	—·089	NE	10	10	1·34	Raining.
Bankura .	·415	+·027	...	NE	4	9	0·52	Thunderstorm
Raniganj .	·445	+·050	...	E	3	7	0·11	
Chaibassa .	·422	—·003	...	SSW	2	9	0·36	Showery.
Ranchi .	·430	—·008	—·096	E	7	10	0·66	Showery.
Hazaribagh	·449	+·010	—·093	E	10	10	0·30	Showery.
Naya Dumka	·465	+·052	—·069	E	3	10	0·75	
Gaya	·432	—·010	—·102	NE	7	7	0·30	Showery.
Dehri .	·438	—·003	—·077	E	11	9	0·03	
Daltonganj	·422	—·034	...	N	4	6	0·75	
Benares .	·447	—·003	—·058	ENE	2	9	0·34	
Buxar .	·458	+·015	—·054	E	5	8	0·13	Showery.

Strong to light south-west monsoon winds prevailed over the Bay with squally rainy weather. It will have been noticed in the preceding table that the wind was strong from north-east at Saugor Island with moderate rain, but the winds over the Bay exhibited no cyclonic movements so that the north-east wind in question was probably local and due to a small squall over the extreme north of the Bay. The following gives the marine data for this day :—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Darius* .	16 45	86 14	29·565	WSW	4	4 P.M. showery.
S.S. *Kerbela* .	17 59	83 43*	·712	SW	5	South-west swell.
S.S. *Bavaria* .	18 26	86 52	·568	SW	4	4 P.M. showery.
S.S. *Vadala* .	18 41	86 17*	·404	SW	4	8 P.M. overcast.
S.S. *Shahjehan*.	19 10	89 31	·463	SW	3	Dull overcast.
S.S. *Rajput* .	19 35	86 05*	·425	SW	5	Rough head sea and rain showers.
S.S *Borneo* .	20 09	87 51	·465	WSW	4	Fine.
S S. *Monsoori* .	20 17	88 22	·451	SW by W	2	Do.
S.S. *Itaura* .	20 30	88 02*	·424	SW	4	Rough sea and squally 8 P.M. incessant rain squalls.
S.S. *Kistna* .	21 34	91 07	·518	S by E	4	Fine.
S.S. *Islanda* .	Kulpee		·527	...	...	4 P.M. overcast.

* Noon position.

July 10th.—The shallow depression noticed over West and South-West Bengal on the two preceding days had advanced north-westward and lay over the east of the North-Western Provinces where pressure was in moderate to considerable defect. The winds were feebly cyclonic in the neighbourhood of the depression and general moderate rain was falling over Northern India. The following gives 8 A.M. data for the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours			
	"	"	"				"	
Benares	29·437	—·010	—·067	ESE	5	10	0·34	
Sutna	·439	—·017	—·081	WNW	5	10	1·04	Raining.
Allahabad	·423	—·035	—·080	E	8	10	1·57	
Lucknow	·479	—·001	—·029	E	5	10	0·41	Raining.
Cawnpore	·464	—·027	—·037	NE	5	10	0·93	Drizzling.
Bahraich	·497	—·009	—·043	E	6	6	...	
Dehri	·450	+·012	—·062	E	23	6	...	
Mainpuri	·484	0	—·032	Calm	1	10	0·98	
Buxar	·460	+·002	—·051	E	10	7	0·04	
Bareilly	·504	—·006	—·001	NE	3	5	0·20	Showery.
Agra	·493	+·013	—·010	NE	5	10	0·09	
Gorakhpur	·502	+·007	—·010	ENE	5	9	...	

Over the Bay pressure had increased briskly and normal monsoon conditions prevailed.

July 11th.—The depression had apparently passed on to the neighbourhood of Bareilly and Mainpuri after causing heavy rain over a large part of the North-Western Provinces but the storm had almost filled up and was no longer of any consequence.

On the 8th in addition to the storm described above two other depressions were shown over the Indian area. The first lay over Lower Sind where pressure was in large defect. This storm had been accompanied with a considerable increase in the force of the wind over Gujarat and with the first heavy burst of rain of the season over that area. The following were some of the more important falls of rain in Gujarat at this time :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 8th July 1901.
		"
Broach	Broach	5·82
Broach	Jambusar	4·60
Broach	Hansot	3·76
Surat	Balsar	3·60
Broach	Vagra	3·46
Broach	Ankleshvar	3·11
Surat Agency	achin	2·63
Ahmedabad	Modasa	2·28
Surat	Rander	2·23
Surat Agency	Dharampur	2·20
Kaira	Nadiad	2·10
Broach	Amod	2·09

The storm apparently advanced north-eastward into the western desert where it filled up. The second depression lay over the South Punjab. The depression was only slight but determined a considerable fall of rain to the Punjab and Rajputana. It filled up on the following day, the 9th.

Depression of July 15th to 18th in Bengal and the north of the Bay.—On the 15th the barometer was rising on the Arakan coast and was falling over the north and west of the Bay and pressure was becoming uniform over the north of the Bay. The winds were irregular round the north coast of the Bay but were not distinctly cyclonic at 8 A.M. The following gives data for the stations around the north of the Bay for 8 A.M. :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				"	
Waltair	29·558	—·034	—·012	W	10	10	...	Sea smooth.
Copalpur	·501	—·038	—·044	SW	10	8	0·17	Wind variable.
Puri	·523	—·003	...	WSW	11	10	0·10	Sea smooth.
Cuttack	·497	—·035	—·031	Calm	5	10	...	
False Point	·499	—·032	—·042	WNW	10	10	0·53	Showery.
Balasore	·482	—·050	—·028	NNW	3	10	0·55	
Saugor Island.	·486	0	—·039	W	18	10	2·97	Sea rough.
Calcutta	·461	—·026	—·072	WSW	7	10	0·30	Showery.
Barisal	·453	—·010	—·107	SSE	2	5	0·05	
Chittagong	·486	+·023	—·125	SE	7	10	0·32	
Akyab	·563	+·053	—·078	S	3	10	1·43	Showery.
Bassein	·634	—·001	—·068	SSW	5	8	1·42	
Diamond Island.	·613	—·032	—·097	SSW	10	9	1·79	

For the Bay there was very little information but the *Kasara* in Lat. 21° 48′ N. and Long. 91° 40′ E. reported an easterly wind and continuous rain and the *Clan Ronald* in Lat. 21° 11′ N. and Long. 87° 45′ E. reported a north-north-west wind with squalls, rain, thunder and lightning, so that incipient cyclonic conditions were already present at the head of the Bay. The following gives marine data for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Nurani* .	17 49	90 59	29·560	SW	2	Cloudy, 8 P.M. rainy.
S.S. *Shahzada* .	18 13	93 07	·557	WSW	4	Overcast.
S.S. *Hochheimer*.	18 36	85 07	·613	WSW	4	
S.S. *Clan Ronald*	21 11	87 45	·462	NNW	...	4 A.M. heavy rain squalls with thunder and lightning.
S.S. *Kistna* .	21 24	90 51	·452	SW	2	Moderate sea and cloudy.
S.S. *Kasara* .	21 48	91 40	·336	E	4	Continuous rain.
S.S. *Itola* .	Calcutta		·380	...	...	Noon fine.
S.S. *Malda* .	Calcutta		·512	...	...	Cloudy.

July 16th.—Pressure had increased briskly over Upper Burma and part of Bengal and had fallen slightly over Orissa and South-West Bengal. A shallow depression lay over the north-west of the Bay, Orissa and West Bengal. The winds within the depression exhibited very irregular directions and there was apparently no well defined centre. The following gives 8 A.M. data for the storm area:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				″	
Gopalpur .	29·497	—·004	—·045	WSW	7	8	0·02	
Puri . .	·472	—·051	...	SW	9	10	0·89	Drizzling rain.
Cuttack .	·462	—·035	—·067	Calm	2	10	1·02	Raining.
False Point.	·478	—·021	—·060	SW	10	10	0·09	Drizzling.
Balasore .	·477	—·005	...	NNE	2	5	0·04	Showery.
Saugor Island	·465	—·021	—·053	ESE	9	8	0·05	Sea slight.

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				″	
Calcutta .	29·483	+·022	—·045	ENE	4	8	0·88	Showery.
Midnapore	·476	+·027	—·053	NE	2	4	0·10	
Chaibassa .	·458	—·027	—·060	E	2	9	0·34	Showery.
Ranchi .	·481	—·039	—·043	NE	7	10	0·32	Showery.
Burdwan .	·493	+·031	—·037	SE	2	10	0·37	Showery.
Bankura .	45 2	+·018	...	NE	1	5	0·09	
Raniganj .	·471	+·029	...	N	2	5	1·38	Showery.
Hazaribagh	·499	—·013	—·037	ENE	12	10	0·13	Showery.
Gaya .	·489	—·005	—·033	N W	5	9	0·26	Showery.
Dehri .	·510	+·019	—·004	ENE	5	8	0·02	
Daltonganj .	·497	—·044	...	Calm	3	4	0·83	

The ships' observations showed normal monsoon winds up to about Lat. 21° N. but to the northward in the extreme north-west angle of the Bay the directions were very variable. The following gives the marine data available for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Malda* .	19 06	89 59	29·529	SSW	4	8 P.M. squally with rain.
S.S. *City of Venus*	19 27	87 24	·493	WSW	4	Moderate sea and showery.
S.S. *Hochheimer*.	Eastern channel*		...	W	2	
S.S. *Itola* . .	Intermediate*		·376	SW	4	Fine. Noon light rain squalls.
S.S. *Nurani* .	Upper Gasper*		·475	NNW	2	Fine.
S.S. *Shahzada* .	21 38	91 42	·584	Var	2	Passing clouds.
S.S. *Kasara* .	Chittagong		·473	...	...	Noon fine.
S.S. *Purulia* .	Calcutta		·485	...	...	Noon cloudy.

* Noon position.

July 17.—The shallow depression which was crossing the Orissa coast on the 16th had advanced in a westerly direction and was shown over Ganjam and the east of the Central Provinces. It had not changed in intensity since the preceding day and was still a shallow and comparatively unimportant depression. Westerly winds from the Arabian Sea were, however, feeding into the storm and

rain had commenced over the Central Provinces. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				"	
Gopalpur .	29·495	—·002	—·045	N	4	6	0·03	
Puri . .	·510	+·038	...	Calm	14	6	...	Sea rough.
Cuttack .	·534	+·072	+·006	Calm	3	10	1·93	Raining.
False Point.	·529	+·051	—·011	S	8	8	0·08	Showery.
Sambalpur .	·484	—·022	—·032	S	4	6	1·70	
Raipur .	·487	—·088	—·055	NNE	2	10	0·27	
Seoni .	·502	—·099	—·048	WNW	5	8	0·47	
Jubbulpore.	·513	—·040	—·027	W	5	7	1·54	Showery.

Over the Bay the barometer had risen briskly and moderate to strong winds prevailed but were somewhat more southerly than usual in direction. The following gives marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S.S. *Yanariva* .	17 03	84 46	29·483	W	4	Dull, cloudy.
S.S. *Goa* . .	18 15	91 24	·604	SW	2	8 P.M. passing squalls.
S.S. *Itola* .	18 44	90 19	·497	S by E	4	South-west swell and cloudy midnight heavy rain.
S.S. *Madura* .	19 13	90 21	·509	SW	2	Slight swell and fine.
S.S. *Kangra* .	19 22	85 08*	·447	SW	4	Moderate swell and light showers.
S.S. *Purulia* .	19 56	89 06	·565		4	Moderate sea and fine. 4 P.M. cloudy.
S.S. *Kasara* .	Diamond Harbour*		·490	Var.	1	Fine.
S.S. *Kistna* .	Chittagong		·653	...	...	4 P.M. fine.
S.S. *Shahzada* .	"		·676	...	...	4 P.M. fine and clear.

* Noon position.

July 18th.—The depression had apparently advanced west-north-westward to the neighbourhood of Sutna and Nowgong but had almost filled up and was no longer of any importance. A small residual disturbance, however, passed through the North-Western Provinces on the following day, the 19th, and then disappeared.

After the disappearance of this depression the barometer fell and became low over Bengal and the Gangetic Plain. Within this low pressure area a depression formed during the 21st and was shown as a well defined but shallow disturbance over West Bengal and the east of the North-Western Provinces on the 22nd. The winds were irregular and the depression had apparently no distinct centre but it was accompanied with general and moderately heavy rain all over Central and North-East India. During the 24 hours between 8 A.M. on the 22nd and 8 A.M. on the 23rd the depression moved north-westward into the North-Western Provinces whence it extended slowly southward into the Central Provinces where it filled up on the 26th. The storm was shallow throughout its existence but was accompanied with heavy rain both in the North-West and Central Provinces. The following were a few of the more important amounts:—

	DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
				"
North-Western Provinces.	Hardoi . . .	Sandila . .	21st July .	6·65
	Gorakhpur . .	Maharajganj .	" " .	4·81
	Hardoi . . .	Bilgram . .	" " .	4·32
	Shahjahanpur .	Pawayan . .	" " .	4·12
	Almora . . .	Tanakpur . .	22nd " .	6·00
	Gorakhpur .	Bansgaon . .	" " .	4·60
	Almora . . .	Champawat .	" " .	3·18
Central Provinces.	Hoshangabad . .	Pachmarhi . .	" " .	4·50
	Balaghat . .	Lanji . . .	" " .	4·08
	Mandla . . .	Tikaria . .	" " .	3·86
	Bilaspur . . .	Korba . . .	" " .	3·78
	Seoni . . .	Lakhnadon . .	23rd " .	4·12
	Saugor . . .	Rehli . . .	" " .	3·53
	Do. . . .	Saugor . .	" " .	3·49
North-Western Provinces.	Unao . . .	Mohan . .	" " .	5·25
	Lucknow . . .	Malihabad . .	" " .	4·75
	Rae Bareli . .	Diregbijaiganj .	" " .	3·22
	Almora . . .	Tanakpur . .	24th " .	4·00
	Dehra Dun . .	Mussooree . .	" " .	3·35
Central Provinces.	Nagpur . . .	Katol . . .	" " .	4·10
	Hoshangabad . .	Sohagpur . .	" " .	3·25
	Do. . .	Seoni . . .	25th " .	3·31
North-Western Provinces.	Hamirpur . .	Mandaha . .	" " .	4·82
	Dehra Dun . .	Ambari . .	" " .	4·50
	Do. . .	Rajpur . .	" " .	4·25
	Garhwal . . .	Okhimath . .	" " .	3·31
	Banda . . .	Karwi . . .	" " .	3·16
Central Provinces.	Nimar . . .	Harsud . .	26th " .	4·19
	Chanda . . .	Brahmapuri .	" " .	2·55

Depression and cyclonic storm of the 23rd to the 30th July.—On the 23rd pressure was giving way over the Bay but the winds were blowing from the normal directions and there was no evidence of cyclonic actions over the Bay.

July 24th.—Pressure had continued to decrease slowly over the Bay while it had increased briskly over Northern India. A shallow low pressure area was shown over the Bay apparently off the Orissa and Ganjam coasts but the disturbance was exceedingly slight and beyond drawing the wind into the eastward at Saugor Island and into north-west at Waltair had very little effect on the weather. The following gives 8 A.M. data for the coast ports of the Bay :—

STATION.	PRESSURE.			WIND.			RAINFALL.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.		
	"	"	"				"	
Masulipatam	29·647	—·007	—·007	WNW	10	9	0·04	Thunder.
Cocanada .	·598	—·015	—·014	WSW	7	4	...	
Waltair .	·551	—·015	—·035	NW	13	7	0·32	Sea smooth.
Gopalpur .	·529	+·004	+·003	SSW	11	8	...	
Puri . .	·540	+·020	...	Calm	10	9	...	
Cuttack .	·540	+·016	+·008	Calm	2	6	...	
False Point	·542	0	+·002	S	7	8	...	
Balasore .	·564	+·041	+·058	SE	4	8	...	
Saugor Island	·574	+·047	+·054	ESE	12	10	0·14	Drizzling rain.
Calcutta .	·589	+·059	+·067	ESE	4	8	0·05	
Barisal .	·627	+·064	+·083	NNE	4	4	0·82	Showery.
Chittagong .	·645	+·047	+·041	ENE	8	5	...	
Akyab .	·652	—·001	+·004	E	2	7	0·83	
Bassein .	·675	—·018	—·037	S	2	8	0·02	
Diamond Island.	·665	—·037	—·058	SW	5	9	0·34	

Moderate to strong south-west winds prevailed over the Bay as far north as Latitude 21° N, but to the north of that latitude the wind drew into south-east. The following gives marine data for this day :—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S.S. *Florican* .	17 59	83 51	29·532	SW	4	Fine.
S.S. *Chilka* .	18 06	91 40	·614	WSW	4	Do.
S.S. *Vortigern* .	18 10	85 31	30·003	SW	5	Cloudy.
S.S. *Onipenta* .	18 32	85 25	29·550	SW	4	Fine. 4 P.M. drizzling rain.
S.S. *Malda* .	19 06	90 10	·608	Var.	1	Heavy rain.
S.S. *Virawa* .	19 11	87 15	·507	SW	2	Cloudy.
S.S. *Goa* . .	19 22	90 29	·528	Var.	4	Heavy rain.
S.S. *Labuan* .	19 32	86 34	...	SW	4	Fine.
S.S. *Ethiopia* .	20 57	88 57	·666	SW	4	Do.
S.S. *City of Athens*	Saugor Island.*		...	S	1	Do.
S.S. *Nadir* . .	Saugor Island.		·547	...	...	4 A.M. passing clouds.
S.S. *Kasara* .	21 30	91 37	·533	SE	4	Fine.
S.S. *Kapurthala*.	Hooghly river.		533	SE	2	Do.

* Noon position.

July 25th.—The barometer continued to fall over the greater part of the Bay and the depression over the Bay was little changed though it was apparently concentrating somewhat. The depression was of very slight intensity and the air movement feeble, but the concentration of the disturbance was having a marked effect on the wind directions which were becoming more distinctly cyclonic. The following gives 8 A.M. data for the coast stations of the Bay :—

STATION.	PRESSURE.			WIND.			RAINFALL.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.		
	"	"	"				"	
Masulipatam	29·613	—·034	—·042	NW	9	10	0·62	Thunderstorm.
Cocanada .	·585	—·013	—·030	NW	8	10	0·52	Raining.
Waltair .	·532	—·019	—·056	Calm	6	10	...	Sea smooth.
Gopalpur .	·551	+·022	?	NNE	7	8	0·27	Drizzling rain.
Puri . .	·550	+·010	...	NE	4	4	...	Sea smooth.
Cuttack .	·563	+·023	+·029	E	1	5	0·03	
False Point	·566	+·024	+·024	E	5	8	0·42	Showery.
Balasore .	·587	+·023	+·080	ENE	2	7	0·18	Do.
Saugor Island	·590	+·016	+·069	ESE	9	7	0·95	Sea slight.
Calcutta .	·611	+·022	+·088	E	3	4	0·39	Showery.
Barisal .	·598	—·029	+·055	NNE	2	3	...	
Chittagong .	·595	—·050	—·007	NNW	4	6	...	

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				"	
Akyab .	29·600	—·052	—·046	E	2	6	...	
Bassein .	·626	—·049	—·085	S	3	9	0·54	
Diamond Island.	·635	—·030	—·087	Calm	6	10	2·11	Showery.

The ships' observations showed that a marked change had occurred in the winds over the Bay. The winds were still generally feeble but the directions had changed considerably. They were westerly across the centre of the Bay and variable or easterly in the north, thus showing the circulation around the depression area over the centre of the Bay. This is shown by the following marine data :—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	"			
S.S. *Onipenta* .	16 01	83 35	29·510	W	5	4 P.M. rain squall at times.
S.S. *Nawab* .	16 08	91 47	·577	W by S	5	Noon heavy rain.
S.S. *Haddon Hall*	16 15	86 03	...	WNW	5	Rough sea and heavy rain.
S.S. *Maharani* .	18 25	91 01	·501	WNW	2	Fine.
S.S. *Ehrenfels* .	18 31	85 54	·594	ENE	2	
S.S. *Arabia* .	18 44	87 08	·488	NE	2	Fine. 4 A.M. cloudy.
S.S *MountOswald*	18 46	87 21*	...	SSE	4	Fine; noon occasional rain squalls.
S.S. *Virawa* .	19 35	87 00	·477	SE	2	Fine.
S.S. *Chilka* .	19 57	87 18	·571	NE	2	Fine.
S.S. *Orissa* .	False Point.		·533	...	...	4 A.M. cloudy.
S.S. *Kasara* .	Akyab.		·563	...	...	Do.
S.S. *Vortigern* .	20 36	87 41	30·023	E	4	Squally.
S.S. *Shahsada* .	Budge Budge*		29·573	...	...	Noon fine.

* Noon position.

July 26th.—The barometer had fallen over the north of the Bay and North-East India and the depression over the Bay was advancing northward up the Bay towards the Orissa coast. The depression was of the same intensity as on the preceding day. The following gives the 8 A.M. observations recorded at the coast stations :—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				"	
Cocanada .	29·584	—·001	—·037	WSW	9	10	0·06	Sea smooth.
Waltair .	·550	+·018	—·046	W	5	10	0·22	Sea smooth
Gopalpur .	·522	—·029	—·010	N	10	10	0·45	Wind variable.
Puri . .	·521	—·029	...	NE	13	4	0·16	
Cuttack .	·536	—·027	—·004	ENE	2	8	0·07	
False Point.	·524	—·042	—·022	E	10	8	...	
Balasore .	·539	—·048	+·028	Calm	3	6	...	
Saugor Island.	·544	—·046	+·019	ENE	9	8	...	Sea smooth.
Calcutta .	·560	—·051	+·034	Calm	2	7	2 03	Showery.
Barisal .	·557	—·041	+·069	Calm	2	4	0·36	
Chittagong.	·566	—·029	—·041	SE	4	9	0·30	Thunder.
Akyab .	·580	—·020	—·071	E	2	7	0·08	
Bassein .	·660	+·034	—·053	Calm	3	10	1·12	Raining.
Diamond Island.	·633	—·002	—·091	SW	12	10	3·66	Continuous rain.

The observations recorded on board ships in the Bay showed that the depression had advanced northward up the Bay and that the winds had undergone the usual changes accompanying this alteration in the pressure conditions. The wind was south-westerly as far north as Lat. 17° N. in the west of the Bay and as far north as Lat. 18°30′ N. in the east of the Bay, while to the north of those latitudes south-easterly and north-easterly winds were reported. The weather was squally and showery. The following gives the marine data for this day :—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	"			
S.S. *Kangra* .	Masulipatam		29·562	W by S	4	Light rain, midnight squally with passing showers.
S.S. *Warora* .	16 34	86 50	·534	SW	4	Overcast. Noon heavy rain.
S.S. *Mount Oswald.*	16 58	86 40	...	SW	5	Squally and showery, 4 A.M heavy rain squalls.
S.S. *Commilla* .	18 46	93 44	·585	SW	5	Showery.
S.S. *Nawab* .	19 00	89 41	·577	SW	3	Rainy.
S.S. *Oolobaria* .	19 08	87 26*	·521	SE	2 to 4	Frequent rain squalls.
S.S. *Fonar.* .	19 28	87 37*	·520	SE	2	Fine. Noon passing showers.

* Noon position.

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *Kasara* .	19 44	93 00	29·509	E by S	5	Fine 8 P.M. passing squalls of wind and rain.
S.S. *Shahsada* .	19 58	89 17	·574	SE	4	Fine. Noon passing rain squalls
S.S. *HaddonHall*	20 02	87 42	...	NE	4	Fine noon heavy squalls and heavy rain.
S.S. *Ehrenfels* .	Saugor	Island*	...	ESE	2	
S.S. *Virawa* .	21 40	87 56	·530	E	2	Fine.

* Noon position.

July 27th.—The barometer had again fallen over the north of the Bay and North-East India while it had risen over the south of the Peninsula and of the Bay. The depression was in about the same position as on the preceding day but had intensified slightly and was better defined. This is shown by the following table which gives 8 A.M. data for the coast ports:—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				″	
Cocanada .	29·564	—·020	—·060	WSW	10	10	0·30	
Gopalpur .	·501	—·021	...	NNW	8	8	1·25	Sea slight.
Puri . .	·497	—·024	...	N	14	8	0·21	Showery.
Cuttack .	·495	—·041	—·054	Calm	2	9	1·30	Showery.
False Point .	·473	—·051	— 084	N	9	10	0·54	Showery.
Balasore .	·496	—·043	...	NE	2	8	...	Thunder.
Saugor Island.	·499	—·045	—·037	ENE	8	7	0·24	
Calcutta .	·512	—·048	—·025	SE	2	9	0·24	Showery.
Barisal .	·536	—·021	—·021	SSE	2	4	...	
Chittagong .	·577	+·011	—·038	SE	4	5	0·38	Showery.
Akyab .	·610	+·030	—·046	S	2	10	0·55	Raining.
Bassein .	·648	—·012	—·064	S	3	9	1·03	
Diamond Island.	·643	+·010	—·081	SSW	12	10	0·84	Sea slight.

The ships' observations of this day showed that pressure had given way somewhat over the north of the Bay and had increased in the south. Barometric gradients had hence increased over the south and centre of the Bay, while the depression in the north was better defined. The following gives the scanty marine data available which apparently show that the centre of the disturbance lay in about Lat. 20°N. and Long. 88° E.

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
SS. *Kistna* .	16 12	93 25	29·613	SW	4	Cloudy, 4 P.M. squally.
S.S. *Oolobaria* .	16 33	87 10*	·488	WSW	6	High confused sea and dull rainy.
S.S. *Kasara* .	16 34	93 50	·492	S	4	S. W. Swell and passing rain squalls.
S.S. *Fonar* .	17 35	86 46	·430	W	4	4 A.M. distant squalls.
S.S. *Shahsada* .	17 58	91 47	·542	SW	5	Heavy rain squalls.
S.S. *Commilla* .	19 52	92 40	·590	SW	2	Cloudy.
S.S. *Warora* .	20 04	87 52	·442	NE	4	Occasional showers.
S.S. *Orissa* .	False Point		·461	...	...	8 P.M. Cloudy.
S.S. *Nawab* .	Diamond Harbour*		·497	NE	5	Light rain.

* Noon position.

July 28th.—Pressure had again fallen over Orissa and South-West Bengal and the centre of the storm over the Bay had apparently crossed the Orissa coast and lay between Cuttack and False Point where pressure was probably about 0·15″ below the normal. The storm was hence of only slight intensity but was occasioning a well marked cyclonic circulation of the winds around the Bay and was determining moderately heavy rain to a considerable part of the country. The following gives 8 A.M. data for the storm area:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				″	
Waltair .	29·517	—·012	—·090	W	9	10	0·28	Sea slight.
Gopalpur .	·498	—·003	...	W	7	10	1·72	Showery.
Puri .	·467	—·030	...	NW	12	10	0·52	
Cuttack .	·462	—·033	—·093	Calm	2	10	0·34	Raining.
False Point	·430	—·043	—·131	SSE	9	10	0·24	Showery.
Balasore .	·461	—·035	—·066	ENE	3	10	0·75	Drizzling.
Saugor Island	·507	+·008	—·034	E	10	10	1·26	Sea slight.

There was nothing remarkable about the conditions over the Bay where light south-west or variable winds were reported. This is shown by the following marine data for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *Purulia*	17 50	91 18	29·585	SSW	4	High sea and passing rain squalls.
S.S. *Nuddea*	18 09	91 19	·670	SW by W	4	4 A.M. occasional rain squalls.
S.S. *Orissa*	18 44	86 08	·467	Var.	2	Cloudy. Midnight light squalls.
S.S. *Yanariva*	19 11	86 10	·372	W	4	Heavy rain.
S.S *Kistna*	19 20	90 17	·550	SW	4	Fine.
S.S. *Malda*	Saugor Island		·607	...	...	Noon squally with passing showers.
S.S. *Kapurthala*	Calcutta		·577	...	...	Noon cloudy.

July 29th.—Pressure had increased over the greater part of the Indian area but particularly over the north-west angle of the Bay where the change had been between 0·15″ and 0·20″. The storm had advanced north-westward and was shown over the North-West and Central Provinces, where it was apparently filling up. The following gives 8 A.M. data for the storm area:—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				″	
Sambalpur	29·597	+·077	+·019	ESE	2	2	0·65	
Raipur	·572	+·033	+·001	SW	5	9	0·78	Showery.
Nagpur	·589	+·002	−·018	WNW	8	8	0·05	
Seoni	·586	+·014	+·002	WSW	3	8	0·09	
Jubbulpore	·572	+·006	+·002	W	0	10	0·27	Drizzling.
Saugor	·606	+·008	+·039	NNE	8	8	0·62	
Sutna	·554	+·006	+·026	E	5	10	0·54	Showery.
Nowgong	·589	+·024	+·057	WNW	3	10	2·08	Continuous rain.
Allahabad	·573	+·022	+·060	E	13	8	...	Thunder.
Cawnpore	·609	+·041	+·120	NNE	4	4	0·35	Thunder.
Benares	·593	+·038	+·079	ESE	6	3	...	
Daltonganj	·603	+·052	...	E	7	2	0·40	Showery.

The above shows that the depression was of very slight intensity and the air movement feeble. Rain, however, was fairly general around the depression. The storm during the next 24 hours continued to travel north-westward and was shown at 8 A.M. on the 30th close to Agra but the process of filling up had continued and the storm was now small and of little importance. It subsequently disappeared apparently over the North-West Himalayas.

Summary of the Reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

There was as usual very little snow during July but the following reports of snow on the higher ranges of the Himalayas have been received.

I.—Afghan Mountain Districts.

(1) *Chitral.*—On the higher hills in the neighbourhood of Chitral light snow fell on the 2nd and 5th of July.

II.—Kashmir and Punjab Himalayas.

(1) *Kashmir.*—About one foot of snow fell on the Tragbal, Burzil and other heights on the Gilgit road during July.

The observer at Gulmarg reported that on the 7th, 10th and 12th July very slight snow fell on the higher mountains in that neighbourhood.

(2) *Simla.*—The following is a statement of the snow fall over the higher mountains of Bashahr Forest:—

Kilba and Kailas Ranges.

		′	″
8th July	Buran Pass snowfall	1	6
	Rupan do.	1	0
	Kailas ghati	2	0
	Pando showara	1	0
11th July	Miru Kanda snowfall	0	1
	Pando Showara	0	6
	Rupan Pass	0	6
	Buran do.	0	6
	Kailas ghati	1	0

July 8th to 18th and 20th. 12,000 feet elevation. snowfall 2 to 6 inches.

CHINI AND PANDRABIS RANGES.

July 8th to 20th. {12,000 feet to 16,000 feet.} snowfall 4 to 6 inches.

(3) *Chamba.*—No snow fell at Kelar (8,400 feet) the head-quarters of Pangi, during July, but at a height of 14,400 feet on the Sach Pass snow fell as follows:—

	'	"
July 8th	0	3
„ 9th	1	6
„ 10th	1	0
„ 20th	1	0

The falls were rather heavier than usual.

III.—NORTH-WESTERN PROVINCES HIMALAYAS.

(1) *Almora.*—Snow fell as under:—

MALLA JOHAR.

July 10th	1
„ 11th	1
„ 12th	1
„ 19th	1
TOTAL	4

MALLA DANPUR.

No snow fell.

The snowfall was greater than in the same month last year.

(2) *Garhwal.*—Snow fell on the 12th on the perpetual snows and the passes, the depth having been about 6 inches. Snowfall in July is unusual. There was a severe storm in the Bara Hoti Pass where about 160 sheep and goats were killed and some persons injured.

Summary of Special Storm Reports.

The following gives a statement of the chief local storms of which reports were received during the month. The storms were less numerous than usual notwithstanding the delay in the establishment of the monsoon over the country, and the consequent hot weather which was experienced during the first half of the month:—

July 1st.—A heavy duststorm passed over Hoshangabad at 6-20 P.M., from south-west to north-east. The storm lasted about half an hour.

At Jubbulpore there was a thunderstorm at 8-30 P.M., which lasted for forty minutes. The storm came up from west.

„ *2nd.*—A very heavy duststorm was experienced at Hoshangabad at 6-45 P.M. The storm came up from north-east and passed to south-west. About 0·26" of rain fell.

„ *7th.*—A thunderstorm occurred at Simla at 8 P.M. lasting one hour. Heavy rain fell and the wind was strong. The storm came up from north-west.

At Gulmarg there was a moderate thunderstorm between 0-35 P.M. and 5 P.M. followed by continuous drizzling rain.

A duststorm occurred at Srinagar between 2-30 P.M. and 5 P.M., followed by severe gales.

„ *10th.*—A moderate thunderstorm was experienced at Gulmarg between 2-28 P.M. and 5 P.M.

„ *12th.*—A severe thunderstorm with hail and rain passed over Gulmarg between 1-22 P.M. and 5-30 P.M.

July 12th—A thunderstorm was experienced at Srinagar between 3-30 P.M. and 5 P.M.

„ *14th.*—A slight duststorm was felt at Srinagar between 4-30 P.M. and 7 P.M.

„ *18th.*—A duststorm accompanied with thunder, lightning and light showers of rain occurred at Srinagar between 5 P.M. and 10 P.M.

„ *19th.*—A thunderstorm occurred at Saugor between 4-20 P.M. and 5 P.M.

A slight duststorm passed over Srinagar between 6 P.M. and 10 P.M.

„ *26th.*—A violent duststorm occurred at Jacobabad between 4 P.M. and 4·20 P.M. The storm came from north-east and was followed by a few drops of rain.

„ *28th.*—A thunderstorm passed over Hoshangabad at 6-10 A.M., lasting half an hour. Heavy rain fell.

Hailstorms.—On the evening of the 16th at about 4-30 P.M., a hailstorm occurred along the Sholapur Hubli Road. The storm lasted about 15 minutes but the hailstones were small.

Earthquakes.—An earthquake occurred at Shillong at 4 A.M. on the 5th. The shock was the worst since the great earthquake of June 12th, 1897 and lasted quite one minute. Lesser shocks continued throughout the day. No damage was done.

A slight earthquake was felt at Gulmarg on the 10th at 11 P.M.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea.—The monsoon current was, so far as can be determined from the available data, stronger than usual in this area on the 6th, 7th, 12th, 14th, 16th and 26th; of normal strength on the 3rd and 5th and more or less below its normal July intensity during the rest of the month. There were also large fluctuations in its strength from day to day, thus indicating that it was much less steady than is ordinarily the case in the month of July. The current was strongest during the month on the 6th when it averaged 5·1 in force and feeblest on the 30th when its average intensity, as deduced from the data of 16 vessels, was only 3·4.

On the mean of the whole month the current in the Arabian Sea was 0·3 or 7 per cent. below its normal intensity, *viz.*, 4·6. The winds, although fairly normal in direction in the western half, blew somewhat more directly from the west than usual in the eastern half of the area.

Bay of Bengal.—The monsoon current in this area was characterized by several abnormal features of which the following were the most noteworthy:—

(1) Winds contained a strong westerly component in the centre and south-east of the Bay, thus indicating a larger determination than usual of the current eastwards to South Tenasserim and Lower Siam.

(2) The weather in the Bay was much less disturbed than usual due to the failure of the depressions of the month to develop into regular cyclonic storms.

(3) Winds were very abnormal in direction at the head of the Bay where they blew on most days from between east and south instead of from between south and west.

(4) The current was exceedingly unsteady varying considerably in strength from day to day. It was more or less above its normal strength on the 2nd, 4th to the 12th, 15th, 16th, 20th to the 23rd, 28th and 31st; of normal strength on the 3rd, 14th, 26th and 27th and weaker than usual on all other days. It was strongest on the 5th (averaging 5·3 in force) and feeblest on the 29th (averaging 3·3 in force).

On the mean of the whole month the current in the Bay was 5 per cent. stronger than usual.

From the preceding account of the weather in the Indian seas it will be seen that while the Bay of Bengal current was slightly stronger than usual, the current in the Arabian Sea was somewhat below its normal intensity. The most noteworthy feature of the marine meteorology was the failure of the depressions of the month in the Bay to develop into regular cyclonic storms.

Equatorial Belt.—Conditions were apparently normal in this area. The rainfall returns of Zanzibar show that there was much less precipitation during the month at that station than usual, thus showing that there was no abnormal diversion of the trades current to East Africa.

On the other hand the total rainfall of the month was 60 per cent. in excess of the normal at the Seychelles.

Temperature of the Air.

The variations of the mean temperature conditions of the month were determined by the abnormal distribution of the rainfall of the month. During the first week there was very little rain and the mean temperature was high over the greater part of the country but particularly over the South Gangetic Plain. Between the 8th and the 12th the rainfall became fairly general and temperature decreased and became lower than usual over a large part of the country. On the 13th rain commenced to fall off again and the mean temperature was high in most places till the 18th when general rain recommenced and except in North-West India the mean temperature was changeable, but on the whole low, until the end of the month. The rainfall was very capricious in the north-west and, as is usual under these conditions, the temperature in that area exhibited large changes from day to-day.

The mean maximum or day temperature of the month was in excess except in a few scattered localities where it was in slight defect. These areas of defect were as follows:—first the Brahmaputra Valley as shown by the stations of Dhubri and Sibsagar. The following gives data for these stations:—

STATION.	MEAN MAXIMUM TEMPERATURE		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°	°
Sibsagar	89·7	90·8	—1·1
Dhubri	86·7	87·4	—0·7

Second, the Burma Coast districts and part of Central Burma as is shown by the following stations :—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°	°
Mergui	83.3	84.2	—0.9
Tavoy	82.6	83.3	—0.7
Diamond Island	83.9	84.5	—0.6
Rangoon	84.6	85.0	—0.4
Minbu	90.8	91.1	—0.3

Third, parts of the Peninsula. The following shows the stations at which any deficiency was shown :—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°	°
Cocanada	90.0	91.2	—1.2
Hyderabad (Deccan)	85.3	86.1	—0.8
Raichur	88.8	89.6	—0.8
Masulipatam	91.7	92.1	—0.4
Goa	81.9	82.2	—0.3
Coimbatore	87.2	87.4	—0.2
Trivandrum	81.8	81.9	—0.1
Waltair	89.2	89.3	—0.1

And fourth, part of the south-east of the Punjab as represented by the station of Ludhiana. The following gives data for this station :—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°	°
Ludhiana	96.4	97.9	—1.5

With these unimportant exceptions the mean maximum temperature of the month was in excess. The excess was more than 2° in amount over part of Upper Burma, Assam and South-East Bengal as well as over a large part of North-Western and Central India including Sind, Gujarat, Rajputana, the West, South and East Punjab, the North-Western Provinces, the Central Provinces, Central India and Chota Nagpur. It was more than 5° at the stations for which comparative data are given below :—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, Jul, 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°	°
Jaipur	99.7	91.8	+7.9
Deesa	99.1	91.3	+7.8
Sambhar	99.3	91.9	+7.4
Sutna	94.2	86.8	+7.4
Jhansi	98.0	90.7	+7.3
Nowgong	96.9	90.0	+6.9
Hoshangabad	92.8	86.1	+6.7
Neemuch	93.5	86.9	+6.6
Agra	99.4	92.9	+6.5
Allahabad	97.8	91.4	+6.4
Ajmer	97.2	90.9	+6.3
Mainpuri	99.5	93.5	+6.0
Ahmedabad	96.4	90.7	+5.7
Lucknow	97.4	92.0	+5.4
Rajkot	95.3	90.1	+5.2
Benares	96.5	91.4	+5.1

The above shows that the excess was greatest and nearly 8° along a curved line which ran from Sutna, through Jhansi to Jaipur and thence south-westward to Deesa.

Excessively hot dry weather prevailed over Northern India from the 1st to the 8th, more particularly over the Gangetic Plain, and a second very warm period prevailed over North-West India from the 23rd to the 25th. Most of the absolute maxima of the month were recorded during the first hot period when the following readings exceeding 115° were registered :—

STATION.	Highest maximum temperature.	Date on which recorded.
	°	
Jacobabad	116.1	1st July.
	117.1	3rd "
	120.0	4th "
Mooltan	118.4	" "
Lahore	116.1	" "
Sialkot	115.9	" "

STATION.	Highest maximum temperature.	Date on which recorded.
	°	
Khushab	115·4	4th July.
Dera Ismail Khan	115·2	" "
Jacobabad	123·0	5th "
Mooltan	119·5	" "
Lahore	118·1	" "
Montgomery	118·0	" "
Sialkot	117·5	" "
Khushab	117·4	" "
Dera Ismail Khan	117·2	" "
Bikaner	116·9	" "
Sirsa	116·8	" "
Jaipur	116·2	" "
Peshawar	116·0	" "
Jacobabad	126·0	6th "
Montgomery	119·5	" "
Mooltan	119·5	" "
Sialkot	118·9	" "
Dera Ismail Khan	118·7	" "
Khushab	118·4	" "
Lahore	118·1	" "
Peshawar	117·0	" "
Rawalpindi	116·0	" "
Ludhiana	115·9	" "
Sirsa	115·8	" "
Jacobabad	116·1	7th "
Bikaner	116·3	8th "

The following gives the highest maximum temperatures of the month in each of the provinces of India with the dates on which they were recorded and the highest maxima previously recorded at the same stations :—

PROVINCE OR DIVISION.	STATION.	Highest maximum temperature recorded in July 1901.	Date on which recorded.	Highest maximum temperature recorded in July previous to 1901.	Year in which recorded.
		°		°	
BURMA	Mandalay	100·6	9th and 25th.	106·1	1898
ASSAM	Silchar	100·1	28th	103·6	1896
BENGAL	Bankura	98·6	6th	105·1	1897
ORISSA	Cuttack	97·4	1st	104·4	1897
BIHAR	Dehri	110·4	1st	107·9	1900
CHOTA NAGPUR	Daltonganj	108·1	2nd	108·1	1897
N. W. P. AND OUDH.	Allahabad	114·2	1st	113·4	1876
PUNJAB	Montgomery	119·5	6th	120·4	1891
	Mooltan	119·5	5th and 6th.	116·8	1891
SIND	Jacobabad	126·0	6th	123·0	1900
RAJPUTANA	Bikaner	116·9	5th	114·3	1891
GUJARAT	Ahmedabad	103·8	4th	106·3	1900
CENTRAL INDIA	Nowgong	110·0	2nd	110·5	1900
CENTRAL PROVINCES.	Saugor	103·4	3rd	103·9	1900
BERAR	Amraoti	96·2	12th	103·3	1897 and 1900
WEST COAST	Cochin	89·5	9th	90·9	1877
BOMBAY DECCAN	Bijapur	97·4	7th	95·7	1895 and 1899
MYSORE	Bangalore	86·8	21st and 31st.	91·9	1877
MADRAS COAST	Nellore	102·8	11th and 14th.	107·9	1899
MADRAS DECCAN	Cuddapah	103·2	11th and 14th.	105·2	1897
SOUTH INDIA	Trichinopoly	102·1	31st	105·2	1896

The above return shows that the highest maxima were generally recorded during the first nine days of the month over the greater part of the country and that in the case of Delhi, Allahabad, Mooltan, Jacobabad, Bikaner and Bijapur the readings were higher than have previously been recorded during the month of July. On the hills the day temperature was generally in excess except in Kashmir where it was lower than usual. At Leh the depression was very large.

The mean minimum or night temperature of the month exhibited the same general distribution, relatively to the normal, as the mean maximum temperature. There were a few stations in different parts of India where the minimum, on the mean of the month, was lower than usual but they were very few and the depression of temperature was small. This is shown below :—

PROVINCE.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
		°	°	°
BURMA	Thayetmyo	74·8	76·1	—1·3
	Toungoo	73·7	74·9	—1·2
	Akyab	76·7	77·4	—0·7

Province.	Station.	Mean minimum temperature. Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
		°	°	°
Peninsula	Negapatam	76·8	77·8	—1·0
	Chanda	74·6	75·5	—0·9
	Cocanada	78·1	78·9	—0·8
	Raichur	72·6	73·1	—0·5
	Masulipatam	77·5	77·9	—0·4
	Mysore	67·0	67·1	—0·1
Ceylon	Colombo	76·6	77·3	—0·7
Gujarat	Bhavnagar Para	78·8	78·9	—0·1
Punjab	Umballa	78·5	78·6	—0·1

Over the whole of the remainder of India the mean night temperature was in excess. The excess was less than in the case of the mean maximum temperature, but exceeded 2° over the South-West Punjab, Rajputana, Gujarat, the greater part of Central India, part of the Central Provinces and the Gangetic Plain and was 4° or more at the stations for which comparative data are given below:—

Station.	Mean minimum temperature. Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°	°
Bikaner	85·5	80·0	+5·5
Jhansi	82·9	78·4	+4·5
Agra	84·5	80·2	+4·3
Jaipur	80·9	76·9	+4·0
Nowgong	82·0	78·0	+4·0

The mean night temperature was lower than usual at the hill stations in Baluchistan and Kashmir as well as at Wellington in South India but was more or less excessive elsewhere.

The mean temperature of the month was generally excessive, but there were three small areas where it was lower than usual, *viz.*, the Brahmaputra Valley, part of Burma and part of the East Coast. The following gives data for these three areas:—

Area.	Station.	Mean daily temperature. Actual, July 1901.	Normal, July.	Variation of actual from Normal, July 1901.
		°	°	°
Brahmaputra Valley	Sibsagar	83·9	84·5	—0·6
	Dhubri	82·7	83·1	—0·4
Burma	Tavoy	78·4	78·7	—0·3
	Rangoon	80·2	80·4	—0·2
	Akyab	80·9	81·0	—0·1
	Thayetmyo	82·4	82·5	—0·1
East Coast	Cocanada	84·1	85·1	—1·0
	Masulipatam	84·6	85·0	—0·4

In addition the mean temperature was lower than usual locally at the following places:—

Station.	Mean daily temperature. Actual, July 1901.	Normal July.	Variation of actual from normal, July 1901.
	°	°	°
Raichur	80·7	81·4	—0·7
Ludhiana	88·6	89·2	—0·6

Over the whole of the remainder of India the heat, on the mean of the month, was excessive. The excess was greatest and more than 2° in amount over a large part of North-Western India and the Gangetic Plain and was more than 4° at the following stations:—

Station.	Mean daily temperature. Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°	°
Jaipur	90·3	84·3	+6·0
Jhansi	90·5	84·6	+5·9
Nowgong	89·5	84·0	+5·5
Sambhar	90·4	84·9	+5·5
Agra	91·9	86·5	+5·4

Station.	Mean daily temperature. Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°	°
Deesa	89·9	84·5	+5·4
Sutna	87·1	81·8	+5·3
Ajmer	88·9	83·8	+5·1
Bikaner	95·1	90·1	+5·0
Allahabad	90·2	85·4	+4·8
Neemuch	84·8	80·3	+4·5
Mainpuri	90·9	86·6	+4·3
Hoshangabad	84·7	80·5	+4·2
Ahmedabad	88·4	84·3	+4·1

The temperature, on the mean of the month, was less than usual at the Kashmir and Baluchistan hill stations; was normal at Wellington and Darjeeling and was slightly to moderately excessive at the remaining hill stations.

The principal abnormal features of the temperature conditions were as follows:—

(1) Both the maximum and the minimum temperature and consequently also the mean temperature were considerably to largely above the normal over a large part of North-Western and Central India and the Gangetic Plain.

(2) The day temperature was lower than usual, the night temperature about normal and the mean temperature slightly lower than the average in the Brahmaputra Valley.

(3) Over Burma, North-East India and the Peninsula the maximum and minimum temperatures were approximately normal.

The following table gives temperature data of the month for 56 meteorological divisions of India:—

Provinces.	Division.	Actual temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	83·8	75·3	79·6	8·5	15·1	−0·1	+1·1	−1·2
	Lower Burma (Deltaic)	81·7	76·7	80·7	8·1	14·4	0	+1·2	−1·2
	Central do.	88·9	74·3	81·6	14·7	21·3	+1·3	−1·3	+2·6
	Upper do.	91·8	76·9	84·4	14·9	22·6	+1·4	+0·7	+0·7
	Arakan	85·1	76·7	80·9	8·4	14·4	+0·5	−0·7	+1·2
Bengal and Assam	Eastern Bengal	88·2	78·6	83·4	9·6	18·0	+1·1	+1·0	+0·1
	Assam (Surma)	92·2	77·5	84·9	14·7	24·8	+2·2	+0·4	+1·8
	Do. (Brahmaputra)	88·8	77·7	83·3	11·1	20·3	−0·9	0	−0·9
	Deltaic Bengal	89·9	79·2	84·6	10·7	19·0	+1·1	+0·2	+0·9
	Central do.	90·5	79·2	84·9	11·3	20·0	+1·2	+0·7	+0·5
	North do.	89·6	78·8	84·2	10·9	20·2	+0·7	+0·7	0
	Bengal Hills	68·3	51·0	59·6	17·3	25·5	+0·1	+0·7	−0·6
	Orissa	89·8	79·3	84·6	10·5	19·9	+1·4	+0·6	+0·8
	Chota Nagpur	89·9	76·3	83·1	13·6	30·1	+2·0	+1·1	+0·9
	Bihar (South)	94·0	80·6	87·3	13·4	32·1	+2·8	+0·9	+1·9
	Do. (North)	91·5	79·9	85·7	11·6	22·0	+0·9	+0·9	0
North-Western Provinces and Oudh	North-Western Provinces (East)	97·2	82·2	89·7	15·0	39·4	+5·8	+2·8	+3·0
	Oudh (South)	97·4	81·2	89·3	16·2	38·0	+5·4	+1·9	+3·5
	Do. (North)	94·6	79·8	87·2	14·8	37·6	+2·8	+0·9	+1·9
	North-Western Provinces (Central)	98·3	82·5	90·5	15·8	36·0	+6·0	+3·4	+2·6
	Do. do. (West)	97·7	82·5	90·1	15·2	37·3	+4·8	+2·6	+2·2
	Do. do. (Submontane, East)	92·8	79·8	86·3	13·0	29·9	+1·9	+0·3	+1·6
	Do. do. (Submontane, West)	93·0	78·1	85·6	15·0	38·3	+3·4	+1·1	+2·3
	Do. do. (Hills)	73·3	61·2	67·3	12·0	31·2	+2·2	+1·0	+1·2
Punjab	Punjab (South-East)	97·1	82·5	89·8	14·6	35·2	+3·1	+2·0	+1·1
	Do. (South)	99·0	80·5	89·8	18·5	43·0	+2·9	+0·6	+2·3
	Do. (Central)	99·6	80·4	90·0	19·2	46·2	+1·0	0	+1·0
	Do. (Submontane)	97·6	80·1	88·9	17·5	45·8	+1·2	+0·9	+0·3
	Do. (Hills)	82·8	60·6	71·8	22·1	42·7	−1·2	−0·7	−0·5
	Do. (North)	103·7	75·7	89·7	28·1	48·5	+3·3	+0·7	+2·6
	Do. (West)	105·4	83·8	94·6	21·6	42·0	+2·2	+1·2	+1·0
Bombay and Malabar Coast Districts (Madras).	Malabar	83·6	75·1	79·4	8·6	14·1	+1·5	+1·1	+0·4
	Madras (South Central)	90·7	72·8	81·8	17·9	24·4	+0·4	+1·4	−1·0
	Coorg	68·0	62·8	65·4	5·2	10·8	−0·7	+0·6	−1·3
	Mysore	80·8	66·8	73·9	14·0	20·1	+0·5	+0·3	+0·2
	Konkan	83·8	76·8	80·3	7·0	12·9	+0·5	+1·0	−0·5
	Bombay Deccan	84·1	70·5	77·3	13·6	22·0	+1·0	+0·6	+0·4
	Hyderabad (North)	85·2	70·3	77·8	14·9	28·3	...	...	...
	Khandesh	87·9	73·0	80·4	14·9	23·2	+2·0	+1·3	+0·7

Province.	Division.	Actual temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Central Provinces and Berar.	Berar	88·6	74·2	81·4	14·4	25·1	+1·2	+0·7	+0·5
	Central Provinces (West)	90·2	76·1	83·1	14·1	28·0	+3·4	+1·2	+2·2
	Do. (Central)	88·8	74·7	81·8	14·1	28·9	+3·4	+0·6	+2·8
	Do. (East)	88·6	76·5	82·6	12·1	29·1	+1·9	+0·5	+1·4
Bombay (North)	Gujarat	93·1	79·3	86·2	13·8	25·5	+4·2	+1·8	+2·4
	Kathiawar and Cutch	92·1	79·4	85·8	12·7	22·0	+3·2	+1·1	+2·1
	Sind	101·8	82·8	92·3	19·0	33·3	+2·5	+1·1	+1·4
	Baluchistan Hills	96·2	63·1	79·7	33·1	53·4	+0·4	−2·5	+2·9
Rajputana and Central India.	Central India (East)	93·3	78·0	85·7	15·3	34·0	+6·4	+2·8	+3·6
	Rajputana (East), Central India (West)	97·8	80·7	89·3	17·1	38·0	+7·4	+3·6	+3·8
	Do. (West)	103·1	83·4	93·3	19·7	39·1	+4·5	+5·5	−1·0
Madras	East Coast (North)	89·8	78·8	84·3	11·0	21·8	+0·5	−0·1	+0·6
	Hyderabad (South)	87·5	72·9	80·2	14·6	25·0	−0·2	+0·5	−0·7
	Madras (Central)	93·5	75·9	84·8	17·6	26·9	+1·8	+0·6	+1·2
	East Coast (Central)	94·6	79·2	86·9	15·4	26·2	+0·2	+0·5	−0·3
	Do. (South)	97·2	77·8	87·5	19·4	27·1	+1·9	+0·7	+1·2
	Madras (South)	94·8	76·4	85·2	18·3	25·5	+0·7	+0·4	+0·3

The following gives a summary of the more important features of the temperature conditions which obtained during the month :—

The period from the 1st to the 8th was one of scattered showers over the Peninsula, Burma, North-East India and the North-West Himalayas but of very little rainfall elsewhere. These rainfall conditions resulted in lower temperatures than usual at several of the hill stations as well as at some places in the Indus Valley. The following gives comparative data for the north-west hill stations and for Peshawar, Dera Ismail Khan, Mooltan, Jacobabad and Kurrachee from the 1st to the 7th :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st July.	2nd July.	3rd July.	4th July.	5th July.	6th July.	7th July.
	°	°	°	°	°	°	°
Leh	−7·0	−6·6	−6·7	−4·3	−3·0	−2·3	−4·1
Srinagar	−13·4	−7·8	−4·6	−1·5	−1·7	−0·6	−0·8
Murree	−8·2	+5·9	+8·6	+9·7	+12·2	+12·4	+9·4
Cherat	−2·5	−0·6	+3·1	+5·0	+6·8	+7·3	+8·3
Chaman	−12·0	−8·3	−6·3	−5·4	−1·2	−0·4	−3·6
Quetta	−14·2	−10·3	−7·6	−6·4	−5·0	−4·1	−4·1
Peshawar	−4·6	−3·0	+0·8	+3·2	+6·1	+9·6	+8·2
Dera Ismail Khan	+1·7	+0·9	+2·7	+3·5	+4·9	+6·9	+7·1
Mooltan	+4·3	+5·1	+6·9	+8·8	+9·6	+8·7	+3·4
Jacobabad	+1·9	+2·9	+3·4	+6·2	+8·2	+7·6	+2·1
Kurrachee	−0·9	−1·0	+1·8	+1·4	+1·6	+0·8	+2·2

They also resulted in changeable and generally lower temperatures than usual over the Peninsula. The following gives comparative data for the Peninsular divisions from the 1st to the 7th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st July.	2nd July.	3rd July.	4th July.	5th July.	6th July.	7th July.
	°	°	°	°	°	°	°
West Coast	+0·9	−0·1	+0·5	+1·1	+0·5	+0·7	+1·1
Bombay Deccan	−1·3	−1·2	+0·3	+1·0	+0·5	−0·1	−0·6
Mysore	+0·5	−2·0	−2·2	−1·0	+0·1	+0·4	−0·9
Madras Coast	−1·4	−2·8	−3·1	+0·9	+2·7	+2·0	+0·9
Madras Deccan	+0·7	−2·8	−5·0	0	+1·6	+2·4	+1·4
South India	+2·0	+0·3	−0·6	+0·3	+0·8	+0·4	+0·4

In Burma the showers were lighter than usual at this time of year and the mean temperature was generally excessive except on the 1st. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st July.	2nd July.	3rd July.	4th July.	5th July.	6th July.	7th July.
	°	°	°	°	°	°	°
Burma	−0·8	+0·2	+2·0	+1·6	+1·6	+1·4	+1·1

In North-East India similar conditions prevailed though the temperature was more changeable in this area than in Burma. The following gives comparative data from the 1st to the 7th for the different divisions of North-East India :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	1st July.	2nd July.	3rd July.	4th July.	5th July.	6th July.	7th July.
	°	°	°	°	°	°	°
Assam	+0·8	+1·4	—0·5	+1·3	+1·8	+0·8	—2·0
Bengal	+1·9	+1·5	+1·7	+2·3	+2·7	+2·4	+1·2
Orissa	+3·2	+1·3	+1·6	+3·0	+5·1	+2·9	—0·5
Bihar	+5·4	+4·2	+4·7	+6·2	+3·8	+1·6	+2·1
Chota Nagpur	+8·2	+4·4	+2·5	+4·0	+6·8	+4·6	+1·7

The most marked abnormal feature in the temperature conditions was, however, shown over Northern and Central India where the absence of rain was accompanied with an extraordinarily large excess of temperature. The following gives comparative data for the different divisions of Northern and Central India :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	1st July.	2nd July.	3rd July.	4th July.	5th July.	6th July.	7th July.
	°	°	°	°	°	°	°
N.-W. Provinces and Oudh	+12·1	+11·3	+9·9	+10·3	+10·9	+7·1	+6·7
Punjab	+4·8	+4·1	+5·7	+6·9	+7·9	+9·6	+7·6
Sind	+0·7	+1·7	+2·5	+4·5	+5·3	+3·1	+1·5
Rajputana	+6·2	+7·7	+10·0	+12·1	+13·0	+10·0	+7·9
Gujarat	+3·7	+3·8	+3·5	+3·9	+4·8	+2·5	+0·5
Central India	+7·7	+9·4	+9·5	+11·0	+10·8	+7·5	+5·7
Central Provinces	+3·3	+2·2	+3·7	+4·5	+5·0	+2·1	—0·7
Berar	—2·3	+0·5	+3·3	+4·7	+1·8	—4·0	—2·1

The excess was particularly marked over the South Gangetic Plain where the mean temperature was from 10° to 18° above the normal at a number of stations. The highest day temperatures during this period are given in an earlier portion of this section, but the following gives comparative data for those stations in Northern and Central India where the variations of the mean temperature varied between 13° and 18° above the normal :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
1st July	Allahabad	+16·3
	Lucknow	+14·5
	Cawnpore	+14·3
	Benares	+14·1
2nd „	Roorkee	+13·9
	Jhansi	+13·9
	Sutna	+13·8
	Cawnpore	+13·8
	Mainpuri	+13·6
	Allahabad	+13·5
3rd „	Jhansi	+15·1
4th „	Ajmer	+13·5
	Jhansi	+13·4
	Jaipur	+13·3
	Sutna	+13·0
5th „	Jhansi	+18·1
	Jaipur	+17·8
	Sambhar	+16·3
	Agra	+15·0
	Nowgong	+13·9
6th „	Jhansi	+17·8
	Jaipur	+14·5
	Sirsa	+14·2
	Agra	+13·8
	Sambhar	+13·1

During the 7th and 8th there occurred a sudden extension of the rainfall area and this extension of rain was accompanied with a sudden and brisk fall of temperature. This fall of temperature, though it did not altogether obliterate the previously existing excess, considerably reduced

The following gives data for all divisions of India for the 8th in illustration :—

Province or Division.	Variation from normal of Mean maximum temperature, 8th July.	Mean minimum temperature, 8th July.	Mean daily temperature, 8th July.
	°	°	°
Burma	+1·1	+0·5	+0·8
Assam	+0·6	−0·4	+0·1
Bengal	+0·6	+0·7	+0·7
Orissa	−1·5	−1·0	−1·3
Bihar	−3·9	+0·2	−1·9
Chota Nagpur	+0·9	+0·1	+0·5
North-Western Provinces and Oudh	+7·1	+0·6	+3·9
Punjab	+5·9	−1·5	+2·2
Sind	+0·9	+1·3	+1·1
Rajputana	+10·4	−1·1	+4·7
Gujarat	+0·1	−0·7	−0·3
Central India	+7·1	+1·6	+4·4
Central Provinces	+3·3	+1·4	+2·4
Berar	+1·7	+0·3	+1·0
West Coast	+1·5	0	+0·8
Bombay Deccan	−2·5	+0·5	−1·0
Mysore	−0·2	−0·1	−0·2
Madras Coast	+3·1	+2·3	+2·7
Madras Deccan	−0·1	+0·7	+0·3
South India	+2·7	+1·0	+1·9

On the 8th rain extended into Rajputana and the Punjab and was followed by a brisk fall of temperature over those provinces. The following gives data for the 8th, 9th and 10th for those two provinces :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 8th July.	9th July.	10th July.
	°	°	°
Rajputana	+4·7	−2·3	+0·2
Punjab	+2·2	−2·1	−2·3

On the 12th and 13th strongish westerly winds set in over the more central parts of the country and rain fell off in those areas though it continued over Bengal, along the Himalayas and over the North Gangetic Plain. As a consequence temperature rose and was excessive over the central parts of the country while it remained low over Burma, Bengal, the N.-W. Provinces and the Punjab. The following gives comparative data for all divisions except the central parts of the country from the 12th to the 16th and shows the distribution of temperature, relatively to the normal, then prevailing :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 12th July.	13th July.	14th July.	15th July.	16th July.
	°	°	°	°	°
Burma	+0·2	+0·3	−0·4	−0·4	+0·5
Assam	−1·3	−2·2	−1·9	−0·9	+0·5
Bengal	−1·0	−2·0	−1·6	−0·9	−0·1
Orissa	+0·2	+0·9	+2·3	−1·6	−0·9
Bihar	−1·9	−2·3	−2·3	−0·5	−1·0
Chota Nagpur	+0·8	−0·3	+0·5	+0·5	−2·3
North-Western Provinces and Oudh.	−3·8	−1·3	+1·7	+3·0	+2·5
Punjab	−1·7	−1·0	−1·7	−0·4	+1·5
Sind	+2·9	+2·4	+1·0	+1·8	+2·0
Rajputana	+2·5	+3·6	+4·3	+4·0	+5·5
Gujarat	+2·3	+2·5	+3·2	+3·8	+3·6
West Coast	+0·3	+0·7	+1·1	+0·9	+0·4
Bombay Deccan	+2·4	+2·0	+2·3	+1·4	+2·3
Mysore	−0·2	+0·7	+1·2	+0·8	−0·4
Madras Coast	+2·7	+2·1	+2·5	+0·2	+0·8
Madras Deccan	+3·5	+2·6	+2·7	+1·6	+1·4
South India	+0·5	+2·9	+0·9	−0·6	−2·9

During this period the greatest excess of temperature was reported from the central parts of the country and the following large variations from the normal were recorded :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 12th July.	13th July.	14th July.	15th July.	16th July.
	°	°	°	°	°
Central India	+2·1	+4·9	+5·4	+4·9	+5·2
Central Provinces	+3·4	+2·8	+3·9	+4·2	+5·1
Berar	+4·9	+2·8	+2·9	+3·5	+5·8

On the 17th rain recommenced over the central parts of the country and temperature fell briskly over the eastern parts of the Central Provinces though it continued high over the western divisions as well as over North-West India. A change in the rainfall distribution set in at this time. Rain fell off over the Peninsula but fell heavily and generally over Northern India with the exception of the north-west. This extension of rain commenced on the 19th but up to that date the mean temperature was very

high over North-West India. The following gives comparative data for the north-west divisions for the 17th, 18th and 19th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	17th July.	18th July.	19th July.
	°	°	°
North-Western Provinces and Oudh .	+4·6	+2·9	+0·4
Punjab	+4·2	+6·8	+2·9
Sind	+1·7	+2·0	+1·5
Rajputana	+7·1	+10.5	+7·3
Gujarat	+3·9	+3·8	+2·4
Central India	+7·1	+5·9	+5·8

It will be noticed that the greatest excess on these days was reported from Rajputana, Central India and the adjoining districts, and within these areas the following high day temperatures were recorded :—

Date.	Station.	Maximum temperature.		
		Actual, of date.	Normal, of date.	Variation of actual from normal of date.
		°	°	°
17th July .	Indore	96·3	83·7	+12·6
	Saugor	96·4	85·8	+10·6
	Neemuch	97·0	86·7	+10·3
	Khandwa	97·2	87·2	+10·0
	Hoshangabad . . .	95·3	86·4	+ 8·9
	Jaipur	100·2	91·8	+ 8·4
	Malegaon	94·4	86·4	+ 8·0
	Akola	95·9	87·9	+ 8·0
18th „ .	Jaipur	104·2	91·8	+12·4
	Ajmer	102·9	90·8	+12·1
	Neemuch	98·5	86·6	+11·9
	Sambhar	102·5	91·1	+11·4
	Indore	92·8	83·4	+ 9·4
	Sutna	94·5	86·5	+ 8·0
19th „ .	Jaipur	104·7	92·0	+12·7
	Sambhar	104·0	91·4	+12·6
	Ajmer	103·4	91·2	+12·2
	Neemuch	97·5	86·2	+11·3

Heavy rain fell in the submontane districts of Northern India on the 19th and a rapid fall of temperature took place in that area. This fall of temperature subsequently extended to all parts of the Punjab but was more or less confined to the purely submontane districts in other parts of India. This reduction of temperature did not disappear from the Punjab till the 23rd. The following gives comparative temperature data for the Punjab from the 19th to the 23rd :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	19th July.	20th July.	21st July.	22nd July.	23rd July.
	°	°	°	°	°
Punjab	+2·9	—1·9	—6·7	—5·6	+0·5

The following gives temperature data for the North-Western Provinces, Bengal, Assam and Burma for the same dates :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	19th July.	20th July.	21st July.	22nd July.	23rd July.
	°	°	°	°	°
North-Western Provinces and Oudh.	+0·4	—1·2	—4·2	—1·0	0
Bengal	—0·6	+0·1	+0·1	—1·3	—0·4
Assam	—1·9	—4·2	—2·5	—0·5	—0·5
Burma	+0·1	—0·2	—0·2	+0·2	+0·3

During these five days the hottest area included Gujarat, Rajputana and the adjoining districts and in this area

the excess of the mean temperature was more than 5° at the following stations :—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
19th July	D. I. Khan	+8·7
	Peshawar	+8·6
	Khushab	+8·4
	Deesa	+8·1
	Bikaner	+7·6
	Mooltan	+7·4
	Jhansi	+7·4
	Jaipur	+7·4
	Neemuch	+7·0
	Nowgong	+6·9
	Sambhar	+6·9
	Montgomery	+6·5
	Ajmer	+6·5
	Sutna	6·1
	Rajkot	+5·3
	Rawalpindi	+5·1
20th „	Montgomery	+5·9
	Bikaner	+5·1
21st „	Deesa	+5·8
	Bikaner	+5·5
22nd „	Jaipur	+7·6
	Deesa	+6·0
	Sambhar	+5·6
	Ahmedabad	+5·0
23rd „	Deesa	+7·2
	Bikaner	+6·8
	Neemuch	+6·6
	Jaipur	+5·6
	Ajmer	+5·2
	Rajkot	+5·2
	Ahmedabad	+5·1

Over the Peninsula the temperature was unsteady but the variations were not generally large. The following gives temperature variation data for the Peninsular divisions from the 19th to the 23rd :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	19th July.	20th July.	21st July.	22nd July.	23rd July.
	°	°	°	°	°
Central Provinces	+0·5	+0·2	+0·1	—0·7	—2·3
Berar	—4·2	0	+1·7	+0·8	—1·6
West Coast	+1·7	+2·3	+2·6	+2·1	+1·4
Bombay Deccan	+0·4	+1·7	+2·4	+1·4	+0·4
Mysore	+0·1	+1·9	+3·1	+2·0	—0·3
Madras Coast	+0·2	+2·0	+1·9	—0·2	—1·2
Madras Deccan	—0·2	+1·9	+3·3	+1·6	—2·3
South India	+1·3	+1·3	+2·2	+2·2	+0·5

On the 24th temperature exceeded the normal in nearly all divisions but particularly in the north-west. This is shown below :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 24th July.	Mean minimum temperature, 24th July.	Mean daily temperature, 24th July.
	°	°	°
Burma	+0·4	+0·1	+0·3
Assam	—2·6	+0·5	—1·1
Bengal	+0·5	+0·6	+0·6
Orissa	+0·9	+2·8	+1·9
Bihar	+1·3	+0·8	+1·2
Chota Nagpur	+1·5	+1·5	+1·5
North-Western Provinces and Oudh	—1·0	+0·9	—0·1
Punjab	+2·3	+4·3	+3·3
Sind	+3·6	+1·3	+2·5
Rajputana	+7·1	+2·7	+4·9
Gujarat	+5·6	+1·1	+3·4
Central India	+4·1	+1·5	+2·8
Central Provinces	+0·5	+0·5	+0·5
Berar	+1·2	0	+0·6
West Coast	+1·8	+1·0	+1·4
Bombay Deccan	+2·9	+0·6	+1·8
Mysore	+3·9	+0·4	+2·2
Madras Coast	+3·1	+0·4	+1·8
Madras Deccan	+1·8	—0·6	+0·6
South India	+3·3	+1·8	+2·6

The above conditions continued during the 25th, but on the 26th there occurred a brisk fall over the Punjab and over the Peninsula. The reduction of temperature thus produced lasted over the former area till the 30th and over the latter area until the 29th. The following gives comparative data for these two areas from the 26th to the 30th :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A M. OF				
	26th July.	27th July.	28th July.	29th July.	30th July.
	°	°	°	°	°
Punjab	—1·5	—5·2	—1·3	—0·1	—1·0
Berar	—2·8	+0·1	—0·3	—2·5	+2·1
West Coast	+0·5	+0·7	+1·4	+1·3	+0·3
Bombay Deccan	—1·2	—0·4	+1·1	+1·1	+2·0
Mysore	+0·9	—0·5	—0·1	+1·1	+1·7
Madras Coast	—1·9	—1·5	—1·1	—0·1	+2·0
Madras Deccan	—2·5	—0·9	—1·7	—1·4	+1·9

During this time temperature was steadily high over North-East India, the North-Western Provinces, Rajputana and Central India. This is shown below :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M OF				
	26th July.	27th July.	28th July.	29th July.	30th July.
	°	°	°	°	°
Assam	+4·1	+3·1	+4·6	+3·3	+1·6
Bengal	+2·8	+2·9	+2·3	+2·2	+2·7
Orissa	+1·4	+0·3	+0·5	+0·1	+2·5
Bihar	+2·5	+5·6	+4·8	+3·4	+3·5
Chota Nagpur	+0·1	+2·7	+2·3	+0·5	+2·3
North-Western Provinces and Oudh.	+1·7	+3·7	+3·8	+3·0	+4·3
Rajputana	+2·6	+3·1	+4·8	+4·6	+4·2
Central India	+1·7	+3·8	+2·8	+1·6	+2·5
Central Provinces	+1·1	+2·0	+1·5	+0·9	+3·3

On the 31st rain extended into Sind causing a fall of temperature there and a separate fall occurred in Assam. In consequence in both these areas the mean temperature was reduced to below the normal while in all other parts of the country the heat exceeded the normal. The following gives comparative data for all divisions for the last day of the month :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 31st July.	Mean minimum temperature, 31st July.	Mean daily temperature 31st July.
	°	°	°
Burma	+1·8	+0·2	+1·0
Assam	—2·2	+0·2	—1·0
Bengal	+1·0	+2·3	+1·7
Orissa	+3·3	+2·9	+3·1
Bihar	+3·6	+2·1	+2·9
Chota Nagpur	+4·5	+4·2	+4·4
North-Western Provinces and Oudh	+5·8	+3·2	+4·5
Punjab	+1·0	+2·3	+1·7
Sind	—3·4	—1·0	—2·2
Rajputana	+5·3	+2·3	+3·8
Gujarat	+0·7	—0·3	+0·2
Central India	+4·7	+3·3	+4·0
Central Provinces	+3·7	+2·1	+2·9
Berar	+4·8	+0·7	+2·8
West Coast	+1·3	+1·6	+1·5
Bombay Deccan	+2·6	+0·1	+1·4
Mysore	+4·1	+1·2	+2·7
Madras Coast	+3·6	+1·5	+2·6
Madras Deccan	+3·5	+1·9	+2·7
South India	+3·4	+1·2	+2·3

Winds.

The monsoon winds over the centre of the Bay were stronger, steadier and more westerly than usual. This is shown by the following comparative data for Port Blair and Cocos Island:—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Westerly deflection.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°	°			
Port Blair .	92	87	+5	S 68 W	S 47 W	+21	355	268	+87
Cocos Island	93	91	+2	S 41 W	S 34 W	+ 7	288	?	?

On the Burma Coast the wind, on the mean of the month, was lighter than usual, but in other respects it was similar to the winds over the centre of the Bay and was more westerly and steadier than the average. At Akyab the wind direction is unlike that on other parts of the Burma Coast and at that station the wind was more easterly than the average. The following gives comparative data:—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°			
Diamond Island .	84	80	+ 4	S 52 W	S 42 W	214	240	—26
Rangoon . .	82	74	+ 8	S 39 W	S 34 W	113	129	—16
Akyab . .	84	67	+17	S 7 E	S 1 E	59	98	—39

In Lower Bengal and Orissa the winds varied irregularly from the normal. At Chittagong and Saugor Island the velocity exceeded the normal while, on the contrary, at Calcutta and False Point the wind force was low. This is shown below:—

Station	Mean wind velocity in miles per diem.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Chittagong	231	165	+66
Calcutta	113	122	— 9
Saugor Island . . .	373	357	+16
False Point	238	277	—39

The steadiness was generally less than usual over this area except in the case of Chittagong while the direction varied irregularly but generally slightly from the average. The following gives data:—

Station.	Mean steadiness.			Mean wind direction.	
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.
				°	°
Chittagong . .	76	66	+10	S 12 E	S 30 E
Calcutta . . .	54	63	— 9	S 23 E	S 8 E
Saugor Island . .	58	60	— 2	S 3 E	S 21 W
False Point . .	50	63	—13	S 37 W	S 53 W

In West Bengal the wind direction and the steadiness were approximately normal while the force was lighter than usual, but in the Gagetic Plain the direction was more northerly than usual and was stronger than the average. The wind at Allahabad was as usual very unsteady. These variations are shown below:—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Northerly deflection.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°	°			
Allahabad .	9	7	+2	N 20 E	N 71 E	+51	207	151	+56

In the Upper Sub-Himalayas the wind was unusually southerly—more particularly at Lahore, Meerut and Roorkee. The following gives data:—

Station.	Mean wind direction.		
	Actual, July 1901.	Normal, July.	Southerly deflection.
	°	°	°
Dehra Dun	S 32 W	S 12 W	—20
Roorkee	S 6 E	S 37 E	+31
Meerut	S 45 E	S 69 E	+24
Lahore	S 53 E	S 77 E	+24
Ludhiana	S 37 E	S 40 E	+ 3

The velocity and steadiness of the wind in this area varied irregularly from the normal as is shown below:—

Station.	Mean Steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Debra Dun	53	13	+40	32	26	+ 6
Roorkee	29	33	− 4	77	70	+ 7
Meerut	29	21	+ 8	39	57	−18
Lahore	37	30	+ 7	76	80	− 4
Ludhiana	40	23	+17	85	52	+33

In the Indus Valley the winds were fairly normal on the mean of the month except at Peshawar where the direction was unusually northerly and the velocity only about half the average. The following gives comparative data for the stations in this area:—

Station.	Mean Steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual, from normal, July 1901.	Actual, July 1901.	Normal, July.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°			
Peshawar	31	47	−16	N 3 W	N 49 E	53	107	−54
Jacobabad	45	59	−14	S 51 E	S 44 E	113	133	−20
Kurrachee	91	85	+ 6	S 9 W	S 68 W	399	415	−16

At Jaipur and Deesa the winds were fairly normal though there was somewhat more westing than usual in the wind's direction at both stations. This is shown below:—

Station.	Mean Steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Westerly deflection.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°	°			
Jaipur	27	28	− 1	N 85 W	N 72 W	+13	127	133	− 6
Deesa	84	73	+11	S 52 W	S 42 W	+10	374	351	+23

The folowing table gives comparative data for the winds in the Bay Islands, Burma and the different divisions of Northern India:—

Province or Division.	Mean Steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Actual, July 1901.	Normal July.	Variation of actual from normal, July 1901.
				°	°			
Bay Islands	93	89	+ 4	S 55 W	S 41 W	322	268	+ 54
Burma	83	74	+ 9	S 28 W	S 28 W	129	156	− 27
Bengal	63	63	0	S 13 E	S 4 E	239	215	+ 24
Bihar	66	56	+10	S 74 E	S 77 E	86	121	− 35
Chota Nagpur	13	14	− 1	S 14 E	S 9 E	188	210	− 22
Orissa	50	63	−13	S 37 W	S 53 W	238	277	− 39
N.-W. Provinces	30	19	+11	S 23 E	S 49 E	89	76	+ 13
Punjab	36	33	+ 3	S 71 E	S 54 E	71	80	− 9
Sind	68	72	− 4	S 6 W	S 10 W	256	274	− 18
Rajputana	56	51	+ 5	S 75 W	S 75 W	251	242	+ 9

The wind was generally stronger and steadier than usual across the Deccan more particularly at Sholapur where it was nearly 30 per cent. above its normal intensity. The following gives data:—

Station.	Mean Steadiness.			Mean wind velocity in miles per diem.		
	Actual, percentage, July 1901.	Normal, percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Belgaum	88	87	+ 1	610	647	−37
Sholapur	81	83	− 2	430	336	+94
Poona	92	90	+ 2	435	386	+49
Akola	81	73	+ 8	261	210	+51
Buldana	79	74	+ 5	240	219	+21
Khandwa	87	82	+ 5	267	217	+50
Nagpur	76	69	+ 7	252	243	+ 9
Hyderabad (Deccan)	98	90	+ 8	238	249	−18

The wind's direction in this area was fairly normal as is shown below:—

STATION.	MEAN WIND DIRECTION.		
	Actual, July 1901.	Normal, July.	Westerly deflection.
	°	°	°
Belgaum	S 51 W	S 68 W	−17
Sholapur	S 79 W	S 76 W	+ 3
Poona	S 78 W	S 81 W	− 3
Akola	N 65 W	N 74 W	− 9
Buldana	N 86 W	N 79 W	+ 7
Khandwa	N 77 W	N 85 W	− 8
Nagpur	S 76 W	S 88 W	−12
Hyderabad (Deccan)	N 89 W	N 86 W	+ 3

At Bombay the wind was lighter and at Karwar stronger than usual while the steadiness and direction were approximately normal at both stations. The following gives data:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Westerly deflection.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°				
Bombay	87	85	+2	S 78 W	S 74 W	+4	385	450	−65
Karwar	84	75	+9	S 77 W	S 73 W	+4	168	123	+45

In South India the wind was generally fairly normal as regards direction, steadiness and velocity except at Madras where as over the centre of the Bay the direction was more westerly than usual. The following gives comparative data for the different stations in this division:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July, 1901.	Normal, July.	Westerly deflection.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°				
Salem	63	78	−15	S 68 W	S 55 W	+13	109	108	+ 1
Chitaldroog	89	87	+ 2	S 79 W	S 78 W	+ 1	265	291	−26
Bangalore	85	91	− 6	S 75 W	S 73 W	+ 2	273	217	+56
Hassan	87	90	− 3	S 84 W	S 89 W	− 5	110	125	−15
Mysore	90	91	− 1	S 76 W	S 77 W	− 1	325	368	−43
Madras	66	67	− 1	S 84 W	S 48 W	+36	183	191	− 8
Bellary	97	88	+ 9	W	S 87 W	+ 3	326	282	+44

Last year in July when the monsoon conditions were not very dissimilar to those which have prevailed during the month under review it was noticed that while the winds at the coast stations were generally lighter than usual the velocity in the interior of the country was generally above the average. This contrast, though less strongly marked than it was last year, has yet been markedly present during July 1901. The following gives velocity data for the coast and some of the inland stations for the month:—

STATION.	MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, July 1901.	Normal, July	Variation of actual from normal, July 1901.
Bombay	385	450	− 65
Ratnagiri	209	329	−120
Surat	228	377	−149
Deesa	374	351	+ 23
Malegaon	372	283	+ 89
Bhuj	499	398	+101
Akola	261	210	+ 51
Buldana	240	219	+ 21
Khandwa	267	217	+ 50
Poona	435	386	+ 49
Sholapur	430	336	+ 94

The following table gives comparative data of the mean wind direction, steadiness and velocity for the different Peninsular divisions:—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°			
Central Provinces	82	76	+ 6	W	N 87 W	260	230	+30
Berar	80	74	+ 6	N 76 W	N 77 W	251	215	+36
Bombay Deccan	87	87	0	S 69 W	S 75 W	492	456	+36
West Coast	86	80	+ 6	S 78 W	S 74 W	277	287	−10
Madras Deccan	98	89	+ 9	W	W	279	266	+13
Mysore	88	90	− 2	S 79 W	S 79 W	243	250	− 7
Madras Coast	66	67	− 1	S 84 W	S 48 W	183	191	− 8
South India	63	78	−15	S 68 W	S 55 W	109	108	+ 1

The winds were unusually southerly in Baluchistan

Kashmir and Lahoul and the velocity was low except at Leh. This is shown below :—

STATION.	MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, July 1901.	Normal, July.	Southerly deflection.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°				
Quetta . . .	S 70 W	S 85 W	+15	38	91	—53
Leh	S 48 W	S 73 W	+25	67	47	+20
Srinagar . . .	S 67 W	N 20 W	Large	84	93	— 9
Kailang . . .	S 74 W	S 81 W	+ 7	37	49	—12

In the Central Himalayas the wind's velocity was higher than usual, but the wind was unsteady and the directions varied irregularly from the normal. The following gives comparative data :—

HILL STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Actual, July 1901.	Normal, July.	Variation of actual from normal July 1901.
				°	°			
Simla . . .	5	26	—21	N 29 E	N 5 E	97	86	+ 11
Chakrata . .	48	45	+ 3	S 20 E	S 75 W	234	131	+103
Ranikhet . .	40	25	+15	N 79 W	S 62 W	83	59	+ 24

In the Eastern Himalayas the increased southing in the wind was also shown. The following gives data :—

HILL STATION.	MEAN WIND DIRECTION.	
	Actual, July 1901.	Normal, July.
	°	°
Katmandu	S 41 E	S 67 W
Darjeeling	S 35 E	S 75 E

At the central hill stations the wind direction was generally about normal except at Chikalda where the wind was abnormally northerly. The following gives direction data for this station :—

HILL STATION.	MEAN WIND DIRECTION.		
	Actual, July 1901.	Normal, July.	Northerly deflection.
	°	°	
Chikalda	N 7 W	N 55 W	+48

At Wellington the wind was unusually southerly and was lighter than usual. This is shown in the following table :—

HILL STATION.	MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, July 1901.	Normal, July.	Southerly deflection.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	°	°				
Wellington . .	S 46 W	S 79 W	+33	113	124	—11

At Aden and Perim, where the wind direction varied irregularly from the normal, both the force and steadiness were lower than usual. The following gives comparative data :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal July 1901.	Actual, July 1901.	Normal, July.	July Actual, 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°			
Aden . . .	64	73	— 9	S 14 E	S 1 E	230	261	—31
Perim . . .	31	60	—29	S 80 W	N 56 W	288	386	—98

At Zanzibar the South-East Trades were less, and at the Seychelles more, easterly than usual. The steadiness of the winds was about the average, but the velocity was lower than usual. This is shown below :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, July 1901.	Normal percentage, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Easterly deflection.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
				°	°				
Zanzibar .	82	83	—1	S 1 W	S 5 E	—6	194	207	—13
Seychelles .	81	86	—5	S 36 E	S 29 E	+7	240	287	—47

The following summarises the chief features of the air movement over India on the mean of the month :—

(1) The wind was more westerly and stronger than usual over the centre of the Bay.

(2) The wind was more southerly than usual in Upper India both on the hills and plains.

(3) The wind was lighter than usual at most of the coast stations but was strong and steady in the interior of the country.

(4) The winds were fairly normal over Southern India.

(5) They were weaker than usual in the Trades region.

The following gives comparative data of the mean air movement for the various provinces based on Table I :—

Province or Division.	Mean wind velocity in miles per diem.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Burma	120	118	+ 2
Assam	55	79	−24
Bengal	106	163	−57
Orissa	163	166	− 3
Bihar	110	86	+24
Chota Nagpur	125	202	−77
North-Western Provinces and Oudh	98	89	+ 9
Punjab	94	79	+15
Sind	274	295	−21
Rajputana	218	214	+ 4
Gujarat	343	374	−31
Central India	204	197	+ 7
Central Provinces	187	161	+26
Berar	276	192	+84
West Coast	226	288	−62
Bombay Deccan	360	413	−53
Mysore	245	206	+39
Madras Coast	204	218	−14
Madras Deccan	266	278	−12
South India	156	139	+17

Humidity and Cloud.

The mean humidity conditions of the month exhibited several abnormal features. There were two areas of increased humidity compared with the normal, one including the greater part of the Peninsula the second covering a large part of the western desert. The excess in the former case was greatest over Mysore and the Nizam's dominions and amounted to 3 or more at the following stations :—

Station.	Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	%	%	
Chitaldroog	82	76	+6
Hassan	84	81	+3
Hyderabad (Deccan)	76	73	+3

In the north-western area of excess the variations were small the largest having been +2 at Jacobabad.

Lying between these two areas of excess was a large area of deficient humidity. The greatest deficiency within this area coincided roughly with the area of most excessive temperature. This is shown by the following table which gives the variations of humidity equalling or exceeding −10 :—

Station.	Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	%	%	
Jaipur	62	74	−12
Deesa	62	74	−12
Allahabad	71	81	−10

The mean humidity conditions of the month were almost normal over the Bay Islands and Burma. At all the stations within this area the absolute humidity was in

slight excess, but the mean temperature was generally above the normal and the relative humidity was hence generally normal or in trifling excess or defect. This is shown in the following table :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Port Blair . . .	·916	·898	+·018	84	85	—1
Cocos Island . .	·908	·911	—·003	87	88	—1
Diamond Island . .	·880	·877	+·003	86	87	—1
Rangoon . . .	·898	·886	+·012	90	90	0
Akyab . . .	·926	·921	+·005	90	89	+1

In Bengal the variations in the vapour tension were generally very small but the mean temperature in this area also was generally in excess and the relative humidity was consequently lower than usual. This is shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Chittagong . . .	·909	·914	—·005	83	87	— 4
Calcutta . . .	·963	·962	+·001	85	87	— 2
Saugor Island . .	·997	·997	0	85	86	— 1
False Point . . .	·968	·938	+·030	85	85	0

In West Bengal and the East Gangetic Plain the absolute humidity was generally in defect and the temperature high, especially at Allahabad so that the relative humidity was more decidedly in defect than in Bengal. The following gives data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, July 1901.	Normal, July	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Hazaribagh . . .	·777	·811	—·034	77	85	— 8
Darbhanga . . .	·975	·968	+·007	82	83	— 1
Allahabad . . .	·943	·951	—·008	71	81	—10

In the Upper Sub-Himalayas the relative humidity was almost everywhere in defect. This was in part an effect of diminished vapour tension and in part of increased temperature. The variations are shown in the following table :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Dehra Dun . .	·758	·803	—·045	76	84	—8
Roorkee . .	·812	·872	—·060	68	76	—8
Meerut . . .	·863	·887	—·024	70	74	—4
Lahore . . .	·799	·854	—·055	61	61	0
Ludhiana . .	·821	·867	—·046	66	69	—3

In the Indus Valley region conditions were less regular. At Jacobabad the relative humidity was in excess, as, though the mean temperature was higher than usual, the absolute humidity was in large excess. At Peshawar and Kurrachee the relative humidity was in defect. At the former station the vapour tension was in defect, while at the latter it was only in trifling excess ; at the same time that at both stations the mean temperature was excessive. The following gives data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Peshawar . .	·692	·727	—·035	47	53	— 6
Jacobabad . . .	·902	·816	+·086	54	52	+ 2
Kurrachee . . .	·938	·929	+·009	75	78	— 3

In Rajputana the vapour tension was less than usual and the mean temperature in large excess so that the

greatest deficiency of relative humidity was exhibited in this area. The following gives data :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Jaipur	·778	·838	—·060	62	74	—12
Deesa	·789	·828	—·039	62	74	—12

The following gives the mean humidity conditions of each of the divisions of Northern India, Burma and the Bay Islands :—

Province or Division.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Bay Islands . . .	·912	·905	+·007	86	87	— 1
Burma	·901	·894	+·007	89	89	0
Bengal . . .	·956	·957	—·001	84	86	— 2
Bihar . . .	·975	·968	+·007	82	83	— 1
Chota Nagpur . .	·777	·811	—·034	77	85	— 8
Orissa	·968	·938	+·030	85	85	0
North-Western Provinces.	·844	·878	—·034	71	79	— 8
Punjab . . .	·771	·816	—·045	58	61	— 3
Sind . . .	·920	·872	+·048	65	66	— 1
Rajputana . . .	·784	·834	—·050	62	74	—12

The preceding data show that the relative humidity, on the mean of the month, was below the normal generally, the amount of the deficiency increasing westward and having been greatest over Rajputana.

The air was drier than usual over the centre of the Deccan, at Khandwa, Buldana and Nagpur and was damper than usual in other parts of the district. At nearly all stations the absolute humidity was in slight excess of the average while the temperature varied irregularly about the normal. The following gives data :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Belgaum . . .	·686	·669	+·017	91	90	+1
Sholapur . . .	·691	·664	+·027	70	68	+2
Poona	·722	·698	+·024	81	80	+1
Akola	·786	·768	+·018	76	75	+1
Buldana . . .	·707	·709	— 002	77	79	—2
Khandwa . . .	·794	·781	+·013	75	77	—2
Nagpur . . .	·814	·813	+·001	78	80	—2
Hyderabad Deccan .	·724	·713	+·011	76	73	+3

At Bombay where the absolute humidity was in slight excess and the mean temperature in trifling excess the relative humidity was practically normal while at Karwar the relative humidity was in moderate defect. This is shown below :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Bombay . . .	·914	·907	+·007	87	87	0
Karwar . . .	·828	·832	—·004	82	86	—4

In South India the variations of the relative humidity from the normal were irregular. At all places except Bellary and Bangalore the absolute humidity was in excess of the normal but the mean temperature was also generally excessive and the relative humidity except at Chitaldroog and Hassan was about normal. At Bellary both the absolute and relative humidities were below the normal. The following gives data :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Salem . . .	·758	·746	+·012	71	71	0
Chitaldroog . .	·692	·623	+·069	82	76	+6
Bangalore . . .	·603	·609	—·006	76	77	—1
Hassan . . .	·626	·589	+·037	84	81	+3
Mysore . . .	·621	·608	+·013	75	75	0
Madras . . .	·804	·793	+·011	66	67	—1
Bellary . . .	·592	·658	—·066	56	63	—7

The following gives mean humidity conditions for the month for the different provinces of the Peninsula :—

Province or Division.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Central Provinces .	·804	·797	+·007	77	79	—2
Berar	·747	·739	+·008	77	78	—1
Bombay Deccan . .	·700	·677	+·023	81	80	+1
West Coast . .	·871	·869	+·002	85	87	—2
Madras Deccan . .	·658	·686	—·028	66	68	—2
Mysore . . .	·636	·608	+·028	79	77	+2
Madras Coast . .	·804	·793	+·011	66	67	—1
South India . .	·758	·746	+·012	71	71	0

In Baluchistan both the absolute and relative humidities were in slight defect while at the Kashmir stations in part owing to the prevailing low temperature the relative humidity was in excess. The following gives data for these two areas :—

Area.	Hill Station.	Absolute humidity.			Relative humidity.		
		Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
		"	"	"	%	%	
Baluchistan. .	Quetta . .	·403	·439	—·036	44	47	—3
Kashmir . .	Leh . .	·242	·256	—·014	47	45	+2
	Srinagar. .	·695	·658	+·037	81	78	+3
	Kailang . .	·348	·358	—·010	68	66	+2

In the Kumaun Himalayas, on the contrary, the absolute humidity was less than usual while the mean temperature was excessive so that the relative humidity was low more especially at Simla. This is shown below :—

Hill Station.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Simla	·466	·533	—·067	76	88	—12
Chakrata . . .	·513	·546	—·033	85	91	—6
Ranikhet . . .	·578	·581	—·003	82	86	—4

In the Eastern Himalayas there was a slight excess of the absolute humidity but at Darjeeling the temperature was somewhat higher than usual and the relative humidity at that station was in defect. The following gives data :—

Hill Station.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Katmandu . . .	·704	·688	+·016	81	80	+1
Darjeeling . . .	·527	·519	+·008	93	95	—2

At Mount Abu the mean temperature was high and the absolute humidity in slight defect so that the relative humidity was in considerable defect, but at the remaining hill stations in Central and Southern India the variations from the normal were small and unimportant. This is shown below :—

Hill Station.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Mount Abu . . .	·629	·636	—·007	82	89	—7
Pachmarhi . . .	·708	·671	+·037	89	88	+1
Chikalda . . .	·672	·655	+·017	91	92	—1
Wellington . . .	·428	·424	+·004	73	74	—1

At Aden and Perim the variations were large but irregular as is shown by the following table :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, July 1901.	Normal, July.	Variation of actual, from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"	"	%	%	
Aden . . .	·796	·803	—·007	58	65	—7
Perim . . .	·932	·787	+·145	65	56	+9

In the South-East Trades region the air was damper

than usual—slightly so at Zanzibar and considerably so at the Seychelles. The following gives data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
	"	"		%	%	
Zanzibar . . .	·701	·690	+·011	79	78	+1
Seychelles . . .	·747	·705	+·042	81	74	+7

The abnormal features in the cloud distribution differed considerably from the abnormal features of the humidity distribution. Over the whole of North West India and part of Western and Central India the sky was clearer than usual, the deficiency in the cloud amount having been greatest at Kurrachee. The sky was also considerably clearer than usual over the submontane regions of the Punjab and North-Western Provinces. The following gives variation data for these two areas *viz.*, Lower Sind and the submontane regions of Upper India:—

AREA.	STATION.	MEAN CLOUD AMOUNT.		
		Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
LOWER SIND .	Kurrachee . .	4·4	6·9	—2·5
SUBMONTANE REGIONS OF UPPER INDIA.	Dehra Dun . .	6·7	7·7	—1·0
	Roorkee . . .	5·0	6·4	—1·4
	Meerut . . .	6·1	6·7	—0·6
	Ludhiana . . .	4·6	6·0	—1·4
	Lahore . . .	3·1	4·3	—1·2

Over the remainder of the large area of diminished cloud the variations from the normal were small as is shown below:—

STATION.	MEAN CLOUD AMOUNT		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Jaipur	6·5	7·4	—0·9
Deesa	7·2	8·1	—0·9
Allahabad	7·1	7·8	—0·7
Poona	8·7	8·9	—0·2
Bombay	9·0	9·1	—0·1
Khandwa	7·8	7·9	—0·1
Nagpur	8·6	8·7	—0·1

In addition to the above there was a small area of normal or slightly deficient cloud over the Arakan coast districts. Variation data for this area are given below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Akyab	8·3	8·7	—0·4

Over the whole of the reminder of India the sky, on the mean of the month, was more cloudy than usual. In Bengal and Orissa the variations were generally small or moderate as is shown by the following data:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Chittagong	7·9	7·9	0
Calcutta	8·4	8·3	+0·1
Saugor Island	8·4	8·2	+0·2
False Point	8·7	8·2	+0·5

Over the whole of the Peninsula except the Bombay Coast and part of the Bombay Deccan the cloud amount was excessive—particularly so over the Madras Deccan, South India and Mysore where the maximum excess throughout India was shown. The following gives data for this cloudy area:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Bangalore	9·1	6·8	+2·3
Salem	7·6	6·4	+1·2
Bellary	9·3	8·3	+1·0
Hyderabad (Deccan)	8·3	7·4	+0·9
Mysore	9·6	8·9	+0·7
Madras	7·7	7·2	+0·5
Hassan	9·6	9·2	+0·4
Chitaldroog	9·4	9·1	+0·3

In other parts of the Peninsula the excess was moderate to small as is shown by the following data:—

Station.	Mean cloud amount. Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Sholapur	9·1	8·5	+0·6
Akola	9·0	8·5	+0·5
Belgaum	9·4	9·1	+0·3
Karwar	7·9	7·8	+0·1

Over the Burma Coast and the Bay Islands the sky was also more cloudy than usual, more particularly at Diamond Island. Comparative data for this area are given below:—

Station.	Mean cloud amount. Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Port Blair	7·8	7·6	+0·2
Cocos Island	8·9	8·4	+0·5
Diamond Island	9·0	8.2	+0·8
Rangoon	9·6	9·0	+0·6

The sky was generally clearer than usual at the hill stations but in the case of Quetta, Kailang, Katmandu and Wellington there was some excess. This is shown below:—

Hill Station.	Mean cloud amount. Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Quetta	2·3	1·6	+0·7
Kailang	6·5	6·4	+0·1
Katmandu	7·8	6·8	+1·0
Wellington	9·1	8·0	+1·1

The sky was considerably clearer than usual over the Kumaun Himalayas and at Mt. Abu and Darjeeling while it was slightly less cloudy than usual over the greater part of Kashmir and at Pachmarhi. The following gives data for these stations:—

Hill Station.	Mean cloud amount. Actual, July 1901.	Normal, July.	Variation of actual from normal, July 1901.
Simla	7·3	8·8	—1·5
Chakrata	7·4	8·4	—1·0
Ranikhet	8·0	8·5	—0·5
Mount Abu	7·4	8·8	—1·2
Darjeeling	7·6	8·9	—1·3
Leh	4·3	5·1	—0·8
Srinagar	3·9	4·0	—0·1
Pachmarhi	8·5	8·8	—0·3

The mean cloud amount of the month was 9·0 or more at the stations for which comparative data are given below:—

Station.	Mean cloud amount, July 1901.
Rangoon	9·6
Diamond Island	9·0
Hazaribagh	9·5
Buldana	9·6
Belgaum	9·4
Sholapur	9·1
Akola	9·0
Bombay	9·0
Hassan	9·6
Mysore	9·6
Chitaldroog	9·4
Bellary	9·3
Bangalore	9·1
Waltair	9·1

The above stations hence define the areas of greatest cloudiness. On the other hand the mean cloud amount was less than 5·0 at the following stations which consequently define the areas of greatest serenity on the mean of the month:—

Station.	Mean cloud amount, July 1901.
Ludhiana	4·6
Kurrachee	4·4
Lahore	3·1
Peshawar	2·0
Jacobabad	1·7

Rainfall.

The rainfall of July is generally heavy over the greater part of the country but it occasionally happens that there is a delay in the setting in of the rains over Upper India, a delay which in some years may extend into July. The rainfall of the first half of the month is hence sometimes uncertain.

In the month under review the rain did not extend properly over the country during the first week. Scattered showers were reported on the 1st and between the 2nd and the 7th there was daily rain along the West Coast and over Burma and North-East India, but the interior of the country with the exception of some showers was more or less rainless. On the 8th the rainfall extended and was fairly general up to the 12th. After the latter date there occurred a partial break in the rains which lasted until the 17th. On the 17th rain recommenced over the central parts of the country and on the 18th became general except in the extreme north-west. Between the 18th and the end of the month a series of slight disturbances passed from the Bay north-westward into North-Western India and general rain extended as far as Sind and the West Punjab.

The delay in the full extension of the monsoon rainfall at the commencement of the month and the partial break between the 12th and the 17th had an effect on the rainfall which was not obliterated by the general rain between the 18th and the close of the month.

The periods of most general rain were as follows:—

(1) The 8th to the 12th when general rain extended to all parts of the country as far west as the north-west dry area.

(2) The 18th to the 23rd when rain again extended to all areas.

(3) The 26th to the end of the month when the fall was again general throughout the country.

Burma, Bengal and the West Coast districts had steady daily rainfall throughout the month.

The following rainfall table gives the mean actual, mean normal and variation data for the 56 meteorological divisions of the empire:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, July 1901.	Average normal, July.	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	...	...	40·15	47·07	−6·92
	Lower Burma (Deltaic)*	...	...	18·89	23·02	−4·13
	Central ditto*	...	...	12·97	14·13	−1·16
	Upper ditto*	...	...	3·83	9·88	−6·05
	Arakan*	...	...	46·25	48·02	−1·77
Bengal and Assam	Eastern Bengal	16·3	18·4	12·81	18·73	−5·92
	Assam (Surma)	22·0	22·2	17·30	20·54	−3·24
	Do. (Hills)	21·6	21·6	20·62	27·20	−6·58
	Do. (Brahmaputra)	16·2	18·0	15·47	17·36	−1·89
	Deltaic Bengal	16·1	16·4	10·92	11·81	−0·89
	Central do.	14·3	16·0	10·27	12·29	−2·02
	North do.	14·4	16·7	18·79	19·68	−0·89
	Bengal Hills	20·2	24·2	25·87	35·47	−9·60
	Orissa	17·1	14·5	12·58	11·86	+0·72
	Chota Nagpur	15·3	16·9	10·18	14·01	−3·83
	Bihar (South)	10·1	14·0	8·64	12·25	−3·61
	Do. (North)	11·3	14·4	10·25	13·60	−3·35
North-Western Provinces and Oudh.	North-Western Provinces (East)	9·6	13·3	6·42	11·83	−5·41
	Oudh (South)	7·8	12·3	9·22	10·75	−1·53
	Do. (North)	9·2	12·1	8·12	11·69	−3·57
	North-Western Provinces (Central)	8·6	12·3	7·76	11·79	−4·03
	Do. do. (West)	6·9	9·5	5·22	8·85	−3·63
	Do. do. (East Submontane)	11·3	13·2	10·72	12·40	−1·68
	Do. do. (West do.)	10·4	12·7	12·41	14·66	−2·25
	Do. do. (Hills)	16·3	18·7	15·92	17·11	−1·19
Punjab	Punjab (South-East)	6·4	7·8	4·92	7·72	−2·80
	Do. (South)	6·1	5·1	4·13	4·87	−0·74
	Do. (Central)	6·0	5·5	5·64	4·99	+0·65
	Do. (Submontane)	8·0	8·4	9·78	9·22	+0·56
	Do. (Hills)	12·7	15·1	13·35	16·68	−3·33
	Do. (North)	3·3	4·8	2·09	4·17	−2·08
	Do. (West)	2·8	3·0	1·81	2·57	−0·76

*The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, July 1901.	Average normal, July.	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.
				Inches.	Inches.	Inches.
Bombay and Malabar Coast Districts (Madras).	Malabar	28·2	26·6	37·23	35·45	+1·78
	Travancore	17·3	...	16·62	...	...
	Madras (South Central)	3·8	3·8	1·60	1·87	−0·27
	Coorg	28·3	...	35·52	...	...
	Mysore	9·2	9·1	7·19	6·38	+0·81
	Konkan	28·4	26·9	41·11	40·03	+1·08
	Bombay Deccan	11·3	12·2	8·07	9·39	−1·32
	Khandesh	11·6	11·1	7·56	7·67	−0·11
Central Provinces and Berar.	Berar	11·7	...	9·42	11·59	−2·17
	Central Provinces (West)	14·0	15·4	12·87	13·81	−0·94
	Do. (Central)	16·1	17·1	15·03	18·02	−2·99
	Do. (East)	18·0	15·0	13·97	16·07	−2·10
Bombay (North)	Gujarat	12·7	17·1	11·96	18·46	−6·50
	Kathiawar and Cutch	7·6	11·5	5·76	12·39	−6·63
	Sind	2·4	...	1·12	1·86	−0·74
	Baluchistan Hills	2·0	...	1·06	0·99	+0·07
Rajputana and Central India.	Central India (East)	11·9	...	9·65	13·20	−3·55
	Rajputana (East), Central India (West)	8·4	...	6·93	9·09	−2·16
	Do. (West)	4·3	...	3·33	3·98	−0·65
Madras	East Coast (North)	10·9	10·7	6·06	7·27	−1·21
	Hyderabad (South)*	...	...	6·25	...	...
	Madras (Central)	6·1	5·7	2·62	2·85	−0·23
	East Coast (Central)	6·8	4·7	3·00	2·29	+0·71
	Do. (South)	4·8	4·5	2·28	2·63	−0·35
	Madras (South)	1·2	1·8	0·50	0·86	−0·36

* The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

It was only in a very few districts *viz.*, Orissa, Central Punjab, Punjab Submontane, Malabar, Mysore, Konkan, Baluchistan Hills and East Coast Central, that the total rainfall of the month was in any excess of the normal, but in the majority of cases the deficiency was comparatively small (less than −20%) and it was only in twenty divisions that the fall was seriously deficient. These divisions were Upper Burma (−61%), East Bengal (−32%), Assam Hills (−24%), Bengal Hills (−27%), Chota Nagpur (−27%), South Bihar (−29%), North Bihar (−25%), North-Western Provinces, East (−46%), North Oudh (−31%), North-Western Provinces, Central (−34%), North-Western Provinces, West (−41%), South-East Punjab (−36%), North Punjab (−50%), West Punjab (−30%), Gujarat (−35%), Kathiawar and Cutch (−54%), Sind (−40%), Central India, East (−27%), Rajputana East, Central India West (−24%) and Madras South (−42%).

The chart of actual rainfall (Plate IV) shows that the total rainfall of the month was less than half an inch at Kurrachee and Peshawar and over the extreme south-east of the Peninsula; was between half an inch and one inch over the Indus Valley generally and over the centre of the Peninsula and was less than two inches in the dry area in Upper Burma. From these areas the amount of rainfall increased in all directions and exceeded 30 inches along the West Coast, over North Bengal and along the Burma Coast. The table given above shows that in Madras South the average actual rainfall of the month was only 0·50″ and in South Central Madras, Baluchistan, Sind, and the

West Punjab was between 1″ and 2″, while in Tenasserim the rainfall averaged over 40″; in the Konkan over 41″ and in Arakan over 46″.

In Burma rain fell on nearly every day in the Tenasserim and Burma Wet divisions but in Upper Burma only scattered and generally light showers were received and on several days the weather was apparently rainless. The heaviest rainfall was on the 8th and 9th and on the 14th and 15th. The following gives the heaviest falls in 24 hours recorded in each division of the province with the name of the recording station and the date of the occurrence :—

Division.	District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
				Inches.
Tenasserim	Thaton	Thaton	28th July	6·85
Lower Burma	Myaungmya	Pantanaw	17th ,,	3·64
Central Burma	Tharrawaddy	Gyobingauk	31st ,,	4·33
Upper Burma	Chin Hills	Fort White	24th ,,	5·53
Arakan	Akyab	Akyab	,, ,,	8·81

The following gives comparative rainfall data for the five rainfall divisions of the province based on the weekly telegraphic reports :—

Division.	Rainfall.			
	Average *actual*, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Tenasserim	40·15	47·07	—6·92	—15
Lower Burma, Deltaic	18·89	23·02	—4·13	—18
Central Burma	12·97	14·13	—1·16	— 8
Upper Burma	3·83	9·88	—6·05	—61
Arakan	46·25	48·02	—1·77	— 4

Assam had continuous rain in the Surma Valley from the 1st to the 23rd. After the 23rd a partial break set in which lasted till the 28th when general rain again fell till the close of the month. The fall was heaviest during the last general fall as is shown by the following table which gives the falls exceeding 3″ in 24 hours during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cachar	Nemotha	5th July	3·50
	Jatinga Valley	9th ,,	4·82
Sylhet	Lalakhal	10th ,,	6·65
Cachar	Silchar	,, ,,	4·75
	Monierkhal	,, ,,	4·04
	Bikrampur	,, ,,	3·34
	Barkhola	,, ,,	3·33
	Nemotha	,, ,,	3·20
Sylhet	Sunamganj	13th ,,	3·30
Cachar	Jatinga Valley	16th ,,	3·40
	Ditto	29th ,,	3·74
	Dewan	,, ,,	3·04
Sylhet	Lalakhal	30th ,,	8·50
	Sonamganj	,, ,,	5·40
Cachar	Bikrampur	,, ,,	4·06
	Nemotha	,, ,,	3·36
	Monierkhal	,, ,,	3·22
	Jatinga Valley	,, ,,	3·14
	Nemotha	31st ,,	4·40

The following table gives comparative data of the two districts in this division :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cachar	16·79	19·78	—2·99	—15
Sylhet	18·00	21·30	—3·30	—15

In the Assam hills rain occurred under the same conditions and about the same dates as on the plains. The amounts were not as heavy as usual and the only falls

exceeding 3″ in 24 hours during the month were as follows:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
KHASI AND JAINTIA HILLS.	Cherra Poonjee (Police Station).	5th July	4·17
	Laitlyngkot	" "	4·05
	Cherra Poonjee (Police Station).	6th "	10·71
	Mauphlang	" "	4·31
	Laitlyngkot	" "	3·92
	Jowai	" "	3·69
	Cherra Poonjee (Police Station).	12th "	6·21
	Ditto	13th "	8·49
	Laitlyngkot	" "	5·14
GARO HILLS	Tura	" "	3·50
	Ditto	19th "	7·23
KHASI AND JAINTIA HILLS.	Cherra Poonjee (Police Station).	" "	5·15
	Ditto	20th "	12·02
	Mauphlang	" "	7·01
	Laitlyngkot	" "	6·15
GARO HILLS	Tura	30th "	3·02
KHASI AND JAINTIA HILLS.	Cherra Poonjee (Police Station.)	" "	3·01

At Cherra Poonjee the total rainfall of the month was 72″ compared with the normal of 109″ and the heaviest fall in 24 hours was 12″ on the 20th.

In the Goalpara and Kamrup districts of the Brahmaputra Valley there were showers up to the 9th and a general burst of rain between the 10th and the 14th. After the 10th showers again set in and showery weather continued till the end of the month. In the remaining districts of the Brahmaputra Valley the rainfall was more continuous and general, but partial breaks prevailed on the 8th and 9th, the 14th and 15th and from the 25th to the 28th. The following gives comparative data for the different districts of the Brahmaputra Valley:—

DISTRICT.	RAINFALL.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Goalpara	19·55	24·45	—4·90	—20
Kamrup	14·08	15·28	—1·20	— 8
Darrang	13·76	15·85	—2·09	—13
Nowgong	11·05	14·04	—2·99	—21
Sibsagar	12·77	14·95	—2·18	—15
Lakhimpur	23·05	22·05	+1·00	+ 5

The rainfall was frequently heavy in this division and exceeded 3·50″ in 24 hours at the following stations on the following dates:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
LAKHIMPUR	Belijan	6th July	5·20
GOALPARA	Kachugaon	" "	4·15
LAKHIMPUR	Wilton	" "	4·01
SIBSAGAR	Atabaria	" "	3·59
LAKHIMPUR	Sadiya	7th "	4·00
DARRANG	Kabira	10th "	4·01
LAKHIMPUR	Pathalipam	11th "	3·73
	Wilton	12th "	4·10
DARRANG	Orangajuli	13th "	5·61
GOALPARA	Kachugaon	" "	5·50
KAMRUP	Barpeta	" "	4·33
DARRANG	Kerkeriya	" "	3·70
KAMRUP	Bajali	" "	3·60
	Kamalpur	" "	3·61
	Bajali	14th "	5·12
LAKHIMPUR	Harmati	" "	3·90
GOALPARA	Kachugaon	19th "	3·60
KAMRUP	Barpeta	20th "	4·54
GOALPARA	Marnai	21st "	3·75
	Kachugaon	" "	3·66
DARRANG	Charduar	23rd "	7·24
	Balipara	" "	6·70
	Singrimari	" "	4·64
	Boreli	" "	4·30
LAKHIMPUR	Dhakuhakhana	" "	3·81
DARRANG	Kabira	24th "	5·40
	Kerkeriya	" "	5·33
	Orangajuli	" "	4·05
	Boreli	" "	3·80
GOALPARA	Kachugaon	30th "	4·60

The following gives comparative data for the three divisions of this province:—

Division.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Assam Surma	17·30	20·54	—3·24	—16
„ Hills	20·62	27·20	—6·58	—24
„ Brahmaputra	15·47	17·36	—1·89	—11

Rain was irregularly distributed over Bengal and was lighter than usual over the greater part of the province. During the first five days of the month there was comparatively little rain in any part of the province, but on the 6th when a shallow depression was beginning to form rain commenced to fall generally and continued more or less generally until the 16th. After the 17th the weather, with the exception of a brief period about the 22nd, was somewhat drier than usual and the rainfall lighter and more scattered than the normal.

In South-West Bengal heavy rain commenced on the 6th particularly in the Burdwan district. This fall continued more or less steadily until the 17th and was particularly heavy and general on the 11th and 12th. On the 19th general rain again set in continuing till the 22nd when it was heavy. After the 22nd the weather became showery and though these showers became heavy on the 27th general rain was not again experienced before the close of the month. The rain, as mentioned above, was irregularly distributed with more heavy local falls than usual. The following gives a statement of the falls exceeding 3" in 24 hours which occurred in South-West Bengal during the month:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Midnapore	Raipur	6th July	3·36
Birbhum	Labpur	„ „	3·01
Bankura	Onda	7th „	3·70
	Indas	8th „	4·52
Midnapore	Dantan	„ „	4·34
Hooghly	Arambagh	10th „	4·14
Murshidabad	Patkabari	11th „	4·10
Khulna	Kaliganj	11th July	3·05
Burdwan	Burdwan	12th „	4·51
Nadia	Meherpur	„ „	3·80
Howrah	Mohesreka	„ „	3·60
	Howrah	„ „	3·35
	Ulubaria	„ „	3·30
Jessore	Jhenidah	„ „	3·10
24-Parganas	Dimond-Harbour	„ „	3·05
	Alipore	„ „	3·05
Bankura	Indas	14th „	3·10
Jessore	Narail	15th „	3·98
Khulna	Paikgacha	21st „	4·20
Howrah	Mahesreka	22nd „	4·15
Birbhum	Bolpur	„ „	4·06
Burdwan	Katwa	„ „	3·30
Birbhum	Morari	„ „	3·24

The following gives comparative data for the different districts in this division:—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burdwan	10·53	11·88	—1·35	—11
Birbhum	10·09	12·57	—2·48	—20
Bankura	11·21	12·67	—1·46	—12
Midnapore	10·11	12·19	—2·08	—17
Hooghly	9·75	12·00	—2·25	—19
Howrah	14·32	12·00	+2·32	+19
24-Parganas	12·12	12·37	—0·25	— 3
Calcutta	12·99	12·46	+0·53	+ 4
Nadia	10·43	10·51	—0·08	— 1
Murshidabad	8·09	11·27	—3 18	—28
Jessore	10·79	10·54	+0·25	+ 2
Khulna	8·81	12·82	—4·01	—31

In North Bengal the general distribution of rain was very similar, but in the Dinajpur and Jalpaiguri districts the first five days of the month were more showery than

they were in South-West Bengal. General rain prevailed from the 6th to the 15th and again from the 19th to the 24th after which the weather was showery till the close of the month. Heavy local falls were frequently received as is shown by the following statement which records the various falls exceeding 4″ in 24 hours during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jalpaiguri	Jalpaiguri	1st July	4·20
	Kalchini	,, ,,	4·18
Darjeeling	Baxa	2nd ,,	6·49
Jalpaiguri	Kalchini	3rd ,,	5·37
	Falakata	4th ,,	5·40
	Alipur Duar	,, ,,	4·62
	Falakata	6th ,,	4·66
Dinajpur	Gangarampur	,, ,,	4·38
Darjeeling	Siliguri	7th ,,	7·42
	Kalimpong	,, ,,	7·04
	Mungpoo	,, ,,	6·52
	Kurseong	,, ,,	5·68
	Darjeeling	,, ,,	4·96
Jalpaiguri	Falakata	12th ,,	4·66
Bogra	Panchbibi	13th ,,	7·30
Jalpaiguri	Falakata	,, ,,	4·27
Darjeeling	Darjeeling	,, ,,	4·16
Jalpaiguri	Jalpaiguri	,, ,,	4·11
Darjeeling	Kalimpong	14th ,,	5·10
	Baxa	19th ,,	4·70
Jalpaiguri	Kalchini	20th ,,	13·94
Dinajpur	Ramganj	,, ,,	7·00
Jalpaiguri	Jalpaiguri	,, ,,	5·35
	Falakata	,, ,,	5·20
Dinajpur	Thakurgaon	,, ,,	4·64
Jalpaiguri	Debiganj	,, ,,	4·32
Cooch Behar	Mickliganj	,, ,,	4·25
Jalpaiguri	Alipur Duar	,, ,,	4·22
Darjeeling	Darjeeling	24th ,,	4·05
Jalpaiguri	Jalpaiguri	30th ,,	6·21
	Kalchini	,, ,,	4·04

The following gives comparative data for the different districts in North Bengal :—

District.	Rainfall. Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Rajshahi	6·32	12·02	−5·70	−47
Dinajpur	10·75	14·29	−3·54	−25
Jalpaiguri	35·80	30·38	+5·42	+18
Darjeeling	30·03	30·28	−0·25	− 1
Cooch Behar	17·49	24·49	−7·00	−29
Rangpur	10·90	15·56	−4·66	−30
Bogra	11·88	13·23	−1·35	−11
Pabna	10·65	11·13	−0·48	− 4

In East Bengal showery weather prevailed up to the 9th ; then a general burst of rain set in which lasted till the 15th and was very heavy on the 11th and 12th. The 16th, 17th and 18th were fairly fine days, but on the 19th the second general burst of rain set in and lasted till the 23rd. After the 23rd the weather was showery till the end of the month. The rainfall was not very heavy except on the 11th, 12th, 13th, 20th and 21st when the following amounts exceeding 3″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chittagong	Mirsarai	11th July	4·00
	Fenoa	,, ,,	4·00
	Chittagong	,, ,,	3·85
Chittagong Hill Tracts.	Bundarban	,, ,,	3·58
Chittagong	Satkania	,, ,,	3·12
	Chittagong	12th ,,	4·55
	Satkania	,, ,,	3·71
	Cox's Bazar	,, ,,	3·67
	Fenoa	,, ,,	3·55
	Mirsarai	,, ,,	3·40
Noakhali	Chhagalnaya	,, ,,	3·29
Chittagong	Cox's Bazar	13th ,,	5·66
	Kutubdia	,, ,,	3·45

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Mymensingh	Mymensingh	13th July	3·36
	Jamalpur	14th „	6·55
	Sherpur Town	„ „	4·45
Noakhali	Harishpur	20th „	4·16
	Chhagalnaya	„ „	4·08
Mymensingh	Nalitabari	„ „	3·70
Chittagong	Mirsarai	„ „	3·48
Noakhali	Ramganj	21st „	3·75
Tippera	Chandpur	„ „	3·55
Noakhali	Lakhmipur	„ „	3·35
Chittagong	Cox's Bazar	„ „	3·28

The following gives comparative data for the different districts in this division :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dacca	5·24	13·31	−8·07	−61
Mymensingh	14·91	15·55	−0·64	− 4
Faridpur	8·34	11·93	−3·59	−30
Backergunge	11·80	20·33	−8 53	−42
Noakhali	17·35	23·47	−6·12	−26
Chittagong	19·39	29·80	−10·41	−35
Chittagong Hill tracts	12·20	18·58	−6·38	−34

Bihar received less rain than Bengal proper, but there were two periods of general and moderately heavy rain during the month corresponding with the passage of two shallow depressions through the province. The first period ran from the 7th to the 15th and the second from the 21st to the 23rd. During these bursts of general rain the following amounts exceeding 3″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Purnea	Kaliaganj	1st July	4·30
Monghyr	Jamalpur	6th „	3·74
Saran	Bhoreh	7th „	5·50
Monghyr	Chupreon	„ „	4·59
Champaran	Bettiah	„ „	4·00
Purnea	Barsoe	„ „	3·80
Saran	Hathwa	„ „	3·60
Champaran	Ramnagar	„ „	3·50
	Bagaha	„ „	3·15
Patna	Barh	8th „	4·50
Sonthal Parganas	Nayadumka	„ „	3·25
Purnea	Barsoe	11th „	3·60
Sonthal Parganas	Assenboni	„ „	3·19
	Nanihat	12th „	3·51
Bhagalpur	Madhipura	14th „	3·06
Darbhanga	Bahera	21st „	5·70
Champaran	Bagaha	„ „	5·43
Patna	Barh	„ „	3·98
	Bikram	„ „	3·85
Gaya	Daudnagar	„ „	3·43
Darbhanga	Tajpur	„ „	3·21
Saran	Siwan	22nd „	5·56
Patna	Barh	„ „	5·37
Monghyr	Jamui	„ „	5·15
Gaya	Arwal	„ „	4·17
Shahabad	Sasaram	„ „	4·00
Monghyr	Gidhaur	„ „	3·96
Sonthal Parganas	Katikund	„ „	3·85
Patna	Hilsa	„ „	3·65
Sonthal Parganas	Pakaur	„ „	3·45
	Rajmahal	„ „	3·40
Gaya	Sherghati	„ „	3·26
Saran	Gopalganj	23rd „	3·03
Shahabad	Chausa	31st „	3·95
Sonthal Parganas	Hiranpur	„ „	3·85
Saran	Siwan	„ „	3·46

The following gives comparative data for the different districts in this division :—

District.	Rainfall. Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Patna	11·80	12·40	—0·60	— 5
Gaya	8·74	12·27	—3·53	—29
Shahabad	7·25	11·65	—4·40	—38
Saran	12·57	12·14	+0·43	+ 4
Champaran	13·05	14·17	—1·12	— 8
Muzaffarpur	7·55	12·38	—4·83	—39
Darbhanga	7·37	12·34	—4·97	—40
Monghyr	10·56	13·31	—2·75	—21
Bhagalpur	8·41	12·73	—4·32	—34
Purnea	13·92	17·01	—3·09	—18
Malda	7·67	12·28	—4·61	—38
Sonthal Parganas	10·75	13·44	—2·69	—20

In Orissa showery weather prevailed steadily throughout the month. General rain fell between the 6th and the 8th, between the 16th and 18th, and on the 28th and 29th while in the interval there were scattered moderate showers. The rainfall was about normal, but the only falls exceeding 3″ in 24 hours were as follows:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cuttack	Jagatsingpur	6th July	3·30
Angul	Dhenkanal	„ „	3·30
Balasore	Chandbali	7th „	3·25
Cuttack	False Point	10th „	4·15
	Jagatsingpur	15th „	4·55
Puri	Gop	16th „	6·50
Angul	Chhendipada	17th „	6·15
	Kumarkhole	27th „	3·44
Cuttack	Jagatsingpur	28th „	5·00
Puri	Banpur	29th „	3·06

The following gives comparative data for the different districts of the division :—

District.	Rainfall. Average Actual, July 1901.	Average Normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuttack	10·51	11·69	—1·18	—10
Balasore	8·62	12·20	—3·58	—29
Puri	9·29	10·89	—1·60	—15

In Chota Nagpur the rainfall conditions were similar to those recorded in Bihar. From the 1st to the 5th, the weather was finer than usual. On the 6th general rain set in and continued until the 17th. There was then a break for three days and then three days of general rain and finally fairly general rain between the 27th and 29th. The rainfall throughout was lighter than usual and the only falls of over 3″ in 24 hours throughout the month were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Ranchi	Gangpur	1st July	3·90
Manbhum	Barabhbhum	7th „	3·20
Singhbhum	Chaibassa	8th „	3·20
	Katbari	„ „	3·18
Palamau	Balumath	9th „	3·80
Hazaribagh	Chatra	22nd „	3·27
	Kharagdiha	31st „	3·40

The following gives comparative data for the different districts in this division :—

District.	Rainfall. Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Hazaribagh	7·75	13·98	—6·23	—45
Ranchi	6·90	13·05	—6·15	—47
Palamau	8·35	13·53	—5·18	—38
Manbhum	11·52	13·38	—1·86	—14
Singhbhum	10·92	13·76	—2·84	—21

The rainfall of the month was generally less than usual. There were no serious cyclonic storms during the month and consequently no general heavy cyclonic downpours, but the rainfall was irregularly distributed and heavy local falls were frequent. The following gives comparative rainfall data for the nine rainfall divisions of the province:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.	Average actual, July 1901.	Average normal, July.
	Inches.	Inches.	Inches.			
Eastern Bengal	12·81	18·73	−5·92	−32	16·3	18·4
Deltaic Bengal	10·92	11·81	−0·89	− 8	16·1	16·4
Central Bengal	10·27	12·29	−2·07	−17	14·3	16·0
North Bengal	18·79	19·68	−0·89	− 5	14·4	16·7
Bengal Hills	25·87	35·47	−9·60	−27	20·2	24·2
Orissa	12·58	11·86	+0·72	+ 6	17·1	14·5
Chota Nagpur	10·18	14·01	−3·83	−27	15·3	16·9
South Bihar	8·64	12·25	−3·61	−29	10·1	14·0
North Bihar	10·25	13·60	−3·35	−25	11·3	14·4

In the North-Western Provinces the month's rainfall was considerably lighter than usual. In Oudh there were two bursts of general rain, one between the 10th and the 12th and the second between the 20th and the 24th. At other times the weather was fine with passing light showers. During the two general bursts of rain the rainfall was fairly heavy, and the following amounts exceeding 3 inches in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Rai Bareily	Rai Bareily	10th July	4·43
Hardoi	Bilgram	11th ,,	7·68
	Hardoi	,, ,,	6·08
	Shahabad	,, ,,	5·35
Unao	Mohan	,, ,,	4·25
Kheri	Muhamdi	,, ,,	4·05
Sultanpur	Amethi	,, ,,	3·80
Rai Bareily	Salon	,, ,,	3·52
Lucknow	Mohankalganj	,, ,,	3·45
Unao	Purwa	,, ,,	3·05
Fyzabad	Bikapur	,, ,,	3·02
Kheri	Muhamdi	12th July	5·63
Hardoi	Shahabad	19th ,,	4·02
	Sandila	20th ,,	6·65
	Bilgram	,, ,,	4·32
Partabgarh	Patti	,, ,,	3·21
Unao	Mohan	23rd ,,	5·25
Lucknow	Malihabad	,, ,,	4·75
Rai Bareily	Drighijaiganj	,, ,,	3·22
Gonda	Utraula	31st ,,	3·76

In the south-west and central divisions of the North-Western Provinces the distribution of the rainfall was similar to that in Oudh. Fairly fine weather with occasional passing showers prevailed over both divisions except between the 9th and the 12th and the 21st to the 25th when general and in places heavy rain was received. The following gives the falls exceeding 3 inches in 24 hours in these two divisions:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Banda	Mau	9th July	7·15
	Kamasin	,, ,,	5·37
	Karwi	,, ,,	4·52
	Baberu	10th ,,	8·94
Hamirpur	Hamirpur	,, ,,	5·02
	Maudaha	,, ,,	3·45
Fatehpur	Ghazipur	,, ,,	3·38
Allahabad	Barah	,, ,,	3·26
Cawnpore	Bhognipur	,, ,,	3·24
	Shivarajpur	11th ,,	8·46
Farukhabad	Kanauj	,, ,,	7·81
Cawnpore	Bilhaur	,, ,,	7·30
Farukhabad	Thatia Tirwa	,, ,,	4·78
Hamirpur	Thana	,, ,,	4·62
	Bija Nagar	,, ,,	3·85
Etah	Jalesar	,, ,,	3·47
Cawnpore	Cawnpore	,, ,,	3·22
Jaunpur	Mariahu	12th ,,	3·30
	Jaunpur	21st ,,	3·32
Hamirpur	Maudaha	25th ,,	4·82
Banda	Karwi	,, ,,	3·16

In the west division of the North-Western Provinces the rainfall differed slightly from that obtaining in the previous divisions. Fine weather prevailed up to the 9th when there occurred a general burst of rain lasting to the 12th. Then there followed a break of six days when the second burst of general rain commenced. This burst lasted till the 21st but it was followed by more generally showery weather than in the central and eastern divisions. The fall of rain was less heavy than in the other divisions and the only amounts exceeding 3 inches in 24 hours were as follows:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jhansi	Magawara	10th July	4·30
	Jhansi	" "	3·05
Aligarh	Khair	11th "	4·05
Bulandshahr	Anupshahr	" "	3·92
Aligarh	Iglas	" "	3·88
Bulandshahr	Anupshahr	12th "	4·24
Jhansi	Lalitpur	20th "	4·28
	Mahroni	" "	3·40
	Jhansi	" "	3·37
Meerut	Meerut	28th "	3·07

In the submontane division the rainfall was both heavier and more continuous than in other parts of the North-Western Provinces but the main conditions were similar. The first general burst of rain commenced on the 8th and lasted till the 13th, the second commenced on the 17th and lasted till the 26th. During these two periods the following amounts exceeding 4 inches in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Naini Tal	Haldwani	10th July	4·20
	Naini Tal	11th "	10·50
Shahjahanpur	Shajahanpur	" "	5·80
	Pawayan	" "	5·02
Naini Tal	Haldwani	11th July	4·80
	Kashipur	" "	4·30
Bareilly	Pandhera	" "	4·30
Shajahanpur	Tilhar	" "	4·20
Dehra Dun	Ambari	12th "	8·70
Budaun	Gunnaur	" "	6·40
Almora	Tanakpur	" "	4·90
Muzaffarnagar	Khandhla	" "	4·40
Almora	Champawat	" "	4·11
Dehra Dun	Mussooree	17th "	8·00
Garhwal	Lansdowne	" "	4·40
Dehra Dun	Dehra Asylum	" "	4·04
	Ambari	18th "	10·00
	Chakrata (observatory)	" "	5·10
	Rajpur	" "	5·00
Saharanpur	Roorkee (Observatory)	" "	4·72
Dehra Dun	Chakrata, Tahsil	" "	4·15
	(Kalsi)	" "	4·08
Bareilly	Baheri	19th July	10·02
	Choreli	" "	8·10
Bijnour	Bijnour	" "	8·04
Bareilly	Nawabganj	" "	6·45
	Pandhera	" "	6·20
Pilibhit	Puranpur	" "	4·82
Saharanpur	Nakur	" "	4·78
Pilibhit	Amaria	" "	4·27
	Puranpur	20th "	4·73
Shahjahanpur	Pawayan	21st "	4·12
Almora	Tanakpur	22nd "	6·00
Dehra Dun	Ambari	25th "	4·50
	Rajpur	" "	4·25
	Mussooree	30th "	6·75
Naini Tal	Ramnagur	" "	5·11
Dehra Dun	Rajpur	31st "	6·00

In the north-east of the North-Western Provinces the rainfall periods were nearly as prolonged as in the submontane division, the first lasting from the 5th to the 13th, the second from the 20th to the 25th. The rainfall was,

however, less heavy and only exceeded 3 inches in 24 hours at the following places :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			"
GORAKHPUR	Gorakhpur	5th July	5·74
	Maharajganj	" "	3·61
	Hata	7th "	6·40
	Maharajganj	" "	3·80
	"	21st "	4·81
	Bansgaon	22nd "	4·60
BASTI	Basti	31st "	5·82
	Khalilabad	" "	5·25
BALLIA	Ballia	" "	4·52
AZAMGARH	Jewanpur (Sagri)	" "	3·88

The general rainfall of the province was considerably short of the normal as is shown by the following table which gives comparative data for the different divisions for the month :—

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS.	
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.	Average actual, July 1901.	Average normal, July.
	"	"	"			
North-Western Provinces East.	6·42	11·83	—5·41	—46	9·6	13·3
South Oudh	9·22	10·75	—1·53	—14	7·8	12·3
North Oudh	8·12	11·69	—3·57	—31	9·2	12·1
North-Western Provinces Central.	7·76	11·79	—4·03	—34	8·6	12·3
North-Western Provinces West.	5·22	8·85	—3·63	—41	6·9	9·5
North-Western Provinces East Submontane.	10·72	12·40	—1·68	—14	11·3	13·2
North-Western Provinces West Submontane.	12·41	14·66	—2·25	—15	10·4	12·7
North-Western Provinces Hills.	15·92	17·11	—1·19	— 7	16·3	18·7

In the Punjab the rainfall was on the whole scanty. It was irregularly distributed but generally occurred during three periods. The first rainfall period lasted from the 8th to the 15th, and during this period rain was general throughout the province though it was very light and scattered in the north-west and west. The following were the principal amounts exceeding 3 inches in 24 hours which were recorded during this fall :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A M. of date.
			"
GURDASPUR	Dalhousie	9th July	4·86
KARNAL	Thanesar	10th "	3·86
UMBALLA	Dadupur	" "	3·20
GURGAON	Hodal	" "	3·14
JULLUNDUR	Jullundur	11th "	3·93
HISSAR	Hissar	" "	3·60
HOSHIARPUR	Una	" "	3·35
UMBALLA	Dadupur	12th "	5·00
	Jagadhri	" "	3·71
AMRITSAR	Buchar	" "	3·60

The second rainfall period lasted from the 18th to the 22nd and was generally heaviest in the central and sub-montane divisions though there were some local heavy falls in the north-west division. The fall on this occasion was generally light in the South and West Punjab. The following were the amounts exceeding 3 inches in 24 hours recorded during this fall :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			"
KANGRA	Palampur	18th July	5·70
UMBALLA	Naraingarh	" "	3·60
SIMLA	Simla	" "	3·57
KANGRA	Palampur	19th "	4·72
ROHTAK	Sampla	20th "	5·10
JHELUM	Jhelum	" "	4·47
KARNAL	Karnal	" "	3·92
UMBALLA	Kharar	" "	3·70
GURGAON	Nuh	" "	3·35
	Firozpur	" "	3·05
PATIALA STATE	Lehal	21st "	4·50
KARNAL	Thanesar	" "	4·41
PATIALA STATE	Barthala	" "	4·12
KARNAL	Karnal	" "	3·81

The third and last fall occurred between the 25th and the end of the month and was in every respect the most important fall of the month. The rain was rather

irregularly distributed and was again generally light in the south and part of the central divisions while it was very heavy in the Lahore, Gurdaspur and Amritsar districts. The following gives all falls exceeding 3·50″ in 24 hours which occurred during this rainy period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			″
Kangra	Kangra	25th July	8·12
Kangra	Palampur	,, ,,	6·83
Kangra	Dharamsala	,, ,,	6·30
Gurdaspur	Pathankot	,, ,,	5·09
Kangra	Hamirpur	,, ,,	4·05
Gurdaspur	Madhopur	,, ,,	3·95
Gurdaspur	Tibri	26th ,,	8·20
Gurdaspur	Gurdaspur	,, ,,	7·55
Amritsar	Ajnala	,, ,,	6·23
Lahore	Lahore	,, ,,	5·98
Gurdaspur	Pathankot	,, ,,	5·69
Lahore	Meean Meer	,, ,,	5·20
Amritsar	Buggeh	,, ,,	4·60
Gurdaspur	Batala	,, ,,	4·52
Amritsar	Taran Taran	,, ,,	4·32
Gujranwala	Pacca Dalla	,, ,,	4·30
Kangra	Nurpur	,, ,,	3·97
Sialkot	Raya	,, ,,	3·83
Amritsar	Amritsar	,, ,,	3·63
Gurdaspur	Madhopur	,, ,,	3·60
Amritsar	Buggeh	27th ,,	6·40
Amritsar	Buchar	,, ,,	5·60
Gujranwala	Shekhupura	,, ,,	5·00
Gujranwala	Khangah Dogran	,, ,,	4·35
Amritsar	Amritsar	,, ,,	3·60
Amritsar	Taran Taran	,, ,,	3·53
Gujranwala	Ramnagar	29th ,,	4·65
Jhelum	Jhelum	,, ,,	4·37
Sialkot	Sialkot	,, ,,	3·61
Gujrat	Gujrat	,, ,,	3·51

The following table gives comparative rainfall data for the 31 districts of the Punjab and shows that in sixteen districts the month's rainfall was normal or in excess of the normal.

District.	Rainfall. Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	″	″	″	
Hissar	3·22	4·73	−1·51	−32
Ferozepore	4·77	5·03	−0·26	− 5
Montgomery	1·93	2·95	−1·02	−35
Gurgaon	4·71	8·29	−3·58	−43
Rohtak	3·71	6·74	−3·03	−45
Delhi	5·29	7·80	−2·51	−32
Karnal	6·16	7·92	−1·76	−22
Lahore	5·51	4·86	+0·65	+13
Umballa	12·72	11·26	+1·46	+13
Ludhiana	7·89	8·06	−0·17	− 2
Jullundur	6·97	8·27	−1·30	−16
Hoshiarpur	8·34	9·75	−1·41	−14
Gurdaspur	13·94	12·39	+1·55	+13
Amritsar	9·49	6·35	+3·14	+49
Simla	10·07	12·18	−2·11	−17
Kangra	14·55	19·20	−4·65	−24
Gujranw	5·33	5·15	+0·18	+ 3
Sialkot	8·28	8·24	+0·04	0
Gujrat	6·60	6·23	+0·37	+ 6
Jhelum	5·97	4·17	+1·80	+43
Rawalpindi	3·84	6·82	−2·98	−44
Peshawar	0·45	2·16	−1·71	−79
Hazara	2·95	6·47	−3·52	−54
Kohat	2·86	3·63	−0·77	−21
Bannu	2·11	1·94	+0·17	+ 9
Shahpur	2·78	3·31	−0·53	−16
Jhang	1·87	3·03	−1·16	−38
D. I. Khan	1·09	2·29	−1·20	−52
D. G. Khan	1·34	1·96	−0·62	−32
Muzaffargarh	0·12	2·31	−2·19	−95
Mooltan	1·93	3·53	+0·40	+26

Baluchistan received showers between the 7th and the 10th and again between the 26th and the end of the month. Amounts exceeding 1″ in 24 hours were recorded

at the following places on the following dates. The month's rainfall was about normal:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			"
Baluchistan	Mushkof	8th July	1·10
	Nasak	26th "	1·75
	Duki	" "	1·60
	Loralai	" "	1·15
	Harnai	27th "	1·30
	Dirgi	" "	1·20
	Shahrig	29th "	1·30
	Peshi	" "	1·01
	Sibi Ry. Station	30th "	1·65
	Sibi Hospital	" "	1·60
	Mittri	" "	1·10

Kashmir like the Punjab had three periods of fairly general rain, the first lasted from the 7th to the 12th, the second from the 18th to the 21st and the third from the 25th to the end of the month. As in the Punjab the last was the most important fall and during that time the following amounts exceeding 2" in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			"
Jummoo	Sambha	25th July	7·98
	Ramnagar	" "	4·93
	Bisolee	" "	3·00
	Riasi	" "	2·54
	Jashmairgarh	" "	2·50
	Kathua	" "	2·02
	Ramnagar	26th "	2·93
	Kathua	" "	2·25
	Punch	27th "	2·24
	Akhnur	28th "	2·32
	Kotli	" "	2·26
	Riasi	" "	2·23
	Jummoo	" "	2·15
	Sri Ranbir Singh Pora	29th "	6·83
	Sambha	" "	3·32
	Bisolee	" "	3·20
	Udumpur	" "	2·50
	Kathua	" "	2·42

Western Rajputana had two bursts of moderately general rain both agreeing with the general advance of the monsoon currents noticed in the preliminary remarks. The first occurred between the 7th and the 12th when the following amounts exceeding 1" in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			"
Jodhpur	Merta	7th July	1·32
	Parbatsar	" "	1·25
	Jodhpur	8th "	1·90
	Khabha	" "	1·80
	Bilara	" "	1·57
	Gudha	9th "	2·11
	Jodhpur (Sursagar)	" "	1·82
	Merta	" "	1·24
	Didwana	10th "	2·12
	Nawa	11th "	1·43
	Didwana	12th "	1·50

The second lasted from the 18th to the end of the month and during its continuance the following moderately heavy falls were recorded—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			"
Jodhpur	Jetaran	18th July	1·30
	Desuri	26th "	1·25
	Sankra	27th "	2·80
	Dewa	" "	1·23
Jaisalmer	Jaisalmer	28th "	1·55
Jodhpur	Phalodi	" "	1·14
	Gudha	29th "	4·74
Jaisalmer	Devikot	" "	3·40
Jodhpur	Jetaran	" "	2·10
	Sacher	" "	1·40
	Shergarh	" "	1·25
	Ramgarh	" "	1·01
	Nagaur	30th "	3·14
	Jasol	" "	2·13
	Bali	" "	2·00
	Khabha	" "	1·80
	Siwana	" "	1·58
	Jodhpur	" "	1·31
	Pali	" "	1·14
	Balmer	" "	1·07
	Phalodi	31st "	2·15
	Joswantpura	" "	1·38
	Jodhpur (Sursagar)	" "	1.05
Jaisalmer	Jaisalmer	" "	1.04

In Eastern Rajputana the rainfall conditions were similar to those in the west, but the rainfall was both heavier and more general. During the first burst of general rain which lasted from the 7th to the 12th the amounts only exceeded 2″ in 24 hours at the following places on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			″
Ajmer-Merwara	Pisangan	8th July	3·87
Udaipur	Kherwara	,, ,,	2·02
Jhalawar	Jhalrapatam	9th ,,	2·59
Bharatpur	Nagar	,, ,,	2·54
Dholpur	Baseri	10th ,,	3·00
	Bari	,, ,,	2·78
Kotah	Ratlai	,, ,,	2·51
	Iklera	,, ,,	2·45
Jhalawar	Chaoni	,, ,,	2·38
Kotah	Sultanpur	,, ,,	2·22
Bharatpur	Bhasawar	,, ,,	2·02
Alwar	Bansur	11th ,,	2·82
Karauli	Machilpur	,, ,,	2·06

During the second rainfall period which lasted roughly from the 18th to the end of the month the fall was both heavier and more extensive. This is shown by the following table which gives all falls of over 3″ in 24 hours during the period:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			″
Kotah	Baran	19th July	6·50
	Shahabad	,, ,,	5·42
Jaipur	Malpura	,, ,,	4·11
Karauli	Saputra	,, ,,	3·50
	Karauli	,, ,,	3·13
Kotah	Etawah	20th ,,	4·80
Alwar	Alwar	,, ,,	4·65
	Ramgarh	,, ,,	3·95
Jaipur	Hindaun	,, ,,	3·83
Alwar	Lachmangarh	,, ,,	3·68
	Kishangarh	,, ,,	3·65
Jaipur	Mahwa	,, ,,	3·29
Jhalawar	Gangdhar	24th July	5·83
Kusalgarh	Kusalgarh	25th ,,	3·73
Shahpura	Shahpura	26th ,,	3·33
Kotah	Manoharthana	28th ,,	3·83
Banswara	Banswara	29th ,,	4·08
Kotah	Baran	,, ,,	4.06
Ajmer-Merwara	Sawar	30th ,,	4.06

The general rain of the province was somewhat short of the normal as is shown by the following table which gives a comparative statement of the rainfall of the month for some of the larger states:—

State.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	″	″	″	
Jaisalmer	3·05	2·69	+ 0·36	+13
Jodhpur	3·36	4·14	— 0·78	—19
Jaipur	5·11	8·08	— 2·97	—37
Alwar	5·33	9·62	— 4·29	—45
Bharatpur	6·77	8·92	— 2·15	—24
Karauli	10·78	9·88	+ 0·90	+ 9
Kotah	11·67	9·57	+ 2·10	+22
Ajmer Merwara	5·87	7·05	— 1·18	—17
Udaipur	4·92	9·76	— 4·84	—50
Sirohi	4·05	15·73	—11·68	—74

The above shows that the month's rainfall was in excess in the Jaisalmer, Karauli and Kotah states only.

In Central India there was a fine period between the 12th and the 16th but at other times the weather was more or less showery—more particularly in Bhopal and Gwalior from the 18th to the end of the month. Falls of rain exceeding 3″ in 24 hours were recorded at the following stations on the following dates during the month:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			″
Gwalior	Sikarwari	2nd July	3·50
Maihar	Maihar	6th ,,	3·42
Rewah	Tyonthar	10th ,,	10·28

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			"
Bundelkhand	Kadaura	10th July	3·40
	Orchha	" "	3·20
Rewah	Rewah	" "	3·05
Bhopal Agency	Maksudangarh	18th "	3·13
Bundelkhand	Orchha	19th "	4·91
Bhopal Agency	Narsinghgarh	20th "	5·97
	Biaora	" "	4·57
	Kurwai	" "	4·00
	Sehore	" "	3·21
	Maksudangarh	21st "	3·50
	Narsinghgarh	" "	3·29
Rewah	Umaria	22nd "	3·48
	Sohagpur	" "	3·09
	Tyonthar	23rd "	4·57
Gwalior	Neemuch	25th "	3·63
Bhopal Agency	Ashta	" "	3·40
	Maksudangarh	27th "	3·48
Gwalior	Goona	28th "	3·03
Maihar	Maihar	29th "	4·00

The total rainfall of the month was generally somewhat lighter than usual as is shown by the following comparative statement of the rainfall in some of the larger states :—

State.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	"	"	"	
Bhopal Agency	11·89	16·60	—4·71	—28
Gwalior	7·87	10·57	—2·70	—26
Rewah	16·00	14·84	+1·16	+ 8
Bundelkhand	9·04	14·96	—5·92	—40

There was no general or heavy burst of rain in Berar during July but scattered and ordinarily light showers occurred during the first seventeen days and more general and heavier showers between the 18th and the close of the month.

The days with the heaviest and most general rainfall were the 5th, 18th and 19th. The following gives the falls exceeding 3″ in 24 hours which were registered during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			"
Buldana	Deonegaon	5th July	6·07
	Mehkar	" "	4·60
Basim	Risod	" "	3·55
Buldana	Deulgaon Raja	" "	3·37
Basim	Pusad	18th "	4·63
	Sirpur	" "	3·18
	Basim, Civil Station	" "	3·15
Buldana	Buldana Civil Station	" "	3·10
	Mehkar	" "	3·02
Basim	Pusad	18th "	4·52
Buldana	Debnegaon	" "	3·79
Wun	Panderkowra	" "	3·11
Basim	Pusad	25th "	5·90
Ellichpur	Chikalda	28th "	5·91

The general rainfall of the month was in slight defect as is shown by the following comparative data of the division :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.	Average actual, July 1901.	Average normal, July.
	"	"	"			
Berar	9·42	11·59	—2·17	—19	11·7	...

The Central Provinces had showery weather from the 1st to the 17th. The showers were fairly general in the eastern division and part of the central division, but were light in the west. On the 18th the rainfall increased both in amount and extent and fairly general rain continued from that date until the close of the month. The fall was heaviest on the 22nd and 28th when heavy rain was received over the greater part of the Central Provinces

The following is a record of the falls exceeding 3″ in 24 hours which were registered during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			″
Bhandara	Bhandara	3rd July	4·10
Sambalpur	Deogarh	,, ,,	3·22
Betul	Betul	5th ,,	3·85
Chhindwara	Sasaur	,, ,,	3·35
Damoh	Hatta	7th ,,	4·76
Sambalpur	Raigarh (state)	9th ,,	4·10
Bilaspur	Pendra	,, ,,	3·28
Balaghat	Lanji	10th ,,	4·50
Damoh	Hatta	,, ,,	3·65
Bhandara	Tirora	,, ,,	3·06
Wardha	Hinganghat	18th ,,	5·64
Chanda	Chanda	,, ,,	3·51
Hoshangabad	Sohagpur	20th ,,	8·32
	Hoshangabad	,, ,,	3·95
Narsingpur	Gadarwara	,, ,,	3·36
Hoshangabad	Pachmarhi	22nd ,,	4·50
Balaghat	Lanji	,, ,,	4·08
Mandala	Tikaria	,, ,,	3·86
Bilaspur	Korba	,, ,,	3·78
Wardha	Hinganghat	,, ,,	3·36
Chanda	Warora	,, ,,	3·28
Betul	Betul	,, ,,	3·22
Mandla	Dindori (Ramgarh)	,, ,,	3·19
Seoni	Lakhnadon	23rd ,,	4·12
Saugor	Rehli	,, ,,	3·53
	Saugor	,, ,,	3·49
Nagpur	Katol	24th ,,	4·10
Hoshangabad	Sohagpur	,, ,,	3·25
	Seoni	25th ,,	3·31
Nimar	Harsud	26th ,,	4·19
Betul	Shahpur	28th ,,	4·99
Chanda	Chimur	,, ,,	3·31
Boshangabad	Hoshangabad	,, ,,	3·05
Balaghat	Behir	29th ,,	6·57
Mandla	Tikaria	31st ,,	3·52

As was the case in Berar the general rainfall over the Central Provinces was about normal. The following gives comparative data for the three divisions :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.	Average actual, July 1901.	Average normal, July.
	″	″	″			
Central Provinces West	12·87	13·81	—0·94	— 7	14·0	15·4
,, ,, Central	15·03	18·02	—2·99	— 17	16·1	17·1
,, ,, East	13·97	16·07	—2·10	— 13	18·0	15·0

The Bangalore, Kolar, Tumkur, Chitaldroog and Mysore districts of the Mysore state received only light scattered showers during the month and the total rainfall of those five districts was generally small in amount and below the normal but in the Hassan, Shimoga and Kadur districts the rainfall was fairly continuous during the month and on the 9th was very heavy. The following gives the falls exceeding 3″ in 24 hours recorded during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			″
Shimoga	Nagar	3rd July	4·45
	Tirthahalli	,, ,,	4·13
Kadur	Sringeri	,, ,,	3·15
	Koppa	,, ,,	3·04
	Do.	4th ,,	3·40
Shimoga	Tirthahalli	6th ,,	4·35
Kadur	Koppa	,, ,,	4·00
Shimoga	Nagar	8th ,,	5·36
Kadur	Mudgere	,, ,,	4·00
	Koppa	9th ,,	9·60
Shimoga	Tirthahalli	,, ,,	8·21
	Sagar	,, ,,	8·00
	Nagar	,, ,,	7·62
	Sorab	,, ,,	7·25
Kadur	Sringeri	,, ,,	6·95
Shimoga	Shikarpur	,, ,,	5·81
Kadur	Mudgere	,, ,,	5·75
	Yedahalli	,, ,,	5·75
Hassan	Manjarabad	,, ,,	5·30
Shimoga	Kumsi	,, ,,	4·75
	Shimoga	,, ,,	3·50
Kadur	Tarikere	,, ,,	3·20
Shimoga	Tirthahalli	10th ,,	4·36
Kadur	Sringeri	,, ,,	3·40
Hassan	Manjarabad	,, ,,	3·05
Kadur	Sringeri	11th ,,	9·00
	Koppa	,, ,,	4·65
Shimoga	Tirthahalli	,, ,,	4·26
Hassan	Manjarabad	,, ,,	3·35
Kadur	Sringeri	14th ,,	3·35
	Do.	16th ,,	3·81
Shimoga	Tirthahalli	18th ,,	3·16

The general rainfall of the whole state was normal but the variations in the different districts were considerable.

The following gives comparative data for the eight districts :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage Variation from normal.
	"	"	"	
Bangalore	2·35	2·99	— 0·64	—21
Kolar	1·78	2·60	— 0·82	—32
Tumkur	1·26	2·48	— 1·22	—49
Mysore	1·20	1·83	— 0·73	—40
Hassan	8·42	7·10	+ 1·32	+19
Shimoga	23·02	22·01	+ 1·01	+ 5
Kadur	28·16	17·25	+10·91	+63
Chitaldroog	1·95	2·11	— 0·16	— 8

The rainfall of the month was normal over the Peninsular districts of the Bomday Presidency, but was less than usual in the northern divisions. In the Konkan rain fell daily in all the districts and was heavy on the 8th and 9th and on the 25th and 26th. The following were the falls exceeding 6″ in 24 hours which were recorded in this division during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			"
Ratnagiri	Chiplun	5th July	6·21
Kolaba	Matheran	6th "	9·36
Thana	Bhwindi	" "	6·43
Kolaba	Matheran	7th "	8·19
	Pen	" "	7·50
	Khalapur	" "	7·08
Thana	Dahanu	" "	6·35
	Murbad	" "	6·26
	Kalyan	" "	6·13
	Shahpur	8th "	7·64
	Bhwindi	" "	7·24
Ratnagiri	Khed	" "	7·15
Kolaba	Mahad	" "	7·12
Ratnagiri	Mandangad	" "	6·23
Thana	Vada	" "	6·12
North Kanara	Siddapur	9th "	12·73
	Sirsi	" "	10·78
	Ankola	" "	9·70
	Yellapur	" "	6·20
North Kanara	Pen	19th July	6·85
	Matheran	24th "	6·86
	Pen	25th "	9·71
Kolaba	Khalapur	" "	7·35
	Uran	" "	6·67
	Karjat	" "	6·75
Thana	Thana	" "	6·73
	Bhwindi	" "	6·55

The total rainfall of the Konkan division was approximately normal as is shown by the following table which gives comparative data for the different districts :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	"	"	"	
North Kanara	35·35	35·48	—0·13	0
Ratnagiri	41·06	41·23	—0·17	0
Kolaba	55·09	48·78	+6·31	+13
Thana	34·51	35·19	—0·68	— 2

In the Karnatak there were no general or heavy bursts of rainfall. In the Bijapur district only light and scattered showers were received throughout, but in Dharwar, Belgaum and Kolhapur the showers were more general and heavier. The principal periods of rainfall were, as on the West Coast, about the 8th and 9th and the 26th and 27th. The following amounts exceeding 2″ in 24 hours were recorded during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			"
Bijapur	Indi	2nd July	2·08
Belgaum	Chandgad	7th "	2·16
	Do.	8th "	6·25
	Khanapur	" "	3·95
Dharwar	Hangal	9th "	4·54
Belgaum	Chandgad	" "	4·40
Dharwar	Kod	" "	2·90
Kolhapur, etc.	Gargoti	" "	2·03
Belgaum	Chandgad	11th "	2·64
Bijapur	Sindgi	" "	2·12
Belgaum	Chandgad	18th "	2·40

The total rainfall of the division was less than usual as is shown by the following statement giving comparative data of the different districts of the division :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	"	"	"	
Dharwar	3·76	4·85	—1·09	—22
Bijapur	1·86	3·16	—1·30	—41
Belgaum	9·46	15·53	—6·07	—39

In the South Deccan the rainfall was irregularly distributed the principal feature of the distribution having been the lightness of the rainfall in Sholapur and the neighbouring parts of Satara and Poona. At the more elevated stations in Satara and in parts of Poona rain was received on every day of the month, and the falls of rain—especially on the 7th, 8th and 9th and on the 24th, 25th and 26th—were frequently heavy. This is shown in the following table which gives the falls exceeding 5″ in 24 hours :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			"
Poona	Lanoli	7th July	9·00
Satara	Malcolmpeth	" "	8·30
	Ditto	8th "	13·11
Poona	Lanoli	" "	7·75
Satara	Medha	" "	5·43
	Malcolmpeth	9th "	6·05
	Ditto	18th "	5·50
	Ditto	20th "	7·50
Poona	Lanoli	24th "	5·05
	Ditto	25th "	7·26
Satara	Malcolmpeth	" "	5·80
Poona	Lanoli	26th "	6·88
Satara	Malcolmpeth	" "	5·10
	Ditto	27th "	5·35

The following gives comparative data for the districts in this division :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	"	"	"	
Satara	8·07	12·92	—4·85	—38
Sholapur	3·34	3·67	—0·35	— 9
Poona	13·67	15·38	—1·71	—11

In the North Deccan there were three fairly general bursts of rain, *viz.*, between the 6th and the 9th, on the 18th, and from the 25th to the 28th. There was, however, very little rain in the Ahmednagar district. In the intervals between these bursts the weather was showery. The following were the only falls exceeding 3″ in 24 hours :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			"
Ahmednagar	Rahuri	4th July	3·21
Khandesh	Bhusaval	5th "	4·20
	Jalagaon	" "	3·43
	Yaval	" "	3·12
Nasik	Igatpuri	8th "	8·69
	Trimbak	" "	3·58
	Igatpuri	20th "	3·30
	Do.	26th "	6·30

The total rainfall of the month was short in Ahmednagar, in considerable excess in Khandesh and about normal in the remaining district. This is shown below :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	"	"	"	
Ahmednagar	2·75	3·60	—0·85	—24
Nasik	10·55	11·19	—0·64	— 6
Khandesh	8·09	5·05	+3·04	+60

In the Surat district of Gujarat there was but little rain up to the 5th but on the 6th rain fell generally and with the exception of a partial break between the 9th and the

16th, rain continued till the end of the month. In the other districts of this division there were three rainfall periods with fine weather in the intervals. These rainfall periods were from the 7th to the 13th, from the 18th to the 22nd and from the 25th to the end of the month. The heaviest rainfall was experienced on the first day of the first period, and, except about that date, the falls were not very heavy. The following were the falls exceeding 3″ in 24 hours :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Surat	Bardoli	6th July	5·03
	Balsar	,, ,,	4·00
	Pardi	7th ,,	6·81
Broach	Ilav	,, ,,	6·75
Surat	Balsar	,, ,,	6·50
	Olpad	,, ,,	6·38
	Chikhli	,, ,,	5·52
,, Agency	Dharampur	,, ,,	5·04
Ahmedabad	Parantij	,, ,,	4·42
Surat	Randar	,, ,,	4·35
Kaira	Borsad	,, ,,	4·20
Broach	Ankelshvar	,, ,,	4·07
	Broach	,, ,,	3·57
	Hansot	,, ,,	3·38
Surat	Surat	,, ,,	3·05
Kaira	Mehmadabad	,, ,,	3·02
Broach	Broach	8th ,,	5·82
	Jambusar	,, ,,	4·60
	Hansot	,, ,,	3·76
Surat	Balsar	,, ,,	3·60
Broach	Vagra	,, ,,	3·46
	Ankleshvar	,, ,,	3·11
Panch Mahals	Godhra	10th ,,	3·37
	Jhalod	25th ,,	6·20
Kaira	Cambay (State)	26th ,,	3·57
Surat	Mandvi	,, ,,	3·34
Broach	Vagra	,, ,,	3·14
Surat	Pardi	27th ,,	4·10
	Bardoli	,, ,,	3·07
Panch Mahals	Kalol	28th ,,	5·45
Broach	Jambusar	,, ,,	5·15
Panch Mahals	Halol	,, ,,	4·35

The general rainfall of the month was hence in defect, as is shown by the following comparative data for the different districts of this division :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Surat	16·73	25·51	— 8·78	—34
Broach	14·40	17·13	— 2·73	—16
Kaira	9·54	19·67	—10·13	—52
Panch Mahals	9·49	17·47	— 7·98	—46
Ahmedabad	7·34	13·88	— 6·54	—47

In Kathiawar the rainfall was uncertain and very irregularly distributed. There were showers between the 7th and the 12th, between the 18th and the 21st and between the 25th and the 31st. Heavy local falls were reported on the 7th. The following gives the falls exceeding 3″ in 24 hours during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kathiawar	Jafrabad	7th July	7·71
	Jasdan	,, ,,	7·15
	Mahua	,, ,,	3·15
Rewa Kantha	Lunavada	18th ,,	3·18
Mahi Kantha	Mohanpur	25th ,,	3·15
Baroda	Baroda	26th ,,	4·30
Kathiawar	Jasdan	,, ,,	3·10
Rewa Kantha	Rajpipla	,, ,,	3·06
Mahi Kantha	Idar	30th ,,	3·88

In Cutch the only rainfall was at the close of the month, and the rainfall over Kathiawar and Cutch for the whole month was less than half the normal. This is shown below :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Kathiawar	5·31	11·78	—6·47	—55
Cutch	1·52	7·50	—5·98	—80

In Sind there were showers between the 25th and the close of the month, and the total was considerably less than the normal. The following gives data of the seven divisions of the Presidency :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.	Average actual, July 1901.	Average normal, July.
	Inches.	Inches.	Inches			
Konkan . .	41·11	40·03	+1·08	+ 3	28·4	27·6
Bombay Deccan .	8·07	9·39	—1·32	—14	11·3	12·2
Khandesh . .	7·56	7·67	—0·11	— 1	11·6	11·1
Gujarat . .	11·96	18·46	—6·50	—35	12·7	17·1
Kathiawar and Cutch.	5·76	12·39	—6·63	—54	7·6	11·5
Sind . . .	1·12	1·86	—0·74	—40	2·4	...
Baluchistan Hills .	1·06	0·99	+0·07	+ 7	2·0	...

The Malabar Coast districts of Madras obtained daily rain throughout the month. The amount, however, varied considerably and was much heavier on the 6th and the 9th, 10th, 11th and 12th than on other days during the month. The daily averages from the 5th to the 12th were as follows :—

District.	Average actual rainfall during 24 hours preceding 8 A.M. of								
	5th July.	6th July.	7th July.	8th July.	9th July.	10th July.	11th July.	12th July.	Total rainfall of period.
	Inch.	Inches	Inch.	Inch.	Inches	Inches	Inches	Inches	Inches
Malabar . .	1·00	3·06	0·55	0·43	2·17	3·11	3·70	1·51	15·53
South Canara .	0·93	2·48	0·59	0·60	3·30	1·00	2·30	4·93	16·13

and on these days the following falls exceeding 5″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Malabar . .	Mannorghat . .	6th July	7·72
	Vayittiri . .	„ „	6·47
South Canara .	Beltangadi . .	„ „	6·38
	Puttur . . .	„ „	6·05
Malabar . . .	Manjeri . . .	„ „	5·32
South Canara . .	Karkal . . .	9th „	7·80
Travancore State .	Peermade . .	9th July	6·00
Malabar . .	Cannanore . .	„ „	5·96
	Kuttiadi . . .	„ „	5·48
	Tellicherry . .	„ „	5·24
South Canara . .	Beltangadi . .	„ „	5·10
Travancore State .	Chengannur . .	10th „	6·55
Malabar . .	Vayittiri . . .	„ „	6·34
	Nilambur . . .	„ „	5·70
Travancore State .	Peermade . . .	„ „	5·70
	Kottayam . . .	„ „	5·07
Malabar . . .	Kuttiadi . . .	11th „	7·02
Travancore State .	Ettamanur . .	„ „	6·57
	Meenachil . .	„ „	6·38
South Canara . .	Beltangadi . .	„ „	6·25
Malabar . .	Quilandi . . .	„ „	6·15
	Tirurangadi . .	„ „	6·08
	Manjeri . . .	„ „	5·40
Travancore State .	Changanacherry .	„ „	5·33
	Chengannur . .	„ „	5·26
Malabar . . .	Vayittiri . . .	„ „	5·04
South Canara .	Kasaragod . .	12th „	6·67
	Mulki . . .	„ „	6·38
Travancore State .	Thadupuzha . .	„ „	6·29
	Bantwal . . .	„ „	6·00
South Canara .	Udipi . . .	„ „	5·85
	Puttur . . .	„ „	5·75
	Mangalore . .	„ „	5·40
	Beltangadi . .	„ „	5·13

The total rainfall of the month for this division was about normal, as is shown by the following comparative data for the two districts :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Malabar	34·66	30·29	+4·37	+14
South Canara	42·36	44·62	—2·26	— 5

The south division of Madras received only scattered showers throughout the month, and the total fall was only a little more than half the average. The following gives data for the two districts :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal
	Inch.	Inches.	Inch.	
Madura	0·69	1·07	—0·38	—36
Tinnevelly	0·27	0·61	—0·34	—56

In South Central Madras similar conditions prevailed but the showers were somewhat more frequent and heavier and the total rainfall of the month was about normal. The following gives data for Coimbatore and Salem :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Salem	1·76	2·21	—0·45	—20
Coimbatore	0·87	1·14	—0·27	—24

In Central Madras with the exception of Anantapur conditions were more favourable, and on the 1st and 2nd, between the 14th and 18th and between the 25th and 29th fairly general rain was received. As a result the total rainfall of the division was about normal, as is shown by the following data for the districts forming this division :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuddapah	2·41	2·74	—0·33	—12
Anantapur	1·01	2·02	—1·01	—50
Bellary	2·67	2·52	+0·15	+ 6
Kurnool	4·17	4·05	+0·12	+ 3

The north division of the East Coast had frequent rain throughout the month, and heavyish bursts of general rain between the 18th and 22nd and between the 25th and the 28th. The following were the principal falls exceeding 3″ recorded during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kistna	Bapatla	16th July	3·85
Ganjam	Narsannapeta	22nd „	3·40
Godavari	Chintalapudi	25th „	4·44
Vizagapatam	Srungavarapukota	26th „	3·20
Ganjam	Udayagiri	28th „	3·01
	Surada	30th „	4·48

In the central division the rainfall was much lighter but there were fair showers between the 14th and 18th and between the 26th and 31st. There were no heavy falls recorded but the total rainfall was above the normal. This is shown below :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Nellore	3·00	2·29	+0·71	+31

In the south division of the East Coast there were bursts of moderately general rain between the 14th and the 18th and between the 24th and the 28th and very little rain at other times. The falls were generally light, except in North Arcot but the total rainfall of the month for the whole division was about normal. The following gives comparative data for the different districts :—

District.	Rainfall.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madras	6·64	3·84	+ 2·80	+73
Chingleput	4·57	3·60	+ 0·97	+27
North Arcot	2·57	2·99	— 0·42	—14
South Arcot	2·68	2·92	— 0·24	— 8

The general rainfall over Madras was hence normal or in slight defect as is shown by the following statement giving data for the different divisions of the Presidency :—

DIVISION.	RAINFALL.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Malabar	37·23	35·45	+ 1·78	+ 5
Madras South Central	1·60	1·87	— 0·27	—14
East Coast, North	6·06	7·27	— 1·21	—17
Madras, Central	2·62	2·85	—0·23	— 8
East Coast, Central	3·00	2·29	+ 0·71	+31
East Coast, South	2·28	2·63	—0·35	—13
Madras, South	0·50	0·86	— 0·36	—42

The rainfall over the Persian area was very light, as is shown below :—

STATION.	RAINFALL.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Jask	0	0·02	—0·02	—100
Bushire	0	0	0	0
Teheran	0·07	0·81	—0·74	— 91
Ispahan	0	0·10	—0·10	—100
Meshed	0	0·03	—0·03	—100
Baghdad	0	0	0	0

On the contrary in the South-East Trades region the month's rainfall varied irregularly from the average. The following gives comparative rainfall data for the Seychelles, Zanzibar and Mauritius :—

STATION.	RAINFALL.			
	Average actual, July 1901.	Average normal, July.	Variation of actual from normal, July 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Zanzibar	1·63	2·12	—0·49	—23
Seychelles	4·11	2·57	+1·54	+60
Mauritius	1·91	2·26	—0·35	—15

Table

Abstract of Observations taken at 8 A.M. at 223

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.				−·026								84·9	+0·2	75·9	+0·6	80·5	+0·4	9·0					15·5
1	Tenasserim and Bay Islands.	Car Nicobar	25	9·741*		29·691*	29·814	29th	29·675	7th	·139	80·7*	87·1*		77·6*		82·4*		9·5	89·8	12th	73·6	17th	16·2
		Port Blair	61	29·751	−·017	29·743	29·811	11th	29·694	25th	·117	81·3	85·3		78·1		81·3		7·2	88·4	11th	74·7	25th	13·7
		Mergui	96	29·751	−·016	29·780	29·818	10th	29·692	24th	·126	77·8	83·3	−0·9	74·2	+2·4	78·8	+0·8	9·1	88·7	29th	72·4	17th & 23rd.	16·3
		Tavoy	26	29·815	−·029	29·772	29·891	10th	29·751	25th	·140	76·5	82·6	−0·7	74·1	+0·2	78·4	−0·3	8·5	87·2	12th	72·5	21st	14·7
		Moulmein	94	29·702	−·028	29·734	29·796	10th	29·609	25th	·187	77·6	83·9	+1·2	74·6	+0·7	79·3	+1·0	9·3	89·0	3rd	73·3	5 days	15·7
2	Lower Burma	Rangoon	41	29·725	−·035	29·703	29·830	10th	29·647	7th	·183	78·7	84·6	−0·4	75·8	+0·1	80·2	−0·2	8·8	88·6	4th & 5th.	73·9	22nd	14·7
		Bassein	27	29·723	−·024	29·695	29·829	10th	29·648	8th	·181	79·1	85·7	+0·9	76·9	+1·2	81·3	+1·1	8·8	90·2	4th	74·6	21st	15·6
		Diamond Island	41	29·714	−·037	29·660	29·795	10th	29·637	15th	·158	80·6	83·9	−0·6	77·3	+2·3	80·6	+0·9	6·6	87·1	3rd	74·2	21st	12·9
5	Arakan	Akyab	20	29·665	−·028	29·628	29·779	29th	29·547	14th	·232	79·7	85·1	+0·5	76·7	−0·7	80·9	−0·1	8·4	88·9	4th	74·5	22nd	14·4
3	Central Burma	Toungoo*	183	29·571	−·023	29·697	29·659	29th	29·482	6th	·177	79·3	87·9	+1·5	73·7	−1·2	80·8	+0·2	14·2	92·6	3rd	72·1	21st	20·5
	II.—Burma Inland				−·017								91·5	+1·4	76·6	+0·4	84·1	+0·9	14·9					22·5
3	Central Burma	Thayetmyo	130	29·596	−·017	29·655	29·705	29th	29·479	7th	·226	80·2	89·9	+1·1	74·8	−1·3	82·4	−0·1	15·1	92·7	3rd, 4th, & 5th.	70·6	5 days	22·1
4	Upper Burma	Minbu	165	29·551	−·009	29·659	29·658	29th	29·454	14th	·204	80·6	90·8	−0·3	77·5	+0·5	84·2	+0·1	13·3	95·6	5th	76·1	10th	19·5
		Yamethin	657	29·071	−·011	29·675	29·176	29th	28·973	7th	·203	79·9	91·7	+1·4	75·1	+0·8	83·4	+1·1	16·6	99·0	25th	72·7	8th, 12th & 22nd.	26·3
		Mandalay	250	29·453	−·006	29·650	29·582	29th	29·360	7th	·222	84·2	97·4	+3·4	79·4	+1·2	88·4	+2·3	18·0	100·6	9th & 25th.	74·3	25th	26·3
		Kindat	377	29·297	−·001	29·628	29·391	29th	29·211	6th & 7th,	·180	80·2	89·5	+0·3	76·9	+0·3	83·2	+0·2	12·6	93·8	5th	73·3	9th	20·5
		Bhamo	381	29·305	−·059	29·637	29·409	28th	29·221	14th	·188	79·3	89·7	+2·3	75·7	+0·9	82·7	+1·6	14·0	94·5	27th	74·1	4 days	20·4
4(a)	Burma Hill Stations.	Maymyo		26·291			26·367	29th	26·206	14th	·161	72·0	80·4		66·8		73·6		13·6	85·5	25th	62·8	24th	22·7
		Taunggyi										67·5	73·6	−3·1	63·9	0	68·8	−1·6	9·7	82·2	3rd	61·0	21st	21·2
		Lashio										73·9	85·2	+2·0	70·5	+1·4	77·9	+1·7	14·7	91·1	27th	66·5	26th	24·6
	III.—Assam				−·010								89·5	+0·1	77·7	+0·1	83·6	+0·1	11·8					21·2
7	Surma	Silchar	104	29·556	−·011	29·610	29·693	29th	29·453	14th	·240	81·9	92·2	+2·2	77·5	+0·4	84·9	+1·3	14·7	100·1	28th	75·3	9th & 20th.	24·8
9	Brahmaputra	Sibsagar	333	29·342	+·001	29·633	29·451	29th	29·235	6th	·216	80·9	89·7	−1·1	78·1	0	83·9	−0·6	11·6	95·2	26th, 28th & 29th.	74·0	3rd & 7th.	21·2
		Dhubri	115	29·488	−·019	29·557	29·632	29th	29·367	12th	·265	81·2	86·7	−0·7	78·6	0	82·7	−0·4	8·1	91·2	5th, 10th, 28th & 29th.	76·3	14th & 21st.	14·9
		Tezpur	292	29·366		29·613	29·466	29th	29·251	6th	·215	80·8	90·0		78·0		84·0		12·0	96·2	27th	75·4	7th & 10th,	20·8
		Dibrugarh	394	29·280		29·637	29·419?	28th	29·145	4th	·274?	79·0	88·7		76·2		82·5		12·5	96·2	26th & 27th.	72·0	7th	24·2
	IV.—Bengal and Orissa				−·018								89·6	+1·1	79·0	+0·7	84·4	+0·9	10·6					19·4
6	East Bengal	Chittagong	87	29·551	−·031	29·586	29·672	2 h	29·429	14th	·243	81·8	87·6	+2·1	77·1	+0·7	82·4	+1·4	10·5	90·5	25th, 26th & 29th.	74·6	11th	15·9
		Noakhali	43	29·591		29·581	29·705	29th	29·477	7th	·228	82·0	87·1		78·2		82·7		8·9	97·2	3rd	74·9	2nd & 13th.	22·3
		Comilla	36	29·596		29·580	29·711	29th	29·479	7th	·232	81·9	89·4		77·0		83·3		12·4	95·3	26th & 27th.	69·8	11th	25·5
		Sirajganj	49	29·543		29·542	29·688	29th	29·424	12th	·264	81·5	88·5		79·3		83·9		9·2	92·3	26th	77·2	13th	15·1
		Narayanganj	26	29·588	−·014	29·562	29·718	29th	29·465	7th	·253	82·5	88·3	0	80·0	+0·8	84·2	+0·4	8·3	92·6	26th	76·7	13th	15·9
		Barisal	13	29·591	−·013	29·549	29·711	29th	29·463	7th	·248	82·7	87·9	+1·3	79·3	+1·2	83·6	+1·3	8·6	91·3	26th	76·1	13th	15·2
		Mymensingh	59	29·554	−·020	29·564	29·689	29th	29·439	13th	·250	82·6	88·4	+0·9	79·3	+1·3	83·9	+1·1	9·1	93·7	27th	77·5	12th & 27th.	16·2
10	Deltaic Bengal	Faridpur	46	29·565		29·559	29·696	29th	29·438	7th	·258	82·1	88·9		78·8		83·9		10·1	92·8	26th & 27th.	75·9	13th	16·9
		Jessore	33	29·555	−·021	29·534	29·679	29th	29·425	7th	·254	82·9	89·6	+0·2	79·4	+0·3	84·6	+0·3	10·2	94·0	5th	77·2	13th & 14th	16·8
		Calcutta	21	29·553	−·018	29·520	29·689	29th	29·430	7th	·259	82·5	89·7	+1·7	78·8	+0·4	84·3	+1·1	10·9	94·2	6th	74·1	14th	20·1
		Saugor Island	25	29·541	−·021	29·512	29·661	29th	29·414	7th	·247	83·3	89·2	+1·4	80·4	0	84·8	+0·7	8·8	92·9	3rd	75·1	14th & 15th.	17·8
		Krishnagar	47	29·536		29·530	29·678	29th	29·413	7th	·265	82·5	91·2		79·0		85·1		12·2	95·2	6th	76·2	14th	19·1
		Midnapore	149	29·423		29·518	29·552	29th	29·306	7th	·246	82·3	90·7		78·8		84·8		11·9	97·3	1st	74·2	15th	23·1

* Mean of 30 days.

I.

Stations in India, Burma, etc., in July, 1901.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st July 1901.	Normal rain fall for period, 1st June to 31st July.	Variation from normal of period, 1st June to 31st July.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																				30·13	31·57	+1·20					I.—Burma Coast and Bay Islands.		
						15	7		S 59° W	6·5	6·5			87°	·915°	8·8°	9			6·41			20·00			1·57	Car Nicobar†	Tenasserim and Bay Islands.	1
						16	15		S 67° W	14·8		11·0	+35	87	·931	7·9	23			14·36	15·98	− 1·62	34·73	34·77	− 0·04	2·20	Port Blair .		
30	1								N.	1·7	1·5	1·8	−17	94	·877	5·5	31			42·14	33·73	+ 8·41	77·43	63·86	+13·57	3·88	Mergui.		
28						1	2		N 63° W	0·8				93	·853	9·2	30			50·79	46·34	+ 4·45	91·58	82·55	+ 9·03	5·72	Tavoy.		
	1			3	6	16	1	4	S 37° W	2·7	3·0	3·8	−21	90	·859	8·6	28	27·75	+ 0·25	38·01	45·82	− 7·81	71·54	81·54	−10·00	3·45	Moulmein.		
1		1	1		13	12	2	1	S 25° W	4·8		5·5	−13	94	·824	9·5	27	25·36	+ 1·64	26·54	21·68	+ 4·86	43·58	39·19	+ 4·39	3·39	Rangoon .	Lower Burma.	2
12			1	1	13	4			S 4° W	3·9		4·0	− 3	93	·931	7·5	26	27·00	− 1·00	19·57	23·88	− 5·31	37·44	47·44	−10·00	1·81	Bassein.		
2				6	18	5			S 45° W	8·8	8·8	8·9	− 1	86	·915	8·9	23	24·00	− 1·00	30·74	26·28	+ 4·46	47·18	49·48	− 2·30	3·83	Diamond Island.		
		1	9	13	7	1			S 48° E	2·5	2·4	3·8	−37	95	·972	8·9	28	27·55	+0·45	56·63	51·54	+ 5·09	103·28	95·53	+ 7·75	8·81	Akyab .	Arakan.	5
				19	10			1	S 29° E	6·9	6·8	4·8	+42	90	·911	8·7	25	25·09	− 0·09	16·15	17·91	− 1·76	29·33	32·52	− 3·19	2·43	Toungoo .	Central Burma.	3
																				6·60	8·15	−1·55					II.—Burma Inland.		
			1	12	17	1			S 18° E	7·5		6·7	+12	84	·886	6·6	13	15·91	− 2·91	5·24	6·83	− 1·61	11·59	13·77	− 2·19	0·93	Thayetmyo .	Central Burma.	3
	1			28	2				S 44° E	8·2	9·0			84	·893	7·5	11			6·52	3·38	+ 3·14	8·35	8·37	− 0·02	1·04	Minbu .	Upper Burma.	4
2				17	12				S 27° E	8·3	8·7			83	·854	8·4	4			4·17	4·36	− 0·19	10·56	7·28	+ 3·28	2·57	Yamethin.		
	1				30				S.					71	·830	2·6	4			1·96	3·17	− 1·21	11·38	8·56	+ 2·42	0·94	Mandalay.		
23			2	2	1	3			S 16° W	1·1	1·1			90	·934	8·8	13			9·07	12·25	− 3·18	19·62	27·12	− 7·50	1·81	Kindat.		
8	2	8	3			2	1	7	N 7° E	1·9	2·2			93	·927	7·2	17			12·68	18·91	− 6·23	22·06	32·43	−10·37	2·38	Bhamo.		
1		2		2	2	21	3		S 41° W	5·3				85	·865	7·5	7			2·97			14·46			0·72	Maymyo .	Burma Hill Stations.	4(a)
	3	4		12	9	2	1		S 34° E					89	·908	9·7	18			8·84	10·06	− 1·22	15·71	21·13	− 5·42	1·71	Taunggyi.		
		5	1	1	10	12		2	S 42° W	1·8				87	·735	9·3	14			11·03	12·79	− 1·76	18·10	23·01	− 4·91	2·56	Lashio.		
																				13·14	17·46	−3·27					III.—Assam.		
31									Calm	0·7	1·2	3·1	−61	85	·976	8·6	23	22·79	+ 0·27	19·93	19·10	+ 0·80	39·46	39·83	− 0·37	4·75	Silchar .	Surma.	7
7	2	12		5		4		1	N 60° E	2·5	2·3	2·8	−18	93	·932	8·9	20	19·04	+ 0·96	15·62	17·10	− 1·48	31·35	30·79	+ 0·56	1·72	Sibsagar .	Brahmaputra.	
	1	7	8	4	4	6		1	S 68° E	3·1	3·7	3·9	− 5	90	·966	6·7	11	16·13	− 5·13	6·99	16·17	− 9·18	33·29	40·70	− 7·41	2·06	Dhubri.		
	1	5	9	1	2	11	1	1	S 37° E	2·5				90	·949	7·8	11			7·10						1·40	Tezpur.		
	3	7	2	2	5	5	1	6	N 61° W	2·0				94	·924	6·0	21			16·04						3·11	Dibrugarh.		
																				11·27	14·65	−3·38					IV.—Bengal and Orissa.		
	1		2	19	7	1	1		S 35° E	9·7	9·6	7·2	+33	83	·897	6·6	13	19·81	− 6·81	15·11	23·20	− 8·09	34·11	45·89	−11·78	4·35	Chittagong .	East Bengal.	3
		1	11	9	6	3	1		S 47° E	7·4	6·8			88	·959	7·4	23	20·12	+ 2·88	17·06	23·74	− 6·68	45·70	47·93	− 2·23	1·95	Noakhali.		
1			1	9	20				S 15° E	9·0				84	·907	6·5	13	19·22	− 6·22	4·55	16·38	−11·83	34·26	34·03	+ 0·23	0·67	Comilla.		
10		2	5	6	6	2			S 42° E	1·3	1·3			92	·932	8·1	12	14·23	− 2·23	7·33	11·50	− 4·17	29·45	22·62	+ 6·83	3·23	Sirajganj.		
1		1	2	15	10	2			S 30° E	9·2		7·3	+26	89	·939	8·3	15	18·31	− 3·31	6·05	13·78	− 7·73	30·52	26·84	+ 3·68	1·42	Narayanganj.		
1	1	1		10	13	4		1	S 11° E	4·7				88	·987	5·5	20	20·50	− 0·50	9·64	15·76	− 6·12	29·66	31·78	− 2·12	2·50	Barisal.		
7			7	11	5	1			S 45° E	1·9	2·0			88	·978	7·3	17	19·27	− 2·27	15·26	15·56	− 0·30	47·49	33·74	+13·75	3·36	Mymensingh.		
7				5	18	1			S 8° E	1·1	1·0			93	1·023	5·9	16	17·16	− 1·16	9·53	12·21	− 2·68	28·31	24·59	+ 3·72	1·48	Faridpur .	Deltaic Bengal.	10
15				12	2	1		1	S 33° E	3·5	3·5	4·6	−24	90	1·021	8·1	19	17·39	+ 1·61	11·17	11·21	− 0·04	22·45	23·71	− 1·26	2·30	Jessore.		
3			8	9	4	5	2		S 33° E	4·8		5·3	− 9	88	·987	8·6	18	18·04	− 0·04	12·99	12·46	+ 0·53	21·84	23·20	− 1·36	3·05	Calcutta.		
		2	4	6	6	8	4	1	S 4° W	15·6		14·2	+10	88	1·006	8·5	21	17·00	+ 4·00	17·91	15·34	+ 2·57	27·82	25·18	+ 2·64	2·97	Saugor Island		
1	1	2	7	9	6	2	2	1	S 45° E	4·5				89	·992	7·3	11	15·92	− 4·92	7·83	10·62	− 2·79	14·16	19·95	− 5·79	2·16	Krishnagar.		
6	1	3	3	8	8	1		1	S 39° E	3·6	3·2			88	·977	5·1	21	15·65	+ 5·35	9·15	11·63	− 2·48	15·74	21·05	− 5·31	1·35	Midnapore.		

† Wind observation of 25 days and wind variable 3.

Table

Abstract of Observations taken at 8 A.M. at 223

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·243	P	29·490	29·394	29th	29·127	7th	·267	81·9	90·6		78·8		84·8		11·8	98·1	6th	73·9	14th	24·2
		Raniganj	334	29·228		29·508	29·375	29th	29·107	7th	·268	81·8	91·2		78·8		85·0		12·4	97·2	6th	75·9	14th	21·3
		Burdwan	99	29·479	−·011	29·525	29·624	29th	29·359	7th	·265	82·7	91·4	+1·2	79·5	+0·1	85·5	+0·7	11·9	96·4	6th	75·8	14th	20·6
		Naya Dumka	489	29·080		29·523	29·226	29th	28·971	8th	·255	82·1	90·2		78·5		84·4		11·7	97·0	6th	75·4	22nd	21·6
		Berhampore	67	29·516	−·013	29·531	29·664	29th	29·398	7th	·266	82·6	90·6	+1·2	79·4	+0·7	85·0	+1·0	11·2	94·8	6th	76·3	6th	18·5
		Rampur Boalia.	70	29·512		29·531	29·663	29th	29·393	7th	·270	83·5	89·9		79·6		84·8		10·3	94·1	27th	76·1	26th	18·0
		Maida	72	29·498		29·521	29·649	29th	29·393	14th	·256	82·8	90·3		79·6		85·0		10·7	94·6	27th	76·0	13th	18·6
		Bogra	61	29·528		29·541	29·670	29th	29·416	13th	·254	82·7	89·6	+1·1	79·5	+1·3	84·6	+1·2	10·1	94·2	27th	77·2	11th & 13th.	17·0
12	North Bengal	Dinajpur	123	29·460	−·022	29·537	29·604	29th	29·344	13th	·260	82·1	89·9	+0·8	79·2	+0·3	84·6	+0·6	10·7	96·3	27th	77·0	4 days	19·3
		Rangpur	123	29·497		29·573	29·636	29th	29·384	13th	·252	82·8	90·3		79·5		84·9		10·8	97·2	27th	76·8	13th & 14th.	20·4
		Jalpaiguri	284	29·330	−·005	29·571	29·476	29th	29·192	13th	·284	80·7	88·8	+0·5	77·7	+1·1	83·3	+0·8	11·1	95·4	27th	74·1	19th	21·3
		Cooch Behar	156	29·460		29·570	29·605	29th	29·338	12th	·267	82·1	89·5		78·6		84·1		10·9	95·9	27th	76·1	20th & 21st.	19·8
17	North Bihar	Purnea	125	29·460	−·007	29·539	29·615	29th	29·345	13th	·270	82·3	90·6	+0·4	79·6	+1·1	85·1	+0·8	11·0	96·2	27th	74·2	1st	22·0
14	Orissa	Balasore	46	29·531	?	29·522	29·645	30th	29·412	7th	·233	82·6	90·7	+2·3	78·5	+0·2	84·6	+1·3	12·2	96·4	1st	73·8	15th	22·6
		False Point	21	29·558	−·031	29·521	29·676	30th	29·447	7th	·229	82·9	88·4	+0·8	79·4	+1·0	84·0	+0·9	9·0	93·5	1st	75·1	15th	18·4
		Cuttack	80	29·500	−·021	29·523	29·611	30th	29·403	6th & 7th.	·208	82·3	91·0	+1·2	79·2	+0·7	85·1	+1·0	11·8	97·4	1st	76·2	17th	21·2
		Puri	20	29·563		29·525	29·662	29th	29·461	6th	·201	83·5	88·9		80·1		84·6		8·8	94·6	3rd	77·1	28th	17·5
	V.—Gangetic Plain and Chota Nagpur.				−·022								93·3	+3·5	79·7	+1·6	86·6	+2·5	13·6					30·7
15	Chota Nagpur	Hazaribagh	2,007	27·578	−·020	29·512	27·694	29th	27·480	6th	·214	78·3	87·8	+3·3	74·9	+1·4	81·4	+2·4	12·9	102·2	1st	70·9	14th	31·3
		Ranchi	2,128	27·458	P	29·510	27·573	29th	27·367	6th	·206	77·2	85·4	+1·7	74·1	+1·6	79·8	+1·7	11·3	97·2	1st	71·4	15th	25·8
		Daltonganj	730?	28·813		29·492	28·918	29th	28·738	6th	·180	81·6	94·3		77·5		85·9		16·8	108·1	2nd	72·5	15th	35·6
		Purulia		28·747		29·503	28·880	29th	28·637	6th	·243	81·4	91·5		77·2		84·4		14·3	100·6	6th	73·4	14th	27·2
		Chaibassa	760	28·794		29·498	28·909	29th	28·696	6th	·213	81·1	90·3	+1·1	77·6	+0·3	84·1	+0·7	12·7	102·7	1st	2·5	15th	30·2
16	South Bihar	Gaya	375	29·171	−·029	29·496	29·291	25th	29·080	6th	·211	83·8	94·9	+3·5	79·6	+1·0	87·3	+2·3	15·3	108·3	1st	71·8	14th	36·5
		Dehri	351	29·189		29·490	29·316	29th	29·099	6th	·217	85·0	95·0		81·2		88·1		13·8	110·4	1st	75·5	15th	34·9
		Patna	183	29·367	−·030	29·501	29·506	29th	29·270	7th	·236	84·2	92·4	+2·1	80·5	+0·8	86·5	+1·5	11·9	102·0	1st	76·7	11th	25·3
		Arrah	190	29·360		29·490	29·484	29th	29·256	6th	·228	84·7	93·3		80·9		87·1		12·4	109·4	1st	77·0	12th	32·4
		Buxar	239	29·298		29·489	29·424	29th	29·202	6th	·222	84·8	94·2		80·8		87·5		13·4	108·0	1st	76·6	12th	31·4
17	North Bihar	Bhagalpur	160	29·410		29·522	29·559	29th	29·302	7th	·257	83·4	91·6		79·4		85·5		12·2	97·7	1st	75·6	1st & 2nd,	22·1
		Darbhanga	166	29·401	−·018	29·520	29·552	29th	29·288	13th	·264	83·3	90·4	+1·4	80·5	+0·7	85·6	+1·1	10·2	96·3	28th	77·0	14th	19·3
		Muzaffarpur	178	29·396		29·526	29·544	29th	29·286	6th	·258	83·4	91·6		80·1		85·9		11·5	97·2	28th	76·2	8th	21·0
		Motihari	254	29·347		29·527	29·484	29th	29·215	13th	·269	82·9	90·8		79·2		85·0		11·6	97·0	28th	75·9	8th	21·1
		Chapra	181	29·372		29·504	29·509	29th	29·277	13th	·232	84·3	93·7		80·4		87·1		13·3	103·4	1st	77·1	12th	26·3
18	N.-W. Provinces (East).	Benares	267	29·263	−·024	29·481	29·374	29th	29·160	5th & 6th.	·214	85·8	96·5	+5·1	81·9	+2·3	89·2	+3·7	14·6	112·8	1st	72·0	13th	40·8
		Allahabad	309	29·212	−·033	29·471	29·313	29th	29·085	6th	·228	86·8	97·8	+6·4	82·5	+3·2	90·2	+4·8	15·3	114·2	1st	76·3	13th	37·9
23	N.-W. Provinces (East Sub-montane).	Gorakhpur	266	29·300	−·002	29·511	29·433	29th	29·191	13th	·242	83·9	92·8	+1·9	79·8	+0·3	86·3	+1·1	13·0	103·6	1st	73·7	8th	29·9
19	South Oudh	Lucknow	368	29·161	−·024	29·482	29·299	29th	29·027	6th	·272	85·1	97·4	+5·4	81·2	+1·9	89·3	+3·7	16·2	113·3	1st	75·3	20th & 21st.	38·0
20	North Oudh	Bahraich	403	29·136	−·021	29·495	29·274	29th	29·016	6th	·258	84·8	94·6	+2·8	79·8	+0·9	87·2	+1·9	14·8	107·1	1st	69·5	7th	37·6
21	N.-W. Provinces (Central).	Cawnpore	416	29·111	P	29·475	29·243	29th	28·955	6th	·288	86·5	97·5	+4·6	82·5	+3·2	90·0	+3·9	15·0	112·0	1st	76·5	11th	35·5
		Mainpuri	516	29·008	−·020	29·473	29·141	29th	28·856	5th	·285	87·0	99·5	+6·0	82·2	+2·6	90·9	+4·3	17·3	112·7	2nd	77·5	11th	35·2

—continued.

tations in India, Burma, etc., in July 1901—continued.

Wind Direction. Number of winds from Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st July 1901.	Normal rainfall for period, 1st June to 31st July.	Variation from normal of period, 1st June to 31st July.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
1		5	3	7	1	1	3		S 69° E	3·1	3·6			87	·954	7·1	18	17·23	+0·77	13·51	12·68	+0·83	20·47	22·64	— 2·17	2·67	Bankura	Central Bengal.	11
11	1	2	6	5	2	2	1	1	S 63° E	1·8				90	·981	5·9	17	16·46	+0·54	11·26	13·22	−1·96	15·63	22·49	− 6·86	2·01	Raniganj.		
5		3	4	7	7	2	2	1	S 38° E	3·8	3·8	4·3	−12	89	·996	8·9	10	16·27	−6·27	11·04	11·71	−0·67	17·46	20·63	− 3·17	1·51	Burdwan.		
3	1		10	7	6	1	2	1	S 50° E	1·7	1·8			87	·949	8·9	15	18·66	−3·66	12·47	13·71	−1·24	15·42	22·93	− 7·51	3·25	Naya Dumka.		
18			1	2	8	1	1		S 6° E	1·3	1·3	5·0	−74	90	1·004	8·6	12	16·71	−4·71	5·93	10·71	−4·78	13·78	20·09	− 6·31	1·25	Berhampore.		
7			4	9	7	1	2	1	S 28° E	4·0	4·1			88	1·011	5·3	14	15·03	−1·03	4·06	11·59	−7·53	15·58	21·50	− 5·92	0·54	Rampur Boalia.		
	1	1	17	5	4	1		2	S 75° E	2·8	2·6			90	1·005	7·7	13	15·73	−2·73	7·55	11·95	−4·40	14·15	22·29	− 7·84	2·20	Malda.		
			10	4					S 77° E					88	·993	7·3	18	15·84	+2·16	12·08	12·49	−1·41	31·16	27·05	+ 4·11	3·76	Bogra.		
17	?																												
	1	11	5	9	3	1		1	S 87° E	4·6	5·3			90	·988	8·3	19	16·26	−0·26	10·75	14·38	−3·63	20·63	29·87	− 9·24	2·21	Dinajpur	North Bengal.	12
10		2	6	4	8	1			S 45° E	2·8	2·9			88	·983	5·2	11	15·19	−4·19	10·01	16·30	−6·29	28·85	34·92	− 6·07	3·13	Rangpur.		
2	1	11	11	5				1	N 75° E	1·4	1·8			92	·960	3·9	19	20·07	−1·07	34·19	29·24	+4·95	57·95	55·66	+ 2·29	4·64	Jalpaiguri.		
10		5	10	5	1				S 87° E	1·4	1·5			90	·990	7·7	17			18·89	22·94	−4·05	49·02	58·61	− 9·59	3·68	Cooch Behar.		
		4	11	13	1	1		1	S 72° E	3·5	3·9	2·9	+34	90	·996	5·7	14	17·00	3·00	11·70	15·12	−3·42	15 90	26·08	−10·18	3·80	Purnea	North Bihar.	17
6	1	5	1	1	3	11	2	1	S 49° W	3·6				82	·919	7·1	13	15·08	−2·08	5·74	13·04	−7·30	8·78	22·11	−13·33	1·08	Balasore	Orissa.	14
1	1		2	1	5	9	10	2	S 56° W	10·5	10·0	10·5	− 5	87	·979	8·9	12	14·77	−2·77	8·65	13·41	−4·76	11 04	22·78	−11·74	4·15	False Point.		
22			2		1	3	1	2	S 56° W	2·1		3·2	−34	84	·937	8·0	15	16·35	−1·35	12·75	12·91	−0·16	16 75	24·44	− 7·69	2·21	Cuttack.		
6	1	3				18	1	2	S 58° W	12·3	11·5			84	·973	7·5	11	13·04	−2·04	3·89	9·80	−5·91	4·81	17·86	−13·05	0·89	Puri.		
																				8·64	12·37	−3·89					V.—Gangetic Plain and Chota Nagpur.		
2	3		4	6	3	5	5	3	S 18° W	8·9	7·9	8·4	− 6	80	·776	9·2	16	18·86	−2·86	6·89	14·16	−7·27	7·14	21·79	−14·65	1·49	Hazaribagh	Chota Nagpur.	15
	1	4	5	4	5	7	2	3	S 16° E	7·5	8·9			87	·816	8·5	18	19·34	−1·34	11·04	14·30	−3·26	12·31	22·78	−10·47	2·04	Ranchi.		
18	2	1	3	1		5	1		S 4° W	4·1	5·0			82	·883	3·9	13	16·57	−3·57	8·08	12·92	−4·84	10·41	18·95	− 8·54	1·37	Daltonganj.		
16		2	5	1	1	2	3	1	S 63° E	1·8				85	·909	6·3	20			11·98			15·62			2·19	Purulia.		
12		1	3	1	2	5	5	2	S 56° W	2·2	2·5			86	·916	6·5	19	16·76	+2·24	12·66	13·48	−0·82	14·52	22·01	− 7·49	3·20	Chaibassa.		
7		9	3	4	2	2	3	1	N 82° E	5·7	5·1	2·9	+76	82	·953	7·0	14	15·69	−1·69	9·80	13·10	−3·30	10·12	19·66	− 9·54	1·35	Gaya	South Bihar.	16
	1	1	12	5	5	4	2	1	S 51° E	10·2	9·1			77	·921	6·5	9	14·62	−5·62	7·90	11·73	−3·83	7·93	17·64	− 9·71	1·92	Dehri.		
1		5	14	7	1	1	2		S 81° E	5·8	6·8	3·6	+89	86	1·011	8·2	15	13·96	+1·04	8·10	11·75	−3·65	10·12	19·09	− 8·97	1·37	Patna.		
1	6	2	3		1		9	9	N 40° W	3·4	3·5			85	1·012	3·4	11	15·03	−4·03	7·68	12·11	−4·43	7·96	18·25	−10·29	2·67	Arrah.		
	1	1	20	4	1		4		S 84° E	5·9	5·3			80	·953	6·8	12	14·07	−2·07	7·32	11·68	−4·36	7·54	16 88	− 9·34	2·23	Buxar.		
2	1	1	13	8	2	1	2	1	S 69° E	4·2	3·9			86	·987	8·2	16	15·61	+0·39	6·98	12·73	−5·75	10·51	20·27	− 9·76	0·91	Bhagalpur	North Bihar.	17
3		3	13	11			1		S 75° E	3·6		5·0	−28	86	·991	6·9	7	14·20	−7·20	4·77	12·39	−7·62	12·07	19·95	− 7·88	2·09	Darbhanga.		
17			7	6				1	S 70° E	0·6	0·5			92	1·050	4·6	13	14·34	−1·34	7·86	12·46	−4·60	10·74	20·11	− 9·37	1·42	Muzaffarpur.		
		4	22	2		1	1	1	N 88° E	4·7	4·5			92	1·044	4·8	14	12·60	+1·40	11·27	13·39	−2·12	21·90	22·57	− 0·67	2·15	Motihari.		
2		3	17	5	1	2		1	S 82° E	3·9	4·8			85	·995	6·9	12	14·15	−2·15	10·43	12·06	−1·63	11·61	18·34	− 6·73	2·53	Chapra.		
5		1	9	6	1	5	3	1	S 43° E	3·7	4·2	4·8	−13	76	·948	7·4	11	14·27	−3·27	4·72	10·74	−6·02	4·74	15·87	−11·13	0·83	Benares	N.-W. Provinces (East).	18
	1	4	11	3	1	5	4	2	S 79° E	7·7	8·8	6·3	+40	77	·960	7·9	10	14·18	−4·18	6·59	12·33	−5·74	6·61	18·02	−11·41	1·57	Allahabad.		
1	5	13	6	2	1	2		1	N 53° E	2·2		2·8	−21	86	·987	7·1	12	13·91	−1·91	16·17	13·67	+2·50	18·12	23·35	− 5·23	5·47	Gorakhpur	N.-W. Provinces (East Submontane).	23
1		1	22	3	1			3	S 84° E	3·7	4·0	3·9	+ 3	79	·945	7·7	8	13·64	−5·64	8·78	11·25	−2·47	9·90	16·63	− 6 78	2·05	Lucknow	South Oudh.	19
3	1		22	2	1	1		1	S 87° E	4·7	4·4			82	·969	4·5	11			8·45	12·49	−4·04	11·63	18·13	− 6·50	1·36	Bahraich	North Oudh.	20
2	1	3	7	7		7	4		S 36° E	4·5				74	·921	4·8	10	12·10	−2·10	9·10	10·05	−0·95	9·18	13·59	− 4·41	4·20	Cawnpore	N.-W. Provinces (Central).	21
7	1	1	15	1			6		N 34° E	2·1	2·1			70	·889	7·2	5			3·48	11·07	−7·59	3·58	14·07	−10·49	0·98	Mainpuri.		

Table

Abstract of Observations taken at 8 A.M. at 223

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.							Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas				−·014								97·0	+2·4	79·2	+0·9	88·1	+1·7	17·8					·6
24	N.-W. Provinces (West Submontane).	Bareilly	569	28·970	−·009	29·495	29·119	29th	28·817	5th	·302	83·2	95·3	+3·6	80·2	+1·5	87·8	+2·6	15·1	109·5	1st & 2nd.	74·6	19th	34·9
		Dehra Dun	2,233	27·366	−·018	29·520	27·527	29th	27·202	7th	·325	77·8	88·9	+3·6	74·5	+0·3	81·7	+2·0	14·4	105·5	2nd	67·5	13th	38·0
		Roorkee	887	28·656	−·016	29·498	28·821	29th	28·471	7th	·350	83·6	94·8	+2·9	79·5	+1·4	87·2	+2·2	15·3	112·2	1st & 2nd.	70·1	13th	42·1
22	N.-W. P. (West)	Meerut	738	28·784	−·021	29·477	28·940	29th	28·608	7th	·332	83·9	95·9	+3·0	80·4	+0·8	88·2	+1·9	15·5	111·8	2nd	72·8	21st	39·0
26	South-East Punjab.	Delhi	718	28·807	−·016	29·477	28·963	29th	28·629	7th	·334	85·9	97·1	+3·1	82·5	+2·0	89·8	+2·6	14·6	111·2	1st, 2nd & 5th.	76·0	12th & 21st.	35·2
28	Central Punjab.	Lahore	702	28·800	−·011	29·460	29·006	29th	28·600	6th & 7th.	·406	86·4	99·6	+1·0	80·4	0	90·0	+0·5	19·2	118·1	5th & 6th.	71·9	21st	46·2
27	South Punjab	Sirsa	662	28·843	−·015	29·457	29·011	29th	28·643	6th	·368	88·2	102·9	+2·9	81·9	+0·6	92·4	+1·8	21·0	116·8	5th	73·6	22nd	43·2
		Patiala	818	28·723		29·498	28·880	29th	28·507	7th	·373	84·2	95·0		79·1		87·1		15·9	112·6	5th	69·9	13th	42·7
29	Punjab (Submontane).	Ludhiana	812	28·709	−·015	29·478	28·895	29th	28·509	7th	·386	85·1	96·4	−1·5	80·4	+0·4	88·4	−0·6	16·0	115·9	6th	67·1	13th	48·8
		Sialkot	830	28·675	−·015	29·461	28·815	26th & 29th.	28·461	7th	·354	86·7	100·9	+3·3	81·5	+2·3	91·2	+2·8	19·4	118·9	6th	72·1	20th & 21st.	46·8
		Umballa	892	28·640	−·012	29·489	28·802	29th	28·438	7th	·364	83·0	95·6	+1·9	78·5	−0·1	87·1	+0·9	17·1	111·9	1st & 5th.	70·0	13th	41·9
31	North Punjab	Rawalpindi	1,676	27·854	−·007	29·462	27·982	29th	27·633	6th	·349	86·9	101·4	+4·0	71·4	?	86·4	?	30·0	116·0	6th	64·1	20th & 30th.	51·9
	VII.—Indus Valley and North-West Rajputana.				−·012								103·8	+2·7	83·1	+1·6	93·5	+2·1	20·7					39·1
31	North Punjab	Peshawar	1,110	28·409	−·006	29·474	28·559	29th	28·192	6th	·367	89·9	106·0	+3·3	79·9	+0·7	93·0	+2·0	26·1	117·0	6th	71·9	1st	45·1
32	West Punjab	Khushab	612	28·888	?	29·457	29·076	29th	28·662	6th	·414	89·6	103·9	+1·6	82·5	+0·8	93·2	+1·2	21·4	118·4	6th	76·8	26th	41·6
		Montgomery	558	28·823	−·013	29·434	29·100	29th	28·705	6th	·395	91·4	104·8	+0·5	83·8	+0·5	94·3	+0·5	21·0	119·5	6th	74·5	22nd	45·0
		D. I. Khan	594	28·899	−·024	29·427	29·094	29th	28·655	6th	·429	88·8	105·5	+2·7	82·9	+0·5	94·2	+1·6	22·6	118·7	6th	77·2	21st	41·5
		Mooltan	420	29·048	−·016	29·427	29·227	29th	28·851	6th	·376	90·3	107·3	+4·1	86·0	+3·0	96·7	+3·6	21·3	119·5	5th & 6th.	79·5	12th	40·0
47	Sind	Jacobabad	186	29·270	−·015	29·412	29·421	29th	29·090	6th	·341	90·5	111·7	+4·2	85·9	+1·1	98·4	+2·7	26·7	126·0	6th	79·1	31st	46·9
		Hyderabad	96	29·422	+·014	29·469	29·546	29th	29·234	7th	·312	86·0	101·1	+2·3	81·2	+0·7	91·2	+1·5	19·9	112·2	5th	76·0	21st	36·2
		Kurrachee	30	29·527	+·007	29·517	29·650	29th	29·340	7th	·310	84·9	92·6	+0·9	82·1	+1·5	87·4	+1·2	10·5	94·9	4th	78·2	19th & 27th.	16·7
51	West Rajputana	Bikaner	771	28·751	−·041	29·474	28·892	29th	28·608	6th	·284	89·1	103·6	+4·5	85·5	+5·5	95·1	+5·0	19·1	116·9	5th	75·0	9th	41·9
		Pachpadra	360	29·215		29·545	29·325	29th	29·048	7th	·277	87·5	104·0		82·7		93·4		21·3	115·5	5th	77·1	9th	38·4
		Jodhpur	782	28·478		29·530	28·902	29th	28·620	7th	·282	85·3	100·7		82·1		91·4		18·6	114·3	4th & 5th.	77·3	31st	37·0
	VIII.—East Rajputana, Central India, and Gujarat.				−·002								94·8	+5·7	80·0	+2·6	87·5	+4·2	14·8					30·8
50	East Rajputana	Jaipur	1,431	28·144	−·005	29·510	28·264	29th	28·042	5th	·252	85·8	99·7	+7·9	80·9	+4·0	90·3	+6·0	13·8	116·2	5th	72·6	20th	43·6
		Kotah	819	28·732		29·537	28·830	29th	28·602	6th	·228	87·6	99·3		83·2		91·3		16·1	114·6	5th	74·1	30th	40·5
		Sambhar	1,254	28·318	+·013	29·515	28·432	29th	28·196	5th	·236	85·6	99·3	+7·4	81·4	+3·6	90·4	+5·5	17·9	114·5	5th	70·5	12th	44·0
		Ajmer	1,611	27·983	+·002	29·531	28·087	29th	27·847	6th	·240	84·1	97·2	+6·3	80·6	+3·9	88·9	+5·1	16·6	111·9	5th	76·6	31st	35·3
		Udaipur	1,925	27·696		29·551	27·779	29th	27·580	6th & 7th.	·199	81·2	92·2		77·7		85·0		14·5	106·6	4th	73·3	29th	33·3
		Deesa	466	29·142	+·010	29·558	29·217	16th	28·994	7th	·223	84·1	99·1	+7·8	80·5	+3·0	89·9	+5·4*	18·6	107·6	5th	76·5	10th	31·1
46	Kathiawar and Cutch.	Bhuj	395	29·204	+·009	29·543	29·338	21st	29·041	7th	·297	84·8	95·0	+4·9	?78·2*	?+0·1	?86·6*	?+2·5	?16·8	102·3	4th, 5th & 6th	71·9	13th	30·4
		Jamnagar	61	29·561		29·568	29·649	31st	29·398	7th	·251	85·4	93·9		80·5		87·2		13·4	97·1	9th	76·2	31st	20·9
		Rajkot	429	29·202	+·006	29·580	29·288	21st	29·045	7th	·243	82·4	95·3	+5·2	77·3	+1·8	86·4	+3·5	18·0	102·4	3rd	73·7	31st	28·7
		Veraval		29·642	+·009	29·602	29·726	31st	29·496	7th	·230	82·5	85·2	+1·5	80·6	+1·6	82·9	+1·6	4·6	88·1	2nd	77·8	29th & 30th.	10·3
		Dwarka	37	29·601		29·584	29·689	31st	29·439	7th	·250	83·2	87·6		80·8		84·2		6·8	90·4	3rd & 5th.	77·2	31st	13·2
		Bhavnagar Para.	35	29·612	+·006	29·591	29·678	29th	29·472	7th	·206	83·6	95·6	+3·1	78·3	−0·1	87·2	+1·5	16·8	103·6	1st	75·3	26th & 27th.	28·3
49	Central India	Nowgong	757	28·736	−·029	29·487	28·877	29th	28·659	6th	·218	85·9	96·9	+6·9	82·0	+4·0	89·5	+5·5	14·9	110·0	2nd	75·0	28th	35·0
		Indore	1,823	27·830	+·012	29·593	27·898	16th	27·740	6th	·158	77·4	88·7	+4·7	73·9	+1·6	81·3	+3·2	14·8	99·8	4th	70·1	15th	29·7
		Neemuch	1,630	27·987	−·012	29·559	28·082	29th	27·857	6th	·225	80·3	93·5	+6·6	76·2	+2·4	84·8	+4·5	17·3	108·1	4th	70·5	9th	37·6

* Mean of 30 days.

—continued.

ations in India, Burma, etc., in July, 1901—continued.

Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Hygrometry, 8 A.M. Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st July 1901.	Normal rainfall for period, 1st June to 31st July.	Variation from normal of period, 1st June to 31st July.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																			9·19	11·49	−2·22					VI.—Upper Sub-Himalayas.		
9	5	14	2				1	N 81° E	3·1	2·9	4·1	− 29	83	·952	5·7	10	13·95	− 3·45	8·71	16·18	−7·47	10·55	21·85	−11·30	3·64	Bareilly .	N.-W. Provinces (West, Sub-montane).	24
5	2		2	4	4	3	1	S 32° W	1·3		1·2	+ 8	82	·777	7·1	15	21·27	− 6·27	16·50	29·25	−12·75	18·27	38·50	−20·23	3·73	Dehra Dun,		
4	1	2	12				2	S 66° E	3·3	3·3	2·9	+ 14	74	·833	5·1	12	11·82	+ 0·18	14·23	12·45	+1·78	15·38	17·16	− 1·83	4·72	Roorkee,		
4	1	5	10		1			S 60° E	1·7	1·7	2·3	− 26	77	·836	6·5	9	10·18	− 1·18	9·94	9·54	+0·40	10·29	11·98	− 1·69	3·07	Meerut, .	N.-W. P. (West).	22
5 1	1	9	8	1	1	2	3	S 71° E	3·2	3·0	4·5	− 33	74	·899	6·6	8	8·64	− 0·64	7·16	9·22	−2·06	8·71	12·57	− 3·86	2·52	Delhi . .	South-East Punjab.	26
8		7	11		1		4	S 63° E	3·4		3·3	+ 3	67	·820	3·4	7	6·45	+ 0·55	9·86	6·67	+3·19	10·42	8·51	+ 1·91	5·72	Lahore .	Central Punjab	28
2	5		9		10		5	S 7° W	F		4·8	F	61	·780	4·1	9	5·55	+ 3·45	2·53	4·58	−2·05	2·55	6·49	− 3·94	0·49	Sirsa .	South Punjab.	27
2	2	8	11	5		2	1	S 54° E	5·3	5·3			78	·903	5·1	9			8·09			8·54			4·96	Patiala,		
3	3	2	18		2	2	1	S 48° E	4·0	3·6	2·0	+ 80	70	·864	4·9	8	9·36	−1·36	10·28	10·33	−0·33	10·63	12·74	− 2·11	3·50	Ludhiana .	Punjab (Submontane).	29
4	8	9	7		1	1	1	N 88° E	2·9		2·5	+ 16	66	·803	2·4	11	8·45	+2·55	12·23	8·52	+3·71	12·72	11·60	+ 1·12	3·81	Sialkot.		
18	2	10					1	S 53° E	1·1				82	·918	5·0	5			8·74	10·86	−2·12	9·84	14·69	− 4·85	3·71	Umballa.		
20	2	1	2	2	2		2	S 27° E	2·4	2·2	2·1	+ 5	55	·691	2·2	6	8·64	−2·64	2·04	8·75	−6·71	2·90	10·46	− 7·56	0·66	Rawalpindi.	North Punjab.	31
																			1·64	2·86	−1·23					VII.—Indus Valley and North-West Rajputana.		
16 5	1		1	2	1	1	6	N 25° W	2·0	2·2	4·4	− 50	54	·754	1·7	0	1·91	− 1·91	0·14	1·79	−1·65	0·54	2·14	− 1·60	0·09	Peshawar .	North Punjab.	31
6 1	9	7	2	2	3	1		N 81° E	3·5	3·9			58	·776	2·0	4	3·20	+ 0·80	4·05	2·86	+1·19	5·48	3·56	+ 1·92	3·36	Khushab .	West Punjab.	32
2	5	8	3	3	9	2	2	S 5° E	10·3	8·9			51	·716	1·7	2	3·60	− 1·60	1·11	3·27	−2·16	1·11	4·51	− 3·40	0·56	Montgomery,		
18 5	11		4					N 48° E	2·5	2·7	2·4	+ 13	72	·862	2·4	2	3·64	− 1·64	0·93	2·87	−1·94	2·00	3·41	− 1·41	0·50	D. I. Khan.		
7 1	2		6	6	9			S 3° W	2·6	2·1	3·4	− 38	66	·928	2·3	2	2·82	−0·82	0·57	2·94	−2·37	0·67	3·53	−2·86	0·20	Mooltan,		
19		9	7	3			2	S 62° E	4·5	4·7	5·3	− 11	64	·821	1·5	2	1·45	+0·55	0·55	1·28	−0·73	0·55	1·40	−0·85	0·35	Jacobabad .	Sind.	47
				3	26	2		S 48° W	12·3	12·8	13·9	− 8	64	·786	3·3	3	3·18	−0·18	0·75	2·67	−1·92	0·75	3·00	−2·25	0·33	Hyderabad,		
				1	12	18		S 71° W	13·3	16·6	17·3	− 7	79	·945	5·4	1	3·64	−2·64	0·49	3·17	−2·68	0·49	3·99	−3·50	0·44	Kurrachee.		
	1	1	2	3	4	6	12	2	S 62° W	11·0			6·7	+ 64	65	·824	3·8	6			2·58	3·67	−1·09	2·78	5·33	− 2·55	0·83	Bikaner .	West Rajputana	51
	1		2		13	9	6		S 29° W	9·1	8·5	9·3	− 13	69	·826	1·5	4			1·61	2·64	−1·03	1·61	3·33	− 1·72	0·94	Pachpadra,		
3			1	2	15	10		S 57° W	8·6	7·7			66	·793	6·3	6			5·23	4·03	+1·20	5·53	5·62	− 0·09	1·90	Jodhpur.		
																			5·76	10·64	−6·33					VIII.—East Rajputana, Central India and Gujarat.		
1 1	4	2	2		7	11	3	S 88° W	5·4		6·2	− 13	67	·819	5·9	9	12·90	− 3·90	5·77	9·37	−3·60	5·82	11·86	− 6·04	1·96	Jaipur .	East Rajputana.	50
2 1	2	1	1		8	10	6	N 89° W	8·2	9·7			63	·795	4·4	8			10·15	9·85	+0·30	12·03	13·42	− 1·39	2·00	Kotah.		
4 4		3		1		13	6	N 63° W	6·9		9·1	− 24	68	·819	5·2	7	10·20	−3·20	5·20	7·83	−2·63	5·60	9·23	− 3·63	1·46	Sambhar,		
1	3		1		13	10	3	S 73° W	9·1		6·9	+ 32	74	·857	6·1	8	10·27	− 2·27	5·32	7·29	−1·97	6·43	9·57	− 3·14	2·05	Ajmer.		
2 1		1		1	9	13	4	S 30° W	7·4	7·5			73	·776	6·2	8			5·36			6·44			1·92	Udaipur.		
			4	19	6	2		S 52° W	15·7		14·5	+ 8	72	·846	7·5	3	10·73	− 7·73	2·11	10·99	−8·88	2·17	13·15	−10·98	1·53	Deesa.		
			6	24	1			S 83° W	20·8		16·0	+ 25	81	·962	4·6	4			1·88	6·94	−5·06	1·88	8·88	− 7·00	0·75	Bhuj . .	Katmiawar and Cutch.	45
		1	21	5	1			S 53° W	19·2	20·5			74	·897	5·6	3			1·72			1·72			1·12	Jamnagar,		
			8	19	4			S 84° W	15·4	15·2	14·5	+ 5	78	·856	7·9	7	12·81	− 5·81	4·94	13·86	−8·92	6·64	18·19	−11·55	1·50	Rajkot.		
			14	17				S 70° W	14·4	17·0	14·8	+ 15	87	·952	7·3	4			1·09	8·95	−7·86	1·29	15·28	−13·99	0·30	Veraval.		
			22	9				S 55° W	19·6				83	·932	7·5	3			1·27			1·28			0·41	Dwarka.		
2				1	13	4	11	S 84° W	7·8*	7·5*			72	·854	7·8	8			9·12	5·63	+3·49	9·18	10·78	− 1·60	2·56	Bhavnagar Para.		
3 3		3	1		3	16	2	N 83° W	4·8	4·3	4·2	+ 2	72	·871	7·5	10	15·73	− 5·73	6·50	14·41	−7·91	7·37	20·24	−12·87	2·08	Nowgong .	Central India.	4
					7	18	2	S 82° W	7·2		6·8	+ 6	84	·797	9·4	11	13·72	− 2·72	7·50	8·51	−1·01	9·20	15·30	− 6·10	2·12	Indore.		
1	1	1			13	15		S 70° W	15·8	14·2	12·2	+ 16	78	·807	6·8	10	11·73	− 1·73	5·53	9·89	−4·36	6·06	14·16	− 8·10	3·35	Neemuch.		

Table

Abstract of Observations taken at 8 A.M. at 223

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
45	Gujarat	Surat	39	29·634	−·001	29·616	29·711	31st	29·508	7th	·203	82·3	89·7	+2·6	73·2	+1·1	84·0	+1·9	11·4	96·2	2nd	72·5	6th	23·7
		Ahmedabad	161	29·462	−·008	29·571	29·541	16th	29·312	7th	·229	84·2	96·4	+5·7	80·3	+2·4	88·4	+4·1	16·1	103·8	4th	76·6	26th	27·2
22	N.-W. P. (West)	Agra	555	28·967	−·026	29·471	29·095	29th	28·796	5th	·299	88·2	99·4	+6·5	84·5	+4·3	91·9	+5·4	14·9	112·5	6th	76·9	20th	35·6
21	N.-W.P. (Central)	Jhansi	858	28·699	−·015	29·499	29·806	29th	28·557	5th	·249	86·2	98·0	+7·3	82·9	+4·5	90·5	+5·9	15·1	113·4	6th	76·1	4 days	37·3
	IX.—Deccan				−·010								87·7	+2·2	73·5	+0·8	80·6	+1·5	14·2					26·3
38	Bombay Deccan	Belgaum	2,539	27·243	−·006	29·717	27·309	21st	27·146	2nd	·163	70·7	75·8	+0·2	67·5	+0·6	71·7	+0·4	8·3	79·8	1st	66·3	2nd & 23rd.	13·5
		Sholapur	1,590	28·145	−·013	29·681	28·212	21st	28·074	3rd	·138	77·2	89·4	+0·6	72·6	+1·3	81·0	+1·0	16·8	96·2	17th	70·5	1st & 31st.	25·7
		Poona	1,840	27·892	−·004	29·678	27·953	21st & 31st.	27·822	3rd	·131	74·8	82·7	+0·9	70·9	+0·2	76·8	+0·6	11·8	88·0	3rd	68·9	26th	19·1
		Bijapur	1,946	27·813	−·004	29·700	27·887	21st	27·742	2nd	·145	74·9	88·4	+2·4	71·0	+0·2	79·7	+1·3	17·4	97·4	7th	67·7	5th	29·7
40	Khandesh	Malegaon	1,430	28·242	−·010	29·618	28·305	31st	28·150	7th	·155	79·2	89·6	+2·9	75·0	+2·0	82·3	+2·5	14·6	95·9	16th	73·1	6th, 14th & 15th.	22·8
		Ahmednagar	2,152	27·577	−·001	29·661	27·639	21st	27·508	6th	·131	75·7	86·1	+1·1	71·0	+0·5	78·5	+0·8	15·1	90·9	16th	67·4	16th	23·5
41	Berar	Akola	930	28·730	−·004	29·608	28·794	21st	28·666	3rd	·128	79·1	88·9	+0·8	74·1	+0·1	81·5	+0·5	14·8	95·9	17th	71·4	13th	24·5
		Amraoti	1,215	28·440	+·002	29·607	28·500	21st	28·382	4th	·118	77·6	88·3	+1·5	74·3	+1·2	81·3	+1·4	14·0	96·2	12th	70·5	1st	25·7
42	Central Provinces (West).	Khandwa	1,044	28·599	−·001	29·598	28·663	21st	28·526	6th	·137	79·0	88·3	+1·3	75·8	+0·9	82·1	+1·1	12·5	97·2	17th	73·1	5th	24·1
		Hoshangabad	1,006	28·615	+·005	29·576	28·689	21st	28·513	7th	·176	79·7	92·8	+6·7	76·6	+1·6	84·7	+4·2	16·2	101·9	4th	70·2	20th	31·7
		Nagpur	1,025	28·596	−·012	29·575	28·663	21st	28·527	7th	·136	78·6	89·4	+2·3	75·8	+1·1	82·6	+1·7	13·6	98·1	16th	70·6	22nd	27·5
43	Central Provinces (Central).	Chanda	634	29·029	−·018	29·607	29·092	21st	28·968	17th	·124	79·6	89·2	+1·6	74·6	−0·9	81·9	+0·4	14·6	98·2	16th	70·0	22nd & 25th.	28·2
		Seoni	2,033	27·597	−·011	29·559	27·659	30th	27·543	5th	·116	76·4	85·6	+2·1	72·7	+0·2	79·2	+1·2	12·9	93·3	1st	69·5	22nd	23·8
		Jubbulpore	1,327	28·251	−·022	29·526	28·216	30th	28·149	6th	·167	79·0	90·2	+4·7	75·6	+1·0	83·0	+2·9	14·7	101·5	5th	71·1	22nd	30·4
		Saugor	1,807	27·798	−·006	29·539	27·860	21st	27·700	7th	·160	79·4	90·0	+5·0	75·7	+2·2	82·9	+3·6	14·3	103·4	3rd	70·1	23rd	33·3
49	Central India	Sutna	1,040	28·492	−·020	29·481	28·589	30th	28·393	6th	·196	83·2	94·2	+7·4	79·9	+3·2	87·1	+5·3	14·3	109·6	2nd	76·1	9th, 15th & 23rd.	33·5
44	Central Provinces (East).	Raipur	976	28·626	−·013	29·545	28·700	30th	28·537	6th	·163	78·1	88·1	+2·0	75·6	+1·0	81·9	+1·5	12·5	99·9	5th	71·1	6th & 16th.	28·8
		Sambalpur	486	29·098	−·020	29·531	29·192	30th	29·023	7th	·169	80·3	89·1	+1·8	77·4	0	83·3	+0·9	11·7	101·6	1st	72·2	1st	29·4
39	Hyderabad (North).	Aurangabad	1905	27·809		29·654	27·865	21st	27·737	7th	·128	74·8	85·1		67·6		76·4		17·5	91·8	16th & 17th.	50·2	14th	41·6
		Indur		28·402			28·476	22nd	28·332	9th	·144	77·3	85·7		74·2		80·0		11·5	90·8	5 days.	71·2	23rd	19·6
		Bidar	2,165	27·568		29·674	27·679	1st	27·507	2nd	·172	72·7	84·8		69·2		77·1		15·6	91·5	13th	67·8	27th	23·7
53	Hyderabad (South).	Gulbarga	1,502	28·233		29·685	28·305	21st	28·172	6th	·133	75·9	88·7		72·0		80·4		16·7	95·6	17th	70·1	1st	25·5
		Raichur	1,326	28·426	−·012	29·706	28·492	21st	28·370	6th	·122	76·5	88·8	−0·8	72·6	−0·5	80·7	−0·7	16·2	93·1	6th	69·1	2nd	24·0
		Hyderabad (Dn.)	1,690	28·031	?	29·668	28·094	21st	27·973	5th	·121	75·6	85·3	−0·8	72·5	+1·3	78·9	+0·3	12·8	91·4	17th	70·2	9th & 27th.	21·2
		Secunderabad	1,787	27·933	−·021	29·667	28·006	21st	27·876	5th & 6th.	·130	74·9	87·1	+1·0	72·0	+0·8	79·6	+0·9	15·1	94·1	17th	67·5	9th	26·6
		Hanumkonda	565	28·807		29·643	28·879	11th	28·741	5th	·138	78·7	87·7		75·4		81·6		12·3	97·9	6th	70·3	17th	27·6
	X.—West Coast				−·013								83·7	+0·9	76·0	+1·0	79·9	+1·0	7·7					13·4
37	Konkan	Bombay	37	29·692	−·009	29·669	29·769	21st	29·590	7th	·179	81·1	84·8	+0·6	77·8	+0·5	81·3	+0·6	7·0	88·0	16th	74·0	8th	14·0
		Ratnagiri	110	29·657	−·005	29·704	29·730	21st	29·549	2nd	·181	80·2	84·2	+0·5	76·7	+1·4	80·5	+1·0	7·5	87·4	11th	71·9	9th	15·5
		Mormugao	60	29·740	−·011	29·735	29·814	21st	29·648	2nd	·166	80·1	84·3	+0·8	76·6	+0·5	80·5	+0·7	7·7	87·0	21st	73·4	17th	13·6
		Goa	199				Barometer out of order.					79·2	81·9	−0·3	76·8	+1·0	79·4	+0·4	5·1	83·5	6th, 7th & 15th.	75·0	3rd, 8th & 24th.	8·5
		Karwar	44				Barometer out of order.					79·4	83·7	+0·7	76·0	+1·4	79·9	+1·1	7·7	86·2	1st	73·5	4 days	12·7
33	Malabar	Cochin	11	29·890	−·008	29·828	29·951	11th	29·847	3rd & 25th.	·104	78·7	85·9	+2·6	75·2	+1·3	80·6	+2·0	10·7	89·5	9th	72·7	7th & 11th.	16·8
		Calicut	27	29·849	−·020	29·805	29·915	21st	29·786	3rd	·129	77·2	82·7	+0·6	74·3	+0·8	78·5	+0·7	8·4	88·3	9th	73·5	8th, 9th & 11th.	15·8
		Mangalore	65	29·791	−·022	29·788	29·868	12th	29·721	3rd	·147	78·7	84·1	+1·4	75·3	+1·2	79·7	+1·3	8·8	86·8	2nd, 20th & 21st.	73·4	6th, 12th & 26th.	13·4
		Trivandrum	198	29·679	?	29·809	29·723	11th	29·619	2nd	·116	77·4	81·8	−0·1	75·5	?	78·7	?	6·3	84·0	5th, 8th & 9th.	73·5	5th	10·5

* Observations of 30 days.

—continued.

Stations in India, Burma, etc., in July, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st July 1901.	Normal rainfall for period, 1st June to 31st July.	Variation from normal of period, 1st June to 31st July.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
				1	5	8	15	2	S 65° W	10·1	9·5	15·7	− 39	83	·920	6·9	10	16·45	−6·45	12·27	18·28	−6·01	12·48	28·40	−15·92	3·05	Surat	Gujarat.	45
	1					19	2	8	S 72° W	4·6				77	·890	7·4	11			8·99	14·73	−5·74	10·56	22·05	−11·49	2·68	Ahmedabad		
1		7		12		9		2	S 34° E	5·0	5·9	5·0	+18	72	·941	4·6	5	13·00	−8·00	3·13	11·50	−8·37	3·93	14·04	−10·11	0·97	Agra	N.-W. P. (West).	22
1	3	3	4	2		8	6	4	N 82° W	6·8	7·5	4·1	+83	73	·894	3·3	12	14·36	−2·36	11·50	12·60	−1·10	11·67	17·49	−5·82	2·64	Jhansi	N.-W.P. (Central).	21
																				8·77	11·02	−2·19					IX.—Deccan.	
					2	20	9		S 55° W	25·7		27·9	− 8	93	·698	9·3	26	22·91	+3·09	12·81	15·37	−2·56	23·02	21·93	+1·06	1·75	Belgaum	Bombay Deccan.	38
						13	15	3	S 75° W	14·8	10·7	12·3	−13	76	·707	7·8	6	9·45	−3·45	5·36	4·29	+1·07	13·17	9·30	+3·87	2·23	Sholapur.		
						10	18	3	S 80° W	16·0	18·1	16·9	+ 7	83	·716	8·8	14	12·73	+1·27	6·61	6·87	−0·26	12·36	11·60	+0·76	1·06	Poona.		
7						11	11	2	S 72° W	4·3	4·2			80	·693	7·8	2	6·40	−4·40	0·75	1·51	−0·76	6·51	4·20	+2·31	0·26	Bijapur.		
					1	7	22	1	S 79° W	13·5	15·5	11·8	+31	75	·751	4·3	9	8·55	+0·45	2·33	4·75	−2·42	8·69	9·47	−0·78	0·56	Malegaon	Khandesh.	40
	1				1	11	15	3	S 78° W	12·7	15·5			83	·732	8·9	4			1·46	3·09	−1·63	8·61	8·25	+0·36	0·75	Ahmednagar.		
1						9	11	10	N 88° W	10·1	10·9	8·4	+20	81	·796	8·9	11	13·18	−2·18	5·54	10·81	−5·27	10·32	16·28	−5·96	1·25	Akola	Berar.	41
		1				7	20	3	S 87° W	13·6	12·1	7·6	+59	82	·776	8·8	10	12·73	−2·73	3·82	10·62	−6·80	7·38	17·46	−10·08	0·70	Amraoti.		
				1			20	10	N 76° W	11·1		8·4	+32	81	·792	8·2	14	11·91	+2·09	6·03	8·82	−2·79	8·51	14·87	−6·36	1·42	Khandwa	Central Provinces (West).	42
					26		5		S 56° W	7·4	7·5	4·5	+66	75	·766	8·8	15	17·27	−2·27	14·60	17·59	−2·99	16·98	25·79	−8·81	3·95	Hoshangabad		
3					2	10	13	3	S 72° W	9·5		10·1	−6	85	·814	8·5	13	17·64	−4·64	7·97	14·73	−6·76	13·96	23·47	−9·51	2·11	Nagpur.		
2	1	1				6	16	5	N 88° W	4·4		6·2	−29	80	·813	9·2	16			17·20	18·88	−1·68	21·47	26·73	−5·26	3·51	Chanda	Central Provinces (Central).	43
	2	1	1	2	2	7	10	6	S 85° W	6·7		6·2	+8	86	·783	8·3	17	18·64	−1·64	14·50	18·15	−3·65	17·66	28·72	−11·06	2·64	Seoni.		
	2	1		1	3	7	13	4	S 81° W	5·3		5·0	+6	85	·842	7·7	16	19·27	−3·27	10·97	20·80	−9·83	12·50	29·90	−17·40	2·47	Jubbulpore.		
		1	2		2	5	21		S 78° W	8·5	9·7	5·1	+90	81	·813	6·6	18	15·64	−2·36	16·19	15·10	+1·09	17·44	22·50	−5·06	3·49	Saugor.		
1		1	5	3	2	8	8	3	S 49° W	7·8	8·3	9·4	−12	76	·842	7·2	16	15·73	+0·27	10·12	15·17	−5·05	10·93	21·71	−10·78	2·36	Sutna	Central India.	49
3		1			1	19	6	1	S 57° W	11·0	10·1	11·6	−13	87	·831	8·9	20	16·36	+3·64	15·51	16·47	−0·96	21·85	25·39	−3·54	2·33	Raipur	Central Provinces (East).	44
	1	1	2	2	5	13	6	1	S 42° W	5·6	5·5	3·6	+53	85	·887	5·6	18			15·06	22·16	−7·10	17·91	33·29	−15·38	2·33	Sambalpur.		
						12	16	3	S 76° W	16·7	16·5			86	·739	8·6	13			4·71	7·37	−2·66	12·22	13·71	−1·49	0·92	Aurangabad	Hyderabad (North).	39
						13		18	N 80° W	13·0	12·5			81	·765	6·6	16			12·35	10·64	+1·71	18·08	15·24	+2·84	2·00	Indur.		
						28	1	2	S 51° W	11·6	9·8			89	·716	3·4	18			8·21	9·29	−1·08	10·54	15·59	−5·05	1·99	Bidar.		
					1	10	15	5	S 79° W	14·9	14·3			82	·736	7·5	9			4·53	4·89	−0·36	9·40	9·71	−0·31	0·73	Gulbarga	Hyderabad (South).	53
						29	2		S 48° W	15·4	15·1			80	·725	5·3	16			9·80	4·45	+5·35	15·04	8·35	+6·69	1·55	Raichur.		
							31		W	9·9	9·6			81	·712	8·1	13			8·08	6·90	+1·18	12·70	11·75	+0·95	1·60	Hyderabad (Dn.).		
						2	23	6	N 84° W	13·5		13·3	+2	81	·701	7·5	10			6·46	6·50	−0·44	13·44	11·75	+1·69	1·81	Secunderabad.		
2						3	23	3	W	13·0	11·1			78	·767	8·1	13			7·09			12·47			2·22	Hanumkonda		
																				24·54	28·96	−4·42					X.—West Coast.	
				1	2	8	19	1	S 73° W	15·9		19·1	−17	87	·932	9·0	22	21·91	+0·09	33·22	27·17	+6·05	57·96	46·54	+11·42	5·68	Bombay	Konkan.	37
4		1				7	17	2	S 83° W	8·8	8·7	13·7	−37	87	·897	9·1	24	26·36	−2·36	27·00	35·51	−8·51	55·76	66·77	−11·01	3·30	Ratnagiri.		
			1				28	2	N 87° W	14·8†				90	·924	8·2	26			22·99	31·28	−8·29	76·00	53·30	+22·70	2·82	Mormugao.		
						4	23	4	W	9·5‡				90	·894	9·2	29			23·46	33·70	−10·24	82·76	63·79	+18·97	3·13	Goa		
			1	2		8	20		S 73° W	7·1				83	·829	7·9	28	27·45	+0·55	31·06	38·97	−7·91	102·47	76·21	+26·26	5·35	Karwar.		
3	3	2	1			2	12	8	N 63° W	8·1				87	·865	7·7	23	23·91	−0·91	17·46	21·51	−4·05	48·78	49·92	−1·14	3·93	Cochin	Malabar.	33
7	4	5	2			4	4	5	N 30° W	7·1	8·9			92	·848	9·3	28	26·63	+1·37	31·05	29·35	+1·71	63·75	62·57	+1·18	4·35	Calicut.		
7	2					1	12	9	N 68° W	3·5		3·2	+ 9	90	·880	9·0	26	28·10	−2·10	29·52	36·09	−6·57	69·03	71·12	−2·09	5·40	Mangalore.		
2	8	1					3	17	N 35° W	8·2				87	·815	8·3	8			5·11	7·08	−1·97	22·71	20·03	+2·68	1·73	Trivandrum.		

† Mean of 30 days.

‡ Mean of 17 days.

Table

Abstract of Observations taken at 8 A.M. at 223

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	XI.—South India				-·014								91·7	+1·0	75·2	+0·5	83·4	+0·8	16·5					24·5
57	Madras (South)	Pamban	37	29·794		29·758	29·840	13th	29·738	2nd	·102	82·9	90·8		78·3		84·5		12·5	92·3	18th, 20th & 30th.	77·2	4 days	15·1
		Tinnevelly	168	29·665	-·005	29·761	29·716	21st	29·605	25th	·111	85·7	96·0	+0·6	79·3	0	87·7	+0·3	16·7	99·3	20th & 22nd.	76·4	11th	22·9
		Madura	447	29·363	-·018	29·742	29·423	21st	29·310	25th	·113	83·8	98·0	+0·7	76·9	+0·8	87·5	+0·8	21·1	101·4	30th	71·5	7th	29·9
		Periyakulam		28·878			28·937	21st	28·819	25th	·118	80·2	94·2		71·2		81·1		23·0	100·0	8th	65·9	8th	34·1
24	Madras, (South Central).	Salem	940	28·892	-·024	29·773	28·955	12th	28·833	25th	·122	79·2	93·5	+0·9	73·8	+1·5	83·7	+1·2	19·7	97·7	31st	71·0	19th	26·7
		Coimbatore	1,348	28·484	—·008	29·781	28·543	21st	28·435	25th	·108	76·0	87·8	-0·2	71·8	+1·2	79·9	+0·5	16·0	92·4	1st	70·3	12th & 19th.	22·1
35	Coorg	Mercara	3,781	26·168	-·002		26·223	12th	26·118	3rd	·105	64·5	68·0	-0·7	62·8	+0·6	65·4	-0·1	5·2	72·5	1st	61·7	6 days	10·8
36	Mysore	Chitaldroog	2,405	27·406	-·011	29·736	27·463	21st	27·346	2nd	·117	72·4	81·9	+0·4	68·9	+0·6	75·4	+0·5	13·0	86·1	1st	66·9	9th	19·2
		Bangalore	3,021	26·848	—·015	29·773	26·907	21st	26·787	2nd	·120	69·6	82·4	+0·6	65·9	+0·3	74·2	+0·5	16·5	86·8	21st & 31st.	64·3	23rd	22·5
		Hassan	3,091	26·792		29·787	26·850	12th & 21st.	26·728	2nd	·122	71·3	76·2		65·5		70·9		10·7	82·2	1st	64·2	22nd & 23rd	18·0
		Mysore	2,518	27·354	-·006	29·795	27·421	21st	27·298	3rd	·123	72·2	82·8	+0·5	67·0	-0·1	74·9	+0·2	15·8	86·6	24th	66·0	19th, 20th & 30th.	20·6
56	Madras, East Coast, South.	Negapatam	31	29·765	-·022	29·725	29·827	21st	29·703	25th	·124	84·6	97·9	+3·0	76·8	-1·0	87·4	+1·0	21·1	100·6	8th & 9th.	74·9	4th & 10th.	25·7
		Cuddalore	12	29·773	-·010	29·714	29·827	21st	29·714	25th	·113	84·3	97·6	+2·2	79·5	+1·6	88·5	+1·9	18·1	101·2	24th	75·2	15th 16th.	26·0
		Trichinopoly	255	29·560	-·013	29·746	29·623	21st	29·510	25th	·113	83·8	98·9	+1·8	79·0	+1·7	89·0	+1·8	19·9	102·1	31st	75·4	11th	26·7
		Madras	22	29·741	-·024	29·694	29·813	21st	29·690	3rd	·123	84·0	96·2	+0·6	79·1	+0·6	87·7	+0·6	17·1	102·0	13th	73·5	15th & 22nd.	28·5
		Vellore	707	29·069		29·776	29·118	13th	28·995	11th	·123	82·1	95·4		74·5		85·0		20·9	100·9	11th, 13th & 31st.	72·5	23rd	28·4
55	Madras, East Coast, Central.	Nellore	71	29·677	+·005	29·680	29·757	21st	29·622	6th	·135	85·2	97·4	+0·8	80·9	+1·3	89·2	+1·1	16·5	102·8	11th & 14th.	76·1	2nd & 18th,	26·7
		Masulipatam	15	29·696	-·006	29·646	29·769	21st	29·627	6th	·142	81·7	91·7	-0·4	77·5	-0·4	84·6	-0·4	14·2	98·7	12th & 14th.	73·1	17th & 18th.	25·6
54	Madras, Central	Cuddapah	433	29·330	-·012	29·700	29·402	21st	29·275	6th	·127	83·4	96·9	+3·0	78·2	+0·8	87·6	+1·9	18·7	103·2	11th & 14th.	72·7	14th	30·5
		Kurnool	923	28·822	-·019	29·689	28·886	21st	28·765	6th	·121	78·3	91·9	+1·5	74·5	+0·3	83·2	+0·9	17·4	96·7	6th	72·4	2nd, 9th & 16th.	24·3
		Bellary	1,475	28·297	-·012	29·712	28·363	21st	28·234	2nd	·129	79·4	91·8	+0·9	75·1	+0·8	83·5	+0·9	16·7	96·0	11th	70·2	24th	25·8
52	Madras, East Coast, North.	Cocanada	26	29·643	-·009	29·604	29·727	21st	29·558	5th	·169	81·0	90·0	—1·2	78·1	-0·8	84·1	—1·0	11·9	98·1	5th	75·5	18th, 20th & 27th.	22·6
		Waltair (Vizag).	226	29·399	-·027	29·564	29·494	30th	29·310	5th	·184	81·8	89·2	-0·1	78·7	+0·1	84·0	0	10·5	96·9	16th	73·9	16th	23·0
		Gopalpur	21	29·564	—·023	29·524	29·673	30th	29·460	6th	·213	84·5	90·1	+2·9	79·6	+0·5	84·9	+1·7	10·5	95·3	15th	75·6	15th	19·7
	XII.—Hill Stations.																							
48	Baluchistan	Pishin											95·9		63·8		79·9		32·1	101·4	19th & 26th,	48·1	1st	53·3
		Quetta	5,502	24·440	+·015		24·532	29th	24·273	7th	·259	77·0	93·3	+0·7	62·2	-3·1	77·8	—1·2	31·1	100·1	26th,	46·9	1st	53·2
		Kalat										75·4	94·4		53·1		73·8		41·3	100·3	27th	39·0	1st	61·3
		Chaman	4,311	25·423	0		25·511	1st	25·270	7th	·241	85·6	101·2	0	73·4	—1·8	87·2	—0·9	27·8	107·2	19th & 26th,	61·6	1st	45·6
30	Punjab	Leh	11,503	19·681	+·038		19·773	3rd	19·551	20th	·222	55·5	72·7	—6·4	47·6	-3·0	60·2	—4·7	25·1	83·2	25th	39·2	13th	44·0
		Srinagar	5,204	24·688	+·017		24·860	1st	24·533	12th	·327	66·9	84·7	—0·9	62·6	—1·8	73·7	—1·4	22·1	94·9	25th	52·2	1st	42·7
		Gulmarg		21·776			21·886	29th	21·631	12th	·255	61·3	67·1		43·0		57·6		19·1	75·6	20th	40·3	1st & 2nd,	35·3
		Skardu		22·705			22·905	1st	22·552	20th	·353	70·2	86·8		61·8		74·3		25·0	99·6	26th	46·2	1st	53·4
		Dras		20·739			20·851	3rd	20·598	12th	·253	59·6	77·3		44·7		61·0		32·6	86·0	18th & 19th,	32·6	1st	53·4
		Gilgit		24·893			25·146	1st	24·672	20th	·474	82·7	98·1		72·9		85·5		25·2	108·8	26th	56·7	1st	52·1
		Chitral		24·180			24·580	27th	24·320	13th	·260	86·3*	99·6		71·8*		86·7*		27·8	108·2	30th & 31st.	64·1	20th & 27th.	44·1
		Killa Drosh										78·7	96·4		73·7		85·1		22·7	103·2	17th, 18th & 25th.	63·9	8th	39·3
		Para Chinar	6,000									77·0	88·2							97·1	19th			
		Cherat		25·522	†		25·622	29th	25·358	6th	·264	77·7	85·2?	—2·9?	72·9?	+2·5?	82·1?	—0·2?	12·3?	100·4	5th	60·6	21st	39·8

* Mean of 24 days.

—continued.

Stations in India, Burma, etc., in July, 1901—continued.

Wind Direction. Number of winds from									Wind resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calms.	N.	NE.	E.	SE.	S.	SW.	W.	NW.		Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st July 1901.	Normal rainfall for period, 1st June to 31st July.	Variation from normal of period, 1st June to 31st July.				
																				2·45	3·44	−0·89					XI.—South India.	
				1	2	24	4		S 45° W	10·9	11·6			80	·903	2·6	0	1·30	−1·30	0·05	0·71	−0·66	0·05	0·75	−0·70	0·03	Pamban	Madras (South).	57
	1					2	14	14	N 69° W	9·6	6·3			62	·761	5·1	0	0·90	−0·90	0	0·33	−0·33	1·48	1·04	+0·44	0	Tinnevelly.		
5	4			1	1	3	4	13	N 57° W	3·2	3·2	4·6	−30	68	·791	6·0	3	1·45	+1·55	0·92	2·28	−1·36	1·54	3·78	−2·24	0·42	Madura.		
11	6	2	3	1	2	2	4		N 6° W	4·1	4·5			64	·656	6·0	0			0·21			1·69			0·07	Periyakulam.		
1					4	19	7		S 50° W	5·0	4·5	4·7	− 4	78	·773	6·3	7	6·91	+0·09	2·91	3·96	−1·05	5·18	7·64	−2·46	0·85	Salem	Madras (South Central).	34
						7	24		S 30° W	8·6	7·7	8·2	− 6	84	·742	6·3	4	4·36	−0·36	0·93	1·23	−0·30	2·59	2·66	−0·07	0·28	Coimbatore.		
							26	5	N 33° W	6·5	6·0	11·3	+47	97	·601	9·9	31	29·30	+1·70	49·14	42·50	+6·64	70·73	68·21	+2·52	3·96	Mercara	Coorg.	35
						10	16	5	S 32° W	12·9	11·2			87	·685	9·6	10			2·02	2·77	−0·75	4·04	5·87	−1·83	0·30	Chitaldroog	Mysore.	26
						19	12		S 62° W	13·1	11·4	8·6	+33	85	·610	9·5	6	9·00	−3·00	2·82	4·59	−1·77	4·70	8·04	−3·34	0·75	Bangalore.		
						6	19	6	W	5·2	4·6			82	·635	9·6	13			5·29	5·02	+0·27	8·50	9·14	−2·64	1·85	Hassan.		
						18	13		S 64° W	12·6	13·6			81	·638	9·3	2			0·99	2·32	−1·33	2·20	4·44	−2·24	0·38	Mysore.		
						18	13		S 62° W	8·0	7·0	7·1	− 1	67	·805	4·1	1	3·64	−2·64	0·33	2·27	−1·94	0·36	4·01	−3·65	0·20	Negapatam	Madras, East Coast, South.	56
30	1								N	0·2	0·2			69	·820	6·9	5	5·60	−0·60	1·18	2·67	−1·49	2·28	4·15	−1·87	0·34	Cuddalore.		
						10	20	1	S 77° W	7·5		9·9	−24	62	·719	4·3	1	2·18	−1·18	0·16	1·50	−1·34	2·05	3·12	−1·07	0·16	Trichinopoly.		
					2	8	20	1	S 75° W	7·7		8·3	− 7	67	·787	7·6	9	7·00	+2·00	6·64	3·87	+2·77	7·02	5·98	+1·04	1·84	Madras.		
1						30			S 45° W	6·3				61	·666	5·1	5			2·46			4·83			0·83	Vellore.		
1							15	15	N 67° W	10·3				63	·757	8·6	5	4·70	+0·30	2·01	2·50	−0·49	2·64	4·00	−1·36	0·93	Nellore	Madras, East Coast, Central.	55
1							15	15	N 67° W	11·4		9·7	+18	81	·873	9·5	8	9·36	−1·36	5·25	5·71	−0·46	8·16	11·23	−3·07	1·32	Masulipatam.		
					4	20	7		N 86° W					64	·725	7·3	9	6·00	+3·00	4·43	3·90	+0·53	6·55	8·01	−1·46	1·32	Cuddapah	Madras, Central	54
1	5				4	13	8		N 70° W					76	·730	8·5	10	9·83	+0·17	5·73	4·91	+0·82	9·73	8·86	+0·87	1·16	Kurnool.		
					2	28	1		S 89° W	12·9	13·7	11·6	+18	59	·595	8·6	3	3·91	−0·91	0·66	1·98	−1·32	4·65	3·83	+0·82	0·25	Bellary.		
1					15	12	3		S 71° W	8·9	7·5			81	·856	8·5	11	10·00	+1·00	3·69	6·67	−2·98	5·44	12·04	−6·60	0·52	Cocanada.	Madras, East Coast, North.	52
1					1	26	3		N 87° W	12·9				77	·835	9·0	7			2·63	5·09	−2·46	5·78	8·58	−2·80	0·83	Waltair (Vizag).		
3	5	1			3	16	2	1	S 58° W	13·4	13·1	11·3	+16	77	·900	5·4	8	11·33	−3·33	4·94	7·90	−2·96	6·39	13·99	−7·60	1·72	Gopalpur.		
																												XII.—Hill Stations.	
																	0			0	0·21	−0·21	0	0·27	−0·27	0	Pishin.	Baluchistan.	48
30							1		W	1·5	1·6	5·1	−69	53	·496	1·2	1	1·36	−0·36	0·24	1·21	−0·97	0·24	1·33	−1·09	0·22	Quetta.		
	1		7		22		1		S 16° E					42	·375		3			1·97	0·52	+1·45	1·97	0·73	+1·24	0·90	Kalat.		
	3		2	4	8	7	2	5	S 32° W	5·2	5·5			41	·521	0·2	0			0	0·27	−0·27	0	0·42	−0·42	0	Chaman.		
		12	4	2	5	6	2		N 81° E	2·8				52	·234	5·0	4			1·08	0·48	+0·60	1·19	0·68	+0·51	0·33	Leh	Punjab.	30
9	1	1	2	8	8	1		1	S 30° E	3·3	3·5			85	·638	3·9	5			2·28	7·69	−5·41	3·90	11·81	−7·91	1·43	Srinagar.		
17	1	6	1	1		3		2	N 33° E	3·3				85	·465	3·3	8			4·21						1·61	Gulmarg.		
14	1	4	2			5	4	1	N 73° W	5·3	6·3			49	·361	2·5	1			0·45	0·25	+0·20	1·91	0·79	+1·12	0·43	Skardu.		
22						5	3	1	S 67° W	5·4	5·6			58	·301	3·7	1			1·59	0·34	+1·25	3·98			1·45	Dras.		
28						3			S 45° W	1·6	1·6			27	·301	2·4	0			0	0·94	−0·94	0·81	1·10	−0·29	0	Gilgit.		
	7	4	4	3	7	2	2	2	N 76° E					48	·593	0·4	0			0			0·80			0	Chitral.		
18		2	6			3	2		S 72° E					34	·335	1·0	0			0·17			1·37			0·09	Killa Drosh.		
	7	4	8	5			3	4	N 45° E	3·3				50	·453		9			1·78			3·30			0·45	Para Chinar.		
	4	5		7	3	5		7	N					54	·479	2·8	4			4·08	4·81	−0·73	6·01	5·29	+0·72	1·53	Cherat.		

Table

Abstract of Observations taken at 8 A.M. at 223

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
20	Punjab—*concld.*	Murree	6,333	23·705	+·009		23·836	29th	23·579	6th	·257	71·0	78·0	+0·8	64·1	+1·4	71·1	+1·1	13·9	92·9	6th	51·9	12th	41·0
		Poo											78·4		58·5		68·5		19·9	85·3	18th	49·9	14th	35·4
		Simla	7,224	22·992	+·020		23·148	29th	22·866	12th	·282	64·5	71·5	+2·2	61·4	+0·8	66·5	+1·5	10·1	84·4	6th	55·4	8th	29·0
25	North-Western Provinces.	Chakrata	7,022	23·154	+·022		23·308	29th	23·024	12th	·284	63·9	70·9	+1·0	60·3	+0·2	65·6	+0·6	10·6	84·3	1st	54·2	13th	30·1
		Mussooree	6,705	23·122	+·015		23·582	29th	23·291	12th	·291	65·2	72·5	+2·6	62·3	+1·9	67·4	+2·3	10·2	86·3	1st & 2nd	57·9	5 days	28·4
		Ranikhet	6,069	23·948	+·009		24·096	29th	23·812	12th	·284	67·4	76·6	+2·9	63·7	+0·9	70·2	+1·9	12·9	90·1	1st	57·5	13th	32·6
		Muktesar		22·735			22·873	29th	22·595	12th	·278	62·3	73·0		58·6		65·8		14·4	87·4	1st	53·8	13th	33·6
13	Bengal	Yatung	10,480?										62·9		49·7		56·3		13·2	70·1	3rd	46·9	5 days	23·2
		Darjeeling	7,409	22·898	+·021		23·021	29th	22·780	13th	·241	61·6	66·9	+0·1	58·1	+0·7	62·5	+0·4	8·8	71·7	2 days	55·6	7th	16·1
		Gangtok	5,660	24·344			24·444	30th & 31st	24·205	13th	·239	65·9	75·1		45·1		60·1		30·0	80·2	27th	43·0	20th, 24th & 25th.	37·2
	Central India	Mount Abu	3,945	25·801	—·021		25·893	29th	25·676	7th	·217	69·0	79·1	+4·5	66·9	+1·3	73·0	+2·9	12·2	90·2	4th	61·3	12th & 13th.	25·9
		Pachmarhi	3,528	26·215	—·004		26·274	14th	26·129	7th	·145	71·1	78·3	+2·9	69·1	+1·3	73·8	+2·1	9·2	88·2	3rd	65·2	22nd	22·0
	South India	Wellington	6,200	24·176	—·020		24·234	21st	24·122	2nd & 7th	·112	63·4	71·1	+0·3	57·4	−0·7	64·3	−0·2	13·7	74·7	21st, 25th & 26th	53·2	30th	21·5
		Ootacamund		22·993			23·057	21st	22·937	2nd	·120	55·5	61·5		52·1		56·8		9·4	66·5	14th	48·3	20th	18·2
		Kodai Kanal	7,688	22·767			22·830	21st	22·713	2nd	·117	56·9	63·1		52·2		56·1		10·9	66·6	10th	49·3	7th	17·3
	XIII.—Extra India.																							
	Ceylon	Trincomalee	12	29·821	P	29·759	29·885	21st	29·766	25th	·119	82·5	91·9	P	78·1	+1·0	85·1	P	13·8	94·0	17th, 23rd & 30th	76·5	25th & 30th	17·5
		Colombo	40	29·860	−·013	29·832	29·919	21st	29·825	25th	·094	80·0	86·4	+1·2	76·6	−0·7	81·5	+0·3	9·8	89·0	27th	73·0	10th, 12 h & 27th.	16·0
	Persia	Meshed	3,104									84·0			67·5							57·8	1st	
		Teheran		25·708*			25·840	29th & 30th	25·440	22nd	·400	86·9	99·9		65·3		82·6		34·6	107·6	22nd	58·0	23rd	49·6
				25·097*			25·220	31st	25·030	19th & 22nd.	·190													
		Ispahan		24·230			24·400	5th	24·000	23rd	·400	84·0	101·6		66·8		84·2		34·8	104·5	28th & 29th	58·1	8th	46·4
		Bushire	14	29·472	−·006	29·445	29·555	29th	29·377	19th	·178	91·4	97·7	+2·2	85·7	+1·7	91·8	+2·0	12·0	107·5	10th	80·4	5th	27·1
		Jask		29·515	−·020		29·607	31st	29·395	8th	·212	89·4	94·8	−0·9	84·9	+0·1	89·9	−0·4	9·9	104·2	9th	80·7	25th.	23·5
		Muscat	20	29·501		29·468	29·642	29th	29·369	18th	·273	87·7	89·6		86·0		87·9		3·6	94·1	22nd	78·4	31st	15·7
	Arabia	Baghdad	220	29·413	−·033	29·600	29·542	12th	29·278	7th	·264	91·5	113·5	+6·7	80·5	+1·7	97·0	+4·2	33·0	119·2	6th	76·3	28th	42·9
		Bussrah		29·531			29·671	3rd	29·431	23rd	·240		107·3		86·3		96·8		21·0	113·2	9th	81·4	30th	31·8
		Aden	94	29·617	−·009	29·641	29·670	12th	29·569	8th	·101	87·9	93·7	+1·1	82·5	+3·2	89·1	+2·2	9·2	96·3	10th	81·8	3rd & 31st.	14·5
		Perim	201	29·503		29·633	29·585	29th	29·381	20th	·204	88·9	97·7		85·9		91·8		11·8	105·0	9th	82·5	21st	22·5
	Afghanistan	Kabul										76·1	93·7		61·2		77·5		32·5	105·1	25th	50·8	1st	54·3
	Central Asia	Kashgar		25·431			25·581	5th	25·284	26th	·297	77·6	91·1		67·0		79·0		24·1	103·8	26th	57·5	21st	46·3
	Arabian Sea Islands.	Amini Devi	13	29·854		29·795	29·930	21st	29·784	2nd	·146	83·3	87·1		78·3		83·7‡		8·8	88·6	22nd	75·2	15th	13·4
	Africa	Zanzibar	73	30·085†	−·014	30·086	30·127	30th	30·041	3rd	·086	74·2†	80·2		72·6		76·4		7·6	81·6	2nd	70·9	7th	10·7
		Do. Dunga		30·012			30·049	30th	29·964	3rd	·085	72·9	83·2†		64·6‡		73·9‡		18·6	86·5	14th	60·1	16th	26·4

NOTE.—When a query is inserted against any reading or in the variation returns for any station, the data for that

* Aneroid uncorrected. † Mean of 30 days. ‡ Mean of 29 days. ‖ Mountain barometer uncorrected.

[—*concluded.*

Stations in India, Burma, etc., in July 1901—concluded.

Wind Direction. Number of winds from Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st July 1901.	Normal rainfall for period, 1st June to 31st July.	Variation from normal of period, 1st June to 31st July.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26		1	1	2	1				S 61° E	2·9	3·6	5·7	−37	67	·492	3·7	9	12·00	−3·00	6·60	11·25	−4·65	8·05	14·12	−6·07	2·13	Murree.	Punjab—*concld.*	30
24	1					4	2		S 68° W							6·0	1			0·39	1·14	−0·75	0·39	1·41	−1·02	0·15	Poo.		
7	6	2	1	4	6	1		3	E	4·1		1·6	+156	77	·458	6·5	14	19·27	−5·27	14·18	17·55	−3·37	16·61	24·34	−7·73	3·57	Simla.		
	9	1		9	11	1			S 37° W	9·2		4·6	+100	84	·496	7·2	16			20·32	19·42	+0·90	22·45	26·33	−3·88	5·10	Chakrata .	North-Western Provinces.	25
4	2	1	8	4	.	1	2	9	N 24° E					88	·540	7·4	21	21·91	−0·91	24·66	29·49	−4·83	27·44	38·19	−10·75	6·33	Mussooree.		
9	1	3	4	1		6	4	3	N 85° W	3·4	3·9	2·1	+86	85	·575	7·5	19	19·18	−0·18	11·44	13·28	− 1·84	12·52	19·22	−6·70	2·26	Ranikhet.		
3	1		3	9	1	2	1	11	W	5·8	5·3			88	·491	7·0	19			13·97			15·55			3·54	Muktesar.		
																	22			7·87	7·88	− 0·01	15·95			1·66	Yatung .	Bengal.	13
9		4	6	6	1	1	2	2	S 77° E	2·5	2·3	2·6	−12	95	·524	8·3	21	26·15	−5·15	32·15	32·45	− 0·30	51·86	56·14	− 4·28	4·96	Darjeeling.		
	5	6	4		3	11		2	S 84° W	6·5	7·8			89	·570	8·0	26			21·86	22·34	− 0·48	52·89	44·10	+ 8·79	2·04	Gangtok.		
	3	1				21	5	1	S 62° W	12·5	13·0	10·5	+24	91	·638	8·4	15	16·73	−1·73	8·94	24·42	−15·48	9·83	30·55	−20·72	1·97	Mount Abu.	Central India.	
8							9	14	N 63° W	11·9	12·3	9·5	+29	91	·695	9·2	19	23·09	−4·09	23·43	26·69	− 3·26	26·75	36·49	− 9·74	4·22	Pachmarhi.		
10	1	1		2		16	1		S 43° W	4·7		5·8	−19	73	·431	8·3	7	6·75	+0·25	3·90	3·75	+ 0·15	7·87	7·48	+ 0·39	1·37	Wellington .	South India.	
						11	15	5	S 81° W	4·6				89	·412	9·2	13			4·28			4·28§			0·90	Ootacamund.		
2							9	20	N 59° W	16·1				79	·362	5·9	8			3·23			9·58			0·75	Kodai Kanal.		
																											XIII.—Extra India.		
						31			S 45° W	18·9				82	·917	2·6	1			0·58	2·63	− 2·05	1·58	4·68	−3·10	0·54	Trincomalee	Ceylon.	
						18	13		S 64° W	9·9		9·0	+10	88	·909	7·0	8			4·53	5·55	− 1·02	10·54	12·79	− 2·25	0·78	Colombo .		
														63	·743	1·0	0			0	0·03	− 0 03	2·06	0·25	+ 1·81	0	Meshed .	Persia.	
	1	5	3	3	6	11	1	1	S 5° W	0·3†	0·3†			30	·375	0·1	0			0·07	0·51	− 0·44	0·07§	0 52		0·07	Teheran,		
										0·8	1·1			34	·399	0·5	0			0	0·10	− 0·10	0·01	0·10	− 0·09	0	Ispahan.		
5	3	3	3	5		3	1	8	N 1° W	7·2	8·6	9·2	− 7	66	·954	1·1	0			0	0	0	0	0	0	0	Bushire.		
1			20	10					S 75° E	16·3	18·9			81	1·133	3·5	0			0	0·02	− 0·02	0	0·15	− 0·15	0	Jask.		
			2	24				5	S 49° E	4·9	5·1			80	1·050	3·6	0			0	0·08	− 0·08	0	0·08	− 0·08	0	Muscat .		
12	5							14	N 34° W	2·4	3·2			37	·551	0	0			0	0	0	0	0·01	− 0·01	0	Baghdad,	Arabia.	
																	0			0			0			0	Bussrah .		
4		2	1	10	2	12			S 4° E	9·7	9·5	9·4	+ 1	66	·885	4·5	0			0	0	0	1·34	0·01	+ 1·33	0	Aden,		
1	1		6	2		9	3	4	S 68° W	13·3	12·0			71	·969	2·1	0			0	0·02	− 0·02	0·59	0·02	+ 0·57	0	Perim,		
	4	1		1		2	5	18	N 50°W					36	·330	0	0			0	0·39	− 0·39	0·07	0·76	− 0·69	0	Kabul .	Afghanistan.	
16	4		2	1	3	1	2	2	N 45° W	3·5	3·1			39	·360	3·2	0			0	0·45	− 0·45	0·46	0·98	− 0·52	0	Kashgar .	Central Asia.	
						12	18	1	S 73° W					79	·908	6·9	14			3·79			12·40			0·55	Amini Devi.	Arabian Sea Islands.	
				1	19	11			S 14° W	8·6	8·1			87	·739	6·3	3			1·63	2·12	− 0·49	3·69	3·36	+0·33	0·63	Zanzibar .		
1				3	18	8			S 9° W	6·6	6·4			92†	·745††	4·0†	4			3·08			5·48			1·23	Do. Dunga	Africa.	

station, are not utilized in calculating the provincial variations.

§ Total rainfall for July only.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair		29·759	29·689	·070	29·731	−·012	29·723	85·4	78·1*	7·3	88·4	74·7	13·7	83·7	83·6	80·8*	+0·5	75·9	79·4	79·1	78·1
	Rangoon		·737	·654	·083	·702	−·031	·680	84·4	75·8	8·6	88·8	73·7	15·1	81·1	80·4	78·4	+0·1	74·6	78·6	77·5	76·9
	Diamond Island		·732	·661	·071	·704	−·028	·680	83·6	77·3	6·3	87·1	74·0	13·1	81·4	81·0	79·3	+0·8	74·3	78·1	77·9	76·8
	Cocos Island	111	·713	·642	·071	·685	+·033	·728	84·7	77·2	7·5	89·4	73·6	15·8	81·9	82·5	79·9	−0·6	74·8	78·8	78·9	77·5
	Akyab		6·81	·603	·078	·645	−·024	·608	85·1	76·7	8·4	88·7	74·3	14·4	81·3	82·0	79·8	−0·2	75·9	78·6	78·8	77·8
Bengal and Orissa.	Chittagong		·557	·470	·087	·521	−·035	·555	87·5	77·1	10·4	90·5	74·5	16·0	84·7	84·2	81·1	+1·1	75·7	78·9	79·5	78·0
	Calcutta (Alipore)		·561	·478	·083	·526	−·011	·492	89·7	78·7	11·0	94·0	74·3	19·7	85·2	85·9	83·9	+0·8	77·3	80·7	80·7	79·6
	Saugor Island		·554	·473	·081	·520	−·016	·489	89·0	80·4	8·6	92·7	75·0	17·7	85·1	86·9	83·7	+0·9	78·4	81·3	81·9	80·5
	False Point		·566	·488	·078	·532	−·032	·494	88·1	79·4	8·7	93·0	75·1	17·9	85·6	85·4	82·6	+0·8	77·9	80·7	80·6	79·7
Ganoetic Plain and Chota Nagpur.	Hazaribagh		27·585	27·506	·079	27·554	−·014	·471	87·3	74·9	12·4	97·2	70·9	26·3	81·9	82·6	79·6	+1·5	72·7	74·7	75·1	74·2
	Darbhanga		29·412	29·309	·103	29·367	−·011	·483	90·4	80·4	10·0	96·1	77·0	19·1	86·5	87·8	84·1	+0·4	78·4	81·3	81·2	80·3
	Allahabad		·222	·106	·116	·166	−·041	·420	97·8	82·5	15·3	114·1	76·5	37·6	91·0	94·4	89·0	+4·3	78·2	82·0	82·4	80·9
Upper Sub-Himalayas.	Dehra Dun		27·277	27·295	·082	27·329	−·017	·471	88·3	74·6	13·7	105·4	67·5	37·9	81·1	84·6	80·2	+0·8	70·8	74·2	76·1	73·7
	Roorkee		28·661	28·571	·090	28·613	−·006	·444	94·1	79·2	14·9	112·3	70·1	42·2	86·9	92·4	85·9	+1·3	74·5	76·0	76·7	77·1
	Meerut		·792	·698	·094	·742	−·023	·427	95·4	80·5	14·9	111·6	73·0	38·6	87·8	92·0	87·1	+1·6	75·8	79·4	79·6	78·3
	Lahore		·809	·721	·088	·764	−·007	·411	99·3	80·4	18·9	118·3	71·9	46·4	91·4	97·7	89·0	+0·7	74·4	78·7	80·2	77·8
	Ludhiana		·726	·629	·097	·676	−·003	·433	95·0	80·5	15·5	115·8	67·3	48·5	88·7	94·8	87·6	+0·9	74·9	78·5	79·6	77·7
Indus Valley and N.-W. Rajputana.	Peshawar		·411	·296	·115	·353	−·008	·395	106·1	79·8	26·3	117·0	71·9	45·1	96·4	104·1	92·1	+2·5	70·8	78·1	79·2	76·0
	Jacobabad		29·278	29·165	·113	29·220	−·014	·355	111·4	85·1	26·3	126·0	79·2	46·8	98·4	108·3	97·0	+2·3	77·3	83·5	85·6	82·1
	Kurrachee		·547	·474	·073	·515	+·011	·495	92·6	82·2	10·4	95·0	78·4	16·6	88·1	89·1	86·0	+2·0	77·8	80·7	81·5	80·0
E. Rajputana, Central India, and Gujarat.	Jaipur		28·156	28·064	·092	28·111	−·006	·460	99·2	80·8	18·4	116·2	72·6	43·6	90·6	93·6	88·0	+4·1	74·0	78·0	78·0	76·7
	Udaipur		27·703	27·622	·081	27·663		·495	91·9	77·7	14·2	106·8	73·3	33·5	84·9	88·7	84·0		73·4	74·9	76·2	74·8
	Deesa		29·141	29·034	·107	29·089	−·007	·497	99·0	80·4	18·6	107·8	76·4	31·4	89·0	95·3	88·8	+5·0	75·5	77·9	78·3	77·2
	Jamnagar		·569	·489	·080	·529		·536	93·8	80·6	13·2	97·1	76·2	20·9	89·4	90·9	86·4		76·2	79·4	80·0	78·6
Deccan.	Belgaum		27·255	27·193	·062	27·224	−·010	·686	75·6	67·5	8·1	77·8	66·4	11·4	72·7	72·2	70·5	+0·4	66·6	70·4	69·8	68·9
	Sholapur		28·150	28·041	·109	28·104	−·014	618	89·5	72·6	16·9	96·4	70·5	25·9	81·6	85·4	79·0	+0·8	70·1	72·8	73·3	72·1
	Poona		27·900	27·839	·061	27·871	−·002	·643	82·6	70·9	11·7	87·8	68·7	19·1	78·2	78·7	75·6	+0·5	70·0	72·4	72·4	71·6
	Akola		28·737	28·633	·104	28·685	−·004	·557	89·0	74·0	15·0	95·9	71·6	24·3	82·8	87·1	81·0	+0·5	72·5	75·8	76·7	75·0
	Buldana	2,132	27·565	27·471	·094	27·518	−·009	·563	84·2	71·0	13·2	91·0	69·3	21·7	77·8	82·5	77·2	+0·9	69·0	72·1	73·6	71·6
	Khandwa		28·604	28·501	·103	28·553	−·007	·540	88·4	75·9	12·5	97·2	73·1	24·1	81·3	86·9	81·4	+1·5	72·8	75·5	76·9	75·1
	Nagpur		·610	·508	·102	·559	−·002	·526	89·2	75·8	13·4	98·1	70·6	27·5	81·8	85·8	81·7	+1·5	73·1*	76·1	77·2	75·5
	Do. (Sanitary Commr.'s Office).		·625	·514	·111	·570		·526	89·7	76·0	13·7	98·7	70·5	28·2	83·3	86·9	82·2		73·6	76·6	77·9	76·0
	Hyderabad (Deccan).		·040	27·938	·102	27·994	−·006	·611	85·3	72·5	12·8	91·4	70·2	21·2	79·2	83·1	78·4	−1·1	70·1	72·6	74·5	72·4
West Coast.	Bombay		29·703	29·639	·064	29·669	0	·646	84·9	77·7	7·2	88·1	74·2	13·9	82·1	82·3	81·2	+0·3	76·0	78·7	78·6	77·8
	Karwar				Not	recorded.			83·5	75·7	7·8	85·5	73·4	12·1	81·2	81·6	79·6	+0·9	73·0	76·6	76·6	75·4

*Mean of 20 days.

II.

65 Stations in India, Burma, etc., in July, 1901.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Provinces.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·859*	·977	·942	·916	+·018	89*	82	81	84	− 1	7·7	7·9	7·8	+0·2							31	31		S. 68° W.	S. 47° W.	92	87	355	268			Port Blair	Burma Coast and Bay Islands.
·843	·941	·910	·898	+·012	94	89	88	90	0	9·4	9·7	9·6	+0·6				2	1	24	28	7		S. 39° W.	S. 34° W.	82	74	113	129			Rangoon	
·804	·918	·917	·880	+·003	86	86	86	86	− 1	8·7	9·2	9·0	+0·8	1					10	33	17	1	S. 52° W.	S. 42° W.	84	80	214†	240			Diamond Island, Cocos Island	
·830	·948	·945	·908	−·003	89	87	85	87	− 1	8·6	9·1	8·9	+0·5						9	49	4		S. 41° W.	S 34° W.	93	91	288	?	18·57	3·00		
·686	·948	·943	·926	+·005	96	88	86	90	+ 1	8·5	8·1	8·3	−0·4				2	16	34	9	1		S. 7° E.	S. 1° E.	84	67	59†	98			Akyab	
·873	·910	·945	·909	−·005	94	76	80	83	− 4	7·7	8·1	7·9	0		1		2	25	21	12	1		S. 12° E.	S. 30° E.	76	66	231†	165			Chittagong	Bengal and Orissa.
·922	·989	·979	·963	+·001	94	82	79	85	− 2	8·4	8·4	8·4	+0·1	4	1	2	8	20	14	8	4	1	S. 23° E.	S. 8° E.	54	63	113	122			Calcutta (Alipore)	
·946	1·019	1·025	·997	0	91	84	80	85	− 1	8·5	8·2	8·4	+0·2		1	3	4	16	18	15	4	1	S. 3° E.	S. 21° W.	58	60	373	357			Saugor Island	
·939	·984	·982	·968	+·030	93	80	81	85	0	8·7	8·7	8·7	+0·5	2		3	4	7	10	18	17	1	S. 37° W.	S. 53° W.	50	63	238†	277			False Point	
·780	·772	·778	·777	−·034	90	71	71	77	− 3	9·4	9·6	9·5	+0·2	2	8	1	10	10	11	8	6	8	S. 14° E.	S. 9° E.	13	14	188†	210			Hazaribagh	Gangetic Plain and Chota Nagpur.
·945	·968	·981	·975	+·007	91	79	75	82	− 1	7·0	6·1	6·6	+0·3	9	1	4	24	21		1	1	1	S. 74° E.	S. 77° E.	66	56	86	121			Darbhanga	
·908	·974	·948	·943	−·008	83	68	61	71	−10	6·9	7·3	7·1	−0·7	6	5	4	15	6	2	4	11	9	N. 20° E.	N. 71° E.	9	7	207†	151			Allahabad	
·713	·764	·798	·758	−·045	84	74	69	76	− 8	6·6	6·7	6·7	−1·0	5	1	2	1	6	17	16	11	3	S. 32° W.	S. 12° W.	53	13	32	26			Dehra Dun	
·795	·840	·802	·812	−·060	81	68	56	68	− 8	5·5	4·5	5·0	−1·4	22	2	1		14	11	5	1	6	S. 6° E.	S. 37° E.	29	33	‡ 77	70			Roorkee	Upper Sub-Himalayas.
·837	·899	·854	·863	−·024	82	69	60	70	− 4	6·4	5·8	6·1	−0·6	23		3	9	15	1	6	4	1	S. 45° E.	S. 69° E.	29	21	39†	57			Meerut	
·782	·845	·800	·799	−·055	75	59	49	61	0	3·4	2·7	3·1	−1·2	3	5	6	9	20	9	2	6	2	S. 53° E.	S. 77° E.	37	30	76	80			Lahore	
·802	·845	·816	·821	−·046	78	66	54	66	− 3	5·1	4·0	4·6	−1·4	8	1	3	8	23	6	3	8	2	S. 37° E.	S. 40° E.	40	23	85†	52			Ludhiana	
·652	·758	·687	·692	−·035	64	44	33	47	− 6	1·2	2·7	2·0	−0·9	20	14	9	1	1	6		4	7	N. 3° W.	N. 49° E.	31	47	53†	107			Peshawar	Indus Valley and N.-W. Rajputana.
·835	·946	·924	·902	+·036	69	53	40	54	+ 2	1·6	1·8	1·7	−0·6	21	1	1	8	23	4	1	1	2	S. 51° E.	S. 44° E.	45	59	113†	133			Jacobabad	
·893	950	·973	·938	+·069	81	72	71	75	− 3	4·9	3·9	4·4	−2·5							30	30	2	S. 69° W.	S. 68° W.	91	85	399†	415			Kurrachee	
·770	8·0	·764	·778	−·060	74	57	54	62	−12	5·9	7·0	6·5	−0·9	3	2	13	4	2	1	15	17	5	N. 85° W.	N. 72° W.	27	28	127	133			Jaipur	E. Rajputana, Central India, and Gujarat.
·768	·728	·755	·757		81	63	58	67		7·0	6·7	6·9		5	1	2		2	1	19	27	5	S. 76° W.		68		202†				Udaipur	
·819	·8·0	·738	·789	−·039	79	60	47	62	−12	7·5	6·8	7·2	−0·9						9	37	12	4	S. 52° W.	S. 42° W.	84	73	374	351			Deesa	
848	·873	·878	·866		81	63	61	69		5·2	3·9	4·6							3	32	25	2	S. 64° W.		88		495†				Jamnagar	
·644	·715	·699	·686	+·017	95	89	88	91	+ 1	9·1	9·6	9·4	+0·3						9	35	18		S. 51° W.	S. 68° W.	88	87	610	647			Belgaum	Deccan.
·707	·687	·669	·691	+·027	88	65	56	70	+ 2	8·8	9·3	9·1	+0·6		3					25	26	8	S. 79° W.	S. 76° W.	81	83	† 430	336			Sholapur	
724	·723	·718	·722	+·024	96	75	73	81	+ 1	8·6	8·7	8·7	−0·2							18	42	2	S. 78° W.	S. 81° W.	92	90	435†	386			Poona	
·779	·800	·779	·786	+·018	93	72	62	76	+ 1	9·0	9·0	9·0	+0·5	4	2					4	21	31	N. 65° W.	N. 74° W.	81	73	261†	210			Akola	
·685	718	·719	·707	−·002	90	76	66	77	− 2	9·8	9·4	9·6	+1·5	1	1		1		2	9	33	15	N. 86° W.	N. 79° W.	79	74	240†	219	11·05	3·10	Buldana	
·771	·811	·799	·794	+·013	86	76	64	75	− 2	8·1	7·5	7·8	−0·1	1	2					3	38	18	N. 77° W.	N. 85° W.	87	82	267	217			Khandwa	
·781*	·820	·828*	·813	0	88*	77	69	78	− 2	8·7	8·4	8·6	−0·1		1			1	5	19	27	9	S. 76° W.	S. 88° W.	78	69	252	243			Nagpur	
·797	·835	·851	·828		89	73	67	76		8·7	8·2	8·5				2		9	2	26		13	S. 49° W.		56		64†				Do. (Sanitary Commr.'s Office)	
·705	·721	·747	·724	+·011	88	72	67	76	+ 3	8·0	8·5	8·3	+0·9	1							60	1	N. 89° W.	N. 86° W.	98	90	221†	249			Hyderabad (Deccan)	
·873	·938	·932	·914	+·007	92	85	84	87	0	8·8	9·1	9·0	−0·1					1	3	14	41	3	S. 78° W.	S. 71° W.	87	85	385	450			Bombay	West Coast.
·776	·857	·850	·828	−·004	87	81	79	82	− 4	7·6	8·1	7·9	+0·1	1	1					26	26	8	S. 77° W.	S. 73° W.	84	75	168	123			Karwar	

† Corrected. ‡ Mean of 30½ days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S.L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
South India.	Periyakulam		28·875	28·765	·110	28·836			94·2	71·2	23·0	100·0	65·9	34·1	87·0	87·7	81·0		67·4	73·0	73·4	71·1
	Salem		·892	·780	·112	·848	−·029	29·714	93·3	74·0	19·3	97·6	71·0	26·6	84·6	87·9	81·5	+0·8	71·1	75·6	76·8	74·5
	Chitaldroog		27·413	27·338	·075	27·385	−·017	·700	81·8	68·9	12·9	85·8	66·9	18·9	76·4	77·6	74·3	+0·8	67·5	71·0	72·1	70·2
	Bangalore		26·852	26·765	·087	26·820	−·014	·714	82·4	66·0	16·4	87·0	64·3	22·7	74·9	77·9	73·1	+0·8	64·9	68·0	68·8	67·2
	Hassan		·801	·742	·059	·783	−·011	·765	76·0	65·5	10·5	78·3	64·2	14·1	73·5	72·5	69·9	+0·4	64·5	68·6	66·0	67·0
	Mysore		27·359	27·284	·075	27·322	−·013	·745	82·9	67·0	15·9	86·9	65·8	21·1	77·3	77·7	73·7	+0·4	66·0	69·3	69·3	68·2
	Madras		29·746	29·630	·122	29·699	−·020	·648	96·1	78·8	17·3	102·3	73·5	28·8	88·6	90·8	85·6	+0·4		76·6	78·4	76·8
	Bellary		28·304	28·204	·100	28·263	−·019	·661	91·7	75·0	16·7	96·0	70·2	25·8	83·2	86·9	81·2	+0·7	68·2	70·5	71·4	70·0
	Waltair		·408	·322	·086	·365		·529	89·4	78·8	10·6	96·9	74·0	22·9	84·8	86·0	83·2		72·5	77·2	77·9	75·9
Hill Station, Baluchistan.	Quetta		24·441	24·362	·079	24·400	+·014		93·6	62·3	31·3	100·2	47·1	53·1	85·7	90·9	77·3	−0·5	57·3	64·9	65·6	62·6
Hill Stations, Northern India.	Leh		19·666	19·583	·083	19·634	+·038		73·1	47·6	25·5	83·2	39·2	44·0	63·3	71·1	58·6	−3·0	41·8	50·3	52·7	48·3
	Srinagar		24·687	24·609	·078	24·646	+·015		85·6	62·7	22·9	95·0	52·0	43·0	75·3	83·7	73·7	−0·5	60·2	71·2	77·0	69·5
	Kailang	10,087	20·855	20·792	·063	20·828	P		72·9	49·0	23·9	79·8	40·4	39·4	63·1	68·1	59·3	−1·8	47·1	55·2	56·1	52·8
	Simla (Ridge)		23·002	22·958	·044	22·978	+·012		71·1	61·3	9·8	84·4	55·4	29·0	67·3	68·6	65·8	+0·9	56·6	61·0	62·6	60·1
	Chakrata		·168	23·116	·052	23·140	+·012		70·4	60·3	10·1	82·3	54·2	28·1	65·8	67·5	64·8	+0·2	58·5	61·6	63·5	61·2
	Ranikhet		·936	·891	·065	·916	−·006		76·0	63·7	12·3	87·1	57·4	29·7	70·8	72·4	69·2	+1·0	61·3	66·0	67·5	64·9
	Muktesar		22·745	22·689	·056	22·717			72·5	58·5	14·0	86·1	53·8	32·3	66·2	67·7	64·3		57·1	62·2	64·1	61·1
	Katmandu	4,388	25·331	25·257	·074	25·296	P		83·1	69·1	14·0	89·2	66·9	22·3	78·0	78·0	74·9	−0·6	67·7	71·8	72·3	70·6
	Darjeeling		22·908	22·860	·048	22·887	+·019		66·8	58·1	8·7	71·9	55·5	16·4	63·9	64·9	62·0	+0·9	57·7	62·4	63·0	61·0
Hill Stations, Central India.	Mount Abu		25·817	25·755	·062	25·788	−·020		78·6	66·9	11·7	90·2	64·3	25·9	72·1	76·9	72·3	+2·9	64·9	68·3	69·7	67·7
	Pachmarhi		26·249	26·155	·074	26·192	−·006		78·1	69·1	9·0	88·2	66·4	21·8	72·7	76·3	73·7	+1·9	68·1	70·2	72·1	70·1
	Chikalda	3,642	·125	032	·093	·078	−·022		75·0	66·6	8·4	83·2	64·9	18·3	70·6	73·7	71·0	+1·0	65·7	68·7	70·5	68·3
Hill Stations, S. India.	Wellington		24·189	24·133	·056	24·11	−·008		71·1	57·5	13·6	74·8	53·3	21·5	66·9	65·7	63·0	0	54·4	59·7	59·7	57·9
	Ootacamund		23·008	22·953	·055	22·981			61·5	52·1	9·4	66·3	48·5	17·8	58·3	57·3	55·8		50·7	55·8	55·2	53·9
	Kodaikanal		22·783	22·725	·058	22·753			63·1	52·2	10·9	66·6	49·3	17·3	60·2	58·0	56·1	+2·5	48·5	55·1	55·4	52·9
Extra India.	Aden		29·626	29·504	·121	29·562	+·002	·585	93·4	84·5	8·9	95·5	81·6	14·9	90·8	91·9	88·8	+0·6	74·9	79·8	78·0	77·6
	Perim		510	·408	·102	·456	−·013	·585	97·2	85·9	11·3	104·3	82·5	21·8	92·5	93·5	90·6	+0·1	78·0	81·9	82·6	80·8
	Zanzibar		30·109*	30·018	·091	30·064	−·006	30·064*	80·3	72·6	7·7	81·6	70·9	10·7	76·0*	79·5	76·3	−1·6	69·0	72·2*	72·5	71·2
	Port Victoria (Seychelles)	15	·003	25·934	·069	29·969	−·024	29·908	80·0	72·7	7·3	81·7	69·7	12·0	78·7	79·1	76·1	+0·4	70·5	73·3	73·7	72·5
	Mauritius (Pamplemouses)	181				30·022	−·004	30·153				82·1	53·2	28·9			69·0					

* Mean of 30 days.

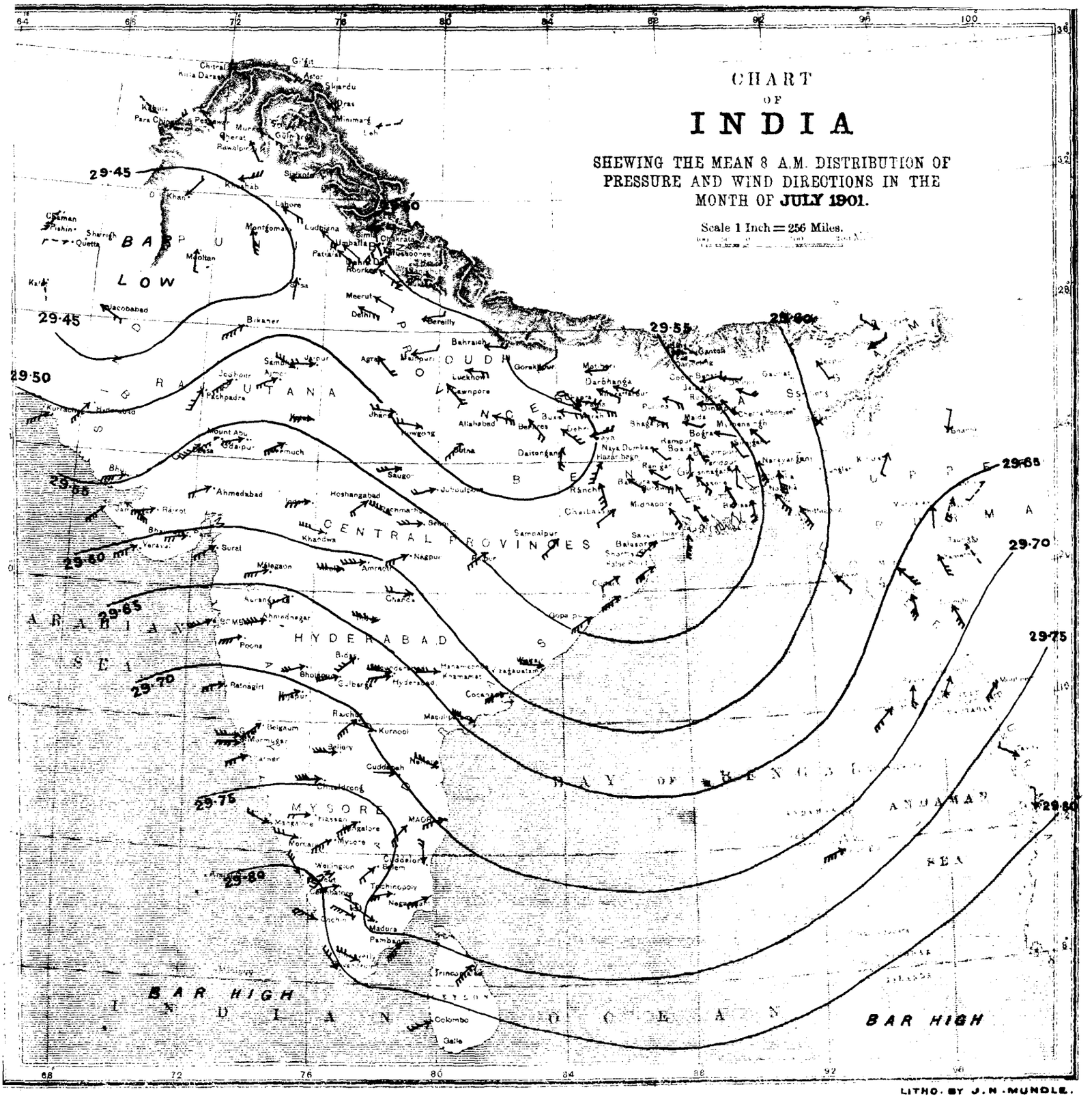
II.—*concluded.*

65 Stations in India, Burma, etc., in July, 1901—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
														Number of winds from																	
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
.625	.624	.629	.626		82	49	48	59		6·4	7·6	7·0		6	5	7	2	3	14	18	5	2	S. 31° W.		32§	%	109‖				Periyakulam	South India.
.725	.770	.780	.758	+·012	87	65	60	71	0	6·9	8·3	7·6	+1·2	13	1	1			5	17	24	1	S. 68° W.	S. 55° W.	63	78	109‖	108			Salem	
.659	.694	.724	.692	+·069	92	77	77	82	+ 6	9·5	9·2	9·4	+0·3							22	33	7	S. 79° W.	S. 78° W.	89	87	265‖	291			Chitaldroog	
.605	.605	.598	.603	−·006	94	70	64	76	− 1	9·4	8·8	9·1	+2·3		1			1		24	31	5	S. 75° W.	S. 73° W.	85	91	273‖	217			Bangalore	
.595	.645	.638	.626	+·037	95	78	80	84	+ 3	9·5	9·6	9·6	+0·4							18	34	10	S. 84° W.	S. 69° W.	87	90	110‖	125			Hassan	
.631	.618	.613	.621	+·013	95	66	65	75	0	9·6	9·5	9·6	+0·7							22	37	3	S. 76° W.	S. 77° W.	90	91	325‖	368			Mysore	
	.755	.806	.804	+·011		57	57	66	− 1	·1	8·2	7·7	+0·5		2		2	4	4	7	35	8	S. 84° W.	S. 48° W.	66	67	183	191			Madras	
.607	.591	.578	.592	−·066	70	52	45	56	− 7	9·2	9·3	9·3	+1·0							3	56	3	W	S. 87° W.	97	88	326‖	282			Bellary	
.714	.840	.850	.801		73	70	68	70		9·1	9·0	9·1					1	1		16	39	5	S. 81° W.		85		134				Waltair	
.436	.402	.370	.403	−·036	74	32	25	44	− 3	·4	3·2	2·3	+0·7	37	3			1	6	4	8	3	S. 70° W.	S. 85° W.	21	30	38‖	91			Quetta	Hill Station, Baluchistan.
.219	.259	.247	.242	−·014	65	44	33	47	+ 2	4·2	4·4	4·3	−0·8		2	2	4	1	13	22	14	3	S. 48° W.	S. 73° W.	57	38	67	47			Leh	Hill Stations, Northern India.
.499	.723	.862	.695	+·037	87	82	74	81	+ 3	2·9	4·9	3·9	−0·1	15	4	1	3	5	10	5	9	10	S. 67° W.	N. 20° W.	21	11	84‖	93			Srinagar	
.313	.375	.356	.348	−·010	88	64	53	68	+ 2	6·3	6·7	6·5	+0·1		3	1		4	7	17	19	11	S. 74° W.	S 81° W	60	65	37	49	1·36	0·85	Kailang	
.414	.474	.509	.466	−·067	78	74	76	76	−12	7·1	7·5	7·3	−1·5	14	13	3		11	10	1	2	8	N. 29° E.	N. 5° E.	5	26	97	86			Simla (Ridge)	
.475	.511	.554	.513	−·033	91	81	83	85	− 6	7·3	7·5	7·4	−1·0	1	10	5	1	9	35	1			S. 20° E.	S. 75° W.	48	45	234	131			Chakrata	
.522	.589	.624	.578	−·003	88	79	79	82	− 4	7·9	8·0	8·0	−0·5	10	2	5	4		1	13	14	13	N. 79° W.	S. 62° W.	40	25	83‖	59			Ranikhet	
.454	.524	.563	.514		92	82	83	86		6·0	7·5	6·8		1	4	5	3	18	2	8	6	15	S. 60° W.		6		126‖				Muktesar	
.662	.717	.733	.704	+·016	93	75	76	81	+ 1	7·3	8·2	7·8	+1·0	1	1		27	3		6	20	4	S. 41° E.	S. 67° W.	5	10	22	21	14·09	2·29	Katmandu	
.474	.548	.558	.527	+·008	97	92	91	93	− 2	7·7¶	7·5§	7·6	−1·3	12	1	11	3	13	5	11	2	4	S. 35° E.	S. 75° E.	21	32	54‖	91			Darjeeling	
.594	.648	.645	.629	−·007	90	84	71	82	− 7	7·2	7·6	7·4	−1·2		3	2	2	1	3	39	9	3	S. 55° W.	S. 54° W.	69	67	314‖	278			Mount Abu	Hill Stations, C. India.
.676	.710	.738	.708	+·037	95	89	82	89	+ 1	9·0	7·9	8·5	−0·3	19	1					5	22	15	N. 78° W.	N. 87° W.	60	76	295‖	252			Pachmarhi	
.624	.680	.710	.672	+·017	95	91	86	91	− 1	7·9	7·4	7·7	−1·3	15	40					2		5	N. 7° W.	N. 55° W.	68	68	166‖	239	21·71	5·91	Chikalda	
.392	.440	.453	.428	+·004	82	66	71	73	− 1	8·8	9·3	9·1	+1·1	2	2			3	4	43	3	3	S. 46° W.	S. 79° W.	76	66	113	124			Wellington‡	Hill Stations, S. India.
.359	.421	.415	.398		92	86	88	89		9·1	9·2	9·2								17	36	9	S. 84° W.		89		159‖				Ootacamund	
.308	.397	.416	.371		78	77	87	82		7·3	7·4	7·4			3	3		1	1		10	34	N. 49° W.		68		391				Kodaikanal†	
.739	.874	.775	.796	−·007	62	60	52	58	− 7	3·0	2·5	2·8	+0·7	3		3		32	3	21			S. 14° E.	S. 1° E.	64	73	230‖	261			Aden	Extra India.
.857	.961	.979	.932	+·145	70	63	63	65	+ 9	1·3	0·8	1·1	−1·4		1	1	10	7	2	10	18	13	S. 80° W.	N. 56° W.	31	60	288‖	386			Perim	
.665	.731*	.707	.701	+·011	83	83*	70	79	+ 1	7·0*	6·0	6·5	+1·9			1		15	29	15	1		S. 1° W.	S. 5° E.	82	83	194‖	207			Zanzibar	
.721	.756	.763	.747	+·042	89	77	76	81	+ 7	5·8	5·9	5·9	+0·3	2		2	4	37	14	3			S. 36° E.	S. 29° E.	81	86	240	287	4·11	1·02	Port Victoria (Seychelles).	
			.537	+·024				77	+ 2																		271	272	1·91	0·49	Mauritius (Pamplemouses)	

† Wind variable 10. ‡ Wind variable 2. § Mean of 22 days. ‖ Corrected. ¶ Mean of 27 days.

G. I. C. P. O.—No. 83 Meteor.—8-11-1901—385.



Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one feather added to the wind arrow
„ „	2 to 5 „ „ „	...	two feathers „ „ „ „
„ „	5 to 10 „ „ „	...	three „ „ „ „ „
„ „	10 to 20 „ „ „	...	four „ „ „ „ „
	[illegible]		five [illegible]

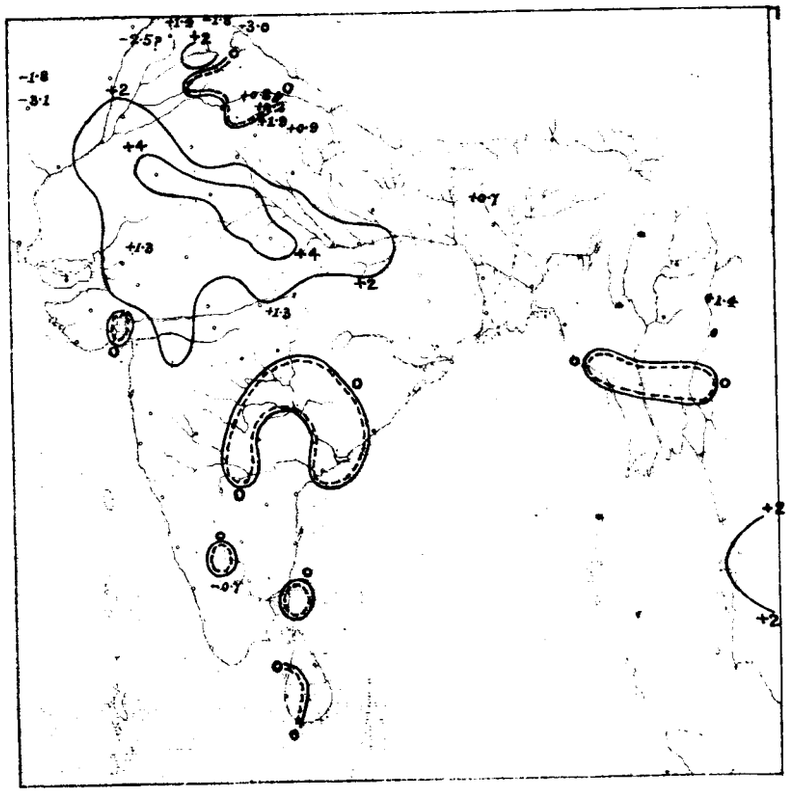
LITHO. BY J.N. MUNDLI

Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

MAXIMUM TEMPERATURE OF THE MONTH
FROM THE NORMAL.

MINIMUM TEMPERATURE OF THE MONTH
FROM THE NORMAL.



Explanation.

ntinuous lines indicate that the mean maximum of month was in
ess by amounts indicated by the attached numbers. Broken or dotted
es that it was in defect by the amounts indicated by the attached
nbers. Double lines are the lines of no variation, the broken line facing
area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY
TEMPERATURE OF THE MONTH FROM
THE NORMAL.

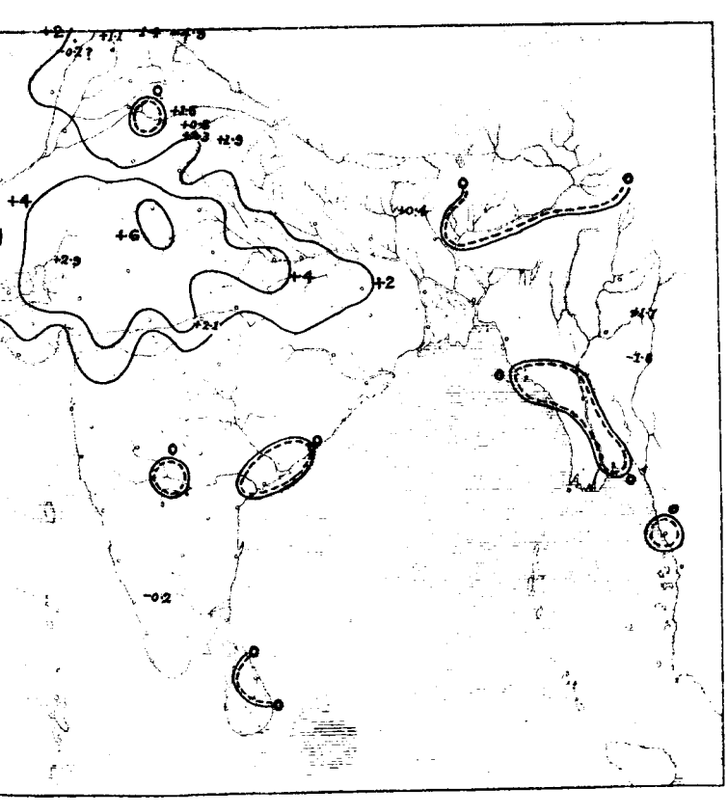
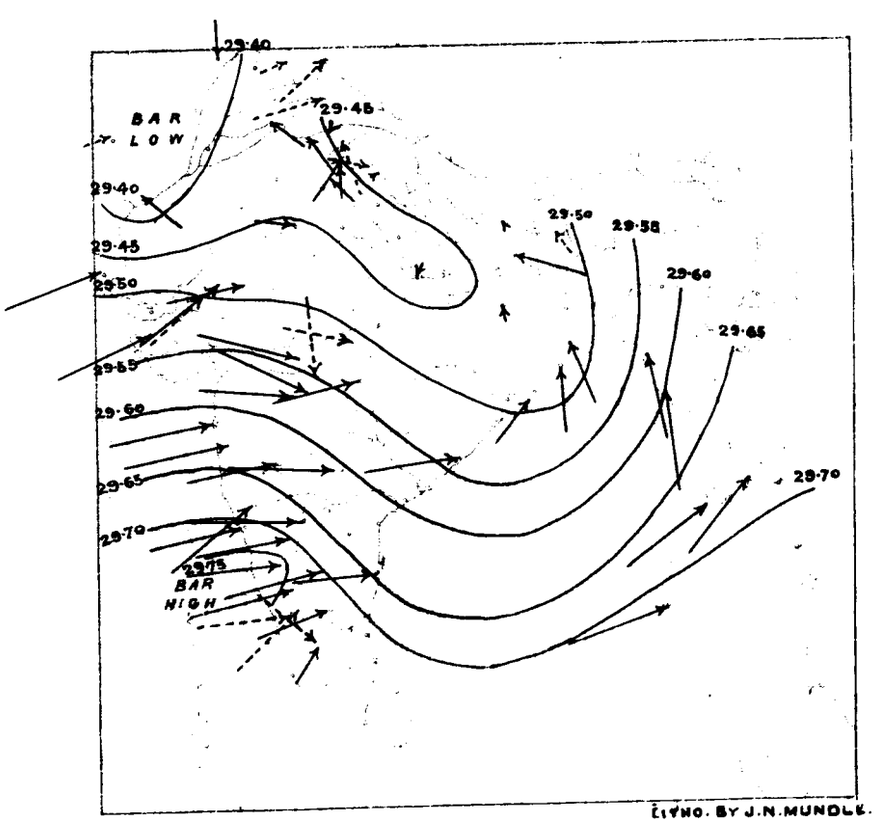


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE
AND THE RESULTANT WIND DIRECTIONS IN
THE MONTH OF **JULY 1901**.



ENG. BY J.N. MUNDLE.

Explanation.

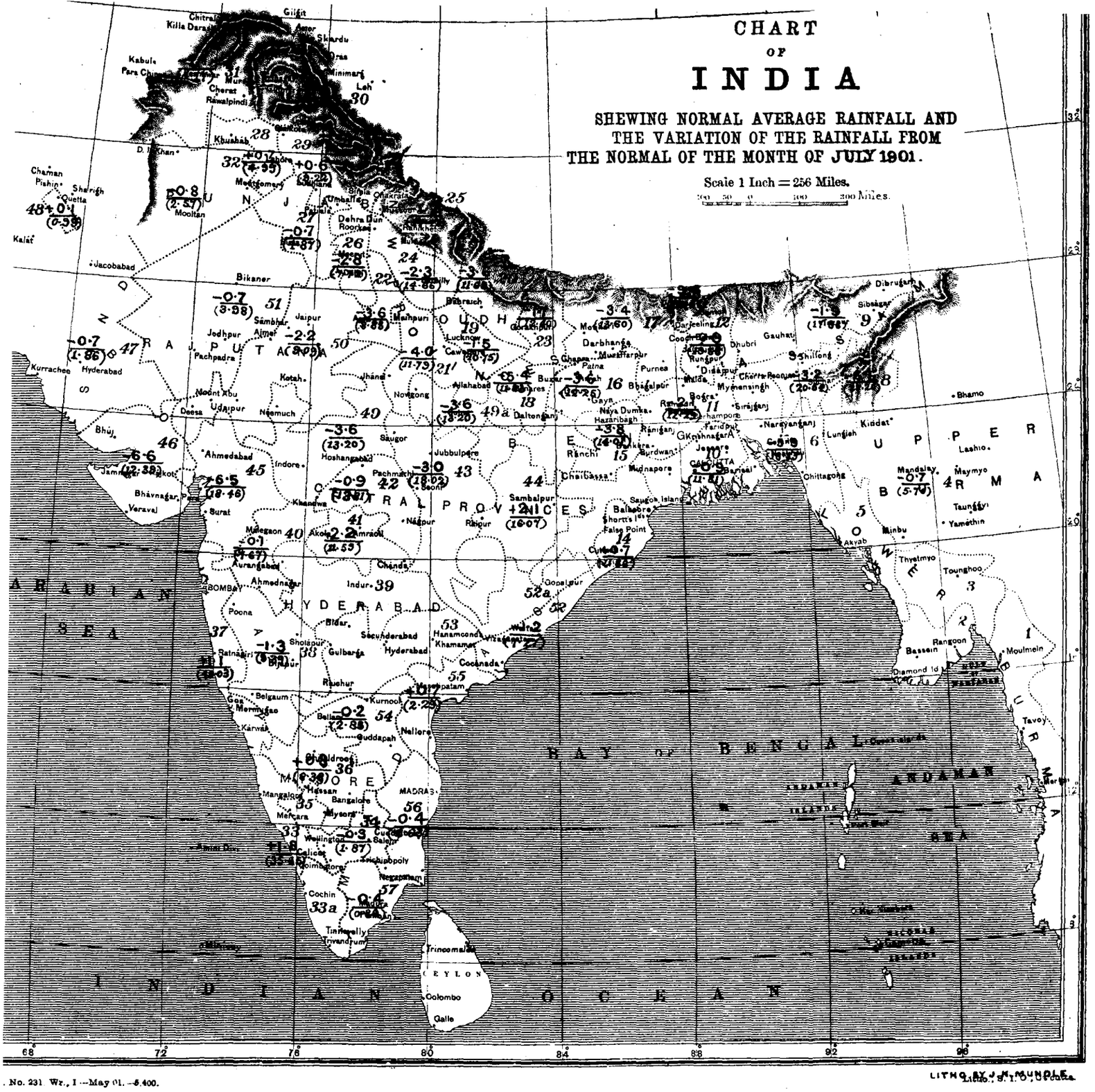
ontinuous lines indicate that the mean daily temperature of month
as in excess by amounts indicated by the attached numbers. Broken

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions

LITHO. BY J.N. MUNGLE.

Explanation.

The Chart shows the distribution of the rainfall of the month by means of [illegible] of rain. The data used in the preparation of this Chart are the rainfall returns of all the [illegible] those at the Hill Stations over 5,000 feet in Elevation. The double line [illegible] a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch).



No. 231 Wr., I.—May 01.—5,400.

LITHO. BY J. N. MUNDLE, Litho. S. I. O., Calcutta.

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim	17. North Bihar	33. Malabar	48. Baluchistan Hills
2. Lower Burma Deltaic	18 North Western Provinces, East	33a Travancore	49. Central India, East
3. Central do.	19. South Oudh	34. Madras, South Central	49a Do. do.
4. Upper do.	20. North do.	35. Coorg	50. Rajputana East, Central India West
5. Arakan	21. North Western Provinces, Central	36. Mysore	51. West Rajputana
6. East Bengal	22. Do. do., West	37. Konkan	52. Madras, East Coast, North
7. Assam, Surma	23. Do. do., East Submontane	38. Bombay Deccan	52(a). Do. do. do. (a)
8. Do., Hills	24. Do. do., West do.	39. Hyderabad, North	53. Hyderabad, South
9. Do., Brahmaputra	25. Do. do., Hills	40. Khandesh	54. Madras, Central
10. Deltaic Bengal	26. South East Punjab	41. Berar	55. Madras, East Coast, Central
11. Central do.	27. South do.	42. Central Provinces, West	56. Do. East Coast, South
12. North do.	28. Central do.	43. Do., Central	57. Madras, South
13. Bengal Hills	29. Punjab, Submontane	44. Do., East	

LIBRARY
★ FEB 3 1902 ★
Weather Bureau.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, AUGUST, 1901.

INTRODUCTION.

THIS review of the weather in India during the month of August 1901 is based on observations taken y at 8 A.M. at 222 stations, and on additional observas taken at 10 A.M. and 4 P.M. at 65 stations. In rainfall summary the rainfall data of the meteogical observatories and the weekly rainfall telens received during the month from District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given.

Summary of the chief features of the weather in India during the month of August, 1901.

he following gives a summary of the chief features of meteorology of the month:—

t the commencement of the month pressure was below normal over the greater part of the country. The dency was greatest in the extreme north-west, but was erate over parts of Bengal and of the central districts. hin the latter area of depression a shallow storm deved during the 1st and thence drifted slowly westward ugh the north of the Central Provinces and the east of Central India into the west of the North-Western Provinces. It occasioned a good deal of general rain over North-East India during the first days of its existence, but the amount and extent of the rainfall gradually decreased and on the 4th, when the storm was filling up near Jhansi, very little rain was reported. As the rain decreased the mean temperature rose and on the 4th was fairly high over a large part of Northern India. The following gives variation data of the mean temperature from the normal

for the different divisions of Northern and Central India for the 2nd and for the 4th to illustrate the rise which took place:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF	
	2nd August.	4th August.
	°	°
Bengal	+0·9	+1·7
Orissa	—0·4	+1·5
Bihar	+0·4	+2·2
Chota Nagpur	+1·3	+2·7
North-Western Provinces and Oudh	0	+3·2
Punjab	+1·2	+2·8
Sind	—0·1	+1·3
Rajputana	—0·7	+4·8
Central India	+0·7	+2·2
Central Provinces	—1·3	+0·5

On the 5th the rainfall was very light in the north, but was fairly general, though not heavy, over the Peninsula, and the mean temperature was generally low on this day in the Peninsular divisions. This is shown below:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 5th August.	Mean minimum temperature, 5th August.	Mean daily temperature, 5th August.
	°	°	°
Berar	—5·0	+0·8	—2·1
West Coast	+0·4	+0·9	+0·7
Bombay Deccan	—3·1	+1·7	—0·7
Mysore	+0·6	+0·8	+0·7
Madras Coast	+1·0	+0·3	+0·7
Madras Deccan	—3·6	—0·3	—2·0
South India	+1·6	+1·3	+1·5

On the 6th a fresh but shallow and diffused depression was shown over West Bengal and the east of the North-Western Provinces and rain had increased over Bengal, the Gangetic Plain and the Central Provinces. At the same time the barometer had fallen rapidly in the extreme north-west and steep barometric gradients were established over North Bombay, Rajputana and the Punjab. These pressure conditions were accompanied with a strong flow of monsoon winds from the head of the Arabian Sea and a heavy fall of rain over and near the Kumaun Himalayas. This rainfall resulted in a rapid fall of temperature over parts of Northern India where in some places the previously existing excess of temperature had disappeared and been replaced by a deficiency. The following gives comparative temperature data for the stations in the Punjab, the North-Western Provinces and Rajputana for the 6th and 7th, where this deficiency of temperature was most marked:—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
6th August	Ludhiana	—7·1
	Umballa	—6·0
	Meerut	—4·4
	Delhi	—4·3
	Roorkee	—3·4
	Bareilly	—3·0
	Sirsa	—2·8
	Dehra Dun	—2·5
7th „	Sirsa	—9·6
	Ludhiana	—8·7
	Umballa	—6·4
	Lahore	—3·7
	Sialkot	—4·7
	Delhi	—4·3
	Roorkee	—3·5
	Jaipur	—3·2

On the 8th the weather was very disturbed. The seasonal low pressure area was shown over the Indus Valley while slight cyclonic storms were shown one over the west of the North-Western Provinces and the other over Deltaic Bengal. Rain was falling fairly generally except over the east of the Peninsula and the mean temperature was

generally low, but especially so over parts of the Punjab. The following gives comparative temperature data for all districts for the 8th :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 8th August.	Mean minimum temperature, 8th August.	Mean daily temperature, 8th August.
	°	°	°
Burma	—0·6	+0·4	—0·1
Assam	—2·7	—0·1	—1·4
Bengal	+0·6	+1·2	+0·9
Orissa	+2·4	0	+1·2
Bihar	+0·7	—2·9	—1·1
Chota Nagpur	+3·8	+1·3	+2·6
North-Western Provinces and Oudh	—2·0	—2·1	—2·1
Punjab	—6·3	—4·5	—5·4
Sind	+0·4	—0·4	0
Rajputana	—3·2	+1·7	—0·8
Gujarat	—1·5	+0·4	—0·6
Central India	—1·4	+0·3	—0·6
Central Provinces	—2·0	—0·3	—1·2
Berar	—3·6	—0·4	—2·0
West Coast	—0·7	+0·4	—0·2
Bombay Deccan	0	+0·3	+0·2
Mysore	—0·6	—0·4	—0·5
Madras Coast	—0·5	—0·2	—0·4
Madras Deccan	+1·8	+0·8	+1·3
South India	+1·4	+0·7	+1·1

The storm noticed over Deltaic Bengal intensified slightly between the 8th and 9th, but did not alter its position. During the 9th it advanced slowly west-north-westward and had reached West Bengal by the morning of the 10th, and the centre of the North-Western Provinces by the morning of the 11th. Here it remained more or less stationary till the morning of the 14th after which it recommenced its westerly movement and broke up near Agra during the 15th. It occasioned very heavy rain over parts of the North-Western and Central Provinces of which the following were the principal amounts :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Allahabad	Manjhanpur	9th August	7·15
Partabgarh	Kunda	" "	6·99
Allahabad	Sirathu	" "	6·65
Sitapur	Biswan	" "	5·17
Fatehpur	Khaga	" "	5·15
Sitapur	Sidhauli	" "	4·74
Hamirpur	Bela-Thal	10th "	5·28
Jubbulpore	Murwara	" "	5·07
Jhansi	Narhat	11th "	7·70
	Garautha	" "	6·20
Hamirpur	Rath	" "	6·15
Damoh	Damoh	" "	6·00
Saugor	Khurai	" "	5·60
Hamirpur	Mahoba	" "	5·28
	Thana	" "	4·95
Partabgarh	Kunda	" "	4·88
Etawah	Etawah	" "	4·78
Hamirpur	Kulpahar	" "	4·73
Jhansi	Jhansi	" "	4·60
	Talbahat	12th "	6·52
	Jhansi	" "	5·75
Saugor	Khurai	" "	5·65
Jhansi	Lalitpur	" "	5·40
Dehra Dun	Rajpur	13th "	8·00
	Debra	" "	5·90
Banda	Girwan	" "	5·19
Dehra Dun	Raipur	" "	4·60
Saugor	Saugor	" "	4·57
Jubbulpore	Murwara	14th "	6·11

This heavy rainfall was accompanied with low temperatures over Bengal, Assam, the North Western Provinces, the Central Provinces, Central India, the Deccan and the east of the Punjab. The following gives comparative

temperature data for the above divisions from the 8th to the 15th in illustration:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF							
	8th Aug.	9th Aug.	10th Aug.	11th Aug.	12th Aug.	13th Aug.	14th Aug.	15th Aug.
	°	°	°	°	°	°	°	°
Assam	−1·4	+0·4	+3·8	+0·8	−2·3	0	+1·2	+1·8
Bengal	+0·9	+1·7	+1·3	+0·3	−0·6	−2·8	−1·7	+0·9
Bihar	−1·1	−2·3	+1·2	+0·7	−0·8	−2·2	−1·4	+0·3
Chota Nagpur	+2·6	−1·6	−0·7	−1·0	−0·6	−3·4	−3·0	−0·2
North-Western Provinces and Oudh	−2·1	−1·3	+0·1	+0·5	−0·5	−2·6	−2·6	−1·9
Central Provinces	−1·2	−2·0	−1·3	−3·2	−2·3	−3·4	−4·5	−2·8
Central India	−0·6	−0·1	−0·3	−2·5	−2·4	−4·8	−5·8	−5·1
Bombay Deccan	+0·2	−0·5	−2·5	−1·6	−0·5	+0·7	−0·4	−1·6
Madras Deccan	+1·3	+0·1	−2·3	−2·2	+1·4	+1·3	−0·3	+1·2
East Punjab	−5·3	−3·8	−0·9	+1·7	0	+2·6	−0·3	−4·3

This depression of temperature extended in a modified form to North Bombay, Rajputana and the greater part of the Punjab where, after the disappearance of the low temperatures which had succeeded the rainfall of the 10th to 12th, the heat had been generally higher than usual. This is shown in the following table which gives temperature variation data of the different divisions of North-West India from the 11th to the 15th:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	11th Aug.	12th Aug.	13th Aug.	14th Aug.	15th Aug.
	°	°	°	°	°
Punjab	+1·8	+2·4	+3·8	+2·0	−0·5
Rajputana	+3·4	+2·0	+0·7	+1·1	−2·5
Gujarat	+1·6	+1·0	+0·7	−0·5	−1·9
Sind	+1·4	+2·0	−0·1	−1·0	+0·7

On the 16th and 17th the rainfall was light and scattered over the whole of the Indian land area and the mean temperature was rising in all districts. The following gives variation data for all divisions for these two days:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF	
	Mean temperature, 16th August.	Mean temperature, 17th August.
	°	°
Burma	−0·2	0
Assam	+1·7	+0·8
Bengal	+2·3	+1·8
Orissa	+3·1	+0·9
Bihar	+1·9	+3·3
Chota Nagpur	+1·4	+2·0
North-Western Provinces and Oudh	+0·1	+2·5
Punjab	−1·8	+0·7
Sind	+1·0	+0·7
Rajputana	−1·3	+0·5
Gujarat	−0·4	+0·8
Central India	−1·7	+0·9
Central Provinces	−0·4	+0·8
Berar	+0·1	+1·1
West Coast	+1·4	+1·8
Bombay Deccan	+1·3	+1·7
Mysore	−0·4	+0·8
Madras Coast	+0·1	+1·6
Madras Deccan	+1·8	+1·8
South India	+0·5	+2·5

On the 17th a depression was forming over the north-west of the Bay. This depression crossed the coast during the 18th and was shown on the morning of the 19th over Chota Nagpur where it filled up during the day. This was the only storm formed over the Bay during the month and was yet the most unimportant of the whole series. It occasioned some rise in the force of the monsoon winds over the Bay and was accompanied with an increase in the rainfall over the North Madras coast and over North East India, but the storm itself was feeble and unimportant throughout. During these three days (17th to 19th) scattered and generally light or moderate showers were received over India and the general temperature

was above the normal The following gives comparative temperature data for the 18th and 19th :—

Province or Division.	Variatoin from normal of	
	Mean temperature, 18th August.	Mean temperature, 19th August.
	°	°
Burma	+0·3	+0·1
Assam	+1·6	+0·8
Bengal	+1·6	+1·7
Orissa	+0·2	+0·9
Bihar	+2·3	+2·0
Chota Nagpur	+1·1	+1·1
North-Western Provinces and Oudh	+2·4	+3·0
Punjab	+2·7	+5·1
Sind	+4·2	+5·2
Rajputana	+2·1	+3·2
Gujarat	+1·2	+1·4
Central India	+0·2	+0·9
Central Provinces	+0·6	+0·7
Berar	+2·3	—0·8
West Coast	+1·7	+1·3
Bombay Deccan	+1·4	+1·4
Mysore	+1·1	+0·2
Madras Coast	+1·1	—0·6
Madras Deccan	+2·1	+2·3
South India	+2·2	+1·9

On the 20th and 21st pressure gave way in the extreme north-west and steep pressure gradients were re-established over North-West India. These steep gradients were accompanied with a strong flow of air from the north of the Arabian Sea across North-West India towards the Kumaun Himalayas. Light to moderate showers were consequently received over North Bombay and Rajputana and a very heavy fall of rain over the Kumaun hills. The following shows the principal rainfall amounts in this area between the 20th and 24th :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Dehra Dun	Rajpur	20th August.	11·00
Naini Tal	Kathgodam	" "	7·00
	Kashipur	" "	6 86
Dehra Dun	Dehra Asylum	" "	6·24
Naini Tal	Haldwani	" "	5·10
Simla	Barauli	21st "	16·48
Naini Tal	Naini Tal	21st August.	11·63
	Ramnagar	" "	9·55
	Haldwani	" "	8·45
Dehra Dun	Dehra	" "	6·90
Garhwal	Kotdwara	" "	6·85
Dehra Dun	Bhogpur	" "	6·50
	Mussooree	" "	6·00
Almora	Tanakpur	" "	5·50
Garhwal	Lansdowne	" "	5·43
Naini Tal	Kathgodam	" "	5·30
	Nagla	" "	5·18
Dehra Dun	Ambari	" "	5·04
Simla	Simla	22nd "	8·94
Garhwal	Kotdwara	" "	6·93
Dehra Dun	Rajpur	" "	6·30
	Ambari	" "	6·23
Naini Tal	Rudarpur	" "	6·12
Dehra Dun	Bhogpur	" "	6·0
	Chakrata (Obsy.)	" "	5·53
	Chakrata Tahsil (Kalsi)	" "	5·44
Naini Tal	Kathgodam	23rd "	5·70
	Haldwani	" "	5·50
	Naini Tal	" "	5·05
Dehra Dun	Rajpur	24th "	7·48
	Mussooree	" "	5·65

High temperatures prevailed over the Punjab plains during these five days as is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	20th Aug.	21st Aug.	22nd Aug.	23rd Aug.	24th Aug.
	°	°	°	°	°
Umballa	+1·8	+1·0	—1·6	—0·8	—0·4
Ludhiana	+3·0	+3·9	+5·5	+2·4	+2·3
Sialkot	+9·9	+10·7	+8·4	+4·6	+2·4
Delhi	+4·8	+2·0	—1·6	+0·8	+0·1
Sirsa	+7·9	+8·1	+2·9	+0·6	+2·5
Lahore	+6·0	+9·1	+6·5	+3·8	+3·8
Montgomery	+7·4	+7·6	+1·6	+1·7	+1·8
Mooltan	+9·1	+5·6	+1·9	+2·1	+1·0
Khushab	+8·4	+9·2	+6·3	+3·6	+3·0
Peshawar	+7·8	+9·7	+11·0	+7·3	+4·7
D. I. Khan	+4·6	+6·3	+3·6	+0·5	+1·1

On the 23rd another depression or cyclonic storm appeared over Deltaic Bengal. It passed into South-West Bengal on the 24th, into West Bengal on the 25th, into the east of Central India on the 26th, and filled up over that area on the 27th. It gave moderate to heavy rain to North-East and Central India and occasioned very low temperatures, relatively to the normal, over those areas. The following gives comparative temperature data for Assam, Bengal, the Central Provinces, Berar, Central India and the North-Western Provinces from the 23rd to the 27th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	23rd August.	24th August.	25th August.	26th August.	27th August.
	°	°	°	°	°
Assam . . .	+1·3	+0·2	+1·2	—0·6	+0·1
Bengal . . .	+2·1	+0·2	—0·1	+0·4	+0·5
Bihar . . .	+0·5	—1·4	+0·3	—0·1	+1·0
Chota Nagpur . .	+2·5	—0·3	—3·5	—1·7	—0·5
Central Provinces .	—2·2	—3·0	—4·0	—4·7	—3·4
Berar . . .	—3·5	—3·1	—3·2	—3·0	—0·8
Central India . .	—2·2	—1·8	—1·3	—2·6	+0·2
North-Western Provinces and Oudh.	—1·4	—0·5	+0·2	+0·7	+0·9

The development and advance of this storm had no practical effect on the Arabian Sea monsoon current, which, from the 23rd to the 27th, gave hardly any rain to the Peninsular districts. In consequence the mean temperature over the Peninsula, except the Bombay Deccan, was generally in excess during this period. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	20th August.	21st August.	22nd August.	23rd August	24th August.
	°	°	°	°	°
West Coast . .	+0·6	+1·3	+1·3	+1·5	+1·3
Bombay Deccan . .	—0·7	—1·1	—1·0	—1·4	—0·1
Mysore . . .	+0·4	—0·8	—1·4	+1·5	+2·8
Madras Coast . .	+0·4	+0·1	+0·8	+2·6	+0·4
Madras Deccan . .	+0·9	+1·5	+1·1	+1·0	+1·9
South India . .	+2·3	+0·9	+0·8	+2·7	+3·3

The Punjab and Rajputana were equally beyond its influence, and the mean temperature of these divisions was steadily excessive at this time. The following gives data :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	23rd August.	24th August.	25th August.	26th August.	27th August.
	°	°	°	°	°
Punjab	+2·4	+2·0	+1·1	+2·5	+4·8
Rajputna	—0·7	—0·4	+0·1	+1·2	+4·9

On the 28th a very shallow depression was developed over the central parts of India and remained in that position till the close of the month. It occasioned a further fall of rain over North-East and Central India, and over these areas a further fall of temperature was produced. The following gives data for these areas from the 28th to the 31st and shows the considerable depression of temperature which existed at this time :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	28th August.	29th August.	30th August.	31st August.
	°	°	°	°
Assam	—1·5	—2·6	+0·8	+2·0
Bengal	—0·2	—0·9	—0·6	+0·8
Orissa	+0·7	0	—1·1	+1·1
Bihar	+0·2	—2·0	—3·0	+0·4
Chota Nagpur	+0·7	—1·2	—1·1	—0·7
North-Western Provinces and Oudh .	+0·7	—0·6	—2·5	—0·7
Central India	+1·1	—0·2	—1·7	—0·2
Central Provinces . . .	—2·3	—2·8	—2·3	—1·3
Berar	—1·9	—7·7	—3·9	—2·6

The rainfall, as stated above, was confined to North-East and Central India so that in the divisions of North-West India and of the Peninsula the excess of temperature previously noticed was maintained. The following gives comparative data for the 28th to the 31st for the

Punjab, Rajputana, Gujarat, the West-Coast and the Madras divisions :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	28th August.	29th August.	30th August.	31st August.
	°	°	°	°
Punjab	+4·0	+4·3	+1·5	+0·8
Rajputna	+4·3	+4·0	+0·7	+3·3
Gujarat	+1·1	+0·5	+0·3	+1·4
West Coast	+1·4	+1·1	+0·5	+1·0
Madras Deccan	+1·6	+0·7	+0·6	+0·5
Madras Coast	—0·3	+0·3	+0·8	+0·5

Pressure :—The mean pressure of the whole Indian land area was 0·028″ below the normal. The general anomaly was thus almost the same as that reported in the same month last year. Relatively to the general condition pressure was in excess over the greater part of the Peninsula, North Bombay and the east of Rajputana, while it was generally in defect over the remainder of India. The deficiency was greatest and considerable over two areas, one covering Deltaic, South-West and West Bengal and the adjacent parts of the North-Western Provinces and of the Central Provinces, and the second covering the West Punjab and the west of Rajputana. The trough of low pressure over Northern India was more than usually well defined and the gradients on its southern side were steeper than usual. The trough occupied about the normal position, and hence lay slightly to the north ward of the position it occupied last year. The vertical pressure anomalies were positive in the Baluchistan and Himalayan hill regions, but were negative in the hill regions in the centre and south.

The following table gives pressure variation data of the month for the eleven meteorological divisions :—

Meteorological Province.	Variation from normal of mean 8 A.M. pressure of August 1901.	Pressure anomaly, August 1901.
	″	″
Burma Coast and Bay Islands	—·030	+·002
Burma Inland	—·022	+·006
Assam	—·025	+·003
Bengal and Orissa	—·046	—·018
Gangetic Plain and Chota Nagpur	—·046	—·018
Upper Sub-Himalayas	—·040	—·012
Indus Valley and North-West Rajputana	—·048	—·020
East Rajputana, Central India and Gujarat	—·023	+·005
Deccan	—·024	+·004
West Coast	—·005	+·023
South India	—·005	+·023

Temperature :—The mean temperature conditions of the month differed considerably from the normal owing to the abnormal distribution of rainfall during the month, The mean temperature was generally excessive except over the central parts of the country.

The mean maximum temperature of the month was above the normal in the Punjab, Sind, Rajputana, Gujarat, Kathiawar and the southern half of the Peninsula, where the rainfall was generally in defect. The variations were moderate in parts of these areas. They exceeded 2° in amount at the following stations :—Peshawar (+4°·9), Mooltan (+2°·9), Sialkot (+2°·6), Khushab (+2°·3), Montgomery (+2°·1), Jacobabad (+2°·7), Cochin (+2°·4), Trichinopoly (+2°·5), Negapatam (+2°·8) and Colombo (+3°·2). The day temperature, on the mean of the month, was about normal over the greater part of Burma and North-East India and was below the normal over the central parts of India and the head of the Peninsula, The deficiency was greatest at Nowgong (—2°·3), Jubbulpore (—2°·4), Saugor (—2°·2), Indore (—2°·1), Khandwa (—2°·5), Akola (—2°·9), Amraoti (—3°·6), Nagpur (—2°·7), Raipur (—2°·4) and Chanda (—3°·0).

The mean minimum temperature of the month was in general excess except over the east of the Central Provinces and part of the East Coast, where, however, the negative variations were small. The positive variations were largest in the Punjab and Rajputana and amounted to +3°·2 at Peshawar; +4°·1 at Sialkot; +2°·5 at Khushab ; +3°·4 at Lahore ; +3°·4 at Montgomery; +2°·4 at Mooltan; +3°·4 at Sirsa ; +4°·4 at Bikaner ; +2°·2 at Jaipur ; +2°·3 at Sambhar, and +2°·1 at Ajmer.

The mean temperature of the month was above the normal except at the foot of the Kumaun Himalayas, at some stations in Burma and Assam and over the central parts of India and the north of the Peninsula. The negative variations were generally small and only exceeded 2° at Chanda (—2°·3). The positive variations were also generally small but were more than 2° over the greater part of the Punjab, the west of Rajputana and at a few places in the south of the Peninsula and amounted to 4° at Peshawar.

The mean temperature conditions of the month at the hill stations varied irregularly from the normal. At most places in Baluchistan and the Kashmir Himalayas temperature was in slight to moderate excess and at Darjeeling in slight excess, while at Leh and Pachmarhi it was in slight defect. In the Kumaun Himalayas and

locally at Mount Abu and Wellington the mean temperature was about normal.

The following table gives comparative temperature variation data for the eleven meteorological provinces:—

Meteorological Province.	Variation of actual from normal of		
	Mean maximum temperature, August 1901.	Mean minimum temperature, August 1901	Mean daily temperature, August 1901.
	°	°	°
Burma Coast and Bay Islands	−0·5	+0·4	0
Burma Inland	−0·2	+0·5	+0·2
Assam	+0·2	+0·6	+0·4
Bengal and Orissa	+0·8	+0·8	+0·8
Gangetic Plain and Chota Nagpur.	+0·3	+0·8	+0·6
Upper Sub-Himalayas	−0·3	+1·6	+0·7
Indus Valley and North-West Rajputana.	+2·2	+2·3	+2·2
East Rajputana, Central India and Gujarat.	−0·1	+1·1	+0·5
Deccan	−1·4	+0·2	−0·6
West Coast	+0·7	+1·0	+0·9
South India	+1·0	+0·5	+0·8

Winds:—The monsoon current over the Bay was, as shown by observations taken on board ships, of normal strength. The wind was stronger than usual at Port Blair, Diamond Island and Saugor Island and at all three stations the wind's direction was more westerly than usual. On the other hand, at Calcutta and over the Lower Gangetic Plain the direction was more easterly than the average. Steady south-easterly and east-south-easterly winds also prevailed in the Upper Gangetic Plain. On the contrary, over Rajputana, the central parts of the country and the Peninsula the wind was generally more westerly than the normal. This westerly wind was, on the whole, above the normal strenght, but, while the monsoon current over the Arabian Sea and along the West Coast was approximately normal, the increase in the force, relatively to the average, was considerable over the interior of the country. The wind was less easterly than usual in the South-East Trades region as shown by the observations at Zanzibar.

Humidity:—The mean humidity conditions of the month were practically normal over the Western desert. The air was drier than usual over the North and West Punjab (Peshawar—7%) and Baluchistan. The air was also drier than usual over the Madras Deccan (Bellary—6%), the south of the Peninsula and Bengal. Over the remainder of India the mean humidity was in excess. The excess was slight over the Burma coast and the greater part of India, but was considerable over the west of the North-Western Provinces, (Meerut+7% and Roorkee+6%); the Central Provinces(Nagpur+7%); and Berar (Akola+8%). At most of the hill stations in the Himalayas also the air was damper than usual.

The following table gives variation data of the mean aqueous vapour pressure and mean humidity of nine meteorological provinces for the month of August:—

Meteorological Province.	Mean absolute humidity.		Mean relative humidity.	
	Average actual, August 1901.	Variation of actual rom normal, August 1901.	Average actual, August 1901.	Variation of actual from normal, August 1901.
	"	"	%	
Burma Coast and Bay Islands.	·902	+·002	88	0
Bengal and Orissa	·951	+·005	85	−2
Gangetic Plain and Chota Nagpur.	·912	+·010	83	−1
Upper Sub-Himalayas	·900	+·045	79	+3
Indus Valley and North-West Rajputana.	·853	+·032	64	−2
East Rajputana, Central India and Gujarat.	·832	+·027	75	−1
Deccan	·737	+·020	83	+4
West Coast	·855	+·002	86	−2
South India	·673	+·005	73	−1

Cloud:—There were less cloud than usual, on the mean of the month, over the Punjab, Western Rajputana, Baluchistan, Sind and Cutch, the deficiency having been greatest at Kurrachee (−1·3). The sky was also slightly clearer than usual on the South Konkan Coast. Over the whole of the remainder of India and Burma the cloud amount was in excess of the normal. The excess was moderate or slight in most places, but was considerable over the east of the North-Western Provinces (Allahabad +1·0), the west of the Central Provinces, and the North Deccan (Buldana +2·0) and in the Madras Deccan and Mysore (Bangalore +1·8). The cloud amount was also in excess at most of the hill stations.

The following table gives variation data of the mean cloud amount of nine meteorological provinces for the month of August:—

Meteorological Province.	Mean cloud amount.	
	Average actual, August 1901.	Variation of actual from normal, August 1901.
Burma Coast and Bay Islands	8·7	+0·5
Bengal and Orissa	8·4	+0·5
Gangetic Plain and Chota Nagpur	8·3	+0·6
Upper Sub-Himalayas	6·2	+0·2
Indus Valley and North-West Rajputana	3·3	−0·6
East Rajputana, Central India and Gujarat	8·2	+0·5
Deccan	9·0	+0·9
West Coast	8·1	+0·1
South India	8·2	+0·6

Rainfall.—The distribution of the rainfall of the month was determined mainly by the barometric depressions of the month. The Arabian Sea monsoon current was slightly weaker than usual, but the rainfall along the West Coast, on the mean of the month, was approximately normal. The Bay of Bengal monsoon current was of the normal strength and the rainfall was above the normal on the Burma and Arakan coasts, and about normal in Bengal. There were six depressions developed over the Indian area during the month. Most of these were initiated over Bengal and were hence generally of feeble intensity. They passed through Bengal, Chota Nagpur or South Bihar, the east of Central India, the north of the Central Provinces, and part of the North-Western Provinces, and the month's rainfall was generally in excess over Chota Nagpur, South Bihar the east of Central India, the whole of the Central Provinces and Berar, the greater part of the North-Western Provinces and the Punjab hills. On the other hand, the monsoon currents only occasionally spread over Kathiawar, Sind, Rajputana and the Punjab, so that practically the whole of North-West India had less rain than usual—the deficiency in most cases having been large. Over the interior and east of the Peninsula the rainfall was also short of the normal. As stated above the Arabian Sea monsoon current gave about normal rain to the West Coast districts and this rainfall extended into the Bombay Deccan, but in Mysore, Hyderabad and the Madras districts, both in the interior and along the East Coast, the rainfall was in slight to considerable defect. There was a heavy burst of rain over the stations in the Kumaun Himalayas between the 20th and the 24th.

The following table gives data for the eleven meteorological provinces of the empire :—

Meteorological Province.	Rainfall.			
	Mean actual for August 1901.	Mean normal for August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands.	33·84	27·76	+6·07	+22
Burma Inland	6·86	8·51	—1·65	—19
Assam	15·94	16·54	—1·45*	— 9
Bengal and Orissa	11·79	13·89	—2·10	—15
Gangetic Plain and Chota Nagpur.	12·98	11·57	+1·59*	+14
Upper Sub-Himalayas	12·29	11·15	+1·35*	+12
Indus Valley and North-West Rajputana.	1·22	2·50	—1·29	—52
East Rajputana, Central India and Gujarat.	7·14	7·90	—0·13*	— 2
Deccan	11·31	9·08	+2·48*	+27
West Coast	13·89	17·49	—3·60	—21
South India	3·14	4·36	—1·19*	—27

* A reference to Table I will show that the means in columns 2 and 3 are derived from a smaller number of stations than the means in the 1st column. The sum of the figures in columns 2 and 3 will, therefore, not agree with the figures in column 1.

Atmospheric Pressure.

The mean pressure of the whole Indian land area was 0·028″ below the normal. The general variation from the normal was hence similar to that recorded in August 1900, but the local variations in the two months differed considerably.

Relatively to the general condition pressure was in excess over the greater part of the Peninsula, North Bombay and Eastern Rajputana. The local excess was greatest over the south of the Peninsula and the south of the Bay, and amounted to 0·020″ or more at the following places :—

Station.	Variation from normal of mean 8 A.M. pressure of August 1901.	Pressure anomaly, August 1901.
	″	″
Nellore	+·010	+·038
Trichinopoly	+·003	+·031
Mysore	+·003	+·031
Bijapur	+·003	+·031
Coimbatore	+·002	+·030
Tinnevelly	+·002	+·030
Cuddalore	+·002	+·030

Station.	Variation from normal of mean 8 A.M. pressure of August 1901.	Pressure anomaly, August 1901.
	″	″
Raichur	+·001	+·029
Ratnagiri	+·001	+·029
Mangalore	0	+·028
Hyderabad (Dn.)	0	+·028
Bellary	0	+·028
Cochin	—·001	+·027
Masulipatam	—·001	+·027
Calicut	—·002	+·026
Belgaum	—·002	+·026
Madura	—·002	+·026
Colombo	—·002	+·026
Chitaldroog	—·004	+·024
Cocanada	—·004	+·024
Negapatam	—·005	+·023
Madras	—·006	+·022
Bangalore	—·008	+·020
Port Blair	—·008	+·020

In addition the local pressure anomaly was more than 0·020″ at Bhuj. Data for this station are given below:—

STATION.	Variation from normal of mean 8 A.M. pressure of August 1901.	Pressure anomaly, August 1901.
	″	″
Bhuj	—·007	·021

In other parts of this area the pressure anomalies were small. Pressure was also in local excess over Assam and the dry area of Burma, but the anomalies in this area were small and unimportant. Over the whole of the remainder of India and Burma pressure was in local defect. The deficiency was small in most places, but exceeded 0·020″ in two areas. The first covered Deltaic, South-West and West Bengal, and the adjacent districts of the North-West and Central Provinces. Within this area the anomalies varied between —0·021″ and —0·036″ as is shown by the following table:—

STATION.	Variation from normal of mean 8 A.M. pressure of August 1901.	Pressure anomaly, August 1901.
	″	″
Sutna	—·064	—·036
Jubbulpore	—·061	—·033
Allahabad	—·061	—·033
Sambalpur	—·060	—·032
Benares	—·059	—·031
Saugor Island	—·059	—·031
Chittagong	—·058	—·030
Patna	—·055	—·027
Gaya	—·053	—·025
Cuttack	—·052	—·024
Calcutta	—·051	—·023
Ranchi	—·051	—·023
Nowgong	—·051	—·023
Lucknow	—·050	—·022
Hazaribagh	—·050	—·022
Burdwan	—·050	—·022
Jessore	—·050	—·022
Barisal	—·049	—·024
Darbhanga	—·049	—·021

The second area of depression covered the west of the Punjab and of Rajputana, and within this area pressure was more than 0·020″ below the normal at the following stations:—

STATION.	Variation from normal of mean 8 A.M. pressure of August 1901.	Pressure anomaly, August 1901.
	°	°
Dera Ismail Khan	—·069	—·041
Bikaner	—·066	—·038
Peshawar	—·057	—·029
Mooltan	—·055	—·027
Montgomery	—·051	—·023

The abnormal distribution of pressure had, therefore, the effect of increasing the barometric gradient between Southern and Northern India and of producing a low pressure area over West Bengal and the adjacent parts of the North-West Provinces.

The chart of the actual distribution of pressure shows that the trough of low pressure over Northern India was well marked and well defined and occupied about the normal position, while gradients on its southern side were, as mentioned above, somewhat steeper than usual. Pressure was actually highest over Malabar, Mysore, the south of Ceylon, the south of the Bay and Tenasserim, and was actually lowest over the extreme north-west of India—more particularly in the neighbourhood of Dera Ismail Khan.

During the month under review pressure was in defect at most of the hill stations, but at Leh, Chaman and Darjeeling some excess was reported. The deficiency in the case of the stations in the North-West Himalayas was generally small, and this was equally the case with regard to Wellington in South India, but at Mount Abu and Pachmarhi in the centre of the country, the variations from the normal were large. The vertical pressure anomalies were positive in the case of the Baluchistan and Himalayan hill regions, but were negative over the hill regions in Central and Southern India. This is shown by the following data for ten pairs of stations:—

HILL STATION.	Variation from normal pressure, August 1901.	PLAIN STATION.	Variation from normal pressure, August 1901.	Vertical pressure anomaly (Hill—Plain).
	″		″	″
Quetta	—·011	Jacobabad	—·045	+·034
Murree	—·012	Peshawar	—·057	+·045
Leh	+·015	Lahore	—·046	+·061
Simla	—·006	Ludhiana	—·043	+·037
Chakrata	—·005	Roorkee	—·034	+·029
Ranikhet	—·007	Bareilly	—·029	+·022
Darjeeling	+·007	Dhubri	—·034	+·041
Mount Abu	—·031	Deesa	—·019	—·012
Pachmarhi	—·044	Hoshangabad	—·016	—·028
Wellington	—·003	Coimbatore	+·002	—·005

Barometric depressions and cyclonic storms of the month.

At the commencement of the month pressure was slightly above the normal along the West Coast and over Burma while it was below over the Gangetic Plain and North-West India. The deficiency was greatest over the West Punjab and the trough of low pressure over the Punjab and the Gangetic Plain was somewhat better marked than usual. In consequence of these conditions the Bay monsoon current was determined strongly to Upper India and the slight cyclonic whirls which were formed during the month were directed towards North-West India and travelled slowly up the trough of low pressure. Several of these local whirls were formed during the first half of the month and they exercised a marked influence on the meteorology of that period.

Slight cyclonic storm of the 1st to the 4th:—On the 1st pressure was in slight to moderate defect over Bengal and the North-West and Central Provinces, with light, rather variable, winds and general rain—heavy in some places. The following gives 8 A.M. data for those places at which the deficiency of pressure exceeded 0·050" in this area:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Remarks.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Saugor Island.	29·459	—·067	—·073	W	10	9	3·76	Sea slight.
Calcutta	·475	—·067	—·056	NE	3	9	0·07	
Jessore	·500	—·059	—·053	SE	3	7	0·11	
Raipur	·515	—·068	—·054	WSW	10	10	2·50	Raining.
Seoni	·532	—·057	—·052	WNW	11	9	1·88	Do.
Jubbulpore	·498	—·056	—·069	W	8	10	3·84	Do.
Sutna	·474	—·050	—·055	SSW	7	10	1·02	Showery.

Within this area of variable winds, low pressure and rainfall, a shallow depression was developed during the day.

August 2nd:—The barometer was recovering slowly in Bengal, but was falling over the central parts of the country and a shallow diffused depression was shown covering a large extent of country including Bihar, Chota Nagpur, and the east of the North-Western Provinces and of Central India and the Central Provinces. Pressure was in moderate to considerable defect in the depression area, around which there was a feeble cyclonic circulation of the winds. The following gives 8 A.M. data for the depression area:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Remarks.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Raipur	29·485	—·030	—·081	WSW	11	10	0·86	Raining.
Sambalpur	·543?	+·010?	—·034?	S	7	6	0·23	
Chaibassa	·488	+·007	—·014	Calm	2	7	0·14	Showery.
Ranchi	·489	—·009	—·037	SSE	6	8	0·04	Do.
Hazaribagh	·488	—·011	—·042	S	7	10	...	
Gaya	·466	—·027	—·059	NE	3	8	0·81	Showery.
Dehri	·452	—·035	—·062	E	16	10	0·05	
Buxar	·461	—·038	—·059	E	5	10	...	
Benares	·459	—·022	—·054	NE	3	10	...	
Daltonganj	·493	+·005	...	SE	5	4	...	
Allahabad	·459	—·014	+·054	ENE	9	10	...	Thunder.
Cawnpore	·500	+·025	+·001	ENE	3	2	0·42	Showery.
Lucknow	·492	+·022	—·018	E	3	8	...	
Nowgong	·498	+·002	—·033	W	2	10	0·23	
Sutna	·479	+·005	—·032	WNW	6	10	0·77	Raining.
Jubbulpore	·490	—·008	—·068	NW	6	10	3·73	Do.
Seoni	·520	—·012	—·057	NNW	10	10	1·73	Do.
Saugor	·521	—·018	—·039	WNW	9	9	0·67	

The preceding data show that the rainfall was heaviest on the western quadrants of the depression area, where the Arabian Sea monsoon current came under the influence of the ascensional movement within the depression.

August 3rd:—The barometer was rising except over parts of the Central Provinces, of Central India and of the east of Rajputana, where it was decreasing slightly. The depression had drifted slowly in a westerly direction and had filled up somewhat and become smaller. It was

apparently central over Sutna as is shown by the following 8 A.M. data for the storm area:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches	
Seoni .	29·515	—·005	—·054	SSW	7	10	0·84	Drizzling.
Jubbulpore.	·490	0	—·062	W	5	10	0·28	Showery.
Sutna.	·488	+·039	—·036	Calm	3	10	0·70	Ditto.
Nowgong .	·488	—·010	—·036	Calm	2	9	0·14	Ditto.
Allahabad	·490	+·031	—·018	E	10	8	...	Thunder.
Cawnpore .	·518	+·018	+·012	SE	4	6	...	
Jhansi .	·507	—·010	—·015	NNE	3	5	1·52	Continuous rain.
Hoshangabad.	·554	—·005	—·032	SW	8	10	2·92	Raining.
Nagpur .	·553	+·005	—·042	W	14	10	1·68	Continuous rain.

Heavyish rain continued on the south-west quadrant of the storm, but was generally light elsewhere.

August 4th:—The changes in pressure had been small and unimportant and the depression over the eastern states of Central India was practically unchanged in position and character. The following gives 8 A.M. data for the depression area:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inch.	
Jubbulpore.	29·502	+·013	—·047	WNW	3	9	0·38	Showery.
Saugor .	·523	+·003	—·042	SE	6	9	0·45	Ditto.
Sutna .	·488	0	—·033	SE	2	8	0·02	
Nowgong .	·484	—·004	—·034	E	2	2	...	
Allahabad .	·487	—·003	—·024	ENE	8	6	...	
Cawnpore .	·517	—·001	+·009	E	3	0	...	
Jhansi .	·515	+·008	—·008	NE	3	0	0·22	Showery.
Benares .	·503	+·002	—·009	ESE	3	7	...	

Rain had continued to fall off in the neighbourhood of the depression and during the day the storm practically filled up.

During the 5th the weather was quiet generally with light, fairly general, rain over the Peninsula, and very little rain over Northern India. On the morning of the 6th, however, the barometer was falling briskly over the greater part of Northern India and a shallow depression was shown over the east of the North-Western Provinces and of Central India. This depression may have been due to the re-development of the shallow depression which was shown over the same area on the 4th. Rain had increased and extended to most parts of the country, but this accompanied large changes of pressure in the extreme north-west of India and was not due to the reintensification of the depression in North-East India. The depression apparently drifted north-westward along the Himalayas and broke up in the hills during the 8th where the rainfall during the 6th, 7th and 8th was heavy.

Shallow cyclonic storm of the 8th to the 15th:—Pressure had decreased slightly in Deltaic and East Bengal and Burma, and a shallow depression had formed over Deltaic Bengal. The centre lay near Calcutta. Pressure was in large defect over Deltaic Bengal and the north-east of the Bay and the winds were irregularly cyclonic around the depression area. The rainfall in the neighbourhood of the storm was not, however, particularly heavy. The following gives data for the storm area:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches	
Chittagong.	29·438	—·044	—·209	SE	11	10	0·15	Showery.
Barisal .	·407	—·047	—·179	SSE	3	8	1·22	Ditto.
Jessore .	·393	—·043	—·185	SE	3	9	...	
Noakhali .	·435	—·113	...	SE	10	9	2·29	
Narayanganj	·423	—·046	—·173	SE	8	10	0·48	
Comilla .	·442	—·046	...	S	13	8	0·45	
Krishnagar.	·408	—·034	...	NNE	3	7	1·72	Continuous rain.
Calcutta .	·392	—·035	—·173	ESE	3	5	0·63	Showery.
Saugor Island.	·385	—·033	—·183	W	12	10	0·09	
Midnapore .	·398	—·032	—·173	Calm	2	10	...	
Burdwan .	·403	—·021	—·161	E	2	8	0·03	Showery.

August 9th:—The barometer had fallen briskly over the head of the Bay and North-East India while it had risen

briskly to rapidly over North-West India. The depression over Deltaic Bengal was unchanged in position, but had intensified and pressure was more than 0·25″ below the normal in its central area. The following gives 8 A.M. data for the stations in the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Remarks.
	8 A.M. reduced to sea level and constant gravity at Lat. 45	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Chittagong	29·393	—·045	—·267	SE	11	7	0·43	
Barisal	·343	—·064	—·258	SSE	4	8	0·34	
Jessore	·336	—·063	—·263	SE	3	10	0·13	
Noakhali	·386	—·049	...	E	10	10	0·40	
Comilla	·397	—·045	...	E	14	7	0·20	
Krishnagar	·335	—·073	...	E	4	8	0·98	
Calcutta	·311	—·081	—·269	NW	4	10	5·54	Showery.
Saugor Island	·323	—·062	—·261	WSW	14	10	0 20	Ditto.
Burdwan	·330	—·073	—·250	N	3	10	0·71	Ditto.
Midnapore	·348	—·050	—·239	SW	2	10	0·30	Drizzling rain.

Heavy rain was falling within the depression area of which the following were the principal amounts for the 24 hours ending at 8 A.M. on the 9th :—

District.	Station.	Rainfall during 24 hours preceding 8 A. M. of 9th August 1901.
		Inches.
24-Parganas	Alipore (Obsy).	5·54
Monghyr	Jamalpur	5·43
Hooghly	Arambagh	5·38
Angul	Kumarkhole	5·02
Howrah	Howrah	4·22
Mymensingh	Doorgapur	4·20
Jessore	Bangaon	3·68
Faridpur	Goalundo	3·32
Burdwan	Mankur	3·26
Palamau	Garhwa	3·13
24-Parganas	Dum Dum	3·05
Gaya	Pakri Barawad	3·02

August 10th.—The depression was advancing along the trough of low pressure into West Bengal and the eastern districts of the North-Western Provinces. The following data show its position at 8 A M. on the 10th :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Remarks.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Saugor Island.	29·407	+·084	—·190	ENE	13	10	0·62	Drizzling.
Balasore	·398	+·034	—·185	SSW	1	9	0·11	
Midnapore	·400	+·052	—·200	SE	2	4	1·58	Passing showers.
Burdwan	·433	+·103	—·160	E	3	10	1·49	Thunder-storm.
Bankura	·386	+·064	...	Calm	1	10	0·77	
Chaibassa	·375	+·015	—·158?	Calm	1	7	0·21	Drizzling.
Ranchi	·381	0	—·192	SE	5	10	1·17	Showery.
Hazaribagh	·387	—·004	—·189	S	7	10	1·58	Ditto.
Gaya	·370	—·013	—·196	E	4	7	1·19	
Dehri	·356	—·027	—·202	E	8	10	0·79	
Buxar	·377	—·002	—·185	E	4	10	0·47	
Benares	·362	—·011	—·199	E	2	10	0·54	Showery.
Daltonganj	·342	—·047	...	E	3	7	0·49	
Allahabad	·360	+·005	—·201	NE	9	10	0·15	Thunder.
Sutna	·374	—·0.0	—·198	WNW	8	10	1·85	Continuous rain.
Sambalpur	·411	—·007	—·201	SW	7	10	1·95	Raining.

Pressure had been steady over Chota Nagpur and the east of the North-West and Central Provinces, but had increased over the whole of the remainder of the country. The depression of the barometer within the storm was 0·201″ as compared with 0·267″ on the preceding day so that the storm was becoming slightly shallower. The rainfall was not very heavy.

August 11th :—Pressure had decreased over part of Central India and of the neighbouring districts of the Central Provinces, but had continued to increase elsewhere. The storm had continued to advance in a westerly direc-

tion and to become smaller and slighter. The following gives 8 A.M. data for the stations in the storm area :—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	"	"	"				Inches	
Jubbulpore	29·475	+·042	—·143	WSW	11	10	2·34	Raining.
Saugor	·451	—·084	—·172	W	9	9	3·42	Drizzling.
Daltonganj	·460	+·118	...	Calm	5	7	...	
Benares	·430	+·070	—·136	SSW	1	10	0·51	Showery.
Allahabad	·414	+·054	—·154	SSW	7	10	2·59	Continuous rain.
Sutna	·393	+·019	—·185	WSW	7	10	0·37	Ditto.
Cawnpore	·426	—·001	?	ENE	6	8	0·46	
Lucknow	·429	0	—·135	E	5	10	0·34	Showery.
Gorakhpur	·467	+·042	—·099	ENE	3	10	0·33	Ditto.
Mainpuri	·456	+·009	?	E	1	6	2·35	
Jhansi	·447	—·057	—·139	N	9	9	4·09	Raining.
Nowgong	·396	—·065	—·188	E	5	10	4·10	

The preceding data show that the storm centre had advanced to the neighbourhood of Nowgong where the barometer marked 29·396 inches and pressure was 0·188" below the normal. A well-defined cyclonic circulation of the winds existed around the storm centre and heavy rain was falling in the immediate neighbourhood of the depression. The following gives some of the more important falls during the 24 hours ending at 8 A M. on the 11th :—

Province.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 11th August 1901.
			Inches.
North-Western Provinces.	Jhansi	Narhat	7·70
		Garautha	6·20
	Hamirpur	Rath	6·15
		Mahoba	5·28
		Thana	4·95
	Partabgarh	Kunda	4·88
	Etawah	Etawah	4·78
	Hamirpur	Kulpahar	4·73
	Jhansi	Jhansi	4·60
	Hamirpur	Bela Thal	4·48
North-Western Provinces.	Jhansi	Moth	4·33
	Jalaun	Jalaun	4·30
	Jhansi	Talbahat	4·21
	Hamirpur	Bijanagar	4·15
	Fatehpur	Fatehpur	4·07
	Jhansi	Pachwara	4·01
Central Provinces.	Damoh	Damoh	6·00
	Saugor	Khurai	5·60
Central India States.	Bundelkhand	Charkhari	5·06
	Bhopal Agency	Kurwai	4·59
	Gwalior	Fort Gwalior	4·28
		Morar	4·20
	Bundelkhand	Nowgong	4·10

August 12th :—The barometer had again risen over the greater part of the country, more particularly over Central India and the neighbouring parts of the Central Provinces. The storm had apparently changed its course and had recurved to north-east so that the centre apparently lay between Cawnpore and Allahabad. The following gives 8 A M. data for the stations in the storm area :—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	"	"	"				Inches	
Nowgong	29·498	+·102	—·098	W	5	10	2·82	Drizzling.
Sutna	·481	+·080	—·110	WSW	12	10	0·08	
Cawnpore	·462	+·036	?	ENE	3	7	...	
Allahabad	·439	+·025	—·130	ENE	3	10	0·01	
Benares	·458	+·028	—·109	SE	4	10	0·04	
Gorakhpur	·495	+·028	—·076	NNE	1	10	0·39	Showery.
Lucknow	·455	+·026	—·112	E	3	10	0·01	

Pressure was still in moderate to considerable defect in the central area of the storm, but the depression had partly filled up and the wind circulation around the centre was light and very irregular. Heavyish rain continued to be received in the neighbourhood of the storm, but particularly over Central India and the North-Western

Provinces. The following were some of the more important amounts :—

Province.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 12th August 1901.
			Inches.
North-Western Provinces.	Jhansi	Talbehat	6·52
		Jhansi	5·75
		Lalitpur	5·40
	Dehra Dun	Dehra Asylum	4·50
	Jhansi	Barwasagar	4·00
Central India States.	Bundelkhand	Datia	5·23
	Gwalior	Goona	4·94
		Gwalior Residency	4·71
Central Provinces.	Saugor	Khurai	5·65

August 13th :—Pressure had hardly changed during the preceding 24 hours, but the depression had drifted very slightly eastward and the centre apparently lay between Allahabad and Benares. The following gives 8 A.M. data for the storm area :—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	"	"	"				Inches.	
Lucknow	29·495	+·040	—·072	NE	2	10	0·95	
Cawnpore	·505	+·043	—·044	NNE	11	8	0·11	
Allahabad	·450	+·011	—·118	ENE	6	9	0·05	
Sutna	·497	+·016	—·095	WSW	17	10	1·14	Raining.
Benares	·463	+·005	—·103	ESE	1	10	0·14	
Buxar	·487	+·001	—·086	E	3	9	0·54	
Dehri	·497	+·009	—·073	SSW	9	10	0·03	
Daltonganj	·510	0	...	Calm	3	7	0·44	

The above observations show that the depression was practically unchanged in position and character, but the storm continued to become slighter (Allahabad —0·118"), while, at the same time, it was drifting slowly eastward. The winds continued to show a cyclonic circulation around the centre. The Arabian Sea monsoon current was giving comparatively little rain to the interior of the Peninsula and the south of the Central Provinces, but over the north of the Central Provinces and the South Gangetic Plain, where the winds of this current commenced to feed into the storm, the rainfall was moderately heavy. The following were some of the principal falls recorded :—

Province.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 13th August 1901.
			Inches.
North-Western Provinces.	Banda	Girwan	5·19
	Hamirpur	Maudha	4·35
	Banda	Banda	4·34
		Badausa	4·32
Central India States.	Rewah	Tyonthar	3·22
		Ramnagar	3·05
Central Provinces.	Saugor	Saugor	4·57
	Damoh	Damoh	4·35
		Tejgarh	4·22
	Saugor	Rehli	4·14

August 14th :—The pressure changes continued slight and unimportant and the depression over the Gangetic Plain was practically unchanged in position and character. The following gives 8 A.M. data for this area :—

Station.	Pressure 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure Change in past 24 hours.	Pressure Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	"	"	"				Inches	
Agra	29·513	—·006	—·065	NE	2	10	0·75	Showery.
Mainpuri	·496	—·018	—·050	E	0	10	1·23	
Jhansi	·525	—·019	—·078	W	7	9	0·70	Raining.
Nowgong	·485	—·048	—·115	W	4	10	2·21	Ditto
Sutna	·475	—·022	—·116	WNW	13	10	0·80	Showery.
Allahabad	·458	+·008	—·114	E	8	10	...	
Cawnpore	·494	—·011	?	ENE	3	7	0·28	Showery.
Lucknow	·498	+·003	—·073	ENE	4	10	0·90	Ditto
Benares	·482	+·019	—·087	ESE	3	6	0·74	
Daltonganj	·499	—·011	...	Calm	4	5	...	
Buxar	·509	+·022	—·066	ESE	4	8	0·04	

The preceding data show that pressure continued about 0·11" in defect in the central area of the depression and that the winds were irregularly cyclonic around that area. Rain had decreased somewhat, though the falls remained

heavy at some stations on the west and south sides of the storm as is shown below :—

Province.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 14th August 1901.
			Inches.
N. W. Provinces	Mainpuri	Dhandhaus	3·90
	Banda	Kamasin	3·61
	Farukhabad	Chhibraman	3·20
Rajputana and Central India States.	Jhalawar	Chaoni	7·96
		Jhalrapatam	6·38
	Kotah	Iklera	6·00
	Gwalior	Ali Rajpur	5·06
	Kotah	Khairabad	4·88
		Chipabarod	4·38
		Ratlai	3·42
		Atroo	3·24
	Jodhpur	Bali	3·07

August 15th :—The pressure had changed slightly and irregularly. The storm had apparently advanced slowly in a westerly direction and was central near Agra. This is shown by the following data for 8 A.M. :—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	"	"	"				Inches	
Lucknow	29·508	+·010	—·065	SE	5	8	0·13	Showery.
Cawnpore	·507	+·013	—·049	SE	?	4	0·43	Do.
Nowgong	·508	+·023	—·088	W	2	10	0·18	Do.
Jhansi	·504	—·021	—·097	S	4	8	0·08	Do.
Mainpuri	·487	—·009	—·066	E	1	8	0·21	
Agra	·489	—·024	—·087	SE	4	9	0·12	
Delhi	·513	—·004	—·050	E	2	2	0·60	
Jaipur	·518	—·048	—·090?	NNE	4	9	1·30	

The storm still preserved about the same intensity, but the winds around the centre were light and the cyclonic circulation was not very well defined. Rain was less general and less heavy than on the previous day and no heavy falls of rain were recorded in the neighbourhood of the storm area.

During the day the storm finally filled up. The storm was of the usual character during the first part of its existence. It was formed over Deltaic Bengal and thence passed north-westward along the trough of low pressure as far as the eastern states of Central India. In this position its previously regular career was interrupted and its progress became irregular. On the 11th, if the barometric reading at Nowgong were correct, and the heavy rainfall at that station and at Jhansi appear to support this distribution of pressure, the centre of the storm lay close to Nowgong. Between 8 A. M. on the 11th and 8 A. M. on the 12th the centre apparently advanced north-eastward to the neighbourhood of Allahabad and during the succeeding 24 hours drifted even further east-ward to the neighbourhood of Benares. On the 13th, however, this easterly movement ceased and the depression again advanced westward, reaching Agra on the morning of the 15th. In this position the storm apparently filled up.

The storm thus lasted from the 8th to the 15th and during the last five days of its existence was remarkable for the apparently very erratic movements of its centre.

Slight cyclonic storm of the 15th to the 18th :—On the 15th August when the depression over Upper India was filling up pressure was falling slightly over the Bay and at 8 A. M. the observations from the Bay coasts showed a small area of uniform pressure over the north of the Bay. The winds had fallen lighter at Saugor Island, but the wind's direction at the head of the Bay showed no trace of cyclonic influence.

August 16th :— On the morning of the 16th pressure was steady over the Bay area, but there had been a marked change in the winds. Calms were reported over the interior of Bengal, while the wind had shifted to north-north-east at Saugor Island thus indicating that there was a small depression in course of formation over the north of the Bay. The following gives marine information for this day in illustration :—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	"			
S.S. *Purulia*	Rangoon.		29·710	...	...	4 P.M. frequent squalls of wind and rain.
S.S. *Chanda*	Bimlipatam.		·633	SW	4	Fine.
S.S. *Kistna*	19 08	93 20	·605	NW	2	Moderate sea. 4 P.M. passing squalls.
S.S. *Commilla*	20 10	92 36	·461	SW	2	Drizzling rain.
S.S. *Deepdale*	20 22	87 28	·517	W	6	High sea. 4 A.M. thick with rain.
S.S. *Rheinfels*	20 25	90 00	·442	SW	3	
S.S. *Shahzada*	21 11	89 51	·527	SE	3	Fine.
S.S. *Nevada*	Calcutta.		·545	...	...	Noon, fine.
S.S. *Onda*	Ditto.		·494	...	...	Noon, cloudy.

The following gives 8 A.M. data for this day for the northern Bay ports:—

STATION.	PRESSURE.			WIND.				REMARKS.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inches.	
Waltair	29·577	—·011	—·052	W	14	8	...	Sea smooth.
Gopalpur	·546	+·007	—·052	Calm	9	3	0·02	Sea slight.
Puri	·543	—·007	...	NW	9	8	...	Sea rough.
Cuttack	·536	+·001	—·066	Calm	2	10		
False Point	·544	+·015	—·057	WNW	7	10	0·41	Thunder-storm.
Balasore	·531	+·018	—·052	Calm	1	7		
Saugor Island.	·517	+·004	—·081	NNE	8	8	...	Thunder.
Calcutta	·515	—·007	—·083	Calm	1	8	0·01	
Barisal	·529	—·008	—·089	SE	3	8	0·07	
Chittagong	·571	0	—·099	SSE	6	5	0·19	
Akyab	·584	—·007	—·113	SE	2	3	0·10	
Bassein	·654	—·004	—·096	SW	5	6	0·37	
Diamond Island.	·656	·006	—·099	WSW	13	8	3·39	Showery.
Rangoon	·679	+·021	—·084	SW	7	10	0·02	
Moulmein	·706	+·021	—·079	SW	2	10	0·75	Drizzling.

The two preceding tables show that pressure was steady over the north of the Bay, but that the barometer read lower than usual more particularly off the Arakan coast. There was very little rain falling around the Bay, but at the stations of Moulmein, Akyab, Chittagong and False Point there had been light showers and at Diamond Island a heavy fall of 3·39″ during the previous 24 hours. There was very little marine information, but the winds reported showed apparently a small central area of depression over the north-west of the Bay.

August 17th:—The barometer had been steady on the Orissa and Ganjam coasts, but had risen briskly over Burma and Bengal. The depression had become better defined and was shown as a shallow storm lying off the Orissa and Ganjam coasts, but apparently with its centre in the extreme north close to False Point. The winds were irregularly cyclonic in the neighbourhood of the depression, but were comparatively light in force. The following gives 8 A.M. data for the ports in the north of the Bay:—

STATION.	PRESSURE.			WIND.				REMARKS.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	
	"	"	"				Inches	
Cocanada	29·612	0	—·029	WSW	7	8	...	
Waltair	·584	+·007	—·043	NW	10	9	0·11	Sea smooth.
Gopalpur	·549	+·003	—·057	SSW	7	8	0·01	Wind variable.
Puri	·543	0	...	NW	8	8	0·01	Sea slight.
Cuttack	·540	+·004	—·060	Calm	1	10	0·69	
False Point	·542	—·002	—·061	WNW	8	10	1·22	Thunder storm.
Saugor Island.	·558	+·041	—·041	E	6	8	0·66	Sea smooth.
Balasore	·578	+·047	?	N	0	7	0·88	Nor' wester.
Calcutta	·574	+·059	—·026	ENE	3	9	...	
Barisal	·582	+·053	—·038	SSE	3	4	0·03	
Chittagong	·633	+·062	—·038	E	6	6	0·05	
Akyab	·654	+·070	—·043	SE	2	9	1·24	Showery.

The increase in the definiteness of the depression was due to a barometric rise in the regions surrounding the storm and not to any increase in the intensity of the storm itself which was a shallow depression of very little importance. The observations from ships showed that south-westerly moderate winds prevailed over the centre and north of the Bay. The following gives marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S.S. *Ismaila*	16 32	86 13	29·596	W	4	Noon, heavy squalls of wind and rain.
S.S. *Nawab*	Rangoon.		·717	...	...	4 A.M. passing clouds.
S.S. *Commilla*	17 03	93 43	·495	SSW	4	Passing rain squalls.
S.S. *Yanariva*	18 29	85 23	·502	SW	4	Dull. 4 A.M. showery.
S.S. *Rewa*	18 33	85 20	·565	WSW	2	Dull cloudy. Noon rainy
S.S. *Kokinur*	18 40	87 17	·520	SW	3	Light rain.
S.S. *Deepdale*	18 47	85 17	·557	SW	5	Fresh sea and cloudy.
S.S. *Nevasa*	Lower Gasper.*		·577	...	...	Noon, fine.
S.S. *Onda*	Kulpee.		·545	...	...	Noon, fine.

* Noon position.

August 18th :—The increase of pressure had continued and the depression in the north-west of the Bay had partly filled up and was of even less importance than on the preceding day. The following gives 8 A.M. data for the stations around the north of the Bay :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches	
Cocanada .	29·629	+·017	—·013	SW	7	10	0·03	Sea rough.
Waltair .	·610	+·026	—·017	SE	6	10	...	Sea smooth.
Gopalpur .	·571	+·022	—·045	S	4	8	0·17	
Puri . .	·586	+·043	...	Calm	9	7	1·63	
Cuttack .	·575	+·035	—·025	W	1	10	1·78	
False Point.	·567	+·025	—·035	W	8	10	...	
Balasore .	·569	—·009	?	NNE	2	7	0·29	Showery.
Saugor Island.	·553	—·005	—·046	SE	12	10	0·05	Thunder.
Calcutta .	·595	+·021	—·007	E	4	6	0·67	Showery.
Barisal .	·612	+·030	—·011	SSE	4	3	0·11	
Chittagong .	·653	+·020	—·020	SE	9	2	...	
Akyab .	·698	+·044	—·001	S	2	10	0·38	Raining.

The following gives marine data for this day :—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Deepdale* .	16 15	82 35	29·587	SW	6	Strong sea and heavy showers.
S.S. *Chupra* .	16 35	86 45	·651	SW	5	4 P.M. heavy rain.
S.S. *Orissa* .	17 32	87 08	·547	WSW	2	Smooth sea.
S.S. *Chelydra* .	17 58	90 19	·672	SW	2	Fine. 4 P.M. rainy.
S.S. *Nevasa* .	18 43	90 04	·613	SSW	4	Overcast. Noon, occasional wind and rain squalls.
S.S. *Purulia* .	18 54	90 25	·640	SW	2	Midnight, squally.
S.S. *Nairung* .	19 24	86 17*	·524	W	3	Noon, squally with heavy rain showers.
S.S. *Ismaila* .	19 57	87 51	·556	Var.	4	Passing showers.
S.S. *Onda* .	20 08	87 55	·558	SSW	4	Overcast. Noor, slight rain squalls.
S.S. *Yanariva* .	20 20	87 21	·542	SW	4	Cloudy. 4 A.M. dull rainy.
S.S. *Kistna* .	Akyab.		·693	...	...	Midnight, occasional squalls.

* Noon position.

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Kohinur* .	Lower Gasper.		·511	S	2	Cloudy. 4 A.M. light rain.
S.S. *Rewa* .	D. Harbour.*		·568	W	2	Cloudy. 4 A. M. showery.
S.S. *Shahsada* .	Chittagong.		·598	...	...	8 P. M. overcast.
S.S. *Kapurthala*	Near Calcutta.		·612	...	...	Noon, fine.
S.S. *Madura* .	Calcutta.		·592	...	...	4 P.M., cloudy.

* Noon position.

The two preceding tables show that the depression was very slight and unimportant, the centre lying apparently over the north-west of the Bay as defined by the stations of Saugor Island, Balasore and False Point.

August 19th :—Pressure had again been nearly steady over the Bay area. The feeble depression had crossed the Orissa coast travelling north-westward and was shown over the southern districts of Chota Nagpur. The following gives data for the storm area :—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inch.	
Chaibassa .	29·538	—·025	—·039	WSW	2	4	0·11	Showery.
Midnapore .	·575	—·004	—·037	S	6	2	0·16	
Bankura .	·546	—·019	...	NW	6	9	0·13	
Ranchi .	·559	—·027	—·033	WSW	7	9	0·66	Showery.
Sambalpur .	·578	—·012	—·042	SSW	5	3	0·40	
Saugor Island .	·579	+·026	—·019	SW	19	7	0·12	Sea slight.

The depression filled up during the day. It was at no time of any importance and the rainfall in its neighbourhood was light and scattered.

During the 20th, 21st and 22nd pressure was lowest and considerably below the normal over the Punjab and was highest and about normal over the Peninsula. Very steep gradients hence prevailed over North-West India and the strong winds from the Arabian Sea striking against the North-West Himalayas occasioned a very heavy fall of rain at the hill stations in the Kumaun Himalayas.

Feeble cyclonic storm of the 21st to the 27th :—On the 21st the barometer was falling slowly over Burma, North-East India and the greater part of the Bay area, and on the following day, the 22nd, a shallow depression

had appeared over West and South-West Bengal. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches	
False Point.	29·558	—·010	—·061	W	11	10	2·14	Heavy rain.
Balasore .	·533	—·024	—·065	S	2	4	...	Thunder.
Saugor Island	·541	—·015	—·072	SSW	15	8	...	
Midnapore .	·530	—·022	—·089	SE	3	2	...	
Burdwan .	·550	—·013	—·069	S	2	4	0·05	
Chaibassa .	·516	—·022	—·075	Calm	2	3	...	
Ranchi .	·534	—·015	—·064	SSE	3	10	0·79	Showery.
Bankura .	·497	—·030	...	Calm	2	5	...	
Hazaribagh	·545	—·003	—·066	S	4	10	0·07	Showery.
Gaya .	·529	—·010	—·074	SE	2	5	...	
Dehri .	·522	—·010	—·077	E	4	10	0·48	
Arrah .	·519	+·002	...	W	1	7	0·53	
Patna .	·542	+·022	—·076	ENE	4	10	0·03	Showery.
Buxar .	·543	+·012	—·062	E	2	10	0·27	
Benares .	·535	+·003	—·062	S	1	10	0·09	
Daltonganj	·524	—·017	...	Calm	3	5	0·09	

The preceding data show that pressure was in moderate to considerable defect in Bengal, but that the winds were irregular and generally light, while the rainfall was scattered and generally unimportant except at False Point.

August 23rd :—The barometer had fallen rapidly over Deltaic Bengal and briskly in other parts of the province. A centre of depression had hence been formed within the shallow area of low pressure noticed on the previous day, the centre lying, apparently, between Saugor Island and Barisal. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches.	
False Point	29·510	—·048	—·114	W	9	10	1·00	Showery.
Balasore .	·484	—·049	—·118	WSW	4	10	0·69	Drizzling.
Saugor Island.	·434	—·107	—·182	W	15	8	1·35	Thunder.
Calcutta .	·438	—·103	—·178	Calm	3	10	0·12	

STATION	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches.	
Barisal .	29·449	—·119	—·191	ESE	3	8	0·07	
Midnapore	·457	—·073	—·165	SW	3	10	0·02	
Jessore .	·451	—·117	—·182	NE	3	10	...	
Chaibassa .	·482	—·034	—·123	WSW	2	8	2·93	Drizzling.
Ranchi .	·491	—·043	—·115	NNW	1	10	0·75	Do.
Burdwan .	·469	—·081	—·152	NE	2	8	0·25	
Krishnagar	·462	—·093	...	ENE	3	8	0·47	Thunder.
Faridpur .	·481	—·106	—·179	E	4	10	0·02	
Berhampore	·462	—·092	—·167	E	2	6	0·50	Showery.
Raniganj .	·461	—·063	...	Calm	1	7	0·49	
Bankura .	·439	—·038	...	Calm	3	7	0·12	
Darbhanga	·517	—·036	—·113	Calm	2	9	4·01	Continuous rain.
Patna .	·494	—·048	—·123	Calm	3	10	0·17	Showery.
Gaya .	·508	—·021	—·100	NW	3	10	1·62	Raining.
Hazaribagh	·500	—·045	—·111	Calm	5	10	0·16	Showery.
Dinajpur .	·488	—·081	—·154	NE	4	8	1·46	Do.
Bogra .	·485	—·083	—·152	E	...	10	0·26	

The above shows that pressure was as much as 0·191" below the normal at Barisal and that strong cyclonic winds were blowing at the stations in Deltaic Bengal. Rain was general over Bengal, but was not generally very heavy.

August 24th :—The barometer had fallen slightly to rapidly in Bengal, the change since the previous morning having been as much as—0·125" at Burdwan, and the storm centre had been transferred north-westward to the neighbourhood of that station. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches.	
Balasore .	29·448	—·036	—·157	WSW	6	10	2·10	Drizzling.
Saugor Island	·383	—·051	—·236	WSW	22	10	1·81	Squally.
Barisal .	·433	—·016	—·208	SSE	7	6	0·41	
Calcutta .	·370	—·068	—·247	SSW	6	10	2·65	Drizzling.
Jessore .	·401	—·050	—·232	S	5	9	0·24	
Krishnagar.	·396	—·066	...	ENE	4	10	1·06	

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches	
Faridpur .	29·451	-·030	—·212	SE	4	8	0·12	Passing showers.
Berhampore	·399	—·063	—·231	ENE	5	10	0·05	
Bogra. .	·447	—·038	—·200	E	...	10	0·12	
Burdwan .	·344	—·125	—·279	ENE	3	10	1·75	Continuous rain.
Midnapore .	·374	—·083	—·250	S	3	10	1·49	Raining.
Bankura .	·349	—·090	...	NW	3	9	0·41	
Raniganj .	·388	—·073	...	NE	2	0	2·95	
Chaibassa .	·414	—·068	—·199	WSW	2		0·14	Drizzling.
Ranchi .	·446	—·045	—·168	WNW	7	10	0·66	Showery.
Hazaribagh	·450	—·050	—·167	NE	12	10	1·36	Drizzling.
Naya Dumka	·418	—·068	—·196	ENE	2	10	0·41	

The preceding table shows that the storm had intensified and that the pressure at Burdwan was 0·279″ lower than the average. Gradients were steep over Bengal and strong winds were blowing over that province, more particularly at the coast stations. Rain continued general and had become heavier.

August 25th:—The barometer had risen rapidly in Bengal and had fallen slightly over Chota Nagpur and the east of the North-Western and Central Provinces to which area the storm was now transferred. The following data indicate its position at 8 A.M.:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches	
Chaibassa .	29·471	+·057	—·147	Calm	4	8	4·29	Continuous rain.
Ranchi .	·443	—·003	—·188	ESE	7	10	3·09	Do.
Bankura .	·480	+·131	...	E	6	9	0·32	
Hazaribagh	·443	—·007	—·185	SSE	12	10	1·67	Showery.
Naya Dumka	·507	+ 089	—·111	SE	4	10	0·35	
Gaya . .	·447	—·005	—·167	NE	7	9	0·76	
Dehri .	·433	—·022	—·174	E	6	10	1·58	Passing showers.
Arrah .	·468	+·013	...	W	3	9	1·35	
Patna .	·488	+·035	—·134	ENE	8	10	1·38	Showery.
Buxar .	·465	—·006	—·146	E	7	8	1·22	
Benares .	·443	—·040	—·162	NE	3	9	0·61	
Allahabad .	·479	—·007	—·126	N	9	10	0·77	Showery.
Daltonganj	·367	—·080	...	NE	5	8	2·66	
Sambalpur .	·530	—·003	—·128	SW	10	10	2·23	Continuous rain.

The depression was now central between Hazaribagh and Benares in Lat. 24° N. and Long. 84° E. and had hence advanced west-north-westward during the previous 24 hours. It had commenced to fill up, but pressure was still nearly one-fifth of an inch below the normal at the centre. Strong cyclonic winds were blowing in South Bengal, while the winds were light from north-east in North Bihar. Strong south-west winds were established at the head of the Bay where the weather was showery with a rough sea. Rain continued general over Bengal, but was diminishing in amount.

August 26th:—Pressure changes had been large. The barometer had risen everywhere, but particularly in parts of Bengal where the change amounted to nearly one-fifth of an inch. The storm had advanced in a west-north-westerly direction during the previous 24 hours. The following data indicate the position of the storm at 8 A.M.:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	REMARKS.
	"	"	"				Inches	
Seoni . .	29·646	+·021	— 024	WSW	8	10	2·00	Drizzling.
Jubbulpore .	·576	+·010	—·076	WNW	1	10	5 44	Continuous rain.
Saugor .	·653	+·028	—·103	WNW	10	9	1 22	Drizzling.
Nowgong .	·600	+·040	—·023	NNW	1	10	0·77	Raining.
Sutna .	·540	+·010	—·077	ENE	9	10	1·42	Continuous rain.
Allahabad .	·580	+·101	—·029	ENE	15	8	0·02	Gale.
Cawnpore .	·613	+·062	+·002	ENE	5	8	1·54	
Benaras .	·573	+·130	—·035	E	5	6	0·17	
Buxar .	·603	+·138	—·014	E	8	7	...	
Daltonganj .	·578	+·211	...	E	7	2	0·07	
Dehri . .	·598	+·165	—·013	ESE	23	4	...	

The above shows that the storm had advanced into the eastern states of Central India and was central near Sutna. It had continued to fill up, and the pressure deficiency at Sutna was less than one-tenth of an inch. Heavyish rain was falling to the south-west of the storm

area, the following having been the largest amounts recorded :—

Province.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 26th August 1901.
			Inches.
Central India States.	Maihar	Maihar	3·62
	Rewah	Rewah	2·73
	Bundelkhand	Panna	2·11
	Nagode	Nagode Hospital	2·00
Central Provinces.	Jubbulpore	Jubbulpore	5·44
	Ditto	Murwara	5·09
	Ditto	Sihora	3·26
	Damoh	Hatta	2·83

August 27th:—Pressure had continued to increase and the storm to fill up. The following gives data for the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Remarks.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches.	
Raipur	29·647	+·004	—·007	SSW	12	10	0·33	
Seoni	·653	+·007	—·015	WNW	7	10	0·84	Drizzling.
Jubbulpore	·614	+·038	—·033	NNE	7	8	2·02	Continuous rain.
Saugor	·663	+·010	+·017	N	8	10	2·00	Ditto.

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Remarks.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches.	
Nowgong	29·654	+·054	+·031	NE	2	8	0·16	Showery.
Sutna	·639	+·099	+·016	ENE	4	8	0 10	
Allahabad	·633	+·053	+·020	E	10	7	...	
Benares	·647	+·074	+·033	E	4	4	...	
Daltonganj	·654	+·076	...	E	6	1	...	
Buxar	·666	+·063	+·044	E	5	6	0·66	Passing showers.
Cawnpore	·665	+·052	+·050	ESE	3	7	1·40	Showery.

The storm was almost unchanged as regards position, but it had become shallower and was of very little importance. It still determined showers to the Central Provinces and Central India. The depression disappeared during the 27th.

Shallow cyclonic storm of the 28th to 31st:—On the 28th pressure was giving way over the Central Provinces and the winds exhibited an irregular circulation around a centre midway between Jubbulpore and Hazaribagh. This very shallow depression drifted very slowly in a westerly direction, and on the morning of the 29th was shown near Jubbulpore. It was somewhat better defined than on the preceding day, but was still a very shallow and diffused depression. It was, however, determining very showery weather to the more central parts of the country. On the 30th the depression was practically unchanged in position and character. It was occasioning some local heavy falls of rain over the central parts of the country. On the 31st the depression was still in existence and the storm lasted till the 3rd September, but its influence on the weather continued slight and unimportant.

Summary of the Reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

The following gives the reports of snowfall on the Himalayas during August :—

I—Kashmir and Punjab Himalayas.

(1) *Kashmir*:—The observer at Gulmarg telegraphed on the 9th that the higher mountains were covered with fresh snow during the previous night, and on the 16th that slight snow had fallen over the tops of the higher mountains during the previous day.

II—North-Western Provinces Himalayas.

(1) *Garhwal*:—There were slight falls of snow on the 14th, 15th, 22nd and 23rd of August, but the falls were confined to the perpetual snows. The depth of snow was estimated at about 3 or 4 inches.

(2) *Almora*:—Snow fell as under :—

Malla Johar.

1st August	1 foot.
7th and 8th August	2 feet.
12th August	1 foot.
15th do.	1 „
	5 feet.

On the Malla Danpur, Byans, Chandas and Darma no snow fell during the month, and the snowfall on the Malla Johar was less than in the previous year.

Summary of special Storm Reports.

The following gives a statement of the chief local storms of which reports were received during the month:—

5th August:—There was a thunderstorm at Pachmarhi during the night. The storm lasted only eight minutes. No rain fell.

6th August:—A thunderstorm occurred at Srinagar between noon and 2 P.M. There was no rain.

7th August:—A nor'wester passed over Amini Divi in the early morning between 3 A.M. and 7 A.M. The wind blew a gale from north-west and west, the storm commencing and ending very abruptly.

A slight thunderstorm passed over Srinagar between 8 A.M. and noon.

21st August:—A thunderstorm occurred at Simla commencing at 8 P.M. from north-west. Heavy rain commenced at 8-50 P.M. and lasted till 5 A.M. of 22nd, during which time about 8·27″ of rain fell.

29th August:—A thunderstorm passed over Srinagar between 6 P.M. and 9 P.M. The storm was followed by rain of which ¼-inch was measured.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea:—The meteorological conditions over this area did not differ much from those which usually obtain during the month of August. The monsoon current, on the mean of the whole area, was of about normal strength during the first 26 days and unusually feeble during the remainder of the month when its average daily strength varied between 2·7 and 3·6, the normal being 4·3. The feebleness of the current was most strongly exhibited in the south-east where light unsteady winds were experienced by almost all the vessels passing through that region. The only days of strongish bursts of winds during the month were the 6th, 7th, 8th, 14th and 20th when the current was from 2 to 12 per cent. stronger than usual.

Bay of Bengal:—Weather was much less disturbed than usual over the Bay during the greater part of the month due to the almost complete absence of cyclonic storms. The monsoon current was, on the mean of the whole month, of normal intensity but was, as in the previous month, deflected largely to east over the centre and north of the Bay. The variations in the strength of the current from day to day, as indicated by the available data, were neither large nor rapid, thus indicating that the current was somewhat steadier than usual.

Winds were more or less above their normal August intensity from the 4th to the 11th and again on the 23rd and 24th; of normal strength on the 2nd and 12th and weaker than usual on all other days. They were strongest on the 8th when their average strength, as deduced from the data of 20 vessels, was 5·0 and feeblest on the 18th when they averaged only 3·0 in intensity. The current was also very weak during the last three or four days of the month when it was at least 10 per cent. below its normal strength.

Equatorial Belt:—There are no data available for the eastern half of this area. In the western half conditions were approximately normal except in the region comprised between Long. 68° and 78° E and the Equator and Lat. 4° N where winds were very unsteady, more especially during the second half of the month when light irregular airs were experienced on several occasions. The rainfall returns of Zanzibar show that there was no abnormal determination of the trades current to East Africa, the total precipitation of the month at that station being about 35 per cent. below the normal.

Temperature of the Air.

The variations of the mean temperature of the month from the normal were related to the distribution of the rainfall. The rainfall of the month was light in the north-west including North Bombay, Rajputana and the Punjab and was also light in Southern India. It was fairly continuous in other parts of the country—more especially the central districts of India.

The mean maximum temperature of the month was

above the normal over the greater part of the Punjab, of Rajputana, of North Bombay and of the Bombay coast. The excess was greatest in the West and Central Punjab and Upper Sind, and was more than 2° in amount at the stations for which comparative data are given below :—

Province.	Station.	Mean maximum temperature. Actual, August 1901.	Normal, August.	Variation of actual from normal, August, 1901.
		°	°	°
West Punjab	Peshawar	103·9	99·0	+4·9
	Mooltan	103·2	100·3	+2·9
Central Punjab	Sialkot	96·6	94·0	+2·6
	Khushab	102·0	99·7	+2·3
	Montgomery	103·5	101·4	+2·1
Upper Sind	Jacobabad	106·3	103·6	+2·7

The mean maximum temperature of the month was also above the normal over the Peninsula to the south of Lat. 16° N. The excess was generally slight in this area, but was more than 2° at the following places :—

Station.	Mean maximum temperature. Actual, August 1901.	Normal, August.	Variation of actual from normal, August, 1901.
	°	°	°
Negapatam	95·7	92·9	+2·8
Trichinopoly	98·5	96·0	+2·5
Cochin	85·6	83·2	+2·4

It was also generally in excess over Bengal, Upper Burma and Arakan, but the excess in this area was also small and unimportant.

The mean maximum temperature of the month was generally below the normal over the remainder of India. The deficiency was greatest and slight to considerable in amount over the central parts of the country—particularly in Berar, the Central Provinces, Bundelkhand and Baghelkhand where the variations were more than 2°. The following gives comparative data for the stations in this area :—

Station.	Mean maximum temperature. Actual, August 1901.	Normal, August.	Variation of actual from normal, August, 1901.
	°	°	°
Amraoti	82·8	86·4	−3·6
Chanda	84·8	87·8	−3·0
Akola	84·2	87·1	−2·9
Nagpur	84·6	87·3	−2·7
Khandwa	83·2	85·7	−2·5
Raipur	83·8	86·2	−2·4
Jubbulpore	82·4	84·8	−2·4
Nowgong	86·0	88·3	−2·3
Saugor	81·3	83·5	−2·2
Indore	80·5	82·6	−2·1

The mean maximum temperature was also low over the plains at the foot of the Kumaun Himalayas, the variation exceeding 2° at Umballa and Roorkee. The following gives data for these stations :—

Station.	Mean maximum temperature. Actual, August 1901.	Normal, August.	Variation of actual from normal, August, 1901.
	°	°	°
Roorkee	88·3	90·7	−2·4
Umballa	90·0	92·2	−2·2

The absolute maxima were not very remarkable. This is shown by the following table which gives the highest maximum temperatures recorded during the month in the different provinces of India together with a comparison with previously recorded maxima :—

Province or Division.	Station.	Highest maximum temperature recorded in August 1901.	Date on which recorded.	Highest maximum temperature recorded in August previous to 1901.	Year in which recorded.
		°		°	
Burma	Mandalay	99·5	6th Aug.	103·4	1891
Assam	Silchar	96·6	10th „	100·6	1899 and 1900.
Bengal	Bankura	97·1	26th „	95·6	1888 and 1900.

Province or Division.	Station.	Highest maximum temperature recorded in August 1901.	Date on which recorded.	Highest maximum temperature recorded in August previous to 1901.	Year in which recorded.
		°		°	
Orissa	Cuttack	97·4	14th August	99·4	1880
Bihar	Dehri	98·4	5th ,,	98·4	1893
Chota Nagpur	Daltonganj	97·1	7th ,,	96·1	1899
North-Western Provinces and Oudh.	Mainpuri	100·3	5th ,,	101·3	1900
Punjab	Mooltan	111·4	20th ,,	111·4	1899
Sind	Jacobabad	113·2	20th ,,	116·1	1900
Rajputana	Bikaner	106·1	5th ,,	110·0	1899
Gujarat	Bhuj	96·3	19th ,,	101·3	1899
Central India	Sutna	92·9	5th ,,	98·4	1877
Central Provinces.	Chanda	91·7	21st ,,	99·2	1899
Berar	Akola	90·5	28th ,,	99·8	1899
West Coast	Cochin	88·0	13th and 14th ,,	89·5	1899
Bombay Deccan	Sholapur	93·2	31st ,,	101·0	1877
Mysore	Mysore	91·1	28th ,,	92·6	1899
Madras Coast	Cuddalore	101·2	12th ,,	102·3	1891 and 1897.
Madras Deccan	Cuddapah	100·2	12th, 20th and 21st.	104·2	1899
South India	Trichinopoly	102·1	17th ,,	104·7	1888

The following gives the highest temperatures recorded during the month at stations where the maximum exceeded 105°:—

Station.	Highest actual maximum temperature, July 1901.
	°
Jacobabad	113·2
Mooltan	111·4
Peshawar	110·5
Montgomery	110·0
Dera Ismail Khan	109·7
Khushab	109·4
Sirsa	106·3
Sialkot	106·2
Bikaner	106·1

The mean minimum temperature of the month was above the normal over the greater part of India. It was in slight local defect at the foot of the Kumaun Himalayas, over the east of the Central Provinces, and the neighbouring parts of Ganjam and of Orissa as well as locally at Bijapur, Negapatam, Akyab, Toungoo and Rangoon.

The variations were generally small and only equalled or exceeded 1° at the following stations:—

Station.	Mean minimum temperature.		
	Actual, August, 1901.	Normal, August.	Variation of actual from normal, August, 1901.
	°	°	°
Chanda	73·6	75·1	−1·5
Waltair	77·7	78·8	−1·1
Toungoo	73·9	74·9	−1·0

The minimum temperature, on the mean of the month was above the normal over the remainder of India, but the variations were small except in the Punjab and Rajputana and locally at Mergui. The following gives comparative data for stations at which the variation was 2° or more:—

Station.	Mean minimum temperature.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August, 1901.
	°	°	°
Bikaner	82·4	78·0	+4·4
Sambhar	78·1	75·8	+2·3
Jaipur	77·2	75·0	+2·2
Ajmer	76·6	74·5	+2·1
Sialkot	81·4	77·3	+4·1
Lahore	82·3	78·9	+3·4
Montgomery	84·4	81·0	+3·4
Sirsa	82·9	79·5	+3·4
Peshawar	81·0	77·8	+3·2
Khushab	83·2	80·7	+2·5
Mooltan	84·4	82·0	+2·4
Mergui	74·2	72·0	+2·2

The mean temperature of the month was below the normal average over the central parts of the country and the head of the Peninsula. Within this area the variations

were generally small, but were more than 1° at the following stations :—

Station.	Mean daily temperature. Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	°	°	°
Chanda	79·2	81·5	−2·3
Akola	78·3	80·2	−1·9
Amraoti	77·7	79·5	−1·8
Nagpur	79·4	80·9	−1·5
Jubbulpore	78·0	79·4	−1·4
Sambalpur	81·3	82·5	−1·2
Raipur	79·4	80·5	−1·1
Khandwa	78·7	79·8	−1·1

The mean temperature was also locally lower than usual in four small areas, *viz.*, at the foot of the Kumaun Himalayas, and in some parts of Assam and of Burma. In all these cases the variations were unimportant. Over the remainder of India the temperature, on the mean of the month, was above the normal. The excess was more than 2° over the West and Central Punjab and Western Rajputana, as well as locally at a few places in the southern half of the Peninsula. The following gives comparative data for the stations at which the excess exceeded 2° :—

Station.	Mean daily temperature. Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	°	°	°
Peshawar	92·5	88·4	+4·1
Sialkot	89·0	85·6	+3·4
Bikaner	90·3	87·2	+3·1
Montgomery	94·0	91·2	+2·8
Mooltan	93·8	91·1	+2·7
Sirsa	91·2	88·5	+2·7
Lahore	90·0	87·5	+2·5
Kushab	92·6	90·2	+2·4
Trichinopoly	88·3	86·1	+2·2
Colombo	83·2	81·1	+2·1

The temperature at the hill stations differed only slightly from the normal. In Baluchistan the day temperature was considerably above and the night temperature slightly below the normal, on the mean of the month, so that the mean temperature wan slight excess. In the Kashmir Himalayas both the day and night temperatures were in excess of the normal, while in the Kumaun Himalayas the day temperatures were in defect and the night temperatures in excess of the average. At Darjeeling both the maximum and minimum temperatures, on the mean of the month, were in excess. At the central and southern hill stations the variations from the normal were small and unimportant.

The following gives the mean temperature of the month at the extra Indian stations :—

Station.	Mean daily temperature. Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	°	°	°
Colombo	83·2	81·1	+ 2·1
Bushire	91·0	90·1	+ 0·9
Aden	86·4	86·2	+ 0·2
Jask	88·7	89·5	— 0·8
Muscat	83·8	...	...
Perim	90·2	89·1	+ 1·1
Zanzibar	76·1	75·9	+0·2
Seychelles	76·0	77·5	— 1·5
Mauritius	68·0	68·6	— 0·6

The above shows that the variations from the normal were in general slight and unimportant except at Colombo.

The chief features of the mean temperature conditions of the month were as follows :—

1. The day temperature was in defect and the night temperature was normal, or in trifling defect, all over the central parts of the country so that the mean temperature was in slight defect.

2. Both the day and night temperatures and consequently also the mean temperature were in slight to considerable excess over the greater part of North-Western India.

3. Both the day and night temperatures and consequently also the mean temperature were in moderate to slight defect at the foot of the Kumaun Himalayas.

4. The day and night temperatures and the mean temperature were in excess over the Kashmir Himalayas.

5. The day and night temperatures and consequently also the mean temperature were in excess over Southern India.

6. The variations elsewhere were small, but in most places the mean temperature was in slight excess.

The following gives temperature data of the month for 56 meteorological divisions of the Empire :—

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	83·2	75·1	79·2	8·0	15·5	−0·9	+1·0	−1·9
	Lower Burma (Deltaic)	84·1	76·2	80·1	7·9	13·9	−0·4	+0·7	−1·1
	Central do.	87·8	75·4	81·7	12·4	20·8	+0·2	−0·1	+0·3
	Upper do.	90·2	76·5	83·4	13·7	21·6	−0·4	+0·4	−0·8
	Arakan	84·7	76·5	80·6	8·2	14·4	+0·3	−0·7	+1·0
Bengal and Assam	Eastern Bengal	87·5	78·4	82·9	9·1	15·1	+0·8	+1·1	−0·3
	Assam (Surma)	90·7	77·0	83·9	13·7	21·3	+1·5	+0·3	+1·2
	Do. (Brahmaputra)	88·1	78·2	83·2	9·9	17·6	−0·5	+0·7	−1·2
	Deltaic Bengal	89·1	79·2	84·1	9·9	17·6	+1·1	+0·8	+0·3
	Central do.	89·4	79·1	84·3	10·4	18·6	+1·0	+0·9	+0·1
	North do.	89·1	78·4	83·8	10·7	18·1	+0·8	+1·2	−0·4
	Bengal Hills	71·2	52·5	61·9	18·7	29·7	+0·5	+1·5	−1·0
	Orissa	88·4	78·5	83·5	10·0	19·6	+0·6	+0·1	+0·5
	Chota Nagpur	87·0	75·5	81·3	11·5	21·5	+0·2	+1·1	−0·9
	South Bihar	89·2	79·4	84·4	9·9	21·3	0	+0·3	−0·3
	North do.	89·7	79·1	84·4	10·5	19·2	+0·5	+0·8	−0·3
North-Western Provinces and Oudh.	North-Western Provinces (East)	90·1	79·7	85·0	10·4	22·8	+0·4	+1·1	−0·7
	Oudh (South)	90·6	79·1	84·9	11·5	21·5	0	+0·6	−0·6
	Do. (North)	90·6	79·2	84·9	11·4	19·6	+1·3	+1·3	0
	North-Western Provinces (Central)	89·4	78·6	84·0	10·8	21·8	−0·1	+0·9	−1·0
	Do. do. (West)	90·5	79·6	85·1	10·9	20·5	−0·1	+1·1	−1·2
	Do. do. (East Sub-montane)	89·6	79·4	84·5	10·2	19·3	−0·5	+0·5	−1·0
	Do. do. (West do.)	86·8	76·5	81·7	10·3	20·3	−1·4	+0·4	−1·8
	Do. do. (Hills)	68·9	60·8	64·9	8·1	16·7	−1·1	+1·1	−2·2
Punjab	Punjab (South-East)	90·6	80·8	85·7	9·8	21·7	−1·0	+1·7	−2·7
	Do. (South)	94·9	81·0	88·0	13·9	26·8	+2·0	+3·4	−1·4
	Do. (Central)	97·6	82·3	90·0	15·3	32·7	+1·6	+3·4	−1·8
	Do. (Submontane)	93·7	79·9	86·8	13·8	27·3	+0·4	+1·9	−1·5
	Do. (Hills)	85·2	62·6	74·0	22·6	37·6	+1·0	+1·4	−0·4
	Do. (North)	103·9	81·0	92·5	22·9	37·6	+4·9	+3·2	+1·7
	Do. (West)	102·6	83·7	93·2	18·9	34·5	+2·4	+2·8	−0·4
Bombay and Malabar Coast Districts (Madras).	Malabar	83·9	75·2	79·5	8·7	13·6	+1·3	+1·1	+0·2
	Madras (South Central)	91·0	72·6	81·8	18·4	25·7	+1·0	+1·4	−0·4
	Coorg	69·2	62·8	65·7	6·4	13·8	−1·3	+0·8	−2·1
	Mysore	84·5	66·5	74·1	15·0	23·5	+0·9	+0·3	+0·6
	Konkan	83·3	76·4	79·8	6·9	10·7	+0·4	+1·0	−0·6
	Bombay Deccan	82·5	69·4	76·0	13·1	21·4	−0·4	+0·4	−0·8
	Hyderabad (North)	82·4	69·6	76·0	12·8	23·1	...	...	...
	Khandesh	85·8	71·6	78·9	14·2	23·4	+0·7	+1·2	−0·5
Central Provinces and Berar.	Berar	83·5	72·5	78·0	11·1	21·4	−3·3	−0·4	−2·9
	Central Provinces (West)	83·7	74·3	79·0	9·4	17·5	−2·4	+0·2	−2·6
	Do. (Central)	82·6	72·8	77·7	9·8	20·8	−2·5	−0·5	−2·0
	Do. (East)	84·7	76·0	80·4	8·8	17·1	−2·2	−0·1	−2·1
Bombay (North)	Gujarat	88·2	77·2	82·7	11·0	17·4	+0·4	+0·7	−0·3
	Kathiawar and Cutch	87·7	76·8	82·3	10·9	17·5	+0·7	+0·4	+0·3
	Sind	97·1	79·9	88·5	17·2	26·1	+1·1	+0·5	+0·6
	Baluchistan Hills	95·8	60·8	78·4	35·0	49·0	+3·3	−0·7	+4·0
Rajputana and Central India.	Central India (East)	83·7	74·7	79·2	9·1	18·9	−1·6	+0·7	−2·3
	Rajputana (East), Central India (West)	88·1	76·8	82·5	11·3	22·0	+0·6	+2·1	−1·5
	Do. (West)	96·0	80·1	88·1	15·9	29·0	+1·8	+4·4	−2·6
Madras	East Coast (North)	88·4	78·0	83·2	10·4	19·8	0	−0·6	+0·6
	Hyderabad (South)	86·7	72·1	79·4	14·7	22·1	+0·1	+0·6	−0·5
	Madras (Central)	92·7	75·2	84·0	17·6	24·7	+1·9	+0·7	+1·2
	East Coast (Central)	92·9	78·2	85·6	14·7	22·9	−0·3	+0·2	−0·5
	Do. (South)	96·1	77·0	86·5	19·1	27·8	+1·8	+0·7	+1·1
	Madras (South)	95·4	76·3	85·5	19·1	25·3	+1·2	+0·9	+0·3

The hottest area in India during the month defined, by the isotherm of 90°, included the central, north, and west divisions of the Punjab. The following gives data for this area :—

Station.	Mean daily temperature.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	°	°	°
Central Punjab	90·0	87·5	+2·5
North „	92·5	88·4	+4·1
West „	93·2	90·6	+2·6

The following gives a brief statement of the more important changes in the temperature conditions during the month :—

Temperature at the commencement of the month was in defect over the Western desert, along the foot of the Himalayas, and over the Bay area and was in excess elsewhere—more especially in part of the Punjab. On the 2nd rain was general except in the north-west and over part of the North-Western Provinces, and the mean temperature was low except over the West Punjab, over the east of the North-Western Provinces and Bihar and over Upper Burma. The excess was not large except in the West Punjab, where the day temperatures were high asis shown below :—

Station.	Maximum temperature.		
	Actual, 2nd August.	Normal, 2ndAugust.	Variation of actual from normal, 2nd August.
	°	°	°
Peshawar	109·0	101·3	+7·7
Rawalpindi	99·6	95·3	+4·3
D. I. Khan	105·7	101·4	+4·3
Khushab	104·3	100·8	+3·5

During the 3rd, 4th and 5th there was very little rain over Northern India and during these three days the mean temperature was higher than the average over the whole area from Assam to the Indus. The following gives comparative data for this large area :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	3rd August.	4th August.	5th August.
	°	°	°
Bengal	+1·4	+1·7	+2·3
Orissa	+0·2	+1·5	+1·9
Bihar	+0·6	+2·2	+2·8
Chota Nagpur	+1·8	+2·7	+3·8
North-Western Provinces and Oudh.	+2·3	+3·2	+5·0
Punjab	+2·7	+2·8	+3·8
Sind	+1·6	+1·3	+2·1
Rajputana	+2·4	+4·8	+6·4
Central India	+0·9	+2·2	+3·4

During the same time rain continued over the north of the Peninsula and the temperature remained low, but in Southern India the rainfall took off and the mean temperature rose to above the average. The following gives comparative data for the Peninsular divisions :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	3rd August.	4th August.	5th August.
	°	°	°
Central Provinces	—1·4	+0·5	+2·3
Berar	—5·1	—2·1	—2·1
West Coast	+1·1	+1·4	+0·7
Bombay Deccan	+1·1	+0·2	—0·7
Mysore	+0·6	+0·4	+0·7
Madras Coast	—0·7	—0·2	+0·7
Madras Deccan	+0·6	+0·8	—2·0
South India	0	+1·7	+1·5

On the 6th there occurred a heavy fall of rain over the east of the Punjab and the west of the North-West Provinces and a rapid fall of temperature took place over that area. The following gives comparative data of the maximum and minimum temperatures and the change of the mean

temperature on that date for several stations in that area :—

Station.	Variation from normal of: Maximum temperature, 6th August.	Variation from normal of: Minimum temperature, 6th August.	Mean temperature change during past 24 hours.
	°	°	°
Ludhiana	−10·1	−4·0	−8·8
Umballa	− 9·4	−2·6	−6·5
Delhi	− 5·2	−3·3	−8·9
Sirsa	− 5·0	−0·5	−8·3
Meerut	− 8·1	−0·7	−8·1
Roorkee	− 7·2	+0·5	−4·3
Bareilly	− 6·6	+0·6	−7·0
Dehra Dun	− 5·2	+0·2	−4·3

During the 7th, 8th and 9th there was general rain over nearly the whole country due in part to a depression over Bengal. Temperature was low very generally. The following gives comparative data for all districts for these three days :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of: 7th August.	8th August.	9th August.
	°	°	°
Burma	0	−0·1	−0·5
Assam	+0·3	−1·4	+0·4
Bengal	+2·2	+0·9	+1·7
Orissa	+2·9	+1·2	−2·6
Bihar	+1·2	−1·1	−2·3
Chota Nagpur	+4·6	+2·6	−1·6
North-Western Provinces and Oudh.	−0·5	−2·1	−1·3
Punjab	−2·0	−5·4	−4·8
Sind	+0·9	0	−0·8
Rajputana	−0·9	−0·8	−0·5
Gujarat	−0·9	−0·6	−0·3
Central India	+0·2	−0·6	−0·1
Central Provinces	0	−1·2	−2·0
Berar	−0·5	−2·0	−3·2
West Coast	+0·8	−0·2	+0·3
Bombay Deccan	+0·1	+0·2	−0·5
Mysore	−1·3	−0·5	−0·9
Madras Coast	−0·4	−0·4	−1·8
Madras Deccan	+0·5	+1·3	+0·1
South India	+0·6	+1·1	−0·5

Temperature was hence most largely in defect in the Punjab. The depression of temperature was more marked in the day than in the night temperature and was more than 10° in amount on the following days and at the following places :—

Date.	Station.	Variation from normal of: Maximum temperature of date.	Minimum temperature of date.
		°	°
7th August	Sirsa	−15·9	− 3·3
	Ludhiana	−13·6	− 3·7
	Umballa	−10·5	− 2·2
8th „	Khushab	−13·5	− 8·3
	Sialkot	−12·3	− 2·8
	Lahore	−11·0	− 7·7
	Rawalpindi	−10·8	− 9·6
9th „	Dera Ismail Khan	−12·7	− 3·6
	Rawalpindi	−12·2	−14·2?
	Khushab	−11·7	− 4·2

A slight cyclonic storm or whirl was developed over Bengal on the 8th and 9th, reached West Bengal and the east of the North-Western Provinces on the 10th and the east of Central India and the west of the North-Western Provinces on the 11th. Rain accompanied this depression and the mean temperature was low in Burma, Central India, Berar and the North-Western and Central Provinces on the 10th and 11th. The following gives comparative data for these areas for these two days :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. o: 10th August.	11th August.
	°	°
Burma	−1·2	−0·9
North-Western Provinces and Oudh	+0·1	+0·5
Central India	−0·3	−2·5
Central Provinces	−1·3	−3·2
Berar	−1·0	−2·4

At the same time rain completely ceased over Gujarat, Rajputana and the neighbouring districts and temperature

in consequence rose quickly and was above the normal over these provinces on these two days :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	10th August.	11th August.
	°	°
Gujarat	+0·8	+1·6
Rajputana	+2·2	+3·4

During the next four days *viz.*, from the 12th to the 15th, a good deal of rain fell over Burma, North-East India and the North-Western and Central Provinces, and comparatively little over North-West India and the south of the Peninsula. In consequence the mean temperature was generally in excess over North-West India and the south of the Peninsula and generally in defect in other parts of the country during this period. The following gives comparative temperature data for the 14th for all divisions in illustration :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 14th August.	Mean minimum temperature, 14th August.	Mean temperature 14th August.
	°	°	°
Burma	—1·4	—0·8	—1·1
Assam	+1·4	+0·9	+1·2
Bengal	—2·8	—0·6	—1·7
Orissa	+2·7	—3·5	—0·4
Bihar	—2·2	—0·6	—1·4
Chota Nagpur	—5·6	—0·3	—3·0
North-Western Provinces and Oudh	—4·5	—0·7	—2·6
Punjab	+1·7	+2·2	+2·0
Sind	—0·9	—1·0	—1·0
Rajputana	—0·8	+2·9	+1·1
Gujarat	—1·1	+0·1	—0·5
Central India	—9·6	—2·0	—5·8
Central Provinces	—7·0	—1·9	—4·5
Berar	—4·7	—0·7	—2·7
West Coast	+1·3	+1·1	+1·2
Bombay Deccan	—1·2	+0·5	—0·4
Mysore	+1·2	+1·1	+1·2
Madras Coast	+2·8	—0·8	+1·0
Madras Deccan	+0·5	—1·0	—0·3
South India	+2·7	+2·2	+2·5

During the next five days, *viz.*, from the 16th to the 20th the rainfall over the whole country was very light and scattered for the time of year. Temperature commenced to rise generally on the 16th and by the 18th was above the normal average in all parts of the country. The following gives comparative temperature data for this day in illustration :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 18th August.	Mean minimum temperature, 18th August.	Mean temperature, 18th August.
	°	°	°
Burma	+0·1	+0·4	+0·3
Assam	+2·8	+0·3	+1·6
Bengal	+1·9	+1·2	+1·6
Orissa	+1·4	—1·0	+0·2
Bihar	+2·5	+2·0	+2·3
Chota Nagpur	+0·6	+1·5	+1·1
North-Western Provinces and Oudh.	+2·8	+1·9	+2·4
Punjab	+1·6	+3·8	+2·7
Sind	+5·4	+2·9	+4·2
Rajputana	+0·3	+3·8	+2·1
Gujarat	+0·8	+1·5	+1·2
Central India	—1·0	+1·3	+0·2
Central Provinces	+0·2	+1·0	+0·6
Berar	+2·4	+2·1	+2·3
West Coast	+1·3	+2·1	+1·7
Bombay Deccan	+1·6	+1·2	+1·4
Mysore	+1·7	+0·5	+1·1
Madras Coast	+1·6	+0·6	+1·1
Madras Deccan	+3·7	+0·4	+2·1
South India	+2·3	+2·0	+2·2

Temperature was hence most largely in excess over the Punjab and more particularly in the submontane division of that province. The excess remained large over the Punjab until the 23rd when a fall of temperature set in. The following gives comparative data for this province for each day from the 16th to the 22nd :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	16th Aug.	17th Aug.	18th Aug.	19th Aug.	20th Aug.	21st Aug.	22nd Aug.
	°	°	°	°	°	°	°
Punjab	—1·8	+0·7	+2·7	+5·1	+6·4	+6·7	+4·1

The hottest places, relatively to the normal, were the submontane stations of Peshawar and Sialkot and the following were the daily variations of maximum, minimum and mean temperatures from the normal at these stations from the 16th to the 22nd :—

Date.	Station.	Variation from normal of Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
16th August	Sialkot	− 9·8	+ 1·3	− 4·3
	Peshawar	− 0·1	+ 2·2	+ 1·1
17th ,,	Sialkot	− 0·7	+ 4·8	+ 2·1
	Peshawar	− 0·3	+ 0·9	+ 0·3
18th ,,	Sialkot	+ 4·4?	+ 7·9?	+ 6·2?
	Peshawar	+ 3·3	+ 3·1	+ 3·2
19th ,,	Sialkot	+ 8·7?	+ 8·3?	+ 8·5?
	Peshawar	+ 6·7	+ 5·1	+ 5·9
20th ,,	Sialkot	+ 9·2	+ 10·6	+ 9·9
	Peshawar	+ 9·0	+ 6·6	+ 7·8
21st ,,	Sialkot	+ 13·0	+ 8·4	+ 10·7
	Peshawar	+ 12·2	+ 7·2	+ 9·7
22nd ,,	Peshawar	+ 12·7	+ 9·2	+ 11·0
	Sialkot	+ 8·2	+ 8·6	+ 8·4

On the 21st the rainfall, though still very scattered, was increasing and on the 22nd became moderately heavy over the Central and North-Western Provinces while remaining light elsewhere. The following gives comparative temperature data for all divisions for the 21st and 22nd :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 21st August.	22nd August.
	°	°
Burma	+ 1·2	+ 0·9
Assam	+ 1·2	+ 1·0
Bengal	+ 2·3	+ 3·1
Orissa	+ 2·9	+ 2·6
Bihar	+ 3·1	+ 0·7
Chota Nagpur	+ 3·5	+ 3·8
North-Western Provinces and Oudh	+ 0·7	− 0·8
Punjab	+ 6·7	+ 4·1
Sind	+ 2·6	+ 1·4
Rajputana	+ 3·3	− 0·2
Gujarat	+ 0·6	− 0·4
Central India	+ 2·2	+ 0·2
Central Provinces	+ 1·5	0
Berar	+ 1·2	+ 0·2
West Coast	+ 1·0	+ 1·2
Bombay Deccan	+ 1·5	+ 0·8
Mysore	+ 1·6	+ 1·6
Madras Coast	+ 1·2	+ 1·4
Madras Deccan	+ 3·4	+ 2·7
South India	+ 2·5	+ 2·4

On the 23rd a depression appeared over Deltaic Bengal; thence it advanced to the neighbourhood of Burdwan on the 24th, to Chota Nagpur on the 25th and to the eastern states of Central India on the 26th where it filled up. It gave moderately heavy, but localised rainfall to the districts through which it passed or to which it approached, which reduced temperature to some extent chiefly in the Central Provinces. The following gives comparative data for Burma, North-East India, the North-Western Provinces, Sind, the Central Provinces, Berar, the Bombay Deccan and Central India from the 23rd to the 26th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 23rd August.	24th August.	25th August.	26th August.
	°	°	°	°
Burma	− 0·4	+ 0·6	+ 0·7	+ 0·3
Assam	+ 1·3	+ 0·2	+ 1·2	− 0·6
Bengal	+ 2·1	+ 0·2	− 0·1	+ 0·4
Bihar	+ 0·5	− 1·4	+ 0·3	− 0·1
Chota Nagpur	+ 2·5	− 0·3	− 3·5	− 1·7
Orissa	+ 0·4	− 2·3	− 3·9	+ 0·2
North-Western Provinces and Oudh.	− 1·4	− 0·5	+ 0·2	+ 0·7
Sind	− 0·1	0	− 1·5	− 1·0
Central Provinces	− 2·2	− 3·0	− 4·0	− 4·7
Berar	− 3·5	− 3·1	− 3·2	− 3·0
Central India	− 2·2	− 1·8	− 1·3	− 2·6
Bombay Deccan	− 0·7	− 1·1	− 1·0	− 1·4

The maximum or day temperatures were low at this time at several central stations the variations from the normal having been 8° or more in amount at the following places:—

DATE.	STATION.	Variation from normal of maximum temperature of date.
		°
23RD AUGUST	Nagpur	— 8·4
24TH "	Raipur	—10·0
	Sambalpur	— 9·3
25TH "	Do.	—10·9
	Chaibassa	—10·1
	Cuttack	— 8·7
26TH "	Jubbulpore	—11·1
	Nagpur	— 9·9
	Nowgong	— 9·5
	Sambalpur	— 8·6

In other parts of the country during these four days the weather was fine or fine with occasional passing showers and the mean temperature was generally excessive. This is shown below:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	23rd August.	24th August.	25th August.	26th August.
	°	°	°	°
Punjab	+2·4	+2·0	+1·1	+2·5
Rajputana	—0·7	—0·4	+0·1	+1·2
Gujarat	—1·3	—0·6	+0·7	—0·1
West Coast	+0·6	+1·3	+1·3	+1·5
Mysore	+0·4	—0·8	—1·4	+1·5
Madras Coast	+0·4	+0·1	+0·8	+2·6
Madras Deccan	+0·9	+1·5	+1·0	+1·0
South India	+2·3	+0·9	+0·8	+2·7

The depression noticed above continued as a shallow residual depression over the central parts of the country from the 27th till the close of the month, and during that time showers were received daily at the more central stations. In consequence the mean temperature remained steadily low over the central districts of India as is shown by the following comparative data:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	27th August.	28th August.	29th August.	30th August.	31st August.
	°	°	°	°	°
Central India	+0·2	+1·1	—0·2	—1·7	—0·2
Central Provinces	—3·4	—2·3	—2·8	—2·3	—1·3
Berar	—0·8	—1·9	—7·7	—3·9	—2·6

The above deficiency was mainly due to depression in the day temperatures which in some cases were 10° or more below the normal. These instances are shown below:—

DATE.	STATION.	Variation from normal of maximum temperature of date.
		°
28th August	Chanda	—10·3
29th "	Akola	—13·2
	Khandwa	—11·1
	Chanda	—10·8
30th "	Khandwa	—10·1

In most other parts of the country the heat was generally excessive, but from the 29th to the 31st, it was lower than usual in Assam, Bengal and the North-West Provinces. The following gives comparative data for all divisions (except the more central divisions) from the 27th to the 31st.

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	27th August.	28th August.	29th August.	30th August.	31st August.
	°	°	°	°	°
Burma	+0·1	+0·9	+0·8	+0·2	—0·7
Assam	+0·1	—1·5	—2·6	+0·8	+2·0
Bengal	+0·5	—0·2	—0·9	—0·6	+0·8
Orissa	+0·6	+0·7	0	—1·1	+1·1
Bihar	+1·0	+0·2	—2·0	—3·0	+0·4
Chota Nagpur	—0·5	+0·7	—1·2	—1·1	—0·7
North-Western Provinces and Oudh.	+0·9	+0·7	—0·6	—2·5	—0·7
Punjab	+4·2	+4·0	+4·3	+1·5	+0·8

Province or Division.	Variation from normal of mean temperature of 24hours preceding 8 A.M. of				
	27th August.	28th August.	29th August.	30th August.	31st August.
	°	°	°	°	°
Sind	−1·1	−0·8	−0·3	−0·8	−0·1
Rajputana	+4·0	+4·3	+4·0	+0·7	+3·3
Gujarat	+0·1	+1·1	+0·5	+0·3	+1·4
West Coast	+1·3	−1·4	+1·1	+0·5	+1·0
Bombay Deccan	−0·1	−1·5	−0·5	+2·3	+1·3
Mysore	+2·8	+2·7	+0·9	+2·8	+2·6
Madras Coast	+0·4	−0·3	+0·3	+0·8	+0·5
Madras Deccan	+1·9	+1·6	+0·7	+0·6	+0·5
South India	+3·3	+0·7	+1·7	+1·4	+2·9

Temperature was hence most largely in excess over the Punjab and Rajputana where both the day and night temperatures were considerably higher than usual. This is shown in the following table which gives comparative data for those stations at which the variation of the mean temperature exceeded +6°:—

Date.	Station.	Variation from normal of		
		Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
27th August	Sirsa	+7·8	+8·0	+7·9
	Sialkot	+8·2	+7·1	+7·7
	Peshawar	+7·4	+6·2	+6·8
	Lahore	+6·7	+5·4	+6·1
28th "	Sialkot	+7·6	+8·5	+8·1
	Lahore	+7·3	+7·0	+7·2
	Peshawar	+7·8	+5·8	+6·8
	Sirsa	+6·5	+6·5	+6·5
29th "	Sialkot	+9·3	+10·2	+9·8
	Sirsa	+7·5	+8·6	+8·1
	Peshawar	+7·1	+6·5	+6·8
	Lahore	+6·2	+6·0	+6·1

Winds.

Winds were on the average of the month stronger than usual at Port Blair, Rangoon and Diamond Island and below the normal at Akyab, while the steadiness was everywhere above the average. The following gives comparative data:—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Port Blair	92	82	+10	337	242	+95
Rangoon	80	65	+15	126	110	+16
Diamond Island	84	78	+ 6	243	193	+50
Akyab	81	63	+18	61	85	−24

The direction was about normal at Akyab, but was more westerly than usual at the remaining stations. This is shown below:—

Station.	Mean wind direction.		
	Actual, August 1901.	Normal, August.	Westerly deflection.
	°	°	
Port Blair	S 68 W	S 49 W	+19
Rangoon	S 51 W	S 38 W	+13
Diamond Island	S 61 W	S 45 W	+16
Akyab	S 2 E	S 1 E	...

The monsoon current varied in strength at the head of the Bay. It was stronger than usual at Saugor Island and Chittagong and weaker than usual at Calcutta and False Point. The steadiness was, however, everywhere in

excess of the average. The following gives comparative data :—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Saugor Island . .	69	57	+12	350	315	+35
Chittagong . . .	77	61	+16	213	142	+71
Calcutta . . .	66	56	+10	90	115	—25
False Point . . .	72	53	+19	223	238	—15

The direction of the wind was more westerly than usual at Saugor Island and False Point, and more easterly than the normal at Calcutta. The following gives direction data for these stations :—

Station.	Mean wind direction.	
	Actual, August 1901.	Normal, August.
	°	°
Saugor Island	S 23 W	S 13 W
False Point	S 58 W	S 47 W
Calcutta	S 21 E	S 14 E

The wind was south-south-easterly to east-south-easterly over West Bengal and east-north-easterly in the east of the North-Western Provinces and was generally more easterly than usual over this area. The wind was also steadier than usual, but, except at Allahabad, was weaker than the normal. The following gives data :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Easterly deflection.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
				°	°				
Hazaribagh .	24	8	+16	S 23 E	S 4 W	+27	145	185	— 40
Darbhanga .	82	60	+22	S 67 E	S 77 E	—10	76	111	— 35
Allahabad .	29	4	+25	N 75 E	N 16 E	+59	185	134	+ 51

South-easterly to east-south-easterly winds also prevailed over the Upper Sub-Himalayas except at Dehra Dun blowing steadily at most stations. The velocity was high at Ludhiana, but was generally lower than usual at the other stations. This is shown below :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
				°	°			
Dehra Dun . .	25	14	+11	S 19 W	S 26 W	25	24	+ 1
Roorkee . .	34	22	+12	S 30 E	S 24 E	40	58	—18
Meerut . .	26	10	+16	S 32 E	S 55 E	26	48	—22
Lahore . .	11	25	—14	S 69 E	S 80 E	56	69	—13
Ludhiana .	37	11	+26	S 78 E	S 59 E	69	39	+30

The wind's direction was very nearly normal in the Indus Valley, but was slightly more northerly than usual at Peshawar where also the force of the wind was low The following gives comparative data for direction and velocity :—

Station.	Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual, August 1901.	Normal, August.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	°	°			
Peshawar . . .	N 28 E	N 41 E	43	93	—50
Jacobabad . . .	S 43 E	S 44 E	94	101	— 7
Kurrachee . .	S 67 W	S 67 W	400	397	+ 3

In Northern Rajputana the wind was more westerly and lighter than usual, while in South Rajputana the wind was about normal. The following gives data for Jaipur and Deesa in illustration :—

Station.	Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual, August 1901.	Normal, August.	Westerly deflection.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	°	°				
Jaipur . . .	N 89 W	N 66 W	+23	82	118	—36
Deesa	S 49 W	S 52 W	— 3	287	278	+ 9

The variations in the wind's direction were directly related to the variations in the distribution of pressure. The trough of low pressure in the north was somewhat more

sharply defined than usual, and hence the winds were more easterly to the north-ward and more westerly to the south-ward of the trough than usual. The following table gives comparative data of steadiness and velocity for the Bay Islands, Burma and the different divisions of Northern India :—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August	Variation of actual from normal, August 1901.
Bay Islands	91	87	+ 4	337	242	+95
Burma	82	69	+13	143	129	+14
Bengal	71	58	+13	218	191	+27
Orissa	72	53	+19	223	238	−15
Bihar	82	60	+22	76	111	−35
Chota Nagpur	24	8	+16	145	185	−40
North-Western Provinces.	29	13	+16	69	66	+ 3
Punjab	28	29	− 1	56	67	−11
Sind	79	74	+ 5	247	249	− 2
Rajputana	62	59	+ 3	185	198	−13

The Bombay monsoon current was below its normal strength in the Arabian Sea as judged by the mean force of the winds recorded on board vessels entering the port of Bombay. Winds in the interior of the Peninsula were, on the other hand, slightly stronger than usual.

In the Deccan the wind direction was approximately normal while the steadiness was greater than usual and the force above the normal. The following gives comparative data :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Belgaum	89	89	0	S 54 W	S 71 W	543	517	+ 26
Sholapur	83	81	+ 2	S 78 W	W	411	296	+115
Poona	94	89	+ 5	S 79 W	S 85 W	416	327	+ 89
Akola	90	82	+ 8	N 77 W	N 67 W	230	200	+ 30
Buldana	88	76	+12	N 79 W	N 65 W	231	195	+ 36
Khandwa	97	84	+13	N 75 W	N 81 W	275	199	+ 76
Nagpur	89	64	+25	S 77 W	N 80 W	264	191	+ 73
Hyderabad (Deccan)	98	84	+14	N 88 W	N 81 W	221	203	+ 18

Along the West Coast similar conditions prevailed, as is shown by the following data for Bombay and Karwar :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual, from normal, August 1901.	Actual, August 1901.	Normal, August.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Bombay	92	83	+ 9	S 84 W	S 81 W	382	376	+ 6
Karwar	91	73	+18	N 84 W	N 87 W	109	87	+22

West-south-west winds prevailed all over South India while the steadiness and velocity were generally about normal. The following gives data for the stations in this area :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal August 1901.	Actual, August 1901.	Normal, August.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Salem	56	75	−19	S 53 W	S 57 W	97	93	+ 4
Chitaldroog	87	87	0	S 77 W	S 83 W	250	259	− 9
Bangalore	85	90	− 5	S 77 W	S 79 W	240	188	+52
Hassan	90	89	+ 1	S 85 W	N 87 W	105	106	− 1
Mysore	87	86	+ 1	S 83 W	S 84 W	297	333	−36
Madras	56	60	− 4	S 67 W	S 41 W	150	166	−16
Bellary	99	87	+12	W	N 87 W	321	263	+58

The following gives comparative data of the steadiness and velocity of the winds in the areas under the influence of the Bombay current :—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Central Provinces.	93	74	+19	270	195	+ 75
Berar	89	79	+10	231	198	+ 33
Madras Deccan	99	86	+13	321	233	+ 88
Bombay Deccan	89	86	+ 3	457	380	+ 77
West Coast	92	78	+14	246	232	+ 14
Madras Coast	56	60	− 4	150	166	− 16
Mysore	87	88	− 1	223	222	+ 1
South India	56	75	−19	97	93	+ 4

The preceding table shows that the steadiness of the wind was approximately normal over the Peninsular divisions, but that the winds were stronger than usual especially in the interior. The following table gives the mean daily wind velocity (derived from Table I) for several stations along the West Coast and in the interior of the Peninsula :—

Station.	Mean wind velocity in miles per diem.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Bombay	384	379	+ 5
Ratnagiri	192	247	— 55
Mangalore	48	70	— 22
Bellary	322	257	+ 65
Belgaum	542	497	+ 45
Sholapur	413	264	+19
Poona	415	336	+ 79
Akola	230	190	+ 40
Amraoti	307	146	+161
Nagpur	233	192	+ 41
Khandwa	276	182	+ 94

The preceding data show that the winds, on the mean of the month, were below the normal in strength in the Konkan coast districts and were stronger than usual in the interior of the Peninsula including the Deccan, Berar and the Central Provinces. This was in accordance with the abnormal features of the pressure distribution, *viz.*, the slight excess in the south and the moderate defect within the trough of low pressure in the north.

At the hill stations the winds varied irregularly from the normal. At Quetta and at the Kashmir hill stations the directions were approximately normal while the steadiness and velocity varied irregularly from the average. This is shown below :—

Station.	Mean Steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
				°	°			
Quetta	29	34	— 5	N 68 W	N 80 W	25	76	—51
Leh	26	39	—13	S 38 W	S 69 W	55	39	+16
Srinagar	35	5	+30	N 66 W	N 51 W	86	82	+ 4
Kailang	68	63	+ 5	S 89 W	S 76 W	36	41	— 5

At the central Himalayan stations the winds varied considerably, but at Chakrata both the steadiness and velocity were much above the normal. This is shown below :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
				°	°			
Simla	19	22	— 3	N 3 W	N 32 E	88	81	+ 7
Chakrata	76	46	+30	S 9 E	S 75 W	213	111	+102
Ranikhet	37	25	+12	S 82 W	S 58 W	71	50	+ 21

At Katmandu the wind was east-north-easterly and at Darjeeling south-easterly while at Darjeeling the force was lower than usual. The following gives data for these two stations :—

Hill Station.	Mean wind direction.		Mean wind velocity in miles per diem.		
	Actul, August 1901	Normal, August.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	°	°			
Katmandu	N 69 E	N 77 W	21	18	+ 3
Darjeeling	S 38 E	81 E	66	95	—29

At the central and southern hill stations the winds, unlike those over the neighbouring plains, were less westerly than usual, but the velocity was generally above the average and the steadiness was generally high. This is shown below :—

Hill Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
				°	°			
Mount Abu	86	73	+13	S 49 W	S 60 W	311	254	+ 57
Pachmarhi	58	75	—17	N 62 W	N 84 W	310	206	+104
Chikalda	81	74	+ 7	N	N 41 W	245	266	— 21
Wellington	68	51	+17	S 42 W	S 69 W	92	88	+ 4

At Aden the wind was lighter than usual, while at Perim

the strength was about normal. At Zanzibar the wind blew from the west of south instead of from the east of south, but the steadiness and velocity at this station were about normal. The following gives data for this station :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, August 1901.	Normal percentage, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Westerly deflection.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
				°	°				
Zanzibar .	74	76	—2	S 3 W	S 9 E	+12	174	168	+6

The chief features of the mean air movement over the Indian area during the month were—

(1) The monsoon current was of normal strength in the Bay and somewhat below the normal over the Arabian Sea.

(2) The winds were more westerly than usual over the Bay and Burma and more easterly than usual over the interior of Bengal and parts of the Gangetic Plain.

(3) Winds were of practically normal intensity on the West Coast.

(4) The winds were stronger than the normal over the whole of the interior of the Peninsula and the central districts of India.

Humidity and Cloud.

The variations of the mean humidity of the month from the normal were irregular. Humidity was relatively low over Baluchistan and the West and North Punjab. The deficiency was most marked at Peshawar for which comparative data are given below :—

Station.	Relative humidity.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	%	%	
Peshawar	54	61	—7

Humidity was approximately normal over the Western desert but was in defect over the south of the Peninsula and the Madras Deccan. The deficiency in this area was greatest at Bellary comparative data for which station are given below :—

Station.	Relative humidity.		
	% Actual, August 1901.	% Normal, August.	Variation of actual from normal, August 1901.
	%	%	
Bellary	57	03	—6

The air was also drier than usual over Bengal. In other parts of the country the relative humidity was generally in excess. This excess was greatest and more than 5% in three areas. The following gives comparative data for the stations in these areas :—

Area.	Station.	Relative humidity.		
		Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
		%	%	
N.-W. Provinces West.	Meerut . . .	84	77	+7
	Roorkee . . .	84	78	+6
Central parts of India	Akola . . .	84	76	+8
	Nagpur . . .	85	79	+6
Mysore	Chitaldroog . . .	82	76	+6

The variations in the mean pressure of the aqueous vapour and of the ralative humidity over the Bay Islands and Burma were small and unimportant as is shown by the following data :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901	Normal, August	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Port Blair . . .	·910	·893	+·017	85	86	—1
Cocos Island . .	·903	·904	—·001	86	88	—2
Rangoon . . .	·888	·888	0	91	90	+1
Diamond Island . .	·882	·873	+·009	86	87	—1
Akyab	·926	·939	—·013	91	88	+3

The vapour tension at most of the Bengal stations was about normal, but the mean temperature was somewhat higher than usual and the relative humidity was hence in defect. The only exception was at False Point where the aqueous vapour pressure was in excess, the temperature normal and the relative humidity in slight excess. The following gives data for the stations in this area :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Chittagong . .	·918	·906	+·012	85	87	−2
Calcutta . .	·958	·957	+·001	85	88	−3
Saugor Island .	·974	·988	−·014	84	87	−3
False Point . .	·953	·933	+·020	86	85	+1

In West Bengal and the east of the North-Western Provinces the absolute humidity was generally in slight excess, but the mean temperature was in excess and the relative humidity was normal or in defect. This is shown below :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, August 1901.	Normal, August	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Hazaribagh . .	·786	·799	−·013	82	85	−3
Darbhanga . .	·974	·961	+·013	83	84	−1
Allahabad . .	·975	·946	+·029	83	83	0

In the Upper Sub-Himalayas both the absolute and relative humidities were generally in excess, at some places considerably so. The following gives comparative data for the stations in this area :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Dehra Dun . .	·813	·793	+·020	89	87	+2
Roorkee . .	·912	·864	+·048	84	78	+6
Meerut . . .	·949	·878	+·071	84	77	+7
Lahore . . .	·918	·868	+·050	67	65	+2
Ludhiana . .	·910	·874	+·036	72	73	−1

In the Indus Valley the absolute humidity was everywhere in excess—at Jacobabad largely so—but the mean temperature was at the same time higher than usual—particulary at Peshawar—and the relative humidity was hence normal or in defect of the normal. Comparative data for these stations are given below :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, August 1901.	Normal, August	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Peshawar . . .	·791	·775	+·016	54	61	−7
Jacobabad . . .	·884	·821	+·063	58	57	+1
Kurrachee . . .	·885	·869	+·016	79	79	0

At the Rajputana stations similar conditions prevailed. The aqueous vapour pressure was in excess, but temperature was high and the relative humidity was hence normal. This is shown below :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Jaipur . . .	·835	·809	+·026	75	76	−1
Deesa . . .	·828	·800	+·028	75	75	0

The following gives mean comparative humidity data for the Bay Islands, Burma and the different divisions of Northern India for the month :—

PROVINCE OR DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Bay Islands	·907	·899	+·008	86	88	—2
Burma	·899	·900	—·001	89	88	+1
Bengal	·950	·950	0	85	88	—3
Bihar	·974	·961	+·013	83	84	—1
Chota Nagpur	·786	·799	—·013	82	85	—3
Orissa	·953	·933	+·020	86	85	+1
North-Western Provinces.	·912	·870	+·042	85	81	+4
Punjab	·873	·839	+·034	64	66	—2
Sind	·885	·845	+·040	69	68	+1
Rajputana	·832	·805	+·027	75	76	—1

In nearly all parts of the Deccan the absolute humidity was in excess and the mean temperature lower than usual, so that the relative humidity was in considerable excess. The only exception was at Hyderabad where the aqueous vapour pressure was about normal, the mean temperature in slight excess and the relative humidity in some defect. This is shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Belgaum	·671	·656	+·015	90	89	+1
Sholapur	·688	·660	+·028	73	69	+4
Poona	·714	·683	+·031	84	80	+4
Akola	·793	·753	+·040	84	76	+8
Buldana	·705	·697	+·008	85	81	+4
Khandwa	·784	·766	+·018	81	79	+2
Nagpur	·817	·797	+·020	85	79	+6
Hyderabad (Deccan)	·724	·725	—·001	77	79	—2

Along the West Coast the variations of humidity were irregular. This is shown in the following table :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Bombay	·889	·878	+·011	88	87	+1
Karwar	·820	·828	—·008	83	87	—4

In South India, where the mean temperature was everywhere in excess, the variations in the relative humidity were irregular, at Bellary there was a large, and at Mysore, Bangalore and Salem a moderate to considerable deficiency while at the remaining stations the air was damper than usual. This is shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Bellary	·597	·658	—·061	57	63	—6
Mysore	·606	·630	—·024	71	75	-4
Bangalore	·605	·612	—·007	75	78	—3
Salem	·756	·752	+·004	71	73	—2
Chitaldroog	·680	·620	+·060	82	76	+6
Hassan	·612	·590	+·022	81	80	+1
Madras	.858	·818	+·040	74	72	+2

The mean humidity of the month was practically normal at Darjeeling and Wellington and in slight defect at Quetta, but was in slight to considerable excess at the remaining hill stations. The following gives comparative data:—

HILL STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Leh	·289	·264	+·025	50	48	+ 2
Srinagar	·732	·615	+·117	81	7	+ 4
Kailang	·391	·355	+·036	71	68	+ 3
Simla	·537	·528	+·009	94	91	+ 3

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Chakrata . . .	·552	·541	+·011	96	92	+ 4
Ranikhet . . .	·595	·572	+·023	91	88	+ 3
Katmandu . . .	·719	·677	+·042	82	81	+ 1
Mount Abu . . .	·628	·609	+·019	92	91	+ 1
Pachmarhi . . .	·675	·659	+·016	95	90	+ 5
Darjeeling . . .	·534	·507	+·027	94	95	− 1
Wellington . . .	·443	·437	+·006	75	76	− 1
Quetta . . .	·355	·384	−·029	41	45	− 4

The mean humidity was in slight defect at Zanzibar and was normal at Mauritius, the absolute humidity at both stations having been slightly in defect of the average. The following gives data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	"	"	"	%	%	
Zanzibar . . .	·683	·702	−·019	76	78	−2
Mauritius . . .	·501	·510	−·009	74	74	0

The variations of the amount of cloud from the normal differed somewhat in their distribution from those of the humidity. Cloud was in defect over part of North-West India to the west of a line running from Bhuj to Ludhiana. The following gives comparative data for this area of diminished cloud amount:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Kurrachi	5·4	6·7	−1·3
Ludhiana	5·1	5·8	−0·7
Peshawar	2·4	2·9	−0·5
Lahore	3·4	3·7	−0·3
Jacobabad	2·2	2·3	−0·1

The preceding table shows that the greatest deficiency was reported from Kurrachee and that at the remaining stations the variations from the normal were small.

The cloud amount was also in defect on the South Konkan coast. The following gives data for Karwar in illustration:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Karwar	7·1	7·2	−0·1

Over the whole of the remainder of India cloud was in more or less excess. The following gives comparative data for the Bay Islands, Burma, Assam, North-East India, Rajputana, the central divisions of India and the Peninsular divisions:—

PROVINCE OR DIVISION.	MEAN CLOUD AMOUNT.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
	°	°	°
Bay Islands	8·2	8·0	+0·2
Burma	9·0	8·4	+0·6
Bengal	8·3	7·9	+0·4
Bihar	6·2	6·2	0
Orissa	8·7	7·9	+0·8
Chota Nagpur	9·8	9·0	+0·8
Rajputana	8·2	7·7	+0·5
Central Provinces	8·9	8·1	+0·8
Berar	9·7	8·0	+1·7
Madras Deccan	8·3	7·3	+1·0
Bombay Deccan	9·1	8·5	+0·6
West Coast	8·1	8·0	+0·1
Madras Coast	6·9	6·6	+0·3
South India	6·8	6·3	+0·5
Mysore	8·7	8·1	+0·6

The preceding data show that the greatest excess was in the Deccan and the following table gives comparative

data for all stations in the Peninsula where the cloud excess amounted to 1·0 or more:—

Station.	Mean cloud amount.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Buldana	9·8	7·8	+2·0
Bangalore	8·4	6·6	+1·8
Akola	9·6	8·2	+1·4
Khandwa	8·8	7·6	+1·2
Bellary	8·9	7·8	+1·1

At Allahabad also the cloud on the mean of the month was 1·0 more than usual.

At most of the hill stations the sky on the mean of the month was more cloudy than usual, but at Quetta, Leh and Darjeeling there was some deficiency. This is shown below:—

Hill Station.	Mean cloud amount.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Leh	4·2	5·2	−1·0
Darjeeling	8·2	8·9	−0·7
Quetta	1·2	1·3	−0·1

The excess at the remaining hill stations is shown in the following table:—

Hill Station.	Mean cloud amount.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Wellington	8·7	7·6	+1·1
Pachmarhi	9·5	8·7	+0·8
Chikalda	9·6	8·9	+0·7
Ranikhet	9·4	8·7	+0·7
Simla	9·6	8·9	+0·7
Kailang	7·1	6·5	+0·6
Katmandu	7·7	7·1	+0·6
Mount Abu	9·1	8·5	+0·6
Chakrata	9·1	8·6	+0·5

The chief abnormal features in the mean distribution of cloud during the month were as follows:—

1. Cloud was in moderate to largish defect in North-West India including the Punjab, Western Rajputana, Baluchistan, Sind and Cutch. The deficiency was most marked in Lower Sind.

2. Cloud was in slight defect over part of the West Coast.

3. Cloud was in excess over the remainder of India. The excess was most marked in the Deccan.

4. Cloud was in excess at most of the hill stations.

The cloud amount on the mean of the month was less than 4 at the following stations:—

Station.	Mean cloud amount.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Lahore	3·4	3·7	−0·3
Peshawar	2·4	2·9	−0·5
Jacobabad	2·2	2·3	−0·1

These stations hence define the areas of greatest serenity.

The cloud amount, on the mean of the month, was more than 9 at the following stations which consequently define the areas of greatest cloudiness:—

Station.	Mean cloud amount.		
	Actual, August 1901.	Normal, August.	Variation of actual from normal, August 1901.
Rangoon	9·8	8·9	+0·9
Hazaribagh	9·8	9·0	+0·8
Belgaum	9·1	8·7	+0·4
Poona	9·4	8·6	+0·8
Akola	9·6	8·2	+1·4
Buldana	9·8	7·8	+2·0
Hassan	9·1	8·8	+0·3

Rainfall.

The distribution of rainfall in August was mainly determined by the weakness of the Arabian Sea monsoon current, the normal strength of the Bay of Bengal monsoon current, the increased intensity of the monsoon trough of low pressure and finally by the numerous cyclonic whirls or storms which formed over the head of the Bay or over Bengal and thence passed north-westward into Upper India. These depressions or storms were of small intensity and were formed within the humid currents of the south-west monsoon. There were in all six depressions and cyclonic storms during the month, and all of them with one exception were initiated over the land and were consequently of slight intensity. These storms in most cases passed from Bengal through Chota Nagpur and Bihar into the North-Western Provinces and the Eastern States of Central India and gave fairly general rain to these areas.

The chief periods of most general rain were as follows:—

(1) The 1st to the 4th when rain was fairly general due to the first cyclonic storm of the month.

(2) The 6th to the 9th when rain was general and moderately heavy.

(3) The 9th to the 15th when Burma, North-East India, the Gangetic Plain and the north of the Central Provinces received general rain.

(4) The 22nd to the 27th when North-East India, Burma, the Gangetic Plain and the central parts of the country received general moderately heavy rain from a cyclonic storm and the North-West Himalayas very heavy rain from a strong flow of monsoon winds from the head of the Arabian Sea.

(5) The 28th to the 31st when North-Eastern and Central India received moderate showers from a shallow depression over the Central Provinces.

The preceding remarks have stated the chief periods during which the rainfall of the month occurred. Its actual distribution is shown in Plate IV. This plate shows that there was practically no rain during the month over Baluchistan and Sind and very little (between ½ inch and 1 inch) over the Bombay Deccan, the extreme south of the Peninsula and the west coast of Ceylon while the fall was also very light in the dry area of Upper Burma. From these areas the amount of rain increased and amounted to over 60 inches at Moulmein, to over 50 inches at the foot of the Kumaun Himalayas, to over 42 inches at Akyab on the Arakan coast, to over 30 inches at Jubbulpore and Jalpaiguri and to over 20 inches on the South Malabar coast and over the north of the Central Provinces, the South Gangetic Plain and the greater part of Lower Burma.

The following table gives comparative rainfall data of the month for the 57 meteorological divisions of India:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, August 1901.	Average normal, August.	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.
				Inches.	Inches.	Inches.
Burma	Tenasserim	29·5	..	52·03	...	...
	Lower Burma (Deltaic)	27·3	...	23·95	...	...
	Central do.	19·1	...	12·56	...	...
	Upper do.	10·8	...	7·77	6·61	+1·16
	Arakan	26·0	...	44·44	...	...
Bengal and Assam	Eastern Bengal	17·5	18·0	13·17	16·24	−3·07
	Assam (Surma)	23·0	22·4	21·76	22·44	−0·68
	Do. (Hills)	23·0	21·7	20·91	23·57	−2·66
	Do. (Brahmaputra)	17·8	16·5	17·47	14·89	+2·58
	Deltaic Bengal	15·1	15·9	10·34	12·19	−1·85
	Central do.	13·9	14·9	9·14	11·31	−2·19
	North do.	15·9	16·3	16·75	18·51	−1·76
	Bengal Hills	22·9	22·2	24·38	22·95	+1·43
	Orissa	13·6	15·1	10·02	11·66	−1·64
	Chota Nagpur	16·9	16·3	16·23	13·80	+2·43
	Bihar (South)	14·0	13·3	12·73	11·81	+0·92
	Do. (North)	13·9	14·0	11·87	12·63	−0·76

Province.	Division.	Number of rainy days: Average actual, August 1901.	Number of rainy days: Average normal, August.	Rainfall: Average actual, August 1901.	Rainfall: Average normal, August.	Rainfall: Variation of actual from normal, August 1901.
				Inches.	Inches.	Inches.
North-Western Provinces and Oudh.	North-Western Provinces (East)	14.6	12.5	12.15	10.79	+1.36
	Oudh (South)	13.4	11.9	10.78	10.47	+0.31
	Do. (North)	12.3	11.7	9.89	10.44	−0.55
	North-Western Provinces (Central)	14.8	11.8	15.79	10.55	+5.24
	Do. do. (West)	11.7	9.4	9.54	7.70	+1.84
	Do. do. (Submontane, East)	13.2	12.3	9.76	10.86	−1.10
	Do. do. (Do. West)	15.5	12.1	20.05	13.20	+6.85
	Do. do. (Hills)	20.6	18.6	26.64	16.14	+10.50
Punjab	Punjab (South-East)	7.6	7.4	6.77	5.96	+0.81
	Do. (South)	3.2	4.8	3.11	4.13	−1.02
	Do. (Central)	2.6	5.1	2.58	4.75	−2.17
	Do. (Submontane)	7.1	8.0	8.47	8.30	+0.17
	Do. (Hills)	16.9	15.3	23.63	16.67	+6.96
	Do. (North)	3.9	5.4	3.56	4.78	−1.22
	Do. (West)	1.5	2.8	1.11	2.04	−0.93
Bombay and Malabar Coast Districts (Madras).	Malabar	22.5	21.4	18.98	20.32	−1.34
	Travancore	13.1	...	7.93	...	...
	Madras (South Central)	3.6	5.8	2.22	3.64	−1.42
	Coorg	21.8	...	12.88	...	...
	Mysore	7.9	8.2	3.9*	5.04	−1.13
	Konkan	27.7	23.8	28.20	23.96	+4.24
	Bombay Deccan	11.2	9.9	7.01	6.14	+0.87
	Khandesh	13.3	8.6	7.01	5.99	+1.02
Central Provinces and Berar.	Berar	16.3	...	12.35	8.89	+3.46
	Central Provinces (West)	19.6	12.8	16.47	9.87	+6.60
	Do. do. (Central)	22.6	14.1	24.57	12.86	+11.71
	Do. do. (East)	19.0	13.2	17.55	12.54	+5.01
Bombay (North)	Gujarat	12.7	13.6	8.63	9.28	−0.65
	Kathiawar and Cutch	7.9	7.4	4.41	6.28	−1.87
	Sind	0.2	...	0.21	1.94	−1.73
	Baluchistan Hills	0.4	...	0.22	0.74	−0.52
Rajputana and Central India.	Central India (East)	18.6	...	17.24	11.98	+5.26
	Rajputana (East) Central India (West)	9.9	...	7.55	9.67	−2.12
	West Rajputana	3.3	...	2.37	3.87	−1.50
Madras	East Coast (North)	11.3	11.0	6.46	7.51	−1.05
	Hyderabad (South)*	...	...	3.47	...	...
	Madras Central	5.6	6.7	2.08	4.12	−2.04
	East Coast (Central)	5.7	5.8	2.89	3.47	−0.58
	East Coast (South)	6.5	7.2	4.29	4.97	−0.68
	Madras South	1.7	2.8	0.94	1.62	−0.68

* NOTE.—The figures entered against division marked with an asterisk have been obtained from the Weekly Telegraphic Reports.

The following gives a summary of the more important features of the rainfall of the month :—

(1) Rainfall was in defect in twentynine of the rainfall divisions and more or less in excess in the remaining twenty five divisions.

(2) The deficiency was moderate in amount and ranged between 10% and 25% of the normal in twelve divisions. The rainfall was 25% or more in defect in the following twelve divisions:—Upper Burma (−34%), South Punjab (−25%), Central Punjab (−46%), North Punjab (−26%), West Punjab (−46%), Madras South Central (−39%), Kathiawar and Cutch (−30%), Sind (−89%), Baluchistan Hills (−70%), West Rajputana (−39%), Madras Central (−50%) and Madras South (−42%).

The deficiency was hence large st and serious over the Central Punjab (−46%), the West Punjab (−46%), Sind (−89%), Baluchistan (−70%), Central Madras (−50%) and South Madras (−42%).

(3) The rainfall was between 10% and 25% in excess in nine divisions and was 25% or more in excess in the following eleven divisions:—Tenasserim (+65%), Arakan (+62%), North-Western Provinces Central (+50%)

North-Western Provinces Submontane, West (+52%), North-Western Provinces Hills (+65%), Punjab Hills (+42%), Berar (+39%), Central Provinces West (+67%), Central Provinces Central (+91%), Central Provinces East (+49%), and Central India East (+44%).

The excess was hence greatest in Tenasserim (+65%), Arakan (+62%), North-Western Provinces West Submontane (+52%), North-Western Provinces Hills (+65%), Central Provinces West (+67%) and Central Provinces Central (+91%).

The total rainfall of the month for the whole Indian region was approximately normal. As the percentage variation was less than 1% but the actual mean variation from the normal was +1·57 inches.

The rainfall was in marked excess within a broad band running from Tenasserim across the Bay and through the Central Provinces and Central India to the North-West Provinces and the Punjab Hills.

Arakan, Tenasserim and Lower Burma received almost daily rain during the month, but in the dry area of Upper Burma only light and rather scattered showers were reported.

The rainfall of the month was in large excess in Tenasserim and the following falls exceeding 3·50″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Mergui	Mergui	1st August	5·05
Thaton	Thaton	5th "	2·85
	Thaton	8th "	6·70
	Bilin	" "	3·80
Tavoy	Thayetchaung	9th "	5·78
Amherst	Moulmein	10th "	3·95
Thaton	Bilin	11th "	5·30
	Kyaikto	" "	4·86
Tavoy	Launglon	12th "	4·19
	Tavoy	" "	4·15
Thaton	Bilin	13th "	3·89
Tavoy	Yebyu	14th "	3·57
Mergui	Mergui	15th "	4·39
Thaton	Kyaikto	" "	3·89
Tavoy	Yebyu	" "	3·69
Thaton	Thaton	19th "	5·15
Mergui	Mergui	" "	4·14
Thaton	Bilin	" "	3·79
	Kyaikto	" "	3·69
Amherst	Moulmein	21st August	3·63
Thaton	Thaton	22nd "	5·80
	Kyaikto	" "	4·97
	Bilin	" "	4·20
Tavoy	Yebyu	" "	3·54
Thaton	Kyaikto	24th "	4·00
		30th "	4·15
Amherst	Moulmein	" "	3·85
Thaton	Thaton	" "	3·71
Amherst	Moulmein	31st "	6·28
Thaton	Bilin	" "	5·90
	Thaton	" "	4·30

In Arakan the rainfall was almost equally largely in excess and at Akyab the following falls exceeding 2″ in 24 hours were registered:—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of							
		6th Aug.	7th Aug.	9th Aug.	10th Aug.	11th Aug.	13th Aug.	23rd Aug.	24th Aug.
Akyab	Akyab	2·87	2·91	2·06	2·11	2·38	7·52	3·41	2·24

In Lower and Central Burma the rainfall, though continuous, was not generally very heavy and the total for the month was about normal in these two divisions, while in Upper Burma only light to moderate scattered showers were received and the total rainfall of the month was only about two-thirds of the normal.

The following table gives comparative data of the rainfall of the month for the five divisions of the province:—

Division.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Tenasserim	61·28	37·23	+24·05	+65
Lower Burma, Deltaic	24·07	20·77	+ 3·90	+19
Central Burma	13·49	13·26	+ 0·23	+ 2
Upper Burma	6·47	9·84	− 3·37	−34
Arakan	50·97	31·55	+19·42	+62

Bengal received almost daily rain throughout the month. The periods of most general and heaviest rain agreed with

periods of the development of the different cyclonic storms of the month and were the 1st to the 3rd, the 7th to the 15th, the 18th and 19th, the 22nd to the 25th and the 29th to the 31st.

In South-West Bengal there was fairly general but light rain between the 1st and the 3rd and the only heavy fall during this period was at Saugor Island. This is shown below :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
24-PARGANAS	Saugor Island	1st August	3·76
MIDNAPORE	Garhbeta	" "	2·06
	Midnapore	" "	1·86
HOWRAH	Ulubaria	2nd "	1·50

Between the 4th and the 7th the weather was showery, but there was no rain of any consequence. On the 7th a depression began to form over Deltaic Bengal. While this storm was developing there was heavy rain in South-West Bengal and after the storm had passed away westward there was a strong flow of humid winds from the Bay and general or fairly general rain continued till the 14th. The most general and heaviest rainfall was reported on the 9th, 10th and 13th. During this period the following falls exceeding 3″ in 24 hours were registered :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
24-PARGANAS	Alipore (obsy.)	9th August	5·54
HOOGHLY	Arambagh	" "	5·38
HOWRAH	Howrah	" "	4·22
JESSORE	Bangaon	" "	3·68
BURDWAN	Mankur	" "	3·26
24-PARGANAS	Dum-Dum	" "	3·05
KHULNA	Mollahat	13th "	3·25
	Dumuria	" "	3·07

During the next three days only scattered showers were recorded, as, during that time, a cyclonic storm was developing at the head of the Bay. On the 17th the storm which was very slight crossed the coast and rain was fairly general, but light on the 18th and 19th. There then followed another period of showery weather which lasted till the 22nd. On that and the following day the fourth storm of the month was developing over Deltaic Bengal and the head of the Bay. On the night of the 22nd when the storm was forming the floating light vessel *Planet* off the mouth of the Hooghly received 7 inches of rain between 10 P.M. of the 22nd and 8 A.M. of the 23rd. Heavy rain extended inland on the 23rd and lasted till the 25th during which period the following amounts exceeding 3″ were recorded :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
BANKURA	Khatra	23rd August	5·17
MIDNAPORE	Contai	" "	3·45
KHULNA	Kaliganj	" "	3·15
HOWRAH	Mohesreka	24th "	4·09
HOOGHLY	Arambagh	" "	4·09
24-PARGANAS	Diamond Harbour	" "	3·80
	Canning Town	" "	3·35
MIDNAPORE	Midnapore	25th "	3·46

During the 26th, 27th and 28th the weather was showery, but on the 29th the rainfall increased and was fairly general till the end of the month. The following gives comparative data for the different districts of South-West Bengal and shows that the month's rainfall was normal in the Midnapore, Hooghly, Howrah and Calcutta districts and was in slight to moderate defect in the remaining districts :—

DISTRICT.	RAINFALL.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burdwan	9·15	11·86	−2·71	−23
Birbhum	7·99	12·52	−4·53	−36
Bankura	9·01	12·90	−3·89	−30
Midnapore	14·27	12·85	+1·42	+11
Hooghly	12·72	12·51	+0·21	+ 2
Howrah	11·24	12·38	−1·14	−10
24-Parganas	10·82	13·06	−2·24	−17
Calcutta	13·30	12·95	+0·35	+ 3
Nadia	6·97	11·22	−4·25	−38
Murshidabad	8·68	11·12	−2·44	−32
Jessore	7·55	10·91	−3·36	−31
Khulna	8·55	11·78	−3·23	−27

In North Bengal the rainfall occurred under very similar conditions, but the showery periods were more marked and hence the rainfall of the division was more continuous than was the case in South-West Bengal. The days of most general and heaviest rainfall in this division were the 5th and 6th, the 10th, 11th, 12th and 13th, the 20th and 21st and the 28th and 29th. The rainfalls exceeding 4″ in 24 hours were recorded at the following stations on the following dates in this division :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jalpaiguri	Alipur Duar	5th August	5·29
Cooch Behar	Cooch Behar	6th ,,	5·07
Jalpaiguri	Debiganj	,, ,,	4·57
Dinajpur	Thakurgaon	,, ,,	4·53
Cooch Behar	Mathabhanga	,, ,,	4·32
Dinajpur	Atwari	7th ,,	7·54
Cooch Behar	Cooch Behar	,, ,,	6·43
Jalpaiguri	Alipur Duar	,, ,,	6·03
Darjeeling	Kurseong	8th ,,	7·45
Jalpaiguri	Debiganj	12th ,,	6·93
Dinajpur	Raiganj	,, ,,	5·45
Cooch Behar	Mickliganj	,, ,,	5·00
Rangpur	Bagdogra	,, ,,	4·72
Darjeeling	Kurseong	,, ,,	4·63
Cooch Behar	Fulbari	,, ,,	4·38
Jalpaiguri	Kalchini	21st ,,	7·42
	Jalpaiguri	,, ,,	4·78
		22nd ,,	7·93
	Baxa	26th ,,	5·10
Darjeeling	Siliguri	28th ,,	4·58
	Kurseong	,, ,,	4·21

The following gives comparative data for the different districts in North Bengal :—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Rajshahi	5·64	11·87	−6·23	−52
Dinajpur	9·31	12·56	−3·25	−26
Jalpaiguri	29·70	25·82	+3·88	+15
Darjeeling	24·26	25·52	−1·26	− 5
Cooch Behar	24·13	21·90	+2·23	+10
Rangpur	12·22	12·37	−0·15	− 1
Bogra	9·68	11·90	−2·22	−19
Pabna	7·26	11·17	−3·91	−3

The preceding data show that the month's rainfall was generally about normal, except in Rajshahi, Dinajpur and Pabna where it was in defect.

In East Bengal showery weather prevailed until the 5th. On the 6th general rain commenced and this burst of rain continued until the 13th during which period the following falls exceeding 3″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Mymensingh	Durgapur	6th August	3·20
	Do.	8th ,,	3·10
	Do.	9th ,,	4·20
Faridpur	Goalundo	,, ,,	3·32
Chittagong	Mirsarai	11th ,,	4·25
Noakhali	Harishpur	,, ,,	4·10
	Chhagalnaya	,, ,,	3·90
Chittagong	Fenoa	,, ,,	3·66
Noakhali	Fenny	,, ,,	3·57
Mymensingh	Durgapur	,, ,,	3·40
Chittagong	Cox's Bazar	,, ,,	3·37
Mymensingh	Netrakona	12th ,,	7·71
	Durgapur	,, ,,	7·50
Chittagong	Chittagong	,, ,,	3·91
Mymensingh	Mymensingh	,, ,,	3·57
Dacca	Jaydebpur	,, ,,	3·52
Chittagong	Cox's Bazar	,, ,,	3·08
Mymensingh	Durgapur	13th ,,	5·40

From the 14th to the 20th the weather was again showery, but after the 20th rain recommenced and was moderately general till the close of the month. The amounts were not, however, heavy, only exceeding 3″ in 24 hours at the following stations :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chittagong	Kutubdia	24th August	4·24
	Cox's Bazar	,, ,,	3·47
	Kutubdia	31st ,,	3·37

Comparative data for the different districts of this division are given below:—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dacca	10·64	12·26	−1·62	−13
Mymensingh	16·52	15·20	+1·32	+ 9
Faridpur	6·91	11·70	−4·79	−41
Backerguage	9·54	15·30	−5·76	−38
Tippera	8·05	15·02	−6·97	−46
Noakhali	22·84	24·20	−1·36	− 6
Chittagong	13·76	22·25	−8·49	−38
Chittagong Hill Tracts	8·50	18·03	−9·53	−53

The general rainfall was hence normal in Mymensingh and Noakhali and below the normal elsewhere.

Bihar received fair rain on the 1st and 2nd. The fall was moderately general and the following amounts exceeding 3″ in 24 hours were registered:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sonthal Parganas	Madhupur	1st August	3·64
	Manihat	" "	3·50
Monghyr	Gogri	" "	3·40
Bhagalpur	Madhipura	" "	3·35
Gaya	Jahanabad	" "	3·31
Patna	Patna	" "	3·12

From the 3rd to the 6th there were only scattered showers—which were however heavy in some places—but on the 7th rain commenced generally and, with a partial interruption on the 12th, continued till the 14th. The following were the heaviest amounts, exceeding 4″, recorded during this burst of rain:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Purnea	Kishanganj	7th August.	7·50
Muzaffarpur	Muzaffarpur	8th "	5·88
Darbhanga	Bahera	" "	5·80
Gaya	Gaya	" "	5·76
Shahabad	Arrah	" "	5·67
Shahabad	Chausa	8th August	5·53
	Ramagar	" "	4·45
Champaran	Motihari	" "	4·35
Bhagalpur	Bangaon	" "	4·28
Sonthal Parganas	Sahibganj	" "	4·19
Bhagalpur	Madhipura	" "	4·11
Monghyr	Monghyr	" "	4·08
	Jamalpur	9th "	5·43
Purnea	Barsoe	12th "	5·00
Bhagalpur	Banka	" "	4·65

There was another rainy period between the 22nd and 25th during which the following falls exceeding 3″ were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Muzaffarpur	Sitamarhi	22nd August	3·33
Sonthal Parganas	Barkope	" "	3·25
Muzaffarpur	Pupri	" "	3·22
Champaran	Motihari	" "	3·19
Monghyr	Gidhaur	" "	3·10
Saran	Ekma	23rd "	4·12
Darbhanga	Darbhanga	" "	4·01
Patna	Hilsa	" "	4·00
Gaya	Rajauli	" "	3·95
	Sherghati	24th "	3·25
	Deo	25th "	3·72

Parts of the division again received general rain between the 28th and the 31st, but the falls were not very heavy only exceeding 3″ in 24 hours in the following cases:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Monghyr	Begusarai	28th August	3·97
Malda	Chanchal	" "	3·13
Monghyr	Gogri	" "	3·07
Sonthal Parganas	Manihat	29th "	3·02

The general rain of the division was about normal. The following gives comparative data for the different districts :—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Patna	11·39	11·10	+0·29	+ 3
Gaya	13·64	12·27	+1·37	+12
Shahabad	13·98	12·08	+1·90	+16
Saran	9·80	10·85	—1·05	—10
Champaran	12·22	13·97	—1·75	—13
Muzaffarpur	11·42	10·95	+0·47	+ 4
Darbhanga	12·34	12·30	+0·04	0
Monghyr	13·60	11·80	+1·80	+15
Bhagalpur	12·66	11·67	+0·99	+ 8
Purnea	17·34	15·29	+2·05	+13
Malda	10·18	10·52	—0·34	— 3
Sonthal Parganas	11·84	12·15	—0·31	— 2

In Orissa there was more or less rain throughout the month, though it was less continuous in Puri than in the remaining districts. The days of most general and heaviest rainfall were the 3rd, the 7th to the 10th, the 17th to the 20th, the 23rd and 24th, and the 29th to the 31st. During these periods, the following amounts exceeding 3" were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Angul	Dhenkanal	7th August	4·18
	Kumarkhole	9th ,,	5·02
	Bissipara	10th ,,	3·93
	Talchar	17th ,,	3·60
Cuttack	Banki	18th ,,	6·79
Angul	Dhenkanal	,, ,,	5·40
Puri	Pipli	,, ,,	5·11
	Gop	,, ,,	4·56
	Khurda	,, ,,	4·40
Angul	Baramba	,, ,,	3·50
Puri	Pipli	20th ,,	3·08
Balasore	Jellasore	23rd ,,	4·85

Chota Nagpur received rain from five storms of the month, the periods of most general rain having been the 1st and 2nd, the 7th to the 11th, the 17th, the 23rd to the 25th, and the 29th to the 31st. The largest amounts were recorded on the 25th, but the following falls exceeding 3" in 24 hours were recorded at different times during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A M. of date.
			Inches.
Manbhum	Raghunathpur	1st August	4·00
Singhbhum	Gailkuta	,, ,,	3·65
	Ghatsila	3rd ,,	6·30
Palamau	Garhwa	7th ,,	4·20
Hazaribagh	Chatra	,, ,,	3·29
Singhbhum	Gailkura	8th ,,	3·58
Palamau	Garhwa	9th ,,	3·13
Singhbhum	Monaharpur	10th ,,	9·17
Manbhum	Pandra	14th ,,	3·05
Palamau	Ranka	17th ,,	3·30
Ranchi	Sirguja	20th ,,	4·50
	Gangpur	21st ,,	3·23
	Do.	22nd ,,	3·57
	Bano	23rd ,,	4·55
	Chainpur	,, ,,	4·50
Hazaribagh	Ramgar	,, ,,	4·10
Ranchi	Gangpur	,, ,,	3·76
Orissa Tributary Mahals.	Keonjhar	24th ,,	4·31
Palamau	Chatterpur	,, ,,	4·00
	Balumath	,, ,,	4·00
Ranchi	Bano	,, ,,	3·78
	Jashpur	,, ,,	3·21
Singhbhum	Monaharpur	25th ,,	7·30
Ranchi	Palkot	,, ,,	5·15
Singhbhum	Seraikilla	,, ,,	4·50
	Chaibassa	,, ,,	4·29
	Ghatsila	,, ,,	4·22
	Kalikapur	,, ,,	4·06
Palamau	Nagarutari	,, ,,	4·00
Ranchi	Tawar	,, ,,	3·95
Singhbhum	Chakradharpur	,, ,,	3·84
Palamau	Ranka	,, ,,	3·50
Ranchi	Ranchi	,, ,,	3·09
	Lohardaga	,, ,,	3·06

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Palamau	Latehar	28th August.	3·05
Orissa Tributary Mahals.	Kunjabongarh	29th ,,	3·45
Ranchi	Ranchi	,, ,,	3·12
Palamau	Ranka	30th ,,	3·50
Manbhum	Gobindpur	,, ,,	3·11

The following gives comparative data for the different districts in this division :—

District.	Rainfall.			
	Avarage actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Hazaribagh	13·69	13·13	+0·56	+ 4
Ranchi	17·60	13·20	+4·40	+33
Palamau	11·34	13·21	−1·87	−14
Manbhum	11·40	13·00	−1·60	−12
Singhbhum	17·97	13·22	+4·75	+36

The following table, giving comparative data for the rainfall divisions of the province, shows that the rainfall of the month varied only slightly from the normal :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.	Average actual, August 1901.	Average normal, August.
	Inches.	Inches.	Inches.			
Eastern Bengal	13·17	16·24	−3·07	−19	17·5	18·0
Deltaic ,,	10·34	12·19	−1·85	−15	15·1	15·9
Central ,,	9·12	11·31	−2·19	−19	13·9	14·9
North ,,	16·75	18·51	−1·76	−10	15·9	16·3
Bengal Hills	24·38	22·95	+1·43	+ 6	22·9	22·2
Orissa	10·02	11·66	−1·64	−14	13·6	15·1
Chota Nagpur	16·23	13·80	+2·43	+18	16·9	16·3
South Bihar	12·73	11·81	+0·92	+ 8	14·0	13·3
North ,,	11·87	12·63	−0·76	− 6	13·9	14·0

Assam received about the normal rainfall during the month. In the Surma Valley there was a partial break between the 14th and the 18th and again on the 21st and sand, but otherwise the rainfall continued steadily throughout. The falls were not very heavy, but exceeded 4″ in 24 hours at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cachar	Barkhola	5th August	6·05
Cachar	Dewan	,, ,,	4·90
Sylhet	Sunamganj	12th ,,	9·76
Cachar	Nemotha	,, ,,	4·10
Sylhet	Sunamganj	28th ,,	4·20

Comparative data for the two districts of this division are given below :—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Cachar	21·19	22·16	−0·97	−4
Sylhet	22·57	22·72	−0·15	−1

In the Brahmaputra Valley the rainfall was much less continuous. After the 14th only showery weather was experienced, and on the two last days of the month rain almost ceased. The principal falls (exceeding 4″ in 24 hours) were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sibsagar	Dimapur	2nd August	5·21
Lakhimpur	Wilton	,, ,,	4·25
Lakhimpur	Dhakuakhana	4th ,,	7·00
Sibsagar	Daplating	,, ,,	4·35
Goalpara	Kachugaon	7th ,,	6·20
Goalpara	Marnai	,, ,,	4·50
Sibsagar	Dimapur	8th ,,	4·10
Darrang	Tezpur	10th ,,	5·62
Sibsagar	Dimapur	11th ,,	6·24
Sibsagar	Seleng	,, ,,	6·00
Kamrup	Kulsi	12th ,,	4·23
Goalpara	Marnai	,, ,,	4·18

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Sibsagar	Seleng	19th August	5·50
Lakhimpur	Pathalipam	21st „	6·60
	Harmati	„ „	5·65
Darrang	Kerkeriya	22nd „	4·32
Kamrup	Hajo	26th „	5·50
	Barduar	„ „	4·12
	Kulsi	27th „	5·58
	Boko	„ „	4·12
Lakhimpur	Jaipur	28th „	4·25
Nowgong	Lanka	30th „	4·12

The following gives comparative data for the different districts in this division :—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Goalpara	18·13	16·41	+1·72	+10
Kamrup	13·69	12·55	+1·14	+ 9
Darrang	15·55	13·87	+1·68	+12
Nowgong	19·88	13·62	+6·26	+46
Sibsagar	17·80	14·82	+2·98	+20
Lakhimpur	22·64	18·87	+3·77	+20

Daily rain was received at the hill stations, but the total fall of the month was slightly below the normal. At Cherrapoonjee the total of the month was only 53·30″, the normal being 77·03″ while the heaviest fall recorded on one day was 9·70″ on the 12th.

Comparative data of the rainfall divisions of the province are given below :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.	Average actual, August 1901.	Average normal, August.
	Inches.	Inches.	Inches.			
Assam Surma	21·76	22·44	—0·68	— 3	23·0	22·4
„ Hills	20·91	23·57	—2·66	—11	23·0	21·7
„ Brahmaputra	17·47	14·89	+2·58	+17	17·8	16·5

The rainfall of the North-Western Provinces was affected by all the storms of the month except perhaps the fourth.

In Oudh there was some rain on the 1st and 2nd, a general burst of rain between the 6th and 14th, and then showery weather till the end of the month. The rainfall was irregularly distributed and the following amounts exceeding 4″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sitapur	Biswan	6th August	4·40
Fyzabad	Tanda	8th „	5·65
Partabgarh	Kunda	9th „	6·99
Sitapur	Biswan	„ „	5·17
	Sidhauli	„ „	4·74
	Sitapur	„ „	4·11
Partabgarh	Kunda	11th „	4·88
Bahraich	Bahraich	22nd „	6·00

The total rainfall of Oudh was generally about normal as is shown by the following comparative data for the different districts in this division :—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August, 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Fyzabad	7·91	10·13	—2·22	—22
Gonda	8·65	11·42	—2·77	—24
Bara Banki	11·15	9·97	+1·18	+12
Bahraich	11·25	10·52	+0·73	+ 7
Sitapur	11·64	9·62	+2·02	+21
Kheri	9·06	11·48	—2·42	—21
Sultanpur	8·72	11·60	—2·88	—25
Partabgarh	15·68	9·18	+6·50	+31
Rae Bareli	11·07	10·58	+0·49	+ 5
Unao	11·90	10·47	+1·43	+14
Lucknow	8·07	10·68	—2·61	— 6
Hardoi	9·81	10·06	—0·25	— 2

In the south-east division of the North-Western Provinces showers occurred between the 1st and the 3rd, a general

burst of rain between the 7th and the 14th, and showers on the 18th, the 24th to the 26th, and the 31st. The rainfall was not heavy except in the Allahabad district. The following gives the falls exceeding 3":—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Ghazipur	Muhammadabad	8th August	3·20
Allahabad	Manjhanpore	9th "	7·15
	Sirathu	" "	6·65
	Allahabad	" "	3·82
	Soraon	" "	3·72
	Barah	" "	3·05
	Soraon	11th "	3·46
	Barah	13th "	3·04
Ghazipur	Zamania	23rd "	3·55
Mirzapur	Robertsganj	25th "	4·23

The following gives comparative data for the different districts of this division:—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ghazipur	11·95	9·92	+2·03	+20
Benares	12·06	10·84	+1·22	+11
Jaunpur	10·10	11·92	—1·82	—15
Mirzapur	11·36	11·63	—0·27	— 2
Allahabad	13·84	9·88	+3·96	+40

In the central division there was rain between the 1st and the 3rd and general rain between the 6th and the 15th. On the 16th a break set in which lasted till the 21st, after which the weather became showery and so continued till the 31st. The rainfall was heaviest on the 10th and 11th when the third storm lay over the North-Western Provinces. The following were the principal falls (exceeding 4") recorded during the month:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Hamirpur	Hamirpur	7th August	4·01
Fatehpur	Khaga	9th "	5·15
Hamirpur	Bela-Thal	10th "	5·28
	Kulpahar	" "	4·45
	Rath	" "	4·14
		11th "	6·15
	Mahoba	" "	5·28
	Thana	" "	4·95
Etawah	Etawah	" "	4·78
Hamirpur	Kulpahar	" "	4·73
	Bela-Thal	" "	4·48
Jalaun	Jalaun	" "	4·30
Hamirpur	Bijanagar	" "	4·15
Fatehpur	Fatehpur	" "	4·07
Banda	Girwan	13th "	5·19
Hamirpur	Maudha	" "	4·35
Banda	Banda	" "	4·34
	Badausa	" "	4·32
Hamirpur	Maudha	22nd "	4·44
Farukhabad	Chhibramau	29th "	5·15

The total rainfall of the month was heavier than usual as is shown by the following table giving comparative data of the districts in this division:—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Banda	15·94	12·12	+3·82	+ 32
Fatehpur	17·00	9·92	+7·08	+ 71
Hamirpur	19·55	9·57	+9·98	+104
Cawnpore	10·84	9·89	+0·95	+ 10
Jalaun	15·28	10·07	+5·21	+ 52
Etawah	10·81	10·22	+0·59	+ 6
Farukhabad	11·74	9·96	+1·78	+ 18
Mainpuri	11·45	10·88	+0·57	+ 5
Etah	11·52	9·32	+2·20	+ 24

In the western division there were five well marked rainfall periods, *viz.*, on 1st and 2nd, the 6th to the 8th,

the 11th to the 15th, the 21st and 22nd, and the 28th to the 30th. Moderately heavy rain was received during each of these periods as is shown by the following record of the falls exceeding 4″ in 24 hours during the month:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jhansi	Jhansi	1st August	7·70
	Talbahat	" "	4·60
Agra	Khairagarh	" "	4·52
Jhansi	Pachwara	" "	4·50
	Barwasagar	" "	4·50
	Mau	" "	4·26
Meerut	Meerut	7th "	4·32
Muttra	Chhata	" "	4·30
Jhansi	Narhat	11th "	7·70
	Garautha	" "	6·20
	Jhansi	" "	4·60
	Moth	" "	4·33
	Talbahat	" "	4·21
	Pachwara	" "	4·01
	Talbahat	12th "	6·52
	Jhansi	" "	5·75
	Lalitpur	" "	5·40
Bulandshahr	Sikandrabad	21st "	5·17
	Bulandshahr	" "	4·26
Jhansi	Jhansi	22nd "	5·25
	Garautha	" "	5·12

The following gives comparative data for the different districts in this division:—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jhansi	24·96	11·50	+13·46	+117
Agra	11·87	8·28	+ 3·59	+ 43
Muttra	7·76	7·19	+ 0·57	+ 8
Aligarh	9·22	7·36	+ 1·86	+ 25
Bulandshahr	10·27	7·65	+ 2·62	+ 34
Meerut	8·79	7·97	+ 0·82	+ 10

In the submontane division there was a partial break about the middle of the month, but with this exception rain fell fairly continuously throughout the month. The falls were frequently heavy and amounts exceeding 5·50″ were recorded at the following places on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Dehra Dun	Rajpur	1st August	8·50
Almora	Tanakpur	" "	5·67
Bareilly	Mirganj	7th "	7·53
	Baheri	" "	7·19
Naini Tal	Kilpuri	" "	5·90
Bijnor	Bijnor	" "	5·64
Almora	Tanakpur	" "	5.60
	Chaukuri	8th "	5·94
Dehra Dun	Rajpur	13th "	8·00
	Dehra	" "	5·90
	Rajpur	20th "	11·00
Naini Tal	Kathgodam	" "	7·00
	Kashipur	" "	6·86
Dehra Dun	Dehra Asylum	" "	6·24
Naini Tal	Naini Tal	21st "	11·63
	Ramnagar	" "	9·55
Saharanpur	Hardwar	" "	9·10
Naini Tal	Haldwani	" "	8·45
Dehra Dun	Dehra	" "	6·90
Garhwal	Kotdwara	" "	6·85
Dehra Dun	Bhogpur	" "	6·50
Moradabad	Amroha	" "	6·09
Bijnor	Najibabad	" "	6·00
Dehra Dun	Mussooree	" "	6·00
Garhwal	Kotdwara	22nd "	6·93
Dehra Dun	Rajpur	" "	6·30
	Ambari	" "	6·23
Pilibhit	Amaria	" "	6·13
Naini Tal	Rudarpur	" "	6·12
Dehra Dun	Bhogpur	" "	6·10
	Chakrata Obsy.	" "	5·53
Naini Tal	Kathgodam	23rd "	5·70
Dehra Dun	Rajpur	24th "	7·48
	Mussooree	" "	5·65
Pilibhit	Amaria	29th "	7·88
Moradabad	Moradabad	" "	6·44
Bareilly	Nawabganj	" "	6·00

The following gives the total rainfall of the month for the different districts in this division :—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Pilibhit	17·40	15·72	+1·68	+11
Shahjahanpur	13·39	9·88	+3·51	+36
Budaun	9·78	8·88	+0·90	+10
Bareilly	18·17	11·13	+7·04	+63
Moradabad	19·02	10·85	+8·17	+75
Bijnor	19·54	12·71	+6·83	+54
Muzaffarnagar	10·44	8·08	+2·36	+29
Saharanpur	15·32	11·26	+4·06	+36
Dehra Dun	45·04	29·32	+15·72	+54
Almora	22·31	15·83	+6·48	+41
Garhwal	25·25	13·65	+11·60	+85
Naini Tal	33·98	18·68	+15·30	+82

In the north-east division there were two periods of rainfall, one between the 7th and the 10th, the other between the 22nd and the 25th. At other times the weather was showery. The rainfall was not generally heavy, but amounts exceeding 4″ in 24 hours were recorded on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Gorakhpur	Deoria	7th August	4·03
Basti	Basti	8th „	6·35
Ballia	Ballia	„ „	4·32
Gorakhpur	Deoria	24th „	5·55

Comparative data for the districts in this division are given below :—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Gorakhpur	9·67	10·70	—1·03	—10
Basti	9·92	11·38	—1·46	—13
Azamgarh	9·22	11·17	—1·95	—17
Ballia	10·56	9·82	+0·74	+8

The rainfall of the month was in moderate to large excess in some districts. The following gives comparative data for the eight rainfall divisions of the North-Western Provinces :—

Division.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.	Number of rainy days. Average actual, August 1901.	Average normal, August.
	Inches.	Inches.	Inches.			
North-Western Provinces, East.	12·15	10·79	+1·36	+ 13	14·6	12·5
South Oudh	10·78	10·47	+0·31	+ 3	13·4	11·9
North Oudh	9·89	10·44	—0·55	— 5	12·3	11·7
North-Western Provinces, Central.	15·79	10·55	+5·24	+ 50	14·8	11·8
North-Western Provinces, West.	9·54	7·70	+1·84	+ 24	11·7	9·4
North-Western Provinces, East Submontane.	9·76	10·86	—1·10	— 10	13·2	12·3
North-Western Provinces, West Submontane.	20·05	13·20	+6·85	+52	15·5	12·1
North-Western Provinces, Hills.	26·64	16·14	+10·50	+ 65	20·6	18·6

Rain was comparatively light over the greater part of the Punjab. During the first ten days of the month the monsoon currents extended well over the Punjab, and there was a general burst of rain, but after the 11th rain fell off over the plains, and thereafter there was no general rain, though between the 22nd and 24th and on the 30th and 31st there were showers.

The south division received showers between the 6th and the 8th—particularly in the Hissar district—but after that date there was no rain of any consequence. The only heavy falls (over 3″) reported were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Jind State	Jind	6th August	3·90
	Dhaneta	„ „	3·77
Hissar	Tohana	„ „	3·50

The following gives comparative data for the districts in this division :—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Hissar	3·41	4·05	−0·64	−16
Ferozepur	0·94	4·22	−3·28	−78
Montgomery	0·23	1·90	−1·67	−88

In the central division more or less general showers were received between the 1st and the 3rd, the 6th and the 8th, the 15th and 16th, the 21st and 22nd and the 30th and 31st. During these periods the following amounts equalling or exceeding 3″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Karnal	Gulah	5th August	5·00
Delhi	Sonepat	6th ,,	3·12
Karnal	Panipat	6th ,,	3·97
Karnal	Karnal	6th ,,	3·80
Gurgaon	Tauru	6th ,,	3·29
Gurgaon	Sohna	7th ,,	4·00
Lahore	Mecan Meer	6th ,,	3·80
Gurgaon	Sohna	21st ,,	3·00
Gurgaon	Hattin	22nd ,,	3·00

Comparative data for the districts in this division are given below :—

District.	Rainfall. Average actual, Aug. 1901.	Average normal, August.	Variation of actual from normal, Aug. 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Gurgaon	7·12	6·88	+0·24	+ 3
Rohtak	3·89	5·04	−1·15	−23
Delhi	8·11	6·58	+1·53	+23
Karnal	7·52	5·25	+2·27	+43
Lahore	1·92	4·21	−2·29	−54

In the submontane division rain fell about the same dates and under the same conditions, but in the Umballa district the fall was more continuous than in other parts of the division. The rainfall was heavy at times, particularly on the 6th and 8th and the following moderately heavy falls (exceeding 4″) were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Umballa	Jagadhri	4th August	4·21
Umballa	Naraingarh	5th ,,	5·92
Umballa	Dadupur	,, ,,	4·50
Patiala State	Barthala	6th ,,	5·82
Ludhiana	Ludhiana	,, ,,	5·78
Jullundur	Phillour	,, ,,	5·23
Hoshiarpur	Sadr Station	,, ,,	4·97
Hoshiarpur	Hoshiarpur	,, ,,	4·83
Ludhiana	Jagraon	,, ,,	4·40
Nabha State	Dadahur	7th ,,	4·30
Jullundur	Jullundur	8th ,,	8·23
Amritsar	Ajnala	,, ,,	7·76
Amritsar	Raya	,, ,,	6·62
Amritsar	Amritsar	,, ,,	4·30
Amritsar	Amritsar Jail Hospital	,, ,,	4·15
Umballa	Dadupur	27th ,,	5·00

Comparative data for the districts in this division are given below :—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actuul from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Umballa	12·81	8·91	+3·90	+ 4
Ludhiana	7·95	5·93	+2·02	+34
Jullundur	9·41	6·26	+3·15	+50
Hoshiarpur	7·53	8·93	−1·40	−16
Gurdaspur	10·94	11·99	−1·05	− 9
Amritsar	5·55	5·83	−0·28	− 5

In the north-west division there was moderately heavy and moderately general rain between the 6th and the 8th,

and thereafter a few scattered showers. The only heavy falls (exceeding 4″) were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Peshawar	Mardan	7th August	5·41
Sialkot	Raya	8th „	6·25
Gujranwala	Hafizabad	„ „	6·20

In the Punjab Hills division, including the Simla and Kangra districts, rain was received almost daily. The rainfall was irregular and especially remarkable for the heavy burst between the 20th and 23rd. This heavy fall of rain apparently extended from Naini Tal westward to Dharmsala, and the following amounts exceeding 5″ were recorded over this area between the 20th and 23rd :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Dehra Dun	Rajpur	20th August	11·00
Naini Tal	Kathgodam	„ „	7·00
	Kashipur	„ „	6·86
Dehra Dun	Dehra	„ „	6·24
Simla	Barouli	21st „	16·48
Naini Tal	Naini Tal	„ „	11·63
	Ramnagar	„ „	9·55
	Haldwani	„ „	8·45
Simla	Simla	22nd „	8·94
Kangra	Kangra	„ „	6·15
Naini Tal	Rudarpur	„ „	6·12
Kangra	Dharmsala	„ „	5·75
	Palampur	23rd „	8·20
Naini Tal	Kathgodam	„ „	5·70
	Haldwani	„ „	5·50
	Naini Tal	„ „	5·05

This remarkable fall of rain was apparently due to a strong flow of monsoon winds from the head of the Arabian Sea across Rajputana, etc., to the Kumaun Himalayas. The following gives comparative data for the different districts in the north-west division of the Punjab :—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Kangra	25·22	18·69	+6·53	+35
Gujranwala	3·29	5·52	−2·23	−40
Sialkot	5·54	7·78	−2·24	−29
Gujrat	3·22	6·21	−2·99	−48
Jhelum	2·32	3·92	−1·60	−41
Rawalpindi	5·78	8·40	−2·62	−31
Peshawar	1·24	2·75	−1·51	−55
Hazara	6·17	6·47	−0·30	− 5
Kohat	5·03	2·90	+2·13	+73

The West Punjab had a moderate burst of rain on the 7th and 8th after which the month was practically rainless. The following were the only large amounts reported :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Shahpur	Miani	6th August	2·50
Bannu	Bannu	7th „	2·74
Shahpur	Bhera	„ „	2·45
Dera Ismail Khan	Dera Ismail Khan	8th „	4·50
	Leiah	„ „	2·15
Dera Ghazi Khan	Jampur	10th „	2·01
Shahpur	Naushahra	16th „	2·50
Jhang	Toba Tek Singh	17th „	2·54

Comparative data for the districts in this division are given below and show that the month's rainfall was in large defect of the normal except in Dera Ismail Khan

where it was in moderate excess, and in Bannu where it was normal:—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Bannu	2·13	2·21	—0·08	— 4
Shahpur	2·36	2·79	—0·43	—15
Jhang	0·94	2·25	—1·31	—58
Dera Ismail Khan	1·72	1·36	+0·36	+26
Dera Ghazi Khan	0·75	2·05	—1·30	—63
Muzaffargarh	0·27	2·16	—1·89	—88
Mooltan	0·67	1·13	—0·46	—40

The following gives comparative data for the seven divisions of the province:—

Division.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.	Number of rainy days. Average actual, August 1901.	Average normal, August.
	Inches.	Inches.	Inches.			
South-East Punjab	6·77	5·96	+0·81	+14	7·6	7·4
South Punjab	3·11	4·13	—1·02	—25	3·2	4·8
Central Punjab	2·58	4·75	—2·17	—46	2·6	5·1
Punjab Submontane	8·47	8·30	+0·17	+2	7·1	8·0
Punjab Hills	23·63	16·67	+6·96	+42	16·9	15·3
North Punjab	3·56	4·78	—1·22	—26	3·9	5·4
West Punjab	1·11	2·04	—0·93	—46	1·5	2·8

A few showers fell in Baluchistan between the 6th and the 9th. The amounts exceeded 1″ in the following cases:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Baluchistan	Nari	8th August	1·80
	Babarkach	9th ,,	1·10
	Nuttal	,, ,,	1·08

In Jummoo and Kashmir there were four rainfall periods; the first between the 3rd and the 8th, the second on the 13th and 14th, the third between the 21st and 24th, and the fourth and last on the 30th and 31st. Falls exceeding 3″ in 24 hours were recorded on several days as is shown below:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jummoo	Bhimber	1st August	4·05
	Rampore Rajauri	2nd ,,	3·30
Kashmir	Domel	4th ,,	5·00
Jummoo	Punch	,, ,,	4·16
	Ramnagar	,, ,,	3·80
	Rampore Rajauri	,, ,,	3·22
	Riasi	,, ,,	3·12
	Bisolee	5th ,,	4·70
	Sambha	6th ,,	7·09
	Ramnagar	22nd ,,	4·50
	Meerpore	23rd ,,	3·24
	Rampore Rajauri	,, ,,	3·15
	Punch	29th ,,	5·16

There were two rainfall periods over Western Rajputana, the first between the 3rd and the 7th, the second between the 14th and 20th. During these two periods the following falls exceeding 2″ were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jodhpur	Bali	14th August	3·07
	Jetaran	15th ,,	2·55
Bikaner	Bikaner	,, ,,	2·42
Jodhpur	Sacher	,, ,,	2·17
	Merta	,, ,,	2·03
	Bilara	16th ,,	4·91

In Eastern Rajputana there were fairly general showers up to the 20th, then a fine period, and finally light showers at the end of the month. The heaviest and most general rainfall occurred between the 5th, 6th and 7th and during

this period the following heavy (over 3″) falls in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bharatpur	Dig	6th August	4·07
Dholpur	Dholpur	,, ,,	3·95
Karauli	Machilpur	,, ,,	3·50
Alwar	Bahror	,, ,,	3·45
Kotah	Etawah	,, ,,	3·28
Jaipur	Dausa	7th ,,	5·62
Kotah	Mandana	,, ,,	4·65
Jaipur	Siwai Ramgarh	,, ,,	4·35
Alwar	Thana Ghazi	,, ,,	4·20
Bharatpur	Kawan	,, ,,	3·99
Jaipur	Sanganer	,, ,,	3·40
	Sri Madhopur	,, ,,	3·40
Alwar	Tijara	,, ,,	3·40
Jaipur	Jaipur	,, ,,	3·35
Alwar	Rajgarh	,, ,,	3·15

The following gives comparative data of the month's rainfall in the larger states, and shows that the total rainfall was in moderate defect generally and was in some excess in Kotah and Sirohi:—

State.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jodhpur	2·50	4·17	—1·67	—40
Bikaner	2·73	3·02	—0·29	—10
Jaipur	4·93	9·61	—4·68	—49
Alwar	5·70	9·65	—3·95	—41
Bharatpur	5·82	8·39	—2·57	—31
Karauli	9·29	10·52	—1·23	—12
Kotah	12·39	9·76	+2·63	+27
Ajmer Merwara	4·49	6·60	—2·11	—32
Udaipur	6·62	8·53	—1·91	—22
Sirohi	5·13	4·52	+0·61	+13

The rainfall over Central India was generally abundant during the first three weeks after which showers set in and continued till the end of the month. The heaviest falls were reported between the 10th and the 14th when the third storm of the month was passing through Central India. During this period the following amounts exceeding 4″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bundelkhand	Ajaigarh	10th August	7·41
	Panna	,, ,,	5·74
	Chhatarpur	,, ,,	5·30
	Samthar	,, ,,	5·05
Rewah	Tyonthar	,, ,,	4·82
Nagod	Nagode Hospital	,, ,,	4·78
Bhopal Agency	Sironj	,, ,,	4·12
Bundelkhand	Charkhari	11th ,,	5·06
Bhopal Agency	Kurwai	,, ,,	4·59
Gwalior	Gwalior Fort	,, ,,	4·28
	Morar	,, ,,	4·20
Bundelkhand	Nowgong	,, ,,	4·10
	Datia	12th ,,	5·23
Gwalior	Goona	,, ,,	4·94
	Gwalior Residency	,, ,,	4·71
	Ali Rajpur	14th ,,	5·06

The month's rainfall was generally in considerable excess as is shown by the following comparative rainfall data for the larger states:—

State.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual, from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Indore	9·31	7·59	+1·72	+23
Rutlam	8·84	10·26	—1·42	—14
Bhopal Agency	18·99	13·27	+5·72	+43
Gwalior	13·21	10·50	+2·71	+26
Rewah	25·79	13·46	+12·33	+92
Bundelkhand	22·52	13·12	+ 9·40	+72

Berar received light or moderate daily rain from the 1st to the 9th. On the 10th a break set in which lasted till

the 17th. On the 18th, 19th and 20th more or less general rain was again received after which there were showers till the 28th and 29th when the rainfall again became fairly general.

The heaviest amounts (over 3″) in 24 hours occurred at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Amraoti	Chandur	4th August	3·60
	Morsi	5th ,,	4·02
	Badnera	,, ,,	3·23
	Amraoti Civil Station	6th ,,	3·30
	Talegaon	,, ,,	3·15
Buldana	Nandura	,, ,,	3·09
Basim	Risod	,, ,,	3·02
Amraoti	Chandur	18th ,,	3·76
Buldana	Pimpalgaon Raja	10th ,,	4·56
Akola	Khamgaon	,, ,,	4·50
	Shegaon	,, ,,	4·31
Buldana	Nandura	,, ,,	4·02
Akola	Akola Civil Station	,, ,,	3·58
Buldana	Malkapur	,, ,,	3·08
Amraoti	Karinja	21st ,,	3·06
Wun	Wun	22nd ,,	3·75
	Panderkowra	,, ,,	3·65
Basim	Pusad	28th ,,	3·25
Amraoti	Karinja	29th ,,	6·60
Wun	Durwha	,, ,,	5·50
Basim	Mangrul	,, ,,	4·87
Akola	Pathur	,, ,,	3·29

The following gives comparative rainfall data for Berar and shows that the total rainfall of the month exceeded the normal :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.	Average actual, August 1901.	Average normal, August.
	Inches.	Inches.	Inches.			
Berar	12·35	8·89	+3·46	+39	16·3	...

The Central Provinces received frequent moderate to heavy rain during the month. This was chiefly due to the fact that most of the depressions passed westward up the Gangetic Plain and hence to the north of the Central Provinces. The advance of each depression from Bengal through Bihar was, however, accompanied with an increase of the West Coast monsoon current and by a moderate burst of rain in the Central Provinces. The third storm of the month passed through the northern districts of the Central Provinces and the heaviest rainfall of the month was experienced between the 10th and the 14th. The following amounts exceeding 4″ in 24 hours were recorded during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sambalpur	Sambalpur	1st August	9·49
Balaghat	Behir	,,	5·36
	Balaghat	,,	4·58
	Lanji	,,	4·04
Bhandara	Bhandara	2nd	5·15
	Tirora	,,	4·40
Nagpur	Umrer	3rd	6·83
Bhandara	Bhandara	,,	4·80
	Tirora	,,	4·71
Hoshangabad	Sohagpur	,,	4·29
	Seoni	6th	9·37
Nimar	Harsud	,,	6·25
Hoshangabad	Hoshangabad	,,	4·30
Jubbulpore	Murwara	10th	5·07
Damoh	Hatta	,,	4·20
	Damoh	11th	6·00
Saugor	Khurai	,,	5·60
	Khurai	12th	5·65
	Saugor	13th	4·57
Damoh	Damoh	,,	4·35
	Tejgarh	,,	4·22
Saugor	Rehli	,,	4·14
Jubbulpore	Murwara	14th	6·11
Sambalpur	Bargarh	18th	6·81
Balaghat	Lanji	22nd	7·84
Bhandara	Sakoli	,,	7·50
	Bhandara	,,	6·72
Wardha	Hinganghat	,,	5·30
	Wardha	,,	4·40
Damoh	Hatta	,,	4·09

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date
			Inches.
Sambalpur	Riagarh State	23rd August	4·35
Mandla	Tikaria	25th	4·82
Jubbulpore	Jubbulpore	26th	5·44
	Murwara	,,	5·09
Hoshangabad	Seoni	31st	4·94

The total rainfall of the month was in considerable excess as is shown by the following comparative data :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal	Average actual, August 1901.	Average normal, August.
	Inches.	Inches.	Inches.			
Central Provinces, West	16·47	9·87	+ 6·60	+67	19·0	12·8
Central Provinces, Central.	24·57	12·86	+11·71	+91	22·6	14·1
Central Provinces, East	17·55	12·54	+ 5·01	+40	19·0	13·2

The Bangalore, Kolar, Tumkur, Mysore and Chitaldroog districts of the Mysore State received scattered showers during the month, but principally during the first fifteen days. The Hassan, Shimoga and Kadur districts received, on the contrary, fairly steady and at times heavy rain. The following gives comparative data for the eight districts of the state, and shows that the total rainfall of the month was slightly to largely in defect of the normal except in the Kadur district where it was in moderate excess :—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Bangalore	2·24	4·69	—2·45	—52
Kolar	1·49	3·94	—2·45	—62
Tumkur	0·95	3·18	—2·23	—70
Mysore	0·90	2·93	—2·03	—69
Hassan	4·12	4·20	—0·08	— 2
Shimoga	10·90	11·95	—1·05	— 3
Kadur	14·50	10·15	+4·35	+42
Chitaldroog	1·30	2·17	—0·87	—40

Rain was received daily in the Konkan coast districts, but the fall was not generally heavy more especially during the last ten days of the month when the rainfall decreased very decidedly. Amounts exceeding 5″ in 24 hours were recorded at the following places on the following dates which, it will be noticed, were all during the first half of the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kolaba	Matheran	2nd August	6·20
Thana	Kalyan	3rd ,,	5·64
	Murbad	,, ,,	5·41
	Vada	,, ,,	5·32
	Bhiwndi	,, ,,	5·25
Kolaba	Pen	4th ,,	5·11
	Mahad	5th ,,	5·95
	Roha	,, ,,	5·66
	Karjat	,, ,,	5·41
	Matheran	8th	9·75
	Do.	9th ,,	6·35
	Karjat	,, ,,	6·00
	Mangaon	10th ,,	7·75
	Mahad	,, ,,	5·92
Thana	Murbad	,, ,,	5·60
	Kalyan	,, ,,	5·28
Kolaba	Roha	,, ,,	5·20
Ratnagiri	Sangameshvar	11th ,,	7·70

The following gives comparative data for the four districts in this division :—

District.	Rainfall.			
	Average actual, August 1901.	Average normal for August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
North Kanara	21·28	20·68	+0·60	+3
Ratnagiri	26·55	27·61	—1·06	—4
Kolaba	43·22	30·25	+12·97	+43
Thana	24·62	17·73	+6·89	+39

The preceding data show that the month's rainfall was

about normal in the North Kanara and Ratnagiri districts and was in moderate excess in the two remaining districts.

In the Karnatak the rainfall was irregularly distributed. In Bijapur and part of Dharwar there was very little rain throughout the month and in the remaining districts the rainfall was light and scattered after the 15th. There were no heavy falls of rain during the month and the total fall was about normal in Belgaum and in moderate to considerable defect elsewhere as is shown by the following comparative data for the different districts:—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dharwar	2·56	4·00	—1·44	—36
Bijapur	1·17	5·21	—4·04	—77
Belgaum	6·03	7·36	—1·33	—18

In the South Deccan rain was somewhat heavier and more general than in the Karnatak, though, as in the latter division, the rainfall fell off quickly both in amount and extent during the latter half of the month. Heavy falls in 24 hours were recorded at most of the hill stations as is shown below:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Satara	Malcolmpeth	2nd August	4·35
Poona	Lanoli	3rd ,,	7·87
Satara	Malcolmpeth	,, ,,	6·65
Poona	Lanoli	4th ,,	6·52
Satara	Malcolmpeth	,, ,,	5·21
		5th ,,	6·05
Poona	Lanoli	,, ,,	6·05
Satara	Malcolmpeth	6th ,,	5·50
		7th ,,	4·43
Poona	Lanoli	8th ,,	4·45
		9th ,,	8·70
Satara	Malcolmpeth	10th ,,	8·50
		11th ,,	6·20

The following gives comparative data for the three districts in this division:—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Satara	13·20	6·40	+6·80	+106
Sholapur	2·81	5·37	—2·56	— 48
Poona	13·01	8·82	+4·19	+ 48

The North Deccan had showery weather throughout the month and general rain on the 28th, 29th, and 30th. Falls of over 3″ in 24 hours were recorded at the following places on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Nasik	Igatpuri	10th August.	3·25
Khandesh	Bhadgaon	19th ,,	3·16

Comparative rainfall data for the three districts in this division are given below:—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ahmednagar	2·86	3·77	—0·91	— 24
Nasik	9·68	7·97	+1·71	+ 21
Khandesh	7·40	3·88	+3·52	+ 91

Gujarat had two rainfall periods, the first extending from the 1st to the 9th, the 2nd from the 13th to the 22nd. After the latter date any rain which fell was light and scattered. Falls of 3″ or more in 24 hours were recorded as follows:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Surat Agency	Dharampur	3rd August	3·20
Surat	Valod	4th ,,	3·29
Kaira	Mahudha	6th ,,	7·65
	Dakor	,, ,,	5·07
Panch Mahals	Kalol	,, ,,	3·40
Surat Agency	Bansda	7th ,,	4·35
		8th ,,	4·85
	Dharampur	,, ,,	3·00

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A M. of date.
			Inches.
Surat Agency	Bansda	9th August	4·23
	Dharampur	" "	3·05
Panch Mahals	Jambughoda	14th "	6·30
Ahmedabad	Sanand	" "	3·14
	Ahmedabad	" "	3·00
Panch Mahals	Dohad	15th "	3·60
Ahmedabad	Sanand	19th "	3·75
Kaira	Mahudha	21st "	3·45

The total rainfall was about normal except in Broach. The following gives comparative data for the different districts in this division:—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Surat	10·21	12·83	—2·62	—20
Broach	4·31	7·99	—3·68	—46
Kaira	9·29	8·26	+1·03	+12
Panch Mahals	11·90	9·85	+2·05	+21
Ahmedabad	6·70	7·33	—0·63	— 9

Kathiawar and Cutch received light showers between the 1st and the 8th and between the 13th and the 23rd while Sind, with the exception of local showers in Umarkot and Parkar on the 18th, had no rain throughout the month.

The following gives comparative data of the rainfall divisions of the Bombay Presidency:—

Division.	Rainfall.				Number of rainy days.	
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.	Average actual, August 1901.	Average normal, August.
	Inches.	Inches.	Inches.			
Konkan	28·20	23·96	+4·24	+18	27·7	23·8
Bombay Deccan	7·01	6·14	+0·87	+14	11·2	9·9
Khandesh	7·01	5·99	+1·02	+17	13·3	8·6
Gujarat	8·63	9·28	—0·65	— 7	12·7	13·6
Kathiawar and Cutch.	4·41	6·28	—1·87	—30	7·9	7·4
Sind	0 21	1·94	—1·73	—89	0·2	...
Baluchistan Hills	0·22	0·74	—0·52	—70	0·4	...

The Malabar coast district of Madras received daily general rain until the 20th. After that date rain decreased in amount and extent, and by the end of the month had almost ceased. In South Canara the rainfall continued till later in the month, but the amount fell off considerably during the last ten days. The rainfall was not very heavy, but the following amounts exceeding 4″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
South Canara	Karkal	2nd August.	4·16
	Beltangadi	5th "	6·31
Malabar	Trikkur	14th "	4·04

The total rainfall of the month was about normal as is shown by the following comparative data for the two districts:—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Malabar	16·05	16·23	—0·18	—1
South Canara	25·12	27·59	—2·47	—9

South Madras had very little rain. Madura received showers at the beginning and end of the month, but Tinnevelly was almost rainless. The month's rainfall was only about half the normal as is shown by the following data for these two districts:—

District.	Rainfall.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Madura	1·62	2·45	—0 83	—34
Tinnevelly	0·36	0·85	—0·49	—58

South Central Madras received scattered showers during the greater part of the month and three days of fairly general rain, *viz.*, the 1st, the 27th and the 29th. On these

days the following amounts exceeding 2″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Salem	Salem	27th August	4·07
	Vaniyambadi	,, ,,	2·36
	Harur	,, ,,	2·30
	Rasipuram	29th ,,	3·10
	Paramathi	,, ,,	2·70

The month's rainfall was in considerable defect as is shown by the following data for the two districts:—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Salem	2·75	4·51	−1·76	−39
Coimbatore	1·21	2·12	−0·91	−43

Central Madras received frequent moderate showers between the 1st and the 17th, and another burst of rain on the 26th and subsequent days, but the total rainfall of the month was not heavy and only about half the normal amount. The following gives comparative data for the different districts:—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuddapah	1·70	4·34	−2·64	−61
Anantapur	0·72	3·50	−2·78	−79
Bellary	2·45	3·54	−1·09	−31
Kurnool	3·31	4·95	−1·64	−33

The East coast north received frequent showers except during the last three days of the month and general bursts of rain at about the times of the development of the depressions over the Bay. Thus there was fairly general rain on the 1st and 2nd, the 6th to the 10th, the 18th, the 22nd and the 27th and 28th. Falls exceeding 3″ in 24 hours were recorded at the following places on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Godavari	Pithapuram	3rd August.	3·02
Ganjam	Balliguda	10th ,,	5·18
	Udayagiri	,, ,,	3·65
Vizagapatam	Nowrangapur	,, ,,	3·55
	Jeypore	,, ,,	3·28

The following gives comparative data for the districts in the division and shows that the month's rainfall was about normal in Kistna, above it in Godavari and in moderate to considerable defect in the remaining districts:—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual, from normal August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ganjam	5·35	8·23	−2·88	−35
Vizagapatam	2·94	6·26	−3·32	−53
Godavari	9·27	6·35	+2·92	+46
Kistna	4·84	5·80	−0·96	−17

The central division of the East coast received much less rainfall than the north division, but the anticipated rainfall is lighter, and the total was about normal. The following gives data:—

District.	Rainfall. Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Nellore	2·89	3·46	−0·57	−16

The south division received rain on the 1st, on the 5th and 6th, between the 14th and 19th, and from the 27th to the 30th. The distribution of rain was irregular and the following amounts exceeding 3″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chingleput	Saidapet	5th August	5·74
South Arcot	Chidambaram	27th ,,	3·73
Chingleput	Kattur	30th ,,	3·24
	Sathiavedu	,,	3·01

The month's rainfall was approximately normal for the division, though the rainfall varied considerably in the different districts. This is shown below:—

DISTRICT.	RAINFALL.			
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madras . . .	7·28	4·68	+2·60	+56
Chingleput . . .	7·31	5·82	+1·49	+26
North Arcot . . .	2·52	5·08	—2·56	—50
South Arcot . . .	4·98	5·62	—0·64	—11
Tanjore . . .	3·07	4·29	—1·22	—28
Trichinopoly . .	4·29	4·11	+0·18	+ 4

The following gives comparative data for the eight divisions of the Presidency:—

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS.	
	Average actual, August 1901.	Average normal, August.	Variation of actual from normal, August 1901.	Percentage variation from normal.	Average actual, August 1901.	Average normal, August.
	Inches.	Inches.	Inches.			
Malabar . . .	18·98	20·32	—1·34	— 7	22·5	21·4
Madras South Central	2·22	3·64	—1·42	—39	3·6	5·8
East Coast, North .	6·46	7·51	—1·05	—14	11·3	11·0
Madras, Central . .	2·08	4·12	—2·04	—50	5·6	6·7
East Cost, Central .	2·89	3·47	—0·58	—17	5·7	5·8
East Coast, South .	4·29	4·97	—0·68	—14	6·5	7·2
Madras, South . .	0·94	1·62	—0·68	—42	1·7	2·8

Table

Abstract of Observations taken at 8 A.M. at 222

Number of District.	Meteorological Province or District.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.				−·030								84·0	−0·5	75·5	+0·4	79·7	0	8·5					15·5
1	Tenasserim and Bay Islands.	Port Blair	61	29·778	−·008	29·770	29·878	31st	29·706	8th	·172	80·7	85·1		77·9		81·5		7·2	88·6	31st	74·4	10th	14·2
		Mergui	96	29·774	−·012	29·802	29·864	31st	29·711	4th	·153	77·3	82·4	−2·1	74·2	+2·2	78·3	+0·1	8·2	87·7	21th	72·4	4 days	15·3
		Tavoy	26	29·834	−·031	29·791	29·915	31st	29·770	8th	·145	76·6	82·1	−0·4	74·1	+0·6	78·1	+0·1	8·0	86·7	30th	71·0	15th	15·7
		Moulmein	94	29·722	−·034	29·754	29·799	11th	29·653	15th	·146	76·8	83·1	−0·1	74·2	+0·3	78·7	+0·1	8·9	89·0	28th	72·3	9th & 13th.	16·7
2	Lower Burma	Rangoon	41	29·746	−·042	29·725	29·840	31st	29·664	8th	·176	78·2	84·1	−0·8	75·6	−0·1	79·9	−0·5	8·5	89·1	26th	73·9	10th, 13th & 18th.	15·2
		Bassein	27	29·760	−·030	29·722	29·877	31st	29·650	8th	·227	78·2	84·5	+0·1	76·2	+0·6	80·4	+0·4	8·3	89·7	5th	74·2	13th	15·5
		Diamond Island.	41	29·746	−·033	29·722	29·868	31st	29·645	9th	·223	80·2	*83·6	*−0·6	76·7	+1·5	80·1*	+0·5	6·9	85·6	6 days	72·2	14th	13·4
5	Arakan	Akyab	20	29·693	−·047	29·656	29·826	30th	29·511	9th	·315	79·5	81·7	+0·3	76·5	−0·7	80·6	−0·2	8·2	88·4	5th	74·0	10th & 13th.	14·4
3	Central Burma	Toungoo	183	29·588	−·030	29·714	29·672	31st	29·500	8th	·172	79·3	86·2	−0·1	73·9	−1·0	80·1	−0·6	12·3	91·1	6th & 19th.	71·6	21st	19·5
	II.—Burma Inland.				−·022								90·1	−0·2	76·6	+0·5	83·4	+0·2	13·5					21·7
3	Central Burma	Thayetmyo	130	29·628	−·021	29·700	29·718	31st	29·526	9th	·192	80·6	89·3	+0·5	76·9	+0·9	83·2	+0·7	12·4	92·7	22nd	70·6	7th	22·1
4	Upper Burma	Minbu	165	29·566	−·018	29·675	29·672	30th	29·446	8th	·226	79·9	89·7	−1·0	77·2	+0·4	83·5	−0·3	12·5	94·6	28th	74·6	14th	20·0
		Yamethin	657	29·085	−·015	29·693	29·182	29th	28·982	8th	·200	78·4	90·1	−0·1	74·7	+0·4	82·4	+0·2	15·4	95·0	28th & 29th.	70·7	21st	24·3
		Mandalay	250	29·474	−·026	29·672	29·589	30th & 31st.	29·341	8th	·248	83·2	95·3	P	78·9	+1·6	87·1	P	16·4	99·5	6th	76·8	12th	22·7
		Kindat	377	29·325	−·019	29·657	29·478	30th	29·191	9th	·287	79·3	87·6	−0·7	76·3	+0·1	82·0	−0·3	11·3	92·8	5th & 22nd.	73·3	30th	19·5
		Bhamo	381	29·318	−·033	29·654	29·463	30th	29·197	9th	·26.	78·3	88·2	+0·4	75·6	+0·5	82·0	+0·5	12·7	94·5	28th	73·1	12th, 13th & 31st.	21·4
4(a)	Burma Hill Stations.	Maymyo		26·301			26·386	27th	26·199	9th	·187	70·4	78·4		66·7		72·6		11·7	83·5	29th	63·3	25th	20·2
		Taunggyi										66·5	71·0	−4·6	64·4	+0·7	67·7	−2·0	6·6	75·2	27th	62·0	13th	13·2
		Lashio										72·5	83·6	+1·1	70·0	+1·3	76·8	+1·2	13·6	89·5	27th	67·0	12th	22·5
	III.—Assam				−·025								88·6	+0·2	78·0	+0·6	83·3	+0·4	10·6					18·4
7	Surma	Silchar	104	29·589	−·027	29·644	29·753	30th	29·376	9th	·37.	80·5	90·7	+1·5	77·0	+0·3	83·9	+0·9	13·7	96·6	10th	75·3	18th & 19th.	21·3
9	Brahmaputra	Sibsagar	333	29·369	−·015	29·657	29·515	30th	29·216	9th	·299	79·7	88·3	−1·5	78·1	+0·3	83·2	−0·6	10·2	93·2	10th	75·0	29th	18·2
		Dhubri	115	29·534	−·034	29·604	29·719	29th	29·317	9th	·372	81·5	87·1	+0·6	79·3	+1·1	83·2	+0·9	7·8	90·7	22nd	76·8	12th & 28th.	13·9
		Tezpur	292	29·403		29·658	29·575	29th	29·226	9th	·349	79·5	88·3		77·9		83·1		10·4	93·1	10th	75·9	8th & 29th.	17·2
		Dibrugarh	394	29·307		29·668	29·489	29th	29·159	9th	·320	80·0	88·6		77·6		83·1		11·0	93·2	18th	72·0	29th	21·2
	IV.—Bengal and Orissa.				−·046								88·7	+0·8	78·8	+0·8	83·8	+0·8	10·0					17·6
6	East Bengal	Chittagong	87	29·581	−·058	29·616	29·740	30th	29·360	9th	·380	81·6	87·1	+1·9	76·9	+0·9	82·0	+1·4	10·2	90·0	8th	74·6	13th & 24th.	15·4
		Noakhali	43	29·610		29·600	29·764	30th	29·396	9th	368	81·2	85·8		77·7		81·8		8·1	88·2	22nd	70·4	22nd	17·8
		Comilla	36	29·625		29·609	29·797	30th	29·414	9th	·383	81·5	89·0		76·9		83·0		12·1	91·3	6 days	73·8	11th, 13th & 14th.	16·5
		Sirajganj	49	29·573		29·572	29·757	30th	29·367	9th	·390	81·1	87·9		79·3		83·7		8·6	90·3	5 days	76·7	13th & 29th.	13·6
		Narayanganj	26	29·615	−·039	29·589	29·795	30th	29·401	9th	·394	85·2	87·6	−0·1	79·7	+0·8	83·7	+0·4	7·9	89·1	7 days	76·2	13th	12·9
		Barisal	13	29·611	−·049	29·569	29·775	30th	29·385	9th	·390	82·2	87·4	+1·1	79·0	+1·1	83·2	+1·1	8·4	90·8	6th & 22nd.	75·1	14th	15·7
		Mymensingh	59	29·584	−·042	29·595	29·762	30th	29·396	9th	·36	8.·4	8·.4	+0·2	79·0	+1·4	83·2	+0·8	8·4	90·2	1st	76·1	12th & 13th.	14·1
10	Deltaic Bengal	Faridpur	46	29·593		29·586	29·765	30th	29·373	9th	·39	82·5	88·4		78·9		83·7		9·5	91·8	22nd	75·9	13th & 14th.	15·9
		Jessore	33	29·581	−·050	29·561	29·756	30th	29·351	9th	·405	82·4	89·4	+0·7	79·1	+0·4	84·3	+0·6	10·3	93·0	22nd	75·7	14th	17·3
		Calcutta	21	29·578	−·051	29·545	29·750	30th	29·345	9th	·405	82·6	86·6	+1·5	78·9	+0·8	83·7	+1·2	9·7	93·2	22nd	75·6	13th	17·6
		Saugor Island	25	29·570	−·059	29·539	29·742	30th	29·355	9th	·387	8..7	8·.4	+1·2	80·8	+1·2	84·6	+1·2	7·6	91·4	5th, 6th & 22nd.	76·1	13th	15·3
		Krishnagar	47	29·565		29·560	29·748	30th	29·340	9th	·4.8	82·0	90·2		78·7		84·5		11·5	94·3	21st	74·7	13th	19·6
		Midnapore	149	29·446		29·541	29·613	30th	29·253	9th	·359	82·0	89·3		76·7		84·0		10·6	94·3	22nd	74·7	13th	19·6

* Mean of 22 days.

itions in India, Burma, etc., in August, 1901.

Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW	W.	NW	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st August 1901.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period, 1st June to 31st August.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																			33·84	27·76	+6·07					**I.—Burma Coast and Bay Islands.**		
					15	14	1	S 68° W	14·0		9·6	+46	89	·933	7·8	24			18·94	15·20	+ 3·74	53·67	49·97	+ 3·70	2·74	Port Blair .	Tenasserim and Bay Islands.	1
1					1			N 67° W	1·6	1·4	1·6	−13	95	·881	5·6	30			49·60	28·61	+20·99	127·03	92·47	+34·56	5·05	Mergui,		
1					2	1		S 80° W	1·0				94	·866	9·8	30			97·25	43·19	+ 4·06	138·83	129·63	+ 9·20	4·31	Tavoy.		
2	1		1	4	19	3	1	S 48° W	3·2	3·6	3·2	+13	93	·858	9·1	31	26·18	+4·82	62·66	38 96	+23 70	134·20	120·50	+13·70	6·28	Moulmein		
				5	17	8	1	S 52° W	5·2		4·7	+13	94	·918	9·6	25	22·73	+2·27	12·84	18·19	− 5·35	56·42	57·38	− 0·96	1·56	Rangoon .	Lower Burma.	2
				5	19	1		S 38° W	4·1		3·4	+21	93	·910	7·5	26	25·27	+0·73	23·93	23·25	+ 0·68	61 37	70·69	− 9·32	3·64	Bassein,		
				1	18	8		S 43° W	10·3		6·7	+54	88	·913	9·3	24	22·10	+1·90	29·55	22·68	+ 6·87	76·73	72·17	+ 4·56	4·20	Diamond Island,		
	1	10	9	8	3			S 43° E	2·6	2·5	3·2	−22	95	·963	9·0	26	26·09	−0·09	42·89	41·26	+ 1·63	146·17	136·79	+ 9·38	7·52	Akyab. .	Arakan.	5
			21	10				S 31° E	6·2	6·1	3·9	+56	90	·908	9·6	25	23·91	+1·09	16·83	18·50	− 1·67	46·16	51·02	− 4·86	2·51	Toungoo .	Central Burma.	3
																			6·86	8·51	−1·65					**II.—Burma Inland.**		
		1	11	18	1			S 17° E	6·5		5·9	+10	85	·880	6·1	10	12·36	−2·36	3·33	6·57	− 3·24	14·91	20·34	− 5·43	0·47	Thayetmyo .	Central Burma.	3
			27	3				S 40° E	9·0	10·7			88	·912	8·0	12			4·88	5·10	− 0·22	13·23	13·56	− 0·33	1·55	Minbu .	Upper Burma.	4
			20	10				S 30° E	3·8	4·0			87	·844	9·5	9			4·67	5·89	− 1·22	15·23	12·82	+ 2·41	0·89	Yamethin,		
				31				S					73	·833	3·1	5			1·44	3·88	− 2·44	12·82	12·84	− 0·02	0·56	Mandalay,		
1			2	2	1			S 13° E	0·9	0·9			93	·939	8·8	18			16·47	13·21	+ 3·26	36·09	40·33	− 4·24	2·87	Kindat,		
1	6		1		8	3	2	N 87° W	1·9	2·2			94	·909	7·7	18			10·34	16·38	− 6·04	32·40	48·74	−16·34	1·70	Bhamo,		
1	5	1		5	15	1		S 33° W	4·7				91	·684	8·9	16			7 26			21·72			1·15	Maymyo .	Burma Hill Stations.	6 (a)
13	13	5						N 22° E					90	·602	8·3	19			13·50	14·63	− 1·13	29·21	35·76	− 6·55	3·02	Taunggyi,		
1	4	2	2	9	8	1	4	S 19° W	1·0				92	·743	9·7	22			14·99	12·73	+ 2·26	33·09	35·51	− 2·42	1·83	Lashio,		
																			15·94	16·54	−1·45					**III.—Assam.**		
								Calm	0·5	0·9	3·0	−70	91	·966	9·2	23	21·82	+1·18	18·11	19·66	− 1·55	57·57	59·49	− 1·92	2·39	Silchar .	Surma.	7
4	8		6		3			N 66° E	1·9	1·7	2·7	−37	96	·967	9·6	22	17·78	+4·22	15·12	16·19	− 1·07	46·47	46·98	− 0·51	2·62	Sibsagar .	Brahmaputra.	9
1	7	10	2	1	4		1	N 84° E	3·6	4·2	3·2	+31	90	·971	8·7	13	14·47	−1·47	12·04	13·76	− 1·72	45·33	54·46	− 9·13	2·22	Dhubri,		
1	3	10	3	2	10	1	1	S 37° E	1·9	2·0			94	·919	8·5	19			17·05			36·35			3·38	Tezpur.		
5	3	6	2	3	5	3	4	N 6° E	1·3	1·2			95	·965	6·7	23			17·40						2·74	Dibrugarh.		
																			11·79	13·89	−2·10					**IV.—Bengal and Orissa.**		
		4	18	8		1		S 37° E	9·0	8·9	6·1	+46	85	·922	6·6	14	18·42	−4·42	10·20	19·76	− 9·56	44·31	65·65	−21·34	3·57	Chittagong .	East Bengal.	6
		10	10	8	3			S 41° E	6·4	5·9			89	·956	9·3	28	23·04	+4·96	24·66	24·99	− 0·33	70·36	72·92	− 2·56	2·45	Noakhali.		
		4	16	11				S 34° E	8·1				86	·917	8·1	17	17·67	−0·67	8·72	16·40	− 7·68	42·98	50·43	− 7·45	1·76	Comilla.		
	4	12	7	1				S 81° E	2·0	2·1			93	·885	8·2	13	13·85	−0·85	8·83	10·93	− 2·10	38·28	33·55	+ 4·73	2·60	Sirajganj.		
		6	20	5				S 46° E	9·0		6·0	+50	90	·990	8·9	18	17·38	+0·62	10·55	12·32	− 1·77	41·07	39·16	+ 1·91	2·15	Narayanganj.		
		2	14	12	2	1		S 23° E	3·8				89	·989	6·3	17	18·77	−1·77	9·25	12·53	− 3·28	38·91	44·31	− 5·40	1·31	Barisal.		
		10	14	1				S 61° E	1·4	1·4			90	·972	7·4	22	19·19	+2·81	15·52	14·46	+ 1·06	63·01	48·20	+14·81	3·57	Mymensingh.		
		1	26	3				S 42° E	1·8	1·7			90	1·010	6·9	13	15·96	−2·96	7·12	12·23	− 5·11	35·43	38·82	− 1·39	2·16	Faridpur .	Deltaic Bengal	12
	1	2	10	8				S 34° E	3·4	3·3	4·1	−20	91	1·009	8·3	17	17·12	−0·12	6·27	11·35	− 5·08	28·72	35·06	− 6·34	1·13	Jessore.		
	1	5	7	8	4		1	S 27° E	3·8		5·3	−28	87	·980	8·0	13	18·12	−5·12	13 30	12·95	+ 0·35	35·14	36·15	− 1·01	5·54	Calcutta.		
	1	4	3	6	12	5		S 21° W	14·6		12·4	+18	89	·992	8·5	18	16·81	+1·19	14·21	15·22	− 1·01	42·03	40·40	+ 1·63	3·76	Saugor Island.		
	2	11	11	7				S 57° E	4·0				91	·995	7·5	13	14·12	−1·12	8·65	10·54	− 1·89	22·81	30·49	− 7·68	1·72	Krishnagar.		
2	2	2	5	11	2	1	2	S 15° E	3·0	2·6			88	·966	5·1	16	15·85	+0·15	17·55	12·33	+ 5·22	33·29	33·38	− 0·09	3·30	Midnapore.		

Table

Abstract of Observations taken at 8 A.M. at 222 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal.	Bankura	298	29·268		29·515	29·440	30th	29·078	9th	·362	81·7	89·3		78·5		83·9		10·8	97·1	26th	73·9	13th	23·2
		Raniganj	334	29·256		29·537	29·430	30th	29·061	9th	·369	81·3	89·7		78·6		84·2		11·1	94·7	7th	74·9	13th	19·8
		Burdwan	99	29·504	−·050	29·549	29·676	30th	29·285	9th	·391	82·6	89·5	+0·3	79·5	+0·6	84·5	+0·5	10·0	93·9	22nd	74·8	13th	19·1
		Naya Dumka	489	29·106		29·550	29·283	30th	28·920	9th	·363	81·8	88·9		78·1		83·5		10·8	93·5	21st	75·4	25th	18·1
		Berhampore	67	29·541	−·048	29·556	29·717	30th	29·336	9th	·381	82·2	90·0	+1·5	79·4	+0·9	84·7	+1·2	10·6	93·8	7th & 22nd.	75·8	13th	18·0
		Rampur Boalia	70	29·544		29·563	29·717	30th	29·337	9th	·380	83·4	89·2		79·8		84·5		9·4	93·1	6th & 7th.	76·6	13th	16·5
		Malda	72	29·529		29·552	29·713	29th	29·334	9th	·389	82·7	89·9		79·6		84·8		10·3	93·6	22nd	75·5	29th	18·1
		Bogra	61	29·563		29·576	29·736	29th & 30th.	29·375	9th	·361	82·1	89·0	+1·1	79·2	+1·2	84·1	+1·2	9·8	92·2	5th & 22nd.	76·2	28th	16·0
12	North Bengal	Dinajpur	123	29·493	−·047	29·570	29·681	29th	29·308	9th	·373	81·9	89·8	+1·1	79·2	+0·8	84·5	+1·0	10·6	94·3	5th	75·5	28th	18·8
		Rangpur	123	29·533		29·610	29·724	29th	29·352	9th	·372	82·3	89·6		78·3*		84·0*		11·3	93·2	1st	72·8	20th	20·4
		Jalpaiguri	284	29·365	−·027	29·606	29·567	29th	29·193	9th	·374	80·0	88·3	+0·5	77·6	+1·5	83·0	+1·0	10·7	91·9	16th & 18th.	75·1	28th & 29th.	16·8
		Cooch Behar	156	?		?	?		?		?	81·4	88·8		78·6		83·7		10·2	92·4	4 days	76·1	28th & 29th.	16·3
17	North Bihar	Purnea	125	29·492	−·031	29·571	29·689	29th	29·319	9th	·370	81·2	89·5	+0·3	78·9	+1·0	84·2	+0·7	10·6	94·2	17th	75·7	29th	18·5
14	Orissa	Balasore	46	29·555	?	29·547	29·726	30th	29·372	9th	·354	81·6	89·0	+1·7	78·1	+0·3	83·6	+1·0	10·9	92·9	22nd	74·8	13th, 24th & 25th.	18·1
		False Point	21	29·593	−·046	29·556	29·758	30th	29·420	9th	·338	81·6	86·8	−0·2	77·9	−0·3	82·4	−0·3	8·9	92·5	16th	74·1	1st	18·4
		Cuttack	80	29·527	−·052	29·549	29·682	30th	29·368	9th	·314	81·5	89·7	+0·4	78·5	+0·3	84·1	+0·4	11·2	97·4	14th	75·2	14th	22·2
		Puri	20	29·601		29·563	29·751	30th	29·440	9th	·311	82·2	88·2		79·3		83·8		8·9	95·2	30th	75·6	18th	19·6
	V.—Gangetic Plain and Chota Nagpur.				−·046								89·2	+0·3	78·4	+0·8	83·8	+0·6	10·7					21·0
15	Chota Nagpur	Hazaribagh	2,007	27·599	−·050	29·542	27·779	30th	27·452	9th & 10th.	·327	76·1	84·3	+0·7	74·1	+1·2	79·2	+1·0	10·2	90·2	7th	71·3	25th	18·9
		Ranchi	2,128	27·476	−·051	29·536	27·645	30th	27·327	10th	·318	75·7	83·6	+0·7	73·6	+1·6	78·7	+1·2	10·0	89·2	7th	69·9	25th	19·3
		Daltonganj	730 ?	28·833		29·516	29·011	30th	28·666	10th	·345	79·8	89·8		75·8		82·8		14·0	97·1	7th	73·0	12th, 26th & 27th.	24·1
		Purulia		28·769		29·526	28·943	30th	28·598	9th	·345	80·7	89·5		76·9		83·2		12·6	96·6	17th	72·9	13th & 25th.	23·7
		Chaibassa	760	28·823		29·529	28·990	30th	28·654	9th	·336	80·3	87·9	−0·7	77·1	+0·5	82·5	−0·1	10·8	94·6	7th	73·0	25th	21·6
16	South Bihar	Gaya	375	29·201	−·053	29·528	29·394	30th	29·045	10th	·349	81·9	90·1	0	78·5	0	84·3	0	11·6	98·2	7th	75·8	8th & 9th.	22·4
		Dehri	351	29·215		29·519	29·411	30th	29·054	10th	·357	82·1	89·0		79·2		84·2		9·8	98·4	5th	71·5	11th	26·9
		Patna	183	29·398	−·055	29·532	29·592	30th	29·243	9th	·349	83·0	89·3	0	80·1	+0·6	84·7	+0·3	9·2	95·0	5th	76·2	8th	18·8
		Arrah	190	29·379		29·520	29·569	30th	29·239	9th	·330	82·9	89·3		80·2		84·8		9·1	95·5	7th	76·5	8th	19·0
		Buxar	239	29·331		29·523	29·532	30th	29·185	9th	·347	82·5	88·5		78·9		83·8		9·6	96·0	7th	76·6	5 days.	19·4
17	North Bihar	Bhagalpur	160	29·443		29·555	29·634	29th	29·264	9th	·370	83·2	90·1		79·5		84·8		10·6	95·2	21st	75·6	29th	19·6
		Darbhanga	166	29·433	−·049	29·552	29·617	29th	29·271	9th	·346	81·9	89·1	+0·7	79·6	+0·5	84·4	+0·6	9·5	93·3	17th	75·5	7th & 8th.	17·8
		Muzaffarpur	178	29·431		29·562	29·620	30th	29·263	9th	·357	82·2	89·4		79·2		84·3		10·2	93·7	17th	76·2	1st & 29th.	17·5
		Motihari	224	29·375		29·555	29·577	29th	29·214	9th	·363	82·1	89·5		78·6		84·1		10·9	95·0	17th	75·9	4 days	19·1
		Chapra	181	29·406		29·539	29·601	30th	29·258	9th	·343	82·5	90·3		79·0		84·7		11·3	95·4	5th & 7th.	72·6	2nd	22·8
18	N.-W. P., East	Benares	267	29·292	−·059	29·512	29·484	30th	29·140	10th	·344	82·2	89·7	0	80·0	+1·2	84·9	+0·6	9·7	97·8	6th	76·5	12th	21·3
		Allahabad	309	29·249	−·061	29·511	29·449	30th	29·092	9th	·357	83·0	90·5	+0·7	79·4	+0·9	85·0	+0·8	11·1	99·6	6th	75·3	31st	24·3
23	N.-W. P. (East Submontane).	Gorakhpur	256	29·334	−·031	29·546	29·525	30th	29·189	9th	·336	82·8	89·6	−0·5	79·4	+0·5	84·5	0	10·2	95·5	6th	76·2	9th	19·3
19	South Oudh	Lucknow	368	29·199	−·050	29·522	29·397	30th	29·024	8th	·373	82·3	90·6	0	79·1	+0·6	84·9	+0·3	11·5	97·8	5th & 18th.	76·3	30th	21·5
20	North Oudh	Bahraich	403	29·176	−·029	29·536	29·364	30th	29·017	8th	·347	83·5	90·6	+1·3	79·2	+1·3	84·9	+1·3	11·4	96·6	6th & 18th.	77·0	9 days	19·6
21	N.-W. Provinces (Central).	Cawnpore	416	29·161	−·034	29·528	29·365	30th	28·999	9th	·366	82·5	90·2	+0·6	79·2	+1·0	84·7	+0·8	11·0	97·4	5th	77·0	5 days	20·4
		Mainpuri	516	29·054	−·027	29·524	29·267	30th	28·879	8th	·388	82·5	91·0	+0·8	78·9	+0·7	85·0	+0·8	12·1	100·3	5th	75·0	29th & 30th.	25·3

* Mean of 26 days.

continued.

India, Burma, etc., in August, 1901—continued.

Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st August 1901.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period, 1st June to 31st August.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
	3	6	3	5			4	S 74° E	3·7	4·3			88	·952	7·2	15	16·77	− 1·77	7·69	12·89	− 5·20	28·16	35·53	− 7·37	0·85	Bankura	Central Bengal	11
3	3	6	4	1	2			S 89° E	1·4				90	·973	6·3	17	16·23	+ 0·77	11·05	13·23	− 2·18	26·68	35·72	− 9·04	2·95	Raniganj.		
1	5	7	5	6	1			S 65° E	2·8	2·8	3·6	−22	88	·980	8·1	12	16·19	− 4·19	8·26	11·37	− 3·11	25·72	32·00	− 6·28	1·75	Burdwan.		
	3	12	10	3	1			S 67° E	1·9	2·1			88	·963	9·3	19	18·20	+ 0·80	13·86	13·63	+ 0·23	29·28	36·56	− 7·28	2·29	Naya Dumka.		
		9	8	7				S 49° E	3·1	3·3	4·2	−21	90	·999	7·9	16	16·35	− 0·35	6·61	11·77	− 5·16	20·39	31·86	−11·47	0·98	Berhampore.		
	4	3	9	6	1	1		S 50° E	2·5	2·5			88	1·018	4·1	11	15·19	− 4·19	5·47	11·01	− 5·54	21·05	32·51	−11·46	1·10	Rampur Boalia.		
	2	20	8			1		S 81° E	2·9	2·6			90	1·003	8·2	12	14·31	− 2·31	10·92	10·35	+ 0·57	25·37	32·64	− 7·27	2·96	Malda.		
		15						E					88	·971	7·9	17	16·08	+ 0·92	10·68	11·97	− 1·29	41·84	36·02	+ 2·82	1·98	Bogra.		
	18	3	6	2	2			N 75° E	4·2	4·9			90	·982	7·5	10	15·96	− 5·96	8·93	12·56	− 3·63	29·56	42·43	−12·87	2·14	Dinajpur	North Bengal.	12
	3	7	4	6	1			S 58° E	2·6	2·8			90	·990	5·5	15	13·50	+ 1·50	8·84	12·41	− 3·57	37·68	47·33	− 9·65	2·59	Rangpur.		
4	11	10	2		1			N 62° E	1·5	2·0			92	·945	3·9	24	19·04	+ 4·96	33·81	25·74	+ 8·07	91·76	81·40	+10·36	8·66	Jalpaiguri.		
	3	4	6	2	1			S 63° E	1·5	1·5			90	·971	8·9	22			29·01	21·51	+ 7·50	78·03	80·12	− 2·09	6·43	Cooch Behar		
	10	4	16		1			S 77° E	2·1	1·8	2·3	−22	91	·971	5·8	18	17·16	+ 0·84	14·60	13·90	+ 0·70	30·50	39·73	− 9·23	2·10	Purnea	North Bihar.	17
1	1			3	13	3		S 48° W	2·4				84	·908	6·7	13	16·00	− 3·00	8·49	11·99	− 3·50	17·27	34·10	−16·83	2·10	Balasore	Orissa.	14
				2	9	16	3	S 76° W	9·6	9·2	9·5	− 3	88	·955	8·9	15	16·00	− 1·00	7·97	13·56	− 5·59	19·01	36·34	−17·33	2·14	False Point.		
					5	5	1	S 72° W	2·1		2·6	−19	85	·914	7·8	14	16·15	− 2·15	7·44	12·37	− 4·93	24·19	36·81	−12·62	1·78	Cuttack.		
					11	5	3	S 68° W	11·4	10·7			86	·955	7·4	7	13·27	− 6·27	5·19	10·38	− 5·19	10·00	28·24	−18·24	1·63	Puri.		
																			12·98	11·57	+1·59					V.—Gangetic Plain and Chota Nagpur.		
2	1	3	6	10	3	1	3	S 14° E	7·0	6·3	7·5	−16	86	·787	10·0	17	17·69	− 0·69	12·81	13·11	− 0·30	19·99	34·90	−14·95	1·95	Hazaribagh.	Chota Nagpur.	15
2	2	5	3	6	5	3	2	S 8° E	5·6	6·6			91	·808	8·8	22	17·69	+ 4·31	20·57	13·84	+ 6·73	32·88	36·62	− 3·74	3·32	Ranchi.		
	4	4	3		1	3		E	3·5	4·2			87	·885	5·0	14	15·77	− 1·77	10·12	12·36	− 2·24	20·53	31·31	−10·78	2·66	Daltonganj.		
1	1	2	1	1	1	1	1	E	1·2				87	·913	6·1	15			9·09			24·71			2·47	Purulia.		
		1	1	1	8	6	1	S 58° W	1·7	1·5			88	·915	6·4	19	16·73	+ 2·27	16·17	13·04	+ 3·13	30·69	35·05	− 4·36	4·29	Chalbassa.		
1	11	3	5		5	1	1	N 77° E	3·2	2·9	2·6	+12	85	·924	7·1	19	14·04	+ 4·96	16·61	12·50	+ 4·11	26·73	32·16	− 5·43	5·76	Gaya	South Bihar.	16
2		12	4	5	3	4	1	S 49° E	9·3	8·3			86	·946	7·9	12	14·08	− 2·08	10·76	12·62	− 1·86	18·69	30·26	−11·57	3·35	Dehri.		
	8	12	6	1		1		N 89° E	5·5	6·5	3·2	+103	89	1·013	8·5	12	13·27	− 1·27	8·05	11·30	− 3·25	18·17	30·39	−12·22	3·12	Patna.		
6	1	1			1	9	6	N 50° W	3·0	3·2			90	1·007	6·3	12	13·31	− 1·31	13·74	11·51	+ 2·23	21·70	29·76	− 8·06	4·70	Arrah.		
2		22	3			2	2	N 87° E	4·5	4·1			89	·986	7·9	15	13·38	+ 1·62	13·53	11·33	+ 2·20	21·07	28·21	− 7·14	2·59	Buxar.		
	3	12	11	1				S 72° E	3·9	3·6			87	·982	8·7	11	13·62	− 2·62	8·19	10·80	− 2·61	18·70	31·07	−12·37	1·76	Bhagalpur	North Bihar.	17
	1	12	11	1				S 69° E	3·1		4·4	− 30	89	·982	7·2	13	14·20	− 1·20	15·95	12·47	+ 3·48	28·02	32·42	− 4·40	4·01	Darbhanga.		
	2	3	2					E	1·3	1·1			93	1·028	5·3	13	13·31	− 0·31	20·01	10·28	+ 9·73	30·75	30·39	+ 0·36	5·15	Muzaffarpur		
	2	26	1		1	1		E	5·6	5·4			91	·996	6·2	15	13·25	+ 1·75	15·21	12·19	+ 3·02	37·11	34·76	+ 2·35	4·35	Motihari.		
	4	17	6	1	1		1	S 85° E	3·1	3·8			90	·998	9·1	14	12·65	+ 1·35	12·24	10·37	+ 1·87	23·95	28·71	− 4·76	2·60	Chapra.		
	4	9	6	2	1	2	1	S 75° E	2·2	2·5	4·2	−40	88	·978	8·2	17	14·27	+ 2·73	15·10	11·83	+ 3·27	19·84	27·70	− 7·86	3·26	Benares	N.-W. P., East.	18
2	7	10			5	6		N 61° E	7·0	8·0	5·6	+43	87	·974	8·4	12	13·91	− 1·91	11·97	11·10	+ 0·87	18·58	29·12	−10·54	3·75	Allahabad.		
4	14	6		1	1	1	3	N 41° E	1·5		2·3	−35	89	·986	7·4	12	13·55	− 1·55	10·37	11·93	− 1·56	28·49	35·28	− 6·79	2·97	Gorakhpur	N.-W. P. (East Submontane).	23
1	4	16	3	2	1	2		S 87° E	2·6	2·8	3·0	− 7	89	·977	9·3	15	12·36	+ 2·64	9·74	11·78	− 2·04	19·64	28·46	− 8·82	1·35	Lucknow	South Oudh.	19
	2	20	1			1		N 88° E	3·0	2·8			86	·988	4·3	12			13·17	9·50	+ 3·67	24·80	27·63	− 2·83	6·02	Bahraich	North Oudh.	20
1	5	8	5	1	6	2		S 66° E	4·4				87	·976	6·9	17	11·70	+ 5·30	11·26	9·37	+ 1·89	20·44	22·96	− 2·52	1·54	Cawnpore	N.-W. Provinces (Central).	21
2		12	1		1	5		N 85° E	0·8	0·8			85	·951	7·3	11			10·88	9·84	+ 1·04	14·46	23·91	− 9·45	2·35	Mainpuri.		

Table

Abstract of Observations taken at 8 A.M. at 222 Stations

Number of district.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°.)	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas				−·040								91·7	−0·3	79·3	+1·6	85·6	+0·7	12·4					24·5
24	N.-W. Provinces, (West Submontane).	Bareilly	569	29·008	−·029	29·536	29·230	30th	28·804	8th	·426	81·9	89·3	−0·7	79·0	+1·0	84·2	+0·2	10·3	94·9	18th	74·6	21st	20·3
		Dehra Dun	2,233	27·398	−·036	29·566	27·614	30th	27·221	7th	·393	75·2	82·7	−1·2	73·0	−0·2	77·9	−0·7	9·7	89·0	11th	70·0	8th	19·0
		Roorkee	887	28·694	−·034	29·543	28·934	30th	28·511	7th	·423	80·5	88·3	−2·4	77·4	+0·4	82·9	−1·0	10·9	94·7	11th	73·1	29th	21·6
22	N.-W. P., West	Meerut	738	28·823	−·044	29·522	29·063	30th	28·650	7th	·413	81·7	89·9	−0·7	78·8	+0·5	84·4	−0·1	11·1	94·6	4 days	76·3	4 days	18·3
26	South-East Punjab.	Delhi	718	28·846	−·039	29·521	29·096	30th	28·681	8th	·415	83·2	90·6	−1·0	80·8	+1·7	85·7	+0·4	9·8	98·2	1st	76·5	6th & 30th.	21·7
28	Central Punjab	Lahore	702	28·833	−·046	29·494	29·070	30th	28·635	7th	·435	86·3	97·6	+1·6	62·3	+3·4	90·0	+2·5	15·3	104·6	21st	71·9	8th	32·7
27	South Punjab	Sirsa	662	28·881	−·045	29·496	29·123	30th	28·712	8th	·411	87·5	99·5	+2·0	82·9	+3·4	91·2	+2·7	16·6	106·3	21st	77·1	7th	29·2
		Patiala	818	28·767		29·546	29·006	30th	28·573	8th	·433	82·6	90·2		79·1		84·7		11·1	97·9	1st	73·5	8th	24·4
29	Punjab (Submontane).	Ludhiana	812	28·734	−·043	29·516	28·991	30th	28·580	7th	·411	84·0	94·5	−0·8	80·5	+1·8	87·5	+0·5	14·0	100·5	26th & 27th.	73·6	3 days	26·9
		Sialkot	830	28·711	−·046	29·503	28·965	30th	28·574	7th	·391	84·5	96·6	+2·6	81·4	+4·1	88·0	+3·4	15·2	106·2	21st	74·1	31st	32·1
		Umballa	892	28·679	?	29·533	28·936	30th	28·511	7th	·425	80·6	90·0	−2·2	77·7	−0·1	83·9	−1·2	12·3	97·0	1st	74·0	30th	23·0
31	North Punjab	Rawalpindi	1,676	27·885	−·040	29·503	28·119	30th	28·718	7th	·401	84·1	92·6?	−0·9?						102·1	21st			
	VII.—Indus Valley and North-West Rajputana.				−·048								99·4	+2·2	81·4	+2·3	90·5	+2·2	18·0					31·0
31	North Punjab	Peshawar	1,110	28·424	−·057	29·493	28·630	30th	28·249	6th	·381	87·8	103·9	+4·9	81·0	+3·2	92·5	+4·1	22·9	110·5	22nd	72·9	9th	37·6
32	West Punjab	Khushab	612	28·914	?	29·486	29·152	30th	28·737	6th	·415	88·2	102·0	+2·3	83·2	+2·5	92·6	+2·4	18·8	109·4	21st	72·4	8th	37·0
		Montgomery	558	28·959	−·051	29·471	29·180	30th	28·769	7th	·411	90·1	103·5	+2·1	84·4	+3·4	94·0	+2·8	19·1	110·0	5th	77·5	8th	32·5
		D. I. Khan	594	28·921	−·069	29·450	29·149	30th	28·724	6th	·425	87·6	101·5	?	82·6	?	92·2	?	18·9	109·7	6th & 7th.	73·1	8th	36·6
		Mooltan	420	29·085	−·055	29·466	29·312	30th	28·889	7th	·423	88·0	103·2	+2·9	84·4	+2·4	93·8	+2·7	18·8	111·4	20th	79·5	10th	31·9
47	Sind	Jacobabad	186	29·316	−·045	29·459	29·543	30th	29·097	7th & 8th.	·446	87·3	106·3	+2·7	82·4	+1·1	94·4	+1·9	23·9	113·2	20th	77·6	25th	35·6
		Hyderabad	96	29·469	−·012	29·517	29·669	30th	29·269	8th	·400	82·4	96·0	+0·7	78·7	+0·2	87·3	+0·5	17·3	103·1	19th	75·5	27th	27·6
		Kurrachee	30	29·582	−·027	29·563	29·789	31st	29·417	8th	·372	81·4	89·0	−0·2	78·7	+0·3	83·9	+0·1	10·3	91·9	1st, 19th & 21st.	76·7	28th, 29th & 30th	15·2
51	West Rajputana	Bikaner	771	28·795	−·066	29·525	28·995	30th	28·606	8th	·389	85·7	96·1	+1·8	82·4	+4·4	90·3	+3·1	15·7	106·1	5th	76·0	15th	30·1
		Pachpadra	380	29·250		29·584	29·475	31st	29·041	8th	·434	83·7	96·3		79·5		87·9		16·8	103·0	6th	75·0	16th & 26th.	28·0
		Jodhpur	782	28·636		29·595	29·038	30th	28·648	8th	·390	81·3	93·7		78·4		86·1		15·3	103·7	29th	74·8	26th	28·9
	VIII. East Rajputana, Central India and Gujarat.				−·023								87·3	−0·1	76·6	+1·1	82·0	+0·5	10·7					20·0
50	East Rajputana	Jaipur	1,431	28·192	−·021	29·574	28·388	30th	28·044	8th	·344	80·7	90·3	+0·4	77·2	+2·2	83·7	+1·3	13·1	97·2	29th	73·1	24th & 25th.	24·1
		Kotah	819	28·775		29·591	28·956	30th	28·635	8th	·321	81·0	87·5		77·9		82·7		9·6	94·0	5th	61·0	11th	33·0
		Sambhar	1,254	28·365	?	29·573	28·562	30th	28·223	7th	·339	81·0	89·9	+0·7	78·1	+2·3	84·0	+1·5	11·8	99·0	6th	74·4	9th & 24th.	24·6
		Ajmer	1,611	28·024	−·020	29·591	28·210	30th	27·870	7th	·340	78·9	86·7	−0·8	76·6	+2·1	81·7	+0·7	10·1	94·9	6th	73·6	23rd & 25th.	21·3
		Udaipur	1,925	27·735		29·609	27·910	30th	27·582	8th	·328	77·1	83·9		73·9		79·0		10·0	88·5	6th	70·8	16th	17·7
		Deesa	466	29·190	−·019	29·611	29·386	30th	29·033	8th	·353	79·9	90·2	+1·9	77·1	+1·7	83·7	+1·8	13·1	95·1	29th, 30th & 31st.	74·0	25th	21·1
46	Kathiawar and Cutch.	Bhuj	395	29·259	−·007	29·606	29·455	31st	29·101	8th	·354	81·3	90·0	+1·5	76·6	+0·4	83·3	+1·0	13·4	96·3	19th	74·9	4 days	21·4
		Jamnagar	61	29·614		29·621	29·813	30th	29·468	8th	·345	81·7	89·3		77·0		83·1		12·3	92·0	11th, 19th & 31st.	73·2	27th	18·8
		Rajkot	429	29·252	−·018	29·635	29·442	30th & 31st.	29·119	8th	·323	79·5	89·0	+0·3	74·9	+0·4	82·0	+0·4	14·1	94·4	12th	70·8	30th	23·6
		Veraval		29·704	−·014	29·664	29·895	31st	29·586	7th	·309	79·4	82·7	+0·2	78·1	+0·5	80·4	+0·4	4·6	89·6	28th	75·3	29th	9·3
		Dwarka	37	29·649		29·632	29·855	31st	29·507	8th	·348	80·4	85·0		78·1		81·6		6·9	86·9	2nd, 19th & 27th.	76·2	3rd	10·7
		Bhavnagar Para.	35	29·680	?	29·660	29·857	30th	29·553	8th	·304	80·7	90·4	?	76·3	?	83·4	?	14·1	95·1	11th & 28th.	73·8	27th & 28th.	21·3
49	Central India	Nowgong	757	28·825	−·051	29·536	28·992	30th	28·687	11th	·305	79·5	86·0	−2·3	77·0	+0·3	81·5	−1·0	9·0	91·5	6th	73·0	14th	18·5
		Indore	1,823	27·865	−·014	29·643	28·007	30th	27·757	8th	·250	73·8	80·5	−2·1	71·6	+0·4	76·1	−0·9	8·9	85·2	1st	68·1	18th	17·2
		Neemuch	1,630	28·025	−·040	29·614	28·191	30th	27·890	7th	·301	75·7	83·3	−1·2	73·1	+0·8	78·2	−0·2	10·2	89·0	28th	69·0	24th	20·0

ontinued.

ndia, Burma, etc., in August 1901 —continued.

Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st August 1901.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period, 1st June to 31st August.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																			12·29	11·15	+1·35					VI.—Upper Sub-Himalayas.		
	2	8	5	1			1	S 84° E	1·2	1·1	3·6	− 69	89	·973	6·6	16	12·18	+3·82	17·81	14·51	+3·30	28·36	36 36	− 8·00	3·41	Bareilly .	N.-W. Provinces (West Submontane).	24
1		5	2	1	1	2	S 6° E	1·2		1·1	+ 9	93	·820	8·2	28	21·30	+6·70	52·30	30·00	+22·30	70·57	68·50	+ 2·07	6·08	Dehra Dun.		
	1	1	10	3			1	S 43° E	1·8		2·5	− 28	87	·901	7·6	15	11·64	+3·36	15·86	13·59	+2·27	31·19	30·75	+ 0·44	2·76	Roorkee.		
	1	2	7	1	1	1		S 45° E	1·2	1·2	2·1	− 43	87	·949	7·8	12	11·36	+0·64	11·86	10·59	+1·27	22·15	22·57	− 0·42	4·32	Meerut .	N.-W. P., West.	22
1	3	7	8		3	4	2	S 67° E	2·2	2·0	4·1	− 51	84	·952	6·9	11	9·82	+1·18	9·22	9·35	−0·13	17·93	21·92	− 3·99	2·23	Delhi .	South-East Punjab,	26
1	2	5	6	1	3	5	3	S 28° E	2·3		2·9	− 21	74	·931	4·4	2	6·45	−4·45	2·83	5·83	−3·00	13·25	14·34	− 1·09	2·40	Lahore .	Central Punjab,	28
	3		10		13		5	S 20° W			4·6		65	·835	3·2	3	5·55	−2·55	1·34	4·11	−2·77	3·89	10·60	− 6·71	0·65	Sirsa .	South Punjab.	27
	2	7	14	1	1	1		S 60° E	4·4	4·4			86	·968	7·5	7			9·87			18·41			2·92	Patiala.		
	2	3	18	1	1		1	S 52° W	3·2	2·8	1·4	+100	80	·934	5·1	4	7·82	−3·82	9·86	6·94	+2·92	20·49	19·68	+ 0·81	5·40	Ludhiana .	Punjab (Submontane),	29
	5	13	5	1			1	S 89° E	2·6		2·3	+ 13	79	·924	4·4	9	9·27	−0·27	4·68	10·87	−6·19	17·40	22·47	− 5·07	1·12	Simla .		
		1	5					S 52° E	0·8				92	·962	7·2	7			7·94	7·75	+0·19	17·78	22·44	− 4·66	2·10	Umballa.		
1	1	3	2	1				S 82° E	1·4	1·3	1·6	− 19	72	·853	4·3	4	9·91	−5·91	3·85	9·16	−5·31	6·75	19·62	−12·87	2·38	Rawalpindi.	North Punjab.	31
																			1·22	2·50	−1·29					VII.—Indus Valley and North-West Rajputana.		
6	1					1	9	N 28° W	1·5	1·6	4·0	− 60	64	·845	1·9	0	1·82	−1·82	0·10	2·70	− 2·60	0·64	4·84	− 4·20	0·07	Peshawar .	North Punjab.	31
	8	8	2	1	4	1	1	N 84° E	6·4	7·4			65	·872	1·6	1	2·70	−1·70	1 35	2·01	− 0·66	6·83	5·57	+ 1·26	1·28	Khushab .	West Punjab.	32
	3	1	2	7	13	2	1	S 25° W	10·6	9·1			55	·774	2·5	1	3·20	−0·20	0·80	2·47	− 1·67	1·91	6·98	− 5·07	0·80	Montgomery.		
3	6	1	8	1	1			S 89° E	2·1	2·2	2·1	+ 5	78	1·013	1·4	1	2·27	−1·27	4·50	1·43	+ 3·07	6·50	4·84	+ 1·66	4·50	D. I. Khan.		
		2	8	11	1			S 22° W	2·1	2·8	3·2	− 13	68	·892	2·7	2	2·00	0	0·33	1·58	− 1·25	1·00	5·11	− 4·11	0·23	Mooltan.		
		6	18	3				S 50° E	3·7	3·8	4·0	− 5	69	·893	1·9	0	1·64	−1·64	0	1·27	− 1·27	0·55	2·67	− 2·12	0	Jacobabad	Sind.	47
				7	24			S 35° W	14·7	15·3	13·8	+ 11	68	·736	4·0	0	3·36	−3·36	0	2·51	− 2·51	0·75	5·51	−4·76	0	Hyderabad.		
					13	18		S 72° W	13·4	16·8	17·2	− 2	82	·877	6·4	0	2·36	−2·36	0	1·55	− 1·55	0·49	5·54	− 5·05	0	Kurrachee.		
		1		4	6	13	7	S 82° W	10·0		6·2	+ 61	69	·854	4·4	2			2·73	3·12	− 0·39	5·51	8·45	− 2·94	2·42	Bikaner .	West Rajputana	51
				13	11	7		S 36° W	13·0	11·5	9·7	+ 19	76	·877	1·1	3			1·23	3·78	− 2·55	2·84	7·11	− 4·27	0·70	Pachpadra.		
				1	16	11		S 61° W	7·4	6·7			72	·778	7·6	4			2·36	5·13	− 2·77	7·89	10·75	− 2·86	1·02	Jodhpur.		
																			7·14	7·90	−0·13					VIII.—East Rajputana, Central India and Gujarat.		
1	3	2	1		9	9	3	S 82°, W	3·5		5·5	− 36	80	·842	7·4	6	11·50	−5·50	6·01	10·07	− 4·06	11·83	21·93	−10·10	3·35	Jaipur .	East Rajputana.	
4	1				6	12	8	N 74° W	5·6	6·6			80	·846	6·3	14			8·56	8·92	− 0·36	20·59	22·34	− 1·75	1·51	Kotah.		
5		1			1	14	7	N 64° W	5·6		8·1	− 31	76	·812	6·3	5	10·50	−5·50	4·49	7·88	− 3·39	10·09	17·11	− 7·02	1·95	Sambhar.		
				1	14	13	2	S 68° W	7·4		5·5	+ 35	84	·828	7·1	6	9·82	−3·82	4·18	7·63	− 3·45	10·61	17·20	− 6·59	1·36	Ajmer.		
					10	11	4	S 78° W	4·5	4·5			80	·745	7·8	11			7·82			14·26			2·08	Udaipur.		
				6	19	6		S 45° W	11·8		12·0	− 2	84	·846	8·4	8	10·09	−2·09	4·42	7·60	− 3·18	6·59	20·75	−14·16	2·20	Deesa.		
					3	28		S 86° W	19·5		14·9	+ 31	91	·974	5·9	3			2·60	2·70	− 0·10	4·48	11·58	− 7·10	1·95	Bhuj .	Kathiawar and Cutch.	46
				7	23	1		S 36° W	12·5	13·0			82	·886	5·7	8			1·63			3 35			0·27	Jamnagar.		
					15	15	1	S 70° W	14·1	14·0	11·6	+ 21	83	·837	8·5	10	7·82	+2·18	4·44	4·98	− 0·54	11·08	23·17	−12·09	1 25	Rajkot.		
					9	22		S 77° W	11·4	13·5	13·9	− 3	91	·908	8·6	3			1·02	1·83	− 0·81	2·31	17 11	−14·80	0·15	Veraval.		
				1	24	6		S 53° W	17·7				87	·903	7·6	5			1·91			3·19			0·65	Dwarka.		
					25	3	3	S 56° W	8·0	8·2			80	·843	7·6	9			5·19	5·28	− 0·09	14·37	18·06	− 1·69	1·40	Bhavnagar Para.		
1	1	5	2			18		N 88° W	2·3	2·3	3·4	− 32	92	·924	8·7	18	14·09	+3·91	20·32	14·23	+ 6·09	27·69	24·47	− 6·78	4·10	Nowgong .	Central India .	49
					2	22	3	N 88° W	7·4		6·1	+ 21	92	·776	9·9	15	10·45	+4·55	9·31	7·83	+ 1·48	18·51	23·13	− 4·62	1·69	Indore.		
					13	18		S 72° W	12·6	11·3	11·9	− 5	89	·803	8·4	12	11·00	+1·00	6·49	10·55	− 4·06	12·55	24·71	−12·16	1·77	Neemuch.		

Table

Abstract of Observations taken at 8 A.M. at 222 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
45	Gujarat	Surat	39	29·691	−·007	29·673	29·860	31st	29·570	8th	·290	81·0	87·5	+0·6	77·3	+1·1	82·4	+0·9	10·2	91·6	28th	75·0	2nd	16·6
		Ahmedabad	164	29·515	−·016	29·626	29·692	30th	29·371	8th	·321	80·4	88·8	+0·1	67·0	+0·2	82·9	+0·2	11·8	93·2	25th, 30th & 31st.	75·1	10th	18·1
22	N.-W. P., West	Agra	555	29·018	−·040	29·528	29·230	30th	28·840	8th	·390	83·1	91·0	+0·6	80·3	+1·7	85·7	+1·2	10·7	97·5	5th	74·9	30th	22·6
21	N.-W.P., Central	Jhansi	858	28·738	−·036	29·551	28·888	30th & 31st.	28·612	8th	·276	79·6	86·9	−1·6	77·6	+0·9	82·3	−0·4	9·3	93·2	5th	73·6	12th, 14th & 15th.	19·6
	IX.—Deccan				−·024								84·0	−1·4	72·2	+0·2	78·2	−0·6	11·8					20·9
38	Bombay (Deccan)	Belgaum	2,539	27·281	−·002	29·763	27·387	30th	27·204	5th	·183	69·8	75·1	−1·0	66·6	+0·4	70·9	−0·3	8·5	79·3	31st	63·9	31st	15·4
		Sholapur	1,590	28·183	−·012	29·726	28·292	31st	28·110	8th	·182	75·8	87·6	−0·8	71·2	+0·8	79·4	0	16·4	93·2	31st	68·5	12th	24·7
		Poona	1,840	27·931	−·013	29·723	28·071	31st	27·848	7th	·223	73·5	80·3	−1·4	70·1	+0·6	75·2	−0·4	10·2	85·0	20th	67·4	30th	17·6
		Bijapur	1,946	27·855	+·003	29·745	27·967	30th	27·766	7th	·201	74·2	87·0	+1·5	69·8	−0·1	78·4	+0·7	17·2	91·9	28th	64·2	21st	27·7
40	Khandesh	Malegaon	1,430	28·289	−·017	29·673	28·429	30th	28·191	18th	·238	76·6	87·5	+1·4	73·2*	+1·5*	80·7*	+1·5	14·3	91·4	5 days	70·1	10th & 17th.	21·3
		Ahmednagar	2,152	27·625	−·009	29·718	27·748	30th	27·537	5th	·211	74·5	84·0	−0·1	69·9	+0·9	77·0	+0·4	14·1	89·9	19th	64·5	27th	25·4
41	Berar	Akola	930	28·770	−·015	29·655	28·900	31st	28·685	8th	·215	76·4	83·8	−3·3	72·3	−0·9	78·1	−2·1	11·5	90·0	16th & 18th.	68·9	29th	21·1
		Amraoti	1,215	28·475	−·010	29·650	28·591	30th	28·396	9th	·195	74·9	82·8	−3·6	72·6	+0·1	77·7	−1·8	10·2	90·2	1st	69·0	29th	21·2
42	Central Provinces (West).	Khandwa	1,044	28·636	−·019	29·640	28·774	30th	28·555	6th & 7th.	·219	76·5	83·2	−2·5	74·2	+0·4	78·7	−1·1	9·0	88·2	1st & 18th.	71·1	15th	17·1
		Hoshangabad	1,006	28·651	−·016	29·621	28·786	30th	28·556	6th	·230	75·9	83·2	−2·0	74·3	+0·5	78·8	−0·8	8·9	88·7	5th & 20th.	71·7	14th	17·0
		Nagpur	1,025	28·626	−·032	29·610	28·740	30th	28·536	9th	·204	76·1	84·6	−2·7	74·1	−0·5	79·4	−1·6	10·5	89·6	18th & 29th.	72·1	16th & 29th.	17·5
43	Central Provinces (Central).	Chanda	634	29·061	−·032	29·647	29·174	30th	28·980	9th	·194	76·5	84·8	−3·0	73·6	−1·5	79·2	−2·3	11·2	91·7	21st	70·0	29th	21·7
		Seoni	2,033	27·614	−·040	29·588	27·732	30th	27·529	6th	·203	73·7	81·9	?	71·1	−0·6	76·5	?	10·8	86·8	5th & 6th.	67·0	4 days	19·8
		Jubbulpore	1,327	28·267	−·061	29·551	28·390	30th	28·152	10th	·238	75·7	82·4	−2·4	73·5	−0·4	78·0	−1·4	8·9	89·9	6th	69·6	14th	20·3
		Saugor†	1,807	27·828	−·031	29·585	27·965	30th	27·694	11th	·271	75·3	81·3	−2·2	72·9	+0·4	77·1	−0·9	8·4	90·9	6th	69·6	13th & 14th.	21·3
49	Central India	Sutna	1,040	28·523	−·064	29·521	28·703	30th	28·379	10th	·324	78·8	85·1	−0·6	76·9	+1·2	81·0	+0·3	8·2	92·9	5th	73·1	25th	19·8
44	Central Provinces (East).	Raipur	970	28·648	−·044	29·571	28·767	30th	28·537	10th	·230	76·5	83·8	−2·4	75·0	+0·2	79·4	−1·1	8·8	89·3	21st	73·1	26th & 27th.	16·2
		Sambalpur	486	29·127	−·060	29·563	29·281	30th	28·975	10th	·306	79·0	85·6	−1·9	76·9	−0·4	81·3	−1·2	8·7	91·1	5th	73·2	25th	17·9
39	Hyderabad (North).	Aurangabad	1,905	27·846		29·701	27·980	31st	27·762	9th	·218	72·7	81·8		68·4		75·2		13·4	86·8	1st	65·2	29th	21·6
		Indur		28·424			28·555	30th	28·346	19th	·209	76·0	82·6		72·1		77·4		10·5	88·0	27th	63·2	30th	24·8
		Bidar	2,165†	27·602		29·710	27·717	30th	27·535	5th	·182	73·1	82·7		68·3		75·5		14·4	88·5	21st	65·6	29th	22·9
53	Hyderabad (South).	Gulbarga	1,502	28·272		29·731	28·377	30th	28·198	6th	·179	74·7	87·3		70·9		79·1		16·4	92·4	21st	68·4	30th	24·0
		Raichur	1,326	28·465	+·001	29·746	28·573	30th	28·395	6th	·178	76·6	89·3	+1·5	72·1	0	80·7	+0·8	17·2	93·1	28th	70·1	4 days	23·0
		Hyderabad (Deccan).	1,690	28·068	0	29·709	28·174	30th	28·001	6th	·173	74·9	84·8	−1·3	71·8	+1·1	78·4	−0·1	13·0	89·9	21st	69·2	29th	20·7
		Secunderabad	1,787	27·970	−·025	29·707	28·075	30th	27·909	2nd & 6th.	·166	74·3	86·4	?	71·3	+0·6	78·9	?	15·1	91·1	16th, 21st & 28th.	68·0	26th & 29th.	23·1
		Hanamkonda	865	28·845		29·683	28·954	30th	28·760	9th	·194	77·8	85·9		74·2		80·1		11·7	91·0	27th	71·3	25th & 29th.	19·7
	X.—West Coast				−·005								83·5	+0·7	75·8	+1·0	79·7	+0·9	7·7					12·0
37	Konkan	Bombay	37	29·743	−·009	29·720	29·890	30th & 31st.	29·656	7th	·234	79·7	84·1	+0·2	77·5	+0·8	80·8	+0·5	6·6	86·5	28th	75·0	29th	11·5
		Ratnagiri	110	29·702	+·001	29·750	29·830	31st	29·625	5th	·205	79·1	83·7	+0·3	75·9	+1·1	79·8	+0·7	7·8	84·9	9 days	73·9	9th, 21st & 27th,	11·0
		Mormugao	60	29·782	−·015	29·777	29·894	31st	29·705	7th	·189	79·4	83·8	+0·7	76·2	+0·4	80·0	+0·6	7·6	85·5	19th	74·4	13th	11·1
		Goa	199			Barometer out		of order.				79·0	81·7	−0·2	76·9	+1·2	79·3	+0·5	4·8	82·5	3rd, 4th & 18th,	75·0	23rd	7·5
		Karwar	44			Do.		do.				75·0	83·1	+1·0	75·4	+1·3	79·3	+1·2	7·7	85·2	3rd	73·0	31st	12·2
33	Malabar	Cochin	11	29·905	−·001	29·843	29·951	23rd	29·863	6th	·088	78·8	85·6	+2·4	75·4	+1·3	80·5	+1·9	10·2	88·0	13th & 14th.	72·7	25th	15·3
		Calicut	27	29·876	−·002	29·832	29·931	22nd	29·826	6th	·105	76·9	83·0	+0·3	74·5	+0·8	78·8	+0·6	8·5	86·3	26th	73·5	2nd, 5th & 8th.	12·8
		Mangalore	65	29·830	0	29·827	29·900	30th	29·772	5th	·128	78·3	83·5	+1·1	74·9	+1·1	79·2	+1·1	8·6	86·3	20th	72·4	8th	13·9
		Trivandrum	198	29·696	−·010	29·826	29·749	22nd & 29th	29·645	7th	·104	77·9	83·4	+1·2	75·9	?	79·6	?	7·5	86·5	29th	74·0	3rd	12·5

* Mean of 17 days.
† Mean of 30 days.

ntinued.

ndia, Burma, etc., in August, 1901—continued.

Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Hygrometry 8 A.M. Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st August 1901.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period, 1st June to 31st August.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
				3	9	17	2	S 72° W	9·8	9·2	13·6	− 32	83	·882	7·5	11	12·82	−1·82	3·45	7·89	−4·44	15·93	36·29	−20·36	0·81	Surat	Gujarat.	45
				3	18	1	9	S 65° W	2·6				85	·875	7·7	11			7·84	8·89	−1·05	18·40	30·94	−12·54	2·70	Ahmedabad.		
	8		7		7		5	S 71° E	3·9	4·6	4·4	+ 5	85	·563	7·1	12	10·73	+1·27	9·22	7·67	+1·55	13·15	21·71	− 8·56	2·50	Agra	N.-W. P., West	22
4	4	2	2	1	3	13	2	N 70° W	6·0	6·6	3·9	+ 69	88	·895	6·6	21	14·45	+6·55	26·79	12·50	+14·29	38·46	29·99	+ 8·47	4·60	Jhansi	N.-W.P., Central.	21
																			11·31	9·08	+2·48					IX.—Deccan.		
				1	18	12		S 61° W	22·6		20·7	+ 9	94	·684	9·4	24	17·64	+ 6·36	9·79	8·74	+ 1·05	32·81	30·70	+ 2·11	1·46	Belgaum	Bombay (Deccan).	38
					17	9	5	S 71° W	14·2	17·2	11·0	+ 56	79	·704	8·3	8	11·27	− 3·27	4·06	7·39	− 3·33	17·23	16·69	+ 0·54	1·21	Sholapur.		
					13	15	3	S 75° W	15·3	17·3	14·0	+ 24	85	·704	9·3	12	7·82	+ 4·18	5·41	3·22	+ 2·19	17·77	14·82	+ 2·95	0·93	Poona.		
					16	15		S 67° W					78	·666	8·5	2	7·00	− 5·00	0·52	1·91	− 1·39	7·03	6·11	+ 0·92	0·23	Bijapur.		
		1			10	18	2	S 77° W	12·1	13·9	10·0	+ 39	81	·747	6·5	7	6·91	+ 0·09	1·91	4·07	− 2·16	10·60	13·54	− 2·94	0·42	Malegaon	Khandesh.	40
2			3		11	11	4	S 74° W	12·5	15·3			84	·718	8·8	4			1·43	2·45	− 1·02	10·04	10·70	− 0·66	0·30	Ahmednagar.		
					9	15	7	S 87° W	8·9	9·6	7·9	+ 22	87	·791	9·6	17	9·73	+ 7·27	10·48	7·44	+ 3·04	20·80	23·72	− 2·92	3·58	Akola	Berar.	41
				1	8	21	1	S 77° W	14·4	12·8	6·1	+110	89	·773	9·1	15	9·73	+ 5·27	13·84	6·80	+ 7·04	21·22	24·26	− 3·04	3·30	Amraoti.		
						21	10	N 76° W	11·5		7·6	+ 51	86	·784	9·1	12	9·91	+ 2·09	5·79	7·14	− 1·35	14·30	22·01	− 7·71	1·90	Khandwa	Central Provinces (West).	42
					29		2	S 50° W	5·5	5·6	3·4	+ 65	91	·821	9·8	25	15·09	+ 9·91	22·37	14·52	+ 7·85	39·35	40·31	− 0·96	4·30	Hoshangabad.		
1			1		8	18	3	S 82° W	9·7		8·0	+ 21	90	·814	9·2	14	12·82	+ 1·18	13·70	10·25	+ 3·45	27·66	33·72	− 6·06	3·50	Nagpur.		
				3	11	17		S 66° W	4·7		5·4	− 13	86	·810	9·1	19			16·85	13·87	+ 2·98	38·32	40·60	− 2·28	2·63	Chanda	Central Provinces (Central).	43
2	2			3	5	10	9	N 80° W	6·2		4·8	+ 29	93	·775	8·7	23	17·73	+ 5·27	19·52	12·90	+ 6·62	37·18	41·62	− 4·44	2·00	Seoni.		
1	2	1			7	16	4	N 89° W	5·5		4·6	+ 20	95	·847	9·4	23	16·00	+ 7·00	34·78	16·12	+18·66	47·28	46·02	+ 1·26	5·44	Jubbulpore.		
2	3	1	1	1	2	18	2	N 82° W	7·4	8·4	4·3	+ 95	90	·796	8·7	23	14·55	+ 8·45	24·08	13·53	+10·55	41·52	36·03	+ 5·49	4·57	Saugor.		
	2	6	2	2	6	9	3	S 56° W	6·4	6·8	7·9	− 14	91	·893	9·3	21	13·45	+ 7·55	19·66	12·07	+ 7·59	30·59	33·78	− 3·19	2·40	Sutna	Central India	49
				1	23	5		S 51° W	10·6	9·8	7·3	+ 34	90	·817	9·4	18	14·45	+ 3·55	15·45	12·66	+ 2·79	37·30	38·05	− 0·75	2·80	Raipur	Central Provinces (East).	44
				7	15	7	2	S 50° W	6·2	6·1	3·0	+103	86	·865	5·7	20			28·84	17·09	+11·75	46·75	50·38	− 3·63	9·49	Sambalpur.		
					12	17	2	S 75° W	15·0	15·0			91	·728	9·2	19			10·40	5·56	+ 4·84	22·62	19·27	+ 3·35	1·84	Aurungabad.	Hyderabad (North).	39
					15		16	N 87° W	11·3	10·8			84	·749	5·4	17			9·86	10·19	− 0·33	27·94	25·43	+ 2·51	2·40	Indur.		
					28	2	1	S 50° W	10·7	9·0			87	·707	4·1	11			4·75	9·85	− 5·10	15·29	25·44	−10·15	0·90	Bidar.		
1				1	7	19	3	S 83° W	13·5	13·0			83	·717	7·9	11			3·63	6·43	− 2·80	13·03	16·14	− 3·11	0·80	Gulbarga	Hyderabad (South).	53
					22	9		S 58° W	14·8	14·5			77	·707	4·0	12			3·59	6·56	− 2·97	18·63	14·91	+ 3·72	0·88	Raichur.		
						31		W	9·5	9·2			81	·700	7·4	11			3·37	8·17	− 4·80	16·07	19·92	− 3·85	0·73	Hyderabad (Deccan).		
					6	20	5	S 89° W	13·0		10·0	+ 30	82	·685	6·9	10			5·00	8·17	− 3·17	18·44	19·92	− 1·48	1·92	Secunderabad.		
1					1	25	4	N 84° W	11·7	9·9			79	·757	7·7	11			5·09			17·56			1·28	Hanumkonda.		
																			13·89	17·49	−3·60					X.—West Coast.		
				1	6	21	3	S 84° W	16·0		15·8	+ 1	88	·896	9·1	19	19·64	−0·64	14·31	11·43	+ 2·88	72·27	57·97	+14·30	2·29	Bombay	Konkan.	37
					5	21	4	S 89° W	8·1	8·0	10·3	− 22	89	·880	9·2	28	24·36	+3·64	16·94	24·65	− 7·71	72·70	91·42	−18·72	2·05	Ratnagiri.		
					2	23	4	N 87° W	11·2‡				91	·918	8·0	27			12·12	21·41	− 9·29	88·12	74·71	+13·41	1·32	Mormugao.		
4	1				5	19	2	N 84° W					89	·878	8·8	28			12·94	20·32	− 7·38	95·70	84·11	+11·59	1·70	Goa.		
	1				1	24	2	N 87° W	4·3				85	·822	7·5	26	23·36	+2·64	25·59	24·45	+ 1·14	28·06	100·66	+27·40	3·62	Karwar.		
3	2	1			1	9	9	N 53° W	6·2				87	·864	7·5	19	17·91	+1·09	9·13	13·31	− 4·18	57·91	63·23	− 5·32	1·10	Cochin	Malabar.	3
7				2	1	1	13	N 39° W	7·0	8·8			92	·843	8·4	21	17·88	+3·12	14·01	15·82	− 1·81	77·76	78·39	− 0·63	1·46	Calicut.		
1	3				1	7	5	N 57° W	2·0		2·9	−31	90	·876	8·3	21	23·90	−2·90	18·21	21·13	− 2·92	87·24	92·25	− 5·01	3·27	Mangalore.		
14						4	12	N 29° W	8·4				84	·811	7·2	7			1·75	4·91	− 3·16	24·46	24·91	− 0·48	0·32	Trivandrum.		

‡ Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 222 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	XI.—South India				−·005								91·3	+1·0	74·7	+0·5	82·9	+0·8	16·6					24·6
57	Madras (South)	Pamban	37	29·814		29·778	29·881	27th	29·746	6th	·135	83·5	91·2		77·4		84·3		13·8	92·3	4 days	76·2	14th & 15th.	16·1
		Tinnevelly	168	29·688	+·002	29·785	29·753	31st	29·635	4th	·118	85·4	97·4*	+0·9*	79·5*	+0·5*	88·5*	+0·7*	17·9*	101·9	31st	76·4	28th	25·5
		Madura	447	29·394	−·002	29·775	29·482	31st	29·334	7th	·148	83·2	97·9	+1·4	76·7	+1·2	87·4	+1·3	21·2	101·0	27th	74·0	10th	27·0
		Periya Kulam		28·908			28·991	31st	28·851	7th	·140	80·1	94·9		71·5		81·7		23·4	99·3	31st	66·7	25th	32·6
34	Madras (South Central)	Salem	940	28·924	−·010	29·807	29·013	31st	28·867	6th	·146	78·4	92·5	+1·1	73·3	+1·5	82·9	+1·3	19·2	99·2	27th	71·0	12th, 24th & 25th.	28·2
		Coimbatore	1,348	28·511	+·002	29·807	28·596	31st	28·456	4th	·140	76·8	89·4	+0·9	71·9	+1·3	80·7	+1·1	17·5	92·9	21st	69·8	25th	23·1
35	Coorg	Mercara	3,781	26·189	+·010		26·260	31st	26·143	2nd, 7th & 9th.	·117	64·3	69·2	−1·3	62·8†	+0·8†	65·7†	−0·3	6·4	74·5	31st	60·7	24th	13·8
36	Mysore	Chitaldroog	2,405	27·440	− ·004	29·774	27·543	30th	27·379	2nd & 5th.	·164	72·3	81·8	+0·4	68·4	+0·4	75·2	+0·4	13·4	87·1	21st	66·9	24th & 25th.	20·2
		Bangalore	3,021	26·875	−·008	29·803	26·957	30th	26·813	6th	·144	69·8	82·3	+0·6	65·8	+0·3	74·1	+0·5	16·5	88·3	30th	61·9	25th	26·4
		Hassan	3,091	26·817		29·817	26·893	30th	26·764	6th	·129	71·0	77·1		65·0		71·1		12·1	82·7	31th	62·3	25th	20·4
		Mysore	2,518	27·383	+·003	29·826	27·459	31st	27·329	7th	·130	72·4	84·9	+1·6	66·9	+0·2	75·9	+0·9	18·0	91·1	28th	64·0	24th	27·1
53	Madras (East Coast, South)	Negapatam	31	29·800	−·005	29·760	29·877	30th	29·742	2nd	·135	83·7	95·7	+2·8	76·5	−0·5	86·1	+1·2	19·2	100·1	14th	73·9	1st	26·2
		Cuddalore	12	29·813	+·002	29·754	29·912	27th	29·752	7th	·160	82·5	95·2	+1·6	77·6	+1·1	86·4	+1·4	17·6	101·2	12th	73·7	30th	27·5
		Trichinopoly	255	29·593	+·003	29·780	29·684	27th	29·538	4th & 7th.	·146	82·2	98·5	+2·5	78·1	+1·8	88·3	+2·2	20·4	102·1	17th	73·4	27th	28·7
		Madras	22	29·783	−·006	29·736	29·890	30th	29·715	6th	·175	82·4	94·0	+0·3	77·7	+0·4	85·9	+0·4	16·3	99·0	12th	73·5	14th	25·5
		Vellore	707	29·099		29·743	29·220	31st	29·043	9th	·177	82·3	96·9		75·1		86·0		21·8	102·8	4th	71·5	16th	31·3
55	Madras (East Coast, Central)	Nellore	71	29·716	+·010	29·720	29·827	30th	29·650	6th	·177	84·2	95·6	+0·6	79·6	+1·1	87·6	+0·9	16·0	100·3	12th	75·6	14th	24·7
		Masulipatam	15	29·738	−·001	29·688	29·881	30th	29·659	6th	·222	80·7	90·2	−1·1	76·8	−0·7	83·5	−0·9	13·4	95·1	18th & 21st.	74·1	8th	21·0
54	Madras (Central)	Cuddapah	433	29·370	−·011	29·742	29·467	30th	29·306	6th	·161	82·6	96·0	+3·3	77·5	+1·0	86·8	+2·2	18·5	100·2	12th, 20th & 21st.	73·2	17th	27·0
		Kurnool	924	28·858	−·017	29·729	28·959	30th	28·781	6th	·178	77·1	90·7	+1·6	73·7	+0·2	82·2	+0·9	17·0	94·2	30th	71·4	15th	22·8
		Bellary	1,475	28·337	0	29·756	28·442	30th	28·269	5th	·173	78·8	91·5	+0·7	74·3	+0·9	82·9	+0·8	17·2	95·5	27th	71·2	18th	24·3
52	Madras (East Coast, North)	Cocanada	26	29·685	−·004	29·646	29·820	30th	29·587	6th	·233	80·5	88·0	−0·9	77·5	−0·7	82·8	−0·8	10·5	94·6	27th	74·5	2nd & 3rd,	20·1
		Waltair (Vizag.)	226	29·444	−·022	29·611	29·575	30th	29·331	9th	·244	81·2	88·9	−0·1	77·7	−1·1	83·3	−0·6	11·2	96·9	26th	73·4	10th, 15th & 19th.	23·5
		Gopalpur	21	29·602	−·032	29·563	29·755	30th	29·442	9th	·313	83·3	88·2	+1·1	78·8	0	83·5	+0·6	9·4	91·3	22nd	75·6	10th	15·7
	XII.—Hill Stations.																							
48	Baluchistan	Pishin											95·1		60·7		78·0		34·4	100·4	20th	51·1	9th	49·3
		Quetta	5,502	24·464	−·011		24·626	30th	24·276	8th	·350	75·8	94·8	+4·2	60·6	−1·3	77·8	+1·5	34·2	98·1	6th & 13th.	49·9	24th	48·2
		Kalat										73·8	93·5		51·7		72·6		41·8	99·3	6th	43·4	24th	55·9
		Chaman	4,311	25·482	+·011		25·650	30th	25·311	8th	·339	82·4	99·8	+2·3	70·2	0	85·0	+1·2	29·6	106·2	12th	63·6	18th	42·6
30	Punjab	Leh	11,503	19·680	+·015		19·837	27th	19·476	7th	·361	57·5	76·2	−2·1	49·5	−0·2	62·8	−1·2	26·7	81·7	4th	41·8	29th	39·9
		Srinagar	5,204	24·688	−·012		24·828	30th	24·522	7th	·306	71·4	87·2	+2·8	65·2	+2·1	76·2	+2·5	22·0	92·9	29th	58·2	9th, 10th & 11th.	34·7
		Gulmarg		21·783			21·934	30th	21·612	7th	·322	61·0	66·7		50·9		58·8		15·8	74·1	2nd	40·8	10th	33·3
		Skardu		22·688			22·830	27th	22·490	7th	·340	70·1	91·7		63·2		77·5		28·5	99·1	3rd & 4th.	53·2	10th	45·9
		Dras		20·732			20·861	27th	20·555	7th	·306	62·5	83·3		48·5		65·9		34·8	89·5	6th	37·2	10th	52·3
		Gilgit		24·858			25·096	11th	24·611	7th	·485	83·2	99·9		75·6		87·8		24·3	108·0	3rd, 5th & 28th.	60·3	9th	47·7
		Chitral		24·468			24·560	2nd	24·395	13th	·165	78·8	101·0		65·5		85·4		35·5	106·2	1st & 5th.	58·0	22nd	48·2
		Killa Drosh										77·8	97·6		74·2		85·9		23·4	104·2	4th & 5th.	63·9	15th	40·3
		Para Chinar	6,000									76·8	87·1		63·1		75·1		24·0	93·3	22nd	57·5	10th	35·8
		Cherat		25·521	0		25·702	31st	25·333	8th	·369	75·9	89·1	+2·9	72·4	+2·4	80·8	+2·7	16·7	95·9	21st & 22nd.	65·1	4 days	30·8

* Mean of 30 days.

† Mean of 25 days.

ontinued.

ndia, Burma, etc., in August, 1901—continued.

Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st August 1901.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period, 1st June to 31st August.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
																			3·14	4·36	−1·19					XI.—South India.		
				3	27	1		S 42° W	8·9	9·4			74	·861	2·3	0	0·30	− 0·30	0	0·23	− 0·23	0·05	0·98	− 0·93	0	Pamban	Madras (South).	57
1					3	14	13	N 74° W	9·1	8·7			63	·776	4·2	2	1·00	+ 1·00	0·33	0·31	+ 0·02	1·81	1·35	+ 0·46	0·22	Tinnevelly.		
7					2	2	15	N 57° W	2·2	2·2			68	·772	4·8	5	5·36	− 0·36	2·20	4·00	− 1·80	3·74	7·78	− 4·04	0·95	Madura.		
5		3	1	1		2	2	N 4° E	3·8	4·1			66	·673	5·8	4			1·36			3·05			0·44	Periya Kulam		
				5	12	5		S 45° W	4·5	4·1	4·2	− 2	82	·784	7·1	10	11·78	− 1·78	9·92	7·66	+ 2·26	15·10	15·30	− 0·20	4·07	Salem	Madras (South Central).	34
					11	19	1	S 75° W	7·8	6·9	7·4	− 7	85	·772	6·0	3	2·91	+ 0·09	0·38	1·19	− 0·81	2·97	3·85	− 0·88	0·15	Coimbatore.		
						27	4	N 84° W	5·7	5·3	8·9	− 40	97	·595	9·4	26	26·30	− 0·30	20·12	26·25	− 6·13	90·85	94·46	− 3·61	2·81	Mercara	Coorg.	35
				1	12	15	3	S 74° W	11·7	10·2			86	·676	9·3	7			2·62	2·99	− 0·37	6·66	8·86	− 2·20	0·51	Chitaldroog	Mysore.	36
		1			13	16	1	S 71° W	11·5	10·0	7·6	+ 32	85	·618	8·9	9	10·73	− 1·73	2·82	5·80	− 2·98	7·52	13·84	− 6·32	0·59	Bangalore.		
					5	18	8	N 86° W	5·0	4·4			83	·634	9·0	6			2·06	2·85	− 0·79	8·56	11·99	− 3·43	0·49	Hassan.		
		1			18	11	1	S 63° W	11·6	12·5			79	·625	8·9	3			2·50	3·15	− 0·65	4·70	7·59	− 2·89	1·71	Mysore.		
			1	2	14	9	1	S 57° W	6·1	5·4	5·7	− 5	71	·823	4·7	2	5·91	− 3·91	1·46	3·84	− 2·38	1·82	7·85	− 6·03	1·25	Negapatam	Madras (East Coast, South).	56
								Calm	0·1	0·1			74	·825	7·3	8	8·00	0	3·88	5·17	− 1·29	6·16	9·32	− 3·16	1·15	Cuddalore.		
					3	18	2	S 88° W	4·9		8·2	− 40	68	·750	5·9	3	5·36	− 2·36	1·71	4·67	− 2·96	3·76	7·79	− 4·03	1·26	Trichinopoly.		
			3	2	12	12		S 55° W	6·2		7·3	− 15	76	·841	7·5	9	8·27	+ 0·73	7·28	4·56	+ 2·72	14·30	10·54	+ 3·76	2·63	Madras.		
				3	16	2		S 42° W	5·3	5·0			69	·695	6·5	5			2·22			7·05			1·08	Vellore.		
				1	2	14	14	N 73° W	3·0				66	·781	8·5	6	5·50	+ 0·50	3·20	3·40	− 0·20	5·84	7·40	− 1·56	0·75	Nellore	Madras (East Coast, Central).	55
					1	13	15	N 68° W	9·1		7·8	+ 17	88	·915	8·3	15	9·00	+ 6·00	7·84	7·02	+ 0·82	16·00	18·25	− 2·25	1·88	Masulipatam		
					3	10	18	N 67° W					66	·739	7·6	11	7·90	+ 3·10	3·41	6·38	− 2·97	9·96	14·39	− 4·43	0·84	Cuddapah	Madras (Central).	54
3					2	14	8	N 71° W					77	·717	8·0	8	9·33	− 1·33	2·76	5·85	− 3·09	12·49	14·71	− 2·22	0·88	Kurnool.		
					1	28	1	W	12·6	13·4	10·7	+ 25	61	·601	8·3	3	4·55	− 1·55	0·94	2·58	− 1·64	5·59	6·41	− 0·82	0·44	Bellary.		
					25	5	1	S 54° W	8·3	7·0			84	·878	8·3	15	9·10	+ 5·90	8·57	5·71	+ 2·86	14·01	17·75	− 3·74	2·44	Cocanada	Madras (East Coast, North).	52
			1		7	21	2	S 82° W	14·5				77	·818	8·2	6			2·83	5·89	− 3·06	8·61	14·47	− 5·86	0·65	Waltair (Vizag.).		
		1	1	8	14	2	1	S 32° W	13·5	12·2	9·1	+45	81	·913	4·9	6	11·44	− 5·44	1·93	8·21	− 6·28	8·32	22·20	−13·88	0·80	Gopalpur.		
																										XII.—Hill Stations.		
					1			S 45° W	1·0	1·1	4·5	− 76	54	·487	0·9	0			0	0·21	− 0·21	0	0·48	− 0·48	0	Pishin	Baluchistan.	48
3		9		19				S 29° E					44	·369		0			0	0·52	− 0·52	1·97	1·25	+ 0·72	0	Kalat.		
2		5	4	2	15	3		S 24° W	3·2	3·4			48	·530	0	0			0	0	0	0	0·42	− 0·42	0	Chaman.		
1	15	5	1	2	4	2		N 62° E	2·4				56	·277	3·9	1			0·17	0·61	− 0·44	1·36	1·29	+ 0·07	0·14	Leh	Punjab.	30
	2	2	8	9			2	S 32° E	3·2	3·4			85	·668	5·1	5			1·37	7·36	− 5·99	5·27	19·17	−13·90	0·34	Srinagar.		
1	3	3	2	1	4			S 62° E	2·6				86	·470	8·3	7			3·75			11·53			1·05	Gulmarg.		
2	3	2		2	10	4		S 54° W	5·7	6·8			54	·405	3·9	1			0·24	1·33	− 1·09	2·15	2·12	+ 0·03	0·15	Skardu.		
					3	1		S 56° W	7·1	7·3			58	·326	4·6	0			0·08	0·43	− 0·35	4·07			0·04	Dras.		
								Calm	0·8	0·8			37	·396	3·2	1			0·53	0·36	+ 0·17	1·34	1·46	−0·12	0·48	Gilgit.		
9	2	7	6	3	1	1	2	N 68° E					56	·595	0·6	0			0			0·80			0	Chitral.		
		2		2	1			S 18° E					48	·461	1·5	1			0·36			1·73			0·36	Killa Drosh.		
12	7	5	2	1	1	2	1	N 28° E	2·5				56	·511	6·8	7			2·11			5·41			0·71	Para Chinar.		
2	3		10	4	7	2	3	S 1° E	9·1	8·5			70	·611	4·1	2			0·35	3·24	− 2·89	6·36	8·53	−2·17	0·25	Cherat.		

Table

Abstract of Observations taken at 8 A.M. at 222 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
30	Punjab—(*concld.*)	Murree	6,333	23·722	−·012		23·888	30th	23·534	7th	·354	68·1	76·0	+1·9	63·3	+2·3	69·7	+2·1	12·7	82·3	21st	52·9	9th	29·4
		Poo											80·2		60·0		70·1		20·2	88·5	28th	52·9	9th	35·6
		Simla	7,224	23·009	−·006		23·170	30th	22·852	7th	·318	62·0	66·7	−0·7	60·3	+0·6	63·5	−0·1	6·4	70·0	11th	57·7	31st	12·3
25	North-Western Provinces.	Chakrata	7,022	23·169	−·005		23·323	30th	22·974	8th	·349	63·0	67·1	−2·1	60·4	+1·0	63·8	−0·6	6·7	70·7	4 days	56·7	30th	14·0
		Mussooree	6,705	23·433	−·006		23·600	30th	23·280	7th	·320	63·3	67·9	−0·9	61·0	+1·3	64·5	+0·2	6·9	72·3	19th	57·9	30th & 31st.	14·4
		Ranikhet	6,069	23·970	−·007		24·143	30th	23·801	8th	·342	66·0	72·1	−0·3	63·0	+1·0	67·6	+0·4	9·1	77·0	18th, 19th & 20th.	60·0	13th, 29th & 30th.	17·0
		Muktesar		22·747			22·901	30th	22·585	8th	·316	61·8	68·4		58·6		63·5		9·8	75·5	20th	54·8	29th	20·7
13	Bengal	Yatung	10,480?										63·5		?		?		?	68·1	16th & 19th			
		Darjeeling	7,376	22·920	+·007		23·055	29th	22·806	9th	·249	61·4	66·5	+0·5	58·2	+1·5	62·3	+1·0	8·3	70·7	18th	54·6	29th	16·1
		Gangtok	5,660	24·443			24·459	29th	24·424	8th	·035	66·3	75·9		46·8		61·4		29·1	86·2	26th	43·0	29th	43·2
	Central India	Mount Abu	3,945	25·838	−·031		25·998	31st	25·680	7th	·318	66·2	71·8	−0·1	64·9	+0·5	68·4	+0·2	6·9	76·1	20th	61·4	24th	14·7
		Pachmarhi	3,528	26·230	−·044		26·345	30th	26·142	6th	·203	68·7	72·5	−2·3	67·1	+0·2	69·8	−1·1	5·4	79·2	5th & 6th.	64·2	14th	15·0
	South India	Wellington	6,200	24·201	−·003		24·271	31st	24·150	6th	·121	63·8	72·2	+1·4	56·4	−0·8	64·3	+0·3	15·8	77·2	25th	51·2	25th	26·0
		Ootacamund		23·018			23·085	31st	22·969	6th & 7th.	·116	56·5	63·5		52·2		57·9		11·3	67·5	31st	47·3	25th	20·2
		Kodaikanal	7,388	22·793			22·860	31st	22·746	7th	·114	57·4	63·8		52·5		56·8		11·3	66·2	20th	49·6	10th	16·6
XIII.—Extra India.																								
	Ceylon	Trincomalee	12	29·845	?	29·783	29·923	31st	29·790	2nd & 4th.	·133	82·6	93·1	?	78·0	+1·6	85·6	?	15·1	97·0	28th	75·5	26th	21·5
		Colombo	40	29·884	−·002	29·849	29·927	31st	29·842	4th	·085	81·9	88·4	+3·2	76·0	+0·9	83·2	+2·1	10·4	90·0	15th	75·5	15th	14·5
	Persia	Meshed	3,104									78·1			61·3							51·9	22nd	
		Teheran		25·786¶ (a)†† 25·205			25·970	29th	25·600	9th	·370	83·5	97·7		73·0		85·4		24·7	103·6	13th	63·9	1st	39·7
							25·360	20th	25·100	9th & 10th.	·260													
		Ispahan		24·199¶			24·300	8 days	24·000	9th	·300	79·6	89·3		65·1		82·2		34·2	104·5	11th	58·2	21st & 24th.	46·3
		Bushire	14	29·517	−·027	29·491	29·708	31st	29·360	8th	·348	91·7	97·0	+0·5	84·9	+1·3	91·0	+0·9	12·1	101·5	21st	77·9	29th	23·6
		Jask		29·556	−·045		29·803	31st	29·345	15th	·458	87·5	93·4	−1·4	84·0	−0·1	88·7	−0·8	9·4	100·3	9th & 15th.	80·2	29th & 31st.	20·1
		Muscat	20	29·563		29·530	29·837	31st	29·389	8th	·448	83·8	85·7		81·9		83·8		3·8	94·3	9th	77·1	29th	17·2
	Arabia	Baghdad	220	29·453	−·055	29·640	29·614	18th	29·295	6th	·319	89·9	113·1	+5·3	80·9	+2·8	97·0		32·2	119·4	21st & 22nd.	71·8	31st	47·6
		Bussrah		29·562			29·699	28th	29·413	7th	·286		105·7		83·5		94·6		22·2	111·7	5th	77·4	31st	34·3
		Aden	94	29·637	−·013	29·661	29·718	28th	29·534	7th	·184	84·8	91·5	−0·4	81·2	+0·7	86·4	+0·2	10·3	97·8	13th	77·4	7th	20·4
		Perim	201	29·531		29·661	29·586	28th & 31st	29·436	9th & 9th.	·150	88·9	97·2		85·1		91·1		12·1	101·5	12th	78·1	17th	23·4
	Afghanistan	Kabul										72·8	96·3		61·0		78·7		35·3	103·1	5th	52·8	24th	50·3
	Central Asia	Kashgar		25·501			25·688	22nd	25·271	8th	·417	72·9	87·2		64·6		75·9		22·6	97·9	14th	51·8	24th	46·1
	Arabian Sea Island.	Amini Devi	13	29·886		29·827	29·960	31st	29·808	6th	·152	83·1	87·0		78·3		82·7		8·7	88·6	6th & 7th.	75·4	7th	13·2
	Africa	Zanzibar	73	30·098	+·010	30·099	30·159	23rd	30·047	3rd	·112	73·9	80·2		72·2		76·2		8·0	83·0	20th	70·7	14th	12·3
		Dunga (Zanzibar).		30·022‡			30·090	23rd	29·966	3rd	·124	72·0‡	83·6‡		64·5‡		74·1‡		19·1	86·5	2nd & 4th.	58·9	15th	27·6

* Mean of 17 days.
†† " 22 "
† Total rainfall of July and August only.
‡ Mean of 30 days.
¶ Aneroid uncorrected.
(a) Mountain "

Note.—When a query is inserted against any reading or in the variation returns for any

concluded.

India, Burma, etc., in August 1901—concluded.

Wind Direction. Number of winds from N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st August 1901.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period, 1st June to 31st August.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
1			2				1	N 67° E	3·4	4·2	4·8	− 13	85	·586	5·9	10	15·64	−5·64	13·25	14·28	− 1·03	21·30	28·40	− 7·10	3·11	Murree.	Punjab—(*concld.*)	30
					4	5	1	S 77° W							5·5	2			1·39	0·45	+0·94	1·78	1·86	− 0·08	1·18	Poo.		
4	1		3	2			3	N 15° E	3·7		1·6	+131	94	·526	9·1	23	19·45	+3·55	29·22	17·98	+11·24	45·83	42·32	+ 3·51	8·94	Simla.		
3	2	1	5	16		1		S 18° E	9·5		4·3	+121	94	·537	8·8	26			24·91	18·59	+ 6·32	47·36	44·92	+ 2·44	5·53	Chakrata .	North-Western Provinces.	25
6		2	12	1		2	6	N 79° E					98	·561	8·6	29	22·18	+6·82	55·09	30·90	+24·19	82·53	69·09	+13·44	5·85	Mussooree.		
	1	1	5		6	3	4	S 51° W	2·7	3·1	1·9	+ 63	91	·584	8·6	25	17·82	+7·18	19·22	13·91	+ 5·31	31·74	33·13	− 1·39	2·98	Ranikhet.		
		2	13	4	2	3	7	S 11° E	5·2	4·8			95	·526	9·0	24			20·56			36·11			3·52	Muktesar.		
																28			10·23	9·30	+0·93	28·18			1·36	Yatung .	Bengal.	13
1	4	5	6		1	2	1	S 88° E	2·9	2·7	3·4	−21	97	·526	8·5	23	24·35	−1·35	26·98	25·61	+ 1·37	78·84	81·75	− 2·91	3·70	Darjeeling.		
	4		4	5	14		4	S 30° W	1·2	1·4			95	·614	7·6	26			23·32	24·98	− 1·66	76·21	69·08	+ 7·13	2·35	Gangtok.		
					29	2		S 48° W	12·5	13·0	10·8	+ 20	95	·618	9·5	15	18·50	−3·50	7·66	22·39	−14·73	17·49	52·94	−35·45	1·02	Mount Abu	Central India.	
2						7	10	N 57° W	12·6	13·0	7·5	+ 73	95	·674	9·8	29	21·18	+7·82	40·75	19·74	+21·01	67·50	56·23	+11·27	5·03	Pachmarhi.		
1	1			1	15		2	S 52° W	3·8		3·8	0	72	·430	6·9	7	10·89	−3·89	3·01	4·19	− 1·18	10·88	11·67	− 0·79	1·36	Wellington.	South India.	
			1	1	8	15	2	S 74° W	6·2	5·8			89	·407	8·0	5			1·54			5·82†			0·61	Ootacamund		
1			2	1		5	21	N 54° W	12·7				80	·389	6·2	11			4·67			14·25			1·10	Kodaikanal.		
																										XIII.—Extra India.		
					31			S 45° W	15·0				82	·919	2·1	1			1·70	5·10	− 3·40	3·28	9·78	− 6·50	1·52	Trincomalee	Ceylon.	
				6	21	4		S 43° W	7·7		8·7	−11	84	907	4·8	1			0·42	4·19	− 3·77	10·96	16·98	− 6·02	0·25	Colombo.		
													46	·460	0	0			0	0·02	− 0·02	2·06	0·27	+ 1·79	0	Meshed .	Persia.	
1	10	1	2	1	12	1	3	S 68° W	8·8	1·1			34	382	0·8	1			0·14	0·09	+ 0·05	** 0·21	** 0·60	− 0·39	0·10	Teheran.		
									1·0	1·3			53	5·37	0·5	0			0	0	0	0·01	0·10	− 0·09	0	Ispahan.		
3	2	3	4	1	2	1	9	N 16° W	7·4	8·8	7·8	+13	66	·983	0·5	0			0	0	0	0	0	0	0	Bushire.		
		24	2			1	2	E	15·3	17·7			83	1·081	2·8	0			0	0	0	0	0·15	− 0·15	0	Jask.		
			28			1	2	S 43° E	5·0	5·3			81	·939	1·8	0			0	0	0	0	0·08	− 0·08	0	Muscat.		
7						2	11	N 24° W	2·5	3·3			41	·576	0	0			0	0·13	− 0·13	0	0·14	− 0·13	0	Baghdad .	Arabia.	
																0			0			0			0	Bussrah.		
	5		9	1	8			S 24° E	8·6	8·4	10·8	− 22	70	·835	4·1	0			0·01	0·21	− 0·20	1·35	0·22	+ 1·13	0·01	Aden.		
1	3	1			15	9	1	S 68° W	15·5	13·9			75	1·031	2·5	1			0·38	0·38	0	0·97	0·40	+ 0·57	0·28	Perim.		
					3	13	4	N 56° W					39	·326	0	0			0	0·17	− 0·17	0·07	0·93	− 0·86	0	Kabul .	Afghanistan.	
				1				S	7·7	6·9			57	·459	5·2	1			0·63	0·48	+ 0·15	1·09	1·46	− 0·37	0·38	Kashgar .	Central Asia.	
1					4	20	6	N 86° W					77	·876	5·8	10			3·29			15·69			0·63	Amini Devi	Arabian Sea Island.	
			1	16	13	1		S 21° W	7·6	7·2			88	·724	6·5	4			1·20	1·83	− 0·63	4·89	5·19	− 0·30	0·39	Zanzibar .	Africa.	
1		1	2	6	11			S 20° W	5·9§	5·8§			90‡	·716‡	6·2‖	6			3·01			8·49			1·38	Dunga (Zanzibar.)		

on, the data for that station are not utilized in calculating the provincial variations.

§ Mean of 28 days. ‖ Mean of 29 days. ** Rainfall of June not included.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 65

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45°-Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair		29·798	29·710	·088	29·750	+·003	29·742	85·2	77·9†	7·3	88·6	74·4	14·2	83·0	83·2	80·7†	+ 0·8	75·3	79·1	79·0	77·8
	Rangoon		·762	·667	·095	·721	−·033	·699	88·9	75·6	8·3	89·1	73·7	15·4	80·0	79·8	78·1	− 0·4	74·4	77·7	77·2	76·4
	Diamond Island		·764	·679	·085	·718	−·027	·694	83·6‡	76·7	6·9	85·6	72·2	13·4	81·1	81·4	79·0‡	+ 0·5	74·1	78·0	78·1	76·8
	Cocos Island	111	·745	·671	·074	·703	?	·746	84·9	77·2	7·7	88·0	74·2	13·8	82·6	81·9	79·9	+ 0·1	74·7	79·2	78·4	77·4
	Akyab		·713	·614	·099	·668	−·039	·631	84·6	76·5	8·1	88·2	73·8	14·4	80·8	81·8	79·5	− 0·7	76·0	78·2	78·8	77·7
Bengal and Orissa.	Chittagong		·590	·492	·098	·548	−·056	·582	87·1	76·9	10·2	90·0	73·5	15·5	84·7	83·5	80·7	+ 1·0	75·8	79·4	79·1	78·1
	Calcutta (Alipore)		·586	·498	·088	·547	−·049	·513	88·4	78·8	9·6	93·2	75·5	17·7	84·8	85·1	83·4	+ 0·9	77·6	80·2	80·3	79·3
	Saugor Island		·586	·495	·091	·546	−·045	·514	88·4	80·8	7·6	91·6	76·1	15·5	84·4	86·3	83·7	+ 1·3	77·9	80·6	81·3	79·9
	False Point		·606	·514	·092	·565	−·053	·528	86·9	77·9	9·0	92·5	74·1	18·4	84·3	85·0	81·5	0	76·8	80·3	80·2	79·1
Gangetic Plain and Chota Nagpur.	Hazaribagh		27·612	27·521	·091	27·569	−·050	·495	84·2	74·1	10·1	90·4	71·3	19·1	79·5	80·7	77·9	+ 0·6	72·8	74·4	74·5	73·9
	Darbhanga		29·449	29·337	·112	29·398	−·040	·515	89·3	79·6	9·7	93·5	75·5	18·0	85·2	87·8	83·6	+ 0·7	77·9	80·8	81·4	80·0
	Allahabad		·264	·156	·108	·214	−·059	·473	90·5	79·5	11·0	99·4	75·3	24·1	86·2	87·7	83·7	+ 0·5	77·5	81·4	81·6	80·1
Upper Sub-Himalayas.	Dehra Dun		27·418	27·338	·080	27·371	−·033	·536	82·6	73·0	9·6	88·8	69·8	19·0	77·5	78·6	76·2	− 1·8	71·6	74·7	75·5	73·9
	Roorkee		28·714	28·620	·094	28·663	−·025	·504	88·2	77·4	10·8	94·7	73·1	21·6	82·7	86·5	81·8	− 1·2	76·1	78·3§	80·0§	78·1
	Meerut		·844	·753	·091	·792	−·041	·485	89·4	78·9	10·5	94·6	76·3	18·3	83·6	86·8	83·3	− 0·5	77·4	79·5	80·4	79·1
	Lahore		·845	·755	·090	·793	−·050	·443	97·5	82·3	15·2	104·9	71·9	33·0	90·5	96·3	89·3	+ 2·7	78·0	80·7	82·5	80·4
	Ludhiana		·761	·669	·092	·709	−·026	·470	94·3	80·5	13·8	100·4	73·5	26·9	88·0	92·1	85·5	+ 0·8	77·3	80·0	80·8	79·4
Indus Valley and N.-W. Rajputana.	Peshawar		·433	·316	·117	·368	−·064	·415	103·7	81·0	22·7	110·5	72·7	37·8	93·9	101·7	91·6	+ 4·4	74·2	80·3	80·0§	78·2
	Jacobabad		29·329	29·215	·114	29·265	−·057	·402	106·4	82·5	23·9	113·0	77·6	35·4	94·7	104·2	93·5	+ 1·9	76·9	81·6	84·0	80·8
	Kurrachee		·594	·525	·069	·562	−·028	·542	89·0	78·8	10·2	91·9	76·5	15·4	84·5	85·5	82·7	+ 0·6	75·3	78·6	78·9	77·7
East Rajputana, Central India, and Gujarat.	Jaipur		28·207	28·123	·084	28·164	−·022	·533	90·1	77·2	12·9	97·1	73·1	24·0	84·3	87·4	82·3	+ 0·9	74·5	77·1	77·9	76·5
	Udaipur		27·748	27·678	·070	27·713		·574	84·0	73·9	10·1	88·7	70·6	18·1	79·8	80·5	78·1		71·4	73·5	74·2	73·0
	Deesa		29·197	29·099	·098	29·146	−·026	·560	90·3	77·1	13·2	95·4	74·0	21·4	83·5	83·3	83·0	+ 1·5	74·4	77·2	77·8	76·5
	Jamnagar		·621	·544	·077	·582		·589	89·1	77·1	12·3	92·0	73·4	18·6	85·8	86·6	82·5		74·7	78·1	78·5	77·1
Deccan.	Belgaum		27·294	27·219	·075	27·256	−·004	·722	75·2	66·6	8·6	80·3	63·8	16·5	72·2	72·4	69·6	+ 0·1	66·0	69·6	69·5	68·4
	Sholapur		28·187	28·077	·110	28·139	−·014	·660	87·6	71·1	16·5	93·4	68·5	24·9	80·4	83·5	77·8	− 0·3	69·2	72·5	72·8	71·5
	Poona		27·938	27·875	·063	27·907	−·009	·688	80·3	70·1	10·2	85·0	67·5	17·5	76·6	76·9	73·3	− 0·3	69·4	71·6	71·8	70·9
	Akola		28·781	28·682	·099	28·729	−·012	·610	83·7	72·4	11·3	89·8	69·1	20·7	79·4	81·3	77·8	− 1·8	71·5	75·0	75·7	74·0
	Buldana	2,132	27·600	27·515	·085	27·555	−·019	·620	79·4	69·5	9·9	84·5	66·0	18·5	75·2	76·8	74·1	− 1·2	68·2	70·9	72·3	70·4
	Khandwa		28·642	28·550	·092	28·594	−·023	·590	83·3	74·2	9·1	88·2	71·3	16·9	78·9	82·3	77·9	− 0·4	72·0	74·4	75·6	74·0
	Nagpur		·641	·548	·093	·593	−·019	·569	84·5	74·2	10·3	89·6	72·1	17·5	78·8	81·0	78·8	− 1·4	72·7	75·3	76·0	74·7
	Nagpur (Sanitary Commr.'s Office)		·657	·552	·105	·603		·568	84·6	74·2	10·4	90·4	72·2	18·2	79·7	82·0	78·8		72·8	75·9	76·7	75·1
	Hyderabad (Deccan)		·076	27·965	·111	·025	−·005	·645	85·0	71·8	13·2	89·9	69·1	20·8	78·9	82·8	77·9	+ 0·6	69·9	72·6	74·2	72·2
West Coast.	Bombay		29·755	29·684	·071	29·717	−·010	·694	84·1	77·4	6·7	86·6	75·2	11·4	80·5	81·2	80·1	+ 0·2	75·6	77·5	77·4	76·8
	Karwar			Not recorded.					83·1	75·3	7·8	85·1	72·8	12·3	79·9	81·2	78·5	+ 0·7	73·0	75·8	76·3	75·1

† Mean of 28 days. ‡ Mean of 21 days. § Mean of 20 days.

tions in India, Burma, etc., in August, 1901.

Vapour Tension.				Humidity.					Cloud.				Wind Direction. Number of winds from										Wind steadiness.	Wind velocity.		Rainfall.		Station.	Meteorological Province.
Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																							%	%						
·948	·933	·910	+·017	89†	84	82	85	−1	7·7	7·7	7·7	+0·2							31	30	1	S. 68° W.	S. 49° W.	92	82	337	242			Port Blair	Burma Coast and Bay Islands.
·923	·903	·888	0	94	90	89	91	+1	9·8	9·7	9·8	+0·9			1			11	33	15	2	S. 51° W.	S. 38° W.	80	65	126	110			Rangoon	
·920	·922	·882	+·009	88	86	86	87	0	8·6	8·8	8·7	+0·7	1	1				3	37	16	4	S. 61° W.	S. 45° W.	84	78	243*	193			Diamond Island, Cocos Island, Akyab	
·953	·930	·903	−·001	89	85	85	86	−2	8·3	8·8	8·6	+0·2		1				6	48	6	1	S. 47° W.	S. 41° W.	90	91	264	7	17·49	3·30		
·938	·947	·926	−·013	97	89	87	91	+3	8·9	8·1	8·5	+0·3				3	13	32	12	2		S. 9° E.	S. 1° E.	81	63	61*	85				
·934	·938	·918	+·012	95	78	82	85	−2	7·9	8·8	8·4	+0·7				1	20	21	19	1		S. 1° E.	S. 25° E.	77	61	213*	142			Chittagong	Bengal and Orissa.
·970	·971	·958	+·031	94	81	80	85	−3	8·4	8·4	8·4	+0·1	1		2	8	20	19	10	1	1	S. 21° E.	S. 14° E.	66	56	90	115			Calcutta (Alipore), Saugor Island.	
·895	1·004	·974	−·014	88	84	80	84	−3	8·4	8·0	8·2	+0·3		1	1	1	7	22	21	8	1	S. 23° W.	S. 13° W.	69	57	350	315				
·982	·966	·953	+·020	95	84	80	86	+1	8·9	8·5	8·7	+0·8		1		1	3	8	24	22	3	S. 58° W.	S. 47° W.	72	53	223*	238			False Point	
·789	·776	·786	−·013	94	78	74	82	−3	9·8	9·7	9·8	+0·8	3	8	2	8	11	15	7	2	6	S. 23° E.	S. 4° W.	24	8	145*	185			Hazaribagh	Gangetic Plain and Chota Nagpur.
·994	·990	·974	+·013	92	82	75	83	−1	6·9	5·4	6·2	0	4		1	28	27	1	1			S. 67° E.	S. 77° E.	82	60	76	111			Darbhanga	
1·010	·997	·975	+·029	91	81	77	83	0	8·6	9·0	8·8	+1·0	2	3	9	23	5	2	3	11	4	N. 75° E.	N. 16° E.	29	4	185*	134			Allahabad	
·830	·847	·813	+·020	93	88	87	89	+2	8·6	8·6	8·6	+0·9	8	2			8	14	5	3	7	S. 19° W.	S. 26° W.	25	14	251‖	24			Dehra Dun	Upper Sub-Himalayas.
·912§	·936§	·912	+·048	94	82§	75§	84	+6	7·5	6·7	7·1	+0·7	24		4		18	9	3		4	S. 30° E.	S. 24° E.	34	22	40	58			Roorkee	
·962	·960	·949	+·071	94	83	76	84	+7	7·7	6·1	6·9	+0·4	31		2	2	17	1	5	2	2	S. 32° E.	S. 55° E.	26	10	26*	48			Meerut	
·920	·928	·918	+·050	82	65	55	67	+2	3·7	3·0	3·4	−0·3	16	6	2	11	9	5		11	2	S. 69° E.	S. 30° E.	11	25	56	69			Lahore	
·926	·908	·910	+·036	86	70	61	72	−1	5·0	5·2	5·1	−0·7	4	1	12	5	27	1		4	8	S. 78° E.	S. 59° E.	37	11	69*	39			Ludhiana	
·856	·749§	·791	+·016	72	54	37§	54	−7	1·9	2·8	2·4	−0·5	23	18	9	4	3	3		1	1	N. 28° E.	N. 41° E.	37	51	43*	93			Peshawar	Indus Valley and N.-W. Rajputana.
·904	·892	·884	+·063	77	56	41	58	+1	1·7	2·6	2·2	−0·1	17			6	31	7	1			S. 43° E.	S. 44° E.	65	59	94*	101			Jacobabad	
·900	·902	·885	+·016	87	76	74	79	0	5·8	5·0	5·4	−1·3							32	30		S. 67° W.	S. 67° W.	92	88	400*	397			Kurrachee	
·844	·839	·835	+·026	88	71	65	75	−1	7·8	8·5	8·2	+0·8	5	3	7	4			19	16	8	N. 89° W.	N. 66° W.	42	43	82	118			Jaipur	East Rajputana, Central India, and Gujarat.
·757	·771	·756		88	74	75	79		8·4	8·5	8·5		9	1		2		2	19	22	7	S. 76° W.		64		121*				Udaipur	
·853	·813	·828	+·028	88	75	62	75	0	8·3	7·9	8·1	+0·1		1			1	10	35	13	2	S. 49° W.	S. 52° W.	82	75	287	278			Deesa	
·858	·869	·852		89	70	69	76		5·5	5·0	5·3							4	38	19	1	S. 57° W.		89		320*				Jamnagar	
·695	·685	·671	+·015	97	88	86	90	+1	8·9	9·2	9·1	+0·4						6	37	19		S. 54° W.	S. 71° W.	89	89	543	517			Belgaum	Deccan.
·702	·672	·688	+·028	91	68	60	73	+4	8·7	9·0	8·9	+0·5							27	23	12	S. 78° W.	W.	83	81	411*	296			Sholapur	
·715	·717	·714	+·031	96	78	78	84	+4	9·2	9·6	9·4	+0·8							16	45	1	S. 79° W.	S. 85° W.	94	89	416*	327			Poona	
·809	·807	·793	+·040	96	81	75	84	+8	9·6	9·5	9·6	+1·4							4	36	22	N. 77° W.	N. 67° W.	90	82	230*	200			Akola	
·704	·738	·705	+·008	93	81	80	85	+4	9·9	9·7	9·8	+2·0		1					6	36	19	N. 79° W.	N. 65° W.	88	76	231*	195	12·90	1·83	Buldana	
·789	·799	·784	+·018	89	81	74	81	+2	9·3	8·2	8·8	+1·2		.					40	22	N. 75° W.	N. 81° W.	97	84	275	199			Khandwa	
·832	·836	·818	+·021	93	85	79	86	+7	9·1	8·7	8·9	+0·3						1	21	36	4	S. 77° W.	N. 80° W.	89	64	264	191			Nagpur	
849	·855	·832		93	84	78	85		9·0	8·7	8·9						7	2	45	1	7	S. 44° W.		76		62*				Do. (Sanitary Commr.'s Office), Hyderabad (Deccan)	
·722	·739	·724	−·001	91	73	66	77	−2	7·5	7·7	7·6	+0·8								59	3	N. 33° W.	N. 31° W.	98	84	221*	203				
·911	·892	·889	+·011	92	87	84	88	+1	9·0	9·0	9·0	+0·2		1				1	10	48	2	S. 34° W.	S. 31° W.	92	83	382	376			Bombay	West Coast.
·837	·841	·820	−·008	89	82	79	83	−4	7·1	7·0	7·1	−0·1	2	1				•	2	48	9	N. 31° W.	N. 37° W.	91	73	109	87			Karwar	

* Corrected.

‖ Mean of 27½ days.

¶ Mean of 29 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 65

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L., and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
South India.	Periyakulam		28·801	28·779	·122	28·855			91·9	71·5	23·4	99·3	66·7	32·6	87·0	88·9	81·7		67·9	73·6	74·2	71·8
	Salem		·923	·785	·138	·868	−·025	29·734	92·6	73·2	19·4	99·4	70·8	28·6	83·3	89·9	81·0	+1·2	71·2	75·4	76·7	74·4
	Chitaldroog		27·445	27·357	·088	27·410	+·001	·730	82·1	68·5	13·6	88·8	66·9	21·9	75·8	77·9	74·2	+0·7	67·1	70·6	71·8	69·8
	Bangalore		26·879	26·779	·100	26·841	−·003	·732	82·6	65·8	16·8	83·4	61·9	26·5	75·0	79·9	73·5	+1·2	64·8	68·2	69·4	67·5
	Hassan		·826	·756	·070	·803	0	·780	77·4	65·0	12·4	85·5	62·3	23·2	74·2	74·2	70·4	+0·6	64·1	68·4	68·1	66·9
	Mysore		27·384	27·291	·093	27·338	−·001	·753	85·0	66·9	18·1	91·1	64·2	26·9	78·3	80·3	74·8	+1·1	65·9	69·0	69·7	68·2
	Madras		29·787	29·658	·135	29·732	−·011	·682	94·2	77·6	16·6	99·1	73·3	25·8	86·9	88·3	84·1	+0·1		77·2	79·3	77·6
	Bellary		28·342	28·231	·111	28·296	−·008	·694	91·7	74·3	17·4	96·4	71·2	25·2	83·5	86·9	81·3	+0·5	68·2	70·5	71·6	70·1
	Waltair		29·452	29·348	·104	29·400		·565	88·7	77·7	11·0	97·0	73·5	23·5	84·6	84·8	82·2		71·6	77·0	77·4	75·3
Hill Station, Baluchistan.	Quetta		24·467	24·384	·083	24·423	−·019		94·7	60·6	34·1	98·3	50·1	48·2	85·4	92·6	77·2	+2·2	56·7	62·8	63·8	61·1
Hill Stations, Northern India.	Leh		19·665	19·564	·101	19·625	+·004		76·1	49·5¶	26·6	81·5	41·8	39·7	67·5	73·6	61·9¶	+0·7	43·5	54·5	56·3	51·4
	Srinagar		24·683	24·601	·082	24·640	−·028		86·9	65·1	21·8	93·0	58·0	35·0	76·7	85·3	75·6	+3·1	62·5	72·5	78·5	71·2
	Kailang	10,087	20·865	20·781	·084	20·826	?		75·5	50·8	24·7	82·3	41·4	40·9	65·9	69·7	61·1	+0·9	49·4	58·9	58·1	55·5
	Simla (Ridge)		23·026	22·981	·045	23·001	−·001		66·4	50·2	6·2	70·0	57·7	12·3	63·3	64·7	63·0	−0·4	59·4	62·1	63·1	61·5
	Chakrata		·180	23·129	·051	·152	−·017		67·0	50·4	6·6	70·7	56·7	14·0	63·9	64·7	63·2	−0·2	60·4	62·4	63·2	62·0
	Ranikhet		·983	·918	·065	·936	−·019		72·0	52·9	9·1	77·0	59·9	17·1	67·9	69·1	66·9	+0·1	62·2	65·6	66·5	64·8
	Muktesar		22·768	22·708	·060	22·738			68·2	53·6	9·6	75·5	54·8	20·7	64·1	64·8	62·5		58·2	62·5	63·2	61·3
	Katmandu	4,388	25·363	25·283	·080	25·326	?		84·3	69·1	15·2	88·6	66·1	22·5	78·3	78·2	75·2	+0·2	67·6	72·2	73·2	71·0
	Darjeeling		22·926	22·874	·052	22·903	−·005		66·4	53·1	8·3	70·8	54·7	16·1	63·9	64·8	61·9	+1·3	58·0	62·5	63·2	61·2
Hill Stations, Central India.	Mount Abu		25·856	25·798	·058	25·825	−·036		72·0	64·9	7·1	76·3	61·4	14·9	68·1	70·7	68·1	+0·6	64·0	66·6	67·9	66·2
	Pachmarhi		26·248	26·177	·071	26·211	−·036		72·5	67·1	5·4	79·2	64·2	15·0	69·5	70·9	68·7	−0·8	66·7	68·4	69·1	68·1
	Chikalda	3,642	·145	·056	·089	·098	−·042		70·1	65·3	4·8	75·2	63·2	12·0	67·7	69·2	66·7	−0·9	65·2	67·2	68·3	66·9
Hill Stations, S. India.	Wellington		24·211	24·148	·063	24·180	+·004		72·1	56·4	15·7	77·0	51·0	26·0	67·9	67·2	63·0	+0·3	53·8	61·0	61·0	58·6
	Ootacamund		23·031	22·967	·064	22·969			63·6	52·2	11·4	67·6	47·3	20·3	59·7	59·4	56·9		50·8	56·0	56·2	54·3
	Kodaikanal		22·804	·742	·062	·772			63·6	52·5	11·1	66·2	49·7	16·5	60·5	59·2	56·8		49·3	56·1	56·6	53·3
Extra India.	Aden		29·648	29·514	·134	29·578	−·012	·601	91·3	81·3	10·0	94·8	77·3	17·5	87·8	90·2	86·3	+1·5	75·4	78·2	76·7	76·8
	Perim		·529	·420	·109	·472	−·022	·601	97·1	85·1	12·0	101·8	78·1	22·7	92·2	93·6	90·2	+1·1	78·5	82·6	82·5	81·2
	Zanzibar		30·116¶	30·012	·104	30·064	+·010	30·065¶	80·2	72·2	8·0	83·0	70·7	12·3	75·9¶	79·5	76·1	−0·2	67·9	71·8	72·1	70·6
	Port Victoria (Seychelles).	15	·019	29·936	·083	29·978	+·005	29·917	79·5	72·3	6·7	81·0	70·4	10·6	78·1	78·7	76·0	−2·1	69·9	72·6	72·6	71·7
	Mauritius (Pamplemousses).	181				30·027	−·001	30·158				80·7	52·9	27·8			68·0	−0·6				

¶ Mean of 30 days.

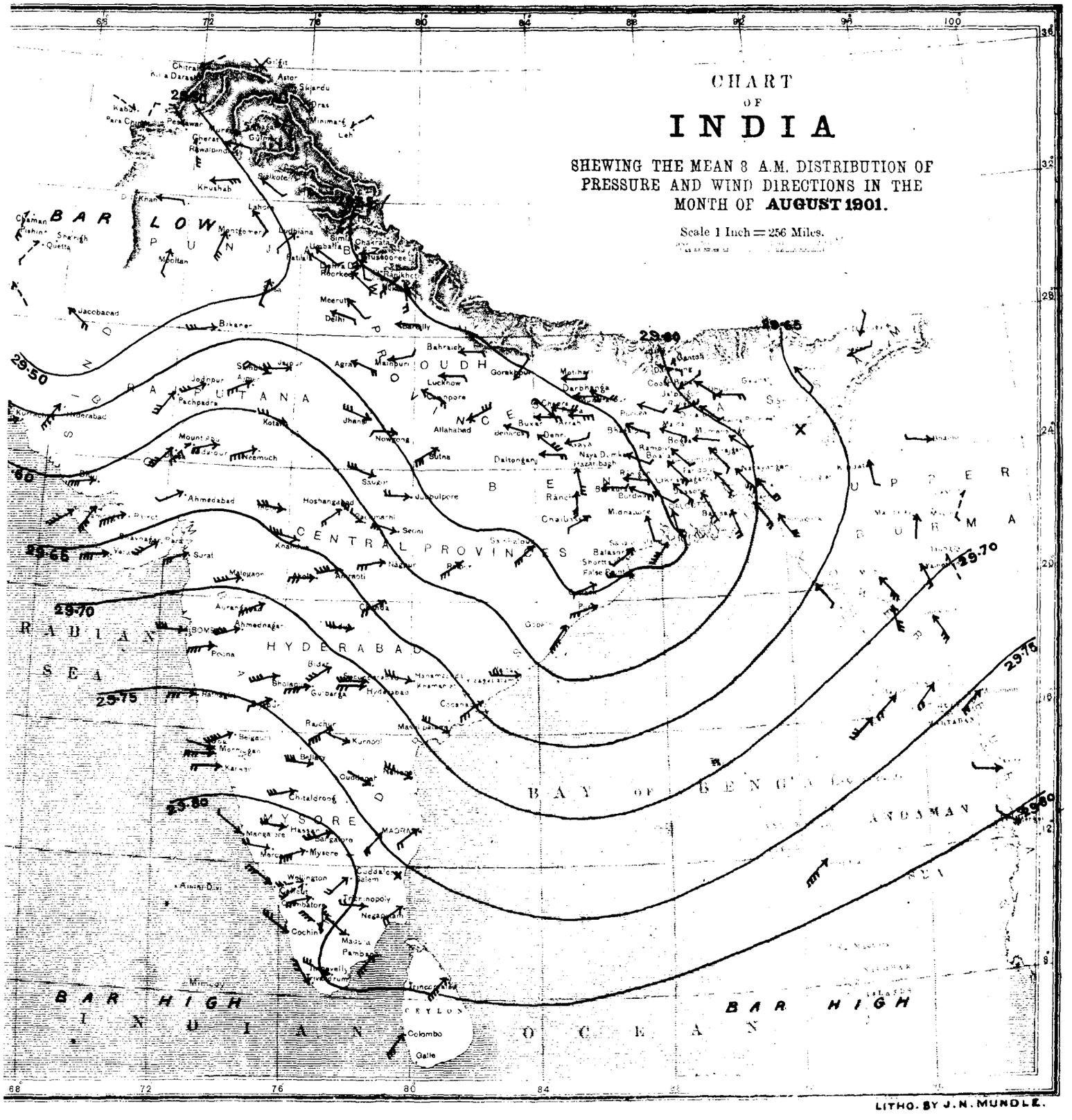
oncluded.

ons in India, Burma, etc., in August, 1901—concluded.

Vapour Tension.				Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Meteorological Province.
													Number of winds from																	
Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
651	·646	·646		82	51	48	61		5·9	7·6	6·8		8	8	1	5	5	18	6	5	6	S. 16° W.		% 23	%	101*				Periyakulam	South India.
·782	·745	·756	+·004	91	68	54	71	− 2	6·5	7·1	6·8	+0·5	16	1				12	16	15	2	S. 53° W.	S. 57° W.	56	75	97*	93			Salem.	
·686	·708	·680	+·060	93	77	75	82	+ 6	9·2	8·4	8·8	+0·2		1					23	32	6	S. 77° W.	S. 83° W.	87	87	250*	259			Chitaldroog.	
·613	·600	·605	−·007	94	71	60	75	− 3	8·6	8·2	8·4	+1·8		1					25	29	7	S. 77° W.	S. 79° W.	85	90	240*	188			Bangalore.	
·630	·619	·612	+·022	95	74	74	81	+ 1	9·1	9·1	9·1	+0·3							14	41	7	S. 85° W.	N. 87° W.	90	89	135*	106			Hassan.	
·596	·594	·606	−·024	95	61	58	71	− 4	8·5	8·7	8·6	+0·1		1			1		16	37	7	S. 83° W.	S. 84° W.	87	86	297*	333			Mysore.	
·805	·880	·858	+·040		63	66	74	+ 2	6·8	7·0	6·9	+0·3				6	3	6	16	23	8	S. 67° W.	S. 41° W.	56	60	150	166			Madras.	
·589	·586	·597	−·061	73	51	46	57	− 6	8·6	9·1	8·9	+1·1							1	60	1	W	N. 87° W.	99	87	321*	263			Bellary.	
·828	·846	·790		73	70	71	71		7·9	8·7	8·3								34	25	3	S. 67° W.		90		157				Waltair.	
·342	·290	·355	−·029	79	28	17	41	− 4	0·8	1·6	1·2	−0·1	38	2		1		1	1	10	9	N 68° W.	N. 80° W.	29	34	25*	76			Quetta.	Hill Station, Baluchistan.
·318	·310	·289	+·025	66¶	47	37	50	+ 2	4·0	4·4	4·2	−1·0		1	10	8	3	7	18	13	2	S. 38° W.	S. 69° W.	26	39	55	39			Leh.	Hill Stations, Northern India.
·755	·902	·732	+·117	86	82	74	81	+ 4	4·3	3·9	4·1	+0·1	16	5	3		4	5	1	12	16	N. 66° W.	N. 51° W.	35	5	86*	82			Srinagar.	
·440	·386	·391	+·036	91	68	55	71	+ 3	7·2	7·0	7·1	+0·6		4		1		6	12	25	14	S. 89° W.	S. 76° W.	68	63	36	41	0·61	0·28	Kailang.	
·549	·562	·537	+·009	96	94	92	94	+ 3	9·7	9·5	9·6	+0·7	17	15	2	2	7	7		2	10	N. 3° W.	N. 32° E.	19	22	88	81			Simla (Ridge),	
·552	·574	·552	+·011	100	93	94	96	+ 4	8·7	9·5	9·1	+0·5		3	2	1	10	44		2		S. 9° E.	S. 75° W.	76	46	213	111			Chakrata.	
608	·623	·595	+·023	96	89	88	91	+ 3	9·3	9·4	9·4	+0·7	12	3	4	3	2	2	15	14	7	S. 82° W.	S. 58° W.	37	25	71*	50			Ranikhet.	
·552	·566	534		98	92	92	94		9·4	9·1	9·3		1	1	3	4	21	8	6	2	16	S. 15° E.		21		114*				Mukteswar.	
·729	·766	·719	+·042	93	75	79	82	+ 1	7·4	8·0	7·7	+0·6				30	1		5	18	8	N. 69° E.	N. 77° W.	6	5	21	18	12·21	1·77	Katmandu.	
·554	·565	·534	+·027	98	93	92	94	− 1	8·3‖	8·0§	8·2	−0·7	1	2	5	9	23	9	8	3	2	S. 38° E.	S. 81° E.	48	26	66*	95			Darjeeling.	
·641	·653	·628	+·019	95	93	87	92	+ 1	9·2	9·0	9·1	+0·6	2				1	3	47	6	3	S. 49° W.	S. 60° W.	86	73	311*	254			Mount Abu.	Hill Stations, Central India.
·683	·691	·675	+·016	98	95	91	95	+ 5	9·7	9·2	9·5	+0·8	20	5					1	18	16	N. 62° W.	N. 81° W.	58	75	310*	206			Pachmarhi.	
·662	·684	·656	+·013	99	97	96	97	+ 3	9·7	9·5	9·6	+0·7	12	50								N.	N. 41° W.	81	74	245*	266	21·44	2·23	Chikalda.	
·468	·472	·443	+·006	85	68	71	75	− 1	8·4	9·0	8·7	+1·1	1	5	1		4	6	41	2	1	S. 42° W.	S. 69° W.	68	51	92	88			Wellington (a)	Hill Stations, S. India.
·414	·421	·398		91	81	83	85		8·0	8·7	8·4		8		1			1	14	28	10	S. 86° W.		71		139*				Ootacamund.	
·408	·435	·387		81	77	86	81		7·3‖	8·4‖	7·9		1	2	3	1	7	1		6	25	N. 45° W.		35		303				Kodai kanal‡	
·833	·739	·790	+·005	75	64	52	64	− 1	2·7	2·0	2·4	+0·6	10		3		35	1	13			S. 28° E.	S. 4° E.	60	70	¶ 171*	262			Aden.	Extra India.
·996	·969	·953	+·149	74	66	62	67	+ 9	1·0	1·3	1·2	−1·4			1	8	2	1	12	25	13	S. 88° W.	N. 48° W.	53	51	334*	333			Pe im.	
·726	·688	·681	−·021	79	81	68	76	− 2	5·5	4·9	5·2	+0·6		1	1	1	12	31	12	3	1	S. 3° W.	S. 9° E.	74	76	174*	168			Zanzibar.	
·732	·722	·717	−·008	86	76	73	78	+ 3	5·3	6·2	5·8	−0·6				2	46	13	1			S. 35° E.	S. 36° E.	92	92	355	323	1·33	0·28	Port Victoria (Seychelles).	
		·501	−·009				74	0																		290	295	2·41	0·66	Mauritius (Pamplemousses).	

† Wind variab
‖ Mean of 29 days.
‡ Wind variable 16.
§ Mean of 22 days.
* Corrected.

C. P. O—No. 124 Meteor —11-12-1901.—385.



Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric ressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the ıore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal repared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Departıent. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little ·om the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of ıambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations re indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during he month is shewn by the following notation:—

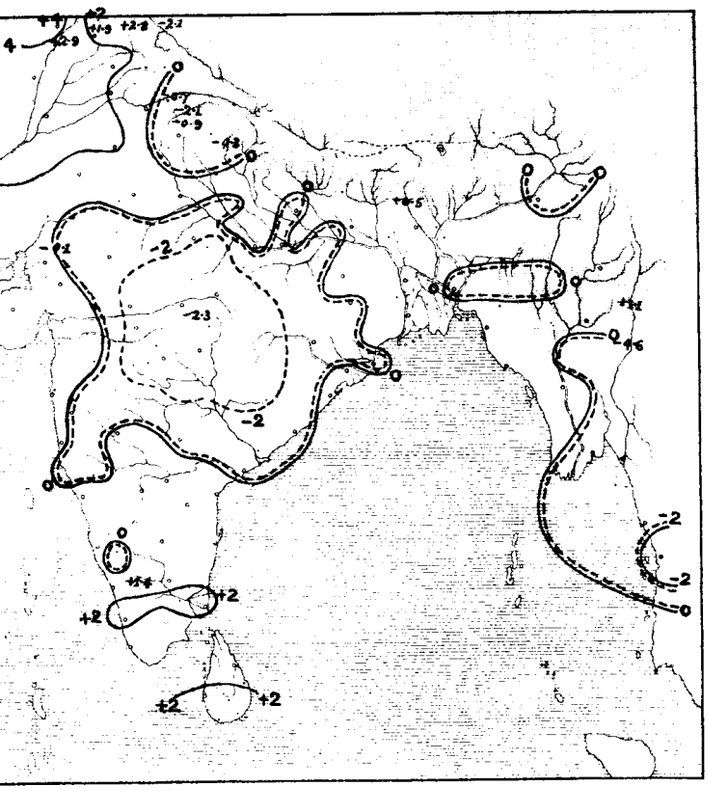
Velocity of	0 to 2 miles per hour	...	one feather added to the wind arrow
„ „	2 to 5 „ „ „	...	two feathers „ „ „ „
„ „	5 to 10 „ „ „	...	three „ „ „ „ „

LITHO BY J.N.MUNDLE.

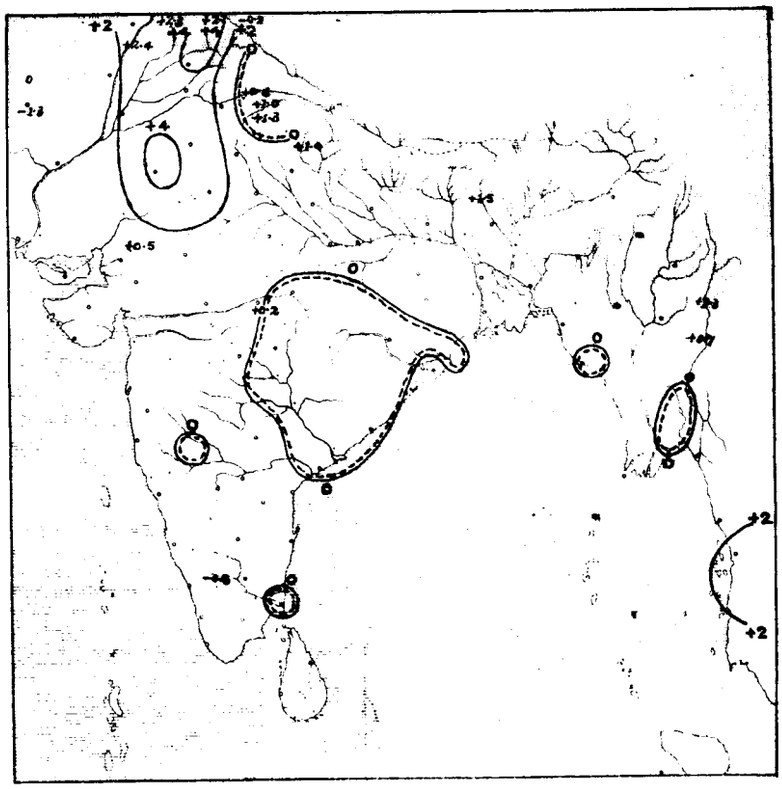
Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

FROM THE NORMAL.



FROM THE NORMAL.



Explanation.

tinuous lines indicate that the mean **maximum** of month was in ess by amounts indicated by the attached numbers. Broken or dotted s that it was in defect by the amounts indicated by the attached nbers. Double lines are the lines of no **variation, the broken line** facing area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

HART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

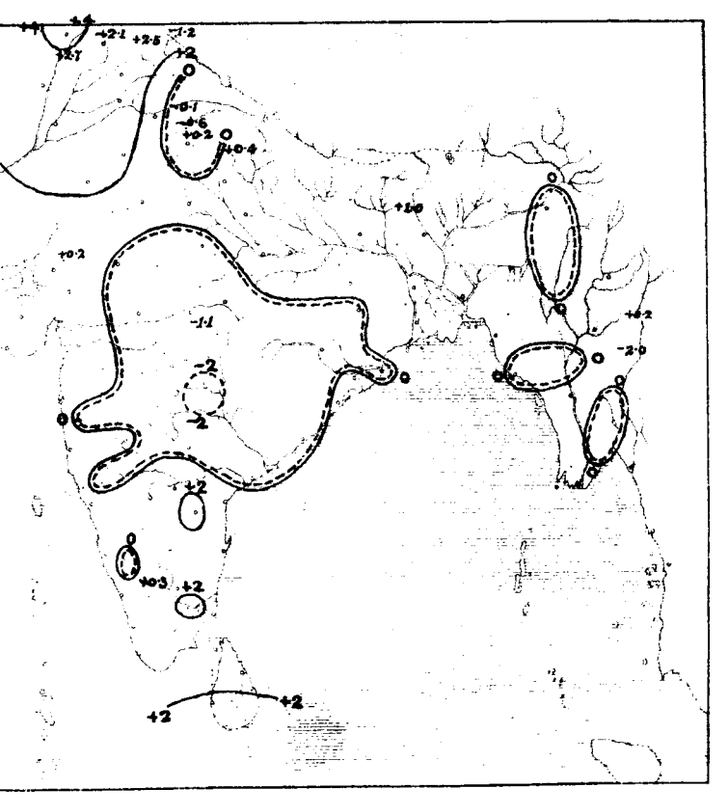
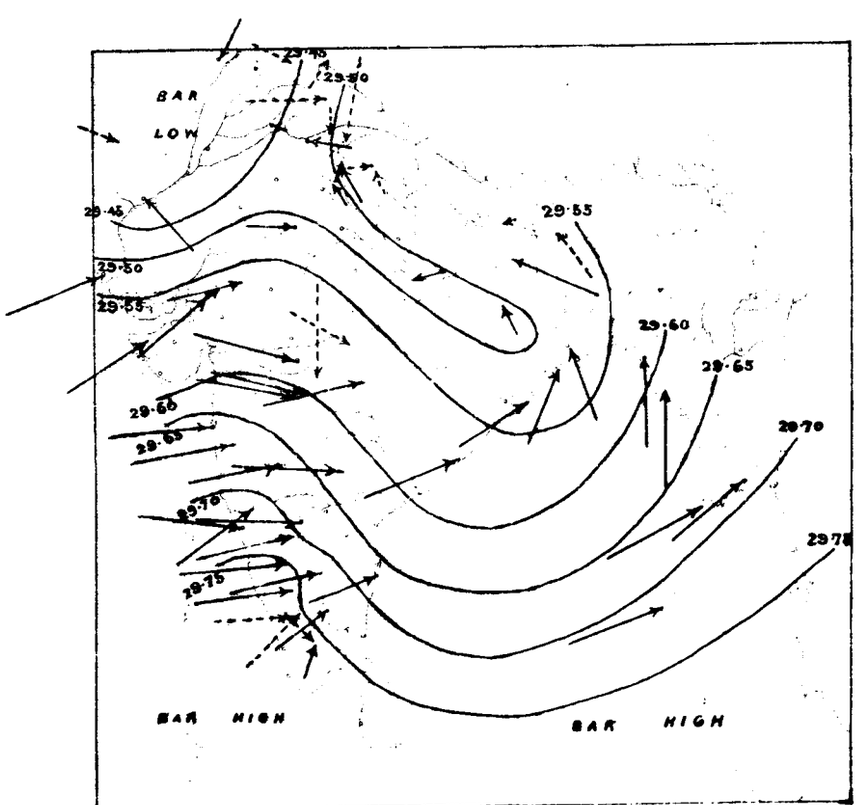


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF **AUGUST 1901.**



LITHO. BY J.N. MUNDLE.

Explanation.

ntinuous lines indicate that the mean daily temperature of month s in excess by amounts indicated by the attached numbers. Broken dotted lines that it was in defect by the amounts indicated by the

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions of the resultants of the wind recorded at 10 and 16 hours, and by their

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The ata used in the preparation of this Chart are the rainfall returns of all the observatories in India 182 in number, except those at the Hill Stations over 5,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of n much from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.

281 Wr. I. May 01. 5400. LITHO. BY J. N. MUNDLE

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish eliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, nd the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers iven in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean ainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by he amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller igures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained y referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do. Hills
33. Malabar
33a. Travancore
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
48. Baluchistan Hills
49. Central India, East
49a. Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. Madras, East Coast, North
52(a). Do. do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South

LIBRARY
★ FEB 24 1902 ★
Weather Bureau.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, SEPTEMBER 1901.

INTRODUCTION.

THIS review of the weather in India during the month of September 1901 is based on observations taken daily at 8 A.M. at 223 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 66 stations. In the rainfall summary the rainfall data of the meteorological observatories, the weekly rainfall telegrams received during the month from District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review, are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given.

Summary of the chief features of the weather in India during the month of September, 1901.

The principal meteorological features of the month of September in normal years are the retreat of the south-west monsoon from Upper India and the occasional occurrence of more or less severe cyclonic storms over the Bay of Bengal. The time of the withdrawal of the monsoon currents from Upper India apparently depends largely on the general strength of the monsoon during the whole period of its prevalence, but usually occurs during the third or fourth week of the month. The withdrawal from Central and Upper India of the Bombay and Bengal branches of the south-west monsoon air currents occurs fairly simultaneously and is followed by fine, dry weather in that region, but Bengal and Burma continue to receive moderate general rain from the Bay current, and the Konkan, Malabar, the Deccan and Southern India from the Arabian Sea current. As mentioned above, the cyclonic storms of this period are sometimes of considerable severity, and give heavy and general rainfall. Their course is, as a rule, west-north-west from the north of the Bay across the Orissa coast and the central parts of the country, and they are frequently remarkable for their long vitality and for their tendency to recurve in the Central Provinces or Central India from west to north.

The following gives a brief account of the more important features of the meteorology of India during the month:—

Pressure at the commencement of the month was more or less in excess, except over the east of the Central

Provinces, where a shallow barometric depression was shown. This depression subsequently moved northward into the east of the North-Western Provinces and West Bengal, and filled up during the 2nd. It occasioned a fairly regular cyclonic circulation of the winds over central and North-East India and gave more or less rain to the same areas. The mean temperature was somewhat lower than usual within the area of rainfall, while it was in excess elsewhere, more particularly over North-West India and the Deccan, where the air was dry and the day temperature much above the normal.

On the 3rd a fresh depression appeared over South-West Bengal and this depression was the most important feature of the weather for a whole week. The storm was nearly stationary over Deltaic Bengal until the 6th and during this period heavy rain was experienced over Bengal and rough weather at the head of the Bay. The following are the more important falls of rain reported from the Bengal stations from the 3rd to the 6th :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chittagong	Cox's Bazar	3rd September	10·09
Noakhali	Fenny	,, ,,	8·43
	Hatya	,, ,,	6·61
Singhbhum	Monaharpur	4th ,,	10·47
Manbhum	Jhalda	,, ,,	7·25
Hazaribagh	Chatra	,, ,,	6·23
Bankura	Bankura	5th ,,	7·37
Khulna	Mollahat	,, ,,	7·25
Hooghly	Serampore	6th ,,	8·88
Nadia	Ranaghat	,, ,,	8·84
Hooghly	Hooghly	,, ,,	7·83
	Arambagh	,, ,,	7·61
24 Parganas	Barasat	,, ,,	7·50
Backergunge	Gaurnadi	,, ,,	7·18
Howrah	Amta	,, ,,	6·50
	Howrah	,, ,,	6·33
Noakhali	Ramganj	,, ,,	6·29
Khulna	Mollahat	,, ,,	6·23

On the 7th the storm began to move northward and on the 8th north-eastward, and it finally filled up near Mymensingh during the 9th. Heavy rain continued over Bengal during this time, as is shown by the following record of the more important falls reported between the 7th and the 10th :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Rajshahi	Boalia	7th September	10·39
	Lalpur	,, ,,	9·26
Bogra	Nowkhilla	,, ,,	9·00
Rajshahi	Mahadebpur	,, ,,	8·64
	Naugaon	,, ,,	8·03
Mymensingh	Itia	,, ,,	7·27
Rangpur	Ulipur	,, ,,	7·20
Rajshahi	Manda	,, ,,	7·11
Nadia	Kushtia	,, ,,	6·70
Pabna	Serajganj	,, ,,	6·50
Jessore	Bangaon	,, ,,	6·47
Dinajpur	Nithpur	,, ,,	6·42
Rangpur	Gobindganj	,, ,,	6·34
Jessore	Jessore	,, ,,	6·20
Bogra	Nowkhilla	8th ,,	15·40
Mymensingh	Nalitabari	,, ,,	14·60
Rangpur	Gobindganj	,, ,,	10·69
Bogra	Bogra	,, ,,	10·62
Mymensingh	Sherpur Town	,, ,,	9·20
Bogra	Sherpur	,, ,,	8·65
	Panchbibi	,, ,,	8·50
Mymensingh	Itia	,, ,,	8·50
	Mymensingh	,, ,,	8·45
Rangpur	Peerganj	,, ,,	7·47
Backergunge	Barisal	,, ,,	7·40
Rajshahi	Naugaon	,, ,,	7·39
Pabna	Serajganj	,, ,,	7·35
Mymensingh	Diwanganj	,, ,,	7·25
	Netrakona	,, ,,	6·55
Dacca	Manikganj	,, ,,	6·41
Mymensingh	Kishorganj	,, ,,	6·16
Rajshahi	Manda	,, ,,	6·15
Mymensingh	Netrakona	9th ,,	13·12
	Durgapur	,, ,,	10·55
	Mymensingh	,, ,,	7·96

During this week the mean temperature was steadily low over Bengal and the adjacent districts. The following gives comparative temperature data for Burma, Assam, Bengal, Orissa, Bihar and Chota Nagpur from the 3rd to the 10th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of							
	3rd Sept.	4th Sept.	5th Sept.	6th Sept.	7th Sept.	8th Sept.	9th Sept.	10th Sept.
	°	°	°	°	°	°	°	°
Burma	−0·5	−0·8	−0·8	+0·6	+0·6	+0·5	−0·2	+1·2
Assam	+0·2	−1·0	−3·5	−2·6	−2·4	−2·5	−4·4	−4·8
Bengal	−0·1	−0·7	−2·1	−3·7	−4·1	−4·4	−4·0	−0·7
Orissa	+1·0	−2·3	−1·1	−0·5	−0·4	+2·2	+0·2	+1·6
Bihar	+1·1	−0·9	−2·2	−4·6	−4·1	−3·9	−1·7	+0·6
Chota Nagpur	−0·8	−2·1	−4·4	−4·3	−2·9	−3·8	−2·8	0

In other parts of the country the weather was dry and in consequence of this unusual dryness and the prevalence of clear skies the mean temperature was more or less above the normal. It was most largely in excess over the Punjab and the Deccan districts. The following gives the variations of the mean temperature from the normal in these areas from the 3rd to the 9th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	3rd Sept.	4th Sept.	5th Sept.	6th Sept.	7th Sept.	8th Sept.	9th Sept.
	°	°	°	°	°	°	°
Punjab	+2·4	+2·2	+1·6	+1·8	+1·6	+0·6	+0·7
Bombay Deccan	+1·0	+0·4	−0·9	+0·1	+3·1	+2·3	+1·6
Madras Deccan	+2·9	+2·9	+4·0	+3·1	+3·0	+4·6	+5·7

On the 7th a depression appeared in the extreme north-west of India, and the weather became unsettled over the Himalayas and the submontane regions of North-West India. These unsettled conditions lasted until the 13th, and, during this period, thunderstorms with rain and hail were experienced over and near the North-West Himalayas, while some snow fell over the inner ranges and on the higher mountains in Kashmir. As a result, temperature fell decidedly over Baluchistan and the Punjab. The following gives comparative temperature data for these two provinces:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	7th Sept.	8th Sept.	9th Sept.	10th Sept.	11th Sept.	12th Sept.	13th Sept.
	°	°	°	°	°	°	°
Baluchistan	−0·2	+1·7	+0·4	−0·5	+0·4	+2·8	+3·8
Punjab	+1·6	+0·6	+0·7	+1·0	+0·8	−1·1	−4·5

From the 10th to the 18th the weather was generally quiet over India with unusually high pressures and unusually high temperatures over nearly the whole country. The following gives comparative temperature data for all divisions for the 18th in illustration of the conditions prevailing:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 18th September.	Mean minimum temperature, 18th September.	Mean temperature, 18th September.
	°	°	°
Burma	+3·0	+0·9	+2·0
Assam	+1·2	−0·4	+0·4
Bengal	+3·6	+1·4	+2·5
Orissa	+5·8	+0·5	+3·2
Bihar	+3·7	−0·2	+1·8
Chota Nagpur	+4·9	+1·4	+3·2
North-Western Provinces and Oudh	+6·2	−0·5	+2·9
Punjab	+3·8	+3·6	+3·7
Sind	−1·0	+0·9	−0·1
Rajputana	+7·6	+1·5	+4·6
Gujarat	+5·9	−2·4	+1·8
Central India	+6·9	−0·2	+3·4
Central Provinces	+7·0	+1·8	+4·4
Berar	+8·6	+2·9	+5·8
West Coast	+0·6	+1·5	+1·1
Bombay Deccan	+8·7	+4·1	+6·4
Mysore	+1·4	+2·0	+1·7
Madras Coast	+0·6	+0·8	+0·7
Madras Deccan	+7·0	+2·8	+4·9
South India	−4·1	−0·6	−2·4

During this period there was little or no rain over Northern and Central India, but over the Peninsula there were daily thundershowers, which were heavy at times over the Deccan.

On the 17th a storm began to develop over the east of the Bay, in the neighbourhood of Diamond Island. The storm developed quickly and was of moderate intensity on the morning of the 19th, when it commenced to move west-north-westward across the Bay. It reached the Madras coast during the 21st and crossed the coast on the night of the 21st—22nd, occasioning strong, squally, north-east winds on the Ganjam coast, and heavy rain in the Circars and Orissa. The following were the principal falls reported on the 21st and 22nd:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Ganjam	Ichchhapuram	21st September	8·95
	Sompeta	,, ,,	7·42
	Gopalpur	,, ,,	5·15
Balasore	Balasore	,, ,,	4·75
Ganjam	Berhampur	,, ,,	4·66
Balasore	Bhadrak	,, ,,	3·92
	Soro	,, ,,	3·55
Ganjam	Ramagiri	,, ,,	3·46
Vizagapatam	Waltair	,, ,,	3·43
Ingul	Kumarkhole	,, ,,	3·41
Ganjam	Chatrapur	,, ,,	3·12
Cuttack	Kendrapara	,, ,,	3·09
Balasore	Soro	22nd ,,	5·20
Ganjam	Balliguda	,, ,,	3·87
Ingul	Bissipara	,, ,,	3·70
Ganjam	Ichchhapuram	,, ,,	3·63
Balasore	Balasore	,, ,,	3·22
Ganjam	Purushottapur	,, ,,	3·05

On the morning of the 22nd, when the storm was crossing the Eastern Ghats, it was filling up quickly. On the morning of the 23rd the storm was central about 80 miles to the south-south-west of Raipur and was giving moderately heavy rain to the Central Provinces. On the 24th the storm was very ill-defined, but was extending northward and on the morning of the 25th the centre of the storm was close to Bahraich at the foot of the central Himalayas. It had occasioned heavy rain over the North-Western Provinces during the previous 24 hours. The following gives the more important falls of rain (1) over the Central Provinces on the 23rd and 24th and (2) over the North-Western Provinces on the 25th:—

	District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
				Inches.
Central Provinces.	Chanda	Chanda	23rd Sept.	6·82
	Do.	Warora	,, ,,	5·16
	Balaghat	Behir	,, ,,	4·44
	Bilaspur	Pendra	,, ,,	3·12
	Damoh	Hatta	24th ,,	3·73
	Chanda	Armori	,, ,,	3·12
	Nagpur	Katol	,, ,,	3·10
North-Western Provinces.	Gonda	Tarabganj	25th ,,	16·85
	Pilibhit	Pilibhit (City)	,, ,,	12·24
	Do.	Amaria	,, ,,	11·97
	Naini Tal	Kilpuri	,, ,,	10·75
	Fyzabad	Bikapur	,, ,,	10·60
	Pilibhit	Pilibhit (Kachahry)	,, ,,	9·95
	Bareilly	Baheri	,, ,,	9·93
	Fyzabad	Fyzabad	,, ,,	9·00
	Bareilly	Oganpur	,, ,,	9·00
	Naini Tal	Naini Tal	,, ,,	8·22
	Bareilly	Nawabganj	,, ,,	7·75
	Gonda	Gonda	,, ,,	7·63
	Naini Tal	Naini Tal	,, ,,	7·50
	Gonda	Utraula	,, ,,	7·06
	Pilibhit	Bisalpur	,, ,,	7·02
	Kheri	Nighasan	,, ,,	6·97
	Shahjahanpur	Shahjahanpur	,, ,,	6·75
	Almora	Tanakpur	,, ,,	6·68
	Sultanpur	Sultanpur	,, ,,	6·64
	Sitapur	Biswan	,, ,,	6·35
	Kheri	Kheri	,, ,,	6·07
	Bahraich	Kaisarganj	,, ,,	6·02

This fall of rain occasioned a decided reduction of temperature over the storm area. This is shown in the following table which gives comparative temperature data from the 18th to the 26th for Madras, the Central

Provinces, Berar, the North-Western Provinces, Orissa, Bihar and Chota Nagpur :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of								
	18th Sept.	19th Sept.	20th Sept.	21st Sept.	22nd Sept.	23rd Sept.	24th Sept.	25th Sept.	26th Sept.
	°	°	°	°	°	°	°	°	°
Madras Coast .	+0·7	+2·3	+1·4	−2·8	−0·7	−0·7	−1·4	+1·0	+0·8
Madras Deccan	+4·9	+4·7	+3·3	+2·0	+3·2	+0·6	−0·3	+1·4	+2·0
Central Provinces	+4·4	+4·3	+3·6	+3·2	+1·7	+0·3	−1·7	−1·0	+0·1
Berar . .	+5·8	+5·4	+4·7	+5·2	+5·0	+0·4	−4·9	0	−0·3
N.-W. Provinces and Oudh.	+2·9	+3·6	+2·6	+2·2	+2·4	+2·0	−0·9	−4·3	−4·2
Orissa . .	+3·2	+4·2	+0·6	−2·8	−3·5	−3·0	−2·0	0	−0·1
Bihar . .	+1·8	+1·9	+2·3	+2·3	+0·7	−1·3	−1·0	+1·4	+1·1
Chota Nagpur .	+3·2	+2·4	+1·8	−0·3	−1·4	−2·1	−1·6	+0·8	+0·1

In the meantime the weather over Western India, which was wholly unaffected by the storm, was very hot, and temperature largely above the normal. The following gives comparative data from the 18th to the 25th, for the Bombay Deccan, Gujarat and Rajputana and shows the very high temperatures prevailing over that area at this time :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of							
	18th Sept.	19th Sept.	20th Sept.	21st Sept.	22nd Sept.	23rd Sept.	24th Sept.	25th Sept.
	°	°	°	°	°	°	°	°
Bombay Deccan . .	+6·4	+5·5	+3·4	+4·2	+4·0	+2·7	+1·1	+0·4
Gujarat . . .	+1·8	−1·7	+2·2	+3·8	+4·8	+5·3	+5·2	+2·4
Rajputana . . .	+4·6	+4·9	+5·9	+5·5	+5·7	+5·3	+4·3	+2·2

In the extreme north-west of India the weather again became unsettled on the 19th, when thundershowers recommenced and continued till the 21st. This caused a reduction of temperature to below the normal over the Punjab and Baluchistan and this reduction continued until almost the close of the month. The following gives comparative temperature data for each alternate day from the 19th to the 29th for the Punjab and Baluchistan :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	19th Sept.	21st Sept.	23rd Sept.	25th Sept.	27th Sept.	29th Sept.
	°	°	°	°	°	°
Punjab . . .	+3·2	−1·2	−0·4	−2·0	−1·9	+0·3
Baluchistan . .	+5·5	−6·1	−8·1	−7·1	+3·4	+4·9

On the 27th the weather was again quiet with scattered rainfall around the Bay area, but fine, dry weather elsewhere. Pressure was high except in the extreme south and the temperature varied irregularly from the normal. On the 28th a shallow depression was shown over the west of the Bay and rain became heavier and more general over the Peninsula. These general conditions continued unchanged during the 29th, but on the 30th a small depression was shown advancing from the Bay towards the Madras coast and moderately heavy rain, and a brisk fall of temperature were reported from the Madras coast districts. The following gives comparative temperature data for the Madras coast districts for the 29th and 30th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	29th September.	30th September.
	°	°
Madras Coast	−0·8	−1·5

Pressure.—The mean pressure of the Indian land area for the month of September 1901 was 0·045″ above the normal. Relatively to this general condition pressure was in excess over Sind, Gujarat, Rajputana, the central parts of the country and the northern half of the Peninsula. The excess was greatest over the west of Central India (Indore +0·043″) and the west of the Central Provinces (Amraoti+0·048″). Pressure was normal or in trifling excess over Upper Burma. Over the whole of the remainder of India pressure was, relatively to the general condition, in defect. The deficiency was small in the Punjab, along the foot of the Himalayas, over Burma and across the centre of the Peninsula, but was moderate in Bengal (Jessore—0·030″) and considerable in the extreme south of the Peninsula (Negapatam—0·041″) and Ceylon (Colombo—0·044″). The vertical pressure anomalies were generally small and not very important. They were generally negative except in the south.

The following table gives the mean pressure variations

and anomalies of the month for eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	Variation from normal of mean 8 A.M. pressure of September 1901.	Pressure anomaly, September 1901.
	"	"
Burma Coast and Bay Islands	+·033	—·012
Burma Inland	+·052	+·007
Assam	+·035	—·010
Bengal and Orissa	+·032	—·013
Gangetic Plain and Chota Nagpur	+·046	+·001
Upper Sub-Himalayas	+·037	—·008
Indus Valley and North-West Rajputana	+·045	0
East Rajputana, Central India and Gujarat	+·069	+·024
Deccan	+·066	+·021
West Coast	+·034	—·011
South India	+·032	—·013

Temperature was, in consequence of the abnormal features of rainfall, more or less above the normal over the greater part of the country. The weather was, however, finer and the sky clearer of cloud than usual, so that, though the day temperature was generally in considerable excess, the night temperature over Northern India was lower than usual by small or moderate amounts.

The mean maximum or day temperature was above the normal over the whole of India with the exception of the North Punjab, the east of the North-Western Provinces, Assam and the neighbouring parts of Bengal and of Burma and the south of the Peninsula. The deficiency in these areas was small and only exceeded 1° at Sibsagar (−1°·4), Mymensingh (−1°·1), Coimbatore (−1°·1) and Madura (−1°·2). The mean day temperature was in large excess over the greater part of North-Western and Central India and the northern half of the Peninsula and was more than 5° in excess over the east of Rajputana, Gujarat, Khandesh and the Bombay Deccan. The excess was absolutely greatest at Deesa (+6°·5) and Malegaon (+6°·2). Over Bengal, the North-Western Provinces and the Indus Valley and South India the excess was slight, but in the extreme south the amount of the excess again increased and at Colombo and in Tenasserim was more than 2°.

The mean minimum temperature was generally above the normal over the Peninsula, Deltaic Bengal and Burma, but was generally below the normal over Northern India with the exception of the East Punjab and the Rajputana desert. The excess was more than 2° over the Rajputana desert (Bikaner +2°·3), the Madras Deccan (Cuddapah +2°·5) and Tenasserim (Mergui +3°·5) as well as locally at Negapatam. The deficiency over Northern India was generally small but exceeded 2° in part of Gujarat (Bhavnagar −2°·4) and at the foot of the Kumaun Himalayas (Dehra Dun −2°·3). This deficiency of the night temperature over Northern India was mainly a result of the unusual dryness of the month and the consequent rapid radiation.

The mean temperature of the month was in trifling defect of the normal over parts of Upper Burma and Assam, over the North-Western Provinces and the adjoining districts of Bengal and the Central Provinces and in the Indus Valley. The variations were small everywhere, only exceeding 1° at Hyderabad (Sind); over the remainder of India the mean temperature was generally in excess. The excess was considerable (more than 2°) over two areas. The first was a large area including Rajputana, Gujarat, Khandesh and the greater part of the north of the Peninsula, the second included the south of Ceylon, the south of the Bay, the Burma coast and Tenasserim. The excess was absolutely greatest at Cuddapah (+3°·7) and Deesa (+3°·7). At the Himalayan hill stations the mean temperature was in slight to moderate defect while in Baluchistan and at the central and southern hill stations it was in slight excess.

The following table gives variation data for the eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	VARIATION OF ACTUAL FROM NORMAL OF		
	Mean maximum temperature, September 1901.	Mean minimum temperature, September 1901.	Mean daily temperature, September 1901.
	°	°	°
Burma Coast and Bay Islands	+1·6	+1·7	+1·7
Burma Inland	−0·5	+0·5	0
Assam	−0·2	−0·3	−0·3
Bengal and Orissa	+0·6	+0·3	+0·5
Gangetic Plain and Chota Nagpur.	+0·4	−0·8	−0·2
Upper Sub-Himalayas	+1·4	−0·2	+0·6
Indus Valley and North-West Rajputana.	+0·2	−0·5	−0·1
East Rajputana, Central India and Gujarat.	+4·3	−0·2	+2·1
Deccan	+3·1	+0·3	+1·7
West Coast	+0·8	+1·0	+0·9
South India	+1·8	+1·2	+1·5

Winds were more westerly but not so strong as usual in September at Port Blair. They were also less easterly and more westerly in Bengal, Orissa and a large part of the Gangetic Plain due to the feebleness of the monsoon influence over this part of India during the greater part of the month, but particularly during the first fortnight. Abnormal dry westerly winds hence obtained over a large part of Northern India, on the mean of the

month, and the accompanying rainfall was proportionately light. Winds were approximately normal over the Indus Valley. Westerly winds with an unusual amount of northing prevailed on the West Coast and at the central hill stations and to a slighter extent over the Deccan and Southern India. The winds were very irregular in the Upper India hill districts. The mean direction was normal at the Seychelles.

The chief abnormal features of the air circulation resembled those of September 1895 and 1896 and were due to the same cause, *viz.*, the weakness and early withdrawal of the monsoon currents.

Humidity.—One of the most noteworthy features of the meteorology of the month of September was the abnormal dryness of the air over nearly the whole country—a result of the early withdrawal and weakness of the monsoon currents. The amount of vapour present in the air was greater than usual over the Bay Islands and Burma and the deficiency in the relative humidity over that region was due to the excessive temperature prevailing, but over the Gangetic Plain, the Punjab, Rajputana, Central India, the Central Provinces and the greater part of the Deccan, the amount of vapour was more or less considerably below the normal, so that, as temperature was largely above the normal over these areas, the relative humidity was largely in defect. The humidity conditions along the West coast were the same as in Burma, *i.e.*, the absolute humidity was in excess, but the temperature having been also in excess the relative humidity was below the normal. In South India also the amount of vapour in the atmosphere was more or less in excess of the normal, but the mean temperature was likewise in excess and the variations of the relative humidity from the average were irregular. At the hill stations the air was generally drier than usual.

The following table gives variation data of the mean aqueous vapour pressure and mean humidity of nine meteorological provinces:—

Meteorological Province.	Absolute Humidity.		Relative Humidity.	
	Average actual, September 1901.	Variation of actual from normal, September 1901.	Average actual, September 1901.	Variation of actual from normal, September 1901.
	"	"	%	
Burma Coast and Bay Islands.	·922	+·029	85	− 2
Bengal and Orissa .	·939	−·002	83	− 2
Gangetic Plain and Chota Nagpur.	·813	−·045	75	− 6
Upper Sub-Himalayas .	·677	−·062	63	− 5
Indus Valley and North-West Rajputana.	·702	−·005	61	0
East Rajputana, Central India and Gujarat.	·570	−·134	49	−17
Deccan . . .	·670	−·029	69	− 7
West Coast . . .	·845	+·004	82	− 4
South India . . .	·685	+·029	71	0

Cloud.—There was slightly more cloud than usual in parts of Burma, South-East Bengal and Orissa, and considerably more cloud than usual over Mysore and the adjacent districts of Madras. The excess was greatest and more than 1·0 at Bangalore (+1·1), Salem (+1·2) and Wellington, (+1·4). Over the whole of the remainder of India the skies were much less clouded than usual—more particularly over the central parts of the country, the Bombay Coast and the north-west dry area. Skies were practically free from cloud throughout the month in parts of the North-Western Provinces, of the Punjab and of Upper Sind and were absolutely clear at Perim while, on the contrary, they were more cloudy than usual at the stations in the South-East Trades region.

The following table gives variation data of the mean cloud amount of nine meteorological provinces:—

Meteorological Province.	Cloud amount.	
	Average actual, September 1901.	Variation of actual from normal, September 1901.
Burma Coast and Bay Islands	7·1	−0·4
Bengal and Orissa	6·9	−0·2
Gangetic Plain and Chota Nagpur . . .	5·0	−1·2
Upper Sub-Himalayas	1·5	−1·9
Indus Valley and North-West Rajputana .	1·5	−0·5
East Rajputana, Central India and Gujarat .	2·6	−1·8
Deccan	5·6	−1·3
West Coast	4·8	−1·8
South India	7·3	+0·4

Rainfall.—September 1901 was an abnormally dry month over the greater part of India due to the weakness of the monsoon currents and their early withdrawal from a large part of the country. Two storms affected the weather during the month and occasioned rain over North-East India during the first ten days and the last ten days of the month, while in the intervening period, with the exception of thunderstorms over the Peninsula, the weather was exceptionally dry.

The rainfall was much heavier than usual on the Arakan coast and was normal or slightly heavier than usual over other parts of Burma. In Assam the rainfall was on the whole lighter than the average. In North Bengal and the Bengal hills and North Bihar the month's rainfall was less than usual, but in other parts of Bengal the month's fall

was normal or in some excess due principally to the heavy rainfall which accompanied the first cyclonic storm of the month. The east of the North-Western Provinces, South Oudh and the hills division had normal rainfall during the month, but over the remainder of the North-Western Provinces the rainfall was very scanty and this deficiency of rain extended westward to all parts of the Punjab (except the North Punjab), to Rajputana, to Central India, to Sind and to Baluchistan. The Bombay or Arabian Sea monsoon current was weak throughout the month and Gujarat, the West Coast, Berar and the west of the Central Provinces all received considerably less rain than usual. Over the interior and south of the Peninsula the weather was disturbed with numerous thunderstorms and the month's rainfall was heavier than usual over a large part of this area. The second cyclonic storm of the month gave heavy rain to the East Coast and to the east of the Central Provinces and as a consequence the rainfall over these areas was generally normal or in only slight defect.

The following table gives comparative data of the eleven meteorological provinces:—

Meteorological Province.	Rainfall. Mean actual for September 1901.	Mean normal for September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands	13·71	21·76	−8·05	−37
Burma Inland	9·03	8·02	+1·01	+13
Assam	11·51	13·31	−1·62*	−12
Bengal and Orissa	14·60	11·25	+3·35	+30
Gangetic Plain and Chota Nagpur	7·43	7·49	−0·25*	− 3
Upper Sub-Himalayas	2·04	5·07	−2·87*	−57
Indus Valley and North-West Rajputana.	0·17	0·89	−0·72	−81
East Rajputana, Central India and Gujarat.	0·85	4·92	−4·11*	−84
Deccan	4·32	7·60	−3·19*	−42
West Coast	3·80	9·30	−5·50	−59
South India	6·09	4·35	+1·76*	+40

* A reference to Table I will show that the means in columns 2 and 3 are derived from a smaller number of stations than the means in the first column. The sum of the figures in columns 2 and 3 will therefore not agree with the figures in column 1.

Atmospheric Pressure.

The mean pressure of the Indian land area for September 1901 was 0·045″ higher than usual and exceeded the average at every station in the Indian area. This condition of pressure has marked the months of September for the past few years as is shown by the following data:—

1896	1897	1898	1899	1900	1901
+0·021″	+0·024″	+0·002″	+0·038″	+0·028″	+0·045″

Pressure was, relatively to this general condition, in excess or the pressure anomalies were positive over part of North-West India, the whole of the central parts of the country and the head of the Peninsula. The anomalies were largest over Lower Sind, Gujarat, Southern Rajputana, Central India and the Central Provinces and were absolutely greatest over the west of Central India and the west of the Central Provinces. They exceeded 0·030″ at the stations for which comparative data are given below:—

Station.	Variation from normal of mean 8 A.M. pressure of Sept. 1901.	Pressure anomaly, Sept. 1901.
	″	″
Amraoti	+·093	+·048
Indore	+·088	+·043
Khandwa	+·087	+·042
Akola	+·085	+·040
Rajkot	+·080	+·035
Veraval	+·080	+·035
Surat	+·079	+·034
Seoni	+·079	+·034
Malegaon	+·078	+·033
Bhavnagar Para	+·078	+·033

Pressure was also in excess, relatively to the general condition, over the dry area of Burma. The anomalies in this area were, however, small, as is shown by the following comparative data:—

Station.	Variation from normal of mean 8 A.M. pressure of September 1901.	Pressure anomaly, September 1901.
	″	″
Thayetmyo	+·057	+·012
Minbu	+·053	+·008
Yamethin	+·052	+·007
Mandalay	+·049	+·004

Over the whole of the remainder of India pressure was, relatively to the general condition, in defect. In general the negative anomalies were small, but in Central Bengal they were moderate and in the south of the Peninsula and Ceylon they were considerable. The following gives comparative data for the stations in the two areas at which the anomalies exceeded 0·020″:—

Area.	Station.	Variation from normal of mean 8 A.M. pressure of September 1901.	Pressure anomaly, September 1901.
		″	″
Central Bengal	Jessoe	+·015	—·030
	Berhampore	+·016	—·029
	Burdwan	+·020	—·025
	Dhubri	+·023	—·022
	Barisal	+·024	—·021
	Dinajpur	+·024	—·021
Ceylon and South of the Peninsula.	Colombo	+·001	—·044
	Salem	+·003	—·042
	Nagapatam	+·004	—·041
	Calicut	+·007	—·038
	Trivandrum	+·009	—·036

The anomalies thus showed a large area of excessive pressure stretching across the central parts of the country with deficient pressure on the north, south and east. The anomalous distribution of pressure was thus in marked contrast to that prevailing in September 1900 when the excess of pressure was shown over North-East and North-West India and at a few places in the south of the Peninsula and the deficiency was shown over the central parts of the country. This difference in the local distribution of pressure was marked by a large difference in the incidence of rainfall.

The chart giving the actual distribution of pressure shows that, on the mean of the month, pressure was high over the west of the Peninsula, the south of the Bay and Tenasserim and was low over Sind, the Central Punjab, the North Gangetic Plain and Bengal.

The variations of the mean pressure of the month from the normal at the hill stations differed but little from the variations recorded at the neighbouring plains stations except in the case of Darjeeling. At Darjeeling the mean pressure was very slightly below the normal, but at every other station it was in excess of the average. The vertical pressure anomalies were generally small and of little importance. The following table gives data for ten pairs of stations :—

Hill Station.	Variation from normal pressure, September 1901.	Plain Station.	Variation from normal pressure, September 1901.	Vertical pressure anomaly (Hill—Plain).
	″		″	″
Leh	+·033	Lahore	+·038	—·005
Quetta	+·047	Jacobabad	+·055	—·008
Murree	+·037	Peshawar	+·039	—·002
Simla	+·036	Ludhiana	+·034	+·002
Chakrata	+·029	Roorkee	+·035	—·006
Ranikhet	+·039	Bareilly	+·047	—·008
Darjeeling	—·005	Dhubri	+·023	—·028
Mount Abu	+·044	Deesa	+·074	—·030
Pachmarhi	+·076	Seoni	+·079	—·003
Wellington	+·030	Coimbatore	+·022	+·008

The preceding table shows that the vertical pressure anomalies were generally slightly negative except in the south.

The pressure data for Aden, the Seychelles, Zanzibar and Mauritius show that the excess of pressure was as marked in the case of these outlying observatories as in the case of India so that the feature appears to have been general over the whole Trades-monsoon area.

Barometric depressions and cyclonic storms of the month.

At the commencement of the month a shallow depression lay over the east of the Central Provinces and the east of the Indo-Gangetic Plain. Winds were irregularly cyclonic around this depression and light to moderate rain was falling around the storm area, the heaviest amount having been 2·79″ at Sutna. On the 2nd the barometer was falling over the whole country, the change having been brisk to rapid over Northern India. The depression noticed over the east of the Central and North-Western Provinces on the 1st was shown lying over Benares and Gaya, but was smaller than on the preceding day. Rain had increased in the storm area, and was moderate at some of the central stations. During the day the depression apparently filled up, but another depression, which was the principal feature in the weather of the next week, was developed over South-West Bengal in the neighbourhood of Midnapore, Chaibassa and Balasore where pressure was in large defect.

Cyclonic storm of the 3rd to the 9th September :—On the 2nd September, as mentioned above, the barometer was falling briskly to rapidly over Northern India and an area, within which pressure was more than 0·10″ below the normal, lay over Deltaic Bengal. Within this area the depression under review was formed. On the 3rd the centre of the

depression was shown in the neighbourhood of Chaibassa where the barometer marked 0·155″ below the normal. An irregular cyclonic circulation of the winds prevailed around the centre, and winds were blowing strongly at the head of the Bay, the average force having been 22 miles per hour, for the previous 24 hours, at Saugor Island. Rain had fallen over Bengal, but the amounts were nowhere very heavy.

September 4th.—Pressure had decreased over Bengal and the depression, which had drifted eastward to the neighbourhood of Calcutta, had intensified. The wind was south-westerly at Calcutta and north-easterly at Burdwan, so that the centre apparently lay between those stations where the barometer marked about 0·190″ below the normal. The following gives 8 A.M. data for the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Balasore	·295	+·062	—·070	SW	12	9	0·04	Drizzling.
Saugor Island	·544	+·006	—·119	SW	37	10	0·01	Sea rough.
Barisal	·562	—·018	—·114	SSE	5	10	0·47	
Calcutta	·493	—·043	—·173	SW	8	10	0·74	Showery.
Krishnagar	·469	—·076	...	ESE	5	10	0·51	
Jessore	·503	—·052	—·173	Calm	2	10	1·00	Raining.
Faridpur	·563	—·033	—·132	SE	3	10	0·12	
Burdwan	·477	—·050	—·192	NE	4	10	0·20	Thunderstorm.
Berhampore	·509	—·036	—·162	E	5	10	1·51	Showery.
Midnapore	·520	+·015	—·152	SW	6	10	1·38	
Bogra	·569	+·001	—·098	E	...	10	0·24	
Bankura	·486	+·005	...	W	4	10	0·93	
Dinajpur	·580	+·007	—·094	ENE	5	10	0·06	
Chaibassa	·552	+·058	—·103	Calm	3	9	2·03	Raining.
Ranchi	·578	+·041	—·087	NW	7	10	3·73	Continuous rain.
Hazaribagh	·578	+·014	—·090	NE	9	10	1·44	Drizzling.
Naya Dumka	·521	—·010	—·144	NE	4	10	0·37	
Gaya	·592	+·044	—·065	NNE	3	10	4·12	Heavy rain.
Arrah	·599	+·067	...	WSW	2	8	0·47	
Patna	·588	+·040	—·073	ENE	6	10	0·32	Showery.
Darbhanga	·612	+·046	—·050	ESE	3	5	0·15	
Purnea	·591	+·011	—·077	NE	3	3	0·11	Showery.
Bhagalpur	·562	+·018	—·088	NE	8	10	0·42	
Rampur Boalia.	·528	—·024	—·141	ENE	2	8	1·31	

The wind blew from the normal direction over the Bay, but the mean force was somewhat above the average. Rain was gen ral throughout Bengal, but was heaviest on the west side of the storm, in Bihar and Chota Nagpur. The following gives the largest amounts reported during the 24 hours preceding 8 A.M. of the 4th :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 4th September 1901.
		Inches.
Singhbhum	Monaharpur	10·47
Manbhum	Jhalda	7·25
Hazaribagh	Chatra	6·23
Singhbhum	Ghatsila	5·00
Ranchi	Sille	4·80
Singhbhum	Kalikapur	4·67
Manbhum	Barahabhum	4·45
Singhbhum	Gailkura	4·20
Gaya	Gaya	4·12

September 5th.—Pressure had been practically steady over Bengal and the depression over that province was unchanged in character. It had moved very slightly northward and the centre was probably closer to Burdwan than on the 4th and the barometer at that station read 0·214″ below the normal. The following gives 8 A.M. data for the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Saugor Island.	29·557	+·013	—·018	SW	34	10	...	
Barisal	·582	+·020	—·097	SSW	11	10	1·80	
Calcutta	·534	+·041	—·135	S	12	10	1·18	Showery.
Jessore	·539	+·036	—·140	SSE	7	10	0·84	
Midnapore	·528	+·008	—·147	S	6	10	0·70	
Burdwan	·458	—·019	—·214	N	8	10	0·81	Showery.
Chaibassa	·571	+·019	—·089	WNW	3	10	1·18	Drizzling rain.
Ranchi	·599	+·021	—·068	WNW	10	10	1·15	Ditto.
Bankura	·471	—·015	...	NW	9	10	7·37	Ditto.
Hazaribagh	·605	+·027	—·072	NNW	14	10	1·92	Raining.
Naya Dumka.	·501	—·020	—·167	ENE	3	10	1·19	Drizzling rain.

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Bhagalpur .	29·580	+·018	...	NE	13	10	0·28	
Krishnagar .	·503	+·034	...	S	6	10	1·17	Drizzling rain.
Faridpur .	·568	+·005	—·129	SE	1	10	3·34	Raining.
Raniganj .	·476	—·028	...	NW	3	10	4·70	Drizzling rain.
Berhampore	·478	—·031	—·196	SE	6	10	0·57	Showery.
Rampur Boalia.	·498	—·030	—·174	SSE	6	10	1·80	
Bogra .	·566	—·003	—·105	E	...	10	0·87	
Dinajpore .	·576	—·004	—·103	NE	8	10	1·81	Continuous rain.
Purnea .	·601	+·010	—·072	NE	7	10	0·92	Showery.

The preceding data show that a well-defined cyclonic circulation of the winds prevailed around the storm centre. The winds had increased at the head of the Bay and at Saugor Island the average force of the wind for the preceding 24 hours had been 34 miles per hour. On the other hand, the force of the wind over the whole of the Bay had fallen 0·7 to 3·3. Rain continued to be reported from the whole of Bengal and had become considerably heavier. The following are the largest amounts reported :—

DISTRICT.	Station.	Rainfall during 24 hours preceding 8 A.M. of 5th September 1901.
		Inches.
BANKURA	Bankura	7·37
KHULNA	Mollahat	7·25
MYMENSINGH . . .	Mymensingh . . .	5·34
SHAHABAD	Sasaram	5·10
SONTHAL PARGANAS . .	Madhopur . . .	4·92
BURDWAN	Raniganj	4·70
BANKURA	Malina	4·60
DITTO	Sonamukhi	4·50
MANBHUM	Barahabhum . . .	4·30
BIRBHUM	Bolpur	4·22
PALAMAU	Chattarpur	4·20
DACCA	Narayanganj . . .	4·13
BANKURA	Vishnupur	4·02
DITTO	Gangajalghati . . .	3·94
NOAKHALI	Chhagalnaya . . .	3·59
HAZARIBAGH . . .	Barhi	3·57
MANBHUM	Raghunathpur . . .	3·50
BANKURA	Onda	3·50

It will be noticed that the heaviest rainfall was now reported from the eastern margin of the storm centre.

September 6th.—The barometer had fallen briskly at Calcutta, but remained steady over other parts of Bengal. A slight movement eastward had taken place in the storm and the centre apparently lay to the northward of Calcutta and half way between Burdwan and Jessore. At Burdwan pressure was 0·219″ below the normal and at Jessore 0·255″ below. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Saugor Island.	29·552	—·005	—·115	SW	36	10	1·99	Sea rough and gale.
Barisal .	·594	+·012	—·088	SW	8	10	3·43	Severe gale.
Calcutta .	·461	—·073	—·210	SW	15	10	5·52	Continuous rain.
Midnapore .	·542	+·014	—·135	SW	7	10	3·24	Heavy rain.
Jessore .	·427	—·112	—·255	SSE	10	10	2·35	Continuous rain.
Burdwan .	·456	—·002	—·219	N	9	10	1·01	Ditto.
Krishnagar .	·360	—·140	...	NE	13	10	4·46	Drizzling rain.
Bankura .	·505	+·034	...	NW	8	10	3·16	
Faridpur .	·544	—·024	—·155	S	3	10	3·12	Drizzling rain.
Comilla .	·656	+·006	...	SE	11	10	3·93	
Narayanganj	·598	0	—·093	SE	15	10	4·00	
Sirajganj .	·558	—·002	—·127	ENE	5	10	1·40	
Berhampore	·471	—·007	—·206	NE	9	10	2·93	Continuous rain.
Rampur Boalia.	·493	—·005	—·182	ENE	5	10	2·21	
Bogra	·571	+·005	—·102	E	...	10	1·50	Showery.
Mymensingh	·633	+·010	—·063	ESE	8	9	3·15	Ditto.
Dinajpur .	·595	+·019	—·088	NE	8	10	0·70	
Malda .	·545	+·024	...	ENE	8	10	0·54	Strong wind.
Bhagalpur .	·607	+·027	—·083	NE	15	10	0·10	Squally.
Purnea .	·621?	+·020?	—·056?	NE	6	10	0·22	Showery.
Naya Dumka.	·541	+·040	...	NNW	12	10	0·76	Continuous rain.
Hazaribagh	·622	+·017	—·060	NNW	17	10	1·07	Drizzling rain.
Raniganj .	·518	+·042	...	NW	7	10	0·50	
Ranchi .	·612	+·019	—·052	NW	10	10	0·52	
Chaibassa .	·581	+·010	—·078	WNW	4	8	0·81	Showery.

The well-marked cyclonic circulation of the winds around the storm centre continued and the wind had

increased at the head of the Bay, where, at Saugor Island, the force was 40 miles per hour at 8 A.M., at Jessore 34 miles, at Calcutta 24 miles and at Narayanganj 18 miles. The *Planet* and *Meteor* floating Light vessels reported fresh gales from west-south-west and south-west all day. Heavy continuous rain had fallen over Bengal and at Calcutta there were anticipations of a downpour similar to that which had occurred in the same month of the preceding year (see Appendix). The following were the heaviest amounts recorded in the 24 hours preceding 8 A.M. of the 6th September :—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 6th September 1901.
		Inches.
HOOGHLY	Serampur	8·88
NADIA	Ranaghat	8·84
HOOGHLY	Hooghly	7·83
	Arambagh	7·61
24-PARGANAS	Barasat	7·50
BACKERGUNGE	Gaurnadi	7·18
HOWRAH	Amta	6·50
	Howrah	6·33
HOOGHLY	Raniganj	6·29
KHULNA	Mollahat	6·23
NOAKHALI	Lakhmipur	6·00
24-PARGANAS	Baserhat	5·85
RANGPUR	Gobindganj	5·79
HOWRAH	Mohesreka	5·60
24-PARGANAS	Alipore (Obsy.)	5·52
MIDNAPUR	Ghatal	5·40
	Garhbeta	5·30
BACKERGUNGE	Patuakhali	5·25
MIDNAPUR	Tamluk	5·15
RAJSHAHI	Lalpur	5·02
24 PARGANAS	Budge Budge	5·00

At the Floating Light ships on this day the rain measured was only 0·80″.

September 7th.—Pressure had generally increased over Bengal. The storm was practically of the same intensity as on the preceding day, but the centre was swaying about over Bengal, and at 8 A.M. lay apparently close to Berhampore where the barometer marked 0·230″ below the normal. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Saugor Island.	29·610	+·058	—·058	SW	24	7	...	Thunder.
Barisal	·634	+·040	—·048?	SSW	10	10	1·91	
Calcutta	·589	+·128	—·082	SW	11	6	4·18	Continuous rain.
Midnapore	·586	+·044	—·089	S	4	3	0·80	
Burdwan	·541	+·085	—·135	WSW	9	10	3·06	Continuous rain.
Jessore	·581	+·154	—·101	S	12	10	6·20	Ditto.
Krishnagar	·548	+·188	...	S	7	10	0·81	
Bankura	·540	+·035	...	W	8	10	0·92	Drizzling rain.
Raniganj	·537	+·019	...	WNW	8	10	1·74	
Faridpur	·621	+·077	—·077	SE	3	10	2·62	
Berhampore	·448	—·023	—·230	S	13	10	0·61	Raining.
Rampur Boalia.	·495	+·002	...	SSE	15	10	10·50	Heavy rain and severe gale of wind.
Bogra	·600	+·029	—·071	E	...	10	4·65	Continuous rain.
Narayanganj	·652	+·054	—·038	SE	19	10	5·70	Gale of wind.
Sirajganj	·583	+·025	—·101	ESE	8	10	6·50	Drizzling rain.
Mymensingh	·683	+·050	—·012	ESE	8	10	4·55	Raining.
Dinajpur	·651	+·056	—·034	NE	13	10	1·06	Continuous rain.
Malda	·519	—·026	...	ENE	13	10	2·52	
Purnea	·649	+·028?	—·029	NE	10	3	0·41	
Bhagalpur	·623	+·016	—·037	NE	16	10	0·01	Squally.
Naya Dumka.	·501	—·040	...	NW	16	10	0·68	Drizzling rain.
Hazaribagh	·668	+·046	—·019	N	16	10	0·23	Ditto.

The cyclonic circulation of the winds around the centre was maintained unimpaired, but the wind had fallen lighter at the head of the Bay where, at Saugor Island, the average force of the wind had decreased to 24 miles per hour. Rain continued to fall all over Bengal and was very heavy over Deltaic and East Bengal. The following gives the heaviest falls during the preceding 24 hours :—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 7th September 1901.
		Inches.
RAJSHAHI	Boalia	10·39
	Lalpur	9·26
BOGRA	Nowkhilla	9·00
RAJSHAHI	Mahadebpur	8·64
	Naugaon	8·03

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 7th September 1901.
		Inches.
Mmyensingh	Itia	7·27
Rangpur	Ulipur	7·20
Rajshahi	Manda	7·11
Nadia	Kushtia	6·70
Pabna	Serajganj	6·50
Jessore	Bangaon	6·47
Dinajpur	Nithpur	6·42
Rangpur	Gobindganj	6·34
Jessore	Jessore	6·20
Dacca	Jaydebpur	6·00
Murshidabad	Dumkal	5·75
Dacca	Dacca	5·65
	Narayanganj	5·61
Nadia	Chuadanga	5·41
Pabna	Pabna	5·23

September 8th.—Pressure had continued to increase over Bengal and the depression had filled up considerably. The storm had been practically stationary near Berhampore, but pressure at this station was less than 0·100″ below the normal compared with 0·230″ below it on the previous morning. The following gives 8 A.M., observations recorded in the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Saugor Island.	29·668	−·058	+·004	WNW	17	9	0·69	Sea slight.
Barisal	·660	+·026	−·023	SSW	7	10	6·00	Drizzling rain.
Calcutta	·649	+·060	−·021	WSW	10	10	0·37	Showery.
Midnapore	·654	+·068	−·021	W	4	4	...	
Burdwan	·635	+·094	−·043	WNW	9	10	0·03	
Bankura	·635	+·095	...	NW	8	10	0·01	
Narayanganj	·657	+·005	−·033	S	17	10	2·50	
Jessore	·636	+·055	−·047	SW	3	10	0·25	
Krishnagar	·621	+·073	...	W	6	10	0·35	Drizzling rain.
Faridpur	·634	+·013	−·064	SE	2	10	3·06	
Raniganj	·666	+·129	...	WNW	8	10	0·04	

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Berhampore	29·592	+·144	−·085	N	8	10	1·07	Continuous rain.
Rampur Boalia.	·588	+·093	−·087	Calm	6	10	4·25	
Bogra	·620	+·030	−·052	E	...	10	10·62	Continuous rain.
Sirajganj	·609	−·026	−·075	ESE	4	10	7·35	Drizzling rain.
Mymensingh	·669	−·014	−·026	ESE	8	10	8·45	Raining.
Malda	·639	+·120	...	NNE	28	8	1·32	
Dinajpur	·662	+·011	−·022	N	13	8	0·75	Showery.
Bhagalpur	·714	+·091	+·054	NE	17	8	0·03	

With the filling up of the storm the cyclonic circulation of the winds had decreased considerably in strength, and winds had shifted to west and west-north-west at the head of the Bay. On the other hand, the rainfall, though slightly less extensive, had become heavier—more particularly over East and Central Bengal where the fall, in some cases, was very heavy. The following gives the largest falls during the preceding 24 hours :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 8th September 1901.
		Inches.
Bogra	Nowkhilla	15·40
Mymensingh	Nalitabari	14·60
Rangpur	Gobindganj	10·69
Bogra	Bogra	10·62
Mymensigh	Sherpur Town	9·20
Bogra	Sherpur	8·65
	Panchbibi	8·50
Mymensingh	Itia	8·50
	Mymensingh	8·45
Rangpur	Peerganj	7·47
Backergunge	Barisal	7·40
Rajshahi	Naugaon	7·39
Pabna	Serajganj	7·35
Mymensingh	Diwanganj	7·25
	Netrokona	6·55
Dacca	Manikganj	6·41
Mymensingh	Kishorganj	6·16
Rajshahi	Manda	6·15

September 9th.—Pressure had continued to increase over the greater part of Bengal and the depression

noticed near Berhampore on the two preceding days, had advanced slowly in an east-north-easterly direction and was central at 8 A.M. near Mymensingh. The storm had continued to fill up slowly and pressure was only in moderate defect (—·052″) at Mymensingh. The following gives 8 A.M. data for the storm area:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Calcutta	29·694	+·045	+·025	WNW	7	2	0·01	
Jessore	·656	+·020	—·027	W	3	10	0·06	
Krishnagar	·687	+·066	...	WNW	7	9	0·12	
Noakhali	·673	—·006	...	SW	7	10	0·95	
Comilla	·671	—·029	...	S	13	7	0·46	
Narayanganj	·658	+·001	—·032	SW	8	9	0·12	
Faridpur	·666	+·032	—·034	Calm	1	8	0·06	Showery.
Berhampore	·681	+·089	+·003	N	3	6	0·01	
Rampur Boalia.	·675	+·087	—·001	NNE	3	0	0·07	Showery.
Bogra	·656	+·036	—·019	Calm	...	10	1·36	
Sirajganj	·643	+·034	—·041	Calm	2	10	1·34	
Mymensingh	·643	—·026	—·052	Calm	3	10	7·96	
Malda	·683	+·044	...	NNE	4	4	...	Threatening.
Dinajpur	·678	+·016	—·005	NE	8	0	...	
Rangpur	·700	—·010	+·002	ENE	9	0	...	

The winds were still irregularly cyclonic around the depression, but the force of the wind had further decreased and the circulation was less regular. The following were the principal falls of rain during the preceding 24 hours:—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 9th September 1901.
		Inches.
Mymensingh	Netrokona	13·12
	Durgapur	10·55
	Mymensingh	7·96
	Sherpur Town	5·92
	Jamalpur	4·65
	Diwanganj	4·05
Bogra	Nowkhilla	3·50
Tipera	Brahmanbari	3·23
Dacca	Jaydebpur	3·19

On the 10th the barometer continued to increase over Bengal, the storm had practically filled up and pressure exceeded the normal over nearly the whole country.

Slight cyclonic storm of the 7th to 13th in North-West India.—On the 7th the winds exhibited an irregular cyclonic circulation around a centre over the Central Punjab, and thunderstorms had given light showers to the West Himalayas and Sub-Himalayas, and on the 8th a shallow depression was shown over the area represented by the stations of Dera Ismail Khan, Montgomery, Lahore and Khushab. Thunderstorms had again given showers to the West Himalayan region and snow had fallen on the higher ranges. On the 9th the depression was still shown though it was somewhat less well-defined and rain had decreased on the Himalayas. By the following morning (the 10th) the depression had redeveloped somewhat, and thundershowers continued to be received over the West Himalayas, while, on the 11th, the storm was well-defined and strongish squally winds prevailed in the extreme north-west. Thundershowers continued to be reported at the hill stations and further snow fell in the interior. The barometer was rising rapidly in the north-west on the 12th, but the depression over the Western desert continued to be shown and the weather remained unsettled with duststorms on the plains, thundershowers on the outer hills, and light snow in the interior. By the morning of the 13th the depression had disappeared and an area of high pressure was shown over the North Punjab, the change having been accompanied with numerous hail and thunderstorms in the Western Himalayas and Sub-Himalayas.

Anticyclonic conditions were at this time established over North-Western and Western India, while a large area of relatively low pressure covered the Bay. This distribution of pressure accompanied with quiet weather lasted till the 17th, when the area of greatest excess of pressure was transferred to the head of the Peninsula and a shallow low pressure area appeared in North-West India. This depression advanced northward during the 17th and 18th and was accompanied during the 18th and 19th with dust and thunderstorms over the plains and outer ranges of the hills, and with snow in the interior ranges. After this disturbed weather had passed away the barometer again rose in the extreme north-west and anticyclonic conditions and fine weather were re-established.

In the meantime on the 18th pressure became very uniform over the Bay while the winds on the surrounding coasts showed an indraught towards the centre of the east of the Bay, where pressure was low.

Cyclonic storm of the 18th to 25th.—On the 18th pressure was low over the Indus Valley region, relatively high over Western India and highest in Malabar and Ceylon, while it was low and apparently uniform

over the Bay. The following gives marine data for this day :—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	Force.	WEATHER.
	° ′	° ′	″			
S.S. *Staffordshire*	11 08	89 00	...	SW	4	Showery.
S.S. *Vadala* .	11 08	83 50	29·822	SW	6	Noon squally and continuous rain.
S.S. *Sirsa* . .	Madras.		·791	SSW	2	Fine and clear.
S.S. *Colaba* .	14 42	94 04	·765	Calm	0	Cloudy.
S.S. *Clitus* .	15 19	92 36	·798	NW	2	Sea smooth and fine. 4 A.M. overcast.
S.S. *Shahsada* .	15 38	95 07	·763	Var.	4	Squally. 4 A.M. passing rain squalls.
S.S. *Maharani* .	15 53	93 59	·680	SSE	2	Fine. 4 P.M. fierce squalls and heavy rain.
S.S. *Kasara* .	Rangoon river.		·684	...	...	8 P.M. light rain.
S.S. *Madura* .	Rangoon.		·768	...	...	Occasional heavy squalls and light rain.
S.S. *Okara* . .	17 24	85 54	·774	NW	1	Fine.
S.S. *Putiala* .	17 57	86 43*	·796	SSW	2	Sea smooth and fine.
S.S. *Scindia* .	18 59	87 15	·675	E	1	Fine.
S.S. *Purulia* .	19 22	89 45	·740	SEbyE	2	Fine. Midnight overcast.
S.S. *Malda* .	19 25	89 56	·798	NNW	2	Fine.
S.S. *Knight Bachelor.*	19 46	87 24*	...	WSW	2	Clear.

* Noon position.

The preceding data apparently show that pressure was more or less uniform over the greater part of the Bay, but that it was low to the west of Diamond Island in about Lat. 16° N. and Long. 93° 30′E. Light and variable winds prevailed over the north and centre of the Bay and fresh to strong south-westerly and westerly winds over the south of the Bay. In the east the wind was also light, but at Diamond Island the direction was east-north-east, on board the *Clitus*, in Lat. 15° 19′ N. and Long. 92° 36′ E., north-westerly ; and on board the *Maharani*, in Lat. 15° 53′ N. and Long. 93° 59′ E., south-south-easterly. Hence the data apparently indicated that a small central area of depression was developing at that time near to but to the west of Diamond Island.

The following gives 8 A.M. data for the coast stations around the northern half of the Bay and shows the generally quiet weather prevailing :—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	WIND. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	″	″	″				Inches	
Mergui .	29·816	0	—·007	SSE	1	6	1·67	
Tavoy .	·798	—·033	—·042	Calm	1	0	0·57	
Moulmein .	·784	—·032	—·012	SW	1	2	0·45	
Rangoon .	·771	—·015	—·010	E	...	10	1·08	Showery.
Bassein .	·779	—·016	+·007	SE	3	7	0·67	
Diamond Island.	·766	—·019	—·009	ENE	1	8	2·45	Thunder.
Akyab .	·801	+·008	+·057	E	2	8	...	Do.
Chittagong .	·784	0	+·052	ENE	2	4	...	
Barisal .	·775	+·008	+·067	SSE	1	0	...	
Calcutta .	·786	+·011	+·102	Calm	3	0	...	
Saugor Island.	·780	+·010	+·103	SW	9	2	...	Sea smooth.
Balasore .	·790	+·030	+·129	Calm	1	1	...	
False Point.	·782	+·005	+·117	W	6	4	...	
Cuttack .	·773	+·002	+·110	Calm	1	0	...	
Puri . .	·782	—·002	...	WSW	7	0	...	
Gopalpur .	·774	—·002	+·102	N	10	0	...	
Waltair .	·796	—·002	+·129	Calm	8	2	...	Sea smooth.
Cocanada .	·787	—·018	+·105	W	5	1	...	
Masulipatam	·806	—·013	+·092	NW	4	1	...	
Nellore .	·806	+·004	+·070	WNW	3	2	...	Thunder.

September 19th.—There had been some change in the conditions prevailing around the Bay. The barometer had risen over Burma and Bengal while it had fallen over Orissa and Madras. The winds had also changed somewhat. The following gives 8 A.M. data for the coast stations around the northern half of the Bay :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	WIND. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	″	″	″				Inches	
Tavoy .	29·825	+·027	—·018	Calm	2	0	0·60	Showery.
Moulmein .	·798	+·014	—·002	SW	2	6	2·35	
Rangoon .	·794	+·023	+·009	E	6	10	1·65	
Bassein .	·794	+·015	+·018	SE	7	8	0·14	
Diamond Island.	·758	—·008	—·018	S	11	7	0·30	Sea slight.
Akyab .	·815	+·014	+·069	NE	1	7	...	

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"					
Chittagong.	29·811	+·027	+·076	NE	4	2	...	Thunder.
Barisal .	·774	?—·001	+·060	N	1	0	...	
Calcutta .	·810	+·024	+·123	Calm	2	10	...	
Saugor Island.	·785	+·005	+·107	NE	4	8	...	
Balasore .	·792	+·002	?	Calm	1	2	...	
False Point	·777	—·005	+·115	N	4	7	...	
Cuttack .	·765	—·008	+·104	Calm	1	4	...	
Puri . .	·770	—·012	...	Calm	4	0	...	
Waltair .	·770	—·026	+·099	Calm	5	4	...	Sea smooth.
Gopalpur .	·762	—·012	+·085	Calm	8	0	...	
Cocanada .	·767	—·020	+·084	NNW	5	9	...	
Masulipatam	·776	—·030	+·061	NW	4	8	...	
Nellore .	·774	—·032	+·038	NNW	6	9	...	

The preceding data show that the wind had shifted from east-north-east to east-south-east at Diamond Island and had increased in force, the velocity at 8 A.M. having been at the rate of 30 miles per hour. On the opposite side of the Bay there had not been much change, west-north-westerly and westerly winds continuing to prevail along the Madras coast.

The following gives marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITIONS. Lat. N.	8 A.M. POSITIONS. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Colaba* .	13 31	92 00	29·725	SW	5	Overcast. 4 P.M. frequent light rain.
S.S. *Putiala* .	14 42	85 34	·744	W by N	4	Moderate sea and cloudy 8 P.M. rainy.
S.S. *Purulia* .	16 31	92 52	·720	SE by E	5	Passing squalls of wind and rain.
S.S. *Maharani*.	Rangoon		·706	...	...	4 A.M. heavy rain.
S.S. *Knight Bachelor*.	16 52	85 58	...	Var.	2	Fine. 4 P.M. heavy rain squalls.
S.S. *Kasara* .	17 12	93 43	·687	E	4	Cloudy.
S.S. *Shahzada* .	17 30	92 04	·767	SE	3	Heavy rain.
S.S. *Okara* .	20 08	87 23	·764	Calm	0	Hazy. 8 P.M. passing squalls.

The above data show that the wind was blowing from south-east on board the *Shahzada* and *Purulia* which ships were to the west of Diamond Island, and that heavy rain and passing squalls were experienced by both vessels. Westerly and south-westerly winds prevailed over the centre of the Bay and a well-defined cyclonic circulation of the winds was thus being established around a centre situate in about Lat. 16° N. and Long. 92° E.

September 20th.—The barometer was falling over all parts of the Bay, but was rising over the Andaman Sea. The fall was slight generally, but was brisk between Masulipatam and Cuttack. The following gives 8 A.M data for the coast stations around the Bay:—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Tavoy .	29·854	+·029	+·009	Calm	2	0	0·26	Showery.
Moulmein	·822	+·024	+·015	SSW	1	8	0·65	
Rangoon .	·794	0	+·002	SE	7	10	1·59	Thunder.
Diamond Island.	·774	+·016	—·006	ESE	18	10	1·21	Cloudy.
Bassein .	·793	—·001	+·013	SE	7	9	1·65	
Akyab .	·769	—·046	+·018	NE	2	6	0·25	Thunder.
Chittagong.	·782	—·029	+·041	NE	4	7	1·02	
Calcutta .	·782	—·028	+·091	NE	2	6	0·02	
Saugor Island.	·753	—·032	+·071	E	7	10	0·30	Thunder.
Balasore .	·783	—·009	+·117	Calm	2	10	2·50	Drizzling rain.
False Point	·736	—·041	+·065	E	5	10	0·92	Thunder.
Cuttack .	·711	—·054	+·044	ENE	4	10	0·26	Drizzling rain.
Puri . .	·708	—·062	...	NE	12	10	1·07	Squally.
Gopalpur .	·679	—·083	—·003	N	13	10	1·77	Sea slight.
Waltair .	·679	—·091	0	N	10	9	0·17	Sea smooth.
Cocanada .	·668	—·099	—·021	W	7	10	0·06	
Masulipatam	·694	—·082	—·027	WNW	4	10	...	Thunder.
Nellore .	·743	—·031	?	WNW	6	10	0·07	Drizzling rain.
Madras .	·719	—·049	—·058	W	6	10	0·29	Thunderstorm.

The above table shows that the barometer had fallen briskly to rapidly on the North Madras coast and that the winds had increased slightly in strength and were cyclonic in direction along the East Coast. At Diamond Island, on the opposite side of the Bay, the winds continued strong Rain was falling generally around the Bay.

The following gives marine data for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *Nevasa*	10 52	95 48	29·774	SW by S	4	Overcast. 4 P.M. constant rain.
S.S. *Putiala*	11 06	83 58	·739	SW by W	5	High sea and fine.
S.S. *Gulf of Trinidad.*	11 20	82 17	·505	WSW	6	Strong sea and squally.
S.S. *Albenga*	12 03	80 23	·712	W	3 to 4	
S.S. *Colaba*	12 23	90 15	·685	SW	5	Overcast. Noon rain squalls at times.
S.S. *Vortigern*	Madras.		·683	...	...	Noon overcast.
S.S. *Sui Sang*	13 17	94 27	·783	SW	5	Drizzling rain. Midnight rain squalls.
S.S. *Knight Bachelor.*	13 19	84 23	...	WSW	5	Fine. 4 P.M. heavy rain.
S.S. *Westminster Bridge.*	14 56	82 19	·673	WNW	2	Fine.
S.S. *Ethiopia*	15 47	96 49	·799	...	...	Noon fine.
S.S. *Purulia*	15 58	96 00	·740	ENE	4	Heavy passing rain squalls.
S.S. *Chindwara*	Masulpatam*		·682	SW	4	Drizzling rain.
S.S. *Pentakota*	Rangoon.		·691	...	...	Noon cloudy.
S.S. *Kasara*	Kyauk Phyou.		·693	..	...	4 P.M. fine.
S.S. *Nurani*	19 32	86 11*	·729	SE by E	2 to 4	Rainy, squally.
S.S. *Shahzada*	19 56	89 19*	·736	E	2	Heavy rain squals

* Noon position.

There was practically no information for the area covered by the storm, but apparently the centre lay in about Lat. 17° N. and Long. 87° E. so that the storm had marched a little to the north of west. The observations showed that south-westerly winds prevailed over the southern half of the Bay and easterly winds in the north, and the general force of the wind for the whole Bay was 4·3 or 0·6 above the normal. There were, however, no ships in the immediate neighbourhood of the storm and no very strong winds were recorded though the weather was rainy and squally in several parts of the Bay.

September 21st.—Pressure had continued to give way briskly on the East Coast more particularly between Waltair and False Point and pressure was considerably below the normal in Ganjam. The following gives 8 A.M. data for the coast stations around the Bay:—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inches	
Madras	29·697	—·022	—·082	W	6	9	...	Sea smooth.
Nellore	·686	—·057	—·055	WNW	5	10	0·89	Showery.
Masulipatam	·675	—·019	—·052	NW	8	10	0·70	Thunder.
Cocanada	·625	—·043	—·071	Calm	5	10	0·15	
Waltair	610	—·069	—·079	NE	10	10	2·90	Sea slight.
Gopalpur	·629	—·050	—·057	NE	16	10	5·15	Showery.
Puri	·661	—·047	...	Calm	13	8	2·13	Drizzling rain.
Cuttack	·665	—·046	—·008	ENE	6	10	0·82	Showery.
False Point	·672	—·064	—·005	E	8	10	2·06	
Balasore	·749	—·034	?	Calm	2	10	4·36	Continuous rain.
Saugor Island.	·747	—·006	+·058	E	6	10	1·74	Thunder.
Calcutta	·761	—·021	+·066	SE	2	10	0·31	Showery.
Chittagong	·785	+·003	+·040	NE	4	3	0·02	
Akyab	·782	+·013	+·025	E	2	3	...	
Bassein	·799	+·006	+·013	SE	7	8	0·07	
Diamond Island.	·780	+·006	—·005	ESE	20	7	0·19	Sea slight.
Rangoon	·798	+·004	0	ESE	6	9	0·52	Showery.
Moulmein	·830	+·008	+·017	SW	1	6	0·04	
Tavoy	·848	—·006	+·003	SSW	2	0	...	

The preceding data show that the cyclonic storm had not crossed the coast, but that the winds were irregularly cyclonic along the East Coast and were blowing strongly at Gopalpur, while strong winds continued at Diamond Island. Heavy rain was falling in Orissa and Ganjam, the following having been the heaviest amounts in the preceding 24 hours:—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 21st September 1901.
		Inches.
Ganjam	Ichchhapuram	8·95
	Sompeta	7·42
	Gopalpur	5·15
Balasore	Balasore	4·75
Ganjam	Berhampur	4·66
Balasore	Bhadrak	3·92
	Soro	3·55

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 21st September 1901.
		Inches.
GANJAM	Ramagiri . . .	3·46
VIZAGAPATAM	Waltair	3·43
INGUL	Kumarkhole . . .	3·41
GANJAM	Chatrapur . . .	3·12
CUTTACK	Kendrapara . . .	3·09

The following gives the marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Umbilo* .	9 40	83 33	29·839	SW	6	Strong sea. Cloudy.
S.S. *Knight Bachelor.*	10 06	83 17	...	WSW	6	Rough sea and clear.
S.S. *Colaba* .	11 11	88 55	·745	WSW	2	Heavy sea and cloudy.
S.S. *Westminster Bridge.*	12 00	80 08	...	W	4	Cloudy. 4 A.M. heavy rain squalls.
S.S. *Chindwara* .	Madras.		·696	SW	4	Fine. 4 A.M. light rain.
S.S. *Gulf of Trinidad.*	14 14	82 28	·525	W	4	Moderate sea. 4 A.M. heavy squalls and torrents of rain.
S.S *Nevasa*. .	14 32	93 17	·738	SW by W.	4	Overcast. 4 P.M. continuous rain.
S.S. *Vortigern* .	15 03	82 46	·763	WSW	5	Cloudy.
S.S. *Pentakota* .	16 15	93 33	·753	Var.	1	Do.
S.S. *Ethiopia* .	16 35	93 02	·757	Var.	4	Fine. 4 P.M. passing rain squalls.
S.S. *Sui Sang* .	16 38	91 28	·843	S	2	Overcast. Midnight showery.
S.S. *Nurani* .	17 39	83 21	·613	N	3	Slight sea and heavy rain.
S.S. *Zibenghla* .	20 00	89 30	·598	ESE	...	Occasional squalls. 4 A.M. heavy rain.
S.S. *Onda* . .	Saugor Island.*		·712	E	3	Constant rain.
S.S. *Shahsada* .	Diamond Harbour.*		·805	...	...	Squally with rain.

* Noon position.

All the marine information referred to the sea area outside the storm. The observations show a well-marked cyclonic circulation of strongish, squally winds, but as there were no observations in the immediate neighbourhood of the storm there were no very strong winds reported. The general force of the wind for the whole Bay was 3·9.

September 22nd.—Pressure was increasing practically everywhere. The cyclonic storm was crossing the Ganjam coast, at 8 A.M. between Waltair and Gopalpur. The following gives 8 A.M. data for this day for the coast stations of the Bay:—

STATION.	PRESSURE.			WIND.			Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.		
	″	″	″				Inches	
Masulipatam	29·690	+·015	—·045	NW	8	10	...	Thunder.
Cocanada .	·649	+·024	—·059	SW	3	8	0·02	Sea smooth.
Waltair .	·650	+·040	—·049	NW	5	10	0·25	Do.
Gopalpur .	·650	+·021	—·046	SSW	17	8	1·85	Showery.
Puri . .	·667	+·006	...	ESE	16	8	2·07	Sea smooth.
Cuttack .	·672	+·007	—·011	ENE	6	10	1·37	Showery.
False Point	·691	+·019	+·006	SE	11	9	1·07	
Balasore .	·738	—·011	+·057	Calm	2	10	3·68	Continuous rain.
Saugor Island	·758	+·011	+·060	NE	7	9	1·32	Sea slight.
Calcutta .	·774	+·013	+·071	ENE	4	10	1·04	Showery.
Chittagong .	·840	+·055	+·086	E	4	8	0·54	
Akyab .	·842	+·060	+·077	E	3	5	0·10	
Bassein .	·854	+·055	+·063	Calm	5	7	0·03	
Diamond Island,	·840	+·060	+·050	S	11	5	...	Sea smooth.
Rangoon .	·871	+·073	+·067	ESE	4	10	0·49	Showery.
Moulmein .	.890	+·060	+·071	ESE	3	10	2·40	

The above shows that the storm was crossing the Eastern Ghats and had filled up somewhat, the barometric depression at the centre having been only about 0·050″. The storm was occasioning rain over a large tract of country, but particularly over Bengal and Orissa.

The following gives marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S. S. *Colaba* .	10 09	87 19	29·805	SW	5	Fine. Noon occasional rain squalls.
S. S. *Khandalla*	10 21	80 09	·704	SW	2	Fine.
S. S. *Okhla* .	11 40	84 06	·737	SSW	2	Fine.
S. S. *Umbilo* .	13 12	84 57	·792	S	2	Fine. Midnight passing squalls.
S. S. *Clan Mackinnon.*	15 20	82 27	...	S	5	Overcast.
S. S. *Purulia* .	Rangoon river.		·800	ESE	2	Fine.

Name of Vessel.	8A.M. Position. Lat. N.	8A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S. S. *Zibenghla* .	17 07	93 05	29·668	SE	2	Fine. Noon occasional rain squalls.
S. S. *Vortigern* .	17 28	84 43	·603	S	5	Fine.
S. S. *Nevasa* .	18 09	90 27	·746	S	4	Overcast. 4 P.M. rainy.
S. S. *Onda* .	Gopalpore*		·758	E	2	Dull, rain squalls.
S. S. *Pentakota* .	19 33	89 52	·747	SSE	4	Moderate following sea and fine. 4 A.M. occasional showers.
S. S. *Ethiopia* .	19 54	89 38	·750	SE	4	Fine. Noon occasional rain.
S. S. *Sui Sang* .	20 13	88 42	·763	SSE	2	Fine. 4 A.M. passing rain squalls.
S. S. *Kasara* .	Akyab		·759	...	...	4 P.M. fine.
S.S. *Culna* .	Chittagong		·842	...	...	Noon cloudy.
S.S. *Commilla* .	Calcutta		·743	...	...	Noon occasional rain.

* Noon position.

The preceding data show that the storm having passed inland, moderate south-west to south-east winds prevailed throughout the Bay, blowing with a mean force of 3·3.

September 23rd.—Pressure had increased more or less briskly over the Bay and the surrounding coasts, but had decreased over the interior of the country and western India. The fall was generally slight, but was brisk at Nagpur. The following gives 8 A.M. data for the storm area :—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inches	
Waltair .	29·741	+·091	+·026	SW	8	10	2·55	Sea smooth.
Copalpur .	·740	+·090	+·033	SE	29	10	0·66	Showery.
Hanamconda.	·695	—·013	...	WSW	7	8	0·39	
Chanda .	·680	—·045	—·087	WSW	3	10	6·82	Raining.
Nagpur .	·673	—·067	—·066	N	5	10	0·13	Drizzling rain.
Raipur .	·681	—·020	—·030	ENE	9	10	0·03	
Seoni .	·705	—·040	—·037	ENE	12	10	1·35	Drizzling rain.
Sambalpur .	·696	—·001	?	ESE	6	10	0·31	
Akola .	·732	—·006	—·036	NW	14	10	0·77	
Amraoti .	·730	—·003	—·027	WSW	5	10	0·88	Drizzling rain.
Khandwa .	·725	—·026	—·038	Calm	5	9	0·03	Thunder.
Hoshangabad.	·739	—·021	—·010	NE	5	10	0·80	
Jubbulpore.	·708	—·028	—·033	NNE	7	10	0·23	Raining.
Saugor .	·765	—·018	—·008	NNE	12	8	0·04	
Sutna .	·746	—·022	+·018	ENE	5	10	0·10	Showery.

The storm had continued to progress slowly west-north-westward and was apparently central in about Long. 81° 10′E and Lat. 20° 5′N. The winds were cyclonic around the depression area and rain was general and in places heavy.

September 24th.—The storm had extended northward and was apparently central near Jubbulpore in Lat. 22° 40′N and Long. 79° 55′E. The following gives 8 A.M. data for the storm area :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inches	
Chanda .	29·702	+·022	—·070	SSW	2	10	1·59	Continuous rain.
Amraoti .	·704	—·026	—·056	W	5	7	2·11	Showery.
Nagpur .	·660	—·013	—·085	ENE	5	10	0·42	
Raipur .	·685	+·004	—·033	SE	2	4	0·56	
Seoni .	·660	—·045	—·085	SSE	2	10	1·82	Raining.
Jubbulpore.	·650	—·058	—·093	ENE	4	10	0·24	
Saugor .	·704	—·061	—·077	NNE	9	10	0·99	Raining.
Sutna .	·660	—·086	—·070	ESE	6	10	1·80	Continuous rain.
Nowgong .	·666	—·092	—·080	N	2	10	1·77	Raining.
Allahabad .	·682	—·100	—·032	E	11	10	1·10	Thunderstorm.
Jhansi .	·684	—·072	—·068	NNE	7	7	0·07	Drizzling rain.
Cawnpore .	·651	—·140	—·069	WSW	7	10	2·12	Raining.
Lucknow .	·653	—·142	—·062	E	4	10	2·41	Continuous rain.
Mainpuri .	·683	—·116	—·056	NNE	2	8	0·53	
Bahraich .	·696	—·116	—·045	E	5	9	4·34	Drizzling rain.

The preceding data show that no well-defined centre of the storm existed and that the storm was filling up. The general depression area extended from Chanda in the south to Bahraich in the north and moderately heavy rain was falling all over that area. The following gives the heaviest falls recorded during the preceding 24 hours :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 24th September 1901.
		Inches.
Bareilly	Choreli	9·80
Cawnpore	Ghatampur	4·75
	Bilhaur	4·60
Kheri	Muhamdi	4·41
Bahraich	Bahraich	4·34
	Kaisarganj	4·26

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 24th September 1901.
		Inches.
ALMORA	Berenag	3·80
DAMOH	Hatta	3·73
HAMIRPUR	Rath	3·70
ALMORA	Pirpulta	3·64
KHERI	Kheri	3·50
ALMORA	Rawana Thal	3·50
	Purana Thal	3·50
	Chaukuri	3·50
HAMIRPUR	Bela Thal	3·48
	Kulpahar	3·48
ETAWAH	Auriya	3·40
UNAO	Safipur	3·27
BANDA	Banda	3·25
JHANSI	Gharautha	3·25
LUCKNOW	Malihabad	3·23
BARA BANKI	Fatehpur	3·20
CHANDA	Armori	3·12
NAGPUR	Katol	3·10
FARUKHABAD	Kaimganj	3·10

September 25th:—Pressure had increased over the central parts of the country and had decreased over Northern India. The cyclonic storm had advanced northward and was shown entering the hills in North Oudh, where pressure was in large defect. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE.			WIND.		CLOUD.	RAINFALL.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Nowgong	29·684	+·018	—·065	W	2	2	1·20	Showery.
Sutna	·686	+·026	—·059	WSW	6	10	2·05	Continuous rain.
Allahabad	·640	—·042	—·084	WSW	6	10	0·90	Showery.
Benares	·643	—·064	—·079	SE	5	10	0·11	
Cawnpore	·635	—·016	—·086	W	2	8	2·50	
Lucknow	·609	—·049	—·119	W	3	10	4·80	Continuous rain.
Mainpuri	·644	—·039	—·098	NNW	2	8	0·23	
Gorakhpur	...	...	...	NNE	4	10	0·73	Showery.
Bahraich	·593	—·103	—·152	E	14	10	3·80	Continuous rain.
Bareilly	·620	—·094	—·107	NE	3	10	4·67	Do.
Ranikhet	...	—·084	—·103	E	1	10	3·30	Do.

The preceding data show that pressure was in large defect (—0·150") in North Oudh and that the winds were westerly over the North-Western Provinces and Oudh, except at Bahraich, where a strong easterly wind and continuous rain were reported showing that the centre of the disappearing storm was probably close to this station. The rainfall had been heavy in the neighbourhood of the storm, as is shown by the following record of the heaviest falls in the 24 hours preceding 8 A.M. of the 25th:—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 25th September 1901.
		Inches.
GONDA	Tarabganj	16·85
PILIBHIT	Pilibhit (City)	12·24
	Amaria	11·97
NAINI TAL	Kilpuri	10·75
FYZABAD	Bikapur	10·60
PILIBHIT	Pilibhit (Kachahry)	9·95
BAREILLY	Baheri	9·93
FYZABAD	Fyzabad	9·00
BAREILLY	Oganpur	9·00
NAINI TAL	Naini Tal	8·22
BAREILLY	Nawabganj	7·75
GONDA	Gonda	7·63
NAINI TAL	Nani Tal	7·50
GONDA	Utraula	7·06
PILIBHIT	Basalpur	7·02
KHERI	Nighasan	6·97
SHAHJAHANPUR	Shahjahanpur	6·75
ALMORA	Tanakpur	6·68
SULTANPUR	Sultanpur	6·64
SITAPUR	Biswan	6·35
KHERI	Kheri	6·07
BAHRAICH	Kaisarganj	6·02

Quiet weather with a generally high barometer prevailed over the country during the 26th and 27th. On the 28th a large shallow depression appeared over the east of the Bay extending from Deltaic Bengal as far south as the North Ceylon coast. This distribution lasted till the morning of the 29th, but during the 29th the axis of the depression suddenly shifted and instead of running north and south over the east of the Bay, ran east and west across the south of the Bay. At the western extremity of this depression and close to the Madras coast a shallow central area of depression was developed on the 30th and drawing the winds into north-east along the Madras coast gave rain all along the coast from Waltair to Negapatam.

Summary of the Reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

Light snow is usually received on the higher ranges of the Kashmir and North-West Himalayas about the middle of September and in the present year these light falls commenced about the usual time :—

I. KASHMIR AND PUNJAB HIMALAYAS.

(1) *Gulmarg: 11th.*—Light snow fell over the upper portions of the higher mountains.

12th.—Higher mountains covered with light snow.

13th.—Higher mountains covered with slight snow the fall having been about 3 inches.

19th.—Higher mountains covered with snow to a depth of about 4 inches.

20th.—Snow fell more than six inches deep over higher mountains.

(2) *Killa Drosh 12th :*—Slight snow fell on top of east hill of Killa Drosh.

19th.—Slight snow again fell.

(3) *Simla :*—During September snow fell on the 12th and 19th. The snow was only ½ inch deep at 10,000 feet and on the higher ranges about 6 inches.

At the end of the month the snow accumulation reported on the passes were as follows :—

Rupin pass	16,000 feet	No new snow.
Borenda „	16,000 „	1 foot.
Harrang „	13,000 „	Clear.
Shatul „	16,000 „	1 foot.
Bulder „	16,000 „	1 foot.
Runang „	14,000 „	Clear.

II. NORTH-WESTERN PROVINCES HIMALAYAS.

(1) *Garhwal*:—There were slight snowfalls on the perpetual snows on the 5th, 11th, 18th, 23rd, 24th and 25th. The depth varied from 1 to 4 inches.

(2) *Almora*:—Snow fell as under :—

MALLA JOHAR.

11th September	1 foot.
12th „	1 foot.
24th „	1 foot.
25th and 26th September	2 feet.
	5 feet.

MALLA DANPUR.

8th September	3 inches.
17th and 18th September	6 inches.
	9 inches.

BYANS, CHANDAS AND DARMA.

24th September	3 inches.
25th „	3 inches.
	6 inches.

At the end of the month the snow accumulation reported on the hills was as follows :—

Utadhura	5 feet.
Ralam Dhura	2½ „
Pindari, Kaphini, Kantela	9 inches.
Byans, Chandas, Darma	6 inches.

The snowfall in this area was less than in the same month of last year.

Summary of Special Storm Reports.

The number of local storms during the month was about the average :—

The following gives a statement of the chief local storms of which reports were received during the month :—

September, 3rd.—A thunderstorm with drizzling rain occurred between 1 P.M. and 6 P.M. at Srinagar.

„ *4th.*—A north-west gale with rain was experienced at Amini Divi between 10-40 P.M. and 11-45 P.M.

„ *6th.*—Violent winds and heavy rain were experienced at Boalia at 8 P.M. to 6 A.M. 7th. A gale from south-south-east with heavy rain prevailed at Jessore from 8 A.M. to 8 P.M.

A thunderstorm occurred at Simla between 4-10 P.M. and 4-40 P.M. Thunder and light showers of rain were again experienced between 6 and 7 P.M.

September, 7th.—A slight thunderstorm occurred at Srinagar between 3 P.M. and 9 P.M.

„ *8th.*—A thunderstorm was experienced at Simla between 5 P.M. and 5-30 P.M. with heavy rain.

„ *9th.*—A slight thunderstorm occurred at Gulmarg between 2 P.M. and 6 P.M.

A thunderstorm was felt at Simla at 3 P.M. lasting about 1 hour.

September, 10th.—A thunderstorm was reported at Simla between 3-30 P.M. and 4 P.M. with light rain.

A slight thunderstorm occurred at Gulmarg between 11 P.M. and midnight.

A slight thunderstorm occurred at Srinagar between 6 P.M. and 9 P.M.

„ *11th.*—A thunderstorm was experienced at Gulmarg at 3-30 P.M.

A thunderstorm was experienced at Srinagar at 3 P.M.

„ *12th.*—A thunderstorm occurred at Simla at 0-30 P.M. and continued till 1-30 P.M. Some rain and hail fell.

„ *15th.*—A slight thunderstorm giving 0·37 inch of rain was experienced at Ootacamund between 1-45 A.M. and 3-40A.M.

„ *17th.*—A very heavy storm passed over Hoshangabad at 6-10 P.M. lasting about one quarter of an hour.

A thunderstorm with rain prevailed at Chitaldroog between 4-15 P.M. and 5-45 P.M.

„ *18th.*—A severe thunderstorm passed over Gulmarg between 8 P.M. and 11 P.M. followed by rain.

A thunderstorm occurred at Srinagar between 7 P.M. and midnight.

„ *19th.*—A violent duststorm was experienced at Jacobabad at 10-30 P.M. The storm lasted half an hour and was followed by a few drops of rain.

Squally weather followed by a thunderstorm occurred at Waltair between 2 P.M. and 8 P.M. There was a slight thunderstorm at Masulipatam at 8 P.M.

A slight thunderstorm was experienced at Nellore at 8 P.M.

September, 19th and 20th.—Squaliy unsettled weather was experienced at Amini Divi on the evenings of the 19th and 20th.

„ *20th.*—A thunderstorm was felt at Waltair between 2 P.M. and 8 P.M. followed by rain.

A thunderstorm occurred at Nellore between 2 P.M. and 8 P.M.

A thunderstorm followed by rain passed over Masulipatam between 2 P.M. and 8 P.M.

A thunderstorm occurred at Simla between 1-20 P.M. and 3 P.M. with heavy showers of rain.

„ *21st.*—Severe gales and thunderstorms prevailed at Waltair between 2 P.M. and 8 P.M. when heavy rain fell.

A heavy storm passed over Hoshangabad between 3 P.M. and 3-20 P.M.

„ *22nd.*—A very heavy storm passed over Hoshangabad at 6-10 P.M. The storm abated in 25 minutes.

„ *23rd.*—A thunderstorm with violent winds and some rain passed over Ootacamund from west to east between 10-50 P.M. and 0-40 A.M. on 24th.

„ *25th.*—A thunderstorm occurred at Ootacamund at 8 P.M. passing from north-east to south-west.

„ *30th.*—A severe thunderstorm passed over Ootacamund with violent winds and heavy rain. The storm commenced at 8 P.M. and lasted one hour.

Earthquake Report :—

September, 9th.—A severe shock of earthquake was felt at Sambhar at 2-14 P.M. local time. The direction of the shock was from south to north and it lasted 30 seconds.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea.—Fairly normal monsoon condition obtained over this area during the first seven or eight days of the month. A significant change occurred on the 9th in the extreme south, where abnormal northerly winds set in and held almost uninterruptedly during the remainder of the month. In the west and centre a moderate monsoon continued to prevail until the 14th when the current collapsed quite suddenly and unsteady, variable winds were experienced. In the east of the sea the winds were very unsteady and contained a strong northerly component. There was a feeble tendency to the establishment of northerly winds of the winter monsoon over the north and centre of the sea towards the end of the month.

The mean daily air movement was more or less below its normal intensity on no less than 24 days, the weakness being most marked during the last four days of the month when the mean force of the winds was only 2·7 as compared with 3·5, the normal of the month.

The chief feature of the weather of the month in the Arabian Sea was hence the abnormally early withdrawal of the monsoon current in the second week of the month.

Bay of Bengal.—Ordinary monsoon winds, force 2 to

prevailed generally over the Bay during the first eleven days of the month. Large and important changes occurred during the 12th, modifying the distribution of pressure very considerably which during the rest of the month was such as usually prevails during the first half of October. Very unsteady winds prevailed during this period over the Bay except in the extreme south where westerly winds held steadily. The most important feature of the meteorology of the period, however, was the storm which crossed the Bay along a westerly track between the 18th and 22nd. It was throughout its existence of feeble intensity and the strongest winds experienced during its existence over the Bay did not exceed 6 in force. As in the Arabian Sea, the air movement in the Bay was lighter than usual on most days during the month. It was above its normal intensity from the 1st to the 4th and the 19th to the 21st, and lighter than usual on all other days. The feebleness was on the whole greatest from the 27th to the 30th when the winds over the Bay were nearly 40 per cent. weaker than usual. On the mean of the whole month the air movement over the Bay was 0·6 below its normal intensity, *viz.*, 3·7.

Equatorial Belt.—There is, as usual, no information available for the eastern half of this region. In the western half (so far as can be judged from the data of a few ships) the winds were much more easterly than usual between the 11th and the 22nd. The data for the Seychelles show that the winds although approximately normal in direction at that station were about 25 per cent. stronger than usual during the first half of the month and considerably below their normal strength during the second half.

A noteworthy feature of the meteorology of the month both at the Seychelles and Zanzibar was the abundant rainfall. Thus the Seychelles obtained a total fall of 12·08 inches during the month as compared with 5 inches, its normal amount, and Zanzibar of 2·86 inches, the normal being 1·66 inches. Nearly 75 per cent. of the total precipitation at these stations was, it may be noted, received during the first fortnight of the month when the Trade winds were blowing strongly.

Temperature of the Air.

The mean temperature conditions of the month varied to a large extent from the normal due to the early termination of the rains in North-West India, the weakness of the Bombay monsoon current and the interrupted character of the Bay of Bengal monsoon current. As a result the rainfall was lighter than usual over a large part of the country and accompanying this light rainfall there was a general excess of temperature—more particularly of the day temperature.

The mean maximum or day temperature of the month exceeded the normal over the whole of India with the exception of parts of Sind, of the Punjab, of the North-Western Provinces, of North-East India, of Central Burma and of the south of the Peninsula. The deficiencies in these cases were generally small in amount, but were more than 1° locally at the following stations :—

Area.	Station.	Mean maximum temperature.		
		Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
		°	°	°
North-East India	Sibsagar	87·2	88·6	—1·4
	Mymensingh	86·5	87·6	—1·1
Central Burma.	Yamethin	90·7	92·0	—1·3
South of the Peninsula.	Madura	94·6	95·8	—1·2
	Coimbatore	88·4	89·5	—1·1

The mean maximum temperature of the month was above the normal over the remainder of India. It was more than 2° above the average over the greater part of North-Western and Central India and the northern half of the Peninsula and was more than 4° above within a large area extending from Rajputana through Gujarat, Khandesh and the Deccan as far as Cuddapah. The following gives comparative data for the stations at which the excess was more than 4° :—

Station.	Mean maximum temperature.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	°	°	°
Deesa	98·8	92·3	+6·5
Malegaon	93·3	87·1	+6·2
Bijapur	91·3	85·4	+5·9
Sambhar	97·4	91·6	+5·8
Surat	93·7	88·2	+5·5
Ahmednagar	89·9	84·4	+5·5
Jaipur	98·1	92·8	+5·3
Ahmedabad	96·5	91·3	+5·2
Agra	97·2	92·2	+5·0
Cuddapah	97·3	92·5	+4·8
Khandwa	92·1	87·4	+4·7
Raichur	92·0	87·5	+4·5
Sholapur	92·3	88·0	+4·3
Ajmer	94·7	90·4	+4·3

A noteworthy feature of the temperature conditions of the month was the great excess in the day temperature in Rajputana, Gujarat, Khandesh and the Deccan districts during the latter half of the month. This is shown in the following table which gives the dates and places at which the day temperature was more than 10° above the normal :—

Date.	Station.	Maximum temperature. Actual of date.	Normal of date.	Variation of actual from normal of date.
		°	°	°
17th September	Malegaon	96·9	86·7	+10·2
18th "	Khandwa	97·7	86·8	+10·9
	Malegaon	97·9	87·1	+10·8
	Surat	98·7	87·9	+10·8
	Akola	98·3	87·9	+10·4
	Bijapur	96·4	86·1	+10·3
19th "	Surat	99·2	88·1	+11·1
	Cuddapah	101·2	90·2	+11·0
	Khandwa	97·7	87·4	+10·3
20th "	Sambhar	102·5	91·5	+11·0
	Jaipur	103·2	92·3	+10·9
	Cuddapah	100·7	90·1	+10·6
	Khandwa	98·2	87·7	+10·5
21st "	Do.	100·2	88·4	+11·8
	Malegaon	99·4	88·0	+11·4
	Sambhar	102·5	91·8	+10·7
	Surat	99·2	88·6	+10·6
	Jaipur	103·2	93·1	+10·1
22nd "	Deesa	107·1	93·8	+13·3
	Ahmedabad	103·2	91·3	+11·9
	Malegaon	98·9	88·1	+10·8
	Khandwa	99·2	88·7	+10·5
23rd "	Ahmedabad	105·3	91·8	+13·5
	Deesa	107·1	94·1	+13·0
	Surat	100·7	89·1	+11·6
	Malegaon	98·4	87·9	+10·5
	Bhuj	102·8	92·7	+10·1
24th "	Deesa	108·0	94·4	+13·6
	Ahmedabad	104·3	92·2	+12·1
	Bhuj	103·8	92·7	+11·1
	Rajkot	102·9	92·0	+10·9
	Surat	100·2	89·4	+10·8
25th September	Deesa	106·6	94·5	+12·1
	Bhuj	103·3	92·7	+10·6
	Ahmedabad	103·3	93·0	+10·3
26th "	Bhuj	103·3	92·8	+10·5
30th "	Surat	101·7	90·7	+11·0

The day temperature was also more than 2° in excess of the average in Ceylon and Tenasserim. The following gives comparative data for the stations in these areas :—

Province or Division.	Station.	Mean maximum temperature. Actual, September 1901.	Normal, September	Variation of actual from normal, September 1901.
		°	°	°
Ceylon	Colombo	88·2	85·5	+2·7
Tenasserim	Tavoy	86·6	83·6	+3·0
	Mergui	86·7	84·1	+2·6

The following table gives the highest maxima recorded in each division or province during the month of September 1901 with the date on which they were recorded together with comparative data of the highest temperatures previously recorded at these stations in September :—

Province or Division.	Station.	Highest maximum temperature recorded in September 1901.	Date on which recorded.	Highest maximum temperature recorded in September previous to 1901.	Year in which recorded.
		°		°	
Burma	Bhamo	97·0	9th	97·6	1895
Assam	Silchar	95·6	19th, 20th & 21st.	101·3	1887
Bengal	Berhampore	98·8	16th	98·0	1876
Orissa	Cuttack	97·9	18th	97·9	1899
Bihar	Gaya	96·2	17th & 19th.	100·7	1877
Chota Nagpur	Purulia	96·6	11th	95·6	1899
North-Western Provinces and Oudh.	Agra	102·5	19th	107·7	1877
Punjab	Mooltan	105·4	20th	111·4	1898
Sind	Jacobabad	107·4	26th	115·3	1877
Rajputana	Deesa	108·0	24th	105·3	1877
Gujarat	Ahmedabad	105·3	23rd	105·3	1896

PROVINCE OR DIVISION.	STATION.	Highest maximum temperature recorded in September 1901.	Date on which recorded.	Highest maximum temperature recorded in September previous to 1901.	Year in which recorded.
		°		°	
CENTRAL INDIA	Neemuch	97·5	20th, 22nd & 30th.	101·0	1899
CENTRAL PROVINCES.	Khandwa	100·2	21st	104·7	1899
BERAR	Akola	98·3	18th	104·2	1899
WEST COAST	Cochin	89·5	16th	91·0	1900
BOMBAY DECCAN	Malegaon	99·4	21st	100·9	1899
MYSORE	Chitaldroog	91·1	14th & 15th.	90·6	1896
MADRAS COAST	Nellore	102·8	12th	106·4	1899
MADRAS DECCAN	Cuddapah	102·7	2nd	103·2	1899
SOUTH INDIA	Tinnevelly	102·4	3rd, 6th & 15th.	103·4	1899

At the hill stations the variations of the mean maximum temperature of the month from the normal were irregular. At nearly all the Himalayan stations, the mean day temperature was lower than usual, in Baluchistan it varied irregularly while at the central and southern hill stations it was higher than the normal.

The following gives comparative data for those hill stations at which the variation was more than 1° :—

HILL STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	°	°	°
Leh	67·7	71·3	—3·6
Murree	70·9	73·8	—2·9
Simla	65·4	67·7	—2·3
Cherat	83·2	85·3	—2·1
Chakrata	67·9	69·0	—1·1
Mount Abu	77·7	75·4	+2·3

The mean minimum or night temperature of the month was generally below the normal over the Indus Valley region, Gujarat, Central India, the Central Provinces, the North-Western Provinces, West Bengal and Assam and was generally above the normal elsewhere. The variations were, as a rule, much smaller than the variations of the day temperature but were moderate over the Western desert and over the Madras Deccan.

The deficiency, on the mean of the month, was greatest at the foot of the Kumaun Himalayas and over Kathiawar and exceeded 2° at the stations for which comparative data are given below :—

PROVINCE OR DIVISION.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
		°	°	°
KATHIAWAR	Bhavnagar Para	73·4	75·8	—2·4
	Rajkot	70·5	72·6	—2·1
KUMAUN HIMALAYAS FOOT STATION.	Dehra Dun	68·0	70·3	—2·3

The excess was greatest over the Rajputana desert, the Madras Deccan and its neighbourhood and the Burma coast and was 2° or more at the following stations :—

PROVINCE OR DIVISION.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
		°	°	°
MADRAS DECCAN AND SOUTH INDIA.	Negapatam	78·9	76·3	+2·6
	Cuddāpah	78·4	75·9	+2·5
	Hyderabad	72·9	70·4	+2·5
	Salem	73·5	71·3	+2·2
BURMA COAST	Mergui	75·0	71·5	+3·5
	Diamond Island	78·8	75·3	+3·5
	Bassein	77·7	75·5	+2·2

The mean night temperature at the hill stations was generally normal or below the normal. The variations were more than 1° at the three following stations only :—

HILL STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	°	°	°
Simla	54·9	57·1	—2·2
Chakrata	55·4	57·1	—1·7
Cherat	64·2	65·6	—1·4

The mean temperature of the month was above the normal except in three areas, *viz.*, the Indus Valley region, the North-Western Provinces and the neighbouring districts of West Bengal and of the Central Provinces and Assam. In these three areas the deficiency was generally small and amounted to 1°·0 or more only at the following stations :—

Province or division.	Station.	Mean daily temperature. Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
		°	°	°
Indus Valley Region.	Hyderabad (S)	85·6	86·7	—1·1
	D. I. Khan	86·6	87·6	—1·0
North-Western Provinces.	Gorakhpur	83·5	84·5	—1·0

Over the whole of the remainder of India, with a few local and unimportant exceptions, the mean temperature of the month was in excess. The excess was greatest within a broad band which covered the Southern Punjab, Rajputana, Gujarat, Khandesh, the Deccan and Mysore. Within this area the mean temperature was more than 3° in excess at the following stations :—

Station.	Mean daily temperature. Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	°	°	°
Cuddapah	87·9	84·2	+3·7
Deesa	86·7	83·0	+3·7
Raichur	83·0	79·7	+3·3
Bijapur	80·8	77·5	+3·3
Malegaon	82·4	79·1	+3·3
Ajmer	84·8	81·6	+3·2
Hyderabad (Deccan)	81·5	78·4	+3·1

The mean temperature was generally in defect at the Himalayan hill stations but was in excess in Baluchistan and at the central and southern hill stations.

The chief features of the mean temperature conditions of the month were hence as follows :—

(1) Increased temperature both by day and night over the greater part of North-Western India and of the Peninsula. The increase was most strongly marked over Rajputana and the Deccan.

(2) Increased temperature by day and deficient temperature by night over the North-Western and Central Provinces and Gujarat.

(3) Deficient temperature both by day and night over Assam.

(4) Increased temperature both by day and night over Burma particularly over Tenasserim and Lower Burma.

The temperature conditions were chiefly related to the character and distribution of the rainfall of the month.

The following table gives complete mean temperature data of the month for the 56 meteorological divisions into which India is divided :—

Province.	Division.	Actual temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	86·6	75·8	81·2	10·8	17·5	+2·4	+1·9	+0·5
	Lower Burma (Deltaic)	86·7	77·7	82·2	9·0	15·0	+1·5	+2·1	—0·6
	Central do.	89·8	76·3	83·0	13·5	19·6	+0·6	+0·7	—0·1
	Upper do.	90·5	75·8	83·2	14·7	21·9	—0·9	+0·1	—1·0
	Arakan	87·1	77·7	82·4	9·4	17·4	?	?	?
Bengal and Assam	Eastern Bengal	87·7	77·6	82·7	10·1	18·7	—0·1	+0·4	—0·5
	Assam (Surma)	90·1	75·8	83·0	14·3	23·3	+0·4	—0·5	+0·9
	Do. (Brahmaputra)	87·1	75·8	81·5	11·3	19·2	—0·6	—0·3	—0·3
	Deltaic Bengal	89·0	78·3	83·7	10·6	18·7	+0·8	+0·3	+0·5
	Central do.	89·3	77·7	83·5	11·7	21·9	+0·5	+0·2	+0·3
	North do.	89·0	76·5	82·7	12·4	20·6	+1·1	+0·1	+1·0
	Bengal Hills	66·1	47·5	56·8	18·5	27·5	—0·1	—0·1	0
	Orissa	89·7	78·8	84·2	10·9	20·7	+1·2	+0·4	+0·8
	Chota Nagpur	87·0	73·3	80·2	13·7	22·8	—0·1	+0·1	—0·2
	Bihar (South)	90·5	77·6	84·1	13·0	20·6	+0·5	—0·9	+1·4
	Do. (North)	90·3	77·1	83·7	13·3	19·8	+1·5	—0·4	+1·9

Province.	Division.	Actual temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
North-Western Provinces and Oudh	North-Western Provinces (East)	91·0	76·2	83·6	14·8	23·8	+0·1	—1·0	+1·1
	Oudh (South)	92·1	75·3	83·7	16·8	26·5	+0·4	—1·0	+1·4
	Do. (North)	90·4	75·3	82·9	15·1	24·1	—0·2	—1·1	+0·9
	North-Western Provinces (Central)	93·3	75·5	84·5	17·8	28·1	+1·5	—0·4	+1·9
	Do. do. (West)	95·5	74·9	85·2	20·7	30·2	+3·6	—0·7	+4·3
	Do. do. (Submontane, East).	90·2	76·7	83·5	13·5	18·8	—0·1	—1·8	+1·7
	Do. do. (Submontane, West).	88·9	71·7	80·3	17·2	26·9	+0·3	—1·5	+1·8
	Do. do. (Hills)	69·3	56·6	63·0	12·7	20·8	—0·4	—0·8	+0·4
Punjab	Punjab (South-East)	95·4	77·0	86·2	18·4	29·1	+2·8	+0·4	+2·4
	Do. (South)	97·9	75·2	86·6	22·7	34·7	+3·4	+1·9	+1·5
	Do. (Central)	99·1	74·2	86·7	24·9	37·7	+3·4	+1·2	+1·2
	Do. (Submontane)	94·2	73·6	83·9	20·5	31·5	+0·6	+0·5	+0·1
	Do. (Hills)	75·8	53·2	64·6	22·6	38·1	—2·2	—1·1	—1·1
	Do. (North)	94·9	69·3	82·1	25·6	38·0	—0·8	—0·7	—0·1
	Do. (West)	100·0	75·5	87·8	24·5	39·9	—0·1	—0·6	+0·5
Bombay and Malabar Coast Districts (Madras).	Malabar	84·4	75·1	79·8	9·3	14·5	+0·5	+0·9	—0·4
	Madras (South Central)	90·4	72·6	81·5	17·9	26·9	—0·1	+1·7	—1·8
	Coorg	74·3	63·0	68·6	11·3	17·4	+1·9	+1·3	+0·6
	Mysore	85·1	67·2	76·2	17·9	26·0	+2·6	+1·6	+1·0
	Konkan	84·3	76·0	80·2	8·3	13·9	+0·9	+1·1	—0·2
	Bombay Deccan	88·1	68·8	78·5	19·3	30·7	+4·1	+0·4	+3·7
	Hyderabad (North)	87·5	69·6	78·6	17·9	27·5	...	...	...
	Khandesh	91·6	68·9	80·6	22·7	34·9	+5·9	—0·1	+6·0
Central Provinces and Berar.	Berar	91·3	72·3	81·8	19·1	30·8	+3·3	+0·2	+3·1
	Central Provinces (West)	90·7	73·0	81·9	17·7	30·6	+2·7	—0·2	+2·9
	Do. (Central)	87·9	71·5	79·8	16·4	27·3	+1·1	—0·6	+1·7
	Do. (East)	89·5	76·9	83·2	12·6	22·1	+1·2	+1·0	+0·2
Bombay (North)	Gujarat	95·1	75·6	85·4	19·5	32·5	+5·4	—0·1	+5·5
	Kathiawar and Cutch	90·7	73·5	82·1	17·2	27·0	+3·2	—1·7	+4·9
	Sind	96·5	75·1	85·8	21·4	39·9	+0·4	—1·2	+1·6
	Baluchistan Hills	88·2	54·7	71·5	33·4	56·1	+0·5	+0·3	+0·2
Rajputana and Central India.	Central India (East)	89·5	72·0	80·8	17·4	28·8	+3·4	—0·8	+4·2
	Rajputana (East), Central India (West)	95·5	73·6	84·6	21·8	33·3	+5·5	+0·6	+4·9
	Do. (West)	99·7	77·0	88·4	22·7	31·7	+2·0	+2·3	—0·3
Madras	East Coast (North)	90·9	78·9	85·0	12·0	21·9	+2·2	+0·8	+1·4
	Hyderabad (South)	91·1	73·3	82·2	17·9	25·8	+4·1	+2·1	+2·0
	Madras (Central)	94·9	75·8	85·3	19·1	29·5	+4·1	+1·8	+2·3
	East Coast (Central)	95·4	79·1	87·3	16·3	26·9	+2·7	+1·6	+1·1
	Do. (South)	93·9	76·9	85·4	17·0	26·2	+0·5	+0·9	—0·4
	Madras (South)	94·5	75·8	84·7	18·8	26·5	+0·4	+0·3	+0·1

The following is a summary of the chief features of the temperature conditions during the month.

During the first ten days of the month two depressions were shown over North-East India. The first was a shallow disturbance which occasioned scattered rain over Burma, North-East India and the Central Provinces, while the second was a more concentrated disturbance which gave heavy rain to Bengal. Elsewhere the weather was fine and nearly clear. As a consequence of these conditions the mean temperature was lower than usual at the commencement of the month over Burma and the Central Provinces and generally higher than usual elsewhere—

more particularly over Rajputana and the Madras Deccan. The following gives variation data for the 24 hours preceding 8 A.M. of the 1st in illustration :—

Province or Division.	Variation from normal of Mean maximum temperature, 1st Sept.	Mean minimum temperature, 1st Sept.	Mean temperature, 1st Sept.
	°	°	°
Burma	−3·5	−0·7	−2·1
Assam	+2·6	+0·5	+1·6
Bengal	+2·0	+0·7	+1·4
Orissa	+0·3	+1·8	+1·1
Bihar	+2·2	+0·3	+1·3
Chota Nagpur	+0·8	+0·9	+0·9
North-Western Provinces and Oudh	+0·3	+0·1	+0·2
Punjab	+1·5	+1·9	+1·7
Sind	0	0	0
Rajputana	+5·2	+3·2	+4·2
Gujarat	+3·0	−0·6	+1·2
Central India	+0·7	−0·6	+0·1
Central Provinces	−1·8	+0·5	−0·7
Berar	−1·2	+0·4	−0·4
West Coast	+1·3	+1·5	+1·4
Bombay Deccan	+2·8	+0·9	+1·9
Mysore	+5·7	+2·0	+3·9
Madras Coast	+2·8	+1·4	+2·1
Madras Deccan	+5·3	+2·1	+3·7
South India	+1·4	+1·3	+1·4

These conditions continued during the next 24 hours, but on the 3rd temperature gave way in Gujarat and a broad band of relatively low temperature was established extending from Sind in the west to Burma and Assam in the east. The following gives comparative temperature data for Sind, Gujarat, Rajputana, Central India, the Central Provinces, the North-Western Provinces, Bengal, Assam and Burma from the 4th to the 8th and shows this band of generally diminished temperature :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 4th Sept.	5th Sept.	6th Sept.	7th Sept.	8th Sept.
	°	°	°	°	°
Sind	−1·3	−1·2	−1·2	−1·8	−1·6
Gujarat	+0·1	+0·7	+0·9	+1·0	+0·3
Rajputana	+0·8	+0·5	+0·3	−0·2	+0·2
Central India	−1·1	−0·8	−0·5	−0·4	−0·3
Berar	−1·9	+0·3	−0·3	0	+0·4
Central Provinces	−2·4	−1·5	−1·0	−0·9	+0·3
North-Western Provinces and Oudh.	−0·9	−0·4	−0·1	−0·9	−1·4
Bengal	−0·7	−2·1	−3·7	−4·1	−4·4
Bihar	−0·9	−2·2	−4·6	−4·1	−3·9
Chota Nagpur	−2·1	−4·4	−4·3	−2·9	−3·8
Orissa	−2·3	−1·1	−0·5	−0·4	+2·2
Assam	−1·0	−3·5	−2·6	−2·4	−2·5
Burma	−0·8	−0·8	+0·6	+0·6	+0·5

The greatest deficiency was shown over the east of the Central Provinces on the 4th (Sambalpur −7°·0), over Chota Nagpur on the 5th (Chaibassa −5°·6), over East Bengal on the 6th (Mymensingh −6°·1), over Central Bengal on the 7th (Burdwan −6°·1) and over North Bengal on the 8th (Dinajpur −9°·0). These areas of greatest relative deficiency of temperature coincided roughly with the areas of heaviest rainfall on each day. In other parts of the Indian area the heat during these five days was generally greater than usual. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 4th Sept.	5th Sept.	6th Sept.	7th Sept.	8th Sept.
	°	°	°	°	°
Punjab	+2·2	+1·6	+1·8	+1·6	+0·6
West Coast	+0·6	+0·5	+1·0	+1·0	+1·6
Bombay Deccan	+0·4	−0·9	+0·1	+3·1	+2·3
Mysore	+1·6	+3·5	+4·1	+4·9	+3·6
Madras Coast	+3·7	+3·6	+3·7	+3·1	+3·2
Madras Deccan	+2·9	+4·0	+3·1	+3·0	+4·6
South India	+3·0	+3·5	+3·1	+2·7	+1·4

The excess was about equally strongly pronounced over the Punjab and over the Deccan. The following were the

stations in these two areas exhibiting the greatest excess on each day :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
4TH SEPT.	Cuddapah	+5·8
	Ludhiana	+5·3
5TH „	Cuddapah	+7·0
	Sirsa	+4·5
6TH „	Cuddapah	+6·7
	Sirsa	+3·5
7TH „	Belgaum	+6·4
	Lahore	+5·2
8TH „	Raichur	+6·4
	Lahore	+3·9

During the 8th and 9th the band of low temperature over the central parts of the country moved northward and during the 9th and 10th the mean temperature was generally lower than usual over Northern India and generally higher than usual over Burma and the Peninsula. The following gives mean temperature data for all provinces for these two days :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	9th September.	10th September.
	°	°
Burma	—0·2	+1·2
Assam	—4·4	—4·8
Bengal	—4·0	—0·7
Orissa	+0·2	+1·6
Bihar	—1·7	+0·6
Chota Nagpur	—2·8	0
North-Western Provinces and Oudh	—1·7	—0·3
Punjab	+0·7	+1·0
Sind	—0·7	—1·4
Rajputana	+0·5	+0·7
Gujarat	—0·9	—1·9
Central India	—0·1	+0·1
Central Provinces	+0·4	+1·3
Berar	+2·2	+2·5
West Coast	+1·1	+1·3
Bombay Deccan	+1·6	+2·1
Mysore	+4·7	+4·5
Madras Coast	+3·8	+3·7
Madras Deccan	+5·7	+4·0
South India	+1·4	+0·6

On the 10th rain practically ceased over the whole country and the reports of the 11th showed that temperature was rising and was higher than usual in nearly all provinces. The following gives comparative data for the 11th in illustration :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 11th Sept.	Mean minimum temperature, 11th Sept.	Mean temperature, 11th Sept.
	°	°	°
Burma	+1·9	+1·5	+1·7
Assam	—2·2	—1·3	—1·8
Bengal	+2·0	+0·3	+1·2
Orissa	+5·6	—0·2	+2·7
Bihar	+3·0	—0·4	+1·3
Chota Nagpur	+3·2	—0·7	+1·3
North-Western Provinces and Oudh	+1·6	—1·3	+0·2
Punjab	+0·8	+0·8	+0·8
Sind	—3·5	—0·5	—2·0
Rajputana	+2·4	—1·7	+0·4
Gujarat	—0·8	—1·2	—1·0
Central India	+1·3	—2·3	—0·5
Central Provinces	+3·2	—0·2	+1·5
Berar	+4·7	+1·6	+3·2
West Coast	+1·6	+1·1	+1·4
Bombay Deccan	+6·8	—2·0	+2·4
Mysore	+2·9	+0·6	+1·8
Madras Coast	+4·5	+3·2	+3·9
Madras Deccan	+4·8	+0·8	+2·8
South India	+0·7	+1·3	+1·0

On the 12th temperature was falling fast in Sind and the Punjab and in Assam. The fall in the former area continued and extended during the following three days but the decrease in Assam was not maintained and the deficiency disappeared by the 15th. The following gives comparative data for Sind and the Punjab from the 12th to the 15th illustrating the extension of the area of low temperature :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	12th September.	13th September.	14th September.	15th September.
	°	°	°	°
Punjab	−1·1	−4·5	−3·9	−1·3
Sind	−1·9	−2·9	−2·3	−1·1

In other parts of the country the temperature was steady and generally excessive during these four days. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	12th September.	13th September.	14th September.	15th September.
	°	°	°	°
Burma	+2·3	+1·8	+1·8	+2·0
Assam	−3·0	−3·1	−0·4	+0·2
Bengal	+1·6	+1·7	+2·0	+2·5
Orissa	+2·3	+2·2	+2·6	+3·1
Bihar	+1·2	+1·2	+1·1	+0·9
Chota Nagpur	+1·4	+0·9	+2·0	+1·7
North-Western Provinces and Oudh.	−0·3	−1·0	−0·4	+0·2
Punjab	−1·1	−4·5	−3·9	−1·3
Sind	−1·9	−2·9	−2·3	−1·1
Rajputana	+1·0	+1·2	+3·6	+4·3
Gujarat	−0·5	−0·5	−0·4	+0·2
Central India	+0·5	+0·4	+1·4	+1·6
Central Provinces	+0·7	+0·9	+2·1	+2·9
Berar	+3·9	+2·5	+3·3	+6·4
West Coast	+1·0	+0·9	+1·4	+2·1
Bombay Deccan	+2·5	+2·0	+4·1	+5·8
Mysore	+3·0	+2·7	+4·7	+4·3
Madras Coast	+2·9	+2·0	+2·1	+1·1
Madras Deccan	+4·3	+3·9	+5·3	+2·3
South India	+1·9	+0·5	−0·3	+0·1

The highest temperatures were shown at this time over the Deccan and the following gives comparative temperature data for the two stations exhibiting the greatest excess of temperature on each day between the 12th and the 15th :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
12th September	Raichur	+5·3
	Hyderabad (Deccan)	+4·6
13th "	Bijapur	+6·3
	Hyderabad (Deccan)	+5·4
14th "	Bijapur	+8·8
	Raichur	+6·2
15th "	Sholapur	+7·5
	Bijapur	+6·2

On the 16th and 17th there was no rain over India except in the extreme south and the mean temperature was generally considerably higher than usual. Rain commenced over the south of the Peninsula on the 15th and simultaneously an area of relatively low temperature appeared over that area where it continued until the 20th. It was at its greatest extent on the 18th and 19th as is shown by the following comparative data for South India from the 15th to the 20th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	15th September.	16th September.	17th September.	18th September.	19th September.	20th September.
	°	°	°	°	°	°
South India	+ 0·1	− 0·2	− 0·7	− 2·4	− 1·6	0

During this period very hot weather was experienced over the Deccan and the northern half of the Peninsula. The following gives comparative data for the two stations in this area exhibiting the largest excess of temperature on each day from the 15th to the 20th :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
15th September	Sholapur	+7·5
	Ahmednagar	+7·2
16th "	Ahmednagar	+7·2
	Hyderabad (Deccan)	+4·6
17th "	Ahmednagar	+7·1
	Malegaon	+6·7

Date.	Station.	Variation from normal of mean temperatnre of 24 hours preceding 8 A.M. of date.
		°
18th September	Malegaon	+8·8
	Sholapur	+6·9
19th „	Malegaon	+8·7
	Cuddapah	+8·1
20th „	Malegaon	+6·3
	Hyderabad (D)	+6·2

On the 20th a cyclonic storm appeared over the Bay and rain was falling over Burma, Deltaic Bengal, Orissa and Ganjam. This storm crossed the Madras coast on the 22nd, travelled into the Central Provinces on the 23rd, into the North-Western Provinces on the 24th, and disappeared over the Central Himalayas on the 25th. Heavy rain fell along the path of the storm and moderate rain all over North-East India. This rainfall occasioned a brisk to rapid fall of temperature over the area affected as is shown below:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	20th September.	21st September.	22nd September.	23rd September.	24th September.	25th September.	26th September.
	°	°	°	°	°	°	°
Madras Coast	+1·4	−2·8	−0·7	−0·7	−1·4	+1·0	+0·8
Central Provinces	+3·6	+3·2	+1·7	+0·3	−1·7	−1·0	+0·1
Central India	+3·7	+3·9	+2·4	+3·3	+3·4	−0·3	−0·3
Orissa	+0·6	−2·8	−3·5	−3·0	−2·0	0	−0·1
Bihar	+2·3	+2·3	+0·7	−1·3	−1·0	+1·4	+1·1
Chota Nagpur	+1·8	−0·3	−1·4	−2·1	−1·6	+0·8	+0·1
North-Western Provinces and Oudh.	+2·6	+2·2	+2·4	+2·0	−0·9	−4·3	−4·2
Bengal	+2·3	+0·5	−1·0	−0·5	+0·1	−0·1	+1·2
Assam	+1·7	+2·3	+1·3	+0·9	+1·5	+1·4	+1·8

During these seven days the temperature was steadily high over a large part of North-West India but particularly in Gujarat but was unsteady in Sind and the North Punjab where the mean temperature was in considerable defect between the 20th and 23rd and on the 25th and 26th. The following gives comparative data for the different divisions of North-West India from the 20th to the 26th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	20th Sept.	21st Sept.	22nd Sept.	23rd Sept.	24th Sept.	25th Sept.	26th Sept.
	°	°	°	°	°	°	°
Punjab	+0·6	−1·1	−0·8	−0·4	−0·6	−2·0	−1·6
Sind	+0·6	+1·0	+1·2	−0·2	−2·0	+0·1	−0·2
Rajputana	+5·9	+5·5	+5·7	+5·3	+4·3	+2·2	+2·6
Gujarat	+2·2	+3·8	+4·8	+5·3	+5·2	+2·4	+1·3

The data in the above table show that the excess was greatest in Gujarat and Khandesh and the following gives comparative data for the two stations in these divisions showing the largest departures from the normal on each day from the 20th to the 26th:—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
20th Sept.	Malegaon	+6·3
	Surat	+5·2
21st „	Malegaon	+8·7
	Surat	+7·3
22nd „	Amedabad	+8·5
	Malegaon	+7·2
23rd „	Ahmedabad	+10·2
	Malegaon	+7·3
24th „	Ahmedabad	+7·7
	Rajkot	+6·6
25th „	Bhuj	+3·9
	Malegaon	+3·5
26th „	Bhuj	+4·2
	Surat	+1·5

On the 27th rain again practically ceased over the greater part of the country and the weather cleared. Temperature changed irregularly and the variations from the

normal were irregularly distributed. The following gives comparative data for all districts for the 27th and 28th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	27th Sept.	28th Sept.
	°	°
Burma	+1·1	+1·0
Assam	+1·7	+0·8
Bengal	+1·0	+1·1
Orissa	−0·6	−1·4
Bihar	−0·7	+0·6
Chota Nagpur	+0·7	+0·1
North-Western Provinces and Oudh	−2·4	−1·1
Punjab	−1·9	−0·9
Sind	−0·8	−0·8
Rajputana	+2·7	+2·4
Gujarat	−0·8	−0·5
Central India	−0·8	−0·5
Central Provinces	+0·2	+0·6
Berar	+0·4	+1·2
West Coast	−0·6	−0·3
Bombay Deccan	−0·7	+2·6
Mysore	−1·7	+0·9
Madras Coast	−0·3	+0·2
Madras Deccan	+1·9	+2·9
South India	−2·8	−0·7

On the 28th a depression began to form over the west of the Bay and gradually intensified from that date to the close of the month. Rain consequently fell over the east and south of the Peninsula and this rainfall reduced and maintained temperature considerably below the normal from the 28th to the 30th. The following gives comparative data for the Madras coast, the Madras Deccan and South India:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	28th Sept.	29th Sept.	30th Sept.
	°	°	°
Madras Coast	+0·2	−0·8	−1·5
Madras Deccan	+2·9	+0·4	+2·0
South India	−0·7	−2·0	−2·3

At the same time temperature continued high over the Bombay Deccan, Berar and Rajputana. This is shown below:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	28th Sept.	29th Sept.	30th Sept.
	°	°	°
Bombay Deccan	+2·6	+3·2	+2·2
Berar	+1·2	+0·5	+1·1
Rajputana	+2·4	+3·4	+4·6

The following gives comparative data for all divisions on the 30th and shows the conditions prevailing at the close of the month:—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 30th Sept.	Mean minimum temperature, 30th Sept.	Mean temperature, 30th Sept.
	°	°	°
Burma	+2·1	+1·8	+2·0
Assam	+3·0	+2·4	+2·7
Bengal	+3·1	+0·8	+2·0
Orissa	+1·8	+2·4	+2·1
Bihar	+2·0	+0·7	+1·4
Chota Nagpur	+0·7	+3·2	+2·0
North-Western Provinces and Oudh	+1·2	+1·2	+1·2
Punjab	+3·3	−0·5	+1·4
Sind	+0·8	−1·5	−0·4
Rajputana	+5·9	+3·2	+4·6
Gujarat	+5·9	−0·7	+2·6
Central India	+2·8	−1·5	+0·7
Central Provinces	+3·3	−2·3	+0·5
Berar	+6·3	−4·2	+1·1
West Coast	−0·5	+0·6	+0·1
Bombay Deccan	+6·3	−2·0	+2·2
Mysore	+1·8	+3·3	+2·6
Madras Coast	−2·8	−0·2	−1·5
Madras Deccan	+2·0	+1·9	+2·0
South India	−3·7	−0·9	−2·3

At the Extra Indian stations in Persia and Arabia the mean temperature of the month was generally in excess while, on the contrary, at the stations in the South-East Trades region the temperature on the mean of the month was below the normal:—

This is shown in the following table :—

Station.	Mean daily temperature.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	°	°	°
Jask	86·0	87·3	—1·3
Bushire	88·9	86·5	+2·4
Ispahan	74·9	73·3	+1·6
Baghdad	91·3	85·9	+5·4
Muscat	84·3	85·0	—0·7
Zanzibar	76·8	77·7	—0·9
Seychelles	76·6	79·0	—2·4
Mauritius	68·7	69·7	—1·0

Winds.

The mean wind at Port Blair was somewhat more westerly than usual, but it was less steady and the velocity was lower than the average, while, on the contrary, at the Burma coast stations and Cocos Island the winds were less westerly than the average though they were also lighter and less steady than usual. The following gives data :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, September 1901.	Normal percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Westerly deflection.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
				°	°				
Port Blair	62	74	—12	S 62 W	S 52 W	+10	194	228	— 34
Cocos Island	59	74	—15	S 21 W	S 44 W	—23	96	447	—351
Rangoon	52	49	+ 3	S 12 W	S 23 W	—11	85	89	— 4
Diamond Island.	42	55	—13	S 13 W	S 45 W	—32	146	182	— 36

In Lower Bengal and Orissa the winds were considerably more westerly than the average—more particularly at Saugor Island and Calcutta. The following gives comparative data of the stations in this area :—

Station.	Mean wind direction.		
	Actual, September 1901.	Normal, September.	Westerly deflection.
	°	°	
Chittagong	S 3 W	S 22 E	+25
Calcutta	S 29 W	S 23 E	+52
Saugor Island	S 33 W	S 2 W	+31
False Point	S 30 W	S 20 W	+10

The winds varied irregularly as regards steadiness and velocity, as is shown by the following data :—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual, percentage, September 1901.	Normal, percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Chittagong	18	37	—19	129	102	+27
Calcutta	49	42	+ 7	114	98	+16
Saugor Island	67	49	+18	302	257	+45
False Point	40	37	+ 3	199	205	— 6

In the east of the North-Western Provinces and the west of Bengal the wind directions were variable. The steadiness at Darbhanga and velocity at Darbhanga and Hazaribagh were low while at Allahabad both were higher than usual. This is shown below:—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, September 1901.	Normal percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
				°	°			
Hazaribagh	15	10	+ 5	N 32 W	S 52 E	167	178	—11
Darbhanga	17	49	—32	S 56 E	S 81 E	45	96	—51
Allahabad	34	13	+21	N 50 W	N 8 W	162	128	+34

In the Upper Sub-Himalayas the wind also varied considerably in direction but was on the whole more westerly

than usual. The direction was as usual in this month unsteady while the velocity was generally below the normal. The following gives data:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, September 1901.	Normal percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Westerly deflection.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
				°	°	°			
Dehra Dun.	18	20	— 2	N 57 W	N 75 W	— 18	18	25	— 7
Roorkee .	15	7	+ 8	S 40 E	S 14 W	— 54	43	48	— 5
Meerut .	43	19	+24	N 82 W	N 49 W	+ 33	33	46	—13
Lahore .	10	7	+ 3	N 54 W	N 55 E	+109	40	50	—10
Ludhiana .	10	14	— 4	N 77 W	N 44 W	+ 33	47	31	+16

A noteworthy and important feature of the month was thus the early withdrawal of the easterly monsoon winds from a large part of Northern India and their substitution by dry westerly land winds.

In the Indus Valley the wind directions were fairly normal, but the velocity was low though the steadiness was about the average. The following gives data:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, September 1901.	Normal percentage, September.	Variation of actual from September 1901.	Actual, September 1901.	Normal, September.	Actual, September. 1901.	Normal, September.	Variation of actual from normal, September 1901.
				°	°			
Peshawar . .	23	51	—28	N 9 E	N 39 E	33	73	—40
Jacobabad . .	51	45	+ 6	S 41 E	S 32 E	69	72	— 3
Kurrachee . .	88	87	+ 1	S 66 W	S 67 W	335	356	—21

In Rajputana the winds were more steady than the average. They were more westerly than the normal at Jaipur but were exactly normal at Deesa. Comparative data for these two stations are given below:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, September 1901.	Normal percentage, September.	Variation of actual from September 1901.	Actual, September 1901.	Normal, September.	Westerly deflection.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
				°	°	°			
Jaipur .	62	43	+19	N 82 W	N 39 W	+43	88	108	—20
Deesa .	60	53	+ 7	S 69 W	S 69 W	0	215	200	+15

The following table gives comparative data of the mean velocity an dsteadiness of the winds over the Bay Islands, Burma and the different divisions of Northern India for the month:—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage September 1901.	Normal percentage, September.	Variation of actual from normal, September 1901.	Actual, Sept. 1901.	Normal, September.	Variation of actual from normal, September 1901.
Bay Islands .	61	74	—13	145	338	—93
Burma . .	46	49	— 3	90	115	—25
Bengal . .	45	43	+ 2	182	152	+30
Bihar . .	17	49	—32	45	96	—51
Chota Nagpur.	15	10	+ 5	167	178	—11
Orissa . .	40	37	+ 3	199	205	— 6
North-Western Provinces.	28	15	+13	64	62	+ 2
Punjab . .	14	24	—10	40	51	—11
Sind . .	70	66	+ 4	202	214	—12
Rajputana .	61	48	+13	152	154	— 2

On the whole the winds were slightly less westerly than usual over the Deccan but the variations from the normal were generally slight as is shown below:—

STATION.	MEAN WIND DIRECTION.		
	Actual, September 1901.	Normal, September.	Westerly deflection.
	°	°	°
Belgaum	S 76 W	S 78 W	— 2
Sholapur	N 23 W	N 69 W	—46
Poona	S 89 W	W	— 1
Akola	N 44 W	N 59 W	—15
Buldana	N 53 W	N 47 W	+ 6
Khandwa	N 31 W	N 66 W	—35
Nagpur	N 50 W	N 52 W	— 2
Hyderabad (Deccan) . . .	N 80 W	N 71 W	+ 9

The velocity generally exceeded the normal over the Bombay Deccan but was generally less than the normal elsewhere while the steadiness varied irregularly from the average. The following gives comparative data of steadiness and velocity:—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, percentage, Sept. 1901.	Normal, percentage, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.
Belgaum	57	75	−18	275	385	−110
Sholapur	71	67	+ 4	289	245	+ 44
Poona	85	77	+ 8	283	259	+ 24
Akola	77	68	+ 9	175	155	+ 20
Buldana	76	68	+ 8	174	200	− 26
Khandwa	57	67	−10	136	154	− 18
Nagpur	43	37	+ 6	163	147	+ 16
Hyderabad (Deccan)	42	61	−19	194	150	− 46

Along the West Coast the wind's direction was as in the Deccan less westerly and more northerly than usual, but the variation was larger. This is shown in the following table:—

STATION.	MEAN WIND DIRECTION.		
	Actual, September 1901.	Normal, September	Northerly deflection.
	°	°	°
Bombay	N 65 W	N 84 W	+19
Karwar	N 68 W	N 80 W	+12

The wind was lighter than usual at Bombay and stronger than usual at Karwar. The following gives comparative data of velocity and steadiness for these two stations:—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, September 1901.	Normal percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Bombay	75	52	+23	229	267	−38
Karwar	78	78	0	90	58	+32

West-north-west winds held throughout Mysore and part of South India but they were both less steady and less strong than usual. This is shown below:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, percentage, September 1901.	Normal, percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
				°	°			
Salem	50	69	−19	S 76 W	S 63 W	67	82	−15
Chitaldroog	63	78	−15	N 74 W	N 87 W	151	228	−77
Bangalore	60	84	−24	N 58 W	S 85 W	154	167	−13
Hassan	48	79	−31	N 65 W	N 79 W	70	91	−21
Mysore	48	68	−20	N 62 W	N 87 W	186	266	−80
Madras	13	52	−39	S 11 W	S 36 W	124	149	−25
Bellary	70	75	− 5	N 64 W	N 78 W	219	223	− 4

The following gives comparative data of the mean velocity and steadiness of the winds over the Peninsula:—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND VILOCITY IN MILES PER DIEM.		
	Actual, percentage, September 1901.	Normal, percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Central Provinces	50	52	− 2	150	151	− 1
Berar	77	68	+ 9	175	178	− 3
Bombay Deccan	71	73	− 2	282	296	−14
West Coast	77	65	+12	160	163	− 3
Madras Deccan	56	68	−12	162	187	−25
Madras Coast	13	52	−39	124	149	−25
Mysore	55	77	−22	140	188	−48
South India	50	69	−19	67	82	−15

The winds were variable in direction at the hill stations in Northern India. This is shown below:—

HILL STATION.	MEAN WIND DIRECTION.	
	Actual, September 1901.	Normal, September.
	°	°
Leh	S 54 W	S 58 W
Srinagar	N 35 W	N 24 W
Kailang	S 48 W	S 57 W
Simla	N 29 W	N 13 E
Chakrata	S 23 E	S 73 W
Ranikhet	S 84 W	S 55 W
Katmandu	N 72 W	N 80 W
Darjeeling	S 52 E	S 58 E

The steadiness was, however, generally considerably greater than usual while the velocity was on the whole above the normal. The following gives data :—

HILL STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, Sept. 1901.	Normal percentage, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.
Leh	68	39	+29	55	42	+13
Srinagar	33	12	+21	80	76	+ 4
Kailang	59	61	− 2	27	38	−11
Simla	57	30	+27	138	99	+39
Chakrata	82	37	+45	233	128	+105
Ranikhet	60	37	+23	84	52	+32
Katmandu	28	14	+14	4	17	−13
Darjeeling	23	6	+17	90	85	+ 5

At the central hill stations the direction was, as along the West Coast and over the Deccan, more northerly and less westerly than the average. This was particularly marked at Chikalda as is shown below:—

HILL STATION.	MEAN WIND DIRECTION.	
	Actual, September 1901.	Normal, September.
	°	°
Mount Abu	S 42 W	S 73 W
Pachmarhi	N 40 W	N 59 W
Chikalda	N	N 23 W

The velocity was high at Mount Abu, low at Chikalda and normal at Pachmarhi. The following gives data:—

HILL STATION.	MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Mount Abu	269	183	+86
Pachmarhi	145	145	0
Chikalda	144	244	−100

At Wellington the wind was east-south-east instead of west-south-west, while the steadiness and velocity were both lower than usual. The following gives data:—

HILL STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, September 1901.	Normal percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Easterly deflection.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
				°	°				
Wellington	12	33	−21	S 54 E	S 56 W	+110	56	70	−14

In the Gulf of Aden the winds varied irregularly from the normal, as is shown by the following comparative data:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, September 1901.	Normal percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Aden	48	50	−2	N 85° E	S 23° E	159	220	−61
Perim	59	28	+31	S 87 E	N 42 E	306	276	+30

At the Seychelles the wind was approximately normal but at Zanzibar the mean direction was S 5° W instead of S 8° E and both the steadiness and velocity were lower than the average. The following gives data for the South-East Trades regions:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, September 1901.	Normal percentage, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
				°	°			
Zanzibar	45	63	−18	S 5 W	S 8 E	119	138	−19
Seychelles	87	90	− 3	S 40 E	S 41 E	293	292	+ 1

Humidity and Cloud.

The mean humidity conditions of the month differed largely from the normal, the abnormal features being such as would naturally follow from the weakness and early withdrawal of the monsoon currents. The humidity, on the mean of the month, was in excess in two areas, one including the Arakan Coast (Akyab +2%), the other parts of South Madras and of Mysore. In the latter area the excess was greatest and amounted to 5% at Madras and Chitaldroog. Over the whole of the remainder of the Indian land area the air was drier than usual. The abnormal dryness increased from the coast inland and was greatest over Rajputana and the adjoining districts of Gujarat and Central India. The following gives data for the area of greatest deficiency :—

Station.	Relative humidity.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	%	%	
Deesa	49	66	—17
Jaipur	48	64	—16

In addition to the above the deficiency was large in the South Deccan and in West Bengal. The following gives comparative data for the stations within these two areas :—

Area.	Station.	Relative humidity.		
		Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
		%	%	
South Deccan .	Sholapur . .	60	70	—10
	Bellary . . .	54	64	—10
West Bengal .	Hazaribagh . .	74	4	—10

The absolute humidity exceeded the normal on the mean of the month at all stations in the Bay Islands and Burma but the mean temperature was above the normal and the relative humidity was below the average except at Akyab. The following gives comparative data for the stations in this area :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.	Actual, September. 1901.	Normal, September.	Variation of actual from normal, September 1901.
	"	"	"	%	%	
Port Blair . . .	·921	·893	+·028	85	87	—2
Cocos Island . .	·919	·891	+·028	82	86	—4
Rangoon . . .	·906	·893	+·013	86	89	—3
Diamond Island . .	·904	·871	+·033	83	87	—4
Akyab . . .	·961	·920	+·041	88	86	+2

At Chittagong the relative humidity was exactly normal but at the remaining stations in Bengal and Orissa the relative humidity was in defect as, though the absolute humidity was about normal, the mean temperature was in general excess. The following gives data :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	"	"	"	%	%	
Chittagong . . .	·931	·916	+·015	86	86	0
Calcutta . . .	·918	·943	—·025	82	86	— 4
Saugor Island . .	·975	·976	—·001	84	86	— 2
False Point . . .	·933	·929	+·004	81	84	— 3

In West Bengal and the Gangetic Plain the air was much drier than usual while the mean temperature was about the normal so that the relative humidity was inconsiderable to large defect. This is shown below :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	"	"	"	%	%	
Hazaribagh . . .	·685	·754	—·069	74	84	—10
Darbhanga . . .	·885	·935	—·050	76	82	— 6
Allahabad . . .	·869	·885	—·016	76	79	— 3

Similar conditions prevailed over the Upper Sub-Himalayan area where the absolute humidity was in considerable defect and the relative humidity in slight to large defect. The following gives comparative data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	"	"	"	%	%	
Dehra Dun	·667	·698	—·031	76	78	—2
Roorkee	·733	·768	—·035	69	72	—3
Meerut	·686	·762	—·076	62	70	—8
Lahore	·627	·714	—·087	51	57	—6
Ludhiana	·672	·755	—·083	58	66	—8

In the Indus Valley conditions were less regular. At Peshawar the absolute and relative humidities were about normal while at Jacobabad they were both in slight excess and at Kurrachee both in slight defect. The following gives data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	"	"	"	%	%	
Peshawar	·585	·592	—·007	54	54	0
Jacobabad	·727	·690	+·037	56	52	+ 4
Kurrachee	·795	·841	—·046	74	77	— 3

In Rajputana the air was very dry and the mean temperature considerably above the normal so that the relative humidity was in large defect. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	"	"	"	%	%	
Jaipur	·564	·683	—·119	48	64	—16
Deesa	·575	·723	—·148	49	66	—17

The following gives comparative humidity data for the Bay Islands, Burma and the different divisions of Northern India:—

PROVINCE OR DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	"	"	"	%	%	
Bay Islands	·929	·893	+·028	84	87	— 3
Burma	·924	·895	+·029	86	88	— 2
Bengal	·941	·945	—·004	84	86	— 2
Bihar	·885	·935	—·050	76	82	— 6
Chota Nagpur	·685	·754	—·069	74	84	—10
Orissa	·933	·929	+·004	81	84	— 3
North-Western Provinces.	·739	·779	—·040	71	75	— 4
Punjab	·628	·687	—·059	54	59	— 5
Sind	·761	·766	—·005	65	64	+ 1
Rajputana	·570	·704	—·134	49	66	—17

The preceding data show that the air was more or less considerably drier than usual over nearly the whole of Northern India.

In the Deccan the absolute humidity was in defect except at Belgaum where it was in trifling excess. The mean temperature was greater than usual at all stations in this area and the relative humidity was in more or less considerable defect. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
	"	"	"	%	%	
Belgaum	·651	·641	+·010	81	85	— 4
Sholapur	·606	·662	—·056	60	70	—10
Poona	·652	·666	—·014	72	76	— 4
Akola	·701	·739	—·038	67	74	— 7
Buldana	·631	·780	—·049	70	78	— 8
Khandwa	·700	·741	—·041	66	75	— 9
Nagpur	·749	·767	—·018	71	75	— 4

Along the West Coast the absolute humidity was slightly above the average but the mean temperature was in excess

and the relative humidity was below the normal. The following gives data :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal Sept. 1901.
	"	"	"	%	%	
Bombay . . .	·870	·865	+·005	81	85	—4
Karwar . . .	·820	·817	+·003	83	86	—3

In South India the absolute humidity was more or less considerably in excess with the exception of Bellary where it was in considerable defect. The mean temperature was, however, in excess throughout the whole of this division so that the variations in the relative humidity were irregular. Thus at Salem, Chitaldroog and Madras the relative humidity was in excess while at the remaining stations it was in defect—largely so at Bellary. The following gives comparative data :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.
	"	"	"	%	%	
Salem . . .	·795	·746	+·049	74	72	+ 2
Chitaldroog . . .	·679	·592	+·087	74	69	+ 5
Bangalore . . .	·624	·603	+·021	74	76	— 2
Hassan . . .	·595	·578	+·017	74	76	— 2
Mysore . . .	·619	·595	+·024	71	71	0
Madras . . .	·903	·823	+·080	78	73	+ 5
Bellary . . .	·578	·654	—·076	54	64	—10

The following gives mean comparative data of the different divisions of the Peninsula :—

Province or Division.	Absolute Humidity.			Relative Humidity.		
	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.
	"	"	"	%	%	
Central Provinces .	·725	·755	—·030	69	76	— 7
Berar	·666	·710	—·044	69	77	— 8
Bombay Deccan . .	·636	·656	—·020	71	77	— 6
West Coast . . .	·845	·841	+·004	82	86	— 4
Madras Deccan . .	·578	·654	—·076	54	64	—10
Madras Coast . .	·903	·823	+·080	78	73	+ 5
Mysore . . .	·629	·592	+·037	73	73	0
South India . . .	·795	·746	+·049	74	72	+ 2

In Kashmir the relative humidity was in excess of the normal while at the remaining hill stations in the Himalayas the relative humidity was normal or in defect. This is shown below :—

Hill Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.
	"	"	"	%	%	
Leh	·177	·172	+·005	43	41	+2
Srinagar . . .	·534	·493	+·041	81	78	+3
Kailang . . .	·233	·245	—·012	59	59	0
Simla	·383	·441	—·058	75	78	—3
Chakrata . . .	·430	·472	—·042	81	84	—3
Ranikhet . . .	·474	·508	—·034	76	81	—5
Katmandu . . .	·624	·631	—·007	79	79	0
Darjeeling . . .	·482	·478	+·004	93	94	—1

At the central hill stations both the absolute and relative humidities were in defect—at Mount Abu by a considerable amount as is shown below :—

Hill Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.
	"	"	"	%	%	
Mount Abu . . .	·476	·547	—·071	64	77	—13
Pachmarhi . . .	·605	·624	—·019	78	82	— 4
Chikalda . . .	·607	·629	—·022	81	89	— 8

At Wellington, on the contrary, both the absolute and relative humidities were in excess as is shown below :—

Hill Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.
	"	"	"	%	%	
Wellington . . .	·473	·428	+·045	80	76	+ 4

In the Gulf of Aden the variations in the humidity were irregular as is shown in the following table:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.
	"	"	"	%	%	
Aden	·505	·549	—·044	62	66	—4
Perim	·965	·847	+·118	71	62	+9

In the South-East Trades region the absolute humidity was less than usual and at Zanzibar and Mauritius the relative humidities were about normal but at the Seychelles, where the mean temperature was in large defect, the relative humidity considerably exceeded the normal. The following gives comparative data for the stations in the South-East Trades region:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.	Actual, Sept. 1901.	Normal, Sept.	Variation of actual from normal, Sept. 1901.
	"	"	"	%	%	
Zanzibar	·713	·727	—·014	78	78	0
Mauritius	·500	·518	—·018	70	71	—1
Seychelles	·740	·753	—·013	79	75	+4

As the larger variations of the humidity conditions and cloud amount from the normal were due to the same causes, *viz.*, the weakness and early withdrawal of the monsoon currents, these variations were similar in general character over the greater part of the country.

There was somewhat more cloud than usual over parts of Burma and at a few stations at the head of the Bay. The following gives data for the stations exhibiting an excess of cloud in this region:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, September 1901.	Normal September.	Variation of actual from normal, September 1901.
Rangoon	8·7	8·2	+0·5
Chittagong	7·0	6·9	+0·1
False Point	7·1	7·0	+0·1

At the remaining stations in the Bay Islands, Burma and Bengal the sky was slightly to moderately clearer than usual as is shown below:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Cocos Island	6·7	7·4	—0·7
Port Blair	7·3	7·3	0
Akyab	5·9	7·2	—1·3
Diamond Island	7·0	7·5	—0·5
Calcutta	6·5	7·3	—0·8
Saugor Island	6·9	7·1	—0·2

There was also an excess of cloud, on the mean of the month, over Mysore and part of South India, the excess having been most marked at the stations of Bangalore, Salem and Wellington. The following gives comparative data for this area of increased cloud amount:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Wellington	8·5	7·1	+1·4
Salem	6·8	5·6	+1·2
Bangalore	7·4	6·3	+1·1
Bellary	8·4	7·5	+0·9
Mysore	8·0	7·6	+0·4

There was less cloud than usual over practically the whole of Northern and Central India, the West Coast and the Bombay Deccan, as is shown by the following comparative data:—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Darbhanga	3·7	5·3	—1·6
Hazaribagh	6·7	8·0	—1·3
Meerut	0·8	3·7	—2·9
Roorkee	1·2	3·8	—2·6
Allahabad	4·7	5·3	—0·6
Ludhiana	1·5	3·0	—1·5
Kurrachee	2·7	3·8	—1·1

STATION.	MEAN CLOUD AMOUNT. Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Jacobabad	0·2	0·6	—0·4
Jaipur	2·1	4·0	—1·9
Deesa	3·1	4·8	—1·7
Nagpur	4·7	7·3	—2·6
Khandwa	4·6	5·5	—0·9
Akola	5·1	6·6	—1·5
Buldana	5·5	6·6	—1·1
Bombay	5·4	7·4	—2·0
Karwar	4·1	5·7	—1·6
Sholapur	6·2	8·0	—1·8
Poona	6·4	7·7	—1·3
Belgaum	6·6	7·5	—0·9

The deficiency was greatest in actual amount in three areas, *viz.*, the Bombay Coast, the south of the Central Provinces and the west of the North-West Provinces. The following gives data for those stations at which the deficiency was 2·0 or more:—

STATION.	MEAN CLOUD AMOUNT. Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Bombay	5·4	7·4	—2·0
Nagpur	4·7	7·3	—2·6
Meerut	0·8	3·7	—2·9
Roorkee	1·2	3·8	—2·6

Over a portion of North-West India, including part of the west of the North-Western Provinces, of the Central Punjab and Upper Sind, the skies were practically free from cloud throughout the month. The following gives comparative data for stations at which the mean cloud amount for the month was less than 1:—

STATION.	MEAN CLOUD AMOUNT. Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Meerut	0·8	3·7	—2·9
Lahore	0·9	1·5	—0·6
Jacobabad	0·2	0·6	—0·4

On the other hand, the mean cloud amount was 8·0 or more on the mean of the month at the following stations in the south of the Peninsula:—

STATION.	MEAN CLOUD AMOUNT. Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Mysore	8·0	7·6	+0·4
Bellary	8·4	7·5	+0·9

There was less cloud than usual at most of the hill stations, the only exceptions being those for which comparative data are given below:—

STATION.	MEAN CLOUD AMOUNT. Actual, September 1901.	Normal September.	Variation of actual from normal, September 1901.
Wellington	8·5	7·1	+1·4
Kailang	5·2	4·8	+0·4
Katmandu	6·4	6·3	+0·1

At Aden the amount of cloud was slightly less than usual, and at Perim there was absolutely no cloud throughout the month:—

STATION.	MEAN CLOUD AMOUNT. Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Aden	1·7	2·3	—0·6
Perim	0	2·8	—2·8

In the South-East Trades region, on the contrary, the cloud amount, on the mean of the month, was above the normal, more particularly at the Seychelles. The following gives data:—

STATION.	MEAN CLOUD AMOUNT. Actual, September 1901.	Normal, September.	Variation of actual from normal, September 1901.
Seychelles	6·8	5·6	+1·2
Zanzibar	5·6	4·8	+0·8

Rainfall.

The general rainfall of the month under review, unlike the same month last year, was in considerable to large defect. The Bombay monsoon current was unusually weak throughout the month and hardly any rain was received from this source over Gujarat, Rajputana and Upper India. On the other hand, over the south of India and to a less extent over the Deccan thunderstorms were very numerous during the month, and the resulting rainfall was heavier than usual over the southern divisions and about normal over the Deccan divisions of the Peninsula. There were two well-marked rainfall periods from the Bay monsoon current, the first lasting from the 1st to the 9th, the second from the 20th to the 30th. During both of these advances rain extended over Burma, Bengal, Assam, and up the Gangetic Plain and along the Himalayas as far as Delhi in the one case and Kashmir in the other. The rainfall decreased both in amount and extent as the current advanced westward, and at its further limits in the south-east of the Punjab and the west of the North-Western Provinces the fall was very light and confined to one or two stations, while it never extended into the north-west dry area. The rainfall in the Satpuras and the East Coast was mainly attributable to the two cyclonic storms of the month, and fell generally between the 1st and the 7th and the 21st and the 26th. The above statement shows that during the middle of the month there was a break in the rains over the greater part of the country, and that over North-West India there was very little rain throughout the whole month.

The following were hence the periods of most general rainfall:—

1st.—The 1st to the 9th, when Burma, Bengal, the East Satpuras and the east of the Himalayan region and of the Gangetic Plain received more or less general rain and the West Himalayas and the west of the Gangetic Plain scattered showers.

2nd.—The 16th to the 24th, when Southern India and the Deccan districts received numerous showers.

3rd.—The 20th to the 30th, when Burma, Bengal, the East Coast and the East Satpuras received general rain and the Gangetic Plain and the Himalayan area more or less heavy showers.

4th.—The 25th to the 30th, when Southern India again received numerous thundershowers.

The average actual rainfall of the month was in excess of the normal (by 20% or more) in 13 divisions, *viz.*, Lower Burma Deltaic (+22%), Arakan (+38%), Eastern Bengal (+91%), Deltaic Bengal (+62%), Central Bengal (+25%), Chota Nagpur (+27%), North-Western Provinces East (+20%), South Oudh (+20%), North Punjab (+47%), Madras South Central (+84%), Mysore (+21%), East Coast South (+45%), and Madras South (+123%). It was normal, *i.e.*, varied by less than 20% from the average in 2 divisions, *viz.*, North-Western Provinces Hills (+4%) and Central Provinces East (+1%), and was more or less in general defect over the whole of the remainder of India.

The deficiency averaged more than 75% in the following divisions: the west of the North-Western Provinces (87 per cent.), the South-East Punjab (90 per cent.), South Punjab (87 per cent.), Gujarat (90 per cent.), Kathiawar and Cutch (84 per cent.), Sind (100 per cent.), Rajputana East, Centra India West (92 per cent.) and West Rajputana (96 per cent).

The following table gives the mean actual, the mean normal and variation rainfall data for the 56 meteorological divisions or districts into which India is divided :—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, September 1901.	Average normal, September.	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	...	...	19·52	23·17	−3·65
	Lower Burma (Deltaic)*	...	...	15·95	13·03	+2·92
	Central ditto*	...	...	7·66	8·68	−1·02
	Upper ditto*	...	...	7·45	?	?
	Arakan*	...	...	27·03	19·61	+7·42

* The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, September 1901.	Average normal, September.	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.
				Inches.	Inches.	Inches.
Bengal and Assam	Eastern Bengal	15·1	12·8	20·97	10·96	+10·01
	Assam (Surma)	13·4	16·1	14·98	16·99	−2·01
	Do. (Hills)	16·1	17·1	16·17	17·86	−1·69
	Do. (Brahmaputra)	12·2	13·1	8·89	11·87	−2·98
	Deltaic Bengal	11·7	11·8	13·78	8·50	+5·28
	Central do.	9·7	11·6	11·66	9·32	+2·34
	North do.	11·6	12·5	11·21	15·38	−4·17
	Bengal Hills	12·7	16·9	8·89	19·53	−10·73
	Orissa	10·0	12·6	8·37	10·48	−2·11
	Chota Nagpur	9·7	11·3	10·50	8·30	+2·20
	Bihar (South)	7·6	9·0	6·34	6·93	−0·59
	Do. (North)	6·6	9·3	4·91	9·57	−4·66
North-Western Provinces and Oudh.	North-Western Provinces (East)	8·9	8·1	8·24	6·89	+1·35
	Oudh (South)	6·3	7·4	7·80	6·52	+1·28
	Do. (North)	7·2	7·2	7·01	7·22	−0·21
	North-Western Provinces (Central)	3·4	6·5	3·55	5·50	−1·95
	Do. do. (West)	1·2	4·8	0·59	4·62	−4·03
	Do. do. (East Submontane)	8·4	7·9	7·71	7·98	−0·27
	Do. do. (West do.)	4·3	6·3	4·23	7·29	−3·06
	Do. do. (Hills)	7·5	9·6	8·21	7·88	+0·33
Punjab	Punjab (South-East)	1·0	4·1	0·43	4·20	−3·77
	Do. (South)	0·5	2·9	0·31	2·38	−2·07
	Do. (Central)	2·2	2·9	1·02	2·39	−1·37
	Do. (Submontane)	3·0	3·8	1·58	3·75	−2·17
	Do. (Hills)	5·3	7·4	2·77	6·86	−4·09
	Do. (North)	4·5	2·7	2·85	1·94	+0·91
	Do. (West)	0·7	1·2	0·41	0·84	−0·43
Bombay and Malabar Coast Districts (Madras).	Malabar	9·7	14·0	8·31	9·30	−0·99
	Travancore	5·8	...	4·88	...	...
	Madras (South Central)	9·7	6·7	8·61	4·63	+3·98
	Coorg	10·6	...	6·86	...	...
	Mysore	8·2	7·4	5·81	4·82	+0·99
	Konkan	8·7	16·8	4·26	14·97	−10·71
	Bombay Deccan	7·4	8·4	4·89	5·53	−0·64
	Khandesh	4·3	9·2	2·23	6·97	−4·74
Central Provinces and Berar.	Berar	4·2	...	2·80	7·34	−4·54
	Central Provinces (West)	5·3	9·5	3·90	8·80	−4·90
	Do. (Central)	6·6	9·7	6·56	7·95	−1·39
	Do. (East)	7·6	9·5	7·62	7·57	+0·05
Bombay (North)	Gujarat	2·2	8·3	0·82	8·03	−7·21
	Kathiawar and Cutch	1·6	4·4	0·73	4·70	−3·97
	Sind	0	...	0	0·48	−0·48
	Baluchistan Hills	0·1	...	0·06	0·15	−0·09
Rajputana and Central India.	Central India (East)	3·1	...	3·49	7·05	−3·56
	Rajputana (East), Central India (West)	0·7	...	0·30	3·84	−3·54
	Do. (West)	0·1	...	0·06	1·53	−1·47
Madras	East Coast (North)	7·4	10·0	5·58	7·59	−2·01
	Hyderabad (South)	...	...	2·89	...	...
	Madras (Central)	6·6	7·5	4·03	5·30	−1·27
	East Coast (Central)	6·3	6·8	3·41	4·43	−1·02
	Do. (South)	9·2	6·8	7·74	5·34	+2·40
	Madras (South)	5·8	3·5	4·80	2·15	+2·65

* Note.—The figures entered against division marked with an asterisk have been obtained from the weekly telegraphic reports.

The preceding data show that the average actual rainfall of the month was *nil* in Sind and only 0·06″ in Baluchistan and West Rajputana. It was less than 1″ in the west of the North-Western Provinces (0·59″), the South-East Punjab (0·43″), the South Punjab (0·31″), the West Punjab (0·41″), Gujarat (0·82″), Kathiawar and Cutch (0·73″), and the east of Rajputana and the west of Central India (0·30″); so that practically to the west of a line running from the head of the Gulf of Cambay to Agra and to the south of a line running from Agra to Peshawar the total rainfall of the month was, for practical purposes, quite unimportant. From this area the rainfall increased in all directions and the average actual fall of the month amounted to 27·03″ in Arakan, to 20·97″ in East Bengal, to 8·24″ in the east division of the North-Western Provinces, to 8·31″ in Malabar and to 7·74″ in the south of the East Coast.

The discussion in the wind section showed that the Bay monsoon current over the centre of the Bay was directed more largely than usual towards Burma. This is confirmed by the rainfall of the month. The Burma coast districts received practically daily rain throughout the month and the wet and dry divisions of Burma very frequent showers. In consequence the general rainfall of the whole province was normal, while the fall on the Arakan coast was in excess of the average. The following falls exceeding 2″ in 24 hours were recorded on the following dates at the meteorological stations of the province:—

Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
		Inches.
Akyab	1st September	2·98
Bhamo	1st "	2·05
Akyab	2nd "	6·63
	3rd "	3·42
Kindat	4th "	2·93
Akyab	4th "	2·30
Kindat	5th "	5·77
Tavoy	7th "	2·48
Kindat	7th "	2·06
Diamond Island	18th "	2·45
Moulmein	19th "	2·35
	22nd "	2·40
	23rd "	2·81
Diamond Island	26th "	2·45
Akyab	26th "	2·25

The following table gives comparative data for the five divisions of Burma:—

Division.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Tenasserim	19·52	23·17	−3·65	−16
Lower Burma Deltaic	15·95	13·03	+2·92	+22
Central Burma	7·66	8·68	−1·02	−12
Upper Burma	7·45	...	...	...
Arakan	27·03	19·61	+7·42	+38

Comparatively dry weather prevailed over Assam during the middle of the month, the break lasting from the 12th to the 20th in the Surma Valley and from the 17th to the 21st in the Brahmaputra Valley. At other times the rainfall was fairly general and continuous. The Surma Valley received rain from the 1st to the 6th, from the 8th to the 11th and from the 21st to the 30th. The following table gives the falls exceeding 3″ in 24 hours with the dates of their occurrence showing that the heaviest rainfall was received during the short burst of rain between the 8th and the 11th:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Garo Hills	Tura	8th September	3·46
Sylhet	Adamtila	" "	3·15
Khasi and Jaintia Hills.	Cherrapoonjee Police Station.	9th "	12·19
Sylhet	Sunamganj	" "	7·05
Cachar	Jatinga Valley	" "	6·76
Khasi and Jaintia Hills.	Laitlyngkot	" "	6·50
Sylhet	Sylhet	" "	5·87
	Lalakhal	" "	5·10
Cachar	Kukicherra	" "	3·89
Kahsi and Jaintia Hills.	Mauphlang	" "	3·85
Cachar	Nemotha	" "	3·44
	Koyah	" "	3·26
	Mupa	" "	3·20
Sylhet	Sephinjuri Dil	" "	3·08
Khasi and Jaintia Hills.	Shillong	" "	3·02
Cachar	Nemotha	10th "	7·10
Khasi and Jaintia Hills.	Cheerrapoonjee Police Station.	" "	4·05
Cachar	Haflong	" "	3·64
	Bikrampur	" "	3·48
	Jatinga Valley	" "	3·46
Sylhet	Lalakhal	" "	3·35
Cachar	Mahur Saddle	" "	3·20

In the Brahmaputra Valley there were more or less daily showers from the 1st to the 16th and from the 22nd to the 30th, though in the Goalpara and Kamrup districts the second fall was very light and partial. There were very few heavy falls in this division, the following showing the only falls exceeding 3″ in 24 hours recorded during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kamrup	Rangiya	1st September	3·40
Sibsagar	Sibsagar	2nd ,,	3·66
Lakhimpur	North Lakhimpur	,, ,,	3·16
Sibsagar	Seleng	4th ,,	4·30
	Amguri	,, ,,	4·05
	Dimapur	10th ,,	5·40
Lakhimpur	Balijan	,, ,,	4·12
Goalpara	Marnai	12th ,,	11·00
Lakhimpur	Dhakuakhana	15th ,,	3·13
	Dibrugarh	16th ,,	3·98
Kamrup	Kamalpur	17th ,,	3·83
	Gauhati	,, ,,	3·20
Sibsagar	Amguri	22nd ,,	3·21

On the hills the rainfall occurred under the same conditions as on the neighbouring plains and the total rainfall of the month was approximately normal. At Cherrapoonjee the total rainfall of the month was 44·13,″ the normal being 45·49,″ while the heaviest fall in 24 hours at this station was 12·19″ on the 9th.

The rainfall of the month was irregularly distributed as is shown by the comparative data of the eight plains districts of Assam :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cachar	14·40	16·51	—2·11	—13
Sylhet	15·80	17·49	—1·69	—10
Goalpara	11·83	17·77	—5·94	—33
Kamrup	5·09	9·23	—4·14	—45
Darrang	7·87	11·09	—3·22	—29
Nowgong	7·48	10·61	—3·13	—30
Sibsagar	10·45	10·70	—0·25	— 2
Lakhimpur	13·13	14·86	—1·73	—12

The rainfall in Bengal was also irregularly distributed. It occurred chiefly during two periods. The first period lasted from the 1st to the 9th and accompanied a barometric disturbance or cyclonic storm which appeared over South-West Bengal, remained stationary for some time over Deltaic Bengal and finally moved north-eastward to finally disappear in the neighbourhood of Mymensingh. The second period lasted from the 20th to the 27th and was connected with the second cyclonic storm of the month.

In South-West Bengal rain began to fall heavily on the 3rd and during the 4th, 5th, 6th and 7th rain was general and heavy throughout the whole of this division. On the 8th the rainfall began to take off, though it was still heavy in some places, and on the 9th only light showers were reported. Falls exceeding 5″ in amount in 24 hours were recorded at the following places on the following dates during this period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bankura	Bankura	5th September	7·37
Khulna	Mollahat	,, ,,	7·25
Hooghly	Serampore	6th ,,	8·88
Nadia	Ranaghat	,, ,,	8·84
Hooghly	Hooghly	,, ,,	7·83
	Arambagh	,, ,,	7·61
24-Parganas	Barasat	,, ,,	7·50
Howrah	Amta	,, ,,	6·50
	Howrah	,, ,,	6·33
Khulna	Mollahat	,, ,,	6·23
24-Parganas	Basirhat	,, ,,	5·85
Howrah	Mohesreka	,, ,,	5·60
24-Parganas	Alipore (Obsy)	,, ,,	5·52
Midnapore	Ghatal	,, ,,	5·40
	Garhbeta	,, ,,	5·30
	Tamluk	,, ,,	5·15
Nadia	Kushtia	7th ,,	6·70
Jessore	Bangaon	,, ,,	6·47
	Jessore	,, ,,	6·20
Murshidabad	Dumkal	,, ,,	5·75
Nadia	Chuadanga	,, ,,	5·41

From the 10th to the 19th the weather was fine over this division. On the 18th a storm had begun to develop over the east of the Bay, and on the 20th South-West Bengal came under the influence of the rainfall caused by the

advance of this storm across the Bay. The rainfall was at first light, but between the 21st and 24th it became moderately heavy and very general. Falls exceeding 2″ in 24 hours were recorded at the following places on the following dates during this period:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jessore	Magura	21st September	2·86
Nadia	Kushtia	" "	2·25
Khulna	Mollahat	22nd "	3·05
Jessore	Bangaon	" "	2·28
Burdwan	Raniganj	" "	2·13
Midnapur	Contai	" "	2·04
Bankura	Khatra	23rd "	2·34
Khulna	Mollahat	" "	2·15
Midnapur	Kukrahaty	24th "	2·62
	Ghatal	" "	2·27
Murshidabad	Azamganj	" "	2·18

From the 25th to the end of the month only showers were received, but on the 27th the showers became fairly general extending to most parts of the division. The following gives comparative rainfall data for the different districts in this division:—

District.	Rainfall,			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burdwan	10·07	7·62	+2·45	+33
Birbhum	6·24	10·18	—3·94	—39
Bankura	11·36	8·51	+2·85	+33
Midnapore	11·51	8·51	+3·00	+35
Hooghly	16·40	8·06	+8·34	+103
Howrah	13·57	8·06	+5·51	+68
24-Parganas	13·70	8·94	+4·76	+53
Nadia	14·63	8·15	+6·48	+80
Murshidabad	8·73	9·82	—1·09	—19
Jessore	13·41	7·81	+5·60	+72
Khulna	11·15	8·85	+2·30	+26

In North Bengal the rainfall occurred under generally similar conditions, but the heaviest falls of rain were recorded on the 8th in North Bengal and on the 6th in the South-West Bengal, a delay due to the place of origin and the movements of the cyclonic storm. In addition there was a burst of showery weather over North Bengal between the 10th and the 15th which was only faintly reproduced in South-West Bengal. Falls of rain exceeding 5″ in 24 hours were recorded at the following places on the following dates during the first rainfall period:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Rangpur	Gobindganj	6th Sept.	5·79
Rajshahi	Lalpur	" "	5·02
	Boalia	7th "	10·39
	Lalpur	" "	9·26
Bogra	Nowkhilla	" "	9·00
Rajshahi	Mahadebpur	" "	8·64
	Nougaon	" "	8·03
Rangpur	Ulipur	" "	7·20
Rajshahi	Manda	" "	7·11
Pabna	Serajganj	" "	6·50
Dinajpur	Nithpur	" "	6·42
Rangpur	Gobindganj	" "	6·34
Pabna	Pabna	" "	5·23
Bogra	Nowkhilla	8th "	15·40
Rangpur	Gobindganj	" "	10·69
Bogra	Bogra	" "	10·62
	Sherpur	" "	8·65
	Panchbibi	" "	8·50
Rangpur	Peergaaj	" "	7·47
Rajshahi	Naugaon	" "	7·39
Pabna	Serajganj	" "	7·35
Rajshahi	Manda	" "	6·15
	Mahadebpur	" "	5·45
Rangpur	Bhawanigaaj	" "	5·25

The second rainfall period lasted from the 21st to the 27th. The rainfall during this period was connected with a cyclonic storm which passed from the east of the Bay to the Madras coast. North Bengal was hence far from the course of the storm and the rainfall was generally

light or moderate. The following falls exceeding 2″ were, however, recorded during this second period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Rangpur	Bagdogra	21st September	2·14
Rajshahi	Manda	22nd ,,	3·15
Dinajpur	Churaman	,, ,,	2·65
	Nithpur	,, ,,	2·24
Cooch Behar	Fulbari	26th ,,	2·02

The following gives comparative rainfall data for the different districts in this division :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Rajshahi	20·71	10·58	+10·13	+ 96
Dinajpur	10·58	11·39	— 0·81	— 7
Jalpaiguri	10·38	21·71	—11·33	— 52
Darjeeling	8·83	15·67	— 6·84	— 44
Cooch Behar	11·52	19·69	— 8·17	— 41
Rangpur	11·92	13·45	— 1·53	— 11
Bogra	20·62	10·92	+ 9·70	+ 89
Pabna	20·12	9·34	+10·78	+115

East Bengal received general rain from the 1st to the 9th and fairly general showers from the 21st to the 30th, the intermediate period being marked by fine weather. The rainfall was very heavy during the first rainfall period, when the following amounts exceeding 5″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chittagong	Fenoa	1st September	5·57
Noakhali	Noakhali	2nd ,,	8·80
	Mirsarai	,, ,,	7·08
Chittagong	Chittagong	,, ,,	6·49
	Cox's Bazar	,, ,,	6·31
	Kutubdia	,, ,,	6·10
	Cox's Bazar	3rd ,,	10·09
Noakali	Fenny	3rd September	8·43
	Hatya	,, ,,	6·61
Chittagong	Satkania	4th ,,	5·63
Mymensingh	Mymensingh	5th ,,	5·34
Backergunge	Gaurnadi	6th ,,	7·18
Noakhali	Ramganj	,, ,,	6·29
	Lakhimpur	,, ,,	6·00
Backergunge	Patuakhali	,, ,,	5·25
Mymensingh	Itia	7th ,,	7·27
Dacca	Jaydebpur	,, ,,	6·00
	Dacca	,, ,,	5·65
	Narayanganj	,, ,,	5·61
Mymensingh	Nalitabari	8th ,,	14·60
	Sherpur Town	,, ,,	9·20
	Itia	,, ,,	8·50
	Mymensingh	,, ,,	8·45
Backergunge	Barisal	,, ,,	7·40
Mymensingh	Diwanganj	,, ,,	7·25
Tippera	Ramchandrapur	,, ,,	6·00
Mymensingh	Netrakona	,, ,,	6·55
Dacca	Manikganj	,, ,,	6·41
Mymensingh	Kesborganj	,, ,,	6·16
	Durgapur	,, ,,	5·80
	Jamalpur	,, ,,	5·75
Backergunge	Bauphal	,, ,,	5·74
Tippera	Chandpur	,, ,,	5·71
Mymensingh	Netrakona	9th ,,	13·12
	Durgapur	,, ,,	10·55
	Mymensingh	,, ,,	7·96
	Sherpur Town	,, ,,	5·92

The showers in the second rainfall period were generally light or moderate, but falls exceeding 3″ in 24 hours were recorded on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chittagong	Fenoa	21st September	3·07
Backergunge	Bauphal	22nd ,,	7·24
Mymensingh	Durgapur	25th ,,	4·50
Noakhali	Chhagalnaya	30th ,,	3·12

The following gives comparative rainfall data for the different districts in this division :—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dacca	19·33	8·84	+10·49	+119
Mymensingh	31·08	12·37	+18·71	+151
Faridpur	15·10	8·16	+ 6·94	+ 85
Backergunge	19·37	10·91	+ 8·46	+ 78
Tippera	17·39	10·00	+ 7·39	+ 74
Noakhali	30·40	14·82	+15·58	+105
Chittagong	21·65	13·18	+ 8·47	+ 64
Chitagong Hill Tracts	11·59	11·50	+ 0·09	+ 1

In Bihar there was much less rain than in Benga Proper. In the Patna districts the general rain of the first rainfall period began on the 3rd and lasted till the 6th, while during the second rainfall period the only general rain was on the 23rd, 24th, and 26th, though in the Sonthal Parganas district the rainfall of both periods was somewhat more heavy and more extensive. The following were the falls exceeding 3″ in 24 hours recorded in the Bihar division :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sonthal Parganas	Assenboni	2nd Sept.	4·75
Shahabad	Bhabhua	3rd ,,	5·04
Gaya	Sherghati	,, ,,	3·77
Monghyr	Jamui	,, ,,	3·22
Patna	Hilsa	,, ,,	3·20
Gaya	Gaya	4th ,,	4·12
Saran	Gopalganj	,, ,,	3·54
Sonthal Parganas	Sarwan	,, ,,	3·05
Shahabad	Sasaram	5th ,,	5·10
Sonthal Parganas	Madhupur	5th Sept.	4·92
Sonthal Parganas	Deoghur	,, ,,	3·40
Sonthal Parganas	Sarwan	,, ,,	3·35
Sonthal Parganas	Jamtara	,, ,,	3·11
Shahabad	Bhabhua	6th ,,	4·25
Malda	Sibganj	8th ,,	5·20
Sonthal Parganas	Bario	23rd ,,	4·15
Sonthal Parganas	Katikund	,, ,,	3·95
Sonthal Parganas	Rajmahal	,, ,,	3·52
Malda	Malda	,, ,,	3·41
Muzaffarpur	Muzaffarpur	26th ,,	4·26
Champaran	Bagaha	,, ,,	3·46

The following gives comparative data for the different districts in this division :—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Patna	7·07	7·01	+0·06	+ 1
Gaya	8·17	6·69	+1·48	+22
Shahabad	8·42	6·89	+1·53	+22
Saran	5·81	7·55	—1·74	—23
Champaran	6·84	9·81	—2·97	—30
Muzaffarpur	6·01	7·97	—1·96	—25
Darbhanga	4·50	9·58	—5·08	—53
Monghyr	5·65	7·91	—2·26	—29
Bhagalpur	4·16	9·18	—5·02	—55
Purnea	4·58	13·28	—8·70	—66
Malda	10·16	11·04	—0·88	— 8
Sonthal Parganas	7·05	9·48	—2·43	—26

Orissa, like other parts of Bengal, had two rainfall periods during the month, the first lasting from the 1st to the 7th, the second from the 21st to the 26th. On neither occasion

was the rainfall particularly heavy, and the only falls exceeding 3″ in 24 hours were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Ingul	Pal Lahara	3rd Sept.	4·28
Balasore	Balasore	21st ,,	4·75
	Bhadrak	,, ,,	3·92
Puri	Satpara	,, ,,	3·65
Balasore	Soro	,, ,,	3·55
Ingul	Kumarkhole	,, ,,	3·41
Cuttack	Kendrapara	,, ,,	3·09
Balasore	Soro	22nd ,,	5·20
Puri	Ranpur	,, ,,	3·71
Ingul	Bassipara	,, ,,	3·70
Balasore	Balasore	,, ,,	3·22
Puri	Banpur	,, ,,	3·05
Balasore	Balasore	23rd ,,	3·60

The following gives comparative data of the districts in this division :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuttack	8·49	10·21	−1·72	−17
Balasore	15·55	11·37	+4·18	+37
Puri	7·43	10·67	−3·24	−30

Chota Nagpur came under the influence of both the cyclonic storms of the month, but particularly of the first. Heavy rain fell between the 2nd and the 7th, the largest amounts having been recorded on the 4th. The following gives the falls exceeding 4″ in 24 hours recorded during this period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Singhbhum	Kalkipur	3rd Sept.	4·10
	Monaharpur	4th ,,	10·47
Manbhum	Jhalda	,, ,,	7·25
Palamau	Balumath	,, ,,	6·80
Hazaribagh	Chatra	,, ,,	6·23
Singhbhum	Ghatsila	,, ,,	5·00
Ranchi	Silli	,, ,,	4·80
Singhbhum	Kalkipur	,, ,,	4·67
Manbhum	Barahabhum	,, ,,	4·45
Singhbhum	Gailkura	,, ,,	4·20
Manbhum	Barahabhum	5th ,,	4·30
Palamau	Chattarpur	,, ,,	4·20
	Ranka	6th ,,	4·50

From the 9th to the 20th the weather was fine, but from the 21st to the 26th there was fairly general rain, the heaviest amounts (exceeding 2″ in 24 hours) having been as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Manbhum	Barahabhum	22nd September.	2·40
Singhbhum	Ghatsila	,, ,,	2·15
	Kalkipur	,, ,,	2·10
Manbhum	Purulia	23rd ,,	3·65
	Barahabhum	,, ,,	3·50
	Jhalda	,, ,,	2·70
Singhbhum	Baharagura	27th ,,	2·38

The following gives comparative data of the different districts in this division :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Hazaribagh	10·01	8·65	+1·36	+16
Ranchi	11·85	9·37	+2·48	+26
Palamau	9·77	7·81	+1·96	+25
Manbhum	11·51	7·74	+3·87	+50
Singhbhum	8·53	7·81	+0·72	+9

The following table gives a summary of the rainfall data of the month in the nine divisions of the province :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.	Average actual, September 1901.	Average normal, September.
	Inches.	Inches.	Inches.			
Eastern Bengal . .	20·97	10·96	+10·01	+91	13·1	12·8
Deltaic „ . .	13·78	8·50	+ 5·28	+62	11·7	11·8
Central „ . .	11·66	9·32	+ 2·34	+25	9·7	11·6
North „ . .	11·21	15·38	— 4·17	−27	11·6	12·5
Bengal Hills . . .	8·80	19·53	−10·73	−55	12·7	16·9
Orissa	8·37	10·48	— 2·11	−20	10·0	12·6
Chota Nagpur . .	10·50	8·30	+ 2·20	+27	9·7	11·3
South Bihar . . .	6·34	6·93	— 0·59	— 9	7·6	9·0
North „ . . .	4·91	9·57	— 4·66	−49	6·6	9·3

The North-Western Provinces received rain during two periods over the greater part of the provinces, the first period lasting from the 1st to the 4th, 5th or 6th, the second from the 24th to the 26th. In the western division there was practically no rain during the second rainfall period and very little during the first, and the general rainfall of the North-Western Provinces was less than usual, except in the east divisions and on the hills.

In Oudh most of the rainfall of the first period was recorded between the 1st and the 5th, but in several districts showers continued until the 9th. The rainfall was heaviest on the 3rd and 4th, and the following falls exceeding 2″ in 24 hours were recorded during this period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sultanpur . .	Amethi . . .	1st September	2·87
Kheri . . .	Kheri . . .	2nd „	2·14
Bara Banki . .	Haidargarh . .	3rd „	4·54
	Nawabganj . .	„ „	3·72
	Fatehpur . .	„ „	3·67
Sitapur . . .	Sitapur . . .	„ „	3·60
Lucknow . . .	Lucknow . . .	„ „	3·52
Bara Banki . .	Ram Sanehighat . .	„ „	3·35
Sitapur . . .	Sidhauli . . .	3rd September	2·98
	Biswan . . .	„ „	2·24
Rai Bareli . .	Drigbijaiganj . .	„ „	2·22
	Dalmau . . .	„ „	2·09
	Rai Bareli . . .	„ „	2·07
Lucknow . . .	Malihabad . . .	„ „	2·06
Sitapur . . .	Misrikh . . .	„ „	2·05
	Sitapur . . .	4th „	2·95
Bahraich . . .	Kaisarganj . . .	6th „	2·04
Fyzabad . . .	Bikapur . . .	8th „	3·50
	Fyzabad . . .	„ „	2·80
Gonda . . .	Tarabganj . . .	„ „	2·18

The second rainfall period lasted from the 23rd to the 26th and was due to the second cyclonic storm of the month. The rainfall was much heavier in this than in the previous rainfall period, more particularly in the Fyzabad and Gonda districts. The following gives the falls of over 5″ in 24 hours during this period :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 25th September.
		Inches.
Gonda	Tarabganj	16·85
Fyzabad	Bikapur	10·60
	Fyzabad	9·00
Gonda	Gonda	7·63
	Utraula	7·06
Kheri	Nighasan	6·97
Sultanpur	Sultanpur	6·64
Sitapur	Biswan	6·35
Kheri	Kheri	6·07
Bahraich	Kaisarganj	6·02
Hardoi	Hardoi	5·51
Sitapur	Sitapur	5·40
Sultanpur	Amethi	5·32
	Kadipur	5·12
Sitapur	Sidhauli	5·01

The following gives comparative rainfall data for the districts in the two Oudh divisions :—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Fyzabad	9·88	7·62	+2·26	+31
Gonda	13·85	8·27	+5·58	+67
Bara Banki	10·13	6·68	+3·45	+50
Bahraich	10·86	6·90	+3·96	+57
Sitapur	13·14	6·56	+6·58	+100
Kheri	12·51	7·53	+4·98	+66
Sultanpur	10·30	7·74	+2·56	+33
Partabgarh	8·50	6·72	+1·78	+26
Rai Bareli	7·46	7·13	+0·33	+ 5
Unao	6·35	5·45	+0·90	+17
Lucknow	9·32	6·40	+2·92	+46
Hardoi	5·44	5·71	—0·27	— 5

In the south-east division of the North-Western Provinces the rainfall was generally similar to that in Oudh, except that the rainfall of the first rainy period was the more important of the two periods. This is shown in the following table which gives the falls exceeding 3″ in 24 hours during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Allahabad	Allahabad	3rd September	3·70
	Meja	» »	3·05
	Barah	4th »	3·70
Jaunpur	Kirakat	» »	3·54
Benares	Chandauli	» »	3·17
Allahabad	Soraon	» »	3·10
	Meja	5th »	4·28
Mirzapur	Chunar	» »	3·67
Allahabad	Phulpur	» »	3·15
Ghazipur	Muhammadabad	6th »	3·31

The following gives comparative data for the different districts in this division :—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ghazipur	7·27	5·02	+2·25	+45
Benares	7·17	6·59	+0·58	+ 9
Jaunpur	6·61	7·78	—1·17	—15
Mirzapur	7·42	6·97	+0·45	+ 6
Allahabad	10·48	6·50	+3·98	+61

The central division received showers on the 1st and 2nd and on the 11th, 12th and 13th and heavy rain from the second cyclonic storm on the 24th and 25th. The following are the principal heavy falls (exceeding 3″) which were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cawnpore	Ghatampur	24th September	4·75
	Bilhaur	» »	4·60
Hamirpur	Rath	» »	3·70
	Kulpahar	» »	3·48
	Bela Thal	» »	3·48
Etawah	Auriya	» »	3·40
Banda	Banda	» »	3·25
Farukhabad	Kaimganj	» »	3·10
Banda	Karwi	25th »	3·26

Comparative rainfall data for the districts in this division are given below :—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Banda	6·33	6·50	—0·17	— 3
Fatehpur	5·09	5·42	—0·33	— 6
Hamirpur	6·01	5·48	+0·53	+10
Cawnpore	4·34	5·15	—0·81	—16
Jalaun	2·56	4·95	—2·39	—48
Etawah	2·74	5·63	—2·89	—51
Farukhabad	2·35	5·36	—3·01	—56
Mainpuri	1·03	5·33	—4·30	—81
Etah	0·85	5·71	—4·86	—85

The west division received showers during the 1st and 2nd and a few scattered showers on the 24th and 25th. The average actual rainfall was very largely below the normal, as is shown by the following comparative data for the different districts in this division :—

District.	Rainfall.			
	Average actual, Sept. 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jhansi	2·63	5·31	—2·68	—50
Agra	0·78	4·76	—3·98	—84
Muttra	0·44	4·18	—3·74	—89
Aligarh	0·34	4·58	—4·24	—93
Bulandshahr	0·68	5·03	—4·35	—86
Meerut	0·71	4·58	—3·87	—84

In the submontane division the rainfall was heavier and more general than in other parts of the North-Western Provinces. As in Oudh the largest amounts were received from the second cyclonic storm and during the second rainfall period. The heaviest falls (exceeding 5″) were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bareilly	Choreli	24th Sept.	9·80
Pilibhit	Pilibhit (City)	25th ,,	12·24
	,, (Kachahri)	,, ,,	11·97
Naini Tal	Kilpuri	,, ,,	10·75
Pilibhit	Amaria	,, ,,	9·95
Bareilly	Baheri	,, ,,	9·93
	Oganpur	,, ,,	9·00
Naini Tal	Naini Tal	,, ,,	8·22
Bareilly	Nawabganj	,, ,,	7·75
Naini Tal	Haldwani	,, ,,	7·50
Pilibhit	Bisalpur	,, ,,	7·02
Shahjahanpur	Shahjahanpur	,, ,,	6·75
Almora	Tanakpur	,, ,,	6·68
	Champawat	,, ,,	5·50
Naini Tal	Nagla	,, ,,	5·25

The general rainfall of the whole division was less than the normal, as is shown by the following comparative data for the different districts of the division :—

District.	Rainfall.			
	Average actual, Sept. 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Pilibhit	13·60	8·21	+5·39	+66
Shahjahanpur	6·15	6·05	+0·10	+ 2
Budaon	2·09	6·14	—4·05	—66
Bareilly	7·27	7·38	—0·11	— 1
Moradabad	1·14	6·38	—5·24	—82
Bijnor	0·85	7·75	—6·90	—89
Muzaffarnagar	1·50	5·47	—3·97	—73
Saharanpur	1·13	6·88	—5·75	—84
Dehra Dun	5·48	10·82	—5·34	—49
Almora	9·02	8·62	+0·40	+5
Garhwal	4·34	5·61	—1·27	—23
Naini Tal	10·95	8·66	+2·29	+26

In the north-east division two rainfall periods were shown as in other parts of the North-Western Provinces. In this division the rainfall of the first and second periods was about equally heavy. The following gives the falls exceeding 3″ in 24 hours :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Azamgarh	Jewanpur (Sagri)	6th Sept.	5·07
Gorakhpur	Hata	,, ,,	3·40
Basti	Domariaganj	25th ,,	5·23
	Haraya	,, ,,	4·88
	Bansi	,, ,,	3·78
		26th ,,	4·35
Gorakhpur	Maharajganj	,, ,,	4·14

The following is a comparative statement of the rainfall

data of the month published in the North-Western Provinces Gazette :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, Sept. 1901.	Average normal, Sept.	Variation of actual from normal, Sept. 1901.	Percentage variation from normal.	Average actual, Sept. 1901.	Average normal, Sept.
	Inches.	Inches.	Inches.			
North-Western Provinces East.	8·24	6·89	+1·35	+20	8·9	8·1
South Oudh . .	7·80	6·52	+1·28	+20	6·5	7·4
North Oudh . .	7·01	7·22	—0·21	— 3	7·2	7·2
North-Western Provinces Central.	3·55	5·50	—1·95	—35	3·4	6·5
North-Western Provinces West.	0·59	4·62	—4·03	—87	1·2	4·8
North-Western Provinces East Submontane.	7·71	7·98	—0·27	— 3	8·4	7·9
North-Western Provinces West Submontane.	4·23	7·29	—3·06	—42	4·3	6·3
North-Western Provinces Hills.	8·21	7·88	+0·33	+ 4	7·5	9·6

The month's rainfall was in excess in the east division of the North-Western Provinces and in South Oudh, was normal in North Oudh, the east submontane division and the hills division and was in defect elsewhere, more particularly in the west division.

In the Punjab local showers were received, chiefly in the hill and submontane districts, between the 1st and the 13th and again on the 19th, 20th and 21st. The rainfall amounts were generally light or moderate, but exceeded 2·00″ at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Hazara . . .	Haripur . . .	1st Sept. .	2·86
Jhelum . . .	Jhelum . . .	2nd ,, .	2·31
Kangra . . .	Dera	,, ,, .	2·11
Bannu . . .	Mianwali . . .	4th ,, .	2·17
Kangra . . .	Dera	13th ,, .	2·85
Jhang . .	Layallpur (c) . .	,, ,, .	2·80
	Lyallpur . . .	,, ,, .	2·67
Ferozepore . .	Moga	,, ,, .	2·22
Hazara . . .	Haripur . . .	19th ,, .	2·30
Rawalpindi . .	Murree . . .	,, ,, .	2·06

The following gives comparative data for each of the districts of the Punjab :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Hissar	0·08	2·22	—2·14	— 96
Ferozepore	0·34	2·58	—2·24	— 87
Montgomery	0	1·12	—1·12	—100
Gurgaon	0·39	4·38	—3·99	— 91
Rohtak	0·64	3·36	—2·72	— 81
Delhi	0·12	5·21	—5·09	— 98
Karnal	0·54	4·06	—3·52	— 87
Lahore	0·21	2·43	—2·22	— 91
Umballa	1·64	5·60	—3·96	— 71
Ludhiana	2·02	3·74	—1·72	— 46
Jullundur	0·52	3·85	—3·33	— 86
Hoshiarpur	1·59	4·25	—2·66	— 63
Gurdaspur	3·01	4·43	—1·42	— 32
Amritsar	1·35	2·56	—1·21	— 47
Simla	2·27	5·82	—3·55	— 61
Kangra	3·08	6·79	—3·71	— 55
Gujranwala	0·67	2·13	—1·46	— 69
Sialkot	1·56	2·64	—1·08	— 41
Gujrat	2·21	2·66	—0·45	— 17
Jhelum	3·33	2·08	+1·25	+ 60
Rawalpindi	4·51	3·20	+1·31	+ 41
Peshawar	1·63	1·15	+0·48	+ 42
Hazara	4·69	2·84	+1·85	+ 65
Kohat	3·52	1·49	+2·03	+136
Bannu	1·04	0·75	+0·29	+ 39
Shahpur	1·19	1·27	—0·08	— 6
Jhang	0·45	0·77	—0·32	— 42
D. I. Khan	0·08	0·52	—0·44	— 85
D. G. Khan	0·02	0·41	—0·39	— 95
Muzaffargarh	0·07	0·54	—0·47	— 87
Mooltan	0·03	0·70	—0·67	— 96

The preceding data show that in the North Punjab districts the rainfall was heavier than usual, but that elsewhere it was very short of the normal and that over the South-East and South Punjab and the Derajat practically no rain fell during the month.

Baluchistan was practically rainless throughout the month. Kashmir had three periods of showery weather. The first lasted from the 1st to the 3rd, the second from the 10th to the 13th and the third from the 18th to the 20th. The falls were moderate or light and only exceeded 2 inches on the following dates at the following places:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jummoo	Meerpore	1st September	3·20
	Jummoo	11th "	2·11
Kashmir	Domel	13th "	2·25
Jummoo	Kishtwar	" "	2·23
	Do.	20th "	2·01
	Do.	28th "	2·23

Rajputana received a few light local showers generally of no importance, and the rainfall in that area as in the Southern Punjab and Sind was practically *nil*.

The Central India states received showers during the first three days of the month, between the 10th and the 16th and between 22nd and the 26th. The rainfall, though much lighter than usual, was considerably heavier than in Rajputana, and the following falls exceeding 3 inches in 24 hours were recorded on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Maihar	Maihar	1st September	7·51
Rewah	Umaria	" "	3·32
	Sohagpur	2nd "	4·07
Bundelkhand	Datia	" "	3·07
Rewah	Sohagpur	3rd "	5·12
	Rewah	" "	3·60
	Bardi	" "	3·38
	Tyonthar	4th "	5·04
	Bardi	" "	4·00
	Do.	5th "	3·12
Gwalior	Bhander	23rd "	3·71
Nagode	Nagode Hospital	24th "	3·87
Rewah	Tyonthar	" "	3·72

The rainfall of the month was very scanty and largely below the normal in some parts of this area, as is shown by the following comparative statement for the larger States:—

State.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Precentage variation from normal.
	Inches.	Inches.	Inches.	
Bhopal Agency	1·59	8·87	—7·28	—82
Gwalior	1·32	6·23	—4·91	—79
Rewah	11·64	7·22	+4·42	+61
Bundelkhand	4·45	6·55	—2·10	—32
Nagode	9·78	7·12	+2·66	+ 37
Maihar	15·29	6·77	+8·52	+126

The rainfall of the month in the Central Provinces occurred during two periods. Light to heavy showers between the 1st and the 4th gave a very irregularly distributed rainfall during the first period. The following gives the falls exceeding 3 inches in 24 hours at this time:—

State.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M of date.
			Inches.
Narsinghpur	Mohpani	1st September	3·80
	Gadarwara	" "	3·41
Saugor	Khurai	2nd "	5·83
Bilaspur	Pendra	" "	5·83
Hoshangabad	Sohagpur	" "	4·67
	Pachmarhi	" "	4·04
Bilaspur	Korba	" "	3·45
	Janjgir	" "	3·24
	Pendra	3rd "	5·34
Mandla	Dindori (Ramgarh)	" "	4·75
Sambalpur	Sambalpur	" "	3·90
	Raigarh (State)	" "	3·08

After the 4th a period of fine weather with light scattered showers set in and continued till the 20th, when the second rainfall period commenced and lasted till the 25th.

During this second period the following were the heaviest (exceeding 3 inches in 24 hours) falls reported :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chanda	Chanda	23rd September.	6·82
	Warora	,, ,,	5·16
Balaghat	Behir	,, ,,	4·44
Bilaspur	Pendra	,, ,,	3·12
Damoh	Hatta	24th ,,	3·73
Chanda	Armori	,, ,,	3·12
Nagpur	Katol	,, ,,	3·10

The general rainfall was about normal in the eastern districts, in slight defect in the central districts and very deficient in the western districts. The following gives comparative data for all the districts in the Central Provinces :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage Variation from normal.
	Inches.	Inches.	Inches.	
Sambalpur	6·09	8·07	— 1·98	—25
Bilaspur	10·68	7·95	+ 2·73	+34
Raipur	4·58	6·57	— 1·99	—30
Chanda	7·18	8·05	— 0·87	—11
Bhandara	5·52	8·38	— 2·86	—34
Balaghat	7·90	9·19	— 1·29	—14
Seoni	6·91	8·47	— 1·56	—18
Mandla	7·38	6·70	+ 0·68	+10
Narsinghpur	7·92	8·82	— 0·90	—10
Saugor	4·62	7·13	— 2·51	—35
Damoh	6·64	7·39	— 0·75	—10
Jubbulpore	5·01	6·95	— 1·94	—28
Wardha	4·94	7·33	— 2·39	—33
Nagpur	4·37	8·19	— 3·82	—47
Chhindwara	4·26	8·29	— 4·03	—49
Hoshangabad	5·10	10·95	— 5·85	—53
Betul	2·84	8·98	— 6·14	—68
Nimar	1·38	7·01	— 5·63	—80

In Berar the rainfall of the month was as scanty as in the neighbouring division of the west of the Central Provinces. Scattered showers were received from the 1st to the 21st, after which there were three days of fairly general rain followed by fine clear weather. The only heavy falls of rain were recorded between the 22nd and the 24th, when the following amounts exceeding 2″ were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Wun	Wun	23rd Sept.	6·92
Akola	Balapur	,, ,,	2·50
Amraoti	Talegaon	,, ,,	2·35
Wun	Panderkowra	,, ,,	2·34
Amraoti	Kholapur	,, ,,	2·30
Wun	Ner	,, ,,	2·30
Amraoti	Murtizapur	,, ,,	2·22
Wun	Yeotmal (Civil Station)	,, ,,	2·20
Buldana	Deulgaon Raja	,, ,,	2·10
Amraoti	Talegaon	24th ,,	2·17
	Amraoti (Civil Station)	,, ,,	2·11

The following gives comparative data of this division :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, Sept. 1901.	Average normal, Sept.	Variation of actual from normal, Sept. 1901.	Percentage variation from normal.	Average actual, Sept. 1901.	Average normal, Sept.
	Inches.	Inches.	Inches.			
Berar	2·80	7·34	—4·54	—62	4·2	...

In the Bombay Presidency, with the exception of the Deccan district, the rainfall was very scanty, and in Sind, no rain whatever fell during the month. In the Konkan there was fairly general, though on the whole light, rain between the 1st and the 7th; showers fell between the 10th and the 13th and between the 16th and the 24th, after which the rains ceased. There were no heavy falls reported, and the general rainfall of the month was only about one-third of the normal. The following gives comparative data for the different districts of this division :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
North Kanara	2·96	10·24	— 7·28	—71
Ratnagiri	4·77	16·52	—11·75	—71
Kolaba	5·19	19·66	—14·47	—74
Thana	3·33	14·65	—11·32	—77

In the Karnatak there was practically no rain until the 15th, when a showery period set in and lasted till the 24th. The rainfall occurred mainly during thundershowers and was hence irregularly distributed. The following gives the falls exceeding 2″ in 24 hours which were recorded in this division :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bijapur	Badami	16th Sept.	3·30
	Muddebihal	" "	2·37
Dharwar	Ranebennur	" "	2·35
Kolhapur, etc.	Ramdurg	" "	2·25
Belgaum	Belgaum	18th "	4·18
Dharwar	Kalghatgi	" "	3·05
	Kod	19th "	2·01
Belgaum	Gokak	20th "	3·48
Bijapur	Bagevadi	" "	3·34
	Bilgi	" "	2·30
Dharwar	Gadag	23rd "	2·20
	Bankapur	25th "	2·10

After the 24th only light scattered showers were received. The following gives comparative data for the districts in this division :—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dharwar	5·83	3·88	+1·95	+50
Bijapur	5·30	5·58	—0·28	— 5
Belgaum	5·20	4·52	+0·68	+15
Kolhapur and other Southern Maratha country States.	4·53	3·37	+1·16	+34

In the South Deccan the rainfall conditions were generally similar to those in the Karnatak. Scattered showers occurred in the early part of the month and general showers between the 15th and the 24th. The following falls exceeding 2″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Satara	Pusesaveli	15th September	2·12
Poona	Maval (Vadgaon)	19th "	4·20
Satara	Panchgani	" "	3·37
	Khandala	" "	3·04
	Koregaon	" "	2·65
Sholapur	Karmala	" "	2·16
Satara	Dahivadi	" "	2·15
	Satara	20th "	2·45
	Shirala	" "	2·14
Poona	Khed	" "	2·07
Sholapur	Akluj	22nd "	2·31
Satara	Tasgaon	" "	2·03
Poona	Talegaon (Dhamdhera)	23rd "	2·33
	Indapur	" "	2·28
Sholapur	Malsiras	" "	2·20
	Karmala	" "	2·20

The following gives comparative data for the districts in this division :—

District.	Rainfall. Average actual, Sept. 1901.	Average normal, Sept.	Variation of actual from normal, Sept. 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Satara	4·79	4·83	—0·04	— 1
Sholapur	4·66	7·86	—3·20	—41
Poona	4·36	7·50	—3·14	—42

The North Deccan had less rain than the South Deccan, and only scattered thundershowers were received during the month. The following gives comparative data for the different districts :—

District.	Rainfall. Average actual, Sept. 1901.	Average normal, Sept.	Variation of actual from normal, Sept. 1901.	Perntage variation from normal.
	Inches.	Inches.	Inches.	
Ahmednagar	2·75	5·94	—3·19	—54
Nasik	3·35	8·04	—4·69	—58
Khandesh	1·21	4·49	—3·28	—73

Gujarat obtained light showers up to the 12th or 13th, but the falls were light and the total rainfall of the month

was largely below the normal. This is shown by the following comparative data for the different districts:—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Surat	1·20	11·81	—10·61	—89
Broach	0·50	8·62	— 8·12	—94
Kaira	0·44	6·45	— 6·01	—93
Panch Mahals	0·56	8·55	— 7·99	—93
Ahmedabad	0·63	5·06	— 4·43	—87

Kathiawar obtained about the same amount of rain as Gujarat and the relative deficiency was nearly as large. The following gives data for the districts in this division:—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Kathiawar	1·05	4·82	—3·77	—78
Cutch	0·24	2·72	—2·48	—91

In Sind the month was rainless. Mysore had little rain of importance during the first fortnight, but from the 15th to the 20th there was general rain and from the 21st to the end of the month moderate showers were received. The following amounts exceeding 3 inches in 24 hours were received on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bangalore	Hoskote	10th Sept.	6·10
	Closepet	,, ,,	4·10
	Bangalore	,, ,,	3·95
Hassan	Alur	,, ,,	3·22
Tumkur	Maddagiri	15th ,,	7·70
	Koratagere	,, ,,	3·20
	Chiknayakanhalli	16th ,,	5·77
Bangalore	Hoskote	,, ,,	5·50
Tumkur	Gubbi	,, ,,	4·35
	Kunigal	,, ,,	3·18
	Tumkur	20th ,,	3·40
Bangalore	Bangalore	,, ,,	3·19
Tumkur	Turuvekere	21st ,,	3·30

The following gives comparative data for the eight districts in the province:—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Bangalore	8·89	5·28	+3·61	+68
Kolar	4·97	5·10	—0·13	— 3
Tumkur	8·17	4·83	+3·34	+69
Mysore	7·15	4·06	+3·09	+76
Hassan	3·40	3·58	—0·18	— 5
Shimoga	3·30	5·88	—2·58	—44
Kadur	4·50	5·85	—1·35	—23
Chitaldroog	4·25	4·81	—0·56	—12

In Coorg there was no rain up to the 14th after which showers set in and continued till the close of the month.

The rainfall of the Madras Presidency was in excess of the normal in the southern divisions and normal or in slight defect in other places.

The Malabar districts received practically no rain from the 1st to the 15th, but from the 16th onward to the close of the month daily rain was reported. The rainfall was heaviest between the 20th and the 24th, as is shown by the following statement which gives the heaviest falls (exceeding 3 inches in 24 hours) recorded during the month:—

District.	Station.	Date.	Raintall during 24 hours preceding 8 A.M. of date.
			Inches.
Malabar	Quilandi	20th September	5·20
	Manjeri	,, ,,	5·07
South Canara	Hosdrug	,, ,,	4·69
Malabar	Kuttiadi	,, ,,	4·61
	Cannanore	,, ,,	4·48
	Badagora	,, ,,	4·46
	Tellicherry	,, ,,	4·30
Malabar	Tal pa ramba	,, ,,	3·88
	Payyanur	,, ,,	3·18
South Canara	Beltangadi	,, ,,	3·05
Malabar	Kuttiadi	22nd ,,	3·24
	Cannanore	24th ,,	3·03
Travancore State	Mavelikara	25th ,,	6·97
	Karunagapally	,, ,,	6·92
	Chengannur	,, ,,	5·34
	Quilon	,, ,,	4·35

The general rainfall of the month was about normal, as is shown by the following comparative data for the two districts in this division :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Malabar	9·15	7·66	+1·49	+19
South Canara	6·50	12·23	—5·73	—47

In South Madras there were showers throughout the month which became heavy and general towards its close. The total rainfall of the month was in large excess, as is shown by the following statement of the comparative data of the different districts :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madura	6·41	2·97	+3·44	+116
Tinnevelly	2·86	1·19	+1·67	+140

The rainfall was occasionally heavy and exceeded 3 inches in 24 hours at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Madura	Tirumangalam	8th September	4·60
	Dindigul	,, ,,	4·09
	Sivaganga	,, ,,	3·28
	Melur	17th ,,	3·31
	Sivaganga	25th ,,	4·52
	Madura	26th ,,	3·52
	Pamban	27th ,,	4·27
Tinnevelly	Srivaikuntam	30th ,,	3·01

In South Central Madras the weather was exceedingly showery except between the 18th and the 25th when it was fine. Falls exceeding 3 inches in 24 hours were recorded at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Coimbatore	Aravakurchi	8th September	4·12
Salem	Sendamangalam	13th ,,	3·72
Coimbatore	Gopichittipalayam	,, ,,	3·52
Salem	Palokode	15th ,,	3·84
	Dharmapuri	,, ,,	3·44
	Sankaridrug	,, ,,	3·20
	Pennagaram	,, ,,	3·17
	Hosur	,, ,,	3·01
Coimbatore	Aravakurchi	26th ,,	3·32
	Perundurai	29th ,,	3·10

The total rainfall of the month was in large excess, as is shown by the following comparative statement for the two districts in this division :—

District.	Rainfall.			
	Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Salem	8·96	5·86	+3·10	+ 53
Coimbatore	8·16	3·19	+4·97	+156

Central Madras received rain during three showery periods, the first lasting from the 8th to the 10th, the second from the 15th to the 20th and the third from the 26th to the 29th. The rainfall generally occurred during thundershowers and the fall was consequently irregularly distributed. The following gives the falls exceeding 3 inches in 24 hours :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cuddapah	Vayalpod	10th September	3·51
Anantapur	Yadaki	15th ,,	4·00
	Penukonda	20th ,,	7·06

The following gives comparative data for the four districts in this division :—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuddapah	3·92	5·20	—1·28	—25
Anantapur	5·65	5·01	+0·64	+13
Bellary	3·65	5·20	—1·55	—30
Kurnool	3·09	5·79	—2·70	—47

In the north division of the East Coast generally light scattered showers were reported up to the 19th. Subsequently general rain set in lasting until the 25th and during this period the following amounts exceeding 3 inches in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Ganjam	Berhampur	20th September	3·39
	Ichchhapuram	" "	3·14
	Ichchhapuram	21st "	8·95
	Sompeta	" "	7·42
	Gopalpur	" "	5·15
	Berhampur	" "	4·66
	Ramagiri	" "	3·46
Vizagapatam	Waltair	" "	3·43
Ganjam	Chatrapur	" "	3·12
	Balliguda	22nd "	3·87
	Ichchhapuram	" "	3·63
	Purushottapur	" "	3·05
Vizagapatam	Polavaram	23rd "	4·32
	Bimlipatam	24th "	3·35
Ganjam	Calingapatam	25th "	3·04

The general rainfall of the month was in slight defect of the normal, as is shown by the following comparative data for the four districts in this division :—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ganjam	9·23	7·88	+1·35	+17
Vizagapatam	6·98	7·63	—0·65	— 9
Godavari	4·87	7·29	—2·42	—33
Kistna	2·37	6·04	—3·67	—61

In the central division of the East Coast the rainfall was considerably lighter than in the north division, but it fell generally under the same conditions. There were no heavy falls during the month and the total rainfall was in slight defect. This is shown in the following statement giving comparative data for the Nellore district :—

District.	Rainfall. Average actual, September 1901.	Average normal, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Nellore	3·41	4·43	—1·02	—23

In the south division there were fairly general showers between the 1st and the 18th to 20th, then a fine period up to the 25th after which showers recommenced and continued till the close of the month. The rainfall was heavy on several occasions and falls exceeding 4 inches in 24 hours were reported at the following places on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
North Arcot	Polur	1st Sept.	6·00
	Arni	" "	5·59
Tanjore	Nidamangalam	13th "	6·18
South Arcot	Villupuram	16th "	5·34
Trichinopoly	Thuraiyur	18th "	4·50

The total rainfall of the month was generally heavier than usual as is shown by the following comparative data for the different districts in the division :—

District.	Rainfall. Average normal, September 1901.	Average actual, September.	Variation of actual from normal, September 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madras	3·96	4·79	—0·83	—17
Chingleput	3·79	5·54	—1·75	—32
North Arcot	6·00	5·95	+0·05	+ 1
South Arcot	8·48	5·92	+2·51	+42
Tanjore	9·33	4·48	+4·85	+108
Trichinopoly	11·44	4·89	+6·55	+134

W. L. D.

Table

Abstract of Observations taken at 8 A.M. at 223 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	I.—Burma Coast and Bay Islands.				+·033								86·9	+1·6	76·5	+1·7	81·7	+1·7	10·4					16·9
1	Tenasserim and Bay Islands.	Car Nicobar	25																					
		Port Blair	61	29·836	+·019	29·828	29·911	1st	29·753	20th	·158	81·1	86·9		78·0		82·4		8·9	90·6	5th	74·6	22nd	16·0
		Mergui	96	29·834	+·030	29·862	29·903	23rd	29·788	17th & 18th.	·115	79·6	86·7	+2·6	75·0	+3·5	80·8	+3·1	11·7	89·1	14th, 15th & 27th.	73·4	4th, 7th & 27th.	15·7
		Tavoy	26	29·902	?	29·859	29·979	23rd	29·841	18th	·138	75·4	86·6	+3·0	74·7	+1·1	80·7	+2·1	11·9	89·2	12th, 18th, 29th & 30th.	72·0	30th	17·2
		Moulmein	94	29·813	+·031	29·844	29·903	23rd	29·753	18th	·150	79·3	86·1	+1·6	75·3	+1·2	80·7	+1·4	10·8	93·5	11th	72·3	15th	21·2
2	Lower Burma	Rangoon	41	29·847	+·027	29·826	29·933	24th	29·793	18th	·140	79·6	86·8	+1·3	76·5	+0·6	81·7	+1·0	10·3	90·1	6th	72·9	19th	17·2
		Bassein	27	29·866	+·043	29·828	29·953	24th	29·813	14th	·140	79·9	87·4	+2·1	77·7	+2·2	82·6	+2·2	9·7	90·2	18th	75·6	8th & 9th	14·6
		Diamond Island	41	29·840	+·032	29·816	29·931	24th	29·782	19th	·149	82·4	85·8	+1·1	78·8	+3·5	82·2	+2·3	7·0	88·4	13th & 17th.	75·2	24th	13·2
5	Arakan	Akyab	20	29·837	+·039	29·800	29·926	24th	29·713	3rd	·213	80·9	87·1	+0·5	77·7	?	82·4	?	9·4	89·9	19th, 22nd & 23rd	72·5	2nd	17·4
3	Central Burma.	Toungoo	183	29·703	+·044	29·829	29·798	23rd	29·640	6th	·158	81·1	89·0	+0·4	75·0	−0·4	82·0	0	14·0	92·6	19th	72·6	1st	20·0
	II.—Burma Inland				+·052								90·5	−0·5	76·1	+0·5	83·3	0	14·4					21·4
3	Central Burma.	Thayetmyo	130	29·748	+·057	29·819	29·839	29th	29·690	4th	·149	81·6	90·5	+0·8	77·5	+1·8	84·0	+1·3	13·0	93·7	30th	74·6	5th & 19th.	19·1
4	Upper Burma	Minbu	165	29·704	+·053	29·813	29·816	23rd	29·632	2nd	·184	79·7	89·1	−2·1?	76·9	+0·4	83·0	−0·9?	12·2	93·6	30th	74·6	18th	19·0
		Yamethin	657	29·217	+·052	29·826	29·315	23rd	29·150	6th	·165	79·3	90·7	−1·3	75·0	+0·3	82·9	−0·5	15·7	97·0	20th	72·2	22nd	24·8
		Mandalay	250	29·616	+·049	29·815	29·737	23rd	29·541	2nd	·196	82·8	95·1	?	77·6	+0·9	86·4	?	17·5	97·0	14th	75·3	1st	21·7
		Kindat	377	29·476	+·060	29·809	29·586	23rd	29·354	2nd	·232	78·5	87·9	−0·9	75·3	+0·1	81·6	−0·4	12·6	92·3	15th	72·8	5th	19·5
		Bhamo	381	29·468	+·043	29·803	29·584	23rd	29·345	2nd	·239	78·2	89·7	−0·5	74·2	−0·1	82·0	−0·3	15·5	97·0	9th	72·6	25th	24·4
4(a)	Burma Hill Stations.	Maymyo		26·420			26·529	23rd	26·268	2nd	·261	71·5	78·8		66·2		72·5		12·6	82·5	19th & 23rd.	64·3	17th & 27th.	18·2
		Taungyi										67·9	75·3	−1·9						80·2	6th & 12th.			
		Lashio										73·2	84·9	+0·5	68·4	+1·0	76·5	+0·8	16·5	89·5	15th & 17th.	65·1	17th	24·4
	III.—Assam				+·035								87·7	−0·2	75·8	−0·3	81·8	−0·3	11·9					20·0
7	Surma	Silchar	104	29·739	+·045	29·795	29·856	30th	29·587	2nd	·269	80·4	90·1	+0·4	75·8	−0·5	83·0	−0·1	14·3	95·6	19th, 20th & 21st.	72·3	13th	23·3
9	Brahmaputra	Sibsagar	333	29·512	+·036	29·804	29·617	30th	29·363	2nd	·254	78·2	87·2	−1·4	76·1	−0·4	81·7	−0·9	11·1	92·2	22nd	73·0	12th	19·2
		Dhubri	115	29·695	+·023	29·765	29·813	30th	29·538	2nd	·275	79·4	86·1	+0·3	76·9	−0·1	81·5	+0·1	9·2	90·2	21st & 29th.	72·7	8th	17·5
		Tezpur	292	29·561		29·811	29·862	30th	29·406	2nd	·256	78·6	87·3		75·7		81·5		11·6	91·1	21st	73·4	19th	17·7
		Dibrugarh	394	29·471		29·831	29·582	30th	29·280	2nd	·302	77·8	87·8		74·5		81·2		13·3	93·2	22nd	71·0	12th & 16th.	22·2
	IV.—Bengal and Orissa				+·032								88·9	+0·6	77·8	+0·3	83·3	+0·5	11·1					20·1
6	East Bengal	Chittagong	87	29·742	+·028	29·777	29·871	30th	29·603	2nd	·268	81·3	87·2	+0·6	76·2	0	81·7	+0·3	11·0	91·5	19th & 20th.	73·6	3rd	17·9
		Noakhali	43	29·759		29·749	29·894	30th	29·609	5th	·285	81·5	87·3		77·8		82·6		9·5	91·2	21st	73·9	30th	17·3
		Comilla	36	29·787		29·771	29·933	30th	29·621	2nd	·312	81·1	88·9		76·2		82·6		12·6	94·2	20th	73·3	30th	21·0
		Sirajganj	49	29·736		29·735	29·885	30th	29·554	4th	·331	81·2	87·8		78·0		82·9		9·8	92·3	17th	70·2	8th & 9th.	22·1
		Narayanganj	26	29·787	+·042	29·762	29·951	30th	29·601	4th	·350	82·2	88·2	−0·3	79·2	+0·5	83·7	+0·1	9·0	92·1	20th & 21st.	75·2	7th	16·9
		Barisal	13	29·781	+·024	29·739	29·933	30th	29·604	4th	·329	82·0	87·8	+0·3	78·0	+0·3	83·0	+0·3	9·8	93·3	17th	74·6	6th & 7th.	18·7
		Mymensingh	59	29·747	+·032	29·757	29·871	30th	29·592	4th	·279	81·3	86·5	−1·1	77·8	+0·7	82·2	−0·2	8·7	91·2	15th, 17th & 21st.	74·1	21st & 26th.	17·1
10	Deltaic Bengal	Faridpur	46	29·758?		29·752?	29·901	30th	29·550	6th	·351	81·9	88·2		78·0		83·1		10·2	91·3	5 days	74·9	22nd	6·9
		Jessore	33	29·750	+·015	29·729	29·893	30th	29·447	6th	·446	82·3	89·4	+0·3	78·4	0	83·9	+0·2	11·0	·5	18th	75·2	11th	19·3
		Calcutta	21	29·763	+·032	29·730	29·913	30th	29·494	6th	·419	82·5	88·9	+1·5	77·9	+0·1	83·4	+0·8	11·0	94·2	17th	74·1	30th	20·1
		Saugor Island	25	29·766	+·042	29·735	29·911	30th	29·569	3rd	·342	82·8	88·3	+0·5	80·3	+0·9	84·3	+0·7	8·0	92·4	20th	76·1	21st	16·3
		Krishnagar	47	29·734		29·730	29·891	30th	29·365	6th	·526	82·0	89·7		77·8		83·8		11·9	94·3	4 days	74·2	8th & 9th.	20·1
		Midnapore	149	29·631		29·728	29·782	30th	29·410	3rd	·372	81·7	89·3		77·6		83·4		11·7	95·3	18th & 19th.	75·7	6 days	19·6

I.

in India, Burma, etc., in September, 1901.

WIND DIRECTION. Number of Winds from										WIND VELOCITY.				HYGROMETRY, 8 A.M.			RAINFALL.									Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind resultant.	Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 30th Sept. 1901.	Normal rainfall for period, 1st June to 30th Sept.	Variation from normal of period, 1st June to 30th Sept.				
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52			
																				13·71	21·76	−8·05					I.—Burma Coast and Bay Islands.		
																											Car Nicobar	TENASSERIM AND BAY ISLANDS.	1
2				2	6	6	10	4	S 61° W	8·2		9·3	−12	89	·950	7·1	16			13·09	19·56	− 6·47	66·76	69·53	−2·77	2·77	Port Blair .		
29					1				S	1·4	1·2	1·5	−20	92	·914	4·3	14			9·61	28·78	−19·17	136·64	121·25	+15·39	1·67	Mergui,		
27					1	1	1		S 45° W	1·1				92	·903	5·3	21			13·90	33·19	−19·29	152·73	163·50	−10·77	2·48	Tavoy.		
2	1	1	1	2	3	16	3	1	S 42° W	1·8	2·0	2·8	− 29	89	·896	7·5	21	22·36	−1·36	19·27	28·85	− 9·58	153·47	149·35	+4·12	2·81	Moulmein.		
2	1	1	6	3	4	8	5		S 10° W	3·6		3·8	− 5	92	·938	9·2	18	19·55	−1·55	13·58	16·04	− 2·46	70·00	73·42	−3·42	1·97	Rangoon .	LOWER BURMA.	2
13				4	3	6	3	1	S 29° W	3·3		3·4	− 3	94	·963	7·1	16	21·27	−5·27	8·76	16·00	− 7·24	70·13	86·69	−16·56	1·65	Bassein.		
4		3	5	4	2	7	5		S	6·1	6·1	6·8	− 12	85	·953	7·3	15	18·90	−3·90	11·20	19·19	− 7·99	87·93	91·36	−3·43	2·45	Diamond Island.		
	2	9	10	5	2	2			N 86° E	1·8	1·7	3·0	− 43	93	·985	7·0	19	17·73	+1·27	24·38	22·04	+ 2·34	170·55	158·83	+11·72	6·63	Akyab .	ARAKAN.	5
3		2		17	6	1		1	S 36° E	3·9	3·9	2·8	+ 39	87	·936	7·9	17	17·55	−0·55	9·60	12·21	− 2·61	55·76	63·23	−7·47	1·48	Toungoo .	CENTRAL BURMA.	3
																				9·03	8·02	+1·01					II.—Burma Inland.		
				10	16	2	1	1	S 10° E	5·3		4·7	+ 13	84	·904	5·4	10	13·36	−3·36	4·36	6·23	− 1·87	19·27	26·57	− 7·30	1·10	Thayetmyo.	CENTRAL BURMA.	3
1	1		1	19	6	1		1	S 35° E	5·5	6·5			91	·931	6·8	9			5·99	5·36	+ 0·63	19·22	19·92	− 0·70	1·81	Minbu .	UPPER BURMA.	4
10		1		14	5				S 37° E	4·0	4·2			88	·880	7·1	15			9·87	6·89	+ 2·98	25·10	20·10	+ 5·00	1·49	Yamethin.		
				4	21	3		2	S 2° W					84	·918	3·4	11			4·97	6·54	− 1·57	17·79	18·45	− 0·66	1·50	Mandalay.		
23	1	1	1	2			1	1	N 52° E	0·7	0·7			93	·918	8·2	14			19·10	13·27	+ 5·83	55·19	53·60	+ 1·59	5·77	Kindat.		
10	1	4				2	1	12	N 37° W	1·8	2·1			92	·890	5·2	14			9·87	9·84	+ 0·03	42 27	58·10	−15·83	2·05	Bhamo.		
8		1	2	2	1	12	4		S 39° W	3·2				90	·856	7·0	16			10·38			32·10			1·58	Maymyo .	BURMA HILL STATIONS.	4 (a)
	2	3	25						N 81° E					89	·606	6·2	18			8·65	7·34	+ 1·31	37·86	43·10	− 5·24	1·70	Taunggyi.		
	6	10	2	2	2	3	1	4	N 24° E	0·9				91	·750	8·8	11			5·53	6·76	− 1·23	38·62	42·28	− 3·66	0·90	Lashio.		
																				11·51	13·31	−1·62					III.—Assam.		
30									Calm	0·4	0·7	2·7	− 74	89	·933	7·6	12	15·85	−3·85	15·37	14·35	+ 1·02	72·94	73·84	− 0·90	2·91	Silchar .	BURMA.	7
12	3	5		1		7	2		N 71° W	2·1	2·1	2·5	−16	96	·924	8·9	14	14·67	−0·67	11·67	12·22	− 0·56	58·14	59·20	− 1·06	3·66	Sibsagar .	BRAHMAPUTRA.	9
4	2	8	9			6	1		N 70° E	4·7	5·5	3·2	+72	91	·916	6·7	13	12·13	+0·87	8·03	13·35	− 5·32	53·36	67·81	−14·45	2·08	Dhubri.		
	1	7	11	2		4	4	1	N 77° E	1·8	1·9			91	·893	6·5	14			6·19			42·54			1·41	Tezpur.		
	9	2	6	1	1	3	2	6	N 1° W	1·3	1·2			92	·861	4·9	17			16·29						2·90	Dibrugarh.		
																				14·60	11·25	+3·35					IV.—Bengal and Orissa.		
	2	6	4	11	6		1		S 62° E	5·5	5·5	4·5	+ 22	88	·949	7·0	14	13·76	+0·24	17·36	12·91	+ 4·45	61 67	78·56	−16·89	4·15	Chittagong.	EAST BENGAL.	6
		3	7	6	6	5	2	1	S 33° E	5·4	5·0			89	·958	7·2	17	15·42	+1·58	33·00	15·77	+17·23	105·36	88·69	+14·67	8·80	Noakhali.		
6			3	8	12		1		S 24° E	4·8				87	·923	6·5	16	13·12	+2·88	17·24	10·51	+ 6·73	60·22	60·94	− 0·72	3·93	Comilla.		
13		1	4	4	6	2			S 31° E	2·1	2·2			92	·931	5·2	11	11·31	−0·31	21·01	9·10	+11·91	59·29	42·65	+16·64	7·35	Sirajganj.		
4		1	3	11	4	5	2		S 22° E	6·0		4·6	+ 21	89	·880	6·6	11	11·61	−0·61	18·70	8·51	+10·19	59·77	47·67	+12·10	5·70	Narayanganj		
2	1	3	1	4	8	8	2	1	S 9° W	3·4				89‡	·972‡	5·2	10	14·61	−4·61	17·51	10·79	+ 6·72	56·42	55·10	+ 1·32	6·00	Barisal.		
11			3	6					S 60° E	1·7	1·7			90	·962	7·5†	16	14·84	+1·16	42·89	12 94	+29·95	105·90	61·14	+44·76	8·45	Mymensingh.		
16			2	10	1	1			S 42° E	1·4	1·3			92	1·007	5·1	12	11·76	+0·24	14·88	8·95	+ 5·93	50·31	45·77	+ 4·54	3·34	Faridpur .	DELTAIC BENGAL.	1
10		2		4	8	4	2		S 5° W	3·0	3·0	3·4	− 12	90	·995	5·8	13	11·96	+1·04	13·28	8·09	+ 5·19	42·00	43·15	− 1·15	6·20	Jessore.		
3		1	1	5	5	10	4	1	S 27° W	4·7		4·5	+ 4	85	·919	5·6	12	13·73	−1·73	19·08	9·33	+ 9·75	54·22	45·48	+ 8·74	5·52	Calcutta.		
		3	2		6	14	4	1	S 40° W	12·5		10·1	+ 24	83	·992	6·7	11	13·53	−2·53	9·39	11·23	− 1·84	51·42	51·63	− 0·21	1·99	Saugor Island.		
1		2	3	4	10	5	4	1	S 4° W	3·6				89	·973	5·1	14	10·34	+3·66	11·05	7·31	+ 3·74	33·86	37·80	− 3·94	4·46	Krishnagar.		
6	4		2	1	9	5	2	1	S 24° W	2·7	2·4			86	·929	4·1	12	12·07	−0·07	11·01	7·68	+ 3·35	41·30	41·04	+ 3·26	3·24	Midnapur.		

† Mean of 20 days.

‡ Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 223 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° lat.	Highest pressure recorded month.	Date.	Lowest pressure recorded month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
11	Central Bengal	Bankura	298	29·156		29·705	29·617	30th	29·221	5th	·396	81·5	89·6		77·4		83·5		12·2	96·1	18th	72·9	9th	22·2
		Raniganj	334	29·441		29·724	29·600	30th	29·194	6th	·406	80·3	90·0		76·8		83·4		13·2	96·2	17th	72·4	8th	23·8
		Burdwan	99	29·679	+·020	29·726	29·853	30th	29·409	6th	·424	82·7	89·7	+0·2	78·9	+0·2	84·3	+0·2	10·8	95·4	16th & 18th.	74·3	8th	21·1
		Naya Dumka	489	29·284		29·732	29·443	30th	29·051	7th	·392	81·2	88·9		76·2		82·5		12·7	94·0	16th & 17th.	71·4	8th	22·6
		Berhampore	67	29·707	+·016	29·722	29·862	30th	29·433	7th	·429	82·6	89·9	+1·1	78·5	+0·1	84·2	+0·6	11·4	98·8	16th	75·3	8th & 9th.	23·5
		Rampur Boalia.	70	29·707		29·726	29·858	30th	29·474	6th	·383	82·5	88·4		78·5		83·5		9·9	92·6	17th, 18th & 20th.	71·6	7th	21·0
		Malda	72	29·699		29·723	29·844	30th	29·496	7th	·348	82·9	89·3		77·9		83·6		12·4	91·1	17th	72·0	8th	21·1
		Bogra	61	29·721		29·735	29·864	30th	29·553	5th	·311	81·6	88·2	+0·2	77·6	+0·4	82·9	+0·3	10·6	92·7	15th	72·7	8th	20·0
12	North Bengal	Dinajpur	123	29·660	+·024	29·737	29·788	30th	29·498	2nd, 3rd & 5th.	·290	81·3	89·3	+0·8	77·0	−0·5	83·2	+0·2	12·3	93·3	21st	72·0	8th	21·3
		Rangpur	123	29·694		29·771	29·821	30th	29·541	2nd	·280	81·2	89·3		76·6*		82·8*		12·7	93·2	4 days	70·8	8th	22·4
		Jalpaiguri	284	29·524	+·026	29·767	29·645	30th	29·363	2nd	·282	79·7	88·6	+1·3	75·8	+0·5	82·3	+0·9	12·8	91·9	21st	72·1	8th	19·6
		Cooch Behar	156	P.		P	?		P		P	80·1	88·3		76·5		82·4		11·8	92·4	1st, 20th & 21st.	73·6	7th	18·8
17	North Bihar	Purnea	125	29·668	+·040	29·747	29·787	30th	29·498	2nd	·299	81·1	89·9	+1·0	77·0	−0·3	83·5	+0·4	12·9	93·7	21st	74·2	6th & 8th.	19·5
14	Orissa	Balasore	46	29·747	P	29·740	29·891	30th	29·522	3rd	·369	81·5	89·1	+1·5	77·3	−0·2	83·2	+0·7	11·8	94·9	16th & 17th.	74·8	23rd	20·1
		False Point	21	29·781	+·058	29·743	29·897	30th	29·595	3rd	·302	83·2†	88·5‡	+0·7‡	78·8‡	+0·8‡	83·7‡	+0·8‡	9·7	95·0	12th	75·6	13th, 24th & 28th.	19·4
		Cuttack	80	29·712	+·052	29·735	29·832	30th	29·540	3rd	·292	82·0	91·1	+1·3	78·5	+0·6	84·8	+1·0	12·6	97·9	18th	75·2	24th	22·7
		Puri	20	29·779		29·712	29·889	29th & 30th.	29·622	3rd	·267	83·7	89·9		80·3		85·1		9·6	97·2	19th	76·6	20th & 21st.	20·6
	V.—Gangetic Plain and Chota Nagpur.				+·046								90·0	+0·4	75·9	−0·8	83 0	−0·2	14·1					22·3
15	Chota Nagpur	Hazaribagh	2,007	27·792	+·047	29·750	27·924	30th	27·604	3rd	·320	76·4	83·9	−0·5	71·8	−0·3	77·9	−0·4	12·1	89·2	19th	68 3	8th	20·9
		Ranchi	2,128	27·671	+·050	29·745	27·801	30th	27·472	3rd	·329	76·0	83·5	+0·3	71·5	+0·7	77·5	+0·5	12·0	89·2	19th	67·9	8th & 28th.	21·3
		Daltonganj	730?	29·047		29·738	29·183	30th	28·855	2nd	·328	77·2	89·5		74·7		81·1		16·8	95·1	17th & 18th.	69·0	27th	26·1
		Purulia		28 962		29·725	29·112	30th	28·738	3rd	·374	80·7	89·3		75·1		82·2		14·2	96·6	11th	71·9	8th	24·7
		Chaibassa	760	29·017		29·729	29·157	30th	28·784	3rd	·373	79·5	88·7	0	75·5	−0·2	82·1	−0·1	13·2	95·1	18th	71·0	29th	21·1
16	South Bihar	Gaya	375	29·400	+·052	29·740	29·548	30th	29·217	2nd	·331	81·6	91·2	+0·4	76·9	−1·0	84·1	−0·3	14·3	96·2	17th & 19th.	73·8	8th	22·4
		Dehri	351	29·429		29·735	29·565	30th	29·239	3rd	·326	82·4	90·1		77·6		83·9		12·5	95·8	18th	74·0	22nd	21·8
		Patna	183	29·599	+·039	29·735	29·739	30th	29·413	3rd	·326	83·1	90·7	+0·5	78·4	−0·7	84·6	−0·1	12·3	95 0	19th & 20th.	76·2	5 days	18 8
		Arrah	190	29·584		29·728	29·725	30th	29·392	3rd	·333	82·7	90·8		77·8		84·3		13·0	95·0	18th	76·0	4 days	19·0
		Buxar	239	29·540		29·735	29·681	30th	29·356	3rd	·325	82·1	89·9		77·2		83·6		12·7	95·0	18th & 21st.	71·1	26th	20·9
17	North Bihar	Bhagalpur	160	29·625		29·738	29·760	30th	29·432	3rd	·328	82·9	90·1		77·3		83·7		12·8	91·2	18th	72·6	8th	21·6
		Darbhanga	166	29·615	+·030	29·735	29·745	30th	29·446	2nd	·299	82·0	90·1	+1·9	78·3	−0·5	84·2	+0·7	11·8	93·3	5 days	75·5	8th & 26th.	17·8
		Muzaffarpur	178	29·625		29·757	29·758	30th	29·444	3rd	·314	82·4	90·3		76·9		83·6		13·4	93·2	4 days	74·7	8th, 16th & 26th.	18·5
		Motihari	224	29·575		29·758	29·700	30th	29·390	2nd	·310	81·6	90·4		75·5		83·0		14·9	94·0	18th, 21st & 22nd.	72·8	4 days	21·2
		Chapra	181	29·608		29·743	29·747	30th	29·425	3rd	·322	82·7	91·0		77·3		84·2		13·7	94·9	18th	74·6	28th	20·3
18	N.-W. Provinces, (East).	Benares	267	29·507	+·049	29·730	29·643	30th	29·328	2nd	·315	80·5	90·4	−0·5	76·3	−1·2	83·4	−0·9	14·1	96·3	18th	74·0	5 days	22·3
		Allahabad	309	29·473	+·054	29·737	29·607	30th	29·297	2nd	·310	81·5	91·5	+0·7	76·0	−0·8	83·8	−0·1	15·5	96·6	18th	73·3	26th, 27th & 28th.	25·3
23	N.-W. Provinces, (East Sub-montane),	Gorakhpur	256	29·525	+·052	29·741	29 666	30th	29·338	2nd	·328	81·3¶	90·2¶	−0·1¶	76·7¶	−1·8¶	83 5¶	−1·0¶	13·5	93·5	14th, 15th & 17th.	74·7	6th	18·8
19	South Oudh	Lucknow	368	29·399	+·040	29·726	29·549	30th	29·239	2nd	·310	81·0	92·1	+0·4	75·3	−1·0	83·7	−0·3	16·8	98·3	19th	71·8	3rd	26·5
20	North Oudh	Bahraich	403	29·362	+·040	29 727	29·517	30th	29·195	2nd	·322	81·1	90·4	−0·2	75·3	−1·1	82·9	−0·7	15·1	96·1	18th, 21st & 22nd.	72·0	16th, 26th & 27th.	24·1
21	N.-W. Provinces (Central).	Cawnpore	416	29·362	?	29·734	29·506	30th	29·193	2nd	·313	81·4	92·9	+0·6	75·7	−1·0	84·3	−0·2	17·2	97·9	19th & 17th.	72·0	26th	25·9
		Mainpuri	516	29·255	+·051	29·732	29·398	30th	29·079	2nd	·319	80·8	94·0	+1·6	74·7	−1·2	84·4	+0·2	19·3	101·3	20th	70·0	25th & 26th.	31·3

* Mean of 23 days. † Mean of 29 days. ‡ Mean of 30 days. ¶ Mean of 17 days.

—continued.

n India, Burma, etc., in September, 1901—continued.

WIND DIRECTION. Number of Winds from										WIND VELOCITY.				HYGROMETRY, 8 A.M.			RAINFALL.														
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Resultant.	Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 30th September 1901.	Normal rainfall for period, 1st June to 30th September.	Variation from normal of period, 1st June to 30th September.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
4		4	2	2	1	3	9	5	N 76° W	3·5	4·1			84	·899	4·4	8	12·69	− 4·69	14·14	8·03	+ 6·11	42·30	43·56	− 1·26	7·37	Bankura .	Central Bengal	11
21		1	1	1		1	1	4	N 45° W	1·6				87	·907	4·8	9	11·76	− 2·76	12·71	7·33	+ 5·38	39·39	43·05	− 3·66	4·70	Raniganj .		
8	2	4	1	1	2	5	4	3	N 79° W	3·3	3·2	3·1	+ 3	86	·963	4·4	12	12·19	− 0·19	8·77	8·04	+ 0·73	24·49	40·04	− 5·55	3·06	Burdwan .		
9	2	2	4	2	4	1	3	3	S 45° E	2·4	2·6			84	·889	5·0	10	13·32	− 3·32	5·68	9·53	− 3·85	34·96	46·09	−11·13	1·19	Naya Dumka		
5	2	1	3	6	7	2	4		S 17° E	3·4	3·7	3·7	0	87	·973	5·1	11	12·61	− 1·61	8·40	10·13	− 1·73	28·79	41·99	−13·20	2·93	Berhampur		
14	1	2	1	3	3	3	3		S 11° W	2·8	2·8			84	·940	3·5	9	12·12	− 3·12	21·48	10·38	+11·10	42·53	42·89	− 0·36	10·50	Rampur Boalia.		
	3	4	9	4	4	3	2	1	S 79° E	3·4	3·1			83	·930	4·3	11	11·35	− 0·35	10·25	10·85	− 0·60	35·62	43·49	− 7·87	3·41	Malda .		
19			11						E					88	·950	4·4	11	12·04	− 1·04	21·39	10·88	+10·51	63·23	49·90	+13 33	10·62	Bogra .		
	2	12	2	3	3	6	1	1	N 74° E	5·4	6·3			86	·924	4·5	13	12·31	+ 0·69	9·04	11·39	− 2·35	38·60	53·82	−15·22	1·81	Dinajpur .	North Bengal .	12
7		6	5	2	6	3	1		S 58° E	4·0	4·3			87	·933	4·4	14	13·04	+ 0·96	10·83	13·72	− 2·89	48·52	61·05	−12·53	2·52	Rangpur .		
	5	7	6	5	1	1	1	4	N 51° E	1·7	2·1			89	·899	2·3†	14	15·04	− 1·04	5·94	22·37	−16·43	97·70	103·77	− 6·07	1·14	Jalpaiguri .		
19		5	4	1		1			N 76° E	2·1	2·2			88	·905	7·1	15			14·53	22·61	− 8·08	92·56	102·73	−10·17	4·78	Cooch Behar		
		7	3	9	2	4	1	4	S 69° E	2·5	2·2	2·0	+10	87	·930	2·4	10	11·16	− 1·16	5·72	13·22	− 7·50	36·22	53·01	−16·79	1·47	Purnea .	North Bihar .	17
19			1		4	6			S 21° W	2·1				81	·879	5·1	12	14·00	− 2·00	20·62	12·95	+ 7·67	37·89	47·05	− 9·16	4·36	Balasore .	Orissa.	14
	1		3	2	4	4	14	2	S 67° W	8·4	8·0	7·9	+ 1	86‡	·972‡	6·5	11	13·23	− 2·23	8·46	11·56	− 3·10	27·47	47·90	−20·43	2·06	False Point.		
18		1	2		2	4	3		S 37° W.	2·1		8·4	−75	82	·901	5·9	9	13·15	− 4·15	5·71	11·07	− 5·36	29·90	47·88	−17·98	1·37	Cuttack.		
16		1		2	1	9	1		S 32° W	9·3	8·7			82	·953	4·0	7	13·11	− 6·11	7·87	10·26	− 2·49	17·87	38·60	−20·73	2·13	Puri.		
																				7·43	7·49	−0·25					V.—Gangetic Plain and Chota Nagpur.		
1	3	1	2	4	5	2	8	4	S 67° W	7·6	7·0	7·0	0	78	·716	5·6	13	12·35	+ 0·65	11·82	8·76	+ 3·06	31·77	43·66	−11·89	3·17	Hazaribagh.	Chota Nagpur.	15
1	2	1	4	4	1	4	5	8	N 72° W	5·5	6·5			82	·736	5·6	11	14·50	− 3·50	10·45	9·62	+ 0·83	43·23	46·24	− 2·91	3·73	Ranchi.		
24		1	2	1			2		E	2·0	2·5			87	·815	2·9	12	10·73	+ 1·27	9·04	7·79	+ 1·25	29·57	39·10	− 9·53	2·17	Daltonganj .		
17	1	1	2	1			4	4	N 37° W	2·1				81	·840	4·0	8			11·34			36·05			3·65	Purulia.		
18		1	1			4	4	2	S 82° W	1·9	1·6			86	·864	3·9	10	12·31	− 2·31	6·66	8·05	− 1·39	37·35	43·10	− 5·75	2·03	Chaibassa.		
1	4	5	1	5	3	6	5		S 18° W	3·6	3·2	2·3	+ 3	77	·830	4·2	10	9·31	+ 0·69	10·42	6·89	+ 3·53	37·15	39·05	− 1·90	4·12	Gaya .	South Bihar.	16
1	1		6	2	6	8	2	4	S 18° W	6·6	5·9			80	·880	4·2	8	10·07	− 2·07	4·87	6·81	− 1·94	23 56	37·07	−13·51	1·40	Dehri.		
2		5	7	4	1	6	4	1	S 45° E	4·2	5·0	2·9	+72	81	·922	3·9	7	9·65	− 2·65	3·89	7·40	− 3·51	22·06	37·79	−15·73	1·38	Patna.		
6	7	2	9				5	1	N 29° E	2·1	2·2			84	·935	0·7	5	9·81	− 4·81	3·96	7·19	− 3·23	25·66	36·95	−10·29	1·56	Arrah.		
2	1	1	9	2	2	2	9	2	S 27° W	5·2	4·8			83	·901	3·6	6	9·19	− 3·19	4·20	7·17	− 2·97	25·27	35·38	− 10·11	1·01	Buxar.		
6		6	2	4	3	5	3	1	S 27° E	4·9	4·6			79	·883	4·9	9	9·42	− 0·42	4·62	7·37	− 2·75	23·32	38·44	−15·12	1·50	Bhagalpur .	North Bihar.	17
13	1	1	6	4	1	2	1	1	S 63° E	2·0		3·6	−44	84	·914	3·7	5	9·16	− 4·16	3·28	8·94	− 5·66	31·30	41·36	−10·06	1·53	Darbhanga.		
19		2	5	2			1	1	N 81° E	1·5	1·4			87	·961	2·5	7	8·96	− 1·96	8·97	8·92	+ 0·05	39·72	39·31	+ 0·41	4·68	Muzaffarpur		
	1	4	13	3	2	4	1	2	S 81° E	4·5	4·4			91	·987	2·8	7	9·04	− 2·04	5·00	9·45	− 4·45	42·11	44·21	− 2·10	1·85	Motihari.		
5	1	1	10	3	2	3	5		S 50° E	2·5	2·1			83	·920	4·1	6	8·38	− 2·38	4·80	6·94	− 2·14	28·75	35·65	− 6·90	1·40	Chapra.		
12			5	1	1	6	3	2	S 34° W	2·1	2·4	3·9	−46	85	·894	4·4	12	8 91	+ 3·09	6·21	6·59	− 0·38	26·05	34·29	− 8·24	1·76	Benares .	N.-W. Provinces (East).	18
2		2	5		2	3	12	4	N 89° W	5·9	6·7	5·3	+26	83	·883	4·4	9	7·73	+ 1·27	10·45	6·05	+ 4·40	29·03	35·17	− 6·14	3·02	Allahabad.		
5	3	7	1	1	3	3	3	4	N 11° W	1·5		2·1	−29	83¶	·883¶	4·5	10	8·55	+ 1·45	12·78	8·56	+ 4·22	41·27	43·84	− 2·57	2·23	Gorakhpur	N.-W. Provinces (East Sub-montane).	23
6			5	2		2	13	2	S 81° W	1·6	1·7	2·8	−40	80	·844	5·1	6	7·55	− 1·55	12·51	6·27	+ 6·24	32·15	34·73	− 2·58	4·80	Lucknow .	South Oudh.	19
4	3	1	17				3	2	N 69° E	2·5	2·4			83	·884	2·7	8			11·37	7·45	+ 3·92	36·17	35·08	+ 1·09	4·34	Bahraich .	North Oudh	20
7	1	1	3	2		6	9	1	S 72° W	3·8				76	·814	3·0	5	6·80	− 1·80	5·73	5·06	+ 0·67	26·17	28·02	− 1·85	2·50	Cawnpore .	N.-W. Provinces (Central).	21
11	1	1	1		1		14	1	N 84° W	1·0	1·0			74	·776	3·0	3			1·07	6·09	− 5·02	15·53	30·00	−14·47	0·53	Mainpuri.		

Table

Abstract of Observations taken at 8 A.M. at 223 Stations

Number of district.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	VI.—Upper Sub-Himalayas.				+·037								93·9	+1·4	73·7	−0·2	83·8	+0·6	20·3					31·1
24	N.-W. Provinces (West Sub-Montane).	Bareilly	569	29·194	+·047	29·729	29·364	30th	29·024	2nd	·340	79·5	90·5	+0·2	75·4	−0·5	83·0	−0·2	15·1	95·4	19th	71·1	26th	24·3
		Dehra Dun	2,233	27·564	+·031	29·752	27·713	30th	27·398	3rd	·315	73·4	85·0	+0·7	68·0	−2·3	76·5	−0·8	17·0	88·0	19th	60·0	13th	28·0
		Roorkee	887	28·874	+·035	29·734	29·028	30th	28·698	3rd	·330	77·7	91·2	0	71·8	−1·8	81·5	−0·9	19·4	94·2	19th & 20th.	65·7	16th	28·5
22	N.-W. P., West.	Meerut	738	29·014	+·034	29·722	29·160	30th	28·839	2nd	·321	78·6	93·8	+2·2	72·8	−1·9	83·3	+0·2	21·0	97·6	20th	67·3	26th	30·3
26	South-East Punjab.	Delhi	718	29·045	+·040	29·728	29·181	29th	28·872	3rd	·309	81·2	95·4	+2·8	77·0	+0·4	86·2	+1·6	18·4	100·2	18th & 19th.	71·1	26th	29·1
28	Central Punjab.	Lahore	702	29·043	+·038	29·716	29·175	30th	28·844	3rd	·331	81·4	99·1	+2·4	74·2	+1·2	86·7	+1·8	24·9	103·6	19th	65·9	25th 28th & 29th	37·7
27	South Punjab	Sirsa	662	29·100	?	29·725	29·237	30th	28·918	3rd	·319	84·5	101·6	+3·4	76·9	+1·9	89·3	+2·7	24·7	104·8	1st & 20th.	68·6	25th & 27th.	36·2
		Patiala	818	28·956		29·744	29·082	30th	28·783	3rd	·299	80·3	94·1		73·4		83·8		20·7	98·0	19th	64·9	28th	33·1
2	Punjab Sub-Montane.	Ludhiana	812	28·945	+·034	29·728	29·086	30th	28·769	2nd	·317	80·5	95·4	+0·6	75·6	+0·7	85·5	+0·7	19·8	100·0	19th	67·6	28th	32·4
		Sialkot	830	28·923	?	29·728	29·054	20th	28·717	3rd	·337	78·9	95·8	+0·5	73·6	+0·3	84·7	+0·4	22·2	100·7	19th	68·1	21st	32·6
		Umballa	892	28·869	?	29·733	29·026	30th	28·681	3rd	·345	78·0	91·3	?	71·7	−1·9	81·5	?	19·6	93·5	20th	64·0	29th	29·5
31	North Punjab	Rawalpindi	1,676	28·096	+·036	29·754	28·221	30th	27·922	2nd	·299	75·4	?89·0	?	?63·4	?	75·9	?	?25·6	97·0	30th	60·0	26th	37·0
	VII.—Indus Valley and North-West Rajputana.				−·045								98·5	+0·2	75·2	−0·5	86·9	−0·1	23·3					37·5
31	North Punjab	Peshawar	1,110	28·670	+·039	29·767	28·827	21st	28·453	2nd	·374	78·4	94·9	−0·8	69·3	−0·7	82·1	−0·8	25·6	100·0	3rd	62·0	26th	38·0
32	West Punjab	Khushab	612	29·138	?	29·722	29·271	13th	28·932	3rd	·339	84·6	99·0	−0·2	75·0	−0·6	87·0	−0·4	24·0	102·8	1st & 10th.	65·4	28th	37·4
		Montgomery	558	29·184	+·039	29·707	29·319	30th	28·995	2nd	·324	85·5	101·1	−0·6	75·7	−0·2	88·4	−0·4	25·4	104·5	2nd & 30th.	63·0	27th	41·5
		D. I. Khan	594	29·160	+·053	29·702	29·315	13th	28·931	2nd	·384	81·1	99·1	−0·7	74·1	−1·2	86·6	−1·0	25·0	103·2	18th	61·1	26th & 27th.	42·1
		Mooltan	420	29·316	+·037	29·705	29·438	13th & 30th.	29·105	2nd	·333	82·0	100·7	+1·0	77·1	−0·3	88·9	+0·4	23·6	105·4	30th	67·0	26th	38·4
47	Sind	Jacobabad	186	29·562	+·055	29·710	29·727	30th	29·338	3rd	·389	81·5	103·7	+0·7	74·7	−1·2	89·2	−0·3	29·0	107·4	26th	60·5	25th	46·9
		Hyderabad	96	29·690	+·075	29·739	29·857	30th	29·507	3rd	·350	81·1	96·6	−0·6	74·6	−1·6	85·6	−1·1	22·0	104·1	24th	66·0	25th	38·1
		Kurrachee	30	29·809	+·046	29·790	29·963	30th	29·667	3rd	·296	79·8	89·3	+1·0	76·1	−0·8	82·7	+0·1	13·2	103·4	25th	68·2	24th	34·7
51	West Rajputana	Bikaner	771	29·014	+·037	29·751	29·144	30th	28·850	3rd	·299	84·5	99·9	+2·0	79·0	+2·3	89·5	+2·2	20·9	104·6	21st	77·0	8 days	27·6
		Pachpadra	380	29·471		29·809	29·589	30th	29·313	3rd	·276	82·9	100·2		75·8		88·1		24·4	107·5	23rd	72·8	16th & 27th.	34·7
		Jodhpur	762	29·051		29·815	29·168	30th	28·907	3rd	·261	82·6	99·0		76·1		87·6		22·9	105·2	22nd & 23rd.	72·3	12th 17th & 27th.	32·9
	VIII.—East Rajputana, Central India and Gujarat.				+·069								93·0	+4·3	73·7	−0·2	83·4	+2·1	19·3					30·2
50	East Rajputana	Jaipur	1,431	28·400	+·060	29·792	28·500	30th	28·260	2nd	·240	80·9	98·1	+5·3	72·1	−0·4	85·2	+2·5	26·0	103·2	20th & 21st.	67·1	27th	36·1
		Kotah	819	28·985		29·803	29·086	30th	28·856	2nd	·230	83·7	96·1		71·2		86·7		18·9	102·5	20th	72·1	30th	30·4
		Sambhar	1,254	28·577	?	29·796	28·697	30th	28·441	d	·256	80·8	97·4	+5·8	73·8	−0·1	85·6	+2·9	23·6	102·5	20th & 21st	67·5	26th	35·0
		Ajmer	1,611	28·229	+·068	29·805	·337	30th	·087	2nd	·250	79·9	94·7	+4·3	71·9	+2·0	84·8	+3·2	19·8	100·4	21st	68·1	25th	32·3
		Udaipur*	1,925	27·941		29·827	·034	28th	27·830	3rd	·204	77·2	87·7		69·2		78·5		18·5	95·0	26th	65·8	26th	29·2
		Deesa	466	29·398	+·074	29·820	29·503	28th	29·268	24th	·235	82·1	98·8	+6·5	74·6	+0·9	86·7	+3·7	24·2	108·0	24th	71·5	6th 11th & 25th.	36·5
46	Kathiawar and Cutch.	Bhuj	395	29·467	+·075	29·816	29·568	30th	29·531	3rd	·257	81·0	94·2	+2·5	74·0	−0·7	84·1	+0·9	20·2	103·8	24th	70·9	4 days	32·9
		Jamnagar	61	29·826		29·833	29·935	28th	29·706	3rd	·229	81·3	91·9		73·2		82·5		18·7	97·2	24th	69·2	18th	28·0
		Rajkot	429	29·458	+·080	29·846	29·555	29th	29·361	3rd	·194	78·3	94·2	+3·3	70·5	−2·1	82·3	+0·6	23·7	102·9	24th	66·9	19th	36·0
		Veraval		29·896	+·080	29·856	29·978	28th	29·814	3rd	·164	78·3	83·3	?	74·3	−1·9	78·8	?	9·0	88·6	30th	70·8	15th	17·8
		Dwarka	37	29·863		29·846	29·966	28th & 29th.	29·737	3rd	·229	79·2	84·5		75·5		80·0		9·0	86·4	27th	73·7	27th	12·7
		Bhavnagar Para	35	29·864	+·078	29·844	29·961	28th	29·734	24th	·227	81·2	96·2	+3·8	73·4	−2·4	84·8	+0·7	22·8	104·6	25th	69·8	25th	34·8
49	Central India	Nowgong	757	29·041	+·057	29·760	29·160	30th	28·890	2nd	·270	79·0	89·9	?	74·1	−0·7	82·0	?	15·8	95·5	19th	70·0	27th & 28th.	25·5
		Indore	1,823	28·055	+·088	29·840	28·143	28th	27·957	24th	·186	75·7	87·6	+2·8	69·4	−0·7	78·5	+1·1	18·2	93·8	30th	62·1	30th	31·7
		Neemuch	1,630	28·228	?	29·819	·328	29th	28·117	2nd	·211	78·5	91·4	+4·0	69·7	−0·9	80·6	+1·6	21·7	97·5	20th 22nd & 30th.	64·0	11th	33·5
45	Gujarat	Surat	39	29·875	+·079	29·857	29·961	28th	29·780	23rd	·181	82·7	93·7	+5·5	75·8	+0·4	84·8	+3·0	17·9	101·7	30th	71·0	27th	30·7
		Ahmedabad†	164	29·710	?	29·821	29·801	28th	29·575	24th	·226	81·5	96·5	+5·2	75·4	−0·5	86·0	+2·4	21·1	105·3	23rd	71·1	25th	34·2

* Mean of 22 days.

† Mean of 29 days.

-continued.

India, Burma, etc., in September, 1901—continued.

WIND DIRECTION. Number of Winds from								Wind resultant.	Wind velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 30th September 1901.	Normal rainfall for period 1st June to 30th September.	Variation from normal of period 1st June to 30th September				
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																			2·04	5·07	−2·87					VI.—Upper Sub-Himalayas.		
1	2	1			1	2	4	N 34° W	1·0	1·0	3·0	−67	82	·818	2·4	6	6·73	−0·73	6·38	8·00	−1·62	34·74	44·36	− 9·62	4·67	Bareilly	N.-W. Provinces (West Sub-Montane)	24
3	1	1			1	1	1	N 10° W	0·8		1·1	−27	80	·665	2·3	10	10·30	−0·30	6·20	10·38	−4·18	76·77	78·88	− 2·11	1·95	Dehra Dun.		
			9	3				S 34° E	1·8		2·0	−10	80	·759	1·7	2	5·55	−3·55	0·33	7·17	−6·84	31·52	37·92	−6·40	0·14	Roorkee.		
	1	1			5	7	3	S 86° W	1·4	1·4	2·1	−33	71	·708	0·7	2	4·55	−2·55	1·83	5·74	−3·91	23·98	28·31	− 4·33	1·58	Meerut	N.-W. Provinces West.	22
2	1	2	2	1	2	11	8	N 72° W	3·1	2·9	3·8	−24	61	·646	1·2	0	4·09	−4·09	0·05	4·23	−4·18	17·98	26·15	−8·17	0·05	Delhi	South-East Punjab.	26
1	4	1	2	1		5		N 11° E	1·8		2·0	−10	62	·668	0·8	0	2·55	−2·55	0·09	2·49	−2·40	13·34	16·83	−3·49	0·09	Lahore	Central Punjab	28
	6	2	5	1	9	1	4	S 6° W			3·6		49	·581	0·4	0	2·73	−2·73	0·07	1·79	−1·72	3·96	12·39	−8·43	0·07	Sirsa	South Punjab.	27
1	1	7	6	1	1	9	3	S 4° E	4·8	4·8			73	·763	0·7	2			0·31			18·72			0·19	Patiala.		
	2		7	1	1	7	2	S 37° W	2·1	1·9	1·1	+73	68	·716	1·1	2	3·36	−1·36	0·66	4·38	−3·72	21·15	24·06	−2·91	0·34	Ludhiana	Punjab (Sub-Montane).	29
3	11	10	1		1	1		N 62° E	2·6		1·6	+63	69	·684	1·8	5	2·82	+2·18	1·48	3·11	−1·63	18·88	25·58	− 6·70	0·44	Sialkot.		
1		4	9	1	1	3	3	S 43° E	1·5				83	·799	2·1	3			1·76	5·31	−3·55	19·54	27·75	−8·21	1·00	Umballa.		
7	3	3				1	3	N 15° E	2·7	2·5	1·3	+92	69	·593	1·6	9	4·27	+4·73	5·29	3·13	+2·16	12·04	22·75	−10·71	1·82	Rawalpindi	North Punjab.	31
																			0·17	0·89	−0·72					VII.—Indus Valley and North-West Rajputana.		
			1			1	3	N 60° W	1·1	1·2	3·1	−61	64	·629	1·3	3	1·82	+1·18	1·21	0·64	+0·57	1·85	5·48	−3·63	0·79	Peshawar	North Punjab.	31
1	12	9	1		1			N 65° E	8·4	9·7			59	·635	1·2	2	1·60	+0·40	0·59	1·41	−0·82	7·42	6·98	+0·44	0·40	Khushab	West Punjab.	32
	2	5	2	8	11	1		S 3° W	8·3	7·1			42	·522	0·3	0	1·40	−1·40	0	0·99	−0·99	1·91	7·97	−6·06	0	Montgomery		
7	8		2					N 32° E	2·3	2·4	·7	+41	64	·692	0·5	0	0·73	−0·73	0	0·23	−0·23	6·50	5·07	+1·43	0	D. I. Khan.		
				6	12			S 30° W	2·2	2·7	2·8	− 4	62	·683	0·8	0	0·55	−0·55	0	0·42	−0·42	1·00	5·53	−4·53	0	Mooltan.		
	2	2	6	2				S 57° E	2·7	2·8	3·1	−10	69	·755	0·1	0	0·18	−0·18	0·03	0·06	−0·03	0·18	2·73	−2·15	0·03	Jacobabad	Sind.	47
1				4	22	2	1	S 47° W	12·7	13·2	12·5	+ 6	62	·653	0·7	0	0·80	−0·80	0	0·52	−0·52	0·75	6·03	−5·28	0	Hyderabad.		
1				1	8	15	4	S 83° W	11·3	14·1	14·9	− 5	78	·793	3·8	0	0·82	−0·82	0	0·54	−0·54	0·49	6·08	−5·59	0	Kurrachee.		
		2	1	3	3	11	10	N 87° W	10·0		5·6	+79	58	·686	0·8	0			0	1·19	−1·19	5·51	9·64	−4·13	0	Bikaner	West Rajputana	51
2		1		9	8	8	2	S 52° W	10·9	9·7	6·1	+59	67	·739	0	0			0	1·72	−1·72	2·84	8·83	−5·99	0	Pachpadra.		
1	4				12	8	1	S 74° W	5·5	5·0			53	·583	3·6	0			0	2·04	−2·04	7·89	12·79	−4·90		Jodhpur.		
																			0·85	4·92	−4·11					VIII.—East Rajputana, Central India and Gujarat		
1	3				4	8	10	N 65° W	3·6		5·2	−31	59	·619	1·2	0	5·00	−5·00	0	4·40	−4·40	11·83	26·33	−14·50	0	Jaipur	East Rajputana	50
3					7	10	7	N 81° W	5·2	6·1			59	·675	1·0	1			0·32	5·16	−4·84	20·91	27·50	− 6·59	0·24	Kotah.		
2			1			11	8	N 66° W	4·9		7·2	−32	57	·601	0·9	1	3·50	−2·50	0·22	3·33	−3·11	10·31	20·44	−10·13	0·20	Sambhar.		
			1		4	19	1	S 83° W	6·6		5·0	+32	64	·650	2·4	1	3·18	−2·18	0·25	2·53	−2·28	10·86	19·73	− 8·87	0·25	Ajmer.		
1					5	4	2	S 83° W	4·0	4·0			69	·647	2·0	3			2·69			16·94			1·84	Udaipur.		
3	1			3	12	6	5	S 76° W	9·2		8·5	+ 8	63	·669	2·7	0	3·73	−3·73	0·05	4·83	−4·78	6·64	25·58	−18·94	0·05	Deesa.		
					1	25	4	N 86° W	15·2		11·3	+35	79	·827	3·6	1			0·20	1·96	−1·76	4·68	13·54	− 8·86	0·17	Bhuj	Kathiawar and Cutch.	46
				5	15	7	3	S 56° W	10·8	11·6			75	·800	2·8	2			0·27			3·62			0·15	Jamnagar.		
				2	7	15	6	S 84° W	10·2	10·1	8·5	+19	79	·767	5·1	2	5·73	−3·73	2·25	4·25	−2·00	13·33	27·42	−14·09	0·91	Rajkot.		
1	4		1		7	9	8	N 77° W	7·8	9·2	8·6	+ 7	85	·820	4·4	1			0·29	1·85	−1·56	2·60	18·96	−16·36	0·13	Veraval.		
	1	1		1	11	10	6	S 80° W	12·3				84	·836	2·8	0			0·15			3·34			0·06	Dwarka.		
4					8	7	5	N 83° W	8·1	8·3			71	·748	2·3	2			1·12	5·16	−4·04	15·49	21·22	− 5·73	0·63	Bhavnagar Para.		
3	1	1			2	12	3	N 72° W	2·0	2·0	2·4	−17	80	·798	4·3	4	6·91	−2·91	4·35	6·32	−1·97	32·04	40·79	− 8·75	1·77	Nowgong	Central India.	49
1	3			1	2	14	5	N 76° W	5·0		4·8	+ 4	80	·715	5·6	4	8·91	−4·91	1·40	8·48	−7·08	19·91	31·61	−11·70	0·72	Indore.		
1	5	1			10	12	1	S 83° W	9·6	8·6	10·2	−15	71	·688	2·6	2	6·91	−4·91	0·60	5·35	−4·75	13·15	30·06	−16·91	0·34	Neemuch.		
6	2			4	4	8	3	N 77° W	6·4	6·0	9·2	−35	72	·808	3·3	0	7·55	−7·55	0·35	8·07	−7·72	16·28	44·36	−28·08	0·09	Surat	Gujarat.	45
2		2			11		14	N 75° W	3·0				19	·78	3·2	0			0·11	5·34	−5·23	18·51	36·28	−17·77	0·07	Ahmedabad		

‡ Mean of 19 days.

Table

Abstract of Observations taken at 8 A.M. at 223 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M. in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
22	N.-W. P., West	Agra	555	29·219	+·042	29·739	29·341	28th	29·056	2nd	·285	81·7	97·2	+5·0	76·9	+0·5	87·1	+2·8	20·3	102·5	19th	72·4	25th & 26th.	30·1
21	N.-W.P., Central	Jhansi	858	28·935	+·046	29·752	29·048	29th	28·772	2nd	·276	80·2	93·1	+2·2	76·2	+1·1	84·7	+1·7	16·9	99·3	19th	72·1	28th & 29th.	27·2
	IX.—Deccan				+·066								89·5	+3·1	71·8	+0·3	80·7	+1·7	17·8					28·3
38	Bombay, Deccan	Belgaum	2,539	27·383	+·051	29·866	27·425	8th	27·314	21st	·111	71·7	81·6	+3·1	65·7	+0·5	73·7	+1·8	15·9	85·8	15th	60·4	27th	25·4
		Sholapur	1,590	28·307	+·054	29·852	28·365	28th	28·212	21st	·153	77·5	92·3	+4·3	71·6	+1·4	82·0	+2·9	20·7	97·2	18th	67·0	26th	30·2
		Poona	1,840	28·076	+·061	29·879	28·129	27th	27·993	23rd	·136	73·7	87·0	+3·2	67·7	−1·0	77·4	+1·1	19·3	92·5	17th & 30th.	60·9	27th	31·6
		Bijapur	1,946	27·972	+·063	29·868	28·023	10th	27·881	23rd	·142	75·6	91·3	+5·9	70·2	+0·6	80·8	+3·3	21·1	96·4	18th	60·7	26th	35·7
40	Khandesh	Malegaon	1,430	28·466	+·078	29·855	28·545	28th	28·370	24th	·175	78·3	93·3	+6·2	70·3*	+0·3*	82·4*	+3·3	23·0	99·4	21st	63·6	26th	35·8
		Ahmednagar	2,152	27·767	+·070	29·866	27·812	28th	27·679	23rd	·163	75·5	89·9	+5·5	67·5	−0·4	78·7	+2·6	22·4	93·4	16th, 18th & 22nd.	59·5	26th	33·9
41	Berar	Akola	930	28·942	+·085	29·828	29·030	28th	28·827	24th	·203	78·6	91·9	+3·6	71·9	−0·5	81·9	+1·6	20·0	98·3	18th	64·4	30th	33·9
		Amraoti	1,215	28·651	+·093	29·827	28·741	28th	28·528	24th	·213	77·9	90·7	+3·0	72·6	+0·9	81·6	+2·0	18·1	97·2	21st	69·5	4 days.	27·7
42	Central Provinces, West.	Khandwa	1,044	28·824	+·087	29·831	28·916	26th	28·705	24th	·211	78·6	92·1	+4·7	72·6	−0·3	82·4	+2·2	19·5	100·2	21st	64·6	29th	35·6
		Hoshangabad	1,006	28·848	?	29·821	28·947	28th	28·735	24th	·212	77·7	88·9	+0·9	72·9	−0·3	80·9	+0·3	16·0	94·3	22nd	66·2	29th	28·1
		Nagpur	1,025	28·807	+·073	29·792	28·906	28th	28·673	24th	·233	79·3	91·2	+2·4	73·6	0	82·4	+1·2	17·6	96·6	19th	68·6	30th	28·0
43	Central Provinces, Central.	Chanda	634	29·224	+·057	29·806	29·320	29th	29·092	23rd	·228	79·9	91·0	+2·2	74·2	0	82·6	+1·1	16·8	96·7	19th	71·0	29th & 30th.	25·7
		Seoni	2,033	27·815	+·079	29·795	27·912	28th	27·679	24th	·233	75·9	85·7	+0·4	69·2	−1·4	77·5	−0·5	16·5	92·3	20th	64·5	30th	27·8
		Jubbulpore	1,327	28·486	+·063	29·778	28·588	30th	28·213	2nd	·245	76·9	87·5	+0·5	72·0	−0·8	79·8	−0·2	15·5	94·0	19th	66·2	29th	27·8
		Saugor	1,807	28·040	+·071	29·806	28·134	30th 29th & 30th.	27·895	2nd	·239	76·4	87·4	+1·4	70·7	−0·3	79·1	+0·6	16·7	94·4	19th	66·6	29th	27·8
44	Central India	Sutna	1,040	28·745	+·053	29·750	28·858	28th	28·588	2nd	·270	79·2	88·9	+1·7	74·9	?	81·9	?	14·0	95·0	18th & 19th.	70·6	26th	24·4
44	Central Provinces, East.	Raipur	970	28 841	+·068	29·764	28·947	29th	28·679	2nd	·268	79·9	89·2	+1·7	76·7	+2·2	83·0	+2·0	12·5	95·9	19th	73·6	3rd & 4th.	22·3
		Sambalpur	486	29·300	?	29·736	29·426	28th	29·132	2nd	·294	80·7	89·7	+0·7	77·0	−0·2	83·4	+0·3	12·7	96·1	18th & 19th.	74·2	3rd, 4th, & 28th.	21·9
39	Hyderabad (Nonim).	Aurangabad	1,905	28·002		29·854	28·072	29th	27·905	23rd	·167	76·5	87·3		67·3		77·3		20·0	92·3	18th	60·7	30th	31·6
		Indur		28·580			28·642	27th, 28th & 29th.	28·477	21st	·165	78·4	88·9		72·2		80·1		15·8	92·8	22nd	69·2	30th	23·6
		Bidar	2,165?	27·723		29·825	27·792	29th	27·614	23rd	·178	76·7	87·3		69·3		78·3		18·0	92·3	19th	65·1	6th	27·2
53	Hyderabad (South).	Gulbarga	1,502	28·380		29·834	28·438	28th	28·268	23rd	·170	78·2	92·1		71·9		82·1		20·2	96·6	19th	67·3	26th	29·3
		Raichur	1,326	28·558	+·035	29·839	28·613	29th	28·450	21st	·163	79·0	92·0	+4·5	74·0	+2·0	83·0	+3·3	18·0	95·1	14th, 18th & 19th.	71·1	1st, 6th 24th.	24·0
		Hyderabad (Deccan).	1,630	28·186	?	29·823	28·255	29th	28 064	22nd	·191	78·3	90·0	+3·7	72·9	+2·5	81·5	+3·1	17·1	94·9	18th	70·7	29th	24·2
		Secunderabad	1,787	28·087	+·045	29·823	28·154	29th	27·966	21st	·188	77·1	90·3	+4·0	72·1	+1·7	81·2	+2·9	18·2	96·6	19th	69·0	22nd	27·6
		Hanumkonda	865	28·970		29·806	29·054	29th	28·857	23rd	·197	81·2	91·3		75·4		83·4		15·9	96·4	20th	72·3	9th	24·1
	X.—West Coast				+·034								84·4	+0·8	75·6	+1·0	80·0	+0·9	8·7					14·1
37	Konkan	Bombay	37	29·900	+·070	29·877	29·959	28th	29·818	23rd	·141	80·5	86·6	+2·3	77·9	+1·6	82·3	+2·0	8·7	88·5	19th & 24th.	73·5	12th	15·0
		Ratnagiri	110	29·818	+·062	29·867	29·861	12th	29·749	20th	·112	79·4	85·1	+1·2	75·5	+1·3	80·3	+1·3	9·6	86·4	9th & 20th.	71·9	26th	14·5
		Marmugao	60	29·882	+·041	29·877	29·929	10th	29·818	21st	·111	78·5	84·0	+0·5	75·7	+0·5	79·9	+0·5	8·3	85·5	20th	72·9	4th	12·6
		Goa	199	29·746	+·056	29·883	29·884?	27th	29 672	20th	·212	78·6	82·4	−0·1	76·2	+0·8	79·3	+0·4	6·2	84·0	16th & 17th.	71·5	9th	12·5
		Karwar	44			Barom	eter out	of or	der.			77·2	83·4	+0·8	74·9	+1·4	79·2	+1·1	8·5	85·2	15th	70·5	27th	14·7
33	Malabar	Cochin	11	29·947	+·011	29·885	29·991	10th	29·904	21st	·087	78·7	85·8	+1·5	75·0	+0·8	80·4	+1·2	10·8	89·5	16th	72·7	20th	16·8
		Calicut	27	29·919	+·007	29·876	29·956	10th	29·868	25th	·088	76·8	83·6	−0·6	74·2	+0·3	78·9	−0·2	9·4	87·3	20th	72·5	12th	14·8
		Mangalore	65	29·885	+·017	29··82	29·930	10th	29·833	21st	·097	75·2	83·7	+0·5	75·3	+1·5	79·5	+1·0	8·4	85·8	4th	73·4	4th	12·4
		Trivandrum	198	29·740	+·009	29·870	29·782	1st & 10th.	29·708	16th	·074	78·6	84·6	+1·7	76·0	?	80·3	?	8·6	87·5	15th	73·5	4 days.	14·0
	XI.—South India				+·032								92·0	+1·8	74·9	+1·2	83·4	+1·5	17·1					26·2
57	Madras (South).	Pamban	37	29·866		29·830	29·919	6th	29·823	22nd	·096	82·8	91·5		76·3		83·9		15·2	92·3	9 days.	72·2	30th	20·1
		Tinnevelly	168	29·735	?	29·832	29·779	1st	29·677	21st	·102	85·5	99·5	+1·9	78·8	+0·1	89·2	+1·0	20·7	102·4	3rd, 6th, & 15th.	73·9	27th	28·5
		Madura	447	29·446	+·017	29·830	29·490	1st & 10th.	29·378	21st	·112	81·4	94·6	−1·2	75·5	+0·4	85·1	−0·4	19·1	100·5	6th	71·0	26th	29·5
		Periyakulam		28·958			28·998	10th	28·883	21st	·115	78·8	92·5		72·4		80·6		20·1	98·3	6th	70·4	14th	27·9

* Mean of 24 days.

—*continued.*

India, Burma, etc., in September, 1901—continued.

WIND DIRECTION. Number of Winds from								Wind Resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 30th September 1901.	Normal rainfall for period, 1st June to 30th September.	Variation from normal of period 1st June to 30th, September				
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
	3		3		13		9	S 76° W	4·2	5·0	4·1	+22	67	·718	1·5	2	5·45	−3·45	0·46	4·91	− 4·45	13·61	26·62	−13·01	0·28	Agra	N.-W. P., West	22
2	4		1		15	8		S 67° W	4·4	4·9	3·2	+53	77	·797	1·5	3	7·00	−4 00	1·02	6·80	− 5·78	39·48	36·79	+ 2·69	0·66	Jhansi	N.-W. P., Central	21
																			4 32	7·60	−3·19					IX.—Deccan.		
2		1			9	12	3	S 83° W	11·5		16·7	−31	86	·663	7·3	8	10·18	−2·18	8·32	4·64	+ 3·68	41·13	35·34	+ 5·79	4·00	Belgaum	Bombay Deccan	38
6	3	1			1	1	18	N 29° W	10·0	12·1	9·9	+22	70	·651	4·7	2	9·72	−7·72	2·83	8·16	− 5·33	20·06	21·85	− 4·79	1·63	Sholapur.		
					11	13	4	S 79° W	10·5	11·9	11·4	+ 4	83	·688	6·0	8	8·18	−0·18	3·93	5·21	− 1·28	21·70	20·03	+ 1·67	1·52	Poona.		
1					2	4	3	N 77° W					74	·656	3·4	6	8·60	−2·60	4·84	3·39	+ 1·45	11·87	9·50	+ 2·37	1·95	Bijapur.		
1				1	7	15	6	S 88° W	7·7	8·9	7·6	+17	67	·649	5·5	4	8·64	−4·64	1·18	6·92	− 5·74	11 78	20·46	− 8·68	0·49	Malegaon	Khandesh,	40
6	3				2	5	13	N 40° W	8·3	10·1			77	·676	5·6	5			1·80	7·39	− 5·59	11·84	18·09	− 6·25	0·67	Ahmednagar.		
1						5	20	N 52° W	7·1	7·7	5·8	+33	75	·735	4·7	2	10·18	−8·18	1·21	7·22	− 6·01	22·01	30·94	− 8·93	0·77	Akola	Berar.	41
1	2	2	1		7	12	5	N 89° W	6·9	6·1	4·4	+39	76	·729	4·7	6	8·27	−2·27	3·89	6·94	− 3·05	25·11	31·20	− 6·09	2·11	Amraoti.		
	1		1			13	10	N 70° W	5·8		6·2	− 6	73	·710	4·0	1	7·55	−6·55	0·88	7·56	− 6·68	15·18	29·57	−14·39	0·62	Khandwa	Central Provinces, West.	12
	3				23		3	S 53° W	2·5	2·6	2·5	+ 4	82	·780	3·7	4	10·18	−6·18	2·81	11·61	− 8·80	42·16	51·92	− 9·76	1·47	Hoshangabad.		
6	1	2			1	6	5	N 39° W	6·4		6·1	+ 5	77	·767	4·3	9	10·64	−1·64	3·92	10·13	− 6·21	31·58	43·85	−12·27	1·02	Nagpur.		
					4	12	2	S 85° W	2·8		4·1	−32	77	·798	5·0	7			10·21	10·75	− 0·54	48·53	51·35	− 2·82	6·82	Chanda	Central Provinces, Central.	43
5	4	1	1	1	3	7	8	N 46° W	3·4		3·9	−13	80	·713	3·4	10	11·73	−1·73	7·25	10·45	− 3·20	44·43	52·07	− 7·64	1·82	Seoni.		
1	2	1	1	6	9	6	3	S 53° W	3 5		3·4	+ 3	84	·776	3·2	5	9·36	−4·36	4·97	8·77	− 3·80	52·25	51·79	− 2·54	1·70	Jubbulpore.		
1	3	1	2		4	16	3	N 86° W	5·9	6·7	3·3	+103	78	·717	3·5	4	8·64	−4·64	3·77	8·19	− 4·42	45·29	44·22	+ 1·07	1·38	Saugor.		
4	1	4	1		9	9	1	S 82° W	5·3	5·7	6·5	−12	80	·791	4·5	8	8·36	−0·36	9·09	6·96	+ 2·13	39·68	40·74	− 1·06	2·79	Sutna	Central India	47
	2	2	1		8	3		S 48° W	5·3	4·9	5·9	−17	78	·793	4·2	7	10·45	−3·45	5 07	8·46	− 3·39	42·37	46·51	− 4·14	1·66	Raipur	Central Provinces, East.	44
4	7	2	2	1	5	8	1	N 47° W	4·1	4·0	2·2	+82	83	·879	2·9	8			7·72	10·07	− 2·35	54·47	60·45	− 5·98	3 90	Sambalpur.		
4	2				3	11	8	N 63° W	9·7	9·6			73	661	4·3	6			2·89	7·44	− 4·55	25·51	26·71	− 1·20	0·98	Aurangabad	Hyderabad (North).	39
1	1				1		15	N 43° W	2·3	2·2			79	·767	4·0	5			6·33	6·91	− 0·58	31·27	32·34	+ 1·93	3·85	Indur		
12	1	1	1		7	2	6	N 39° W	7·2	8·5			76	·696	1·8	8			6·14	8·94	− 2·80	21·43	34·38	−12·95	2·33	Bidar.		
6	4					4	12	N 30° W	8·8	8·4			73	710	4·5	8			3·79	6·44	− 2·65	16·82	22·58	− 5 76	0·82	Gulbarga	Hyderabad (South).	53
2	2				3	5	16	N 54° W	8 2	8·0			70	691	3 0	5			4 06	5·54	− 1·48	22 69	20·45	+ 2·24	1·90	Raichur.		
		1		1		17	1	S 89° W	4·6	4·5			75	·721	3·8	5			1·27	5·99	− 4·72	17·34	25·91	− 8·57	0·37	Hyderabad (Deccan)		
4	2		1			1	20	N 34° W	5·8		7·0	−17	77	·714	3·7	6			2·04	5·99	− 3·95	20·48	25·91	− 5·42	0·79	Secunderabad,		
2				1	2	8	9	N 69° W	7·4	6·3			73	·771	4·8	4			1·13			18·69			0·39	Hanumkonda		
																			3·80	9·30	−5 50					X.—West Coast.		
5	4	2	2	1	1	10	5	N 44° W	9·7		11·7	−17	85	·884	6·0	3	14·18	−11·18	1·87	11·81	− 9 94	74·14	69·78	+ 4·36	1·13	Bombay	Konkan.	37
2	2	1	1			2	3	N 12° W	4·1	4·1		−50	86	·861	5·5	9	16·09	−7·09	2·21	13 18	−10·97	74·91	101·60	−29 69	0·59	Ratnagiri.		
3			1	2	1	3	10	N 57° W	8·5‡				92	·896	5·8	11			4·14	6·55	− 2·41	92 26	81·26	+11·00	0·74	Mormugao		
8	8	2	1	1	2	1	5	N 10° E					88	·865	6·9‡	8			4·15	8·57	− 4·42	99·85	92·68	+ 7·17	1·00	Goa.		
8	1	2		1	1		3	N 1° W	3·7				88	·817	4·9	6	16·09	−10 09	1·93	13 75	−11 82	129·99	114·41	+15·58	0·87	Karwar.		
7	7					2	11	N 14° W	5·4				86	·850	7·5	10	15·73	−3·73	7·19	9·38	− 2·19	65·10	72·61	− 7·51	1·51	Cochin	Malabar.	33
1	2		1			5	13	N 48° W	7·6	9·6	2·4		91	·829	6·0	10	10·13	−0·13	8·02	6·16	+ 1·86	85 78	84·55	+ 1·23	2·81	Calicut.		
7	1		2		1	2	6	N 26° W	2·5			+ 4	87	·854	7·7	7	16·60	−9·60	4·04	10·14	− 6·10	91·28	102·39	−11·11	2·09	Mangalore.		
14					1	3	11	N 5° W	8·5				78	·771	6·0	3			0·65	4·13	− 3·48	25·11	29·07	− 3 96	0·26	Trivandrum.		
																			6·09	4·35	+1·76					XI.—South India.		
1	2		7	5	11	1	3	S 21° W	8·8	9·3			74	·838	3·3	5	1·80	+3·20	5·29	1·44	+ 3 80	5·29	2 42	+ 2·87	4 27	Pamban	Madras (South)	57
8		1		1	2	6	12	N 47° W	6·1	5 9			65	·792	3·6	2	1·90	+0 10	1·76	1·01	+ 0·75	3·57	2·36	+ 1·21	1·42	Tinnevelly.		
9					1		12	N 29° W	1·8	1·8	3·1	−47	71	·765	5·2	11	6·09	−4·91	10·62	4·23	+ 6·39	14·36	12·01	+ 2·35	3·52	Madura.		
4		1	2	1		2	1		2·9	3·1			70	719	5 5	8			4 85			7·90			0·26	Periyakulam.		

‡ Mean of 29 days.

§ Mean of 27 days.

Table

Abstract of Observations taken at 8 A.M. at 223 Station

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	12	22	23	24	25
34	Madras, (South Central).	Salem	940	28·976	+·003	29·860	29·027	8th & 10th.	28·902	21st	·125	79·0	92·4	+1·0	73·5	+2·2	83·0	+1·6	18 9	98·2	7th	70·5	28th	27·7
		Coimbatore	1,348	28·566	+·022	29·868	28·609	10th	28·487	21st	·122	75·6	88·4	−1·1	71·6	+1·1	80·0	0	16·8	94·4	8th	68·3	3rd	26·1
35	Coorg	Mercara	3,781	26·242	+·030		26·288	10th	26·194	21st	·094	65·8	74·3	+1·9	63·0*	+1·3*	68·6	+1·6	11·3	78·5	14th	61·1	10th	17·4
36	Mysore	Chitaldroog	2,405	27·523	+·033	29·857	27·583	10th	27·442	21st	·141	74·6	86·2	+2·6	69·1	+1·6	77·7	+2·1	17·1	91·1	14th & 15th.	65·9	16th	25·2
		Bangalore	3,021	26·939	+·021	29·860	26·993	10th	26·876	21st	·117	71·9	84·7	+2·8	67·0	+2·0	75·9	+2·4	17·7	90·8	8th	65·3	16th & 20th.	25·5
		Hassan	3,091	26·881		29·881	26·921	8th & 10th	26·817	21st	·104	72·2	82·6		65·2		73·9		17·4	88·0	15th	62·0	2nd	26·0
		Mysore	2,518	27·440	+·031	29·885	27·486	10th	27·372	21st	·114	73·0	86·8	+2·5	67·5	+1·1	77·2	+1·8	19·3	91·1	7th	64·0	3rd	27·1
56	Madras, East Coast, South.	Negapatam	31	29·851	+·004	29·811	29·899	10th	29·767	21st	·132	82·9	93·4	+1·2	78·9	+2·6	86·2	+1·9	14·5	98·2	5th	73·9	29th	24·3
		Cuddalore	12	29·867	P	29·808	29·919	10th	29·771	21st	·148	81·2	92·5	+0·8	76·5	+0·5	84·5	+0·7	16·0	98·7	11th	73·2	24th	25·5
		Trichinopoly	255	29·638	+·013	29·827	29·682	10th	29·567	21st	·115	80·0	94·8	−0·5	75·5	0	85·2	−0·3	19·3	100·6	6th	71·4	29th	29·2
		Madras	22	29·840	+·011	29·793	29·886	28th & 29th.	29·744	21st	·142	83·0	93·7	+0·5	77·5	+0·4	85·6	+0·5	16·2	97·5	13th22nd &25th.	73·0	20th	24·5
		Vellore	707	29·166		29·812	29·220	10th	29·065	21st	·155	81·7	94·8		76·0		85·4		18·9	100·9	5th	73·5	1st, 4th & 11th.	27·4
55	Madras, East Coast, Central.	Nellore	71	29·795	+·047	29·799	29·870	28th	29·682	21st	·188	84·5	97·6	+3·5	79·2	+1·6	88·4	+2·6	18·4	102·8	12th	73·1	21st	29·7
		Masulipatam	15	29·838	+·057	29·788	29·913	28th	29·725	21st	·188	84·6	93·1	+1·8	79·0	+1·6	86·1	+1·7	14·1	98·2	11th	74·1	21st	24·1
54	Madras, Central	Cuddapah	433	29·447	+·028	29·819	29·531	10th	29·357	21st	·174	84·1	97·3	+4·8	78·4	+2·5	87·9	+3·7	18·9	102·7	2nd	73·2	26th	29·5
		Kurnool	924	28·947	+·029	29·817	29·002	28th	28·849	21st	·153	79·2	93·2	+3·9	74·9	+1·7	84·1	+2·8	18·3	98·7	14th	68·4	21st	30·3
		Bellary	1,475	28·426	+·041	29·850	28·484	10th	28·332	21st	·152	78·7	94·1	+3·5	74·1	+1·3	84·0	+2·4	20·0	100·0	14th	71·2	19th & 28th.	28·8
52	Madras, East Coast, North.	Cocanada	26	29·807	+·064	29·768	29·886	28th	29·664	21st	·222	83·7	92·4	+3·8	79·2	+1·2	85·9	+2·5	13·2	99·1	12th	75·5	14th	23·6
		Waltair (Vizag.)	226	29·594	+·064	29·761	29·685	28th	29·442	21st	·243	83·6	90·1	+0·4	79·0	+0·9	84·6	+0·7	11·1	94·9	5th & 6th.	73·9	23rd	21·0
		Gopalpur	21	29·779	+·055	29·740	29·884	28th & 29th.	29·639	2nd	·245	84·3	90·3	+2·4	78·5	+0·2	84·4	+1·3	11·8	96·3	6th & 8th.	75·1	25th	21·2
	XII.—Hill Stations.																							
48	Baluchistan	Pishin											86·5		50·4		68·5		36·1	99·4	8th	35·0	24th	64·4
		Quetta	5,502	24·640	+·047		24·783	30th	24·487	3rd	·296	67·2	86·2	+ 1·0	50·0	−0·4	68·1	+0·3	36·2	91·1	1st & 2nd.	34·8	24th	56·3
		Kalat										68·8†	87·2†		43·7†		65·5†		43·5	92·2	2nd	36·2	30th	56·0
		Chaman	4,311	25·660	+·032		25·807	30th	25·483	3rd	·324	76·9	91·8	−0·1	63·8	+1·0	77·8	+0·5	28·0	98·2	6th	50·6	24th	47·6
30	Punjab	Leh	11,503	15·762	+·033		19·914	30th	19·647	3rd	·267	51·7	67·7	−3·4	40·7	−0·8	54·3	−2·1	27·2	74·6	2nd	32·5	22nd & 25th.	42·1
		Srinagar	5,204	24·878	+·041		25·010	30th	24·688	3rd	·322	59·2	78·8	−0·1	53·0	−0·4	65·9	−0·3	25·8	85·8	3rd	45·2	28th.	40·6
		Astor (Kashmir)																						
		Gulmarg		21·895			22·022	30th	21·769	3rd	·253	51·8	60·7		40·6		50·7		20·1	66·6	1st	34·2	26th	32·4
		Skardu		22·864			23·003	29th & 30th.	22·653	3rd	·350	58·9	75·8		51·8		63·8		24·0	87·1	4th	44·7	22nd & 25th.	42·4
		Dras		20·831			20·972	30th	20·706	3rd	·266	51·8	71·3		38·0		54·7		33·3	84·0	17th	27·1	21st	56·9
		Gilgit		25·084			25·261	22nd	24·952	3rd & 4th.	·409	70·6	85·0		63·1		74·1		21·9	97·5	3rd & 4th.	55·1	22nd	42·4
		Chitral		24·466			24·550	22nd & 24th.	24·400	11th	·150	65·9	86·8		56·9		71·9		29·9	95·2	2nd & 3rd.	47·0	22nd & 24th.	48·2
		Killa Drosh										65·4	87·2		62·7		75·0		24·5	97·2	2nd	53·9	20th	43·3
		Para Chinar	6,000									68·7	78·5		57·4		68·0		21·1	84·6	3rd	51·8	23rd	32·8
		Cherat		25·686	+·050		25·808	30th	25·516	2nd	·292	70·5	83·2	−2·1	64·2	−1·4	73·7	−1·8	19·0	90·4	10th	55·1	20th & 23rd.	35·3
		Murree	6,333	23·856	+·037		23·979	30th	23·718	2nd	·261	62·9	70·9	−2·9	58·0	−0·8	64·5	−1·9	12·9	75·7	19th	49·4	13th	26·3
		Poo											74·6		50·7		62·7		23·9	78·8	5th	44·6	13th	34·2
		Simla	7,224	23·133	+·036		23·260	30th	23·016	3rd	·244	58·2	65·4	−2·3	54·9	−2·2	60·2	−2·3	10·5	68·4	20th & 22nd.	49·0	13th	19·4
25	N.-W. Provinces	Chakrata	7,022	23·278	+·029		23·416	30th	23·159	3rd	·257	60·2	67·9	−1·1	55·4	−1·7	61·7	−1·4	12·5	70·2	4th	50·7	13th & 21st	19·5
		Mussooree	6,705	23·561	+·041		23·690	30th	23·434	2nd	·256	61·2	68·3	+0·3	56·9	−0·6	62·6	−0·2	11·4	71·3	16th & 22nd	51·5	13th	19·8
		Ranikhet	6,069	24·096	+·039		24·231	30th	23·962	2nd	·269	64·1	72·0	−0·3	59·8	−0·2	65·9	−0·3	12·2	76·0	4th	55·0	25th	21·0
		Muktesar		22·858			22·986	30th	22·726	2nd	·260	59·7	69·1		54·5		61·8		14·6	73·5	4th, 6th &16th.	50·8	27th	22·7

* Mean of 21 days.

—continued.

n India, Burma, etc., in September, 1901—continued.

WIND DIRECTION. Number of Winds from									Wind resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 30th September 1901.	Normal rainfall for period, 1st June to 30th September.	Variation from normal of period, 1st June to 30th September.				
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
7	1				1	8	12	1	S 75° W	3·1	2·8	3·7	−24	80	·792	6·6	9	6·91	+2·09	7·18	5·63	+ 1·55	22·28	20·93	+ 1·35	1·92	Salem	Madras, (South Central).	31
						18	12		S 63° W	4·5	4·0	6·6	−39	88	·774	6·1	8	2·18	+5·82	5·57	1·13	+ 4·44	8·54	4·98	+ 3·56	1·13	Coimbatore.		
10	1	3					8	8	N 53° W	4·9	4·6	7·9	−42	90	·581	7·8	12	17·10	−5·10	5·64	10·98	− 5·34	96·49	105 44	− 8·95	1·98	Mercara	Coorg.	35
2			1	1		6	13	7	W	7·4	6·4			82	·685	7·6	7			4·40	3·56	+ 0·84	11·06	12·42	− 1·35	1·33	Chitaldroog.	Mysore.	36
		1	1		1	6	14	7	N 89° W	7·4	6·4	6·7	−4	82	·637	7·4	9	8·36	+0·61	12·54	4·72	+ 7·82	20·06	18·56	+ 1·50	3·89	Bangalore.		
2	1	1	2			5	10	9	N 74° W	3·2	2·9			77	·612	8·0	5			2·98	2·72	+ 0·26	11·54	14·71	− 3·17	1·13	Hassan.		
1	3	1			1	11	8	5	S 85° W	7·3	7·9			81	·664	8·6	8			7·98	3·87	+ 4·11	12·68	11·46	+ 1·22	1·55	Mysore.		
2				2	1	14	7	4	S 63° W	5·3	4·7	5·2	−10	78	·890	5·0	7	6·36	+0·64	3·53	3·04	+ 0·51	5·40	10·89	− 5·49	1·23	Negapatam	Madras, East Coast, South.	56
9								1	N 45° W	0	0			81	·860	6·1	8	6·40	+1·60	6·44	5·34	+ 1·10	12·60	14·66	− 2·06	3·34	Cuddalore.		
8	1					3	15	3	N 87° W	4·8		7·1	−32	79	·793	5·4	11	4·91	+6·09	9·80	3·21	+ 6·69	13·66	11·00	+ 2·66	2·38	Trichinopoly		
1	3	1			2	9	13	1	S 78° W	5·2		6·5	−20	77	·873	6·1	8	6·45	+1·55	3·96	4·69	− 0·73	18·26	15·23	+ 3·03	1·05	Madras.		
1					3	5	1		S 36° W	3·3	3·3			72	·777	5·1	10			7·07			14·12			2·61	Vellore.		
3			2		4	1	10	10	N 82° W	5·0				74	·865	7·2	6	5·30	+0·70	3·28	3·44	− 0·16	9·12	10·84	− 1·72	1 38	Nellore	Madras, East Coast, Central	55
4	2	1	1		1	3	7	11	N 64° W	6·0		6·4	−6	83	·991	7·0	4	8·80	−4·80	1·47	5·70	− 4·23	17·47	23·95	− 6·48	0·70	Masulipatam.		
		1				3	16	10	N 77° W					67	·775	5·2	6	6·70	−0·70	3·68	5·48	− 1·80	13·64	19·87	− 6·23	1·12	Cuddapah.		
1	5						5	9	N 45° W					72	·703	5·8	8	7·83	+0·17	4·94	6·54	− 1·60	17·43	21·25	− 3·82	1·30	Kurnool.	Madras, Central	54
6							10	14	S 63° W	8·6	9·1	9·3	−2	60	·593	7·4	9	6·27	+2·73	3·61	4·09	− 0·45	9·23	10·50	− 1·27	1·15	Bellary.		
5	1	2			2	9	6	5	S 80° W	5·8	4·9			81	·944	6·4	6	9·10	−3·10	7·28	5·73	+ 1·55	21·29	23·48	− 2·19	1·89	Cocanada	Madras, East Coast, North.	52
4	1	3	1			11	8	2	S 77° W	9·6				74	·850	6·4	8			9·27	8·27	+ 1·00	17·88	22·74	− 4·86	2·90	Waltair (Vizag.).		
2	9	1	1	1	6	6		4	N 70° W	11·3	11·1	7·2	+54	80	·918	3·1	8	9·33	−1·33	12·45	7·43	+ 5·02	20·77	29·63	− 8·86	5·15	Gopalpur.		
																											XII.—Hill Stations.		
3				1	1				S 24° E	0·9	0·9	3·5	−74	48	·328	0·1	0	0·55	−0·55	0	0·16	− 0·16	0·24	2·19	− 1·95	0	Pishin.	Baluchistan	48
	1		4		20				S 12° E					46†	·329†		0			0	0·05	− 0·05	1·97	1·30	+ 0·67	0	Quetta.		
	1	1	6	9	1	7	4	1	S 20° E	3·6	3·8			41	·387	0·2	0			0	0	0	0	0·42	− 0·42	0	Chaman.		
	2	4	7	1	4	4	6	2	S 15° E	2·2				44	·176	2·7	0			0·04	0·26	− 0 22	1·40	1·55	− 0·15	0·02	Leh	Punjab.	30
3			1	6	5	1	2	2	S 7° E	3·0	3·2			87	·447	3·7	7			1·80	2·86	− 1·06	7·07	22·03	−14·96	0·50	Srinagar.		
7	1	2	1	2	2	3	1	1	S	2·9				82	·324	3·5	8			2·68			14·21			0·69	Ashtor (Kashmir). Gulmarg.		
4	5	1	2			2	4	2	N 35° W	5·1	6·1			71	·346	4·2	0			0·12	0·03	+ 0·09	2·27	2·15	+ 0·02	0·04	Skardu.		
4						3	3		S 68° W	5·9	6·1			54	·206	3·6	1			0·14	0·63	− 0·49	4·21			0·10	Dras.		
3				1			1		S 20° W	3·0	2·6			43	·324	4·2	1			0·22	0·19	+ 0·03	1·56	1·65	− 0·09	0·10	Gilgit.		
4	10	1	3	5	6		1		N 81° E					62	·393	1·6	0			0			0·80			0	Chitral.		
7			1		1	1			S 14° E					54	·339	1·5	2			0·59			1·96			0·43	Killa Drosh.		
	16	4		3	1	1	1	4	N 1° E	3·5				52	·363	6·5	6			2·97			8·38			0·78	Para Chinar.		
	5	3		5	4	6	2	5	S 76° W	8·2	7·6			52	·394	1·6	3			1·57	2·61	− 1·04	7·93	11·14	− 3·21	0·61	Cherat.		
2	2	1		1			1	3	N 27° W	5·1	6·3	5·4	+17	61	·358	2·9	7	6·55	+0·45	6·77	6·16	+ 0·61	28·07	31·56	− 6·19	2·61	Murree.		
9		1	1			4	5		S 72° W							2·7	0			0	0·45	− 0·45	1·78	2·31	− 0·53	0	Poo.		
7	12				1			10	N 21° W	2·2		1·7	+27	74	·368	2·9	7	8·36	−1·36	2·96	6·56	− 3·60	18·79	48·88	− 0·09	0·78	Simla.		
4	12	6		5	3				N 39° E	8·9		4·7	+89	78	·407	2·0	9			3·18	6·92	− 3·74	50·54	51·84	− 1·30	1·40	Chakrata	N.-W. Provinces	25
1	2			12	2			13	N 45° W					80	·429	2·8	7	10·09	−3·09	2·18	10·34	− 8·16	84·71	79·43	+ 5·28	0·63	Mussooree		
3	1		4	4		3	6	4	S 76° W	3·0	3·4	1·9	+79	80	·468	3·0	6	7·73	−1·73	5·33	8·02	− 2·69	37·07	41·15	− 4·08	3·30	Kanikhet.		
1	2		2	8		1		16	N 30° W	5·9	5·4			80	·410	3·9	7			7·65			43·76			1·56	Muktesar.		

† Mean of 25 day.

Table

Abstract of Observations taken at 8 A.M. at 223 Station

Number of District.	Meteorological Province or District.	Station.	Elevation of barometer above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
13	Bengal	Yatung	10,180?										60·3		44·4		52·4		15·9	64·1	30th	38·9	20th	25·2
		Darjeeling	7,376	23·025	−·005		23·133	30th	22·899	2nd	·234	59·0	64·7	−0·1	55·0	−0·1	59·9	−0·1	9·7	68·7	30th	52·6	8th & 10th.	16·1
		Gangtok	5,660	24·442			24·463	27th	24·416	2nd	·047	64·3	73·2		48·2		58·2		30·0	81·2	4th & 28th.	40·0	17th	41·2
	Central India	Mount Abu	3,945	26·026	+·044		26·149	30th	25·906	3rd	·243	69·8	77·7	+2·3	65·3	+0·5	71·5	+1·4	12·4	86·2	24th	60·4	6th	25·8
		Pachmarhi	3,528	26·429	+·076		26·523	28th	26·298	24th	·225	71·4	78·0	+1·0	65·5	−0·7	71·8	+0·2	12·5	83·7	20th	58·2	29th	25·5
	South India	Wellington	6,200	24·258	+·030		24·295	8th & 15th.	24·195	21st	·100	63·5	71·5	+0·5	56·1	+0·4	63·8	+0·5	15·4	74·2	3rd	51·7	5th	22·5
		Cotacamund		23·071			23·167	10th	23·025	21st	·082	57·8	64·8		52·5		58·6		12·3	67·0	1st & 17th.	45·7	3rd	21·3
		Kodai Kanal	7,688	22·840			22·877	1st	22·774	21st	·103	57·6	63·7		52·8		56·9		10·9	67·8	10th	50·3	29th	17·5
	XIII.—Extra India.																							
	Ceylon	Trincomalee	12	29·890	?	29·828	29·947	1st	29·818	20th	·129	81·4	92·7	−0·9	77·1	+0·9	84·9	0	15·6	97·5	1st	74·0	27th	23·5
		Colombo	40	29·917	+·001	29·883	29·968	1st	29·872	27th	·096	82·2	88·2	+2·7	78·1	+1·3	83·2	+2·0	10·1	90·5	11th	74·5	17th	16·0
	Persia	Meshed	3,104									68·0			56·2							41·9	21st & 22nd.	
		Teheran		25·913‡			26·150	19th	25·750	26th	·400	76·3	90·2		63·9		77·1		26·3	99·6	1st & 2nd.	40·0	27th	59·6
				24·778§			24·940	18th & 19th.	24·640	26th	·300													
		Ispahan		24·301‡			24·450	5 day	24·150	1st & 12th.	·300	72·3	91·4		58·4		74·9		33·0	99·3	2nd	50·0	24th	49·3
		Bushire	14	27·764	+·039	29·737	29·907	23rd	29·643	13th	·264	89·4	95·6	+1·4	82·1	+3·3	88·9	+2·4	13·5	98·5	7th	75·0	29th	23·5
		Jask*		29·802†	+·070†		30·008	15th	29·637	4th	·371	85·3	91·2	−2·3	80·8	−0·3	86·0	−1·3	10·4	98·3	12th	73·7	16th	24·6
		Muscat	20	29·790§		29·758	29·935	30th	29·685	12th	·250	84·4	86·3		82·3		84·3		4·0	92·5	26th	77·6	1st	14·9
	Arabia	Baghdad	220	29·648‖	−·025	29·684‖	29·769	19th	29·528	3rd	·241	83·8‖	108·0	+7·2	74·6	+3·5	91·3		33·4	117·2	3rd	67·9	27th	49·3
		Busrah		29·756			29·926	23rd	29·577	6th	·349		101·1		79·9		90·5		21·2	108·4	11th	73·2	27th	35·2
		Aden	94	29·777	+·029	29·802	29·879	30th	29·692	6th	·187	86·5	92·9	−0·7	83·2	+1·1	88·1	+0·2	9·7	98·3	3rd	79·8	24th	18·5
		Perim	201	29·656‖		29·788‖	29·748	30th	29·580	6th	·168	87·8‖	94·5‖		84·3‖		89·5‖		10·2	98·3	2nd	81·5	30th	16·8
	Afghanistan	Kabul										60·1	89·1		52·4		70·8		36·7	100·1	9th	42·8	26th	57·3
	Central Asia	Kashgar		25·600			25·787	22nd	25·475	4th & 11th	·312	66·8	85·7		58·8		72·3		26·9	93·9	3rd	49·4	28th	44·5
	Arabian Sea Islands.	Amini Devi	13	29·945		29·886	29·993	10th	29·891	21st	·099	82·6	86·3		78·6		82·5		7·7	89·0	6th	74·8	21st	14·2
		Minicoy	7	29·972		29·904	30·009	10th	29·926	21st	·083	82·1	86·7							89·4	5th & 20th.			
	Africa	Zanzibar	73	30·104	+·037	30·105	30·178	1st	30·049	20th	·129	75·5	80·9		72·7		76·8		8·2	84·0	29th	69·6	1st	14·4
		Do. Dunga		30·030			30·129	4th	29·938	12th	·191	71·6	83·9		64·1		74·0		19·8	88·0	25th	61·4	17th	26·6

* Mean of 23 days,
‖ ,, 29 ,,

† Mean of 28 days,

‡ Aneroid uncorrected.

§ Mountain barometer uncorrected.

NOTE.—When a query is inserted against any reading or in the variation returns for any station, the

i—concluded.

n India, Burma, etc., in September 1901—concluded.

WIND DIRECTION. Number of winds from									Wind Resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.							Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 30th September 1901.	Normal rainfall for period, 1st June to 30th September	Variation from normal of period, 1st June to 30th September.				
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																	9			3·36	6·42	−3·06	29·54			0·61	Yatung	Bengal.	
6	1	4	7	5	1	2	2	2	S 84° E	3·9	3·6	3·0	+20	95	·479	8·2*	14	18·01	− 4·04	9·80	17·31	−7·51	88·64	99·06	−10·42	2·01	Darjeeling.		
	1	7	1	3	2	11		5	S 56° W	1·4	1·7			92	·556	5·8	14			11·43	20·93	−9·45	87·69	90·01	−2·32	2·80	Gangtok.		
1	4	3		2	2	17	1		S 46° W	10·8	11·2	7·3	+53	70	·487	4·0	2	7·40	− 5·40	0·49	10·71	−10·22	17·98	63·65	−45·67	0·18	Mount Abu	Central India.	
19	2	1	1				2	5	N 32° W	5·9	6·1	5·6	+ 9	79	·607	2·0	7	12·55	− 5·55	10·52	15·97	−5·15	78·02	72·20	+5·82	4·55	Pachmarhi.		
21	1	2	1	2		3			S 56° E	2·1		3·5	−31	79	·460	7·5	20	9·22	+10·78	11·42	4·49	+6·93	22·30	16·16	+6·14	1·89	Wellington	South India.	
19	1		3	1			2	4	N 18° W	2·5	2·4			87	·419	7·8	22			12·89			18·51†			2·57	Ootacamund		
	2	1	1	3	4	1	2	16	S 42° W	10·3				84	·400	5·3	15			11·74			25·99			1·91	Kodai Kanal		
																											XIII.—Extra India.		
						30			S 45° W	9·9				81	·876	3·3	7			10·71	5·81	+4·90	13·99	15·59	−1·60	3·45	Trincomalee	Ceylon.	
				1	5	18	5	1	S 45° W	7·2		8·7	−17	81	·891	5·3	8			3·28	5·29	−2·01	14·24	22·27	−8·03	1·85	Colombo.		
														45	·312	1·2	0			0	0	0	2·06	0·37	+1·69	0	Meshed	Persia.	
		12	4		1	11	1	1	N 83° E	2·2	2·9			31	·276	0·8	1			0·19	0·02		0·40††	0·62††	−0·22	0·18	Tehran.		
										3·5	4·5			51	·415	1·1	1			0·17	0	+0·17	0·18	0·10	+0·08	0·17	Ispahan.		
1	2	7	7	8	2	1		2	E	6·8	8·1	7·7	+ 5	61	·844	0·9	0			0	0	0	0	0	0	0	Bushire.		
1	1		19	2				6	N 77° E	14·7	17·1			78	·905	1·2	0			0	0	0	0	0·15	−0·15	0	Jask.		
				23				7	S 45° E	4·0	4·2			77	·905	0	0			0	0	0	0	0·08	−0·08	0	Muscat.		
18	5	1					1	4	N 18° W	1·4	1·8			45	·517	0·7	0			0·02	0	+0·02	0·02	0·14	−0·12	0·02	Baghdad.	Arabia.	
																	2			1·28			1·28			0·94	Bussrah.		
7		9	1	3					N 66° E	7·6	7·4	8·5	−13	73	·920	5·2	0			0	0·21	−0·21	1·35	0·43	+0·92	0	Aden.		
	1		8	13	1	2	2	2	S 53° E	14·0	12·6			77‖	1·021‖	1·5‖	0			0	0	0	0·97	0·40	+0·57	0	Perim.		
	2		1	5	3	6	10	3	S 60° W					48	·256	0	0			0	0	0	0·07	0·93	−0·86	0	Kabul	Afghanistan.	
7	1				1		1		W	11·3	10·1			47	·304	2·4	0			0	0·13	−0·13	1·09	1·59	−0·50	0	Kashgar	Central Asia.	
	5						3	22	N 42° W					77	·863	6·4	8			3·58	0		19·27			1·70	Amini Devi.	Arabian Sea Islands.	
	13						4	13	N 31° W	9·0	9·6			77	·849	5·3	8			1·84			19·91‡			0·33	Minicoy.		
2				11	9	6	2		S 5° E	5·3	5·0			85	·749	5·6	9			2·86	1·56	+1·30	7·75	6·75	+1·00	0·99	Zanzibar	Africa.	
2			1	10	4	3			S 25° E	5·0	4·8			92	·716	4·5	11			4·50			12·99			0·93	Do. Dunga.		

a for that station are not utilized in calculating the provincial variations.

† Rainfall since 1st July 1901.

‡ Total rainfall for June and September only.

†† Rainfall of June not included.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M.

Meteorological Province	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Burma Coast and Bay Islands.	Port Blair		29·851	29·751	·100	29·803	+·023	29·795	86·8	78·0	8·8	90·6	74·6	16·0	84·3	83·0	81·0	+1·5	75·9	80·1	78·6	78·2
	Rangoon		·861	·740	·121	·802	+·021	·779	87·2	76·4	10·8	90·3	72·7	17·6	82·5	84·3	80·4	+1·7	75·4	78·9	78·8	77·7
	Diamond Island		·855	·749	·106	·804	+·021	·780	85·9†	78·8	7·1	88·4	75·0	13·4	83·7	83·3	81·2†	+2·4	75·3	79·6	78·9	77·9
	Cocos Island	111	·826	·731	·095	·781	+·077	·824	87·6	78·8	8·8	90·6	75·6	15·0	84·4	84·5	82·0	+2·7	75·8	79·8	79·5	78·4
	Akyab		·851	·743	·108	·801	+·040	·764	87·3	77·6	9·7	89·9	72·7	17·2	83·8	84·2	81·5	+0·1	76·5	80·5	80·3	79·1
Bengal and Assam.	Chittagong		·753	·642	·111	·702	+·025	·736	87·1	76·2	10·9	91·7	73·4	18·3	84·5	84·4	80·8	+0·2	75·6	80·1	79·5	78·4
	Calcutta (Allpore)		·776	·678	·098	·729	+·044	·696	88·9	78·0	10·9	94·0	74·1	19·9	85·6	85·7	83·2	+0·7	76·3	80·0	79·3	78·5
	Saugor Island		·781	·683	·098	·734	+·054	·703	88·3	80·3	8·0	92·5	76·2	16·3	85·0	86·0	83·4	+0·8	78·1	80·9	80·9	80·0
	False Point		·791	·693	·098	·744	+·048	·706	88·5	79·1	9·4	95·0	75·4	19·6	86·1	85·7	82·7	+0·9	77·1	80·1	79·8	79·0
Chhotá Nagpur.	Hazaribagh		27·809	27·715	·094	27·766	+·056	·706	84·1	71·8	12·3	89·0	68·1	20·9	79·9	80·9	76·9	−0·1	69·5	72·3	71·6	71·1
	Darbhanga		29·634	29·516	·118	29·580	+·039	·699	90·2	78·3	11·9	93·3	75·5	17·8	86·3	88·1	83·2	+0·4	76·2	79·1	79·2	78·2
	Allahabad		·490	·371	·119	·434	+·058	·693	91·5	75·9	15·6	98·7	73·3	25·4	86·1	90·1	82·9	−0·3	73·8	79·2	80·1	77·7
Upper Sub-Himalayas.	Dehra Dun		27·588	27·511	·077	27·542	+·040	·715	85·0	68·1	16·9	87·9	60·2	27·7	79·2	79·8	75·0	−1·9	65·4	72·1	72·4	70·0
	Roorkee		28·897	28·794	·103	28·839	+·045	·680	91·3	71·8	19·5	94·3	65·6	28·7	84·4	90·0	80·9	−0·9	70·5	75·1‡	76·1‡	73·9
	Meerut		29·035	·934	·101	·976	+·036	·668	94·1	72·8	21·3	97·4	67·3	30·1	85·7	92·3	82·9	+0·1	69·0	74·7	75·8	73·2
	Lahore		·064	·975	·089	29·013	+·046	·668	99·3	74·2	25·1	103·9	65·9	38·0	90·2	97·1	86·0	+2·1	68·6	74·8	75·2	72·9
	Ludhiana		28·967	·873	·094	28·914	+·044	·682	95·6	75·6	20·0	100·0	67·7	32·3	86·9	93·2	84·8	+1·3	71·7	74·1	74·3	73·4
Indus Valley and N.-W. Rajputana.	Peshawar		·681	·577	·104	·623	+·041	·697	94·8	69·5	25·3	100·0	62·0	38·0	86·3	92·0	81·3	−0·7	64·5	72·4	72·4	69·8
	Jacobabad		29·581	29·462	·119	29·515	+·051	·656	103·8	74·8	29·0	107·4	60·5	46·9	91·3	100·9	88·4	−0·3	70·4	77·2	79·6	75·7
	Kurrachee		·826	·739	·087	·794	+·065	·765	89·5	76·1	13·4	103·4	68·9	34·5	85·0	85·0	81·5	−0·1	73·5	75·9	76·8	75·4
N. Rajputana, C. India and Gujarat.	Jaipur		28·417	28·313	·104	28·361	+·068	·720	98·2	72·1	26·1	103·3	67·3	36·0	88·7	96·3	84·1	+2·2	64·9	73·0	73·5	70·5
	Udaipur††		27·952	27·870	·082	27·911		·773	87·9	69·2	18·7	94·8	65·6	29·2	84·2	84·9	77·8		65·6	71·2	71·2	69·3
	Deesa		29·402	29·278	·124	29·339	+·058	·750	99·1	74·5	24·6	108·0	71·3	36·7	88·8	97·5	85·9	+4·0	67·9	73·8	73·2	71·6
	Jamnagar		·833	·733	·100	·783		·790	92·2	73·3	18·9	99·7	69·2	30·5	86·7	88·2	81·7		70·8	75·9	76·6	74·4
Deccan.	Belgaum		27·389	27·285	·104	27·335	+·035	·786	81·5	65·7	15·8	87·3	60·4	26·9	76·3	77·4	72·1	+1·8	65·1	70·3	70·7	69·7
	Sholapur		28·306	28·167	·139	28·247	+·042	·761	92·6	71·6	21·0	97·0	67·1	29·9	83·3	89·5	80·6	+3·0	67·9	71·8	71·3	70·3
	Poona		·076	27·984	·092	·035	+·061	·805	87·4	67·7	19·7	94·2	60·9	33·3	80·1	83·8	75·9	+1·5	67·3	71·4	71·6	70·1
	Akola		·947	28·825	·122	·887	+·076	·762	92·3	71·8	20·5	98·4	64·3	34·1	84·8	89·5	81·3	+1·5	69·9	74·8	74·7	73·1
	Buldana	2,132	27·765	27·658	·107	27·712	+·069	·768	85·3	69·2	16·1	90·7	65·8	24·9	78·4	83·8	76·9	+1·4	66·5	70·7	71·4	69·5
	Khandwa		28·829	28·712	·117	28·772	+·074	·761	92·7	72·6	20·1	100·2	64·8	35·4	84·4	89·8	81·2	+2·2	69·4	74·7	74·9	73·0
	Nagpur		·817	·696	·121	·758	+·080	·727	91·5	73·6	17·9	96·9	68·6	28·3	84·4	87·8	81·6	+1·3	71·2	75·6	75·6	74·1
	Do. (Sanitary Commr.'s Office)		·827	·724	·113	·782		·742	91·5	73·7	17·8	96·7	69·2	27·5	85·6	88·8	81·9		71·5	76·8	76·3	74·9
	Hyderabad (Deccan)		·189	·071	·118	·135	+·054	·747	90·2	72·9	17·3	95·1	70·8	24·3	83·7	87·3	80·8	+3·2	P	74·2	75·2	P
West Coast.	Bombay		29·905	29·806	·099	29·853	+·067	·830	86·7	77·8	8·9	89·1	73·3	15·8	82·6	83·8	81·5	+1·8	75·4	77·5	77·8	76·9
	Karwar				Not recorded.				83·5	74·8	8·7	87·1	70·5	16·6	80·3	81·5	78·6	+0·9	73·4	75·5	76·1	75·0

† Mean of 26 days. ‡ Mean of 29 days. § Mean of 28½ days. ‖ Mean of 21½ days.

I.

t 66 Stations in India, Burma, etc., for September 1901.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from									Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																									%	%						
·868	·971	·925	·921	+·028	91	82	82	85	− 2	6·9	7·7	7·3	0			1		7	7	16	22	7	S 62° W	S 52° W	62	74	194	228			Port Blair .	Burma Coast and Bay Islands.
·873	·934	·912	·906	+·013	96	85	78	86	− 3	9·0	8·3	8·7	+0·5			3	6	11	13	16	11		S 12° W	S 23° W	52	49	85	89			Rangoon .	
·826	·957	·929	·904	+·033	84	83	81	83	− 4	6·8	7·2	7·0	−0·5	8		1	7	11	7	16	9	1	S 13° W	S 45° W	42	55	146*	182			Diamond Island	
·854	·959	·945	·919	+·028	87	81	79	82	− 4	6·7	6·6	6·7	−0·7	1	1	1	2	14	10	20	11		S 21° W	S 44° W	59	74	96	447	2·89	0·58	Cocos Island .	
·900	·957	·985	·961	+·041	95	86	83	88	+ 2	6·1	5·7	5·9	−1·3			1	6	12	15	9	13	4	S 15° W	S 8° E	45	42	40*	74			Akyab .	
·879	·968	·946	·931	+·015	97	81	80	86	0	7·5	6·5	7·0	+0·1		4	6	3	14	9	11	3	10	S 3° W	S 22° E	18	37	129*	102			Chittagong .	Bengal and Orissa.
·888	·950	·917	·918	−·025	93	78	76	82	− 4	5·9	7·1	6·5	−0·8	2	1	1	4	8	12	19	8	5	S 29° W	S 23° E	49	42	114	98			Calcutta (Alipore).	
·933	1·004	·989	·975	−·001	90	83	79	84	− 2	6·8	7·0	6·9	−0·2			2	5	1	14	30	6	2	S 33° W	S 2° W	67	49	302	257			Saugor Island.	
·909	952	·940	·934	+·005	91	77	77	82	− 2	6·6	7·5	7·1	+0·1			3	5	8	15	8	16	5	S 30° W	S 20° W	40	37	199*	205			False Point .	
·693	·700	·661	·685	−·069	89	69	64	74	−10	5·6	7·8	6·7	−1·3	3	15	1	5	7	10	1	7	11	N 32° W	S 52° E	15	10	167*	178			Hazaribagh .	Gangetic Plain and Chota Nagpur.
·877	·960	·877	·885	−·050	90	72	66	76	− 6	3·8	3·5	3·7	−1·6	23	1	2	11	9	2	3	6	3	S 56° E	S 81° E	17	49	45	96			Darbhanga .	
·809	·908	·892	·869	−·016	90	73	64	76	− 3	4·7	4·6	4·7	−0·6	3	4	5	9	3	1	2	19	14	N 50° W	N 8° W	34	13	162*	128			Allahabad .	
·598	·69‡	·710	·667	−·031	86	71	70	76	− 2	1·9	4·1	3·0	−1·8	12	3	2	9	2	4	3	10	12	N 57° W	N 75° W	18	20	18‡	25			Dehra Dun .	Upper Sub-Himalayas.
·738	7‡6‡	·715‡	·733	−·035	93	63‡	51‡	69	− 3	1·4	0·9	1·2	−2·6	10	1	3	3	21	4	1	4	13	S 40° E	S 14° W	15	7	43	48			Roorkee .	
664	71‡	·679	·686	−·076	82	59	45	62	− 8	0·7	0·8	0·8	−2·9	15			4	3		6	18	14	N 82° W	N 49° W	43	19	33*	46			Meerut .	
·634	·661	·587	·627	−·087	74	47	34	51	− 6	0·7	1·0	0·9	−0·6	18	9	3	6	2	6	2	12	2	N 54° W	N 53° E	10	7	40	50			Lahore .	
·735	·670	·604	·672	−·083	82	53	40	58	− 8	0·9	2·0	1·5	−1·5	11	3	7	3	12	1		19	4	N 77° W	N 44° W	10	14	47*	31			Ludhiana .	
·553	·637	·564	·585	−·007	76	50	37	54	0	0·6	2·7	1·7	0	32	9	5	5		1	1	3	4	N 9° E	N 39° E	23	51	33*	73			Peshawar .	Indus Valley and N.W. Rajputana.
699	·753	·730	·727	+·037	79	51	37	56	+ 4	0	0·3	0·2	−0·4	14	5	1	3	25	10	2			S 41° E	S 32° E	51	45	69*	72			Jacobabad .	
·794	777	·814	·795	−·046	88	66	68	74	− 3	3·5	1·8	2·7	−1·1		1				2	30	26	1	S 66° W	S 67° W	88	87	335*	356			Kurrachee .	
·533	617	·542	·564	−·119	67	46	32	48	−16	0·8	3·4	2·1	−1·9		4	4	2		1	13	24	12	N 82° W	N 39° W	62	43	88	108			Jaipur .	E. Rajputana, C. India and Gujarat.
·587	631	·597	·605		83	57	51	64		3·0	3·8	3·4		3	1			1	1	19	15	4	S 70° W		71		106*				Udaipur .	
·596	·636	494	·575	−·148	70	48	29	49	−17	3·3	2·8	3·1	−1·7		8	1			6	28	9	6	S 69° W	S 69° W	60	53	215	200			Deesa .	
722	·750	·763	·745		88	59	58	68		2·9	1·5	2·2				1			1	18	34	6	S 80° W		85		276*				Jamnagar .	
·615	665	·670	·651	+·010	97	74	72	81	− 4	5·7	7·4	6·6	−0·9		5	3	3		2	24	18	5	S 76° W	S 78° W	57	75	275	385			Belgaum .	Deccan.
·640	638	·581	·606	−·056	83	56	41	60	−10	5·2	7·2	6·2	−1·8		15	8	2	1		2	3	29	N 23° W	N 69° W	71	67	289*	215			Sholapur .	
666	·664	625	·652	−·014	98	65	55	72	− 4	5·8	7·0	6·4	−1·3		1	1				12	37	9	S 89° W	W	85	77	283*	259			Poona .	
·709	753	·662	·701	−·038	91	62	49	67	− 7	4·8	5·4	5·1	−1·5	5	7	2					9	37	N 44° W	N 59° W	77	68	175*	155			Akola .	
618	659	615	·631	−·049	87	69	54	70	− 8	5·7	5·3	5·5	−1·1	3	8	2			1		19	17	N 53° W	N 47° W	76	68	174*	200	2·67	1·82	Buldana .	
688	736	676	700	−·041	85	63	50	66	− 9	4·0	5·2	4·6	−0·9	5	7	11	3				13	21	N 31° W	N 66° W	57	67	136	154			Khandwa .	
733	777	737	749	−·018	88	66	58	71	− 4	4·0	5·4	4·7	−2·6	18	9	3	1	1		4	12	12	N 50° W	N 52° W	43	37	163**	147			Nagpur .	
749	812	752	771		90	67	57	71		3·6	5·9	4·8		6	1	8		6		12		27	N 53° W		37		38*				Do. (Sanitary Commr.'s Office)	
?	731	726	?	?	?	64	57	?	?	4·5	6·8	5·7	−0·6	22	1	1	3	1	1		25	6	N 80° W	N 71° W	42	61	104*	150			Hyderabad (Deccan).	
818	824	878	870	+·005	89	79	76	81	− 4	5·6	5·1	5·4	−2·0		3	2	1	1	1	2	25	25	N 65° W	N 84° W	75	52	249	267			Bombay .	West Coast.
809	822	830	820	+·003	94	79	77	83	− 3	3·6	4·6	4·1	−1·6	6	2					4	22	26	N 68° W	N 80° W	78	78	90	58			Karwar .	

¶ Mean of 28 days. ** Mean of 21½ days. †† Observation of 22 days. * Corrected.

Tabl

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 66 Station

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
South India.	Periyakulam		28·951	28·829	·122	28·905			92·3	72·4	19·9	98·3	70·4	27·9	84·6	85·5	80·5		69·9	74·3	74·6	73·0
	Salem		·970	·831	·139	·914	−·003	29·782	92·5	73·6	18·9	98·2	70·5	27·7	83·3	88·5	80·7	+1·3	71·9	76·2	77·6	75·2
	Chitaldroog		27·525	27·398	·127	27·471	+·031	·775	86·2	69·1	17·1	91·1	65·9	25·2	78·7	83·8	77·0	+2·5	67·0	71·8	73·5	70·8
	Bangalore		26·940	26·821	·119	26·892	+·017	·778	84·5	67·0	17·5	90·7	65·1	25·6	77·0	81·4	75·0	+2·7	65·6	69·8	70·1	68·5
	Hassan		·887	·781	·106	·845	+·021	·807	82·4	65·2	17·2	88·0	62·0	26·0	76·6	78·8	72·9	+2·2	64·2	68·2	69·1	67·2
	Mysore		27·438	27·309	·129	27·374	+·019	·786	86·8	67·5	19·3	90·9	64·2	26·7	78·5	82·9	76·2	+1·6	66·5	70·1	70·2	68·9
	Madras		29·843	29·727	·122	29·793	+·022	·744	93·2	77·5	15·7	97·5	72·9	24·6	87·6	87·8	84·0	+0·2		78·5	79·8	78·5
	Bellary		28·430	28·286	·144	28·367	+·027	·765	93·9	73·9	20·0	100·0	71·0	29·0	84·0	90·5	82·4	+2·3	68·2	70·4	71·6	70·1
	Waltair		29·600	29·490	·110	29·545		·710	90·0	79·1	10·9	94·9	73·9	21·0	86·6	86·3	83·6		72·6	77·8	78·0	76·1
Hill Station, Baluchistan.	Quetta		24·647	24·566	·081	24·599	+·043		86·0	50·0	36·0	91·0	34·6	56·4	77·9	83·7	67·5	+0·9	42·9	56·5	57·6	52·3
Hill Stations, Northern India.	Leh		19·750	19·643	·107	19·705	+·019		67·8	40·7	27·1	74·6	32·5	42·1	58·6	65·2	54·1	+0·3	35·6	44·7	47·4	42·6
	Srinagar		24·887	24·796	·091	24·833	+·046		79·2	52·8	26·4	86·0	45·0	41·0	67·1	77·3	65·6	−0·1	50·7	63·2	71·4	61·8
	Kailang	10,087	20·973	20·900	·073	20·945	?		68·8	39·8	29·0	73·5	33·0	40·5	59·9	61·9	51·7	−2·0	37·8	49·1	48·5	45·1
	Simla (Ridge)		23·157	23·112	·045	23·126	+·046		65·7	54·6	11·1	68·5	49·0	19·5	61·4	62·0	59·0	−2·5	51·0	56·0	56·8	54·6
	Chakrata		·302	·259	·043	·272	+·026		68·1	55·4	12·7	70·7	50·7	20·0	63·8	62·5	60·1	−1·6	52·4	58·9	59·0	56·8
	Ranikhet		24·117	24·051	·066	24·070	+·040		71·9	59·8	12·1	76·0	55·0	21·0	67·7	68·8	64·9	−0·6	56·4	61·7	62·8	60·3
	Muktesar		22·882	22·826	·056	22·854			69·2	54·5	14·7	73·5	50·8	22·7	63·7	65·2	60·8		51·7	58·7	60·5	57·0
	Katmandu	4,388	25·489	25·410	·079	25·453	?		81·9	64·7	17·2	85·6	62·0	23·6	76·0	76·9	72·1	−1·5	63·5	68·8	70·3	67·5
	Darjeeling		23·030	22·964	·066	23·000	+·032		64·8	55·0	9·8	68·8	52·7	16·1	61·6	62·9	59·5	+0·8	54·3	60·1	61·2	58·5
Hill Stations, Central India.	Mount Abu		26·045	25·976	·069	26·009	+·051		78·0	65·2	12·8	86·4	60·4	26·0	73·1	76·2	71·1	+2·0	59·2	64·1	65·0	62·8
	Pachmarhi		·445	26·363	·082	·405	+·073		78·3	65·5	12·8	83·9	58·0	25·9	74·3	76·6	71·0	+0·5	63·8	68·0	69·2	67·0
	Chikalda	3,642	·327	·227	·100	·278	+·062		76·9	65·2	11·7	82·1	62·6	19·5	71·9	75·6	70·2	+1·3	63·2	67·5	69·1	66·6
Hill Stations, South India.	Wellington		24·263	24·184	·079	24·224	+·028		71·5	56·2	15·3	73·8	51·8	22·0	68·5	65·5	62·3	+0·1	54·9	62·2	61·4	59·5
	Ootacamund		23·077	23·001	·076	23·039			61·8	52·5	12·3	66·8	45·5	21·3	61·8	59·5	57·3		51·5	57·5	57·3	55·4
	Kodai Kanal		22·846	22·773	·073	22·812			63·6	52·8	10·8	67·8	50·3	17·5	61·5	58·4	56·8		50·8	57·4	56·8	54·5
Extra India.	Aden		29·789	29·661	·128	29·718	+·040	·742	92·8	83·2	9·6	98·3	79·8	18·5	88·5	91·2	87·8	+0·7	75·0	80·0	77·2	77·5
	Perim		·659†	·535	·124	·590	+·036	·721†	94·4	84·3†	10·1	98·4	81·5	16·9	90·3†	91·7	88·7†	+0·1	78·0†	82·7†	82·4	81·0
	Minicoy		·981	·907	·074	·946		·878	86·6			89·4			84·3	83·4				77·6	77·1	
	Zanzibar		30·117	30·011	·106	30·064	+·045	30·064	80·9	72·7	8·2	84·0	69·6	14·4	77·0	80·3	76·6	−0·9	68·6	73·1	73·2	71·7
	Port Victoria (Seychelles)	15	·065	29·975	·090	·020	+·040	29·959	80·3	73·3	7·0	82·5	69·7	12·8	78·9	79·6	76·6	−2·4	70·4	73·5	73 5	72·5
	Mauritius (Pamplemousses)	181				·039	+·022	30·170				84·6	52·4	32·2			68·7	−1·0				

† Mean of 29 days. ‡ Mean of 28 days. § Mean of 25 days.

l—concluded.

a India, Burma, etc., for September, 1901—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Provinces
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
·700	·706	·708	·705		88	60	61	69		5·3	8·2	6·8		8	9	3	2	5	12	5	8	3	S 45° W		% 13	%	76*				Periyakulam‖	
·764	·814	·808	·795	+·049	92	71	60	74	+ 2	6·0	7·5	6·8	+1·2	18	2	1	1		5	8	24	1	S 76° W	S 63° W	50	69	67*	82			Salem	South India.
·642	·693	·701	·679	+·087	90	71	61	74	+ 5	7·0	7·6	7·3	−0·4	4	3	1	3		1	7	23	18	N 74° W	N 87° W	63	78	151*	228			Chitaldroog	
·616	·649	·607	·624	+·021	93	70	59	74	− 2	7·3	7·5	7·4	+1·1		8	7	1		1	7	19	17	N 58° W	S 85° W	60	84	154*	167			Bangalore	
·590	·592	·603	·595	+·017	94	65	62	74	− 2	7·3	8·4	7·9	0		5	6	5	1		9	20	14	N 65° W	N 79° W	48	79	70*	91			Hassan	
·640	·634	·583	·619	+·024	95	65	54	71	0	7·4	8·6	8·0	+0·4		8	8	2	1	1	10	18	12	N 62° W	N 87° W	48	68	186*	266			Mysore	
	·853	·913	·903	+·080		66	70	78	+ 5	5·9	5·2	5·6	−0·5		5	2	13	10	4	7	16	3	S 11° W	S 36° W	13	52	124	149			Madras	
·620	·574	·540	·578	−·076	74	49	38	54	−10	7·8	3·0	8·4	+0·9	4	3	1	3		1	1	24	23	N 64° W	N 78° W	70	75	219*	223			Bellary	
·719	·840	853	·804		72	67	68	69		5·9	6·7	6·3		1	1	5	8	9	5	26	5		S 12° W		43		121				Waltair	
·211	·238	·205	·218	−·034	54	25	17	32	− 7	0·2	1·0	0·6	+0·1	40	1				1	2	9	7	N 77° W	N 60° W	27	42	22*	62			Quetta	Hill Station, Baluchistan.
·173	·181	·178	·177	+·005	66	36	28	43	+ 2	3·6	4·1	3·9	−0·2			1	3	1	10	23	19	3	S 54° W	S 58° W	68	39	55	42			Leh	
·352	·542	707	·534	+·041	86	81	75	81	+ 3	2·6	3·3	3·0	−0·6	16	10	4	2	3	2	2	8	13	N 35° W	N 24° W	33	12	80*	76			Srinagar	
·213	·261	·226	·233	−·012	86	49	41	59	0	4·1	6·3	5·2	+0·4		3			4	18	14	15	6	S 48° W	S 57° W	59	61	27	38	0·48	0·45	Kailang	Hill Stations, Northern India.
·339	·396	·413	·383	−·058	80	72	74	75	− 3	4·6	4·9	4·8	−1·0	15	18			1	2		3	20	N 29° W	N 13° E	57	30	138†	99			Simla (Ridge)**	
·365	·452	·473	·430	−·042	83	76	83	81	− 3	2·7	6·3	4·5	−1·8		3	1		26	30				S 23° E	S 73° W	82	37	233	128			Chakrata	
·424	·489	·510	·474	−·034	82	73	73	76	− 5	4·4	5·5	5·0	−1·0	11	2	2	1			15	24	5	S 84° W	S 55° W	60	37	84*	52			Ranikhet	
·359	·447	·482	·429		84	76	78	79		4·3	5·8	5·1		1	2	3	4	11	2	3	1	33	N 39° W		33		130*				Muktesar	
·576	·627	·670	·624	−·007	94	70	73	79	0	6·2	6·5	6·4	+0·1	14	1		13			2	22	8	N 72° W	N 80° W	28	14	4	17	6·97	1·82	Katmandu	
·415	·505	·525	·482	+·004	95	92	91	93	− 1	7·3‡	6·8§	7·1	−1·2	2	1	10	6	18	4	8	3	8	S 52° E	S 58° E	23	6	90*	85			Darjeeling	
·440	·497	·491	·476	−·071	73	64	56	64	−13	4·4	4·5	4·5	−0·9		6	5	1	3	9	32	2	2	S 42° W	S 73° W	51	34	269*	183			Mount Abu	Hill Stations, Central India.
·573	·612	·630	·605	−·019	91	74	70	78	− 4	5·1	5·4	5·3	−1·9	31	2	4	3			1	7	12	N 40° W	N 59° W	27	45	145*	145			Pachmarhi	
·560	·624	·638	·607	−·022	90	80	73	81	−·8	4·9	5·3	5·1	−2·3	38	22								N	N 23° W	37	66	114*	244	5·18	3·08	Chikalda	
·420	·497	·502	·473	+·045	89	71	80	80	+ 4	7·5	9·4	8·5	+1·4	12	13	3	1	13	8	6		3	S 54° E	S 56° W	12	33	56	70			Wellington**	Hill Stations, South India.
·376	·430	·449	·418		94	78	88	87		7·7	9·3	8·5		25	5	7	8		1		8	6	N 3° E		27		56*				Ootacamund	
·352	·432	·449	·403		88	79	91	87		7·2	9·2	8·2		1	5	7	4	8	1	1	3	23	N 16° W		33		247				Kodai Kanal¶	
·760	·908	·716	·805	−·044	67	67	50	62	− 4	2·3	1·0	1·7	−0·6	15		24	1	18		2			N 85° E	S 23° E	48	50	† 159*	220			Aden	
881†	1·025†	·988	·965	+·118	75†	72†	66	71	+ 9	0	0	0	−2·8		3	7	24	16	2		2	5	S 87° E	N 42° E	59	28	† 306*	276			Perim	
	·860	·847				73	74			5·5	5·8	5·7			20	1				1	8	30	N 36° W		85		230*				Minicoy	
·645	·764	·730	·713	−·014	80	82	71	78	0	6·2	5·0	5·6	+0·8	1	5	4	4	8	18	16	3	1	S 5° W	S 8° E	45	63	119*	138			Zanzibar	Outer India.
·713	·755	·753	·740	−·013	86	76	74	79	+ 4	6·7	6·9	6·8	+1·2			2	3	43	10	1	1		S 40° E	S 41° E	87	90	293	292	12·13	6·19	Port Victoria (Seychelles)	
			·500	−·018				70	− 1																		290	285	0·98	0·24	Mauritius (Pamplemouses)	

‖ Wind variable 5. ¶ Wind variable 7. ** Wind variable 1. * Corrected.

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one feather added to the wind arrow
„ „	2 to 5 „ „ „	...	two feathers „ „ „ „
„ „	5 to 10 „ „ „	...	three „ „ „ „
„ „	10 to 20 „ „ „	...	four „ „ „ „
	over 20 „ „ „	...	five „ „ „ „

LITHO. BY J. N. MUNDLE.

Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

CHART SHEWING THE VARIATION OF THE MEAN MAXIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.

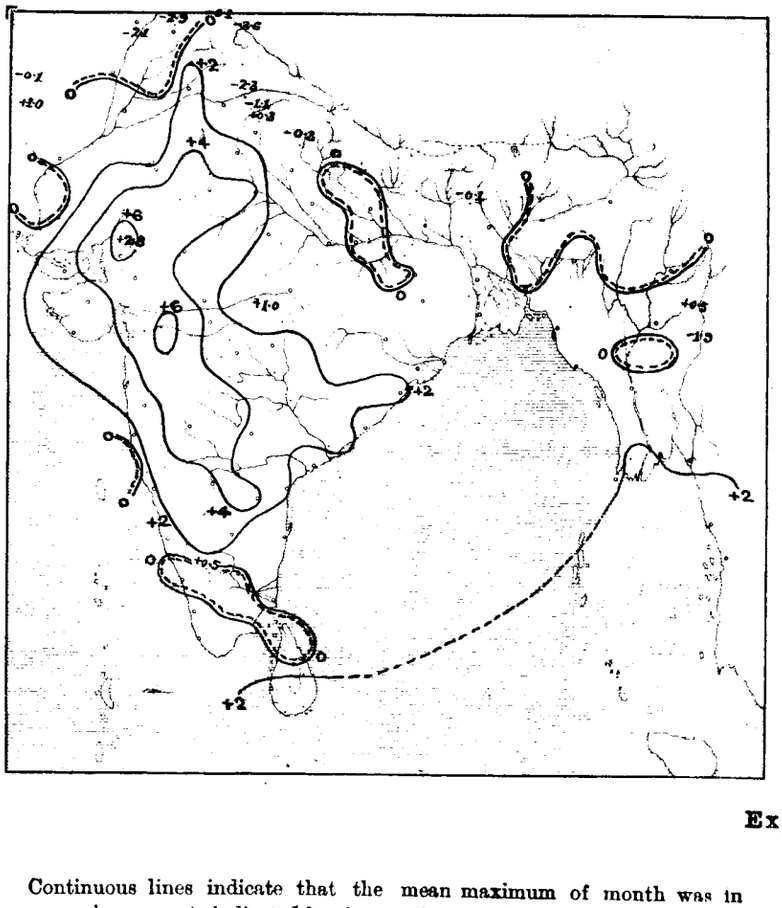
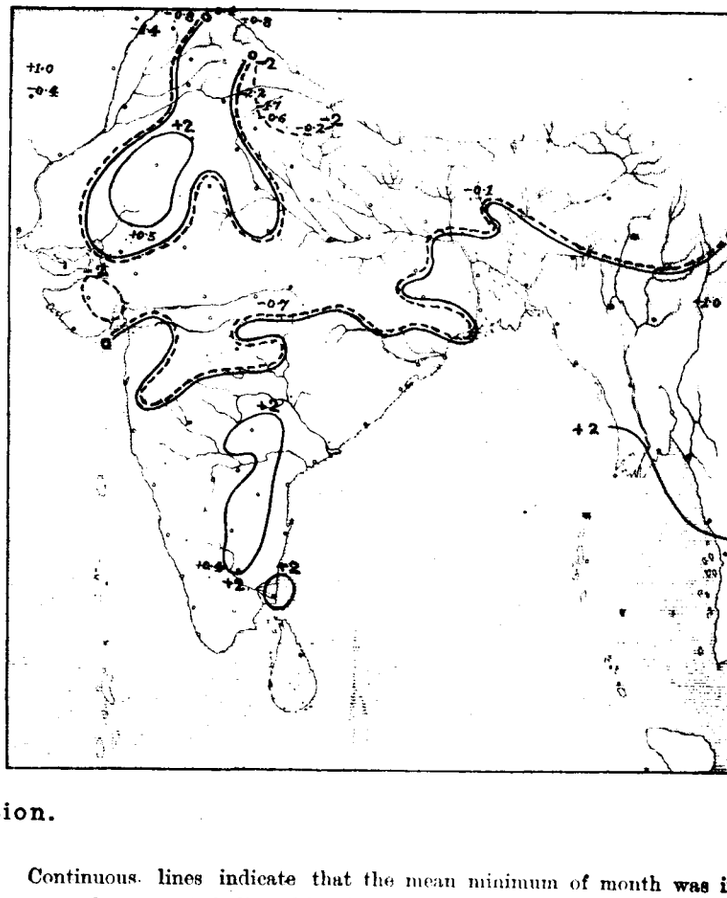


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was i excess by amounts indicated by the attached numbers. Broken or dotte lines that it was in defect by the amounts indicated by the attache numbers. Double lines are the lines of no variation, the broken line facin the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

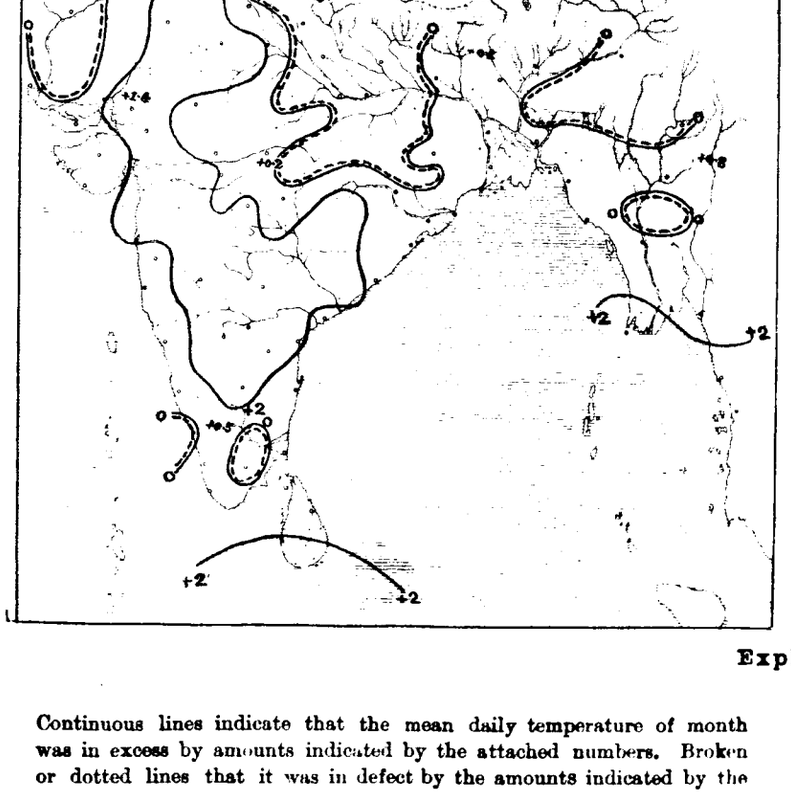
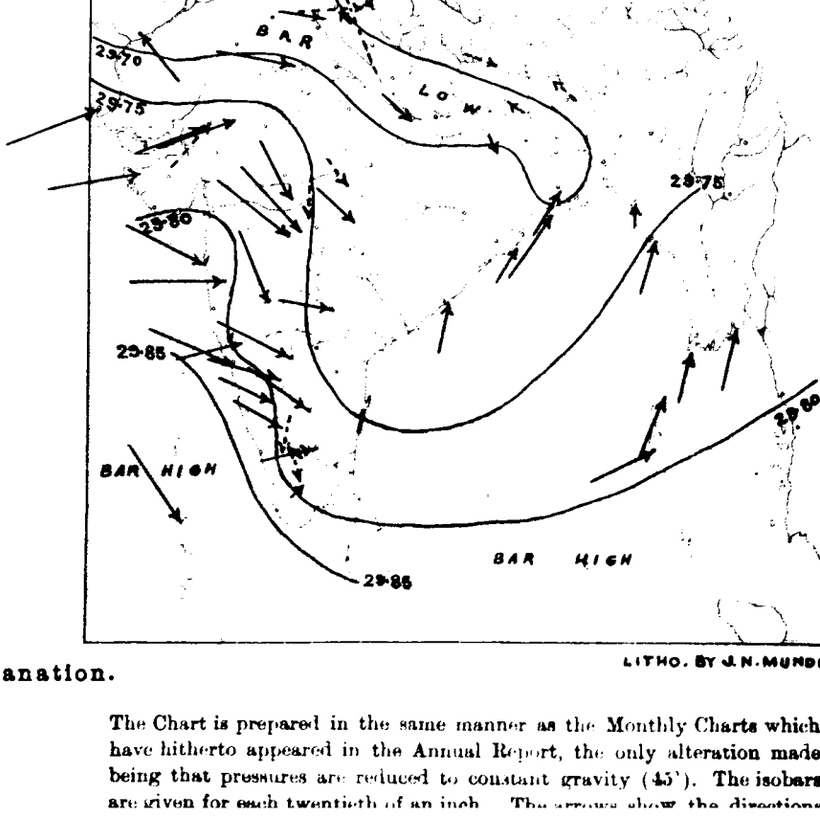


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF SEPTEMBER 1901.



LITHO. BY J. N. MUNDI

Explanation.

Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions

LITHO. BY J.N. MUNDLE.

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India (182 in number), except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
33. Malabar
33a Travancore
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
48. Baluchistan Hills
49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. Madras, East Coast, North
52(a). Do. do. do. (a)
53. Hyderabad, South
54. Madras, East Coast, Central
55. Do. East Coast, South
57. Madras, South

LIBRARY
★ MAR 31 1902 ★
Weather Bureau.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, OCTOBER, 1901.

INTRODUCTION.

THIS review of the weather in India during the month of October 1901 is based on observations taken daily at 8 A.M. at 223 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 66 stations. The rainfall summary is based on the rainfall data of the meteorological observatories and the weekly rainfall telegrams received during the month from District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review. A summary of the weather in the Bay of Bengal and the Arabian Sea, based on information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given.

Summary of the chief features of the weather in India during the month of October, 1901.

October is pre-eminently a month of transition during which the south-west monsoon winds begin to retreat from the north of the Bay and cold weather conditions begin to establish themselves over Northern India. The direction of movement of the cyclonic storms of the month is affected by these changes, and there is generally a marked difference in the trajectories of the storms of October and those of the three preceding months of the rains. At the same time cold weather storms advancing from the westward ordinarily begin to appear in North-West India, and the first falls of snow ordinarily take place over the North-West Himalayas during this month.

October 1901 was on the whole slightly more disturbed than usual both over the Bay area and was about normally disturbed over the extreme north-west. The storms, though slightly more numerous than the average, were not, however, accompanied with much rain, and the general dryness, which had been the characteristic of the greater part of the year, did not disappear under the influence of these disturbances either in the Bay area or in the north-west. At the commencement of the month both temperature and pressure were more or less in excess except in the south of the Peninsula where the weather was showery during the first week, and both temperature and pressure below the normal.

The decrease of temperature was greatest on the 4th as is shown by the following comparative data for the Madras coast stations on this day:—

STATION.	VARIATION FROM NORMAL OF		
	Maximum temperature, 4th October.	Minimum temperature, 4th October.	Mean temperature, 4th October.
	°	°	°
Negapatam	−2·7	+1·5	−0·6
Cuddalore	−6·2	−0·8	−3·5
Madras	−10·5	−1·7	−6·1
Nellore	−4·3	−2·8	−3·6
Masulipatam	−1·2	−1·2	−1·2
Cocanada	+0·3	−0·4	−0·1

A very shallow depression appeared over the Punjab on the 1st. It was stationary over the West Punjab on the 2nd, 3rd and 4th, after which date it was transferred eastward through the Punjab into the west of the North-Western Provinces where it filled up on the 6th. The disturbance gave cloudy weather, but practically no rain to the greater part of the Punjab, but during the 3rd, 4th and 5th moderate snow was received on the Afghan Mountains and on the ranges of the Kashmir and North-West Himalayas, and rain and hail over the submontane regions of the Punjab. This disturbed weather gave rise to a cool wave which advanced across the frontier districts and extended through the Punjab into the North-Western Provinces reducing temperature temporarily to below the normal in those areas. The following comparative data for Baluchistan, the Punjab and the North-Western Provinces from the 3rd to the 7th illustrate the progress of this wave:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	3rd Oct.	4th Oct.	5th Oct.	6th Oct.	7th Oct.
	°	°	°	°	°
Baluchistan	+9·5	+1·4	−0·8	+2·2	+6·2
Punjab	+4·0	+5·1	+1·2	+0·2	+1·2
N.-W. P. and Oudh	+3·1	+3·8	+3·5	−0·5	−0·1

A brisk fall of pressure occurred locally over Burma on the 1st, and a shallow depression was shown over that area and the Bay on the 3rd. On that and the following day barometric gradients increased over the south of the Bay accompanied with a strengthening of the south-west winds in the south, and the depression over the centre of the Bay suddenly underwent a marked development. The storm thus initiated formed the principal feature in the weather until the 10th. The storm passed along a curved path over the Bay finally striking the Bengal coast near Barisal and breaking up over East Bengal on the 10th. The rainfall accompanying the storm was not heavy except in Arakan on the 6th and in Bengal on the 9th. The following were the principal falls (exceeding 5″) recorded during the existence of the storm:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
AKYAB	Akyab	6th October	8·62
CHITTAGONG	Kutubdia	9th "	7·23
	Cox's Bazar	" "	6·93
	Chittagong	" "	6·83
NOAKHALI	Fenny	" "	6·37
CHITTAGONG	Mirsarai.	" "	6·25
NOAKHALI	Harishpur	" "	6·00

The above rainfall occasioned a moderate fall of temperature, and the mean temperature was generally reduced to below the normal from the 6th to the 10th over the Bay area. This is shown below:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	6th October.	7th October.	8th October.	9th October.	10th October.
	°	°	°	°	°
Madras Coast	−2·5	−1·6	−0·1	+1·7	+0·3
Orissa	−0·6	−0·8	−0·4	+1·9	+1·4
Bengal	+1·5	−0·2	+0·4	−1·3	−1·0
Assam	+1·9	+0·6	+2·1	−3·3	−3·6
Burma	−1·7	−2·1	−1·8	−1·2	−1·3

During the same period temperature was generally very excessive over North-Western and Central India.

The following gives comparative data for the divisions in this area from the 6th to the 10th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	6th October.	7th October.	8th October.	9th October.	10th October.
	°	°	°	°	°
North-Western Provinces and Oudh	−0·5	−0·1	+0·8	+1·3	+1·1
Punjab	+0·2	+1·2	+3·2	+3·4	+2·0
Sind	+2·2	+4·2	+2·0	+1·1	+1·2
Rajputana	+5·1	+4·4	+4·2	+3·2	+2·6
Gujarat	+0·5	+0·6	−1·4	−2·0	0
Central India	+2·9	+2·8	+2·5	+2·0	+1·8
Central Provinces	+1·9	+2·5	+1·8	+1·7	+1·3
Berar	+2·6	+4·9	+4·1	+2·9	+1·1

The following table gives comparative data for those stations at which the mean excess was more than 5° in amount during these five days :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
6th October	Khandwa	+7·6
	Ahmednagar	+7·8
	Ajmer	+7·0
	Sambhar	+6·6
	Malegaon	+6·5
	Jaipur	+5·6
7th „	Khandwa	+7·9
	Ahmednagar	+5·8
	Neemuch	+5·6
	Indore	+5·5
	Malegaon	+5·5
	Akola	+5·3
	Deesa	+5·3
	Sholapur	+5·1
	Bijapur	+5·1
8th „	Khandwa	+8·9
	Ajmer	+7·7
	Neemuch	+5·8
	Malegaon	+5·1
9th „	Khandwa	+6·6
	Ahmednagar	+5·7

It is remarkable that while over the greater part of North-West India the heat was excessive at this time, in Kathiawar there was a steady slight deficiency due apparently to a slightly cloudy state of the sky. The following gives data for the Kathiawar stations :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	6th October.	7th October.	8th October.	9th October.	10th October.
	°	°	°	°	°
Bhuj	−0·4	−0·2	−1·5	−2·4	−1·3
Rajkot	+1·4	0	−3·7	−2·3	−1·5
Bhavnagar Para	−0·3	+0·6	−1·1	−2·3	−1·5
Veraval	−2·0	−2·8	−4·7	−5·0	−4·8

During the 11th, 12th and 13th the weather was generally quiet over the Indian area with lower temperatures than usual along the West Coast, and over Kathiawar on the one hand and over Burma and Assam on the other, while practically over the whole of the interior of India the heat was more or less excessive. The following gives data for those stations during these three days at which the excess of the mean temperature was 4° or more in amount :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
11th October	Cuddapah	+4·6
	Khandwa	+4·6
	Madras	+4·4
	Malegaon	+4·2
	Deesa	+4·1
12th „	Khandwa	+6·4
	Malegaon	+5·1
	Bijapur	+4·8
	Cuddapah	+4·7
	Sholapur	+4·6
	Surat	+4·3
	Ajmer	+4·3
	Jaipur	+4·2
13th „	Khandwa	+7·1
	Cuddapah	+6·7
	Ajmer	+5·7

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
13th October . .	Jaipur	+5·3
	Malegaon	+4·8
	Bikaner	+5·4
	Jhansi	+4·2
	Saugor	+4·1
	Cuddalore	+4·1

During these three days a depression was developed over the centre of the Bay. The storm struck the Circars coast near Waltair on the 14th, and thence passed in a west-north-westerly direction across the head of the Peninsula and Gujarat, finally disappearing over the north of the Arabian Sea on the 18th. Heavyish rain was received on the Circars coast on the 14th and 15th, and moderate rain accompanied the storm in its subsequent course across the Peninsula. The rainfall was more or less localised as the storm did not affect a very large area, but the course of the storm was traced by a well marked fall of temperature. The following table gives temperature data from the 13th to the 18th for certain representative stations and illustrates the advance of the cool wave :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	13th October.	14th October.	15th October.	16th October.	17th October.	18th October.
	°	°	°	°	°	°
Gopalpur . . .	−0·6	−0·6	−1·6	+1·2	+1·4	+1·5
Waltair . . .	+1·3	−0·3	−4·6	−3·1	−1·3	?−0·8
Cocanada . . .	+1·6	+0·7	−6·6	−2·3	+1·2	+1·5
Masulipatam . .	+2·3	+2·5	−7·5	−0·5	+2·4	+0·6
Nellore . . .	+3·8	+5·8	+0·7	+3·0	+4·8	+2·2
Madras . . .	+2·3	+3·7	+1·9	+5·6	+2·3	−0·1
Kurnool . . .	+2·0	+2·9	−0·7	−2·2	+3·2	+4·6
Hyderabad (Deccan) .	+1·7	+2·8	+1·0	−5·6	+1·9	+3·4
Chanda . . .	−1·0	+0·1	+2·3	−1·1	−2·2	+1·6
Bijapur . . .	?+4·2	+4·7	+6·1	−0·3	−0·5	+2·1
Sholapur . . .	+2·8	+3·6	+4·5	−1·7	−1·6	+2·7
Ahmednagar . .	+3·1	+4·2	+5·5	+1·0	−5·3	−1·3
Malegaon . . .	+4·8	+4·4	+8·0	+3·7	−5·2	+0·2
Bombay . . .	−1·1	−2·0	−0·6	−0·7	−3·2	−2·1
Ratnagiri . . .	−1·1	−2·3	−1·6	−1·2	−2·2	−1·2
Surat	+2·6	+2·0	+4·8	+7·0	−0·9	−2·4
Veraval . . .	?−7·1	?−4·5	?−4·8	−2·0	+1·6	?−4·5

When the above storm had disappeared together with its accompanying depression of temperature, fine weather set in, and the heat on the 19th was excessive over nearly the whole Indian region. This excess of temperature continued over Northern and Central India from the 19th until the close of the month. The excess was more or less considerable to large over nearly the whole of this large area, as is shown by the following comparative data of the northern and central divisions from the 19th to the 31st :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF												
	19th October.	20th October.	21st October.	22nd October.	23rd October.	24th October.	25th October.	26 October.	27th October.	28th October.	29th October.	30th October.	31st October.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Bengal . . .	+4·6	+3·4	+1·2	−0·2	−0·1	+0·7	+1·2	+1·4	+1·9	+2·0	+2·1	+2·4	+2·3
Orissa . . .	+4·5	+5·6	+5·6	+2·4	+2·6	+0·8	−0·1	+1·7	+1·9	+2·2	+2·2	+3·0	+3·8
Bihar . . .	+6·2	+2·3	+0·1	+1·0	+1·2	+1·7	+2·0	+2·6	+3·6	+4·4	+4·8	+5·9	+3·9
Chota Nagpur .	+6·4	+5·2	+2·6	+2·9	+1·0	+0·7	+1·7	+2·0	+2·5	+3·2	+4·5	+4·9	+6·3
North-Western Provinces and Oudh.	+3·0	+1·1	+1·7	+2·4	+2·5	+2·0	+2·0	+3·3	+3·7	+3·7	+4·7	+5·4	+5·3
Punjab . . .	+1·6	+1·0	+1·8	+2·4	+2·7	+3·0	+4·0	+5·0	+4·7	+4·5	+5·8	+6·2	+5·8
Rajputana . .	+3·9	+4·9	+8·2	+6·6	+4·3	+4·2	+5·5	+5·7	+5·5	+7·4	+6·6	+6·5	+7·7
Central India .	+4·6	+5·4	+5·4	+6·2	+5·1	+3·8	+2·6	+3·8	+3·8	+4·0	+4·8	+5·7	+7·2
Central Provinces .	+4·8	+5·4	+5·4	+5·6	+4·9	+3·0	+1·4	+2·0	+2·5	+2·5	+3·5	+3·5	+4·2
Berar . . .	+4·4	+4·7	+5·5	+5·7	+6·8	+4·6	+2·1	+2·1	+2·6	+1·8	+3·6	+3·5	+3·1

Though the weather was, as shown above, steadily hotter than usual during these thirteen days, the area of greatest excess of temperature was not maintained steadily over any one area but moved about irregularly over Northern and Central India. The following gives comparative data for the two stations on each day, which exhibited the largest excess of temperature, and illustrates this feature of the temperature conditions :—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
19th October . .	Ranchi	+ 7·4
	Gaya	+ 7·2
	Sutna	+ 7·2
20th ,, . .	Ajmer	+ 8·1
	Cuddapah	+ 7·3
21st ,, . .	Sambhar	+11·0
	Ajmer	+ 9·5
22nd ,, . .	Cuddapah	+ 8·2
	Khandwa	+ 8·1

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
23rd October	Khandwa	+ 8·7
	Amraoti	+ 7·5
24th ,,	Ahmedabad	+ 8·6
	Malegaon	+ 8·1
25th ,,	Ahmedabad	+ 8·2
	Bikaner	+ 8·0
26th ,,	Cuddapah	+ 7·9
	Bikaner	+ 7·2
27th ,,	Rawalpindi	+ 7·9
	Sialkot	+ 7·1
28th ,,	Ahmedabad	+ 9·4
	Bikaner	+ 9·2
29th ,,	Bikaner	+10·7
	Jacobabad	+10·7
30th ,,	Sialkot	+ 9·1
	Rawalpindi	+ 8·8
31st ,,	Saugor	+ 9·9
	Jhansi	+ 9·5

Over the Peninsula temperature was less steadily excessive than over Central and Northern India. Thus on the 27th and 28th the weather became showery over the south of the Peninsula, the temperature fell and the mean temperature was lower than usual in a few districts. The following gives comparative temperature date for each alternate data from the 19th to the 31st for the Peninsular divisions, and shows the fall of temperature towards the close of the month :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	19th Oct.	21st Oct.	23rd Oct.	25th Oct.	27th Oct.	6th Oct.	31st Oct.
	°	°	°	°	°	°	°
West Coast	+0·2	+1·0	+1·0	+1·4	+1·3	+0·4	+1·3
Bombay Deccan	+3·1	+3·7	+3·5	+2·9	+2·6	+1·8	+1·9
Mysore	+1·5	+2·1	+2·6	+1·8	+2·1	—1·3	+0·6
Madras Coast	+1·3	+3·7	+3·4	+2·2	+1·6	+1·2	+4·3
Madras Deccan	+3·5	+5·9	+4·7	+3·7	+2·2	+0·6	+2·4
South India	+1·7	+4·4	+4·3	+2·9	+2·9	+0·9	+2·7

There were no cold waves emanating in the north-west and passing from west to east across Northern India, such as ordinarily occur in October in more disturbed years, but on the 4th and 5th some snow occurred on the higher mountain ranges in the north-west and some rain on the outer ranges of the Himalayas and the submontane districts of the Punjab. Following this there occurred a slight cold wave which was, however, confined to the Punjab and part of the North-West Provinces. The following gives data for certain selected stations from the 3rd to the 7th in illustration :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	3rd Oct.	4th Oct.	5th Oct.	6 Oct.	7th Oct.
	°	°	°	°	°
Quetta	+9·2	+3·2	—1·5	+1·3	+3·6
Chaman	+9·8	—0·5	—0·1	+3·0	+8·8
D. I. Khan	+4·0	+4·0	—1·6	—2·0	+1·5
Peshawar	+3·8	+2·1	—7·3	—1·9	+0·5
Cherat	+7·2	—2·2	—14·0	—3·4	—1·7
Murree	+6·0	+1·2	—4·3	—0·1	—0·8
Lahore	+6·3	+7·8	+5·6	+2·8	+2·1
Ludhiana	+2·3	+4·7	+4·4	+0·2	+1·8
Simla	+2·8	+2·9	+2·0	—4·8	+0·8
Dehra Dun	+2·8	+2·7	+0·6	—4·6	—1·2
Roorkee	+3·2	+4·0	—0·1	—5·1	—2·0
Meerut	+2·3	+5·5	+5·6	—3·0	—0·2
Mussooree	+1·4	+0·7	—0·8	—3·8	+1·6

Pressure.—As usual in October the mean distribution of pressure in October 1901 was generally uniform, but was slightly lower over the Gangetic Plain and the Bay area, and slightly higher over the Brahmaputra Valley and North-West India than elsewhere. The total range of pressure of the month over India was 0·106″.

The mean pressure of the whole Indian land area was 0·025″ below the normal.

Pressure was, relatively to this general condition, in local defect over the greater part of Northern India and Burma. The local deficiencies slightly exceeded 0·020″ in parts of Bihar, of the North-Western Provinces and Central India and of the Punjab. Pressure was in excess, relatively to the general condition, over North Bombay, the west and south of the Peninsula and the southern half of the Bay. The excess was generally moderate or small but amounted to between 0·020″ and 0·040″ along the West Coast (Goa +·040″) and in Ceylon (Colombo +·026″).

The vertical pressure anomalies were generally positive and in the north-west mountain regions were large and important. In the centre and south they were small and of little significance.

The following table gives the mean pressure variations and anomalies of the month for the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	Variation from normal of mean 8 A.M. pressure of October 1901.	Pressure anomaly, October 1901.
	"	"
Burma Coast and Bay Islands	—·028	—·003
Burma Inland	—·026	—·001
Assam	—·036	—·011
Bengal and Orissa	—·037	—·012
Gangetic Plain and Chota Nagpur	—·038	—·013
Upper Sub-Himalayas	—·039	—·014
Indus Valley and North-West Rajputana	—·042	—·017
East Rajputana, Central India and Gujarat	—·024	+·001
Deccan	—·019	+·006
West Coast	+·004	+·029
South India	—·016	+·009

Temperature.—As a result of the very early termination of the monsoon rains in India and the unusual prevalence of fine and dry weather the temperature conditions, on the mean of the month, exhibited large variations from the normal. Both the mean maximum or day temperature and the mean minimum or night temperature were in excess over nearly the whole country, and the mean diurnal range was about normal.

The mean day or maximum temperature was lower than usual in three small areas including the West Coast from Kurrachee southward to Calicut, the Central Bay coasts and parts of Central Burma and the north of Burma and the Upper Assam Valley, and in all three areas the deficiency was small and unimportant. Over the whole of the remainder of India the mean maximum or day temperature exceeded the normal. The excess was greatest and varied between 5° and 9° at the following stations, *viz.* Khandwa (+9°·1), Indore (+5° 9), Sambhar (+5°·7), Neemuch (+5°·4), and Malegaon (+5°·3).

With two or three unimportant exceptions the mean minimum or night temperature was higher than usual in all parts of the country. The excess was moderate to considerable over a large part of the interior of India and was absolutely greatest over Rajputana and the adjoining districts. It was more than 4° at Ajmer (+6°·4), Deesa (+5°·7), Jhansi (+5°·4), Bikaner (+4°·8), Sialkot (+4°·8), Jaipur (+4°·7), Lahore (+4°·3) and Agra (+4°·1).

The mean temperature of the month was, with a few local and unimportant exceptions, above the normal throughout the Indian region. The excess was almost as marked at the elevation of the hill stations as at the elevation of the plains. It was greatest and large over the north-western and central parts of the country, including parts of the Punjab, Rajputana, the North-Western Provinces, Central India, the Central Provinces and Khandesh. The excess was more than 4½° at Khandwa (+5°·9), Ajmer (+5°·4), Deesa (+5°·1), Jhansi (+4°·9), Bikaner (+4°·8), Sialkot (+4°·7), and Jaipur and Malegaon (each +4°·6). At the hill stations the excess ranged from 4°·1 at Srinagar to 0.°5 at Chaman and 0°·8 at Wellington.

The following table gives temperature variation data for the month of October 1901 for eleven meteorological provinces of the empire:—

METEOROLOGICAL PROVINCE.	VARIATION OF ACTUAL FROM NORMAL OF		
	Mean maximum temperature, October 1901.	Mean minimum temperature, October 1901.	Mean daily temperature, October 1901.
	°	°	°
Burma Coast and Bay Islands	—0·5	+1·1	+0·3
Burma Inland	—0·2	+1·7	+0·8
Assam	+0·7	+0·9	+0·8
Bengal and Orissa	+1·9	+1·3	+1·6
Gangetic Plain and Chota Nagpur.	+3·2	+2·0	+2·6
Upper Sub-Himalayas	+2·8	+2·6	+2·7
Indus Valley and North-West Rajputana.	+2·7	+2·5	+2·6
East Rajputana, Central India and Gujarat.	+3·9	+3·1	+3·5
Deccan	+4·0	+1·3	+2·7
West Coast	—0·3	+0·9	+0·3
South India	+1·5	+0·9	+1·2

Winds.—The winds at the Bay Islands were stronger and steadier than usual and were remarkable for the unusually large westerly component in their direction. In Bengal also the winds contained an abnormal westerly component, and in Upper India this increased westing in the wind direction was almost equally strongly pronounced. The winds over Upper India were generally lighter than usual, while the steadiness varied irregularly from the average. In the Deccan the wind varied between north-west and north-east and as in Upper India was generally more westerly than the average, while the velocity was on the whole greater than usual. In South India the wind's direction varied irregularly from the normal but the steadiness was considerable though the velocity was low. The winds were very variable at the hill stations.

The air movement was very abnormal over a large part of the country the principal abnormal feature having been the largely increased westing in the winds.

Humidity.—The mean humidity conditions of the month were determined largely by the early withdrawal of the

monsoon, and the consequent high temperature prevailing over the greater part of the country. Except in parts of North-West India and of the Deccan the amount of aqueous vapour present in the air was generally above the normal, but the mean temperature having been excessive, the relative humidity was below the normal over nearly the whole of the interior of India. The areas of greatest deficiency of the relative humidity lay (1) over the Western Desert represented by the stations of Ludhiana (—6) and Deesa (—5) and (2) over the Central Provinces and the Deccan represented by the stations of Khandwa (—11), Sholapur (—12) and Bellary (—11). But while over the whole of the interior of the country the air was generally drier than usual, there was some excess of humidity around the coasts and Arakan. Orissa and the West Coast all exhibited a slight excess of dampness. At most of the hill stations the air was also drier than usual.

The following table gives the variations of the mean absolute and relative humidities of the month from the normal in nine meteorological divisions:—

Meteorological Province.	Mean absolute humidity.		Mean relative humidity.	
	Average actual, October 1901.	Variation of actual from normal, October 1901.	Average actual, October 1901.	Variation of actual from normal, October 1901.
	"	"	%	
Burma Coast and Bay Islands.	·903	+·017	85	+ 1
Bengal and Orissa . .	·875	+·038	80	— 1
Gangetic Plain and Chota Nagpur.	·667	+·029	64	— 4
Upper Sub-Himalayas .	·482	+·013	54	— 1
Indus Valley and North-West Rajputana.	·543	+·067	53	+ 3
East Rajputana, Central India and Gujarat.	·449	+·026	39	— 4
Deccan	·535	—·027	56	— 6
West Coast . . .	·840	+·013	82	+ 1
South India . . .	·661	+·012	71	— 1

Cloud.—There was more cloud than usual in two areas. The first included Lower Burma and the east and north of the Bay and the second parts of the south of the Peninsula. In the former the excess of cloud was moderate to considerable amounting to 2·4 at Rangoon, to 1·8 at Cocos Island, and to 1·3 at Port Blair; in the latter it was slight amounting to 1·1 at Bellary and to 0·7 at Mysore. Over practically the whole of the remainder of India, both on the hills and plains, the sky was more or less clearer than usual. The deficiency was greatest within an area which covered Berar, Khandesh, the Bombay Deccan and the Konkan coast. The greatest deficiencies within this area were 1·5 at Chikalda, 1·6 at Sholapur and 1·4 at Bombay. The sky was practically clear of cloud that is, the cloud amount equalled only 0·5 or less at the following stations: Meerut (0·5), Roorkee (0·4), Ludhiana (0·4) Jacobabad (0·4), Lahore (0·3) and Quetta (0·3), while it was very cloudy in parts of the south of the Peninsula and of Lower Burma the cloud amount averaging 7·0 or more at Rangoon (8·3), Bellary (7·6), Mysore (7·3), Port Blair (7·3) and Cocos Island (7·0).

The following table gives the comparative data of the cloud amount for nine meteorological divisions:—

Meteorological Province.	Mean cloud amount.	
	Average actual, October 1901.	Variation of actual from normal, October 1901.
Burma Coast and Bay Islands . . .	6·8	+1·2
Bengal and Orissa	4·8	+0·3
Gangetic Plain and Chota Nagpur . . .	2·2	—0·8
Upper Sub-Himalayas	0·5	—0·4
Indus Valley and North-West Rajputana .	0·8	—0·1
East Rajputana, Central India and Gujarat .	1·3	—0·5
Deccan	3·2	—1·0
West Coast	3·0	—1·4
South India	6·3	0

Rainfall.—The principal feature in the meteorology of the month was the scantiness of the rainfall. There was actually or practically no rain throughout the month over a large part of North-Western India, and over nearly the whole of the remainder of India the average actual rainfall of the month was more or less in defect. The only important exception was in the north-east where East Bengal and the Assam divisions reported normal or slightly excessive rain. This condition resulted from the fact that these areas lay directly in the path of the first cyclonic storm of the month and received heavy general rain on the 9th and 10th from this disturbance. The deficiency was absolutely greatest and ranged between 3″ and 5″ over the Bengal hills, the Konkan, the central and south divisions of the east coast and the south division of Madras. There were fairly constant showers over the south of the Peninsula and over Burma during the month, but in other parts of the country the rainfall accompanied the appearance and passage of two cyclonic storms, the first of which after giving rain to the Bay area advanced north-eastward and carried rain into North-East India, while the second after equally giving rain to the Bay area crossed the head of the Peninsula and carried rain to the Central Provinces, Berar, the Deccan, Khandesh, Gujarat and Rajputana.

The following table gives comparative rainfall data of the eleven meteorological provinces of the empire:—

METEOROLOGICAL PROVINCE.	RAINFALL. Mean actual for October 1901.	Mean normal for October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands.	14·20	9·57	+4·63	+48
Burma Inland . .	6·29	4·50	+1·79	+40
Assam	4·68	5·00	−0·06*	− 1
Bengal and Orissa .	3·28	5·18	−1·90	−37
Gangetic Plain and Chota Nagpur.	0·58	2·56	−2·16*	−84
Upper Sub-Himalayas .	0·21	0·46	−0·29*	−63
Indus Valley and North-West Rajputana.	0·03	0·06	−0·03	−50
East Rajputana, Central India and Gujarat.	0·25	0·66	−0·36*	−55
Deccan	1·86	3·04	−1·26*	−41
West Coast . . .	2·72	7·80	−5·07	−65
South India . . .	4·95	7·64	−2·68*	−35

* A reference to Table I will show that the means of columns 2 and 3 are derived from a smaller number of stations than the means in the first column. The sum of the figures in columns 2 and 3 will, therefore, not agree with the figures in column 1.

Atmospheric Pressure.

The mean pressure of the Indian land area was 0·025 inch below the normal.

Pressure was, relatively to this general condition, in local defect, or the anomalies were negative over the greater part of Northern India and Burma. The local deficiency was generally small in amount but exceeded 0·020 inch in three areas for which data are given below:—

PROVINCE OR DIVISION.	STATION.	Variation from normal of mean 8 A.M. pressure of October 1901.	Pressure anomaly, October 1901.
		"	"
BIHAR . . .	Darbhanga . . .	−·054	−·029
	Patna	−·047	−·022
NORTH-WESTERN PROVINCES AND PART OF CENTRAL INDIA.	Agra	−·049	−·024
	Meerut . . .	−·048	−·023
	Lucknow . . .	−·046	−·021
	Nowgong . . .	−·046	−·021
PUNJAB . . .	Rawalpindi . . .	?−·079	?−·054
	Mooltan . . .	−·060	−·035
	Dera Ismail Khan .	−·058	−·033
	Peshawar . . .	−·051	−·026
	Montgomery . . .	−·047	−·022

Pressure was in excess, relatively to the general condition, over North Bombay, the west and south of the Peninsula and the southern half of the Bay. The excess was moderate in the extreme west and extreme south of the Indian area, but was small elsewhere. The following gives comparative data for those stations at which the excess was more than 0·020 inch:—

STATION.	Variation from normal of mean 8 A.M. pressure of October 1901.	Pressure anomaly, October 1901.
	"	"
Goa	+·015	+·040
Trivandrum	+·014	+·039
Ratnagiri	+·012	+·037
Trincomalee	+·008	+·033
Bombay	+·003	+·028
Mormugao	+·002	+·027
Belgaum	+·001	+·026
Bijapur	+·001	+·026
Colombo	+·001	+·026
Cochin	0	+·025
Mangalore	−·002	+·023
Ahmednagar	−·002	+·023
Malegaon	−·002	+·023

The mean pressure of the month was very uniform over the greater part of the land and sea areas, but was slightly lower over the Gangetic Plain and the Bay area and slightly higher over the Brahmaputra Valley and the sub-montane districts of North-West India than elsewhere. The total range of the mean 8 A.M. pressure of the month was 0·106 inch, which is somewhat greater than usual. The actual distribution of pressure is given in Plate I, which shows slight high pressure areas over the west of the Peninsula and the North Punjab and a moderate high pressure

area over the Brahmaputra Valley and a large area of uniform pressure over the Bay and the surrounding coasts.

Pressure was in slight or small excess at the Baluchistan and Western Himalayan hill stations; at Mussooree the amount of the excess was doubtful. In the Eastern Himalayas as well as at the central and southern hill stations the pressure, on the mean of the month, was lower than usual. The vertical pressure anomalies were positive except in the Mount Abu area and the Eastern Himalayas and were large in amount in the North-West Himalayan and the Baluchistan mountain areas. The following gives data for ten pairs of stations:—

HILL STATION.	Variation from normal pressure, October 1901.	PLAIN STATION.	Variation from normal pressure, October 1901.	Vertical pressure anomaly (Hill—Plain).
	"		"	"
Quetta	+·008	Jacobabad	—·035	+·043
Murree	+·003	Peshawar	—·051	+·054
Simla	+·007	Ludhiana	—·038	+·045
Leh	+·042	Lahore	—·040	+·082
Chakrata	+·007	Roorkee	—·042	+·049
Ranikhet	+·006	Bareilly	—·034	+·040
Darjeeling	—·021	Dhubri	?—·045	—·024
Pachmarhi	—·009	Hoshangabad	?—·018	+·009
Mount Abu	—·030	Deesa	—·021	—·009
Wellington	—·002	Coimbatore	—·010	+·008

The chief features of the pressure distribution of October 1901 were as follows:—

(1) Slight to moderate deficiency (except along the West Coast) averaging 0·025 inch in amount.

(2) Uniform and lower pressures than usual over the Bay area and higher pressures than usual over the Brahmaputra Valley.

(3) Relatively to the general condition pressure was locally in excess over North Bombay and the west and centre of the Peninsula, and was in slight to moderate defect elsewhere.

(4) The vertical pressure anomalies were generally positive and were strongly marked in the north-west.

Barometric depressions and cyclonic storms of the month.

During the month of October 1901 the weather was disturbed over the Bay, two distinct and two abortive cyclonic storms having formed over that area during the month. On the other hand, the weather was about normally settled in North-West India, where only two small and unimportant depressions appeared.

At the commencement of the month pressure was above the normal over the whole of Northern and Central India, while it was below over Lower Burma, the centre and south of the Bay and the southern half of the Peninsula, the deficiency having been greatest over Tenasserim where calms and light north-westerly winds were reported. On the 1st the winds were strong and squally over the south-west of the Bay blowing from cyclonic directions. Heavy rain was falling on board the *Saint Ninian* and the *City of Sparta*, and a slight depression existed in about Lat. 12° N. and Long. 83° 30′ E. The following gives marine data for this portion of the Bay:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta office.	WIND		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S.S. *Kerbela*	8 51	81 13*	29·786	SSW	6	Rough sea. 4 P.M. gusty with rain squalls.
S.S. *Upada*	9 00	82 51	·765	SW	4	Squally.
S.S. *City of Sparta*	9 32	83 09	29·699	SW	5	Squally and heavy rain.

* Noon position.

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta office.	WIND		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
S.S. *St Ninian*	10 26	83 39	...	W	...	Confused sea and fresh squalls and heavy rain.
S.S. *Fultala*	11 36	84 25	·737	var	2	Rainy.
S.S. *Wildenfels*	12 05	80 29	·804	WNW	3	
S.S. *Queensland*	12 34	84 33	...	S by W	4	Gentle southerly swell. 8 P.M. squally.
S.S. *Deepdale*	Madras.		·728	...	...	Midnight squally.

The preceding data show all the evidences of the presence of a small cyclonic storm in its initial stages, but the disturbance never developed as the circulation was apparently broken up by the larger and more important depression, which subsequently appeared over the centre of the Bay on the following day.

Cyclonic storm of the 2nd to the 9th.—On the 1st, as mentioned above, pressure was lowest, relatively to the normal, over Tenasserim where calms or light north-north-westerly winds and moderate rain were reported. At the same time pressure was uniform with light variable winds and a high humidity over the centre of the Bay. Conditions were thus favorable for the initiation of a cyclone, but the disturbance which apparently started the cyclonic whirl seems to have entered the Bay across the Tenas-

serim Peninsula. The following gives 8 A.M. observations around the Bay on this day, the 1st October:—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	in.	in.	in.				Inches	
Trincomalee	29·813	—·027	?	SW	7	3	0·68	
Negapatam	·797	—·022	—·032	SE	4	9	0·35	
Cuddalore	·790	—·034	—·037	Calm	0	10	1·36	Drizzling.
Madras	·802	+·007	—·011	NNW		9	0·66	Sea smooth.
Nellore	·822	—·010	+·015	WNW	4	10	0·86	Drizzling.
Masulipatam	·819	—·010	+·027	NNW	9	9	0·19	
Cocanada	·807	—·011	+·026	NNE	13	2	0·24	Sea slight.
Waltair	·821	—·016	+·041	NE	13	8	0·25	Sea smooth.
Gopalpur	·811	—·033	+·047	NNW	9	0	...	Do.
Cuttack	·808	—·047	+·021?	Calm	1	2	...	
False Point	·824	—·035	+·039	NW	5	6	...	
Balasore	·846	—·038	+·060	Calm	1	2	...	
Saugor Island	·839	—·041	+·048	SW	6	4	1·38	Wind variable.
Calcutta	·834	—·046	+·042	W	1	1	0·01	
Chittagong	·835	—·072	+·016	N	2	5	0·01	
Akyab	·819	—·068	+·002	N	0	8	...	
Bassein	·803	—·058	—·025	Calm	3	9	...	
Diamond Island	·813	—·037	—·012	SSW	2	8	0·35	Thunder.
Moulmein	·788	—·076	—·061	NW	2	8	0·70	
Rangoon	·806	—·044	—·037	WSW	2	7	...	
Tavoy	·791	—·063	?	Calm	1	0	1·70	Thunder.
Mergui	·799	—·037	—·052	Calm	1	6	0·80	

The above data show that pressure was decreasing briskly over Burma and was steady or giving way slightly on the Madras coast. The following gives marine data for the 1st:—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	Force.	WEATHER.
	° ′	° ′	in.			
S. S. *Karbela*	8 51	81 13*	29·786	SSW	6	Rough sea. 4 P.M. gusty with rain squalls.
S. S. *Upada*	9 00	82 51	·765	SW	4	Squally.
S. S. *City of Sparta.*	9 32	83 09	·699	SW	5	Squally and heavy rain.
S. S. *St. Ninian*	10 26	83 39	...	W	...	Confused sea and fresh squalls and heavy rain.
S. S. *Fultala*	11 36	84 25	·737	Var.	2	Rainy.
S. S. *Wildenfels*	12 05	80 29	·804	WNW	3	
S. S. *Queensland*	12 34	84 33	...	S by W	4	Gentle south swell. 8 P.M. squally.
S. S. *Deepdale*	Madras.		·728	...	...	Midnight squally.
S. S. *Umta*	13 55	84 53	·720	NE	2	Cloudy.
S. S. *Malda*	16 02	93 40	·797	Var.	4	Sea smooth and cloudy.
S. S. *Madura*	16 30	92 54	·728	NE	2	Smooth sea. 8 P.M. drizzling rain.
S. S. *Culna*	Rangoon.		·836	...	...	8 P.M. cloudy.
S. S. *Shahsada*	19 26	92 13	·816	WNW	2	Fine.

* Noon position.

In the north of the Bay the wind was generally north-westerly and light or moderate in force.

October 2nd.—Pressure was decreasing slightly around the coasts of the Bay. The following gives 8 A.M. data for the coast stations:—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	in.	in.	in.				Inches	
Trincomalee	29·799	—·014	—·030	SW	14	3	0·10	
Negapatam	·762	—·035	—·068	W	3	10	...	
Cuddalore	·778	—·012	—·051	Calm	0	8	0·02	Showery.
Madras	·757	—·045	—·060	N	4	5	0·71	Sea smooth.
Nellore	·784	—·038	—·027	WNW	3	8	1·73	Continuous rain.
Masulipatam	·794	—·025	—·002	Calm	8	2	1·03	
Cocanada	·781	—·026	—·003	N	11	4	0·55	Sea rough.
Waltair	·780	—·041	—·001	NE	8	5	...	Sea smooth.
Gopalpur	·768	—·043	—·002	NNW	6	0	...	
Cuttack	·759	—·049	—·032	Calm	1	4	...	
False Point	·776	—·048	—·013	W	4	6	...	Thunder.
Balasore	·764	—·082	—·024	SW	1	2	...	Ditto.
Saugor Island	·779	—·060	—·014	W	7	3	...	Sea smooth.
Calcutta	·770	—·064	—·025	SW	2	0	...	
Chittagong	·771	—·064	—·048	NE	2	4	...	
Akyab	·787	—·032	—·032	ENE	1	2	...	
Bassein	·751	—·052	—·078	SE	3	9	0·13	
Diamond Island	·758	—·055	—·067	ENE	4	9	2·20	
Moulmein	·772	—·016	—·079	SSW	1	6	0·13	
Rangoon	·764	—·042	—·081	NE	4	8	0·08	Thunderstorm.
Tavoy	·784	—·007	?	Calm	1	10	0·47	Showery.
Mergui	·789	—·010	—·062	Calm	1	4	0·21	

The above shows that the winds were light and unsteady around the Bay, but at Moulmein the wind had changed to south-south-west and at Rangoon, Bassein and Diamond Island to the eastward. Heavyish rain had fallen at the last-named station.

The following gives marine information for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind Direction.	Force.	Weather.
	° ′	° ′	″			
S. S. *St. Ninian* .	12 57	84 39	...	W	2	Fine.
S. S. *Chanda* .	Madras.		29·798	...	...	4 A.M. Fine.
S. S. *City of Sparta.*	13 37	85 04	·659	NE	2	Southerly swell and cloudy, midnight squally with heavy rain.
S. S. *Fultala* .	14 52	85 46	·713	NE	2	Fine. 8 P.M. slight rain.
S. S. *Deepdale* .	15 18	82 26	·688	NE	4	Passing showers.
S. S. *Culna* .	15 41	95 07	·815	Var.	2	Fine. 4 A.M. heavy rain squalls.
S. S. *Shahsada* .	15 56	93 41	·750	SE	2	Fine, noon occasional rain.
S. S. *Commilla* .	Rangoon River.		·734	...	...	Midnight cloudy.
S. S. *Madura* .	Rangoon.		·701	NNE	2	Fine. 4 A.M. occasional heavy squalls of wind and rain.
S. S. *Umta* .	18 06	86 50	·770	ENE	2	Sea smooth.
S. S. *Kangra* .	Gopalpur.		·804	SW	2	Sea smooth and fine.
S. S. *Malda* .	19 34	89 54	·733	N	2	Sea smooth.
S. S. *Goa* . .	19 55	89 18	·748	NW	2	Fine.

The barometer had fallen briskly over the centre of the Bay, but the winds were light though their directions apparently pointed to the presence of a slight depression in about Lat. 16° N.

October 3rd.—Pressure had commenced to recover over Tenasserim but was still giving way on other coasts of the Bay. The following gives 8 A.M. observations of the coast stations:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inch.	
Negapatam	29·777	+·015	—·056	Calm	4	10	...	
Cuddalore .	·778	0	—·056	Calm	0	10	0·01	Showery.
Madras .	·783	+·026	—·037	NW	4	10	0·04	Sea smooth.
Nellore .	·771	—·013	—·045	WNW	3	8	0·03	Thunder.
Masulipatam	·773	—·021	—·026	Calm	5	6	...	
Cocanada .	·748	—·033	—·041	N	6	2	0·03	Sea smooth
Waltair .	·743	—·037	—·039	Calm	5	4	...	Ditto.
Gopalpur .	·731	—·037	—·046	NNW	6	0	...	
Cuttack .	·729	—·030	—·063	Calm	0	3	...	
False Point	29·747	—·029	—·042	SE	4	7	...	Thunder.
Balasore .	·754	—·010	—·034	NNW	1	3	...	
Saugor Island.	·748	—·031	—·045	NNW	5	4	...	Thunder.
Calcutta .	·754	—·016	—·040	W W	2	3	0·21	
Chittagong .	·771	0	—·048	NE	2	8	...	Thunder.
Akyab .	·771	—·016	—·048	E	0	6	...	
Bassein .	·755	+·004	—·076	NE	1	8	0·57	
Diamond Island.	·738	—·020	—·088	E	9	9	0·90	Thunder.
Rangoon .	·777	+·013	—·069	SSE	5	10	0·55	Showery.
Moulmein .	·795	+·023	—·057	SW	1	6	0·07	
Tavoy .	·811	+·027	—·057	Calm	1	10	1·46	Showery.
Mergui .	·816	+·027	—·034	Calm	3	6	2·70	

The easterly wind had increased at Diamond Island and at 8 A.M. was blowing with a velocity equal to 16 miles per hour. Elsewhere the winds continued irregular and generally light, and there was no rain of importance around the Bay, though thunder was reported from several stations.

The following gives the marine information for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *St Ninian* .	15 14	83 28	...	N. by E.	2	Passing showers.
S.S. *Ula* . .	15 23	85 35	29·682	NE	2	Sea smooth. 8 P.M. frequent rain and wind squalls.
S.S. *Gulf of Trinidad.*	16 10	82 27*	·625	Var.	2	Fine.
S.S. *Commilla* .	17 16	93 56	·635	N	2	Fine. Midnight cloudy.
S.S. *Deepdale* .	17 26	84 39	·668	ENE	2	Fine. 4 A.M. cloudy.
S.S. *Goa* . .	17 29	92 18	·711	E	2	Sea smooth. 8 P.M. continuous rain squalls.
S.S. *Culna* .	17 46	93 00	·723	Var.	0	Overcast. Noon occasional heavy rain squalls.
S.S. *City of Sparta.*	17 55	86 57	...	NNE	2	Overcast. Noon showery.
S.S. *Pentakota* .	18 18	90 21	·721	ESE	3	Sea smooth. 8 P.M. occasional squalls.
S.S. *Fultala* .	18 25	87 19	·710	NE	2	Sea smooth. 4 A.M. showery.
S.S. *Rajput* .	18 38	84 57	·745	SW	2	Sea smooth.
S.S. *Ethiopia* .	20 06	92 40	·742	SE	4	Fine.
S.S. *Umta* .	21 14	88 04	·723	SW	2	Fine.

* Noon position.

The preceding data show that a large shallow area of low pressure overlay the Bay on this day. The winds were generally light and the weather quiet, but there existed a feeble cyclonic circulation apparently around a central area of depression in about Lat. 15° or 16° N. and Long. 90° E. The weather was showery in places.

October 4th.—Pressure had continued to increase in Tenasserim and to decrease in most other parts of the Bay coasts. The fall was greatest in Central Madras. The following gives 8 A.M. data for the coast stations :—

STATION.	PRESSURE.			WIND		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Negapatam	29·757	—·020	—·079	Calm	3	10	...	
Cuddalore .	·749	—·029	—·086	Calm	0	10	0·01	Showery.
Madras .	·725	—·058	—·101	WNW	2	10	0 28	Sea smooth.
Nellore .	·716	—·055	—·104	Calm	3	8	0·30	Showery.
Masulipatam	·722	—·051	—·085	NNW	4	9	0·14	Thunder.
Cocanada .	·709	—·039	—·088	WNW	4	10	0·53	
Waltair .	·706	—·037	—·080	NE	8	7	...	Sea smooth.
Gopalpur .	·716	—·015	?	NNW	8	3	0·02	Drizzling.
Cuttack .	·719	—·010	—·075	ENE	1	4	...	
False Point	·727	—·020	—·064	NE	5	8	...	
Balasore .	·756	+·002	—·034	N	1	3	0·97	Thunder-storm.
Saugor Island.	·742	—·006	—·053	NE	4	3	0·07	Sea smooth.
Calcutta .	·757	+·003	—·040	NE	3	1	0·01	
Chittagong .	·799	+·028	—·023	NE	2	10	1·31	Drizzling.
Akyab .	·753	—·018	—·069	E	0	8	0·02	
Bassein .	·744	—·011	—·091	SE	10	9	1·54	Continuous rain.
Diamond Island.	·730	—·008	—·100	ESE	10	10	1·11	Sea slight.
Rangoon .	·760	—·017	—·089	SE	4	10	1·39	Showery.
Moulmein .	·794	—·001	—·061	SE	3	8	0·27	
Tavoy .	·846	+·035	—·016	Calm	1	10	2·54	Showery.
Mergui .	·848	+·032	—·002	Calm	2	6	1·70	

There had been considerable changes during the preceding 24 hours. Rain had increased in Burma and had extended to several places along the Madras coast. Winds had risen in force and were blowing from west-north-west between Cocanada and Madras while at Diamond Island the wind had shifted to east-south-east. The following gives marine information for this day :—

NAME OF VESSEL.	8 A.M. POSITION.		Baro-meter as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S.S. *Loch Tay* .	13 02	84 57	...	W	2	Heavy rain.
S.S. *Gulf of Trinidad.*	13 37	82 31	29·565	SW	4	Raining. Noon squally.
S.S. *Pentakota* .	14 47	93 04	·687	SSE	4	Fine. Noon frequent heavy rain squalls.
S.S. *Islanda* .	15 10	93 59	·708	WSW	4	Moderate sea and continuous rain.
S.S. *Wildenfels*	15 18	82 38	·724	N	2 to 3	
S.S. *Camorta* .	15 34	95 24	·769	S	2	Rainy, noon continuous rain.
S.S. *Chanda* .	15 46	81 04	·742	Var.	2	Fine. 4 P.M. squally looking.
S.S. *Nadir* .	18 41	85 07	·749	S	3	Cloudy. 8 P.M. heavy squalls.
S.S. *Commilla* .	19 00	93 38	·665	Va	2	Fine. Midnight occasional rain.
S.S. *Ula* . .	19 20	87 19	·692	NE	2	Sea smooth. 4 P.M. passing squalls of wind and rain.
S.S. *Deepdale* .	19 40	86 43	·688	NE	4	Fine. 4 P.M. heavy rain.
S S. *Ethiopia* .	19 50	92 46	·680	...	...	Fine.
S.S. *Okhla* .	20 20	87 55*	·729	E	2	Fine. Noon passing showers.
S.S. *Maharani* .	20 45	88 23	·637	ENE	2	Fine and clear. 8 P.M. passing rain squals.
S.S. *Culna* .	21 04	91 47	·748	N	2	Fine. 4 A.M. overcast.
S.S. *City of Sparta.*	21 14	88 11	·639	...	...	4 A.M fine.
S.S. *Fultala* .	21 25	88 02	·709	NE	2	Fine.

* Noon position.

There was no information for the centre of the Bay on this day. Around the coasts the winds were irregularly cyclonic in direction but were not strong. In the south-west of the Bay there was general rain falling but the marine observations gave very little evidence of a storm on this day though the centre probably lay in about Lat. 16° N. and Long. 88° E.

October 5th.—Pressure had increased at the southern and fallen at the northern stations around the Bay. This is shown by the following 8 A.M. data :—

STATION.	PRESSURE.			WIND		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inch.	
Negapatam	29·747	—·010	—·093	SW	5	4	...	
Cuddalore .	·750	+·001	—·082	Calm	0	9	...	
Madras .	·736	+·011	—·095	W	3	10	0·13	Sea smooth.

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND Direction at 8 A.M.	WIND Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches.	
Nellore .	29·740	+·024	—·079	Calm	3	10	...	Thunder.
Masulipatam	·741	+·019	—·071?	NW	4	10	0·10	Drizzling.
Cocanada .	·691	—·018	—·108	W	5	10	0·74	Sea rising.
Waltair .	·693	—·013	—·098	N	8	10	0·85	Sea smooth.
Gopalpur .	·683	—·033	—·109	N	11	8	0·30	Showery.
Cuttack .	·683	—·036	—·116	ENE	3	6	...	
False Point	·677	—·050	—·119	ENE	7	8	0·20	Showery.
Balasore .	·716	—·040	—·078	NE	2	4	...	Thunder.
Saugor Island.	·712	—·030	—·087	ENE	6	8	0·10	Thunderstorm.
Calcutta .	·727	—·030	—·074	ENE	3	7	0·36	Showery.
Chittagong.	·750	—·049	—·075	NE	2	9	0·04	
Akyab .	·745	—·008	—·083	NE	1	8	0·05	
Bassein .	·763	+·019	—·076	SE	9	9	0·37	Ditto.
Diamond Island.	·752	+·022	—·077	SSW	16	10	0·97	Thunder.
Rangoon .	·814	+·054	—·037	ESE	6	10	1·17	Showery.
Moulmein .	·829	+·035	—·028	SW	4	9	0·07	
Tavoy .	·856	+·010	+·003	Calm	2	10	0·43	Ditto.
Mergui .	·858	+·010	+·009	Calm	2	6	1·41	

The preceding data show that cyclonic winds continued around the Bay. The force had increased in Ceylon and Orissa, while the direction had shifted to south south-west at Diamond Island. Rain had increased in Burma and showers were reported from Saugor Island southward to Madras on the east coast. The following gives marine data for the 5th:—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND Direction.	WIND Force.	WEATHER.
	° ′	°	"			
S.S. *Hermod* .	10 20	87 50	...	WSW	2	Cloudy.
S.S. *Gulf of Trinidad.*	11 13	82 21	29·605	WSW	7	Strong sea and squally.
S.S. *Islanda* .	13 29	91 35	·562	SW	7	Rough southerly swell.
S.S. *Weissenfels*	13 46	91 35	·767	SW	4 to 5	
S.S. *Umsinto* .	14 26	85 06	·590	W	4	Moderate beam sea and cloudy. 4 A.M. passing squalls.
S.S. *Rajput* .	14 32	81 02	29·725	WSW	3	Moderate sea and continuous light rain.
S.S. *Palamcotta*	16 16	93 15	·731	var.	...	Heavy rain squalls.
S.S. *Loch Tay* .	17 14	86 48	...	var.	2	Showery. 4 P.M. squally with heavy rain.
S.S. *Okhla* .	18 03	86 38	·638	E	2	Noon passing showers.
S.S. *Camorta* .	18 16	93 08	·747	E	4	Continual heavy rain.
S.S. *Wildenfels* .	18 17	85 58	·704	NNW	5 to 6	
S.S. *Maharani* .	18 40	90 49	·578	ESE	4	Moderate sea.
S.S. *Ethiopia* .	19 20	93 13	·728	SE	...	Cloudy, midnight frequent squalls.
S.S. *Commilla* .		Akyab	·727	...	...	4 A.M. occasional rain squalls.

The ship's observations showed that pressure had increased over the south of the Bay and decreased in the north. Steep gradients and fresh to strong south-west and west-south-west winds were reported in the south and the cyclonic storm had considerably developed. Squally showery weather prevailed throughout the Bay and the centre of the storm had apparently advanced north-westward from Lat. 16° N and Long. 88° E to Lat. 18° N and Long. 86° 30′ E to the neighbourhood of the ships *Loch Tay, Okhla and Wildenfels.*

October 6th.—Pressure had given way over nearly the whole of the Bay, the fall having been brisk to rapid in the north. The following gives 8 A.M. data for the Bay ports:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND Direction at 8 A.M.	WIND Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches.	
Masulipatam	29·669	—·072	—·146	NW	5	10	...	Thunder.
Cocanada .	·637	—·054	—·164	WNW	4	10	0·01	Sea slight.
Waltair .	·655	—·038	—·142	NE	7	10	0·03	Sea smooth.
Gopalpur .	·621	—·062	—·181	NNW	10	10	0·63	Do.
Cuttack .	·643	—·010	—·164	Calm	1	8	1·45	

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind Direction at 8 A.M.	Wind Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches	
False Point	29·644	—·033	—·158	NW	8	9	0·95	Showery.
Balasore	·649	—·067	—·151	N	1	6	1·11	Thunderstorm.
Saugor Island.	·631	—·081	—·175	NE	5	9	1·54	Do.
Calcutta	·639	—·088	—·168	NW	2	6	0·12	
Chittagong	·640	—·110	—·189	NE	4	10	0·06	
Akyab	·650	—·095	—·182	SSE	2	10	8·62	Continuous rain.
Bassein	·771	+·008	—·073	SE	7	10	0·40	
Diamond Island.	·752	0	—·082	SSW	13	10	1·68	
Rangoon	·783	—·031	—·069	S	4	10	0·25	Showery.
Moulmein	·819	—·010	—·041	SE	3	9	1·16	

Rain was falling over practically the whole of Burma, the fall having been very heavy in Akyab. Rain had also increased considerably in Orissa and Deltaic Bengal, but the fall had almost ceased at the Madras coast stations. The deficiency of pressure was greatest in East and Deltaic Bengal, amounting to 0·203″ at Narayanganj, to 0·189″ at Chittagong, to 0·175″ at Saugor Island, and to 0·176″ at Barisal. The following gives marine information for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind Direction.	Wind Force.	Weather.
	° ′	° ′	"			
S.S. *Nadir*	15 46	82 02*	29·855	SSW	2	Slight haze.
S.S. *Okhla*	15 47	85 31	·590	WSW	2	4 P.M. heavy rain squalls.
S.S. *Kangra*	Masulipatam.*		·648	W	4	8 P.M. continuous light rain.
S.S. *Chanda*	Vizagapatam.		·706			4 A.M. rainy.
S.S. *Umsinto*	17 45	86 44	·569	NE	2	Cloudy.
S.S. *St. Ninian*	18 20	84 37		SE	6	Rising sea and cloudy; midnight heavy squalls of rain.
S.S. *Palamcotta*	19 30	89 58	·595	Calm	0	Frequent heavy rain squalls.
S.S. *Commilla*	Akyab.		·510			Midnight squally with occasional rain.
S.S. *Mascotte*	20 36	88 04	·650	ESE	4	Slight swell and overcast.
S.S. *Quito*	Saugor Island.*		·660	SE	2	Dull.
S.S. *Rajah*	Ditto		·556			4 P.M. cloudy.
S.S. *Camorta*	21 46	91 42	·635	NE	2	Fine; 4 A.M. drizzling rain.
S.S. *Kistna*	Calcutta.		·609			4 P.M. overcast.

*Noon position.

The above shows that the winds were very irregular in direction over the north of the Bay and the force was nowhere very strong. Several vessels, however, reported a high confused swell, and the weather was squally and rainy. The depression had apparently moved northward, and the centre, which was not however well defined, lay about 100 miles to the east of False Point in Lat. 20°20′ N and Long. 88° 10′ E.

October 7th.—The barometer had risen slightly over the south and centre of the Bay and had fallen in the north and north-east. The fall had been brisk on the Chittagong coast. The following gives 8 A.M. data for the stations around the north of the Bay:—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind Direction at 8 A.M.	Wind Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches	
Gopalpur	29·629	+·008	—·185	NNW	7	5	0·01	
Cuttack	·624	—·019	—·188	NW	2	8	0·20	
False Point	·608	—·036	—·201	NW	4	9	0·12	Thunder
Balasore	·619	—·030	—·188	NNW	1	4	0·09	
Saugor Island.	·594	—·037	—·218	NNE	5	8	0·75	Sea smooth.
Calcutta	·601	—·038	—·213	NNW	2	9	0·58	Showery.
Barisal	·578	—·043	—·226	NNE	4	9	0·51	
Chittagong	·580	—·060	—·257	NE	5	10	1·19	Continuous rain.
Akyab	·621	—.029	—·214	S	6	10	1·91	
Bassein	·763	—·008	—·083	SSE	5	9	2·87	Do.
Diamond Island.	·748	—·004	—·086	S	15	9	1·21	Sea rough.
Rangoon	·791	+·008	—·063	SSE	...	10	1·37	Showery.

The preceding data show that southerly and south-easterly winds prevailed in Burma, north-easterly winds in Bengal, and north-west winds in Orissa. The force was, however, only moderate. Rain had fallen all around the north of the Bay but the amounts were not large.

The following gives marine data :—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Chanda* .	18 06	84 36	29·644	WNW	2	Fine. 4 A.M. cloudy.
S.S. *Mascotte* .	18 18	86 06	·590	ENE	2	Cloudy. 4 A.M. heavy rain.
S.S. *Quito* .	18 51	87 02	·600	Var.	4	Moderate head swell and heavy downpour of rain. 4 P.M. squally.
S.S. *Rajah* .	18 55	89 50	·516	SE	2	Heavy swell and cloudy.
S.S. *St. Ninian*.	19 25	86 05	...	NE	6	Squally with rain.
S.S. *Umzinto* .	20 29	88 00	·575	NW	2	Cloudy.
S.S. *Kistna* .	21 10	90 00	·540	Var.	2	Fine. 4 A.M. cloudy.
S.S. *Commilla* .	21 42	91 40	·446	W	2	Fine, 4 A.M. occasional rain squalls.
S.S. *Palamcotta*	Hooghly river.		·596	N	4	Cloudy.
S.S. *Malda* .	Near Calcutta.		·522	...	...	4 P.M. cloudy.

The winds were very irregular and were not strong in the immediate vicinity of the storm though the *St. Ninian* off Puri reported a strong north-east wind and rain squalls. The central area of the storm, though very ill defined, apparently lay in about Lat. 21° 30′ N and Long. 90° E. The greatest deficiency of pressure lay to the east of this position, and at Chittagong amounted to 0·257″.

October 8th.—Pressure had increased everywhere and the storm at the head of the Bay had partly filled up. The following gives data for the coast stations around the north of the Bay :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather
	″	″	″				Inches	
Cuttack .	29·685	+·061	—·131	W	2	4	...	
False Point	·682	+·074	—·131	W	6	7	1·04	Thunder-storm.
Balasore .	·680	+·061	—·129	N	2	6	...	Thunder.
Saugor Island.	·649	+·055	—·166	NNW	8	9	0·02	Sea slight.
Calcutta .	·657	+·056	—·162	N	4	10	...	
Barisal .	·626	+·048	—·182	Calm	3	10	1·53	
Chittagong	·664	+·084	—·175	SE	8	10	1·60	Continuous rain.
Akyab .	·721	+·100	—·115	SSW	5	10	2·66	
Bassein .	·846	+·083	0	SSE	7	10	1·24	Continuous rain.
Diamond Island.	·806	+·058	—·028	S	14	10	0·19	Sea slight.

The barometer had risen between 0·050″ and 0·080″ in the storm area and the greatest deficiency of pressure was 0·182″ at Barisal near which station the storm centre apparently lay.

The following gives marine data :—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer, as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Lai Sang* .	15 34	91 14	29·801	SW	5	Moderate sea and cloudy.
S.S. *Madura* .	15 49	93 57	·691	SSW	4	4 A.M. occasional heavy squalls.
S.S. *Rajah* .	15 53	92 10	·716	SSW	5 to 6	Rough sea and rain squalls.
S.S. *Quito* .	16 17	85 41	·750	SW	4	Moderate head swell and fine. Midnight slight rain squalls.
S.S. *Den of Ogil*.	18 19	87 03	·658	WNW	2	Squally.
S.S. *Malda* .	19 02	90 03	·656	N	4	S. W. swell and fine 8 P.M. passing squalls with heavy rain.
S.S. *Shahzada* .	19 09	92 33	·721	WSW	4 to 5	Heavy rain squalls.
S.S. *Chanda* .	19 31	86 19	·724	NW	4	Smooth sea and fine, midnight overcast.
S.S. *St. Ninian* .	20 28	87 30	...	N	5	Heavy S. W. swell and cloudy. 4 P.M. passing showers.
S.S. *Commilla* .	21 55	91 36*	·609	...	...	Noon heavy squalls and rain.
S.S. *Purulia* .	Calcutta		·673	...	...	Noon fine.

*Noon position.

The preceding data show that the winds were generally northerly over the head of the Bay and that the weather was fine. During the day the storm passed slowly inland into East Bengal.

October 9th.—The barometer had continued to rise over the whole country and the storm had advanced into East Bengal where pressure was about 0·111″ below the normal. The following gives 8 A.M. data for the storm area :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inch.	
Saugor Island.	29·773	+·124	—·048	NW	5	9	0·12	Showery.
Calcutta .	·754	+·097	—·071	NNW	3	9	0·05	
Barisal .	·774	+·121	—·067	WSW	3	10	0·21	

STATION.	PRESSURE.			WIND		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches.	
Chittagong .	29·834	+·170	—·008	SSE	12	10	6·70	Continuous rain.
Narayanganj	·715	+·042?	—·112	W	6	10	2·10	
Jessore .	·766	+·101	—·063	N	3	10	...	
Berhampore	·766	+·069	—·069	NNW	2	8	...	
Bogra .	·757	+·067	—·083	N	...	10	0·10	
Mymensingh	·716	+·037	—·111	NW	3	10	3·25	Showery.
Dinajpur	·777	+·069	—·053	NE	5	2	...	
Silchar .	·781	+·062	—·061	Calm	2	10	2·10	

The above shows that moderately heavy rain had fallen over East Bengal, but that the storm had become a shallow and diffused depression. During the day the storm filled up and disappeared.

During these nine days the weather became slightly unsettled in the north-west. On the 1st and 2nd a shallow depression was shown over the Punjab, but the weather was fine and generally quiet. On the 3rd the depression intensified and was shown over Mooltan and Dera Ismail Khan where pressure was ·133" and ·160" respectively below the normal. The winds were feebly cyclonic around the depression. Light showers accompanying dust and thunderstorms occurred during the 3rd in Kashmir, the North-West Himalayas and the submontane regions of the Punjab. These showers were accompanied with a brisk to rapid increase of pressure and gradients became very steep on the north side of the depression on the 4th. This increase of pressure transferred the depression eastward and on the morning of the 5th the storm was shown over the East Punjab where pressure was in moderate defect. Further showers had occurred over the same areas as on the 3rd, and a rapid fall of temperature had taken place in the extreme north-west. During the 5th or the early morning of the 6th the depression filled up. Another fall of the barometer occurred over the extreme north-west on the 7th and a fresh depression appeared over the West Punjab on that day. The depression was better defined on the 8th, and on the 9th was a well marked though small storm with its centre near Mooltan, where pressure was 0·078" be lowthe normal. By the morning of the 10th the depression had filled up without affecting the weather. On the 10th the weather was quiet all over the country. The barometer was rising slightly to briskly all over India, but was falling over Burma. Pressure was fairly uniform over the Bay with generally light and variable winds, and the changes, which preceded and accompanied the appearance of the first storm of the month, were repeated in this case.

Cyclonic storm of the 11th to the 18th.—The barometric fall which had been passing through Burma on the 10th had extended westward over the Bay and Northern India, and had become brisk over Tenasserim and Lower Burma. The following gives 8 A.M. data for the stations around the northern half of the Bay :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches.	
Mergui .	29·857	—·072	+·007	Calm	1	5	0·70	
Tavoy .	·852	—·057	—·015	Calm	0	8	1·74	
Moulmein .	·819	—·073	—·049	SW	1	6	1·18	
Rangoon .	·802	—·076	—·059	NNE	2	10	0·06	
Diamond Island.	·819	—·061	—·022	E	5	8	0·09	
Bassein .	·817	—·076	—·036	E	6	3	0·08	
Akyab .	·814	—·061	—·030	SE	0	4	...	
Chittagong.	·815	—·023	—·035	ENE	4	2	...	
Calcutta .	·799	—·024	—·037	NNW	1	4	...	
Saugor Island.	·782	—·039	—·047	Calm	3	3	...	
Balasore .	·800	—·032	?	N	1	3	...	
False Point	·787	—·034	—·035	WNW	4	3	...	Thunder.
Cuttack .	·785	—·034	—·040	Calm	1	2	0·27	
Gopalpur .	·789	—·028	—·033	NNW	7	2	1·85	
Waltair .	·825	—·018	+·021	W	4	10	0·17	Sea sligh t.

The preceding data show that light to moderate cyclonic winds prevailed around the Bay with scattered rain in Tenasserim, Burma and the east coast, and that a depression, at that time shallow, was developing over the east

of the Bay. The following gives marine data for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S *Dalmatia* .	13 23	85 11	29·831	WSW	4	Light sea and cloudy. Noon heavy rain squalls.
S.S. *Sumatra* .	15 47	92 04	·783	WSW	2	South swell and overcast.
S.S. *Kistna* .	19 40	92 54	·850	SE	4	Fine.
S S. *Ikhona* .	19 45	89 25*	·660	Calm	0	Fine.
S.S. *Orissa* .	20 01	86 39*	·749	NW	2	Smooth sea and fine. 8 P.M. dull hazy.
S.S. *Maharaja* .	21 08	90 06	·746	NE	3	Fine and clear.
S.S. *Culna* .	21 13	88 47	·771	W	2	Smooth sea and fine.
S.S. *Shahsada* .	21 40	88 45	·760	SW	2	Fine and clear.
S.S. *Palamcotta*	Calcutta		·752	...	...	4 P.M. cloudy.

* Noon position.

The above shows that the winds were light and variable on this day, but that they were drawing slowly into cyclonic directions. The weather was moderately fine.

October 12th.—The principal feature in the observations of this day was, the brisk fall over the whole of the Bay area. The following gives 8 A.M. data for the Bay ports:—

Station	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inch.	
Moulmein .	29·773	—·046	—·097	SW	1	6	0·20	
Rangoon .	·772	—·030	—·092	ENE	2	10	...	
Diamond Island.	·755	—·064	—·091	Calm	4	6	...	
Bassein .	·764	—·053	—·091	SSE	2	2	0·03	
Akyab .	·746	—·068	—·102	NE	0	3	...	
Chittagong	·761	—·054	—·093	NE	3	6	...	
Calcutta .	·759	—·040	—·081	Calm	1	4	0·31	
Saugor Island.	·744	—·038	—·086	ENE	5	4	...	Sea smooth.
Balasore .	·760	—·040	—·065	Calm	2	3	0·77	Thunderstorm.
False Point	·754	—·033	—·069	N	5	8	...	
Cuttack .	·742	—·043	—·084	Calm	1	6	0·68	
Gopalpur .	·741	—·048	—·081	NNW	7	3	...	Sea smooth.
Waltair .	·759	—·066	—·044	W	5	10	...	Sea slight.
Coconada .	·762	—·063	—·038	NW	3	9	...	
Masulipatam.	·777	—·069	—·029	NW	3	10	...	

Winds were thus irregularly cyclonic around the Bay, but the force was low and very little rain was reported. The following gives marine data for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *Tannenfels*	14 04	85 06	29·745	N	2	
S.S. *Ethiopia* .	16 05	93 40	·688	SW	2	Smooth sea and fine.
S.S. *Dalmatia* .	16 29	86 15	631	NNW	5	Moderate sea and squally; 4 A.M continuous heavy rain.
S.S. *Kistna* .	17 54	94 07	·728	S	2	Fine.
S.S. *Ikhona* .	17 56	91 41	·572	SE	4	Fine. Midnight occasional passing rain squalls.
S.S. *Barenfels* .	18 56	86 07	·770	NNE	3 to 4	
S.S. *Khandalla*	19 18	85 10*	·725	N	5	Smooth sea and showery.
S.S. *Palamcotta*	19 37	89 48	·717	SE	4	Fine.
S.S. *Scindia* .	19 50	87 36*	·727	ENE	2	Passing rain.
S.S. *Camorta* .	21 08	88 32	·732	var.	2	Fine.

* Noon position.

The above shows that a marked development had occurred over the Bay and that the winds on board the *Scindia*, *Barenfels*, *Dalmatia*, *Ikhona*, *Palamcotta*, and *Khandalla* exhibited a fairly well-marked cyclonic circulation. During the day the weather became unsettled with continuous heavy rain squalls.

October 13th.—The barometer was rising over Burma and the east of the Bay, but was falling in the west and north, though the changes were not large. The following gives 8 A.M. data for the Bay ports:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inch.	
Moulmein .	29·850	+·077	—·024	S	3	6	0·19	
Rangoon .	·792	+·020	—·076	E	3	10	0·72	Showery.
Diamond Island.	·765	+·010	—·085	SSW	9	8	0·17	
Bassein .	·774	+·010	—·085	SSE	6	7	...	
Akyab .	·767	+·021	—·086	NE	0	4	...	
Chittagong.	·751	—·010	—·104	NE	2	2	0·23	Thunder.
Calcutta .	·765	+·006	—·078	N	2	4	...	
Saugor Island.	·743	—·001	—·090	NE	5	5	0·26	Thunderstorm.
Balasore .	·753	—·007	—·074	N	1	5	...	
False Point	·725	—·029	—·101	N	6	8	0·21	Showery.
Cuttack .	·724	—·018	—·103	Calm	1	6	...	
Gopalpur .	·715	—·026	—·105	N	7	8	0·02	
Waltair .	·718	—·041	—·088	E	4	10	...	Sea smooth.
Cocanada .	·712	—·050	—·088	NW	4	9	...	Sea slight.
Masulipatam.	·745	—·032	—·062	WNW	4	10	..	

The above data show that pressure was in considerable defect around the north of the Bay, where also, the winds were cyclonic, but not very strong. They also show that though the coast observations gave indications of the presence of the cyclonic storm, the effects of the storm on the weather were slight and the rainfall light and scattered.

The following gives the marine data for this day :—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Valetta* .	14 19	85 23	29·679	NW	4 to 5	Squally. 4 P.M. hard squalls of rain.
S.S. *Orissa* .	15 19	81 45	·704	SW	2	Smooth sea.
S.S. *Itaura* .	16 11	86 00	·568	NW	4	4 A.M. heavy squalls of wind and rain.
S.S. *Itola* .	16 20	86 07	·462	NNW	6	Moderate sea. Noon occasional light rain.
S.S, *Florican* .	17 25	85 03	...	N	7	Moderate sea and heavy squalls of rain.
S.S. *Scindia* .	17 37	86 23	·527	E	2	Continuous rain.
S.S. *Tannenfels*	17 43	87 00	·595	NE	4	
S.S. *Sirdhana* .	18 29	84 26	·670	N	5	Light rain. Midnight heavy squalls of wind and rain.
S.S. *Oolobaria* .	18 31	86 33	·686	ENE	5	Moderate sea and showery. 4 P.M. heavy rain squalls.
S.S. *Ethiopia* .	19 18	90 17	·692	E	2	Cloudy. Midnight heavy rain squalls.
S.S. *Ula* .	19 26	87 23	·722	SE	4	Sea smooth. Midnight rain and wind squalls.
S.S. *Dalmatia* .	19 50	87 25	·731	NE	4	Sea smooth. 4 A.M. heavy rain squalls.

The winds had increased in strength and averaged 3 9 for the whole Bay. The storm centre was apparently in Lat. 16°20′ N. and Long. 86°30′ E. and the winds exhibited a fairly well defined cyclonic circulation. The storm was nearest to the *Itola* in Lat. 16°20′ N and Long. 86°7′ E with a strong north-north-west wind, while the *Florican* in Lat. 17°25′ N and Long. 85°3′ E reported a moderate northerly gale. The weather was cloudy and squally and the *Scindia* close to the storm area reported continuous rain.

October 14th.—Large changes were reported over the Bay. The storm had advanced westward to the neighbourhood of Waltair and lay in about Lat 17°20′ N and Long. 83°40′ E. At Waltair pressure had fallen 0·126″ while pressure had increased rapidly over the north and east of the Bay, the change at some stations exceeding 0·100″. The following gives 8 A.M. data for the Bay ports :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Diamond Island.	29·864	+·099	+·010	ESE	18	6	0·26	Sea slight.
Bassein .	·885	+·111	+·022	SSE	6	6	0·07	
Rangoon .	·893	+·101	+·022	ESE	...	8	0·21	Showery.
Akyab .	·863	+·096	+·006	SE	0	4	0·92	
Chittagong.	·866	+·115	+·004	NE	3	4	0·05	
Calcutta .	·828	+·059	—·024	E	4	6	—	
Saugor Island.	·799	+·056	—·039	ENE	7	9	0·15	Sea slight
Balasore .	·787	+·034	—·046	ESE	1	8	0·03	Drizzling.
False Point	·740	+·015	—·092	E	12	10	1·55	Showery.
Cuttack .	·734	+·010	—·110	ENE	6	10	0·22	″
Gopalpur .	·670	—·045	—·151	NNE	15	8	0·14	Drizzling.
Waltair .	.592	—·126	—·218	N	13	10	0.47	Severe gale.
Cocanada .	·671	—·041	—·132	SW	4	10	0·45	Sea smooth.
Masulipatam	·725	—·020	—·085	WNW	4	10	...	Thunder.
Nellore .	·762	+·013	—·041	WNW	3	10	...	

The above shows that the cyclonic storm had intensified and that the pressure was in considerable to very large defect on the North Madras coast. At Waltair the wind was blowing with a velocity of 28 miles per hour at 8 A M. but the storm was a small and rather concentrated disturbance, and the winds were not strong at any distance from the centre. The rainfall was not heavy. The following gives marine data for this day :—

NAME OF VESSEL.	8 A.M. POSIT.ON.		Barometer as corrected by Calcutta Office.	WIND		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Orissa* .	12 26	81 15	29·728	SW	5	Smooth sea. 4 A.M dull hazy.
S.S *Vauxhall* .	15 18	86 01	...	W	5	High beam sea. 8 P.M. heavy rain.
S.S. *Scindia* .	15 22	85 14	·601	SW	6	High sea and rainy. 4 A.M. frequent hard squalls.
S.S. *Oolobaria* .	16 41	85 32	·530	SSW	6	High confused sea, 4 A.M. occasional heavy rain squalls.
S.S. *Shahjehan*	16 54	91 31	·783	SE	4	Rough sea. 4 A.M. squally, and showery.
S.S. *Ula* . .	17 06	86 17	·617	S	6	Rough sea and rainy at times.
S.S. *Valetta* .	18 10	86 37	·642	SE by E	5	Fine. Noon frequent hard squalls of wind and rain.

NAME OF VESSEL.	8A.M. POSITION. Lat. N.	Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	Force.	WEATHER.
	° ′	° ′	″			
S.S. *Itaura*	19 02	87 12	29·597	ESE	...	High beam sea and continuous hard rain and wind squalls.
S.S. *Maharani*	19 22	89 50	·718	E by S	4	Dull gloomy, 8 P.M. heavy squalls.
S.S. *Itola*	19 32	87 16	·532	E	7	Considerable sea and frequent hard rain squalls.
S.S. *Sirdhana*	19 37	86 14	·641	E	6	Heavy rain squalls.
S.S. *Florican*	19 47	87 29	...	ESE	7	Cross sea and heavy squalls with rain.

There were no ships within the storm area, but there were numerous vessels to the east and north of the centre; their observations showing clearly this portion of the cyclonic circulation. The strongest winds were those from east, the *Itola* and the *Florican* both reporting moderate gales, while the mean force of the wind for the whole surface of the Bay was 4·8 which was 1·7 above the normal. Cloudy and rainy weather prevailed over the Bay. The following gives the special observations at Vizagapatam on this day:—

Hour and date.	STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change since last observation.	WIND. Direction.	Average hourly velocity in miles.	Cloud.	Rainfall since last observation.	WEATHER.
14th Oct 1901.		″	″				Inches.	
8 hour	Waltair .	29·592	...	N		10	0·47	Severe gale and drizzling rain.
10 „	„ .	·578	—·014	NE		10	...	Severe gale of wind is terrifying.
12·45„	„ .	·459	—·119	NE		10	0·20	Severe gale of wind, squalls increasing in frequency, weather stormy and sea rising.
14 „	„ .	·423	—·036	NE	Anemometer readings not reliable.	10	...	Hurricane wind, and violent squalls.
16 „	„ .	·436	+·013	NE		10	0·20	Severe gale of wind.
20 „	„ .	·559	+·123	NE		10	0·24	Severe gale of wind and drizzling rain.
15th Oct 2 hour.	„ .	·581	+·022	E		10	1·24	Severe gale of wind with heavy rain at intervals and rough sea.
8 „	„ .	·747	+·166	SE		10	2·93	Severe gale of wind.

The following particulars are supplied by Captain Hill master of the S.S. *Khandalla*.

I left Bimlipatam at 11 a.m. of the 14th, having had no communication, owing to high surf. as Visagapatam would be similar, I intended to go on direct to Cocanada. When about 16 miles south of Visagapatam, I found I was running into a cyclone, so hove to heading N. 60° E. for one hour, then noticing the wind veered by the sun, I kept her E. for one hour, but not heading the sea so well on that course I put her back N. 60° E., at 8 p.m. of the 14th. Finding wind still veering by the sun, I altered course to E. × S. ½° S. until 1 a.m. of the 15th, when I made sure of the cyclone having passed towards the land, the courses were altered gradually from E. × S. ½° S. through south to west, which latter course I continued up to 1 a.m. wind gradually veering until it became steady at S. × W.; wind veered from N. W. to N. through E. to S by W.

At noon position was obtained and found ship had experienced at set S. 45 W. 31 miles.

The weather experienced during this time was strong squalls of wind, heavy rain, with a high confused sea, which did not moderate until about 30 miles off Hope Island Light House heading west.

The barometer readings were as follows:—

13th	8 p.m.	29·64	14th	4 a.m.	29·55
14th	noon	29·46	„	2 p.m.	29·35
„	4 p.m.	29·38	„	6 p.m.	29·47
„	8 „	29·54	„	midnight	29·61
15th	1 a.m.	29·59	15th	2 a.m.	29·61
„	3 „	29·62	„	4 „	29·62
„	5 „	29·63	„	6 „	29·65
„	7 „	29·67	„	8 „	29·70
„	10 „	29·71	„	11 „	29·70
„	noon	29·70	„	4 p.m.	29·66

These are the readings of an Aneroid barometer which was compared with the Calcutta standard, October 8th, no error given by meteorological office.

October 15th.—The storm had crossed the coast during the preceding 24 hours and had advanced about 100 miles inland. It lay at 8 A.M. a little to the east of Hanamconda in about Lat. 17°30′ N and Long. 81° E. It had filled up somewhat, the lowest reported pressure having been 29·623″ at Hanamconda as compared with

29·592″ at Waltair on the preceding day. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	″	″	″				Inches	
Madras	29·738	−·014	−·090	S	5	8	...	Sea slight.
Nellore	·717	−·045	−·090	WSW	3	10	...	
Masulipatam	·636	−·039	−·131	WSW	14	10	4·40	Continuous rain.
Cocanada	·686	+·015	−·124	S	18	10	2·83	Sea rough.
Waltair	·746	+·154	−·074	SE	38	10	2·93	Severe gale.
Hanamconda	·623	−·172	...	NNW	20	10	1·54	Nor'wester with rain.
Hyderabad (Deccan).	·702	−·115	−·162	NW	8	10	0·06	Drizzling.
Kurnool	·749	−·045	−·092	Calm	...	10	0·13	
Cuddapah	·743	−·040	−·082	NW	...	10	...	
Raichur	·750	−·076	−·088	WNW	7	10	...	
Chanda	·732	−·100	−·150	N	1	10	0·06	

Strong winds and gales had prevailed on the Circars coast, notably at Gopalpur, Waltair and Cocanada, and heavy rain had fallen between Masulipatam and Balasore. The marine data exhibited the usual conditions of weather after the passage of a storm inland, strong southerly and south-easterly winds blowing over the west and north of the Bay with squally, rainy, weather. The mean force of the wind over the Bay was 3·2 which was only slightly above the normal.

October 16th.—Pressure had increased briskly to rapidly over the eastern half of the Peninsula and had fallen briskly to rapidly over the Bombay Presidency, the west of the Central Provinces, Rajputana and the neighbouring parts of the North-Western Provinces and Central India. The storm had advanced quickly in a north-westerly direction and was central at 8 A.M. near Akola where pressure was 0·155″ below the normal. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	″	″	″					
Nellore.	29·794	+·077	−·017	WNW	5	3	...	
Masulipatam	·804	+·118	−·023	SSE	7	1	...	

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	″	″	″				Inches	
Cuddapah	29·801	+·058	−·031	NW	...	4	...	
Kurnool	·779	+·030	−·055	Calm	...	5	0·17	
Bellary	·790	+·023	−·063	Calm	9	8	...	
Hyderabad (Deccan).	·774	+·072	−·086	Calm	8	2	1·59	
Raichur	·784	+·034	−·063	SW	22	1	...	
Bijapur	·776	−·033	−·084	SW	...	4	0·12	
Sholapur	·778	−·017	−·115	W	13	10	0·31	Drizzling.
Ratnagiri	·783	−·063	−·048	S	5	9	...	
Poona	·782	−·067	−·118	SW	11	10	0·10	Do.
Bombay	·769	−·101	−·093	S	5	10	...	
Ahmednagar.	·774	−·082	−·140	NW	12	10	0 78	Raining.
Malegaon	·760	−·118?	−·147	NNW	11	8	1·32	Drizzling.
Akola	·724	−·084	−·155	NE	...	10	1·86	
Amraoti	·764	−·029	−·116	ESE	18	10	0·17	Showery.
Chanda	·771	+·039	−·118	SE	3	8	1·36	Do.
Nagpur	·768	+·003	−·102	E	12	10	...	
Khandwa	·755	−·099	−·124	E	11	7	0·06	Thunder.
Hoshangabad.	·792	−·078	−·090	NE	7	0	...	
Indore	·779	−·098	−·104	NE	11	10	...	
Ahmedabad	·770	−·089	−·099	NE	3	8	...	
Surat	·790	−·061	−·086	NNE	6	8	...	
Veraval	·793	−·082	−·074	NNW	10	7	...	Sea smooth.
Bhavnagar Para.	·762	−·096	−·096	N	...	8	...	
Rajkot	·802	−·097	−·090	WNW	7	10	...	
Deesa	·796	−·087	−·090	NNE	6	10	...	Hot wind.

The above shows that the winds were blowing strongly over the Bombay Deccan and the West Satpuras and that favourable rain had been received in the Bombay Deccan, Berar, etc. The storm had travelled about 200 miles and the centre lay in about Lat. 20°10′ N. and Long. 77°10′ E.

October 17th.—Pressure had increased practically over the whole country, but especially so over the Peninsula where the change had been brisk to rapid. The storm had advanced in a west-north-westerly direction and was shown

passing out into the Arabian Sea through Kathiawar. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches.	
Poona .	29·859	+·077	—·056	WSW	13	10	0·12	Drizzling.
Bombay .	·824	+·055	—·044	S	6	10	0·35	Showery.
Ahmednagar	·844	+·070	—·060	SSE	7	5	0·91	Do.
Malegaon .	·816	+·056	—·093	SSW	6	9	1·98	Do.
Surat .	·784	—·006	—·096	ESE	3	9	0·29	
Verval .	·783	—·010	—·089	Calm	9	6	...	Sea smooth.
Dwarka .	·794	—·024	...	NNW	11	0	...	S a slight.
Bhavnagar Para.	·777	+·015	—·097	NE	...	8	0·40	Thunder.
Rajkot .	·789	—·013	—·106	Calm	6	8	...	
Bhuj . .	·823	+·019	—·057	W	12	0	...	
Khandwa .	·827	+·072	—·055	S	8	3	0·12	Thunder.
Neemuch .	·830	+·006	—·098	NE	10	4	0·52	
Indore .	·837	+·058	—·056	SE	9	10	...	
Ahmedabad	·775	+·005	—·103	E	4	5	0·07	
Deesa .	·795	—·001	—·092	ESE	9	6	...	
Hyderabad (Sind)	·847	0	—·101	N	10	0	...	

The above shows that the cyclonic storm was central near Rajkot at 8 A.M., and that its intensity had diminished, the barometric depression at its centre having been ·106″ as compared with ·155″ on the preceding day. The winds were moderately strong at Bombay and Dwarka, but were very irregular in direction in the storm area. Showers had been received in the Konkan, Gujarat, the Bombay Deccan, the West Satpuras and the west of Central India.

October 18th.—Pressure had continued to rise almost everywhere, and the cyclonic storm had continued to travel west-north-westward and was passing out into the north of the Arabian Sea. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inch.	
Bombay .	29·825	+·071	+·023	SE	18	0	...	
Surat . .	·883	+·099	—·001	S	6	3	0·15	
Ahmedabad .	·877	+·102	—·011	E	4	6	0·05	
Deesa . .	29·875	+·080	—·017	SSE	8	3	...	
Kurrachee .	·912	+·048	+·021	NNE	4	0	...	
Hyderabad (Sind.)	·899	+·052	+·037	N	10	0	...	
Veraval .	·833	+·050	—·045	SE	4	8	0·08	Sea smooth.
Bhavnagar Para.	·872	+·095	—·015	SE	...	9	0·04	Thunder.
Rajkot . .	·843	+·054	—·051	SE	7	9	...	
Dwarka .	·832	+ 038	...	NE	12	0	...	Sea slight.
Bhuj . .	·833	+·010	—·049	W	16	0	...	

The storm was now a shallow diffused depression. An irregular cyclonic circulation of the winds still prevailed over the Konkan, Gujarat, Kathiawar and Sind, and the winds were moderately strong on the Kathiawar coast and at Bombay. The storm had ceased, however, to be of any importance, and the winds were light from north-west over the north of the Arabian Sea. It had given a few light showers to Gujarat and Rajputana. During the day the storm passed away westward and south-east winds were established over North Bombay, etc. At Jask and Muscat there was a brisk fall of the barometer on the 19th and 20th, but the weather at those stations remained clear and the sea smooth, so that the cyclonic storm apparently filled up after leaving the Kathiawar coast.

The direction of motion of this storm was to west-north-west practically throughout its course, so that its movements were in marked contrast with those of the storm of October 5th to 9th, the explanation of this difference being apparently the high pressure (relatively to the normal) which prevailed, during the existence of the latter storm, over Northern India.

Between the 11th and the 14th another slight storm appeared in the extreme north-west. It apparently exercised no important influence on the weather and was not followed by snow in the higher Himalayas, judging from the fact that no fall of temperature was developed in the extreme north-west. On the 19th and 20th, a feeble storm again appeared in the north-west, but this also was so slight as to occasion no change in the weather.

On the 20th the barometer was falling slightly over Burma and a north-westerly wind was reported from Diamond Island. During the succeeding 24 hours a shallow depression passed through Burma out into the Bay and strongish south-easterly winds subsequently appeared

on the Burma coasts, but the storm failed to develop and on the 24th the barometer was steady all round the Bay. A large shallow low pressure area existed over the Bay from the 25th to the 28th, after which, the lowest pressures were transferred to the south of the Bay and fairly normal conditions existed till the end of the month.

Summary of the Reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

The following are the reports of snowfall on the Afghan mountains and the Western Himalayas received up to date. The snowfall of the month under review has, so far as the available records show, been generally lighter than usual and the accumulation is probably small.

I.—AFGHAN MOUNTAIN DISTRICTS.

Killa Drosh(1).—On the 3rd and 7th there was a slight fall of snow on the hills east of Drosh down to 12,000 feet.

On the 8th there was a slight snowfall on the tops of the hills down to about 9,000 feet.

On the 20th a further slight fall of snow occurred on the hills to the north and east down to about 12,000 feet.

On the 29th and 30th the tops of the hills to the north and east of Drosh were covered with fresh snow.

II.—KASHMIR AND PUNJAB HIMALAYAS.

Kashmir(1).—On the 4th the observer at Gulmarg reported that the higher mountains were covered with seven inches of fresh snow. About the middle of the month fresh snow fell on the higher mountains surrounding the Srinagar Valley.

III.—NORTH-WESTERN PROVINCES HIMALAYAS.

Almora (1).—Snow fell as under:—

Malla Johar.

3rd October	1 foot
4th do.	2 feet
	3 feet

Malla Danpur.

No snow fell.

Byans, Chandans and Darma.

No snow fell during the month.

The snowfall was less than during October 1900.

Summary of special Storm Reports.

The following gives a statement of the chief local storms of the month of October 1901 of which reports were received:—

1st.—A nor'wester with rain occurred at Amini Divi.

2nd.—A north-west gale with light rain occurred at Amini Divi.

3rd.—A duststorm with thunder occurred at Gulmarg between 1-7 P.M. and 5 P.M. Snow subsequently fell on the higher ranges.

A thunderstorm passed over Ootacamund between 11 A.M. and 11-40 A.M. with heavy rain.

4th.—A nor'wester with light rain was experienced at Amini Div.

A thunderstorm was experienced at Srinagar between 3 P.M. and 7 P.M. with moderate rain. A house was struck by the lightning.

5th.—A severe squall from north-west passed over Amini Divi with thunder and drizzling rain.

9th.—A thunderstorm was experienced at Srinagar between 5 A.M. and 7 A.M.

13th.—A thunderstorm passed over Ootacamund between 4 P.M. and 5 P.M. The wind blew at the rate of 25 miles per hour and the storm passed to south-west.

15th.—A distant thunderstorm was reported from Khandwa at 4-15 P.M.

20th.—A thunderstorm with dust haze commenced at Khandwa at 3-30 P.M. and lasted till 4 P.M.

At Ootacamund a thunderstorm was experienced between 11-15 A.M. and 0-30 P.M. The wind was violent from north-east, the velocity having been at the rate of 20 miles per hour. The temperature fell 5° and 2·11 inches of rain fell during the storm.

23rd.—A heavy storm accompanied with thunder, lightning and rain passed over Poona between 7 P.M. and 7-20 P.M. Heavy rain lasted from 7-5 to 7-25 P.M.

26th.—At 2-15 P.M. a thunderstorm burst over Ootacamund from south-east. The wind blew at a rate of 33 miles per hour and half an inch of rain fell in 40 minutes.

12th.—At Darrang, Mangaldai, Assam, an earthquake lasting about 5seconds was felt at 2-30 P.M. The shock passed from west to east.

13th.—A slight shock of earthquake lasting about 20 seconds was felt at Jodhpur at 11-55 P.M. (Railway time.)

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea.—Conditions over the Arabian Sea during the greater part of the month were such as usually obtain in that area in the month of October. Except in the south, where westerly winds prevailed steadily throughout the month, winds were exceedingly unsteady over the Arabian Sea on most days during the month. There was a feeble tendency to cyclonic circulation in the north-east of the sea off the coast of Kathiawar on the 17th and 18th due to a residual depression—the continuation of the second storm of the month in the Bay—which entered that region from Gujarat, but it failed to intensity. Northerly winds of the winter monsoon set in over the north and centre on the 25th and extending rapidly southwards were established over the whole sea area as far south as Lat. 8° or 7° N. Weather was generally fine throughout the month except locally in the south-east where it was feebly disturbed with occasional rain squalls on two or three occasions. The mean daily air movement exceeded the normal on the 1st, 2nd, 4th, 5th, 6th, 12th, 30th and 31st, and was weaker than usual on all other days. Winds were on the whole lightest from the 20th to the 27th when they averaged only 2·2 in force or 20 per cent. below their normal strength.

Bay of Bengal.—Weather was more or less disturbed over the greater part of this area during the first two weeks of the month. Two storms of a somewhat peculiar character visited the Bay during this period, one from the 3rd to the 8th and the other between the 11th and 14th. They were both of them well-defined disturbances and exercised a marked influence on the weather. The first storm advanced along a northerly course parallel to the East Ghats to the East Bengal coast which it crossed on the 8th. The second storm, on the other hand, followed a west-north-west track and struck the Circars coast on the 14th, and thence drifting in the same general direction across the North Deccan and Gujarat passed out into the Arabian Sea as a slight residual depression of no importance on the 18th. As the storms were only of moderate intensity the strongest winds experienced by vessels in the Bay during their existence did not exceed 7 or 8 in force. The mean air movement over the Bay ranged between 3·0 and 4·8 during the first fifteen days as compared with 3·1, the normal of the month. During the second half of the month the pressure conditions were very abnormal, pressure being lower in the south-east of the Bay than elsewhere. Abnormal north-westerly winds hence obtained over the west of the Bay instead of the normal north-east winds and were associated with the prevalence of finer weather than usual along the Madras coast.

The air movement was considerably feebler than usual during this period and fine settled weather prevailed generally during the second half of the month.

The principal feature of the meteorology in the Bay was hence the contrast between the unsettled weather in the first half of the month and fine quiet weather in the second half.

Equatorial Belt.—Conditions were approximately normal over this area throughout the greater part of the month.

Temperature of the Air.

The mean temperature conditions of the month were very abnormal in consequence of the very early withdrawal of the monsoon from North-West India in August and the very scanty rainfall during both September and October over a large part of the Indian area.

The mean maximum or day temperature of the month was lower than usual in three areas. The first included the West Coast from Kurrachee southward to Calicut, the second the Central Bay coasts and the adjoining parts of Burma, and the third the extreme north-east of Upper Burma and the Upper Assam Valley. In all three areas the deficiency was slight or small as is shown in the following table which gives comparative data for the stations in the different areas :—

Area.	Station.	Mean maximum temperature.		
		Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
		°	°	°
First Area	Goa	83·7	85·1	—1·4
	Ratnagiri	86·9	88·2	—1·3
	Mormugao	85·0	86·0	—1·0
	Veraval	86·7	87·4	—0·7
	Kurrachee	92·5	93·0	—0·5
	Karwar	84·6	85·0	—0·4
	Mangalore	84·7	85·1	—0·4
	Bombay	87·2	87·3	—0·1
	Calicut	85·7	85·8	—0·1

Area.	Station.	Mean maximum temperature. Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
		°	°	°
Second Area	Minbu	89·3	91·3	—2·0
	Mergui	85·1	86·8	—1·7
	Diamond Island	85·0	86·4	—1·4
	Tavoy	86·5	87·5	—1·0
	Bassein	86·0	87·0	—1·0
	Yamethin	91·3	92·3	—1·0
	Waltair	88·2	89·0	—0·8
	Cocanada	87·0	87·4	—0·4
	Toungoo	89·3	89·7	—0·4
	Rangoon	86·8	87·2	—0·4
	Akyab	87·8	87·9	—0·1
Third Area	Bhamo	87·9	88·8	—0·9
	Sibsagar	84·3	85·1	—0·8

Over the whole of the remainder of India, both on the hills and plains, the mean maximum temperature exceeded the normal. The excess was more than 2° over practically the whole of Inland India and was more than 4° over the Central Punjab, Rajputana, Gujarat, the west of the North-Western Provinces, Central India and the Central Provinces, Berar, Khandesh, the Bombay Deccan and Bihar. It was more than 5° at the stations for which comparative data are given below :—

Station.	Mean maximum temperature. Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	°	°	°
Khandwa	99·0	89·9	+9·1
Indore	93·0	87·1	+5·9
Sambhar	97·3	91·6	+5·7
Neemuch	95·3	89·9	+5·4
Malegaon	94·9	89·6	+5·3

One of the most remarkable features of the meteorology of the month was thus the abnormally high day temperature over the whole of the interior of India. In this respect October of the present year was like October 1896, though the excess was more strongly marked in the earlier year.

The highest maximum temperatures were generally registered during thefirst week of the month, but the absolute maximum temperatures were not, except at Mooltan, as high as those in October 1896 and October 1899. The following give data of the absolute maxima in illustration :—

Province or Division.	Station.	Highest maximum temperature recorded in October 1901.	Date on which recorded.	Highest maximum temperature recorded in October, previous to 1901.	Year in which recorded.
		°		°	
Burma	Mandalay	99·0	2nd Oct.	100·5	1892
Assam	Dhubri	91·2	1st ,,	92·2	1900
Bengal	Rangpur	98·7	3rd ,,	93·3	1887 and 1888
Orissa	Cuttack	95·4	20th and 21st.	101·8	1886
Bihar	Dehri	96·8	19th ,,	100·4	1896
Chota Nagpur	Chaibassa	95·1	20th ,,	95·9	1896
North-Western Provinces and Oudh.	Agra	103·0	4th ,,	107·7	1877
Punjab	Mooltan	106·4	2nd ,,	105·4	1895 and 1896.
Sind	Jacobabad	108·4	3rd ,,	108·9	1899
Rajputana	Pachpadra	106·5	,, ,,	109·5	1895 and 1896.
Gujarat	Ahmedabad	105·3	1st, 2nd and 3rd.	108·8	1899
Central India	Neemuch	99·0	4th ,,	102·5	1899
Central Provinces.	Khandwa	102·2	8th ,,	105·2	1899
Berar	Akola	98·8	8th and 9th ,,	104·2	1899
West Coast	Ratnagiri	96·9	31st ,,	99·1	1888
Bombay Deccan	Malegaon	100·4	4th ,,	104·3	1899
Mysore	Chitaldroog	87·6	22nd ,,	91·1	1899
Madras Coast	Nellore	98·3	14th ,,	102·8	1900
Madras Deccan	Cuddapah	101·2	21st ,,	102·2	1896 and 1899.
South India	Tinnevelly	100·3	,, ,,	102·4	1894, 1897 1899 and 1900.

The mean minimum or night temperature of the month was higher than usual at all stations with the exception of Bhuj, Veraval, Poona, Kurnool, Mysore and Jessore, at which places the mean minimum temperature was, as is shown below, in trifling defect :—

Station.	Mean minimum temperature. Actual, October 1901.	Normal, October.	Variation of actual from normal October 1901.
	°	°	°
Bhuj	70·1	71·2	—1·1
Veraval	71·6	72·1	—0·5
Kurnool	70·9	71·3	—0·4
Mysore	66·4	66·8	—0·4
Poona	66·1	66·4	—0·3
Jessore	74·8	74·9	—0·1

The mean night temperature was above the normal over the remainder of India. The excess was considerable and more than 2° in amount over nearly the whole of North-Western India and parts of West and North Bengal. The excess was absolutely greatest and as much as 6° over Southern Rajputana and was more than 4° at the following stations :—

Station.	Mean minimum temperature.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	°	°	°
Ajmer	69·4	63·0	+6·4
Deesa	72·6	66·9	+5·7
Jhansi	73·9	68·5	+5·4
Bikaner	74·9	70·1	+4·8
Sialkot	66·6	61·8	+4·8
Jaipur	69·2	64·5	+4·7
Lahore	64·2	59·9	+4·3
Agra	71·9	67·8	+4·1

The excess in the minimum temperature was nearly as strongly marked on the hills as on the plains and the lowest minimum temperatures recorded on the north-west hills were as follows :—

Hill Station.	Lowest minimum temperature recorded in October 1901.	Date on which recorded.	Lowest minimum temperature recorded in October previous to 1901.	Year in which recorded.
	°		°	
Kalat	17·2	30th	17·2	1894
Dras	19·6	31st	5·6	1898
Leh	25·5	31st	18·5	1895
Pishin	26·0	30th and 31st.	17·9	1898
Quetta	27·8	30th	23·9	1883
Chaman	32·1	"	36·1	1900
Chitral	34·9	31st	36·0	1893 and 1899.
Skardu	36·1	28th and 31st.	30·7	1898
Srinagar	37·1	31st	29·6	1894
Poo	40·8	"	33·2	1900
Simla	41·8	6th	30·0	1877
Para Chinar	44·4	31st	40·1	1899
Gilgit	45·7	16th	41·3	1898
Killa Drosh	47·1	31st	43·9	1899
Chakrata	49·7	23rd and 27th.	34·8	1884
Mussooree	50·0	27th	35·0	1890
Cherat	51·0	26th	45·6	1896 and 1898
Murree	52·9	31st	37·7	1890
Ranikhet	53·0	25th	42·5	1876

The above shows that the absolute minima on the hills were in most cases considerably higher than the lowest readings previously recorded in the month of October.

The mean temperature of the month was, with a few local exceptions, above the normal. The excess was more than 2° in amount over the greater part of the interior and was more than 4° at the following stations in the Punjab, Rajputana and the adjoining parts of the North-Western Provinces, Central India, the Central Provinces, and Khandesh :—

Station.	Mean daily temperature.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	°	°	°
Khandwa	83·9	78·0	+ 5·9
Ajmer	82·6	77·2	+ 5·4
Deesa	86·6	81·5	+ 5·1
Jhansi	85·4	80·5	+ 4·9
Bikaner	87·7	82·9	+ 4·8
Sialkot	81·6	76·9	+ 4·7
Jaipur	83·4	78·8	+ 4·6
Malegaon	82·1	77·5	+ 4·6
Neemuch	81·7	77·3	+ 4·4
Saugor	80·3	76·0	+ 4·3
Agra	84·7	80·4	+ 4·3
Lahore	80·8	76·5	+ 4·3
Indore	79·5	75·4	+ 4·1

At all the hill stations the mean temperature, on the mean of the month, was above the normal, the excess ranging from 4°·1 at Srinagar to 0°·5 at Chaman and 0 °8 at Wellington.

The chief features of the mean temperature conditions of the month were as follows :—

(1) Slightly lower day temperatures than usual along the West Coast, over the centre of the Bay and parts of Burma and Assam and higher day temperatures than usual elsewhere.

(2) Higher night temperatures than usual over nearly the whole country.

(3) Very high temperatures, both by day and night, over North-West India.

(4) Higher temperatures than usual, both by day and night, at the hill stations.

The following table gives temperature data for the 56 Meteorological Divisions of the Empire :—

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	86·5	75·3	80·9	11·3	17·2	−0·2	+1·1	−0·9
	Lower Burma (Deltaic)	85·9	76·8	81·4	9·0	16·7	−0·9	+1·2	−2·1
	Central do.	90·0	75·0	82·5	15·1	23·1	+0·6	+2·2	−1·6
	Upper do.	89·9	74·2	82·1	15·7	26·2	−0·4	+1·6	−2·0
	Arakan	87·8	77·5	82·7	10·3	16·4	−0·1	+0·7	−0·8
Bengal and Assam	Eastern Bengal	87·9	74·9	81·4	13·1	22·4	+0·6	+0·5	+0·1
	Assam (Surma)	90·0	73·2	81·6	16·8	30·7	+1·2	+0·8	+0·4
	Do. (Brahmaputra)	85·4	72·2	78·8	13·2	22·7	+0·5	+1·0	−0·5
	Deltaic Bengal	89·9	75·3	82·6	14·6	25·3	+2·2	+0·6	+1·6
	Central do.	90·5	74·6	82·6	15·9	26·5	+2·5	+1·5	+1·0
	North do.	88·8	72·6	80·7	16·3	26·7	+2·0	+2·0	0
	Bengal Hills	64·3	43·8	54·0	20·5	29·3	+1·6	+2·6	−1·0
	Orissa	90·0	76·3	83·2	13·8	26·3	+1·6	+1·7	−0·1
	Chota Nagpur	88·9	69·5	79·3	19·4	29·5	+2·8	+2·4	+0·4
	South Bihar	93·0	73·2	83·1	19·8	30·0	+4·1	+2·5	+1·6
	North do.	91·5	72·7	82·1	18·8	29·8	+4·0	+1·7	+2·3
North-Western Provinces and Oudh.	North-Western Provinces (East)	93·4	69·2	81·3	24·2	34·9	+3·5	+1·0	+2·5
	Oudh (South)	92·1	67·4	79·8	24·7	34·6	+1·2	+1·8	−0·6
	Do. (North)	92·2	69·9	81·1	22·3	34·6	+2·4	+2·5	−0·1
	North-Western Provinces (Central)	95·4	69·6	82·5	25·8	35·3	+3·6	+3·2	+0·4
	Do. do. (West)	95·4	68·1	81·8	27·3	38·5	+4·0	+2·9	+1·1
	Do. do. (East Sub-montane)	91·6	70·5	81·1	21·1	30·5	+3·4	+1·9	+1·5
	Do. do. (West do.)	88·0	63·9	76·0	24·1	34·5	+1·3	+1·4	−0·1
	Do. do. (Hills)	68·9	54·2	61·6	14·7	22·2	+2·6	+2·8	−0·2
Punjab	Punjab (South-East)	94·4	71·0	82·7	23·4	33·1	+2·6	+3·0	−0·4
	Do. (South)	95·9	64·5	80·2	31·4	43·5	+3·0	+3·1	−0·1
	Do. (Central)	97·4	64·2	80·8	33·2	46·4	+4·2	+4·3	−0·1
	Do. (Submontane)	94·1	64·5	79·3	29·6	40·5	+3·4	+3·5	−0·1
	Do. (Hills)	71·7	47·3	59·5	24·4	42·6	+2·6	+3·4	−0·8
	Do. (North)	90·7	59·7	75·2	31·0	46·3	+2·5	+3·0	−0·5
	Do. (West)	97·5	65·2	81·3	32·3	47·3	+3·0	+2·5	+0·5
Bombay and Malabar Coast Districts (Madras).	Malabar	85·2	75·1	80·2	10·1	15·5	+0·5	+0·8	−0·3
	Madras (South Central)	89·5	71·6	80·6	17·9	28·5	+0·8	+1·0	−0·2
	Coorg	75·5	62·0	68·8	13·5	22·9	+0·1	−0·1	+0·2
	Mysore	83·5	66·2	74·8	17·3	25·9	+1·3	+0·4	+0·9
	Konkan	85·5	75·8	80·6	9·7	19·5	−0·8	+1·0	−1·8
	Bombay Deccan	90·5	67·4	79·0	23·1	34·0	+4·0	+0·7	+3·3
	Hyderabad (North)	89·2	67·8	78·5	21·4	34·1	...	...	...
	Khandesh	92·9	67·8	80·4	25·2	38·1	+4·5	+2·9	+1·6
Central Provinces and Berar.	Berar	94·6	67·8	81·2	26·9	37·5	+4·9	+1·0	+3·9
	Central Provinces (West)	95·1	68·6	81·9	26·5	37·9	+5·6	+1·5	+4·1
	Do. (Central)	90·8	66·8	78·9	24·0	34·6	+3·6	+1·3	+2·3
	Do. (East)	89·2	67·8	78·5	21·4	31·7	...	...	...
Bombay (North)	Gujarat	98·5	74·1	86·4	24·4	34·7	+4·7	+3·1	+1·6
	Kathiawar and Cutch	93·2	71·4	82·3	21·7	33·1	+1·5	−0·2	+1·7
	Sind	98·0	70·1	84·0	27·9	44·6	+1·8	+1·7	+0·1
	Baluchistan Hills	77·4	39·4	58·4	38·0	64·3	+1·9	−0·2	+2·1
Rajputana and Central India.	Central India (East)	92·7	67·6	80·2	25·2	35·4	+5·0	+3·0	+2·0
	Rajputana (East), Central India (West)	97·2	70·4	83·8	26·8	37·7	+4·4	+5·6	−1·2
	Do. (West)	100·3	72·5	86·4	27·8	41·0	+4·8	+4·8	0
Madras	East Coast (North)	88·0	76·0	82·0	12·0	20·3	0	+0·9	−0·9
	Hyderabad (South)	91·1	70·1	80·6	21·0	33·2	+3·1	+0·9	+2·2
	Madras (Central)	93·8	73·1	83·5	20·6	34·3	+4·5	+0·6	+3·9
	East Coast (Central)	91·2	76·7	84·0	14·5	25·6	+1·1	+1·0	+0·1
	Do. (South)	91·3	75·8	83·6	15·5	26·5	+2·0	+1·2	+0·8
	Madras (South)	91·8	75·1	83·2	16·7	23·0	+1·5	+1·3	+0·2

The above shows that the mean daily temperature of the month was moderately uniform throughout the Indian area, readings in the plains districts ranging from 74°·8 in Mysore to 86°·4 in Gujarat and West Rajputana, thus showing a range for the whole country of about 12°.

The weather generally throughout the month was finer than usual so that the temperature changes from day to day were generally small and the main distribution of temperature was on the whole fairly constant throughout the period under review.

Rain with north-east winds set in over the east and south of the Peninsula at the commencement of the month and the mean temperature was lower than usual in those areas during the first week of the month. The deficiency was generally greatest in the coast districts where the rainfall was most continuous. The following gives comparative data for the Madras districts and Mysore from the 1st to the 7th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	1st Oct.	2nd Oct.	3rd Oct.	4th Oct.	5th Oct.	6th Oct.	7th Oct.
	°	°	°	°	°	°	°
Madras Coast	—0·8	—1·7	+0	—1·5	—2·0	—2·5	—1·6
Madras Deccan	+1·1	+2·3	+3·3	+1·3	+0·4	—0.8	0
Mysore	+1·6	+0·5	+1·6	+0·2	+1·2	—0.2	—1·4
South India	—1·5	—2·1	—1·0	—1·2	+0·1	—0·9	—1·5

Over the remainder of India the mean temperature was above the normal from the 1st to the 4th. The excess was most marked in Gujarat where at some stations the excess ranged between 6° and 8°. The following gives comparative data for all except the Madras and Mysore districts from the 1st to the 4th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	1st October.	2nd October.	3rd October.	4th October.
	°	°	°	°
Burma	+2·8	+2·3	+2·1	+0·5
Assam	+1·0	+1·4	+0·8	+2·0
Bengal	+0·9	+2·4	+2·8	+0·7
Orissa	+1·9	+2·0	+2·5	+1·8
Bihar	+2·5	+3·1	+3·6	+2·0
Chota Nagpur	+3·5	+3·2	+3·6	+2·1
North-Western Provinces and Oudh	+1·9	+2·6	+3·1	+3·8
Punjab	+1·9	+3·2	+4·0	+5·1
Sind	+1·1	+1·9	+1·9	+1·4
Rajputna	+4·7	+4·5	+4·5	+4·9
Gujarat	+4·8	+4·1	+4·2	+2·0
Central India	+0·7	+0·8	+1·7	+2·4
Central Provinces	+1·1	+1·7	+2·0	+2·3
Berar	+1·5	+2·4	+1·6	+2·4
West Coast	+0·5	—0·4	+0·4	+0·6
Bombay Deccan	+3·4	+4·1	+3·9	+3·6

The above shows that on the morning of the 4th the highest temperatures were reported from the Punjab but during the 4th a change occurred. A very feeble cold wave appeared on the north-west frontier and extended eastward along the Himalayas into the North-Western Provinces. The following data for the 5th, 6th and 7th for Baluchistan, the Punjab and the North-Western Provinces illustrate the progress of this wave:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	5th October.	6th October.	7th October.
	°	°	°
Baluchistan	—0·8	+2·2	+6·2
Punjab	+1·2	+0·2	+1·2
North-Western Provinces and Oudh.	+3·5	—0·5	—0·1

When this cold wave appeared in the extreme north-west the area of greatest excess of temperature, which on the 4th lay over the Punjab, was transferred southward and on the 5th, 6th and 7th was shown over Rajputana. The following gives comparative data for this province for these days:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	5th October.	6th October.	7th October.
	°	°	°
Rajputana	+3·5	+5·1	+4·4

During these seven days a cyclonic storm had been developed over the Bay and advancing along a curved course had struck the Bengal coast near Barisal whence it advanced into East Bengal where it occasioned heavy rain on the 8th and 9th. During the whole time of the existence of the storm rain had fallen daily over Burma, but it was not till the storm had advanced to the north of the Bay that the rainfall became heavy and temperature fell decidedly. The following gives data from the 5th to the 10th for Burma, Assam, Bengal and

Orissa, and illustrates the fall of temperature accompanying the rainfall due to this storm :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	5th Oct.	6th Oct.	7th Oct.	8th Oct.	9th Oct.	10th Oct.
	°	°	°	°	°	°
Burma . . .	+0·1	—1·7	—2·1	—1·8	—1·2	—1·3
Assam . .	+1·6	+1·9	+0·6	+2·1	—3·3	—3·6
Bengal . . .	+0·9	+1·5	—0·2	+0·4	—1·3	—1·0
Orissa . . .	+1·5	—0·6	—0·8	—0·4	+1·9	+1·4

During the three days, the 8th, 9th and 10th, the mean temperature in other parts of the Indian area was generally more or less excessive and the weather fine, but in Gujarat, due perhaps to the northerly winds, the nights were unusually cool and in consequence the mean temperature of that area was lower than usual. The following table gives the variations of the minimum or night temperature for the stations in this province for these three nights :—

STATION.	VARIATION FROM NORMAL OF MINIMUM TEMPERATURE OF		
	8th October.	9th October.	10th October.
	°	°	°
Surat	—0·2	—0·7	+0·2
Ahmedabad	—1·0	—1·1	—0·4
Bhavnagar Para . . .	—5·9	—6·2	—3·6
Veraval	—4·2	—3·1	—2·4
Rajkot	—6·9	—5·0	—1·6
Bhuj	—2·3	—2·5	—2·6
Deesa	+2·0	+1·8	+1·1

Low temperatures subsequently extended and the mean temperature was lower than usual along the West Coast from Kurrachee as far south as Karwar from the 11th to the 15th. Slightly cloudy weather prevailed at this time and the depression of temperature was due to lowness of the day and not of the night temperature as was the case in Gujarat between the 8th and the 10th. The following gives comparative data of the maximum and minimum temperatures for the stations along the West Coast from Kurrachee to Karwar for the period 11th to 15th October:—

DATE.	STATION.	VARIATION FROM NORMAL OF	
		Maximum temperature of date.	Minimum temperature of date.
		°	°
11TH OCTOBER	Kurrachee . . .	—3·4	+2·5
	Veraval . . .	—4·3?	—1·8
	Surat	+7·7	+1·6
	Bombay . . .	—1·0	+0·5
	Ratnagiri . . .	—4·8	—2·1
	Goa	—3·2	+0·8
	Mormugao . . .	—2·5	—0·3
	Karwar . . .	—2·1	+0·9
12TH ,,	Kurrachee . . .	—5·1	+2·2
	Veraval . . .	—6·6?	—0·1
	Surat	+7·5	+1·1
	Bombay . . .	—1·2	—1·0
	Ratnagiri . . .	—4·0	+2·6
	Goa	—2·9	+2·9
	Mormugao . . .	—2·7	+1·2
	Karwar . . .	—1·8	+2·7
13TH ,,	Kurrachee . . .	—4·7	—1·2
	Veraval . . .	—11·0?	—3·2
	Surat	+5·4	—0·2
	Bombay . . .	—0·2	—2·0
	Ratnagiri . . .	—3·5	+1·4
	Goa	+0·2	—0·1
	Mormugao . . .	—2·0	—0·9
	Karwar . . .	—0·8	+2·2
14TH ,,	Kurrachee . . .	—5·6	+3·8
	Veraval . . .	—8·4?	—0·5
	Surat	+3·8	+0·1
	Bombay . . .	—2·7	—1·2
	Ratnagiri . . .	—3·6	—0·9
	Goa	—3·7	—2·2
	Mormugao . . .	—3·9	—4·0
	Karwar . . .	—2·3	—0·3
15TH ,,	Kurrachee . . .	—4·8	+1·9
	Veraval . . .	—9·7?	+0·2
	Surat	+4·4	+3·2
	Bombay . . .	—1·6	+0·4
	Ratnagiri . . .	—4·6	+1·5
	Goa	—4·4	—1·2
	Mormugao . . .	—5·3	—1·4
	Karwar . . .	—4·7	+0·6

In the meantime on the opposite side of India the weather had again become unsettled. A shallow storm had shown itself over the Bay on the 11th and commenced to affect the weather, and rain was falling over Burma, the Circars and Orissa. On the 12th and 13th there was very little change in the temperature conditions, but on the 14th the storm was close to the Circars coast, rain had become heavier and temperature had fallen. The storm passed in a west-north-west direction inland across the head of the Peninsula, carrying rain with it, and a well-marked wave of low temperature crossed the Peninsula from east to west and passed out into the Arabian Sea. The following gives temperature data for Burma and the Peninsular divisions from the 11th to the 19th to illustrate the progress of this cold wave :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF								
	11th Oct.	12th Oct.	13th Oct.	14th Oct.	15th Oct.	16th Oct.	17th Oct.	18th Oct.	19th Oct.
	°	°	°	°	°	°	°	°	°
Burma . .	—0·8	+0·4	—0·1	—1·8	—0·5	+0·5	+1·1	+1·0	+1·5
Madras Coast .	+0·6	+1·3	+2·3	+2·7	—1·0	+1·7	+1·9	+0·9	+1·3
Madras Deccan	+1·8	+3·4	+3·5	+3·4	+1·6	—0·7	+2·6	+3·7	+3·5
South India .	—0·9	+1·4	+1·7	+2·3	+1·8	+1·8	+1·9	+2·2	+1·7
Mysore . .	+0·6	+1·1	+1·3	+1·1	+0·2	+0·2	+0·2	+2·0	+1·5
Bombay Deccan	+3·0	+3·3	+2·8	+3·0	+4·9	+1·3	—2·8	—0·6	+3·1
West coast .	—0·6	+0·2	+0·4	—0·6	—0·9	—0·4	—0·5	—0·1	+0·2
Berar . .	+2·0	+1·6	+2·5	+2·5	+4·3	+1·8	—2·4	+2·1	+4·4
Central Provinces	+1	+1·4	+1·5	+1·4	+7	+2·7	+1·9	+3·1	+4·8

During these nine days temperature was steadily in moderate to large excess over Northern India. This is shown below :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A. M.								
	11th Oct.	12th Oct.	13th Oct.	14th Oct.	15th Oct.	16th Oct.	17th Oct.	18th Oct.	19th Oct.
	°	°	°	°	°	°	°	°	°
Bengal .	+0·6	+1·5	+1·7	+2·1	+1·0	+1·6	+2·0	+3·6	+4·6
Orissa . .	+2·1	+2·0	+0·6	—0·4	—2·6	+0·5	+0·9	+2·3	+2·5
Bihar . .	+1·5	+0·9	+1·5	+1·6	+4·2	+2·9	+5·3	+6·4	+6·2
Chota Nagpur .	+1·7	—0·5	+0·4	+1·4	+2·5	—0·4	+3·6	+5·3	+6·4
N. W. P. and Oudh.	+0·9	+0·6	+0·8	+1·5	+2·9	+3·4	+3·9	+4·3	+3·0
Punjab . .	+0·4	+1·0	+1·2	+2·8	+2·7	+2·7	+0·9	+1·0	+1·6
Sind . .	+1·2	+0·9	+0·5	+0·2	—1·0	+0·6	+0·9	+2·4	+3·1
Rajputana .	+2·4	+3·9	+4·3	+4·3	+4·3	+4·1	+4·7	+2·7	+3·9
Central India .	+1·6	+2·1	+2·1	+2·0	+2·9	+5·4	+3·8	+3·6	+4·6

The area of greatest excess during this period was not steady over any single province but moved about irregularly over Northern India. The following gives comparative data for the two stations which on each day exhibited the greatest excess of temperature :—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8. A. M. of date.
		°
11TH OCTOBER.	Surat	+4·7
	Khandwa	+4·6
12TH "	Khandwa	+6·4
	Malegaon	+5·1
13TH "	Khandwa	+7·1
	Ajmer	+5·7
14TH "	Lahore	+6·4
	Khandwa	+6·2
15TH "	Malegaon	+8·0
	Khandwa	+7·0
16TH "	Khandwa	+7·5
	Surat	+7·0
17TH "	Deesa	+6·9
	Jaipur	+6·5
18TH "	Deesa	+8·7
	Gaya	+7·0
19TH "	Ranchi	+7·4
	Sutna	+7·2

From the 20th to the 27th the weather was fine and quiet generally and the mean temperature was higher than usual in practically all parts of the Indian area. The following gives comparative data for all divisions for the 24th and illustrates the conditions prevailing during this period :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 24th October.	Mean minimum temperature, 24th October.	Mean daily temperature, 24th October.
	°	°	°
Burma	+0·1	+2·3	+1·2
Assam	+2·1	+2·7	+2·4
Bengal	+2·1	—0·7	+0·7
Orissa	+2·4	—0·9	+0·8
Bihar	+3·2	+0.2	+1·7
Chota Nagpur	+2·6	—1·2	+0·7

Province or Division.	Variation from normal of Mean maximum temperature, 24th October.	Mean minimum temperature, 24th October.	Mean daily temperature, 24th October.
	°	°	°
North-Western Provinces and Oudh	+3·4	+0·5	+2·0
Punjab	+3·7	+2·3	+3·0
Sind	+1·7	+1·0	+1·4
Rajputana	+5·7	+2·6	+4·2
Gujarat	+5·7	+2·1	+3·9
Central India	+5·9	+1·7	+3·8
Central Provinces	+5·9		+3·0
Berar	+7·2	+2·0	+4·6
West Coast	0	+3·0	+1·5
Bombay Deccan	+3·2	+4·6	+3··
Mysore	+1·8	+3·3	+2·6
Madras Coast	+3·5	+1·5	+2·5
Madras Deccan	+3·1	+6·0	+4·6
South India	+4·2	—0·2	+2·0

The greatest excess was generally reported from Rajputana and Gujarat. The following gives for each day from the 20th to the 27th the station exhibiting the largest excess of temperature :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
20TH OCTOBER	Ajmer	+ 8·1
21ST ,,	Sambhar	+11·0
22ND ,,	Khandwa	+ 8·1
23RD ,,	Do.	+ 8·7
24TH ,,	Ahmedabad	+ 8·6
25TH ,,	Do.	+ 8·2
26TH ,,	Bikaner	+ 7·2
27TH ,,	Rawalpindi	+ 7·9

Between the 27th and the end of the month a few light showers were experienced over the south of the Peninsula and the mean temperature in the Madras Deccan, South India and Mysore on these five days was normal or in only trifling excess. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 27th Oct.	28th Oct.	29th Oct.	30th Oct.	31st Oct.
	°	°	°	°	°
Madras Deccan	+2·2	—0·8	+0·6	+1·9	+2·4
South India	+2·9	+2·8	+0·9	+0·7	+2·7
Mysore	+2·1	+0·3	—1·3	—1·1	+0·6

Over Northern and Central India, on the other hand, these five days formed a period of excessive heat, relatively to the normal, and in North-West India and particularly over the Western desert the excess was very large. The following gives comparative data for all the divisions in Central, North-West and Northern India from the 27th to the 31st :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 27th Oct.	28th Oct.	29th Oct.	30th Oct.	31st Oct.
	°	°	°	°	°
Bengal	+1·9	+2·0	+2·1	+2·4	+2·3
Orissa	+1·9	+2·0	+2·2	+3·0	+3·8
Bihar	+3·6	+4·4	+4·8	+5·9	+3·9
Chota Nagpur	+2·5	+3·2	+4·5	+4·9	+6·3
North-Western Provinces and Oudh	+3·7	+3·7	+4·7	+5·4	+5·3
Punjab	+4·7	+4·5	+5·8	+6·2	+5·8
Sind	+2·5	+3·2	+4·7	+2·3	+3·9
Rajputana	+5·5	+7·4	+6·6	+6·5	+7·7
Gujarat	+3·9	+4·6	+2·9	+2·8	+4·1
Central India	+3·8	+4·0	+4·8	+5·7	+7·2
Central Provinces	+2·5	+2·5	+3·5	+3·5	+4·2
Berar	+2·6	+1·8	+3·6	+3·5	+3·1

The following gives data for the station recording the largest excess on each day from the 27th to the 31st :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
27th October	Rawalpindi	+ 7·9
28th ,,	Ahmedabad	+ 9·4
29th ,,	Bikanir	+10·7
	Jacobabad	+10·7
30th ,,	Sialkot	+ 9·1
31st ,,	Jhansi	+ 9·5

This excess of temperature, on the mean of the month, apparently extended northward into Kashmir, westward through Baluchistan as far as Jask at the entrance to the Persian Gulf as well as southward into Ceylon, but apparently was not felt further afield as at Aden and Perim as well as at the stations in the South-East trades region the mean temperature of the month was generally in defect.

Winds.

As October is a month of slow transition from the south-west monsoon proper to the north-east or cold weather monsoon and is likewise characterised by marked uniformity of pressure and temperature conditions, the air movement of the period is generally feebler and more irregular than in any other month of the year. In October 1901 the air movement departed considerably from the normal. A cyclonic storm in the Bay during the first week gave cyclonic winds to the Bay area and north-west winds to the interior districts of the Peninsula while it occasioned a down draught of westerly winds for a considerable distance in the Gangetic Plain. On the disappearance of this storm on the 10th dry land winds prevailed over the whole country, but on the 11th another storm appeared over the Bay while a well marked depression was shown over the Southern Punjab. In consequence the air movement became very irregular in the extreme north-west of India, while the air movement described above was re-established over other parts of the country. These winds lasted until almost the close of the month at about which time the north-east monsoon was established over the Bay and north-westerly to westerly winds over Northern and North-Western India.

Winds were stronger than usual at Port Blair and steadier than usual both at that station and at Cocos Island. They were very abnormal in direction, the chief feature of the winds having been a strongly marked westerly component over the Bay Islands. This is shown below :—

Bay Islands.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Westerly deflection.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
				°	°				
Port Blair.	55	25	+30	S 64 W	S 1 W	+63	178	150	+28
Cocos Island	26	13	+13	S 23 W	S 67 E	+90	132	?	?

On the Burma coast also the winds were very abnormal in direction. They were more easterly at Rangoon more southerly at Diamond Island and more northerly at Akyab than the average, showing the influence of the place of origin and direction of motion of the different cyclonic storms of the month. The following gives direction data for the Burma coast stations :—

Station.	Mean wind direction.	
	Actual, October 1901.	Normal, October.
	°	°
Rangoon	S 53 E	S 36 E
Diamond Island	S 25 E	S 56 E
Akyab	N 63 E	S 64 E

In Bengal the wind's direction was irregular. At Chittagong and False Point the wind blew from between north and east and at Calcutta and Saugor Island from the north-westward. The steadiness was generally greater than usual, but the velocity was generally below the average. This is shown below :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal October 1901.	Actual, October 1901.	Normal, October.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
				°	°			
Chittagong	29	13	+16	N 7 E	N 11 W	78	66	+12
Calcutta	27	11	+16	N 52 W	N 44 W	57	67	—10
Saugor Island	45	13	+32	N 35 W	N 8 W	134	174	—40
False Point	18	22	— 4	N 42 E	N 50 E	124	145	—21

The winds were very steady and generally stronger than

usual in the Gangetic Plain, but the directions were variable. The following gives data :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
				°	°			
Hazaribagh . .	32	24	+ 8	N 4 W	N 35 W	131	124	+ 7
Darbhanga . .	27	1	+26	S 77 E	S 4 W	19	52	—33
Allahabad . .	36	18	+18	N 57 W	N 49 W	73	66	+ 7

In the Upper Sub-Himalayas a west-north-westerly wind prevailed except at Roorkee where a light unsteady south-south-east wind was reported. The following gives data for the stations in this area :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.	
	Actual percentage October 1901.	Normal percentage October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.
				°	°
Dehra Dun . .	16	21	— 5	N 57 W	N 39 W
Roorkee . . .	6	6	0	S 20 E	S 6 E
Meerut . . .	34	35	— 1	N 72 W	N 55 W
Lahore . . .	10	11	— 1	N 83 W	N 7 W
Ludhiana . . .	34	22	+12	N 72 W	N 39 W

At Peshawar there was a light unsteady north-east wind, but at Jacobabad the unusual westerly component in the wind noticed in other parts of Northern India was shown. Similar conditions also prevailed in Rajputana. The following gives data for the stations in the Indus Valley, Rajputana and Gujarat :—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
				°	°			
Peshawar . .	18	33	—15	N 40 E	N 52 E	32	60	—28
Jacobabad . .	12	9	+ 3	S 78 W	S 27 E	42	54	—12
Kurrachee . .	68	61	+ 7	S 66 W	S 72 W	214	235	—21
Jaipur . . .	61	37	+24	N 77 W	N 22 W	67	77	—10
Deesa . . .	38	12	+26	N 88 W	N 82 E	156	161	— 5

The chief abnormal feature in the winds over Northern India was hence the abnormal amount of westing in the winds over a large part of that area. This feature was common to the whole area from the Indus Valley in the west to Deltaic Bengal in the east, and amount the of this abnormal westing is shown in the following table :—

STATION.	MEAN WIND DIRECTION.		
	Actual, October 1901.	Normal, October.	Westerly deflection.
	°	°	
Jacobabad	S 78 W	S 27 E	Large.
Jaipur	N 77 W	N 22 W	+55
Deesa	N 88 W	N 82 E	Large.
Lahore	N 83 W	N 7 W	+76
Ludhiana	N 72 W	N 39 W	+33
Meerut	N 72 W	N 55 W	+17
Allahabad	N 57 W	N 49 W	+ 8
Calcutta	N 52 W	N 44 W	+ 8
Saugor Island	N 35 W	N 8 W	+27

This current was generally steadier than the normal winds of this month, but the force was low. The following gives comparative data of steadiness and velocity for the same stations :—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, October 1901.	Normal, percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Jacobabad . .	12	9	+ 3	42	54	—12
Jaipur . . .	61	37	+24	67	77	—10
Deesa . . .	38	12	+26	156	161	— 5
Lahore . . .	10	11	— 1	25	39	—14
Ludhiana . .	34	22	+12	44	26	+18
Meerut . . .	34	35	— 1	24	31	— 7
Allahabad . .	36	18	+18	73	66	+ 7
Calcutta . .	27	11	+16	57	67	—10
Saugor Island .	45	13	+32	134	174	—40

The following gives comparative data of steadiness and of the mean velocity of the air movement in different districts of Northern India, the Bay Islands and Burma during the month:—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Bay Islands	41	19	+22	178	150	+28
Burma	20	18	+ 2	92	102	—10
Bengal	34	12	+22	96	102	— 6
Orissa	18	22	— 4	124	145	—21
Bihar	32	24	+ 8	131	124	+ 7
Chota Nagpur	27	1	+26	19	52	—33
North-Western Provinces.	23	20	+ 3	35	40	— 5
Punjab	21	22	— 1	34	42	— 8
Sind	40	35	+ 5	128	145	—17
Rajputana	50	25	+25	112	119	— 7

In the Deccan the wind varied between north-west and north-east. It was on the whole much more westerly than usual, due probably to the indraught towards the cyclonic storms over the Bay area. The following gives direction data:—

STATION.	MEAN WIND DIRECTION.	
	Actual, October 1901.	Normal, October.
	°	°
Belgaum	N 37 W	N 54 E
Sholapur	N 30 E	N 55 E
Poona	N 75 W	N 37 E
Akola	N 10 W	N 16 E
Buldana	N 62 W	N 24 E
Khandwa	N 37 E	N 22 E
Nagpur	N 7 E	N 37 E
Hyderabad (Deccan)	N 78 E	S 80 E

The variations from the normal as regards velocity and steadiness were irregular, as is shown by the following comparative data:—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Belgaum	63	13	+50	201	241	—40
Sholapur	39	22	+17	248	193	+55
Poona	54	19	+35	202	139	+63
Akola	34	32	+ 2	...	...	...
Buldana	46	49	— 3	139	125	+14
Khandwa	21	35	—14	112	71	+41
Nagpur	64	49	+15	115	102	+13
Hyderabad (Deccan)	14	33	—19	98	96	+ 2

The wind was west-north-westerly on the West Coast, blowing with about the normal velocity and steadiness. This is shown below:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	October Actual, 1901.	Normal, October.	Westerly Deflection.	Actual, October 1901.	Normal, Octob	Variation of actual from normal, October 1901.
				°	°				
Bombay	37	33	+4	N 52 W	N 14 E	+66	192	226	—34
Karwar	59	63	—4	N 70 W	N 76 W	— 6	65	54	+11

In South India the winds varied irregularly from the normal, but in this area also abnormally increased westing was shown by the winds at some stations. This characteristic is shown in the following comparative data:—

STATION.	MEAN WIND DIRECTION.	
	Actual, October 1901.	Normal, October.
	°	°
Salem	S 76 W	S 50 W
Chitaldroog	N 54 W	N 28 E
Bangalore	N 43 W	N 8 W
Hassan	N 56 E	N 42 E
Mysore	N 57 W	N 42 E
Madras	N 20 E	N 55 E
Bellary	N 7 E	N 42 E

The wind was somewhat steadier than usual, except at Mysore, where it was normal, while the variations from the normal in the case of velocity were irregular. This is shown below :—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Salem	35	29	+ 6	40	60	—20
Chitaldroog	19	15	+ 4	103	143	—40
Bangalore	40	8	+32	126	105	+21
Hassan	32	24	+ 8	48	63	—15
Mysore	13	13	0	149	185	—36
Madras	19	17	+ 2	97	118	—21
Bellary	40	14	+26	122	104	+18

The following gives data of mean steadiness and velocity for the different divisions of the Peninsula :—

Province or Division.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Central Provinces	43	42	+ 1	114	87	+27
Berar	40	41	— 1	139	125	+14
Bombay Deccan	52	18	+34	217	191	+26
West Coast	48	48	0	129	140	—11
Madras Deccan	27	24	+ 3	110	100	+10
Mysore	26	15	+11	107	124	—17
Madras Coast	19	17	+ 2	97	118	—21
South India	35	29	+ 6	40	60	—20

In Baluchistan the wind was light but was otherwise fairly normal. This is shown below :—

Hill Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Westerly Deflection.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Quetta	34	44	—10	° N 65 W	° N 59 W	+6	21	54	—33

The wind was north-north-westerly at Srinagar and much steadier than usual, while at Leh and Kailang the direction was south-westerly. The following gives data for these three stations :—

Hill Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Westerly deflection.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Srinagar	42	12	+30	° N 35 W	° N 18 W	+17	65	75	—10
Leh	61	42	+19	S 56 W	S 55 W	+ 1	73	44	+29
Kailang	53	64	—11	S 48 W	S 37 W	+ 6	25	37	—12

In the Central Himalayan region the wind direction was very variable but the steadiness of the wind was much greater than usual and the velocity exceeded the normal. The following gives data :—

Hill Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Simla	42	15	+27	° N 27 W	° N 32 W	143	108	+35
Chakrata	85	32	+53	S 17 E	S 64 W	206	129	+77
Ranikhet	60	51	+ 9	S 78W	S 55 W	57	49	+ 8

In the Eastern Himalayas the winds varied between west south-west and west-north-west and both steadiness and velocity were less than usual. This is shown in the following table :—

Hill Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
				°	°			
Katmandu . .	21	38	—17	S 78 W	W	7	16	— 9
Darjeeling . .	11	21	—10	N 66 W	S 78 W	66	85	—19

The wind was almost due northerly at the hill stations in the Central Provinces where the direction was probably influenced by the Bay storms, while it was west-south-westerly at Mount Abu. This is shown below:—

Hill Station.	Mean wind direction.	
	Actual, October 1901.	Normal, October.
	°	°
Pachmarhi	N 4 W	N 25 E
Chikalda	N 1 E	N 2 E
Mount Abu	S 64 W	N 40 W

At Wellington the wind was more easterly than usual but was about normal as regards steadiness and velocity.

At Aden and Perim the winds were approximately normal, except that the direction at Aden was east-north-east instead of east-south-east, as is shown below :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
				°	°			
Aden . . .	55	56	— 1	N 63 E	S 80 E	292	316	—24
Perim . . .	90	84	+ 6	S 64 E	S 62 E	450	414	+ 6

In the South-East Trades region the wind direction varied slightly from the normal, the wind having been a trifle less easterly at Zanzibar and a trifle more easterly at the Seychelles than the normal. The steadiness was less than usual but the velocity slightly exceeded the average. The following gives comparative data :—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, October 1901.	Normal percentage, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Easterly deflection.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
				°	°				
Zanzibar .	48	53	—5	S 1 E	S 3 E	—2	147	120	+27
Seychelles .	48	59	—11	S 50 E	S 44 E	+6	187	183	+ 4

Humidity and Cloud.

One of the most noteworthy features of the meteorology of the month due to the early withdrawal of the monsoon currents from Northern India was the low humidity conditions prevailing over the interior of India.

The Indus Valley and the coast districts of the Peninsula and of Burma were practically the only districts in which the relative humidity was in any excess and in these areas the excess was generally small and unimportant. The amount of aqueous vapour present in the air was not generally below the normal, but the temperature of the month was excessive almost everywhere and in consequence the humidity, on the mean of the month, was almost everywhere in defect. This deficiency was greatest in the Deccan districts and was more than 10% in amount at the stations for which comparative data are given below :—

Station.	Relative humidity.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	%	%	
Sholapur	50	62	—12
Bellary	52	63	—11
Khandwa	46	57	—11

Over Burma and the Bay Islands the variations in the amount of the aqueous vapour were irregular. At Rangoon there was some deficiency and at Akyab a large excess while at the remaining stations it was nearly normal. At all these stations the mean temperature was nearly normal, and the relative humidity, on the mean of the month, was about the average except at Akyab where it was in some excess. The following gives comparative data for this area :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Rangoon . . .	·856	·888	—·032	83	84	—1
Diamond Island . .	·885	·867	+·018	83	83	0
Akyab. . . .	·986	·883	+·103	89	83	+6
Port Blair . . .	·907	·911	—·004	86	86	0
Cocos Island . .	·881	·880	+·001	83	83	0

In Bengal and Orissa all the stations reported an excess of aqueous vapour pressure and all stations an excess of temperature so that the relative humidity was about normal except at Calcutta where it was in some defect.

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Chittagong . .	·869	·848	+·021	84	83	+1
Calcutta . .	·852	·819	+·033	77	81	—4
Saugor Island .	·890	·857	+·033	80	81	—1
False Point . .	·890	·825	+·065	80	79	+1

Similar conditions prevailed in the Gangetic Plain and Chota Nagpur, but the excess of aqueous vapour was smaller than in the case of Bengal, while the temperature excess was, on the contrary, larger, hence the relative humidity, on the mean of the month, was in decided defect. The following gives data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Hazaribagh . .	·555	·539	+·016	60	64	—4
Darbhanga . .	·779	·757	+·022	69	75	—6
Allahabad . .	·668	·620	+·048	63	66	—3

In the Upper Sub-Himalayas conditions were less regular. At Dehra Dun and Roorkee the aqueous vapour present in the air was in excess of the normal while the temperature was only slightly above the average so that the relative humidity at these two stations was in slight excess. This is shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Dehra Dun . . .	·515	·450	+·065	65	62	+3
Roorkee . . .	·524	·494	+·030	61	58	+3

At the remaining stations in this area the variations in the absolute humidity were small but the mean temperature was in considerable excess and the relative humidity was hence in defect. The following gives data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Meerut . . .	·483	·493	—·010	53	57	—4
Lahore . . .	·443	·442	+·001	45	47	—2
Ludhiana . .	·445	·464	—·019	47	53	—6

In the Indus Valley the amount of aqueous vapour present in the air was considerably greater than usual so that notwithstanding the excess of temperature the relative

humidity was generally above the average. The following gives comparative data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation, of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Peshawar . .	·434	·363	+·071	51	47	+4
Jacobabad . .	·468	·419	+·049	42	42	0
Kurrachee . .	·726	·646	+·080	67	63	+4

In Rajputana also the absolute humidity was higher than usual, but in this case the excess was small, while, on the other hand, the temperature was very excessive. As a result the relative humidity was in defect. This is shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Jaipur . . .	·446	·406	+·040	40	43	—3
Deesa . . .	·451	·440	+·011	37	42	—5

The following gives comparative data of the absolute and relative humidities for the Bay Islands, Burma and the different districts of Northern India illustrating the general excess of the absolute and the fairly general defect of the relative humidities :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Bay Islands . .	·894	·896	—·002	85	85	0
Burma . . .	·909	·879	+·030	85	83	+2
Bengal . . .	·870	·841	+·029	80	81	—1
Bihar . .	·555	·539	+·016	60	64	—4
Chota Nagpur .	·779	·757	+·022	69	75	—6
Orissa . . .	·890	·825	+·065	80	79	+1
North-Western Provinces.	·548	·515	+·033	61	61	0
Punjab . .	·441	·423	+·018	48	49	—1
Sind . . .	·597	·532	+·065	55	53	+2
Rajputana . .	·449	·423	+·026	39	43	—4

In the Deccan as in the north-west dry area the variations in the amount of aqueous vapour present in the air were irregular while the temperature, though everywhere in excess of the normal, varied considerably in the amount of that excess and as a result the relative humidity also varied irregularly from the average. The following gives comparative data of the stations at which the absolute humidity was in defect :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Sholapur . . .	·504	·579	—·075	50	62	—12
Akola	·535	·571	—·036	55	60	— 5
Buldana . . .	·483	·523	—·040	51	59	— 8
Khandwa . . .	·505	·540	—·035	46	57	—11
Nagpur . . .	·549	·581	—·032	53	60	— 7

The above shows that the greatest deficiency, both in the absolute and relative humidities, was at Sholapur.

The following gives comparative data of the stations at which the absolute humidity was in excess :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Belgaum . .	·603	·589	+·014	74	72	+2
Poona . . .	·566	·549	+·017	62	60	+2

Along the West Coast the variations of humidity were irregular and unimportant. This is shown below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, Octoebr.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Bombay . . .	·869	·840	+·029	82	80	+2
Karwar . . .	·811	·815	—·004	82	83	—1

In South India with the somewhat doubtful exception of Bellary the amount of aqueous vapour present in the air was in excess, but the mean temperature was generally higher than usual and the relative humidity varied irregularly and by small amounts from the normal. The following gives comparative data for the stations in this area :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Salem	·765	·751	+·014	74	76	— 2
Chitaldroog	·614	·566	+·048	68	65	+ 3
Bangalore	·603	·592	+·011	74	75	— 1
Hassan	·588	·579	+·009	76	75	+ 1
Mysore	·631	·602	+·029	74	71	+ 3
Madras	·879	·833	+·046	80	80	0
Bellary	·545	·621	—·076	52	63	—11

The following gives comparative data of the absolute and relative humidities of the different Peninsular divisions :—

PROVINCE OR DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Central Provinces	·527	·561	—·034	50	59	— 9
Berar	·509	·547	—·038	53	60	— 7
Bombay Deccan	·558	·573	—·015	62	65	— 3
West Coast	·840	·827	+·013	82	81	+ 1
Madras Deccan	·545	·621	—·076	52	63	—11
Mysore	·609	·585	+·024	73	71	+ 2
Madras Coast	·879	·833	+·046	80	80	0
South India	·765	·751	+·014	74	76	— 2

The decreased humidity was almost as well marked on the lower hills in the north-west as on the plains of Northern India. Srinagar formed the only important exception but the conditions at that station are recognised as exceptional. The following gives data for the hill stations of Northern Inda :—

HILL STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Leh	·094	·100	—·006	34	40	— 6
Srinagar	·438	·315	+·123	83	78	+ 5
Kailang	·141	·134	+·007	42	50	— 8
Simla	·226	·246	—·020	46	52	— 6
Chakrata	·311	·284	+·027	60	60	0
Ranikhet	·368	·328	+·040	62	61	+ 1
Katmandu	·514	·474	+·040	72	73	— 1
Darjeeling	·410	·370	+·040	87	83	+ 4

At the central hill stations the mean temperature of the month was very excessive so that though the absolute humidity varied only slightly from the normal, the relative humidity was in considerable defect. This is shown below :—

HILL STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Mount Abu	·353	·339	+·014	41	45	—4
Pachmarhi	·434	·439	—·005	56	61	—5
Chikalda	·460	·466	—·006	56	62	—6

At Perim and Aden the air was considerably damper than usual and in the South-East Trades region both the absolute and relative humidities were generally in slight excess. The following gives comparative data for the stations in the South-East Trades region :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
	"	"	"	%	%	
Zanzibar	·752	·771	—·019	77	78	—1
Seychelles	·793	·780	+·013	81	78	+3
Mauritius	·570	·560	+·010	71	70	+1

The variations in the mean cloud amount are usually similar in general character to those of the humidity, a deficiency in one element accompanying a deficiency in the other, and *vice versâ*. There was thus in October 1901 an excess of cloud over the Bay area and a deficiency in nearly all other places.

The mean cloud amount of the month was much larger than usual over Lower Burma and the Bay Islands. The following gives data in illustration:—

Station.	Mean cloud amount.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Rangoon	8·3	5·9	+2·4
Diamond Island	6·9	5·7	+1·2
Port Blair	7·3	6·0	+1·3
Cocos Island	7·0	5·2	+1·8

There was also generally more cloud than usual on the north coasts of the Bay though the excess was much less in this than in the other area. This is shown below:—

Station.	Mean cloud amount.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Chittagong	4·9	4·4	+0·5
Calcutta	3·7	4·1	−0·4
Saugor Island	4·9	4·7	+0·2
False Point	5·5	4·8	+0·7

Cloud was also in trifling excess at one or two stations in the south of the Peninsula and it is remarkable that one of these stations was Bellary where, as shown above, the humidity deficiency was very large. The following gives comparative data for the stations in the Peninsula showing an excess:—

Station.	Mean cloud amount.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Bellary	7·6	6·5	+1·1
Mysore	7·3	6·6	+0·7

Over the whole of the remainder of India the cloud amount was in defect. The deficiency was greatest and more than 1·0 within an area covering the west of the Central Provinces, the Bombay Deccan and the West Coast. The following gives data for the stations within this area:—

Station.	Mean cloud amount.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Sholapur	4·3	5·9	−1·6
Buldana	2·2	3·7	−1·5
Bombay	2·7	4·1	−1·4
Poona	3·6	4·9	−1·3
Karwar	3·2	4·5	−1·3
Belgaum	4·4	5·6	−1·2

Over the remainder of the plains of India the mean cloud amount of the month was in slight defect. The following gives comparative data for the various provinces:—

Province or Division.	Mean cloud amount.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Bay Islands	7·2	5·6	+1·6
Burma	6·5	5·5	+1·0
Bengal	4·5	4·4	+0·1
Bihar	4·3	4·4	−0·1
Orissa	5·5	4·8	+0·7
Chota Nagpur	0·8	2·6	−1·8
North-Western Provinces	0·8	1·2	−0·4
Punjab	0·7	1·1	−0·4
Sind	0·6	0·7	−0·1
Rajputana	1·3	1·8	−0·5
Central Provinces	2·8	3·2	−0·4
Berar	2·2	3·5	−1·3
Bombay Deccan	4·1	5·5	−1·4
West Coast	3·0	4·4	−1·4
Madras Deccan	5·6	5·4	+0·2
Madras Coast	5·8	6·0	−0·2
Mysore	6·2	6·4	−0·2
South India	5·8	5·8	0

With the single exception of Ranikhet, where the cloud amount was in slight excess, cloud was as generally in defect at the level of the hills as on the neighbouring plains. The deficiency amounted to 0·5 or more in amount at the following stations :—

Hill Station.	Mean cloud amount.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Leh	2·0	3·8	—1·8
Kailang	2·0	3·4	—1·4
Srinagar	1·9	2·8	—0·9
Simla	0·6	1·5	—0·9
Katmandu	3·1	3·9	—0·8
Chakrata	1·1	1·7	—0·6
Darjeeling	5·3	5·8	—0·5
Chikalda	2·2	3·7	—1·5
Pachmarhi	2·5	3·2	—0·7

The sky was clearer than usual notwithstanding the increased humidity at Aden and Perim while the amount of cloud varied irregularly from the normal in the South-East Trades region. The following gives data for Zanzibar and the Seychelles :—

Station.	Mean cloud amount.		
	Actual, October 1901.	Normal, October.	Variation of actual from normal, October 1901.
Zanzibar	6·3	4·6	+1·7
Seychelles	5·4	6·2	—0·8

Skies were practically clear or the mean amount of the month was 0·5 or less at the following places in India :—

Station.	Mean cloud amount.
	Actual, October 1901.
Roorkee	0·4
Meerut	0·5
Lahore	0·3
Ludhiana	0·4
Jacobabad	0·4
Quetta	0·3

The sky was cloudiest, the mean amount of cloud amounting to 7·0 or more over parts of Lower Burma and of the south of the Peninsula. The following gives data for the stations in these areas :—

Station.	Mean cloud amount.
	Actual, October 1901.
Port Blair	7·3
Rangoon	8·3
Cocos Island	7·0
Mysore	7·3
Bellary	7·6

Rainfall.

The principal rainfall in the month of October is attributable to the retreating south-west monsoon current. This current in this month is practically confined to the Peninsula and the Bay area so that over the whole of North-Western and Central India the average rainfall of the month is very light. Over this area the average rainfall is less than two inches and diminishes in amount westward to the Indus Valley within which region it is less than two-tenths of an inch.

In the North and Central Deccan, the Central Provinces Bengal and the greater part of Burma the month's rainfall averages between 2″ and 5″ whilst in Lower Burma and the south of the Peninsula it ranges between 5″ and 13″. The heaviest rainfall is ordinarily received along the Madras coast.

During October 1901 rain was received over the Peninsula, the Bay area and Burma from the retreating south-west monsoon current ; over the North Deccan, Khandesh,

Gujarat and South Rajputana from a cyclonic storm from the Bay and over the hill and submontane districts of Northern India from a slight cyclonic storm over North-West India.

The chief periods of rainfall during the month were as follows:—

(1) The 1st to the 10th, when Burma, the Peninsula, Bengal and Assam received moderate to heavy rain from the first cyclonic storm of the month.

(2) The 4th to the 6th, when the hills and submontane districts of North-West India received rain, hail and snow.

(3) The 11th to the 18th, when Burma, the Bay area, North Madras, the Deccan, the Central Provinces, North Bombay and Rajputana received rain from the second cyclonic storm.

(4) The 22nd to the 25th, when Burma and the southern half of the Peninsula received daily showers.

(5) The 27th, when the south of the Peninsula received general showers.

The chief features of the rainfall distribution of the month of October 1901 were as follows:—

(1) The month's rainfall was generally in defect of the normal except over part of the path of the first cyclonic storm of the month.

(2) It was in excess of the average from this cause in East Bengal and part of Assam.

(3) It was also in excess of the normal in the North Punjab, Mysore and Western Rajputana owing to local heavier rain than usual.

(4) The rainfall was in large defect over the greater part of Bengal, the North-Western Provinces, the Punjab, the Central Provinces, Bombay and Central India.

The following table gives mean actual, mean normal and variation rainfall data for the 56 meteorological divisions or districts into which India is divided:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, October 1901.	Average normal, October.	Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.
				Inches.	Inches.	Inches.
Burma	Tenasserim	19·0	...	17·86	...	...
	Lower Burma (Deltaic)	16·4	...	12·52	...	...
	Central do.	12·0	...	6·80	...	...
	Upper do.	8·2	...	6·81	4·20	+2·61
	Arakan	9·9	...	12·74	...	...
Bengal and Assam	Eastern Bengal	6·4	6·0	6·29	5·59	+0·70
	Assam (Surma)	8·9	6·9	8·79	6·79	+2·00
	Do. (Hills)	10·1	8·6	11·63	7·73	+3·90
	Do. (Brahmaputra)	5·9	6·2	4·15	4·66	−0·51
	Deltaic Bengal	3·9	5·5	2·52	4·51	−1·99
	Central do.	2·4	4·4	1·40	3·52	−2·12
	North do.	2·6	4·1	1·83	4·60	−2·77
	Bengal Hills	4·3	5·9	3·09	6·16	−3·07
	Orissa	5·3	6·6	3·46	5·50	−2·04
	Chota Nagpur	2·0	4·0	1·29	2·95	−1·66
	Bihar (South)	0·8	2·8	0·38	2·60	−2·22
	Do. (North)	0·4	2·7	0·27	2·79	−2·52
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·2	2·0	0·07	2·18	−2·11
	Oudh (South)	0·5	1·6	0·16	1·60	−1·44
	Do. (North)	0·3	1·5	0·10	1·61	−1·51
	North-Western Provinces (Central)	0·4	1·2	0·18	1·04	−0·86
	Do. do. (West)	0·6	0·7	0·42	0·54	−0·12
	Do. do. (Submontane, East)	0·5	2·0	0·43	2·83	−2·40
	Do. do. (Do. West)	0·8	0·8	0·34	0·83	−0·49
	Do. do. (Hills)	0·9	1·6	0·76	1·33	−0·57
Punjab	Punjab (South-East)	0·1	0·5	0·03	0·36	−0·33
	Do. (South)	0·3	0·5	0·10	0·21	−0·11
	Do. (Central)	0·1	0·6	0·03	0·35	−0·32
	Do. (Submontane)	0·3	0·6	0·16	0·38	−0·22
	Do. (Hills)	0·4	1·3	0·19	0·90	−0·71
	Do. (North)	1·0	0·9	0·67	0·48	+0·19
	Do. (West)	0	0·3	0	0·10	−0·10

Province.	Division.	Number of rainy days. Average actual, October 1901.	Number of rainy days. Average normal, October.	Rainfall. Average actual, October 1901.	Rainfall. Average normal, October.	Rainfall. Variation of actual from normal, October 1901.
				Inches.	Inches.	Inches.
Bombay and Malabar Coast Districts (Madras).	Malabar	8·8	11·7	8·17	9·34	−1·17
	Travancore	10·8	...	9·43	...	...
	Madras (South Central)	7·2	8·5	5·27	6·14	−0·87
	Coorg	14·5	...	9·98	...	...
	Mysore	9·7	8·1	6·83	5·52	+1·31
	Konkan	2·9	7·6	2·11	5·52	−3·41
	Bombay Deccan	5·3	7·4	3·15	5·00	−1·85
	Hyderabad (North)	2·9	...	2·81	2·85	−0·04
	Khandesh	3·0	5·6	2·77	3·61	−0·84
Central Provinces and Berar.	Berar	1·5	...	2·06	2·49	−0·43
	Central Provinces (West)	0·8	2·6	0·35	2·08	−1·73
	Do. do. (Central)	0·9	2·4	0·29	1·85	−1·56
	Do. do. (East)	2·1	2·6	1·10	2·06	−0·96
Bombay (North)	Gujarat	1·1	2·3	0·71	1·36	−0·65
	Kathiawar and Cutch	0·6	0·4	0·25	0·69	−0·44
	Sind	0	...	0	0·03	−0·03
	Baluchistan Hills	0	...	0	0·10	−0·10
Rajputana and Central India.	Central India (East)	0·5	...	0·17	1·50	−1·33
	Rajputana (East) Central India (West)	0·6	...	0·34	0·34	0
	West Rajputana	0·2	...	0·14	0·07	+0·07
Madras	East Coast (North)	6·5	7·2	5·49	7·04	−1·55
	Hyderabad (South)	0·4	...	2·48	2·94	−0·46
	Madras Central	4·9	6·3	2·71	4·84	−2·13
	East Coast (Central)	5·3	8·1	3·70	8·68	−4·98
	East Coast (South)	6·1	9·5	4·58	8·26	−3·68
	Madras South	5·5	8·6	3·63	6·82	−3·19

The above shows that the average actual rainfall of the month was 0·10″ or less over a large part of North-West India including the following divisions:—*viz.*, North-Western Provinces, East, North Oudh, South-East Punjab, South Punjab, Central Punjab, West Punjab, Sind and Baluchistan hills.

In these divisions the month was hence practically rainless. From this rainless area the amount of rain received increased in all directions and the average actual fall amounted to 8·79 inches in the Surma division of Assam, to 11·63 inches in the hills division of Assam, to 8·17 inches in Malabar, to 9·98 inches in Coorg and to 5·49 inches in the north division of the east coast.

As mentioned above the rainfall was very generally in defect of the average. It was in excess only in six of the rainfall divisions, *viz.*, in the Eastern Bengal, Assam, Surma, Assam hills, North Punjab, Mysore and West Rajputana.

It was more or less in defect over the whole of the remainder of India and the deficiency amounted to more than 75% in the divisions for which comparative data are given below:—

Division.	Rainfall. Average actual, October 1901.	Rainfall. Average normal, October.	Rainfall. Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inch.	Inches.	Inches.	
South Bihar	0·38	2·60	−2·22	−85
North Bihar	0·27	2·79	−2·52	−90
North-Western Provinces (East.)	0·07	2·18	−2·11	−97
South Oudh	0·16	1·60	−1·44	−90
North Oudh	0·10	1·61	−1·51	−94
North-Western Provinces (Central).	0·18	1·04	−0·86	−83
North-Western Provinces (East, submontane.)	0·43	2·83	−2·40	−85
South-East Punjab	0·03	0·36	−0·33	−92
Central Punjab	0·02	0·35	−0·32	−91

Division.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inch.	Inches.	Inches.	
Punjab Hills	0·19	0·90	−0·71	−79
West Punjab	0	0·10	−0·10	−100
Central Provinces (West)	0·35	2·08	−1·73	−83
„ „ (Central)	0·29	1·85	−1·56	−84
Sind	0	0·03	−0·03	−100
Baluchistan Hills	0	0·10	−0·10	−100
Central India (East)	0·17	1·50	−1·33	−89

Burma received almost daily rain. The following table gives rainfall data for the Burma divisions :—

Division.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Tenasserim	17·86			
Lower Burma (Deltaic)	12·52			
Central Burma	6·80			
Upper Burma	6·81	4·20	+2·61	+62
Arakan	12·74			

In the Surma division of Assam there were scattered showers during the first three days. On the 6th the rainfall due to the first cyclonic storm of the month commenced and continued generally until the 11th when it ceased abruptly. The fall was very heavy in some places on the 9th and 10th, and the following amounts exceeding 3″ in 24 hours were recorded during this rainfall period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sylhet	Sephinjuri Bil	8th October	3·58
	Sonamganj	9th „	6·27
	Sylhet	„ „	3·87
	Maulvi Bazar	„ „	3·67
Cachar	Nemotha	„ „	3·52
	Chandpur	„ „	3·43
Sylhet	Lalakhal	10th „	14·88
	Sylhet	„ „	11·35
	Maulvi Bazar	„ „	5·52
	Karimganj	„ „	3·90

The weather was fine on the 12th and 13th, but on the 14th showers recommenced and continued till the 20th, after which the weather was fine till the close of the month.

In the Brahmaputra Valley the rainfall of the month was generally similar. There were showers at the commencement of the month, general rain between the 7th and the 12th and showers again thereafter, but the showers about the 20th were much more general in the Brahmaputra than in the Surma Valley. The following amounts exceeding 3″ in 24 hours were recorded in the Brahmaputra Valley during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Nowgong	Lanka	9th October	5·50
	Lumding	„ „	4·00
	Kulikuchi	10th „	3·60
Kamrup	Sonapur	„ „	3·60
Nowgong	Sukimbari	„ „	3·27
Kamrup	Kulsi	„ „	3·26
	Chhaygaon	„ „	3·18
Darrang	Tezpur	„ „	3·11
Nowgong	Nowgong	„ „	3·01

The total rainfall of the month was normal or in excess of the normal in the Cachar, Sylhet, Nowgong and Sibsagar districts and in slight defect elsewhere, as is shown by the following table which gives comparative data for the eight plains districts of the province :—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cachar	7·05	6·54	+0·51	+8
Sylhet	11·25	7·06	+4·19	+59
Goalpara	3·55	4·93	−1·38	−28
Kamrup	2·75	3·79	−1·04	−27
Darrang	3·19	5·01	−1·82	−36
Nowgong	7·38	3·96	+3·42	+86
Sibsagar	5·61	4·66	+0·95	+20
Lakhimpur	3·90	5·57	−1·67	−30

On the hills the month's rainfall was in excess of the normal, the rainfall periods having been generally similar to those on the neighbouring plains. At Cherrapoonjee the total actual rainfall of the month was 32·14 inches compared with an average of only 12·55 inches. The

heaviest rainfall of the month at this station occurred on the 9th and 10th, when the first storm of the month was passing into Silchar and when the amounts received were 12·55 inches and 10·35 inches respectively.

In Bengal the rainfall was almost everywhere lighter than usual and in Bihar the rainfall practically failed altogether. In South-West Bengal there were moderately general showers from the 1st to the 9th and general showers on the 15th and 16th after which the rainfall ceased for the remainder of the month. The following falls exceeding 3″ in 24 hours were recorded during the first showery period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Khulna	Khulna	4th October	3·52
	Kaliganj	" "	3·23
	Mollahat	5th "	4·95
Howrah	Amta	" "	3·45
Khulna	Paikgacha	" "	3·10
	Mollahat	7th "	5·35
	"	8th "	4·62

The total rainfall of the month was only about half the average, as is shown by the following table which gives comparative data for the different districts in this division :—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burdwan	1·09	3·53	—2·44	—69
Birbhum	1·99	3·53	—1·54	—44
Bankura	1·46	3·24	—1·78	—55
Midnapore	2·50	4·63	—2·13	—46
Hooghly	1·77	4·08	—2·31	—57
Howrah	1·92	3·66	—1·74	—48
24-Parganas	1·63	4·79	—3·16	—66
Calcutta	1·99	4·39	—2·40	—55
Nadia	1·45	4·16	—2·71	—65
Murshidabad	1·7	3·74	—1·95	—52
Jessore	0·64	4·41	—3·77	—85
Khulna	3·44	4·94	—1·50	—30

In North Bengal the rainfall was lighter and more scattered than in South-West Bengal, and the total rainfall was very short of the normal. The following gives comparative data for the districts in this division :—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Rajshahi	1·70	3·79	—2·09	—55
Dinajpur	2·05	4·55	—2·50	—55
Jalpaiguri	2·06	4·83	—2·77	—57
Darjeeling	4·66	4·72	—0·06	— 1
Cooch Behar	0·98	5·54	—4·56	—81
Rangpur	1·74	4·88	—3·14	—64
Bogra	1·82	3·89	—2·07	—53
Pabna	1·84	4·14	—2·30	—56

In East Bengal there was a heavyish burst of rain between the 6th and the 10th, when the first cyclonic storm was crossing the coast. The fall was particularly heavy on the 8th and 9th when the following amounts exceeding 4″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chittagong	Cox's Bazar	8th October	6·97
	Fenoa	" "	4·80
	Kodala	" "	4·36
	Kutubdia	9th "	7·23
	Cox's Bazar	" "	6·93
	Chittagong	" "	6·83
Noakhali	Fenny	" "	6·37
Chittagong	Mirsarai	" "	6·25
Noakhali	Harishpur	" "	6·00
Chittagong	Satkania	" "	4·45

Between the 10th and the 20th there were showers, but after the latter date the weather cleared and was fine till the close of the month. The total rainfall of this division

was slightly above the normal owing to the heavy fall in Chittagong. This is shown by the following table which gives data for the different districts:—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dacca	2·36	4·26	—1·90	— 45
Mymensingh	3·36	5·30	—1·94	— 37
Faridpur	3·51	4·32	—0·81	— 19
Backergunge	3·98	5·92	—1·94	— 33
Tippera	5·74	5·10	+0·64	+ 13
Noakhali	7·11	7·38	—0·27	— 4
Chittagong	16·45	6·85	+9·60	+140
Chittagong Hill Tracts	8·56	6·54	+2·02	+ 31

In Bihar there were showers during the first and third weeks but the total rainfall of the month was small and unimportant. The following gives data for these two divisions:—

Division.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.	Number of rainy days. Average actual, October 1901.	Average normal, October.
	Inch.	Inches.	Inches.			
South Bihar	0·38	2·60	—2·22	—85	0·8	2·8
North Bihar	0·27	2·79	—2·52	—90	0·4	2·7

In Chota Nagpur the rainfall was heavier than in Bihar, but the times of occurrence of rain were similar. The following gives data for the different districts in this division, and shows that the rainfall was only about half the average except in Manbhum where it was normal and in the Ranchi district where it was in excess:—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Hazaribagh	1·26	3·37	—2·11	—63
Ranchi	3·89	2·58	+1·31	+51
Palamau	0·36	2·64	—2·28	—86
Manbhum	2·87	2·72	+0·15	+ 6
Singhbhum	0·63	2·97	—2·34	—79

In Orissa there was a week of showery weather at the commencement of the month, and a burst of fairly general rain between the 14th and 16th after which the rainfall ceased. The only amounts exceeding 2″ in 24 hours were recorded at the following places on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Puri	Puri	6th October	2·33
Balasore	Chandbali	14th ,,	2·50
Puri	Kanas	15th ,,	3·98
Balasore	Soro	,, ,,	2·72
Cuttack	Salepur	,, ,,	2·35
Balasore	Bhadrak	,, ,,	2·02

The following gives comparative data for the districts in this division:—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuttack	3·49	5·49	—2·00	—36
Balasore	4·78	5·51	—0·73	—13
Puri	4·59	7·37	—2·78	—38

There was no general rain over the North-Western Provinces and Oudh during the month. Showers were received on the 5th and 6th particularly in the east and submontane districts, but the amounts were not heavy and only exceeded 1″ in 24 hours at the following places on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Gorakhpur	Padrauna	5th October	2·19
Basti	Domariaganj	,, ,,	2·19
Naini Tal	Kashipur	,, ,,	1·10
	Naini Tal	6th ,,	7·08
Almora	Ranikhet (Observatory)	,, ,,	1·38
Bareilly	Baheri	,, ,,	1·31

Another showery period was experienced on the 18th, but on this occasion the showers did not extend into either the east or submontane divisions. The following amounts exceeding 1″ in 24 hours were, however, recorded during this second showery period :—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 18th October.
		Inches.
MUTTRA	Baroda	2·70
	Chota Kosi	2·10
ETAH	Kasganj	1·72
MUTTRA	Mant	1·47
ALIGARH	Sikandra Rao	1·38
FARRUKHABAD	Aligarh	1·34
HARDOI	Hardoi	1·30
		1·02

The following gives data for the different divisions of the North-Western Provinces and shows the large features of the rainfall over the greater part of the area :—

DIVISION.	RAINFALL				NUMBER OF RAINY DAYS.	
	Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.	Average actual, October 1901.	Average normal, October.
	Inch.	Inches.	Inches.			
North-Western Provinces, East.	0·07	2·18	—2·11	—97	0·2	2·0
South Oudh	0·16	1·60	—1·44	—90	0·5	1·6
North Oudh	0·10	1·61	—1·51	—94	0·3	1·5
North-Western Provinces, Central.	0·18	1·04	—0·86	—83	0·4	1·2
North-Western Provinces, West.	0·42	1·54	—0·12	—22	0·6	0·7
North-Western Provinces, East Submontane.	0·43	2·83	—2·40	—85	0·5	2·0
North-Western Provinces, West Submontane.	0·34	0·83	—0·49	—59	0·8	0·8
North-Western Provinces, Hills.	0·76	1·33	—0·57	—43	0·9	1·6

Showers were received in the submontane hills and north-west division of the Punjab on the 4th and 5th. The fall was heavy in the Peshawar district, and the following amounts exceeding 1″ in 24 hours were recorded in different parts of the submontane and north-west divisions :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
PESHAWAR	Katlang	4th October	2·20
	Khanmahi	,, ,,	2·20
	Charsadda	,, ,,	1·07
UMBALLA	Naraingarh	5th ,,	1·35
	Jagadhari	,, ,,	1·15
PESHAWAR	Lahor (Utman Bolak)	9th ,,	1·03
	Swabe	10th ,,	1·66
PATIALA STATE	Kotra	21st ,,	1·05

Over the remainder of the province the month was actually or practically rainless except in the North Punjab, as is shown by the following table giving data for the different rainfall divisions :—

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS.	
	Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.	Average actual, October 1901.	Average normal, October.
	Inch.	Inch.	Inch.			
South-East Punjab	0·03	0·36	—0·33	—92	0·1	0·5
South Punjab	0·10	0·21	—0·11	—52	0·3	0·5
Central Punjab	0·03	0·35	—0·32	—91	0·1	0·6
Punjab Submontane	0·16	0·38	—0·22	—58	0·3	0·6
Punjab Hills	0·19	0·90	—0·71	—79	0·4	1·3
North Punjab	0·67	0·48	+0·19	+40	1·0	0·9
West Punjab	0	0·10	—0·10	—100	0	0·3

Baluchistan had no rain during the month. In Kashmir there were two showery periods one on the 4th and 5th, the second on the 8th and 9th. The former was the more

important and the following amounts exceeding 1″ in 24 hours were received at this time:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Kashmir	Sri Ranbir Singh Pora.	4th October	1·85
	Utarmachhipore	,, ,,	1·50
Jummoo	Jummoo	,, ,,	1·20
	Ramban	,, ,,	1·18
Kashmir	Anantnag	,, ,,	1·15
	Sri Protap Singh Pora.	,, ,,	1·12
	Sopore	,, ,,	1·04
	Pattan	,, ,,	1·03
	Uri	5th ,,	2·13
	Haripore	,, ,,	1·52
Jummoo	Kishtwar	,, ,,	1·40
Kashmir	Uri	9th ,,	1·18

Western Rajputana received a few scattered showers between the 17th and the 19th when the second cyclonic storm of the month was passing through Gujarat. The falls exceeded half an inch at the following places on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jodhpur	Sojat	17th October	1·52
	Siwana	,, ,,	1·00
	Sojat	18th ,,	0·75
	Sacher	,, ,,	0·60

In Eastern Rajputana on the same date very fairly general and fairly heavy showers were received of which the following were the more important (exceeding 1″ in 24 hours):—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bharatpur	Bharatpur	17th October	2·25
Karauli	Karauli	,, ,,	2·40
Jaipur	Dausa	,, ,,	1·44
Bharatpur	Kumher	,, ,,	1·15
Tonk	Tonk	,, ,,	1·15
Ajmer-Merwara	Goela	17th October	1·11
Bharatpur	Nagar	,, ,,	1·10
Jaipur	Hindaun	18th ,,	1·35
Ajmer-Merwara	Bhinal	,, ,,	1·34
Dholpur	Rajakhera	,, ,,	1·20
Jaipur	Sanganer	,, ,,	1·05

These showers gave normal or heavier rain than usual to this area, as is shown by the following comparative data for some of the larger states:—

State.	Rainfall.			
	Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Jodhpur	0·13	0·07	+0·06	+ 86
Bikaner	0	0·09	—0·09	—100
Jaipur	0·41	0·18	+0·23	+128
Alwar	0·09	0·80	—0·71	— 89
Bharatpur	0·58	0·39	+0·19	+ 49
Karauli	0·84	0·15	+0·69	+460
Kotah	0·06	0·37	—0·31	— 84
Ajmer-Merwara	0·58	0·24	+0·34	+142

In Central India there were showers between the 16th and 19th, but the rainfall in this area was lighter than in Rajputana, as is shown by the following comparative data for some of the larger states:—

State.	Rainfall.			
	Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inch.	Inches.	Inches.	
Bhopal Agency	0·01	1·35	—1·34	—99
Gwalior	0·28	0·60	—0·32	—53
Rewah	0·04	2·33	—2·29	—98
Bundelkhand	0·12	1·16	—1·04	—90
Indore	0·24	1·21	—0·97	—80
Rutlam	0	0·98	—0·98	—100

Showers occurred over the Central Provinces in the first and third weeks of the month, but the amounts were small and except in the east the rainfall of the month failed almost completely. The following gives data of the three rainfall divisions :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.	Average actual, October 1901.	Average normal, October.
	Inches.	Inches.	Inches.			
Central Provinces, West	0·35	2·08	—1·73	—83	0·8	2·6
,, Central	0·29	1·85	—1·56	—84	0·9	2·4
,, East	1·10	2·06	—0·96	—47	2·1	2·6

In Berar the rainfall was much more favourable. General moderate to heavy showers occurred on the 16th and 17th, and moderately general showers on the 21st and 22nd. The following is a record of the largest amounts received and shows that on the 16th, when the second cyclonic storm of the month was central near Akola, the rainfall was exceptionally heavy and extensive :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Buldana	Buldana (Civil station)	16th October	5·10
	Nandura	,, ,,	3·73
	Pimpalgaon Raja	,, ,,	3·70
	Malkapur	,, ,,	3·63
Akola	Shegaon	,, ,,	3·48
	Khamgaon	,, ,,	3·25
Buldana	Deulgaon Raja	,, ,,	2·95
Akola	Balapur	,, ,,	2·90
Buldana	Chikhli	,, ,,	2·80
Akola	Pathur	,, ,,	2·66
Basim	Basim (Civil Station)	,, ,,	2·50
	Risod	,, ,,	2·43
Akola	Jalgaon	,, ,,	2·35
Buldana	Mehkar	,, ,,	2·30
	Deonigaon	,, ,,	2·25
Basim	Pusad	,, ,,	2·00
	Risod	21st ,,	2·74

The total rainfall of the month was approximately normal, as is shown by the following comparative data :—

Division.	Rainfall.			
	Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Berar	2·06	2·49	—0·43	—17

The rainfall was heavy over Mysore. There were two periods of rainfall; the first lasting from the 1st to the 10th, the second from the 18th to the 27th, and during these two periods the following falls exceeding 2·50″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bangalore	Magadi	1st October	2·90
Kadur	Koppa	2nd ,,	3·55
	Sringeri	,, ,,	3·45
Shimoga	Sagar	,, ,,	2·90
Hassan	Alur	,, ,,	2·70
Shimoga	Shikarpur	,, ,,	2·60
Mysore	Nagamangala	,, ,,	2·55
Tumkur	Chiknayakanhalli	3rd ,,	4·18
	Huliyar	4th ,,	2·56
Shimoga	Tirthahalli	5th ,,	2·54
Kolar	Chintamani	6th ,,	4·28
Tumkur	Kunigal	,, ,,	3·98
Kolar	Mulbagal	,, ,,	3·15
	Chikballapur	18th ,,	2·95
	Do.	23rd ,,	3·35
Shimoga	Shikarpur	25th ,,	2·85

The total rainfall of the month was normal or slightly to moderately in excess of the normal, as is shown by the

following comparative data for the eight districts in the province :—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Bangalore	5·97	5·88	+0·09	+ 2
Kolar	5·33	5·63	−0·30	− 5
Tumkur	7·37	5·36	+2·01	+38
Mysore	9·36	5·94	+3·42	+58
Hassan	8·42	5·71	+2·71	+47
Shimoga	6·82	5·29	+1·53	+29
Kadur	7·01	6·47	+0·54	+ 8
Chitaldroog	3·78	3·76	+0·02	+ 1

In the Bombay Presidency the rainfall was generally deficient. Rain fell in the Konkan between the 1st and the 12th, on the 16th, 17th and 18th, and between the 23rd and 25th. The rainfall was heaviest on the 23rd when the following amounts exceeding 2″ in 24 hours were recorded :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 23rd October 1901.
		Inches.
Ratnagiri	Chiplun	3·40
	Dapoli	2·24
	Khed	2·15

The total rainfall of the month was less than half the normal, as is shown by the following comparative data of the districts in this division :—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
North Kanara	4·31	7·21	−2·90	−40
Ratnagiri	2·05	5·70	−3·65	−64
Kolaba	1·85	5·58	−3·73	−67
Thana	0·71	3·47	−2·76	−80

In the Karnatak the rainfall was somewhat more general than in the Konkan but occurred at about the same periods. It was moderately heavy in the Dharwar district on the 6th and in Kolhapur on the 21st. The following is a record of all falls exceeding 2″ in 24 hours during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bijapur	Indi	2nd October.	2·01
	Muddebihal	3rd ,,	2·40
	Bagevadi	,, ,,	2·17
Kolhapur, etc.	Kolhapur	4th ,,	3·50
Bijapur	Muddebihal	,, ,,	2·12
Dharwar	Hubli	6th ,,	2·90
	Haveri	,, ,,	2·86
	Navalgund	,, ,,	2·16
	Hangal	,, ,,	2·10
Kolhapur, etc.	Sangli	21st ,,	3·12
	Miraj	,, ,,	3·06
Dharwar	Gadag	23rd ,,	2·43

Comparative data for the districts forming this division are given below :—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dharwar	4·62	5·71	−1·09	−19
Bijapur	3·27	4·81	−1·54	−32
Belgaum	3·51	5·90	−2·39	−41

In the Deccan divisions there was general rain between the 16th and 24th when the second storm of the month was crossing the head of the Peninsula. The rainfall at

this time was general and heavy and the following amounts exceeding 2″ in 24 hours were registered :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A M. of date.
			Inches.
Khandesh	Jalgaon	16th October.	3·15
	Erandol	,, ,,	2·88
	Raver	,, ,,	2·80
	Bhadgaon	,, ,,	2·70
	Pachora	,, ,,	2·65
	Yaval	,, ,,	2·55
	Edalabad	,, ,,	2·50
	Jamner	,, ,,	2·50
	Chalisgaon	,, ,,	2·48
	Bhusaval	,, ,,	2·29
	Parola	,, ,,	2·01
Nasik	Nandgaon	17th ,,	3·80
Khandesh	Pimpalner	,, ,,	3·09
Nasik	Satana	,, ,,	2·62
Khandesh	Sindkheda	,, ,,	2·43
	Nandurbar	,, ,,	2·13
	Navapur	,, ,,	2·08
	Taloda	,, ,,	2·07
Ahmednagar	Shevgaon	21st ,,	2·05
Satara	Medha	23rd ,,	2·33
	Mhasvad	,, ,,	2·25

The following gives comparative data for the districts in these two divisions :—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual, from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Satara	3·02	4·54	—1·52	—33
Sholapur	1·63	4·16	—2·53	—61
Poona	1·99	4·44	—2·45	—55
Ahmednagar	2·42	3·50	—1·08	—31
Nasik	2·46	3·87	—1·41	—36
Khandesh	3·16	1·89	+1·27	+67

Gujarat and Kathiawar received rain at the same time and from the same cause, but the fall was much lighter than over the Deccan, and the total for the month in these two divisions was only about half the normal. The following gives data for the divisions :—

Division.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inch.	Inches.	Inch.	
Gujarat	0·71	1·36	—0·65	—48
Kathiawar and Cutch	0·25	0·69	—0·44	—64

In Sind there was no rainfall throughout.

In the Madras Presidency also the rainfall was short but to a less extent than in other parts of the country. In Malabar there were showers between the 1st and the 8th, then a fairly fine period up to the 20th, after which showers recommenced. The rainfall was very heavy on the 6th when the following amounts exceeding 5″ in 24 hours were recorded :—

District.	Station.	Rainfall during 24 hours preceding 8 A. M. of 6th October 1901.
		Inches.
Malabar	Payyanur	11·60
	Cannanore	8·51
Travancore State	Peermade	7·10
Malabar	Mannaghat	6·75
	Kuttiadi	5·86
	Tellicherry	5·30
	Badagara	5·26

The general rainfall of the division was about normal, as is shown by the following comparative data for the different districts :—

District.	Rainfall. Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Malabar	9·22	9·25	—0·03	0
South Canara	5·96	9·49	—3·53	—37

In South Madras and South-Central Madras there were showers in the first and last weeks of the month, but fairly fine weather in the interval. There were no heavy falls but the following amounts equalling or exceeding 3″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Coimbatore	Perundurai	1st October.	4·80
	Karur	„ „	4·00
Salem	Paramathi	6th „	3·82
	Rayakotta	„ „	3·50
Madura	Nelakkottai	„ „	3·08
Coimbatore	Dharapuram	10th „	5·10
	Kodumudi	„ „	3·45
Madura	Dindigul	„ „	3·41
Salem	Dharmapuri	23rd „	3·94
Madura	Sivaganga	26th „	3·00
	Panban	28th „	3·86

The following gives comparative data for the districts composing these two divisions :—

District.	Rainfall.			
	Avarage actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madura	4·98	7·32	—2·34	—32
Tinnevelly	1·92	6·18	—4·26	—69
Salem	5·79	5·89	—0·10	— 2
Coimbatore	4·35	6·37	—2·02	—32

In Central Madras general rain fell between the 4th and the 6th, and a few scattered showers at other times. Comparative data for the districts included in this division are given below :—

District.	Rainfall.			
	Average actual, October. 1901.	Average normal, October.	Variation of actual from normal, October. 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuddapah	2·52	5·79	—3·27	—56
Anantapur	2·77	4·72	—1·95	—41
Bellary	3·29	4·30	—1·01	—23
Kurnool	2·38	4·34	—1·96	—45

There were two periods of rainfall in the north division of the east coast, the first lasting from the 1st to the 11th, the second from the 14th to the 16th, while in addition there were showers on the 22nd. The rainfall was heaviest on the 15th and 16th when the second cyclonic storm was crossing the coast and when the following amounts exceeding 4″ were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Vizagapatam	Pottanghi	15th October	8·27
Godavari	Mummidivaram	„ „	5·74
	Amalapuram	„ „	5·09
Vizagapatam	Chodavaramu	„ „	5·04
Godavari	Ellore	„ „	4·62
Kistna	Masulipatam	„ „	4·40
Godavari	Razole	„ „	4·35
	Kottapeta	„ „	4·33
Vizagapatam	Anakapalle	„ „	4·28
	Chipurupalle	„ „	4·10
	Vizianagram	16th „	5·39

The total rainfall of the whole division was somewhat below the normal, as is shown by the following comparative data for the different districts :—

District.	Rainfall.			
	Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ganjam	4·60	7·96	—3·36	—42
Vizagapatam	7·55	7·64	—0·09	— 1
Godavari	6·66	7·63	—0·97	—13
Kistna	4·43	5·81	—1·38	—24

The central division of the east coast had practically only one rainfall period, *viz.*, from the 1st to the 7th, and the total rainfall of the month was only about half the normal. This is shown below :—

District.	Rainfall.			
	Average actual, October 1901.	Average normal, October.	Variation of actual from normal, October 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Nellore	3·70	8·68	—4·98	—57

In the east coast south rain fell between the 1st and the 7th, on the 11th and 12th, and between the 24th and 29th. The rainfall was heavy at times and falls exceeding 3″ in 24 hours were recorded at the following times at the following places:—

DISTRICT.	STATION.	DATE.	Rainfall during 24 hours preceding 8 A M. of date.
			Inches.
CHINGLEPUT	Madurantakam	1st October.	3·62
CHINGLEPUT	Kattur	2nd ,,	3·54
NORTH ARCOT	Vellore	6th ,,	5·84
SOUTH ARCOT	Vanur	,, ,,	5·28
SOUTH ARCOT	Merkanam	,, ,,	4·94
NORTH ARCOT	Walajah	,, ,,	3·41
CHINGLEPUT	Attipat	27th ,,	3·12

The following gives comparative data of the districts included in this division:—

DISTRICT.	RAINFALL.			
	Average actual, Octr 1901.	Average normal, October.	Variation of actual from normal, Octr. 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madras	8·87	10·75	—1·88	—17
Chingleput	6·14	9·42	—3·28	—35
North Arcot	3·98	6·80	—2·82	—40
South Arcot	4·63	8·58	—3·95	—46

W. L. D.

Tabl

Abstract of Observations taken at 8 A.M. at 22

Number of District.	Meteorological Province or District.	Station.	Elevation of barometers above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during moth.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	I.—Burma Coast and Bay Islands.				−·028								86·8	−0·5	7·59	+1·1	81·3	+0·3	10·9					17·
1	Tenasserim and Bay Islands.	Port Blair	61	29·837	−·017	29·829	29·905	31st	29·742	2nd	·163	79·9	85·6		76·9		81·2		8·7	88·7	28th & 30th.	73·8	21st	14·9
		Mergui	96	29·823	−·005	29·852	29·901	10th	29·761	2nd	·140	78·2	85·1	−1·7	74·5	?	79·8	?	10·6	89·7	24th	72·9	19th	16·1
		Tavoy	26	29·897	−·023	29·854	29·959	31st	29·827	2nd & 12th.	·132	77·9	86·5	−1·0	74·0	+0·9	80·3	−0·1	12·5	89·7	25th & 28th.	71·5	20th	18·2
		Moulmein	94	29·811	−·035	29·842	29·897	9th	29·741	2nd	·156	79·9	88·9	+0·7	75·7	+1·3	82·3	+1·0	13·2	92·5	29th	73·8	7th, 20th & 21st.	18·7
2	Lower Burma	Rangoon	41	29·852	−·041?	29·830	29·944	15th	29·777	20th	·167	78·8	86·8	−0·4	75·7	+0·1	81·3	−0·2	11·1	91·1	2nd & 17th.	73·4	24th & 29th.	17·7
		Bassein	27	29·867	−·033	29·829	29·954	31st	29·782	4th	·172	79·0	86·0	−1·0	76·7	+1·7	81·4	+0·4	9·3	91·2	18th	73·1	8th	18·
		Diamond Island	41	29·840	−·038	29·816	29·920	31st	29·754	4th	·166	81·6	85·0	−1·4	78·1	+1·9	81·6	+0·3	6·9	90·4	30th	76·2	6 days	14·2
5	Arakan	Akyab	20	29·855	−·042	29·818	29·949	15th	29·658	7th	·291	80·0	87·8	−0·1	77·5	+0·7	82·7	+0·3	10·3	90·4	2nd & 3rd.	74·0	30th	16·4
3	Central Burma	Toungoo	183	29·714	−·030	29·840	29·793	9th	29·642	12th	·151	80·5	89·3	−0·4	73·7	−0·8?	81·5	−0·6?	15·6	93·6	2nd	69·6	12th	24·0
	II.—Burma Inland				−·026								90·0	−0·2	74·5	+1·7	82·3	+0·8	15·5					25·5
3	Central Burma	Thayetmyo	130	29·767	−·025	29·839	29·855	24th	29·650	7th	·205	80·4	90·7	+0·6	76·2	+2·2	83·5	+1·4	14·5	95·7	1st	73·6	26th 28th & 29th.	22·1
4	Upper Burma	Minbu	165	29·737	−·025	29·847	29·826	15th	29·600	7th	·226	79·2	89·3	−2·0	76·2	+1·8	82·8	−0·1	13·1	94·6	1st	73·1	13th	21·5
		Yamethin	657	29·238	−·030	29·848	29·321	14th	29·125	7th	·196	79·1	91·3	−1·0	74·7	+1·5	83·0	+0·3	16·6	98·0	3rd	71·7	13th	26·3
		Mandalay	250	29·630;	−·038	29·830	29·717	23rd	29·492	7th	·225	81·4	93·5	+1·9	75·8	+1·1	84·7	+1·5	17·7	99·0	2nd	70·3	28th & 30th.	28·7
		Kindat	377	29·522	−·007	29·857	29·641	15th	29·348	7th	·293	77·1	87·3	+0·1	73·2	+1·8	80·3	+1·0	14·1	92·8	3rd	67·3	31st	25·5
		Bhamo	381	29·510	−·029	29·851	29·621	14th	29·359	7th	·262	75·9	87·9	−0·9	71·1	+1·9	79·5	+0·5	16·8	92·5	2nd	63·6	30th	28·3
4(a)	Burma Hill Stations.	Maymyo		26·451			26·522	15th	26·372	2nd	·150	70·3	78·4		61·8		70·1		16·6	82·5	4th	53·3	28th & 29th.	29·2
		Taunggyi										67·1	73·9	−3·9						89·1	11th			
		Lashio										71·0	84·8	+2·1	65·6	+3·1	75·2	+2·6	19·2	93·5	8th	58·0	28th	35·5
	III.—Assam				−·036								86·3	+0·7	72·4	+0·9	79·4	+0·8	13·9					24·3
7	Surma	Silchar	104	29·794	−·019?	29·851	29·908	31st	29·563	7th	·345	78·2	90·0	+1·2	73·2	+0·8	81·6	+1·0	16·8	95·0	5th	64·3	30th	30·7
9	Brahmaputra	Sibsagar	333	29·582	−·036	29·877	29·690	27th	29·415	6th	·275	74·4	84·3	−0·8	72·0	+1·1	78·2	+0·2	12·3	89·2	2nd & 6th.	67·0	26th	22·1
		Dhubri	115	29·770	?	29·841	29·887	31st	29·568	7th	·319	77·1	86·7	+1·7	73·8	+0·8	80·3	+1·3	12·9	91·2	1st	69·7	22nd	21·5
		Tezpur	252	29·635		29·888	29·744	27th	29·442	7th	·302	75·4	85·1		72·1		78·6		13·0	89·6	6th	65·9	30th & 31st.	23·7
		Dibrugarh	394	29·543		29·906	29·654	27th	29·389	6th	·265	75·1	85·4		70·9		78·2		14·5	90·2	6th & 18th.	67·0	26th & 27th.	23·2
	IV.—Bengal and Orissa				−·037								89·5	+1·9	74·7	+1·3	82·1	+1·6	14·8					25·3
6	East Bengal	Chittagong	87	29·785	−·044	29·821	29·887	15th	29·543	7th	·344	78·4	87·0	+0·6	73·7	0	80·4	+0·3	13·3	91·0	3rd	67·1	22nd	23·9
		Noakhali	43	29·815		29·805	29·935	31st	29·592	7th	·343	80·1	87·3		75·3		81·3		12·0	90·7	3rd, 19th & 20th.	70·4	31st	20·3
		Comilla	36	29·845		29·829	29·961	31st	29·615	7th	·346	81·1	89·2		74·1		81·7		15·1	93·3	3rd & 4th.	67·8	23rd	25·5
		Sirajganj	49	29·812		29·812	29·925	31st	29·640	6th	·285	78·3	87·8		74·7		81·3		13·1	90·8	3rd	69·3	22nd	21·5
		Narayanganj	26	29·853	−·027	29·827	29·966	15th	29·629	7th	·337	80·6	88·6	+0·6	75·7	+0·6	82·2	+0·6	12·9	92·1	19th	71·2	28th & 31st.	20·9
		Barisal	13	29·842	−·045	29·800	29·952	31st	29·570	7th	·382	81·5	88·1*	+0·6*	75·4*	+1·0*	81·7*	+0·8	12·7	93·3	20th	69·1	20th	24·2
		Mymensingh	59	29·811	−·033	29·822	29·926	15th	29·605	7th	·321	79·7	87·6	+0·8	75·3	+2·2?	81·5	+1·5?	12·3	90·7	4th, 5th & 20th.	70·1	30th	20·6
10	Deltaic Bengal	Faridpur	46	29·834		29·828	29·956	31st	29·625	7th	·331	79·7	88·4		74·9		81·7		13·5	91·8	3rd & 20th.	68·9	31st	22·9
		Jessore	33	29·837	−·043	29·817	29·947	31st	29·632	7th	·315	81·2	90·2	+1·6	74·8	−0·1	82·6	+0·8	15·4	94·5	20th	67·7	23rd	26·8
		Calcutta	21	29·849	−·041	29·816	29·964	31st	29·635	7th	·329	81·2	89·3	+2·7	75·6	+1·2	82·5	+2·0	13·7	93·7	20th	69·6	22nd	24·1
		Saugor Island	25	29·810	−·042	29·809	29·958	31st	29·624	7th	·334	81·6	89·1	+2·3	76·8	+0·7	83·0	+1·5	12·3	91·9	5th	67·6	25th	24·3
		Krishnagar	47	29·835		29·831	29·952	31st	29·626	7th	·326	80·0	91·3		74·6		83·0		16·7	94·3	4th & 20th.	67·7	23rd	26·6
		Midnapore	145	29·718		29·814	29·825	31st	29·522	7th	·330	81·0	90·9		75·2		83·1		15·7	94·8	19th	67·7	23rd	27·1

* Mean of 30 days.

I.

stations in India, Burma, etc., in October, 1901.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st October to 31st October 1901.	Normal rainfall for period, 1st October to 31st October.	Variation from normal of period, 1st October to 31st October.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																				14·20	9·57	+4·63					I.—Burma Coast and Bay Islands.		
3	1			2	3	6	10	6	S 80° W	7·4		6·4	+16	90	·923	6·7	19			15·29	12·17	+ 3·12	15·29	12·17	+ 3·12	4·86	Port Blair .	Tenasserim and Bay Islands.	1
30						1			S 45° W	1·5	1·3	1·5	−13	93	·883	4·8	18			21·00	14·32	+ 6·68	21·00	14·32	+ 6·68	2·70	Mergui.		
30	1								N.	1·0				93	·895	5·1	21			18·12	10·13	+ 7·99	18·12	10·13	+ 7·99	2·54	Tavoy.		
1		2	2	12	4	5	1	4	S 21° E	1·7	1·9	1·7	+12	86	·876	4·8	17	11·55	+ 5·45	10·78	8·10	+ 2·68	10·78	8·10	+ 2·68	1·98	Moulmein.		
	3	7	6	6	3	2	2	2	N 86° E	3·2		3·2	0	91	·895	7·6	17	9·09	+ 7·91	10·89	6·74	+ 4·15	10·89	6·74	+ 4·15	1·39	Rangoon .	Lower Burma.	2
3		3	2	14	4	1		4	S 47° E	4·2		2·5	+68	90	·893	6·4	15	12·18	+ 2·82	13·24	8·21	+ 5·03	13·24	8·21	+ 5·03	2·87	Bassein.		
1	2	5	7	4	5	3	1	3	S 74° E	7·5	7·5	6·4	+17	85	·925	6·7	16	11·60	+ 4·40	12·59	9·22	+ 3·37	12·59	9·22	+ 3·37	2·20	Diamond Island.		
	2	17	5	2	3	1		1	N 60° E	0·6	0·6	2·3	−74	93	·956	4·9	8	8·64	−0·64	17·31	10·44	+ 6·87	17·31	10·44	+ 6·87	8·62	Akyab .	Arakan.	5
8	2	3		10	1	3		4	S 53° E	3·0	3·0	1·8	+67	87	·918	7·5	14	10·55	+ 3·45	8·56	6·76	+ 1·80	8·56	6·76	+ 1·80	2·17	Toungoo .	Central Burma	3
																				6·29	4·50	+ 1·79					II.—Burma Inland.		
	5	1	1	9	10	2		3	S 25° E	3·3		3·1	+ 6	84	·864	4·6	8	7·91	+ 0·09	5·70	4·24	+ 1·46	5·70	4·24	+ 1·46	1·28	Thayetmyo .	Central Burma.	3
2	1		1	16	2		2	7	S 36° E	4·9	5·3			90	·911	6·5	9			6·62	3·04	+ 3·58	6·62	3·04	+ 3·58	1·03	Minbu .	Upper Burma.	4
15	4			7	3			2	S 54° E	2·7	2·8			88	·873	6·1	6			8·76	4·74	+ 4·02	8·76	4·74	+ 4·02	3·65	Yamethin.		
	3	1		3	23			1	S 6° E					84	·900	1·3	5			5·05	5·08	− 0·03	5·05	5·08	− 0·03	2·40	Mandalay.		
19	1	6	3				1	1	N 43° E	0·7	0·7			92	·866	6·4	9			7·19	6·15	+ 1·04	7·19	6·15	+ 1·04	1·76	Kindat.		
4	1	7	4	1		1	2	11	N 4° W	2·0	2·3			91	·827	4·2	7			4·42	3·76	+ 0·66	4·42	3·76	+ 0·66	1·07	Bhamo.		
7	3	4	2	2		3	4	5	N 27° W	3·3				87	·648	5·6	13			6·13			6·13			0·74	Maymyo .	Burma Hill Stations.	4(a)
	2	9	8	4	5	2		1	S 89° E					87	·579	6·2	14			9·90	5·59	+ 4·31	9·90	5·59	+ 4·31	2·27	Taunggyi.		
	7	14	3	2			1	4	N 30° E	0·1				93	·706	7·1	12			6·52	3·19	+ 3·33	6·52	3·19	+ 3·33	1·40	Lashio.		
																				4·68	5·00	−0·06					III.—Assam.		
30			1						E	0·4	0·7	2·1	−67	90	·889	6·0	7	7·75	− 0·75	5·65	6·65	− 1·00	5·65	6·65	− 1·00	2·10	Silchar .	Surma.	7
10	3	10	1	5		2			N 63° E	2·0	1·8	2·0	−10	98	·835	8·5	10	7·20	+ 2·70	7·08	4·84	+ 2·24	7·08	4·84	+ 2·24	2·68	Sibsagar .	Brahmaputra.	9
2	1	9	12	2	1	3	1		N 80° E	3·0	3·5	2·9	+21	87	·828	4·0	5	3·93	+ 1·07	2·09	3·50	− 1·41	2·09	3·50	− 1·41	0·87	Dhubri.		
	1	12	13	2	1	1		1	N 72° E	2·0	2·1			89	·783	4·5	2			2·81			2·81			2·52	Tezpur.		
	7	12	9			1	1	1	N 44° E	2·0	1·9			88	·757	2·8	9			5·78			5·78			2·52	Dibrugarh.		
																				3·28	5·18	−1·90					IV.—Bengal and Orissa.		
	2	22	2	3	1			1	N 52° E	3·2	3·2	3·0	+ 7	88	·883	4·6	8	7·00	+ 1·00	11·63	6·24	+ 5·39	11·63	6·24	+ 5·39	6·70	Chittagong .	East Bengal.	6
	4	11	10	1	2		2	1	N 58° E	1·8	1·6			87	·904	4·4	8	7·31	+ 0·69	6·89	7·70	− 0·81	6·89	7·70	− 0·81	3·16	Noakhali.		
13	7		4	1	5		1		N 76° E	1·7				82	·868	3·6	8	5·83	+ 2·17	6·11	5·20	+ 0·91	6·11	5·20	+ 0·91	1·55	Comilla.		
24	2				3	2			S 27° W	0·4	0·4			91	·890	3·6	5	4·88	+ 0·12	1·07	4·23	− 3·16	1·07	4·23	− 3·16	0·43	Sirajganj.		
10		4	5	4		4	4		S 53° E	2·5		2·3	+ 9	87	·911	4·4	7	5·46	+ 1·54	4·26	4·42	− 0·06	4·36	4·42	− 0·06	2·10	Narayanganj.		
3	7	9	1	3	1	2	2	3	N 20° E	1·8				87	·940	3·0	7	6·23	+ 0·77	4·70	5·61	− 0·91	4·70	5·61	− 0·91	1·53	Barisal.		
30								1	N 45° W	0·2	0·2			88	·892	?	6	5·77	+ 0·23	5·40	5·62	− 0·22	5·40	5·62	− 0·22	3·25	Mymensingh.		
25	1	2		3					N 85° E	1·1	0·9			89	·914	1·7	6	5·23	+ 0·77	3·88	4·09	− 0·21	3·88	4·09	− 0·21	1·11	Faridpur .	Deltaic Bengal.	10
15	6	2	2		1	3	1	1	N 5° W	1·9	1·9	2·1	−10	85	·910	2·5	2	5·92	− 3·92	0·56	4·55	− 3·99	0·56	4·55	− 3·99	0·24	Jessore.		
7	3	2	3	1	1	4	4	6	N 56° W	2·4		3·2	−25	83	·894	2·7	6	6·04	− 0·04	1·99	4·39	− 2·40	1·99	4·39	− 2·40	0·58	Calcutta.		
2	4	9	3		1	3	3	6	N	5·6		6·5	−14	85	·926	4·2	8	8·15	− 0·15	5·86	9·14	− 3·28	5·86	9·14	− 3·28	1·54	Sangor Island.		
2	2	3	4	3	2	3	7	5	N 76° W	1·8				86	·881	3·1	4	5·35	− 1·35	3·34	4·22	− 0·88	3·34	4·22	− 0·88	1·72	Krishnagar.		
11	8	3			2	5	·	2	N 27° W	1·9	1·7			79	·842	1·5	5	5·15	− 0·15	1·96	4·30	− 2·34	1·96	4·30	−2·34	0·85	Midnapore.		

Tabl

Abstract of Observations taken at 8 A.M. at 2

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range [illegible] month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
11	Central Bengal	Bankura	398	29·950		29·801	29·653	31st	29·360	7th	·293	80·1	91·5		74·6		83·1		16·9	98·1	3rd	68·4	22nd	29·
		Raniganj	334	29·537		29·823	29·638	31st	29·333	7th	·303	79·1	91·6		73·7		82·7		17·9	94·2	3rd, 4th & 20th.	66·0	22nd	28·
		Burdwan	99	29·775	−·040	29·822	29·878	31st	29·578	7th	·300	81·4	91·8	+3·1	76·2	+1·5	84·0	+2·3	15·6	95·9	19th & 20th.	70·8	22nd	25·
		Naya Dumka	489	29·382		29·834	29·487	15th	29·195	7th	·292	79·7	90·1		72·7		81·4		17·4	93·0	1st	65·4	22nd	27·
		Berhampore	67	29·810	−·041	29·826	29·918	31st	29·614	7th	·304	80·9	90·8	+3·1	75·6	+1·1	83·2	+2·1	15·2	95·2	3rd	69·7	26th	25·
		Rampur Boalia.	70	29·802		29·821	29·909	31st	29·607	7th	·302	81·5	89·5		75·6		82·6		13·9	92·6	19th	70·1	22nd & 23rd.	22·
		Malda	72	29·793		29·818	29·901	15th	29·597	7th	·304	80·8	90·2		74·1		82·2		16·1	94·1	3rd	66·0	21st	28·
		Bogra	61	29·807		29·821	29·912	15th	29·617	7th	·295	78·8	88·4	+1·5	74·1	+1·8	81·2	+1·7	14·3	92·7	3rd	67·2	21st	25·
12	North Bengal	Dinajpur	123	29·745	−·039	29·823	29·856	26th	29·555	7th	·301	78·6	89·5	+2·1	73·0	+0·9	81·3	+1·5	16·5	93·3	3rd	65·5	21st	27·
		Rangpur	123	29·771		29·850	29·890	26th	29·580	7th	·310	78·6	89·5*		72·4†		80·9†		17·1	98·7	3rd	66·3	21st	32·
		Jalpaiguri	284	29·608	−·021	29·854	29·732	26th	29·423	7th	·309	76·4	88·1	+1·8	72·3	+3·1	80·2	+2·5	15·8	91·4	6th & 7th.	68·1	21st & 22nd.	23·
		Cooch Behar	156	29·791‡		29·906‡	29·863	26th	29·629	20th	·234	77·3	88·2		72·5		80·4		15·7	91·4	1st & 2nd.	68·1	22nd. 29th & 30th.	23·
17	North Bihar	Purnea	125	29·755	−·031	29·836	29·865	27th	29·559	7th	·306	77·5	90·3§	+3·3§	73·4§	+2·2§	82·1§	+2·8	17·4	93·2	3rd & 19th.	67·2	24th	26·
14	Orissa	Balasore	48	29·825	−·026	29·818	29·943	31st	29·626	7th	·317	79·7	89·7	+1·9	75·0	+1·9	82·4	+1·9	14·7	93·9	20th	68·3	24th	25·
		False Point.	21	29·846	−·040	29·809	29·964	31st	29·647	7th	·317	81·7	88·7	+1·4	76·1	+1·4	82·4	+1·4	12·6	94·5	21st	70·1	25th	24·
		Cuttack	80	29·784	−·044	29·807	29·907	31st	29·602	7th	·305	79·7	91·4	+1·5	76·4	+1·9	84·0	+1·7	15·0	95·4	20th & 21st	71·2	25th	24·
		Puri	20	29·843		29·806	29·964	31st	29·667	7th	·297	81·4	90·3		77·5		83·9		12·8	93·2	3rd, 21st & 22nd.	62·1	24th	31·
	V.—Gangetic Plain and Chota Nagpur.				−·038								91·8	+3·2	70·8	+2·0	81·3	+2·6	21·0					31·
15	Chota Nagpur	Hazaribagh.	2,007	27·875	−·022	29·838	27·970	31st	27·713	7th	·257	76·5	86·1	+3·0	69·0	+2·2	77·6	+2·6	17·1	88·2	4 days	64·3	23rd	23·
		Ranchi	2,128	27·745	−·026	29·826	27·843	31st	27·578	7th	·265	75·7	85·7	+3·0	68·7	+3·3	77·2	+3·2	17·0	88·7	3rd	61·9	23rd	26·
		Daltonganj	730†	29·137		29·839	29·253	31st	28·974	7th	·279	72·3	91·8		66·1		78·9		25·7	95·1	22nd	57·5	26th	37
		Purulia		29·049		29·817	29·145	31st	28·859	7th	·286	78·6	90·5		71·9		81·3		18·6	93·0	2nd & 20th.	64·9	25th	28·
		Chaibassa	760	29·103		29·820	29·216	31st	28·911	7th	·305	77·6	90·6	+2·5	71·9	+1·6	81·3	+2·1	18·7	95·1	20th	64·0	23rd	31·
16	South Bihar	Gaya	375	29·496	−·027	29·829	29·607	27th	29·343	7th	·264	79·9	93·3	+4·0	73·5	+2·6	83·4	+3·3	19·8	96·2	3rd	66·7	22nd & 26th.	29·
		Dehri	351	29·513		29·823	29·626	31st	29·342	7th	·284	79·5	93·5		73·7		83·6		19·8	96·8	19th	68·0	22nd & 23rd.	28·
		Patna	183	29·686	−·047	29·823	29·791	27th	29·511	7th	·280	81·5	92·4	+4·1	74·9	+2·4	83·7	+3·3	17·5	96·0	19th	66·3	21st	29·
		Arrah	190	29·666		29·811	29·783	27th	29·491	7th	·292	79·9	93·1		71·7		82·4		21·4	95·5	7th & 20th.	63·5	22nd	32·
		Buxar	239	29·628		29·825	29·740	31st	29·459	7th	·281	79·2	92·9		72·2		82·6		20·7	95·5	19th	65·5	24th, 25th & 31st.	30·
17	North Bihar	Bhagalpur	160	29·718		29·831	29·820	27th	29·520	7th	·300	81·6	92·0		73·3		82·7		18·7	95·7	19th	64·1	21st	31·
		Darbhanga	166	29·698	−·054	29·820	29·807	27th	29·525	7th	·282	79·9	91·0	+4·7	74·6	+1·2	82·8	+3·0	16·4	93·8	3rd	66·4	20th & 21st.	27·
		Muzaffarpur	178	29·707		29·840	29·822	27th	29·532	7th	·291	81·0	91·3		72·1		81·7		19·2	93·7	19th	62·3	21st	31·
		Motihari	224	29·654		29·839	29·768	26th & 27th.	29·474	7th	·294	79·0	91·2		70·5		80·8		20·7	95·0	29th	60·8	21st & 22nd.	34·
		Chapra	181	29·692		29·828	29·803	27th	29·522	7th	·281	80·1	92·4		72·1		82·3		20·3	94·4	6 days	64·6	22nd	29·
18	N.-W. Provinces (East).	Benares	267	29·595	−·043	29·821	29·703	27th	29·437	7th	·266	77·2	93·5	+3·6	69·6	+0·9	81·6	+2·3	23·9	95·8	4 days	62·3	26th	33·
		Allahabad	309	29·554	−·044	29·821	29·657	27th	29·404	7th	·253	78·8	93·2	+3·3	68·7	+1·1	81·0	+2·2	24·5	96·6	22nd	60·4	29th	36·
23	N.-W. Provinces (East Sub-montane),	Gorakhpur	256	29·610	−·023	29·826	29·719	27th	29·445	7th	·274	78·9‖	91·6‖	+3·4‖	70·5‖	+1·9‖	81·1‖	+2·7‖	21·1‖	94·5	19th	64·0	21st	30·
19	South Oudh	Lucknow	363	29·488	−·046	29·821	29·596	27th	29·329	7th	·267	76·5	92·1	+1·2	67·4	+1·8	79·8	+1·5	24·7	94·3	11th & 22nd.	59·7	25th	34·
20	North Oudh	Bahraich	403	29·456	− 031	29·824	29·565	27th	29·281	7th	·284	79·1	92·2	+2·4	69·9	+2·5	81·1	+2·5	22·2	96·6	8th	62·0	20th	34·
21	N.-W. Provinces (Central).	Cawnpore	416	29·450	− 039	29·828	29·561	27th	29·303	7th	·258	77·4	93·5	+3·0	67·9	+1·7	80·7	+2·4	25·6	95·8	4th & 22nd.	60·0	28th	35·
		Mainpuri	516	29·346	?	29·828	29·444	27th	29·194	7th	·250	77·0	95·8	+3·5	67·0	+2·4	81·4	+3·0	28·8	98·8	22nd	60·0	28th	38·

* Mean of 30 days. † Mean of 28 days. ‡ Mean of 19 days. § Mean of 27 days. ‖ Mean of 23 days.

I—*continued.*

stations in India, Burma, etc., in October, 1901—continued.

Wind Direction. Number of winds from Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry—8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st Oct. to 31st Oct. 1901.	Normal rainfall for period, 1st Oct. to 31st Oct.	Variation from normal of period, 1st Oct. to 31st Oct.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
15		2	1	1		2	4	5	N 63° W	1·7	1·9			76	·789	2·1	4	5·19	−1·19	1·85	3·82	−1·97	1·85	3·82	− 1·97	0·75	Bankura .	Central Bengal.	11
22	2	2	1				2	2	N 11° W	0·8				80	·809	1·9	2	4·35	−2·35	0·89	3·31	−2·42	0·89	3·31	− 2·42	0·46	Raniganj.		
10	5	4	4	1		2	3	2	N 16° E	1·9	1·9	2·1	−10	80	·872	2·8	0	4·27	−4·27	0·11	3·61	−3·50	0·11	3·61	− 3·50	0·06	Burdwan.		
20	2	3	2		1			3	N 22° E	1·0	1·1			79	·803	2·9	3	4·88	−1·88	2·48	4·22	−1·74	2·48	4·22	− 1·74	1·28	Naya Dumka.		
8	2	4	4		2	4	6	1	N 72° W	1·4	1·5	2·1	−29	84	·886	2·6	2	5·43	−3·43	1·35	3·83	−2·48	1·35	3·83	− 2·48	0·83	Berhampore.		
17	2	1			1	4	5	1	S 87° W	1·5	1·6			81	·872	1·6	3	5·19	−2·19	3·57	4·11	−0·54	3·57	4·11	− 0·54	1·68	Rampur Boalia.		
	2	8	5	4	4	4	3	1	S 82° E	1·0	1·0			83	·868	1·7	3	4·62	−1·62	1·68	4·42	−2·74	1·68	4·42	− 2·74	1·34	Malda.		
26	3		2						N 34° E					88	·869	0·6	3	5·00	−2·00	1·24	3·74	−2·50	1·24	3·74	− 2·50	0·62	Bogra.		
	8	14	2		3	3	1		N 35° E	2·5	4·0			84	·837	1·9	2	3·45	−1·46	2·32	4·55	−2·23	2·32	4·55	− 2·23	1·80	Dinajpur .	North Bengal.	12
10		7	10		3	1			N 86° E	2·2	2·3			86	·848	1·0	2	4·00	−2·00	1·71	5·44	−3·73	1·71	5·44	− 3·73	1·41	Rangpur.		
2	4	14	7	1		1		2	N 49° E	1·0	1·3			86	·790	1·2*	3	4·81	−1·81	1·28	5·32	−4·04	1·28	5·32	− 4·04	0·67	Jalpaiguri.		
21		6	4						N 63° E	1·2	1·3			84	·793	3·2*	3			1·40	5·98	−4·58	1·40	5·98	− 4·58	0·62	Cooch Behar.		
	1	12	5	5		6		2	N 75° E	1·8	1·6	1·4	+14	88§	·843§	1·1*	0	3·46	− 3·46	0·04	3·57	−3·53	0·04	3·57	− 3·53	0·03	Purnea .	North Bihar.	13
17	7	1		1		2	1	2	N 16° W	0·6				81	·829	3·1	4	6·74	−2·74	5·17	6·13	−0·96	5·17	6·13	− 0·96	2·20	Balasore .	Orissa.	14
	9	2	2	2	1	2	8	5	N 39° W	5·2	5·0	6·1	−18	87	·941	5·1	9	7·92	+1·08	5·44	9·19	−3·75	5·44	9·19	− 3·75	1·55	False Point.		
21		1	2			2	4	1	W	1·4		1·9	−26	83	·849	3·6	6	6·38	−0·38	3·82	5·64	−1·82	3·82	5·64	− 1·82	1·45	Cuttack.		
9	10	3		1		2		6	N 12° W	7·7	7·3			85	·914	2·8	7	8·62	−1·62	6·37	8·90	−2·53	63 7	8·90	− 2·53	2·33	Puri.		
																				0 58	2·56	−2·16					V.—Gangetic Plain and Chota Nagpur.		
5	2		3	2		6	8	5	S 89° W	5·3	4·3	5·0	− 4	66	·617	1·7	2	4·69	− 2·69	1·50	3·41	− 1·91	1·50	3·41	− 1·91	0·74	Hazaribagh	Chota Nagpur.	15
5	3	2	2		2	4	5	3	N 63° W	3·8	4·5			73	·660	2·2	1	4·73	−3·73	0·61	2·95	− 2·34	0·61	2·95	− 2·34	0·53	Ranchi.		
26			1	4					S 53° E	1·3	1·6			84	·678	0·5	2	3·19	− 1·19	0·49	2·50	− 2·01	0·49	2·50	− 2·01	0·24	Daltonganj.		
15	1	1		1			5	8	N 52° W	1·1				75	·739	1·2	3			4·41			4·41			2·29	Purulia.		
19	1	1	1			4	4	1	S 86° W	1·3	1·2			80	·766	1·6	2	4·46	− 2·46	0·73	2·72	− 1·99	0·73	2·72	− 1·99	0·27	Chaibassa.		
10		3	1	1	6	7	3		S 22° W	3·2	2·8	1·5	+87	68	·708	1·9	1	2·96	− 1·96	0·12	2·27	− 2·15	0·12	2·27	− 2·15	0·12	Gaya . .	South Bihar.	16
			2	3	11	13	2		S 18° W	4·0	3·5			69	·701	2·0	1	2·77	− 1·77	1·40	2·63	− 1·23	1·40	2·63	− 1·23	1·34	Dehri.		
3	1	3	8	4	1	4	2	5	E	2·1	2·5	1·9	+32	75	·818	1·2	1	3·19	− 2·19	0·20	3·25	− 3·05	0·20	3·25	− 3·05	0·16	Patna.		
19	6		1	3			2		N 14° E	1·3	1·3			77	·795	0·6	0	3·62	− 3·62	0·16	2·99	− 2·83	0·16	2·99	− 2·83	0·06	Arrah.		
7	1		7	2	1		10	3	N 76° W	2·9	2·7			70	·710	1·4	1	3·04	− 2·04	0·82	3·26	− 2·44	0·82	3·26	− 2·44	0·82	Buxar.		
10		3	4	6	3	3	2		S 41° E	2·0	1·9			73	·789	1·1	0	3·12	− 3·12	0·04	2·80	− 2·76	0·04	2·80	− 2·76	0·04	Bhagalpur .	North Bihar.	17
20			6	5	1				S 61° E	1·1		2·2	−50	80	·819	0·9	0	3·08	− 3·08	0	2·84	− 2·84	0	2·84	− 2·84	0	Darbhanga.		
25			2	2			1	1	S 63° E	1·0	0·8			81	·861	0·3	0	2·81	− 2·81	0	3·11	− 3·11	0	3·11	− 3·11	0	Muzaffarpur.		
		3	17	3	1	3	3	1	S 82° E	2·1	2·0			94	·933	0·2	1	2·58	− 1·58	0·25	3·39	− 3·14	0·25	3·39	− 3·14	0·25	Motihari.		
17			6	3		1	2	2	S 76° E	1·3	1·6			76	·783	1·3	1	2·85	− 1·85	1·79	3·08	− 1·29	1·79	3·08	− 1·29	1·75	Chapra.		
23		1	1		1	3	2		S 63° W	1·2	1·4	2·6	−46	75	·722	1·1	0	2·45	− 2·45	0	2·30	− 2·30	0	2·30	− 2·30		Benares .	N.-W. Provinces (East).	18
9	1	2	4	2	1	1	8	3	N 77° W	2·5	2·9	2·8	+ 4	72	·719	1·1	0	1·64	− 1·64	0	1·83	− 1·83	0	1·83	− 1·83	0	Allahabad.		
13	1	7	2	2	2	2	1	1	N 68° E	1·1		1·3	−15	73	·730	0·8	0	2·64	− 2·64	0	3·77	− 3·77	0	3·77	− 3·77	0	Gorakhpur .	N.-W. Provinces (East Submontane).	22
11	1		6		2		11		S 73° W	1·1	1·2	1·9	−37	74	·681	1·0	1	1·36	−0·36	0·31	0·83	−0·52	0·31	0.83	− 0·52	0·31	Lucknow .	South Oudh.	19
10	2		8	2	1		2	6	N 37° E	1·5	1·4			75	·755	0·5	0			0	1·69	−1·69	0	1·69	− 1·69	0	Bahraich .	North Oudh.	20
8	2	1	3	2	1	6	5	3	S 74° W	2·0				66	·628	0·9	0	1·60	−1·60	0	1·37	−1·37	0	1·37	− 1·37	0	Cawnpore .	N.-W. Provinces (Central).	21
23			2		2		4		S 45° W	0·7	0·7			60	·565	1·1	0			0	0·82	−0·82	0	0·82	− 0·82	0	Mainpuri.		

Tabl

Abstract of Observations taken at 8 A.M. at 22

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	2
	VI.—Upper Sub-Himalayas				−·039								92·9	+2·8	64·4	+2·6	78·7	+2·7	28·6					39
	N.-W. Provinces (West Submontane).	Bareilly .	569	26·289	−·034	29·831	29·400	27th & 30th.	29·133	7th	·267	74·8	90·5	+1·3a	67·9	+2·7	79·2	+2·0	22·6	92·9	19th	61·2	22nd	31
		Dehra Dun .	2,233	27·648	−·039	29·866	27·741	14th & 30th.	27·499	7th	·242	68·1	83·6	+1·9	61·6	+0·8	72·6	+1·4	22·0	86·5	2nd	55·0	22nd	31
		Roorkee .	887	28·967	−·042	29·947	29·069	30th	28·819	7th	·250	68·2	89·9	+0·8	62·2	+0·7	76·1	+0·8	27·7	94·7	4th	54·4	22nd & 23rd.	40
	N.-W. P. (West)	Meerut .	738	29·106	−·048	29·829	29·208	27th	28·963	7th	·245	70·5	93·4	+3·4	64·3	+1·6	78·9	+2·5	29·1	97·1	4th	57·3	23rd & 27th.	39
	South-East Punjab.	Delhi .	718	29·132	−·044	29·825	29·234	23rd	28·992	7th	·242	75·9	94·4	+2·6	71·0	+3·0	82·7	+2·8	23·4	98·2	4th	65·1	28th	33
	Central Punjab.	Lahore .	702	29·144	−·040	29·832	29·272	31st	29·021	3rd	·251	72·7	97·4	+4·2	64·2	+4·3	80·8	+4·3	33·2	104·4	3rd	58·0	18th & 20th.	46
	South Punjab .	Sirsa .	662	29·198	−·030	29·837	29·326	31st	29·075	7th	·251	76·0	98·9	+3·0	65·6	+3·1	82·3	+3·1	33·3	104·8	3rd	59·1	20th	45
		Patiala .	818	29·049		29·852	29·153	15th	28·940	20th	·213	72·9	92·8		63·3		78·1		29·5	97·9	3rd	56·7	27th	41
	Punjab (Submontane).	Ludhiana .	812	29·043	−·038	29·843	29·146	27th & 31st.	28·915	7th	·231	72·0	94·0	+2·1	65·6	+2·1	79·8	+2·1	28·4	99·5	3rd	60·1	20th	39
		Sialkot .	830	29·024	?	29·843	29·154	31st	28·898	7th	·256	72·7	96·6	+4·6	66·6	+4·8	81·6	+4·7	30·0	103·2	3rd	61·1	22nd	42
		Umballa .	892	28·967	?	29·852	29·063	30th	28·837	7th	·226	69·3	91·7	?	61·2	+0·4	76·5	?	30·5	94·0	2nd, 3rd & 12th.	54·0	23rd	40
	North Punjab .	Rawalpindi.	1,676	28·187	−·079?	29·869	28·317	31st	28·043	7th	·274	69·5	92·1	+4·1	59·0	+3·1	75·6	+3·6	33·1	99·0	2nd	53·5	23rd	45
	VII.—Indus Valley and North-West Rajputana.				−·042								97·6	+2·7	68·1	+2·5	82·9	+2·6	29·6					44
	North Punjab .	Peshawar .	1,110	28·771	−·051	29·892	28·906	31st	28·608	2nd	·298	69·4	89·2	+0·8	60·3	+2·9	74·8	+1·9	28·9	101·0	2nd	54·0	19th	47
	West Punjab .	Khushab .	612	29·247	?	29·840	29·389	31st	29·086	7th	·303	75·2	96·1	+2·2	65·7	+3·6	80·9	+2·9	30·4	105·3	2nd	59·5	28th	45
		Montgomery	558	29·284	−·047	29·817	29·427	31st	29·140	4th	·287	77·9	98·5	?	64·8	+2·6	81·7	?	33·7	106·0	3rd	59·0	20th & 21st.	47
		D. I. Khan	594	29·268	−·058	29·823	29·425	31st	29·085	3rd	·340	71·2	96·0	+2·7	62·7	+1·2	79·4	+2·0	33·3	104·3	3rd	55·1	27th	49
		Mooltan .	420	29·416	−·060	29·814	29·591	31st	29·259	3rd	·332	74·0	99·2	+4·2	67·4	+2·8	83·3	+3·5	31·8	106·4	2nd	59·4	20th	47
	Sind . .	Jacobabad .	186	29·669	−·035	29·819	29·829	31st	29·507	4th	·322	76·7	102·7	+4·7	65·2	+2·1	84·0	+3·4	37·5	108·4	3rd	55·5	20th	52
		Hyderabad .	96	29·775	−·022	29·825	29·908	31st	29·603	4th	·305	78·2	98·7	+1·3	71·1	+0·5	84·9	+0·9	27·6	106·2	2nd	65·5	24th & 30th.	40
		Kurrachee .	30	29·878	−·024	29·858	29·989	31st	29·699	4th	·290	79·7	92·5	0·5	73·9	+2·4	83·2	+1·0	18·6	104·4	20th	64·2	23rd	40
	West Rajputana	Bikaner .	771	29·091	?	29·838	29·210	23rd	28·969	7th	·241	81·8	100·4	+4·8	74·9	+4·8	87·7	+4·8	25·5	103·6	21st	68·0	27th	35
		Pachpadra .	380	29·528		29·868	29·640	27th	29·390	4th	·250	80·6	101·2		70·4		85·8		30·8	106·5	3rd	60·6	30th	45
		Jodhpur .	782	29·115		29·883	29·219	27th	29·001	4th	·218	80·9	99·4		72·2		85·8		27·2	103·7	1st & 2nd.	62·2	25th	41
	VIII.—East Rajputana, Central India, and Gujarat.				−·024								95·4	+3·9	70·8	+3·1	83·2	+3·5	24·6					35
	East Rajputana	Jaipur .	1,431	28·470	−·032	29·871	28·563	31st	28·346	7th	·217	79·0	97·6	+1·4	69·2	+4·7	83·4	+4·6	28·4	103·2	3rd, 4th & 5th.	63·1	24th	40
		Kotah . .	819	29·056		29·877	29·151	31st	28·936	7th	·215	83·2	98·0		74·7		86·4		23·3	103·0	4th	69·1	24th & 25th.	33
		Sambhar .	1,254	28·648	?	29·877	28·746	27th	28·531	7th	·215	77·7	97·3	+5·7	68·2	+3·5	82·8	+4·6	29·1	102·5	3rd	60·7	25th	41
		Ajmer .	1,611	28·296	−·030	29·884	28·386	23rd & 27th.	28·188	4th	·198	77·5	95·7	+4·3	69·4	+6·4	82·6	+5·4	26·3	99·9	4th & 6th	62·7	25th	37
		Udaipur‡ .	1,925	27·996		29·883	28·094	27th	27·890	4th	·204	78·3	94·1*		68·1*		81·1*		26·0	96·0	4 days	61·3	25th	34
		Deesa . .	466	29·442	−·021	29·865	29·538	31st	29·338	4th	·200	82·3	100·5	+4·5	72·6	+5·7	86·6	+5·1	27·9	106·1	3rd	67·5	25th	38
46	Kathiawar and Cutch.	Bhuj .	395	29·519	−·012	29·870	29·629	23rd	29·369	4th	·260	80·4	98·2	+2·5	70·1	−1·1	84·2	+0·7	28·1	103·8	2nd	65·9	26th, 27th & 28th.	37
		Jamnagar .	61	29·862		29·869	29·953	27th	29·730	4th	·223	81·0	94·0		71·3		82·7		22·7	99·6	1st & 2nd	66·2	29th	33
		Rajkot .	429	29·490	−·016	29·876	29·575	23rd	29·379	4th	·196	78·6	97·8	+2·6	69·3	+0·9	83·6	+1·8	28·5	101·9	2nd & 3rd	63·9	30th	38
		Veraval .		29·908	−·006	29·868	29·983	22nd	29·813	4th	·173	78·3	86·7	−0·7	71·6	−0·5	79·2	−0·6	15·1	97·6	1st	65·3	29th	32
		Dwarka .	37	29·898		29·881	29·998	23rd	29·758	4th	·240	78·6	84·2		74·1		79·2		10·1	93·9	19th	70·7	30th	23
		Bhavnagar Para.	55	29·887	−·016	29·867	29·986	27th	29·781	3rd & 4th.	·205	80·3	98·0	+2·9	72·1	+0·1	85·1	+1·5	25·9	102·6	2nd	68·8	25th & 30th.	33
49	Central India .	Nowgong .	757	29·115	−·046	29·841	29·217	27th	28·985	7th	·232	75·4	91·5	?	67·3	+2·2	79·4	?	24·2	94·5	22nd & 23rd.	59·0	27th	35
		Indore . .	1,823	28·096	−·013	29·875	28·192	27th	27·985	7th	·207	78·1	93·0	+5·9	66·0	+2·3	79·5	+4·1	27·0	95·3	4th & 7th	60·1	28th	35
		Neemuch .	1,630	28·287	−·037	29·880	28·386	27th	28·168	7th	·2·8	78·8	95·3	+5·4	68·0	+3·4	81·7	+4·4	27·3	99·0	4th	62·6	26th & 27th.	36

* Mean of 29 days.

‡ Observation of 30 days.

I—*continued.*

stations in India, Burma, etc., in October, 1901—continued.

Wind Direction. Number of winds from Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Hygrometry, 8 A.M. Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st October to 31st October 1901.	Normal rainfall for period, 1st October to 31st October.	Variation from normal of period, 1st October to 31st October.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																				0·21	0·46	−0·29					VI.—Upper Sub-Himalayas.		
26			1					4	N 34° W	0·4	0·4	1·9	− 79	81	·689	0·7	1	0·91	+ 0·09	0·18	1·15	−0·97	0·18	1·15	− 0·97	0·18	Bareilly .	N.-W. Provinces (West, Submontane).	24
28	1			1				1	N	0·4		1·7	− 77	73	·510	1·1	2	1·20	+ 0·80	0·72	0·99	−0·27	0·72	0·99	− 0·27	0·59	Dehra Dun,		
23		1		7					S 53° E	1·4		1·4	0	79	·551	0·1	1	0·55	+ 0·45	0·74	0·43	+0·31	0·74	0·43	+ 0·31	0·65	Roorkee,		
28						1	2		S 75° W	1·0	1·0	1·4	− 28	68	·538	0·3	0	0·45	− 0·45	0	0·42	−0·42	0	0·42	− 0·42	0	Meerut, .	N.-W. P. (West).	23
10		1	1	4	1		7	7	N 76° W	1·7	1·6	2·4	− 33	45	·416	0·4	0	0·18	− 0·18	0	0·08	− 0·08	0	0·08	− 0·08	0	Delhi . .	South-East Punjab.	26
22	1		1	4	2		1		S 37° E	1·1		1·6	− 31	58	·471	0·2	0	0·45	− 0·45	0	0·26	−0·26	0	0·26	− 0·26	0	Lahore .	Central Punjab	28
7		1		7		10	1	5	S 38° W	3·5	3·2	2·5	+ 28	42	·375	0·2	0	0·64	− 0·64	0	0·14	−0·14	0	0·14	− 0·14	0	Sirsa .	South Punjab.	27
1	6	2	6	7	5		2	2	S 84° E	3·6	3·7			71	·579	0·7	2			0·60			0·60			0·44	Patiala,		
17	1		1	5	1	3	3		S 6° W	1·9	1·7	0·9	+ 89	61	·488	0·5	0	0·55	− 0·55	0	0·40	−0·40	0	0·40	− 0·40	0	Ludhiana .	Punjab (Submontane).	29
6	4	11	9	1					N 58° E	1·6		1·4	+ 14	58	·470	0·4	0	0·82	− 0·82	0	0·31	−0·31	0	0·31	− 0·31	0	Sialkot,		
23				6				2	S 45° E	0·9				78	·571	0·5	1			0·18	0·31	−0·13	0·18	0·31	− 0·13	0·18	Umballa,		
15	3	1	1			1	3	7	N 41° W	2·3	2·1	1·2	+ 75	53	·402	0·9	0	1·45	− 1·45	0·06	0·55	−0·49	0·06	0·55	− 0·49	0·06	Rawalpindi,	North Punjab.	31
																				0·03	0·06	−0·03					VII.—Indus Valley and North-West Rajputana.		
25	2				1	1	1	1	N 67° W	1·3	1·4	2·5	− 44	65	·479	1·5	1	0·27	+ 0·73	0·29	0·11	+0·18	0·29	0·11	+ 0·18	0·25	Peshawar .	North Punjab.	31
10		15	4		1	1			N 57° E	4·2	4·9			46	·406	0·2	0	0·20	− 0·20	0	0·07	−0·07	0	0·07	− 0·07	0	Khushab .	West Punjab.	32
6	1		1	6	6	7	3	1	S 45° W	6·1	5·2			35	·335	0·2	0	0·10	−0·10	0	0·15	−0·15	0	0·15	− 0·15	0	Montgomery,		
19	6	4				1		1	N 9° E	1·7	1·8	1·2	+ 50	58	·447	0·2	0	0·09	− 0·09	0	0·05	−0·05	0	0·05	− 0·05	0	D. I. Khan,		
16	1	1	1	6	4		1	1	S 36° E	1·2	1·5	2·0	− 25	52	·447	0·1	0	0	0	0	0	0	0	0	0	0	Mooltan,		
23	3			1	1	1		2	N 34° W	1·5	1·6	2·2	− 27	51	·468	0·5	0	0	0	0	0	0	0	0	0	0	Jacobabad .	Sind.	47
2	6				3	18	2		S 56° W	8·0	8·3	7·8	+ 6	63	·596	0·9	0	0	0	0	0	0	0	0	0	0	Hyderabad,		
6	1	2			3	5	10	4	S 86° W	7·2	9·0	9·7	− 7	71	·715	1·5	0	0	0	0	0	0	0	0	0	0	Kurrachee.		
3			1	2	1	1	19	4	S 89° W	6·5		4·0	+ 63	49	·530	0·3	0			0	0·10	−0·10	0	0·10	− 0·10	0	Bikaner .	West Rajputana	51
	8	2	4	1	5	6	3	2	N 72° W	6·4	5·7	3·7	+ 54	55	·584	0	0			0	0·05	−0·05	0	0·05	− 0·05	0	Pachpadra,		
12	1	2	1		1	8	4	2	S 72° W	3·3	3·0			38	·400	0·8	0			0·08	0·13	−0·05	0·08	0·13	− 0·05	0·08	Jodhpur,		
																				0·25	0·66	−0·36					VIII.—East Rajputana, Central India and Gujarat.		
16	1	2				1	3	8	N 47° W	2·9		3·7	− 22	53	·525	1·3	1	0·90	+ 0·10	0·97	0·30	+0·67	0·97	0·30	+ 0·67	0·91	Jaipur .	East Rajputana.	50
7	3	1		3	1	5	1	10	N 65° W	3·7	4·4			48	·541	0·7	1			0·31	0·50	−0·19	0·31	0·50	− 0·19	0·20	Kotah,		
20	2		2				5	2	N 52° W	3·1		4·7	− 34	46	·434	1·0	0	0·50	−0·50	0	0·17	−0·17	0	0·17	− 0·17	0	Sambhar,		
15		1		1			11	3	N 80° W	3·4		2·6	+ 31	58	·552	1·1	2	0·64	+ 1·36	0·60	0·31	+0·29	0·60	0·31	+ 0·29	0·50	Ajmer,		
26	1		1				1	1	N 24° W	2·2	2·2			57	·559	1·0	0			0·03			0·03			0·02	Udaipur,		
	6	6	3	4	2	2	5	3	N 5° E	6·6		6·7	− 1	50	·551	1·0	1	0·45	+ 0·55	0·31	0·35	−0·04	0·31	0·35	− 0·04	0·31	Deesa,		
	1				1	2	15	12	N 74° W	12·7		6·0	+112	69	·712	0·9	1			0·32	0·35	−0·03	0·32	0·35	− 0·03	0·32	Bhuj . .	Kathiawar and Cutch,	46
		1	1	2	4	10	10	3	S 59° W	5·3	5·7			72	·762	1·6	0			0			0			0	Jamnagar,		
3		1		2		3	13	9	N 83° W	6·7	6·6	5·6	+ 18	71	·698	2·6	0	1·27	− 1·27	0·09	0·45	−0·36	0·09	0·45	− 0·36	0·09	Rajkot,		
1	10	1		4	1		2	12	N 24° W	6·5	7·7	2·4	+221	73	·698	2·4	0			0·08	1·08	−1·00	0·08	1·08	− 1·00	0·08	Veraval,		
	1	3	1	3	1	4	8	10	N 72° W	8·4				83	·810	1·3	0			0			0			0	Dwarka,		
	2	3		1		5	1	19	N 49° W					59	·603	2·2	1			0·44	0·35	+0·09	0·44	0·35	+ 0·09	0·40	Bhavnagar Para,		
9	3		3		3	7	5	1	S 61° W	1·2	1·2	1·5	− 20	71	·635	1·4	0	1·82	− 1·82	0	1·17	−1·17	0	1·17	− 1·17	0	Nowgong .	Central India.	49
7	4	1	2	2	1	2	4	8	N 47° W	3·4		2·3	+ 48	60	·580	1·5	1	3·09	− 2·09	0·24	1·45	−1·21	0·24	1·45	− 1·21	0·24	Indore,		
	6	10	2	1		1	5	6	N 1° W	5·6	5·0	7·9	− 37	50	·493	1·2	2	1·09	+ 0·91	0·66	0·49	+0·17	0·66	0·49	+ 0·17	0·52	Neemuch,		

Table

Abstract of Observations taken at 8 A.M. at 22

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
45	Gujarat	Surat	39	29·892	−·007	29·874	29·984	27th	29·800	4th	·184	81·8	97·3	+5·0	73·2	+2·7	85·3	+3·9	24·1	104·7	3rd	69·5	28th	35·
		Ahmedabad*	161	29·745	−·022	29·856	29·943	23rd	29·644	3rd	·199	82·0	99·7	+4·3	75·0	+3·4	87·4	+3·9	24·7	105·3	1st, 2nd & 3rd.	71·1	4 days	34·
22	N.-W. P. (West)	Agra	555	29·308	−·049	29·830	29·413	31st	29·168	7th	·245	78·2	97·4	+4·5	71·9	+4·1	84·7	+4·3	25·5	103·0	4th	65·9	23rd	37·
21	N.-W.P. (Central)	Jhansi	858	29·022	−·031	29·844	29·121	27th	28·902	7th	·219	79·4	96·8	+4·4	73·9	+5·4	85·4	+4·9	22·9	100·3	4th	69·1	25th	31·
	IX.—Deccan				−·019								91·6	+4·0	68·4	+1·3	80·1	+2·7	23·2					34·
36	Bombay Deccan	Belgaum	2,539	27·383	+·001	29·860	27·474	27th	27·300	4th	·174	72·7	84·3	+1·9	65·0	0	74·7	+1·0	19·3	88·3	2nd	59·4	28th & 29th.	28·
		Sholapur	1,590	28·318	−·016	29·861	28·423	27th	28·213	16th	·220	78·2	93·6	+4·5	69·4	+1·5	81·5	+3·0	24·2	97·2	21st	62·1	29th	35·
		Poona	1,840	28·087	−·013	29·893	28·199	27th	27·978	16th	·221	73·0	92·0	+4·5	66·1	−0·3	79·1	+2·1	25·9	95·5	4 days	57·4	28th	38·
		Bijapur	1,946	27·977	+·001	29·867	28·083	27th	27·879	5th	·204	77·2	92·2	+4·9	69·2	+1·5	80·7	+3·2	23·0	94·4	5 days	60·7	29th	33·
40	Khandesh	Malegaon	1,430	28·503	−·002	29·695	28·622	27th	28·357	16th	·265	78·0	94·9	+5·3	69·2	+3·9	82·1	+4·6	25·7	100·4	4th	62·1	31st	38·
		Ahmednagar	2,152	27·795	−·002	29·889	27·912	27th	27·651	16th	·261	77·5	90·9	+3·6	66·3	+1·9	78·6	+2·8	24·6	95·4	4th	57·5	28th	37·
41	Berar	Akola	930	28·976	−·017	29·866	29·096	27th	28·835	16th	·261	77·4	95·1	+5·0	66·0	0	80·6	+2·5	29·1	98·3	8th & 9th.	57·5	28th	41·
		Amraoti	1,215	28·692	−·010	29·867	28·806	27th	28·575	6th	·231	79·1	94·1	+4·7	69·5	+2·0	81·8	+3·4	24·6	96·2	6 days.	62·5	28th	33·
42	Central Provinces (West).	Khandwa	1,044	28·859	−·014	29·868	28·973	27th	28·740	7th	·233	78·8	99·0	+9·1	68·7	+2·6	83·9	+5·9	30·3	102·2	8th	60·1	26th & 28th.	42·
		Hoshangabad	1,006	28·895?	−·018?	29·877?	29·006	27th & 31st.	28·768	6th	·238	74·1	92·6	+3·5	68·0	+1·0	80·3	+2·3	24·6	95·8	16th	60·3	25th	35·
		Nagpur	1,025	28·859	−·026	29·851	28·985	27th	28·724	6th	·261	76·7	93·7	+4·3	69·1	+0·8	81·4	+2·6	24·6	97·1	23rd	61·1	26th	36·
43	Central Provinces (Central).	Chanda	634	29·271	−·034	29·858	29·406	27th	29·140	6th	·266	77·7	91·9	+2·5	68·6	+0·1	80·3	+1·3	23·3	95·2	22nd	59·1	27th & 28th.	36·
		Seoni	2,033	27·873	?	29·859	27·984	27th	27·744	6th	·240	75·4	89·5	+3·5	64·6	+0·3	77·1	+1·9	24·9	91·3	23rd	58·0	25th & 28th.	33·
		Jubbulpore	1,327	28·554	−·036	29·860	28·661	27th	28·419	7th	·242	72·7	90·3	+3·5	65·0	+0·3	77·7	+2·2	25·3	93·0	19th, 20th & 23rd.	56·4	27th & 28th.	36·
		Saugor	1,807	28·098	−·029	29·862	28·202	27th	27·977	7th	·225	78·3	91·5	+4·7	69·0	+3·8	80·3	+4·3	22·5	94·4	4th	62·1	25th	32·
49	Central India	Sutna	1,040	28·828	−·040	29·844	28·934	31st	28·682	7th	·252	75·4	91·1	+3·7	68·9	+3·3	80·0	+3·5	22·2	94·0	23rd	59·7	28th	34·
44	Central Provinces (East).	Raipur*	970	28·910	−·030	29·839	29·033	31st	28·766	7th	·267	78·1	90·8	+3·0	70·7	+0·9	80·8	+2·0	20·1	94·4	20th, 21st & 23rd.	61·9	28th	32·
		Sambalpur	486	29·390	−·040	29·830	29·497	31st	29·234	7th	·263	78·8	91·5	+2·8	72·3	+0·1	81·9	+1·5	19·2	95·1	3rd & 20th.	64·2	26th & 27th.	30·
39	Hyderabad (North).	Aurangabad	1,905	28·020		29·862	28·137	27th	27·944	16th	·233	79·6	90·7		65·7		78·2		25·0	94·4	4th & 9th.	57·2	27th	37·
		Indur		28·608			28·705	27th & 31st.	28·491	6th & 7th.	·214	77·1	89·2		68·6		78·9		20·6	91·8	10th & 14th.	60·1	29th & 30th.	31·
		Bidar	2,165?	27·762		29·859	27·879	26th	27·620	16th	·259	78·6	87·8		69·2		78·5		18·6	97·7	26th	64·2	16th	33·
53	Hyderabad (South).	Gulbarga	1,502	28·398?		29·849?	28·509	27th	28·292	6th	·217	79·7	93·7		69·1		81·4		24·6	97·8	7th	62·3	28th	35·
		Raichur	1,326	28·570	−·010	29·850	28·671	27th	28·467	7th	·204	79·2	91·7	+3·2	72·5	+0·5	82·1	+1·9	19·2	96·1	21st	65·1	28th & 31st.	31·
		Hyderabad (Dn.)	1,690	28·211	?	29·855	28·334	27th	28·046	15th	·288	76·5	89·8	+3·0	69·2	+1·4	79·5	+2·2	20·6	93·9	3rd	60·2	29th	32·
		Secunderabad	1,787	28·113	−·030	29·857	28·229	27th	27·953	15th	·276	75·1	90·0	+3·2	68·5	+0·7	79·3	+2·0	21·5	94·6	3rd	60·6	28th	34·
		Hanumkonda	871	29·607		29·849	29·133	27th	28·873	6th	·260	78·5	90·2		71·0		80·6		19·2	93·5	3rd	61·7	29th	31·
	X.—West Coast				+·004								85·3	−0·3	75·5	+0·9	80·4	+0·3	9·9					17·
37	Konkan	Bombay	37	29·898	+·003	29·875	29·976	27th	29·792	16th	·184	79·5	87·2	−0·1	77·1	+0·9	82·2	+0·4	10·1	91·0	28th	74·5	17th	16·
		Ratnagiri	110	29·806	+·012	29·855	29·879	27th	29·731	4th	·148	79·6	86·9	−1·3	74·9	+1·4	80·9	+0·1	12·0	96·9	31st	69·9	29th & 30th.	27·
		Mormugao	60	29·874	+·002	29·869	29·953	23rd	29·782	2nd	·171	78·6	85·0	−1·0	75·8	+0·3	80·4	−0·4	9·2	89·0	31st	72·4	14th & 31st.	16·
		Goa	199	29·729	+·015	29·865	29·801	23rd	29·655	5th	·146	79·0	83·7	−1·4	76·7	+1·3	80·2	−0·1	7·0	89·0	28th & 31st.	73·0	30th & 31st.	16·
		Karwar	44	29·915?	?	29·891?	29·968	23rd	29·860	16th	·108	76·6	84·6	−0·4	74·4	+1·3	79·5	+0·5	10·2	89·8	31st	68·5	30th	21·
33	Malabar	Cochin	11	29·934	0	29·871	29·995	27th	29·839	5th	·156	79·6	87·7	+2·0	75·2	+0·8	81·5	+1·4	12·5	90·5	5 days	72·2	23rd	18·
		Calicut	27	29·907	−·009	29·863	29·974	23rd	29·814	5th	·160	79·0	85·7	−0·1	74·8	+0·7	80·3	+0·3	10·9	88·8	30th & 31st.	73·0	15th, 17th & 24th.	15·
		Mangalore	65	29·876	−·002	29·873	29·946	27th	29·788	5th	·158	79·2	84·7	−0·4	74·9	+0·8	79·8	+0·2	9·8	87·3	28th	71·9	16th, 30th & 31st.	15·
		Trivandrum	198	29·753	+·014	29·884	29·814	11th	29·700	5th	·114	78·4	82·6	0	75·6	?+3·2	79·1	+1·6?	7·0	85·5	30th	73·0	1st	12·

* Observations of 30 days.
† " " 20 "

I—*continued.*

stations in India, Burma, etc., in October, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st October to 31st October 1901.	Normal rainfall for period, 1st October to 31st October.	Variation from normal of period, 1st October to 31st October.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
8	8	1	1	4	3	1	2	3	N 12° E	3·6	3·4	5·1	−33	67	·726	1·5	2	3·00	−1·00	0·44	1·53	−1·09	0·44	1·53	−1·9	0·29	Surat	Gujarat.	45
1	9	1	7			2		10	N 3° W	2·4				58	·632	1·2	0			0·12	0·89	−0·77	0·12	0·89	−0·77	0·07	Ahmedabad		
6		4		4		11		6	S 60° W	3·1	3·7	3·0	+23	56	·543	1·0	1	0·45	+0·55	0·20	0·47	−0·27	0·20	0·47	−0·27	0·14	Agra	N.-W. P. (West).	22
	1	4		1	1	17	5	2	S 60° W	3·5	3·9	2·6	+50	67	·674	0·4	0	1·27	−1·27	0	0·70	−0·70	0	0·70	−0·70	0	Jhansi	N.-W.P. (Central).	21
																				1·86	3·04	−1·26					IX.—Deccan.		
15	3	2	1			4	6		N 76° W	8·4		10·5	−20	80	·642	3·0	8	8·09	−0·09	5·99	6·39	−0·40	5·99	6·39	−0·40	1·52	Belgaum	Bombay Deccan.	38
4	6	10	1	2		4	2	2	N 18° E	8·5	10·3	7·4	+39	59	·566	2·2	3	5·91	−2·91	0·74	5·10	−4·36	0·74	5·10	−4·36	0·31	Sholapur.		
8	1				1	6	13	2	S 82° W	7·5	8·5	5·8	+47	79	·643	2·3	5	6·18	−1·18	2·46	4·80	−2·34	2·46	4·80	−2·34	0·92	Poona.		
25						3		3	W					65	·603	0·7	3	7·70	−4·70	2·02	3·52	−1·50	2·02	3·52	−1·50	1·00	Bijapur.		
	2		1	1	3	5	10	9	N 87° W	5·3	6·1	4·5	+36	59	·576	5·2	2	4·18	−2·18	3·30	2·84	+0·46	3·30	2·84	+0·46	1·98	Malegaon	Khandesh.	40
5	10	5		2	1	1		7	N 3° W	5·8	7·1			59	·553	2·1	2			1·77	2·39	−0·62	1·77	2·39	−0·62	0·91	Ahmednagar.		
12		2	1	2		2	1	10	N 39° W			3·3		62	·587	1·9	1	4·09	−3·09	1·93	3·50	−1·57	1·93	3·50	−1·57	1·86	Akola	Berar.	41
	7	8	3	3	1	5	2	2	N 28° E	6·1	5·4	2·9	+86	55	·553	2·1	1	4·09	−3·09	0·28	2·88	−2·60	0·28	2·88	−2·60	0·17	Amraoti.		
6			3	4	3	1	8	6	S 72° W	4·7		2·9	+62	55	·543	1·2	1	3·27	−2·27	0·18	1·73	−1·55	0·18	1·73	−1·55	0·12	Khandwa	Central Provinces (West).	42
1		14		3		10		3	N 45° E	1·6	1·6	1·5	+ 7	70	·602	0·5	1	3·18	−2·18	0·48	1·82	−1·34	0·48	1·82	−1·34	0·37	Hoshangabad		
2	18	2	2	1	2		1	3	N 3° E	4·8		4·3	+12	63	·591	2·6	0	3·55	−3·55	0	2·95	−2·95	0	2·95	−2·95	0	Nagpur.		
19	5	1		2		2	2		N 24° W	1·5		2·3	−35	74	·717	3·3	1			1·43	2·24	−0·81	1·43	2·24	−0·81	1·36	Chanda	Central Provinces (Central).	43
	4	3		2	6	5	5	6	S 86° W	3·8		3·1	+23	62	·548	1·1	1	3·55	−2·55	0·50	2·36	−1·86	0·50	2·36	−1·86	0·46	Seoni.		
2		2		12	9	4	1	1	S 17° E	2·4		2·1	+14	79	·643	1·0	2	2·45	−0·45	0·61	2·07	−1·46	0·61	2·07	−1·46	0·46	Jubbulpore.		
	1	4	1	2	6	1	10	6	S 89° W	4·5	5·1	2·7	+89	56	·548	0·5	3	2·91	+0·09	0·50	1·45	−0·95	0·50	1·45	−0·95	0·21	Saugor.		
2	3	1	2				12	11	N 56° W	2·8	3·0	4·3	−30	72	·643	2·1	0	2·09	−2·09	0·08	2·37	−2·29	0·08	2·37	−2·29	0·08	Sutna	Central India.	49
25		2	1	1		1			E	2·4	2·2	3·8	−42	70	·680	2·9	2	3·82	−1·82	0·66	2·29	−1·63	0·66	2·29	−1·63	0·38	Raipur	Central Provinces (East).	44
	8	9	5	1		1	1	6	N 19° E	2·5	2·5	2·0	+25	78	·781	0·7	2			1·37	2·04	−0·67	1·37	2·04	−0·67	0·70	Sambalpur.		
15	5	3	2	1	1		1	3	N 13° E	6·7	6·6			58	·566	1·6	4			5·15	2·96	+2·19	5·15	2·96	+2·19	2·71	Aurangabad	Hyderabad (North).	39
16		4		3				8	N 7° W	4·0	3·8			80	·750	3·2	3			2·82	2·63	+0·19	2·82	2·63	+0·19	2·21	Indur.		
	11	3	4			7	1	5	N 14° W	10·1	8·5			63	·616	0	3			1·34	3·65	−2·31	1·34	3·65	−2·31	0·96	Bidar.		
10	6	6	3		1	2	3		N 21° E	8·0	7·7			66	·669	2·0	3			1·01	3·06	−2·05	1·01	3·06	−2·05	0·60	Gulbarga	Hyderabad (South).	53
6	4	3	3	2	1	3	2	7	N 22° W	6·5	6·4			67	·667	1·5	4			2·13	4·78	−2·65	2·13	4·78	−2·65	0·83	Raichur.		
26				1	1		2	1	S 63° W	3·6	3·5			71	·655	2·2	4			4·55	3·08	+1·47	4·55	3·08	+1·47	1·66	Hyderabad (Dn.).		
10	7	6		4				4	N 20° E	4·1		3·8	+8	72	·636	1·9	4			3·14	3·08	+0·06	3·14	3·08	+0·06	1·38	Secunderabad		
18	3	1		2	3	1		3	N 45° W	6·0	5·1			72	·705	3·7	5			3·80			3·80			1·54	Hanumkonda		
																				2·72	7·80	−5·07					X.—West Coast.		
2	4	9	7	5	2			2	N 68° E	7·9		9·8	−19	86	·874	2·8	1	3·45	−2·45	0·39	2·47	−2·08	0·39	2·47	−2·08	0·25	Bombay	Konkan.	37
5	2	2	5	5	3	1	2	6	N 82° E	4·3	4·3	7·7	−38	78	·789	4·6	2	5·91	−3·91	0·42	4·28	−3·86	0·42	4·28	−3·86	0·12	Ratnagiri.		
5	1	1	3	4	5	1	2	9	S 78° W	6·8*				90	·880	5·3	2			0·36	7·01	−6·65	0·36	7·01	−6·65	0·16	Mormugao.		
2	2	7	6		4	4	1	5	N 44° E					85	·850	5·7	1			0·77	5·97	−5·20	0·77	5·97	−5·20	0·64	Goa.		
21	1		3		3			3	N 84° E	2·8				88	·863	4·0	3	9·09	−6·09	2·04	7·68	−5·64	2·04	7·68	−5·64	1·49	Karwar.		
8	10	5					3	5	N 10° W	5·0				94	·859	5·5	9	15·09	−6·09	5·37	14·01	−8·64	5·37	14·01	−8·64	1·35	Cochin	Malabar.	36
12	3	3	1	6	2			4	N 68° E	7·0	8·8			87†	·851†	5·3	7	10·44	−3·44	6·92	10·17	−3·25	6·92	10·17	−3·25	3·50	Calicut.		
20	2		4	3				2	N 74° E	1·91		2·7	−30	85	·851	2·8	5	9·90	−4·90	3·86	7·82	−3·96	3·86	7·82	−3·96	1·51	Mangalore.		
14	6						3	8	N 37° W	5·0				94	·821	6·1	8			4·29	10·76	−6·37	4·37	10·76	−6·37	1·76	Trivandrum.		

* Mean of 29 days. † Mean of 21 days. ‡ Mean of 20 days.

Table

Abstract of Observations taken at 8 A.M. at 22

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	XI.—South India				—·016								89·6	+1·5	73·3	+0·9	81·4	+1·2	16·3					25·8
57	Madras (South)	Pamban	37	29·871		29·835	29·935	20th	29·796	6th	·139	82·7	90·2		76·5		83·4		13·7	92·3	7th	75·2	1st, 29th & 30th,	17·1
		Tinnevelly	168	29·743	—·008	29·840	29·816	27th	29·654	7th	·162	83·6	96·4	+2·7	77·6	+1·0	87·1	+1·9	18·8	100·3	21st	74·9	1st & 24th	25·4
		Madura	447	29·453	—·011	29·827	29·530	18th	29·368	7th	·162	81·5	91·9	+0·2	75·4	+1·6	83·7	+0·9	16·5	95·9	15th	72·0	24th & 30th.	23·9
		Periyakulam		28·964			29·039	27th	28·876	6th	·163	78·0	88·7		70·9		78·6		17·8	92·4	23rd	66·9	16th	25·5
34	Madras, (South Central).	Salem	940	28·982	—·021	29·867	29·060	27th	28·886	6th	·174	78·7	90·6	+1·3	72·0	+1·5	81·4	+1·4	18·6	95·2	21st & 22nd.	64·4	30th	30·8
		Coimbatore	1,348	28·567	—·010	29·866	28·637	27th	28·472	6th	·165	76·5	88·3	+0·3	71·1	+0·5	79·7	+0·4	17·2	92·9	22nd	66·8	30th	26·1
35	Coorg	Mercara	3,781	26·239	+·007		26·298	23rd	26·159	5th	·139	66·0	75·5	+0·1	62·0	−0·1	68·8	0	13·5	79·0	27th	56·1	30th	22·9
36	Mysore	Chitaldroog	2,405	27·523	—·011	29·855	27·610	27th	27·426	5th	·184	74·0	85·4	+1·4	68·4	+0·8	76·9	+1·1	17·0	87·6	22nd	62·9	28th	24·7
		Bangalore	3,021	26·939	—·017	29·865	27·009	27th	26·826	6th	·183	71·2	83·1	+2·1	65·8	+0·9	74·5	+1·5	17·3	85·8	21st	60·4	29th & 30th.	25·4
		Hassan	3,091	26·981		29·883	26·952	27th	26·797	5th	·155	71·7	80·8		64·2		72·5		16·6	82·8	23rd	55·5	30th	27·3
		Mysore	2,518	27·436	—·005	29·884	27·514	27th	27·342	6th	·172	72·2	84·5	+0·5	66·4	−0·4	75·4	+0·1	18·1	87·1	4 days	60·9	30th	26·2
46	Madras, East Coast, South.	Negapatam	21	29·860	—·022	29·820	29·943	18th	29·755	6th	·188	82·0	90·4	+2·5	77·5	+1·9	84·0	+2·2	12·9	96·2	15th	74·9	7th	21·3
		Cuddalore	12	29·881	—·016	29·822	29·974	18th	29·769	6th	·205	81·0	90·3	+2·1	76·0	+1·3	83·2	+1·7	14·3	96·7	16th	71·7	25th & 29th.	25·0
		Trichinopoly	255	29·648	—·015	29·838	29·727	27th	29·557	6th	·170	80·1	92·7	+1·9	75·1	+1·1	83·9	+1·5	17·6	97·6	22nd	70·9	29th	26·7
		Madras	22	29·867	—·022	29·825	29·967	18th	29·736	6th	·231	81·3	90·4	+1·4	75·6	+0·4	83·0	+0·9	14·8	97·0	16th	69·5	29th	27·5
		Vellore	707	29·188		29·837	29·261	19th	29·078	6th	·183	79·7	92·8		74·7		83·7		18·1	98·4	13th	66·5	29th & 30th.	31·9
55	Madras, East Coast, Central.	Nellore	71	29·819	—·007	29·823	29·929	27th	29·671	6th	·258	82·7	93·2	+1·9	77·0	+1·2	85·2	+1·6	16·2	98·3	14th	69·6	28th & 29th,	28·7
		Masulipatam	15	29·875	—·009	29·825	29·990	27th	29·719	6th	·271	81·7	89·2	+0·2	76·4	+0·7	82·8	+0·5	12·8	92·6	9th	70·1	15th	22·5
54	Madras, Central	Cuddapah	433	29·457	—·021	29·829	29·550	27th	29·349	6th	·201	83·1	95·0	+5·1	75·7	+1·6	85·4	+3·4	19·3	101·2	21st	65·4	28th	35·8
		Kurnool	924	28·965	—·022	29·840	29·073	27th	28·856	6th	·217	77·0	93·1	+3·8	70·9	−0·4	82·0	+1·7	22·2	96·2	3rd & 22nd.	60·3	28th & 29th.	35·9
		Bellary	1,475	28·431	—·012	29·854	28·533	27th	28·325	5th	·208	79·1	93·2	+3·8	72·8	+2·0?	83·0	+2·9?	20·4	97·0	22nd	65·7	29th	31·3
52	Madras, East Coast, North.	Cocanada	26	29·847	—·016	29·808	29·964	27th	29·676	6th	·288	80·3	87·0	−0·4	76·5	+0·8	81·8	+0·2	10·5	90·1	4th, 13th & 22nd.	71·5	28th & 29th.	18·6
		Waltair (Vizag).	226	29·640	—·025	29·808	29·766	31st	29·425	14th	·341	81·4	88·2	−0·8	76·4	+1·0	82·3	+0·1	11·8	90·9	5th, 26th & 27th.	71·9	28th	19·0
		Gopalpur	21	29·840	—·039	29·801	29·972	31st	29·660	6th	·312	80·2	88·8	+1·3	75·0	+0·8	81·9	+1·1	13·8	91·8	22nd	68·6	28th	23·2
	XII.—Hill Stations.																							
48	Baluchistan	Pishin											76·8		38·2		57·5		38·6	89·4	3rd	26·0	30th & 31st	63·4
		Quetta	5,502	24·731	+·008		24·828	18th	24·585	7th	·243	56·3	77·5	+2·7	38·9	−0·3	58·2	+1·2	38·6	89·1	3rd	27·8	30th	61·3
		Kalat										58·3	75·7		30·2		53·0		45·5	87·5	5th	17·2	30th	70·3
		Chaman	4,311	25·801	+·013		25·922	31st	25·647	7th	·275	63·2	79·6	+1·0	50·4	0	65·0	+0·5	29·2	94·2	3rd	32·1	30th	62·1
30	Punjab	Leh	11,503	19·817	+·042		19·921	1st	19·653	20th	·268	43·7	63·4	+4·6	31·5	+1·4	47·5	+3·0	31·9	73·6	3rd	25·5	31st	48·1
		Srinagar	5,204	24·974	—·007		25·084	10th	24·816	4th	·268	50·2	73·4	+4·0	43·9	+4·1	58·7	+4·1	29·5	84·3	2nd	37·1	31st	47·7
		Skardu		22·963			23·091	10th	22·766	20th	·325	50·1	69·1		42·7		55·9		26·4	81·5	2nd	36·1	28th & 31st.	45·4
		Dras		20·885			20·984	1st	20·729	20th	·255	40·8	62·6		27·3		45·0		35·3	73·9	3rd	19·6	31st	54·3
		Gilgit		25·217			25·385	10th	24·976	3rd	·409	59·3	74·3		53·0		63·7		21·3	92·5	3rd	45·7	16th	46·8
		Chitral		24·447			24·525	4 days	24·300	19th	·225	52·7	77·4*		47·4		62·3*		30·0	92·2	1st & 2nd.	39·4	31st	52·8
		Killa Drosh										55·9	76·8		53·2		65·0		23·6	94·2	1st & 2nd.	47·1	31st	47·1
		Para Chinar	6,000	24·531			24·642	31st	24·385	20th	·257	62·9	75·8		50·9		63·4		24·9	87·7	2nd	44·4	31st	43·3
		Cherat		25·752	+·004		25·862	31st	25·620	7th	·242	66·8	79·7	+1·1	59·7	+2·4	69·7	+1·8	20·0	92·4	2nd	51·0	26th	41·4

* Mean of 28 days.

I—*continued.*

***stations in India, Burma, etc., in October, 1901*—continued.**

Wind Direction. Number of winds from: Calm	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st Oct. to 31st Oct. 1901.	Normal rainfall for period, 1st Oct. to 31st Oct.	Variation from normal of period, 1st Oct. to 31st Oct.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																				4·95	7·64	−2·68					**XI.—South India.**		
	3	3		3	4	14	1	3	S 45° W	9·4	10·0			75	·845	3·0	5	7·50	−2·50	4·90	6·86	−1·96	4·90	6·86	−1·96	3·86	Pamban	Madras (South).	57
	5	2		2	1	4	8	9	N 80° W	5·1	4·9			70	·805	3·7	2	7·30	−5·30	0·70	6·01	−5·31	0·70	6·01	−5·31	0·26	Tinnevelly.		
12	9	2						8	N 15° W	1·2	1·2	2·9	−59	72	·782	4·3	8	9·73	−1·73	3·34	8·21	−4·87	3·34	8·21	−4·87	0·93	Madura.		
15	4	3	1	1	5		1	1	N 63° E	1·8	2·0			76	·728	4·5	12			4·85			4·85			0·75	Periyakulam.		
19					2	7	3		S 49° W	1·9	1·7	2·8	−39	79	·780	5·3	8	11·36	−3·36	4·47	6·89	−2·42	4·47	6·89	−2·42	2·48	Salem	Madras (South Central).	36
		4	1	4	10	12			S 50° W	3·1	2·8	3·5	−20	84	·779	5·5	6	8·91	−2·91	2·53	5·94	−3·41	2·53	5·94	−3·41	1·20	Coimbatore.		
14		2	6				6	3	N 11° W	4·5	4·2	3·6	+17	92	·601	7·9	14	13·50	+0·50	11·83	9·60	+2·23	11·83	9·60	+2·23	2·89	Mercara	Coorg.	35
1	3	2	2	1	1	9	9	3	S 83° W	4·9	4·3			78	·654	5·8	7			3·93	4·99	−1·06	3·93	4·99	−1·06	1·28	Chitaldroog	Mysore.	36
	1	3	2			4	17	4	N 81° W	5·7	5·0	4·0	+25	83	·638	6·2	11	10·00	+1·00	4·74	7·15	−2·41	4·74	7·15	−2·41	0·95	Bangalore.		
	1	6	7	2		2	7	6	N	2·3	2·0			81	·629	6·3	12			7·08	5·68	+1·40	7·08	5·68	+1·40	1·29	Hassan.		
	4	3	1		2	7	9	5	N 79° W	5·8	6·3			83	·652	7·4	14			11·25	6·61	+4·64	11·25	6·61	+4·64	1·89	Mysore.		
4	1	5		2	2	12	5		S 49° W	5·6	4·9	3·7	+32	82	·913	5·5	6	10·82	−4·82	3·99	10·59	−6·60	3·99	10·59	−6·60	2·85	Negapatam	Madras, East Coast, South.	56
31									Calm	0·3	0·4			81	·865	5·7	6	9·40	−3·40	3·52	8·67	−5·15	3·52	8·67	−5·15	1·36	Cuddalore.		
12		1				1	15	2	N 85° W	4·2		3·8	+11	79	·803	4·9	5	10·00	−5·00	5·60	7·49	−1·89	5·60	7·49	−1·89	2·19	Trichinopoly.		
	5		1	1	3	5	6	5	S 72° W	3·8		5·0	−24	83	·889	5·4	9	12·09	−3·09	8·87	11·00	−2·13	8·87	11·00	−2·13	2·63	Madras.		
27		2		1	1				S 82° E	2·0	2·0			80	·812	3·6	4			7·76			7·76			5·62	Vellore.		
6				3	4		8	10	N 86° W	3·5				76	·851	5·7	5	8·90	−3·90	4·47	9·04	−4·57	4·47	9·04	−4·57	1·73	Nellore	Madras, East Coast, Central.	55
4	8	2		1	1	2	3	10	N 35° W	4·7		4·4	+ 7	83	·905	5·1	7	9·91	−2·91	7·12	9·34	−2·22	7·12	9·34	−2·22	4·40	Masulipatam.		
	1	4	6	3	1	2	5	9	N 19° W					65	·732	4·5	4	6·80	−2·80	2·08	6·33	−4·25	2·08	6·33	−4·25	1·22	Cuddapah	Madras, Central	54
29							1	1	N 66° W					72	·673	4·0	5	7·00	−2·00	1·38	5·03	−3·65	1·38	5·03	−3·65	0·65	Kurnool.		
16							3	12	N 54° W	4·8	5·1	4·3	+19	57	·570	6·0	5	6·73	−1·73	3·27	4·29	−1·02	3·27	4·29	−1·02	2·22	Bellary.		
1	7	5			1	3	4	10	N 34° W	6·1	5·1			81	·846	5·1	10	10·00	0	8·32	10·36	−2·04	8·32	10·36	−2·04	2·83	Cocanada	Madras, East Coast, North.	52
4	3	7	1	2		1	12	1	N 44° W	8·3				75	·804	5·6	10			7·90	10·54	−2·64	7·90	10·54	−2·64	2·93	Waltair (Vizag).		
	15	1		1				14	N 19° W	8·8	8·6	6·3	+37	83	·849	1·8	7	9·44	−2·44	4·66	9·35	−4·69	4·66	9·35	−4·69	1·85	Gopalpur.		
																											XII.—Hill Stations.		
																0				0	0·06	−0·06	0	0·06	−0·06	0	Pishin.	Baluchistan.	48
31									Calm	0·8	0·8	3·0	−73	44	·207	0	0	0·18	−0·18	0	0·07	−0·07	0	0·07	−0·07	0	Quetta.		
	12		9		9		1		N 66° E					40	·196	0	0			0	0·07	−0·07	0	0·07	−0·07	0	Kalat.		
2			8	16	1	4			S 48° E	3·4†	3·6†			33	·193	0·5	0			0	0·09	−0·09	0	0·09	−0·09	0	Chaman.		
	3	15	11				2		N 55° E	3·1				38	·106	1·1	0			0	0·31	−0·31	0	0·31	−0·31	0	Leh	Punjab.	38
13				5	9		2	2	S 1° E	2·4	2·6			87	·317	2·0	1			0·79	0·63	+0·16	0·79	0·63	+0·16	0·76	Srinagar.		
11	1	5	4			6	3	1	N 22° W	5·6	6·7			68	·244	2·8	0			0·07	0·02	+0·05	0·07	0·02	+0·05	0·07	Skardu.		
25				1	1	2	2		S 41° W	5·6	5·8			50	·124	1·8	1			0·25	1·64	−1·39	0·25	1·64	−1·39	0·20	Dras.		
24			1	1		3	2		S 34° W	3·7	3·3			52	·261	4·5	4			1·52	0·16	+1·36	1·52	0·16	+1·36	0·62	Gilgit.		
28	1		1				1		N					[illegible]	·291	3·4	4			1·70			1·70			0·78	Chitral.		
28			2		1	1	1		S 2° E					[illegible]	·237	2·7	3			1·58			1·58			0·99	Killa Drosh.		
6	9	3	2				2	8	N 13° W					36	·208	2·7	3			0·72			0·72			0·41	Para Chinar.		
	12	4		1	4	2	1	7	N 15° W	8·7	7·9			42	·277	1·5	2			1·24	0·10	+1·14	1·24	0·10	+1·14	0·34	Chorat.		

† Mean of 2½ days.

Table

Abstract of Observations taken at 8 A.M. at 22

Number of District.	Meteorological Province or District.	Station.	Elevation of barometern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
20	Punjab—*concld.*	Murree	6,333	23·911	+·003		23·999	30th	23·797	7th	·202	61·9	70·2	+1·0	59·5	+6·4	64·9	+3·7	10·7	77·2	2nd	52·9	31st	24·3
		Poe											72·8		45·2		59·1		27·6	80·3	2nd	40·8	31st	39·5
		Simla	7,228	23·187	+·007		23·268	15th	23·076	20th	·192	56·9	64·8	+2·2	53·5	+2·6	59·2	+2·4	11·3	68·9	2nd	48·1	6th	20·8
25	North-Western Provinces.	Chakrata	7,022	23·334	+·007		23·421	15th	23·209	7th	·212	57·9	69·5	+3·5	53·5	+2·8	61·5	+3·2	16·0	73·7	19th	49·7	23rd & 27th	24·0
		Mussooree	6,705	23·613	+·026		23·704	15th	23·498	20th	·206	59·8	67·1	+2·9	54·3	+2·7	60·7	+2·8	12·8	69·8	13th	50·0	27th	19·8
		Ranikhet	6,069	24·155	+·006		24·241	15th	24·027	7th	·214	61·4	70·7	+1·5	57·0	+2·9	63·9	+2·2	13·7	74·0	9th & 19th	53·0	25th	21·0
		Muktesar		22·912			22·996	15th	22·796	20th	·200	59·3	68·2		52·1		60·2		16·1	70·7	19th	46·8	26th	23·9
19	Bengal	Yatung	10,480?										58·9		39·5		49·2		19·4	63·1	1st	34·9	15th	28·2
		Darjeeling	7,376	23·063	−·021		23·145	15th	22·945	20th	·200	56·4	62·4	+1·6	51·6	+2·6	57·0	+2·1	10·8	68·7	1st	49·1	5 days	19·6
		Gangtok	5,660	24·446			24·469	26th & 28th	24·425	4th	·044	61·8	71·5		40·2		55·8		31·3	77·2	1st	37·0	26th & 31st.	40·2
	Central India	Mount Abu	3,945	26·087	−·030		26·188	27th	25·990	4th	·198	73·7	81·2	+2·3	67·6	+3·4	74·4	+2·9	13·6	85·7	3rd	63·9	9th	21·8
		Pachmarhi	3,528	26·484	−·009		26·596	29th	26·366	7th	·230	74·1	82·3	+5·0	60·8	+0·9	71·6	+3·0	21·5	84·7	5th & 23rd	54·2	25th	30·5
	South India	Wellington	6,200	24·260	−·002		24·323	27th	24·175	6th	·148	63·3	70·8	+2·3	54·3	−0·7	62·6	+0·8	16·5	74·2	23rd	46·7	29th & 30th	27·5
		Ootacamund		23·065			23·129	27th	22·987	6th	·142	58·5	64·2		50·5		57·4		13·7	68·0	23rd	39·2	30th	28·8
		Kodai Kanal	7,688	22·833			22·892	27th	22·754	6th	·138	54·5	62·8		51·9		55·7		10·9	67·0	22nd	43·2	29th	18·8
	XIII.—Extra India.																							
	Ceylon	Trincomalee	12	29·907	+·008	29·845	29·978	18th	29·809	7th	·169	80·5	90·3	P	76·5	+1·3	83·4	P	13·8	94·0	17th	174·0	20th	20·0
		Colombo	40	29·916	+·001	29·882	29·972	18th & 24th.	29·860	7th	·112	81·5	87·8	+2·3	76·9	+1·6	82·4	+2·0	10·9	92·0	23rd	73·0	28th	19·0
	Persia	Meshed	3,104	† ¶ 26·135			25·280	29th	26·020	13th	·260	47·0 ¶ 55·3	69·8¶		40·7 47·4¶		58·7¶		22·4	83·5	9th	32·0 4 days. 35·0	29rd	48·5
		Teheran		‖ ¶ 24·927 †			25·060	29th	24·800	25th	·260													
		Ispahan		24·416			24·550	17th & 29th	24·250	6th	·300	57·5	77·7		45·8		61·8		31·9	98·5	8th	28·1	29th	70·4
		Bushire	14	29·938	−·003	29·911	30·143	31st	29·762	5th	·381	78·9	88·3	+0·4	72·9	+2·2	80·6	+1·3	15·4	97·0	13th	58·2	28th & 29th.	38·8
		Bahrein	30	29·951			30·118	31st	29·774	5th	·344	83·9	90·2		79·1		84·7		11·1	104·7	6th	72·6	28th	32·1
		Jask§		29·942	+·008	29·911	30·102	31st	29·784	7th	·318	82·3	90·3	−0·4	75·1	−0·3	82·7	−0·4	15·2	98·8	4th	65·2	18th	33·6
		Muscat	20	29·905		29·873	30·052	31st	29·762	3rd	·290	83·2	85·2		80·6		82·9		4·6	99·8	14th	77·1	23rd	22·7
	Arabia	Baghdad	220	29·853	+·028	30·053	30·035	27th	29·612	4th	·423	69·1	93·8	+0·1	63·2	+1·1	78·5	+0·6	30·6	107·2	4th	49·5	28th	57·7
		Bussrah		29·986			30·202	31st	29·780	5th	·422		89·1		68·4		78·8		20·7	101·4	5th	52·5	29th & 30th	48·9
		Aden	94	29·866	−·007	29·892	29·941	19th	29·741	7th	·200	81·4	88·3	−2·9	76·6	−0·5	82·4	−1·7	11·7	93·3	18th	69·9	13th	23·4
		Perim	201	29·740		29·873	29·799	19th	29·636	7th	·163	84·3	90·4		80·0		85·3		10·4	93·1	8th	78·2	13th & 24th.	14·9
	Afghanistan	Kabul										51·5	81·4		44·0		62·7		37·4	94·1	2nd & 3rd	35·8	16th & 30th	58·3
	Central Asia	Kashgar		25·689			26·120	31st	25·406	8th	·724	49·5	66·1		43·4		54·8		22·7	86·2	3rd	29·3	24th	56·9
	Arabian Sea Islands	Amini Devi	13	29·925		29·866	29·986	23rd	29·842	4th	·144	82·5	86·2		77·0		81·6		9·2	90·1	19th	72·5	30th	17·6
		Minicoy	7	29·554		29·886	30·020	24th	29·882	4th	·138	81·8	86·5							91·0	26th			
	Africa	Zanzibar	73	30·039	+·028	30·040	30·099	15th	29·983	13th	·116	77·3 ‡	82·8		74·5		78·6		8·3	86·2	25th	72·7	28th	13·5
		Do. Dunga		29·963			30·026	9th	29·899	29th	·127	74·5	85·8‡		65·2‡		75·5‡		20·6	90·4	25th	60·4	22nd	30·0

Note.—When a query is inserted against any reading or in the variation returns for any station, the data for that

* Mean of 28 days. † Aneroid uncorrected. ‡ Mean of 29 days. § Observations of 30 days.

I—*concluded.*

stations in India, Burma, etc., in October, 1901—concluded.

Wind Direction. Number of winds from: Calm	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind velocity. Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st Oct. to 31st Oct. 1901.	Normal rainfall for period, 1st Oct. to 31st Oct.	Variation from normal of period, 1st Oct. to 31st Oct.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
21	1			4	3	1		1	S 11° E	3·3	4·0	5·7	−30	42	·238	1·8	2	2·45	−0·45	0·82	1·65	−0·83	0·82	1·65	−0·83	0·61	Murree.	Punjab—*contd.*	30
27		1		1				2	N							0·4	0			0	0·75	−0·75	0	0·75	−0·75	0	Poo.		
1	15	2	1	2	1			9	N 8° W	6·0		2·5	+140	43	·202	0·1	0	1·27	−1·27	0·08	1·22	−1·14	0·08	1·22	−1·14	0·08	Simla.		
3	22		1	2	3				N 6° E	8·3		5·1	+63	58	·281	0·7	0			0	0·84	−0·84	0	0·84	−0·84	0	Chakrata .	North-Western Provinces.	25
12	2			9	1			7	S 72° E					55	·291	1·0	2	1·40	+0·60	0·62¶	1·04	−0·42	0·62	1·04	−0·42	0·38	Mussooree.		
20		1	3	2		2		3	E	2·2	2·5	1·7	+47	71	·390	1·8	1	1·09	−0·09	1·38	1·48	−0·10	1·38	1·48	−0·10	1·38	Ranikhet.		
3		2		13	2	1		10	S 45° E	5·1	4·7			57	·294	1·0	1			0·16			0·16			0·15	Muktesar.		
																	2			0·41	2·49	−2·08	0·41	2·49	−2·08	0·24	Yatung .	Bengal.	13
10	2	2	4	2		2	4	5	N 27° W	3·0	2·8	2·6	+ 8	89	·410	4·6¶	3	4·92	−1·92	4·98	5·83	−0·85	4·98	5·83	−0·85	2·30	Darjeeling.		
	1	8	2	7	1	8	1	3	S 53° E	1·6	1·9			86	·478	4·9	9			3·10	6·89	−3·79	3·10	6·89	−3·79	0·73	Gangtok.		
5	2	3	1		1	10	6	3	S 82° W	6·7	7·0	4·0	+75	44	·365	1·4	1	0·60	+0·40	0·26	0·71	−0·45	0·26	0·71	−0·45	0·25	Mount Abu.	Central India.	
22	2	1	2	1	1			2	N 41° E	2·8	2·9	2·9	0	55	·459	1·9	2	4·27	−2·27	0·41	2·63	−2·22	0·41	2·63	−2·22	0·27	Pachmarhi.		
23	2	2		1	1			2	N 13° E	2·1		2·6	−21	76	·447	4·7	13	15·89	−2·89	6·77	12·10	−5·33	6·77	12·10	−5·33	1·59	Wellington .	South India.	
25	2		2	2					N 72° E	1·0	0·9			78	·384	4·9	16			11·51			11·51			3·36	Ootacamund.		
1	1	6	6	1	1		1	14	N 1° W	11·3				80	·383	4·2	12			7·10			7·10			1·81	Kodai Kanal.		
																											XIII.—Extra India.		
3						28			S 45° W	9·4				87	·911	2·8	7			3·26	9·96	−6·70	3·26	9·96	−6·70	0·73	Trincomalee	Ceylon.	
1		2	2	2	5	16	3		S 30° W	6·6		7·3	−10	82	·891	5·5	8			4·48	13·51	−9·03	4·48	13·51	−9·03	1·11	Colombo		
														62	·204	3·2‖	3			0·89	0·79	+0·10	0·89	0·79	+0·10	0·47	Meshed .	Persia.	
	2	12	2	2		2		3	N 39° E	2·4°°	3·1°°			50¶	·227¶	1·9¶	1			0·41	0·17	+0·24	0·41	0·17	+0·24	0·28	Teheran.		
28		1					1	1	N 45° W	3·0	3·9			56	·267	0·9	1			0·25	0·30	−0·05	0·25	0·30	−0·05	0·25	Ispahan.		
1	5	12	3	5				5	N 40° E	6·9	8·2	6·5	+26	59	·599	0·3	0			0	0·20	−0·20	0	0·20	−0·20	0	Bushire.		
1	3	6		2	2	3	6	8	N 49° W					80	·939		0			0			0			0	Bahrein.		
10	7	2	8	1				2	N 41° E	9·1	10·6			70	·788	0·4	0			0	0·04	−0·04	0	0·04	−0·04	0	Jask.		
		3		18				10	S 63° E	3·7	3·9			67	·765	0·6	0			0	0·04	−0·04	0	0·04	−0·04	0	Muscat		
9	9	3	2		1		1	6	N 4° W	2·6	3·4			46	·341	2·6	0			0	0·04	−0·04	0	0·04	−0·04	0	Baghdad.	Arabia.	
																				0			0			0	Bussrah		
7		21		1		1		1	N 45° E	12·6	12·3	12·2	+ 1	71	·764	1·3	0			0	0·02	−0·02	0	0·02	−0·02	0	Aden.		
			15	14	1	1			S 63° E	20·8	18·7			74	·878	0·8	0			0	0·09	−0·09	0	0·09	−0·09	0	Perim.		
		3	2	11	8	5	2		S 19° E					48	·189	0·6	0			0·03	0·03	0	0·03	0·03	0	0·03	Kabul .	Afghanistan.	
27									Calm					56	·198	2·0°	0			0	0·07	−0·07		0·07	−0·07	0	Kashgar .	Central Asia.	
3	10	1		1			1	15	N 25° W					79	·879	5·6	10			4·61			4·61			0·81	Amini Devi.	Arabian Sea Islands.	
	2			1	1		13	14	N 66° W	6·1	6·5‖			78	·849	3·7	10			7·23			7·23			2·64	Minicoy.		
1			1	6	17	6			S 2° E	6·5‖	6·1			85	·801	6·5	7			2·16	3·72	−1·56	2·16	3·72	−1·56	0·50	Zanzibar .	Africa.	
6	1		1	9	7	2	1	2	S 18° E	5·5°	5·4°			90‡	·777‡	4·9°	10			3·77			3·77			0·92	Do. Dunga		

station, are not utilized in calculating the provincial variations.

‖ Mountain barometer uncorrected.

¶ Mean of 23 days.

°° Mean of 22 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Burma Coast and Bay Islands.	Port Blair		29·850	29·749	·101	29·798	−·011	29·790	85·6	76·9‡	8·7	88·7	73·8	14·9	83·0	82·2	80·0‡	−0·2	74·9	79·1	78·2	77·4
	Rangoon		·864	·743	·121	·809	−·038	·786	86·4	75·7	10·7	91·3	73·2	18·1	80·8	82·9	79·3	−0·5	74·7	76·8	77·3	76·3
	Diamond Island		·855	·747	·108	·799	−·045	·775	84·9	78·1	6·8	90·2	76·1	14·1	83·5	82·3	80·4	+0·4	75·0	79·2	77·8	77·3
	Cocos Island	111	·824	·729	·095	·775	P	·818	85·7	77·6	8·1	89·2	73·2	16·0	83·3	81·9	80·2	+0·4	74·9	78·8	77·6	77·1
	Akyab		·866	·752	·114	·810	−·044	·773	87·6	77·5	10·1	90·4	74·0	16·4	83·6	84·6	81·8	+0·5	76·4	80·4	81·3	79·4
Bengal and Orissa.	Chittagong		·791	·673	·118	·732	−·055	·767	86·9	73·7	13·2	90·9	67·1	23·8	83·4	84·6	79·8	+0·8	73·3	78·2	78·4	76·6
	Calcutta (Alipore)		·855	·745	·110	·795	−·041	·762	89·3	75·5	13·8	93·5	69·8	23·7	85·7	87·0	82·1	+2·1	74·4	78·3	78·0	76·9
	Saugor Island		·850	·740	·110	·790	−·040	·760	89·0	76·8	12·2	91·9	67·6	24·3	85·5	86·0	81·7	+1·5	74·5	79·8	78·9	77·7
	False Point		·855	·749	·106	·800	−·047	·763	88·7	76·1	12·6	94·3	70·1	24·2	86·4	86·5	81·3	+1·5	75·4	78·9	79·1	77·8
Gangetic Plain and Chota Nagpur.	Hazaribagh		27·888	27·786	·102	27·839	−·029	·778	86·0	69·0	17·0	88·2	64·2	24·0	81·5	82·5	76·2	+2·7	64·9	69·1	68·4	67·5
	Darbhanga		29·711	29·587	·124	29·645	−·069	·763	90·9	74·6	16·3	93·8	66·2	27·6	86·8	89·6	82·1	+2·8	72·7	77·2	76·6	75·5
	Allahabad		·563	·441	·122	·496	−·059	·756	93·3	68·8	24·5	95·6	60·4	35·2	86·4	92·1	80·1	+1·5	67·0	74·8	74·8	72·2
Upper Sub-Himalayas.	Dehra Dun		27·667	27·582	·085	27·613	−·039	·799	83·7	61·6	22·1	86·7	54·8	31·9	76·5	79·3	71·2	+0·6	58·0	67·0	67·8	64·3
	Roorkee		28·989	28·883	·106	28·925	−·039	·776	89·8	62·0	27·8	94·5	54·1	40·1	80·8	87·2	74·9	+0·8	60·8	69·6	68·7	66·4
	Meerut		29·127	29·024	·103	29·069	−·045	·768	93·3	64·3	29·0	97·3	57·5	39·8	80·9	90·5	77·7	+2·1	60·8	67·8	69·3	66·0
	Lahore		·161	·067	·094	·107	−·043	·769	97·1	64·2	32·9	104·4	57·8	46·6	85·6	95·5	79·5	+5·0	58·5	68·5	71·0	66·0
	Ludhiana		·065	28·964	·101	·007	−·035	·781	93·7	65·6	28·1	99·4	60·2	39·2	83·1	91·2	78·5	+3·3	60·1	67·4	68·8	65·4
Indus Valley and N.-W. Rajputana.	Peshawar		28·788	·685	·103	28·730	−·049	·821	88·9	60·3	28·6	101·0	54·0	47·0	80·7	85·5	73·1	+2·2	55·2	65·9	67·3	62·8
	Jacobabad		29·688	29·571	·117	29·622	−·044	·764	102·5	65·3	37·2	108·6	55·5	53·1	90·3	96·2	82·1	+3·6	58·5	70·4†	73·8†	67·6
	Kurrachee		·838	·700	·098	·840	−·032	·820	92·6	73·9	18·7	101·2	64·2	40·0	86·9	86·9	81·8	+2·1	69·9	74·5	76·8	73·7
E. Rajputana, Central India, and Gujarat.	Jaipur		28·494	28·378	·106	28·425	−·033	·789	97·5	69·3	28·2	103·3	63·0	40·3	89·4	95·0	81·7	+5·5	60·4	69·4	70·5	66·8
	Udaipur		·005†	27·859†	·106	27·952		·792	94·3†	68·1§	26·2	96·3	61·5	34·8	88·4†	92·1†	80·6§		62·2§	69·4†	70·7†	67·4
	Deesa		29·447	29·326	·121	29·380	−·035	·790	100·5	72·6	27·9	106·3	67·3	39·0	91·5	98·6	86·3	+5·6	62·7	71·5	71·2	68·4
	Jamnagar		·866	·761	·105	·813		·820	94·0	71·4	22·6	99·7	66·4	33·3	87·9	90·9	81·9		67·9	73·9	74·4	72·1
Deccan.	Belgaum		27·389	27·279	·110	27·333	−·007	·773	84·3	65·1	19·2	88·4	59·2	29·2	78·9	78·6	72·9	+0·6	64·1	69·5	69·5	67·7
	Sholapur		28·319	28·185	·134	28·255	−·024	·764	92·5	69·4	24·1	97·0	62·3	34·7	85·7	90·6	80·1	+2·9	63·0	70·3	69·2	67·5
	Poona		·084	27·965	·119	·028	−·016	·785	91·9	66·1	25·8	95·5	57·4	38·1	83·3	88·4	78·0	+1·9	65·4	69·7	70·3	68·4
	Akola		·982	28·853	·129	·913	−·023	·784	95·0	65·8	29·2	99·0	57·6	41·4	86·5	93·1	80·7	+2·3	62·9	71·9	71·0	68·6
	Buldana	2,132	27·796	27·687	·109	27·737	−·018	·784	87·9	70·0	17·9	91·3	63·6	27·7	82·4	85·4	79·1	+2·5	62·2	68·6	67·3	66·0
	Khandwa		28·864	28·734	·130	28·795	−·031	·776	98·9	68·8	30·1	102·2	60·1	42·1	88·7	96·5	82·7	+5·8	62·2	71·4	71·9	68·5
	Nagpur		·865	·744	·121	·801	−·023	·768	93·9	69·1	24·8	96·9	61·1	35·8	85·5	91·2	81·6	+2·8	64·2	71·5	70·6	68·8
	Do. (Sanitary Commr.'s Office).		·891	·769	·122	·826		·783	94·9	69·3	25·6	97·5	61·1	36·4	87·5	92·2	81·4		65·7	74·0	73·9	71·2
	Hyderabad (Deccan).		·213	·093	·120	·151	−·022	·765	89·8	69·2	20·6	94·1	60·4	33·7	84·3	86·2	78·6	+1·7		71·7	71·0	
West Coast.	Bombay		29·904	29·791	·113	29·844	+·002	·821	87·4	77·0	10·4	93·2	74·5	18·7	82·3	84·1	81·3	+0·2	74·9	77·2	78·3	76·8
	Karwar		·929¶	·811¶	·118	·866	P	·842¶	84·7	74·3	10·4	89·7	68·7	21·0	80·4	83·0	79·0	+0·6	73·0	75·3	76·5	74·9

† Mean of 30 days. ‡ Mean of 28 days § Mean of 29days..

II.

66 stations in India, Burma, etc., in October, 1901.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from											Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
·852‡	·854	·814	·907	−·004	92‡	84	83	86	0	6·8	7·8	7·3	+1·3	3	1	2	1	5	7	16	20	7	S. 64° W.	S. 1° W.	% 55	% 25	178	150			Port Blair .	Burma Coast and Bay Islands.
·847	·874	·866	·862	−·026	95	82	77	85	+ 1	8·6	7·9	8·3	+2·4		4	10	9	11	11	5	6	4	S. 53° E.	S. 36° E.	23	28	76§	74			Rangoon .	
·821	·942	·892	·885	+·018	86	82	81	83	0	6·6	7·2	6·9	+1·2	3	3	4	9	13	11	7	4	8	S. 25° E.	S. 56° E.	24	17	181°	173			Diamond Island, Cocos Island	
·830	·926	·888	·881	+·001	87	81	82	83	0	6·7	7·3	7·0	+1·8	2	3	6	5	7	13	12	7	7	S. 23° W.	S 67° E.	26	13	132	?	11·65	2·10		
·896	1·032	1·031	·986	+·103	95	86	87	89	+ 6	4·6	3·9	4·3	−0·5	4	2	12	8	7	9	4	2	14	N. 83° E.	S. 64° E.	13	8	20°	59			Akyab .	
·818	·898	·891	·869	+·021	98	78	75	84	+ 1	4·9	4·8	4·9	+0·5		6	14	5	8	5	1	4	19	N. 7° E.	N. 11° W.	29	13	78°	66			Chittagong .	
·839	·872	·844	·852	+·033	84	70	66	77	− 4	3·6	3·7	3·7	−0·4	4	8	5	5	5	2	10	7	16	N. 52° W.	N. 44° W.	27	11	57	67			Calcutta (Alipore), Saugor Island, False Point	Bengal and Orissa.
·833	·942	·895	·890	+·033	90	77	72	80	− 1	4·3	5·5	4·9	+0·2		11	10	2	3	1	7	9	19	N. 35° W.	N. 8° W.	45	13	134	174				
·875†	·893	·898	·889	+·064	97	71	71	80	+ 1	5·5	5·5	5·5	+0·7	1	12	7	12	7	5	5	6	7	N. 42° E.	N. 50° E.	18	22	124°	145				
·573	·565	·526	·555	+·016	79	52	48	60	− 4	3·7	4·8	4·3	−0·1	4	15	5	9	4	3	4	4	14	N. 4° W.	N. 35° W.	32	24	131°	124			Hazaribagh .	Gangetic Plain and Chota Nagpur.
·784	·807	·745	·779	+·022	91	63	53	69	− 6	1·0	0·6	0·8	−1·8	38	2	1	10	9	1			1	S. 77° E.	S. 4° W.	27	1	19	52			Darbhanga .	
·650	·716	·637	·668	+·048	91	56	42	63	− 3	1·5	1·3	1·4	−0·4	5	5	4	7	1	4	5	13	18	N. 57° W.	N. 49° W.	36	18	73°	66			Allahabad .	
·447	·551	·546	·515	+·065	80	60	54	65	+ 3	0·8	1·0	0·9	−0·3	35	3	1	2	1	4	1	1	10	N. 57° W.	N. 39° W.	16	21	11	33			Dehra Dun .	Upper Sub-Himalayas.
·527	·582	·462	·524	+·030	93	55	36	61	+ 3	0·5	0·3	0·4	−0·5	34	1	1		11	5			10	S. 20° E.	S. 6° E.	6	6	33	31			Roorkee .	
·495	·511	·443	·483	−·010	80	48	31	53	− 4	0·4	0·6	0·5	−0·2	36	1	1				2	13	9	N. 72° W.	N. 55° W.	34	25	21°	31			Meerut .	
·424	·471	·435	·443	+·001	70	38	26	45	− 2	0·2	0·3	0·3	−0·4	29	5		4	4	5	2	6	7	N. 83° W.	N. 7° W. ¶	10	11	25	39			Lahore .	
·454	·420	·411	·445	−·019	71	41	28	47	− 6	0·3	0·4	0·4	−0·6	14		5	1	7		4	16	15	N. 72° W.	N. 39° W.	34	22	44°	26			Ludhiana .	
·383	·464	·454	·424	+·071	71	44	37	51	+ 4	1·4	1·4	1·4	−0·1	37	9	4	4	4	1	1		2	N. 40° E.	N. 52° E.	18	33	32°	60			Peshawar .	Indus Valley and N.W. Rajputana.
·411	·487††	·506†	·468	+·049	65	34†	27††	42	0	0·4	0·2	0·4	0	33	7			1	10	3	2	6	S. 78° W.	S. 27° E.	12	9	42°	54			Jacobabad .	
·691	·694	·793	·726	+·080	81	56	63	67	+ 4	0·9	0·5	0·7	−0·2	2	2	4		1	3	27	22	1	S. 66° W.	S. 72° W.	68	61	214°	235			Kurrachee .	
·422	·473	·444	·446	+·040	58	25	27	40	− 3	0·9	1·9	1·4	−0·3	4	2	6			1	11	22	16	N. 77° W.	N. 22° W.	61	37	67	77			Jaipur .	E. Rajputana, Central India and Gujarat.
·490§	·487††	·490†	·489		71§	37†	33†	47		1·3	2·1	1·7		9	5	5	8	3	2	6	15	7	N. 64° W.		20		** 63°				Udaipur .	
·446	·508	·398	·451	+·011	55	35	22	37	−5	1·1	1·3	1·2	−0·6		6	5	3	3	6	12	16	11	N. 38° W.	N. 32° E.	38	12	156	161			Deesa .	
·640	·654	·633	·642		83	50	44	59		1·1	0·9	1·0			2	2	1	2	4	8	29	14	N. 87° W.		66		136°				Jamnagar .	
·591	·605	·612	·603	+·014	95	61	65	74	+ 2	2·7	6·1	4·4	−1·2		5	11	11	2	4	14	7	8	N. 27° W.	N. 54° E.	63	13	241	241			Belgaum .	Deccan.
·506	·554	·452	·504	−·075	70	46	34	50	−12	2·7	5·9	4·3	−1·6	2	13	21	5	6		10		5	N. 30° E.	N. 55° E.	39	22	248°	193			Sholapur .	
·622	·557	·518	·566	+·017	96	42	40	62	+ 2	2·3	4·3	3·6	−1·3	2	1	6		5		8	22	18	N. 75° W.	N. 37° E.	54	19	202°	139			Poona .	
·546	·591	·467	·535	−·036	85	47	32	55	− 5	2·0	2·4	2·2	−1·0	20	4	8	6	1	1	1	2	19	N. 10° W.	N. 16° E.	34	22	°	83			Akola .	
·469	·531	·449	·483	−·040	64	42	39	51	− 8	1·9	2·5	2·2	−1·5	4	18	4	5	6	2			4	N. 62° W.	N. 24° E.	46	40	139¶	125	6·10	5·10	Buldana .	
·490	·552	·471	·505	−·035	68	41	29	46	−11	1·4	2·8	2·1	−0·3	3	4	13	8	8	6	2	3	15	N. 27° E.	N. 22° E.	21	26	112	71			Khandwa .	
·549	·603	·496	·549	−·032	76	49	34	53	− 7	2·7	4·0	3·4	− 4	1	36	11	1	2	4	2	1	4	N. 7° E.	N. 37° E.	64	49	115	102			Nagpur .	
·600	·675	·613	·629		82	52	41	58		2·0	3·5	2·8		13		10		5	4			30	N. 27° W.		37		29°				Do. (Sanitary Commr.'s Office).	
	·625	·574				53	47			2·9	4·3	3·6	−0·7	33	1	7	6	6	2			4	3	N. 78° E.	S. 80° E.	14	33	98°	96			Hyderabad (Deccan).	
·840	·876	·895	·870	+·030	90	79	76	82	+ 2	2·8	2·6	2·7	−1·4		2	5	6	5	5	2	11	26	N. 52° W.	N. 14° E.	37	33	192	226			Bombay .	West Coast.
·797	·810	·825	·811	−·004	94	78	74	82	− 1	2·8	3·5	3·2	−1·3	10	4		1			2	28	17	N. 70° W.	N. 76° W.	59	63	65	54			Karwar . .	

‖ Mean of 18 days. ¶ Mean of 20 days. ** Mean of 29½ days. * Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to M.S.L., and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
South India.	Periyakulam		28·958	28·838	·120	28·909			88·7	70·9	17·8	92·4	66·9	25·5	83·3	84·7	78·6		58·9	73·8	74·7	72·3
	Salem		·981	·843	·138	·918	−·026	29·787	90·8	72·1	18·7	96·5	64·5	32·0	83·4	87·7	79·6	+1·6	70·8	75·5	76·5	74·3
	Chitaldroog		27·524	27·401	·123	27·465	−·010	·771	85·3	68·4	16·9	87·9	62·9	25·0	79·0	82·8	76·3	+1·2	64·9	71·1	70·6	68·9
	Bangalore		26·942	26·827	·115	26·889	−·017	·782	83·3	65·8	17·5	85·8	60·1	25·7	77·1	79·0	73·5	+1·5	64·4	69·7	68·3	67·5
	Hassan		27·883	27·781	·102	27·836	−·011	·804	80·9	64·2	16·7	82·8	55·5	27·3	76·3	76·8	71·5	+0·1	63·4	68·2	66·1	66·6
	Mysore		·435	·314	·121	·375	−·011	·794	84·6	66·4	18·2	87·3	61·1	26·2	78·0	80·7	74·5	−0·2	65·7	70·1	70·5	68·8
	Madras		29·872	29·754	·127	29·816	−·022	·767	90·4	75·3	15·1	97·3	69·4	27·9	85·7	86·0	82·1	+1·0		78·0	78·4	77·4
	Bellary		28·434	28·295	·139	28·367	−·029	·767	93·1	72·7	20·4	97·0	65·5	31·5	84·5	88·8	81·3	+2·5	66·3	70·0	70·1	68·8
	Waltair		29·653	29·538	·115	29·596		·761	88·2	76·4	11·8	90·8	71·9	18·9	84·7	85·3	81·6		70·5	75·3	76·0	73·9
Hill Stations, Baluchistan.	Quetta		24·739†	24·660†	·079	24·691	+·008		77·0	38·5	38·5	89·1	27·6	61·5	66·9	73·3	56·9	+1·3	35·4	50·2‡	52·7‡	46·1
Hill Stations, Northern India.	Leh		19·807	19·691	·116	19·759	+·027		63·3	31·6	31·7	73·6	25·5	48·1	51·8	59·6	47·5	+4·9	27·2	36·3	39·9	34·5
	Srinagar		24·980	24·872	·108	24·917	−·021		78·3	43·7	29·6	85·0	37·0	48·0	60·3	71·3	58·0	+4·6	41·7	57·3	67·2	55·4
	Kailang	10,087	21·041	20·929	·112	20·993	?		67·8†	33·1†	34·7	76·8	29·5	47·3	55·6†	61·1†	47·4†	+5·0	29·0†	42·3†	43·8†	38·4
	Simla (Ridge)		23·211	23·153	·058	23·173	+·013		64·6	53·4	11·2	68·9	48·1	20·8	60·2	61·6	58·1	+1·9	44·7	48·6	50·1	47·8
	Chakrata		·354	·305	·049	·321	−·006		69·5	53·5	16·0	73·7	49·7	24·0	62·7	62·9	59·7	+2·9	47·3	54·0	54·2	51·8
	Ranikhet		24·171	24·098	·073	24·120	+·001		70·7	57·1	13·6	71·1	53·1	21·0	66·8	68·0	63·0	+2·3	51·1	57·9	58·3	55·8
	Muktesar		22·935	22·869	·066	22·902			68·2	52·1	16·1	70·7	46·8	23·9	63·5	63·0	58·8		45·2†	54·1	54·3	51·2
	Katmandu	4,388	25·573	25·470	·103	25·521	?		82·0	58·2	23·8	84·4	52·6	31·8	75·0	75·7	68·6	+1·7	57·1	65·9	66·5	63·2
	Darjeeling		23·069	22·995	·074	23·031	+·009		62·1	51·6	10·5	67·0	48·9	18·1	58·9	60·6	56·5	+2·1	50·0	56·4	57·9	54·8
Hill Stations, Central India.	Mount Abu		26·104	26·028	·076	26·060	−·034		81·2	67·9	13·3	85·7	64·0	21·7	77·5	79·0	74·0	+3·4	56·1	61·4	62·4	60·0
	Pachmarhi		·499	·407	·092	·449	−·014		82·3	60·7	21·6	84·7	54·4	30·3	78·6	80·4	71·1	+3·4	56·9	63·7	65·6	62·1
	Chikalda	3,642	·368	·269	·099	·314	−·027		81·1	66·6	14·5	84·8	62·9	20·9	76·7	79·1	73·3	+3·2	59·3	64·4	65·8	63·2
Hill Stations, S. India.	Wellington		24·258	24·187	·071	24·223	+·004		70·9	54·3	16·6	74·2	46·6	27·6	67·8	65·0	61·1	+0·3	53·2	61·4	59·9	58·2
	Ootacamund		23·075	22·995	·080	23·035			64·5	50·6	13·9	68·2	39·2	29·0	61·8	58·9	56·1		49·6	56·5	55·8	54·0
	Kodaikanal		22·846	·766	·080	22·803			63·0	51·9	11·1	67·0	48·2	18·8	60·6	57·6	55·7		49·7	56·2	55·3	53·7
Extra India.	Aden		29·876	29·767	·109	29·822	−·004	·847	88·2	76·9	11·3	93·1	72·9	20·2	84·1	85·8	82·1	−0·8	71·3	75·4	74·9	73·9
	Perim		·743	·630	·113	·687	+·013	·820	90·3	80·0	10·3	93·1	78·2	14·9	85·8	87·0	84·3	−0·6	75·2	78·9	78·9	77·7
	Minicoy		·966	·897	·069	·930		·862	86·6			91·0			84·0	83·4				77·6	77·2	
	Zanzibar	15	30·017‡	·931	·116	·969	+·035	·988‡	82·8	74·5	8·3	86·2	72·7	13·5	78·6†	82·2	78·5	−0·6	70·2	74·7†	74·8	73·2
	Port Victoria (Seychelles)	181	·015	·923	·092	·969	+·014	·908	82·1	73·9	8·2	83·1	69·2	13·9	80·3	81·4	77·8	−1·3	72·1	75·5	75·4	74·3
	Mauritius (Pamplemousses)					·965	+·009	30·096				89·0	56·2	32·8			73·4	+1·0				

‡ Mean of 29 days.

† Mean of 30 days.

II.—*concluded.*

66 stations in India, Burma, etc., in October, 1901—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																									%	%						
·682	·715	·728	·708		90	64	62	72		5·1	8·2	6·7		10	12	7	5	5	8	3	5	4	N. 30° E.		11		47*				Periyakulam¶	
·741	·781	·772	·765	+·014	94	68	60	74	− 2	5·0	6·5	5·8	0	33	2		1			11	14	1	S. 76° W.	S. 50° W.	35	29	40*	60			Salem	South India.
·578	·664	·599	·614	+·048	82	67	54	68	+ 3	5·5	5·5	5·5	−0·5	4	4	9	10	1	1	11	13	9	N. 54° W.	N. 28° E.	19	15	103*	143			Chitaldroog	
·592	·646	·570	·603	+·011	93	70	58	74	− 1	4·7	5·9	5·3	−0·5		8	12	4	1	1	7	17	12	N. 43° W.	N. 8° W.	40	8	126*	105			Bangalore	
·578	·597	·590	·588	+·009	96	66	65	76	+ 1	6·0	6·9	6·5	−0·6		2	17	16	7		4	9	7	N. 56° E.	N. 42° E.	32	24	48*	63			Hassan	
·630	·640	·622	·631	+·029	96	67	60	74	+ 3	7·2	7·4	7·3	+0·7		4	9	8	8	2	7	15	9	N. 57° W.	N. 42° E.	13	13	149*	185			Mysore	
	·856	·870	·879	+·046		70	70	80	0	5·7	5·8	5·8	−0·2		14	11	5	9	4	7	5	7	N. 20° E.	N. 55° E.	19	17	97	118			Madras	
·571	·556	·507	·545	−·076	71	47	38	52	−11	7·2	8·0	7·6	+1·1	14	8	13	6	3			5	13	N. 7° E.	N. 42° E.	40	14	122*	104			Bellary	
·674	·757	·780	·737		74	64	65	68		5·2	5·6	5·4			2	17	15	8	5	13	2		S. 75° E.		35		96				Waltair	
·179	·193‡	·186‡	·186	0	76	29‡	23‡	43	+ 2	0·1	0·4	0·3	−0·3	39	1						11	11	N. 65° W.	N. 59° W.	34	44	21*	54			Quetta	Hill Station, Baluchistan.
·114	·085	·081	·093	−·007	64	22	16	34	− 6	1·2	2·8	2·0	−1·8			2	2	3	9	23	16	7	S. 56° W.	S. 55° W.	61	42	73	44			Leh	
·245	·440	·628	·438	+·123	84	83	81	83	+ 5	1·6	2·1	1·9	−0·9	21	5	5	2	1	1		7	20	N. 35° W.	N. 18° W.	42	12	65*	75			Srinagar	
·128†	·156†	·138†	·141	+·007	67†	35†	25†	42	− 8	1·3	2·6	2·0	−1·4		1	2	3	6	11	21	13	5	S. 43° W.	S 37° W	53	64	25	37	0·10	0·10	Kailang	Hill Stations, Northern India.
·208	·225	·247	·226	−·020	51	43	44	46	− 6	0·3	0·8	0·6	−0·9	11	17	1		5	6		1	21	N. 27° W.	N. 32° W.	42	15	143	108			Simla (Ridge)	
·265	·332	·336	·311	+·027	64	58	58	60	0	1·1	1·0	1·1	−0·6	1		1		23	35	1		1	S. 17° E.	S. 64° W.	85	32	206	129			Chakrata	
·320	·393	·392	·368	+·040	68	60	57	62	+ 1	2·1	1·8	2·0	+0·3	14	1		1		1	18	20	7	S. 78° W.	S. 55° W.	60	51	57*	49			Ranikhet	
·228†	·327	·335	·297		57†	55	58	57		1·7	1·6	1·7			4	4	1	12	3	11	4	23	N. 77° W.		26		114*				Muktesar	
·458	·539	·547	·515	+·041	93	62	61	72	− 1	2·6	3·5	3·0	−0·9	13	1		10	8	1		25	4	S. 78° W.	W	21	38	7	16	*Nil*	*Nil*	Katmandu	
·348	·431	·451	·410	+·040	90	86	85	87	+ 4	4·8§	5·8‖	5·3	−0·5	2	3	11	5	7	3	11	9	11	N. 66° W.	S. 78° W.	11	21	63*	85			Darjeeling	
·320	·364	·376	·353	+·014	47	39	38	41	− 4	1·7	1·9	1·8	−0·1		4	5	3	4	7	20	11	8	S. 64° W.	N. 40° W.	39	9	166*	109			Mount Abu	Hill Stations, Central India.
·426	·418	·459	·434	−·005	79	44	45	56	− 5	2·0	3·0	2·5	−0·7	32	8	3	3	3	2		1	10	N. 4° W.	N. 25° E.	21	32	70*	75			Pachmarhi	
·425	·470	·485	·460	−·006	65	53	50	56	− 6	2·1	2·3	2·2	−1·5	42	18	1	1						N. 1° E.	N. 2° E.	30	40	154*	139	2·92	1·51	Chikalda	
·398	·482	·467	·449	+·005	93	70	75	79	− 4	6·3	8·3	7·3	−0·1	7	14	2	3	23	7	2		4	S. 68° E.	S. 36° E.	29	34	50	54			Wellington	Hill Stations, S. India.
·349	·404	·415	·389		91	73	83	82		6·3	8·4	7·4		33	5	8	8	1	1	1	3	2	N. 44° E.		21		23*				Ootacamund	
·347	·410	·417	·384		87	77	88	86		5·9	8·4	7·2			5	10	6	4	3	1	3	27	N. 16° W.		41		269				Kodaikanal¶	
·702	·766	·725	·731	+·011	75	65	59	66	+ 2	1·0	0·7	0·9	−0·8	18		31	2	10				1	N. 63° E.	S. 80° E.	55	56	292*	316			Aden	Extra India.
·813	·889	·884	·862	+·113	79	69	69	70	+ 9	0·1	0·3	0·2	−1·0			1	26	34	1				S. 64° E.	S. 62° E.	90	84	450*	444			Perim	
	·862	·853				74	75			4·3	5·7	5·0			4	1		2	1	1	27	26	N. 66° W.		77		157*				Minicoy	
·685	·808†	·763	·752	−·019	80	83†	69	77	− 1	7·1†	5·5	6·3	+1·7		3	4	3	12	21	11	5	2	S. 1° E.	S. 3° E.	48	53	147*	120			Zanzibar	
·765	·810	·804	·793	+·013	91	77	75	81	+ 3	5·3	5·4	5·4	−0·8	4	3	4	5	31	6	2	1	6	S. 50° E.	S. 44° E.	48	59	187	183	4·93	1·66	Port Victoria (Seychelles).	
			·570	+·010				71	+ 1																		278	266	0·79	0·27	Mauritius (Pamplemousses)	

¶ Wind variable 3. § Mean of 25 days. * Corrected. ‖ Mean of 28 days.

G. I. C. P. O.—No. 83 Meteor.—13-2-1902—385.

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached to them express the barometric pressure in inches and are drawn for differences of pressure of 0·05 inch. The isobars in the Bay of Bengal are fixed by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Chart of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

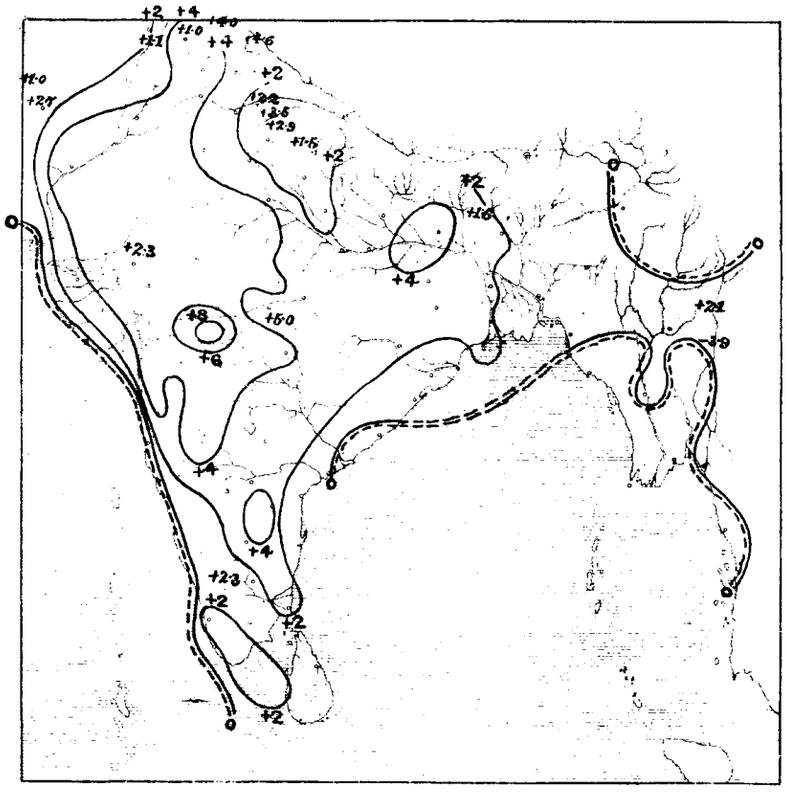
Velocity of	0 to 2 miles per hour	... one feather added to the wind arrow
"	" 2 to 5 " " "	... two feathers " " " "
"	" 5 to 10 " " "	... three " " " " "

LITHO. BY J.N. MUNDLE.

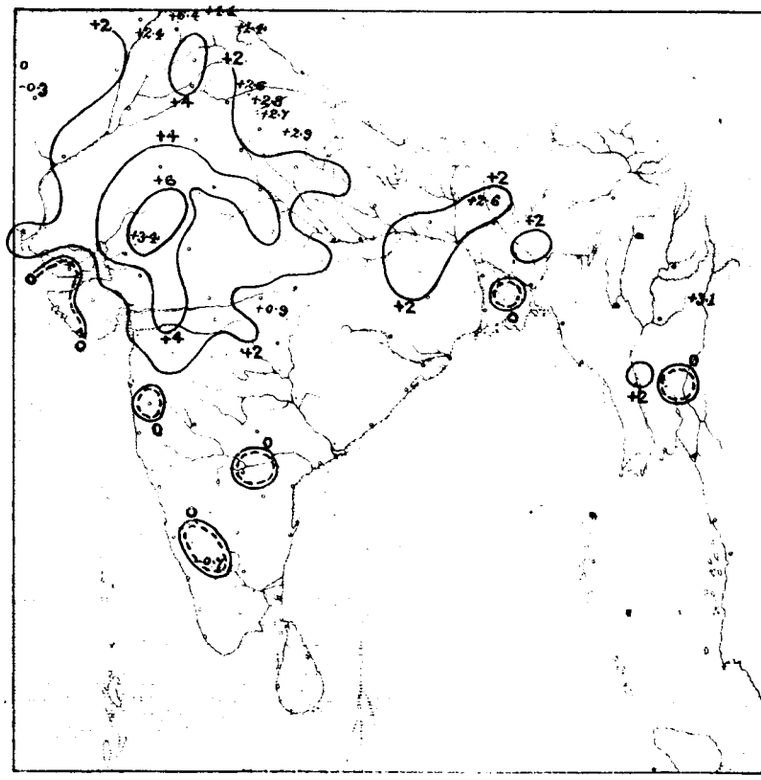
Explanation

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by the amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line bounding the area of deficient pressure or negative variations.

MAXIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

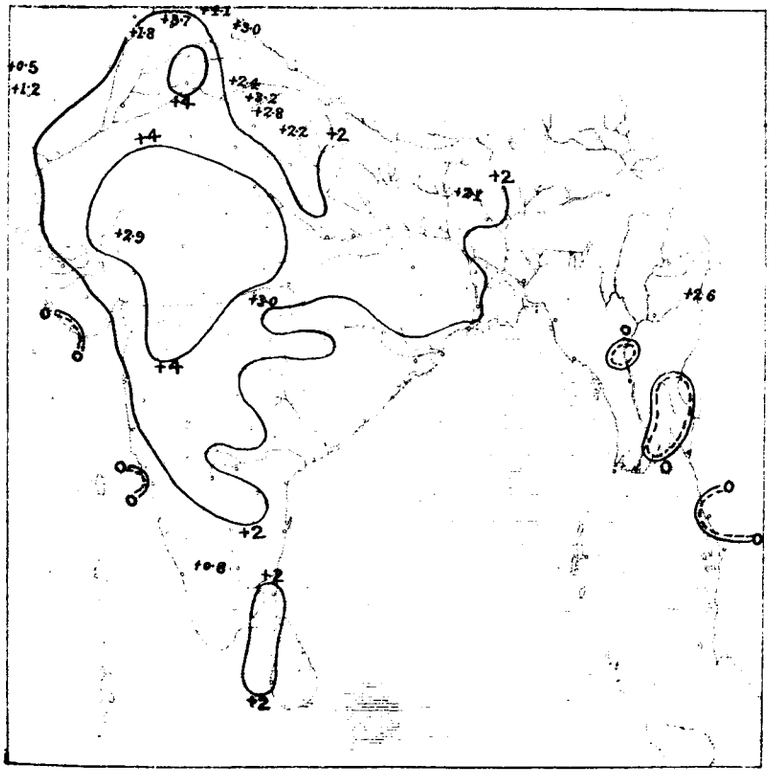
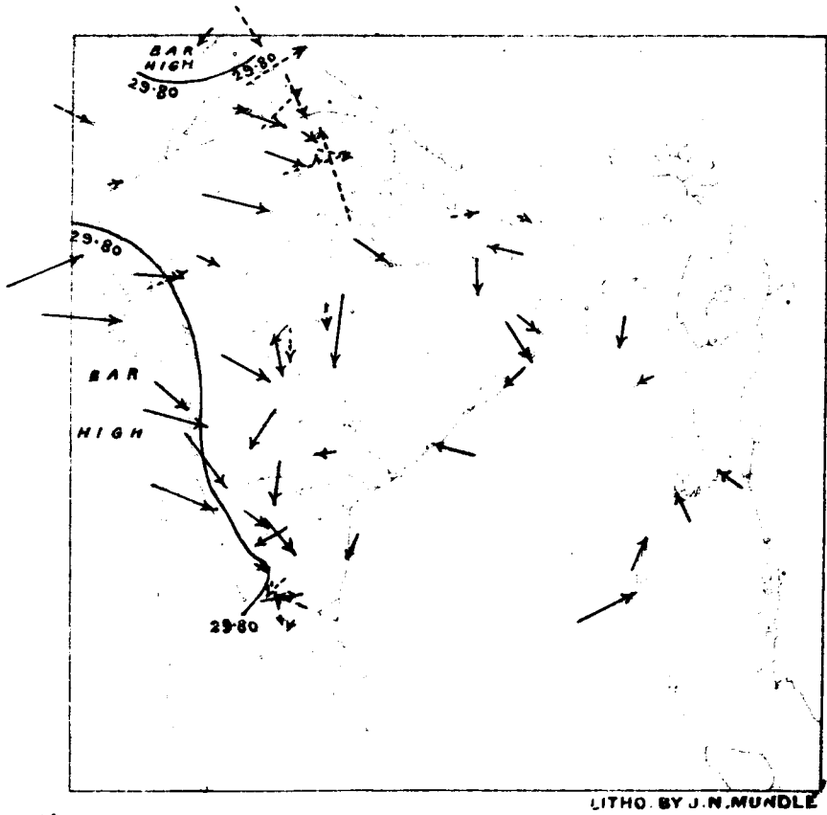


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF **OCTOBER 1901.**



LITHO. BY J.N.MUNDLE

Explanation.

Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions

LITHO. BY J.N. MUNDLE.

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India (182 in number) except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.

Reg. No 231 Wr., 1.—May 01.—5 400

LITHO. BY J. N. MUNDLE & Co.

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim	17. North Bihar	33. Malabar	48. Baluchistan Hills
2. Lower Burma Deltaic	18 North Western Provinces, East	33a Travancore	49. Central India, East
3. Central do.	19. South Oudh	34. Madras, South Central	49a Do. do.
4. Upper do.	20. North do.	35. Coorg	50. Rajputana East, Central India West
5. Arakan	21. North Western Provinces, Central	36. Mysore	51. West Rajputana
6. East Bengal	22. Do. do., West	37. Konkan	52. Madras, East Coast, North
7. Assam, Surma	23. Do. do., East Submontane	38. Bombay Deccan	52a. Do. do. do. (a)
8. Do., Hills	24. Do. do., West do.	39. Hyderabad, North	53. Hyderabad, South
9. Do., Brahmaputra	25. Do. do., Hills	40. Khandesh	54. Madras, Central
10. Deltaic Bengal	26. South East Punjab	41. Berar	55. Madras, East Coast, Central
11. Central do.	27. South do.	42. Central Provinces, West	56. Do. East Coast, South
12. North do.	28. Central do.	43. Do. Central	57. Madras, South
13. Bengal Hills	29. Punjab, Submontane	44. Do. East	
14. Orissa	30. North East Punjab	45. Gujarat	
15. Chota Nagpur	31. North do.	46. Kathiawar	
16. Gangetic Bengal	32. North West Punjab	47. Rajputana West	

LIBRARY
★ MAY 5 1902 ★
Weather Bureau.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, NOVEMBER 1901.

INTRODUCTION.

THIS review of the weather in India during the month of November 1901 is based on observations taken daily at 8 A.M. at 224 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 66 stations. In the rainfall summary the rainfall data of the meteorological observatories, the weekly rainfall telegrams received during the month from District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review, are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given.

Summary of the chief features of the weather in India during the month of November, 1901.

During November the weather is almost invariably fine over Northern and Central India with clear skies and light winds, but is often disturbed in the Bay area. The month is practically rainless over India to the north of Lat. 21°N. except in Assam and Bengal which receive rain from the cyclonic storms over the Bay. These storms usually originate over the south of the Bay and travel westward or north-westward to the Madras coast, but in the present month the track of the storms was much more northerly, and the rainfall of Bengal and Assam was hence considerably heavier than usual. The Peninsula to the south of Lat. 15° N. receives moderate to heavy rain due to the retreating south-west monsoon current in the Bay. The rainfall is usually heaviest in the Coromandel coast districts south of Madras and in Mysore, the Nilgiris, Palnis and other hills of Southern India.

The following gives a summary of the more important changes of the meteorological conditions and the chief features of the weather during November 1901 :—

The weather during November 1901 was divided into two parts. During the first part which lasted from the 1st to the 13th the weather was quiet. The retreating south-west monsoon gave daily more or less rain to the Peninsula south of Lat. 15° N, while the whole of Northern and Central India experienced fine and quiet weather with a high temperature. On the 13th the weather changed over the Bay and cyclonic conditions were established, and during the whole period from the 13th to the end of the month the weather was more or less influenced, over Southern and Eastern India, at least, by cyclonic storms, one of which was of considerable intensity. The storms were, however, confined to the Bay area, and the weather

in North-Western and Central India was uninterruptedly fine throughout the whole month.

Temperature at the commencement of the month was in excess over the whole Indian region. The excess was most marked within a broad band which extended east and west from Sind to the central districts of Bengal. The excess was greatest and more than 6° at the stations for which comparative data are given below :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st November 1901.
	°
Deesa	+10·1
Jhansi	+10·1
Indore	+ 8·8
Ajmer	+ 8·4
Ahmedabad	+ 7·8
Saugor	+ 7·3
Khandwa	+ 7·2
Agra	+ 7·2
Jaipur	+ 7·1
Sambhar	+ 7·0
Neemuch	+ 6·8
Sutna	+ 6·5

Light to moderate rain was falling over Madras, but the weather elsewhere was fine and rainless. On the 2nd, 3rd, and 4th some showers occurred in parts of Burma, and the temperature of the Burma coast district fell to below the normal generally during these three days as is shown below :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	2nd November.	3rd November.	4th November.
	°	°	°
Mergui	+0·2	+0·6	−0·6
Tavoy	+3·7	−0·2	−2·3
Moulmein	+1·0	+0·3	−0·8
Rangoon	+2·6	−2·9	−0·4
Bassein	+2·5	−3·5	0
Diamond Island	−0·7	−2·8	+0·5
Akyab	+1·8	+0·6	+0·5

The rainfall along the Madras coast continued steadily and was heavy on the 6th and 7th. This rainfall reduced temperature in the Madras coast and South India districts, to below the normalas is shown by the following comparative data from the 2nd to the 8th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	2nd Nov.	3rd Nov.	4th Nov.	5th Nov.	6th Nov.	7th Nov.	8th Nov.
	°	°	°	°	°	°	°
Madras Coast.	+2·5	+2·1	+0·1	+0·7	−0·6	−0·7	−1·5
South India	−0·2	−1·0	−1·8	+0·1	+0·5	−1·8	−0·5

Over other parts of India the heat remained steadily excessive—more particularly over Gujarat and the adjacent districts where the mean temperature was steady and day by day about 5° above the normal. The following gives comparative data from the 2nd to the 8th for the different divisions of Northern and Central India :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	2nd Nov.	3rd Nov.	4th Nov.	5th Nov.	6th Nov.	7th Nov.	8th Nov.
	°	°	°	°	°	°	°
Bengal	+3·1	+3·4	+2·7	+2·2	+1·9	+1·6	+0·4
Orissa	+2·9	+1·6	+1·1	+2·0	+4·2	+4·4	+0·5
Bihar	+5·0	+3·4	+1·7	+1·4	+2·4	+1·9	+1·6
Chota Nagpur	+4·3	+3·9	+3·4	+3·1	+3·6	+2·9	+1·9
North-Western Provinces and Oudh.	+3·4	+2·5	+2·0	+1·7	+1·6	+1·9	+1·7
Punjab	+3·3	+2·4	+1·9	+2·3	+2·6	+2·3	+2·7
Sind	+3·4	+4·4	+1·7	+2·9	+1·4	+4 2	+3·6
Rajputana	+7·2	+5·5	+4·8	+5·9	+5·0	+5·7	+5·4
Gujarat	+6·8	+5·8	+5·7	+5·7	+3·4	+3·4	+2·4
Central India	+5·5	+4·8	+3·5	+2·7	+2·6	+2·1	+2·2
Central Provinces	+4·2	+3·6	+2·0	+1·5	+1·2	+0·5	+0·2
Berar	+3·4	+3·1	+2·7	+2·5	+1·0	+0·6	−0·3

From the 9th to the 12th the rainfall diminished in amount and extent over the south of the Peninsula and temperature rose over that area. On the 12th the first indications of the first cyclonic storm of the month appeared, the wind having changed to north-west at Negapatam and blowing strongly with heavy rain. Between the 12th and 13th the storm in the Bay intensified and rain commenced along the Ganjam coast. On the 14th the storm was approaching the coast near Cocanada whence it marched north-eastward along the coast finally breaking up over Upper Burma on the 19th. It gave rain to Ganjam, Orissa, Bengal, Assam and Burma, during its

prgress, the fall having been very heavy over Orissa and the North Circars on the 16th. The following were some of the principal amounts recorded at this time:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Vizagapatam	Kuppli	15th November	12·15
Ganjam	Chicacole	" "	10·50
	Narsannapeta	" "	9·49
Vizagapatam	Konada	" "	9·00
	Balacheruvu	" "	8·71
Ganjam	Tekkali	" "	8·15
	Rambha	" "	7·60
Vizagapatam	Vizianagram	" "	5·62
Cuttack	False Point	16th "	8·86
Balasore	Chandbali	" "	8·15
Ganjam	Sompeta	" "	6·80
	Gopalpur	" "	6·55
	Chatrapur	" "	6·38
	Berhampur	" "	5·08

This heavy rainfall occasioned a marked reduction of temperature over the affected areas. This is shown moderately clearly in the following table which gives comparative temperature data from the 13th to the 19th for the Madras coast, Orissa, the Bengal divisions, Assam and Burma and illustrates the advance of the area of lower temperatures northward with the rainfall:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	13th Nov.	14th Nov.	15th Nov.	16th Nov.	17th Nov.	18th Nov.	19th Nov.
	°	°	°	°	°	°	°
Madras Coast	+0·7	—0·9	—0·2	+3·4	+4·0	+3·6	+2·6
Orissa	+4·1	+2·4	—0·7	—1·8	+0·6	+0·7	+0·8
Chota Nagpur	+2·1	+4·6	+3·8	+1·1	—0·3	+1·9	+0·4
Bihar	+1·1	+1·5	+1·4	+2·7	+3·4	+2·3	—0·1
Bengal	+0·4	+1·7	+1·1	+0·4	+1·3	—0·3	—0·1
Assam	—1·3	—1·5	—2·2	—0·1	+0·9	+0·3	+0·6
Burma	+0·3	+1·6	+2·0	+1·4	+1·1	+0·9	+0·8

These seven days 13th to 19th formed a period of generally increasing temperature over other parts of India. The following gives comparative data for the divisions of India not quoted in the preceding table:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	13th November.	14th November.	15th November.	16th November.	17th November.	18th November.	19th November.
	°	°	°	°	°	°	°
North-Western Provinces and Oudh.	+1·6	+1·6	+1·9	+1·7	+2·0	+1·1	+0·4
Punjab	+2·1	+1·7	+2·4	+1·9	+1·0	+0·9	+1·3
Sind	+1·5	+1·5	+1·5	+2·4	+0·7	+1·0	+1·7
Rajputana	+1·7	+2·3	+3·2	+3·2	+2·9	+1·6	+2·4
Gujarat	+0·1	+1·4	+4·9	+5·0	+4·2	+5·1	+4·9
Central India	+1·2	+3·5	+3·6	+4·4	+4·7	+2·5	+2·3
Central Provinces	+1·3	+4·1	+4·0	+3·4	+3·5	+4·6	+2·4
Berar	+0·8	+5·2	+5·0	+5·2	+3·9	+5·2	+4·7
West Coast	+0·8	+0·9	+1·7	+1·2	+1·6	+3·1	+3·6
Bombay Deccan	+0·1	+1·9	+5·1	+7·3	+6·0	+5·6	+4·8
Mysore	—0·2	+0·2	+4·1	+5·2	+5·1	+5·0	+3·4
Madras Deccan	—0·3	+2·9	+5·0	+7·8	+6·7	+5·6	+5·3
South India	—0·8	+1·9	+3·1	+3·9	+2·3	+3·4	+1·4

The hottest days were the 15th, 16th and 17th and during these three days the mean temperature was more than 8° above the normal average at the stations for which comparative data are given below:—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
15th November	Surat	+ 9·5
	Khandwa	+ 8·6
16th "	Sholapur	+ 10·4
	Bellary	+ 10·0
	Surat	+ 9·5
	Cuddapah	+ 9·2
	Bijapur	+ 9·0
	Kurnool	+ 8·6
17th "	Bijapur	+ 9·3
	Kurnool	+ 9·1
	Surat	+ 8·3

From the 20th to the 23rd the weather was generally fine and quiet with very little rain in any part of India. During these four days the heat was generally greater than usual over North-Western and Central India and the west and south of the Peninsula, while it was generally lower than usual over the north-east of the Peninsula and North-East India. The following gives comparative data for all districts for the 21st in illustration :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 21st November.	Mean minimum temperature, 21st November.	Mean temperature 21st November.
	°	°	°
Burma	+0·7	+2·9	+1·8
Assam	+0·4	+0·2	+0·3
Bengal	−0·8	−4·6	−2·7
Orissa	−1·1	−6·0	−3·6
Bihar	+1·6	−4·5	−1·5
Chota Nagpur	+0·8	−1·3	−0·3
North-Western Provinces and Oudh	+3·0	−1·8	+0·6
Punjab	+2·2	+1·1	+1·7
Sind	+6·3	−2·0	+2·2
Rajputana	+5·5	+1·8	+3·7
Gujarat	+5·4	+2·9	+4·2
Central India	+4·7	+1·6	+3·2
Central Provinces	+2·9	−0·8	+1·1
Berar	+3·1	−0·9	+1·1
West Coast	+1·5	+3·9	+2·7
Bombay Deccan	+3·4	+1·9	+2·7
Mysore	+2·0	+3·4	+2·7
Madras Coast	+0·2	−1·0	−0·4
Madras Deccan	+2·7	−0·2	+1·3
South India	−2·6	+2·7	+0·1

On the 22nd and 23rd a cyclonic storm commenced to form over the south of the Bay. Rain fell heavily at Diamond Island and lightly in Bengal on the 24th and became heavy over Orissa and Bengal on the 25th, 26th and 27th. This rainfall was accompanied by a marked reduction of temperature, a cool area extending northward and north-eastward with the cyclonic storm and the cyclonic rainfall from the Madras coast through Bengal to Assam and Burma. The following table gives comparative temperature data from the 23rd to the 28th for these areas :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	23rd Nov.	24th Nov.	25th Nov.	26th Nov.	27th Nov.	28th Nov.
	°	°	°	°	°	°
Madras Coast	−1·5	−2·1	−1·7	−3·6	−1·1	+0·2
Orissa	−3·0	−2·2	−2·1	−4·3	−0·5	+1·5
Chota Nagpur	−0·1	+1·0	+0·5	−2·8	−1·2	+2·2
Bihar	+0·7	+3·2	+2·9	+0·3	−0·7	+1·2
Bengal	−0·3	+2·2	−0·7	−3·3	−0·9	−2·1
Assam	+0·2	+2·0	−2·2	−4·1	−2·5	+0·2
Burma	+1·7	+1·5	−1·1	−0·5	+0·6	+1·9

Very low day temperatures were recorded over Bengal, Assam and part of Burma on the 25th, 26th and 27th, of which the following were the most important examples :—

DATE.	STATION.	MAXIMUM TEMPERATURE.		
		Actual of date.	Normal of date.	Variation of actual from normal of date.
		°	°	°
25TH NOVEMBER	Minbu	71·6	88·7	−17·1
	Silchar	71·9	83·4	−11·5
	Yamethin	77·4	88·4	−11·0
	Dinajpur	71·8	81·4	− 9·6
	Kindat	70·8	79·9	− 9·1
	Jalpaiguri	72·4	80·7	− 8·3
26TH ,,	Silchar	68·4	83·3	−14·9
	Jessore	68·1	81·6	−13·5
	Narayanganj	70·1	82·3	−12·2
	Jalpaiguri	68·4	80·4	−12·0
	Kindat	67·8	79·6	−11·8
	Burdwan	69·3	81·0	−11·7
	Mymensingh	69·2	80·9	−11·7
	Calcutta	68·0	79·5	−11·5
	Yamethin	76·9	88·4	−11·5
	Bogra	69·8	81·1	−11·3
27TH ,,	Burdwan	67·3	80·9	−13·6
	Dinajpur	67·8	80·9	−13·1
	Jalpaiguri	67·9	80·0	−12·1
	Dhubri	66·6	78·0	−11·4
	Berhampore	69·2	79·8	−10·6
	Purnea	69·2	79·0	− 9·8
	Sibsagar	66·2	75·9	− 9·7

North-Western, Central and Western India, though they remained outside the rainfall area of this storm, were not wholly unaffected as the mean temperature decreased in

sympathy with the large fall taking place within the storm area. The following gives comparative data for those divisions of India not dealt with in the previous table :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	23rd November.	24th November.	25th November.	26th November.	27th November.	28th November.
	°	°	°	°	°	°
N.-W. Provinces and Oudh.	+1·6	+1·6	+3·4	+4·4	+2·8	+1·7
Punjab	+0·9	+0·3	+0·8	+1·2	+1·8	+2·7
Sind	+3·7	+3·6	+3·1	+0·7	+2·4	+3·9
Rajputana	+4·7	+4·7	+2·1	+0·3	−1·0	+1·7
Gujarat	+3·9	+2·9	+2·5	+0·9	−2·8	−2·0
Central India	+5·4	+2·5	+0·9	+1·6	−0·3	−0·9
Central Provinces	+0·7	0	−0·8	+0·7	+0·7	−0·1
Berar	+1·1	−1·5	−1·7	−1·8	−1·1	−0·4
West Coast	+1·8	+0·6	−0·4	−1·7	−3·5	−2·9
Bombay Deccan	+2·4	+0·5	−0·4	−4·4	−4·6	−1·9
Mysore	+1·8	+1·3	−2·0	−3·8	−4·4	−3·4
Madras Deccan	+0·8	−0·9	−3·5	−5·4	−3·2	−0·7
South India	+1·7	+0·3	−2·6	−3·5	−3·6	−3·6

On the two last days of the month, the rainfall and disturbed weather having disappeared, a fairly general rise of temperature took place, and on the 30th the mean temperature was in excess except along the West Coast and in Bengal. This is shown in the following table which gives comparative data for all divisions for the 30th:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 30th Nov.	Mean minimum temperature, 30th Nov.	Mean temperature, 30th Nov.
	°	°	°
Burma	+1·7	+2·2	+2·0
Assam	+0·1	+4·3	+2·2
Bengal	−0·6	−2·2	−1·4
Orissa	+0·3	+1·4	+0·9
Bihar	+2·9	−2·0	+0·5
Chota Nagpur	+2·6	+1·5	+2·1
North-Western Provinces and Oudh	+4·5	+1·9	+3·2
Punjab	+5·5	+2·8	+4·2
Sind	+5·9	+2·7	+4·3
Rajputana	+9·0	+8·2	+8·6
Gujarat	+3·5	−1·1	+1·2
Central India	+6·7	+1·8	+4·3
Central Provinces	+4·0	−0·3	+1·9
Berar	+2·7	−1·3	+0·7
West Coast	−1·6	+1·3	−0·2
Bombay Deccan	+2·1	+6·0	+4·1
Mysore	−0·1	+4·7	+2·3
Madras Coast	−0·4	+4·0	+1·8
Madras Deccan	−3·0	+9·0	+3·0
South India	+1·9	+1·6	+1·8

Pressure averaged 0·010 inch below the normal. The local anomalies were small or slight in nearly all parts of the country, but there was on the mean of the month an excess of more than 0·02″ at Toungoo, Thayetmyo and Silchar and a deficiency of 0·02″ at False Point, Gopalpur and Bhavnagar. Pressure was in slight local excess over the mid-West Coast, the Bombay Deccan Khandesh, the Central Provinces, the Western desert, the East Punjab, the submontane districts of Northern India, East Bengal, Assam and Burma and in slight defect over the remainder of India. The most marked feature in the pressure abnormals of the month was the smallness of the variations in all parts of the Indian region. The vertical pressure anomalies, as determined by the variations at the hill stations and the neighbouring plains stations, were positive and considerable in the north-west mountain area, but were small and unimportant in the Eastern Himalayan area and in the central and southern mountain districts.

The following table gives the mean pressure variations and anomalies of the month for the eleven meteorological provinces of India :—

METEOROLOGICAL PROVINCE.	Variation from normal of mean 8 A.M. pressure of November 1901.	Pressure anomaly, November 1901.
	″	″
Burma Coast and Bay Islands	0	+·010
Burma Inland	−·001	+·009
Assam	+·004	+·014
Bengal and Orissa	−·011	−·001
Gangetic Plain and Chota Nagpur	−·013	−·003
Upper Sub-Himalayas	−·006	+·004
Indus Valley and North-West Rajputana	−·015	−·005
East Rajputana, Central India and Gujarat	−·015	−·005
Deccan	−·004	+·006
West Coast	−·011	−·001
South India	−·020	−·010

Temperature.—The variations of the mean temperature conditions of the month were strongly marked, the chief feature having been the excess which was general over all parts of the country except portions of the coast districts of the Peninsula and a few places in North-East India.

The mean day or maximum temperature was normal or in trifling defect at several stations on the west, south and east coasts of the Peninsula and in slight to moderate defect over East and North Bengal, Assam and a considerable part of Burma. The deficiency on the plains was greatest at Bhamo (−2°·7) and Yamethin (−2°·1), but amounted to 3°·0 at the hilll station of Taunggyi. In all other parts of the Indian region the mean maximum temperature was in slight to large excess. This excess was greatest over Gujarat (Surat +6°·0), the west of the Central Provinces (Khandwa +6°·4) and Upper Sind (Jacobabad +5°·5). The excess was more than 2° over a large area which included the Bombay Coast, the Deccan, the central parts of India, West Bengal, the North-Western Provinces, the Punjab, Rajputana and Sind. At the hill stations the excess in the mean day temperature was as large as at the stations on the neighbouring plains.

The mean night or minimum temperature was below the normal over the Tinnevelly district of Madras, the eastern districts of the Central Provinces, the Darbhanga district of Bihar and the Dhubri district of Assam. In all these districts the variations from the normal were small and unimportant. Over the whole of the remainder of India the mean night temperature was in excess. This excess was considerable to large within a broad band which ran southward from the North Punjab through Rajputana, the west of the North-Western Provinces and Gujarat as far as the West Coast and the Bombay Deccan. The largest excess within this band was 5°·2 at Jhansi and Deesa. The excess was also considerable within a band which ran southward from the Upper Assam Valley through Burma to Tenasserim. Within this band the largest excess was 3°·3 at Mandalay.

The mean temperature of the month was normal or in trifling defect at some stations on the coasts of the Peninsula and in North-East India. The deficiency was less than 0°·5 in most places and was hence quite unimportant. Over the whole of the remainder of India the mean temperature was more or less excessive. The excess was more than 4° at several central and north-western stations including Surat (+4°·9), Deesa (+5°·4), Ajmer (+4°·4) and Jhansi (+4°·4), and was more than 2° over the Bombay Coast, the Deccan, the east of the North-Western Provinces and West Bengal and practically the whole of North-West India. At all the hill stations but particularly in Baluchistan the mean temperature was in excess.

The following table gives temperature variation data of the month of November for eleven meteorological provinces:—

Meteorological Province.	Variation of actual from normal of		
	Mean maximum temperature, November 1901.	Mean minimum temperature, November 1901.	Mean daily temperature, November 1901.
	°	°	°
Burma Coast and Bay Islands	+0·5	+2·3	+1·4
Burma Inland	−1·3	+2·3	+0·5
Assam	−0·8	+0·9	+0·1
Bengal and Orissa	0	+0·9	+0·5
Gangetic Plain and Chota Nagpur.	+2·2	+1·1	+1·7
Upper Sub-Himalayas	+2·3	+2·0	+2·2
Indus Valley and North-West Rajputana.	+3·6	+1·2	+2·4
East Rajputana, Central India and Gujarat.	+4·1	+3·1	+3·6
Deccan	+2·5	+1·3	+1·9
West Coast	+0·8	+1·7	+1·3
South India	+0·1	+1·0	+0·5

Winds.—The winds were more southerly and stronger and steadier than usual at the Bay Islands, while they were more easterly and lighter and less steady than usual over the Burma coast district. In Bengal the wind's direction was very nearly normal, but the steadiness and velocity were in excess at most stations. In Upper India the winds were very variable and in the Indus Valley the velocity was very low. In the Deccan the winds were slightly more easterly and considerably stronger and steadier than usual. In South India the wind's direction was also slightly more easterly than the average but in this division both the velocity and steadiness were below the average. The winds were hence slightly more northerly than usual in North-East India, very variable in North-West India and more easterly than the average over the Deccan and South India. In the South-East Trades region the wind was unusually southerly.

Humidity.—The air was slightly but generally damper than usual in three areas. The first included the Bay area where the excess of the relative humidity varied between 2% and 5% and was greatest at False Point. The second area included parts of Mysore and of the south of the Bombay Deccan, where the variations of the relative humidity were about +2%, and the third included the Punjab and Upper Sind. In this case the greatest variation was reported from Jacobabad where it amounted to +4%. Over the remainder of India the relative humidity was lower than usual, more particularly over Gujarat (Deesa —14%), Berar (Buldana —9%) and the Central Provinces (Nagpur and Khandwa each,—8%). The relative humidity was low, on the mean of the month, at all the hill stations except Leh, and Srinagar, the variation from the average amounting to —10% at Chakrata, to —12% at Mount Abu and to —9% at Chikalda.

The following table gives variation data of the mean aqueous vapour pressure and of the mean humidity of nine meteorological provinces for the month of November 1901 :—

METEOROLOGICAL PROVINCE.	MEAN ABSOLUTE HUMIDITY.		MEAN RELATIVE HUMIDITY.	
	Average actual, November 1901.	Variation of actual from normal, November 1901.	Average actual, November 1901.	Variation of actual from normal, November 1901.
	"	"	%	
Burma Coast and Bay Islands.	·850	+·031	80	0
Bengal and Orissa .	·650	+·031	77	+ 2
Gangetic Plain and Chota Nagpur.	·430	—·006	58	— 4
Upper Sub-Himalayas .	·340	+·010	55	0
Indus Valley and North-West Rajputana.	·370	+·030	51	0
East Rajputana, Central India and Gujarat.	·254	—·036	29	—10
Deccan	·384	—·037	47	— 5
West Coast . . .	·697	—·003	68	— 5
South India . . .	·611	+·012	71	0

Cloud.—There was a strongly marked contrast between North-Western and Central India on the one hand and Southern and North-Eastern India on the other in regard to cloud amount. The sky, on the mean of the month, was considerably more clouded than usual over the Peninsula, Bengal, the Burma coast and the Bay area. The cloud amount was as much as 3·5 in excess at Bellary and 2·1 in excess at Chitaldroog, while it was more than 1·5 in excess at the stations for which comparative data are given below :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Bellary	8·4	4·9	+3·5
Chitaldroog	6·9	5·2	+1·7
Hyderabad (Deccan) . . .	5·0	3·2	+1·8
Salem	6·9	5·2	+1·7
Mysore	8·1	6·5	+1·6
Port Blair	7·0	5·3	+1·7
Rangoon	5·9	4·2	+1·7

On the other hand, over Central and North-Western India the sky, on the mean of the month, both on the hills and plains, was even clearer than usual of cloud. The deficiency in the cloud amount amounted to or exceeded 1·5 at the following stations in the North-West Himalayas :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Leh	1·8	4·1	—2·3
Kailang	1·4	3·7	—2·3
Srinagar	1·0	3·2	—2·2
Simla	0·8	2·3	—1·5

On the plains the deficiency in the cloud amount was greatest and amounted to about 1·0 at Dehra Dun, Ludhiana, Lahore, Deesa and Buldana.

The following table gives variation data of the mean cloud amount of nine meteorological provinces for the month of November 1901 :—

METEOROLOGICAL PROVINCE.	MEAN CLOUD AMOUNT.	
	Average actual, November 1901.	Variation of actual from normal, November 1901.
Burma Coast and Bay Islands	5·2	+0·8
Bengal and Orissa	4·2	+1·2
Gangetic Plain and Chota Nagpur . . .	1·6	+0·1
Upper Sub-Himalayas	0·4	—0·9
Indus Valley and North-West Rajputana .	0·8	—0·8
East Rajputana, Central India and Gujarat .	0·6	—0·9
Deccan	2·6	+0·1
West Coast	2·8	+0·5
South India	7·2	+1·7

Rainfall.—The month was practically rainless over the whole of North-Western and Central India and part of the Deccan. The dividing line ran roughly from Bombay east-south-eastward to Gulbarga and thence north-eastward to Patna and Motihari. To the northward and westward of this line there was no rain throughout the month, while to the eastward and southward there was moderate to very heavy rain. The total rainfall of the month varied between 10 and 20 inches along the east coast of the Peninsula from False Point to Negapatam and amounted to 27 inches at Pamban. The actual rainfall of the month was in moderate to large excess of the normal over the south and east of the Peninsula, Bengal and Assam, while in Burma the variations from the normal were irregular. Very heavy rain was received in Orissa and Ganjam on the 16th from the first cyclonic storm of the month. Very light snow showers were received in parts of Kashmir during the month, but there was neither rain

nor snow in Baluchistan or the Persian area. The following gives data for eleven meteorological provinces.—

METEOROLOGICAL PROVINCE.	RAINFALL. Mean actual for November 1901.	Mean normal for November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma Coast and Bay Islands	5·27	4·05	+0·09	+2
Burma Inland	0·61	1·39	−0·78	−56
Assam	4·22	0·85	+2·98	+351
Bengal and Orissa	3·79	0·96	+2·83	+295
Gangetic Plain and Chota Nagpur	0·19	0·23	−0·07	−30
Upper Sub-Himalayas	0	0·14	−0·14	−100
Indus Valley and North-West Rajputana.	0	0·16	−0·16	−100
East Rajputana, Central India and Gujarat.	0	0·27	−0·27	−100
Deccan	0·21	0·88	−0·69	−78
West Coast	5·07	3·07	+2·00	+65
South India	9·05	6.40	+2·76	+43

Atmospheric Pressure.

The mean pressure of the Indian land area for the month of November 1901 was ·010 inch below the normal. The variations were generally small and the distribution, relatively to the average, irregular. There was some excess over Burma, Assam and the adjacent districts of Bengal, over the Central Provinces and Khandesh and over the East Punjab. Over the remainder of India pressure was in defect, but the variations were generally small except along the east-coast, over Gujarat, over the North-West Provinces and over the West Punjab where they ranged between −0·020″ and −0·030″. The relatively low pressures along the east coast were probably due to the cyclonic storms and disturbed weather over the Bay, while the low pressure over Gujarat was a feature of the distribution which has frequently been observed at this season and has been associated with the appearance of slight storms over that area during the succeeding cold weather.

Pressure, relatively to the general condition, was in excess over Burma, Assam and the adjacent districts of Bengal, over the greater part of the Central Provinces, the Bombay Deccan and the mid-West Coast and over the Western desert and the South and East Punjab. The anomalies were generally small and unimportant and exceeded 0·02″ only at the three following stations for which comparative data are given below :—

STATION.	Variation from normal of mean 8 A.M. pressure of November 1901.	Pressure anomaly, November 1901.
	″	″
Thayetmyo	+·015	+·025
Silchar	+·014	+·024
Toungoo	+·012	+·022

In all other parts of the country pressure, relatively to the general condition, was in defect. The negative anomalies were small and amounted to 0·02″ only at the three following stations :—

STATION.	Variation from normal of mean 8 A.M. pressure of Nov. 1901.	Pressure anomaly, Nov. 1901.
	″	″
False Point	−·030	−·020
Gopalpur	−·030	−·020
Bhavnagar Para	−·030	−·020

The variations of pressure at the hill stations were generally small and except in the north-west were similar in character to those at the neighbouring stations on the plains. The following gives comparative date for ten pairs of stations and shows that, in the north-west, pressure, in the middle and higher strata of the atmosphere, was in considerable excess relatively to that at the level of the plains :—

HILL STATION.	Variation from normal pressure, November 1901.	PLAIN STATION.	Variation from normal pressure, November 1901.	Vertical pressure anomaly (Hill−Plain).
	″		″	″
Quetta	+·017	Jacobabad	−·011	+·028
Leh	+·062	Lahore	−·004	+·066
Murree	+·035	Peshawar	−·025	+·060
Simla	+·026	Ludhiana	0	+·026
Chakrata	0	Roorkee	−·007	+·007
Ranikhet	+·029	Bareilly	−·005	+·034
Darjeeling	+·004	Dhubri	−·007	+·011
Mount Abu	−·014	Deesa.	−·019	+·005
Pachmarhi	+·001	Khandwa	+·007	−·006
Wellington	−·012	Coimbatore.	−·010	−·002

The chief features of the pressure distribution of the month were:—

(1) General slight deficiency.

(2) Local excess in Burma and Assam, at some central stations and over the Western desert.

(3) Local deficiency over the Bay area, the Gangetic Plain and Bombay.

(4) Slight to moderate excess at the north-western hill stations and normal pressures at the central, southern and north-eastern hill stations.

Barometric depressions and cyclonic storms of the month.

During the first eight days of the month the barometer over India changed little from day to day and pressure was higher than usual over nearly the whole country. The winds were north-easterly and northerly over the southern half of the Peninsula and more or less rain was received daily over that area. On the 2nd the winds increased, the sea rose and the rainfall became heavier in places, but the accompanying fall of the barometer passed away and never developed into a depression. On the 5th and 6th similar changes occurred. Rain extended from Negapatam in the south to Gopalpur in the north and the fall was heavy at Nellore and Madras, but on the 7th, though heavy rain continued along the coast, the barometer was steady and no barometric depression or storm was shown. On the 8th the rainfall diminished, and the weather was quiet over the Bay, but on the 9th pressure was giving way slightly to briskly along the Coromandel coast.

Cyclonic storm of the 9th to the 18th.—On the 9th pressure was giving way slowly over the greater part of the country and slightly to briskly along the Madras coast. The pressure was about normal over the Bay area, but was above the normal over India. The winds were north-easterly at Negapatam, Waltair and Cocanada, but were northerly at the remaining stations along the east coast of the Peninsula. The following gives data for the stations around the Bay showing the conditions prevailing on the day before the appearance of the storm:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inch.	
Trincomalee	29·863	—·041	—·004	SW	1	3	0·18	
Colombo .	·881	—·020	—·009	E	3	2	0·19	Sea smooth.
Negapatam	·870	—·051	—·003	NE	8	4	0·25	
Cuddalore .	·883	—·049	—·004	Calm	1	2	0·19	Showery.
Madras .	·889	—·047	+·004	N	5	6	0·15	Sea slight.
Nellore .	·910	—·057	+·009	NNW	3	8	0·40	Drizzling.
Masulipatam	·930	—·041	+·025	N	8	2	...	
Cocanada .	29·923	—·034	+·022	NE	13	3	...	Sea smooth.
Waltiar .	·941	—·038	+·019	NE	14	2	...	Sea smooth.
Gopalpur .	·956	—·027	+·013	NNW	12	0	...	
Cuttack .	·972	—·019	+·025	Calm	1	0	...	
False Point	·957	—·025	+·015	N	6	0	...	
Balasore .	·987	—·025	+·039	NNW	1	0	...	
Saugor Island.	·960	—·026	+·015	NNE	9	1	...	Sea smooth.
Calcutta .	·980	—·013	+·031	NNW	4	0	...	
Chittagong .	·933	—·025	+·002	NE	3	2	...	
Akyab .	·921	—·010	+·006	NE	0	2	...	
Bassein .	·902	—·005	+·007	NE	5	4	...	
Diamond Island.	·876	—·019	—·018	ENE	7	3	...	
Moulmein .	·890	—·016	—·018	W	2	4	...	

November 10th.—On this day the barometer was falling over the whole Indian region the change over the south of the Peninsula and Ceylon having been brisk. The following gives 8 A.M. data for the stations around the Bay:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Ins.	
Colombo .	29·823	—·058	—·072	WNW	4	10	0·36	Sea smooth.
Trincomalee	·817	—·046	—·052	SW	3	3	1·24	
Negapatam	·806	—·064	—·073	NE	16	10	2·12	Sea very rough.
Cuddalore .	·842	—·041	—·052	Calm	0	10	1·23	Raining.
Madras .	·854	—·035	—·040	NE	7	6	0·73	Sea rough.
Nellore .	·885	—·025	—·022	N	3	3	0·14	Showery.

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"					
Masulipatam	29·903	—·027	—·012	NNE	8	2		
Cocanada .	·900	—·023	—·007	NE	12	0		Sea slight.
Waltair .	·914	—·027	—·016	NE	15	1		Sea smooth.
Gopalpur .	·928	—·028	—·016	NNW	12	0		
Cuttack .	·938	—·034	—·014	Calm	1	0		
False Point	·929	—·028	—·020	N	6	0		
Balasore .	·945	—·042	—·010	Calm	1	0		
Saugor Island.	·924	—·036	—·028	NNE	7	0		Dust haze.
Calcutta .	·932	—·048	—·022	N	3	0		
Chittagong.	·914	—·019	—·021	NE	3	0		
Akyab .	·896	—·025	—·023	NE	0	0		
Bassein .	·874	—·028	—·026	NE	4	3		
Diamond Island.	·864	—·012	—·032	ENE	9	3		
Moulmein .	·887	—·003	—·025	NE	1	2		

The above shows that pressure was about normal except over Ceylon and the Coromandel coast where it was in slight to moderate defect. The winds varied between north and north-east but were not strong except at Negapatam and Waltair. Rain was falling along the coast from Nellore to Negapatam and was heavy at the latter station. The sea was very rough at Negapatam and rough at Madras. The preceding data gave but little indication of the storm over the Bay as, except for the rough sea at Madras and the very rough sea, strong wind and heavyish rain at Negapatam, conditions were about normal. The following gives marine observations for this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force	
	° ′	° ′	"			
S.S. *Oolobaria* .	5 55	80 21	29·744	NNW	2	Moderate sea. 4 A.M. light rain.
S.S. *Kerbela* .	6 28	81 38	·759	NW	2	Midnight occasional squally.
S.S. *Bulla* .	7 57	87 16	·818	WSW	2	Smooth sea and fine.
S.S. *Candia* .	8 05	82 48	·768	N	3	4 A.M. occasional rain.
S.S. *Knight Bachelor.*	8 14	82 40	...	NW	4	Moderate sea and fine.
S.S. *Islanda* .	8 34	86 57	·755	WSW	2 to 4	9·45 A.M. heavy rain squalls.
S.S *Nairung* .	8 53	81 15*	·838	E	6	Passing squalls with rain.
S S. *Shahjehan*	14 04	93 18	·783	E	4	Rainy.

* Noon position.

NAME OF VESSEL OR STATION.	8A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S.S. *Massilia* .	14 15	84 59	29·896	NE	6	Frequent heavy rain squalls.
S.S. *Turbo* .	14 50	85 25	·791	N	6	High sea and squally.
S.S. *Quito* .	15 26	85 13	·860	ENE	3	Smooth sea 8 P.M. rain squalls.
S.S. *Lowenburg* .	15 36	82 55	·870	ENE	4 to 5	
S.S. *Pundua* .	15 58	96 28	·835	Var.	2	Fine.
Port Blair .	...	...	·806	WSW	4†	Ditto.
S.S. *Sumatra* .	16 26	91 52	·836	ENE	4	Occasional rain squalls.
S.S. *Purulia* .	19 27	90 04	·857	NE	2	Fine.
S.S. *Itria* .	20 24	88 23	·895	NNE	2	Ditto.
S.S. *Kistna* .	Akyab.		·856	...	...	4 P.M. fine.
S.S. *Shahzada* .	Chittagong.		·850	...	...	Noon fine.

† Velocity.

The above data show that a fairly complete but not very strong cyclonic circulation of the wind prevailed over the Bay. North-easterly winds prevailed over the north and centre of the Bay, northerly and north-westerly winds near Ceylon and south-westerly winds over the south of the Bay and at Port Blair. The average wind force for the whole Bay was 0·3 above the normal and the strongest winds (force 6) were reported on board the *Massilia* and the *Turbo* in the centre of the Bay as well as on board the *Nairung* in the extreme south-west where the weather was squally with rain. The cyclonic storm was not well-defined on this day but apparently lay over the south of the Bay in about Lat. 7°30′N. and Long 84°E.

November 11th.—There had been no important change during the preceding 24 hours as is shown by the following 8 A.M. data for the Bay ports for this day:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches.	
Colombo .	29·834	+·011	—·067	W	6	10	1·75	Sea smooth.
Trincomalee	·794	—·023	—·081	SW	3	4	0·08	
Negapatam	·799	—·007	—·087	N	16	10	1·85	Sea tremendous.
Cuddalore .	·859	+·017	?	Calm	1	10	1·99	Raining.

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Madras .	29·855	+·001	—·045	ENE	8	10	1·98	Sea rough.
Nellore .	·884	—·001	—·029	NNW	0	8	0·25	Showery.
Masulipatam	·905	+·002	—·019	N	7	7	...	
Cocanada .	·881	—·012	—·024	NE	14	3	...	
Waltair .	·910	—·004	—·025	NE	17	2	...	Sea smooth.
Gopalpur .	·924	—·004	—·024	NNW	11	0	...	Ditto.
Cuttack .	·934	—·004	—·023	Calm	2	0	...	
False Point .	·932	+·003	—·022	N	6	3	...	
Balasore . .	·967	+·022	+·008	Calm	1	0	...	
Saugor Island.	·937	+·013	—·019	NE	7	1	...	Ditto.
Calcutta .	·958	+·026	—·001	N	2	0	...	
Chittagong .	·929	+·015	—·008	NE	3	0	...	
Akyab .	·912	+·016	—·018	NE	0	0	...	
Bassein .	·902	+·028	—·003	Calm	3	7	0·02	
Diamond Island	·877	+·013	—·021	ENE	8	7	0·15	
Moulmein .	·913	+·026	—·001	SW	1	4	...	

The winds were northerly and north-easterly over the northern half of the Bay, but the direction had shifted from north-east to north at Negapatam and to west at Colombo showing the increasing cyclonic influence. The sea was rough at Madras and tremendous at Negapatam and moderate rain was falling from Nellore southward The following gives marine information for this day:—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Logician* .	5 56	80 51	...	W	4	Continuous rain.
S.S. *Nairung* .	6 21	80 52	29·778	SW	4	Rough sea and fine.
S.S. *Islanda* .	7 14	83 56	·735	WSW	4	Heavy rain.
S.S. *Oolobaria* .	7 59	83 16	·731	NW	5	Moderate sea midnight heavy wind and rain squalls.
S.S. *Kerbela* .	8 20	81 29	29·758	NW	4	4 P.M. continuous heavy rain squalls.
S.S. *Howick Hall*	11 55	95 16	·647	E	1	Fine.
S.S. *Knight Bachelor.*	12 14	84 12	...	NNE	5	Rain squalls.
S.S. *Quito* .	12 19	83 45	·810	E	3	Frequent heavy rain squalls.
S.S. *Pentakota* .	12 35	94 33	·771	E	4	Moderate sea and fine.
S.S. *Candia* .	12 40	84 32	·803	NE	4	Occasional squalls.
Port Blair . .	...	...	·825	SE	7	Cloudy.
S.S. *Shahjehan* .	17 33	90 29	·833	NE	3 to 4	Moderate sea.
S.S. *Turbo* .	17 52	86 46	...	NE	6	Fine.
S.S. *Massilia* .	18 35	86 54	·920	NE	3	Ditto.
S.S. *Lowenburg* .	18 53	85 59	·925	NE	4	
S.S. *Shahzada* .	19 21	92 27	·871	NE	2	Ditto.
S.S. *Warora* .	19 41	86 47	·866	NE	4	Slight sea.
S.S. *Sumatra* .	20 19	88 46	·895	NE by N	2	Fine.
S.S. *Kistna* .	21 50	91 42	·884	NNE	2	Ditto.
S.S. *Kasara* .	Calcutta.		·888	...	...	Noon fine.

* Velocity.

There had not been much change over the sea area where the cyclonic storm was practically unaltered in position and intensity. The storm centre apparently still lay in about Lat. 7°30′N. and Long. 84°E. and a well-defined cyclonic circulation of the winds prevailed over the southern half of the Bay. The *Pentakota* and *Howick Hall* in the Andaman Sea and Port Blair reported easterly and east-south-easterly winds, the *Candia*, the *Quito* and the *Knight Bachelor* in the centre reported north-north-east to east winds, the *Oolobaria* and *Kerbela* off Ceylon reported north-west winds and the *Logician*, *Nairung* and *Islanda* to the south of Ceylon reported winds from between west and west-south-west, showing the complete cyclonic circulation around the storm. The wind force was the same as on the preceding day but the weather was squally and unsettled and the *Logician* reported continuous rain. The northern half of the Bay was as yet unaffected by the storm.

November 12th.—Pressure remained steady over the Indian land area where the barometer was unaffected by

the storm. The following gives 8 A.M., data for the Bay ports :—

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Colombo .	29·848	+·014	—·056	WNW	10	10	1·92	Sea slight.
Trincomalee	·832	+·038	—·049	Calm	2	10	2·27	
Negapatam .	·825	+·026	—·064	NW	14	10	3·37	Raining.
Cuddalore .	·836	—·023	—·068	Calm	...	8	1·51	Showery
Madras .	·845	—·010	—·062	NE	4	3	0·74	Sea rough.
Nellore .	·874	—·010	—·044	NW	4	7	...	Thunder.
Masulipatam	·883	—·022	—·048	NNE	6	2	...	
Cocanada .	·871	—·017	—·049	NNE	12	4	...	Sea smooth.
Waltair .	·875	—·035	—·069	NE	19	9	...	Do.
Gopalpur .	·917	—·007	—·037	NNW	11	0	...	
Cuttack .	·933	—·001	—·031	NNE	2	0	...	
False Point.	·922	—·010	—·037	N	7	4	...	
Balasore .	·963	—·004	0	N	1	0	...	
Saugor Island.	·938	+·001	—·022	NNE	9	0	...	Dust haze.
Calcutta .	·950	—·008	—·014	N	4	0	...	
Chittagong .	·925	—·004	—·016	NE	3	0	...	
Akyab .	·909	—·003	—·012	NE	0	0	...	
Bassein .	·908	+·006	0	NE	5	3	0·11	
Diamond Island.	·870	—·007	—·031	ENE	6 ?	4	0·22	
Moulmein .	·936	+·023	+·018	SE	2	6	...	

The above shows that there had been no important change except at Negapatam where the wind had increased and blew from north-west with heavy rain. The coast pressure observations thus afforded very little indication of the storm though the storm itself, as shown by the marine observations, had intensified considerably.

The following gives the marine observations for this day :—

NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Neuenfels* .	5 54	80 19	...	Var.	4	
S.S. *Islanda* .	6 06	80 53	29·771	Var.	4	Frequent heavy squalls.
S.S. *Chilka* .	6 29	82 38	·596	WSW	4	Moderate sea. Midnight passing showers.
S.S. *Quito* .	9 07	82 32	29·790	NNE	4	4 A.M. heavy rain.
S.S. *Logician* .	9 30	83 15	...	ENE	5	Squally; noon heavy rain squalls.
S.S. *Oolobaria* .	10 53	83 41	·674	NNE	5	Moderate sea, 4 A.M. occasional terrific rain and wind squalls.
S.S. *Byculla* .	11 28	93 51	·847	SSE	2	Passing rain squalls.
S.S. *Howick Hall*	14 55	92 56	·667	E	4	Fine.
S.S. *Knight Bachelor.*	15 45	85 24	...	NNE	5	Rough sea, 4 A.M. squally.
S.S. *Candia* .	16 56	86 12	·815	NE	4 to 5	Noon, heavy rain squalls.
S.S. *Den of Ogil* .	19 23	87 21*	·765	NE	3	Fine. 8 P. M. squally.

* Noon position.

The winds had shifted more towards east over the north of the Bay showing the extending influence of the storm. The storm itself had apparently intensified but had not changed its position much. The centre so far as could be ascertained from the scanty data available lay in about Lat. 7°30′ N. and in Long. 83° E. so that it had seemingly swayed a little to the westward. The *Oolobaria*, the *Logician* and the *Quito* were still in the neighbourhood of the storm and reported east-north-east to north-north-east winds, while the *Chilka* to the south-east of Ceylon reported a west-south-west wind. The weather was squally and rainy from the Andaman sea right across the Bay to the Madras coast and the average force of the wind for the whole Bay had risen to 4·1 which was 0·9 above the normal.

November 13th.—The storm had now commenced to move northward and the barometer was falling at all the Madras coast stations. The following gives 8 A.M. data for the Bay ports :—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inch.	
Colombo .	29·845	—·003	—·060	ENE	7	0	0·64	Sea slight.
Trincomalee	·790	—·042	—·095	NW	5	5	0·22	
Negapatam	·814	—·011	—·079	WNW	3	8	0·12	Do.
Cuddalore .	·827	—·009	—·081	Calm	0	9	...	
Madras .	·814	—·031	—·101	NNW	7	9	...	Sea smooth.
Nellore .	·826	—·048	—·098	NW	5	8	...	Foggy.

STATION.	PRESSURE.			WIND.		CLOUD.	RAINFALL.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inch.	
Masulipatam	29·835	—·048	—·103	NNE	5	10	...	
Cocanada .	·839	—·032	—·088	N	15	10	0·39	Sea slight.
Waltair .	·847	—·028	—·102	NE	21	10	0·19	Showery.
Gopalpur .	·911	—·006	?	NNE	16	8	0·85	Sea slight.
Cuttack .	·931	—·002	—·037	ENE	4	9	...	
False Point.	·913	—·009	—·051?	ENE	10	9	...	
Balasore .	·968	+·005	+·001	NE	1	6	...	
Saugor Island.	·953	+·015	—·011	NNE	10	6	...	Do.
Calcutta .	·971	+·021	+·002	NE	3	1	...	
Chittagong.	·953	+·028	+·010	NNE	3	1	...	
Akyab .	·942	+·033	+·021	NE	0	0	...	
Bassein .	·942	+·034	+·032	Calm	4	3	...	
Diamond Island.	·908	+·038	+·006	E	15	2	...	Do.
Moulmein	·948	+·012	+·027	SE	2	0	...	

The barometric fall was only slight, but the winds had increased considerably in strength on the Ganjam coast where rain had commenced to fall. On the Coromandel coast the winds had drawn into north north-west but were not strong.

The following gives marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION.				Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.		Long. E.			Direction.	Force.	
	°	′	°	′	"			
S.S. *Rajpootana*.	7	33	82	10*	29·767	NW	2	Smooth sea and fine.
S.S. *Neuenfels* .	8	14	81	47	·883	NW	4 to 5	
S.S. *Chilka* . .	8	20	86	0	·595	NNW	4	Moderate sea and heavy continuous rain.
S.S. *Florican* .	Madras.				·762	..	...	Midnight heavy rain squalls.
S.S. *Logician* .	13	26	84	59	...	E	4	Midnight passing showers.
S.S. *Oolobaria* .	13	49	84	57	·667	E	5	Overcast, 4 A.M. heavy rain.
S.S. *Byculla* .	13	51	95	48	·900	ENE	4	Sea slight and fine.
S.S. *Maharaja* .	15	32	94	41	·858	N	2	Fine.
S.S. *Kasara* .	16	19	93	27	·845	ESE	6	Strong sea and fine.
S.S. *Den of Ogil*	16	52	86	25	·745	ENE	5	High confused sea and heavy squalls.
S.S. *Knight Bachelor.*	19	02	87	10	...	Var.	6	Rough sea and overcast, 4 P.M. heavy rain squalls.
S. S. *Okhla* .	19	54	87	51*	30·027	NE	4	Cloudy, midnight continuous rain.

* Noon position.

The winds were north-easterly to easterly over the northern half of the Bay, easterly in the east and north-westerly off the Ceylon coast. The force was not very strong so far as the available information showed and the average force had fallen to 3·9 which was 0·7 above the normal. The storm had commenced a northerly movement and the centre apparently lay in Lat. 12°N. and Long. 82° 50′E. The *Chilka* to the south of the storm reported heavy continuous rain and between 4 P.M. and midnight heavy rain and squalls were experienced over the head of the Bay. At Waltair a severe north-east gale sprang up at about 4 P.M.

November 14th:—The storm had continued to progress northward and the barometric fall had become brisk on the North Madras coast. The following gives data for the Bay ports.

STATION.	PRESSURE.			WIND.		CLOUD.	RAINFALL.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Negapatam	29·827	+·013	—·068	SW	2	4	...	
Cuddalore .	·812	—·015	—·099	Calm	0	6	...	
Madras .	·827	+·013	—·090	NNW	5	6	...	Sea slight.
Nellore .	·813	—·013	—·114	NW	8	10	...	
Masulipatam	·792	—·043	—·148	NNW	7	10	0·92	Raining.
Cocanada .	·766	—·073	—·162	N	23	10	1·59	Sea rough.
Waltair .	·761	—·086	—·190	NW	26	10	2·80	Severe gale and thunderstorm.
Gopalpur .	·904	—·007	—·061	ENE	17	10	2·22	Showery.
Cuttack .	·937	+·006	—·035	ENE	5	10	0·18	Drizzling.
False Point.	·946	+·033	—·021	ENE	10	10	0·30	
Balasore .	·965	—·003	—·005	NNW	1	9	0·21	
Saugor Island.	·954	+·001	—·013	N	8	10	...	
Calcutta .	·960	—·011	—·012	NE	3	10	...	
Chittagong.	·959	+·006	+·015	NNE	3	9	...	
Akyab .	·944	+·002	+·023	NE	•	4	...	
Bassein .	·936	—·006	+·024	NE	5	2	...	
Diamond Island.	·918	+·010	+·017	ENE	13	2	...	Sea smooth.
Moulmein .	·937	—·011	+·014	SE	1	2	...	

Strong east-north-easterly to northerly winds prevailed from False Point to Masulipatam and a thunderstorm was experienced at Waltair, while moderately heavy rain prevailed from Balasore to Masulipatam. On the Coromandel coast the wind was north-westerly to south-westerly.

The following gives the marine data for this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S. S. *Hardwick Hall.*	9 54	83 26	29·787	NW	2	Fine.
S. S. *Chilka* .	10 51	89 6	·681	S	4	Moderate sea and fine.
S. S. *Neuenfels* .	11 38	80 23	·793	W	3	
S. S. *Den of Ogil*	13 47	85 10	·785	S	5	Moderate sea and cloudy, 8 P.M. squally.
S. S. *Florican* .	14 05	82 06	·732	WNW	5	Squally, noon frequent squalls with rain.
S. S. *Oolobaria* .	16 57	86 35	·671	SE	6	Moderate sea and frequent rain squalls.
S. S. *Logician*	17 18	86 39	...	ESE	7	Sea rising and heavy rain squalls. Noon heavy rain with thunder and lightning.
S. S. *Okhla* .	17 49	87 00	·917	ESE	5	Rain squalls.
S. S. *Maharaja*	18 0	91 23	·851	SE	3	Midnight rain squalls.
S. S. *Kohinur* .	19 14	85 38*	·873	ESE	3	Moderate sea and heavy rain.

* Noon position.

A well-marked cyclonic circulation of the winds prevailed over the west of the Bay. On the *Florican* in Lat. 14°5′N. and Long. 82°6′E. a squally west-north-west wind was reported, on the *Den of Ogil* in Lat. 13°47′N. and Long. 85°10′E. a fresh southerly wind and on the *Oolobaria*, the *Logician*, the *Okhla*, and the *Kohinur* between Lats. 16° and 20°N. and Longs. 84° and 88°E. fresh south-east and east-south-east winds and frequent squalls. The centre of the storm lay apparently in Lat. 15° 45′N. and Long. 84° E., so that it had travelled about 290 miles in a northerly or north-north-easterly direction. The *Kohinur* reported heavy rain, and in the evening the thunder and lightning at Waltair became frequent and heavy.

November 15th:—During the 14th the direction of movement of the storm continued to be north-north-east, and on the morning of the 15th the storm centre lay off the Ganjam coast between Waltair and Gopalpur.

The following gives 8 A.M. data for the Bay ports:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Cuddalore .	29·843	+·031	—·068	Calm	1	6	...	
Madras .	·845	+·018	—·070	NNW	3	4	...	Sea smooth.
Nellore .	·843	+·030	—·084	SSW	3	8	...	
Negapatam .	·839	+·012	—·056	SW	3	4	...	
Masulipatam	·825	+·033	—·111	NW	6	2	0·09	
Cocanada .	·785	+·019	—·140	SW	13	8	1·89	Sea slight.
Waltair .	·725	—·036	—·224	W	35	10	3·99	Sea slight.
Gopalpur .	·813	—·091	—·154	NNE	22	10	2·16	Wind variable.
Cuttack .	·878	—·059	—·094	ENE	6	10	0·84	Raining.
False Point .	·893	—·053	—·075	E	13	10	2·66	
Balasore .	·944	—·021	—·026	N	0	10	0·54	Drizzling.
Saugor Island.	·943	—·011	—·024	NE	6	10	0·42	Showery.
Calcutta .	·975	+·015	+·002	NE	2	10	0·05	
Chitagong .	·951	—·008	+·008	E	2	10	...	
Akyab	·942	—·002	+·021	NE	0	5	...	
Bassein .	·942	+·006	+·029	NE	4	4	0·06	
Diamond Island.	·924	+·006	+·024	ENE	5	4	...	

Pressure had changed comparatively little at the coast stations during the preceding 24 hours, but the winds had increased in strength, and the intensity of the storm was slightly greater. At Gopalpur a strong north-north-east gale was blowing at 8 A.M. with heavy rain and the barometer read 0·154″ below the normal. On the South Madras coast the winds were between south-west and north-west and light in force with fair weather.

The following gives the marine observations on this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Den of Ogil*	10 37	84 03	29·825	SSW	5	Moderate S. W. sea and cloudy, 4 A.M. squally.
S.S. *Hardwick Hall.*	13 42	85 12	·836	W	2	Fine.
S.S. *Okhla* .	15 24	85 47	·927	SSW	5	Rough sea and cloudy.
S.S. *Florican* .	16 04	84 18	·792	W	4	Moderate sea and cloudy, 4 A.M. passing rain squalls.
S.S. *Kohinur* .	Cocanada.		·750	SW	6	Rough cross sea. 4 A.M. dirty with continuous rain.

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Bhundara* .	18 34	85 59*	29·884	SE	6	Moderate sea and occasional squalls and rain.
S.S. *Oolobaria* .	18 44	87 45	·789	E by S	9	High sea and hard squalls.
S.S. *Maharaja* .	20 12	88 34	·859	ENE	5	Continuous rain squalls.
S.S. *Maharani* .	Saugor	Island.	·870	ENE	2	Overcast with light rain.

* Noon position.

The winds continued to exhibit a complete cyclonic circulation around the storm centre and the mean force of the wind for the whole Bay was 4·1. The south-westerly to westerly winds in the south were generally light to fresh, while the easterly winds to the north were strong to a gale, thus the *Oolobaria* in Lat. 18° 44′ N. and Long. 87° 45′ E. experienced an east by south gale of force 9 and hard squalls. The centre of the storm apparently lay in Lat. 17° 35′ N. and Long. 84° 55′ E., so that the movement, as so frequently happens when a storm is changing its direction, had been slow and amounted to only 140 miles in 24 hours.

November 16th:—The barometer had fallen briskly over Orissa and Ganjam, risen over the Circars and been steady on the Coromandel coast. The following gives 8 A.M. data for the Bay ports:—

Station.	Pressure. 8 A.M., reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				inches	
Negapatam	29·832	—·007	—·060	SW	3	4	...	
Cuddalore .	·830	—·013	—·081	Calm	1	7	...	
Madras .	·818	—·027	—·092	S	4	4	...	Sea smooth.
Nellore .	·826	—·017	—·102	SSE	4	5	...	
Masulipatam	·833	+·008	—·096	NNW	5	7	...	
Cocanada .	·802	+·017	—·118	NW	5	3	...	Sea slight.
Waltair .	·811	+·086	—·129	NW	7	7	0·35	Sea smooth.
Gopalpur .	·772	—·041	—·194	NNW	25	10	6·55	Wind variable.
Cuttack .	·807	—·071	—·162	ENE	8	10	1·89	Drizzling.
False Point .	·802	—·091	—·163	E	9	10	8·86	Continuous rain.
Balasore .	·897	—·047	—·070	ENE	1	10	0·89	
Saugor Island.	·891	—·052	—·073	NE	6	10	1·14	Drizzling.
Calcutta .	·928	—·047	—·043	E	3	10	0·42	
Chittagong	·922	—·029	—·020	NE	2	10		
Akyab .	·898	—·044	—·022	E	0	10		
Bassein .	·901	—·041	—·011	SE	4	6		

At Gopalpur the wind was north-north-east at 2 A.M. and north-north-west at 8 A.M. so that the centre of the storm passed that station between those hours. Between 8 A.M. on the 15th and 8 A.M. on the 16th, 6·55 inches of rain fell at this station and at False Point 8·86 inches. At Saugor Island and in Orissa the wind was strong from east-north-east and at Gopalpur, Waltair and Cocanada from north-west. The depression was somewhat slighter or smaller than on the preceding day and the greatest variation of the barometer from the normal was —·194″ at Gopalpur.

The following gives the marine information for this day:—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Boolidana* .	10 44	82 33	29·814	S	2	Fine.
S.S. *Okhla* .	12 29	84 31	·940	SSW	2	Fine.
S.S. *Kerbela* .	13 35	80 32	·788	S	4	Fine.
S.S. *Kohinur* .	15 50	81 59*	·785	W by S	3	Fine.
S.S. *Rajah* .	16 19	91 56	·846	NE	1 to 2	Sea slight and fine.
S.S. *Bhundara* .	16 26	84 06	·858	SW	2	Rain squalls at times.
S.S. *Hardwick Hall* .	17 38	86 36	·708	SSW	4	Light rain squalls.
S.S. *Uganda* .	17 58	90 45	30·041	SE by S	4	Cloudy, 8 P.M. rainy and very thick at times.
S.S. *Florican* .	18 33	86 38	29·762	SSE	4	Squally with heavy rain.
S.S. *Ellora* .	Gopalpur.		·781	NW	4	Moderate sea, 4 P.M. passing rain squalls.
S.S. *Oolobaria* .	Saugor Island.		·786	E	9	Heavy sea, 4 A.M. heavy rain and wind squalls.

* Noon position.

The mean force of the wind for the whole Bay had fallen to 3·3 which was only 0·1 above the normal. The winds were south-westerly over the south and centre of the Bay and were easterly and east-north-easterly in the north and east. The force was not high except on board the *Oolobaria* which was at Saugor Island and reported an easterly gale of force 9 with heavy rain. At 2 A.M. on this day the observer at Saugor Island reported that the sea was smooth, the weather overcast with drizzling rain and a gentle breeze from north-east, at 8 A.M. a north-east wind of 12 miles per hour and at 2 P.M. that the sea was slight and the weather dark and gloomy, so that up to midday on this date the weather was not much affected at the Sandheads. At 8 A.M. the centre of the storm apparently lay in about Lat. 19°N. and Long. 86°E. so that the movement had again been only about 132 miles in 24 hours.

November 17th:—The storm had reached the head of the Bay and the barometer had fallen slightly to briskly over Bengal, while it had been steady over the Peninsula. The following gives 8 A.M. data for the Bay ports:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches.	
Masulipatam	29·854	+·021	—·068?	NNW	2	2	...	
Cocanada	·837	+·035	—·080	N	4	4	...	Sea smooth.
Waltair	·845	+·034	—·089	NE	5	3	...	Sea smooth.
Gopalpur	·845	+·073	—·123	NNW	10	4	0·02	
Cuttack	·834	+·027	—·131	Calm	5	9	0·07	
False Point	·819	+·017	—·142	N	18	10	0·21	
Balasore	·832	—·065	—·133	N	6	5	0·16	
Saugor Island.	·783	—·108	—·179	NE	16	10	1·65	Drizzling.
Calcutta	·834	—·094	—·136	NNE	5	10	0·07	
Chittagong.	·874	—·048	—·068	ENE	2	10	0·18	
Akyab	·881	—·017	—·039	SE	2	10	0·26	Drizzling.
Bassein	·903	+·002	—·005	NE	4	4	...	
Diamond-Island.	·883	—·006	—·015	SE	9	8	...	

Rain was falling around the head of the Bay with north-easterly to northerly winds. The intensity of the storm was similar to that recorded on the preceding day the largest pressure variation reported having been —·179″ at Saugor Island.

The following gives the marine information for this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Bhundara*	13 11	81 51	29·886	S	2	Smooth sea and fine.
S.S. *Booldana*	13 37	82 34	·794	S	2	Cloudy.
S.S. *Kerbela*	Masulipatam		·863	...	...	4 A.M. fine.
S.S. *Maharani*	16 40	93 14	...	SSE	3 to 4	Fine.
S.S. *Chanda*	17 41	92 00	·837	SW	4	Slight sea. Noon passing squalls.
S.S. *Pundua*	19 42	89 50	29·789	SW	5	Squally.
S.S. *Rajah*	20 2	89 12	·666	ENE	6	High confused sea. 4 A.M. dull rainy.
S.S. *Uganda*	21 12	88 16	·879	N	6	Thick rainy and frequent hard squalls.
S.S. *Ula*	Saugor Island*		·698	NE	6	Heavy rain.
S.S. *Malda*	Calcutta.		·803	...	...	4 P.M. cloudy.

* Noon position.

There was very little information available. The observations showed moderate to fresh south-west winds over the greater part of the Bay, but north-easterly and northerly winds in the extreme north-west, the *Uganda* in Lat. 21° 12′ N. and Long. 88° 16′ E. reporting a northerly wind of force 6 and the *Ula* at Saugor Island a north-east wind of force 6 with heavy rain. The centre of the storm lay apparently in Lat. 21° N. and Long. 89° E., so that the movement of the storm since the previous morning had been to north-east 252 miles. The special reports from the Saugor Island observer on this day shewed that the sea was slight, the wind moderate and the weather generally only feebly disturbed.

November 18th.—On the morning of the 18th the barometer was falling briskly over North-East India while it was rising elsewhere. The storm had apparently travelled east-north-eastward and the centre lay near Lungleh. The following gives 8 A.M. data for the storm area:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Saugor Island.	29·892	+·109	—·069	NNW	15	1	0·14	Showery.
Calcutta	·901	+·067	—·069	NNW	6	0		
Jessore	·877	+·018	—·085	NW	4	0		
Barisal	·841	—·015	—·106	NW	8	7	0·98	
Silchar	·846	—·074	—·122	Calm	1	10	0·17	
Narayanganj.	·862	—·014	—·087	N	6	10		
Chittagong.	·819	—·055	—·123	NW	7	2	4·05	
Akyab	·841	—·040	—·081	SW	2	10	1·72	Raining.

Heavy rain had fallen at Chittagong and north-westerly winds were reported over Lower Bengal and on the Chittagong coast. The storm was filling up though, as there were no observatories in the neighbourhood of the centre, it is

difficult to determine what was the depression of the barometer at that point. The following gives marine information for this day :—

Name of Vessel.	8 A.M. Position.		Barometer as corrected by Calcutta Office.	Wind		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Golconda* .	Madras		29·872		...	8 P.M. squally.
S.S. *Maharani* .	16 8	96 0	·836	E	2	Fine.
S.S. *Booldana* .	16 40	82 30	·830	NNE	5	Cloudy. 4 A.M. passing showers.
S.S. *Kerbela* . .	Cocanada		·880	...	...	4 A.M. occasional rain squalls.
S.S. *Malda* . .	19 26	89 41	·842	N by W	4	Moderate following sea and fine.
S.S. *Ula* . .	19 59	87 52*	·790	NNW	2	Smooth sea and fine.
S.S. *Chanda* . .	20 01	89 19	·901	NW	4	Moderate sea and fine.
S.S. *Nawab* . .	20 20	88 56*	·835	N	3	Moderate sea and fine.
S.S. *Florican* . .	Lower Gasper		·822	...	...	4 A.M. fine.
S.S. *Rajah* . .	River Hooghly		·836	N	...	Fine.

* Noon position.

All the vessels at the head of the Bay showed that the wind had shifted round and that north-westerly winds and fine weather prevailed over that area. The storm centre was estimated to have been in Lat. 23° 15′ N. and Long. 92° 25′ E., so that the movement since the previous morning had been 270 miles to east-north-east.

The following gives a statement of the position and rate of advance of the centre from the 11th to the 18th :—

Date.	Position of centre at 8 A.M.		Distance travelled during interval.	Average hourly rate of motion during interval.
	Lat. N.	Long. E.		
	° ′	° ′	Miles.	Miles.
11th November	7 30	84 0	...	...
12th „	7 30	83 5	70	3
13th „	12 0	82 50	320	13
14th „	15 45	84 0	290	12
15th „	17 35	84 55	140	6
16th „	19 5	86 0	132	6
17th „	21 0	89 5	252	11
18th „	23 15	92 25	270	11

During the next three days pressure was approximately normal over the Bay and the north-east winds of the autumn monsoon prevailed steadily right down to the southern-most limits of the Bay. During these three days the force of the wind on the average of the whole Bay was slightly below the normal, but the weather was slightly unsettled and squally. On the 19th a small depression appeared off the South Coromandel coast and heavyish rain was reported from Cuddalore and Negapatam on the 20th, but the depression failed to develop and by the 21st had wholly disappeared. On the 22nd the barometer was falling slightly across the south of the Bay and a depression, which was the principal feature in the weather of the last ten days of the month, was developing over that area :—

Severe cyclonic storm of the 22nd to the 27th.—On the 22nd the barometer was falling slightly over the Peninsula and rising slightly over Burma, while the pressure was nearly normal throughout the Bay area. The following gives 8 A.M. data for the Bay ports :—

Station.	Pressure.			Wind		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Trincomalee	29·868	+·002	—·015	Calm	1	3	...	
Colombo .	·864	+·013	—·028	NNW	4	2	0·47	
Negapatam	·874	+·003	—·015	NW	6	10	0·52	
Madras .	·897	—·014	—·011	N	7	2	...	
Cuddalore .	·889	+·009	—·019	Calm	0	4	...	
Nellore .	·927	—·009	—·001	NNW	4	3	...	
Masulipatam	·949	—·017	+·020	NNE	7	1	...	
Cocanada .	·952	—·019	+·029	N	9	2	...	
Waltair .	·961	—·011	+·017	NE	11	5	...	
Gopalpur .	·978	+·017	+·013	NNW	9	0	...	
Cuttack .	·999	+·043	+·021	Calm	0	2	...	
False Point	·988	+·041	+·018	NNW	3	4	...	
Balasore .	30·017	+·048	+·039	N	0	1	...	
Saugor Island.	29·984	+·038	+·011	NE	4	3	...	
Calcutta .	·999	+·065	+·018	NNE	1	0	...	
Chittagong	·977	+·056	+·023	NNE	3	8	...	
Akyab .	·939	+·032	+·006	NE	1	3	...	
Bassein .	·919	+·038	—·001	NE	4	4	...	
Diamond Island.	·894	+·027	—·014	ENE	4	7	...	
Rangoon .	...	...	...	...	...	9	...	
Moulmein .	·907	+·022	—·023	NE	1	0	...	

The winds exhibited a slight indraught towards the south of the Bay but the force was low and with the exception of Negapatam and Colombo there was practically no rain reported all round the Bay.

The following is the marine information for this day:—

Name of Vessel or Station.	8 A.M. Position. Lat. N.	Long E.	Barometer as corrected by Calcutta Office.	Wind Direction.	Force.	Weather
	° ′	° ′	″			
S.S. *Ula* . .	7 07	82 20	29·779	NNW	4	Moderate sea and overcast 4 A.M. occasional rain squalls
S.S. *Hermod* .	9 25	85 52	...	NW	4	Rainy.
S.S. *Sui Sang* .	9 37	96 54	·818	E	5	Moderate sea and fine.
S.S, *Nuddea* .	9 50	97 54	·868	NE	...	Fine, noon cloudy.
S. S. *Onda* .	10 18	83 42	·854	NNE	4	Cloudy.
S.S. *Itinda* . .	10 42	84 1	·830	NNE	4	Overcast with rain, noon heavy rain squalls.
S,S. *Upada* . .	13 37	84 54	·817	NNE	5	Moderate sea and overcast.
S.S. *Nizam* . .	16 10	81 40	·854	NE	5	Moderate sea and fine.
S.S. *Orissa* . .	16 40	86 02	·850	NE	4	Slight sea and fine.
S.S. *Mascotte* .	16 48	87 0	·854	NW	5	Fine, 4 P.M. overcast.
Port Blair . .			·831	SE	13*	Cloudy.
S.S. *Booldana* .	18 20	84 11	·934	...	...	4 A. M. Fine.
S.S. *Goa* . .	19 00	93 42	·836	NE	2	Fine.
S.S. *Kerbela* .	20 19	87 09	·913	N	1	Smooth sea.
S.S. *Maharaja* .	21 02	88 04	·917	S	2	Fine.

* Velocity.

The winds were northerly and north-north-easterly over the north and west of the Bay as far south as Lat. 10° N. where the direction drew into north-west while over the east of the Bay the wind's direction was easterly and east-south-easterly. At Port Blair the barometer had commenced to fall and the wind was south-east with a velocity of 13 miles per hour. Rain was falling at Port Blair and on board the *Itinda* in Lat. 10°42′ N. and Long. 84°1′ E and the *Hermod* in Lat. 9°25′ N. and Long. 85°52′ E. The storm at this time was shallow and of very slight intensity, and the centre apparently lay in Lat. 12°N. and Long. 88° E.

November 23rd—Pressure had given way slightly at the head of the Bay, but elsewhere the barometer was steady and the observations around the Bay gave only slight evidence of the existence of the cyclonic storm. The following gives 8 A. M. data for the Bay ports —

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inch.	
Trincomalee	29·847	—·021	—·040	Calm	2	4	0·08	
Negapatam	·868	—·006	—·005	NW	11	8	...	
Cuddalore .	·883	—·006	—·028	Calm	1	5	...	
Madras .	·885	—·012	—·033	N	8	9	...	
Nellore .	·915	—·012	—·018	NNW	5	8	...	
Masulipatam	·947	—·002	+·005	NNE	7	9	...	
Cocanada .	·930	—·022	—·004	N	12	8	...	
Waltair .	·935	—·026	—·019	NE	18	7	...	
Gopalpur .	·966	—·012	—·008	NW	11	2	...	
Cuttack .	·967	—·032	—·018	Calm	1	6	...	
False Point	·947	—·041	—·029	N	6	8	...	
Balasore .	·983	—·034	—·002	Calm	1	7	...	
Saugor Island.	·958	—·026	—·022	NNE	7	8	...	
Calcutta .	·966	—·033	—·023	Calm	3	9	...	
Chittagong .	·950	—·027	—·011	NNE	3	6	...	
Akyab .	·916	—·023	—·024	NE	1	4	...	
Bassein .	·905	—·014	—·022	NE	7	3	...	
Diamond Island.	·869	—·025	—·047	ENE	12	7	...	
Rangoon .	...	...	...	...	...	6	...	
Moulmein .	·911	+·004	—·025	N	3	3	...	

The winds all round the Bay were influenced by the storm and exhibited an indraught towards the centre of the south of the Bay. The force was freshening generally, particularly along the North Madras coast. There was, however, no rain at any station, and the sea was slight to smooth at all the reporting stations.

The following gives the marine data for this day:—

Name of Vessel or Station.	8 A.M. Position. Lat. N.	Long. E.	Wind. Barometer as corrected by Calcutta office.	Direction.	Force.	Weather.
	° ′	° ′	″			
SS. *Bavaria* .	6 59	82 2	29·798	NW	5	Rough sea and cloudy.
S.S. *Malta* . .	9 37	83 18	·752	NW by N	5	Cloudy, midnight continual light rain.
S.S. *Hermod* .	10 16	87 31		N	5	Rough sea and thick rainy.
S.S. *Onda* . .	12 39	84 36	·820	NE	6	Moderate sea and hard squalls, 4 P. M. frequent hard rain squalls.
S.S. *Itinda* . .	13 30	84 54	·768	N by E	6	High sea and squally with rain.
S.S. *Orissa* . .	13 45	84 37	·763	NE	4	Dull rain at times.
S.S. *Malda* . .	16 33	93 14	·826	ENE	4	Slight sea and cloudy.
S.S. *Upada* . .	16 43	86 2	·811	NE by N	5	Moderate sea and cloudy. 4 A.M. squally and continuous rain.
S.S. *Booldana* .	17 33	86 31	·883	NE by E		Continuous squalls with heavy rain.
S.S. *Nizam* . .	Bimlipatam.		·839	NE	5	Moderate sea, 8 P. M. overcast.
S.S. *Pentakota* .	19 18	90 20	·848	NE	3	Smooth sea and cloudy, midnight frequent heavy squalls and light rain.
Port Blair . .			·823	SE	15*	

* Velocity.

Pressure had given way over the south and centre of the Bay but had hardly changed in the east. Thus at Port Blair the barometer which had been 29·831″ on the 22nd had only fallen ·008 to 29·823″ on the 23rd. The wind at that station still blew from south-east but the force had risen somewhat and averaged 15 miles per hour. North-north-east winds prevailed over the north and west of the Bay as far south as Lat. 13°N. where the direction drew into north-north-west and the mean force of the wind over the whole Bay was 4·6 which was 1·0 above the mean force of the preceding day and 1·4 above the normal. Heavy rain (2·20″) had fallen at Port Blair and the *Orissa*, the *Onda*, the *Itinda*, the *Booldana*, and the *Hermod*, all in the west of the Bay reported squally rainy weather and winds of between 5 and 6. The storm had apparently intensified and moved north-westward the centre lying at 8 A. M. in about Lat. 13°5′N. and Long. 86°10′E. having travelled about 160 miles in the preceding 24 hours.

November 24th:—The barometer had been steady in Tenasserim but had fallen in other parts of the Bay area where pressure was in moderate to considerable defect.—The following gives 8 A. M. data for the Bay ports:—

Station.	Pressure. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cl.-ud.	Rainfall.	Weather.
	″	″	″				Inches	
Negapatam.	29·841	—·027	—·058	NW	4	8	—	
Cuddalore .	29·843	—·040	—·071	NNW	1	9	—	
Madras .	29·849	—·036	—·076	NNW	7	9	—	
Nellore .	29·878	—·037	—·059	NNW	4	10	—	
Masulipatam	29·871	—·076	—·083	N	5	9	—	
Cocanada .	29·853	—·077	—·090	NNE	8	9	—	
Waltair .	29·852	—·083	—·112	NE	15	10	—	
Gopalpur .	29·880	—·086	—·102	N	9	8	0·01	
Cuttack .	29·917	—·050	—·077	Calm	1	8	—	
False Point.	29·898	—·049	—·087	N	10	10	—	
Balasore .	29·933	—·050	—·061	NNE	1	8	0·29	
Sougor Island	29·936	—·022	—·053	N	13	10	0·04	
Calcutta .	29·959	—·007	—·036	N	5	10	—	
Chittagong.	29·939	—·011	—·027	SE	3	10	c05	
Akyab .	29·894	—·022	—·053	NE	1	6	—	
Bassein .	29.905	0	—·029	NE	10	3	0·06	
Diamond Island.	29·857	— 012	—·064	SSE	21	10	2·87	
Rangoon .	—	—	—	—	—	10	—	
Moulmein .	29·906	—·005	—·038	NNW	3	10	—	
Tavoy .	29·903	+·007	—·025	N	2	8	—	
Mergui .	29·887	+·013	—·003	Calm	1	6	0·12	

The barometer had given way briskly along the Ganjam coast, where pressure was more than 0·100″ below the normal. The winds around the coasts of the Bay exhibited a well-marked cyclonic circulation blowing from the south-eastward at Diamond Island and Chittagong, from north in Lower Bengal and Orissa, from north-east in Ganjam and from north-north-west along the Coromandel coast. The force was rising generally and was strong at Waltair and Diamond Island. Heavy rain had fallen at Diamond Island and light rain had commenced in Bengal and the general conditions indicated

that a rather severe cyclonic storm had developed over the Bay and was advancing northward.

The following gives the marine observations on this day :—

Name of Vessel or Station.	8 A.M. Position.		Barometer as corrected by Calcutta Office.	Wind		Weather.
	Lat. N.	Long E.		Direction.	Force.	
	° ′	° ′	″			
S. S. *Umkusi*	6 24	81 28	29·769	WNW	5	Following sea. 4 P.M. rainy.
S. S. *Taunton*	6 38	82 12	...	WNW	2	Fine. 8 P.M. squally.
S. S. *Historian*	7 34	82 28	·802	NW	5	Fine. Midnight overcast.
S. S. *Bavaria*	9 35	83 26	·768	NNW	8	High sea. 4 P.M. showery.
S. S. *Orissa*	10 38	82 57	·668	NW	6	Dull occasional rain squalls.
S. S. *Hermod*	12 15	89 27	...	SE	6	Rough sea and heavy rain.
S. S. *Malta*	13 35	85 1	·575	N	8 to 7	Hard squalls and heavy rain.
S. S. *Ondd*	14 44	85 33	·808	NE	4	Confused sea and frequent hard squalls.
S. S. *Itinda*	15 44	85 31	·754	...	...	Thick with heavy rain.
S. S. *Pentakota*	16 29	93 18	·768	E	7	Slight sea and frequent squalls.
S. S. *Booldana*	17 19	89 2	·792	E	6	Occasional rain squalls.
S. S. *Newholm*	18 32	89 06	...	NNE	6	Showery.
S. S. *Nisam*	18 43	84 52	·799	NNE	6	Rough sea and dull overcast,
S. S. *Howick Hall.*	19 0	87 10	·824	NNE	6	Increasing sea. Noon continuous rain.
S. S. *Upada*	19 35	87 39	·849	NNE	5	Squally. 8 P.M. hard wind and rain squalls.
S. S. *Malda*	19 40	89 45	·817	SE	5	Squally with thick heavy rain.
Port Blair	...	...	·801	SSE	17*	Cloudy.

* Velocity.

The storm had further increased in intensity and pressure near the centre was at least 0·2″ lower than on the preceding day. The storm had apparently moved north-north-westward and the centre lay close to the *Malta* and in about Lat. 14° N. and Long. 85° 50′ E. The positions given for the centre on the 22nd, 23rd and 24th, are, however, open to considerable doubt, as there were no ships near the centre on these days and very little information available for determining the positions. The winds over the Bay continued to show a well-marked cyclonic circulation blowing from the south-eastward at Port Blair and on Board the *Hermod* in Lat. 12°15′ N. and Long. 89° 27′ E. from east and north-east over the north of the Bay, from north-north-east and north in the west of the Bay and from north-west off the Coromandel coast. The mean force of the wind for the whole Bay was 5·7 which was 2·5 above the average. The wind at Port Blair had increased to 17 miles per hour and gales were reported as follows :—on board the *Malta* in Lat. 13° 35′ N. and Long. 85°·1′ E. from north, on board the *Pentakota* in Lat. 16° 29′ N. and Long. 93° 18′ E. from east, and on board the *Bavaria* in Lat. 9° 35′ N. and Long. 83° 26′ E. from north-north-west. The weather was dull and threatening in the north of the Bay and overcast and squally with heavy rain in the west of the Bay.

November 25th.—The barometer had fallen briskly in Orissa and Ganjam, but elsewhere around the Bay the pressure changes had been slight and unimportant. This is shown by the following statement which gives 8 A.M. data for the Bay ports :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Negapatam	29·839	—·002	—·068	W	2	8	...	
Cuddalore	29·836	—·007	—·082	Calm	1	9	...	
Madras	29·846	—·003	—·089	WNW	7	9	...	
Nellore	29·842	—·036	—·101	NW	5	10	...	
Masulipatam	29·813	—·058	—·151	N	6	8	...	
Cocanada	29·776	— 077	—·176	NW	7	4	...	
Waltair	29·769	—·083	—·204	NE	19	10	...	
Gopalpur	29·825	—·055	?	N	12	0	0·03	
Cuttack	29·871	—·046	—·132	NE	4	10	0·23	
False point	29·822	—·076	—·172	N	15	10	0·83	
Balasore	29·876	—·057	—·124	NE	1	10	0·26	
Saugor Island.	29·866	—·070	—·131	NE	11	10	1·24	
Calcutta	29·922	— 037	—·081	NE	5	10	0·41	
Chittagong	29·915	—·024	—·060	N	4	10	0·83	
Akyab	29·864	—·030	—·089	SE	2	10	...	
Bassein	29·910	+·005	—·033	NE	10	1	...	
Diamond Island.	29·846	—·011	—·079	E	31	4	0·02	

The winds had changed somewhat. An easterly gale was blowing at Diamond Island and the wind was shifting from north to north-east at the head of the Bay and from north-north-west to west-north-west on the Coromandel coast. On the Ganjam coast the direction remained north-easterly. At Waltair the north-east wind rose to a gale at 8 P.M. of the 24th and continued all day on the 25th. At the floating light vessel *Planet* the day opened with squally weather and an increasing sea and swell.

At 7 A.M. the squalls rose in force and reached force 10. They continued with this force until 5 or 6 P.M. when the wind fell a little. The barometer at this time was but little affected by the approach of the storm and the diurnal range of pressure continued uninterruptedly. At the floating light vessel *Torch* the wind did not rise to a gale till 9 P.M., but from that hour until midnight of the 25th a fresh to strong northerly gale was reported.

The following gives the marine information of this day:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer as corrected by Calcutta Office.	WIND		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S. S. *Historian* .	10 48	83 52	29·815	WNW	4	Heavy confused sea and overcast.
S. S. *Bavaria* .	11 59	84 34	·798	WNW	7	High confused sea and heavy rain.
S. S. *Hermod* .	13 32	91 54	...	SE	4	Fine.
S. S. *Chilka* .	15 42	95 10	·685	SE	4	Moderate sea. Midnight heavy rain.
S. S. *Howick Hall.*	16 2	86 8	·474	N	7	Violent squalls.
S. S. *Newholm* .	16 04	86 27	...	NE	5	Strong sea. 4 P.M. fine.
S. S. *Booldana* .	17 1	91 5	·759	SE by S	8	High cross sea and occasional rain squalls.
S. S. *Onda* .	17 4	85 39	·755	NNE	6	Showery. 4 A.M. continuous rain squalls.
S. S. *Malta* .	17 49	87 7	·738	ENE	4	Rainy.
S. S. *Itinda* .	18 21	86 58	·692	ENE	4	Slight rain. 8 P.M. heavy rain squalls.
S. S. *Nizam* .	18 30	85 16	·642	N	9	High tremendous sea and dull overcast.
S. S. *Maharaja.*	19 54	92 2	·789	SE	6 to 7	Heavy sea, 4 A.M. rainy.
S. S. *Kasara* .	21 9	90 9	·665	ENE	7	High sea and heavy rain squalls.

The storm had apparently moved nearly due northward and the centre apparently lay in about Lat. 17° 15′ N. and Long. 86° E., but it is extremely difficult in face of the scanty information available to locate the centre with even approximate correctness. The cyclonic circulation of the wind continued, the wind's direction having been south-south-easterly over the east of the Bay, east-north-easterly in the north, north-easterly in the west, and west-north-westerly in the south. The mean force of the wind was 5·8 which was 2·6 above the normal. The west-north-west wind in the south was moderate to fresh in force, but all over the centre and north of the Bay the wind was strong to a gale. The *Booldana* in Lat. 17°1′ N. and Long. 91° 5′ E. reported a south-east by south gale of force 8 with occasional rain squalls; the *Kasara* in Lat. 21° 9′ N. and Long. 90° 9′E. an east-north-east moderate gale and heavy rain squalls; the *Nizam* in Lat. 18° 30′N. and Long. 85° 16′E. a hard northerly gale with a tremendous sea; and the *Howick Hall* in Lat. 16° 2′N. and Long. 86° 8′E. a moderate northerly gale with violent squalls The strongest winds were thus reported on board the *Nizam*, but the winds reported from the *Itinda*, the *Onda*, the *Malta*, the *Howick Hall* and the *Newholm* preclude the possibility of the centre of the main cyclone being close to the *Nizam*.

November 26th.—The cyclonic storm had reached the head of the Bay and the centre lay over the north-west angle of the Bay in Lat. 21° 25′ N. and Long. 87° 15′ E. Pressure had decreased rapidly over North-East India, while it had increased over the south of the Peninsula and Lower Burma. The following gives 8 A.M. data for the Bay ports:—

STATION.	PRESSURE.			WIND		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Negapatam	29·867	+·028	—·044	Calm	1	4	...	
Cuddalore .	·879	+·043	—·045	Calm	0	3	...	
Madras .	·868	+·022	—·072	WNW	4	4	...	
Nellore .	·862	+·020	—·089	NW	6	10	...	
Masulipatam	·839	+·026	—·132	NNW	9	10	...	
Cocanada .	·783	+·007	—·176	WNW	5	9	...	
Waltair .	·794	+·025	—·188	NE	12	9	...	
Gopalpur .	·771	—·054	—·228	WSW	16	10	0·50	
Cuttack .	·668	—·203	—·341	W	7	10	0·74	
False Point .	·583	—·239	—·420	WNW	32	10	5·25	
Balasore .	·520	—·356	—·487	NNW	7	10	1·50	
Saugor Island.	·593	—·273	—·411	NE	23	10	1·14	
Calcutta .	·725	—·197	—·285	NE	9	10	0·59	
Chittagong	·851	—·064	—·129	SE	5	10	0·03	
Akyab .	·880	+·016	—·079	SE	2	6	...	
Bassein .	·932	+·022	—·014	NE	10	1	...	
Diamond Island.	·905	+·059	—·024	ENE	30	6	0·07	
Moulmein .	·945	+·008	—·009	SE	3	0	...	

Pressure had fallen 0·356″ in 24 hours at Balasore and more than 0·200″ at False Point, Cattack, and Saugor Island and pressure was fully 0·500″ below the normal average off the Orissa coast. The storm had probably intensified considerably during its rapid passage northward, but as there were no vessels in the immediate neighbourhood of the storm on the 25th this cannot be

determined definitely. Rain had been received all over Bengal, Assam and Orissa, and the fall in many cases was very heavy. The following gives the principal amounts received during the 24 hours ending at 8 A.M. on the 26th :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M. of 26th November 1901.
		Inches.
Khasi and Jaintia Hills	Jowai	7·07
	Cherrapunji Police Station.	6·56
	Mauphlang	5·44
Cuttack	False Point	5·25
Cachar	Mahur Saddle	4·06
Khulna	Dumuria	4·06
Backergunge	Bhola	4·02
Cachar	Paiding	3·93
Khasi and Jaintia Hills	Upper Shillong	3·72
Khulna	Mollahat	3·64
Mymensingh	Mymensingh	3·62
Kamrup	Rangiya	3·52
Midnapore	Midnapore	3·45
	Panskura	3·44
Cachar	Haflong	3·40
Backergunge	Pirojpur	3·35
Sibsagar	Nigriting	3·33
Kamrup	Boko	3·16
Khasi and Jaintia Hills	Shillong	3·11
Backergunge	Barisal	3·10
Cachar	Mupa	3·03

The wind at Gopalpur shifted from north to north-north-west at 8 P.M. on the 25th and had shifted to west-south-west at 8 A.M. on the 26th, the change of wind was accompanied with very violent squalls. The Balasore observer reported that the weather was squally throughout the 25th and that the storm commenced at about 3-30 or 4-0 A.M. on the 26th and lasted till 1-30 or 1-45 P.M. when the disturbance passed away. The commander of the F. L. V. *Torch* reported a continuance of the gale which had commenced at 9 P.M. on the 25th. The wind was north-north-easterly up to 4 A.M., 26th, shifted to north-east at 5 A.M., to east at 6 and 7 A.M., to south-east at 8 A.M., to south at 9 A.M. and to south-south-west at 10 A.M. The strength rose to force 10 at 6 A.M. and to 10-11 between 7 A.M. and 10 A.M. The lowest barometer was at 8 A.M. when a reading of 29·430″ (uncorrected) was recorded. The above observations show that the storm passed northward to the west of the light vessel. On board the F. L. V. *Planet* the wind was north-north-east force 10 from 2 A.M. to 4 A.M., east force 10 at 6 A.M., south-east force 12 from 8 A.M. to 10 A.M., south-south-west force 12 to 10 at 11 A.M. and south-west force 10 at noon. The lowest barometer was at 10 A.M. and at that hour the commander reports that the last "hurricane squall" was experienced. At Burdwan the storm was felt from 11 A.M. to 4 P.M. on the 26th. The following are the barometric readings recorded :—

	Barometer.	Attad. Ther.	Barometer corrected to sea level and to gravity 45°.
	″	°	″
25th 8 A.M.	30·004	68	29·948
26th „	29·850	66	29·800
1-50 P.M.	29·500	64	29·456
2 „	29·502	64	29·458
2-25 „	29·504	65	26·457
2-35 „	29·508	65	29·461
3-15 „	29·552	68	29·496
4 „	29·614	69	29·501

At about 1 P.M. the wind shifted from north to north-west and 29·456″ (corrected) was probably about the lowest reading recorded at this station, as the centre of the storm must have been passing at about that hour. At Jessore the cyclone was felt between 1 P.M. and 6 P.M. which was about two hours later than at Burdwan.

The following gives the marine observations for this day :—

Name of Vessel.	8 A.M. Position.				Barometer as corrected by Calcutta Office.	Wind		Weather.
	Lat. N.		Long. E.			Direction.	Force.	
	°	′	°	′	″			
S.S. *Howick Hill*	13	14	84	14	29·824	WSW	4	Fine.
S.S. *Newholm*	13	28	83	51	...	W	4	Do.
S.S. *Historian*	14	14	85	17	·878	WNW	4	Do.
S.S. *Bavaria*	14	43	85	45	·878	W	3	High Northerly swell, 8 P.M. cloudy.
S.S. *Booldana*	16	4	93	6	·870	SE	4	Cloudy, noon occasional rain squalls.
S.S. *Palamcotta*	16	12	93	24	·869	SE	...	Cloudy, 4 P.M. passing squalls.
S.S. *Chilka*	17	27	92	23	·647	SSE	5	4 P.M. heavy rain.
S.S. *Onda*	17	50	86	43	·750	WNW	5	Heavy N.W. swell, 4 A.M. light rain.
S.S. *Itinda*	19	43	87	57	·479	SW by W	7	Very high sea and heavy squalls with rain.
S.S. *Madura*	20	20	89	27	·913	S by E	7	Heavy sea, 4 P.M. cloudy.
S.S. *Malta*	20	56	87	48	·370	SE by S	8	High sea and overcast 4 A.M. rainy.
S.S. *Purulia*	Calcutta.				...	NNE	...	Noon continual heavy squalls with rain.

The storm had apparently travelled about 300 miles in a northerly direction since the preceding morning and the centre apparently lay in about Lat. 21° 25′ N. and Long. 87° 15′ E. There was very little marine information for this day, but the *Malta*, which lay in Lat. 20° 56′ N. and Long. 87° 48′ E. and was hence close to the centre, reported a barometric reading of 29·370″ at 8 A.M. with a south-east by south fresh gale and rain. The following gives extracts from the log of this vessel:—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
4 A.M.	S.S. *Malta*	...	...	...	NE	7	Overcast with rain and N. E. Swell.
8 „	.....	20 56	87 48	29·370	SE by S	8	Overca and high sea.
Noon.	.....	...	...	...	WSW	9to7	Overcast and very high sea.
4 P.M.	.....	...	...	...	W	4to3	Overcast.

The remaining vessels were generally at some distance from the storm and experienced in the west of the Bay west-north-westerly winds and in the east of the Bay south-south-easterly winds. The mean force of the wind for the whole Bay was only 4·3 and the weather was improving.

The following is a copy of the log of the *Itinda*, a vessel which encountered the cyclone and in fact passed up the Bay at about the same time as the storm, November 19th, etc., etc.:—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer as corrected by Calcutta Office.	Wind. Direction.	Wind. Force.	Weather.
19th.		° ′	° ′	″			
4 A.M.	S.S. *Itinda*	...	...	...	NNW	2	Dull, overcast.
8 „	.....	Colombo.		29·867	...	...	
Midnight 20th.	.....	...	...	...	ESE	2	Overcast.
4 A.M.	.....	...	...	...	N	2	Light rain.
8 „	.....	5 51	80 49	·826	E	2	Cloudy.
Noon	.....	6 00	81 08	...	var.	2	Overcast.
4 P.M.	.....	...	...	...	NE	4	Cloudy and sea slight.
8 „	.....	...	...	...	NNE	4	Cloudy.
Midnight 21st.	.....	...	...	...	NNE	2	Fine.
4 A.M.	.....	...	...	...	var.	2	Light rain.
8 „	.....	7 49	82 42	·817	var.	2	Fine.
Noon.	.....	8 15	82 56	...	var.	1	Do.
4 P.M.	.....	...	...	...	NNE	2	Do.
8 P.M.	S.S. *Itinda*	...	...	...	N	2	Fine.
Midnight 22nd	.....	...	...	..	N	2	Do.
4 A.M.	.....	...	...	...	NNE	4	Passing showers.
8 „	.....	10 42	84 01	29 830	NNE	4	Overcast with rain.
Noon	.....	11 11	84 12	...	NNE	6	Heavy rain squalls and moderate sea.
4 P.M.	.....	...	...	...	NNE	6	Overcast and moderate sea.
8 „	.....	...	...	...	NNE	5	Overcast and head sea.
Midnight 23rd.	.....	...	...	...	ENE	6	Overcast and moderate sea.
4 A.M.	.....	...	...	...	NNE	6	Overcast and heavy sea.
8 „	.....	13 30	84 54	·768	N by E	6	Squally with rain and high sea.
Noon	.....	13 56	85 02	...	NE by E	...	Very heavy rain squalls and moderate sea.
4 P.M.	.....	...	...	...	E	...	Heavy rain and wind squalls.
8 „	.....	...	...	...	NE	5	Overcast and squally with moderate high sea.
Midnight 24th	.....	...	...	...	NNE	6	Fine and less sea.
4 A.M.	.....	...	...	...	NE by N	6	Overcast and high sea.
8 „	.....	15 44	85 31	·754	var.	...	Thick with heavy rain and moderate high confused sea.
Noon	.....	16 06	85 44	...	NE by N	5	Overcast and moderate sea.
4 P.M.	.....	...	...	...	NNE	6	Squally and moderate high sea.
8 „	.....	...	...	...	NNE	5	Overcast and moderate high sea.
Midnight 25th.	.....	...	...	...	NNE	6	Overcast and confused sea.
4 A.M.	.....	...	...	...	NNE	2	Cloudy and moderate heavy sea.
8 A.M.	.....	18 21	86 58	·692	ENE	4	Slight rain and moderate sea.
Noon	.....	18 45	87 12	...	E	5	Cloudy.
4 P.M.	.....	...	...	...	NE	4	Cloudy and moderate sea.
8 „	.....	...	...	...	NNE	6	Heavy rain squalls.
Midnight 26th	.....	...	...	...	ESE	5	Gusty and high sea.
4 A.M.	.....	...	...	...	SE by S	8	Overcast and high confused sea.
8 A.M.	.....	19 43	87 57	·479	SW by W	7	Heavy squalls with rain and very high sea.
Noon	.....	19 59	88 04	...	W by S	6	Overcast and high confused sea.
4 P.M.	.....	...	...	...	W by S	4	Dull and cloudy.
8 „	.....	...	...	...	W	2	Cloudy.
Midnight		...	...	...	WNW	4	Overcast.

November 27th.—The storm had moved quickly north-north-eastward and was central between Bogra and Mymensingh. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE.			WIND		CLOUD.	RAINFALL.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Calcutta .	29·951	+·226	—·064	WNW	14	10	1·32	
Burdwan .	·966	+·162	—·060	W	10	10	2·02	
Jessore .	·942	+·139	—·062	W	10	10	0·28	
Narayanganj	·917	+·068	—·075	SW	16	10	0·03	
Berhampore	·943	+·081	—·084	NW	7	10	2·04	
Bogra .	·887	+·024	—·098	N	...	10	3·72	
Mymensingh	·878	+·009	—·120	SSE	4	10	3·44	
Dinajpur .	·926	+·022	—·087	WNW	8	10	0·50	
Dhubri .	·923	—·017	—·117	NNE	15	10	2·26	

In consequence of the movements of the storm large changes of pressure were shown, but the storm was filling up quickly and the winds had fallen lighter. Heavy rain was again reported from many parts of Bengal, the following having been the principal amounts in the 24 hours ending at 8 A.M. on the 27th :—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 27th November 1901.
		Inches.
NOAKHALI	Ramganj . . .	5·00
KHASI AND JAINTIA HILLS .	Cherrapunji Police Station.	4·47
MYMENSINGH	Diwanganj . . .	4·15
KHASI AND JAINTIA HILLS .	Mauphlang . . .	4·05
BOGRA	Bogra . . .	3·72
MYMENSINGH	Mymensingh . .	3·44
RAJSHAHI	Lalpur . . .	3·40
DARRANG	Tezpur . . .	3·37
	Behali . . .	3·34
	Barpukhuri . . .	3·20
KHASI AND JAINTIA HILLS .	Jowai . . .	3·15
RAJSHAHI	Nator	3·10
NOWGONG	Nowgong . . .	3·03

The following accounts of the above cyclone have been received from officers in charge of Light Vessels, etc., in the Hooghly.

The Master of the D. V. *Retriever* says he was steaming up the river on the 26th, and that "I think I must have been pretty close to the centre, because the wind dropped considerably for a few minutes and the sky to the south and south-west became brightly white. If I remember rightly this occurred after 1-30 P.M. or when the barometer had begun to rise and lasted ten minutes when it became as 'ugly' looking as ever.

"I was rather disappointed with the wind force. I expected from our low readings to get hurricane squalls, but we had nothing very hard. The storm must have travelled very quickly after striking the coast because the Ridge Light Ship had her lowest barometer 29·28" (corrected) at 8 A.M. with the wind at south-east, while we had our minimum at 1 P.M. over 120 miles away."

The following were the observations recorded by Mr. T. Munro commanding the *Retriever* :—

PLACE.	Hour.	Bar aneroid.	WIND	
			Direction.	Force.
Hastings . . .	6 A.M.	" ...	ENE	3
	8 A.M.	29·75	NE	3
	9 A.M.	29·72	NE	3
	10 A.M.	29·68	NE	3
	11 A.M.	29·52	NE	4
	11-30 A.M.	29·48	ENE	6 to 7
Per Serang . . .	12·0	29·43	E by N	7
	12-30 P.M.	29·32	ESE	7
Sankral . . .	1 P.M.	29·25	SE	8
Garden Reach . .	1-30 P.M.	29·25	SSE	7
	2 P.M.	29·35	S	5
Hastings . . .	2-30 P.M.	29·43	SSW	4
	3 P.M.	29·51	SW	4
	5 P.M.	29·67	SSW	3
	7 P.M.	29·78	NW	3
	10 P.M.	29·88	W	2

Mr. Elston gives the following account of the cyclone from observations taken at Long Sand station, 3½ miles south-west of Saugor Island.

"On Monday, November 25th, the barometer was falling slowly and the wind rose from north-north-east force 5 to north force 10 during the day. On the 26th the barometer read 29·800" at 8 A.M. with a north-east wind force 9—10 and heavy rain. After 8 A.M. the weather rapidly got

worse and the wind at 11 A.M. had veered to east-south-east blowing with hurricane force (12). At 11-30 A.M. the barometer marked 29·46″ with the storm at its worst. After that hour the wind rapidly veered into south-east and south and fell very quickly, until it got to its normal by 4 P.M. blowing from west.

"At about 1 P.M. on the 26th I noticed a considerable break in the sky about 60 degrees high in the west-south-west, the blue being visible through the reft."

The following remarks are extracted from the log of the F. L. V. *Comet*:—On the 25th the wind was cyclonic, north-east to north force 3 to 10; on the 26th weather cyclonic, wind north-east to west through south, force from 3 to 12; during the early part of the forenoon the storm burst upon the vessel with hurricane force bringing with it a furious sea, the storm centre passing to the westward of the vessel at about 11-30 A.M. when the barometer read about 29·40″. After 11-30 A.M. the barometer began to rise rapidly as the wind hauled into south and south-south-west.

The following observations were supplied by Mr. Shield, Chief Officer of the R. S. V. *Tigris*, at anchor in Dag's Creek, Fuldubi, 8½ miles from Saugor Island:—

During the 24th the barometer was steady with a north to north-east wind. At 8 P.M. noticed the upper strata of clouds driving from south-east to north-west across the moon.

Date.	Hour.	Bar.	Wind		Remarks.
			Direction.	Force.	
		"			
25th Nov.	6 A.M.	30·23	NE	3	Noon moderate gale, heavy rain, sharp squalls, dense cloud, low scud. 8 P.M. upper strata clouds driving from S. S. E. to N. N. W.
	Noon.	30·27	ENE	6	
	6 P.M.	30·20	N	5	
26th Nov.	6 A.M.	Aneroid. 30·10	NNE	7	A strong gale from N. N. E. with sharp squalls. 9-25 A.M. wind shifted to south-east heavy squalls; 10 A.M. wind blowing full hurricane force and furious squalls, thick rain, dense masses of cloud driving at terrific rate, 11-15A.M. wind hauled to south and bar. commencing to rise; noon fresh gale from south-west. About 10 A.M., when blowing the hardest, I noticed a break in the clouds to the west-south-west showing a big bank of clouds beyond. This was distinctly visible and appeared closer at 11 A.M.
	7 A.M.	30·05	...	...	
	8 A.M.	29·90	...	...	
	9 A.M.	29·84	ENE	8	
	9-25 A.M.	...	SE	9	
	10 A.M.	29·67	SE	12	
	11 A.M.	29·55	SSE	12	
	11-15 A.M.	29·56	S	10	
	Noon.	29·67	SW	9	
	1 P.M.	...	WSW	8	
	3 P.M.	...	WSW	6	
	5 P.M.	...	WSW	5	
	9 P.M.	...	WSW	4	

November 28th.—On this day the storm had practically disappeared.

The following table gives the position and rate of motion of the centre from the 22nd to the 27th:—

Date.	Position of centre at 8 A.M.		Distance travelled during interval.	Average hourly rate of motion during interval.
	Lat. N.	Long. E.		
	° ′	° ′	Miles.	Miles.
22nd November	12 0	88 0		
23rd "	13 5	86 10	160	7
24th "	14 0	85 50	75	3
25th "	17 15	86 0	230	10
26th "	21 25	87 15	300	13
27th "	24 45	89 50	300	13

The above storm was more severe than the average cyclonic storm which passes from the centre to the north of the Bay in November, but was not remarkably severe and was so far as can be estimated of only about one-third the intensity of the cyclone of November 1st to 7th 1891 which followed a roughly similar course.

A very noticeable feature of the weather of the month under review was the complete absence of all disturbances in Upper India and over the countries to the westward of the North-West frontier.

Summary of the Reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

I.—Afghan Mountain Districts.

The only snowfall report received was from Killa Drosh, and gave information for the period from May 15th to November 30th 1901. The following is the report:—

"Snowfall in this district is limited, generally speaking, to the months of October, November, December, January, February, March and April. This year on crossing Lowari Pass (10,500 feet) during first week of October the pass was clear, the snow lying on the mountains at about 11,500 feet or somewhat less.

"First recorded snowfall at Drosh was on September 12th, 1901, and covered top of mountain to the east of the fort. This mountain is about 12,500 feet high and its summit is never clear of snow throughout the year. The depth of this slight fall was probably an inch or so. Some remarks apply to the slight falls of 19th September and 3rd and 7th October and no snowline is shown at an altitude of 11,000 feet. More snow fell on 8th October and snowline descended to between 9,000 and 10,000 feet. Next fall was recorded on October 20th and the snowline was about 11,000 feet and again slight snow fell on the 29th and 30th October covering peaks to the north and east of the fort. Thus sheet ice was present on the ground for the first time on November 21st and 29th, a moderate snowstorm was responsible for covering the hills to the north, east and west, snow lying for some hours at 7,000 feet elevation. This fall may be calculated at three or four inches in depth.

"September 12th .	Tops of peaks and Mountains.	Slight.	Depth unknown.
„ 19th .	„	„	„
October 3rd .	„	„	„
„ 7th .	„	„	„
„ 8th .	„	„	„
„ 20th .	„	„	„
„ 29th .	„	„	„
„ 30th .	„	„	„
November 29th .	„	moderate.	3 to 4 inches.

"For the period up to date there has been lying no snow on the ground around Drosh which is only at an elevation of about 4,500 feet.

"First recorded fall of snow on Lowari Pass was about the last week of October 1901. The snowfalls generally and accumulations on the pass for the period have been less than usual.

"The inhabitants state that the period has been milder than usual and that snowfalls have been less in number and quantity than those that took place during the same period last year."

Summary of Special Storm Reports.

Stormy cyclonic weather prevailed around the Bay during November, 1901, but ordinary quiet settled conditions were reported in other parts of the country. The following were the special storm reports:—

November 14th.—Frequent thunder and lightning at Waltair at 8 P.M.

A thunderstorm was experienced at the Intermediate Light Vessel between 2 A.M. and 6 A.M.

„ *18th.*—Thunderstorm with violent winds occurred at Ootacamund at 5-30 A.M. lasting till 6-20 A.M.

Earthquake Reports.—At Sambhar at 9-7 P.M. (local time) on the 8th November a severe earthquake was felt. The shock came from south and lasted five seconds.

At Killa Drosh there was a slight shock of earthquake at 10-20 P.M. of 19th November, lasting 45 seconds.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea.—Ordinary northerly winds of the winter monsoon obtained over the whole of the Arabian Sea to the north of Lat. 9° or 10° N. throughout the month. Further south winds were westerly during the first 25 days, but shifted quickly to north on the 26th and blew from between north and north-east during the remainder of the month. Weather was more or less disturbed in the region of westerly winds, more especially in the vicinity of the Malabar and West Ceylon coasts and quiet elsewhere. The air movement was of about normal strength on the mean of the month, being only 0·1 above the normal, *viz.*, 3·0. It, however, varied considerably in intensity from day to day during the month, being somewhat stronger than usual on the 7th and 8th, 11th to the 14th, 16th, 18th to 20th and 24th to 28th and normal or slightly below it on all other days.

Bay of Bengal.—During the first seven or eight days of the month the air movement over this area was such as ordinarily prevails in the month of November, northerly winds obtaining in the north and centre and westerly winds in the south with an intermediate belt of light unsteady winds. Weather was unsettled with occasional squalls and rain in the south and south-west and fine with little or no cloud over the rest of the Bay. A storm was generated in the area of interaction between the two opposite systems of air circulation in the south of the Bay off the east coast of Ceylon on the 10th and 11th. It marched northwards up the Bay parallel to the Ghâts during the next six days and then recurving quickly to north-east passed inland across the East Bengal coast on the 18th. It was a storm of only moderate intensity and hence its influence on the weather was neither very

extensive nor very marked. With its passage inland the winds, which had been cyclonic in direction during its existence, returned to their normal northerly directions in the north of the Bay on the 19th and extending rapidly southwards were established over the whole of the Bay excepting the extreme south where humid westerly winds continued. The air circulation over the Bay on the 20th and 21st was thus very similar to that which obtained on the 8th and 9th, and, as happened on that occasion, a storm was generated in the southern half of the Bay. Like the previous disturbance it also drifted northwards, intensifying at the same time and struck the Sunderbands on the 26th. It was, however, a severe storm and occasioned a very rough stormy weather over the greater part of the Bay during its existence, the F. L. vessels *Torch* and *Planet* experiencing hurricane winds of force 11 to 12. With the dispersion of the storm on the 27th ordinary north-east winds with fine weather set in over the whole of the Bay as far south as Lat. 6° N. and held steadily during the rest of the month.

Winds were more or less above their normal intensity during the two periods of disturbances, *viz.*, from the 10th to the 17th and the 22nd to the 26th and lighter than usual on most other days. They were strongest on the 24th and 25th when they averaged 5·7 and 5·8 in force respectively, as compared with 3·2 the normal of the month. On the mean of the whole month the air movement in the Bay was 0·2 above the normal.

Equatorial Belt.—There are as usual no data available for the eastern half of the Equatorial Belt. In the western half the south-east trades extended as far north as the Equator during the first three weeks of the month, but retreated quickly southwards in the fourth week and were replaced by unsteady northerly winds as far south as Lat. 4° or 5° S. The data for the Seychelles and Zanzibar show that the precipitation of the month at these two stations was from 10 to 20 per cent. below the normal.

Temperature of the Air.

The variations of the mean temperature conditions of the month were large and strongly marked. The mean temperature was more or less considerably in excess over India generally and was normal or in trifling excess or defect on the coasts of the Peninsula and over Burma, Assam and Bengal. These conditions were attributable to the steadily fine weather which prevailed over India and to the disturbed cyclonic weather over the Bay area.

The mean maximum or day temperature of the month was higher than usual except in the two following areas, *viz.*, the south-west, south, and east coasts of the Peninsula and Upper Burma, Assam, and the adjoining parts of Bengal. In these two areas the mean maximum temperature was generally in slight defect, but at the following stations in Burma the deficiency exceeded 2°:—

Station.	Mean maximum temperature.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	°	°	°
Bhamo	79·1	81·8	—2·7
Yamethin	86·9	89·0	—2·1

Over the whole of the remainder of the Indian region the mean maximum temperature was in excess. The excess was most pronounced over the area represented by the stations of Jacobabad, Bikaner, Ajmer, Sambhar, Khandwa, Surat, Bhuj, Deesa, Indore, Ahmedabad, Bhavnagar and Hyderabad and within this area the temperature was more than 4° above the normal. The following gives comparative data for the stations in this area:—

Station.	Mean maximum temperature.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	°	°	°
Khandwa	91·7	85·3	+6·4
Surat	95·9	89·9	+6·0
Deesa	95·9	90·4	+5·5
Jacobabad	91·4	85·9	+5·5
Bhuj	93·4	88·3	+5·1
Indore	86·7	81·8	+4·9
Sambhar	87·3	82·5	+4·8
Hyderabad (Sind)	92·0	87·2	+4·8
Ahmedabad	95·6	90·9	+4·7
Rajkot	94·2	89·9	+4·3
Bhavnagar Para	93·4	89·3	+4·1
Ajmer	87·2	83·1	+4·1

In the North Punjab and in Baluchistan the day temperature, on the mean of the month, was also very high

and the variations from the normal were more than 4° above the average at the following three stations :—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	°	°	°
Quetta	70·8	63·8	+7·0
Rawalpindi	81·5	76·7	+4·8
Lahore	85·5	81·3	+4·2

Except at a few stations the excess of the day temperature was as marked in the case of the hill stations as at the plains stations in their neighbourhood. This is shown below :—

HILL STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	°	°	°
Quetta	70·8	63·8	+7·0
Chaman	73·2	69·7	+3·5
Srinagar	64·7	60·7	+4·0
Cherat	71·4	67·5	+3·9
Chakrata	62·7	59·4	+3·3
Leh	50·8	47·8	+3·0
Simla	57·2	55·6	+1·6
Murree	62·5	61·0	+1·5
Ranikhet	63·7	62·4	+1·3
Mussooree	58·8	58·2	+0·6
Darjeeling	55·5	54·5	+1·0
Pachmarhi	76·2	72·0	+4·2
Mount Abu	76·1	73·3	+2·8
Wellington	68·5	66·8	+1·7

The following gives the highest temperature recorded during the month in each of the divisions of India with the name of the station recording it together with the highest temperature previously recorded in November at that station :—

PROVINCE OR DIVISION.	Station.	Highest maximum temperature recorded in November 1901.	Date on which recorded.	Highest maximum temperature recorded in November previous to 1901.	Year in which recorded.
		°		°	
BURMA . .	Mandalay .	96·5	3rd	96·0	1898
ASSAM . .	Silchar .	91·0	9th	94·5	1900
BENGAL . .	Raniganj .	93·6	1st	96·1	1896
ORISSA . .	Cuttack .	92·4	1st	96·8	1886
BIHAR . .	Dehri . .	94·3	2nd	97·3	1896
CHOTA NAGPUR .	Chaibassa .	93·5	1st	94·7	1896
NORTH-WESTERN PROVINCES AND OUDH.	Jhansi . .	97·2	1st	98·2	1872
PUNJAB . .	Sialkot .	94·6	1st	91·6	1895 and 1899.
SIND . . .	Hyderabad .	100·1	2nd	100·7	1895
RAJPUTANA .	Deesa . .	103·1	1st, 2nd & 3rd.	102·9	1895
GUJARAT . .	Ahmedabad .	102·3	1st & 3rd	102·3	1899
CENTRAL INDIA .	Neemuch .	96·0	1st	94·5	1899
CENTRAL PROVINCES.	Khandwa .	99·2	2nd	98·7	1899
BERAR . . .	Akola . .	93·4	1st & 2nd	97·5	1896 and 1899.
WEST COAST .	Ratnagiri .	97·4	2nd, 3rd, 5th & 18th.	98·8	1896
BOMBAY DECCAN	Sholapur .	98·2	16th	96·2	1896
MYSORE . .	Chitaldroog .	88·1	15th	90·6	1896
MADRAS COAST .	Nellore . .	92·8	17th	96·9	1898
MADRAS DECCAN	Cuddapah .	96·2	17th	97·1	1896
SOUTH INDIA .	Salem . .	94·2	18th	99·7	1876

The above shows that except in Burma, the Punjab, Rajputana, Central India, the Central Provinces, the Bombay Deccan and Gujarat the highest temperatures were lower than those previously recorded.

The mean night or minimum temperature of the month was in trifling defect in three small areas, *viz.*, the Tinnevelly district of South India, the east and south of the Central Provinces and part of Assam and of West Bengal. The following gives comparative data for the stations in these areas :—

PROVINCE OR DIVISION.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, November 1901.	Normal, November.	Variation of actual from normal November 1900.
		°	°	°
SOUTH INDIA . . .	Tinnevelly . .	73·9	74·6	−0·7
EAST AND SOUTH OF CENTRAL PROVINCES.	Chanda . . .	58·0	59·1	−1·1
	Sambalpur . .	61·8	62·4	−0·6
	Raipur . . .	60·0	60·2	−0·2
	Nagpur . . .	59·6	59·7	−0·1
PART OF ASSAM AND OF WEST BENGAL.	Darbhanga . .	61·3	62·0	−0·7
	Dhubri . . .	63·5	63·6	−0·1

Over the whole of the remainder of India the minimum temperature, on the mean of the month, was in excess of the normal. The variations were generally slight but exceeded 2° in two areas which ran north and south, the first from the Punjab through Rajputana, the greater part of North-Western Provinces, Central India and Khandesh to the West Coast and the Bombay Deccan, the second from the Upper Assam Valley through Upper and Central Burma as far as Lower Burma and Tenasserim. In these two areas the excess was more than 3° at the following stations:—

Area.	Station.	Mean minimum temperature. Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
		°	°	°
First area	Deesa	62·0	56·8	+5·2
	Jhansi	61·9	56·7	+5·2
	Ajmer	54·1	49·4	+4·7
	Sialkot	52·9	48·5	+4·4
	Jaipur	57·0	53·0	+4·0
	Agra	58·7	54·9	+3·8
	Surat	66·1	62·3	+3·8
	Bijapur	64·4	60·6	+3·8
	Lahore	49·9	46·2	+3·7
	Saugor	59·6	56·0	+3·6
	Goa	75·8	72·3	+3·5
	Ahmednagar	59·6	56·2	+3·4
Second Area	Minbu	71·1	68·0	+3·1
	Mergui	72·6	69·5	+3·1

At the hill stations the mean minimum temperature was almost everywhere excessive:—

The following were the lowest night temperatures recorded during the month in Northern India and at the hill stations. They were generally recorded during the 3rd week at the hill stations and last week at the plains stations and were much higher than those previously recorded during November in former years:—

Station.	Lowest minimum temperature recorded in November 1901.	Date on which recorded.	Lowest minimum temperature recorded in November previous to 1901.	Year in which recorded.
	°		°	
Dros	7·6	22nd, 27th & 28th.	—9·9	1899
Leh	14·5	22nd, 23rd & 27th.	6·7	1883
Kalat	16·4	30th	5·8	1895
Skardu	21·1	23rd	16·7	1897
Srinagar	23·5	23rd	20·1	1893
Quetta	24·8	24th	14·0	1879
Rawalpindi	38·0	27th	25·9	1879
Peshawar	40·9	22nd, 24th, 26th & 30th.	24·7	1879
Sirsa	41·0	27th	33·5	1879
Jacobabad	42·0	26th	32·7	1879
Dera Ismail Khan	42·1	24th, 26th, & 27th.	28·0	1879
Roorkee	42·5	28th	30·9	1879
Jubbulpore	44·9	29th	32·0	1879
Indore	45·1	26th	41·7	1881
Pachpadra	45·1	27th	33·6	1879
Ajmer	45·3	27th	31·1	1879
Meerut	45·7	28th	36·1	1879
Akola	46·0	30th	37·6	1879
Bareilly	46·7	29th	39·8	1879
Dehra Dun	47·0	20th	40·0	1879
Rajkot	48·0	28th	43·5	1879

The mean temperature of the month, as stated above, was very slightly below the normal on the south-west, south and east coasts of the Peninsula and over part of North Bengal, of Assam and of Upper Burma. Over the whole of the remainder of India including the hill stations and Baluchistan, the mean temperature exceeded the normal. The excess was more than 2° over practically the whole of North-Western India, the Bombay Coast, the Deccan, the west of the Central Provinces and the east of the North-Western Provinces and part of West Bengal. It was 4° or more at the following stations:—

Station.	Mean daily temperature. Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	°	°	°
Deesa	79·0	73·6	+5·4
Surat	81·0	76·1	+4·9
Ajmer	70·7	66·3	+4·4
Jhansi	74·8	70·4	+4·4
Lahore	67·7	63·7	+4·0

The following is a brief summary of the more important temperature features of the month :—

(1) The day temperature was in slight defect, the night temperature in slight to considerable excess, and the mean temperature about normal over the coasts of the Peninsula, Upper Burma, Assam and the adjacent parts of Bengal.

(2) Both the day and night temperatures were in considerable to large excess over the greater part of North-West India.

(3) The day temperature was in considerable excess, the night temperature in slight defect and the mean temperature about normal over the east of the Central Provinces.

(4) Both the day and night temperatures and consequently also the mean temperature were in slight to considerable excess over the interior of the Peninsula.

(5) At the hill stations both the day and night temperatures were in excess of the normal.

The following table gives comparative temperature data for 56 meteorological divisions into which India is divided :—

Province.	Division.	Actual temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	88·3	72·2	80·2	16·1	23·0	+0·2	+2·4	—2·0
	Lower Burma (Deltaic)	87·0	75·5	81·3	11·5	17·8	+0·8	+2·7	—1·9
	Central do.	87·5	70·4	79·0	17·1	27·3	+1·1	+2·6	—1·5
	Upper do.	84·4	67·6	76·0	16·8	29·1	—1·9	+2·2	—4·1
	Arakan	85·5	72·9	79·2	12·6	21·9	0	+1·0	—1·0
Bengal and Assam	Eastern Bengal	82·4	66·0	74·2	16·4	30·9	—0·2	+1·0	—1·2
	Assam (Surma)	84·2	64·3	74·3	19·9	31·6	—0·5	+0·5	—1·0
	Do. (Brahmaputra)	78·4	62·5	70·5	15·9	28·8	—0·9	+1·1	—2·0
	Deltaic Bengal	82·5	64·6	73·6	17·9	34·8	+0·7	+0·3	+0·4
	Central do.	82·8	63·2	73·0	19·6	37·0	+0·7	+0·9	—0·2
	North do.	81·1	61·9	71·7	19·2	32·0	—0·9	+1·3	—2·2
	Bengal Hills	56·9	35·1	46·1	21·8	36·1	+1·0	+2·0	—1·0
	Orissa	82·9	60·7	74·8	16·2	33·0	—0·4	+1·1	—1·5
	Chota Nagpur	81·0	59·1	70·1	21·9	38·5	+0·9	+1·7	—0·8
	Bihar (South)	85·2	60·8	73·0	24·3	39·7	+2·3	+1·3	+1·0
	Do. (North)	83·5	59·5	71·6	24·0	39·1	+1·7	—0·2	+1·9
North-Western Provinces and Oudh.	North-Western Provinces (East)	85·6	55·7	70·7	29·9	45·3	+3·6	+0·8	+2·8
	Oudh (South)	84·7	54·1	69·4	30·6	44·1	+1·8	+2·3	—0·5
	Do. (North)	84·7	57·2	71·0	27·5	41·1	+2·1	+0·5	+1·6
	North-Western Provinces (Central)	86·3	56·5	71·5	29·8	44·5	+3·5	+5·2	—1·7
	Do. do. (West)	85·3	55·1	70·2	30·2	43·5	+2·8	+2·9	—0·1
	Do. do. (Submontane, East)	84·0	59·0	71·5	25·0	39·4	+2·4	+1·5	+0·9
	Do. do. (Submontane, West)	80·6	52·2	66·4	28·3	42·7	+2·1	+1·3	+0·8
	Do. do. (Hills)	61·7	46·0	54·0	15·8	30·1	+1·7	+2·0	—0·3
Punjab	Punjab (South-East)	83·3	57·8	70·6	25·5	41·1			
	Do. (South)	84·5	50·6	67·6	33·9	49·5	+2·1	+2·7	—0·6
	Do. (Central)	85·5	49·9	67·7	35·6	47·9	+4·2	+3·7	+0·5
	Do. (Submontane)	82·7	51·5	67·3	31·2	47·2	+1·8	+1·9	—0·1
	Do. (Hills)	62·3	36·6	49·4	25·8	40·1	+2·8	+1·2	+1·6
	Do. (North)	80·4	45·6	63·0	34·8	47·3	+2·2	+2·2	0
	Do (West)	85·8	50·9	68·4	34·9	49·1	+2·8	+1·5	+1·3
Bombay and Malabar Coast Districts (Madras).	Malabar	85·6	73·6	79·7	12·0	24·6	—0·3	+0·6	—0·9
	Madras (South Central)	86·6	69·1	77·9	17·5	36·5	+0·2	+0·6	—0·4
	Coorg	75·6	61·5	68·6	14·1	26·9	+0·6	+1·2	—0·6
	Mysore	81·1	64·2	72·7	16·9	31·8	+0·3	+1·3	—1·0
	Konkan	89·5	74·2	81·9	15·3	27·5	+1·8	+2·6	—0·8
	Bombay Deccan	86·7	62·7	74·5	24·1	40·9	+1·8	+2·7	—0·9
	Hyderabad (North)	84·7	60·2	72·4	24·5	37·2	...	...	...
	Khandesh	87·6	58·7	73·1	28·9	45·4	+3·4	+0·9	+2·5
Central Provinces and Berar.	Berar	88·4	59·0	73·7	29·5	42·8	?	?	?
	Central Provinces (West)	88·3	57·9	73·1	30·4	44·7	+4·1	+0·6	+3·5
	Do. (Central)	84·1	56·3	70·2	27·8	42·6	+2·5	+0·7	+1·8
	Do. (East)	84·1	60·9	72·6	23·2	39·2	+1·5	—0·4	+1·9

Province.	Division.	Actual temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bombay (North)	Gujarat	95·8	66·9	81·3	28·9	44·4	+5·4	+2·9	+2·5
	Kathiawar and Cutch	92·4	63·8	78·1	28·6	44·8	+3·9	+1·6	+2·3
	Sind	91·9	57·3	74·6	34·7	49·3	+4·6	+0·7	+3·9
	Baluchistan Hills	71·6	33·7	52·6	37·9	55·6	+5·3	+1·0	+4·3
Rajputana and Central India.	Central India (East)	85·0	55·2	70·2	29·8	46·1	+4·0	+2·0	+2·0
	Rajputana (East), Central India (West)	88·9	56·6	72·8	32·3	49·8	+4·2	+4·6	−0·4
	Do. (West)	90·6	57·7	74·2	32·9	50·8	+4·0	+1·2	+2·8
Madras	East Coast (North)	83·2	71·2	77·2	12·1	26·1	−0·4	+1·3	−1·7
	Hyderabad (South)	86·5	65·7	76·1	20·8	36·5	+2·1	+2·0	+0·1
	Madras (Central)	87·7	68·4	78·1	19·3	38·1	+1·2	+2·0	−0·8
	East Coast (Central)	84·8	72·2	78·5	12·6	27·5	−0·2	+0·3	−0·5
	Do. (South)	85·2	72·9	79·1	12·4	29·1	−0·3	+0·6	−0·9
	Madras (South)	86·3	73·0	79·3	13·3	23·4	−0·6	−0·2	−0·4

The following is a statement of the larger and more important of the changes of the temperature conditions during the month.

Very quiet and undisturbed weather appears to have prevailed over Persia, Baluchistan and North-Western and Central India during the month, and the temperature was hence steadily high over the whole of this large area, while, on the contrary, over the Bay area the temperature was unsteady owing to the occurrence of storms and cyclonic rainfall around the Bay.

Temperature on the 1st and 2nd was excessive practically over the whole Indian region. The excess was greatest and between 5° and 10° within a broad band which extended east and west across Northern India from Bengal to Sind. From this band the amount of the excess decreased in all directions and was less than 2° along the foot of the hills in the North-Western Provinces, along the west coast of the Peninsula and in Assam and Burma.

The following table giving variation data for the 24 hours ending at 8 A.M. on the 1st explains the conditions, relatively to the normal, prevailing at the commencement of the month :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 1st November.	Mean minimum temperature, 1st November.	Mean temperature, 1st November.
	°	°	°
Burma	0	+2·1	+1·1
Assam	+1·8	+1·6	+1·7
Bengal	+3·6	+3·1	+3·4
Orissa	+6·7	+3·1	+4·9

Province or Division.	Variation from Normal.		
	Mean maximum temperature, 1st November.	Mean minimum temperature, 1st November.	Mean temperature, 1st November.
	°	°	°
Bihar	+6·4	+4·5	+5·5
Chota Nagpur	+7·7	+2·7	+5·2
North-Western Provinces and Oudh	+6·0	+2·7	+4·4
Punjab	+4·3	+4·7	+4·5
Sind	+3·4	+2·7	+3·1
Rajputana	+7·7	+5·7	+6·7
Gujarat	+5·5	+4·2	+4·9
Central India	+7·6	+6·3	+7·0
Central Provinces	+6·4	+1·9	+4·2
Berar	+5·1	+2·4	+3·8
West Coast	+1·7	+1·6	+1·7
Bombay Deccan	+3·4	+2·7	+3·1
Mysore	+2·5	+2·3	+2·4
Madras Coast	+3·2	+1·4	+2·3
Madras Deccan	+4·2	+3·2	+3·7
South India	+3·3	+1·4	+2·4

On the 2nd rain commenced over Lower Burma and the southern half of the Peninsula, the fall continuing in the latter region until the 9th. This rainfall reduced temperature to below the normal over a considerable part of the east of the Peninsula, the fall commencing in the south and thence extending northward as far as Orisssa

The following gives comparative temperature data in illustration from the 3rd to the 9th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	3rd Nov.	4th Nov.	5th Nov.	6th Nov.	7th Nov.	8th Nov.	9th Nov.
	°	°	°	°	°	°	°
Madras Coast	+2·1	+0·1	+0·7	−0·6	−0·7	−1·5	+0·4
Madras Deccan	+1·7	+1·6	+2·7	+1·8	+0·5	−0·3	+0·7
South India	−1·0	−1·8	+0·1	+0·5	−1·8	−0·5	−1·5

In Burma the rainfall though commencing about the same time was less continuous and the reduction of temperature was only slight. The following gives data for this province from the 3rd to the 9th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	3rd Nov.	4th Nov.	5th Nov.	6th Nov.	7th Nov.	8th Nov.	9th Nov.
	°	°	°	°	°	°	°
Burma	−0·3	+0·9	+0·6	+1·1	+0·9	+0·6	+0·2

Over the remainder of India, though there occurred a slight general decrease of temperature, the heat throughout these seven days remained steadily in excess. The excess was greatest over Gujarat and the neighbouring regions and was more than 6° in amount at the following stations on each day from the 3rd to the 9th :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
3rd November	Deesa	+8·3
	Ahmedabad	+8·3
	Surat	+7·7
	Khandwa	+7·5
	Indore	+7·1
	Bhuj	+6·9
	Ajmer	+6·3
4th November	Deesa	+7·8
	Veraval	+7·5
	Ahmedabad	+7·0
	Sholapur	+7·0
	Ahmednagar	+6·6
	Indore	+6·6
	Poona	+6·2
5th ,,	Jaipur	+7·8
	Deesa	+7·3
	Surat	+7·0
	Ajmer	+6·5
	Rajkot	+6·4
	Bhuj	+6·3
6th ,,	Deesa	+6·5
	Bhuj	+6·1
7th ,,	Deesa	+7·2
	Sambhar	+6·9
8th ,,	Deesa	+6·5
9th ,,	Ajmer	+6·2

On the 10th and 11th there was not much change to record. The mean temperature was generally lower than usual over the Peninsula and Burma and generally in excess over North-Western and Northern India. The following gives comparative temperature data for all divisions for the 10th in illustration :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 10th Nov.	Mean minimum temperature, 10th Nov.	Mean temperature 10th Nov.
	°	°	°
Burma	−0·3	0	−0·2
Assam	+2·5	−1·7	+0·4
Bengal	+2·7	−0·4	+1·2
Orissa	+1·3	−3·0	−0·9
Bihar	+4·3	+0·1	+2·2
Chota Nagpur	+3·3	+1·2	+2·3
North-Western Provinces and Oudh	+2·9	+1·7	+2·3
Punjab	+3·0	+3·5	+3·3
Sind	+6·7	+2·0	+4·4

Province or Division.	Variation from normal of Mean maximum temperature, 10th Nov.	Mean minimum temperature, 10th Nov.	Mean temperature, 10th Nov.
	°	°	°
Rajputana	+6·1	+3·5	+4·8
Gujarat	+5·5	—0·1	+2·7
Central India	+2·8	—1·0	+0·9
Central Provinces	+2·3	—2·8	—0·3
Berar	+3·3	—4·6	—0·7
West Coast	+1·9	+1·6	+1·8
Bombay Deccan	+2·1	—1·9	+0·1
Mysore	+0·9	+1·6	+1·3
Madras Coast	+0·5	+0·9	+0·7
Madras Deccan	+1·5	+1·3	+1·4
South India	+2·0	+2·7	+2·4

On the 12th a cyclonic storm formed over the south-west of the Bay and heavy rain set in along the Madras coast. This rainfall occasioned a brisk fall of temperature, and as the cyclonic storm and rainfall extended northward along the east coast and into Bengal, it was attended by a well-marked cool wave. This is shown by the following comparative data for the two stations recording the largest negative variation on each day from the 12th to the 18th :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
12th Nov.	Cuddalore	—4·8
	Trichinopoly	—4·4
13th ,,	Trincomalee	—4·4
	Colombo	—4·1
14th ,,	Waltair	—3·4
	Masulipatam	—3·1
15th ,,	Waltair	—4·6
	Cuttack	—3·3
16th ,,	Calcutta	—4·3
	Cuttack	—3·4
17th ,,	Chittagong	—2·1
	Bhamo	—2·0
18th ,,	Kindat	—3·8
	Minbu	—2·4

During this period there occurred a marked rise of temperature over the interior of India and of the Peninsula, and on the 16th, 17th and 18th the heat, relatively to the normal, was very great over Gujarat, the central districts and the Deccan districts. The following gives comparative temperature data for the interior divisions from the 12th to the 18th:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 12th Nov.	13th Nov.	14th Nov.	15th Nov.	16th Nov.	17th Nov.	18th Nov.
	°	°	°	°	°	°	°
Gujarat	—0·6	+0·1	+1·4	+4·9	+5·0	+4·2	+5·1
Central India	+0·3	+1·2	+3·5	+3·6	+4·4	+4·7	+2·5
Central Provinces	—0·1	+1·3	+4·1	+4·0	+3·4	+3·5	+4·6
Berar	—2·2	+0·8	+5·2	+5·0	+5·2	+3·9	+5·2
West Coast	—0·1	+0·8	+0·9	+1·7	+1·2	+1·6	+3·1
Madras Deccan	+0·5	—0·3	+2·9	+5·0	+7·8	+6·7	+5·6
Bombay Deccan	—1·9	+0·1	+1·9	+5·1	+7·3	+6·0	+5·6
Mysore	—1·2	—0·2	+0·2	+4·1	+5·2	+5·1	+5·0
South India	—2·9	—0·8	+1·9	+3·1	+3·9	+2·3	+3·4

During this period there was a steady movement southward of the area of greatest relative heat. This is shown by the following data which give for each day from the 12th to the 18th the two stations which recorded the largest positive variations :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
12th Nov.	Sialkot	+4·9
	Lahore	+4·6
13th ,,	Sialkot	+5·1
	Deesa	+4·1
14th ,,	Khandwa	+6·7
	Nagpur	+5·9
15th ,,	Surat	+9·5
	Khandwa	+8·6
16th ,,	Sholapur	+10·4
	Bellary	+10·0
17th ,,	Bijapur	+9·3
	Kurnool	+9·1
18th ,,	Kurnool	+8·1
	Bijapur	+7·7

The temperature changes between the 19th and 23rd over the eastern half of India were remarkable and interesting. On the 19th an area of relatively low temperature appeared over Upper Burma in the neighbourhood of Kindat and Bhamo where, though there had been a light shower of rain, the precipitation was inadequate to explain the fall of temperature. The area of reduced temperature spread quickly during the succeeding 24 hours covering the greater part of Bengal, North Madras and the east of the Central Provinces, and this notwithstanding that no rain whatever occurred over this region. On the 21st the area of reduced temperature had increased both in size and intensity and remained unaltered during the 22nd. On the 23rd it commenced to disappear. The following gives comparative temperature data for the more eastern divisions from the 19th to the 23rd :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	19th Nov.	20th Nov.	21st Nov.	22nd Nov.	23rd Nov.
	°	°	°	°	°
Bengal	−0·1	−1·9	−2·7	−1·9	−0·3
Orissa	+0·8	−2·0	−3·6	−2·6	−3·0
Bihar	−0·1	−1·3	−1·5	−1·0	+0·7
Chota Nagpur	+0·4	−0·9	−0·3	−1·0	−0·1
Madras Coast	+2·6	+1·0	−0·4	−1·8	−1·5

During these five days the mean temperature was steadily excessive over the western divisions—more particularly over Berar, the Bombay Deccan, etc. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	19th Nov.	20th Nov.	21st Nov.	22nd Nov.	23rd Nov.
	°	°	°	°	°
Sind	+1·7	+3·2	+2·2	+2·8	+3·7
Rajputana	+2·4	+3·0	+3·7	+2·9	+4·7
Gujarat	+4·9	+4·5	+4·2	+2·7	+3·9
Central India	+2·3	+2·1	+3·2	+3·7	+5·4
Central Provinces	+2·4	+0·7	+1·1	+1·6	+0·7
Berar	+4·7	+2·8	+1·1	+3·4	+1·1
West Coast	+3·6	+3·2	+2·7	+2·4	+1·8
Bombay Deccan	+4·8	+4·2	+2·7	+2·2	+2·4
Mysore	+3·4	+2·3	+2·7	+3·4	+1·8

On the 24th a fresh set of conditions commenced to affect the weather. On the 22nd a cyclonic storm began to form over the Bay. Rain due to the storm commenced in Bengal and Burma on the 24th. The storm advanced northward up the Bay striking the Bengal coast on the 26th and advancing into East Bengal on the 27th, heavy rain accompanying the storm in its progress. This rainfall occasioned a brisk fall of temperature over the storm area, as is shown by the following comparative data for the Bengal divisions, Assam and Burma from the 24th to the 30th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	24th Nov.	25th Nov.	26th Nov.	27th Nov.	28th Nov.	29th Nov.	30th Nov.
	°	°	°	°	°	°	°
Burma	+1·5	−1·1	−0·5	+0·6	+1·9	+3·1	+2·0
Assam	+2·0	−2·2	−4·1	−2·5	+0·2	+1·4	+2·2
Bengal	+2·2	−0·7	−3·3	−0·9	−2·1	−0·6	−1·4
Orissa	−2·2	−2·1	−4·3	−0·5	+1·5	+1·2	+0·9
Bihar	+3·2	+2·9	+0·3	−0·7	+1·2	−0·2	+0·5
Chota Nagpur	+1·0	+0·5	−2·8	−1·2	+2·2	+1·9	+2·1

As is usual under the conditions described above the reduction of temperature was much more strongly marked in the day than in the night temperatures and at the following stations on the following dates the maximum temperature was more than 12° below the normal :—

Date.	Station.	Maximum temperature.		
		Actual of date.	Normal of date.	Variation of actual from normal of date.
		°	°	°
25th November	Minbu	71·6	88·7	−17·1
26th "	Silchar	68·4	83·3	−14·9
	Chaibassa	66·6	81·5	−14·9
	Jessore	68·1	81·6	−13·5
	Cuttack	71·3	84·1	−12·8
	Narayanganj	70·1	82·3	−12·2
	Balasore	69·8	82·0	−12·2
27th "	Burdwan	67·3	80·9	−13·6
	Dinajpur	67·8	80·9	−13·1
	Jalpaiguri	67·9	80·0	−12·1

With the development of the cyclonic storm over the Bay, the wind which had previously been easterly and south-easterly over the Peninsula shifted to the northward and

this change was immediately succeeded by a brisk fall of temperature. This fall reduced temperature to below the normal all over the Peninsular divisions, a condition which lasted until the 28th when with the return of the wind to easterly and south-easterly directions the previously existing excess of temperature was restored. This change is illustrated in the following table which gives variation data for the Peninsular divisions from the 24th to the 30th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A. M. of						
	24th Nov.	25th Nov.	26th Nov.	27t Nov.	28th Nov.	29th Nov.	30th Nov.
	°	°	°	°	°	°	°
Central Provinces . . .	0	—0·8	+0·7	+0·7	—0·1	+0·2	+1·9
Berar	—1·5	—1·7	—1·8	—1·1	—0·4	—1·4	+0·7
West Coast	+0·6	—0·4	—1·7	—3·5	—2·9	—1·9	—0·2
Bombay Deccan . . .	+0·5	—0·4	—4·4	—4·6	—1·9	—0·6	+4·1
Mysore	+1·3	—2·0	—3·8	—4·4	—3·4	+0·9	+2·3
Madras Coast . . .	—2·1	—1·7	—3·6	—1·1	+0·2	+2·0	+1·8
Madras Deccan . . .	—0·9	—3·5	—5·4	—3·2	—0·7	+2·2	+3·0
South India	+0·3	—2·6	—3·5	—3·6	—3·6	—1·4	+1·8

The reason of this reduction of temperature was not rainfall as in the case of North-Eastern India, but a cool northerly wind which eventually cleared the sky of cloud and permitted a rapid radiation. As a consequence the effect was more pronounced in the night than in the day temperature, and at the following stations on the following dates the minimum temperature fell to more than 10° below the normal :—

Date.	Station.	Minimum temperature.		
		Actual, of date.	Normal, of date.	Variation of actual from normal of date.
		°	°	°
26th November	Madras . . .	59·5	71·4	—11·9
	Salem . . .	56·0	66·9	—10·9
	Raichur . .	55·2	65·6	—10·4
	Cuddapah . .	57·3	67·6	—10·3
27th „ . .	Mysore . . .	52·4	64·8	—12·4
	Wellington . .	38·7	50·9	—12·2
	Calicut . . .	61·0	72·7	—11·7
	Salem . . .	55·0	66·5	—11·5
	Coimbatore . .	57·2	67·9	—10·7
	Poona . . .	46·5	56·9	—10·4
28th „ . .	Salem . . .	55·0	66·4	—11·4
	Wellington . .	40·2	50·5	—10·3

In Northern and North-Western India the temperature also underwent a decrease in sympathy with the changes over North-Eastern and tropical India, but the fall was much smaller and on most days the mean temperature remained more or less in excess of the normal. This is shown below :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	24th Nov.	25th Nov.	26th Nov.	27th Nov.	28th Nov.	29th Nov.	30th Nov.
	°	°	°	°	°	°	°
N.-W. Provinces and Oudh .	+1·6	+3·4	+4·4	+2·8	+1·7	+1·8	+3·2
Punjab	+0·3	+0·8	+1·2	+1·8	+2·7	+4·2	+4·2
Sind	+3·6	+3·1	+0·7	+2·4	+3·9	+4·3	+4·3
Rajputana	+4·7	+2·1	+0·3	—1·0	+1·7	+5·4	+8·6
Gujarat	+2·9	+2·5	+0·9	—2·8	—2·0	—0·1	+1·2
Central India . . .	+2·5	+0·9	+1·6	—0·3	—0·9	+1·4	+4·3

On the 30th the effects of the rainfall in North-East India and of the cool winds over the Peninsula had alike disappeared and the mean temperature exceeded the normal in all divisions, excepting Bengal and the West Coast. The following gives comparative data for all divisions on 30th, and shows the general excess of temperature which prevailed at this time :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 30th November.	Mean minimum temperature, 30th November.	Mean temperature, 30th November.
	°	°	°
Burma	+1·7	+2·2	+2·0
Assam	+0·1	+4·3	+2·2
Bengal	—0·6	—2·2	—1·4
Orissa	+0·3	+1·4	+0·9
Bihar	+2·9	—2·0	+0·5
Chota Nagpur	+2·6	+1·5	+2·1
North-Western Provinces and Oudh.	+4·5	+1·9	+3·2
Punjab	+5·5	+2·8	+4·2
Sind	+5·9	+2·7	+4·3
Rajputana	+9·0	+8·2	+8·6
Gujarat	+3·5	—1·1	+1·2
Central India	+6·7	+1·8	+4·3
Central Provinces . . .	+4·0	—0·3	+1·9

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature 30th November.	Mean minimum temperature 30th November.	Mean temperature 30th November.
	°	°	°
Berar	+2·7	—1·3	+0·7
West Coast	—1·6	+1·3	—0·2
Bombay Deccan	+2·1	+6·0	+4·1
Mysore	—0·1	+4·7	+2·3
Madras Coast	—0·4	+4·0	+1·8
Madras Deccan	—3·0	+9·0	+3·0
South India	+1·9	+1·6	+1·8

In the Persian-Baluchistan area the weather during November 1901 was in marked contrast to that which prevailed in the same month last year. The weather was quiet and practically rainless and the mean temperature was steadily excessive The following gives temperature data for the month for the stations in this area :—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	°	°	°
Quetta	50·9	47·2	+3·7
Chaman	59·7	57·2	+2·5
Jask	75·9	75·7	+0·2
Bushire	71·0	70·5	+0·5
Teheran	55·4	...	...
Ispahan	52·1	...	...
Baghdad	66·9	63·6	+3·3

As a result there were no cold waves such as ordinarily originate in this region and advance eastward into North-Western India, so that the mean temperature was steadier than usual in the latter area and steadier than in other parts of India.

Winds.

The wind was more southerly than usual at Port Blair and more easterly than usual at Diamond Island and Akyab, changes due to the pressure conditions over the Bay. These variations are shown in the following table :—

STATION.	MEAN WIND DIRECTION.	
	Actual, November 1901.	Normal, November.
	°	°
Port Blair	S 64 E	N 81 E
Diamond Island	N 79 E	N 60 E
Akyab	N 52 E	N 3 E

The wind was very steady and of about the normal strength at Port Blair, while it was less steady and lighter than usual at Diamond Island and Akyab. This is shown below :—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Port Blair	68	44	+24	169	165	+ 4
Diamond Island.	55	59	— 4	185	222	—37
Akyab	25	31	— 6	21	55	—34

In Bengal there was slightly more northing in the wind than usual, but in most places the direction was very nearly normal. The steadiness was in excess except at Calcutta and the velocity due to the severe cyclonic storm in the latter half of the month exceeded the normal at all stations. The following gives comparative data:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Northerly deflection.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
				°	°	°			
Chittagong	55	48	+ 7	N 12 E	N 19 W	+ 7	76	63	+13
Calcutta	54	59	— 5	N 12 W	N 14 W	+ 2	86	62	+24
Saugor Island.	63	60	+ 3	N 1 E	N 3 E	+ 2	208	167	+41
False Point.	68	59	+ 9	N 28 E	N 27 E	— 1	167	153	+14

The winds in the Gangetic Plain and Chota Nagpur varied irregularly from the normal and were very variable. This is shown below:—

STATION.	MEAN WIND DIRECTION.	
	Actual, November 1901.	Normal, November.
	°	°
Hazaribagh	N 3 E	N 30 W
Darbhanga	S 6 W	S 85 W
Allahabad	N 41 W	N 52 W

The steadiness and velocity were both low at Darbhanga, while at the other stations in this division both were normal or in excess. The following gives comparative data:—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual, percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Hazaribagh .	47	45	+ 2	110	110	0
Darbhanga .	17	40	—23	25	41	—16
Allahabad .	28	23	+ 5	74	49	+25

In the Upper Sub-Himalayas the normal wind is from north-west and west-north-west, but during the month under review the directions were very variable, while the velocity was generally lower and the steadiness generally higher than usual. The following gives comparative data:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
				°	°			
Dehra Dun.	25	17	+ 8	S 45 W	S 89 W	8	34	—26
Roorkee .	8	4	+ 4	S 37 E	N 88 W	21	26	— 5
Meerut .	28	40	—12	N 86 W	N 57 W	21	29	— 8
Lahore .	7	18	—11	S 86 W	N 45 W	16	32	—16
Ludhiana .	42	33	+ 9	N 74 W	N 45 W	37	23	+14

The wind blew from about the normal direction at Kurrachee but blew from N. 67° W. instead of from N. 13° W. at Jacobabad and from N. 22° E. instead of from N. 76° E. at Peshawar. The steadiness was approximately normal, but the velocity was less than usual both at Kurrachee and Peshawar. The following gives comparative data of steadiness and velocity:—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Peshawar .	15	12	+3	20	51	—31
Jacobabad .	11	11	0	50	40	+10
Kurrachee .	24	18	+6	106	193	—87

In Rajputana the general conditions were about normal. This is shown below:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
				°	°			
Jaipur . .	43	36	+ 7	N 41 W	N 19 W	55	66	—11
Deesa . . .	47	48	— 1	N 55 E	N 61 E	191	181	+10

The following gives mean data of velocity and steadiness for the different divisions of Northern India and for Burma and the Bay Islands:—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Bay Islands .	72	39	+33	169	165	+ 4
Burma . .	40	45	— 5	103	139	—36
Bengal . .	57	56	+ 1	123	97	+26
Orissa . .	68	59	+ 9	167	153	+14
Bihar . .	17	40	—23	25	41	—16
Chota Nagpur.	47	45	+ 2	110	110	0
North-Western Provinces.	22	21	+ 1	31	35	— 4
Punjab . .	21	21	0	24	35	—11
Sind . .	18	15	+ 3	78	117	—39
Rajputana .	45	42	+ 3	123	124	— 1

Over the Deccan the wind directions were nearly normal but were slightly more easterly than usual at the majority of stations. This is shown below:—

STATION.	MEAN WIND DIRECTION.		
	Actual, November 1901.	Normal, November.	Easterly deflection.
	°	°	°
Belgaum	N 79 E	N 76 E	+ 3
Sholapur	N 82 E	N 77 E	+ 5
Poona	S 81 E	N 82 E	— 1
Akola	N 66 E	N 61 E	+ 5
Buldana	N 74 E	N 64 E	+10
Khandwa	S 72 E	N 58 E	+14
Nagpur	N 32 E	N 54 E	−22
Hyderabad (Deccan)	S 82 E	S 72 E	+10

This easterly wind was also generally steadier and stronger than usual, more particularly in the Bombay Deccan and the west of the Central Provinces. Comparative data of steadiness and velocity are given below:—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, Nov. 1901.	Normal, percentage, Nov.	Variation of actual from normal, Nov. 1901.	Actual, 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.
Belgaum	78	64	+14	226	267	−41
Sholapur	68	65	+ 3	271	199	+72
Poona	69	60	+ 9	195	138	+57
Akola	79	49	+30	93	85	+ 8
Khandwa	70	52	+18	97	64	+33
Nagpur	72	60	+12	90	95	— 5
Hyderabad (Deccan)	57	67	−10	87	88	— 1

Along the West Coast the wind was less steady than usual, while the direction was somewhat more northerly than usual at Bombay and less northerly at Karwar. The velocity was below the normal at Bombay and above at Karwar. The following gives data:—

STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Northerly deflection.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
				°	°	°			
Bombay	39	52	−13	N 6 E	N 18 E	+12	203	235	−32
Karwar	37	46	− 9	N 39 W	N 31 W	— 8	71	60	+11

In South India the increased easting in the wind's direction was less noticeable than in the Deccan, but at Mysore and Madras it was fairly well—marked. Throughout the whole of this division the direction varied between north-east and east-north-east. This is shown below:—

STATION.	MEAN WIND DIRECTION.		
	Actual, November 1901.	Normal, November.	Easterly, Deflection.
	°	°	°
Salem	N 55 E	N 87 E	−32
Chitaldroog	N 69 E	N 74 E	— 5
Bangalore	N 58 E	N 61 E	— 3
Hassan	N 72 E	N 71 E	+ 1
Mysore	N 87 E	N 78 E	+ 9
Madras	N 33 E	N 24 E	+ 9
Bellary	N 70 E	N 81 E	−11

The wind was generally steady, but not more so than usual, while at most stations the velocity was below the average. The following gives comparative data:—

STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, Nov. 1901.	Normal percentage, Nov.	Variation of actual from normal, Nov. 1901.	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.
Salem	8	24	−16	40	74	−34
Chitaldroog	67	72	− 5	132	160	−28
Bangalore	60	64	− 4	162	108	+54
Hassan	84	77	+ 7	54	86	−32
Mysore	63	72	− 9	171	219	−48
Madras	59	64	− 5	134	156	−22
Bellary	53	55	− 2	75	77	− 2

The following gives mean steadiness and velocity data for the different Peninsular divisions :—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND VILOCITY IN MILES PER DIEM.		
	Actual, percentage, November 1901.	Normal, percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Central Provinces .	71	56	+15	94	80	+14
Berar	73	51	+22	93	85	+ 8
Bombay Deccan . .	72	63	+ 9	231	201	+30
West Coast . .	38	49	—11	137	148	—11
Mysore . . .	69	71	— 2	130	143	—13
Madras Deccan . .	55	61	— 6	81	83	— 2
Madras Coast . .	59	64	— 5	134	156	—22
South India . . .	8	24	—16	40	74	—34

At Quetta the wind velocity was low, but the direction and steadiness were approximately normal. This is shown below :—

HILL STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
				°	°			
Quetta. . .	32	40	—8	N 43 W	N 51 W	14	54	—40

In Kashmir the wind direction was fairly normal generally, but the steadiness and velocity varied irregularly from the average. The following gives data :—

HILL STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
				°	°			
Leh . . .	72	34	+38	S 35 W	S 51 W	74	44	+30
Srinagar . .	12	18	— 6	N 13 W	N 16 E	46	66	—20
Kailang . .	73	61	+12	S 69 W	S 52 W	16	33	—17

In the Western Himalayas the wind was more easterly than is usual, while in the Eastern Himalayas it was more southerly. This is shown below :—

HILL STATION.	MEAN WIND DIRECTION.	
	Actual, November 1901.	Normal, November.
	°	°
Simla	S 48 E	S 12 W
Chakrata	S 20 E	S 61 W
Ranikhet	S 78 W	S 53 W
Katmandu	S 76 W	N 80 W
Darjeeling	S 45 W	N 79 W

The steadiness and velocity in most cases exceeded the normal, as is shown by the following comparative data :—

HILL STATION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Simla . . .	13	18	— 5	79	101	—22
Chakrata . .	85	30	+55	187	115	+72
Ranikhet . .	40	35	+ 5	49	37	+12
Katmandu . .	30	45	—15	7	14	— 7
Darjeeling . .	12	12	0	73	64	+ 9

At the central hill stations the variations from the normal were irregular and unimportant. The following gives comparative data for these stations :—

HILL STATION.	MEAN STEADINESS.			MEAN WIND DIRECTION.		MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal November.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
				°	°			
Mount Abu . .	59	21	+38	N 1 W	N 54 E	137	94	+43
Pachmarhi . .	43	41	+ 2	N 69 E	N 46 E	48	63	—15
Chikalda . .	11	19	— 8	N 6 E	N 7 W	140	114	+26

At Wellington in South India the increased easting which was noticeable at the plains stations in the Deccan and part of South India was reproduced at the level of the hills and accompanying it there was diminished steadi-

ness and velocity. The following gives comparative data for this station :—

Hill Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Easterly deflection.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
				°	°	°			
Wellington.	38	54	−16	S 63 E	S 41 E	+22	43	55	−12

At Aden and Perim the velocity was low while the variations in the wind's direction and steadiness were irregular and probably unimportant. The following gives data :—

Station.	Mean Steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
				°	°			
Aden . . .	57	66	— 9	N 63 E	S 87 E	127	311	−184
Perim . . .	94	82	+12	S 49 E	S 62 E	465	491	— 26

Both at Zanzibar and the Seychelles the winds were unusually southerly. This is shown below :—

Station.	Mean wind direction.		
	Actual, November 1901.	Normal, November.	Southerly deflection.
	°	°	°
Zanzibar	S 17 E	S 31 E	+14
Seychelles	S 31 E	S 70 E	+39

At both stations the velocity was approximately normal while the steadiness was slightly greater than usual. The following gives data :—

Station.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, November 1901.	Normal percentage, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Zanzibar . . .	37	29	+ 8	98	115	−17
Seychelles . . .	42	30	+12	152	140	+12

The principal variations from the normal for the month were, consequently, first, the increased velocity over North-East India due probably entirely to the strong winds which accompanied the cyclone of the last week, and, secondly, the generally increased easting in the wind's direction over the Peninsula.

Humidity and Cloud.

The month of November 1901 was a dry month, except over the Bay area, and the principal feature in the humidity conditions was the area of low humidity which covered a large part of North-Western and Central India. Humidity was more than 5% below the normal over Gujarat, Rajputana, the south of the North-Western Provinces, Central India, the Central Provinces, the Deccan and the Bombay Coast. The following gives comparative data for the stations within this area and shows that the centre of relative dryness lay over Gujarat :—

Station.	Relative Humidity.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	%	%	
Deesa	20	34	−14
Buldana	41	50	— 9
Khandwa	41	49	— 8
Nagpur	47	55	— 8
Sholapur	45	53	— 8
Bombay	64	70	— 6
Allahabad	56	62	— 6
Jaipur	38	43	— 5

In the Punjab and Upper Sind there was an area within which the relative humidity was in excess, while a second area of excess covered the Bay, and a third but much smaller area lay along the south-west coast of the Peninsula. Within these areas of excessive relative humidity the variations were generally small, the largest being reported from False Point where it amounted to 5 %. The following gives comparative data for this station :—

Station.	Relative humidity.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	%	%	
False Point	79	74	+5

Over Burma and the Bay Islands the absolute humidity was in excess except at Port Blair. The temperature exceeded the normal at all stations, and both at Rangoon and Diamond Island the relative humidity was below the

average. The following gives data for the stations in this area: —

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.	Actual, November. 1901.	Normal, November.	Variation of actual from normal, November 1901.
	"	"	"	%	%	
Port Blair . . .	·915	·923	—·008	85	82	+3
Cocos Island . .	·840	·793	+·047	79	78	+1
Rangoon . . .	·789	·782	+·007	74	78	—4
Diamond Island . .	·843	·791	+·052	77	78	—1
Akyab . . .	·815	·757	+·058	83	80	+3

In Bengal and Orissa the absolute humidity was everywhere excessive, but at Calcutta the relative humidity was in slight defect, though at the coast stations it was in excess. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.	Actual November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	"	"	"	%	%	
Chittagong . . .	·696	·684	+·012	81	79	+2
Calcutta . . .	·586	·584	+·002	72	73	—1
Saugor Island . .	·645	·637	+·008	77	75	+2
False Point . . .	·672	·628	+·044	79	74	+5

In the Gangetic Plain the air was drier than usual, except at Hazaribagh, and the relative humidity was in defect at all stations. The following gives data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	"	"	"	%	%	
Hazaribagh . . .	·364	·360	+·004	53	54	—1
Darbhanga . . .	·526	·534	—·008	66	70	—4
Allahabad . . .	·399	·412	—·013	56	62	—6

In the Upper Sub-Himalayas and the Indus Valley the absolute humidity was, except at Meerut, everywhere in excess, and notwithstanding the high temperature prevailing, the relative humidity was also generally in excess. At Meerut and Kurrachee, however, the relative humidity was in defect, and at Dehra Dun and Roorkee it was about normal. The following gives comparative data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	"	"	"	%	%	
Dehra Dun . .	·353	·342	+·011	60	61	— 1
Roorkee . .	·346	·345	+·001	58	58	0
Meerut . . .	·323	·335	—·012	53	56	— 3
Lahore . . .	·328	·315	+·013	51	50	+ 1
Ludhiana . .	·352	·313	+·039	55	53	+ 2
Peshawar . .	·303	·272	+·031	54	53	+ 1
Jacobabad . .	·337	·298	+·039	48	44	+ 4
Kurrachee . .	·470	·450	+·020	50	54	— 4

At Jaipur the absolute humidity was in slight excess, but the mean temperature considerably exceeded the normal, so that the relative humidity was in defect. At Deesa both the absolute and relative humidities were in large defect. The following gives comparative data for these two stations:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	"	"	"	%	%	
Jaipur	·311	·297	+·014	38	43	— 5
Deesa	·196	·281	—·085	20	34	—14

The following gives mean comparative humidity data

for the different divisions of Northern India and for Burma and the Bay Islands:—

Province or Division.	Absolute humidity.			Relative humidity.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	"	"	"	%	%	
Bay Islands	·878	·858	+·020	82	80	+ 2
Burma	·816	·777	+·039	78	79	— 1
Bengal	·642	·635	+·007	77	76	+ 1
Bihar	·526	·534	—·008	66	70	— 4
Chota Nagpur	·364	·360	+·004	53	54	— 1
Orissa	·672	·628	+·044	79	74	+ 5
North-Western Provinces.	·355	·358	—·003	57	60	— 3
Punjab	·328	·300	+·028	53	52	+ 1
Sind	·404	·374	+·030	49	49	0
Rajputana	·254	·290	—·036	29	39	—10

In the Deccan, with the exception of Belgaum, the amount of aqueous vapour in the air was in defect of the normal average, while the mean temperature was generally in excess, hence the relative humidity also, with the exception of Belgaum, was in defect. The deficiency was greatest at Buldana, Khandwa, Nagpur and Sholapur. The following gives comparative data for the stations in this area:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
	"	"	"	%	%	
Belgaum	·485	·464	+·021	61	59	+ 2
Sholapur	·422	·460	—·038	45	53	— 8
Poona	·368	·416	—·048	47	49	— 2
Akola	·379	·410	—·031	50	53	— 3
Buldana	·324	·395	—·071	41	50	— 9
Nagpur	·376	·431	—·055	47	55	— 8
Khandwa	·333	·369	—·036	41	49	— 8

Along the West Coast the variations in the amount of vapour in the air were irregular, but the temperature on the mean of the month, was excessive and the relative humidity was in defect. The following gives data for Karwar and Bombay:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.
	"	"	"	%	%	
Karwar	·726	·706	+·020	71	74	—3
Bombay	·668	·694	—·026	64	70	—6

In Southern India, except at Bangalore and Bellary, the air contained more aqueous vapour than usual, and the variations in the relative humidity were slight and irregular. This is shown below:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.
	"	"	"	%	%	
Salem	·704	·660	+·044	75	75	0
Chitaldroog	·562	·494	+·068	67	65	+ 2
Bangalore	·529	·532	—·003	70	73	— 3
Hassan	·544	·536	+·008	72	73	— 1
Mysore	·580	·570	+·010	71	68	+ 3
Madras	·817	·771	+·046	85	81	+ 4
Bellary	·540	·540	0	60	62	— 2

The following gives mean comparative data for the different divisions of the Peninsula:—

Province or Division.	Absolute humidity.			Relative humidity.		
	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.	Actual, Nov. 1901.	Normal, Nov.	Variation of actual, from normal Nov. 1901.
	"	"	"	%	%	
Central Provinces	·355	·400	—·045	44	52	— 8
Berar	·352	·403	—·051	46	52	— 6
West Coast	·697	·700	—·003	68	72	— 4
Bombay Deccan	·425	·435	—·010	51	54	— 3
Mysore	·554	·533	+·021	70	70	0
Madras Deccan	·540	·540	0	60	62	— 2
Madras Coast	·817	·771	+·046	85	81	+ 4
South India	·704	·660	+·044	75	75	0

At most of the northern hill stations the absolute humidity was in some excess but the mean temperature was higher than usual, and, except at Leh and Srinagar, the relative humidity was in defect. At Chakrata the deficiency was as much as 10%. The following gives comparative data for the stations in the Himalayas:—

Hill Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.
	"	"	"	%	%	
Leh	·116	·092	+·024	60	54	+6
Srinagar	·276	·227	+·049	78	78	0
Kailang	·096	·102	—·006	46	52	—6
Simla	·167	·174	—·007	45	48	—3
Chakrata	·180	·199	—·019	45	55	—10
Ranikhet	·255	·250	+·005	57	59	—2
Katmandu	·346	·337	+·009	69	72	—3
Darjeeling	·272	·265	+·007	75	80	—5

At the central hill stations both the absolute and relative humidities were in defect and at Mount Abu and Chikalda by considerable amounts. The following gives data:—

Hill Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.
	"	"	"	%	%	
Mount Abu	·193	·244	—·051	27	39	—12
Pachmarhi	·289	·313	—·024	50	55	— 5
Chikalda	·317	·366	—·049	46	55	— 9

At Wellington the amount of aqueous vapour in the air was slightly excessive, but the temperature was high and the relative humidity was in trifling defect:—

Hill Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.
	"	"	"	%	%	
Wellington	·438	·416	+·022	82	83	—1

In the Gulf of Aden humidity conditions varied irregularly from the normal. At Perim there was a large excess, while at Aden the absolute humidity was in excess and the relative humidity normal. Comparative data for these two stations are given below:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.
	"	"	"	%	%	
Perim	·790	·672	+·118	74	62	+12
Aden	·681	·653	+·028	66	66	0

In the South-East Trades region the variations from the normal were small and unimportant. The following gives data for Zanzibar and the Seychelles:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.	Actual, Nov. 1901.	Normal, Nov.	Variation of actual from normal, Nov. 1901.
	"	"	"	%	%	
Zanzibar	·821	·819	+·002	81	81	0
Seychelles	·808	·819	—·011	81	82	—1

The variations in the amount of cloud were roughly similar to those of the aqueous vapour conditions. Thus there was an excess of cloud over the greater part of the Peninsula and of the Bay area and a deficiency elsewhere.

Over the whole of Central and North-West India there was a deficiency in the cloud amount. This deficiency was at a maximum in two areas where the variations amounted to —1·0 or more. The first area included the Western desert and the East Punjab represented by the stations for which comparative data are given below:—

Station.	Mean cloud amount.		
	Actual, November 1901.	Normal November.	Variation of actual from normal, November 1901.
Ludhiana	0·8	1·9	—1·1
Lahore	0·4	1·4	—1·0
Deesa	0·5	1·5	—1·0

The second area included Berar and part of the Central Provinces and of Khandesh represented by the station of Buldana. The following gives data for this station :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Buldana	1·3	2·3	−1·0

The area of excessive cloudiness included nearly the whole of the Peninsula, West and Lower Bengal, the greater part of the Burma coast and the Bay Islands. The excess of cloud amount was at its maximum over the Madras Deccan where it ranged between 2·1 and 3·5, but was more than 1·5 at the following large number of station :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Bellary	8·4	4·9	+3·5
Chitaldroog	6·8	4·7	+2·1
Hyderabad (Deccan)	5·0	3·2	+1·8
Salem	6·9	5·2	+1·7
Mysore	8·1	6·5	+1·6
Port Blair	7·0	5·3	+1·7
Rangoon	5·9	4·2	+1·7

At all the hill stations except Darjeeling and Wellington the sky was clearer of cloud than usual. The deficiency was greatest and more than 2·0 over the North-West Himalayas. The following gives comparative data for the stations in this area :—

HILL STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1901.	Normal November.	Variation of actual from normal, November 1901.
Leh	1·8	4·1	−2·3
Kailang	1·4	3·7	−2·3
Srinagar	1·0	3·2	−2·2

At the Arabian stations the sky was much clearer than usual, as is shown by the following comparative data for Aden and Perim :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Aden	0·8	2·2	−1·4
Perim	0·1	1·8	−1·7

In the South-East Trades region, on the contrary, the cloud amount was in excess though in the case of the Seychelles the variation was very small. Comparative data for Zanzibar and the Seychelles are given in the following table :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Zanzibar	7·1	5·7	+1·4
Seychelles	7·0	6·9	+0·1

The sky was practically clear of cloud or the cloud amount, on the mean of the month, was less than 0·5 at the following stations :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Derha Dun	0·4	1·4	−1·0
Roorkee	0·4	1·0	−0·6
Meerut	0·2	0·8	−0·6
Lahore	0·4	1·4	−1·0
Kurrachee	0·4	1·2	−0·8

The cloud amount was greatest and averaged 7·0 or

more, on the mean of the month, at the following stations which were all in the south of the Indian region :—

Station.	Mean cloud amount.		
	Actual, November 1901.	Normal, November.	Variation of actual from normal, November 1901.
Port Blair	7·0	5·3	+1·7
Hassan	7·0	6·4	+0·6
Mysore	8·1	6·5	+1·6
Madras	7·2	6·0	+1·2
Bellary	8·4	4·9	+3·5
Wellington	8·3	6·8	+1·5

The chief features in the cloud distribution relatively to the normal were —

(1) Less cloud than usual over Central and North-West India—more particularly over the Western desert.

(2) Increased cloudiness over the Peninsula and the Bay area with the maximum excess over the Madras Deccan.

(3) Unusually clear skies over the North-West Himalayas and practically clear skies, on the mean of the month, over the Sub-Himalayas.

Rainfall.

The fine clear weather which characterised the month of October 1901 over Central and North-West India continued and intensified during November. Over the whole country to the north-west of a line running roughly from Bombay to Patna the month was rainless throughout both on the hills and plains, and in parts of Central Burma the weather was almost equally dry. On the other hand, over the south and east of the Peninsula, Bengal, Assam and part of Burma rain fell generally during the month and over a large part of that area was more or less largely in excess of the normal. Rain fell during the month mainly under the influence of the two cyclonic storms but during the first ten days more or less heavy showers were received over the south of the Peninsula and Ceylon from the north-east monsoon winds which prevailed over the Bay and the Peninsula.

The chief features of the rainfall of the month of November 1901 were as follows :—

1st.—The rainfall of the month was largely in excess over Burma, Assam, Bengal and Orissa, the excess being most marked over North Bengal and the Brahmaputra Valley.

2nd—It was in excess over the Madras districts, more particularly the coast districts.

3rd.—It was lighter than usual in Mysore, the Bombay Coast and the Bombay Deccan.

4th.—Rain was altogether absent from the North-Western Provinces, the Central Provinces (except Sambalpur), Central India, Berar, Khandesh, Gujarat, Rajputana, the Punjab, Sind and Baluchistan.

As shown above there was no rainfall during the month over Central and North-West India. In other parts of the country the chief periods of rainfall were as follows :—

1st.—From the 1st to the 13th when a considerable part of the Peninsula received light to moderately heavy showers from the north-east winds, and Assam and parts of Burma occasional light showers.

2nd.—The 14th to the 19th during the existence of the first cyclonic storm of the month when Ganjam, Orissa, Lower Bengal and Burma received light to heavy rain.

3rd.—The 16th to the 19th when the south of the Peninsula received local light to heavy showers.

4th.—The 24th to the end of the month when Ganjam, Orissa, Bengal, Assam and Burma received light to heavy rain from the second storm of the month.

The following table gives mean actual, mean normal and variation rainfall data for the 56 meteorological divisions or districts into which India is divided :—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, November 1901.	Average normal, November.	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.
				Inches.	Inches.	Inch.
Burma	Tenasserim	3·5	...	2·17	...	...
	Lower Burma (Deltaic)	2·4	...	1·57	...	...
	Central ditto	1·7	...	1·21	...	...
	Upper ditto	2·7	...	1·02	1·25	−0·23
	Arakan	4·3	...	3·95	...	...

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, November 1901.	Average normal, November.	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.
				Inches.	Inches.	Inches.
Bengal and Assam	Eastern Bengal	3·6	1·5	4·44	1·32	+3·12
	Assam (Surma)	4·8	1·9	3·65	1·50	+2·15
	Do. (Hills)	4·9	2·4	4·41	1·20	+3·21
	Do. (Brahmaputra)	4·0	1·2	4·32	0·64	+3·68
	Deltaic Bengal	4·5	1·1	3·81	0·90	+2·91
	Central do.	2·9	0·8	2·13	0·54	+1·59
	North do.	2·2	0·3	1·03	0·15	+0·88
	Bengal Hills	3·1	0·7	0·77	0·29	+0·48
	Orissa	5·0	2·0	5·49	1·93	+3·56
	Chota Nagpur	1·4	0·8	0·39	0·47	−0·08
	Bihar (South)	0·8	0·4	0·29	0·22	+0·07
	Do. (North)	0·7	0·3	0·26	0·12	+0·14
North-Western Provinces and Oudh.	North-Western Provinces (East)	0	0·2	0	0·11	−0·11
	Oudh (South)	0	0·1	0	0·02	−0·02
	Do. (North)	0	0·1	0	0·04	−0·04
	North-Western Provinces (Central)	0	0·1	0	0·04	−0·04
	Do. do. (West)	0	0	0	0·01	−0·01
	Do. do. (East Submontane)	0	0·1	0·01	0·06	−0·05
	Do. do. (West do.)	0	0·3	0	0·13	−0·13
	Do. do. (Hills)	0	0·6	0	0·22	−0·22
Punjab and North-West Frontier Province.	Punjab (South-East)	0	0·2	0	0·03	−0·03
	Do. (South)	0	0·1	0	0·06	−0·06
	Do. (Central)	0	0·3	0	0·21	−0·21
	Do. (Submontane)	0	0·3	0	0·17	−0·17
	Do. (Hills)	0	0·9	0	0·72	−0·72
	Do. (North)	0	0·7	0	0·76	−0·76
	Do. (West)	0	0·3	0	0·18	−0·18
Bombay and Malabar Coast Districts (Madras).	Malabar	11·6	5·1	11·32	3·58	+7·74
	Travancore	16·1	...	15·76	...	...
	Madras (South Central)	7·9	5·7	5·40	3·77	+1·63
	Coorg	9·1	...	6·28	...	...
	Mysore	5·5	3·8	2·85	2·57	+0·28
	Konkan	1·0	1·7	0·37	1·10	−0·73
	Bombay Deccan	1·0	2·4	0·38	1·44	−1·06
	Hyderabad (North)	0·1	...	0·02	1·14	−1·12
	Khandesh	0	1·4	0·01	0·92	−0·91
Central Provinces and Berar.	Berar	0	...	0	0·64	−0·64
	Central Provinces (West)	0	0·7	0	0·38	−0·38
	Do. (Central)	0	0·6	0	0·37	−0·37
	Do. (East)	0·3	0·8	0·08	0·47	−0·39
Bombay (North)	Gujarat	0	0·4	0	0·18	−0·18
	Kathiawar and Cutch	0	0·2	0	0·32	−0·32
	Sind	0	...	0	0·07	−0·07
	Baluchistan Hills	0	...	0	0·64	−0·64
Rajputana and Central India.	Central India (East)	0	...	0	0·33	−0·33
	Rajputana (East), Central India (West)	0	...	0	0·19	−0·19
	Do. (West)	0	...	0	0·12	−0·12
Madras	East Coast (North)	4·9	2·9	6·14	2·71	+3·43
	Hyderabad (South)	1·6	...	0·71	1·25	−0·54
	Madras (Central)	5·3	3·3	2·75	2·16	+0·59
	East Coast (Central)	10·9	6·9	13·25	8·12	+5·13
	Do. (South)	12·4	9·1	11·12	9·17	+1·95
	Madras (South)	11·2	8·0	9·07	6·27	+2·80

The above shows that out of the 56 divisions no less than 24 received actually or practically no rain. Of the remaining 32 divisions 9 received less and 18 more than the normal fall of the month. The variation from the

normal exceeded +100% in the case of the following large number of divisions :—

Division.	Rainfall. Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Eastern Bengal	4·44	1·32	+3·12	+236
Assam Surma	3·65	1·50	+2·15	+143
Assam Hills	4·41	1·20	+3·21	+268
Assam Brahmaputra	4·32	0·64	+3·68	+575
Deltaic Bengal	3·81	0·90	+2·91	+323
Central Bengal	2·13	0·54	+1·59	+294
North Bengal	1·03	0·15	+0·88	+587
Bengal Hills	0·77	0·29	+0·48	+166
Orissa	5·49	1·93	+3·56	+184
North Bihar	0·26	0·12	+0·14	+117
Malabar	11·32	3·58	+7·74	+216
East Coast, North	6·14	2·71	+3·43	+127
Tenasserim	2·17	...	...	...
Lower Burma Deltaic	1·57	...	...	...
Central Burma	1·21	...	...	...
Upper Burma	1·02	1·25	−0·23	−18
Arakan	3·95	...	...	...

The chief feature of the rainfall distribution of the month was thus the large contrasts presented by different parts of the country for, while the whole of the north-western and central districts were practically rainless, many parts of Southern, Eastern and North-Eastern India received from two to five times the normal fall.

Occasional showers were received in Lower Burma and Central Burma on the 2nd and 3rd. The weather then cleared and was fine until the 11th when light showers were again reported. The first storm of the month passed into Upper Burma on the 19th, and on the three days 17th to 19th, scattered showers were received over Burma. These showers were generally light but were moderately heavy in the Akyab district. Fine weather lasted till the 24th when under the influence of the second storm of the month heavy rain fell at Diamond Island. The storm ceased to affect Lower Burma after the 24th but at the close of its existence on the 28th, when the storm lay over East Bengal, light showers were received over parts of Burma.

The following gives a comparative statement of the rainfall in the five divisions of Burma :—

Assam obtained rain during three showery periods. The first lasted from the 2nd to the 5th when the following falls exceeding 2 inches in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cachar	Jatinga Valley	3rd November	2·05
Lakhimpur	Pathalipam	4th ,,	3·70
Cachar	Nemotha	,, ,,	3·35
	Bikrampur	,, ,,	2·94
Sibsagar	Amguri	,, ,,	2·05

The second rainfall period, caused by the first cyclonic storm of the month, lasted from the 17th to the 20th. The rainfall on this occasion was light and only exceeded 1" in 24 hours at the following stations :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Garo Hills	Tura	17th November	1·04
Lushai Hills	Aijal	18th ,,	1·65
	Sairang	,, ,,	1·38
	Tenzol	,, ,,	1·25
Cachar	Jatinga Valley	,, ,,	1·25
Naga Hills	Mokokchang	,, ,,	1·21
	Wokha	,, ,,	1·02

The third rainfall period which lasted from the 24th to the 29th was due to the second cyclonic storm and during this period the rainfall was both heavier and more extensive than at any other time during the month. On the hills during this period falls of between 4″ and 7″ in 24 hours were obtained and at various stations in Cachar the rainfall was almost equally heavy. The following gives a record of the falls exceeding 3″ in 24 hours reported at this time:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
KHASI AND JAINTIA HILLS.	Jowai	26th November	7·07
	Cherapunji Police Station.	,, ,,	6·56
	Mauphlang	,, ,,	5·44
GACHAR	Mahur Saddle	,, ,,	4·06
	Paiding	,, ,,	3·93
KHASI AND JAINTIA HILLS.	Upper Shillong	,, ,,	3·72
KAMRUP	Rangiya	,, ,,	3·52
CACHAR	Haflong	,, ,,	3·40
SIBSAGAR	Nigriting	,, ,,	3·33
KAMRUP	Boko	,, ,,	3·16
KHASI AND JAINTIA HILLS.	Shillong	,, ,,	3·11
CACHAR	Mupa	,, ,,	3·03
KHASI AND JAINTIA HILLS.	Cherrapunji Police Station.	27th ,,	4·47
	Mauphlong	,, ,,	4·05
DARRANG	Tezpur	,, ,,	3·37
	Behali	,, ,,	3·34
	Barpukhuri	,, ,,	3·20
KHASI AND JAINTIA HILLS.	Jowai	,, ,,	3·15
NOWGONG	Nowgong	,, ,,	3·03

The following gives a comparative statement of the rainfall of the three Assam divisions compiled from the Assam Gazette:—

DIVISION.	RAINFALL.				NUMBER OF RAINY DAYS.	
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.	Average actual, November 1901.	Average normal November.
	Inches.	Inches.	Inches.			
Assam Surma	3·65	1·50	+2·15	+143	4·8	1·9
Assam Hills	4·41	1·20	+3·21	+268	4·9	2·4
Assam Brahmaputra	4·32	0·64	+3·68	+575	4·0	1·2

The rainfall of the month in Bengal was wholly determined by the two cyclonic storms of the month. In South West Bengal the first rainfall period lasted from the 15th to the 17th. The rainfall was not heavy but exceeded 1″ in 24 hours at the following places on the following dates:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
24-PARGANAS	Saugor Island	16th November	1·14
KHULNA	Kaliganj	17th ,,	2·17
24-PARGANAS	Saugor Island	,, ,,	1·65
KHULNA	Nakipur	,, ,,	1·57
	Morelganj	,, ,,	1·25

The second rainfall period lasted from the 24th to the 27th. The rain was both heavier and more extensive than during the earlier fall, every station in the division receiving more or less rain. The heaviest rain was received on the 26th when the following falls exceeding 3″ in 24 hours were registered:—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 26th November.
		Inches.
KHULNA	Dumuria	4·06
	Mollahat	3·64
MIDNAPORE	Midnapore	3·45
	Panskura	3·44

The following gives comparative data for the different districts in this division:—

DISTRICT.	RAINFALL.			
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Burdwan	3·14	0·70	+2·44	+349
Birbhum	2·26	0·60	+1·66	+277
Bankura	2·33	0·70	+1·63	+233
Midnapore	4·65	0·89	+3·76	+422
Hooghly	2·86	0·70	+2·16	+309
Howrah	3·37	0·63	+2·74	+435

DISTRICT.	RAINFALL. Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
24-Parganas	3·94	0·99	+2·95	+298
Calcutta	2·87	0·66	+2·21	+335
Nadia	2·99	0·89	+2·10	+236
Murshidabad	2·59	0·68	+1·91	+281
Jessore	2·57	1·00	+1·57	+157
Khulna	3·53	0·90	+2·63	+292

In North Bengal there was practically no rain from the first cyclonic storm, but from the second general moderately heavy rain was received. The following gives the principal amounts exceeding 3″ in 24 hours :—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 27th November.
		Inches.
BOGRA	Bogra	3·72
RAJSHAHI	Lalpur	3·40
	Nator	3·10

The following gives comparative data for the districts in this division : —

DISTRICT.	RAINFALL. Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Rajshahi	2·75	0·48	+2·27	+ 473
Dinajpur	0·76	0·11	+0·65	+ 591
Jalpaiguri	0·46	0·30	+0·16	+ 53
Darjeeling	1·02	0·29	+0·73	+ 252
Cooch Behar	0·49	0·13	+0·36	+ 277
Rangpur	1·76	0·12	+1·64	+ 367
Bogra	2·95	0·58	+2·37	+ 409
Pabna	2·40	0·63	+1·77	+ 281

In East Bengal rain was received from both the storms of the month. The rainfall from the first storm was generally light and scattered but was heavy in Noakhali and Chittagong. The following gives the falls exceeding 3″ in 24 hours :—

DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 18th November 1901.
		Inches.
NOAKHALI	Hatya	8·96
	Harishpur	5·20
BACKERGUNGE	Bauphal	3·54

During the second rainfall period, which lasted from the 25th to the 27th, rain was received at all stations in this division. The fall was most general on the 26th and the following amounts exceeding 3″ in 24 hours were recorded:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
NOAKHALI	Hatya	25th November	3·05
BACKERGUNGE	Bhola	26th ,,	4·02
MYMENSINGH	Mymensingh	,, ,,	3·62
BACKERGUNGE	Pirojpur	,, ,,	3·35
	Barisal	,, ,,	3·10
NOAKHALI	Ramganj	27th ,,	5·00
MYMENSINGH	Diwanganj	,, ,,	4·15
	Mymensingh	,, ,,	3·44

The following gives comparative data for the districts in this division :—

DISTRICT.	RAINFALL. Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Dacca	2·98	1·31	+ 1·67	+127
Mymensingh	3·85	0·70	+ 3·15	+450
Faridpur	2·76	1·12	+ 1·64	+146
Backergunge	6·49	1·36	+ 5·13	+377
Tippera	2·81	1·20	+ 1·61	+134
Noakhali	6·93	1·81	+ 5·12	+283
Chittagong	3·30	2·08	+ 1·22	+ 59
Chittagong Hill Tracts	3·22	1·80	+ 1·42	+ 79

From the first storm of the month Bihar received practically no rain and from the second storm only light scattered showers mainly on the 27th. There were no heavy falls of rain, but the total rainfall of the month generally exceeded the normal, as is shown by the following comparative statement for the districts in this division :—

DISTRICT.	RAINFALL.			
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inch.	Inch.	
Patna	0·30	0·22	+0·08	+ 36
Gaya	0·23	0·23	0	0
Shahabad	0·04	0·35	−0·31	− 89
Saran	0·14	0·26	−0·12	− 46
Champaran	0	0·15	−0·15	−100
Muzaffarpur	0·01	0·13	−0·12	− 92
Darbhanga	0·41	0·11	+0·30	+273
Monghyr	0·62	0·13	+0·49	+377
Bhagalpur	0·68	0·11	+0·57	+518
Purnea	0·41	0·07	+0·34	+486
Malda	1·11	0·28	+0·83	+296
Sonthal Parganas	1·17	0·34	+0·83	+244

Orissa received rain from both storms. The first rainfall period lasted from the 14th to the 17th and the rainfall was heavy on the 16th. The following gives the principal falls exceeding 3″ in 24 hours :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
CUTTACK	Jagatsingpur	15th November	3·45
PURI	Gop	,, ,,	3·26
	Satpara	,, ,,	3·05
CUTTACK	False Point	16th ,,	8·86
BALASORE	Chandbali	,, ,,	8·15
PURI	Puri	,, ,,	4·02
	Bhanpur	,, ,,	4·00
CUTTACK	Kendrapara	,, ,,	3·79
PURI	Gop	,, ,,	3·50
	Satpara	,, ,,	3·35

The second rainfall period lasted from the 24th to the 27th. The rain was neither so heavy nor so general as during the first fall, but amounts exceeding 2″ in 24 hours were received at the following places on the following dates :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
CUTTACK	Jagatsingpur	25th November	2·35
	False Point	26th ,,	5·25
BALASORE	Jellasore	,, ,,	2·81
CUTTACK	Kendrapara	,, ,,	2·35
BALASORE	Chandbali	,, ,,	2·06

The month's rainfall was very irregularly distributed but was nearly three times as heavy as usual in the Cuttack and Balasore districts. The following gives comparative data for the four districts of this division :—

DISTRICT.	RAINFALL.			
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuttack	8·31	2·09	+6·22	+298
Balasore	6·15	1·41	+4·74	+336
Angul	1·32	1·34	−0·02	− 1
Puri	8·44	3·03	+5·41	+179

Chota Nagpur obtained light showers on the 14th and 15th and between the 25th and 27th. The following gives comparative data for the districts in this division :—

DISTRICT.	RAINFALL.			
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Hazaribagh	0·38	0·38	0	0
Ranchi	0·11	0·42	−0·31	−74
Palamau	0·02	0·31	−0·29	−94
Manbhum	0·67	0·47	+0·20	+43
Singhbhum	0·99	0·71	+0·28	+39

In the North-West Provinces there were one or two utterly unimportant showers on the 25th, while in the Punjab there was absolutely no rain throughout the month. Baluchistan, Kashmir, Rajputana, and Central India were rainless throughout.

In the Sambalpur district of the Central Provinces there were a few light showers on the 15th, 16th and 26th, but with these exceptions the whole month was rainless throughout this region. In Berar there was no rain throughout.

In Coorg there were showers between the 1st and the 8th, between the 14th and the 19th and on the 21st, 22nd, 29th and 30th. The amounts were moderately heavy at times and exceeded 1″ in 24 hours at the following stations on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Coorg	Anandapur	5th Novr.	2·04
	Sanivarasante	,, ,,	1·99
	Somavarpet	,, ,,	1·22
	Dunkeld	6th ,,	3·22
	Fraserpet	,, ,,	2·15
	Kiggatnad	,, ,,	1·67
	Napoklu	,, ,,	1·45
	Mercara	,, ,,	1·02
	Horur	7th ,,	1·29
	Kiggatnad	,, ,,	1·05
	Virajpet	8th ,,	1·22
	Dunkeld	,, ,,	1·16
	Kiggatnad	,, ,,	1·08
	Napoklu	15th ,,	1·19
	Somavarpet	17th ,,	3·18
	Dunkeld	21st ,,	1·94

In parts of Bombay there were showers during the first half of the month, but during the second half the weather was rainless throughout the whole Presidency. In the Konkan there were showers between the 2nd and the 9th and again on the 16th and 17th. The rainfall was generally light and only exceeded 1″ in 24 hours at the following places on the following dates:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
North Kanara	Kumta	6th November	1·09
Savantvadi	Banda	,, ,,	1·04
North Kanara	Bhatkal	8th ,,	1·07

The following gives comparative data for the districts in this division:—

District.	Rainfall. Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inch.	Inches.	Inches.	
North Kanara	1·00	2·06	—1·06	— 51
Ratnagiri	0·18	1·15	—0·97	— 84
Kolaba	0·06	0·69	—0·63	— 91
Thana	0	0·20	—0·20	—100

In the Karnatak the rainfall distribution was similar to that in the Konkan, but the fall was lighter and no fall exceeding 1″ in 24 hours was recorded at any station during the month. The following gives comparative data for the districts in this division:—

District.	Rainfall. Average actual, Nov. 1901.	Average normal, Nov.	Variation of actual from normal, Nov. 1901.	Percentage variation from normal.
	Inch.	Inches.	Inches.	
Dharwar	0·50	1·63	—1·13	—69
Bijapur	0·47	1·52	—1·05	—69
Belgaum	0·32	1·65	—1·33	—81

The South Deccan obtained showers between the 3rd and 9th and on the 14th and 15th. The rainfall was partial and scattered, but the showers were heavier than in the Karnatak and Konkan. The following falls exceeding 1″ in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Satara	Medha	4th November	1·57
	Panchgani	,, ,,	1·40
	Malcolmpeth	,, ,,	1·03
Poona	Sirur	15th ,,	1·15

The North Deccan, Gujarat and Sind had actually or practically no rain throughout the whole month.

The Malabar coast district of Madras received practically daily rain from the 1st to the 24th or 25th though in South Canara the rainfall was less heavy and less continuous than in Travancore and Malabar. The days of heaviest and most general rain were the 7th, the 16th and the 23rd and the following amounts exceeding 4″ in 24 hours were registered during the month and generally fell on or near the above dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Malabar	Talipparamba	6th November	4·27
	Manjeri	,, ,,	4·23
	Tirurangadi	7th ,,	7·34
	Manantoddy	,, ,,	7·20
Travancore State	Kottarakaray	,, ,,	4·95
	Parur	,, ,,	4·90
	Pattanapuram	,, ,,	4·74
Cochin State	Trichur	,, ,,	4·20
Travancore State	Rajakamangalam	,, ,,	4·18
	Meenachie	,, ,,	4·04
	Peermade	8th ,,	4·20
Malabar	Chowghat	13th ,,	5·52
Travancore State	Kottayam E. O.	16th ,,	6·87
	Shertalley	,, ,,	6·77
	Kottayam	,, ,,	6·77
	Kunnatnad	,, ,,	6·45
	Alangad	,, ,,	5·10
	Ettamanur	,, ,,	4·62
Malabar	Cochin	,, ,,	4·57
Travancore State	Vaikam	,, ,,	4·46
	Parur	,, ,,	4·05
	Pattanapuram	19th ,,	4·85
	Kunnatnad	22nd ,,	5·12
	Alangad	23rd ,,	4·22
	Eraniel	,, ,,	4·03
	Alleppey	,, ,,	4·02

The total rainfall of the month was more than three times as heavy as usual, as is shown by the following comparative data for the two districts composing this division :—

District.	Rainfall. Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November, 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Malabar	12·76	3·95	+8·81	+223
South Canara	8·30	2·93	+5·37	+183

South Madras received rain under the same conditions as Malabar but the fall was lighter both absolutely and relatively to the normal. The first burst of rain lasted from the 1st to the 12th after which there was a break and then another fall between the 19th and the 25th. The falls were heavy on some occasions and amounts exceeding 3″ in 24 hours were reported at the following place on the following dates :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Madura	Pamban	1st November.	3·15
Tinnevelly	Ottappidaram	3rd ,,	5·23
	Vilattikulam	,, ,,	3·22
Madura	Mulluraghunadapatnam.	,, ,,	3·20
Tinnevelly.	Ottappidaram	7th ,,	3·74
Madura	Dindigul	8th ,,	5·56
	Tirumangalam	,, ,,	4·62
	Pamban	,, ,,	4·27
	Madura	,, ,,	3·77
	Vedasandur	,, ,,	3·20
	Teruvadanai	19th ,,	3·11
Tinnevelly	Tuticorin	,, ,,	3·05
Madura.	Pamban	20th ,,	3·86
	Morekulam	21st ,,	5·30
	Ramnad	,, ,,	4·30
	Morekulam	24th ,,	3·20

The total fall of the month exceeded the normal, as is shown by the following comparative data for the districts in this division :—

District.	Rainfall. Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madura	8·85	5·97	+2·88	+48
Tinnevelly	9·33	6·63	+2·70	+41

In South Central Madras the weather was showery between the 1st and the 11th. It then cleared till the 17th after which a general burst of rain occurred on the 18th and 19th. The falls were not very heavy but the total fall of the month exceeded the normal. The following gives comparative data for the two districts within this division :—

District.	Rainfall.			
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Salem	5·03	3·89	+1·14	+29
Coimbatore . . .	5·84	3·63	+2·21	+61

Central Madras experienced three rainfall periods. The first lasted from the 1st to the 10th, the second during the 17th and 18th, and the third during the 29th and 30th. The rain was heavy at times and exceeded 3″ in 24 hours at the two following stations :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cuddapah . .	Chitvel . . .	3rd November	4·40
	Kamalapuram . .	17th „ .	3·06

The total rainfall exceeded the normal in the four districts of which the division is formed. This is shown below :—

District.	Rainfall.			
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cuddapah . . .	5·32	3·65	+1·67	+46
Anantapur . . .	1·89	1·85	+0·04	+ 2
Bellary	1·53	1·40	+0·13	+ 9
Kurnool	1·73	1·41	+0·32	+23

Along the east coast the rainfall of the month was heavier than usual. In the north division rain fell between the 6th and the 8th; between the 13th and the 18th and finally at a few places on the 25th and 26th. The rainfall was both heaviest and most general on the 14th, 15th and 16th when the first cyclonic storm of the month passed along the coast. The following heavy falls (exceeding 5″ in 24 hours) were recorded at this time :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A. M. of date.
			Inches.
Vizagapatam . .	Kuppili . . .	15th November	12·15
Ganjam . . .	Chicacole . . .	„ „ .	10·50
	Narsannapeta . .	„ „ .	9·49
Vizagapatam . .	Konada . . .	„ „ .	9·00
	Balacheruvu . .	„ „ .	8·71
Ganjam . . .	Tekkali . . .	„ „ .	8·15
	Rambha . . .	„ „ .	7·60
Vizagapatam . .	Vizianagram . .	„ „ .	5·62
	Chipurupalle .	„ „ .	5·46
	Bimlipatam . .	„ „ .	5·45
Ganjam . . .	Sompeta . . .	16th „ .	6·80
	Gopalpur . . .	„ „ .	6·55
	Chatrapur . .	„ „ .	6·38
	Berhampur . .	„ „ .	5·08

The total rainfall of the month in this division was twice as heavy as usual. The following gives comparative data for the districts composing this division :—

District.	Rainfall.			
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ganjam	8·45	2·52	+5·93	+235
Vizagapatam	9·92	2·74	+7·18	+262
Godavari	5·29	3·23	+2·06	+ 64
Kistna	2·83	3·01	−0·18	− 6

The central division of the east coast received general rain up to the 9th. Fine weather with occasional showers prevailed up to the 28th when another burst of rain occurred lasting during the 29th and 30th. The heaviest rainfall was received from the 3rd to the 6th and on the

29th and the following amounts exceeding 3″ in 24 hours were recorded during the month :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Nellore	Venkatagiri	3rd November	4·60
	Pakala	,, ,,	3·80
	Atmakur	,, ,,	3·40
	Rapur	,, ,,	3·30
	Gudur	,, ,,	3·10
	Dugarazpatnam	4th ,,	3·50
	Rapur	6th ,,	3·60
	Dugarazpatnam	,, ,,	3·50
	Kota	,, ,,	3·50
	Gudur	,, ,,	3·28
	Kistnapatam	7th ,,	4·05
	Pakala	,, ,,	3·54
	Kandukur	,, ,,	3·37
	Venkatagiri	8th ,,	3·53
	Iskapalle	29th ,,	4·18
	Kavali	,, ,,	3·16

The following gives data for the Nellore district :—

District.	Rainfall.			
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Nellore	13·25	8·12	+5·13	+63

The southern division received daily rain up to the 12th. The fall then suddenly ceased and fine weather continued up to the 17th. On the 18th the second burst of rain commenced and continued up to the 21st. The rainfall was frequently heavy and amounted to more than 3″ in 24 hours at the following large number of stations :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
South Arcot	Manambadi	2nd November	3·20
	Bhuvanagiri	,, ,,	3·02
Chingleput	Cheyur	3rd ,,	3·60
	Uttramerur	,, ,,	3·34
North Arcot	Kalahasti	,, ,,	3·30
Chingleput	Cheyur	6th ,,	4·35
	Vadasammanjeri	,, ,,	4·25
South Arcot	Merkanam	,, ,,	3·86
Chingleput	Saidapet	,, ,,	3·47
	Sriperumbudur	,, ,,	3·42
South Arcot	Villupuram	,, ,,	3·03
Chingleput	Cheyur	7th ,,	4·00
	Madurantakam	,, ,,	3·43
	Vadasammanjeri	11th ,,	5·55
	Chingleput	,, ,,	4·32
	Kovelong	,, ,,	4·15
South Arcot	Manambadi	,, ,,	4·08
	Chidambaram	12th ,,	3·09

The following gives the rainfall of the month at the stations in Persia, Arabia and the South-East Trades region :—

Station.	Rainfall.			
	Average actual, November 1901.	Average normal, November.	Variation of actual from normal, November 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jask	0	0·44	−0·44	−100
Bushire	0	2·60	−2·60	−100
Ispahan	0·31	1·16	−0·85	− 73
Teheran	1·78	1·04	+0·74	+ 71
Muscat	0	0·94	−0·94	−100
Baghdad	0·05	1·03	−0·98	− 95
Aden	0	0·21	−0·21	−100
Perim	0	0·06	−0·06	−100
Zanzibar	6·51	7·87	−1·36	− 17
Seychelles	9·68	11·75	−2·07	− 18

The preceding data show that there was no rain throughout the month at Jask, Bushire, Muscat, Perim and Aden. Lighter rain than usual at the Seychelles, Zanzibar, Baghdad and Ispahan and heavier rain than the normal at Teheran.

W. L. D.

Table

Abstract of Observations taken at 8 A.M. at 22

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M. in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	I.—Burma Coast and Bay Islands.				0								86·7	+0·5	73·9	+2·3	80·3	+1·4	12·8					19 6
1	Tenasserim and Bay Islands.	Car Nicobar.	25	†29·838		†29·791	29·926	5th	29·710	21st	·185	†77·3	†83·6		74·9†		79·3†		8·7	87·8	10th	73·5	6th	14·3
		Port Blair .	61	29·881	+·005	29·873	29·971	4th	29·809	24th	·162	80·6	85·5		78·0		81·8		7·5	89·1	29th	75·4	8th & 10th.	13·7
		Mergui .	96	29·866	?	29·894	29·947	4th	29·818	20th	·129	77·6	87·0	−0·2	72·6	+3·1	79·8	+1·5	14·4	89·6	13th	68·4	12th	21·2
		Tavoy .	26	29·948	−·020	29·905	30·025	4th	29·911	10th	·114	78·0	88·4	+0·4	70·7	+2·0	79·6	+1·2	17·7	91·7	29th	66·0	12th	25·7
		Moulmein .	94	29·892	+·001	29·924	29·971	4th	29·852	29th	·119	78·7	89·4	+1·1	73·2	+2·1	81·3	+1·6	16·2	92·0	16th	69·8	5th	22·2
2	Lower Burma .	Rangoon .	41									74·0	87·8	+0·5	74·5	?	81·2	?	13·3	91·6	30th	71·9	13th	19·7
		Bassein .	27	29·957	+·007	29·919	30·029	4th	29·911	10th	·118	76·6	86·6	+0·7	74·2	+2·4	80·4	+1·6	12·4	88·7	21st & 29th.	71·2	13th, 25th & 26th.	17·5
		Diamond Island.	41	29·925	−·002	29·901	30·024	2nd	29·870	25th	·154	81·4	86·6	+0·9	77·9	+3·0	82·3	+2·0	8·7	90·4	21st	74·2	24th	16·2
5	Arakan . .	Akyab .	20	29·960	−·002	29·924	30·039	4th	29·878	18th	·161	75·6	85·5	0	72·9	+1·0	79·2	+0·5	12·6	88·9	2nd & 3rd.	67·0	21st, 29th & 30th.	21·9
3	Central Burma .	Toungoo .	183	29·809	+·012	29·938	29·882	2nd	29·760	29th	·122	75·7	86·4	−0·6	70·2	?	78·3	?	16·2	90·1	1st & 2nd.	66·6	23rd	23·5
	II.—Burma Inland.				−·001								85·1	−1·3	68·1	+2·3	76·6	+0·5	17·0					29·4
3	Central Burma .	Thayetmyo .	130	29·876	+·015	29·950	29·952	2nd	29·816	18th	·136	76·1	88·6	+1·1	70·6	+2·6	79·6	+1·9	18·0	92·7	29th	61·6	30th	31·1
	Upper Burma .	Minbu .	165	29·854	P	29·963	29·969	25th	29·79[illegible]	18th	·116	75·5	87·5	−1·6	71·1	+3·1	79·3	+0·8	16·4	92·1	6th	63·6	30th	28·5
		Yamethin .	657	29·341	?	29·960	29·398	4th	29·279	28th	·119	73·8	86·9	−2·1	69·7	+3·0	78·3	+0·5	17·2	93·5	5th	63·7	30th	29·8
		Mandalay .	250	29·762	+·001	29·966	29·839	24th	29·691	18th & 28th.	·148	75·5	88·3	+1·7?	70·5	+3·3	79·4	?	17·8	96·5	3rd	66·3	25th & 30th.	30·2
		Kindat	377	29·656	−·010	29·996	29·752	25rd	29·568	18th	·184	69·0	80·2	−1·3	64·9	+0·4	72·6	−0·5	15·3	87·8	4th	60·8	23rd	27·0
		Bhamo* .	381	29·638	−·011	29·988	29·723	23rd	29·561	18th	·162	66·9	79·1	−2·7	61·8	+2·3	70·5	−0·2	17·3	87·0	5th	57·2	21st	29·8
4(a)	Burma Hill Stations.	Maymyo .		26·532			26·603	4th	26·460	30th	·143	65·6	75·2		55·8		65·5		19·4	79·0	2nd & 3rd.	48·8	22nd & 30th.	30·2
		Taunggyi .										63·2	71·1	−3·0	56·2	+4·5	63·7	+0·8	14·9	76·7	20th	47·0	30th	29·7
		Lashio .										63·5	79·7	+2·9	57·4	+3·2	68·6	+3·1	22·3	85·1	4th	52·0	25th	33·1
	III.—Assam .				+·004								79·5	−0·8	62·9	+0·9	71·2	+0·1	16·7					29·4
7	Surma . .	Silchar .	104	29·920	+·014	29·979	29·982	4th	29·768	18th	·194	70·0	84·2	−0·5	64·3	+0·5	74·3	0	19·9	91·0	9th	59·4	12th, 21st & 23rd.	31·6
9	Brahmaputra .	Sibsagar .	333	29·724	+·004	30·028	29·827	23rd	29·603	18th	·224	64·7	77·1	−1·3	62·0	+2·2	69·6	+0·5	15·1	85·3	1st	55·4	23rd	29·9
		Dhubri .	115	29·912	−·007	29·988	29·976	6th	29·822	18th	·154	67·7	79·5	−0·5	63·5	−0·1	71·5	−0·3	16·0	87·2	5th	59·3	18th	27·9
		Tezpur .	252	29·774		30·035	29·862	23rd	29·655	27th	·207	66·4	77·9		62·9		70·4		15·0	85·1	3rd	59·0	23rd & 24th.	26·1
		Dibrugarh .	394	29·685		30·059	29·798	23rd	29·572	28th	·226	65·8	78·9		61·6		70·3		17·3	86·2	1st & 2nd.	54·9	23rd	31·3
	IV.—Bengal and Orissa.				−·011								82·4	0	64·3	+0·9	73·4	+0·5	18·1					34·0
6	East Bengal .	Chittagong .	87	29·903	−·004	29·941	29·985	4th	29·782	18th	·203	73·1	82·9	+0·1	67·1	+0·8	75·0	+0·5	15·8	88·5	14th	60·1	22nd	28·4
		Noakhali .	43	29·950		29·941	30·021	4th	29·840	26th	·181	72·9	82·6		65·7		74·2		16·9	87·9	3rd & 4th.	56·9	30th	31·0
		Comilla .	36	29·908		29·952	30·030	4th	29·869	18th	·161	73·1	83·3		65·3		74·3		18·0	88·9	10th	56·0	30th	32·9
		Sirajganj .	49	29·957		29·957	29·997	6th	29·850	26th	·147	67·6	81·1		64·7		72·9		16·4	88·1	4th	56·1	30th	32·0
		Narayanganj	26	29·979	+·004	29·954	30·040	4th	29·874	26th	·166	71·4	83·0	−0·7	66·6	+0·7	74·8	0	16·4	89·1	2nd	57·8	30th	31·3
		Barisal .	13	29·963	−·006	29·921	30·025	4th	29·828	26th	·197	73·1	82·2	0	66·8	+1·4	74·5	+0·7	15·4	88·8	4th	57·2	30th	31·6
		Mymensingh	59	29·941	−·003	29·953	29·995	6th	29·840	18th	·155	69·5	81·6	−0·7	65·5	?	73·6	?	16·1	87·3	3rd	58·4	30th	28·9
10	Deltaic Bengal	Faridpur .	46	29·962	†	29·957	30·019	4th	29·847	26th	·172	70·2	82·2		64·3		73·3		17·9	86·6	4th	54·0	30th	34·6
		Jessore .	33	29·97[illegible]	−·008	29·954	30·028	4th	29·822	26th	·206	70·2	82·8	−0·5	63·7	?	73·3	?	19·1	90·5	1st & 3rd.	54·1	22nd	36·4
		Calcutta .	21	29·986	−·016	29·953	30·048	7th	29·759	26th	·289	70·9	82·1	+0·9	65·0	+0·4	73·6	+0·7	17·1	90·2	2nd	57·1	20th, 22nd & 30th.	33·1
		Saugor Island	25	29·9[illegible]	−·026	29·937	30·025	4th	29·623	26th	·402	72·2	81·9	+0·5	67·2	+0·2	74·6	+0·4	14·7	88·9	1st	58·0	21st	30·9
		Krishnagar .	47	29·975		29·972	30·031	4th	29·837	26th	·194	70·1	83·5		63·6		73·6		19·9	92·1	2nd	54·3	21st	37·8
		Midnapore .	149	29·852		29·953	29·907	7th	29·622	26th	·285	70·0	82·7		63·9		73·3		18·8	91·8	1st	55·6	21st & 22nd.	36·2

* Observation of 29 days.

† Mean of 29 days

I.

Stations in India, Burma, etc., in November, 1901.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW	W.	NW	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st October to 30th November 1901.	Normal rainfall for period, 1st October to 30th November.	Variation from normal of period, 1st October to 30th November.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																				5·27	4·05	+0·09					**I.—Burma Coast and Bay Islands.**		
8		4	4	5	5	2			S 52° E	2·5	2·5			94†	·877†	8·3†	14			15·40			31·67			3·78	Car Nicobar.	Tenasserim and Bay Islands.	
	1	5	2	16	2	1	1	2	S 60° E	7·1		7·1	0	88	·921	6·5	12			21·98	8·97	+13·01	37·27	21·14	+16·13	5·80	Port Blair .		1
29	1								N	1·5	1·3	1·6	−19	84	·786	4·3	5			1·30	4·30	− 3·00	22·30	17·62	+ 4·68	0·50	Mergui.		
27	1	2							N 31° E	1·2				86	·825	1·7	1			0·68	2·13	− 1·45	18·80	12·26	+ 6·54	0·64	Tavoy.		
	3	11	2	8	2	1	2	1	N 75° E	1·5	1·7	2·4	−29	78	·767	2·3	2	2·18	−0·18	1·64	2·32	− 0·68	12·42	10·42	+ 2·00	1·14	Moulmein		
														88	·824	6·1	0	3·18	−3·18	0	2·98	− 2·98	10·89	9·72	+ 1·17	0	Rangoon .	Lower Burma.	2
6		14	1	2				7	N 29° E	4·2	.	3·1	+35	89	·822	3·6	3	5·55	−2·55	1·46	4·21	− 2·75	14·70	12·42	+ 2·28	1·05	Bassein.		
1	2	11	11	3	2				N 75° E	8·3	8·3	8·6	− 3	80	·867	0·4	5	7·10	−2·10	3·96	7·21	− 3·25	16·55	16·43	+ 0·12	2·87	Diamond Island.		
	5	21		3		1			N 43° E	0·7	0·7	2·2	−68	90	·799	3·2	5	3·09	+1·91	4·08	92·4	+ 1·14	19·86	13·38	+ 6·48	1·85	Akyab. .	Arakan.	5
7	8	3		3				9	N 8° W	2·1	2·1	1·7	+22	89	·800	5·2	3	2·36	+0·64	2·15	1·37	+ 0·78	10·71	8·13	+ 2·58	0·11	Toungoo .	Central Burma.	3
																				0·61	1·39	−0·78					**II.—Burma Inland.**		
	10	4		2	3		1	10	N 14° W	3·0		3·5	−14	82	·738	4·5	0	3·45	−3·45	0·05	2·16	− 2·11	5·75	6·40	− 0·65	0·05	Thayetmyo .	Central Burma.	3
	6	1		1	1		1	20	N 35° W	5·9	7·0			83	·746	5·6	0			0·10	1·18	− 1·08	6·72	4·22	+ 2·50	0·07	Minbu .	Upper Burma.	4
11	11			1	1			6	N 15° W	3·2	3·4			88	·734	5·4	2			0·59	1·13	− 0·54	9·35	5·87	+ 3·48	0·33	Yamethin.		
24		1	1	1	3				S 38° E					82	·730	2·4	1			0·26	1·28	− 1·02	5·31	6·36	− 1·05	0·10	Mandalay.		
27		2	1						S 63° E	0·6	0·6			93	·668	3·2	3			0·88	1·73	− 0·85	8·07	7·88	+ 0·19	0·35	Kindat.		
9	3	10	3			2	1	1	N 37° E	1·9	2·2			93	·610	5·0	3			1·78	0·87	+ 0·91	6·20	4·63	+ 1·57	0·82	Bhamo.		
8	2	12	1	1		4	2		N 36° E	2·2				86	·545	4·3	2			1·09			7·22			0·74	Maymyo .	Burma Hill Stations.	4(a)
		1	2	6	10	8	1	2	S 5° W					84	·491	4·5	3			1·35	1·27	+ 0·08	11·25	6·86	+ 4·39	0·75	Taunggyi.		
	7	9	2	1	2	1	2	6	N 8° E	0·3				94	·552	7·2	3			0·93	1·24	− 0·31	7·45	4·43	+ 3·02	0·35	Lashio.		
																				4·22	0·85	+2·98					**III.—Assam.**		
26		1	2					1	N 58° E	1·2	2·1	2·1	0	87	·646	4·7	5	1·86	+3·14	3·12	1·31	+ 1·81	8·77	7·96	+ 0·81	1·07	Silchar .	Surma.	7
13	5	7		2		2		1	N 29° E	1·5	1·4	1·7	−18	99	·611	8·5	5	2·00	+3·00	5·83	0·98	+ 4·85	12·91	5·82	+ 7·09	2·00	Sibsagar .	Brahmaputra.	9
3		4	19		1	2			N 87° E	5·4	6·4	4·9	+31	90	·616	3·6	2	0·47	+1·53	2·54	0·26	+ 2·28	4·63	3·76	+ 0·87	2·26	Dhubri.		
	1	14	13			2			N 67° E	2·2	2·3			90	·581	4·8	3			4·60			7·41			2·36	Tezpur.		
	3	11	8	3	2			2	N 65° E	1·2	1·1			88	·554	2·3	6			5·02			10·80			1·72	Dibrugarh.		
																				3·79	0·96	+2·83					**IV.—Bengal and Orissa.**		
	4	19	3	2				2	N 43° E	3·1	3·1	3·0	+ 3	87	·708	4·6‡	3	1·96	+1·04	5·15	1·53	+ 3·62	16·78	7·77	+ 9·01	4·05	Chittagong .	East Bengal.	6
	6	10	4	3		1	1	5	N 30° E	1·3	1·2			87	·707	3·7	6	1·58	+4·42	5·96	1·81	+ 4·15	12·85	9·51	+ 3·34	2·40	Noakhali.		
10	10		1	1	2		5	1	N 21° W	1·3				84	·684	3·9	3	1·88	+1·12	2·76	1·14	+ 1·62	8·87	6·34	+ 2·53	1·61	Comilla.		
21	3	1	1			1	1	2	N 14° W	1·0	1·0			92	·624	3·5§	2	0·96	+1·04	2·20	0·60	+ 1·60	3·27	4·83	− 1·56	1·08	Sirajganj.		
7	4	8	2	1	1	1	1	5	N 15° E	3·0		1·9	+58	89	·691	3·8	2	1·85	+0·15	2·13	1·74	+ 0·39	6·49	6·16	+ 0·33	1·65	Narayanganj.		
	7	7	2	2		3	1	8	N 2° W	3·1				88	·721	3·3†	5	1·53	+3·42	5·96	1·27	+ 4·69	10·66	6·88	+ 3·78	3·50	Barisal.		
27					1			2	N 77° W	0·4				89	·649	?	2	1·00	+1·00	7·23	0·61	+ 6·62	12·63	6·23	+ 6·40	3·62	Mymensingh.		
24	2	2	1				1		N 18° E	1·2	1·0			90	·676	2·6†	3	1·27	+1·73	3·20	1·18	+ 2·02	7·08	5·27	+ 1·81	2·77	Faridpur .	Deltaic Bengal.	13
20	6		1				1	2	N 8° W	2·3	2·3	1·8	+28	86	·642	3·1‖	4	1·27	+2·73	2·66	1·22	+ 1·44	3·22	5·77	− 2·55	1·77	Jessore.		
9	6	7	1		1	1	2	3	N 5° E	3·8		3·0	+27	84	·639	3·2	4	1·00	+3·00	2·87	0·66	+ 2·21	4·86	5·05	− 0·19	1·32	Calcutta.		
	11	16						3	N 21° E	8·4		6·4	+31	89	·703	4·1	7	1·58	+5·42	6·18	1·52	+ 4·66	12·04	10·66	+ 1·38	1·65	Saugor Island		
2	6	4	2			2	4	10	S 69° W	2·8				84	·625	3·1	3	0·88	+2·12	3·64	0·94	+ 2·70	6·98	5·16	+ 1·82	2·98	Krishnagar.		
5	15	3				1		6	N 8° W	2·9	2·6			77	·568	2·8	5	0·96	+4·04	4·01	0·63	+ 3·38	5·97	4·92	+ 1·04	2·53	Midnapore.		

‡ Mean of 28 days. § Mean of 25 days. ‖ Mean of 27 days.

Table

Abstract of Observations taken at 8 A.M. at 224 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M. in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
11	Central Bengal.	Bankura	298	29·690		29·951	29·748	7th & 8th.	29·547	26th	·201	69·2	83·2		63·1		73·2		20·1	93·5	1st	55·0	22nd	38·5
		Raniganj	324	29·683		29·980	29·736	22nd	29·564	26th	·172	68·0	83·9		62·4		73·2		21·5	93·6	1st	55·2	22nd& 30h.	38·4
		Burdwan	99	29·916	−·014	29·966	29·963	7th	29·754	26th	·209	70·6	83·7	+1·0	65·0	+0·9	74·4	+1·0	18·7	93·2	2nd	56·8	30th	36·4
		Naya Dumka	489	29·522		29·980	29·574	7th & 8th	29·414	26th	·160	68·6	82·3		60·6		71·5		21·7	91·5	1st	52·0	30th	39·5
		Berhampore	67	29·953	−·011	29·970	30·001	7th	29·844	26th	·157	69·8	82·9	+1·1	64·6	+0·5	73·7	+0·8	18·3	91·5	1st	55·3	30th	36·2
		Rampur Boalia	70	29·943		29·964	29·992	7th	29·838	26th	·154	69·9	81·9		64·0		73·0		17·9	90·3	1st	56·5	22nd	33·8
		Malda	72	29·942		29·968	29·996	7th	29·864	18th	·132	69·0	82·1		62·5		72·3		19·6	91·1	1st	52·0	30th	39·1
		Bogra	61	29·938		29·953	29·982	6th	29·845	18th	·137	67·6	82·0	−0·1	63·4	+1·2	72·7	+0·6	18·6	89·2	4th	55·5	29th	33·7
12	North Bengal	Dinajpur	123	29·888	+·001	29·971	29·942	24th	29·820	26th	·122	66·5	81·7	−0·7	60·8	+0·5	71·3	−0·1	20·9	88·3	4th & 5th.	52·4	20th & 21st.	35·9
		Rangpur	123	29·910		29·992	29·955	6th & 7th.	29·837	18th	·118	67·7	81·6		62·6*		72·6*		19·0	88·5	4th	55·8	30th	32·7
		Jalpaiguri	284	29·747	+·005	30·001	29·802	6th & 23rd,	29·669	30th	·133	66·4	80·6	−1·1	61·7	+2·1	71·1	+0·5	18·9	85·4	3rd	56·1	16th	29·3
		Cooch Behar	156	29·885		30·003	29·939	6th	29·804	18th	·135	67·3	80·5		62·6		71·6		17·9	86·3	3rd	56·2	15th	30·1
17	North Bihar	Purnea	125	29·906	+·005	29·991	29·958	7th & 8th.	29·830	18th	·128	64·1	82·8	+0·9	59·2	+0·4	71·1	+0·7	23·6	90·4	1st	50·8	30th	39·6
14	Orissa	Balasore	48	29·962	−·010	29·956	30·021	22nd	29·525	26th	·496	68·6	82·4	−0·3	63·5	+1·1	73·0	+0·4	18·9	91·4	1st	55·0	22nd	36·4
		False Point	21	29·966	−·030	29·929	30·032	4th	29·620	26th	·412	72·8	82·1	+0·2	67·1	+1·4	74·6	+0·8	15·0	90·5	1st, 2nd & 3rd,	58·0	21st & 22nd.	32·5
		Cuttack	80	29·914	−·026	29·939	29·972	22nd	29·644	26th	·328	70·2	83·8	−1·2	66·8	+0·7	75·3	−0·3	17·0	92·4	1st	58·1	21st & 22nd.	34·3
		Puri	20	29·866		29·929	30·025	4th	29·740	26th	·285	72·7	83·2		69·3		76·3		13·9	91·2	2nd	62·6	22nd	28·6
	V.—Gangetic Plain and Chota Nagpur.				−·013								83·9	+2·2	58·5	+1·1	71·2	+1·7	25·4					40·6
15	Chota Nagpur	Hazaribagh	2,007	27·987	0	29·995	28·042	8th	27·882	26th	·160	67·1	78·8	+2·1	59·6	+1·9	69·2	+2·0	19·2	86·4	2nd	53·6	29th	32·8
		Ranchi	2,128	27·850	−·006	29·977	27·909	8th	27·723	26th	·186	66·2	77·8	+1·4	59·7	P	68·8	P	18·1	85·8	2nd	53·2	22nd	32·6
		Daltonganj	730 P	29·293		30·017P	29·350	8th	29·215	26th	·135	61·1	83·6		52·9		68·4		30·7	91·6	2nd	44·2	29th	47·4
		Purulia		29·182		29·972	29·230	8th	29·038	20th	·192	68·2	82·6		61·7		72·2		20·9	92·5	1st	53·5	30th	39·0
		Chaibassa	760	29·236		29·974	29·290	8th	29·049	26th	·241	66·7	82·2	−0·3	61·5	+1·5	71·9	+0·6	20·7	93·5	1st	52·9	22nd	40·6
16	South Bihar	Gaya	375	29·646	−·012	29·992	29·712	8th	29·570	26th	·142	67·1	84·7	+2·3	60·4	+1·3	72·6	+1·8	24·3	93·2	2nd	53·8	30th	39·4
		Dehri	351	29·671		29·992	29·733	8th	29·604	17th	·129	67·6	85·2		62·1		73·7		23·1	94·3	2nd	56·6	4 days.	37·7
		Patna	183	29·841	P	29·984	29·901	8th	29·773	17th	·128	68·8	84·5	+3·1	62·2	P	73·4	P	22·3	92·5	2nd	53·4	30th	39·1
		Arrah	190	29·823		29·974	29·883	8th	29·757	17th	·126	66·7	85·4		58·9		72·2		26·5	93·3	2nd	51·8	30th	41·5
		Buxar	239	29·790		29·993	29·847	23rd	29·722	30th	·125	69·0	86·0		60·5		73·3		25·5	93·8	2nd	52·9	29th	40·9
17	North Bihar	Bhagalpur	160	29·873		29·991	29·930	8th	29·796	18th	·134	70·0	83·6		60·9†		72·3†		22·7	92·6	1s,	51·7	30th	40·9
		Darbhanga	166	29·857	−·013	29·984	29·910	8th	29·783	18th	·127	66·7	83·3	+2·5	61·3	−0·7	72·3	+0·9	22·0	89·8	1st	53·3	30th	36·5
		Muzaffarpur	178	29·864		30·004	29·927	8th	29·784	27th	·143	67·8	83·2		60·3†		71·8†		22·9	89·7	1st	52·3	22nd	37·4
		Motihari	224	29·811		30·002	29·872	8th	29·724	18th	·148	67·8	83·6		56·0		69·8		27·6	89·0	1st, 2nd & 3rd.	47·9	29th & 30th.	41·1
		Chapra	181	29·845		29·988	29·905	8th	29·777	17th	·128	66·4	84·5		59·2		71·9		25·3	90·7	1st	51·5	30th	39·2
18	N.-W. P., East	Benares	267	29·752	−·018	29·986	29·812	8th	29·691	17th & 30th.	·121	65·1	85·2	+3·3	56·3	+0·8	70·8	+2·1	28·9	93·8	1st	48·0	29th	45·8
		Allahabad	309	29·705	−·025	29·983	29·763	8th	29·641	30th	·122	66·2	85·9	+3·8	55·1	+0·7	70·5	+2·3	30·8	94·1	1st	49·4	21st. & 29th	44·7
23	N.-W. P. (East Submontane.)	Gorakhpur	256	29·760	−·009	29·985	29·831	8th	29·680	30th	·151	67·4	84·0	+2·4	59·0	+1·5	71·5	+2·0	25·0	90·0	1st	50·6	29th	39·4
19	South Oudh	Lucknow	368	29·645	−·021	29·991	29·718	8th	29·569	30th	·149	62·5	84·7	+1·8	54·1	+2·3	69·4	+2·1	30·6	92·8	1st	48·7	30th	44·1
20	North Oudh	Bahraich	403	29·604	−·016	29·985	29·679	8th	29·530	30th	·149	66·8	84·7	+2·1	57·2	+0·5	71·0	+1·3	27·5	90·6	2nd	49·5	28th	41·1
21	N.-W. Provinces (Central.)	Cawnpore	416	29·611	P	30·003	29·683	8th	29·534	30th	·149	64·0	85·4	+2·4	54·0	P	69·7	P	31·4	94·3	1 st	49·0	21st	46·3
		Mainpuri	516	29·601	−·005	30·003	29·563	8th	29·415	30th	·153	62·8	86·0	+2·2	53·7	P	69·9	P	32·3	95·3	1st	48·6	29th	46·7

* Mean of 19 days.

† Mean of 29 days.

I—*continued.*

in India, Burma, etc., in November, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Hygrometry, 8 A.M. Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st October to 30th November 1901.	Normal rainfall for period, 1st October to 30th November.	Variation from normal of period, 1st October to 30th November.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
20		2				1	5	2	N 72° W	1·7	2·0			72	·517	2·6	4	0·85	+ 3·15	1·33	0·52	+ 0·81	3·18	4·34	− 1·16	0·51	Bankura	Central Bengal	11
20	1	1	1				2	5	N 39° W	1·0				75	·516	2·5	3	0·65	+ 2·35	1·08	0·50	+ 0·58	1·97	3·81	− 1·84	0·44	Raniganj.		
14	6	4	1				2	3	N 1° W	2·2	2·2	1·9	+16	77	·578	2·8†	4	0·88	+ 3·12	3·18	0·67	+ 2·51	3·29	4·28	− 0·99	2·02	Burdwan.		
18	2	2	3			1	2	2	N 5° E	0·8	0·9			74	·519	3·1	3	0·60	+ 2·40	0·86	0·37	+ 0·49	3·34	4·59	− 1·25	0·34	Naya Dumka.		
14	3	1	2			2		8	N 27° W	1·3		1·7	−23	85	·621	3·1†	3	0·63	+ 2·37	2·92	0·56	+ 2·36	4·27	4·39	− 0·12	2·04	Berhampore.		
15	7	3					3	2	N 10° W	1·7	1·7			84	·618	2·7†	3	0·53	+ 2·47	2·69	0·31	+ 2·38	6·26	4·42	+ 1·84	2·26	Rampur Boalia.		
	8	4	5	1		2	8	2	N 11° W	1·0	1·0			85	·609	2·8	3	0·42	+ 2·58	1·48	0·20	+ 1·28	3·16	4·62	− 1·46	0·64	Malda.		
14	16								N					87	·599	3·1‡	2	0·65	+ 1·35	4·30	0·64	+ 3·66	5·54	4·38	+ 1·16	3·72	Bogra.		
	2	19	2			4	2	1	N 38° E	4·3	4·9			87	·576	2·5	3	0·23	+ 2·77	0·93	0·08	+ 0·85	3·25	4·63	− 1·38	0·50	Dinajpur	North Bengal.	12
9		8	8	1	1		2	1	N 67° E	1·9	2·0			90	·616	2·4§	1	0·11	+ 0·89	0·79	0·13	+ 0·66	2·50	5·57	− 3·07	0·62	Rangpur.		
	12	9				1	2	6	N 3° W	0·8	1·0			86	·562	1·3	1	0·34	+ 0·66	0·42	0·16	+ 0·26	1·70	5·48	− 3·78	0·32	Jalpaiguri.		
21		3	6						N 76° E	0·8	0·8			88	·600	3·9	2			0·63	0·07	+ 0·56	2·03	6 05	− 4·02	0·34	Cooch Behar		
	1	10	3	2		7		7	N 16° E	2·1	1·8	1·2	+50	89	·541	1·5	2	0·19	+ 1·81	0·67	0·08	+ 0·59	0·71	3·65	− 2·94	0·42	Purnea	North Bihar.	17
13	10	3	1					3	N 4° E	1·1				81	·567	3·4	8	1·73	+ 6·27	4·19	1·32	+ 3·17	9·66	7·45	+ 2·21	1·50	Balasore	Orissa.	14
	18	3	3					6	N 2° E	7·8	7·5	6·5	+15	87	·710	4·6	7	2·73	+ 4·27	18·69	3·23	+15·46	24·13	12·42	+11·71	8·86	False Point.		
20	1	4	2				3		N 27° E	2·1		1·7	+24	82	·608	4·0	5	1·88	+ 3·12	3·95	1·73	+ 2·22	7·77	7·37	+ 0·40	1·89	Cuttack.		
	22	5						3	N 2° E	9·8	9·2			86	·702	3·3	6	2·77	+ 3·23	11·26	3·48	+ 7·78	17·63	12·38	+ 5·25	4·02	Puri.		
																				0·19	0·23	−0·07					**V.—Gangetic Plain and Chota Nagpur.**		
13	1	1	5	1			7	2	N 45° W	5·0	4·5	4·3	+ 5	62	·404	3·1	1	0·69	+ 0·31	0·24	0·29	− 0·05	1·74	3·70	−1·96	0·17	Hazaribagh.	Chota Nagpur.	15
8	2	4	2			1	4	9	N 29° W	3·8	4·4			64	·409	3·1	1	0 80	+ 0·20	0·19	0·43	− 0·24	0·80	3·38	− 2·58	0·11	Ranchi.		
26	1		3						N 72° E	1·6	1·9			81	·443	1·6	0	0·76	− 0·76	0·08	0·37	− 0·29	0·57	2·87	− 2·30	0·06	Daltonganj.		
10	3	1	2				8	6	N 79° W	1·0				68	·471	2·4	4			0·75			5·16			0·27	Purulia.		
18	2	4	1			3	2		N 5° W	1·4	1·2			82	·540	2·6	3	0·92	+ 2·08	0·89	0·45	+ 0·44	1·62	3·17	− 1·55	0·52	Chaibassa.		
6	2	1		3	13	2	3		S 8° W	3·8	3·4	1·2	+183	69	·463	2·6	0	0·53	− 0·53	0·11	0·38	− 0·27	0·23	2·65	− 2·42	0·07	Gaya	South Bihar.	16
1		2	2	1	12	11		1	S 13° W	4·9	4·4			68	·464	1·6†	0	0·54	− 0·54	0·04	0·28	− 0·24	1·44	2·91	− 1·47	0·03	Dehri.		
2		3	5	1	2	8	7	2	S 50° W	2·2	2·6	1·5	+ 73	74	·525	1·5	1	0·34	+ 0·66	0·21	0·17	+ 0·04	0·41	3·42	− 3·01	0·16	Patna.		
19	1	2	6				2		N 68° E	0·9	1·0			74	·484	0·5	1	0·46	+ 0·54	0·21	0·20	+ 0·01	0·37	3·19	− 2·82	0·19	Arrah.		
2		1	7	1	1	2	15	1	S 77° W	3·0	2·7			61	·445	0·9	0	0·42	− 0·42	0·04	0·46	− 0·42	0·86	3·72	− 2·86	0·03	Buxar.		
10	1	4	4		4	2	3	2	S 81° E	2·1	2·0			73	·540	2·4	1	0·26	+ 0·74	0·86	0·21	+ 0·65	0·90	3·01	− 2·11	0·75	Bhagalpur	North Bihar.	17
10		1	5	5	2	2	3	2	S 31° E	1·1		1·8	− 39	79	·521	1·2	1	0·19	+ 0·81	0·31	0·07	+ 0·24	0·31	2·91	− 2·61	0·29	Darbhanga.		
26		1	2	1					E	0·7	0·6			80	·552	0·5†	0	0·40	− 0·40	0	0·17	− 0·17	0	3·28	− 3·28	0	Muzaffarpur		
	2	9	11	2	3	1	1	1	N 76° E	2·2	2·1			95	·652	0·5	0	0·20	− 0·20	0	0·13	− 0·13	0·25	3·52	− 3·27	0	Motihari.		
12	1	1	4	1	1	6	2	2	S 34° W	1·3	1·6			76	·501	1·1	1	0·42	+ 0·58	0·18	0·38	− 0·20	1·97	3·46	− 1·49	0·13	Chapra.		
19		3				8			S 45° W	0·8	0·9	2·1	−57	73	·453	0·5	0	0·82	− 0·32	0	0·36	− 0·36	0	2·66	− 2·66	0	Benares	N.-W. P., East.	18
5		4	3	2	2	1	10	3	N 82° W	2·7	3·1	2·0	+55	67	·438	0·2	0	0·45	− 0·45	0	0·17	− 0·17	0	2·00	− 2·00	0	Allahabad.		
2	5	6			1	2	3	5	N 20° W	1·0		0·9	+11	73	·499	0·8	0	0·18	− 0·18	0·08	0·10	− 0·02	0·08	3·87	− 3·79	0 08	Gorakhpur	N.-W. P. (East Submontane).	23
15	3	1	1				9	1	N 61° W	1·1	1·2	1·4	−14	76	·428	0·7	0	0·09	− 0·09	0	0·05	− 0·05	0·31	0·88	− 0·57	0	Lucknow	South Oudh.	19
12	1	4	6			2	3	2	N 39° E	1·2	1·1			76	·512	0·2	0			0	0	0	0	1·69	− 1·69	0	Bahraich	North Oudh.	20
14		4	1		2	4	4	1	S 69° W	1·8				62	·375	0·7	0	0	0	0	0·15	− 0·15	0	1·52	− 1·52	0	Cawnpore	N.-W. Provinces (Central).	21
25			1				4		W	0·5	0·5			58	·334	0·7	0			0	0	0	0	0·82	− 0·82	0	Mainpuri.		

‡ Mean of 20 days.

§ Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 224 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°.)	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	VI.—Upper Sub-Himalayas				−·006								82·7	+2·3	51·4	+2·0	67·1	+2·2	31·4					46·0
24	N.-W. Provinces, (West Submontane).	Bareilly	569	29·438	−·005	30·000	29·513	8th	29·348	30th	·165	61·5	82·6	+1·7	54·3	+2·1	68·5	+1·9	28·3	90·9	1st	46·7	29th	44·2
		Dehra Dun	2,233	27·756	−·019	30·034	27·840	8th	29·659	30th	·181	57·6	77·0	+2·8	52·5	+1·1	64·8	+2·0	24·5	83·5	1st	47·0	20th	36·5
		Roorkee	887	29·114	−·007	30·023	29·185	8th	29·024	30th	·161	56·8	82·1	+1·7	49·9	+0·7	66·0	+1·2	32·2	89·8	1st	42·5	28th	47·3
22	N.-W. P., West	Meerut	738	29·259	−·013	30·008	29·335	8th	29·174	21st	·161	56·9	83·8	+2·8	51·5	+1·9	67·7	+2·4	32·3	91·1	1st	45·7	28th	45·4
26	South-East Punjab.	Delhi	718	29·288	−·010	30·006	29·349	8th	29·205	30th	·144	62·5	83·3	+0·3?	57·8	+2·4	70·6	+1·4?	25·5	92·2	1st	51·1	22nd	41·1
28	Central Punjab	Lahore	702	29·312	−·004	30·030	29·386	25th	29·246	29th	·140	56·1	85·5	+4·2	49·9	+3·7	67·7	+4·0	35·6	91·9	1st	44·0	25th & 27th.	47·9
27	South Punjab	Sirsa	662	29·361	?	30·027	29·422	24th	29·282	21st	·140	59·6	86·4	+2·1	50·7	+2·7	68·6	+2·4	35·7	94·3	1st	41·0	27th	53·3
		Patiala	818	29·205		30·037	29·273	15th	29·127	21st & 30th.	·146	59·5	82·6		50·5		66·6		32·1	90·8	1st	45·2	23rd	45·6
29	Punjab (Submontane).	Ludhiana	812	29·196	0	30·026	29·260	25th	29·110	21st	·150	57·6	81·7	+1·3	53·0	+3·0	67·9	+2·2	28·7	90·1	1st	47·1	28th	43·0
		Sialkot	830	29·180	+·009	30·030	29·255	25th	29·085	21st	·170	57·9	83·8	+3·2	52·9	+4·4	68·4	+3·8	30·9	94·6	1st	45·1	27th	49·5
		Umballa	892	29·109	−·001	30·026	29·178	23rd	29·026	30th	·152	54·7	82·6	+0·8	48·7	−1·7	65·6	−0·5	33·9	91·5	1st	42·5	24th & 29th.	49·0
31	North Punjab	Rawalpindi	1,676	28·323	−·009	30·073	28·393	25th	28·218	21st	·175	52·1	81·5	+4·8?	44·9	+2·8	63·2	+3·8?	36·6	87·4	2nd	38·0	27th	49·4
	VII.—North-West Frontier, Indus Valley and North-West Rajputana.				−·015								88·2	+3·6	54·1	+1·2	71·1	+2·4	34·1					49·2
31	North Punjab	Peshawar	1,110	28·918	−·025	30·080	28·989	24th	28·812	21st	·177	54·4	79·2	+2·2	46·3	+2·2	62·8	+2·2	32·9	86·1	1st	40·9	4 days	45·2
32	West Punjab	Khushab	612	29·420	?	30·040	29·495	25th	29·360	29th	·135	58·9	84·9	+2·2	51·6	+2·0	68·3	+2·1	33·3	92·7	1st	43·5	26th	49·2
		Montgomery	558	29·464	−·010	30·019	29·545	25th	29·382	21st	·163	62·3	86·0	?	51·4	?	68·7	?	34·6	93·5	2nd	44·5	26th	49·0
		D. I. Khan*	594	29·447	−·026	30·026	29·524	24th	29·388	27th	·136	54·7	84·5	+2·5	46·9	+0·4	65·7	+1·5	37·6	92·3	1st, 2nd & 3rd.	42·1	24th, 26th & 27th.	50·2
		Mooltan	420	29·606	−·024	30·020	29·702	25th	29·538	28th	·164	60·2	87·7	+3·6	53·7	+2·1	70·7	+2·9	34·0	94·3	1st & 2nd.	46·4	26th	47·9
47	Sind	Jacobabad	136	29·850	−·011	30·008	29·954	25th	29·790	21st	·164	60·7	91·4	+5·5	50·2	+0·8	70·8	+3·2	41·2	98·5	3rd	42·0	26th	56·5
		Hyderabad	96	29·936	−·006	29·989	30·041	26th	29·887	11th	·154	67·8	92·0	+4·8	59·6	+0·4	75·8	+2·6	32·4	100·1	2nd	52·5	27th	47·6
		Kurrachee	30	30·013	−·011	29·995	30·123	26th	29·950	11th	·173	70·4	92·4	+3·6	62·0	+0·8	77·2	+2·2	30·4	99·9	8th & 9th.	56·2	22nd	43·7
51	West Rajputana	Bikaner	771	29·242	−·008	30·015	29·324	25th	29·185	21st	·139	65·1	87·9	+4·0	58·4	+1·2	73·2	+2·6	29·5	98·6	2nd	51·1	26th	47·5
		Pachpadra	380	29·663		30·020	29·741	25th	29·617	21st & 22nd.	·124	64·1	93·2		54·7		74·0		38·5	100·0	1st, 5th & 7th.	45·1	27th	54·9
		Jodhpur	782	29·247		30·039	29·306	25th	29·207	10th	·099	68·6	90·8		60·0		75·4		30·8	98·1	1st & 2nd.	48·2	27th	49·9
	VIII.—East Rajputana, Central India and Gujarat.				−·015								90·0	+4·1	60·1	+3·1	75·1	+3·6	29·9					46·4
50	East Rajputana	Jaipur	1,431	28·597	−·003	30·041	28·642	8th	28·516	21st	·126	66·0	87·5	+2·9	57·0	+4·0	72·3	+3·5	30·5	97·2	1st	48·0	27th	49·2
		Kotah	819	29·201		30·052	29·246	8th	29·133	21st	·113	68·0	88·9		60·0		74·5		28·9	99·5	1st	54·5	25th & 28th.	45·0
		Sambhar	1,254	28·781	?	30·061	28·826	8th	28·700	21st	·126	60·2	87·3	+4·8	53·0	?	70·2	?	34·3	97·5	7th	45·9	27th & 28th.	51·6
		Ajmer	1,611	28·417	−·008	30·063	28·463	7th	28·344	21st	·119	61·0	87·2	+4·1	54·1	+4·7	70·7	+4·4	33·1	95·4	1st	45·3	27th	50·1
		Udaipur	1,925	28·104		30·051	28·152	7th	28·048	21st	·104	64·7	86·4		53·4		69·9		33·0	95·0	1st	45·2	27th & 28th.	49·8
		Deesa	466	29·541	−·019	29·974	29·612	26th	29·491	17th	·121	73·9	95·9	+5·5	62·0	+5·2	79·0	+5·4	33·9	103·1	1st, 2nd & 3rd.	50·1	27th	53·0
46	Kathiawar and Cutch.	Bhuj	395	29·622	−·006	29·978	29·705	26th	29·553	15th	·152	76·8	93·4	+5·1	63·7	+1·7	78·6	+3·4	29·7	100·3	2nd	55·0	27th	45·3
		Jamnagar	61	29·955		29·962	30·046	26th	29·905	15th	·141	74·2	92·2		61·5		76·8		30·7	99·1	2nd & 5th.	52·3	27th	46·8
		Rajkot	429	29·565	−·021	29·957	29·636	27th	29·507	15th	·129	72·9	94·2	+4·3	60·4	+1·9	77·3	+3·1	33·8	100·9	2nd & 3rd.	48·0	28th	52·9
		Veraval		29·967	−·026	29·927	30·061	27th	29·903	15th	·158	77·0	90·8	+2·4	68·9	+1·2	79·9	+1·8	21·9	98·6	4th	60·3	28th	38·3
		Dwarka	37	29·976		29·959	30·071	27th	29·917	15th	·154	76·0	90·6?		66·3		78·4?		24·3	98·9	3rd	60·1	29th	38·8
		Bhavnagar Para.	55	29·964	−·030	29·951	30·040	26th	29·893	15th	·147	72·1	93·4	+4·1	62·2	?	77·8	?	31·2	99·6	2nd	53·2?	27th	46·4
49	Central India	Nowgong	757	29·264	−·020	30·016	29·321	8th	29·200	21st	·121	62·1	82·8	?	53·9	+2·0	68·4	?	28·9	92·0	1st	47·0	28th	45·0
		Indore	1,823	28·191	+·004	30·005	28·244	8th	28·131	17th & 21st.	·113	69·6	86·7	+4·9	55·3	+1·5	71·0	+3·2	31·4	93·3	1st & 2nd.	45·1	26th	48·2
		Neemuch	1,630	28·101	−·016	30·040	28·451	7th	28·341	16th & 21st.	·110	67·1	87·0	+3·6	55·8	+1·6	71·5	+2·6	31·2	96·0	1st	46·6	28th	49·4

* Mean of 24 days.

I—*continued.*

in India, Burma, etc., in November 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st October to 30th November 1901.	Normal rainfall for period, 1st October to 30th November.	Variation from normal of period, 1st October to 30th November.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																				0	0·14	—0·14					VI.—Upper Sub-Himalayas.		
26						1	1	2	N 77° W	0·3	0·3	1·7	— 82	78	·428	0·2	0	0·27	−0·27	0	0·13	−0·13	0·18	1·28	− 1·10	0	Bareilly	N.-W. Provinces (West Submontane).	24
30									Calm	0·1		1·7	− 93	73	·353	0·4	0	0·60	−0·60	0	0·37	−0·37	0·72	1·36	− 0·64	0	Dehra Dun.		
26	1			2				1	N 67° E	1·0		1·1	− 9	76	·356	0·3	0	0·64	−0·64	0	0·16	−0·16	0·74	0·59	+ 0·15	0	Roorkee.		
26							4		W	0·9		1·3	− 31	71	·337	0·2	0	0·36	−0·36	0	0·08	−0·08	0	0·50	− 0·50	0	Meerut	N.-W. P., West.	22
9	3	3	1				3	11	N 30° W	2·4	2·2	2·3	− 4	46	·259	0·1	0	0·18	−0·18	0	0·07	−0·07	0	0·15	− 0·15	0	Delhi	South-East Punjab.	26
27					1		2		S 63° W	0·7		1·4	− 50	72	·330	0·8	0	0·27	−0·27	0	0·10	−0·10	0	0·36	− 0·36	0	Lahore	Central Punjab.	28
7		1	1	12		7		2	S 19° E	3·3	3·9	2·0	+ 95	56	·287	0	0	0·09	−0·09	0	0·01	−0·01	0	0·15	− 0·15	0	Sirsa	South Punjab.	27
8	3	2	4	5	2	1	2	3	N 85° E	3·7	3·7			69	·354	0·6	0			0			0·60			0	Patiala.		
13		2		5	1	2	4	3	S 47° W	2·0	1·8	0·8	+125	68	·322	0·7	0	0·36	−0·36	0	0·99	−0·09	0	0·49	− 0·49	0	Ludhiana	Punjab (Submontane).	29
18		3	6	2				1	N 81° E	0·7		1·0	− 30	62	·300	0·1	0	0·18	−0·18	0	0·09	−0·09	0	0·40	− 0·40	0	Sialkot.		
26							1	3	N 56° W	3·8				77	·335	0·5	0			0	0·18	−0·18	0·18	0·49	− 0·31	0	Umballa.		
19	2	2	2	2			1	2	N 35° E	1·4	1·3	1·1	+ 18	57	·227	0·1	0	0·36	−0·36	0	0·35	−0·35	0·06	0·90	− 0·84	0	Rawalpindi.	North Punjab.	31
																				0	0·16	−0·16					VII.—North-West Frontier, Indus Valley and North-West Rajputana.		
27			1		2				S 27° E	0·9	1·0	2·1	− 52	67	·285	1·1	0	0·64	−0·64	0	0·57	− 0·57	0·29	0·68	− 0·39	0	Peshawar	North Punjab.	31
16	2	9	2			1			N 45° E	2·5	2·9			49	·252	0·4	0	0·40	−0·40	0	0·33	− 0·33	0	0·40	− 0·40	0	Khushab	West Punjab.	32
6		2	3	11	4	1		3	S 45° E	3·0	2·6			42	·237	0·7	0	0·20	−0·20	0	0·07	− 0·07	0	0·22	− 0·22	0	Montgomery.		
21		2						1	N 19° E	0·5	0·5	0·7	− 29	68	·290	0·6	0	0·45	−0·45	0	0·21	− 0·21	0	0·26	− 0·26	0	D. I. Khan*		
22		1		5	1	1			S 38° E	1·0	1·2	1·5	− 20	59	·313	0·2	0	0·09	−0·09	0	0·10	− 0·10	0	0·10	− 0·10	0	Mooltan.		
17	3	1		1		2	1	5	N 42° W	1·9	2·0	1·6	+ 25	57	·302	0·3	0	0	0	0	0·16	− 0·16	0	0·16	− 0·16	0	Jacobabad	Sind.	47
3	20			2	2	2		1	N 3° W	5·6	5·8	6·1	− 5	45	·298	0·2	0	0·20	−0·20	0	0·06	− 0·06	0	0·06	− 0·06	0	Hyderabad.		
15	4	9	1		1				N 38° E	3·6	4·5	7·9	− 43	52	·380	0·4	0	0·09	−0·09	0	0·09	− 0·09	0	0·09	− 0·09	0	Kurrachee.		
5	1	3	3	4	6	1	7		S 2° E	3·7		2·4	+ 54	50	·318	0·5	0			0	0·08	− 0·08	0	0·18	− 0·18	0	Bikaner	West Rajputana	51
	8	5	13		1	1		2	N 52° E	4·0	3·5	2·1	+ 67	46	·285	0	0			0	0	0	0	0·05	− 0·05	0	Pachpadra.		
8	2	15	5						N 51° E	2·7	2·4			26	·183	0·6	0			0	0·13	− 0·13	0·08	0·26	− 0·18	0	Jodhpur.		
																				0	0·27	−0·27					VIII.—East Rajputana, Central India and Gujarat.		
14	4	6	1	1			1	3	N 16° E	2·2		3·0	− 27	50	·325	0·5	0	0·20	−0·20	0	0·24	− 0·24	0·97	0·54	+ 0·43	0	Jaipur	East Rajputana.	50
12	3	4	1	2	1	3		4	N 4° E	1·6	1·9			43	·300	0·3	0			0	0·03	− 0·03	0·31	0·53	— 0·22	0	Kotah.		
27	1	2							N 31° E	1·4		3·4	− 59	52	·268	0·3	0	0·30	−0·30	0	0·19	− 0·19	0	0·36	− 0·36	0	Sambhar.		
28		1						1	N	1·8		1·4	+ 29	58	·314	0·5	0	0·27	−0·27	0	0·19	− 0·19	0·60	0·50	+ 0·10	0	Ajmer.		
27	1							2	N 31° W	1·1	1·1			47	·291	0·3	0			0			0 03			0	Udaipur.		
		17	12	1					N 65° E	7·8		7·5	+ 4	26	·216	0·3	0	0·18	−0·18	0	0·16	− 0·16	0·31	0·51	− 0·20	0	Deesa.		
2	2	1	1	3	8	8	5		S 33° W	8·1	8·1	4·7	+ 72	50	·439	0	0			0	0·02	− 0·02	0·32	0·37	− 0·05	0	Bhuj	Kathiawar and Cutch.	45
2	1	13	4	9	1				N 77° E	7·8	8·3			39	·332	0·3	0			0			0			0	Jamnagar.		
5	4	11	5	4					N 57° E	4·5	4·5	4·9	− 8	30	·255	0·8	0	0·18	−0·18	0	0·36	− 0·36	0·09	0·81	− 0·72	0	Rajkot.		
	10	15	3					2	N 29° E	5·3	5·3	5·0	+ 6	40	·372	1·9	0			0	0·87	− 0·87	0·08	1·95	— 1·87	0	Veraval.		
	16	8	4	1				1	N 23° E	11·0				63	·570	1·0	0			0			0			0	Dwarka.		
	3	2	1	1		1	3	19	N 32° W	4·9†	4·6†			36	·286	0·9	0			0	0·55	− 0·55	0·14	0·90	− 0·46	0	Bhavnagar Para.		
10	5	2	4	1		3	4	1	N 9° W	1·1	1·1	1·0	+ 10	68	·389	0·3	0	0·55	−0·55	0	0·25	− 0·25	0	1·42	− 1·42	0	Nowgong	Central India	49
14		6	7	3					N 81° E	2·5		2·0	+ 25	55	·398	0·5	0	0·73	−0·73	0	0·45	− 0·45	0·24	1·90	− 1·66	0	Indore.		
	5	13	6	1	1		1	3	N 41° E	5·4	4·9	7·5	− 35	50	·330	0·4	0	0·18	−0·18	0	0·21	− 0·21	0·16	0·70	− 0·54	0	Neemuch.		

† Mean of 16 days.

Table

Abstract of Observations taken at 8 A.M. at 224 Stations

Number of District.	Meteorological Provinces or Districts.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
45	Gujarat	Surat	39	29·961	−·011	29·943	30·036	27th	29·888	16th	·148	75·3	95·9	+6·0	66·1	+3·8	81·0	+4·9	29·8	102·2	2nd	57·0	27th	45·2
		Ahmedabad*	163	29·842	−·020	29·957	29·914	27th	29·776	16th & 17th.	·138	75·7	95·6	+4·7	67·6	+2·0	81·6	+3·4	28·0	102·3	1st & 3rd.	58·7	27th	43·6
22	N.-W. P., West	Agra	555	29·464	−·022	30·005	29·517	8th	29·385	30th	·132	64·6	86·7	+2·7	58·7	+3·8	72·7	+3·3	28·0	96·0	1st	53·9	21st, 24th & 28th.	42·1
21	N.-W.P., Central	Jhansi	858	29·159	−·015	30·066	29·221	8th	29·086	21st	·135	67·3	87·6	+3·5	61·9	+5·2	74·8	+4·4	25·7	97·2	1st	56·7	24th	40·5
	IX.—Deccan				−·004								86·1	+2·5	60·4	+1·3	73·3	+1·9	25·6					40·6
38	Bombay (Deccan)	Belgaum	2,539	27·423	−·002	29·912	27·460	8th	27·369	15th	·091	71·2	82·5	+0·9	63·2	+1·6	72·9	+1·3	19·3	85·3	2nd & 16th.	53·4	26th	31·9
		Sholapur	1,590	28·395	−·001	29·956	28·427	8th & 9th.	28·321	14th	·106	73·9	89·0	+2·1	64·9	+2·7	77·0	+2·4	24·1	94·2	2nd & 4th.	50·1	26th	44·1
		Poona	1,840	28·149	−·010	29·973	28·191	8th	28·089	15th	·102	68·4	88·2	+3·0	58·2	?	73·2	?	30·0	92·0	2nd	46·5	27th	45·5
		Bijapur	1,946	28·039	−·010	29·955	28·079	8th	27·961	14th & 15th.	·118	71·4	87·0	+2·2	64·4	+3·8	75·7	+3·0	22·6	90·9	1st & 2nd.	52·7	26th	38·2
40	Khandesh	Malegaon	1,430	28·588	+·008	30·007	28·638	27th	28·527	16th	·111	69·5	89·1	+3·4	57·7	+0·9	73·4	+2·2	31·4	94·4	2nd	48·7	27th	45·7
		Ahmednagar	2,152	27·870	+·004	29·994	27·920	8th	27·798	15th	·122	71·5	86·0	+1·3	59·6	+3·4	72·8	+2·4?	26·4	90·4	2nd & 4th.	45·4	27th	45·0
41	Berar	Akola	930	29·087	+·005	30·000	29·152	8th	29·018	15th	·134	67·8	88·7	+2·8	54·9	?	71·8	?	33·8	93·4	1st & 2nd.	46·0	30th	47·4
		Amraoti	1,215	28·797	+·005	29·994	28·865	8th	28·728	14th	·137	71·8	88·1	+2·9	62·9	?	75·5	?	25·2	93·2	1st & 2nd.	55·0	29th	38·2
42	Central Provinces (West).	Khandwa	1,044	28·969	+·007	30·006	29·031	8th	28·911	17th	·120	67·6	91·7	+6·4	56·9	+1·2	74·3	+3·8	34·8	99·2	2nd	48·1	26th	51·1
		Hoshangabad	1,006	29·027	+·010	30·033?	29·079	8th	28·963	17th	·116	64·2	86·2	+2·8	57·3	+0·7	71·8	+1·8	28·9	92·8	1st	50·2	25th	42·5
		Nagpur	1,025	28·981	−·003	29·995	29·035	8th	28·907	14th	·128	67·8	87·0	+3·0	59·6	−0·1	73·3	+1·5	27·4	93·1	1st & 2nd.	52·7	23rd	40·4
43	Central Provinces (Central).	Chanda	634	29·390	−·013	29·993	29·445	8th	29·303	14th	·142	67·0	86·2	+1·8	58·0	−1·1	72·1	+0·4	28·2	91·2	2nd	49·6	24th	41·6
		Seoni	2,033	27·978	+·008	30·010	28·029	8th	27·902	17th	·127	66·0	83·0	+2·4	55·1	0	69·1	+1·2	27·9	89·8	1st & 2nd.	47·0	29th	42·8
		Jubbulpore	1,327	28·677	−·017	30·020	28·735	8th	28·623	17th	·112	61·0	83·4	+2·6	52·5	+0·2	68·0	+1·4	30·9	90·4	2nd	44·9	29th	45·5
		Saugor†	1,807	28·216	0	30·019	28·271	8th	28·161	21st	·110	69·3	83·7	+3·0	59·6	+3·6	71·6	+3·3	24·1	92·4	2nd	52·1	28th	40·3
49	Central India	Sutna	1,040	28·966	−·019	30·013	29·020	8th	28·911	21st	·109	63·3	83·5	+3·4	55·8	+3·0	69·7	+3·2	27·7	90·9	1st	49·3	28th	41·6
44	Central Provinces (East).	Raipur	970	29·030	−·012	29·984	29·084	8th	28·942	26th	·152	67·8	84·1	+2·0	60·0	−0·2	72·1	+0·9	24·1	90·3	2nd	52·4	23rd	37·9
		Sambalpur	486	29·514	P	29·967	29·578	8th	29·372	26th	·206	68·9	84·1	+0·9	61·8	−0·6	73·0	+0·2	22·3	92·1	2nd	51·6	30th	40·5
39	Hyderabad (North).	Aurangabad	1,905	28·106		29·983	28·163	8th	28·047	15th	·116	71·6	85·4		57·6†		71·4†		27·8	89·8	2nd	49·2	26th	40·6
		Indur		28·702			28·761	8th	28·650	15th	·111	70·8	84·3		58·9		71·6		25·4	87·7	3rd	49·1	25th	38·6
		Bidar	2,165?	27·832		29·950	27·874	8th	27·760	18th	·114	74·7	84·4		64·2		74·3		20·2	88·5	1st	56·2	28th	32·3
53	Hyderabad (South).	Gulbarga	1,502	28·476		29·945	28·515	20th	28·388	14th	·127	74·9	89·3		65·3		77·3		24·0	94·4	3rd & 17th.	54·4	25th	40·0
		Raichur	1,326	28·643	−·018	29·938	28·690	8th	28·554	14th	·136	74·5	86·6	+1·0	68·6	+1·3	77·6	+1·2	18·0	90·6	3rd	55·2	26th	35·4
		Hyderabad (Deccan).	1,690	28·290	P	29·957	28·342	8th	28·196	14th	·146	71·6	85·0	+2·1	64·7	+2·6	74·9	+2·4	20·3	89·4	1st & 5th.	55·3	21st.	34·1
		Secunderabad	1,787	28·188	−·022	29·954	28·244	8th	28·095	14th	·149	70·3	86·1	+3·2	64·0	+1·9	75·1	+2·6	22·1	91·1	2nd & 3rd.	53·7	26th	37·4
		Hanamkonda	871	29·107		29·962	29·156	20th	29·020	15th	·136	73·4	85·7		65·9		75·8		19·8	91·0	3rd & 4th.	55·2	21st	35·8
	X.—West Coast				−·011								87·8	+0·8	73·9	+1·7	80·9	+1·3	13·9					26·2
37	Konkan	Bombay	37	29·940	−·013	29·917	30·019	27th	29·882	14th	·137	77·7	89·5	+3·0	75·1	+2·0	82·3	+2·5	14·4	94·0	3rd	70·0	27th	24·0
		Ratnagiri	110	29·827	−·016	29·876	29·893	26th	29·771	14th	·122	80·2	93·4	+3·0	72·6	+2·7	83·0	+2·9	20·8	97·4	4 days	65·9	27th	31·5
		Mormugao	60	29·898	P	29·893	29·954	26th	29·850	14th	·104	77·9	88·7	+1·7	75·0	+2·1	81·9	+1·9	13·7	91·5	5th, 20th & 22nd.	67·3	27th	24·2
		Goa	199	29·754	−·001	29·891	29·805	27th	29·697	14th	·108	78·9	87·3	−0·4	75·8	+3·5	81·6	+1·6	11·5	91·0	5th, 5th & 19th.	67·0	27th & 28th.	24·0
		Karwar	44	29·908	−·005	29·884	29·961	27th	29·863	11th	·098	75·6	88·7	+1·8	72·4	+2·9	80·6	+2·4	16·3	92·8	20th	59·0	27th	33·8
33	Malabar	Cochin	11	29·936	−·002	29·874	29·989	16th	29·891	18th	·098	78·1	87·8	+0·9	74·2	0	81·0	+0·5	13·6	90·5	1st, 5th & 6th.	68·2	27th	22·3
		Calicut	27	29·913	−·015	29·869	29·952	6th	29·864	18th	·088	77·6	86·3	−0·8	73·2	+0·1	79·8	−0·4	13·1	88·8	1st & 23rd.	61·0	27th	27·8
		Mangalore	65	29·875	−·018	29·872	29·910	30th	29·838	18th	·072	78·1	86·2	−1·0	73·5	+0·7	79·9	−0·2	12·7	91·7	5th	63·5	27th	28·2
		Trivandrum	198	29·757	P	29·889	29·798	30th	29·711	13th	·087	76·4	82·2	−0·4	73·6	+1·7	77·9	+0·7	8·6	85·5	9th	65·5	28th	20·0

* Mean of 29 days. † Mean of 28 days.

I—*continued.*

in India, Burma, etc., in November, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st October to 30th November 1901.	Normal rainfall for period, 1st October to 30th November.	Variation from normal of period, 1st October to 30th November.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
6		6	4	4					N 83° E	3·7	3·5	5·9	− 41	49	·434	0·6	0	0·55	−0·55	0	0·17	−0·17	0·44	1·70	− 1·26	0	Surat .	Gujarat.	45
		6	21	2					N 84° E	2·9				31	·278	0·6	0			0	0·44	−0·44	0·12	1·33	− 1·21	0	Ahmedabad.		
		4		6		11		9	S 68° W			2·5		54	·329	0·3	0	0·18	−0·18	0	0·05	−0·05	0·20	0·52	− 0·32	0	Agra . .	N.-W. P., West	22
8	1		1	1	1	12	3	3	S 60° W	2·4	2·7	1·8	+ 50	62	·415	0·1	0	0·36	−0·36	0	0·12	−0·12	0	0·82	− 0·82	0	Jhansi .	N.-W.P., Central.	21
																				0·21	0·88	−0·69					IX.—Deccan.		
7	1	7	11	3			1		N 78° E	8·9		11·7	− 24	66	·511	5·2	1	2·73	− 1·73	0·44	2·11	− 1·67	6·43	8·50	− 2·07	0·36	Belgaum .	Bombay (Deccan).	38
	2	9	11	7	1				N 84° E	9·2	11·1	7·7	+ 44	52	·451	3·9	0	1·73	− 1·73	0·03	1·15	− 1·12	0·77	6·25	− 5·48	0·03	Sholapur.		
11		4	6	3		2	2	2	N 83° E	7·0	8·0	5·8	+ 38	57	·404	2·0	0	2·64	− 2·64	0	1·31	− 1·31	2·46	6·11	− 3·65	0	Poona.		
27				2	1				S 31° E					71	·549	2·5	3	2·20	+ 0·80	0·96	1·14	− 0·18	2·98	4·66	− 1·68	0·46	Bijapur.		
	3	5	4	1	2	2	6	7	N 30° W	3·3	3·8	4·0	− 5	46	·347	3·7	0	1·75	− 1·75	0	0·64	− 0·64	3·30	3·48	− 0·18	0	Malegaon .	Khandesh.	40
3	1	4	5	5	6	2		4	S 58° E	4·9	6·0			54	·426	2·2	0			0·01	0·65	− 0·64	1·78	3·04	− 1·26	0·01	Ahmednagar.		
10		4	9	4	2			1	S 84° E	4·1	4·0	3·4	+ 18	55	·384	1·0	0	1·18	− 1·18	0	0·75	− 0·75	1·93	4·25	− 2·32	0	Akola .	Berar.	41
	4	19	7						N 50° E	7·5	6·7	3·0	+123	44	·346	1·9	0	1·27	− 1·27	0	0·62	− 0·62	0·28	3·50	− 3·22	0	Amraoti.		
15			11	2	2				S 75° E	4·0		2·6	+ 54	48	·330	0·8	0	1·09	− 1·09	0	0·31	− 0·31	0·18	2·04	− 1·86	0	Khandwa .	Central Provinces (West).	42
		27		1		2			N 48° E	3·0	3·1	1·9	+ 63	58	·352	0·3	0	0·91	− 0·91	0	0·61	− 0·61	0·48	2·43	− 1·95	0	Hoshangabad.		
5	12	12	1					2	N 25° E	3·9		4·0	− 3	56	·391	1·8	0	1·09	− 1·09	0	0·90	− 0·90	0	3·85	− 3·85	0	Nagpur.		
21	2	2	1			1	1	2	N 10° W	1·4		1·8	− 22	68	·465	3·6	0			0	1·12	− 1·12	1·43	3·36	− 1·93	0	Chanda .	Central Provinces (Central).	43
	12	9	3	1	1	1	3		N 22° E	4·4		2·6	+ 69	55	·361	0·3	0	0·82	− 0·82	0	0·60	− 0·60	0·50	2·96	− 2·46	0	Seoni.		
5	1	2	1	7	11	1		2	S 21° E	2·0		1·8	+ 11	71	·391	0·3	0	1·27	− 1·27	0	0·50	− 0·50	0·61	2·57	− 1·96	0	Jubbulpore.		
	1	4	8	12	3	1	1		S 65° E	3·9	4·4	2·3	+ 91	48	·343	0·1	0	0·55	− 0·55	0	0·45	− 0·45	0·50	1·90	− 1·40	0	Saugor.		
4	6		1	1			8	10	N 47° W	2·6	2·8	3·2	− 13	61	·359	0·5	0	0·73	− 0·73	0	0·30	− 0·30	0·08	2·57	− 2·59	0	Sutna .	Central India	49
16	2	8	1					3	N 25° E	3·3	3·0	3·3	− 9	61	·419	3·0	0	1·82	− 1·82	0	0·52	− 0·52	0·66	2·81	− 2·15	0	Raipur .	Central Provinces (East).	44
	2	16	3	3		1	2	3	N 42° E	3·0	2·9	1·4	+107	75	·538	1·9	1			0·25	0·65	− 0·40	1·62	2·69	− 1·07	0·25	Sambalpur.		
10		2	11	6	1				S 77° E	7·3	7·2			50	·395	1·9	0			0	0·61	− 0·61	5·15	3·57	+ 1·58	0	Aurungabad.	Hyderabad (North).	33
21		3	2	1		1		2	N 56° E	5·3	5·1			67	·520	2·7	0			0	1·06	− 1·06	2·82	3·69	− 0·87	0	Indur.		
2		12	14	1	1				N 73° E	12·0	10·0			62	·530	0	1			0·14	1·15	− 1·01	1·48	4·80	− 3·32	0·14	Bidar.		
4	2	8	14	1		1			N 73° E	9·6	9·3			67	·589	3·0	0			0·03	0·64	− 0·61	1·04	3·70	− 2·66	0·03	Gulbarga .	Hyderabad (South).	53
2	1	2	20	3			1	1	N 85° E	7·1	6·9			68	·596	3·2	4			1·45	0·80	+ 0·65	3·58	5·58	− 2·00	0·60	Raichur.		
20	2	2	3	3					N 79° E	3·81	3·7			69	·543	3·5	1			0·90	1·76	− 0·86	5·45	4·84	+ 0·61	0·90	Hyderabad (Deccan).		
3	2	14	8	3					N 61° E	4·8		3·5	+ 37	68	·522	3·0	2			0·56	1·76	− 1·20	3·70	4·84	− 1·14	0·39	Secunderabad.		
12	8			1	1	1		7	N 26° W	5·1	4·3			63	·539	1·0	2			0·74			4·54			0·38	Harumkonda.		
																				5·07	3·07	+2·00					X.—West Coast.		
		13	15	2					N 73° E	8·4		9·9	− 15	70	·678	1·7	0	1·09	−1·09	0	0·66	− 0·66	0·39	3·13	− 2·71	0	Bombay .	Konkan.	37
7		4	12	6		1			S 84° E	4·9	4·9	9·0	− 46	55	·567	2·8	2	1·18	+0·82	1·13	0·50	+ 0·63	1·55	4·78	− 3·23	1·00	Ratnagiri.		
		9	12	7	1	1			S 89° E	7·3				80	·772	4·1	1			0·35	1·24	− 0·89	0·71	8·25	− 7·54	0·19	Mormugao.		
		13	17						N 71° E					72	·723	4·7	1			0·29	1·45	− 1·16	1·06	7·42	− 6·36	0·20	Goa.		
10	2	10	8						N 59° E	3·0				80	·710	4·2	1	3·82	−2·82	0·12	2·63	− 2·51	2·16	10·31	− 8·15	0·12	Karwar.		
7	7	8	1	1		2	2	2	N 12° E	3·1				85	·822	6·1	15	10·09	+4·91	13·16	6·77	+ 6·39	18·53	20·78	− 2·25	4·57	Cochin .	Malabar.	33
4	1	7	8	8		1		1	N 89° E	6·2	7·8			83§	·789§	6·4	10	8·41	+1·56	9·70	5·06	+ 4·64	16·62	15·23	+ 1·39	2·93	Calicut.		
9			9	10	2				S 61° E	2·8		3·0	− 7	82	·802	6·2	11	5·10	+5·90	9·82	3·09	+ 6·73	13·68	10·91	+ 2·77	3·23	Mangalore.		
15	2	4	5	1		1	1	1	N 56° E	2·9				87	·797	7·6	16			11·08	6·24	+ 4·84	15·47	17·00	− 1·53	3·01	Trivandrum.		

‡ Mean of 20 days.

§ Mean of 26 days.

Table

Abstract of Observations taken at 8 A.M. at 224 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.												
				Mean actual pressure (reduced to 32°.)	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	XI.—South India				−·020								84·8	+0·1	70·2	+1·0	77·5	+0·5	14·6					29·8
57	Madras (South)	Pamban	37	29·891		29·855	29·928	30th	29·834	12th	·094	79·7	85·5		75·1		80·3		10·4	88·3	19th	73·2	28th & 29th.	15·6
		Tinnevelly	168	29·779	−·022	29·878	29·829	8th	29·719	13th	·110	78·4	88·0	−0·7	73·9	−0·7	81·0	−0·7	14·1	92·2	1st & 16th.	63·9	4 days	23·3
		Madura	447	29·495	−·007	29·884	29·512	8th	29·439	13th	·103	77·8	86·9	−0·4	72·7	+0·4	79·8	0	14·2	91·9	18th	66·1	27th	25·8
		Periya Kulam		28·999		?	29·038	8th	28·951	17th	·087	75·1	84·6		70·3		76·1		14·3	90·8	1st	62·0	27th	28·8
34	Madras (South Central).	Salem	940	29·020	−·019	29·912	29·058	20th	28·972	14th & 17th	·086	75·7	87·5	+0·6	68·9	+0·9	78·2	+0·8	18·6	94·2	18th	55·0	27th & 28th.	39·2
		Coimbatore	1,348	28·598	−·010	29·803	28·637	4th	28·543	17th	·094	75·1	85·7	−0·2	69·3	+0·2	77·5	0	16·4	90·9	1st	57·2	27th	33·7
35	Coorg	Mercara	3,781	26·247	−·004		26·287	2nd	26·188	18th	·099	65·4	75·6	+0·6	61·5	+1·2	68·6	+0·9	14·1	79·0	1st	52·1	26th, 27th & 28th.	26·9
36	Mysore	Chitaldroog	2,405	27·561	−·026	29·907	27·602	4th	27·504	15th	·098	71·9	82·6	+1·0	65·9	+1·9	74·3	+1·5	16·7	88·1	15th	57·9	27th	30·2
		Bangalore	3,021	26·966	−·019	29·907	27·003	21st	26·919	14th	·084	69·1	80·9	+2·4?	63·4	+1·4	72·2	+1·9?	17·5	84·8	15th	54·9	26th	29·9
		Hassan	3,091	26·904		29·920	26·946	4th	26·856	18th	·090	70·0	79·0		62·1		70·6		16·9	81·8	1st	47·0	27th	34·8
		Mysore	2,518	27·456	−·023	29·908	27·494	1st	27·389	18th	·105	72·1	81·8	−0·4	65·2	+0·6	73·5	+0·1	16·6	84·6	18th	52·4	27th	32·2
56	Madras (East Coast, South).	Negapatam	31	29·901	−·021	29·861	29·961	8th	29·838	11th	·123	76·5	85·2	+1·5?	75·1	+1·2	80·2	+1·4?	10·1	90·7	16th, 17th & 18th.	68·5	26th	22·2
		Cuddalore	12	29·933	−·028	29·874	29·991	8th	29·871	14th	·120	76·4	84·4	−0·5	73·0	+1·0	78·7	+0·3	11·4	92·2	17th	61·7	26th	30·5
		Trichinopoly	255	29·694	−·012	29·685	29·729	8th	29·648	13th	·081	77·4	86·7	0	72·1	+0·4	79·4	+0·2	14·6	93·5	1st	62·9	27th	30·6
		Madras	22	29·926	−·021	29·879	29·983	8th	29·861	13th	·122	77·5	84·6	−0·4	72·7	+0·4	78·7	0	11·9	90·0	17th	59·5	26th	30·5
		Vellore	707	29·242		29·902	29·282	20th	29·173	16th	·109	74·1	85·3		71·5		78·4		13·8	91·9	17th	60·4	27th	31·5
55	Madras (East Coast, Central).	Nellore	71	29·893	−·022	29·898	29·961	8th	29·808	14th	·153	77·0	85·1	−1·3?	72·7	+0·9	78·9	−0·2?	12·4	92·8	17th	64·1	26th	28·7
		Masulipatam	15	29·960	−·010	29·910	30·021	8th	29·842	14th	·179	76·4	84·5	−0·2	71·7	+0·3	78·1	+0·1	12·8	89·5	2nd	63·2	23rd	26·3
54	Madras (Central)	Cuddapah	433	29·530	−·029	29·910	29·590	8th	29·450	16th	·140	76·3	87·5	+0·9	70·3	+1·0	78·9	+1·0	17·2	96·2	17th	57·3	26th	38·9
		Kurnool	924	29·034	?	29·922	29·088	8th	28·959	15th & 16th.	·129	72·0	88·1	+1·5	66·9	+2·7	77·5	+2·1	21·2	92·7	19th	52·2	26th	40·5
		Bellary	1,475	28·489	−·013	29·931	28·530	3rd	28·414	17th	·116	73·6	87·5	+1·2	68·1	+2·4	77·8	+1·8	19·4	94·0	16th & 17th.	59·1	25th & 27th.	34·9
52	Madras (East Coast, North.)	Cocanada	26	29·938	−·017	29·869	30·010	21st	29·805	14th	·205	76·1	82·7	−0·5	72·4	+1·7	77·5	+0·6	10·3	87·1	4th	64·5	21st	22·6
		Waltair (Vizag.)	226	29·739	−·026	29·909	29·816	5th	29·554	15th	·262	77·5	84·0	−0·4	73·2	+1·3	78·6	+0·5	10·8	90·4	2nd	65·9	3rd	24·5
		Gopalpur	21	29 968	−·030	29·929	30·030	7th	29·810	26th	·220	73·3	83·0	−0·3	67·9	+0·8	75·5	+0·3	15·1	89·8	1st	58·6	2nd	31·2
	XII.—Hill Stations.																							
48	Baluchistan	Pishin											69·5		?		?		?	78·3	4 days	?		?
		Quetta	5,502	24·781	+·017		24·865	2nd	24·714	17th	·151	42·8	70·3	+6·5	31·2†	+0·4†	50·8†	+3·5	39·1	79·2	7th, 8th & 9th.	24·8	24th	54·4
		Kalat										48·2	70·7		23·8		47·3		46·9	80·1	9th	16·4	30th	63·7
		Chaman	4,311	25·829	+·001		25·952	1st	25·774	15th	·178	56·8	73·2	+3·5	46·1	+1·5	59·7	+2·5	27·1	83·3	9th	35·6	1st	47·7
20	Punjab	Leh	11,503	19·830	+·062		19·996	8th	19·705	17th	·291	29·8	50·8	+3·0	20·2	+0·1	35·5	+1·6	30·6	63·6	1st	14·5	22nd, 23rd & 27th.	49·1
		Srinagar	5,204	25·047	+·015		25·130	8th	24·961	21st	·169	33·1	64·7	+4·0	29·6	−1·8	47·2	+1·1	35·1	70·8	9th	23·5	23rd	47·3
		Skardu		23·041			23·190	8th	22·884	29th	·306	29·6	57·2		27·5		42·4		29·7	65·4	2nd	21·1	22rd	44·3
		Dras		20·917			21·071	8th	20·792	17th	·279	23·0	49·1		13·4		31·4		35·7	58·3	3rd	7·6	22nd, 27th & 28th.	50·7
		Gilgit		25·335			25·445	7th	25·206	29th	·239	49·4	65·9		42·4		54·2		23·5	77·5	6th	35·1	25th	42·4
		Chitral		24·493			24·600	7th	24·375	28th	·225	39·8	68·8		35·6		52·2		33·2	74·5	7th	30·4	23rd	44·1
		Killa Drosh										47·8	68·6		45·7		57·2		22·9	75·5	9th	39·2	29th	36·3
		Para Chinar	6,000	24·593			24·669	8th	24·481	21st	·188	55·3	68·0		42·1		55·1		25·9	75·3	9th	35·6	24th	39·7
		Cherat		25·833	+·019		25·884	8th	25·715	21st	·169	58·2	71·4	+3·9	52·3	+3·4	61·9	+3·7	19·1	79·9	9th	49·0	26th	30·9

† Mean of 29 days.

I—*continued.*

in India, Burma, etc., in November, 1901—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st October to 30th November 1901.	Normal rainfall for period, 1st October to 30th November.	Variation from normal of period, 1st October to 30th November.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																				9·05	6·40	+2·76					**XI.—South India.**		
	5	16		2	1	2		4	N 31° E	10·3	10·9			84	·852	4·4	15	8·00	+ 7·00	27·25	9·55	+17·70	32·15	16·41	+15·74	4·27	Pamban	Madras (South).	57
	5	4					9	12	N 42° W	3·2	3·0			82	·805	7·0	15	10·50	+ 4·50	8·38	9·99	− 1·11	9·58	16·00	− 6·42	1·56	Tinnevelly.		
9	8	4	2	1				6	N 5° E	1·6	1·6	3·8	− 58	76	·731	6·2	10	7·09	+ 2·91	7·81	4·66	+ 3·15	11·15	12·87	− 1·72	3·77	Madura.		
18	2	1		3	1	3		2	S 45° W	1·2	1·3			82	·719	5·7	9			8·17			13·02			2·31	Periya Kulam		
22	1		2		2	1	1	1	S 22° W	1·8	1·6	3·3	− 52	80	·723	6·3	7	7·36	− 0·36	6·03	3·96	+ 2·07	10·50	10·85	− 0·35	2·28	Salem	Madras (South Central).	34
		8	15			1	6		N 70° E	2·3	2·0	2·6	− 23	84	·744	6·4	9	8·09	+ 0·91	6·94	3·72	+ 3·22	9·47	9·66	− 0·19	2·18	Coimbatore.		
4	1	16	9						N 59° E	5·0	4·7	3·7	+ 27	85	·545	8·1	9	7·20	+ 1·80	4·19	3·34	+ 0·85	16·02	12·94	+ 3·08	1·02	Mercara	Coorg.	35
2	1	6	15	3		1	2		N 83° E	6·3	5·4			77	·607	7·1	3			0·96	2·23	− 1·27	4·89	7·22	− 2·33	0·57	Chitaldroog	Mysore.	36
	2	9	12	1		3	2	1	N 66° E	7·8	6·7	3·7	+ 81	77	·563	6·4	6	6·09	− 0·09	1·47	3·59	− 2·12	6·21	10·74	− 4·53	0·33	Bangalore.		
		7	14	6	1	1	1		S 87° E	2·5	2·3			79	·580	7·2	7			7·33	1·93	+ 5·40	14·41	7·61	+ 6·80	3·46	Hassan.		
1	2	9	11	3		4			N 78° E	6·6	7·1			78	·614	7·3	7			2·91	1·70	+ 1·21	14·16	8·31	+ 5·85	0·92	Mysore.		
5	2	8		1		3	2	9	N 20° W	6·8	6·0	5·2	+ 15	85	·844	6·8	17	13·09	+ 3·91	17·72	15·95	+ 1·77	21·71	26·54	− 4·83	3·37	Negapatam	Madras (East Coast, South).	56
29	1								N	0·4	0·5			90	·821	7·3	16	11·80	+ 4·20	18·31	13·72	+ 4·59	21·83	22·39	− 0·56	2·32	Cuddalore.		
22	3	4						1	N 18° E	2·3		4·2	− 45	83	·785	5·7	10	8·45	+ 1·55	5·57	5·37	+ 0·20	11·17	12·86	− 1·69	2·54	Trichinopoly.		
	11	8	3		1		2	5	N 9° E	5·7		6·8	− 16	84	·809	6·4	15	13·00	+ 2·00	14·92	13·21	+ 1·71	23·79	24·21	− 0·42	3·97	Madras.		
21		6				1		2	N 22° E	3·4				89	·758	5·8	11			7·67						2·85	Vellore.		
2	6	2	1	2	1	1		15	N 27° W	3·9				83	·784	7·8	15	9·40	+ 5·60	15·08	10·44	+ 4·64	19·55	19·48	+ 0·07	2·95	Nellore	Madras (East Coast, Central).	55
	17	8	1	1				3	N 12° E	7·1		5·5	+ 29	79	·727	5·8	7	5·91	+ 1·09	3·54	7·06	− 3·52	10·66	16·40	− 5·74	1·36	Masulipatam		
		11		12	1	3		3	S 81° E					80	·734	6·6	11	7·00	+ 4·00	5·99	4·67	+ 1·32	8·07	11·00	− 2·93	1·21	Cuddapah	Madras (Central).	54
29	1								N					75	·601	6·1	4	3·17	+ 0·83	3·26	1·15	+ 2·11	4·64	6·18	− 1·54	1·54	Kurnool.		
16	1	1	7	1				4	N 55° E	2·9	3·1	3·3	− 6	66	·555	7·7	7	3·82	+ 3·18	3·22	2·13	+ 1·09	6·49	6·42	+ 0·07	1·18	Bellary.		
	9	16				1		4	N 19° E	11·7	9·8			77	·694	5·5	7	4·30	+ 2·70	10·03	7·41	+ 2·62	18·35	17·77	+ 0·58	4·49	Cocanada	Madras (East Coast, North).	52
	2	26					1	1	N 38° E	14·3				65	·612	6·1	8			10·55	6·90	+ 3·65	18·45	17·44	+ 1·01	3·99	Waltair (Vizag.)		
	14	1	1				1	13	N 19° W	11·5	11·3	7·0	+61	81	·659	3·0	8	4·33	+ 3·67	14·60	4·99	+ 9·61	19·26	14·34	+ 4·92	6·55	Gopalpur.		
																											XII.—Hill Stations.		
																	0			0	0·75	− 0·75	0	0·81	− 0·81	0	Pishin	Baluchistan.	48
30									Calm	0·5	0·5	2·7	− 81	53	·144	0·4	0	0·09	− 0·09	0	0·27	− 0·27	0	0·34	− 0·34	0	Quetta.		
	2		9		19				S 28° E					48	·160		0			0	0·35	− 0·35	0	0·42	− 0·42	0	Kalat.		
11			11	7				1	S 75° E	6·2*	6·8*			50	·235	0·5	0			0	0·48	− 0·48	0	0·57	− 0·57	0	Chaman.		
		14	16						N 69° E	3·0				77	·132	0·9	0			0	0·03	− 0·03	0	0·34	− 0·34	0	Leh	Punjab.	30
19		1	2	5	2			1	S 52° E	1·8	1·9			89	·167	0·5	0			0	0·25	− 0·25	0·79	0·88	− 0·09	0	Srinagar.		
24	2	1				1	1	1	N 34° W	1·7	2·0			86	·145	1·5	0			0	0·13	− 0·13	0·07	0·15	− 0·08	0	Skardu.		
28						1	1		S 68° W	2·9	3·0			86	·108	0·9	0			0·01	2·00	− 1·99	0·28	3·64	− 3·38	0·01	Dras.		
29							1		W	2·6	2·3			43	·153	2·0	0			0	0·07	− 0·07	1·52	0·23	+ 1·29	0	Gilgit.		
27							3		W					71	·170	1·8	0			0·04	0		1·74			0·04	Chitral.		
26	1						3		N 72° W					36	·118	0·4	0			0·05			1·63			0·05	Killa Drosh.		
	13	5	2			1	3	6	N 6° W	1·5				36	·157	0·9	0			0			0·72			0	Para Chinar.		
	13	3		2	2			10	N 11° W	6·9	6·4			35	·167	0·9	0			0	0·24	− 0·24	1·24	0·34	+ 0·90	0	Cherat.		

* Mean of 16 days.

Table

Abstract of Observations taken at 8 A.M. at 224 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-station above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
30	Punjab—(*concld.*)	Murree	6,333	23·957	+·035		24·034	8th	23·835	21st	·199	53·8	62·5	+1·5	47·4	+2·3	55·0	+1·9	15·1	71·2	9th	41·0	22nd& 23rd.	30·2
		Poo											63·5		36·5		50·0		27·0	72·4	11th	31·2	24th	41·2
		Simla	7,224	23·209	+·026		23·281	8th	23·111	21st	·170	48·7	57·2	+1·6	46·0	+2·1	51·6	+1·9	11·2	65·4	2nd	40·6	22nd	24·8
25	North-Western Provinces.	Chakrata	7,022	23·338	0		23·399	8th	23·211	21st	·188	49·5	62·7	+3·3	44·9*	+2·2*	54·2*	+2·8*	17·8*	71·7	1st & 2nd.	39·8	18th	31·9
		Mussooree	6,705	23·642	+·010		23·731	8th	23·495	21st	·236	51·8	58·8	+0·6	46·5	+1·7	52·7	+1·2	12·3	67·7	2nd	39·0	22nd	28·7
		Ranikhet	6,069	24·198	+·029		24·291	8th	24·095	21st	·196	52·2	63·7	+1·3	48·8	+2·1	56·3	+1·7	14·9	71·0	1st	44·0	23rd	27·0
		Muktesar		22·928			23·004	9th	22·827	21st	·177	51·5	61·6		43·6		52·7		18·0	69·7	2nd	36·9	21st	32·8
13	Bengal	Yatung	10,480?										51·0		30·2		40·6		20·8	60·1	9th	21·9	22nd	38·2
		Darjeeling	7,376	23·094	+·004		23·166	8th	22·982	30th	·184	49·0	55·5	+1·0	43·6	+2·0	49·6	+1·5	11·9	62·5	10th	37·5	23rd	25·0
		Gangtok	5,660	24·463			24·485	16th	24·438	9th	·047	54·5	64·3		31·6		48·0		32·7	72·2	9th	27·0	4 days	45·2
	Central India	Mount Abu	3,945	26·150	—·014		26·215	7th	26·098	16th	·117	68·7	76·1	+2·8	60·7	+3·6	68·4	+3·2	15·4	83·2	2nd	53·4	21st	8
		Pachmarhi	3,528	26·550	+·001		26·608	7th & 8th.	26·498	16th	·110	65·4	76·2	+4·2	50·8	-0·2	63·5	+2·0	25·4	82·7	2nd	42·8	29th	39·9
	South India	Wellington	6,200	24·263	-·012		24·305	4th	24·219	27th	·086	59·8	68·5	+1·7	53·5	+1·0	61·0	+1·4	15·0	71·7	1st	38·7	27th	33·0
		Ootacamund		23·066			23·105	4th	23·006	27th & 28th.	·099	56·5	63·8		49·7		56·8		14·1	69·0	5th	31·6	27th	37·4
		Kodaikanal	7,688	22·833			22·868	4th	22·773	27th	·095	55·1	60·9		50·1		54·1		10·8	66·5	1st	39·1	27th	27·4
XIII.—Extra India.																								
	Ceylon	Trincomalee	12	29·930	—·008	29·868	29·969	7th	29·852	13th	·117	78·3	85·5	-1·3	74·6	+0·1	80·1	-0·6	10·9	90·5	16th	67·5	27th	23·0
		Colombo	40	29·907	—·018	29·873	29·952	19th	29·857	10th	·095	78·7	86·2	-0·1	74·1	+0·1	80·2	0	12·1	90·0	6th	69·0	28th	21·0
	Persia	Meshed	3,104									41·3			37·5							29·5	29th	
		Teheran		26·084†			26·200	1st	25·950	26th	·250	51·5	65·3		45·4		55·4		19·9	78·5	6th	35·0	28th	43·5
				24·893§			25·020	23rd	24·800	4 days	·220													
		Ispahan		†24·431‖			24·595	25th	24·250	8th	·345	47·5‡	68·4‡		35·7‡		52·1‡		32·7	79·2	6th	29·1	20th	50·1
		Bushire	14	30·076	+·008	30·049	30·158	19th	29·987	8th	·171	68·2	78·9	-0·1	63·1	+1·0	71·0	+0·5	15·8	86·1	9th	55·8	12th	30·3
		Bahrein	30	30·084			30·178	20th	29·990	7th	·188	73·9	80·3		70·0		75·2		10·3	90·7	7th	64·2	14th	26·5
		Jask‡		30·049	-·028		30·117	27th	29·988	10th	·129	74·7	83·7	+0·8	68·0	-0·4	75·9	+0·2	15·7	87·3	7th	62·2	3rd	25·1
		Muscat	20	30·023		29·991	30·075	4th	29·965	10th	·110	76·7	79·8		74·2		77·0		5·6	81·4	7th	70·0	6th	11·4
	Arabia	Baghdad	220	29·971‖	-·004	30·179‖	30·127	28th	29·773	5th	·354	56·7‖	78·9‡	+2·3	54·2¶	+4·2	66·9¶	+3·3	24·7	95·3	6th	44·5	29th	50·8
		Bussrah		30·151			30·274	9th	29·985	25th	·289		76·0		57·9		67·0		18·1	86·8	5th	47·0	11th	39·8
		Aden	94	29·949	—·009	29·975	30·015	22nd	29·889	8th	·126	78·0	85·9	-0·3	74·2	+0·9	80·1	+0·3	11·7	91·8	6th	69·9	24th& 3th.	21·9
		Perim	201	29·816		29·952	29·897	22nd	29·756	7th & 8th.	·141	81·1	86·9		76·9		81·9		10·0	91·0	7th	75·2	23rd & 30th.	15·8
	Afghanistan	Kabul										41·1	72·8		33·3		53·1		39·5	81·2	10th	26·6	30th	54·6
	Central Asia	Kashgar	4,255	25·791**			25·950	30th	25·630	28th& 29th.	·320	31·5**	54·8**		29·4**		42·1**		25·4	72·1	9th	25·5	28th	46·6
	Arabian Sea Islands.	Amini Devi	18	29·913		29·854	29·962	30th	29·864	24th	·098	83·6	86·8		75·5		81·2		11·3	90·3	18th	67·8	28th	22·5
		Minicoy	7	29·942		29·874	29·990	30th	29·912	11th	·078	81·1	86·2							90·7	17th			
	Africa	Zanzibar	73	29·979	+·012	29·979	30·040	2nd	29·931	19th	·109	79·3	83·1		76·2		79·7		6·9	86·2	27th	74·2	5th & 10th,	12·0
		Do. Dunga		29·914			30·019	2nd	29·854	19th	·165	76·7	86·6		67·7		77·2		18·9	91·0	21st	64·6	17th	26·4

* Mean of 20 days. ‖ Mean of 28 days. ‡ Mean of 29 days. NOTE.—When a query is inserted against any reading or in the variation returns for any
¶ ,, ,, 25 ,, † Aneroid uncorrected.
** ,, ,, 22 ,, § Mountain ,,

I—*concluded.*

in India, Burma, etc., in November 1901—concluded.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected.)	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st October to 30th November 1901.	Normal rainfall for period, 1st October to 30th November.	Variation from normal of period, 1st October to 30th November.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
28				1	1				S 24° E	1·7	2·1	5·1	− 59	43	·177	0	0	0·73	−0·73	0	1·08	− 1·08	0·82	2·73	− 1·91	0	Murree.	Punjab—(*concld.*)	30
25			1	2	2				N 76° W							0·5	0			0	0·78	−0·78	0	1·53	− 1·53	0	Poo.		
12	7	3	1	4	1			2	N 34° E	3·3		1·9	+ 74	42	·145	0·7	0	1·18	−1·18	0	0·54	− 0·54	0·08	1·76	− 1·68	0	Simla.		
14	13	1						2	N 3° W	7·4		4·5	+ 64	48	·173	0·5	0			0	0·59	− 0·59	0	1·43	− 1·43	0	Chakrata .	North-Western Provinces.	25
15	2	1	1	3	2		2	4	N 38° W					52	·209	0·3	0			0	0·40	− 0·40	0·62	1·44	− 0·82	0	Mussooree.		
22		1	2			2	1	2	N 55° W	1·8	2·1	1·2	+ 75	64	·253	0·5	0	1·00	−1·00	0	0·33	− 0·33	1·38	1·81	− 0·43	0	Ranikhet.		
		1		15	2		3	9	S 18° E	5·6	5·2			46	·178	0·1	0			0			0·16			0	Muktesar.		
																††	4			2·70	0·34	+2·36	3·11	2·83	+ 0·28	1·37	Yatung .	Bengal.	13
11	1	4	6	3	1	2	1	1	E	3·3	3·0	1·7	+76	77	·269	3·5	1	0·61	+0·39	0·42	0·20	+ 0·22	5·40	6·03	− 0·63	0·31	Darjeeling.		
	1	14	2	4	2	4		3	N 63° E	2·1	2·4			78	·338	3·4	7			4·85	1·43	+ 3·42	7·95	8·32	− 0·37	1·80	Gangtok.		
14	2	11		1			1	1	N 35° E	5·5	5·7	3·7	+ 54	31	·220	0·3	0	0·18	−0·18	0	0·27	− 0·27	0·26	0·98	− 0·72	0	Mount Abu	Central India.	
21		2	2	4	1				S 69° E	2·0	2·1	2·5	− 16	51	·321	1·5	0	1·09	−1·09	0	0·71	− 0·71	0·41	3·34	− 2·93	0	Pachmarhi.		
22	1	2	1	1	1			2	N 39° E	1·7		2·7	−37	82	·427	7·0	12	13·22	−1·22	7·20	8·45	− 1·25	13·97	20·55	− 6·58	2·62	Wellington.	South India.	
16		5	3	5				1	N 84° E	1·3	1·2			80	·372	5·9	11			4·65			16·16			0·96	Ootacamund		
1	3	4	4	8				10	N 36° E	10·2				85	·375	6·0	17			8·65			15·75			2·25	Kodaikanal.		
																											XIII.—Extra India.		
15	1					13		1	S 53° W	2·3				90	·376	4·0	15			13·77	16·23	− 2·46	17·03	26·19	− 9·16	2·88	Trincomalee	Ceylon.	
6	3	3	4	1	2	3	4	4	N 34° W	5·1		5·8	−12	87	·361	6·3	24			19·47	13·25	+ 6·22	23·95	26·76	− 2·81	3·68	Colombo.		
														71	·185	4·1	1			1·07	0·51	+ 0·56	1·99	1·30	+ 0·66	0·93	Meshed .	Persia.	
5	8	13	3			1			N 35° E	2·1	2·8			54	·205	1·4	5			1·78	1·04	+ 0·74	2·19	1·21	+ 0·98	0·63	Teheran.		
25						5			S 45° W	1·8	2·3			57‡	·188‡	1·9‡	1			0·31	1·16	− 0·85	0·56	1·46	− 0·90	0·27	Ispahan.		
	5	11	3	6	1			4	N 49° E	7·5	8·9			61	·420	0·8	0			0	2·60	− 2·60	0	2·80	− 2·80	0	Bushire.		
1	4	1			5	1	10	8	N 73° W					82	·687	0·6	0			0			0			0	Bahrein.		
11	6	5	4					3	N 25° E	8·6	10·0			77	·672	0	0			0	0·44	− 0·44	0	0·48	− 0·48	0	Jask.		
				6		16		8	S 52° W	?	?			70	·645	0·8	0			0	0·94	− 0·94	0	0·98	− 0·98	0	Muscat.		
13	9	1			1			4	N 10° W	2·3	3·1			60‖	·280‖	2·9‖	0			0·05	1·03	− 0·98	0·05	1·07	− 1·02	0·05	Baghdad .	Arabia.	
										††	††						0			0			0			0	Bussrah.		
14		13	1	2					N 56° E	5·6	5·5	11·6	− 53	69	·655	0·9	0			0	0·21	− 0·21	0	0·23	− 0·23	0	Aden.		
			9	21					S 58° E	21·6	19·4			74	·793	0·7	0			0	0·06	− 0·06	0	0·15	− 0·15	0	Perim.		
		2	4	10	7	6	1		S 22° E	‡‡	‡‡			52	·135	1·4	0			0	0·91	− 0·91	0·03	0·94	− 0·91	0	Kabul .	Afghanistan.	
22									Calm	0·3	0·3					2·1	0			0	0·04	− 0·04	0	0·11	− 0·11	0	Kashgar .	Central Asia.	
1	10	5	2	4		3	1	4	N 10° E					74	·855	6·3	7			3·43			8·04			0·86	Amini Devi	Arabian Sea Islands.	
	2	1	1	2	1	7	11	5	S 86° W	8·0	8·6			81	·865	6·7	14			9·05			16·28			2·05	Minicoy.		
2		1	5	11	7	4			S 33° E	4·3	4·1			85	·847	6·8	14			6·51	7·87	− 1·36	8·67	11·59	− 2·92	1·04	Zanzibar .	Africa.	
17	1	4	2	3	1			2	N 72° E	4·3	4·2			92	·851	5·2	13			7·44			11·21			1·67	Do. Dunga.		

station, the data for that station are not utilized in calculating the provincial variations.

†† Mean of 27 days.

‡‡ Mean of 21 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 66

Meteorological Province.	Station.	Elevation of barometer above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45°Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Burma Coast and Bay Islands.	Port Blair		29·587	29·785	·102	29·835	−·009	29·827	85·5	78·0	7·5	89·1	75·4	13·7	83·3	83·3	80·8	+ 0·2	75·8	79·3	78·8	78·0
	Rangoon				Not recorded.				88·1	74·7	13·4	91·5	72·0	19·5	83·8	85·9	79·8	+ 1·9	72·8	76·5	76·0	75·1
	Diamond Island		·933	·830	·103	·881	−·016	·857	86·4	77·9	8·5	90·4	74·2	16·2	84·4	83·9	81·1	+ 2·0	74·3	78·3	77·1	76·6
	Cocos Island	111	·884	·794	·090	·834	+·022	·878	85·2	77·7	7·5	88·6	73·6	15·0	83·3	81·8	80·2	+ 1·0	74·0	77·5	76·8	76·1
	Akyab		·969	·871	·098	·923	−·016	·886	85·3	72·9	12·4	88·9	66·9	22·0	80·4	82·3	78·8	+ 0·9	71·5	76·1	76·4	74·7
Bengal and Orissa.	Chittagong		·914	·814	·100	·862	−·015	·898	82·6	67·1	15·5	88·4	60·3	28·1	78·3	79·5	74·5	+ 0·5	66·7	72·8	72·3	70·6
	Calcutta (Alipore)		·994	·895	·099	·937	−·024	·904	81·8	65·0	16·8	90·3	56·9	33·4	77·3	80·0	72·9	+ 0·5	63·6	69·5	68·9	67·3
	Saugor Island		·972	·888	·084	·924	−·027	·894	81·4	67·2	14·2	88·4	58·2	30·2	77·4	78·8	73·3	− 0·1	65·4	71·3	70·5	69·1
	False Point		·984	·887	·097	·935	−·037	·897	81·8	67·1	14·7	90·5	58·0	32·5	78·5	79·4	73·5	+ 0·5	66·5	71·9	71·4	69·9
Gangetic Plain and Chota Nagpur.	Hazaribagh		28·003	27·905	·098	27·950	−·016	·927	78·5	59·6	18·9	86·4	53·6	32·8	73·6	75·4	68·0	+ 1·2	54·4	60·3	61·1	58·6
	Darbhanga		29·869	29·747	·122	29·803	−·020	·926	82·9	61·3	21·6	89·1	53·3	35·8	77·3	80·6	71·1	− 0·2	59·6	67·9	67·8	65·1
	Allahabad		·718	·603	·115	·650	−·035	·917	85·8	55·2	30·6	94·3	49·4	44·9	77·2	83·8	69·1	+ 0·1	53·2	64·0	65·6	61·0
Upper Sub-Himalayas.	Dehra Dun		27·786	27·693	·093	27·729	−·015	·959	76·8	52·5	24·3	81·8	47·2	34·6	67·9	71·6	62·6	+ 0·2	49·2	58·3	59·8	55·8
	Roorkee		29·136	29·027	·109	29·070	−·015	·942	81·7	49·9	31·8	87·4	42·4	45·0	71·6	77·7	64·1	+ 0·2	48·7	60·3	61·3	56·8
	Meerut		·276	·168	·108	·213	−·034	·934	83·5	51·6	31·9	89·9	45·7	44·2	69·0	78·8	65·8	+ 1·0	48·5	58·0	61·6	56·0
	Lahore		·328	·234	·094	·271	−·024	·955	85·2	49·9	35·3	91·6	44·0	47·6	72·4	83·0	65·6	+ 3·2	46·7	59·9	64·1	56·9
	Ludhiana		·220	·118	·102	·158	−·008	·957	81·3	53·0	28·3	89·1	47·4	41·7	71·1	79·4	65·5	+ 2·5	50·3	59·0	63·6	57·6
Indus Valley and N.W. Rajputana.	Peshawar		28·936	28·828	·108	28·872	−·033	·995	79·0	46·3	32·7	85·1	40·9	44·2	68·3	74·1	60·0	+ 1·4	42·5	57·1	59·7	53·1
	Jacobabad		29·863	29·751	·112	29·797	−·019	·944	91·3	50·3	41·0	98·5	41·8	56·7	77·8	86·0	68·0	+ 2·3	47·1	61·9‡	66·0‡	58·2
	Kurrachee		30·019	·916	·103	·963	−·021	·944	92·1	62·1	30·0	99·9	56·4	43·5	84·4	85·4	76·0	+ 1·9	54·6‡	67·4	72·5	64·9
East Rajputana, Central India, and Gujarat.	Jaipur		28·614	28·511	·103	28·552	−·010	·951	87·3	57·1	30·2	95·4	48·1	47·3	79·6	84·6	70·5	+ 2·8	49·3	62·0	63·6	58·3
	Udaipur		·114	27·998	·116	·056		·936‡	86·3	53·5	32·8	93·9	45·0	48·9	78·9	84·5	69·5		50·2	59·9	61·7	57·3
	Deesa		29·549	29·431	·118	29·483	−·028	·899	95·7	62·0	33·7	103·3	49·9	53·4	88·2	93·5	78·7	+ 4·7	49·1	62·0	63·7	58·3
	Jamnagar		·955	·835	·120	·895		·902	92·0	61·5	30·5	99·3	52·3	47·0	84·3	89·7	76·2		52·0‡	63·3	64·0	59·8
Deccan.	Belgaum		27·424†	27·312‡	·112	27·363	−·021	·905§	82·5	63·1	19·4	85·3	53·4	31·9	77·0‡	80·8‡	72·2‡	+ 1·4	60·6	65·7‡	65·5‡	63·9
	Sholapur		28·390	28·257	·133	28·321	−·026	·846	89·0	64·6	24·4	94·4	50·1	44·3	81·6	86·8	75·8	+ 2·1	57·4	65·9	66·9	63·4
	Poona		·150	·018	·132	·086	−·019	·853	88·3	58·4	29·9	92·0	46·5	45·5	81·1	86·4	73·2	+ 0·8	55·3	63·1	64·4	60·9
	Akola		28·089	·960	·129	29·020	−·012	·905	88·5	54·9	33·6	93·5	45·9	47·6	80·5	87·3	72·3	− 0·1	52·5	64·8	66·0	61·1
	Buldana	2,132	27·877	27·771	·106	27·820	−·012	·892	82·4	61·4	21·0	87·7	55·6	32·1	78·2	80·6	72·3	+ 0·1	54·1	61·1	61·2	58·8
	Khandwa		28·973	28·841	·132	28·903	−·015	·902	91·5	56·9	34·6	99·2	48·1	51·1	81·0	89·3	73·7	+ 3·2	50·6	63·5	65·4	59·8
	Nagpur		·991	·871	·120	·927	−·010	·912	86·9	59·6	27·3	92·9	52·7	40·2	78·3	84·4	73·5	+ 0·8	54·2	63·7	64·0	60·6
	Nagpur (Sanitary Commr.'s Office)		29·013	·889	·124	·947		·922	87·7	59·5	28·2	93·8	51·8	42·0	79·8	85·5	73·0		55·1	65·7	66·7	62·5
	Hyderabad (Deccan).		28·293	·182	·111	·236	−·039	·870	85·1	64·7	20·4	89·6	55·5	34·1	79·1	82·0	74·1	+ 2·1	?	67·7	67·5	?
West Coast.	Bombay		29·911	29·826	·115	29·878	−·032	·854	89·4	75·1	14·3	93·9	70·1	23·8	81·7	84·6	80·8	+ 1·7	68·5	71·2	75·1	71·6
	Karwar		·918	·796	·122	·851	−·014	·827	88·9	72·4	16·5	92·8	58·9	33·9	82·0	86·5	79·7	+ 2·2	70·1	73·4	75·6	73·0

† Mean of 29½ days. ‡ Mean of 29 days. § Mean of 28 days.

II.

Stations in India, Burma, etc., for November, 1901.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind steadiness.		Wind velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																									%	%						
·867	·952	·927	·915	−·008	91	83	81	85	+3	6·6	7·4	7·0	+1·7	1	3	11	5	35	4		1		S. 64° E.	N. 81° E.	68	44	169	165			Port Blair	Burma Coast and Bay Islands.
·783	·817	·767	·789	+·007	91	70	62	74	−4	5·3	6·4	5·9	+1·7											N. 63° E.		56		97			Rangoon	
·795	·891	·842	·843	+·052	83	75	72	77	−1	3·9	4·8	4·4	−0·1	3	2	16	19	11	2	1	1	5	N. 79° E.	N. 60° E.	55	59	185*	222			Diamond Island,	
·794	·868	·857	·840	+·047	83	76	79	79	+1	5·2	5·6	5·4	+0·8		2	16	18	24					S. 85° E.	N. 80° E.	76	33	168	¶	5·54	2·20	Cocos Island,	
·760	·850	·836	·815	+·058	93	82	75	83	+3	3·3	3·2	3·3	+0·1		1	18	7	13	1	1	10	9	N. 52° E.	N. 3° E.	25	31	21*	55			Akyab	
·649	·736	·704	·696	+·012	98	76	70	81	+2	3·6	4·0	3·8	+0·9		7	23	4	4		1	3	18	N. 12° E.	N. 19° W.	55	48	76*	63			Chittagong	Bengal and Orissa.
·576	·620	·563	·586	+·002	93	67	57	72	−1	3·5	3·8	3·7	+1·2	2	20	11	2	2		5	5	13	N. 12° W.	N. 14° W.	54	59	86	62			Calcutta (Alipore)	
·610	·687	·639	·645	+·008	91	74	65	77	+2	4·0	4·3	4·2	+1·3		23	17	2	1		2	8	7	N. 1° E.	N. 3° E.	63	60	208	167			Saugor Island.	
·651	·699	·666	·672	+·044	97	72	67	79	+5	4·7	5·0	4·9	+1·3	1	24	17	11	1	1		2	3	N. 28°E.	N. 27° E.	68	59	167*	153			False Point	
·365	·363	·364	·364	+·004	71	45	43	53	−1	3·0	3·0	3·0	+0·5	6	17	5	11	1	2		3	15	N. 3° E.	N. 30° W.	47	45	110*	110			Hazaribagh	Gangetic Plain and Chota Nagpur.
·495	·566	·516	·526	−·008	90	60	49	66	−4	1·1	0·8	1·0	+0·2	25		2	6	7	4	6	7	3	S. 6° W.	S. 85° W.	17	40	25	41			Darbhanga	
·385	·422	·390	·399	−·013	88	45	34	56	−6	0·5	0·9	0·7	−0·5	12	3	3	10	2	1	1	13	15	N. 41° W.	N. 52° W.	28	23	74*	49			Allahabad	
·314	·373	·372	·353	+·011	79	54	48	60	−1	0·4	0·3	0·4	−1·0	42					1	14	1		S. 45° W.	S. 89° W.	25	17	81	34			Dehra Dun	
·332	·379	·328	·346	+·001	92	48	34	58	0	0·4	0·3	0·4	−0·6	34			2	12	2		1	9	S. 37° E.	N. 88° W.	8	4	21	26			Roorkee	Upper Sub-Himalayas.
·303	·342	·324	·323	−·012	79	48	33	53	−3	0·1	0·3	0·2	−0·6	38				2		1	14	5	N. 86° W.	N. 57° W.	28	40	21*	29			Meerut	
·281	·353	·351	·328	+·013	77	44	31	51	+1	0·2	0·6	0·4	−1·0	47	1	1		2	2		5	2	S. 86° W.	N. 45° W.	7	18	16	32			Lahore	
·332	·342	·382	·352	+·039	82	45	38	55	+2	0·8	0·7	0·8	−1·1	14	1	3	1	5	2		21	13	N. 74° W.	N. 45° W.	42	33	37*	23			Ludhiana	
·228	·338	·344	·303	+·031	72	49	40	54	+1	0·9	2·2	1·6	−0·7	48	6	3	1	1				1	N. 22° E.	N. 76° E.	15	12	20*	51			Peshawar	Indus Valley and N.-W. Rajputana.
·287	·349‡	·378‡	·337	+·039	78	37‡	30‡	48	+4	0·3	0·6	0·5	−0·9	22	9	3		5	5	7	2	7	N. 67° W.	N. 13° W.	11	11	56*	40			Jacobabad	
·328‡	·446	·633	·470	+·020	58‡	39	54	50	−4	0·3	0·4	0·4	−0·8	8	5	12	3	1		15	15	1	N. 78° W.	N. 85° W.	24	18	106*	193			Kurrachee	
·260	·342	·332	·311	+·014	55	33	27	38	−5	0·6	0·8	0·7	−0·8	2	4	10	7			4	17	16	N. 41° W.	N. 19° W.	43	36	55	66			Jaipur	East Rajputana, Central India, and Gujarat.
·330	·282	·271	·294		80	29	23	44		0·4	0·9	0·7		28	3	7	14	5	2		1		N. 82° E.		38		30				Udaipur	
·183	·209	·195	·196	−·085	32	16	12	20	−14	0·4	0·5	0·5	−1·0		7	17	14	9	1	1	5	6	N. 55° E.	N. 61° E.	47	48	191	181			Deesa	
·267‡	·308	·256	·278		49‡	27	18	31		0·4	0·4	0·4			28	21	1					10	N. 10° E.		34		224*				Jamnagar	
·509	·502‡	·496‡	·485	+·021	86	54‡	43‡	61	+ 2	4·8	4·8	4·8	+1·4	1	4	16	28	7	2				N. 79° E.	N. 76° E.	78	64	226‖	267			Belgaum	Deccan.
·399	·449	·418	·422	−·038	63	41	33	45	− 8	3·7	5·1	4·4	+0·8	2	5	21	12	20					N. 82° E.	N. 77° E.	68	65	271*	199			Sholapur	
·407	·361	·337	·368	−·048	81	33	26	47	− 2	2·4	3·1	2·8	+0·1	1		16	18	20	2	2	1		S. 81° E.	N. 82° E.	69	60	195*	138			Poona	
·372	·408	·358	·379	−·031	85	39	27	50	− 3	0·9	1·4	1·2	−0·5	6	3	24	25	2					N. 66° E.	N. 61° E.	79	49	93*	85			Akola	
·334	·334	·303	·324	−·071	60	34	29	41	− 9	0·8	1·8	1·3	−1·0		9	17	19	11	3			1	N. 74° E.	N. 64° E.	66	52	¶	122	Nil	Nil	Buldana	
·298	·372	·328	·333	−·036	63	35	24	41	− 8	1·0	1·6	1·3	−0·3	1		7	25	18	5	2		2	S. 72° E.	N. 58° E.	70	52	97	64			Khandwa	
·362	·417	·348	·376	−·055	69	42	29	47	− 8	2·3	2·8	2·6	+0·1	11	18	27	3	1					N. 32° E.	N. 54° E.	72	60	90	95			Nagpur	
·389	·461	·426	·425		75	45	35	52		2·1	2·4	2·3		15		23		4				18	N. 14° E.		45		27*				Do. (Sanitary Commr.'s Office).	
¶	·544	·501	¶	¶	¶	54	45	¶	¶	4·3	5·7	5·0	+1·8	15	2	11	12	20					S. 82° E.	S. 72° E.	57	67	87*	88			Hyderabad (Deccan)	
·617	·632	·754	·668	−·026	71	58	63	64	− 6	1·7	2·1	1·9	−0·2		1	14	15	1			9	20	N. 6° E.	N. 18° E.	39	52	203	235			Bombay	West Coast.
·717	·716	·745	·726	+·020	88	65	60	71	− 3	3·5	3·6	3·6	+1·2	5	14	12	1	1	1	6	18	2	N. 39° W.	N. 31° W.	37	46	71	60			Karwar	

‡ Mean of 27 days. ¶ Mean of 21 days. * Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 66

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
South India.	Periyakulam		28·996	28·881	·115	28·946			84·5	70·3	14·2	89·1	62·0	27·1	79·7	80·5	76·1		68·3	72·9	73·3	71·4
	Salem		29·020	·903	·117	·967	−·032	29·844	87·4	69·0	18·4	94·3	55·2	39·1	80·8	83·8	76·9	+0·8	68·0	73·1	73·6	71·6
	Chitaldroog		27·561	27·449	·112	27·505	−·041	·828	82·4	65·9	16·5	88·1	58·0	30·1	76·7	79·7	73·5	+1·7	62·4	68·1	68·5	66·3
	Bangalore		26·969†	26·865	·104	26·920	−·027	·830†	80·8	63·4	17·4	84·9	55·1	29·8	74·8	77·0	71·2	+1·4	61·5	66·1	66·5	64·7
	Hassan		·909	·803	·106	·859	−·036	·837	78·9	62·1	16·8	81·6	47·0	34·6	74·5	76·3	69·9	+0·3	61·1	65·9	66·6	64·5
	Mysore		27·459	27·346	·113	27·403	−·033	·832	81·8	65·2	16·6	85·0	52·6	32·4	76·5	78·7	72·7	−0·2	64·0	68·0	68·1	66·7
	Madras		29·934	29·830	·113	29·881	−·037	·833	84·6	72·6	12·0	90·2	59·5	30·7	81·2	81·0	77·9	−0·2		75·5	75·2	74·5
	Bellary		28·498	28·367	·131	28·433	−·028	·851	87·3	68·1	19·2	94·0	59·1	34·9	79·2	82·8	76·2	+1·0	64·1	67·6	68·3	66·7
	Waltair		29·752	29·647	·105	29·700		·868	83·8	73·2	10·6	90·5	65·9	24·6	80·8	80·8	77·7		65·2	70·2	71·5	69·0
Hill Station, Baluchistan.	Quetta		24·788	24·714	·074	24·741	+·015		70·4	31·3†	39·1	79·4	24·9	54·5	69·7	65·1	49·5†	+2·1	29·2	45·0	47·2	40·5
Hill Stations, Northern India.	Leh		19·829	19·717	·112	19·774	+·041		50·2	20·2	30·0	59·6	14·4	45·2	38·5	47·1	35·1	+2·6	19·5	31·1	35·9	28·8
	Srinagar		25·054	24·930	·124	24·982	−·017		64·4	29·4	35·0	70·6	23·6	47·0	47·4	62·8	46·5	+1·5	27·7	44·5	57·5	43·2
	Kailang	10,087	21·049	20·922	·127	20·995	P		61·6	25·5	36·1	67·3	20·0	47·3	45·3	50·1	38·8	+5·1	23·7	33·8	34·7	30·7
	Simla (Ridge)		23·233	23·173	·060	23·193	+·023		57·0	46·0	11·0	65·4	40·6	24·8	53·1	52·6	50·2	+0·5	38·5	42·2	43·0	41·2
	Chakrata		·358	·293	·065	·316	−·027		62·7	44·8‡	17·9	71·2	39·9	31·3	59·2	56·4	51·8‡	+1·3	39·6	46·6	45·0	43·7
	Ranikhet		24·216	24·139	·077	24·165	+·007		63·3	48·8	14·5	70·3	44·0	26·3	58·9	59·4	54·9	+0·9	43·3	49·6	50·1	47·7
	Muktesar		22·955	22·888	·067	22·922			61·4	43·6	17·8	69·7	36·9	32·8	56·5	55·0	50·9		37·0	45·9	46·0	43·0
	Katmandu	4,388	25·678	25·581	·097	25·626	P		74·4	46·5	27·9	80·3	38·9	41·4	63·8	67·5	58·8	+0·5	45·3	56·3	57·4	53·0
	Darjeeling		23·101	23·034	·067	23·064	−·003		55·3	43·6	11·7	62·5	37·5	25·0	51·5	53·7	49·1	+1·7	40·7	47·2	49·0	45·6
Hill Stations, Central India.	Mount Abu		26·168	26·088	·080	26·121	−·021		75·8	60·7	15·1	83·2	52·4	29·8	73·1	73·2	67·6	+2·9	47·9	53·7§	53·8†	51·9
	Pachmarhi		·569	·482	·087	·522	−·005		76·0	50·8	25·2	82·7	42·8	39·9	71·2	73·3	63·5	+1·5	47·0	56·5	57·6	53·7
	Chikalda	3,642	·436	·340	·096	·384	−·020		76·7	58·9	17·8	83·1	53·3	29·8	72·9	74·2	68·1	+1·2	51·8	57·8	59·1	56·2
Hill Stations, S. India.	Wellington		24·269	24·198	·071	24·234	−·012		68·1	53·5	14·6	71·4	38·7	32·7	65·0	62·7	59·5	+1·0	52·2	59·7	59·0	57·0
	Ootacamund		23·073	23·000	·073	23·037			63·7	49·7	14·0	69·0	31·4	37·6	60·5	57·8	55·2		43·1	55·2	54·9	52·7
	Kodaikanal		22·845	22·768	·077	22·804			60·7	50·1	10·6	66·1	39·1	27·0	57·9	56·1	54·0		48·4	54·2	54·3	52·3
Extra India.	Aden		29·950	29·846	·104	29·902	−·004	·928	85·8	74·2	11·6	91·8	69·7	22·1	82·0	84·0	79·7	+0·8	68·2	72·2	75·4	71·9
	Perim		·812	·707	·105	·764	−·004	·898	86·8	76·9	9·9	91·0	75·2	15·8	83·9	83·6	81·1	+0·2	73·7	75·9	75·7	75·1
	Minicoy		·945	·875	·070	·909		·841	86·2			90·7			82·8	82·1				77·2	76·6	
	Zanzibar		·983	·877	·106	·930	+·010	·930	83·3	76·2	7·1	86·2	74·2	12·0	80·6	82·5	79·6	0	72·6	76·5	76·8	75·3
	Port Victoria (Seychelles.)	15	·992	·902	·090	·947	+·005	·886	82·7	74·3	8·4	84·5	71·1	13·4	81·7	81·7	78·2	−0·8	72·5	76·2	75·6	74·8
	Mauritius (Pamplemouses.)	181				·911	+·015	30·040				90·2	59·9	30·3			75·5	−0·6				

† Mean of 29 days. ‡ Mean of 20 days. § Mean of 26 days.

II—*concluded.*

Stations in India, Burma, etc., for November, 1901—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Meteorological Province.
														Number of winds from																	
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month,	Heaviest rainfall during the month,		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																									%	%						
·668	·721	·726	·709		90	71	70	79		5·6	7·5	6·6		17	2	4	6	12	7	6	5		S. 29° E.		26		32*				Periyakulam	South India.
·680	·725	·706	·704	+·044	95	68	61	75	0	6·3	7·5	6·9	+1·7	23	1	7	13			6	8	2	N. 55° E.	N. 87° E.	8	24	40*	74			Salem.	
·532	·588	·567	·562	+·068	81	64	57	67	+ 2	6·9	6·7	6·8	+2·1	2	3	18	25	6			2	4	N. 69° E.	N. 74° E.	67	72	132*	160			Chitaldroog.	
·532	·552	·501	·529	−·003	89	64	58	70	− 3	5·7	6·9	6·3	+1·4	1	7	19	23	2		2	4	2	N. 58° E.	N. 61° E.	60	64	162*	108			Bangalore.	
·539	·546	·548	·544	+·008	94	63	60	72	− 1	6·4	7·6	7·0	+0·6		1	26	27	5			1		N. 72° E.	N. 71° E.	84	77	54*	86			Hassan.	
·589	·587	·565	·580	+·010	93	64	57	71	+ 2	8·3	7·9	8·1	+1·6		1	15	26	10	1	3	3	1	N. 87° E.	N. 78° E.	63	72	171*	219			Mysore.	
	·813	·802	·817	−·046		76	76	85	+ 4	7·2	7·2	7·2	+1·2		22	15	10	4	3	1		5	N. 33° E.	N. 24° E.	59	64	134	156			Madras.	
·560	·541	·520	·540	0	80	53	46	60	− 2	8·3	8·5	8·4	+3·5	9	2	12	24	5		1		7	N. 70° E.	N. 81° E.	53	55	75*	77			Bellary.	
·522	·608	·654	·595		63	58	62	61		5·8	6·0	5·9				47	9		1	1	2		N. 51° E.		84		153				Waltair.	
·141†	·148	·142	·144	−·007	81†	29	23	44	− 3	0·4	0·8	0·6	−0·9	39	4						3	14	N. 43° W.	N. 51° W.	32	40	14*	54			Quetta.	Hill Station, Baluchistan.
·102	·122	·124	·116	+·024	93	48	39	60	+ 6	1·4	2·2	1·8	−2·3			1	2	6	9	33	8	1	S. 35° W.	S. 21° W.	72	34	74	44			Leh.	
·135	·266	·427	276	+·049	82	79	73	78	0	0·5	1·4	1·0	−2·2	24	7	4		8	4	1	2	10	N. 13° W.	N. 16° E.	12	18	46*	66			Srinagar.	Hill Stations, Northern India.
·114	·100	·074	·096	−·006	84	33	21	46	− 6	1·0	1·7	1·4	−2·3					3	3	25	19	10	S. 69° W.	S. 52° W.	73	61	16	33	*Nil*	*Nil*	Kailang.	
·161	·159	·181	·167	−·007	51	39	45	45	− 3	0·8	0·8	0·8	−1·5	27	5	2	1	12	7		1	5	S. 48° E.	S. 12° W.	13	18	79	101			Simla (Ridge.)	
·163‡	·190	·188	·180	−·019	55‡	38	41	45	−10	0·6	0·6	0·6	−1·1	3	1			25	31				S. 20° E.	S. 61° W.	85	30	187	115			Chakrata.	
·229	·264	·271	·255	+·005	65	53	53	57	− 2	1·0	0·6	0·8	−0·7	24	2	2	1			15	13	3	S. 78° W.	S. 53° W.	40	35	49*	37			Ranikhet.	
·156	·204	·223	·194		54	44	50	49		0·7	1·0	0·9		5	3	4	2	20	2	5	3	16	S. 24° E.		5		121*				Muktesar.	
·297	·377	·363	·346	+·009	91	63	53	69	− 3	1·7	2·5	2·1	−0·4	5		3	9	8	1		34		S. 76° W.	N. 80° W.	30	45	7	14	0·06	0·05	Katmandu.	
·228	·285	·303	·272	+·007	79	74	73	75	− 5	5·1†	5·7†	5·4	+1·0	3	1	9	5	10	3	12	8	9	S. 45° W.	N. 79° W.	12	12	73*	64			Darjeeling.	
·190	·195§	·193†	·193	−·051	36	24§	23†	27	−12	0·5	0·7	0·6	−0·9	1	29	11		3	3	2	4	7	N. 1° W.	N. 54° E.	59	21	137*	94			Mount Abu.	Hill Stations, Central India.
·283	·291	·294	·289	−·024	75	38	36	50	− 5	1·6	2·0	1·8	−0·3	23	3	14	11	7				2	N. 69° E.	N. 16° E.	43	41	48*	63			Pachmarhi.	
·309	·309	·332	·317	−·049	61	28	39	46	− 9	0·7	0·8	0·8	−1·6	51	7	1			1				N. 6° E.	N. 7° W.	11	19	140*	114	*Nil*	*Nil*	Chikalda.	
·383	·466	·465	·438	+·022	91	74	81	82	− 1	7·5	9·0	8·3	+1·5	17	6	6		25	3	1		1	S. 63° E.	S. 41° E.	38	54	43	55			Wellington	Hill Stations, S. India.
·328	·390	·404	·374		89	73	84	82		5·9	8·4	7·2		31	2	8	9	7	2			1	N. 85° E.		32		31*				Ootacamund.	
·329	·390	·408	·374		89	81	90	89		7·1	8·2	7·7		4	7	10	5	11	2	1	1	17	N. 21° E.		28		247				Kodaikanal ¶	
·613	·657	·773	·681	+·028	72	60	66	66	0	1·1	0·4	0·8	−1·4	17		32	1	10					N. 63° E.	S. 87° E.	57	66	127*	311			Aden.	Extra India.
·791	·795	·784	·790	+·118	85	68	68	74	+12	0·1	0	0·1	−1·7				19	47	4				S. 49° E.	S. 62° E.	94	82	465	491			Perim.	
	·861	·848				77	77			6·1	6·6	6·4			3	3	3	4	3	15	15	11	S. 87° W.		47		207*				Minicoy.	
·757	·860	·846	·821	+·002	84	83	76	81	0	7·6	6·5	7·1	+1·4	1	5	5	6	12	16	9	4	2	S. 17° E.	S. 31° E.	37	29	98*	115			Zanzibar.	
·780	·832	·812	·808	−·011	92	77	75	81	− 1	6·7	7·3	7·0	+0·1		2	3	4	26	6	5	5	6	S. 31° E.	S. 76° E.	42	30	152	140	9·68	1·89	Port Victoria (Seychelles.)	
			·596	−·002				70	+ 1																		235	254	5·06	3·11	Mauritius (Pamplemousses.)	

‡ Wind variable 1. ¶ Wind variable 2. * Corrected.

G. I. C. P. O—No. 156 Meteor.—183-1902.—385.

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one feather added to the wind arrow
„ „	2 to 5 „ „ „	...	two feathers „ „ „ „
„ „	5 to 10 „ „ „	...	three „ „ „ „ „
	10 to 20		four

LITHO. BY J. N. MUNDLE.

Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

CHART SHEWING THE VARIATION OF THE MEAN MAXIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.

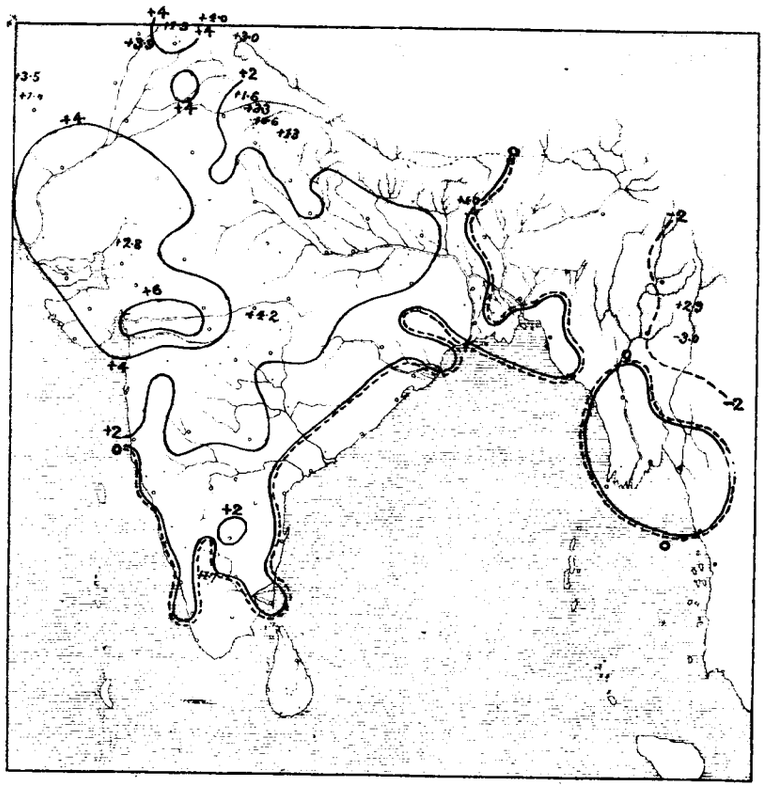
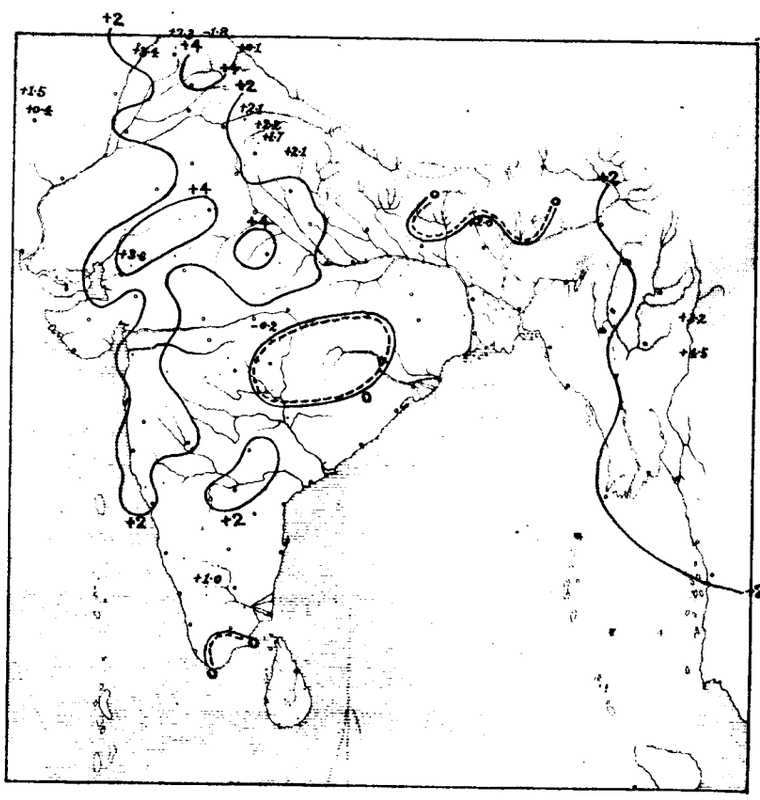


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

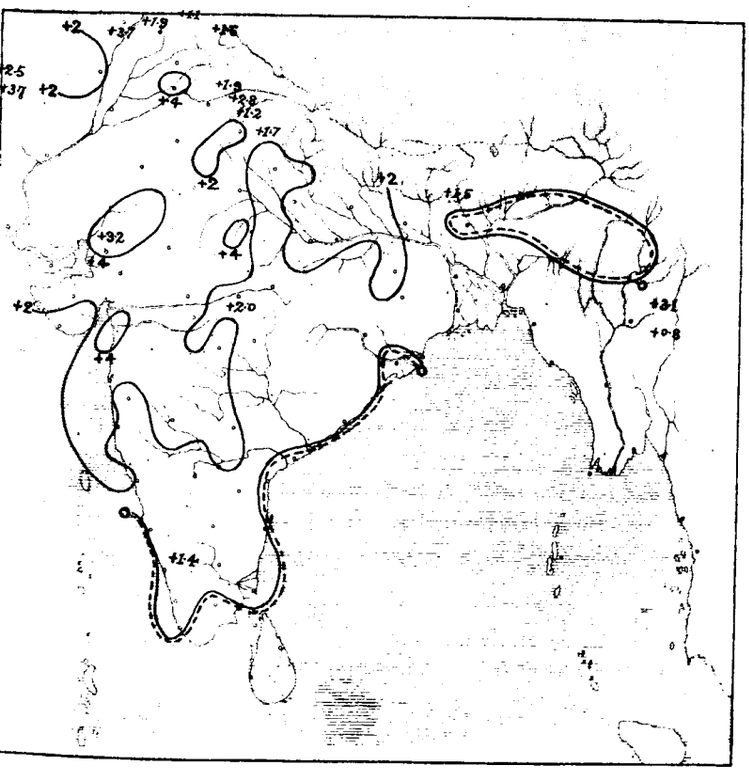
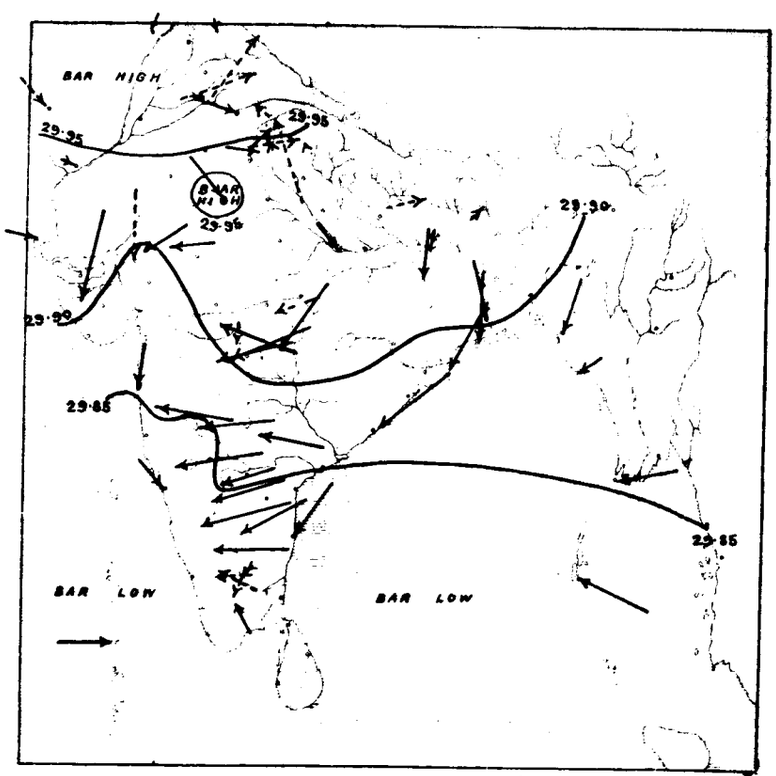


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF NOVEMBER 1901.



LITHO BY J.N. MUNDELL.

Explanation.

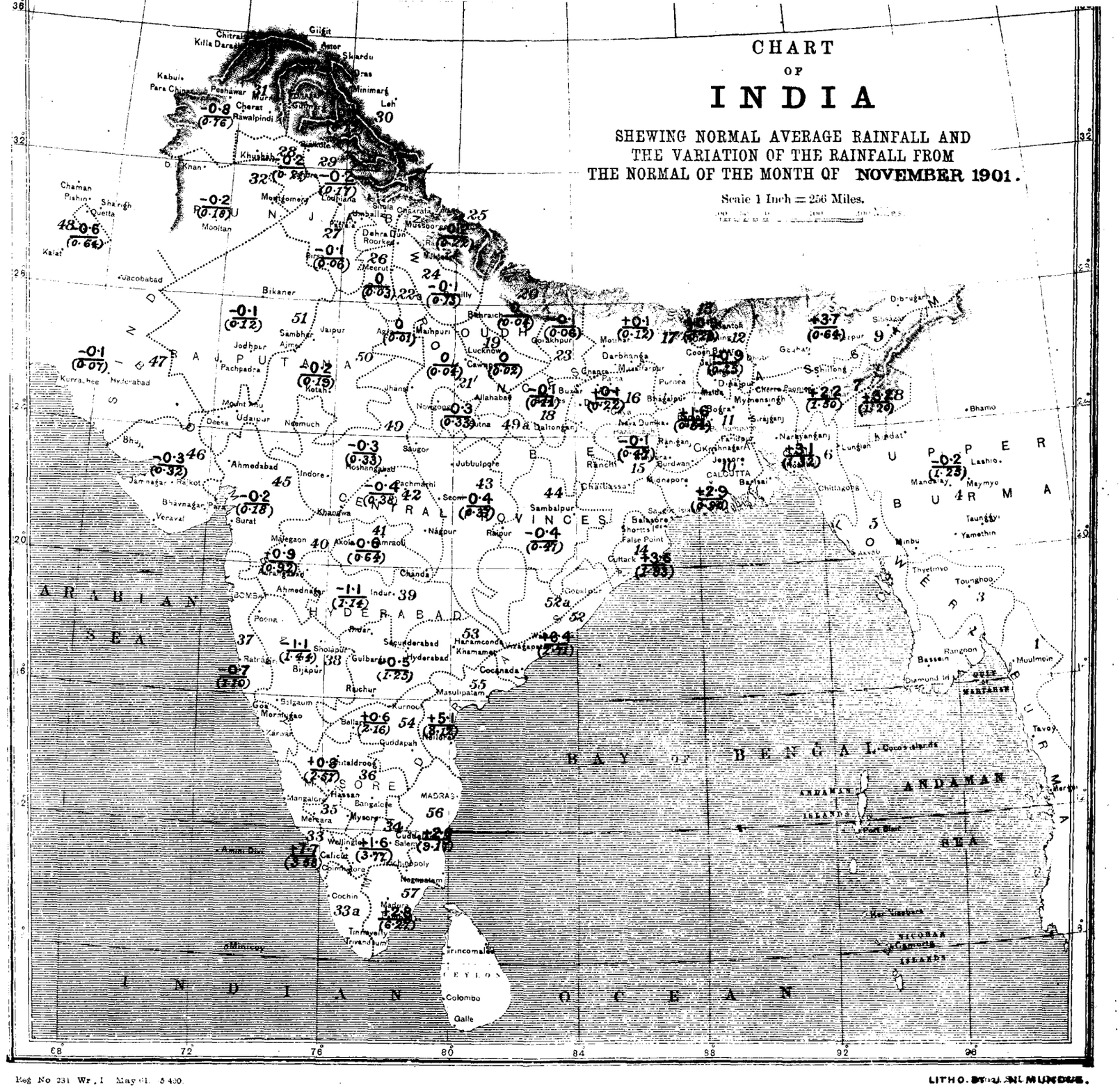
Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions

LITHO. BY J.N. MUNDLE.

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India for November except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall was [illegible] a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.



Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
33. Malabar
33a Travancore
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar
48. Baluchistan Hills
49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. Madras, East Coast, North
52(a). Do. do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South

LIBRARY
★ MAY 26 1902 ★
Weather Bureau.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, DECEMBER, 1901.

INTRODUCTION.

THIS review of the weather in India during the month of December 1901 is based on observations taken daily at 8 A.M. at 227 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 65 stations. The rainfall summary is based on the rainfall data of the meteorological observatories and on the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given.

Summary of the chief features of the weather in India during the month of December, 1901.

The most important feature in the meteorology of the month of December is the final withdrawal of the south-west humid winds from the south of the Bay and the extension of the north-east monsoon winds over the whole of the Bay. This change usually occurs in the third or ourth week of the month. During the early part of the month the north-east winds which prevail on the Coromandel coast and in East Ceylon continue to give light to heavy rain. This rainfall is heaviest in the South Coromandel coast districts and diminishes rapidly westwards from the coast into the interior.

Cyclonic storms are also of occasional occurrence during the month, and the final withdrawal of the retreating south-west monsoon current from the south of the Bay is frequently immediately preceded by the formation of a cyclonic storm in the south-west of the Bay. These storms almost invariably march westwards to the South Coromandel coast between Negapatam and Cuddalore or Pondicherry and usually break up in the Madura, Tinnevelly or Coimbatore districts. They occasionally give excessive cyclonic rain to the South Coromandel coast districts.

Another important feature is the occasional appearance of shallow depressions in Upper India. These depressions originate sometimes in Baluchistan and Persia and sometimes in North-Western India. They generally give very little rain if they occur during the early part of December. In the latter part of December and in January and February, these depressions and storms of the cold weather frequently give moderate, general rain to Northern India and moderate to heavy snow to the hill districts. They usually march in an easterly direction across Northern India. When they enter India from Baluchistan they frequently give rise to the formation of secondary or subsidiary depressions in the Punjab. These subsidiary storms are usually much deeper and

more intense than the primary storms and give heavy rain in the Punjab, and stormy weather and heavy snow in the hills.

The weather in December 1901 was, on the whole, finer than usual. Two disturbed periods were, however, experienced, the first covering the first twelve days of the month when conditions were stormy over the south of the Bay and the southern half of the Peninsula owing to a moderate cyclonic storm, and the second covering the three days from the 25th to the 27th when a land-formed depression in North-West India gave rain and snow to the hills and rain to the submontane districts of Northern India.

At the commencement of the month pressure was normal over the south of the Peninsula and the south of the Bay, but was in general defect elsewhere, by amounts increasing from 0·01″ in the Deccan to 0·15″ in the Indus Valley. The weather was quiet generally with a few light showers in the extreme south and temperature was in excess in practically all parts of the country except the Arakan coast. The excess of temperature was largest in two areas, one covering parts of the Central India Plateau and of the South Gangetic Plain, the other the Central Deccan. The following gives data for those stations at which the variation of the mean temperature was more than +6°·0 and illustrates the distribution of temperature at this time :—

Division.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st December 1901.
		°
Central India Plateau.	Jhansi	+8·7
	Ajmer	+7·5
	Sutna	+7·5
	Sambhar	+7·3
	Bikaner	+6·8
Central Deccan	Hyderabad (Deccan)	+9·3
	Bijapur	+8·3
	Sholapur	+7·8
	Kurnool	+7·6
	Ratnagiri	+6·3

A fairly steady and continuous change set in after the 1st. The barometer rose almost daily over India from the 2nd to the 6th but the change was steadily greater in the north and north-west than in the south, so that the deficiency of pressure noticed over the north and north-west at the commencement of the month day by day diminished and by the 6th had altogether disappeared. On the 6th the barometer began to fall over the south of the Bay and a storm was developed to the south-west of the Andamans, which was the most important feature of the weather from the 6th to the 12th. On the 6th the weather was fine and practically rainless over the whole country, but the showers, which had fallen over the Peninsula between the 1st and the 6th, had reduced temperature to considerably below the normal over the southern half of that area. The following gives comparative data of mean temperature for the Peninsular divisions from the 1st to the 6th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	1st Dec.	2nd Dec.	3rd Dec.	4th Dec.	5th Dec.	6th Dec.
	°	°	°	°	°	°
Central Provinces	+2·9	+4·0	+3·8	+3·2	+1·8	+1·8
Berar	+3·0	+5·3	+4·3	+4·0	+3·3	+3·3
West Coast	+2·3	+3·1	+1·9	+1·2	+0·2	−0·8
Bombay Deccan	+6·0	+5·2	+5·2	+5·5	+3·8	+1·9
Mysore	+2·1	+1·1	+0·7	−0·9	−1·6	−4·2
Madras Coast	+1·4	+0·2	−0·9	−1·6	−2·1	−2·2
Madras Deccan	+5·7	+4·1	+1·1	+0·9	−1·0	−3·1
South India	+2·2	+0·6	−0·4	−1·0	−2.9	−4·5

On the 7th the weather remained fine and rainless everywhere notwithstanding that the depression over the Bay was on that day well-defined and advancing westward towards the Madras coast. The mean temperature was higher than usual over the Bay in front of the advancing storm and this area of excessive temperature advanced westward with the storm and on the 8th covered a considerable part of the Peninsula. As this advance of the warm wave in front of the depression is an interesting feature of the temperature distribution the following table is given showing the changes over the Peninsular divisions between the 7th and the 10th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	7th December.	8th December.	9th December.	10th December.
	°	°	°	°
Central Provinces	+0·3	0	−0·1	+0·2
Berar	+0·1	−0·8	+1·1	−0·2
West Coast	−1·7	−1·0	+0·6	+2·7
Bombay Deccan	−0·7	−2·5	+1·9	+1·8
Mysore	−3·4	+1·0	+1·8	+1·0
Madras Coast	+0·1	+1·1	+0·9	−0·7
Madras Deccan	−3·2	+0·3	+4·0	+2·4
South India	−3·4	+2·2	+0·2	+1·5

On the 8th the depression was advancing towards the Madras coast and rain had commenced along the East coast and over South India. On the following day the 9th, the storm was 100 miles to the east of Cuddalore at 8 A.M. and crossed the coast at about 1 P.M. when it began to break up quickly. The rain in front of the depression was not very heavy but the easterly winds which accompanied the passage of the storm across the coast brought very heavy rain to the Madras coast districts. The following gives some of the more important examples:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chingleput	Kovelong	8th December	5·11
Nellore	Venkatagiri	9th ,,	4·07
Chingleput	Poovamallee	10th ,,	14·82
	Sathiavedu	,, ,,	13·32
	Tiruvallur	,, ,,	13·20
	Cheyur	,, ,,	11·25
	Ponneri	,, ,,	9·99
	Conjeeveram	,, ,,	9·15
North Arcot	Arcot	,, ,,	8·50
	Tiruttani	,, ,,	8·35
	Kalahasti	,, ,,	8·29
	Arkonam	,, ,,	8·15
Chingleput	Saidapet	,, ,,	7·99
North Arcot	Walajah	,, ,,	7·42
Nellore	Ioda	,, ,,	7·25
	Puttur	,, ,,	7·24
	Sulurpeta	,, ,,	6·15
Chingleput	Chingleput	,, ,,	5·92
North Arcot	Vellore	,, ,,	5·90
Chingleput	Madurantakam	,, ,,	5·03

During these four days (7th to 10th) the mean temperature had been steadily excessive over Gujarat and the neighbouring regions, but had been unsteady over Northern India generally. The following gives temperature variation data for the stations of Deesa, Ahmedabad, Surat and Indore from the 7th to the 10th to illustrate the excess of temperature which prevailed at this time over this area:—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	7th December.	8th December.	9th December.	10th December.
	°	°	°	°
Deesa	+4·5	+6·2	+4·3	+5·3
Ahmedabad	+5·2	+4·3	+3·6	+3·0
Surat	+5·0	+5·3	+3·1	+4·9
Indore	+5·2	+4·4	+2·0	+1·1

After the disappearance of the storm in the south, the weather became very quiet and settled and from the 11th to the 24th the changes call for hardly any notice. Slightly disturbed weather giving snow showers appeared in Kashmir on the 12th, and this slightly showery weather apparently travelled quickly along the Himalayas reaching Darjeeling on the 14th. This feebly unsettled weather exercised no effect on the weather in Northern India which remained steadily warmer than usual. During the whole of this period from the 11th to the 24th the general temperature conditions, relatively to the normal, were practically unchanged. Throughout the whole period the mean temperature was lower than usual over Burma and the east of the Peninsula and was higher than usual over the Deccan, the west of the Peninsula and North-West India. The areas of greatest excess and of greatest deficiency moved slightly from day to day, but the main features of the temperature distribution were unchanged throughout. The following table shows the station giving the greatest excess and the greatest deficiency of temperature for each day from the 11th to the 24th:—

Date.	Station.	Greatest positive variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.	Station.	Greatest negative variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°		°
11th December	Bijapur	+6·2	Tavoy	−5·9
12th ,,	,,	+6·8	,,	−5·8
13th ,,	,,	+8·6	,,	−6·7
14th ,,	,,	+8·1	,,	−5·1
15th ,,	Jaipur	+6·8	Rangoon	−4·6
16th ,,	Neemuch	+8·1	Toungoo	−5·3
17th ,,	Deesa	+10·7	,,	−4·8
18th ,,	Bhuj	+8·6	Rangoon	−3·5

DATE.	STATION.	Greatest positive variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.	STATION.	Greatest negative variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°		°
19th December	Veraval . .	+ 5·6	Hyderabad (Deccan.)	—4·1
20th ,,	Kurrachee . .	+ 6·0	Mandalay .	—3·9
21st ,,	Sambhar . .	+ 9·7	Ahmednagar .	—4·5
22nd ,,	Ajmer . .	+ 8·1	Bhamo . .	—3·6
23rd ,,	Lucknow . .	+ 6·9	Silchar . .	—5·0
24th ,,	Deesa . .	+ 5·6	Bhamo . .	—4·4

During this period there was practically no rain throughout the whole Indian region.

On the 24th the second storm of the month commenced to develop. It arose within an area of marked temperature inequality lying over Gujarat. The following gives temperature variation data for the stations of Deesa, Neemuch, Bhuj, Rajkot, Bhavnagar, Surat and Ahmedabad from the 23rd to the 25th :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	23rd December.	24th December.	25th December.
	°	°	°
Deesa	+6·1	+5·6	+9·1
Neemuch	+2·2	+3·2	+4·5
Bhuj	+2·4	+5·5	+5·0
Rajkot	+3·6	+4·9	+5·7
Bhavnagar	+0·6?	+0·9?	+2·9?
Surat	+4·9	+4·3	+4·5
Ahmedabad	+1·7	+2·9	+2·5?

Within the high temperature area which the above observations disclose the depression was formed. It was exceedingly shallow and slight on the 25th but was larger and better marked on the 26th. It commenced to move east-north-eastward after 8 A.M. on the 26th and had reached the neighbourhood of Sutna by the morning of the 27th. In this position it filled up. It gave a few light and scattered showers to Gujarat, Rajputana and Central India, but occasioned very fair showers over the hills and submontane districts of Northern India. These showers resulted in a brisk fall of temperature which was reduced to considerably below the normal over the greater part of Northern India. The following gives comparative temperature data of the different divisions of Northern India from the 27th to the 31st and shows the effect of this, the only snowfall and rainfall of the month, in Northern India :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	27th December.	28th December.	29th December.	30th December.	31st December.
	°	°	°	°	°
Bengal	—0·9	+0·8	+1·0	—0·3	—0·1
Orissa	+1·4	+2·2	+3·0	—1·5	—2·6
Bihar	+0·9	—0·8	+0·2	—1·7	—1·4
Chota Nagpur	+4·3	+4·2	+1·2	—0·2	—0·6
North-Western Provinces and Oudh	+3·2	—2·2	—2·0	—2·7	—1·0
Punjab	+0·1	—0·5	—0·9	0	+0·7
Sind	—1·1	—0·4	—0·2	—0·7	+0·6
Rajputana	+2·6	—2·1	—2·3	—1·1	+0·3
Gujarat	—0·2	—2·7	+0·6	+3·3	+5·7
Central India	+5·0	—1·0	—2·2	—2·2	+0·9

Pressure.—The mean pressure of the Indian land area was 0·019 inch above the normal.

Relatively to thisgeneral condition, pressure was locally in excess or the baric anomalies were positive over Ceylon and the extreme south of the Peninsula, the central parts of the Peninsula, Upper Sind, the submontane districts of the Punjab and the north-western districts of the North-Western Provinces, the central districts of Bengal and part of Lower Burma. Within these areas the anomalies were generally small and with the somewhat doubtful exceptions of Sialkot and Cocanada were less than 0·020". Over the remainder of the Indian region pressure, relatively to the general condition, was in defect. In this case also the anomalies were generally small, but over Kathiawar and part of Gujarat the deficiency of pressure exceeded 0·02 inch. This deficiency of pressure over this region had been a persistent feature of the pressure distribution of the cold weather of 1900-1901, and was almost equally pronounced at the commencement of the cold weather of 1901-1902.

The pressure variations were somewhat greater at the hill stations in Northern India than at the neighbouring plains stations or the vertical anomalies were positive, but over the hill areas in North-Eastern, Central and Southern India, the opposite relationship existed and the anomalies, though small, were negative.

The following table gives the mean pressure variations and anomalies of the month for the eleven meteorological provinces of India :—

METEOROLOGICAL PROVINCE.	Variation from normal of mean 8 A.M. pressure of December 1901.	Pressure anomaly, December 1901.
	"	"
Burma Coast and Bay Islands	+·019	0
Burma Inland	+·015	—·004
Assam	+·016	—·003
Bengal and Orissa	+·019	0
Gangetic Plain and Chota Nagpur	+·014	—·005
Upper Sub-Himalayas	+·023	+·004
North-West Frontier, Indus Valley and North-West Rajputana.	+·015	—·004
East Rajputana, Central India and Gujarat	+·008	—·011
Deccan	+·025	+ 006
West Coast	+·017	—·002
South India	+·023	+·004

Temperature.—The variations of the mean temperature conditions of the month were fairly broadly marked, the principal features having been the deficiency over Burma and Madras and the excess over the remainder of India. The mean day or maximum temperature of the month was in defect over Burma and the adjoining districts of Assam and Bengal and over the Madras coast districts and was in excess elsewhere. The excess was more than 2° in amount over the greater part of the Punjab, Upper Sind, Rajputana, Gujarat, the Konkan, Khandesh, Central India and the Central Provinces, and was more than 4° at Khandwa (+4°·8) and Surat (+4°·8). The mean maximum temperature varied by small amounts from the normal at most of the hill stations, but was in moderate excess at Srinagar (+4°·4), Chaman (+3°·9), Cherat (+2°·5) and Pachmarhi (+2°·5).

The mean minimum temperature of the month exhibited an irregular distribution, relatively to the normal. It was in defect over Burma, Madras, the east of the Central Provinces, along the foot of the hills in Northern India and over the West Punjab. The deficiency was moderate or slight in most places, but amounted to 2°·4 at Akyab and to 2°·3 at Cuddapah. Over Western India the mean night temperature was generally in excess. The excess was greatest over Gujarat, Rajputana and the west of the North-Western Provinces, and amounted to more than 4° at Surat (+5°·3), Deesa (+5°·9), Ajmer (+6°·6), Jaipur (+4°·2), Jhansi (+4°·4) and Saugor (+4°·2). On the northern hills the night temperature, on the mean of the month, was generally in defect, but at Mount Abu and Pachmarhi it was in some excess. There were no markedly cold periods during the month and the absolute minima at the hill stations were not remarkable.

The mean temperature of the month was generally in defect over Burma, Assam and Madras and generally in excess elsewhere. The deficiency in the former area was nowhere large, not equalling 2° at any station. The mean temperature was normal or in trifling excess over Bengal, the North-Western Provinces, the Punjab, Sind, the South Deccan and the east of the Central Provinces and was excessive over the North Deccan, the Konkan, Gujarat, Rajputana and the adjacent districts of the North-Western Provinces and of Central India, over the whole of which area the excess was more than 2°. The excess was more than 4° at Khandwa (+4°·1), Surat (5°·1), Deesa (+4°·8) and Ajmer (+4°·6). On the hills the variations of the mean temperature from the normal were generally unimportant.

The following table gives variation data of the month of December for eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	VARIATION OF ACTUAL FROM NORMAL OF		
	Mean maximum temperature, December 1901.	Mean minimum temperature, December 1901.	Mean daily temperature, December 1901.
	°	°	°
Burma Coast and Bay Islands	—0·9	—0·6	—0·8
Burma Inland	—1·9	+0·5	—0·8
Assam	—0·6	—0·4	—0·5
Bengal and Orissa	+0·2	+0·2	+0·2
Gangetic Plain and Chota Nagpur.	+1·6	+0·4	+1·0
Upper Sub-Himalayas	+1·3	+1·0	+1·2
North-West Frontier, Indus Valley and North-West Rajputana	+2·0	+0·4	+1·2
East Rajputana, Central India and Gujarat.	+2·7	+3·8	+3·3
Deccan	+2·1	+1·6	+1·9
West Coast	+0·5	+1·4	+1·0
South India	0	—0·4	—0·3

Winds were somewhat more easterly than usual at the Bay Islands and across the Peninsula, and in the latter area there was a slight southerly instead of a northerly component. The force was less than usual both over the Bay Islands and South India, while the steadiness was approximately normal. In Bengal the winds were northerly and north-north-westerly and were unusually steady. In the Gangetic Plain and Upper India the winds were even more irregular than usual and the velocity was

low. At the hill stations the winds were also very irregular in direction. The principal features of the air movement of the month were hence increased northing in parts of Bengal and increased easting over the Bay and South India, a low velocity over Northern India and an increased velocity over a large part of the Peninsula. In the South-East Trades region the winds were approximately normal.

Humidity.—The air was unusually dry on the Burma coast and in the Bay Islands, due probably to the unusual prevalence of northerly to north-easterly winds, but in Arakan and the south-east of Bengal there was an area of excess both of the absolute and relative humidities. Over India there were two areas of excessive relative humidity, one over part of the south of the Peninsula with its maximum over Mysore (Chitaldroog+ 7), the second over the Lower Indus Valley with its maximum at Jacobabad (+4). Over the whole of the remainder of India both the absolute and relative humidities, on the mean of the month, were in defect. The amount of the deficiency increased towards the interior and was greatest at Khandwa (—11), Buldana (—13), Chikalda (—11) and Nagpur (—10). This feature of the increased dryness of the air was as strongly marked at the hill as at the neighbouring plains stations with the exception of Srinagar where the conditions are exceptional. In the South-East Trades region there was a slight excess of humidity in the south.

The following table gives variation data of the mean aqueous vapour pressure and of mean humidity of nine meteorological provinces for the month of December 1901 —

Meteorological Province.	Absolute Humidity.		Relative Humidity.	
	Average actual, December 1901.	Variation of actual from normal, December 1901.	Average actual, December 1901.	Variation of actual from normal, December 1901.
	"	"	%	
Burma Coast and Bay Islands.	·667	—·019	73	— 1
Bengal and Orissa . .	·479	—·007	72	— 2
Gangetic Plain and Chota Nagpur.	·328	—·017	59	— 5
Upper Sub-Himalayas .	·254	—·026	57	— 5
Indus Valley and North-West Rajputana.	·293	+·015	53	0
East Rajputana, Central India and Gujarat.	·240	—·023	35	— 8
Deccan	·293	—·048	42	— 7
West Coast . . .	·594	—·016	63	— 5
South India . . .	·505	0	67	+ 1

Cloud.—Skies were unusually free from cloud over the greater part of the Bay area, but at Saugor Island, Chittagong and Rangoon the cloud amount was in slight to considerable excess. Cloud was also in slight to considerable defect in the submontane and hill areas of Northern India and over Baluchistan and Sind. At Ludhiana the mean cloud amount of the month was only 1·9 and was 1·3 below the normal, while at Darbhanga it was only 0·7 and was 0·2 below the normal. Over the whole of the remainder of India the mean cloud amount was in excess of the average. The excess was considerable within a broad band which stretched from Saugor Island in the east to Bombay in the west and was as much as 2·2 at Akola. Over the Peninsula except at the east coast stations and Bangalore all places reported an excess of cloud and the actual cloud amount was greater than in other parts of the country. Thus at Chitaldroog the mean cloud amount was 5·5 and 1·2 above the normal, at Mysore it was 5·7 and 1·9 above the normal and at Bellary it was 5·6 and 1·9 above the normal.

The following table gives variation data of the mean cloud amount of nine meteorological provinces for the month of December 1901:—

Meteorological Province.	Cloud Amount.	
	Average actual, December 1901.	Variation of actual from normal, December 1901.
Burma Coast and Bay Islands . . .	3·3	—0·1
Bengal and Orissa	2·7	+0·5
Gangetic Plain and Chota Nagpur . . .	2·2	+0·7
Upper Sub-Himalayas	1·9	—0·6
Indus Valley and North-West Rajputana .	2·1	—0·4
East Rajputana, Central India and Gujarat .	2·7	+0·8
Deccan	3·5	+1·1
West Coast	2·5	+0·9
South India	4·8	+0·7

Rainfall.—The month was abnormally dry over the greater part of India and of Burma and apparently this abnormal dryness extended westward over Baluchistan, Persia and Arabia, where, judging from the scattered data available, the total rainfall of the month was unusually scanty. The rainfall of the month was in excess over parts of the hill and submontane districts of Bengal and of the North-Western Provinces due to rain and snow which

accompanied a depression which appeared over Gujarat and Rajputana on the 25th and thence travelled north-eastward to Central India on the two following days. The total rainfall of the month was likewise in excess in Malabar, Central Madras, and the central and south divisions of the East coast due to the heavy rainfall which accompanied a cyclonic storm which formed over the south of the Bay on the 6th and 7th and thence passed westward across the south of the Bay and the south of the Peninsula. The rainfall from this storm was particularly heavy in Chingleput on the 10th. Over the whole of the remainder of India the rainfall of the month was lighter than usual and over a large area of country, including the greater part of Burma, of Assam, of Bengal, of the North-Western Provinces and of the Punjab, and the whole of Rajputana, Bombay, the Central Provinces, Central India, the Deccan and North Madras, the total rainfall of the month was less than one-tenth of an inch.

The following table gives comparative rainfall data of the eleven meteorological provinces or divisions:—

METEOROLOGICAL PROVINCE.	RAINFALL.			
	Mean actual for December 1901.	Mean normal for December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Burma Coast and Bay Islands.	0·90	0·99	−0·77	−78
Burma Inland . .	0·12	0·42	−0·30	−71
Assam	0·06	0·37	−0·31	−84
Bengal and Orissa .	0·02	0·22	−0·20	−91
Gangetic Plain and Chota Nagpur.	0·05	0·18	−0·13	−72
Upper Sub-Himalayas .	0·22	0·57	−0·35	−61
Indus Valley and North-West Rajputana.	0·02	0·22	−0·20	−91
East Rajputana, Central India and Gujarat.	0·04	0·19	−0·15	−79
Deccan	0	0·36	−0·36	−100
West Coast . . .	0·67	0·62	+0·05	+ 8
South India . . .	2·52	2·63	−0·12	− 5

Atmospheric Pressure.

The mean pressure of the Indian land area for the month was ·019 inch above the normal. The mean pressure of the month of December 1900 was ·012 inch above the normal, so that there was only a difference of ·007 inch between the two months, while the general weather conditions were in marked contrast. As in the month of December 1900, one of the most marked features in the pressure variation of the month under review, was the local deficiency of pressure over Kathiawar and Gujarat, but the area of deficiency was smaller in the present than in the preceding year, though in both years the intensity or amount of the depression was about equal. In the cold weather of 1900-01 this distribution of pressure resulted in the production of a series of depressions which formed in the area of low pressure and thence advanced north-eastward into the central parts of the country. In December 1901 a similar tendency disclosed itself, but for some reason the tendency never developed beyond that stage and only one depression appeared. The local anomalies in December 1901 were generally moderate or small. Pressure, relatively to the general condition, was in slight excess over (1) Ceylon and the extreme south of the Peninsula, (2) over the central parts of the Peninsula and the adjacent districts of Central India and of Khandesh, (3) over the submontane districts of the Punjab and the neighbouring districts of the North-Western Provinces, (4) over Upper Sind, (5) over the central districts of Bengal and (6) over part of Lower Burma. In all these areas the anomalies were small in most cases not exceeding 0·010″ and only equalled or exceeded 0·020″ at the two stations for which comparative data are given below:—

STATION.	Variation from normal of mean 8 A.M. pressure of December 1901.	Pressure anomaly, December 1901.
	″	″
Sialkot	+·043	+·024
Cocanada	+·039	+·020

Over the whole of the remainder of India pressure, relatively to the general condition, was in defect. The deficiency was small except in the area including Gujarat and Kathiawar to which attention has been drawn above. Within this area the pressure anomalies exceeded 0·020 inch, as is shown below:—

STATION.	Variation from normal of mean 8 A.M. pressure of December 1901.	Pressure anomaly, December 1901.
	″	″
Bhavnagar Para	−·016	−·035
Deesa	−·005	−·024
Rajkot	−·002	−·021
Veraval	−·002	−·021

Pressure at the level of the hill stations in Northern India was everywhere in excess. The variations though on the whole moderate or small were, with the exception of Simla and Darjeeling, generally greater than the variations at the neighbouring plains stations. At the central and southern hill stations, on the contrary, the opposite relation existed, the pressure excess at the hill stations having been less than that at the neighbouring plains stations. The following data illustrate these features :—

HILL STATION.	Variation from normal pressure, December 1901.	PLAIN STATION.	Variation from normal pressure, December 1901.	Vertical pressure anomaly (Hill—Plain).
	"		"	"
Quetta . .	+·037	Jacobabad .	+·020	+·017
Leh . . .	+·036	Lahore . .	+·027	+·009
Murree . .	+·038	Rawalpindi .	+·019	+·019
Simla . . .	+·028	Ludhiana . .	+·029	—·001
Chakrata . .	+·026	Roorkee . .	+·022	+·004
Ranikhet . .	+·031	Bareilly . .	+·020	+·011
Darjeeling . .	+·002	Dhubri . .	+·007	—·005
Mount Abu . .	+·012	Deesa . .	—·005	+·017
Pachmarhi . .	+·021	Khandwa . .	+·031	—·010
Wellington . .	+·005	Coimbatore .	+·030	—·025

The vertical anomalies were hence positive in the north-west, more particularly in the case of Quetta and Jacobabad and Murree and Rawalpindi, while in the north-east, centre and south they were generally negative. The positive anomalies in the north-west were not unusually large, as is shown by the following table which gives the positive anomalies of six pairs of stations for December during the past few years :—

HILL STATION.	PLAIN STATION.	VERTICAL PRESSURE ANOMALY (HILL-PLAIN) OF						
		Decr. 1901.	Decr. 1900.	Decr. 1899.	Decr. 1898.	Decr. 1897.	Decr. 1896.	Decr. 1895.
		"	"	"	"	"	"	"
QUETTA .	Jacobabed .	+·017	—·039	+·030	+·009	+·010	+·007	—·010
LEH . .	Lahore . .	+·009	—·034	+·009	—·032	—·022	—·030	+·022
MURREE .	Rawalpindi .	+·019	—·008	+·027	—·034	+·006	—·019	—·004
SIMLA . .	Ludhiana .	—·001	—·019	+·014	+·002	—·007	—·026	—·012
CHAKRATA .	Roorkee .	+·004	+·001	+·024	+·017	+·007	—·003	+·015
RANIKHET .	Bareilly .	+·011	+·019	+·020	+·015	+·007	+·001	+·011

As the above distribution of pressure in the vertical direction ordinarily coincides with finer and drier weather than usual in North-West India, the preceding data indicated a finer cold weather than usual for Upper India, but hardly indicated the exceedingly scanty snow and rainfall which the two succeeding months disclosed.

Barometric depressions and cyclonic storms of the month.

Two depressions or storms have affected the weather over the Indian region during the month under review. The first was a moderate cyclonic storm which was developed over the south of the Bay and thence advanced westward across the south of the Peninsula. The second was a shallow storm which apparently formed over Gujarat and Rajputana, a result of the unusually high temperatures which obtained at that time over that area, and thence passed east-north-eastward as far as the east of the North-Western Provinces. With these two exceptions the weather was quiet and settled throughout the month.

Pressure at the commencement of the month was generally lower than usual, the deficiency increasing in amount northward and amounting to nearly 0·15″ in the Indus Valley. Pressure was more uniform than usual, the winds light and the weather warm. Pressure increased during the next 72 hours, more particularly in the north and the usual cold weather conditions of pressure and winds were established by the 5th. On this day the barometer was low and falling over the south of the Bay, while it was high over Central and North-West India. A few light scattered showers were falling in Burma, while over India the weather was rainless. Fresh northerly to north-westerly winds were reported along the Madras coast, while the east-north-easterly wind at Diamond Island was moderately strong. At Port Blair the barometer had fallen slightly with light rain and an east-south-east wind of velocity 21 miles per hour. It is probable therefore that a storm had formed on this day over the south of the Bay and to the south-west of the Andaman Islands :—

Cyclonic storm of the 6th to the 10th.—On the 6th the barometer was rising slightly over Burma and the east of the Bay, while it was falling slightly over Madras.

The following gives 8 A.M data for the Bay stations:—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inch.	
Mergui .	30·007	+·001	+·106	Calm	2	4	...	
Tavoy .	·028	+·007	+·095	Calm	1	5	...	
Moulmein .	·048	+·002	+·092	S	4	0	...	
Diamond Island.	29·994	+·019	+·061	ENE	19	6	...	
Bassein .	30·047	+·024	+·094	NE	8	6	...	
Akyab .	·045	+·024	+·077	NE	2	10	0·29	
Chittagong .	·053	+·025	+·062	NE	3	9	...	
Calcutta .	·056	+·023	+·040	NW	2	0	...	
Saugor Island.	·050	+·018	+·035	N	7	3	...	Dust haze.
Balasore .	·079	+·019	?	NNW	1	2	...	
False Point.	·057	+·009	+·045	NW	6	5	...	
Cuttack .	·057	—·004	+·040	Calm	1	2	...	
Gopalpur .	·047	—·006	+ 025	NNW	10	0	...	
Waltair .	·037	—·010	+·056	NE	15	1	...	Sea smooth.
Cocanada .	·629	—·014	+·052	Calm	10	2	...	Sea slight.
Masulipatam.	·042	—·014	+·073	N	4	0	...	
Nellore .	·020	—·015	+·039	NNW	5	7	...	Foggy.
Madras .	29·995	—·020	+·050	NW	8	5	...	Sea slight.
Cuddalore	·989	—·013	+·032	Calm	1	9	...	
Negapatam	·973	—·006	+·056	NW	14	4	...	
Trincomalee	·972	+·009	+·071	Calm	2	5	...	

The above shows that the pressure changes during the preceding 24 hours had been very slight, comprising a slight rise in Burma and a slight fall in Madras. Pressure was above the normal everywhere, but less so over the centre of the Bay than over the surrounding coasts. A strong east-north-east wind was blowing at Diamond Island, while the winds varied from north-north-east to north-west along the Madras coast where the force was increasing slightly. Light scattered showers had fallen in Burma, but there had been no rain over India.

The following gives marine data for this day:—

NAME OF VESSEL OR STATION.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Okhla* .	5 57	82 1	30·055	NNW	5	Fine, 8 P.M. cloudy.
S.S. *Byculla* .	6 27	80 12	29·901	N	6	Rough sea and fine.
S.S. *Nowshera* .	6 54	82 02	30·011	NE	4	Moderate head sea and fine.
S.S. *Itria* . .	8 45	84 59	29·784	NNW	4	Moderate sea and overcast, 4 A.M. light rain.
S.S. *Senator* .	9 45	83 26	...	N by W	6	Rough sea and cloudy. Noon squally.
S.S. *Loodiana* .	13 17	82 42	29·896	NE by N	5	Moderate N.E. swell. Noon squally.
S.S. *Upada* .	13 47	82 04	·926	NE	4	Moderate following sea and fine, 8 P.M. passing rain squalls.
S.S. *Rewa* .	14 47	82 7	·985	NE	4	Moderate sea and fine, 4 P.M. overcast.
Port Blair .	...	...	·934	ESE	20*	Strong wind.

* Velocity miles per hour.

The barometer had risen ·045″ at Port Blair and the wind which still held at east south-east had fallen very slightly. Moderate rain had, however, been received. All the ships' observations referred to the west of the Bay and the area to the west of the storm. The *Rewa* in Lat. 14° 47′ N. and Long. 82° 7′ E., the *Loodiana* in Lat. 13° 17′ N. and Long. 82° 42′ E. and the *Upada* in Lat. 13° 47′ N. and Long. 82° 4′ E. all reported north-easterly winds and fine to squally weather, while the *Senator* in Lat. 9° 45′ N. and Long. 83° 26′ E. and the *Itria* in Lat. 8° 45′ N. and Long. 84° 59′ E. reported north-north-west winds, cloudy to overcast skies and a moderate to rough sea. The Port Blair observations showed that the storm had commenced to move westward and the marine observations and the coast observations of the wind's direction showed that the centre of the disturbance was apparently in about Lat. 12° N. and Long. 88° E. The mean force of the wind for the whole Bay area was 4·2 which was 1·0 above the normal, while pressure exceeded the average all around the Bay, so that the storm at this time was probably of only slight intensity.

December 7th.—The barometer continued to fall slowly over the south of the Bay, while it was steady or rising slowly elsewhere. The following gives 8 A.M. data for the Bay ports:—

Station.	Pressure.			Wind		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"					
Mergui	30·017	+·010	+·118	Calm	1	4	...	
Tavoy	·036	+·008	+·104	Calm	1	0	...	
Moulmein	·055	+·007	+·103	S	2	0	...	
Bassein	·045	—·002	+·092	NE	3	3	...	
Diamond Island.	·030	+·036	+·097	ENE	11	3	...	
Akyab	·053	+·008	+·087	NE	2	5	...	
Chittagong	·081	+·028	+·093	NE	2	6	...	
Calcutta	·102	+·046	+·090	NNW	3	0	...	
Saugor Island.	·095	+·045	+·084	NNE	9	5	...	Dust haze.
Balasore	·119	+·040	?	Calm	1	4	...	
False Point	·075	+·018	+·067	N	9	6	...	
Cuttack	·096	+·039	+·082	Calm	1	7	...	
Gopalpur	·081	+·034	+·059	NNW	11	6	...	
Waltair	·038	+·001	+·059	NE	17	8	...	Sea smooth.
Cocanada	·019	—·010	+·044	NNW	9	9	...	
Masulipatam	·035	—·007	+·070?	N	5	8	...	
Nellore	·017	—·003	+·034	NNW	4	5	...	
Madras	29·982	—·013	+·038	NNW	8	10	...	Sea rough.
Cuddalore	·964	—·025	+·008?	Calm	0	9	...	
Negapatam	·956	—·017	+·040	NW	10	10	...	
Trincomalee	·934	—·038	+·036	NW	2	3	...	

Pressure was decreasing from Cocanada to Trincomalee, while it was rising at Diamond Island. Cloud and humidity had both decreased in Burma and increased along the west coast of the Bay. There had, however, been no rain anywhere. The winds on the Madras and Ceylon coasts exhibited an indraught towards the low pressure area over the Bay, but the force had not increased since the previous morning. Pressure remained above the average all around the Bay.

The following gives the marine data for this day:—

Name of Vessel or Station.	8 A.M. Position		Barometer as corrected by Calcutta Office.	Wind		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S. S. *Nairung*	Near Galle		29·962	...	...	4 A.M. cloudy.
S. S. *Itria*	6 29	82 12	·825	N	5	4 A.M. fine.
S. S. *Okhla*	8 4	83 1	·893	NW	5	Moderate sea and cloudy. Midnight continuous rain.
S. S. *Nowshera*	9 19	82 25	·993	NW	4	Moderate head sea and cloudy. Midnight heavy rain squalls.
S. S. *Upada*	9 44	82 06	·834	N by W	4	Sea slight and over cast. Noon showery.
S. S. *Pundua*	13 17	96 44	·995	SE	4	Fine.
S. S. *Senator*	13 42	84 58	...	N by E	5	Rough sea and showery, 4 P.M. heavy rain squalls.
S. S. *Loodiana*	14 5	86 4	29·937	E by N	5	Considerable swell and continual rain squalls.
S. S. *Onda*	14 57	85 16	·824	NE	4	Moderate sea and rainy.
S. S. *Purulia*	15 44	94 4	30·022	N	4	Fine, 4 A.M. cloudy.
S. S. *Rewa*	17 22	84 27	30·004	NE	6	Noon overcast.
Port Blair	...	...	29·979	ESE	16*	Cloudy.

* Velocity.

At Port Blair pressure continued to increase and the rain had ceased, but the wind direction was unchanged. Over the west of the Bay, however, the winds had altered somewhat, having drawn more into east over the centre of the Bay and more into west in the south. Thus on board the *Loodiana* in Lat. 14° 5′ N. and Long. 86° 4′ E. the wind was fresh from east by north. On board the *Rewa* in Lat. 17° 22′ N. and Long. 84° 27′ E. and the *Senator* in Lat. 13° 42′ N. and Long. 84° 58′ E. the direction remained north-easterly but the force had increased. All these vessels reported a considerable sea with overcast, showery and squally weather. To the south-west of the storm there lay the *Okhla* in Lat. 8° 4′ N. and Long. 83° 1′ E., the *Upada* in Lat. 9° 44′ N. and Long. 82° 6′ E. and the *Nowshera* in Lat. 9° 19′ N. and Long. 82° 25′ E., all reporting moderate to fresh north-west winds and showery overcast weather.

The preceding data apparently show that the storm had advanced about 130 miles westward and that the centre lay in Lat. 12° N. and Long. 86° E. The mean force of the wind for the whole Bay had fallen to 3·9 showing that the storm had not increased in intensity.

December 8th.—Pressure was now giving way over the whole of the Bay area. The following gives 8 A.M. data for the Bay ports:—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Mergui	29·982	—·035	+·084	Calm	1	3	...	
Tavoy	·992	—·044	+·051	Calm	1	0	...	
Moulmein	30·012	—·043	+·062	NE	2	0	...	
Bassein	·023	—·022	+·071	Calm	3	3	...	
Diamond Island.	·000	—·030	+·068	ENE	5	2	...	
Akyab	·030	—·023	+·065	NE	2	2	...	
Chittagong	·063	—·018	+·076	NE	2	2	...	
Calcutta	·090	—·012	+·080	N	3	4	...	
Saugor Island.	·074	—·021	+·065	N	9	6	...	Sea slight.
Balasore	·111	—·008	+·101	NNW	1	4	...	
False Point	·083	+·008	+·077	NNW	8	7	...	
Cuttack	·090	—·006	+·077	Calm	2	6	...	
Gopalpur	·076	—·005	+·058	NNW	10	8	...	
Waltair	·027	—·011	+·048	NE	21	10	...	
Cocanada	·009	—·010	+·034	NE	20	9	...	Sea rough.
Masulipatam	·008	—·027	+·045	NNE	9	1	...	
Nellore	29·982	—·035	+·002	NNW	7	10	0·22	Showery.
Madras	·946	—·036	+·002	NNE	9	8	1·81	Sea rough.
Cuddalore	·930	—·034	—·026	Calm	1	9	1·52	Showery.
Negapatam	·925	—·027	+·013	W	9	10	2·75	
Trincomalee	·889	—·045	—·006	SW	3	5	0·40	

Pressure was decreasing at almost all the Bay coast stations, the fall having been slightly greater from Masulipatam to Trincomalee than elsewhere. Pressure was slightly below the normal at Cuddalore and Trincomalee though it still remained slightly in excess elsewhere. The skies were thickly clouded along the west coast of the Bay, where also light to heavy rain had fallen. The winds were northerly from Masulipatam to Madras and were westerly at Negapatam and had strengthened on the Circars coast. The force had hardly changed from Madras southward though this part of the coast was apparently in the direct path of the storm.

The following gives marine data for this day:—

NAME OF VESSEL OR STATION.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S.S. *Upada*	6 02	80 56	29·839	WNW	2	Fine.
S.S. *Pekin*	6 13	94 00	·819	E	2	Fine.
S.S. *Rheinfels*	6 32	81 42	·914	NW	2 to 3	
S.S. *City of Madrid.*	6 49	81 53	·965	Var.	1	Confused swell, 4 A.M. fine.
S.S. *Nairung*	6 55	82 09	·906	Var.	1	Fine and clear.
S.S. *Pundua*	9 15	97 39	·942	E	4	Slight sea and fine.
S.S. *Okhla*	10 44	83 51	30·010	Var.	5	Occasional rain, 4 A.M. frequent heavy rain squalls.
S.S. *Onda*	12 02	83 49	29·750	ENE	6	Rough sea and squally with rain.
S.S. *Nowshera*	12 06	82 27	·951	NE	5	High beam sea and heavy rain squalls.
S.S. *Nawab*	14 40	93 54*	·935	NE	2	Smooth sea and fine.
S.S. *Loodiana*	15 13	90 9	·963	ENE	5	Moderate north-east swell and fine, 4 A.M. overcast.
Port Blair	...	...	·965	ESE	10†	Cloudy.

* Noon position.
† Velocity.

The storm had become deeper and better defined. Pressure had been steady at Port Blair while it had fallen decidedly over the south-west of the Bay. Over the whole of the south of the Bay the winds were influenced by the depression. They were easterly on the *Pundua* in Lat. 9° 15′ N. and Long. 97° 39′ E. and the *Pekin* in Lat. 6° 13′ N. and Long. 94° 0′ E., north-easterly on the *Nawab* in Lat. 14° 40′ N. and Long. 93° 54′ E., the *Loodiana* in Lat. 15° 13′ N. and Long. 90° 9′ E., the *Onda* in Lat. 12° 2′ N. and Long. 83° 49′ E., and the *Nowshera* in Lat. 12° 6′ N. and Long. 82° 27′ E. The two latter ships were near the storm centre and experienced rainy squally weather and a rough sea. The *Rheinfels* and the *Upada* were off the Ceylon coast and experienced light north-westerly winds and fine weather. The mean force of the wind for the whole Bay was 3·6. The storm lay apparently close to the *Onda* in Lat. 12° N. and Long. 84° E., so that it had again apparently progressed about 130 miles westward. The storm was still of only moderate intensity.

December 9th.—The following gives 8 A.M. data for the Bay ports:—

STATION.	PRESSURE. 8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches.	
Trincomalee	29·922	+·033	+·026	SW	4	2	0·30	
Negapatam	·871	—·058	—·045	NW	4	5	0·31	
Cuddalore	·898	—·082	—·105	Calm	0	10	0·55	
Madras	·881	—·065	—·064	NE	17	10	1·35	Sea very rough.
Nellore	·973	—·009	—·007	E	8	10	1·94	Continuous rain.
Masulipatam	30·025	+·017	?	NNE	13	10	...	Gale of wind.
Coranada	·023	+·014	+·046	NNE	21	9	...	
Waltair	·052	+·025	+·071	NE	21	8	0·08	Ditto.
Gopalpur	·097	+·021	+·081	NW	12	0	...	
Cuttack	·106	+·016	+·091	Calm	1	6	...	
False Point	·101	+·018	+·093	N	5	7	...	
Balasore	·121	+·010	+·108	NNW	0	6	...	
Saugor Island.	·087	+·013	+·076	N	8	9	...	Dust haze.
Calcutta	·095	+·005	+·083	Calm	3	9	...	
Chittagong	·049	—·014	+·062	NE	3	7	...	
Akyab	·034	+·004	+·067	NE	2	8	...	
Bassein	·037	+·014	+·084	Calm	3	1	...	
Diamond Island.	·020	+·020	+·086	NNE	3	2	...	

The barometer had fallen briskly at Madras, Cuddalore and Negapatam and slightly over the south of the Peninsula and the south of the Bay. The winds were cyclonic along the Madras coast, blowing from between north-east and east between Waltair and Madras, from north-west at Negapatam and from south-west at Trincomalee while a calm was reported at Cuddalore. The force had diminished on the Circars coast but had increased at Madras, where the velocity at 8 A.M. was at the rate of 23 miles per hour. The skies were cloudy to overcast along the Madras coast where also moderate rain had been received.

The following gives marine data for this day:—

NAME OF VESSEL OR STATION.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer as corrected by Calcutta Office.	WIND. Direction.	WIND. Force.	WEATHER.
	° ′	° ′	"			
S. S. *Pekin*	6 22	89 47	29·819	NE	1	Fine.
S. S. *Saint Ninian.*	6 27	81 49	·938	W	2	Fine, midnight cloudy.
S. S. *Chindwara*	8 02	81 44*	·907	SW	4	Moderate sea and fine.
S. S. *Rheinfels*	8 49	81 44	·924	SW	2 to 3	
S. S. *Onda*	9 08	83 02	·767	S by W	5	Moderate sea and passing showers.
S. S. *Nairung*	9 28	80 59	·900	W	3	Slight sea and cloudy.
S. S. *City of Madrid.*	10 53	84 03	·995	ESE	5	Moderate sea and cloudy, noon squally.
S. S. *Kum Sang*	11 27	95 15	·977	NNE	3	Fine.
S. S. *Nawab*	12 56	91 17	·955	NE	3	Slight swell and fine.
S. S. *Okhla*	14 11	84 58	30·035	E by N	5	Rough sea and occasional rain.
S. S. *Nowshera*	14 21	82 16	·053	NE by E	4	Moderate sea and cloudy, 4 A.M fierce rain squalls.
Port Blair	...	...	29·978	NNE	3†	

* Noon position.
† Velocity.

The winds were north-easterly over the east of the Bay, but exhibited a well-defined cyclonic circulation in the south-west. The *Okhla* in Lat. 14° 11′ N. and Long. 84° 58′ E. and the *Nowshera* in Lat. 14° 21′ N. and Long. 82° 16′ E. to the north of the storm reported moderate to fresh east-north-east winds with rain and occasional fierce squalls; the *City of Madrid* in Lat. 10° 53′ N. and Long. 84° 3′ E. to the east of the storm experienced a fresh east-south-east wind and cloudy, squally weather, while the *Chindwara* in Lat. 8° 2′ N. and Long. 81° 44′ E., the *Rheinfels* in Lat. 8° 49′ N. and Long. 81° 44′ E., the *Onda* in Lat. 9° 8′ N. and Long. 83° 2′ E. and the *Nairung* in Lat. 9° 28′ N. and Long. 80° 59′ E. reported south-westerly to westerly light to fresh winds with fine to showery weather.

The above data show that the storm had continued to advance westward, but that the rate of movement had increased somewhat, the centre at 8 A.M. lying in Lat. 12° N. and Long. 80° 40′ E., so that the centre had advanced about 230 miles in the previous 24 hours and lay close to Cuddalore at 8 A.M. The storm was still of only slight or moderate intensity, and the mean force of the wind for the whole Bay was again only 3·6, which was 0·4 above the normal.

The storm apparently crossed the coast at about 1 P.M. and the following are the special barometer, wind and rain

observations recorded at the Madras observatory during the 9th :—

Hour.	Barometer reduced to 32°.	Wind		Rainfall.	Weather.
		Velocity.	Direction.		
				Inches.	
7 A.M. .	29·884	26	NE by E	0·24	Strong wind.
8 „ .	·928	24	NE	0·16	Ditto.
9 „ .	·941	26	NE	0·24	Strong wind with heavy rain.
10 „ .	·960	21	NE	0·45	Ditto ditto.
11 „ .	·917	19	NE by N	1·63	Ditto ditto.
12 (noon) .	·878	20	N	0·55	Passing clouds.
1 P.M. .	·849	19	E by S	0·03	Drizzling.
2 „ .	·855	10	SE	0·35	Ditto.
3 „ .	·862	6	SE	0·35	Overcast.
4 „ .	·866	12	SE by E	1·48	Raining.
8 „ .	·973	15	E	4·11*	Overcast.

* Total fall between 4 and 8 P.M.

The above shows that the lowest pressures were recorded at 1 P.M. when the wind changed, and that the barometer remained low until 4 P.M. after which a rapid recovery set in. The rainfall was heavy at this station amounting to 10·30 inches between 8 A.M. of the 9th and 8 A.M. of the 10th but the wind was at no time more than a fresh to strong breeze. The other special observations taken at the Madras coast stations give similar information. By the morning of the 10th the storm had practically disappeared and easterly (south-east to north-east) winds averaging 3·0 in force prevailed over the Bay.

Showery weather continued over the south of the Peninsula during the next two days after which the fall ceased and rainless weather was experienced over the whole country till the 20th when some light local showers were received over North-West India and Kashmir. Fine weather with a rising barometer then set in. On the 25th a depression began to form over Gujarat within an area of very excessive temperature which during the two or three preceding days had been reported over that area.

Land formed depression of the 25th to the 27th.—On the 25th the barometer was falling over the whole country. The change had been brisk to rapid over the greater part of North-West India and over the Central Provinces but the only important fall was that over Gujarat. The following gives 8 A.M. data for this area :—

Station.	Pressure.			Wind		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"					
Bhuj . .	29·992	—·040	—·057	ENE	10	9	...	
Dwarka .	·982	—·026	...	NNW	11	7	...	Sea smooth.
Veraval .	·947	—·034	—·071	NNE	6	3	...	Ditto.
Bhavnagar Para.	·965	—·052	?	NW	4	4	...	
Surat .	·970	—·027	—·043	E	4	0	...	
Ahmedabad	·960	—·050	—·083	E	2	8	...	
Deesa .	·980	—·045	—·059	NE	7	5	...	Wind variable.

The above shows—principally from pressure variation data — that a depression was developing over Gujarat. The depression was apparently the result of a marked temperature inequality which had prevailed over this region for some days preceding the day of appearance of the barometric depression. The following gives temperature variation data for the stations in Rajputana, Sind, Gujarat and the adjacent regions from the 23rd to the 25th and exhibits clearly the inequality which gave rise to this depression :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	23rd December.	24th December.	25th December.
	°	°	°
Jacobabad	+3·1	+0·1	—3·0
Hyderabad	+4·3	+1·9	—3·3
Kurrachee	+2·5	+2·6	—2·3
Bhuj	+2·4	+5·5	+5·0
Rajkot	+3·6	+4·9	+5·7
Surat	+4·9	+4·3	+4·5
Ahmedabad	+3·7?	+2·9	+2·5?
Malegaon	+2·5	+1·4	+3·1
Khandwa	+3·4	+2·3	+4·5
Deesa	+6·1	+5·6	+9·1
Neemuch	+2·2	+3·2	+4·5
Indore	+1·8	+2·3	+2·9
Ajmer	+6·7	+3·9	+3·7
Jaipur	+4·7	+1·5	+1·9

December 26th.—The barometer had continued to fall over the whole country. The fall had been brisk over North-West India and rapid over East Rajputana. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE.			WIND		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"					
Dwarka .	29·922	—·060	...	NNW	17	8	...	Sea slight.
Bhuj . .	·966	—·026	—·088	SW	6	9	...	
Rajkot .	·983	—·028	—·119	WNW	6	8	...	
Surat .	·981	—·049	—·093	SSE	4	3	...	
Malegaon .	·985	—·069	—·076	WNW	4	4	...	
Ahmedabad	·898	—·065	—·144	SE	1	4	...	
Deesa .	·902	—·078	—·149	NNE	6	7	...	Wind variable.
Indore .	·962	—·066	—·091	Calm	1	10	...	
Neemuch .	·980	—·093	—·141	NE	7	4	...	
Ajmer .	·968	—·094	—·146	SE	1	9	...	
Jaipur .	·993	—·087	—·116	ENE	2	10	...	
Sambhar .	·972	—·109	—·138	Calm	2	9	...	
Kotah .	·959	—·115	...	SE	1	3	...	
Jodhpur .	·934	—·140	...	NE	2	9	...	
Bikaner .	·946	—·116	—·171	ESE	4	6	...	
Jacobabad .	·952	—·086	—·153	Calm	1	4	...	
Mooltan .	·967	—·082	—·164	SE	1	4	...	
Dera Ismail Khan.	·973	—·067	—·160	Calm	1	9	...	
Montgomery	·976	—·062	—·136	E	2	1	...	
Sirsa . .	·985	—·054	—·119	NE	2	0	...	

The storm was slightly better defined than on the preceding day though it was still a very shallow disturbance. It was apparently extending northward and covered Eastern Rajputana and Gujarat. It had given no rain.

December 27th.—The barometer had risen over the greater part of the country, but had been steady or had given way slightly over the east of Central India and the adjacent districts to which area the depression, noticed in Gujarat and Rajputana on the preceding day, had advanced. The following gives 8 A.M. data for the storm area :—

STATION.	PRESSURE.			WIND		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inch.	
Saugor .	30·000	—·001	—·078	W	5	9	...	
Jhansi .	·017	—·002	?	NE	6	6	...	
Nowgong .	29·991	—·022	—·102	W	1	10	...	
Sutna .	·967	—·056	—·122	WNW	3	10	...	
Allahabad .	·971	—·023	—·113	ENE	2	10	...	
Benares .	·994	—·003	—·087	E	1	10	...	
Cawnpore .	·980	—·017	—·114	NNE	2	10	...	
Lucknow .	·985	+·012	—·093	N	1	10	...	
Gorakhpur	30·018	+·030	—·050	Calm	1	8	...	
Mainpuri .	·032	+·042	—·055	ESE	1	10	0·50	
Agra . .	·002	+·014	—·096	NE	4	9	0·20	

The depression was central near Sutna. Light to moderate rain and snow had fallen in the Simla and Mussooree hills and light rain over the submontane regions of the Punjab and the North-Western Provinces. The following gives the more important amounts :—

	DISTRICT.	STATION.	Rainfall during 24 hours preceding 8 A.M. of 27th December 1901.
			Inches.
PUNJAB	UMBALLA . . .	Kasauli	1·23
	SIMLA	Simla	0·95
	ROHTAK . . .	Sampla	0·84
	KANGRA . . .	Plach	0·77
NORTH-WESTERN PROVINCES.	GARHWAL . . .	Landsdowne . . .	1·10
	DEHRA DUN . . .	Chakrata Tahsil . . .	1·05
	MORADABAD . . .	Sambhal	1·00
	ALMORA . . .	Lohaghat	1·00
	NAINI TAL . . .	Kathgodam . . .	1·00

December 28th.—By the morning of the 28th the storm had filled up and though further light rain was reported from the hill and submontane regions, the amounts were altogether unimportant.

During the remainder of the month strongly marked anticyclonic conditions of pressure and winds prevailed with fine weather.

Summary of the Reports of the Weather and Snowfall in the Mountain Districts to the North and North-West of India.

The snowfall of the month was light and was confined to the higher elevations. The following gives details of the snowfall so far as reports have been received :—

I.—AFGHAN MOUNTAIN DISTRICTS.

(1) *Wano.*—Light snow fell on the Marwatti range (11,000ft.) on the 18th and 19th December but melted away during the day. There was no accumulation of snow at the end of the month and the snowfall up to date had been lighter than usual.

(2) *Kurram.*—Snow fell on the 7th, 11th, 19th, 25th, 26th and 27th December on the Koh-i-Sufed but none of these falls extended below 9,000 feet. The snow had not, at the end of the month, reached any considerable depth and the whole range on the southern face was almost bare of snow.

(3) *Killa Drosh*—

10th.—Slight snow fell on the tops of the hills to the north-east of Drosh.

11th.—Moderate snow fell on the peaks of the hills to the north-east, south-east and west of Drosh, and snow to a depth of about 6 inches fell on the tops of the hills of the Lowari Pass.

26th.—Moderate snow fell on the tops of the hills to the north-east, south-east and west of Drosh.

II. KASHMIR AND PUNJAB HIMALAYAS.

(1) *Kashmir.*—On the night of the 11th-12th December snow fell on the higher mountains visible from the Srinagar observatory.

(2) *Leh.*—During December snow fell in Leh as follows :—

Dec.	12th	½ inch.
	26th and 27th	4 inch.
	28th	½ inch.
	30th	Slight sprinkle.
	30th and 31st	1 inch.

The snow melted away in sunny places, but in shady corners there was a little lying at the end of the month.

(3) *Simla.*—The following snowfall report has been received from the Deputy Conservator of Forests, Bashahr division :—Light snow fell on the 12th and 13th and the snowline descended to 9,000 feet. On the 26th another snowfall occurred giving 1½ inches of snow when the snowline descended to 5,750 feet. All the passes were closed at the end of the month and the depth of snow on them was as follows :—

Pass.	Elevation.	Depth of snow.
Rupin Pass	16,000 ft.	4 feet.
Borenda	16,000 ft.	3½ feet.
Harrang	12,000 ft.	1 foot.
Shatul	15,000 ft.	2½ feet.
Bulder	16,000 ft.	3 feet.
Runang	14,000 ft.	1 foot.

(4) *Upper Sutlej Valley.*—Snow fell as follows :—

11th and 12th December	2 inches.
26th and 27th December	4 inches.

On both occasions snow fell throughout the valley. At the close of the month, the snowline on the south-east slopes was at an elevation of about 12,000 feet and on the shady sides at about 9,000 feet.

III. NORTH-WESTERN PROVINCES HIMALAYAS.

(1) *Garhwal.*—Snow fell on the 27th December when the snowline descended to about 6,000 feet. The depth of snow varied from 4 feet in the regions of perpetual snow to 1 inch in the midlands. The snow accumulated in the Mana and Niti Passes and communication across them was closed at the end of the month.

(2) *Chamba.*—The following snowfall report has been received from the Deputy Conservator of Forests, Chamba Division :—

DATE.	Kilar elevation 7360.	Kalatop.	Sukhi galli.	Lungera elevation 8000.	Chad Bhent 7000.	Bhandal 6000.	Dulr 5500.	Chatrari 5000.	Olotsa 5000.	Bharmaur 4500.	Khanga.	Chatri.	Aliyas.	Tisa.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	
11th December	0 2	...	...	...	...	...	...	...	...	...	...	...	...	...
12th ,,	...	0 1	...	...	...	...	...	...	...	...	...	...	...	...
26th ,,	...	...	...	0 6	0 9	0 8	0 10	0 30	0 81	0 ...	...	...	...	...
27th ,,	...	0 7	0 1	...	...	...	...	...	...	...	0 9	0 9	0 9	...

The snow commenced to fall very late and the fall was very slight as compared with previous years.

(3) *Almora.*—The following snowfall report has been received from the Deputy Commissioner Almora.

Malla Johar.

11th December		2 feet.
15th	,,	2 ,,
27th	,,	4 ,,
TOTAL		8 feet.

This was the depth of snow on the peak of Utadhura,

Malla Danpur.

4th December	6 inches.

This was the depth of snow on the peaks of Pindari, Kaphini and Kantela.

Byans, Chandas and Darma.

26th December		1 foot.
27th	,,	1½ feet.
TOTAL		2½ feet.

At the close of the month the depth of snow on Utadhura was 8 feet, on Ralamdhura 4 feet, on the peaks of Pindari, Kaphini and Kantela 6 inches and on Byans, Chandas and Darma 2½ feet.

The snowfall was less than that of the previous years.

Summary of Special Storm Reports.

With the exception of a small cyclonic storm which affected the Madras coast in the early part of the month and a second which passed from Gujarat to Central India between the 25th and 27th, the weather was quiet throughout the month and the following were the only local storms reports :—

18th.—Duststorm at Pachmarhi at 2 P.M. lasting 3 minutes.

27th.—A slight local storm was experienced at Saugor at 8 A.M.

At 5 P.M a duststorm with high winds prevailed at Veraval.

A small storm passed over Allahabad in the afternoon but no rain fell.

A slight storm accompanied with rain occurred at Mainpuri between 7·0 and 7-30 A.M.

Earthquakes.—

1st:—A slight shock of earthquake was felt at Killa Drosh.

Hail storms:—

18th:—A hail storm accompanied with a shower of rain occurred at about noon at several villages in the Western Nara district in Sind. The size of the hail stones varied from that of a grain to that of a small marble.

The storm lasted for about two minutes only. No damage was reported.

Brief Summary of the weather in the Arabian Sea and Bay of Bengal during the month.

Arabian Sea.—Remarkably steady northerly winds prevailed throughout the month over the whole of this area except locally in the south-east where the air motion was very unsteady, winds from between north and east alternating with those from between east and south. Weather was feebly disturbed with occasional rain and squalls in the region of unsteady winds and fine over the remainder of the sea. The air movement ranged from 2·6 on the 14th to 4·3 on the 17th and averaged 3·6 for the whole month, the normal for the period being 3·3.

Bay of Bengal.—Unusually steady winds from northerly directions obtained over the whole of the Bay as far south as Lat. 10° N. during the month. To the south of that parallel winds were very unsteady during the first four days. On the 5th humid westerly winds set in over the extreme south and began to intensify. A storm was generated in the area of interaction between the two opposite wind systems on the 6th and 7th and marching along the usual track of storms during December passed across the South Coromandel coast to the south of Madras during the 9th. It was, however, a small disturbance and its influence on the winds and weather was but slight. The humid westerly winds withdrew from the south of the Bay on the 10th and were replaced by light irregular airs until the 12th on which day the north-east winds which had hitherto been confined to the north of Lat. 10° or 11° N. extended rapidly southwards and were established over the whole of the Bay by the morning of the 13th. The south-west monsoon current of 1901 had now completely withdrawn from the Bay and during the remainder of the month fine dry weather with northerly winds held steadily throughout the Bay.

The winds over the Bay were unusually steady during the greater part of the month and fluctuated in strength between an average of 2·5 on the 1st and 4·4 on the 30th. The mean intensity for the whole month was 3·3, almost identical with the normal, *viz.*, 3·2.

Equatorial Belt.—The air circulation was on the whole of the usual type over the western half of this area, though apparently the northern limit of the extension of the South-East Trades current was much further south than usual during the first week of December. The most important abnormal feature of the weather in this region, however, was the scanty rainfall at the Seychelles which obtained only 60 per cent. of the normal amount.

Temperature of the Air.

The variations of the mean temperature conditions of the month from the normal were smaller in December than in November 1901.

The mean maximum temperature of the month was above the normal over by far the greater part of India. The variations were generally small or moderate in amount over Bengal, the Peninsula and the Gangetic Plain and along the foot of the Himalayas, but were considerable within a large area which covered the greater part of the Punjab, Upper Sind, Rajputana, Gujarat, the Konkan, Khandesh, the Central Provinces and Central India. Within this large area the mean maximum temper-

ature was more than 2°·0 in excess of the normal, and at the following stations the variations were more than +3°·0.

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°	°
Khandwa	86·5	81·7	+4·8
Surat	91·5	86·7	+4·8
Lahore	75·2	71·5	+3·7
Deesa	88·7	85·1	+3·6
Bhavnagar	87·6	84·2	+3·4
Ahmedabad	88·9	85·5	+3·4
Sambhar	78·7	75·3	+3·4
Malegaon	86·5	83·2	+3·3
Indore	81·8	78·5	+3·3
Neemuch	81·2	77·9	+3·3
Khushab	74·5	71·2	+3·3
Akola	85·1	82·0	+3·1

Over Burma, Assam, East Bengal, the Madras coast, part of Southern India and part of the Malabar coast the mean maximum temperature of the month was below the normal. In these areas, however, the deficiency was small and exceeded 1½° at the following stations :—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°	°
Bhamo	73·9	76·4	—2·5
Kindat	73·8	75·7	—1·9
Rangoon	85·6	87·3	—1·7
Nellore	82·9	84·6	—1·7

At the hill stations in Northern India the variations of the mean maximum temperature of the month were generally small and unimportant, but at Srinagar and Chakrata there was some excess. The following gives comparative data for the hill stations in the North-West Himalayas :—

HILL STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°	°
Leh	35·7	38·1	—2·4
Ranikhet	56·6	58·2	—1·6
Mussooree	51·2	52·6	—1·4
Simla	50·4	51·3	—0·9
Murree	53·0	53·7	—0·7
Srinagar	52·2	47·8	+4·4
Chakrata	55·8	55·0	+0·8

In Baluchistan the excess was as marked as at the stations in the Punjab plains. The following gives data for Quetta and Chaman :—

HILL STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°	°
Chaman	62·4	58·5	+3·9
Quetta	59·4	57·1	+2·3

The following were the highest maximum temperatures recorded in each division together with the highest maxima previously registered at the recording stations :—

PROVINCE OR DIVISION.	Station.	Highest maximum temperature recorded in December 1901.	Date on which recorded.	Highest maximum temperature recorded in December, previous to 1901.	Year in which recorded.
		°		°	
BURMA	Rangoon	91·1	1st	98·2	1890
ASSAM	Silchar	85·4	5th	87·0	1887
BENGAL	Comilla	84·4	,,	86·4	1886 and 1900
ORISSA	Cuttack	85·4	2nd	90·7	1896
BIHAR	Dehri	84·3	1st	87·0	1895
CHOTA NAGPUR	Daltonganj	85·1	,,	85·0	1898

PROVINCE OR DIVISION.	STATION.	Highest maximum temperature recorded in December 1901.	Date on which recorded.	Highest maximum temperature recorded in December, previous to 1901.	Year in which recorded.
		°		°	
NORTH-WESTERN PROVINCES AND OUDH.	Jhansi . .	90·2	1st	98·0?	1871
PUNJAB . .	Sirsa . .	85·3	2nd	88·3	1899
SIND . .	Hyderabad .	90·6	1st and 2nd.	92·1	1899
RAJPUTANA .	Deesa . .	94·6	1st	95·6	1899
GUJARAT . .	Surat . .	97·7	3rd	97·2	1899
CENTRAL INDIA .	Neemuch . .	87·5	3rd and 4th.	88·0	1899
CENTRAL PROVINCES.	Khandwa . .	91·7	2nd	99·7	1875
BERAR . .	Akola . .	89·5	„	97 8	1896
WEST COAST .	Ratnagiri .	100·3	„	97·4	1896
BOMBAY DECCAN	Poona . .	92·5	3rd	95·0	1896
MYSORE . .	Chitaldroog .	86·1	14th	88·6	1900
MADRAS COAST .	Negapatam .	87·2	1st	91·5	1878
MADRAS DECCAN	Aurangabad .	92·3	17th	94·3	1896
SOUTH INDIA .	Tinnevelly .	90·2	1st, 2nd, 8th and 11th.	97·3	1892

The mean minimum temperatures of the month exhibited an irregular distribution, relatively to the normal. They were generally excessive over Western and North-Western India and generally deficient over Eastern India and Burma. The excess was most marked over Gujarat, Rajputana and the adjacent districts of the North-Western Provinces and Central Provinces and the variations were more than + 4°·0 at the stations for which comparative data are given below :—

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°	°
Ajmer	50·9	44·3	+6·6
Deesa	57·9	52·0	+5·9
Surat	62·1	56·8	+5·3
Jhansi	55·0	50·6	+4·4
Saugor	55·2	51·0	+4·2
Jaipur	52·3	48·1	+4·2
Bijapur	60·4	56·2	+4·2

The mean minima of the month were more or less below the normal along the foot of the hills in Eastern India, over Burma and South-East Bengal and over the Eastern half of the Peninsula. The deficiency was generally slight but amounted to 1½° or more at the following stations :—

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°	°
Toungoo	57·8	62·6	—4·8?
Akyab	62·0	64·4	—2·4
Rangoon	65·5	67·7	—2·2?
Tavoy	62·7	64·6	—1·9
Cuddapah	63·7	66·0	—2·3
Darbhanga	52·4	54·0	—1·6
Dhubri	54·4	55·9	—1·5

The preceding data show that the greatest excess both in the day and in the night temperatures occurred over much the same area of the country, but that, as is shown by the following table, the excess of temperature was more marked by night than by day. The following gives variation data of the mean monthly maximum and minimum temperatures in illustration :—

STATION.	VARIATION FROM NORMAL OF	
	Mean maximum temperature, December 1901.	Mean minimum temperature, December 1901.
	°	°
Bijapur	+1·8	+4·2
Surat	+4·8	+5·3
Deesa	+3·6	+5·9
Ajmer	+2·6	+6·6
Jaipur	+1·5	+4·2
Jhansi	+1·9	+4·4
Saugor	+2·4	+4·2

The mean minimum temperatures of the month were generally below the normal at the hill stations in the North-West Himalayas and Baluchistan, but the deficiency was not large except at Srinagar. The lowest minima

recorded at the hill stations were in no way remarkable, as is shown below:—

HILL STATION.	Lowest minimum temperature recorded in December 1901.	Date on which recorded.	Lowest minimum temperature recorded in December previous to 1901.	Year in which record.
	°		°	
Minimarg	2·0	23rd	—2·0	1898
Leh	8·0	15th	—9·5	1894
Kalat	8·2	24th	4·4	1894
Pishin	14·0	31st	8·9	1894
Dras	14·9	29th	—26·0	1898
Skardu	17·1	17th and 18th.	8·2	1898
Astor	17·5	14th, 15th, 17th, 18th, and 31st.	—3·0	1900
Quetta	17·8	24th	10·8	1898
Srinagar	19·1	28th and 29th.	18·1	1896
Poo	19·6	28th	12·2	1894
Chitral	26·0	27th	25·0	1898
Gilgit	27·9	17th	25·3	1896
Para Chinar	28·4	29th	16·1	1898
Chamah	29·6	23rd, 24th, 25th & 26th	21·1	1898
Ranikhet	30·0	28th	29·0	1873
Simla	30·3	28th	21·0	1877
Chakrata	30·4	28th	23·0	1877
Mussooree	31·5	28th	30·0	1890 and 1898.
Murree	32·5	28th	22·4	1890
Killa-Drosh	32·8	28th	26·8	1900
Cherat	35·0	28th	27·6	1898

The mean temperature of the month was below the normal over Burma, Assam, East Bengal and Madras and above it in all other divisions. The negative variations in Burma were 1°·0 or more at Kindat (—1°·0), Akyab (—1°·8) and Tavoy (—1°·5); in Assam at Dhubri (—1°·4); in East Bengal at Jessore (—1°·1) and in Madras at Gopalpur (—1°·3), Nellore (—1°·3), Madras (—1°·2) and Cuddapah (—1°·1).

The mean temperature was in slight excess over the remainder of Bengal, the Central Provinces, the Gangetic Plain, the Punjab, Sind and the south of the Deccan and of the Bombay Coast. The excess was more than 2° over Gujarat, Rajputana, the adjacent parts of the North-Western Provinces, the west of Central India, Khandesh, the Konkan and the North Deccan and was more than 4° in amount at the stations for which comparative data are given below:—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°	°
Surat	76·8	71·7	+5·1
Deesa	73·4	68·6	+4·8
Ajmer	64·9	60·3	+4·6
Khandwa	69·3	65·2	+4·1

The mean temperature of the month was slightly below the normal at the hill stations in the North-West Himalayas but was above it in Baluchistan and at Mount Abu, Pachmarhi and Wellington.

The following gives a summary of the most important features of the temperature conditions of the month.

(1) Both the day and night temperatures and consequently also the mean temperature were in slight defect over Burma, Assam and Madras.

(2) The day temperature was in slight excess, the night temperature in slight defect and the mean temperature about normal over the North Gangetic Plain, the east of the Central Provinces and the Indus Valley.

(3) Over the whole of the remainder of India the day, night and mean temperatures were in excess of the normal.

(4) The excess was greatest over Gujarat, Rajputana and the adjoining divisions and within this area the night temperature was, relatively to the normal, more largely in excess than the day temperature.

(5) The mean temperature was about normal on the North-West Himalayas but was above the normal at the Baluchistan and central and southern hill stations.

The following table gives temperature data of the month for 56 meteorological divisions of India :—

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	86·5	65·1	75·8	21·4	31·7	−0·9	−0·6	−0·3
	Lower Burma (Deltaic)	84·2	67·9	76·1	16·4	25·4	−0·8	+0·4	−1·2
	Central do.	81·9	57·7	69·9	24·2	37·1	?	?	?
	Upper do.	79·3	56·5	67·9	22·8	36·1	−1·9	+0·5	−2·4
	Arakan	80·7	62·0	71·4	18·7	29·3	−1·2	−2·4	+1·2
Bengal and Assam	Eastern Bengal	77·3	56·4	66·9	20·9	30·2	−0·3	+0·4	−0·7
	Assam (Surma)	79·6	54·4	67·0	25·2	36·5	+0·1	−0·8	+0·9
	Do. (Brahmaputra)	72·5	52·8	62·6	19·7	19·7	−0·9	−0·3	−0·6
	Deltaic Bengal	77·4	55·4	66·4	22·0	31·7	+0·7	−0·7	+1·4
	Central do.	77·0	54·6	65·8	22·4	31·4	+0·1	+0·9	−0·8
	North do.	75·8	52·8	64·4	23·0	32·2	0	+0·4	−0·4
	Bengal Hills	52·1	24·0	38·1	28·1	43·7	...	...	...
	Orissa	79·6	58·2	68·9	21·4	29·2	0	+0·3	−0·3
	Chota Nagpur	76·4	51·0	63·8	25·4	35·5	+1·6	+1·7	−0·1
	South Bihar	77·2	51·7	64·4	25·5	36·5	+2·1	+0·9	+1·2
	North do.	76·3	50·0	63·2	26·4	37·8	+1·4	−1·2	+2·6
North-Western Provinces and Oudh.	North-Western Provinces (East)	76·8	47·4	62·1	29·4	41·0	+1·8	−0·3	+2·1
	Oudh (South)	76·8	47·0	61·9	29·8	40·1	+1·3	+1·4	−0·1
	Do. (North)	76·0	47·8	61·9	28·2	39·5	+1·2	−0·2	+1·4
	North-Western Provinces (Central)	77·9	49·3	63·6	28·5	41·8	+1·7	+1·0	+0·7
	Do. do. (West)	75·8	48·0	61·9	27·8	40·2	+1·3	+2·0	−0·7
	Do. do. (East Submontane)	75·3	50·4	62·9	24·9	34·3	+1·0	+0·2	+0·8
	Do. do. (West do.)	71·9	44·3	58·1	27·7	36·8	+0·8	+0·2	+0·6
	Do. do. (Hills)	54·5	39·7	47·1	14·8	31·9	−0·7	−0·6	−0·1
Punjab and North-West Frontier Province.	Punjab (South-East)	74·6	50·7	62·7	23·9	34·6	+0·3	+2·2	−1·9
	Do. (South)	74·4	43·3	58·9	31·2	44·3	+0·6	+1·6	−1·0
	Do. (Central)	75·2	41·5	58·4	33·7	46·0	+3·7	+0·9	+2·8
	Do. (Submontane)	71·6	44·2	57·9	27·5	41·0	+0·9	+1·5	−0·6
	Do. (Hills)	46·7	25·8	36·3	21·0	39·0	+0·6	−1·1	+1·7
	Do. (North)	69·5	37·5	53·5	32·0	45·8	+1·8	+0·3	+1·5
	Do. (West)	74·9	42·4	58·7	32·5	47·4	+2·1	−0·2	+2·3
Bombay and Malabar Coast Districts (Madras).	Malabar	86·5	71·9	79·2	14·7	23·3	−0·2	+0·5	−0·7
	Madras (South Central)	84·5	65·2	74·9	19·3	30·0	−0·9	−0·5	−0·4
	Coorg	74·5	57·4	66·0	17·1	26·9	0	−0·2	+0·2
	Mysore	79·0	59·0	69·0	20·0	31·3	−0·1	−0·2	+0·1
	Konkan	87·4	71·1	79·3	16·3	26·0	+1·2	+2·4	−1·2
	Bombay Deccan	85·2	59·0	72·1	26·1	38·8	+1·5	+3·5	−2·0
	Hyderabad (North)	82·9	55·7	69·3	27·3	39·3	...	...	...
	Khandesh	85·3	53·8	69·5	31·5	46·1	+2·3	+2·9	−0·6
Central Provinces and Berar.	Berar	84·8	54·4	69·6	30·4	39·6	+3·1	+0·5	+2·6
	Central Provinces (West)	83·3	52·4	67·8	31·0	41·0	+3·8	+2·0	+1·8
	Do. (Central)	79·6	49·9	64·8	29·7	41·3	+1·9	+0·8	+1·1
	Do. (East)	80·6	52·6	66·6	28·0	38·2	+1·5	−1·0	+2·8
Bombay (North)	Gujarat	90·2	62·4	76·3	27·8	41·9	+4·1	+4·2	−0·1
	Kathiawar and Cutch	85·2	59·8	72·5	25·4	39·1	+2·3	+3·1	−0·8
	Sind	81·0	51·5	66·2	29·5	45·3	+2·1	+0·8	+1·3
	Baluchistan Hills	59·9	28·9	44·4	31·0	54·4	+3·1	−1·1	+4·2
Rajputana and Central India.	Central India (East)	78·9	49·6	64·3	29·3	43·1	+2·9	+2·5	+0·4
	Rajputana (East), Central India (West)	81·2	52·2	66·7	29·0	44·5	+2·8	+4·8	−2·0
	Do. (West)	81·4	52·8	67·1	28·6	43·6	+2·3	+0·8	+1·5
Madras	East Coast (North)	80·2	63·7	71·9	16·5	23·6	+0·2	−0·8	+1·0
	Hyderabad (South)	84·5	60·4	72·4	24·1	35·3	+1·4	+2·0	−0·6
	Madras (Central)	86·0	61·9	74·0	24·2	36·4	+0·9	−0·2	+1·1
	East Coast (Central)	82·7	66·4	74·6	16·3	23·5	−0·9	−1·1	+0·2
	Do. (South)	82·7	69·2	76·0	13·5	22·8	−0·1	−0·2	+0·1
	Madras (South)	85·1	70·3	77·5	14·8	22·9	+0·1	−0·6	+0·7

The above shows that the hottest areas defined by the isotherm of 75°·0 included Tenasserim, Lower Burma, the south of the East coast, South Madras, the Malabar and Konkan coasts and Gujarat, while the coolest area defined by the isotherm of 60° included the west of the North-Western Provinces and the whole of the Punjab (except the south-east).

The weather was unusually quiet and settled during December 1901 and the temperature changes and variations from the normal were hence generally small and unimportant. Two storms affected the weather and occasioned rain, but the resulting changes of temperature were not very extensive. The following is a statement of the larger and more important changes of the temperature conditions during the month :—

Temperature at the beginning of the month was in moderate defect on the Arakan coast and in slight defect over parts of Bengal and of the north of the Bay. It was in excess in practically all other parts of the country, more particularly within two bands one of which stretched east-south-eastward from Bikaner to Sutna and the other from Bijapur to Secunderabad. At the stations within these two bands the excess of temperature ranged between 6° and 9°, as is shown below :—

STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st December 1901.
	°
Hyderabad (Deccan)	+9·3
Jhansi	+8·7
Bijapur	+8·3
Sholapur	+7·8
Kurnool	+7·6
Sutna	+7·5
Ajmer	+7·5
Sambhar	+7·3
Bikaner	+6·8
Ratnagiri	+6·3
Agra	+6·0
Nowgong	+6·0

The following gives mean variation data for the 24 hours ending at 8 A.M. on the 1st illustrating the conditions prevailing at the commencement of the month :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 1st December 1901.	Mean minimum temperature, 1st December 1901.	Mean daily temperature, 1st December 1901.
	°	°	°
Burma	+1·5	+1·2	+1·4
Assam	—0·5	+3·1	+1·3
Bengal	—0·5	—0·2	—0·4
Orissa	+5·2	—1·6	+1·8
Bihar	+3·3	—0.6	+1·4
Chota Nagpur	+5·2	+1·9	+3·6
North-Western Provinces and Oudh	+4·9	+1·0	+3·0
Punjab	+6·2	+0·8	+3·5
Sind	+6·5	+1·3	+3·9
Rajputana	+8·5	+4·7	+6·6
Gujarat	+6·0	+0·4	+3·2
Central India	+8·5	+2·8	+5·7
Central Provinces	+6·3	—0·6	+2·9
Berar	+5·5	+0·4	+3·0
West Coast	+0·2	+4·4	+2·3
Bombay Deccan	+4·6	+7·4	+6·0
Mysore	—0·4	+4·6	+2·1
Madras Coast	+0·5	+2·3	+1·4
Madras Deccan	+2·9	+8·4	+5·7
South India	+1·6	+2·8	+2·2

On the 3rd the low temperatures which prevailed over and off the Arakan coast suddenly extended south-westward and included the whole of the Madras coast districts and from this date until the 7th the mean temperature was steadily low over the Madras districts. The following gives comparative temperature data for the Peninsular divisions from the 3rd to the 7th and shows the passage of the low temperature area westward across the Peninsula :—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	3rd December.	4th December.	5th December.	6th December.	7th December.
	°	°	°	°	°
South India	—0·4	—1·0	—2·9	—4·5	—3·4
Madras Deccan	+1·1	+0·9	—1·0	—3·1	—3·2
Madras Coast	—0·9	—1·6	—2·1	—2·2	+0·1
Mysore	+0·7	—0·9	—1·6	—4·2	—3·4
Bombay Deccan	+5·2	+5·5	+3·8	+1·9	—0·7
West Coast	+1·9	+1·2	+0·2	—0·8	—1·7
Berar	+4·3	+4·0	+3·3	+3·3	+0·1
Central Provinces	+3·8	+3·2	+1·8	+1·8	+0·1

During these five days the mean temperature was slightly unsteady over Sind, the Punjab and the North-Western Provinces due probably to actions taking place outside the area of the Indian region, but the changes were not very large and the variations from the normal were unimportant. The following gives data for these provinces for these days:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	3rd Dec.	4th Dec.	5th Dec.	6th Dec.	7th Dec.
	°	°	°	°	°
Sind	+2·3	+1·0	—0·5	—0·2	+0·9
Punjab	+2·6	+1·7	+0·2	—0·4	—0·3
North-Western Provinces and Oudh.	+2·0	+1·8	+0·9	—0·6	—0·6

Over the whole of the remainder of India the heat was daily in considerable excess. The following gives comparative data:—

PROVINCE OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	3rd Dec.	4th Dec.	5th Dec.	6th Dec.	7th Dec.
	°	°	°	°	°
Assam	+1·4	+2·2	+2·1	+1·8	+0·7
Bengal	+1·0	+1·8	+2·4	+2·4	+2·4
Bihar	+1·5	+3·6	+4·7	+4·2	+3·2
Chota Nagpur	+0·8	+3·1	+3·1	+2·2	+1·7
Rajputana	+6·9	+6·1	+3·9	+2·7	+3·1
Central India	+4·7	+4·6	+4·4	+3·2	+1·6
Gujarat	+4·6	+2·6	+1·6	+2·8	+2·3

During this period the hottest area, relatively to the normal, was generally Khandesh, but the area of maximum excess moved about to a certain extent, as is shown by the following table which gives for each day the two stations exhibiting the greatest excess of temperature:—

DATE.	STATION.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
3rd December 1901	Saugor	+9·8
	Surat	+9·6
4th " "	Malegaon	+9·5
	Khandwa	+9·0
5th " "	Khandwa	+7·9
	Indore	+6·8
6th " "	Khandwa	+7·1
	Surat	+6·9
7th " "	Ajmer	+5·6
	Khandwa	+5·5

From the 8th to the 10th the distribution of temperature, relatively to the normal, was very irregular and the only important change was the brisk fall of temperature which accompanied the heavy cyclonic rainfall on the Madras coast on the 10th. The following gives data from the 8th to the 10th for the Madras coast stations:—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	8th Dec.	9th Dec.	10th Dec.
	°	°	°
Negapatam	—0·4	—0·8	+1·6
Cuddalore	—0·1	+0·7	—0·4
Madras	—1·3	+1·0	—3·6
Nellore	+0·5	—0·7	—2·7
Masulipatam	+1·4	+3·6	—0·6

On the 10th and 11th temperature was locally low in Tenasserim but the principal features of the temperature distribution were a deficiency of temperature over Bengal, the head of the Bay and across the head of the Peninsula and an excess elsewhere. The following gives data for all

districts for the 11th to illustrate the conditions at this time :—

Province or Division.	Variation from normal of Mean maximum temperature, 11th December.	Mean minimum temperature, 11th December.	Mean daily temperature, 11th December.
	°	°	°
Burma	−0·5	−1·2	−0·9
Assam	−1·1	−0·5	−0·8
Bengal	−0·8	−2·0	−1·4
Orissa	−1·2	−3·1	−2·2
Bihar	+1·2	−2·3	−0·6
Chota Nagpur	+1·4	−0·4	+0·5
North-Western Provinces and Oudh	+1·9	−0·3	+0·8
Punjab	+1·4	+3·7	+2·6
Sind	+2·9	+1·1	+2·0
Rajputana	+3·2	−0·1	+1·6
Gujarat	+4·2	+0·9	+2·6
Central India	+1·5	−1·8	−0·2
Central Provinces	+1·6	−4·3	−1·4
Berar	+2·6	−2·0	+0·3
West Coast	+1·7	+5·3	+3·5
Bombay Deccan	+0·7	+4·8	+2·8
Mysore	−5·3	+5·9	+0·3
Madras Coast	−1·8	+1·5	−0·2
Madras Deccan	−1·8	+7·5	+2·9
South India	−2·5	+3·0	+0·3

A slight modification of these conditions was introduced on the 13th, when the area of relatively low temperature, instead of running east and west across the Peninsula, ran north and south over Madras. This distribution of temperature lasted with slight alterations from the 13th to the 24th. During these twelve days the mean temperature, though unsteady, was daily below the normal over Burma. This is shown below :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 13th Decr.	14th Decr.	15th Decr.	16th Decr.	17th Decr.	18th Decr.	19th Decr.	20th Decr.	21st Decr.	22nd Decr	23rd Decr.	24th Decr.
	°	°	°	°	°	°	°	°	°	°	°	°
Burma.	−0·5	−0·8	−1·0	−1·1	−0·8	−1·4	−2·1	−2·0	−2·2	−1·4	−1·5	−2·0

The mean temperature was generally steadily and daily lower than usual over the east of the Peninsula. The following gives comparative data for the Madras districts :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 13th Decr.	14th Decr.	15th Decr.	16th Decr.	17th Decr.	18th Decr.	19th Decr.	20th Decr.	21st Decr.	22nd Decr.	23rd Decr.	24th Decr.
	°	°	°	°	°	°	°	°	°	°	°	°
Madras Coast.	−2·6	−2·4	−1·5	−1·9	−1·7	−1·9	−1·2	−0·7	−0·9	−1·0	−1·0	−1·1
Madras Deccan.	+1·2	+2·3	+2·5	−0·2	−2·2	−1·5	−1·0	0·9	+0·1	+0·9	−0·3	−0·5

The mean temperature was, on the contrary, steadily and more or less considerably in excess over Bombay and Central and North-West India. The following gives data :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 13th December.	14th December.	15th December.	16th December.	17th December.	18th December.	19th December.	20th December	21st December.	22nd December.	23rd December.	24th December.
	°	°	°	°	°	°	°	°	°	°	°	°
Bombay Deccan	+6·1	+3·8	+2·9	+4·6	+1·5	+0·7	+0·2	+1·8	−1·3	+1·1	+1·3	+1·7
West Coast	+1·6	+1·1	−0·4	−0·2	+0·3	+0·4	+0·3	+0·9	+0·3	+0·9	+0·5	−0·6
Berar	+2·1	+3·5	+3·6	+3·5	+2·1	+2·8	+1·6	+3·1	+1·1	+0·7	+2·3	+1·1
Central Provinces	+0·3	+1·1	+1·3	+0·9	+0·9	+1·1	+0·8	+2·2	+0·7	+0·5	+1·7	+1·7
Central India	+1·2	+1·9	+3·2	+4·1	+4·2	+3·8	+1·2	+2·5	+2·7	+3·0	+3·2	+2·6
Gujarat	+2·7	+2·7	+2·9	+3·7	+7·8	+6·3	+3·3	+3·4	+3·6	+3·3	+2·0	+2·9
Rajputana	+3·1	+3·2	+4·1	+4·8	+5·7	+4·6	+0·5	+4·5	+6·0	+4·8	+5·1	+2·4
Sind	+2·8	+1·5	+1·4	+2·5	+2·1	+5·0	+2·3	+5·0	+1·2	+2·5	+3·3	+1·5
Punjab	+2·0	+1·2	+1·8	+1·7	+1·0	+1·8	+1·9	+2·1	+2·0	+1·9	+1·4	+0·4
North-Western Provinces and Oudh.	+1·2	+1·2	+1·8	+1·5	+1·1	+1·8	+2·2	+1·9	+2·8	+3·4	+3·7	+0·8

The area of greatest excess of temperature advanced northward during these twelve days, passing from the south of the Bombay Deccan on the 13th northward to Rajputana by the 22nd. The following gives for each day from the 13th to the 24th the two stations which recorded the largest excess of temperature :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
13th December 1901	Bijapur	+ 8·6
	Ahmednagar	+ 6·8
14th " "	Bijapur	+ 8·1?
	Chitaldroog	+ 5·6
15th " "	Jaipur	+ 6·8
	Ajmer	+ 5·7

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°
16th December 1901	Neemuch	+ 8·1
	Ahmedabad	+ 6·9
17th " "	Deesa	+10·7
	Ahmedabad	+ 8·4
18th " "	Bhuj	+ 8·6
	Surat	+ 6·9
19th " "	Veraval	+ 5·6
	Bhuj	+ 5·1
20th " "	Kurrachee	+ 6·0
	Surat	+ 5·5
21st " "	Sambhar	+ 9·7
	Deesa	+ 7·2
22nd " "	Ajmer	+ 8·1
	Deesa	+ 5·9
23rd " "	Lucknow	+ 6·9
	Ajmer	+ 6·7
24th " "	Deesa	+ 5·6
	Bhuj	+ 5·5

On the 24th and 25th temperature was high over Gujarat, as is shown by the following table giving mean temperature variation data for these two days for the stations in this area :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A. M. of	
	24th December.	25th December.
	°	°
Surat	+4·3	+4·5
Ahmedabad	+2·9	+2·5?
Bhavnagar	+0·9?	+2·9?
Veraval	—1·5?	+1·2
Rajkot	+4·9	+5·7
Bhuj	+5·5	+5·0
Deesa	+5·6	+9·1

Within this area a slight barometric depression was developed. It was shown over Gujarat and Rajputana on the 26th and thence advanced eastward or north-eastward to the neighbourhood of Allahabad by the morning of the 27th. It occasioned rain at the submontane and snow at the hill stations of Northern India, a change in the weather which introduced considerable modifications in the temperature distribution.

The following gives temperature variation data for all districts for the 27th :—

Province or Division.	Variation from normal of		
	Mean maximum temperature, 27th Decr.	Mean minimum temperature, 27th Decr.	Mean daily temperature, 27th Decr.
	°	°	°
Burma	—2·2	—0·7	—1·5
Assam	—2·0	—2·0	—2·0
Bengal	—1·1	—0·7	—0·9
Orissa	+1·7	+1·1	+1·4
Bihar	+0·8	+1·0	+0·9
Chota Nagpur	+3·7	+4·9	+4·3
North-Western Provinces and Oudh	+0·2	+6·1	+3·2
Punjab	—1·0	+1·2	+0·1
Sind	+1·3	—3·4	—1·1
Rajputana	+0·7	+4·4	+2·6
Gujarat	—0·5	+0·2	—0·2
Central India	+3·2	+6·8	+5·0
Central Provinces	+4·9	+7·9	+6·4
Berar	+5·4	+6·1	+5·8
West Coast	—0·3	+0·8	+0·3
Bombay Deccan	+2·8	+4·1	+3·5
Mysore	—1·4	—2·2	—1·8
Madras Coast	+1·1	+0·9	+1·0
" Deccan	—0·6	+0·6	0
South India	0	—0·7	—0·4

The above shows that on this day the mean temperature was in considerable to large excess over the central parts of the country and was in defect in North-Western and North-Eastern India, the greatest deficiency having been reported from the West Punjab. During the 28th the influence of the snowfall and rainfall of that and the preceding day made its impress on the temperature conditions and a large area of relatively low temperature was developed over the North-Western Provinces and the Central India Plateau, while the area of greatest excess of temperature was reduced in extent and transferred eastward and southward to Bengal and the Peninsula. The following gives comparative data for

all districts for the 29th and illustrates the change introduced by the unsettled weather of the 27th and 28th :—

Province or Division.	Variation from Normal of Mean maximum temperature, 29th Decr.	Mean minimum temperature, 29th Decr.	Mean daily temperature, 29th Decr.
	°	°	°
Burma	—2·0	+0·9	—0·6
Assam	—0·5	+0·5	0
Bengal	+1·5	+0·4	+1·0
Orissa	+2·9	+3·1	+3·0
Bihar	+0·8	—0·5	+0·2
Chota Nagpur	+2·2	+0·2	+1·2
North-Western Provinces and Oudh	—3·7	—0·2	—2·0
Punjab	—0·5	—1·2	—0·9
Sind	+1·5	—1·8	—0·2
Rajputana	—0·8	—3·7	—2·3
Gujarat	+1·0	+0·1	+0·6
Central India	—1·9	—2·5	—2·2
Central Provinces	+0·9	+0·4	+0·7
Berar	+1·6	+1·0	+1·3
West Coast	+1·9	+3·0	+2·5
Bombay Deccan	+0·6	+2·2	+1·4
Mysore	+2·7	—0·6	+1·1
Madras Coast	+0·2	+1·3	+0·8
Madras Deccan	+1·7	+0·8	+1·3
South India	0	+0·6	+0·3

On the 29th rain ceased, but the cool winds which followed the snowfall on the hills continued to give low temperatures to Northern India and to Burma. The following gives mean temperature variation data for all districts for the 30th and 31st showing the high temperatures over the Peninsula and the low temperatures over Northern India and Burma at the close of the month :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 30th December.	31st December.
	°	°
Burma	—2·4	—2·9
Assam	0	+0·6
Bengal	—0·3	—0·1
Orissa	—1·5	—2·6
Bihar	—1·7	—1·4
Chota Nagpur	—0·2	—0·6
North-Western Provinces and Oudh	—2·7	—1·0
Punjab	0	+0·7
Sind	—0·7	+0·6
Rajputana	—1·1	+0·3
Gujarat	+3·3	+5·7
Central India	—2·2	+0·9
Central Provinces	+0·2	+1·7
Berar	+3·5	+4·7
West Coast	+3·5	+3·9
Bombay Deccan	+4·2	+4·7
Mysore	+1·1	—1·4
Madras Coast	+1·0	+1·0
Madras Deccan	+1·8	+1·9
South India	+1·2	+1·5

The following gives mean temperature data for the extra Indian stations for the month of December :—

Station.	Mean daily temperature. Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°	°
Trincomalee	78·9	79·2	—0·3
Colombo	80·8	79·6	+1·2
Teheran	46·3	...	...
Ispahan	43·4	...	...
Bushire	64·6	62·6	+2·0
Jask	72·8	70·7	+2·1
Muscat	74·0	...	...
Baghdad	55·7	53·7	+2·0
Aden	76·4	77·6	—1·2
Perim	79·1	...	...
Seychelles	77·7	79·0	—1·3
Zanzibar	82·5	...	...
Mauritius	77·5	78·4	—0·9

The above shows that the relatively high temperatures, which prevailed over North-Western India and Baluchistan during the month, extended westward and were a marked feature of the meteorological conditions in Persia. In the South-East Trades region the temperature was, on the mean of the month, slightly below the normal.

Winds.

The winds were weaker than usual at the Bay Islands, but the steadiness was exactly normal. At both stations the direction of the wind was unusually easterly. This is shown below:—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, December 1901.	Normal percentage, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Easterly deflection.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
				°	°				
Port Blair.	66	66	0	N 61 E	N 58 E	+ 3	159	181	—22
Cocos Island	85	85	0	N 51 E	N 34 E	+17	168	?	?

On the Burma coast the winds varied considerably, the direction having been N 2° W at Akyab and N 36° E at Diamond Island.

In Bengal northerly to north-north-westerly winds prevailed and were generally steadier and stronger than usual. The following gives data for the stations in this —

Station.	Mean Steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, December 1901.	Normal percentage, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
				°	°			
Chittagong . .	61	53	+ 8	N 2 W	N 24 W	69	66	+ 3
Calcutta . . .	83	62	+21	N 24 W	N 23 W	67	61	+ 6
Saugor Islands . .	74	59	+15	N 8 W	N 3 E	152	169	—17

In Orissa the wind was slightly more northerly and slightly steadier than usual. The following gives data for False Point:—

Station.	Mean steadiness.			Mean wind direction.			Mean wind velocity in miles per diem.		
	Actual percentage, December 1901.	Normal percentage, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Northerly Deflection.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
				°	°				
False Point .	69	58	+11	N 25 E	N 32 E	+7	103	151	—48

In the Gangetic Plain and Upper India the mean wind directions varied considerably and irregularly from the normal. The direction varied generally between west-north-west and west-south-west, while the velocity was above the normal at Hazaribagh, Allahabad and Ludhiana and below it elsewhere. The following gives comparative data of direction and velocity:—

Station.	Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual, December 1901.	Normal, December.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°			
Hazaribagh . .	N 31 W	N 44 W	130	119	+11
Darbhanga . .	S 88 W	S 81 W	23	49	—26
Allahabad . . .	N 70 W	N 47 W	79	60	+19
Dehra Dun . .	S 63 W	S 75 W	3	31	—28
Roorkee . . .	N 52 W	N 67 W	28	32	— 4
Meerut . . .	N 82 W	N 61 W	27	37	—10
Lahore . . .	N 56 W	N 35 W	20	33	—13
Ludhiana . . .	N 69 W	N 43 W	35	27	+ 8

At Peshawar and Jacobabad the wind's direction was more northerly than usual, while at Kurrachee it was about

normal. At all three stations the velocity was low. The following gives data :—

Station.	Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual, December 1901.	Normal, December.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	°	°			
Peshawar . . .	N 28 W	S 4 E	25	61	—36
Jacobabad . . .	N 11 W	N 15 W	26	39	—13
Kurrachee . . .	N 51 E	N 41 E	125	217	—92

In Eastern Rajputana the wind was unusually easterly on the mean of the month, while in Southern Rajputana it was about normal. This is shown below :—

Station.	Mean wind direction.	
	Actual, December 1901.	Normal, December.
	°	°
Jaipur	N 53 E	N 19 W
Deesa	N 39 E	N 44 E

The following gives variation data of the mean air movement for the Bay Islands, Burma and all the divisions of Northern India :—

Province or Division.	Mean steadiness.			Mean wind velocity in miles per diem.		
	Actual percentage, December 1901.	Normal percentage, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
Bay Islands . . .	76	76	0	159	181	—22
Burma . . .	51	45	+ 6	91	135	—44
Bengal . . .	73	58	+15	96	99	— 3
Orissa . . .	69	58	+11	103	151	—48
Bihar	18	53	—35	23	49	—26
Chota Nagpur . .	71	56	+15	130	119	+11
North-Western Provinces.	33	25	+ 8	34	40	— 6
Punjab . . .	27	18	+ 9	27	40	—13
Sind	17	21	— 4	76	128	—52
Rajputana . . .	16	37	—21	117	133	—16

The winds were generally somewhat steadier than usual over the Deccan and in some places contained a feeble southerly instead of northerly component. The directions varied between east-south-east and east-north-east. The following gives comparative data :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, December 1901.	Normal percentage, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
				°	°			
Belgaum . .	71	67	+ 4	S 89 E	N 88 E	277	299	— 22
Sholapur . .	66	66	0	S 74 E	S 83 E	292	182	+110
Poona . . .	57	54	+ 3	S 74 E	N 85 E	179	133	+ 46
Akola . . .	68	57	+11	N 71 E	N 61 E	79	80	— 1
Buldana . .	57	43	+14	N 80 E	N 82 E	139	132	+ 7
Khandwa . .	48	42	+ 6	S 64 E	N 62 E	83	62	+ 21
Nagpur . .	40	54	—14	N 53 E	N 57 E	46	83	— 37
Hyderabad (Deccan).	63	65	— 2	S 73 E	S 72 E	79	81	— 2

Along the West Coast the winds were practically normal in direction though they were less steady than usual :—

Station.	Mean steadiness.			Mean wind direction.	
	Actual percentage, December 1901.	Normal percentage, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.
				°	°
Bombay . . .	39	58	—19	N 6 E	N 16 E
Karwar . . .	46	54	— 8	N 5 W	N 6 W

In South India the winds were generally normal in direction, steadiness and velocity. The following gives comparative data for the stations in this area :—

Station.	Mean steadiness.			Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual percentage, December 1901.	Normal percentage, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
				°	°			
Salem . . .	66	50	+16	N 87 E	N 77 E	76	92	—16
Chitaldroog .	84	82	+ 2	E	N 83 E	171	199	—28
Bangalore . .	87	84	+ 3	N 74 E	N 70 E	195	116	+79
Hassan . .	89	82	+ 7	N 69 E	N 76 E	75	95	—20
Mysore . .	81	84	— 3	N 80 E	N 80 E	237	261	—24
Madras . .	89	79	+10	N 33 E	N 25 E	180	178	+ 2
Bellary . .	84	69	+15	S 83 E	S 86 E	90	76	+14

The following gives comparative data of air movement or the different divisions of the Peninsula :—

PROVINCE OR DIVISION.	MEAN STEADINESS.			MEAN WIND VELOCITY IN MILES PER DIEM.		
	Actual percentage, December 1901.	Normal percentage, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
Central Provinces .	44	48	— 4	65	73	— 8
Berar	63	50	+13	109	106	+ 3
Bombay Deccan . .	65	62	+ 3	249	205	+44.
West Coast . .	43	56	—13	142	151	— 9
Madras Deccan . .	74	67	+ 7	85	79	+ 6
Madras Coast . .	89	79	+10	180	178	+ 2
Mysore . . .	85	83	+ 2	170	165	+ 5
South India . .	66	50	+16	76	92	—16

The winds varied in direction very irregularly from the normal at the hill stations. In Baluchistan and Kashmir the directions were approximately normal, but at Simla, Chakrata and Darjeeling the wind was unusually easterly. The following gives data for these three stations :—

HILL STATION.	MEAN WIND DIRECTION.	
	Actual, December 1901.	Normal, December.
	°	°
Simla	S 44 E	S 11 W
Chakrata	S 25 E	S 64 W
Darjeeling	N 67 E	N 55 W

At Wellington, in the south, the wind was also unusually easterly. This is shown below :—

HILL STATION.	MEAN WIND DIRECTION.	
	Actual, December 1901.	Normal, December.
	°	°
Wellington	S 61 E	S 41 E

At Aden, Perim and in the South-East Trades region the winds were approximately normal.

The principal features of the air motion of the month were hence :—

(1) Increased northing at some of the Bengal stations ;

(2) Increased easting over the Bay and over parts of the Peninsula, and

(3) Increased easting at several of the Himalayan hill stations.

Humidity and Cloud.

The variations of the mean humidity conditions of the month from the normal were large. On the Arakan coast there was an excess of humidity, the greatest excess having been reported from Akyab. The following gives comparative data for this station :—

STATION.	RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	%	%	%
Akyab	83	75	+8

Another area of more or less excessive humidity was shown over part of the south of the Peninsula, the greatest excess in this case having been reported from the Mysore stations. The following gives data :—

STATION.	RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	%	%	%
Chitaldroog	63	56	+7
Mysore	67	62	+5
Bangalore	70	68	+2
Hassan	65	65	•

A third area of excessive humidity was shown over the Lower Indus Valley, but in this area the variations from the normal were slight.

Over the whole of the remainder of India the relative humidity was in defect. The deficiency was moderate to considerable all over the interior of the country and was greatest at the stations for which comparative data are given below:—

Station.	Relative humidity.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	%	%	
Buldana	34	47	—13
Khandwa	39	50	—11
Nagpur	42	52	—10
Akola	43	51	—8

A second area of considerable deficiency of relative humidity was shown over the Andaman Sea, within which the mean relative humidity was 5 per cent. in defect at the two following stations:—

Station.	Relative humidity.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	%	%	
Port Blair	74	79	— 5
Diamond Island	68	73	— 5

The air was abnormally dry at the Bay Islands and the Burma coast stations (with the exception of Akyab), while the mean temperature was generally above the normal, so that the relative humidity was low. The following gives data:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Port Blair	·786	·827	—·041	74	79	—5
Cocos Island	·657	·680	—·023	69	71	—2
Rangoon	·606	·651	—·045	70	72	—2
Diamond Island	·656	·683	—·027	68	73	—5

At Chittagong and Akyab the aqueous vapour tension was in excess, the mean temperature lower than usual and the relative humidity in considerable to slight excess. This is shown below:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Chittagong	·525	·522	+·003	78	76	+2
Akyab	·630	·588	+·042	83	75	+8

Over Bengal, the Gangetic Plain and Upper India the air was drier than usual, while the mean temperature was generally higher than the normal. In consequence the relative humidity was everywhere in defect and at some stations by considerable amounts. The following gives data:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal December 1901.
	"	"	"	%	%	
Calcutta	·426	·432	—·006	66	70	— 4
Saugor Island	·476	·496	—·020	71	73	— 2
False Point	·490	·496	—·006	71	74	— 3
Hazaribagh	·273	·274	—·001	49	52	— 3
Darbhanga	·390	·422	—·032	66	73	— 7
Allahabad	·322	·340	—·018	61	66	— 5

In the Lower Indus Valley the air contained more vapour than usual and notwithstanding the high temperature prevailing the relative humidity was in excess of the normal. The following gives data:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Jacobabad	·260	·237	+·023	51	47	+4
Kurrachee	·403	·368	+·035	54	53	+1

The mean vapour pressure of the month was only slightly below the normal at stations in Rajputana, but abnormally

high temperatures prevailed and the relative humidity was in considerable defect. This is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Jaipur . . .	·254	·271	—·017	41	49	—8
Deesa . . .	·226	·254	—·028	28	36	—8

The following gives comparative data of humidity for the Bay Islands, Burma and the different divisions of Northern India:—

PROVINCE OR DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Bay Islands . .	·722	·754	—·032	72	76	—4
Burma . . .	·631	·641	—·010	74	74	0
Bengal . . .	·476	·484	—·008	72	73	—1
Bihar . . .	·390	·422	—·032	66	73	—7
Chota Nagpur .	·273	·274	—·001	49	52	—3
Orissa . . .	·490	·496	—·006	71	74	—3
North-Western Provinces.	·273	·295	—·022	59	64	—5
Punjab . .	·240	·260	—·020	55	60	—5
Sind . . .	·332	·303	+·029	53	50	+3
Rajputana . .	·240	·263	—·023	35	43	—8

The air contained less vapour than usual in the Deccan except at Belgaum, and as the mean temperature was generally excessive, the deficiency in the relative humidity was considerable to large. The following gives data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Belgaum . . .	·385	·37	+·013	53	50	+3
Sholapur . . .	·330	·372	—·042	40	48	—8
Poona . . .	·291	·324	—·033	42	43	—1
Akola . . .	·267	·331	—·064	43	51	—8
Buldana . . .	·242	·324	—·082	34	47	—13
Khandwa . . .	·261	·319	—·058	39	50	—11
Nagpur . . .	·278	·349	—·071	42	52	—10

Along the West Coast both the absolute and relative humidities were in defect, as is shown below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Bombay . . .	·596	·615	—·019	63	69	—6
Karwar . . .	·591	·603	—·012	63	67	—4

In South India the variations in the mean humidity amounts were irregular, at Chitaldroog and Mysore both the absolute and relative humidities were in excess, at Bangalore and Madras the absolute humidity was in defect but the relative humidity in excess, at Hassan the relative humidity was exactly normal, while at the remaining stations both the absolute and relative humidities were in defect. Comparative data are given below:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual, from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Salem	·587	·589	—·002	69	71	—2
Chitaldroog . . .	·468	·419	+·049	63	56	+7
Bangalore . . .	·450	·455	—·005	70	68	+2
Hassan . . .	·429	·452	—·023	65	65	0
Mysore . . .	·476	·454	+·022	67	62	+5
Madras . . .	·703	·704	—·001	81	79	+2
Bellary . . .	·425	·467	—·042	53	58	—5

The following gives mean humidity data for the different divisions of the Peninsula :—

PROVINCE OR DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation, of actual from normal, December 1901.	Actual, December 1901.	Normal, De m-ber.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Central Provinces .	·270	·335	—·065	41	52	—11
Berar . . .	·255	·328	—·073	39	50	—11
West Coast . .	594	·610	—·016	63	68	—5
Bombay Deccan .	·335	·356	—·021	45	47	—2
Madras Deccan .	·425	·467	—·042	53	58	—5
Madras Coast .	·703	·704	—·001	81	79	+2
Mysore . .	·456	·445	+·011	66	62	+4
South India . .	·587	·589	—·002	69	71	—2

At all the hill stations with the exception of Srinagar where the surrounding conditions are peculiar, both the absolute and relative humidities, on the mean of the month, were in defect. The deficiency was moderate or slight in the Himalayas, where temperature was lower than usual but was considerable to large in the central and southern hill districts. The following gives data for a few representative stations :—

HILL STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Quetta . . .	·142	·151	—·009	55	57	—2
Leh	·044	·080	—·036	40	63?	—23?
Srinagar . . .	·193	·175	+·018	81	80	+1
Simla	·116	·137	—·021	42	45	—3
Chakrata . . .	·136	·151	—·015	46	51	—5
Ranikhet . . .	·184	·201	—·017	55	58	—3
Katmandu . .	·262	·267	—·005	70	73	—3
Mount Abu . .	·205	·215	—·010	36	42	—6
Pachmarhi . . .	·227	·275	—·048	46	55	—9
Chikalda . . .	·243	·303	—·060	40	51	—11
Wellington . .	·334	·352	—·018	69	77	—8

At Aden the air was drier than usual. This is shown below: —

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Aden . . .	·586	·634	—·048	65	69	—4

At the Seychelles and Zanzibar the mean humidity conditions were about the normal, but at Mauritius both the absolute and relative humidities were above the average. The following gives data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
	"	"	"	%	%	
Zanzibar . .	·854	·857	—·003	78	78	0
Seychelles . .	·803	·811	—·008	83	81	+2
Mauritius . .	·711	·687	+·024	76	73	+3

The variations in the amount of cloud were very different in general character to those of humidity, the only important parallelism in the two elements having been the deficiency over the Bay area.

Cloud was in general defect in two areas, the first including Sind, the Punjab and the submontane regions of Northern India, the second including the Bay area. The deficiency was as much as 1·3 at Ludhiana and 1·1 at Lahore, but was less than 1·0 at all the other stations. Over the whole of the remainder of India the cloud amount was in excess, the amount of the excess having been greatest over the interior of India and as much as 2·2 at Akola.

The mean cloud amount of the month varied irregularly from the normal over the Bay Islands and the Burma and Chittagong coasts. At three stations the cloud was in

excess, if the estimates at Cocos Island be correct, and at three it was in defect. The following gives comparative data :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
Rangoon	4·3	2·9	+1·4
Cocos Island	4·2	3·5	+0·7
Chittagong	2·6	2·2	+0·4
Akyab	1·4	2·3	−0·9
Diamond Island	2·6	3·4	−0·8
Port Blair	3·9	4·7	−0·8

Along the Orissa and Madras coasts and inland as far as Bangalore the sky, on the mean of the month, was freer of cloud than usual, but the variations were comparatively small. This is shown below :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
False Point	2·0	2·5	−0·5
Madras	5·1	5·4	−0·3
Bangalore	3·3	3·9	−0·6

Over the submontane regions of Northern India from Darbhanga to Peshawar the cloud amount was in defect, the maximum deficiency having been reported from Ludhiana. The following gives comparative data :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
Darbhanga	0·7	0·9	−0·2
Roorkee	1·6	2·2	−0·6
Dehra Dun	2·5	2·6	−0·1
Ludhiana	1·9	3·2	−1·3
Peshawar	2·8	3·5	−0·7
Lahore	1·3	2·4	−1·1

In Sind which, it will be remembered, was an area of slightly excessive humidity, the cloud amount was in slight defect, as is shown in the following statement :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
Jacobabad	1·8	2·2	−0·4
Kurrachee	1·7	1·8	−0·1

Over Bengal, the North-Western Provinces, the Central Provinces, Rajputana and North Bombay the cloud amount was in more or less considerable excess. The excess was greatest across the head of the Peninsula from Saugor Island to Bombay and was absolutely greatest over Berar, so that the areas of greatest cloud excess and of greatest humidity deficiency coincided to a very large extent. The following gives cloud variation data for the stations within this large area of excess :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
Saugor Island	3·6	2·3	+1·3
Hazaribagh	3·1	2·1	+1·0
Allahabad	2·8	1·5	+1·3
Nagpur	3·5	2·3	+1·2
Akola	3·9	1·7	+2·2
Khandwa	3·0	1·8	+1·2
Bombay	3·0	1·8	+1·2

Cloud was in moderate to considerable excess of the normal over the Peninsula except along the East coast. The excess was greatest and more than 1·0 in amount at the stations for which comparative data are given below :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
Bellary	5·6	3·7	+1·9
Belgaum	4·1	2·6	+1·5
Mysore	5·7	3·8	+1·9
Salem	5·5	4·3	+1·2

The mean cloud amount of the month was in defect at all the hill stations except Mount Abu, Pachmarhi and Ranikhet. The excess was greatest at Mount Abu and the deficiency greatest at Srinagar. The following gives comparative data for the hill stations :—

Station.	Mean cloud amount.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
Mount Abu	3·4	1·7	+1·7
Pachmarhi	3·1	2·1	+1·0
Ranikhet	2·8	2·6	+0·2
Srinagar	3·5	5·3	−1·8
Quetta	2·0	2·9	−0·9
Leh	4·5	5·6	−1·1
Simla	3·4	3·9	−0·5
Chakrata	3·0	3·1	−0·1
Katmandu	2·3	2·8	−0·5
Darjeeling	4·2	4·3	−0·1
Chikalda	2·2	2·4	−0·2
Wellington	4·5	5·4	−0·9

The sky was practically cloudless, the mean cloud amount of the month having been less than 1·0 at Darbhanga (0·7), while it was most cloudy over parts of Madras. The following gives comparative data for the stations at which the mean cloud amount exceeded 5·0 :—

Station.	Mean cloud amount.
	Actual, December 1901.
Mysore	5·7
Bellary	5·6
Salem	5·5
Madras	5·1

At Aden and Perim the cloud amount, on the mean of the month, was in slight defect of the normal, while in the South-East Trades region the variations in the cloud amount were irregular, Zanzibar reporting a considerable excess and the Seychelles a slight deficiency, as is shown below :—

Station.	Mean cloud amount.		
	Actual, December 1901.	Normal, December.	Variation of actual from normal, December 1901.
Aden	3·3	3·4	−0·1
Perim	1·2	1·6	−0·4
Zanzibar	5·6	3·9	+1·7
Seychelles	6·5	6·8	−0·3

Rainfall.

December is usually the month of least rainfall in India. The normal rainfall of the month is less than an inch in amount over the whole country with the exception of the coast districts of South Madras. The average rainfall of the month slightly exceeds 10 inches at the South Coromandel coast stations but diminishes rapidly both northwards and inland and is less than 1 inch in amount to the west of a line joining Madura, Coimbatore, Salem and Cuddapah and is less than three or four tenths of an inch over the whole of Northern and Central India and the Deccan.

The rainfall of December 1901 was less than one-tenth of an inch in amount over the greater part of the Indian region including Tenasserim, Lower and Upper Burma, Assam (except Upper Assam), Bengal (except North Bengal,) the greater part of the North-Western Provinces and of the Punjab, Rajputana, Sind, the central districts of India and the Peninsula north of Lat. 16° N. It exceeded one-tenth of an inch in amount over the submontane districts of Northern India, Central Burma, part of Gujarat and the southern half of the Peninsula and was absolutely greatest at Madras.

There were two rainfall periods over India during the month which were as follows :—

1st:—The 8th to the 12th, when Southern India received first showers and subsequently moderate to heavy rain from a cyclonic storm, and

2nd:—The 27th and 28th, when snow was received on the hills and rain over Upper India, mainly in the submontane districts.

In addition to these two periods of rainfall light local showers were received in South India and Assam on the 1st and 2nd, in Burma on the 6th, in the Himalayas on the

13th and 14th, in Gujarat on the 18th and in South India from the 18th to the 21st.

The rainfall of the month was in excess of the normal in the Bengal Hills, in the west submontane and hill districts of the North-Western Provinces, in Malabar, in Central Madras, and in the south and central divisions of the East coast. It was in defect in all other divisions.

The chief abnormal features of the rainfall of the month were :—

(a) Slightly increased rainfall in the hill and submontane districts of Northern India;

(b) The heaviness of the rainfall over the southern half of the Peninsula, and

(c) The absence of even the small normal rainfall of the month over the remainder of the country.

The following table gives mean actual, mean normal and variation rainfall data for the 56 meteorological divisions into which India is divided :—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, December 1901.	Average normal, December.	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.
				Inches.	Inches.	Inch.
Burma	Tenasserim	0·2	...	0·15	...	...
	Lower Burma (Deltaic)	0·2	...	0·04	...	...
	Central do.	0	...	0·02	...	...
	Upper do.	0·2	...	0·09	0·31	−0·22
	Arakan	0·6	...	0·12	...	...
Bengal and Assam	Eastern Bengal	0	0·4	0	0·29	−0·29
	Assam (Surma)	0	0·5	0	0·39	−0·39
	Do. (Hills)	0·1	0·8	0·04	0·52	−0·48
	Do. (Brahmaputra)	0·3	1·0	0·09	0·41	−0·32
	Deltaic Bengal	0	0·3	0	0·18	−0·18
	Central do.	0	0·2	0	0·11	−0·11
	North do.	0·2	0·2	0·05	0·10	−0·05
	Bengal Hills	0	0·7	0·51	0·25	+0·26
	Orissa	0	0·5	0	0·31	−0·31
	Chota Nagpur	0	0·3	0	0·23	−0·23
	Bihar (South)	0	0·2	0	0·15	−0·15
	Do. (North)	0	0·3	0	0·10	−0·10
North-Western Provinces and Oudh.	North-Western Provinces (East)	0	0·4	0	0·26	−0·26
	Oudh (South)	0·3	0·6	0·07	0·41	−0·34
	Do. (North)	0·7	0·6	0·16	0·38	−0·22
	North-Western Provinces (Central)	0·4	0·5	0·14	0·35	−0·21
	Do. do. (West)	0·8	0·5	0·19	0·34	−0·15
	Do. do. (Submontane, East)	0	0·4	0	0·20	−0·20
	Do. do. (Do. West)	1·5	0·8	0·57	0·47	+0·10
	Do. do. (Hills)	1·9	1·1	1·07	0·52	+0·55
Punjab and North-West Frontier Province.	Punjab (South-East)	0·5	0·6	0·18	0·30	−0·12
	Do. (South)	0·4	0·5	0·12	0·27	−0·15
	Do. (Central)	0	0·5	0	0·30	−0·30
	Do. (Submontane)	0·4	0·8	0·14	0·58	−0·44
	Do. (Hills)	1·0	1·3	0·65	0·88	−0·23
	Do. (North)	0	1·0	0	0·61	−0·61
	Do. (West)	0	0·3	0	0·15	−0·15
Bombay and Malabar Coast Districts (Madras).	Malabar	2·7	1·1	1·59	0·61	+0·98
	Travancore	2·8	...	1·63	...	...
	Madras (South Central)	2·8	2·2	1·19	1·28	−0·09
	Coorg	2·1	...	0·93	...	...
	Mysore	1·6	1·1	0·58	0·60	−0·02
	Konkan	0·2	0·3	0·09	0·14	−0·05
	Bombay Deccan	0·1	0·7	0·03	0·41	−0·38
	Khandesh	0	0·8	0	0·56	−0·56

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, December 1901.	Average normal, December.	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.
				Inches.	Inches.	Inches.
Central Provinces and Berar.	Berar	0	...	0·00	0·54	−0·54
	Central Provinces (West)	0	0·5	0·00	0·52	−0·52
	Do. do. (Central)	0	0·5	0·00	0·33	−0·33
	Do. do. (East)	0	0·5	0·00	0·30	−0·30
Bombay (North)	Gujarat	0	0·1	0·00	0·06	−0·06
	Kathiawar and Cutch	0	0·2	0·01	0·04	−0·03
	Sind	0·2	...	0·04	0·11	−0·07
	Baluchistan Hills	0	...	0·00	0·98	−0·98
Rajputana and Central India.	Central India (East)	0·3	...	0·09	0·39	−0·30
	Rajputana (East), Central India (West)	0·2	...	0·03	0·30	−0·27
	West Rajputana	0·1	...	0·03	0·13	−0·10
Madras	East Coast (North)	0·2	0·6	0·05	0·60	−0·55
	Madras Central	1·2	0·8	0·61	0·43	+0·18
	East Coast (Central)	3·3	2·2	4·43	2·07	+2·36
	East Coast (South)	5·3	5·2	6·64	4·98	+1·66
	Madras South	3·3	4·5	2·03	3·55	−1·52

Practically no rain fell over Tenasserim and Lower and Upper Burma during the month. There were showers in several districts on the 5th and 6th, but the general rainfall of the province was even lighter than usual. The following gives comparative data for the different divisions:—

Division.	Rainfall.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Tenasserim	0·15	...	...	...
Lower Burma (Deltaic)	0·04	...	...	...
Central Burma	0·02	...	...	...
Upper Burma	0·09	0·31	−0·22	−71
Arakan	0·12	...	...	...

Parts of Assam received light showers between the 1st and the 3rd and again between the 13th and the 16th, but the total fall of the province was only 10% of the small normal fall of the month.

North Bengal had some showers on the 13th and 14th when Kalimpong received an amount of 2·07 inches in 24 hours, but the whole of the remainder of the province was actually or practically rainless.

The North-Western Provinces, with the exception of the east and the east submontane divisions, received rain on the 27th and 28th. In Oudh, in the central division and in the west division, the rainfall was light exceeding 0·50″ in 24 hours only at a few stations, but in the submontane division the falls were heavier and equalled or exceeded 1 inch in 24 hours at the following places:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Garhwal	Lansdowne	27th December	1·10
Dehra Dun	Chakrata Tahsil	,, ,,	1·05
Almora	Lohaghat	,, ,,	1·00
Naini Tal	Kathgodam	,, ,,	1·00
Moradabad	Sambhal	,, ,,	1·00
Almora	Champawat	28th ,,	1·40
Naini Tal	Naini Tal	,, ,,	1·19
Bareilly	Pandhera	,, ,,	1·00

The following gives comparative rainfall data for the eight divisions of the North-Western Provinces :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.	Average actual, December 1901.	Average normal, December.
	Inches.	Inch.	Inch.			
North-Western Provinces, East.	0	0·26	—0·26	—100	0	0·4
South Oudh . .	0·07	0·41	—0·34	—83	0·3	0·6
North Oudh . .	0·16	0·38	—0·22	—58	0·7	0·6
North-Western Provinces, Central.	0·14	0·35	—0·21	—60	0·4	0·5
North-Western Provinces, West.	0·19	0·34	—0·15	—44	0·8	0·5
North-Western Provinces, East Submontane.	0	0·20	—0·20	—100	0	0·4
North-Western Provinces, West Submontane	0·57	0·47	+0·10	+21	1·5	0·8
North-Western Provinces, Hills.	1·07	0·52	+0·55	+106	1·9	1·1

There was only one fall of rain in the Punjab during the month, *viz.*, on the 26th and 27th. The rainfall extended to all divisions except the West and North-West Frontier Province where there was no rainfall throughout the month. The rainfall was generally light or moderate and exceeded 0·75 inch only at the following places :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Simla . . .	Kot Khai . . .	26th December	0·98
	Kilba . . .	» »	0·95
Umballa . . .	Kasauli . . .	27th »	1·23
Simla . . .	Simla . . .	» »	0·95
Kohat . . .	Sampla . . .	» »	0·84
Kangra . . .	Plach . . .	» »	0·77

The total rainfall of the month was in defect of the normal in all parts of the province, as is shown by the following comparative data of the different divisions :—

Division.	Rainfall.				Number of rainy days.	
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.	Average actual, December 1901.	Average normal, December.
	Inch.	Inch.	Inch.			
South-East Punjab .	0·18	0·30	—0·12	— 40	0·5	0·6
South Punjab . .	0·12	0·27	—0·15	— 56	0·4	0·5
Central Punjab . .	0	0·30	—0·30	—100	0	0·5
Punjab Submontane .	0·14	0·58	—0·44	— 76	0·4	0·8
Punjab Hills . .	0·65	0·88	—0·23	— 26	1·0	1·3
North Punjab . .	0	0·61	—0·61	—100	0	1·0
West Punjab . .	0	0·15	—0·15	—100	0	0·3

Baluchistan was practically rainless throughout the month. Kashmir had three showery periods. The first was on the 11th and 12th, the second on the 19th and 20th and the third between the 26th and the 31st. The falls were in all cases light and so far as can be judged only about half the normal fall was received.

Western Rajputana received a few light and quite unimportant showers between the 19th and the 25th. Eastern Rajputana like the Punjab and the North-Western Provinces, and from the same cause, received showers on the 26th and 27th. The fall in this area was, however, much lighter and was less than the small normal fall. The following gives comparative data for some of the larger states :—

State.	Rainfall.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Jaipur	0·05	0·33	—0·28	— 85
Alwar	0	0·45	—0·45	—100
Bharatpur	0·02	0·29	—0·27	— 93
Karauli	0·11	0·33	—0·22	— 67
Kotah	0·06	0·25	—0·19	— 76
Ajmer-Merwara . . .	0·02	0·28	—0·26	— 93
Udaipur	0	0·13	—0·13	—100

Part of Gwalior and of Bundelkhand received light showers on the 26th and 27th under the same conditions as Rajputana, but the remaining states of Central India were rainless throughout the month. This is shown in the following table which gives comparative data of the larger states:—

STATE.	RAINFALL.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inch.	Inch.	Inch.	
Indore	0	0·20	−0·20	−100
Rutlam	0	0·23	−0·23	−100
Bhopal Agency	0	0·45	−0·45	−100
Gwalior	0·18	0·30	−0·12	− 40
Rewah	0	0·45	−0·45	−100
Bundelkhand	0·04	0·48	−0·44	− 92

In the Central Provinces there was no rain throughout the month and in Berar the weather was equally dry.

Mysore had two showery periods. During the first, which occurred on the 1st and 2nd, rain was received in all the districts and falls of 1″ or more in 24 hours were recorded at the following stations:—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
KOLAR	Bagepalli	1st December	1·10
TUMKUR	Gubbi	,, ,,	1·00
BANGALORE	Magadi	2nd ,,	1·30
HASSAN	Belur	,, ,,	1·00

The second showery period lasted from the 9th to the 12th. The rainfall was light except in the Kolar district where the following falls exceeding 1″ in 24 hours were recorded:

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
KOLAR	Mulbagal	10th December.	1·78
	Bowringpet	,, ,,	1·18
	Srinivaspur	,, ,,	1·18
	Kolar	,, ,,	1·03

The rainfall of the province was very irregularly distributed, as is shown by the following comparative statement for the eight districts:—

DISTRICT.	RAINFALL.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inches.	Inch.	Inch.	
Bangalore	0·97	0·59	+0·38	+64
Kolar	1·32	0·77	+0·55	+71
Tumkur	0·52	0·54	−0·02	− 4
Mysore	0·30	0·68	−0·38	−56
Hassan	0·74	0·92	−0·18	−20
Shimoga	0·07	0·35	−0·28	−80
Kadur	0·59	0·72	−0·13	−18
Chitaldroog	0·04	0·25	−0·21	−84

Coorg, like Mysore, received showers on the 1st and between the 9th and the 12th, but the amounts were generally small.

In the Bombay Presidency only a few light scattered showers were recorded. In the Konkan the North Kanara was the only district which received rain, light showers falling there on the 1st and 2nd and 12th. In the Karnatak there were light showers on the 13th and 14th in all districts except Bijapur. In the Deccan, Khandesh and Gujarat there was no rain, though in parts of Kathiawar a few light, unimportant showers were received on the 18th. Sind had a few light showers between the 18th and 21st.

In Madras the rainfall was heavier and more general than in other parts of the country. There were two periods of rainfall in Malabar. The first lasted from the 1st to the 4th, and during this period the falls of rain were generally light, only exceeding 1·25″ in 24 hours at the following places:—

DISTRICT.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
TRAVANCORE (STATE)	Kunnattur	3rd December.	1·91
	Variyur	,, ,,	1·88
MALABAR	Kuttiadi	,, ,,	1·29
TRAVANCORE (STATE)	Changanacherry	,, ,,	1·27
	Meenachil	4th ,,	2·58

The second rainfall period, which coincided with the passage over the south of the Peninsula of the cyclonic

storm from the Bay, lasted from the 9th to the 12th and during this period the following amounts exceeding 1·50 inches in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Travancore State	Muvattupuzha	10th December.	1·71
Malabar	Chowghat	11th "	2·13
	Cannanore	" "	1·66
Travancore State	Meenachil	12th "	3·36
	Parur	" "	2·85
Malabar	Payyanur	" "	2·25
Travancore State	Muvattupuzha	" "	1·86
Malabar	Tellicherry	" "	1·70

The general rainfall of the division exceeded the normal, as is shown by the following comparative data for the different districts :—

District.	Rainfall.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inches.	Inch.	Inches.	
Malabar	1·77	0·76	+1·01	+133
South Canara	1·23	0·40	+0·83	+208

The Madras South division received rain under the same conditions as Malabar. There were two periods of general rain, while scattered local showers occurred between the 18th and the end of the month. The first period of general rain occurred on the 2nd and 3rd and the second between the 8th and the 12th. During the former period the rainfall was light, but during the latter the following amounts exceeding 2″ in 24 hours were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Madura	Mudukulattur	10th December.	4·40
	Paramagudi	" "	3·25
	Sivaganga	" "	3·23
	Manakkudi	" "	2·55

The total rainfall of the month was lighter than usual, as is shown by the following comparative data of the districts forming the division :—

District.	Rainfall.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madura	3·02	3·40	—0·38	—11
Tinnevelly	0·84	3·73	—2·89	—78

The division of Madras South-Central also had two periods of general rain, but after the conclusion of the second period, which ended on the 12th, the rainfall ceased and there were no showers during the latter half of he month. The rainfall was moderately heavy in parts of Salem on the 10th and the total rainfall of the month was about normal.

The following gives data for the two districts included in this division :—

District.	Rainfall.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Salem	1·54	1·39	+0·15	+11
Coimbatore	0·83	1·32	—0·49	—37

The Cuddapah district of the central division of Madras received light showers on the 1st and moderate showers between the 8th and the 11th, but the Anantapur, Bellary and Kurnool districts received little or no rain during the month. The principal falls in Cuddapah, exceeding 1 inch in 24 hours, were as follows :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cuddapah	Chitvel	9th Dec.	1·78
	Madanapalle	" "	1·14
	Vayalpad	" "	1·06
	Chitvel	10th "	2·21
	Piler	" "	1·60
	Badvel	" "	1·20

The total rainfall of the division exceeded the normal only in the Cuddapah district, as is shown by the following data for the different districts:—

District.	Rainfall.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inches.	Inches.	Inch.	
Cuddapah	1·69	1·04	+0·65	+62
Anantapur	0·23	0·23	0	0
Bellary	0·03	0·15	—0·12	—80
Kurnool	0·11	0·17	—0·06	—35

The East coast north division had practically no rain during the month; but the central division received a well marked general fall between the 8th and 11th due to the Bay cyclone. During this fall the following amounts exceeding four inches in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Nellore	Venkatagiri	9th December.	4·07
	Tada	10th ,,	7·25
	Sulurpeta	,, ,,	6·15
	Dugaraspatnam	,, ,,	4·75
	Kota	,, ,,	4·70
	Gudur	,, ,,	4·66
	Venkatagiri	,, ,,	4·60

The total fall of the month was about twice as heavy as usual, as is shown by the following comparative data:—

District.	Rainfall.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Nellore	4·43	2·07	+2·36	+114

The south division of the East coast had two general falls of rain, the first between the 1st and the 3rd, the second between the 8th and the 11th. During the former rainy period the following falls of rain exceeding 2″ in 24 hours were registered:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chingleput	Saidapet	1st December	2·92
North Arcot	Wandiwash	,, ,,	2·37
	Polur	,, ,,	2·18
	Tiruvettiyur	,, ,,	2·14
South Arcot	Merkanam	,, ,,	2·14
Tanjore	Nannilam	2nd ,,	3·45
	Kudavasal	,, ,,	3·40
	Pallukkottai	,, ,,	3·18
Trichinopoly	Iluppur	,, ,,	3·11
	Trichinopoly	,, ,,	2·99
	Lalgudi	,, ,,	2·90
Tanjore	Vallam	,, ,,	2·86
	Tirukattupalli	,, ,,	2·60
	Tanjore	,, ,,	2·57
	Tiruvalur	,, ,,	2·54
	Muttupet	,, ,,	2·24
	Tiruvadi	,, ,,	2·20
	Negapatam	,, ,,	2·10
	Nannilam	3rd ,,	2·10

During the second rainy period which was due to the cyclonic storm previously noticed the rainfall was heavy to very heavy and the following amounts exceeding 5 inches in 24 hours were recorded:—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chingleput	Kovelong	8th December	5·11
	Poonamallee	10th ,,	14·82
	Sathiavedu	,, ,,	13·32
	Tiruvallur	,, ,,	13·20
	Cheyur	,, ,,	11·25
	Ponneri	,, ,,	9·99
	Conjeeveram	,, ,,	9·15

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
NORTH ARCOT	Arcot	10th December.	8·50
	Tiruttani	" "	8·35
	Kalahasti	" "	8·29
	Arkonam	" "	8·15
CHINGLEPUT	Saidapet	" "	7·99
NORTH ARCOT	Walajah	" "	7·42
	Puttur	" "	7·24
CHINGLEPUT	Chingleput	" "	5·92
NORTH ARCOT	Vellore	" "	5·90
CHINGLEPET	Madurantakam	" "	5·03

The total rainfall of the division was in excess of the normal in the Madras, Chingleput and North Arcot districts, as is shown by the following comparative data for the different districts included in this division :—

DISTRICT.	RAINFALL.			
	Average actual, December 1901.	Average normal, December.	Variation of actuul from normal, December 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madras	14·67	5·28	+9·39	+178
Chingleput	13·30	5·05	+8·25	+163
North Arcot	8·01	2·63	+5·38	+205
South Arcot	3·95	5·20	—1·25	— 24
Tanjore	5·54	7·65	—2·11	— 28
Trichinopoly	2·19	3·31	—1·12	— 34

The scanty rainfall noticed over Western India and Baluchistan appears to have been as strongly marked over Persia as over India. The following gives data for the Persian and Arabian stations and shows that over nearly the whole of that area the weather throughout the month was unusually dry and the rainfall of the month much below the normal:—

STATION.	RAINFALL.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jask	0	0·78	—0·78	—100
Bushire	1·49	3·24	—1·75	— 54
Teheran	0·41	1·37	—0·96	— 70
Ispahan	0·53	0·54	—0·01	— 2
Baghdad	0·20	1·64	—1·44	— 88
Muscat	0·52	0·26	+0·26	+100
Aden	0·33	0·37	—0·04	— 11

Over the South-East Trades region also similar conditions prevailed and the rainfall of Zanzibar and the Seychelles was in defect of the normal of the month. This is shown below:

STATION.	RAINFALL.			
	Average actual, December 1901.	Average normal, December.	Variation of actual from normal, December 1901.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Zanzibar	4·16	5·20	—1·04	—20
Seychelles	9·42	15·09	—5·67	—38
Mauritius	6·10	4·75	+1·35	+28

W. L. D.

Table

Abstract of Observations taken at 8 A.M. at 227 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of barometer above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	I.—Burma Coast and Bay Islands.				+·019								84·3	−0·9	67·1	−0·6	75·7	−0·8	17·2					27·1
1	Tenasserim and Bay Islands.	Car Nicobar	25	29·893		29·846	29·982	9th	29·806	31st	·176	79·2	84·1		76·5		80·3		7·6	85·8	29th	69·2	14th	16·6
		Port Blair	61	29·944	+·026	29·936	29·987	7th & 10th.	29·891	25th	·096	79·2	86·5		75·7*		81·2*		10·8	88·7	29th	70·9	13th	17·8
		Mergui	96	29·926	?	29·954	29·989	7th	29·853	2nd	·136	73·2	85·5	−1·5	66·7	+0·8	76·1	−0·4	18·8	90·1	31st	59·3	11th & 12th.	30·8
		Tavoy	26	30·015	+·011	29·972	30·079	7th	29·942	2nd	·137	69·2	86·9	−1·0	62·7	−1·9	74·8	−1·5	24·2	90·2	1st	55·5	11th & 13th.	34·7
		Moulmein	94	29·955	+·013	29·989	30·023	7th	29·881	25th & 26th.	·142	70·7	87·1	−0·1	65·9	−0·6	76·5	−0·4	21·2	91·0	31st	61·4	20th	29·6
2	Lower Burma	Rangoon	41									68·8	85·6	−1·7	65·5	−2·2?	75·6	−2·0?	20·1	91·1	1st	60·8	26th	30·3
		Bassein	27	30·032	+·023	29·955	30·085	6th	29·947	25th	·138	67·8	83·3	−1·1	65·5	+0·2	74·2	−0·5	17·8	86·1	1st, 3rd & 9th.	60·8	26th	25·3
		Diamond Island	41	29·996	+·016	29·972	30·054	7th	29·925	30th	·129	76·9	83·8	−0·5	72·6	+0·6	78·2	+0·1	11·2	88·9	9th	68·2	30th	20·7
5	Arakan	Akyab	20	30·045	+·016	30·008	30·096	17th	29·966	25th	·130	65·7	80·7	−1·2	62·0	−2·4	71·4	−1·8	18·7	84·4	8th	55·1	24th	29·3
3	Central Burma	Toungoo	183	29·880	+·025	30·010	29·939	18th	29·789	26th	·150	64·2	79·7	?	57·8	−4·8?	68·8	?	21·9	87·1	1st	51·1	31st	36·0
	II.—Burma Inland				+·015								80·1	−1·9	56·7	+0·5	68·4	−0·8	23·4					36·4
3	Central Burma.	Thayetmyo	130	29·953	+·029	30·030	30·016	4th	29·862	26th	·154	66·0	84·1	?	57·6	−1·3	70·9	?	26·5	89·7	1st	51·6	24th	38·1
4	Upper Burma	Minbu	165	29·928	?	30·043	29·999	4th	29·843	25th & 26th.	·156	65·2	82·5	−1·4	60·1	+0·4	71·3	−0·5	22·4	89·6	5th	53·5	31st	36·1
		Yamethin	657	29·409	+·011	30·045	29·463	4th	29·323	25th & 26th.	·140	62·9	83·7	?	56·9	+0·5	70·3	?	26·8	89·9	1st	49·2	31st	40·7
		Mandalay	250	29·846	?	30·057	29·918	4th	29·742	25th	·176	64·4	82·6	+0·5?	58·5	−0·3?	70·6	+0·1	24·1	88·5	4 days	52·3	31st	36·2
		Kindat	377	29·743	+·019	30·097	29·822	4th	29·657	1st	·165	58·8	73·8	−1·9	55·6	0	64·7	−1·0	18·2	80·3	4th	48·8	30th	31·5
		Bhamo	381	29·709	−·001	30·069	29·786	18th	29·607	25th	·179	55·4	73·9	−2·5	51·4	+1·0	62·7	−0·8	22·5	79·5	1st & 2nd.	43·7	24th	35·8
4 a)	Burma Hill Stations.	Maymyo		26·542			26·624	4th	26·454	25th	·170	52·8	70·3		41·5		55·9		28·8	75·0	30.h	35·8	22nd & 25th.	39·2
		Taunggyi										54·4	66·7	?	44·0	?	55·4	?	22·7	73·7	30th	36·1	23rd	37·6
		Lashio										52·6	74·1	+1·0	46·4	−0·9	60·3	+0·1	27·7	78·6	4th	41·1	24th	37·5
	III.—Assam				+·016								73·9	−0·6	53·1	−0·4	63·5	−0·5	20·8					30·3
7	Surma	Silchar	104	30·003	+·028	30·064	30·064	4th	29·919	26th	·145	59·2	79·6	+0·1	54·4	−0·8	67·0	−0·4	25·2	85·4	5th	48·9	25th	36·5
8	Brahmaputra	Sibsagar	333	29·793	+·013	30·106	29·869	4th	29·703	26th	·166	54·4	71·1	−0·6	51·5	+1·0	61·3	+0·2	19·6	75·3	1st, 2nd, 3rd. & 6th.	45·9	25th	29·4
		Dhubri	115	29·992	+·007	30·071	30·056	18th	29·891	26th	·162	58·7	73·4	−1·2	54·4	−1·5	63·9	−1·4	19·0	77·1	5th	49·8	19th	27·3
		Tezpur	252	29·844		30·112	29·924	4th	29·754	26th	·170	56·1	71·8		54·0		62·9		17·8	76·0	3rd, 4th 5th.	50·0	18th & 19th.	26·0
		Dibrugarh	394	29·781		30·121	29·857	17th	29·685	1st	·172	55·6	73·6		51·2		62·4		22·4	78·1	4th 5th, 6th & 7th.	45·9	19th	32·2
	IV.—Bengal and Orissa				+·019								77·3	+0·2	55·2	+0·2	66·3	+0·2	22·1					31·3
6	East Bengal	Chittagong	87	29·987	+·011	30·026	30·043	7th	29·894	26th	·149	62·9	78·1	+0·2	57·1	−1·3	67·6	−0·6	21·0	82·9	5th	53·1	5 days	29·8
		Noakhali	43	30·041		30·033	30·096	18th	29·973	13th	·123	65·1	77·8		56·5		67·2		21·3	82·0	6th	50·1	27th	31·9
		Comilla	36	30·046		30·031	30·110	18th	29·969	1st	·141	63·0	78·9		55·5		67·3		23·4	84·4	5th	52·1	4 days	32·3
		Sirajganj	49	30·043		30·044	30·104	18th	29·948	26th	·156	58·8	75·8		55·4		65·6		20·4	79·8	8th	49·9	26th	29·9
		Narayanganj	26	30·066	+·026	30·042	30·116	22nd	29·978	26th	·138	62·1	77·8	−0·6	57·0	−0·3	67·4	−0·5	20·8	82·1	6th & 7th.	52·8	25th	29·3
		Barisal	13	?	?	?	30·116	22nd	29·975	26th	·141	64·4	77·6	+0·4	56·6	+0·4	67·1	+0·4	21·0	80·8	8th	50·2	26th	30·6
		Mymensingh	59	30·022?	+·018?	30·036?	30·073	7th	29·941	26th	·132	60·8	75·5	−1·0	56·8	+2·8	66·2	+0·9	18·7	80·0	5th	52·7	24th	27·3
10	Deltaic Bengal	Faridpur	46	30·042		30·038	30·094	18th	29·950	26th	·144	59·3	76·8		54·5		65·7		22·3	81·7	7th.	47·8	25th	33·9
		Jessore	33	30·065	+·018	30·046	30·130	18th	29·982	26th	·148	61·3	76·9	−0·9	54·0	−1·2	65·5	−1·1	22·9	81·1	7th	47·1	26th	34·0
		Calcutta	21	30·086	+·015	30·054	30·156	18th	29·993	26th	·163	61·4	77·6	+1·5	55·9	−0·2	66·8	+0·7	21·7	81·6	2nd	51·1	24th & 27th.	30·5
		Saugor Island	25	30·080	+·014	30·050	30·141	18th	29·989	1st	·152	64·0	77·3	+1·5	58·1	−1·0	67·7	+0·3	19·2	81·0	8th	53·0	30th	28·0
		Krishnagar	47	30·068		30·067	30·127	22nd	29·969	26th	·158	61·6	77·4		54·0		65·7		23·4	80·9	1st	47·7	25th	33·2
		Midnapore	149	29·952		30·057	30·006	18th	29·864	26th	·142	61·1	78·6		55·8		67·3		22·8	83·3	1st	52·6	12th	30·7

* Mean of 29 days.

I.

in India, Burma, etc., in December, 1901.

WIND DIRECTION. Number of Winds from									Wind resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st December to 31st December 1901.	Normal rainfall for period, 1st December to 31st December.	Variation from normal of period, 1st December to 31st December.				
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																				0·90	0·99	−0·77					I.—Burma Coast and Bay Islands.		
		12	13	4					N 76° E	6·1	6·1			78	·782	7·4	5			7·05			7·65			3·18	Car Nicobar	Tenasserim and Bay Islands.	1
	7	12	3	5			2	2	N 43° E	6·6				80	·798	3·2	2			1·32	6·62	− 5·30	1·32	6·62	−5·30	0·93	Port Blair		
31									Calm	2·1	1·9	1·8	+ 6	78	·632	3·4	0	0·70	−0·70	0	0·38	− 0·38	0	0·38	−0·38	0	Mergui.		
31	—								Calm	0·8				85	·613	0·7	0	0·20	−0·20	0	0·06	− 0·06	0	0·06	−0·06	0	Tavoy.		
	2	21	1	1	2			4	N 39° E	2·2	2·4	2·6	− 8	84	·636	1·4	0	0·20	−0·20	0	0·05	− 0·05	0	0·05	−0.05	0	Moulmein.		
														87	·615	3·3	0	0·40	−0·40	0	0·09	− 0·09	0	0·09	−0·09	0	Rangoon	Lower Burma.	2
10	1	13						7	N 16° E	8·3		2·7	+22	87	·591	1·8	1	0·50	+0·50	0·21	0·13	+ 0·08	0·21	0·13	+0·08	0·21	Bassein.		
1	4	20	5					1	N 44° E	5·4	5·4	7·4	− 27	74	·687	2·5	0	0·90	−0·90	0	0·70	− 0·70	0	0·70	−0·70	0	Diamond Island.		
	14	17							N 25° E	2·3	2·2	2·2	0	92	·590	1·5	2	0·70	+1·30	0·43	0·70	− 0·27	0·43	0·70	−0·27	0·29	Akyab	Arakan.	5
11	9	1						10	N 20° W	2·1	2·1	2·3	− 9	90	·553	4·7	0	0·40	−0·40	0·01	0·17	− 0·16	0·01	0·17	−0·16	0·01	Toungoo	Central Burma.	3
																				0·12	0·42	−0·30					II.—Burma Inland.		
	10	10	4			1		6	N 17° E	2·9		3·2	− 9	77	·489	2·1	0	0·40	−0·40	0·03	0·15	− 0·12	0·03	0·15	− 0·12	0·03	Thayetmyo	Central Burma.	2
1	3						1	26	N 42° W	5·3	6·3			81	·515	2·1	1	0·30	+0·70	0·43	0·63	− 0·20	0·43	0·63	− 0·20	0·37	Minbu	Upper Burma.	4
11	14							6	N 13° W	2·7	2·8			85	·495	2·5	1	0·70	+0·30	0·13	0·49	− 0·36	0·13	0·49	− 0·36	0·13	Yamethin.		
	23	4			1	1	1	1	N 1° E					85	·514	1·7	0	0·70	−0·70	0	0·29	− 0·29	0	0·29	− 0·29	0	Mandalay.		
29			2						E	0·9	0·9			95	·482	1·9	9	0·50	−0·50	0	0·51	− 0·51	8	0·51	− 0·51	0	Kindat.		
18	2	8	2		1				N 49° E	1·6	1·9			98	·438	3·6	1	1·00	0	0·12	0·42	− 0·30	0·12	0·42	− 0·30	0·12	Bhamo.		
23	1	4	1				2		N 27° E	1·6				86	·347	2·3	1	0·80	+0·20	0·48	0·45	+ 0·03	0·48	0·45	+ 0·03	0·48	Maymyo	Burma Hill Stations.	4(a)
	1	3	1	8	4	7			S 12° E					72	·310	2.5	1			0·41	0·63	− 0·22	0·41	0·63	− 0·22	0·10	Taunggyi.		
	2	3	4	7		1	4	10	N 7° W	0·3				94	·375	6·8	0			0·08	0·66	− 0·58	0·08	0·66	− 0·58	0·08	Lashio.		
																				0·06	0·37	−0·31					III.—Assam.		
29		1	1						N 66° E	0·8	1·4	1·9	− 26	93	·478	1·4	0	0·80	−0·80	0	0·46	− 0·46	0	0·46	− 0·46	0	Silchar	Surma.	7
17	6	2			2	2		2	N 15° W	1·2	1·1	1·6	−31	100	·429	6·7	1	1·90	−0·90	0·17	0·57	− 0·40	0·17	0·57	− 0·40	0·17	Sibsagar	Brahmaputra.	9
1		14	16						N 69° E	3·8	4·5	4·5	0	93	·464	2·0	0	0·20	−0·20	0	0·07	− 0·07	0	0·07	− 0·07	0	Dhubri.		
		15	14	1		1			N 69° E	1·2	1·3			95	·425	1·9	0	1·00	−1·00	0			0			0	Tezpur.		
	4	13	5	7		1		1	N 65° E	1·1	1·0			92	·598	0·3	0	1·40	−1·40	0·12			0·12			0·06	Dibrugarh.		
																				0·02	0·22	−0·20					IV.—Bengal and Orissa.		
	11	20							N 29° E	3·0	3·0	3·2	− 6	89	·516	2·6‡	0	0·81	−0·81	0	0·85	− 0·85	0	0·85	− 0·85	0	Chittagong.	East Bengal.	6
	19	6	1		1		4		N 3° E	0·6	0·6			87	·532	1·7	0	0·48	−0·48	0	0·38	− 0·38	0	0·38	− 0·38	0	Noakhali.		
22	5		2		1		1		N 14° E	0·6				89	·512	6·7	0	0·45	−0·45	0	0·22	− 0·22	0	0·22	− 0·22	0	Comilla.		
29	2								N	0·5	0·5			91	·454	0·7	0	0·39	−0·39	0	0·11	− 0·11	0	0·11	− 0·11	0	Sirajganj.		
13	3	2	1	1	1		1	9	N 29° W	1·5		1·9	− 21	91	·508	2·81	0	0·44	−0·44	0	0·16	− 0·16	0	0·16	− 0·16	0	Narayanganj		
7	7	4		1		1	1	10	N 17° W	1·4				88	·539	0·3*	0	0·52	−0·52	0	0·60	− 0·60	0	0·60	− 0·60	0	Barisal.		
26	1	1	1				1	1	N	0·7	0·7			91	·481	†	0	0·26	−0·26	0	0·05	− 0·05	0	0·05	− 0·05	0	Mymensingh		
28	3								N	1·0	0·9			93	·477	0·6	0	0·26	−0·26	0	0·08	− 0·08	0	0·08	− 0·08	0	Faridpur	Deltaic Bengal.	10
27	4								N	0·8		1·7	− 53	84	·467	1·6¶	0	0·35	−0·35	0	0·18	− 0·18	0	0·18	− 0·18	0	Jessore.		
12	11					1	1	6	N 22° W	2·8		3·0	− 7	83	·456	2·7	0	0·38	−0·38	0	0·22	− 0·22	0	0·22	− 0·22	0	Calcutta.		
	21	5				1		4	N	6·3		6·0	+ 5	89	·530	3·7*	0	0·58	−0·58	0	0·33	− 0·33	0	0·33	− 0·33	0	Saugor Island.		
3	5	2		1		1	7	11	N 42° W	1·7				83	·457	2·5	0	0·16	−0·16	0	0·10	− 0·10	0	0·10	− 0·10	0	Krishnagar.		
3	18	2					2	6	N 12° W	2·0	1·8			75	·410	1·5	0	0·28	−0·28	0	0·20	− 0·20	0	0·20	− 0·20	0	Midnapur.		

† Wind variable 2. ‡ Mean of 28 days. ‖ Mean of 24 days. ¶ Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 227 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
11	Central Bengal	Bankura	298	29·783		30·050	29·840	18th	29·688	26th	·152	61·2	78·1		55·0		66·6		23·1	82·1	1st	51·6	31st	30·5
		Raniganj	334	29·776		30·032	29·836	22nd	29·685	13th	·151	58·3	78·5		54·3		66·4		24·2	82·4	1st	49·2	31st	33·2
		Burdwan	99	30·010	+·013	30·063	30·074	18th	29·911	26th	·163	61·5	78·6	+0·9	56·6	+0·7	67·6	+0·8	22·0	82·1	1st	51·8	25th	30·3
		Naya Dumka	489	?		?	?		?		?	57·9	76·2		51·9		64·1		24·3	79·4	1st & 6th.	47·0	25th	32·4
		Berhampore	67	30·048	+·019	30·067	30·108	18th	29·952	26th	·156	60·3	76·8	+0·2	55·5	+0·2	66·2	+0·3	21·3	80·2	1st	49·1	24th	31·1
		Rampur Boalia.	70	30·031		30·054	30·098	18th	29·946	13th	·152	60·2	75·8		54·9		65·4		20·9	79·1	7th	49·0	25th	30·1
		Malda	72	30·029		30·057	30·091	18th	29·940	26th	·151	59·2	75·6		53·1		64·4		22·5	79·3	3rd	46·1	25th	33·2
		Bogra	61	30·022		30·039	30·071	18th	29·947	26th	·124	59·1	76·1	−0·8	55·4	+1·8	65·8	+0·5	20·7	80·3	5th & 6th.	50·2	25th	30·1
12	North Bengal	Dinajpur	123	29·972	+·014	30·059	30·040	7th	29·876	26th	·164	55·4	76·7	+0·1	50·9	−0·4	63·8	−0·2	25·8	81·1	5th	45·4	25th	35·7
		Rangpur	123	29·991		30·076	30·058	7th	29·896	26th	·162	58·3	75·7		52·8		64·4		22·9	80·3	5th	48·3	20th & 25th.	32·0
		Jalpaiguri	284	29·823	+·028	30·083	29·884	18th	29·728	26th	·156	57·1	75·2	−0·1	53·6	+1·2	64·4	+0·6	21·6	80·2	5th	50·1	19th, 20th & 24th.	30·1
		Cooch Behar	156	29·964		30·086	30·026	18th	29·870	26th	·156	57·4	75·6		53·9		64·3		21·7	80·4	5th	49·4	18th	31·0
17	North Bihar	Purnea	125	29·991	+·029	30·080	30·047	18th	29·895	26th	·152	52·2	77·0	+1·1	48·7	−0·7	62·9	+0·2	28·3	82·4	4th	41·5	25th	40·9
14	Orissa	Balasore	48	30·076	?	30·072	30·128	22nd	29·981	26th	·147	59·6	78·9	+0·1	55·0	+0·6	67·0	+0·4	23·9	83·4	1st & 2nd.	52·5	6 days	30·9
		False Point	21	30·089	+·020	30·052	30·141	22nd	30·007	26th	·134	63·5	78·4	+1·1	57·4	+0·1	67·9	+0·6	21·0	82·4	1st & 2nd.	53·0	12th & 31st.	29·4
		Cuttack	80	30·031	+·018	30·058	30·097	22nd	29·949	1st	·148	61·4	80·7	−1·3	58·4	+0·1	69·6	−0·6	22·3	85·4	2nd	54·1	12th	31·3
		Puri	20	30·093		30·057	30·158	22nd	30·013	1st & 26th.	·145	65·3	80·3		61·8		71·1		18·5	84·2	22nd	59·1	12th	25·1
	V.—Gangetic Plain and Chota Nagpur.				+·014								76·5	+1·6	49·9	+0·4	63·2	+1·0	26·7					37·6
15	Chota Nagpur	Hazaribagh	2,007	28·052	+·026	30·104	28·120	7th	27·948	26th	·172	57·8	73·6	+2·0	51·5	+1·3	62·6	+1·7	22·1	79·0	1st	47·2	30th & 31st.	31·8
		Ranchi	2,128	27·917	+·024	30·088	27·981	7th	27·803	26th	·173	57·7	73·7	+1·7	52·3	+2·7	63·0	+2·2	21·4	78·7	1st	48·5	14th	30·2
		Daltonganj	730?	29·394		30·126	29·473	7th	29·288	1st	·185	52·2	77·4		44·0		60·7		33·4	85·1	1st	39·5	11th	45·6
		Purulia		29·262		30·069	29·327	7th	29·176	26th	·151	60·4	78·1		54·3		66·2		23·8	83·7	1st	49·5	31st	34·2
		Chaibassa‡	760	29·321		30·075	29·377	18th & 22nd.	29·228	26th	·149	57·8	79·3	+1·2	53·1	+1·1	63·3	+1·2	26·2	84·7	2nd	49·2	15th	35·5
16	South Bihar	Gaya	375	29·744	+·025	30·099	29·812	7th	29·638	13th	·174	57·2	77·7	+1·9	51·4	+0·3	64·6	+1·1	26·3	83·3	1st	46·9	30th & 31st.	36·4
		Dehri	351	29·766		30·096	29·842	7th	29·659	13th	·183	57·8	77·7		53·9		65·8		23·8	84·3	1st	48·6	30th	35·7
		Patna	183	29·936	−·004	30·082	29·996	18th	29·836	1st	·160	58·1	76·2	+2·2	52·5	+1·4	64·4	+1·8	23·7	81·8	5th	46·8	25th	35·0
		Arrah	190	29·920		30·076	29·994	19th	29·815	26th	·179	55·5	77·0		49·8		63·4		27·2	81·8	1st	44·0	30th	37·8
		Buxar	239	29·884		30·095	29·961	7th	29·773	13th	·188	58·7	77·2		50·8		64·0		26·4	83·0	1st	44·9	30th	38·1
17	North Bihar	Bhagalpur	160	29·963		30·085	30·027	18th	29·872	1st	·155	60·0	76·6		51·7		64·2		24·9	81·3	6th	45·6	25th	35·7
		Darbhanga	166	29·941	+·008	30·073	30·007	7th	29·844	26th	·163	56·2	75·8	+1·7	52·4	−1·6	64·1	+0·1	23·4	81·2	5th	45·8	25th	35·4
		Muzaffarpur	178	29·946		30·090	30·011	7th	29·837	13th	·174	56·1	76·1		49·5		62·8		26·6	81·5	5th	43·3	28th & 30th.	38·2
		Motihari	224	29·893		30·090	29·968	7th	29·781	26th	·187	56·4	75·2		46·9		61·4		28·9	81·0	5th	41·0	25th	40·0
		Chapra	181	29·935		30·083	29·999	7th	29·830	26th	·169	55·4	76·6		50·6		63·6		26·0	81·7	5th	45·1	30th	36·6
18	N.-W. Provinces, (East).	Benares	267	29·850	+·018	30·092	29·913	9th	29·742	13th	·171	54·3	76·2	+1·3	48·0	+0·2	62·1	+0·8	28·2	83·6	1st	44·9	7th, 10th & 11th.	38·7
		Allahabad	309	29·793?	+·007?	30·085?	29·877	7th	29·688	27th	·189	54·5	77·3	+2·3	46·7	−0·7	62·0	+0·8	30·6	85·1	1st	41·9	30th	43·2
23	N.-W. Provinces, (East Sub-montane),	Gorakhpur	256	29·846	+·016	30·078	29·921	4th	29·740	13th	·181	56·9	75·3	+1·0	50·4	+0·2	62·9	+0·6	24·9	79·4	4 days	45·1	30th	34·3
19	South Oudh	Lucknow	368	29·733	+·012	30·089	29·821	4th	29·621	26th	·200	51·9	76·8	+1·3	47·0	+1·4	61·9	+1·4	29·8	82·3	1st & 2nd.	42·2	30th	40·1
20	North Oudh	Bahraich	403	29·678	0	30·073	29·772	4th	29·565	26th	·207	54·2	76·0	+1·2	47·3	−0·2	61·9	+0·5	28·2	81·1	1st	41·6	25th	39·5
21	N.-W. Provinces (Central).	Cawnpore	416	29·700	+·019	30·105	29·772	9th	29·581	27th	·191	52·4	77·2	+1·4	46·3	−0·9	61·8	+0·3	30·9	85·8	1st	42·0	30th	43·3
		Mainpuri	516	29·589	+·015	30·103	29·661	4th	29·477	26th	·184	52·7	76·4	+1·8	46·7	−0·6	61·6	+0·6	29·7	83·3	1st	41·6	9th	41·7

‡ Observation of 30 days.

I—continued.

in India, Burma, etc., in December, 1901—continued.

WIND DIRECTION. Number of Winds from										Wind Velocity.				Hygrometry, 8 A.M.			Rainfall.												
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Resultant.	Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st December to 31st December 1901.	Normal rainfall for period, 1st December to 31st December.	Variation from normal of period 1st December to 31st December.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
16						2	10	3	N 86° W	1·3	1·5			68	·375	0·2	0	0·34	− 0·34	0	0·13	− 0·13	0	0·13	− 0·13	0	Bankura .	Central Bengal	11
18	5	1					7		N 20° W	0·7				73	·358	1·9	0	0·26	− 0·26	0	0·08	− 0·08	0	0·08	− 0·08	0	Raniganj .		
13	7	1					2	8	N 28° W	1·4		1·9	−26	74	·408	2·1*	0	0·23	− 0·23	0	0·11	− 0·11	0	0·11	− 0·11	0	Burdwan .		
27	2	1					1		N 6° W	0·8	0·9			79	·383	2·7	0	0·33	− 0·33	0	0·16	− 0·16	0	0·16	− 0·16	0	Naya Dumka		
25	3							3	N 22° W	0·6	0·7	1·6	−56	83	·439	2·5	0	0·34	− 0·34	0	0·11	− 0·11	0	0·11	− 0·11	0	Berhampur		
22	5	2						2	N	0·9	0·9			84	·439	0·7	0	0·22	− 0·22	0	0·06	− 0·06	0	0·06	− 0·06	0	Rampur Boalia.		
1	8	2	1				5	14	N 34° W	1·2	1·1			83	·423	0·2	0	0·19	− 0·19	0	0·24	− 0·24	0	0·25	− 0·24	0	Malda .		
15	16								N					87	·442	0	0	0·23	− 0·23	0	0·02	− 0·02	0	0·02	− 0·02	0	Bogra .		
	7	8	2	1	1	2	6	4	N 10° W	1·5	1·7			91	·402	2·2	0	0·32	− 0·32	0	0·04	− 0·04	0	0·04	− 0·04	0	Dinajpur .	North Bengal .	12
16	1	6	7					1	N 61° E	0	0			91	·449	0·3	0	0·23	− 0·23	0	0·09	− 0·09	0	0·09	− 0·09	0	Rangpur .		
1	10	9	2	1			3	5	N 9° E	0·7	0·9			91	·423	0·7	1	0·23	+ 0·77	0·59	0·04	+ 0·55	0·59	0·04	+ 0·55	0·59	Jalpaiguri .		
21		4	5	1					N 77° E	0·7	0·8			96	·455	1·7	0	0·27	−0·27	0	0·08	− 0·08	0	0·08	− 0·08	0	Cooch Behar		
25		2			1	3			S 27° W	1·8	1·6	1·3	+23	91	·359	0·5†	0	0·23	− 0·23	0	0·10	− 0·10	0	0·10	− 0·10	0	Purnea .	North Bihar .	17
21	6	1						3	N 6° W	0·4				79	·407	1·9	0	0·52	− 0·52	0	0·18	− 0·18	0	0·18	− 0·18	0	Balasore .	Orissa.	14
2	12						1	16	N 28° W	4·4	4·3	6·3	−32	87	·510	2·0	0	0·68	− 0·68	0	0·69	− 0·69	0	0·69	− 0·69	0	False Point.		
25			1			1	4		S 76° W	0·8		1·3	−38	80	·438	2·7	0	0·58	− 0·58	0	0·27	− 0·27	0	0·27	− 0·27	0	Cuttack.		
2	21	2						6	N 6° W	7·3	6·8			80	·504	0·9	0	0·61	− 0·61	0	0·65	− 0·65	0	0·65	− 0·65	0	Puri.		
																				0·05	0·18	−0·13					V.—Gangetic Plain and Chota Nagpur.		
13	2					2	7	7	N 65° W	6·1	5·5	4·6	+20	61	·295	3·5	0	0·52	− 0·52	0	0·20	− 0·20	0	0·20	− 0·20	0	Hazaribagh.	Chota Nagpur.	18
10	3						5	13	N 49° W	3·8	4·5			61	·296	3·8	0	0·48	− 0·48	0	0·09	− 0·09	0	0·09	− 0·09	0	Ranchi.		
29			1	1					S 63° E	1·3	1·5			80	·315	1·3	0	0·55	− 0·55	0	0·29	− 0·29	0	0·29	− 0·29	0	Daltonganj.		
9		1					11	10	N 65° W	1·3				63	·337	1·4		0·29	− 0·29	0	0·18	− 0·18	0	0·18	− 0·18	0	Purulia.		
26					1	2	1		S 45° W	0·9	0·8			79	·376	1·8	0	0·65	− 0·65	0	0·10	− 0·10	0	0·10	− 0·10	0	Chaibassa.		
19					3	6	3		S 45° W	3·3	3·0	1·3	+131	74	·346	3·0	0	0·35	−0·35	0	0·17	− 0·17	0	0·17	− 0·17	0	Gaya .	South Bihar.	15
1					13	16	1		S 27° W	3·8	3·4			67	·325	1·9	0	0·44	− 0·44	0	0·32	− 0·32	0	0·32	− 0·32	0	Dehri.		
4			2			8	8	9	N 87° W	2·1	2·5	1·7	+47	74	·365	2·0	0	0·35	− 0·35	0	0·10	− 0·10	0	0·10	− 0·10	0	Patna.		
26		1	4						N 79° E	0·7	0·7			78	·349	0·2	0	0·35	− 0·35	0	0·13	− 0·13	0	0·13	− 0·13	0	Arrah.		
2						3	25	1	S 88° W	2·6	2·3			66	·328	1·9	0	0·45	− 0·45	0	0·20	− 0·20	0	0·20	− 0·20	0	Buxar.		
16	1	1			1	3	5	4	N 84° W	1·8	1·7			74	·390	2·5	0	0·26	− 0·26	0	0·07	− 0·07	0	0·07	− 0·07	0	Bhagalpur .	North Bihar.	17
25					1	1	3	1	S 76° W	0·8		2·0	−60	85	·386	0·8	0	0·23	− 0·23	0	0·07	− 0·07	0	0·07	− 0·07	0	Darbhanga.		
29							1		N 45° W	0·5	0·5			87	·392	0·2	0	0·19	− 0·19	0	0·07	− 0·07	0	0·07	− 0·07	0	Muzaffarpur		
	1	2		3	4	8	9	4	S 63° W	2·0	2·0			90	·414	0·5	0	0·47	− 0·47	0	0·14	− 0·14	0	0·14	− 0·14	0	Motihari.		
10	1			1	1	7	9	2	S 75° W	1·3	1·5			81	·360	2·0	0	0·29	− 0·29	0	0·09	− 0·09	0	0·09	− 0·09	0	Chapra.		
16			1	1		12	1		S 41° W	1·4	1·6	2·4	−33	75	·326	2·1	0	0·40	− 0·40	0	0·21	− 0·21	0	0·21	− 0·21	0	Benares .	N.-W. Provinces (East).	18
7	1		1		1	6	11	4	S 86° W	2·9	3·3	2·5	+32	77	·326	3·7	0	0·50	− 0·50	0	0·24	− 0·24	0	0·24	− 0·24	0	Allahabad.		
16	4					1	4	6	N 50° W	1·1		0·9	+22	79	·375	1·4	0	0·40	− 0·40	0·01	0·14	− 0·13	0·01	0·14	− 0·13	0·01	Gorakhpur	N.-W. Provinces (East Sub-Montane).	23
17	3						11		N 75° W	1·3	1·4	1·7	−18	79	·300	2·7	0	0·80	− 0·80	0·06	0·38	− 0·32	0·06	0·38	− 0·32	0·06	Lucknow .	South Oudh.	19
11	3	1	1			2	4	9	N 45° W	1·5	1·4			85	·361	1·5	1	0·70	+ 0·30	0·21	0·34	− 0·13	0·21	0·34	− 0·13	0·21	Bahraich .	North Oudh	20
15	1	1				7	6	1	S 78° W	2·2				73	·290	2·2	0	0·60	− 0·60	0	0·17	− 0·17	0	0·17	− 0·17	0	Cawnpore .	N.-W. Provinces (Central).	21
21				1			8	1	W	0·7	0·7			66	·263	4·0	2	0·60	+1·40	0·80	0·34	+ 0·46	0·80	0·34	+ 0·46	0·50	Mainpuri.		

* Mean of 30 days.

† Mean of 26 days.

Table

Abstract of Observations taken at 8 A.M. at 227 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	VI.—Upper Sub-Himalayas.				+·023								72·9	+1·3	43·7	+1·0	58·3	+1·2	29·2					40·7
24	N.-W. Provinces (West Sub-montane).	Bareilly . .	569	29·518	+·020	30·097	29·622	4th	29·390	26th	·232	49·9	73·4	+0·7	46·4	+1·0	59·9	+0·9	27·0	78·8	1st	42·2	5th & 30th.	36·6
		Dehra Dun .	2,233	27·809	+·010	30·129	27·908	4th	27·696	25th	·212	48·6	69·1	+0·8	44·8	−0·7	57·0	+0·1	24·3	74·0	1st	40·5	24th, 26th & 28th.	33·5
		Roorkee . .	887	29·187	+·022	30·120	29·278	4th	29·084	26th	·194	45·6	73·2	+0·7	41·4	?	57·3	?	31·8	77·3	2nd & 3rd.	36·9	26th	40·4
22	N.-W. P., West.	Meerut . .	738	29·344	+·019	30·111	29·432	4th	29·222	1st	·210	47·7	74·4	+1·4	44·8	+0·9	59·6	+1·2	29·6	81·0	3rd	41·2	30th	39·8
26	South-East Punjab.	Delhi . .	716	29·375	+·019	30·110	29·465	4th	29·249	26th	·216	53·4	74·6	+0·3	50·7	+2·2	62·7	+1·3	23·9	81·2	1st	46·6	29th	34·6
28	Central Punjab.	Lahore . .	702	29·400	+·027	30·139	29·491	4th	29·252	26th	·239	44·5	75·2	+3·7	41·5	+0·9	58·4	+2·3	33·7	83·0	2nd	37·0	25th	46·0
27	South Punjab .	Sirsa . .	662	29·428?	+·013?	30·111?	29·511	7th	29·294	1st	·217	49·5	75·5	+0·6	43·9	+1·6	59·7	+1·1	31·6	85·3	2nd	40·0	8th & 25th.	45·3
		Patiala . .	818	29·272		30·126	29·372	4th	29·124	27th	·248	48·6	73·3		42·6		58·0		30·7	79·8	2nd	36·5	26th	43·3
29	Punjab Sub-montane.	Ludhiana .	812	29·277	+·029	30·127	29·360	4th	29·146	26th	·214	47·5	71·4	+0·1	44·8	+1·5	58·1	+0·8	26·6	78·1	2nd	39·1	26th	39·0
		Sialkot . .	830	29·263	+·043	30·138	29·357	4th	29·121	1st	·236	46·8	71·8	+1·6	43·5	+1·5	57·7	+1·6	28·3	80·0	1st	37·0	25th	43·0
		Umballa .	892	29·184	+·023	30·121	29·272	4th	29·066	26th	·206	45·4	74·3	+2·5?	40·7?	?	57·5?	?	33·6	80·5	3rd	34·0?	26th	46·5?
31	North Punjab .	Rawalpindi .	1,676	28·394	+·019	30·188	28·507	4th	28·249	26th	·258	41·3	69·8	+2·2	36·5	+0·2	53·2	+1·2	33·3	77·4	1st & 2nd.	31·0	29th & 31st.	46·4
	VII.—North-West Frontier, Indus Valley and North-West Rajputana.				+·015								77·8	+2·0	47·4	+0·4	62·6	+1·2	30·4					45·7
31	North Punjab .	Peshawar .	1,110	29·006	+·010	30·201	29·115	9th	28·846	26th	·269	43·1	69·1	+1·3	38·5	+0·3	53·8	+0·8	30·6	79·1	1st	33·9	5th, 27th & 29th.	45·2
32	West Punjab .	Khushab .	612	29·515	+·029	30·155	29·616	28th	29·369	1st	·247	46·9	74·5	+3·3	41·9	+0·4	58·2	+1·9	32·6	85·2	1st	36·4	30th & 31st.	48·8
		Montgomery .	558	29·554	+·019	30·127	29·648	9th	29·402	26th	·246	49·1	74·9	+2·3	42·1	−0·5	58·5	+0·9	32·8	84·0	3rd	36·5	29th	47·5
		D. I. Khan .	594	29·545	+·011	30·143	29·655	4th	29·372	1st	·283	43·7	74·1	+0·8	40·0	−0·5	57·1	+0·2	34·1	84·8	1st	34·5	27th	50·3
		Mooltan .	420	29·709	+·010	30·135	29·811	9th	29·541	1st	·270	49·2	76·1	+2·4	45·6	?	60·9	?	30·5	83·3	1st & 2nd.	40·5	27th	42·8
47	Sind . . .	Jacobabad .	186	29·950	+·020	30·114	30·048	9th	29·785	1t	·263	48·9	79·6	+3·0	43·2	−0·2	61·4	+1·4	36·4	89·5	1st	35·5	25th	54·0
		Hyderabad .	96	30·039	+·015	30·094	30·142	9th	29·893	1st	·249	59·0	80·2	+1·6	54·0	+1·7	67·1	+1·7	26·2	90·6	1st & 2nd.	46·0	27th	44·6
		Kurrachee .	30	30·109	+·018	30·091	30·209	9th	29·978	26th	·231	62·8	83·2	+1·6	57·2	+1·0	70·2	+1·3	26·0	87·4	8th, 11th & 13th.	50·2	28th	37·2
51	West Rajputana	Bikaner .	771	29·328	+·006	30·121	29·420	9th	29·157	26th	·263	54·9	77·4	+2·3	50·6	+0·8	64·0	+1·6	26·8	87·2	1st	43·1	31st	44·1
		Pachpadra .	380	29·734		30·098	29·810	28th	29·545	26th	·265	57·9	84·3		51·3		67·8		33·0	91·0	2nd	43·1	28th	47·9
		Jodhpur .	782	29·309		30·117	29·397	10th	29·132	26th	·265	61·2	82·4		56·5		69·5		25·9	89·1	3rd	49·2	29th	39·9
	VIII.—East Rajputana, Central India and Gujarat.				+·008								82·7	+2·7	55·2	+3·8	69·0	+3·3	27·5					42·0
50	East Rajputana	Jaipur . .	1,431	28·661	+·016	30·131	29·753	9th	28·531	26th	·222	58·1	79·1	+1·5	52·3	+4·2	65·7	+2·9	26·8	88·2	1st	42·0	29th	46·2
		Kotah . .	819	29·273		30·142	29·364	9th	29·090	26th	·274	58·8	81·8		53·6		67·7		28·2	90·0	1st & 4th.	48·0	29th	42·0
		Sambhar .	1,254	28·842	+·021	30·147	29·929	9th	29·688	26th	·241	51·9	78·7	+3·4	48·1	+2·4	63·4	+2·9	30·6	86·9	1st	40·0	29th	46·9
		Ajmer . .	1,611	28·479	+·008	30·153	28·560	9th	28·321	26th	·239	54·1	78·8	+2·6	50·9	+6·6	64·9	+4·6	27·9	86·9	1st	42·4	2-th & 30th.	44·5
		Udaipur .	1,925	28·157		30·135	28·238	9th	28·003	26th	·235	58·0	80·0		50·2		65·1		29·8	87·0	1st	44·2	29th	42·8
		Deesa . .	466	29·609	−·005	30·055	29·696	18th	29·460	26th	·236	64·6	88·7	+3·6	57·9*	+5·9*	73·4	+4·8	30·8	94·6	1st	50·1	28th	44·5
46	Kathiawar and Cutch.	Bhuj . .	395	29·698	+·014	30·065	29·777	9th	29·597	26th	·180	66·5	85·0	+3·0	58·3	+2·7	71·7	+2·9	26·7	92·3	1st	50·0	28th	42·3
		Jamnagar .	61	30·034		30·041	30·118	9th	29·932	26th	·186	65·0	84·5		57·1		70·8		27·4	90·5	11th	47·3	28th & 29th.	43·2
		Rajkot . .	429	29·635	−·002	30·036	29·709	9th	29·524	26th	·185	64·8	87·9	+2·5	56·0	+3·9	71·9	+3·2	31·9	92·4	3rd	48·0	27th	44·4
		Veraval . .	8	30·045	−·002	30·005	30·111	9th	29·970	26th	·141	70·0	85·3	+1·3	64·5	+2·6	74·9	+2·0	20·8	92·1	1st	59·3	27th	32·8
		Dwarka . .	37	30·055		30·039	30·143	9th	29·938	26th	·205	70·2	83·1		63·1		73·2		20·0	88·4	11th	55·6	28th	32·8
		Bhavnagar Para	55	30·036	−·016	30·038	30·111	9th	29·924	26th	·187	64·7?	87·6	+3·4	57·2?	?	72·4?	?	30·4	92·6	3rd	46·7	28th	45·9
49	Central India .	Nowgong .	757	29·352	+·012	30·124	29·422	9th	29·246	26th & 27th.	·176	52·6	75·9	?	46·6	+0·9	61·3	?	29·3	86·0	1st	41·5	30th & 31st.	44·5
		Indore . .	1,822	?	?	?	28·323	9th	28·134	26th	·189	63·6	81·8	+3·3	52·1	+3·2	67·0	+2·3	29·7	86·8	5th	45·1	11th	41·7
		Neemuch .	1,630	28·460	+·004	30·132	28·560	9th	28·310	26th	·250	58·4	81·2	+3·3	51·7	+2·7	66·5	+3·0	29·5	87·5	3rd & 4th.	45·1	30th	42·4
45	Gujarat . .	Surat . .	39	30·036	+·010	30·019	30·115	8th	29·938	26th	·177	68·7	91·5	+4·8	62·1	+5·3	76·8	+5·1	29·4	97·7	3rd	54·0	28th	43·7
		Ahmed . .	163	29·920	+·002	30·039	30·005	9th	29·778	26th	·227	68·0	88·9	+3·4	62·7	+3·1	75·8	+3·3	26·2	95·2	3rd	55·2	27th	40·0

* Mean of 30 days.

I—*continued.*

in India, Burma, etc., in December, 1901—continued.

WIND DIRECTION. Number of Winds from										Wind velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind resultant.	Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st December to 31st December 1901.	Normal rainfall for period 1st December to 31st December.	Variation from normal of period 1st December to 31st December.				
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																				0·22	0·57	−0·35					VI—Upper Sub-Himalayas.		
								4	N 45° W	0·4	0·4	2·2	−82	82	·293	1·5	2	0·64	+1·36	0·57	0·33	+0·24	0·57	0·33	+0·24	0·37	Bareilly	N.-W. Provinces (West Sub-montane).	30
							1		W	0		1·7	−100	70	·240	2·5	2	1·40	+0·60	0·41	0·80	−0·39	0·41	0·80	−0·39	0·25	Dehra Dun.		
							2	1	N 75° W	1·3		1·3	0	82	·254	1·6	1	1·30	−0·30	0·41	0·61	−0·20	0·41	0·61	−0·20	0·41	Roorkee.		
							9		W	1·1	1·1	1·6	−31	74	·249	2·4	1	0·90	+0·10	0·14	0·48	−0·34	0·14	0·48	−0·34	0·14	Meerut	N.-W. Provinces West.	22
		3			1	2	1	7	17	N 61° W				53	·216	2·4	0	1·10	−1·10	0·08	0·53	−0·45	0·08	0·53	−0·45	0·08	Delhi	South-East Punjab.	26
								31		Calm		0·9		1·5	−40	81	·241	1·4	0	·90	−0·90	0	0·38	−0·38	0	0·38	−0·38	0	Lahore	Central Punjab	28
		14		3	1	3	1	4	5	S 73° W	2·5	2·3	2·2	+ 5	68	·239	0·3	1	0·80	+0·20	0·22	0·31	−0·09	0·22	0·31	−0·09	0·22	Sirsa	South Punjab.	27
		5	4	4	5	1	1	1	5	5	N 7° W	3·6	3·6			75	·258	2·5	1			0·16			0·16		0·16	Patiala.		
		14		1		3		5	6	2	S 66° W	1·7	1·5	0·8	+88	71	·233	2·2	1	0·90	+0·10	0·34	0·78	−0·44	0·34	0·78	−0·44	0·34	Ludhiana	Punjab (Sub-montane).	29
		20	1	6	3	1					N 60° E	0·7		1·1	−36	74	·227	1·5	0	1·10	−1·10	0	0·52	−0·52	0	0·52	−0·52	0	Sialkot.		
		30			1						E	1·7				82	·251	1·6	1	1·20	−0·20	0·32	0·82	−0·50	0·32	0·82	−0·50	0·32	Umballa.		
		23	1	3	1			1	2		N 15° E	2·0	1·8	1·1	+64	63	·168	2·1	0	1·60	−1·60	0	0·74	−0·74	0	0·74	−0·74	0	Rawalpindi	North Punjab.	31
																				0·02	0·22	−0·20					VII—North-West Frontier, Indus Valley and North-West Rajputana.		
		22				5	1	3			S 34° W	1·1	1·2	2·4	−50	66	·185	2·7	0	1·10	−1·10	0·04	0·33	−0·29	0·04	0·33	−0·29	0·04	Peshawar	North Punjab.	35
		17	2	6	1	1	2	1			N 49° E	1·9	2·2			50	·165	1·8	0	0·40	−0·40	0	0·54	−0·54	0	0·54	−0·54	0	Khushab	West Punjab.	32
		19	3	6	6	2	2	1	1		N 68° E	2·9	2·5			55	·195	1·2	0	0·60	−0·60	0	0·42	−0·42	0	0·42	−0·42	0	Montgomery		
		31									Calm	0·5	0·5	0·8	−38	68	·199	1·9	0	0·80	−0·80	0	0·21	−0·21	0	0·21	−0·21	0	D. I. Khan.		
		22	2	1		5			1		S 89° E	1·0	1·2	1·2	− 8	65	·231	0·9	0	0·70	−0·70	0	0·19	−0·19	0	0·19	−0·19	0	Mooltan.		
		28	1		2						N 63° E	0·9	0·9	1·6	−44	67	·234	1·6	0	0·40	−0·40	0	0·09	−0·09	0	0·09	−0·09	0	Jacobabad	Sind.	47
		1	22	2			1		2	3	N 7° W	8·3	8·6	6·5	+32	50	·250	1·6	0	0·20	−0·20	0·07	0·05	+0·02	0·07	0·05	+0·02	0·07	Hyderabad.		
		7	3	17	3	1					N 48° E	4·1	5·1	9·2	−45	61	·351	1·6	0	0·10	−0·40	0	0·13	−0·13	0	0·13	−0·13	0	Kurrachee.		
		1	1		2	10	13	4		1	S 61° E	4·9		2·4	+104	48	·211	2·3	0	0·40	−0·40	0	0·17	−0·17	0	0·17	−0·17	0	Bikaner	West Rajputana	51
			8	4	10	2	2	1	3	1	N 55° E	4·2	3·7	2·1	+76	57	·279	0·1	0	0·40	−0·40	0·07	0·12	−0·05	0·07	0·12	−0·05	0·07	Pachpadra.		
		4	2	23	2						N 45° E	4·3	3·9			39	·210	3·4	0	0·50	−0·50	0·05	0·15	−0·10	0·05	0·15	−0·10	0·05	Jodhpur.		
																				0·04	0·19	−0·15					VIII—East Rajputana, Central India and Gujarat.		
		8		7	4	1	3	4	2	2	S 86° E	2·7		3·4	−21	48	·229	2·3	0	0·70	−0·70	0	0·19	−0·19	0	0·19	−0·19	0	Jaipur	East Rajputana	50
		20	2	4	1	2		1		1	N 47° E	1·4	1·7			55	·272	1·7	0	0·80	−0·80	0			0	0·29	− 0·29	0	Kotah.		
		24	2	5							N 33 E	2·1		3·7	−43	52	·203	2·3	0	0·80	−0·80	0	0·35	−0·35	0	0·35	−0·35	0	Sambhar.		
		21	2	1		3			1	3	N 7° W	1·7		1·4	+21	66	·279	2·9	0	0·60	−0·60	0·04	0·27	−0·23	0·04	0·27	− 0·23	0·02	Ajmer.		
		25	2					2	2		N 45° W	1·1	1·1			53	·254	2·3	0	0·50	−0·50	0			0			0	Udaipur.		
			3	19	9						N 54° E	7·2		8·1	−11	38	·234	1·7	0	0·09	−0·09	0·07	0·06	+0·01	0·07	0·06	+0·01	0·07	Deesa.		
			1	3	3	1	5	9	7	2	S 50° W	7·1		5·1	+39	61	·399	3·1	1	0·20	+0·80	0·11	0·07	+0·04	0·11	0·07	+ 0·04	0·11	Bhuj	Kathiawar and Cutch.	46
		5	1	14	4	4	2			1	N 67° E	7·4	8·8			53	·235	1·5	1			0·16			0·16			0·16	Jamnagar.		
		3	1	8	10	7	1			1	N 86° E	4·9	4·9	4·8	+ 2	43	·265	2·8	0	0·20	−0·20	0·01	0·04	−0·03	0·01	0·04	−0·03	0·01	Rajkot.		
			10	14	4					3	N 27° E	6·3		5·0	+26	48	·344	3·2	0	0·40	−0·40	0	0·09	−0·09	0	0·09	−0·09	0	Veraval.		
			13	9	6					3	N 25° E	11·2				66	·494	2·9	0			0·01			0 01			0·01	Dwarka.		
	1		3			1	2	5	7	12	N 73° W	4·4	4·1			46?	·282?	3·0	0	0·10	−0·10	0	0·07	−0·07	0	0·07	− 0·07	0	Bhavnagar Para.		
		14	2	1	3			3	6	2	N 71° W	1·0	1·0	1·2	−17	73	·290	3·0	0	0·70	−0·70	0	0·55	−0·55	0	0·55	− 0·55	0	Nowgong	Central India.	49
		13	2	3	1	11	1				S 67° E	1·8		2·1	−11	51	·292	3·9	0	0·50	−0·50	0	0·20	−0·20	0	0·20	−0·20	0	Indore.		
				21	8			1		1	N 55° E	4·7	4·2	8·1	−48	56	·274	3·0	0	0·60	−0·60	0	0·28	−0·28	0	0·28	−0·28	0	Neemuch.		
		2	3	5	17	3	1				N 82° E	4·3	4·0	5·0	−20	47	·332	2·1	0	0·10	−0·10	0	0·01	−0·01	0	0 01	−0·01	0	Surat	Gujarat.	45
		1	1	11	15	3				1	N 73° E	3·0				36	·246	2·8	0	0·10	−0·10	0	0·07	−0·07	0	0·07	− 0·07	0	Ahmedabad		

Table

Abstract of Observations taken at 8 A.M. at 227 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
22	N.-W. P., West	Agra	555	29·561	+·019	30·117	29·631	7th & 28th,	29·433	26th	·198	54·6	77·1	+1·1	51·2	+3·0	64·2	+2·1	25·9	86·0	1st	45·4	29th	40·6
21	N.-W.P., Central	Jhansi	858	29·254	+·028	30·121	29·313	22nd	29·149	1st	·164	59·0	80·0	+1·9	55·0	+4·4	67·5	+3·2	25·0	90·2	1st	49·7	31st	40·5
	IX.—Deccan				+·025								83·0	+2·1	55·0	+1·6	69·0	+1·9	28·0					39·6
38	Bombay Deccan	Belgaum	2,539	27·486	+·017	29·997	27·546	22nd	27·421	26th	·125	67·8	82·6	+1·4	60·2	+2·2	71·4	+1·8	22·4	86·3	13th & 14th,	54·9	8th	31·4
		Sholapur*	1,590	28·476	+·029	30·057	28·540	11th	28·403	26th	·137	69·3	86·2	+1·4	60·8	+4·0	73·5	+2·7	25·4	91·2	1st	51·6	8th	39·6
		Poona	1,840	28·215	+·008	30·068	28·224	22nd	28·141	26th	·143	62·7	86·4	+3·0	54·7	?	70·6	?	31·7	92·5	3rd	47·0	8th	45·5
		Bijapur	1,946	28·117	+·022	30·058	28·191	11th	28·053	1st, 26th & 27th.	·138	67·3	85·4	+1·8	60·4	+4·2	72·9	+3·0	25·0	89·4	3rd & 15th.	50·6	7th	38·8
40	Khandesh	Malegaon	1,430	28·655	+·032	30·099	28·729	22nd	28·551	26th	·178	62·4	86·5	+3·3	53·5	+3·2	70·0	+3·3	33·0	92·9	4th	45·2	10th	47·7
		Ahmednagar	2,152	27·933	+·029	30·094	28·004	22nd	27·856	26th	·148	64·4	84·0	+1·3	54·1	+2·6	69·0	+2·0	29·9	88·9	2nd	44·4	8th	44·5
41	Berar	Akola	930	29·166	+·031	30·097	29·237	22nd	29·064	26th	·173	60·1	85·1	+3·1	50·5†	+0·5†	67·7†	+1·8	34·6	89·5	2nd	43·0	12th	46·5
		Amraoti	1,215	28·876	+·032	30·092	28·943	22nd	28·780	26th	·163	65·3	84·4	+2·7	58·3	?	71·4	?	26·1	88·2	1st & 2nd.	55·5	4th & 10th.	32·7
42	Central Provinces, West.	Khandwa	1,044	29·042	+·031	30·100	29·119	9th	28·923	26th	·196	59·2	86·5	+4·8	52·2	+3·3	69·2	+4·1	24·3	91·7	2nd	44·6	10th	47·1
		Hoshangabad	1,006	29·107	+·038	30·133	29·179	9th	28·989	26th	·190	56·5	80·4	?	51·0	+0·3	65·7	?	29·4	84·7	1st & 3rd,	46·3	9th, 11th & 22nd,	35·4
		Nagpur	1,025	29·071	+·031	30·104	29·134	22nd	28·984	26th	·150	59·9	83·1	+2·8	53·9	+0·6	68·5	+1·7	29·2	87·6	1st & 2nd.	50·2	11th, 13th & 17th,	37·4
43	Central Provinces, Central.	Chanda	634	29·485	+·021	30·104	29·545	22nd	29·406	13th	·139	57·7	83·1	+1·5	50·1	−1·0	66·6	+0·3	33·0	87·1	2nd	44·1	12th	43·0
		Seoni	2,033	28·051	+·038	30·125	28·114	22nd	27·959	26th	·155	57·1	78·6	+1·4	49·4	+0·4	64·0	+0·9	29·2	85·2	1st	45·0	11th	40·2
		Jubbulpore	1,327	28·760	+·019	30·133	28·823	7th & 9th.	28·651	26th	·172	51·7	78·2	+2·2	44·9	−0·3	61·6	+1·0	33·3	85·4	1st	39·4	8th & 11th.	46·0
		Sangor	1,807	28·288	+·032	30·123	28·352	9th	28·185	27th	·167	61·5	78·3	+2·4	55·2	+4·2	66·8	+3·3	23·1	84·9	1st & 2nd.	49·1	29th	35·8
49	Central India	Sutna	1,040	29·056	+·018	30·128	29·123	9th	28·923	27th	·200	52·7	76·7	+2·0	47·9	+1·7	62·3	+1·9	28·8	85·9	1st	42·2	30th	43·7
44	Central Provinces, East.	Raipur	970	29·119	+·020	30·094	29·200	22nd	29·031	26th	·169	59·5	80·5	+2·2	52·7	−0·6	66·6	+0·8	27·8	86·2	1st	47·4	12th	38·9
		Sambalpur	486	29·612	+·005	30·076	29·676	22nd	29·527	26th	·149	59·8	80·7	+1·4	52·5	−1·3	66·6	+0·1	28·2	85·1	1st & 2nd.	47·6	11th, 12th & 15th	37·5
39	Hyderabad (North).	Aurangabad	1,905	28·181		30·079	28·246	23rd	28·086	26th	·160	67·2	83·5		55·6		69·5		27·9	92·3	17th	48·7	19th	43·6
		Indur		28·785			28·844	23rd	28·627	1st	·217	64·3	83·4		51·6		67·5		31·8	87·8	1st & 4th,	44·1	12th	43·7
		Bidar	2,165?	?		?	27·970	23rd	27·771	12th	·199	70·6	81·9		59·8		70·9		22·1	87·5	16th	57·0	18th	30·5
53	Hyderabad (South).	Gulbarga	1,502	28·565		30·054	28·637	22nd	28·500	26th	·137	69·5	86·4		60·1		73·2		26·3	90·9	1st	50·5	7th	40·4
		Raichur	1,326	28·730	+·022	30·040	28·793	22nd	28·674	26th	·119	70·6	84·6	−0·1	63·9	+0·5	74·3	+0·2	20·7	85·6	15th	55·7	7th	32·9
		Hyderabad (Deccan).	1,690	28·377	+·032	30·070	28·450	22nd	28·310	26th	·140	65·1	83·4	+1·8	59·0	+2·4	71·2	+2·1	24·4	88·4	1st	54·3	5th, 7th & 17th,	34·1
		Secunderabad	1,787	28·273	?	30·063	28·342	22nd	28·215	26th	·127	65·1	84·1	+2·5	59·6	+3·0	71·9	+2·8	24·5	89·1	1st	55·1	17th	34·0
		Hanumkonda	871	29·208		30·065	29·277	22nd	29·140	26th	·137	67·0	83·9		59·3		71·6		24·6	89·0	2nd	53·7	12th	35·3
	X.—West Coast				+·017								87·0	+0·5	71·4	+1·4	79·2	+1·0	15·6					24·8
37	Konkan	Bombay	37	30·015	+·011	29·993	30·077	8th	29·946	1st	·131	74·1	86·5	+2·4	72·0	+2·5	79·3	+2·5	14·5	90·5	2nd	68·0	14th & 15th,	22·5
		Ratnagiri	110	?	?	?	29·955	23rd	29·838	26th	·117	75·9	89·8	+0·5	70·0	+3·2	79·9	+1·9	19·8	100·3	2nd	65·4	15th	34·9
		Mormugao	60	29·977	+·009	29·972	30·041	22nd	29·916	26th	·125	74·6	87·2	+0·8	72·4	+1·3	79·8	+1·9	14·8	91·0	10th	68·3	7th	22·7
		Goa	199	29·828	?	29·966	29·884	23rd	29·760	27th	·124	75·5	85·4	?	72·8	+3·2	79·1	?	12·6	89·0	1st	68·0	8th	21·0
		Karwar	44	29·984	+·020	29·960	30·044	23rd	29·905	29th	·139	71·1	88·2	+1·0	68·3	+1·9	78·2	+1·5	19·9	90·3	4 days.	61·5	7th	28·8
33	Malabar	Cochin	11	30·000	+·025	29·938	30·061	11th	29·928	29th	·133	76·5	89·4	+1·5	72·6	−0·1	81·0	+0·7	16·8	92·5	29th	67·8	6th	24·7
		Calicut	27	29·984	+·012	29·940	30·042	22nd	29·909	29th	·133	75·3	86·3	−1·2	70·4	0	78·4	−0·6	15·9	88·8	31st	63·0	7th	25·8
		Mangalore	65	29·948	+·005	29·945	30·008	22nd	29·882	29th	·126	76·1	87·0	−1·5	70·9	+0·4	79·0	−0·6	16·1	91·2	31st	64·0	6th	27·2
		Trivandrum	198	29·809	+·036	29·941	25·867	11th & 12th.	29·724	29th	·143	75·7	83·3	+0·3	73·4	+1·7	78·4	+1·0	9·9	86·0	31st	70·5	7th, 8th & 15th	15·5
	XI.—South India				+·023								82·7	0	65·3	−0·4	74·0	−0·3	17·4					26·9
57	Madras (South).	Pamban	37	29·982		29·946	30·031	12th	29·938	1st	·093	77·1	83·8		74·1		79·0		9·7	88·3	15th	71·2	21st & 22nd,	17·1
		Tinnevelly	168	29·876	+·024	29·976	29·929	22nd	29·810	9th	·119	75·9	87·0	+0·8	72·3	−0·3	79·7	+0·3	14·7	90·2	4 days	68·9	6th & 24th.	21·3
		Madura	447	29·586	+·036	29·979	29·648	23rd	29·517	1st	·131	74·7	85·4	−0·6	69·5	−0·9	77·5	−0·8	15·9	89·4	10th	65·1	6th & 7th.	24·3
		Periyakulam		29·088			29·146	23rd	29·015	9th	·131	71·7	84·1		65·1		73·6		19·0	86·7	31st	58·0	6th	28·7

* Observation of 27 days.

† Mean of 29 days.

I—*continued.*

in India, Burma, etc., in December, 1901—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Resultant.	Wind Velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M. Mean humidity.	Mean vapour tension.	Mean cloud amount.	Rainfall. Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st December to 31st December 1901.	Normal rainfall for period, 1st December to 31st December.	Variation from normal of period 1st December to 31st December.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
9		1		3		9		9	S 84° W	2·1	2·4	2·6	− 8	62	·264	1·7	1	0·60	+0·40	0·20	0·29	− 0·09	0·20	0·29	− 0·09	0·20	Agra	N.-W. P., West	22
10		1			1	11	1	7	S 77° W	2·2	2·4	2·3	+ 4	72	·356	1·4	0	0·80	−0·80	0·07	0·24	− 0·17	0·07	0·24	− 0·17	0·07	Jhansi	N.-W. P., Central	21
																				0	0·36	−0·36					IX.—Deccan.		
4		5	13	7	1		1		S 83° E	11·5		12·3	− 6	62	·421	3·5	0	0·40	−0·40	0·02	0·12	− 0·10	0·02	0·12	− 0·10	0·02	Belgaum	Bombay Deccan.	38
		5	13	9					S 83° E	10·0	12·1	6·8	+78	46	·334	3·7	0	0·50	−0·50	0	0·43	− 0·43	0	0·43	− 0·43	0	Sholapur.		
10	1	3	8	3			2	4	N 62° E	6·5	7·3	5·7	+28	51	·295	3·2	0	0·50	−0·50	0	0·19	− 0·19	0	0·19	− 0·19	0	Poona.		
28					1		2		W					77	·525	3·8	0	0·50	−0·50	0	0·03	− 0·03	0	0·03	− 0·03	0	Bijapur.		
	2	2	1		1	5	11	9	N 74° W	3·2	3·7	3·5	+ 6	47	·272	3·9	0	0·50	−0·50	0	0·26	− 0·26	0	0·26	− 0·26	0	Malegaon	Khandesh.	40
12	1			10	1	1	1	5	S 24° E	3·7	4·5			58	·353	4·2	0	0·90	−0·90	0	0·50	− 0·50	0	0·50	− 0·50	0	Ahmednagar.		
19		2	10						N 83° E	3·3	3·2	3·1	+ 3	48	·252	3·8	0	0·70	−0·70	0	0·75	− 0·75	0	0·75	− 0·75	0	Akola	Berar.	41
	3	16	11	1					N 60° E	6·2	5·6	3·1	+81	45	·283	3·6	0	0·60	−0·60	0	0·57	− 0·57	0	0·57	− 0·57	0	Amraoti.		
20			7	2	1		1		S 72° E	3·4		2·4	+42	47	·237	3·5	0	0·50	−0·50	0	0·43	− 0·43	0	0·43	− 0·43	0	Khandwa	Central Provinces, West.	42
		29		1		1			N 46° E	3·0	3·1	2·4	+29	58	·266	2·1	0	0·60	−0·60	0	0·53	− 0·53	0	0·53	− 0·53	0	Hoshangabad.		
18	1	9	1	1				1	N 45° E	1·9		3·5	−46	51	·268	3·8	0	0·70	−0·70	0	0·48	− 0·48	0	0·48	− 0·48	0	Nagpur.		
17	5	6	2	1					N 39° E	1·9		1·6	+19	71	·346	2·8	0	0·80	−0·80	0	0·34	− 0·34	0	0·34	− 0·34	0	Chanda	Central Provinces, Central.	43
	10	8	2		3	2	3	3	N 5° E	2·3		2·5	− 8	53	·247	1·6	0	0·90	−0·90	0	0·52	− 0·52	0	0·52	− 0·52	0	Seoni.		
6			2	16	8				S 31° E	1·4‡		1·8	−22	73	·282	2·4	0	0·60	−0·60	0	0·33	− 0·33	0	0·33	− 0·33	0	Jubbulpore.		
	1	2	5	16	3		4		S 49° E	3·8	4·3	2·5	+72	46	·249	2·7	0	0·80	−0·80	0	0·70	− 0·70	0	0·70	− 0·70	0	Saugor.		
9	2						8	12	N 58° W	2·2	2·4	3·6	−33	66	·261	3·1	0	0·90	−0·90	0	0·43	− 0·43	0	0·43	− 0·43	0	Sutna	Central India	45
22	2		1	2	2		1	1	S 45° E	2·1	1·9	2·6	−27	59	·288	3·5	0	0·50	−0·50	0	0·25	− 0·25	0	0·25	− 0·25	0	Raipur	Central Provinces, East.	44
	7	11	4	1	1		2	5	N 23° E	1·4	1·4	1·4	0	73	·374	0	0	0·30	−0·30	0	0·24	− 0·24	0	0·24	− 0·24	0	Sambalpur.		
4		7	17	2		1			N 74° E	6·6	6·5			42	·285	2·9	0	1·10	−1·10	0	0·61	− 0·61	0	0·61	− 0·61	0	Aurangabad	Hyderabad (North).	39
26	1			3				1	S 75° E	5·2	5·0			64	·390	2·6	0	0·60	−0·60	0	0·33	− 0·33	0	0·33	− 0·33	0	Indur		
		7	2	12		10			S 36° E	9·6	8·0			58	·436	0	0	0·70	−0·70	0	0·52	− 0·52	0	0·52	− 0·52	0	Bidar.		
11	3		15	2					N 83° E	8·5	8·2			63	·457	2·9	0	0·30	−0·30	0	0	0	0	0	0	0	Gulbarga	Hyderabad (South).	58
2	1	2	12	14					S 72° E	8·4	8·2			67	·491	2·6	0	0·30	−0·30	0	0	0	0	0	0	0	Raichur.		
25			4	2					S 75° E	2·2	3·1			71	·483	3·2	0			0	0·17	− 0·17	0	0·17	− 0·17	0	Hyderabad (Deccan).		
13		8	9	1					N 73° E	4·0		3·3	+21	67	·418	2·1	0	0·40	−0·40	0	0·17	− 0·17	0	0·17	− 0·17	0	Secunderabad.		
18	4			4	2	1		2	S 82° E	4·4	3·7			63	·425	4·1	0	0·10	−0·10	0			0			0	Hanumkonda.		
																				0·67	0·62	+0·05					X.—West Coast.		
	1	15	14	1					N 67° E	8·4		10·0	−16	69	·588	3·5	0	0·10	−0·10	0	0·06	− 0·06	0	0·06	− 0·06	0	Bombay	Konkan.	37
6		2	17	6					S 83° E	4·6	4·6	9·9	−54	58	·501	3·2	0	0·10	−0·10	0	0·05	− 0·05	0	0·05	− 0·05	0	Ratnagiri.		
1		8	21	1					N 80° E	7·6				74	·636	2·7	0			0	0	0	0	0	0	0	Mormugao.		
		13	18						N 72° E					69	·616	3·6	0			0·03	0·06	− 0·03	0·03	0·06	− 0·03	0·03	Goa.		
4	1	12	14						N 68° E	3·6				73	·557	2·2	0	0·10	−0·10	0	0·07	−0·07	0	0·07	− 0·07	0	Karwar.		
1	15	12	1				1	1	N 17° E	4·0§				75	·694	3·5	2	2·50	−0·50	0·85	1·66	− 0·81	0·85	1·66	− 0·81	0·42	Cochin	Malabar.	23
3		11	15	2					N 75° E	6·2	7·8			79	·696	3·2	5	1·60	+3·40	3·10	0·97	+ 2·13	3·10	0·97	+ 2·13	1·45	Calicut.		
		1	14	15	1				S 67° E	3·0		3·5	−14	71	·645	3·6	2	0·50	+1·50	1·34	0·45	+ 0·89	1·34	0·45	+ 0·89	1·04	Mangalore.		
8	11	5	5	1				1	N 31° E	3·5				76	·678	4·4	2	3·60	−1·60	0·67	2·24	− 1·57	0·67	2·24	− 1·57	0·53	Trivandrum.		
																				2·52	2·63	−0·12					XI.—South India.		
	4	17	1	1				8	N 21° E	13·4	14·2			92	·854	3·5	6	9·20	−3·20	2·09	10·31	− 8·22	2·09	10·31	− 8·22	0·66	Pamban	Madras (South)	57
	16	5				2	1	7	N 9° W	4·9	4·7			80	·717	5·2	4	5·70	−1·70	0·70	3·75	− 3·05	0·70	3·75	− 3·05	0·23	Tinnevelly.		
3	11	15	1			1			N 27° E	3·4	3·4	4·9	−31	75	·650	4·3	1	3·80	−2·80	0·60	1·87	− 1·27	0·60	1·87	− 1·27	0·33	Madura.		
16	1		3	2	2	4	1	2	S 14° W	1·5	1·7			78	·606	3·8	2	3·20	−1·20	1·36	1·56	− 0·20	1·36	1·56	−0·20	0·59	Periyakulam.		

‡ Mean of 23 days.

§ Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 227 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
34	Madras, (South Central).	Salem	940	29·116	+·018	30·018	29·198	23rd	29·037	9th	·161	72·3	85·4	−0·6	64·8	−0·3	75·1	−0·5	20·6	88·2	31st	57·0	6th	31·2
		Coimbatore	1,342	28·689	+·030	30·011	28·750	23rd	28·641	9th & 26th	·109	70·9	83·6	−1·1	65·6	−0·7	74·6	−0·9	18·0	86·9	10th	58·2	6th	28·7
35	Coorg	Mercara	3,781	26·307	+·023		26·360	4th	26·237	26th	·123	60·8	74·5	0	57·4	−0·2	66·0	−0·1	17·1	79·0	29th	52·1	6th & 24th.	26·9
36	Mysore	Chitaldroog	2,405	27·632	+·008	30·000	27·687	11th	27·581	26th	·106	68·6	81·5	+0·6	61·2	+0·5	71·4	+0·6	20·3	87·1	15th	54·9	6th	32·2
		Bangalore	3,021	27·038	+·008	30·020	27·098	22nd & 23rd, 3rd	26·991	26th	·107	63·9	77·6	+0·1	58·0	−0·6	67·8	−0·3	19·6	81·2	15th	51·9	6th	29·3
		Hassan	3,091	26·976		30·023	27·098	3rd	26·924	1st	·174	66·2	76·4		56·8		66·6		19·6	81·3	29th	47·9	6th	33·4
		Mysore	2,518	27·530	+·015	30·013	27·590	22nd & 23rd.	27·471	14th	·119	67·4	80·4	−1·0	59·8	−0·5	70·1	−0·8	20·6	83·1	4 days	51·9	6th	31·2
58	Madras, East Coast, South.	Negapatam	31	30·000	+·023	29·960	30·056	23rd	29·911	9th	·145	76·6	82·4	+1·4	72·5	+0·7	77·5	+1·1	9·9	87·2	1st	69·0	4 days	18·2
		Cuddalore	12	30·034	+·015	29·975	30·101	23rd	29·856	9th	·245	73·5	82·6	−0·5	69·4	−0·3	76·0	−0·4	13·2	86·1	1st	64·7	14th	21·4
		Trichinopoly	255	29·795	+·020	29·990	29·855	23rd	29·721	1st	·134	74·0	84·8	+0·3	68·7	−0·3	76·8	0	16·1	89·5	1st	61·4	6th	28·1
		Madras	22	30·041	+·022	29·994	30·105	23rd	29·928	9th	·177	74·8	82·2	−1·4	68·9	−0·9	75·6	−1·2	13·3	85·5	2nd	63·5	5th & 13th.	22·0
		Vellore	707	29·344		30·014	29·401	22nd & 23rd.	29·244	9th	·157	72·0	81·6		66·5		74·1		15·1	84·4	25th	59·9	6th	24·5
55	Madras, East Coast, Central.	Nellore	71	30·014	+·032	30·020	30·080	22nd & 23rd.	29·951	1st	·129	73·0	82·9	−1·7	67·7	−0·8	75·3	−1·3	15·2	86·3	31st	64·1	13th	22·2
		Masulipatam	15	30·092?	+·052?	30·012?	30·160	22nd	30·031	1st	·129	71·3	82·4	−0·1	65·1	−1·4	73·8	−0·8	17·3	85·0	1st & 9th.	60·2	26th	24·8
54	Madras, Central	Cuddapah	433	29·639	+·017	30·025	29·711	22nd	29·573	1st	·138	71·4	85·0	+0·2	63·7	−2·3	74·4	−1·1	21·3	88·2	2nd, 28th & 30th.	56·8	6th	31·4
		Kurnool	924	29·133	?	30·035	29·200	22nd	29·067	26th	·133	66·4	87·0*	+1·6*	59·9	+0·5	73·5*	+1·1	27·1	91·7	2nd	49·7	6th	42·0
		Bellary	1,475	28·577	+·021	30·037	28·637	22nd & 23rd.	28·523	26th	·114	68·7	86·1*	+0·8*	62·0	+1·3	74·1*	+1·1	24·1	91·0	15th	55·1	6th	35·9
52	Madras, East Coast, North.	Cocanada	26	30·072	+·039	30·033	30·137	22nd	30·012	1st	·125	70·4	80·1	−0·1	64·5	−0·8	72·3	−0·5	15·6	83·6	26th	60·5	17th	23·1
		Waltair (Vizag.)	226	29·870	+·033	30·044	29·932	22nd & 23rd, 22nd	29·798	26th	·134	73·0	80·8	−0·5	67·4	−0·7	74·1	−0·1	13·4	84·4	3rd	63·4	13th & 25th.	21·0
		Gopalpur	21	30·090	+·018	30·051	30·155	22nd	30·008	26th	·147	65·8	79·6	−0·6	59·2	?	69·4	?	20·4	82·7	2nd & 26th.	56·1	23rd	26·6
		XII.—Hill Stations.																						
48	Baluchistan	Pishin											58·4		32·2		45·3		26·2	67·3	6th & 7th	14·0	31st	53·3
		Quetta	5,502	24·778	+·037		24·864	9th	24·624	26th	·240	32·2	59·4	+2·3	26·9	−1·9	43·2	+0·2	32·5	67·7	7th	17·8	24th	49·9
		Kalat										41·6	59·3		18·5		39·0		40·8	72·3	6th	8·2	24th	64·1
		Chaman	4,311	25·870	+·041		25·947	4th	25·723	26th	·224	45·5	62·4	+3·9	37·8	−0·2	50·1	+1·9	24·6	79·8	7th	29·6	4 days	50·2
30	Punjab	Leh	11,503	19·773	+·036		19·880	10th	19·600	27th	·280	15·9	35·7	−2·4	12·7	−0·9	24·2	−1·7	23·0	44·1	1st	8·0	15th	36·1
		Srinagar	5,201	25·061	+·017		25·152	9th	24·904	27th	·248	28·2	52·2	+4·4	25·1	−3·2	38·7	+0·6	27·1	64·9	1st	19·1	28th & 29th.	45·8
		Sonamarg		21·926			22·009	4th	21·785	27th	·224	19·4	34·8		12·2		23·5		22·6	58·7	3rd	−9·9	23rd	68·6
		Astor (Kashmir)		22·681			22·818	17th	22·504	26th	·314	21·8	43·2		22·5		32·9		20·7	50·3	1st	17·5	5 days	32·8
		Minimarg		21·441			21·533	8th	21·291	27th	·242	17·8	39·0		11·0		25·0		28·0	48·3	2nd	2·0	23rd	46·3
		Skardu		23·050			23·193	17th	22·890	27th	·303	24·0	41·6		21·8		31·7		19·8	51·0	1st	17·1	17th & 18th.	33·9
		Dras		20·887			21·012	17th	20·702	27th	·310	4·0	27·8		−1·1		13·4		28·9	40·3	1st	−11·9	29th	55·2
		Gilgit		25·380			25·555	17th	25·209	26th	·346	35·9	49·8		32·9		41·4		16·9	59·6	1st	27·9	17th	31·7
		Chitral		24·526			24·600	4 days	24·340	26th	·260	33·4	55·6		29·1		42·4		26·5	63·7	2nd	26·0	27th	37·7
		Killa Drosh										38·4	54·7		26·6		45·7		18·1	60·9	5th	32·8	28th	28·1
		Para Chinar	6,000	24·585			24·696	9th	24·413	25th	·283	41·8	57·0		34·6		45·8		22·4	67·7	9th	28·4	29th	39·3
		Cherat		25·848	+·027		25·960	4th	25·707	26th	·253	47·9	57·9	+2·5	43·2	+0·8	50·4	+1·7	14·7	67·8	2nd	35·0	28th	32·8
		Murree	8,333	23·946	+·038		24·051	4th	23·794	26th	·257	44·0	53·0	−0·7	38·5	−1·5	45·8	−1·1	14·5	62·2	1st	32·5	28th	29·7
		Poo											48·2		28·0		38·1		20·2	58·3	1st	19·6	28th	38·7
		Simla	7,224	23·196	+·028		23·279	4th	23·083	26th	·196	41·9	50·4	−0·9	39·4	−0·8	44·9	−0·9	11·0	57·9	12th	30·3	28th	27·6
29b	N.-W. Provinces	Chakrata	7,022	23·355	+·026		23·448	4th	23·267	27th	·181	41·1	55·8	+0·8	38·6	−1·0	47·2	−0·1	17·2	64·3	11th	30·4	28th	33·9
		Mussooree	6,705	23·632	+·012		23·735	4th	23·504	27th	·231	43·5	51·2	−1·4	39·5	−1·1	45·4	−1·3	11·7	59·2	12th	31·5	28th	27·7
		Ranikhet	6,069	24·197	+·031		24·307	4th	24·099	25th	·208	45·8	56·6	−1·6	42·8	+0·2	49·7	−0·7	13·8	62·2	1st, 11th & 12th.	30·0	28th	32·2
		Muktesar		22·516			23·013	4th	22·808	27th	·205	43·8	54·4		38·0		46·2		16·4	63·7	12th	29·9	28th	33·8

* Mean of 30 days.

I—*continued.*

in India, Burma, etc., in December, 1901—continued.

WIND DIRECTION. Number of Winds from									Wind resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st December to 31st December 1901.	Normal rainfall for period, 1st December to 31st December.	Variation from normal of period, 1st December to 31st December.				
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
12	2	2	13				2		N 75° E	3·4	3·1	4·0	−23	77	·613	4·6	4	2·10	+1·90	0·75	1·26	− 0·51	0·75	1·26	−0·51	0·33	Salem .	Madras, (South Central).	34
		5	25				1		N 83° E					86	·658	5·8	2	2·40	−0·40	1·57	1·13	+ 0·44	1·57	1·13	+ 0·44	1·34	Coimbatore.		
2	1	20	8						N 56° E	7·1	6·6	4·7	+40	88	·476	8·3	1	1·00	0	0·69	0·51	+ 0·18	0·69	0·51	+ 0·18	0·43	Mercara .	Coorg.	35
2		2	17	10					N 77° E	8·1	7·0			74	·516	3·7	1	0·70	+0·30	0·27	0·09	+ 0·18	0·27	0·09	+ 0·18	0·14	Chitaldroog.	Mysore.	36
1		9	20	1					N 78° E	9·3	8·1	3·9	+108	82	·487	4·0	4	1·00	+3·00	0·91	0·43	+ 0·43	0·91	0·43	+ 0·43	0·40	Bangalore.		
1	1	12	12	4				1	N 73° E	3·5	3·1			76	·492	5·2	1	1·00	0	0·64	0·18	+ 0·46	0·64	0·18	+ 0·46	0·46	Hassan.		
1		17	10	2				1	N 63° E	9·0	9·7			78	·521	5·6	1	1·00	0	0·46	0·17	+ 0·29	0·46	0·17	+ 0·29	0·35	Mysore.		
1	6	9					2	13	N 12° W	13·9	12·2	6·8	+79	84	·780	6·5	9	9·40	−0·40	7·57	12·79	− 5·22	7·57	12·79	− 5·22	2·75	Negapatam	Madras, East Coast, South.	56
26	2	1						2	N 10° W	1·0	1·2			85	·712	5·1	7	6·70	+0·30	4·81	8·19	− 3·38	4·81	8·19	− 3·38	1·52	Cuddalore.		
18	2	10					1		N 34° E	2·7		5·0	−46	80	·670	7·4	5	4·60	+0·40	3·64	2·76	+ 1·08	3·84	2·76	+ 1·08	2·99	Trichinopoly		
	19	6	1					5	N 3° E	7·2		7·6	− 5	82	·715	4·4	5	7·20	−2·20	14·67	6·02	+ 8·65	14·67	6·02	+ 8·65	10·30	Madras.		
19		4						8	N 18° W	3·8	3·8			90	·634	4·1	5	3·60	+1·40	11·73	2·88	+ 8·85	11·73	2·88	+ 8·85	6·02	Vellore.		
1	9	3	2		1			15	N 17° W	3·6				83	·679	4·5	3	3·30	−0·30	4·39	1·64	+ 2·75	4·39	1·64	+ 2·75	2·15	Nellore .	Madras, East Coast, Central	55
2	18	10	1						N 18° E	6·6		5·7	+16	78	·596	2·2	1	0·60	+0·40	0·11	0·78	− 0·67	0·11	0·78	− 0·67	0·11	Masulipatam.		
	1	7	6	9		3	3	2	S 84° E					78	·610	3·4	2	1·30	+0·70	1·35	1·14	+ 0·21	1·35	1·14	+ 0·21	0·98	Cuddapah.	Madras, Central	54
29	2								N					73	·481	3·2	0	0·30	−0·30	0·03	0·12	− 0·09	0·03	0·12	− 0·09	0·03	Kurnool.		
17		2	2	8				2	S 70° E	3·6	3·8	3·1	+23	64	·453	5·6	0	0·30	−0·30	0	0·11	− 0·11	0	0·11	− 0·11	0	Bellary.		
1	12	12						6	N 10° E	10·0	8·4			74	·544	2·9	0	0·70	−0·70	0	0·80	− 0·80	0	0·80	− 0·80	0	Cocanada .	Madras, East Coast, North.	52
1	1	22					7		N 27° E	10·9				59	·478	2·9	0	1·10	−1·10	0·03	1·80	− 1·72	0·08	1·80	− 1·72	0·08	Waltair (Visag.).		
	13							18	N 26° W	9·9	9·7	6·9	+41	75	·473	0·8	0	0·80	−0·80	0	0·75	− 0·75	·0	0·75	− 0·75	0	Gopalpur.		
																											XII.—Hill Stations.		
																	0	2·70	−2·70	0	1·20	− 1·20	0	1·20	− 1·20	0	Pishin.	Baluchistan .	48
31									Calm	0·6	0·6	2·7	−78	82	·148	2·5	0	2·70	−2·70	0	0·81	− 0·81	0	0·81	− 0·81	0	Quetta.		
	1		4		25				S 9° E					61	·165		0	2·70	−2·70	0	0·65	− 0·65	0	0·65	− 0·65	0	Kalat.		
5			16	10					S 73° E	5·3	5·8			66	·201	2·0	0	3·10	−3·10	0·01	0·92	− 0·91	0·01	0·92	− 0·91	0·01	Chaman.		
		12	15	2	2				N 79° E	1·9		1·3	+46	59	·055	3·4	0	0·60	−0·60	0·08	0·19	− 0·11	0·08	0·19	− 0·11	0·03	Leh . .	Punjab.	30
16	1			5	6			3	S 12° E	1·7	1·8			89	·136	3·7	1	3·50	−2·50	0·20	0·91	− 0·71	0·20	0·91	− 0·71	0·12	Srinagar.		
11	3	4	5	6	1		1		N 87° E	4·0	3·6			73	·082	2·5	2			1·41			1·41			0·84	Sonamarg .		
5					2	16	7	1	S 57° W	4·9				61	·082	4·1	1			0·22			0·22			0·13	Astor (Kashmir).		
15		7	1	5	2			1	S 87° E	4·6	4·9			60	·062	3·7	4			1·83			1·83			1·10	Minimarg.		
27	1	1				1	1		N 45° W	1·8	2·1			99	·127	4·5	0	1·10	−1·10	0·08			0·08			0·08	Skardu.		
31									Calm	0·5	0·5			100	·067	3·6	4	6·60	−2·60	0·86			0·86			0·32	Dras.		
30							1		W	3·0	2·7			54	·114	4·0	0	0·80	−0·80	0·08	0·09	− 0·01	0·08	0·09	− 0·01	0·08	Gilgit.		
26			1		1		2		S 45° W					67	·127	2·6	0			0·05			0·05			0·03	Chitral.		
29							2		W					49	·116	2·6	0			0·13			0·13			0·08	Killa Drosh.		
	14	2		1			2	12	N 19° W	1·0				51	·134	2·5	0	2·50	−2·50	0·05	0·79	− 0·74	0·05	0·79	− 0·74	0·05	Para Chinar.		
	7	5				1	1	17	N 24° W	8·7	8·1			35	·116	2·5	0			0	1·00	− 1·00	0	1·00	− 1·00	0	Cherat.		
24	2		1	1	2			1	E	1·2	1·5	6·1	−75	46	·136	2·8	0	1·50	−1·50	0	1·14	− 1·14	0	1·14	− 1·14	0	Murree.		
26		2	1	2					E							3·1	3			0·61	1·05	− 0·44	0·61	1·05	− 0·44	0·30	Poo.		
12	7	1		4	3			3	N 19° E	4·0		1·8	+ 122	33	·086	3·4	1	1·60	−0·60	1·09	1·23	− 0·14	1·09	1·23	− 0·14	0·95	Simla.		
8	18	2			1	1		1	N	7·0		4·2	+67	47	·120	2·2	2	2·40	−0·40	1·35	1·16	+ 0·19	1·35	1·16	+ 0·19	0·95	Chakrata .	N.-W. Provinces.	25
14	1		5	4			5	2	S 72° E					51	·142	2·0	2	1·90	+0·10	2·10	1·41	+ 0·69	2·19	1·41	+ 0·69	1·79	Mussooree.		
21	1		1	3		2	1	2	S 35° W	1·8	2·1	1·3	+62	55	·169	2·9	2	1·50	+0·50	1·14	0·71	+ 0·43	1·14	0·71	+ 0·43	0·90	Ranikhet.		
3		2	1	7	2	2	1	12	N 63° W	5·4	5·0			40	·114	2·9	2			1·17			1·17			0·80	Muktesar.		

Table

Abstract of Observations taken at 8 A.M. at 227 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
13	Bengal	Yatung	10,480†										45·7		23·9		34·8		21·8	55·1	31st	19·9	23rd	35·2
		Darjeeling	7,376	23·066	+·002		23·168	4th	22·946	25th	·222													
		Gangtok	5,660	24·484			24·504	20th & 25th.	24·460	6th, 14th & 30th.	·044	46·2	58·5		24·1		41·3		34·4	71·2	23rd	19·0	23rd	52·2
	Central India	Mount Abu	3,945	26·179	+·012		26·262	8th	26·025	26th	·237	61·9	69·7	+0·8	55·9	+3·4	62·8	+2·1	13·8	75·1	1st & 2nd.	48·5	28th	26·6
		Pachmarhi	3,528	26·599	+·021		26·661	22nd	26·509	26th	·152	57·1	71·7	+2·5	45·9	+0·9	58·8	+1·7	25·8	76·1	1st, 2nd & 27th.	39·8	11th	36·3
	South India	Wellington	6,200	24·307	+·005		24·362	11th	24·256	26th	·106	56·7	67·3	+1·7	47·8	−1·3	57·6	+0·2	19·5	72·2	28th	36·7	7th & 23rd.	35·5
		Kodai Kanal	7,688	22·868			22·920	11th	22·821	26th	·099	54·1	60·5		47·6		52·7		12·9	67·3	26th	42·2	6th	25·1
		Ootacamund		23·102			23·153	11th	23·055	26th	·098	56·4	63·2		46·7		55·0		16·5	68·5	26th & 28th.	34·6	6th	32·9
	XIII.—Extra India.																							
	Ceylon	Trincomalee	12	30·008	+·033	29·946	30·050	12th	29·948	31st	·102	78·5	83·4	−0·6	74·3	+0·1	73·9	−0·3	9·1	86·5	10th	70·0	14th	16·5
		Colombo*	40	29·959	+·026	29·925	30·021	11th	29·871	29th	·150	78·7	88·2	+1·7	73·5	+0·6	80·8	+1·2	14·7	90·5	12th & 13th.	69·5	14th	21·0
	Persia	Meshed	3,104									36·2			33·0							28·2	30th	
		Teheran		26·131‖			26·250	18th & 28th.	25·950	26th	·300	41·3	55·6		37·0		46·3		18·6	60·5	4 days	30·0	9th	30·5
				24·922**			25·040	22nd	24·800	26th	·240													
		Ispahan		24·439‖			24·600	22nd	24·325	3 days	·275	37·4	56·4		30·4		43·4		26·0	66·4	5th	23·1	31st	43·3
		Bushire	14	30·158	+·031	30·132	30·319	23rd	30·058	1st	·261	61·2	71·0	+1·3	58·1	+2·6	64·6	+2·0	12·9	83·1	3rd & 4th.	51·3	25th, 26th & 27th.	31·8
		Bahrein†	30	30·162			30·323	23rd	30·049	10th	·274	67·1	73·9		62·9		68·4		11·0	84·1	11th	53·1	28th	31·0
		Jask†		30·123	−·009		30·227	23rd	30·025	1st	·212	69·8	80·1	+2·2	65·6	+2·0	72·8	+2·1	14·5	83·8	4th	60·3	4th	23·5
		Muscat	20	30·114		30·082	30·191	23rd	30·030	1st	·164	73·3	76·2		71·7		74·0		4·5	79·0	8th	68·0	31st	11·0
	Arabia	Baghdad	220	30·063	+·052	30·277	30·217	23rd	29·756	2nd	·461	46·2	68·3	+4·0	43·1‡	−0·1	55·7‡	+2·0	25·2	81·0	2nd	37·7	20th	43·3
		Bussrah		30·234			30·391	23rd	30·068	2nd	·323		64·6		49·6		57·1		15·0	76·2	3rd	43·8	8th	32·4
		Aden	94	30·004	+·003	30·030	30·106	23rd	29·943	1st	·163	75·2	80·8	−1·8	72·0	−0·6	76·4	−1·2	8·8	86·3	2nd	67·9	25th, 26th & 27th.	18·4
		Perim	201	29·870		30·007	30·014	23rd	29·810	21st	·204	77·7	83·7		74·4		79·1		9·3	87·1	6th	69·4	23rd	17·7
	Afghanistan	Kabul										30·7	59·5		26·2		42·9		33·3	70·2	1st	21·4	31st	48·8
	Central Asia	Kashgar	4,255	25·790			26·220	3rd	25·480	21st	·740	20·6	41·2		18·5		29·9		22·7	59·8	18th	12·5	31st	47·3
	Arabian Sea Islands.	Aminidevi	13	29·986		29·927	30·052	8th	29·924	31st	·128	83·2	86·3		73·9		80·1		12·4	88·6	21st	67·4	7th	21·2
		Minicoy	7	30·000		29·932	30·059	4th	29·933	29th	·126	81·7	85·8							88·9	13th			
	Africa	Zanzibar	73	29·938	+·005	29·927	30·004	23rd	29·859	16th	·145	82·0	85·6		79·2		82·5		6·3	87·5	10th	77·0	1st	10·5
		Do. Dunga		29·868‡			30·017	7th	29·783	16th	·234	79·5	90·3		70·8		80·6		19·5	93·2	4 days	67·5	3rd & 4th	25·8

Nots.—When a query is inserted against any reading or in the variation returns for any station, the

* Observation of 30 days.
† „ „ 29 „
‡ Mean of 30 days.
‖ Aneroid uncorrected.
** Mountain barometer, uncorrected.

I—*concluded.*

in India, Burma, etc., in December, 1901—concluded.

WIND DIRECTION. Number of winds from									Wind Resultant.	Wind Velocity.				Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.									Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.		Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st December to 31st December 1901.	Normal rainfall for period, 1st December to 31st December.	Variation from normal of period, 1st December to 31st December.				
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																	0	0·57	− 0·57	0	0·18	−0·18	0	0·18	−0·18	0	Yatung .	Bengal.	13
11	3	5	2	4	1	2	2	1	N 63° E	2·2	2·0	1·9	+ 5			2·8‡	1	0·65	+ 0·35	0·13	0·23	−0·10	0·13	0·23	−0·10	0·13	Darjeeling.		
	1	16	7	5	1	1			N 72° E	1·8	2·1			74	·231	2·4	2			1·63	0·54	+1·09	1·63	0·54	+1·09	1·00	Gangtok.		
17	2	4		4	1	1	1	1	N 73° E	4·4	4·6	3·6	+28	38	·208	2·1	0	0·50	− 0·50	0	0·21	−0·21	0	0·21	−0·21	0	Mount Abu	Central India.	
23			2	3		1	1	1	S 39° E	1·8	1·9	2·6	−27	55	·253	3·2	0	1·00	− 1·00	0	0·47	−0·47	0	0·47	−0·47	0	Pachmarhi.		
18	1	5	2	2	2			1	N 74° E	2·6		2·5	+ 4	62	·291	4·3	5	5·60	− 0·60	2·19	3·91	−1·72	2·19	3·91	−1·72	1·01	Wellington	South India.	
	2	8	10	7				4	N 72° E	14·0				62	·256	2·2	7	8·10	−1·10	4·45	5·57	−1·12	4·45	5·57	−1·12	1·68	Kodai Kanal		
14		4	7	5				1	E	3·3	3·1			56	·250	4·0	4	3·30	+0·70	1·74	1·65	+0·09	1·74	1·65	+0·09	0·55	Ootacamund.		
																											XIII.—Extra India.		
7		13				5		6	N 9° E	1·8				91	·827	3·2	13			9·63	15·90	−6·27	9·63	15·90	−6·27	2·92	Trincomalee	Ceylon.	
	16	8	4	1				1	N 24° E	9·5		7·9	+20	79	·786	2·5	4			1·70	6·79	−5·09	1·70	6·79	−5·09	0·94	Colombo.		
														78	·166	3·5	1			0·28			0·28			0·28	Meshed .	Persia.	
1	5	21	2					2	N 36° E	2·0	2·5			60	·157	1·5	1			0·41			0·41			0·35	Teheran .		
30								1	N 45° W	1·9	2·5			66	·150	1·8	1			0·53			0·53			0·46	Ispahan .		
2	7	11	4	2	1			4	N 31° E	6·1	7·3	6·6	+11	76	·414	2·8	1			1·49	3·24	−1·75	1·49	3·24	−1·75	1·40	Bushire.		
4	3	1		1	3	2	5	10	N 63° W					91	·607	1·0	1			0·58			0 58			0·58	Bahrein.		
5	10	9	4					1	N 29° E	9·9	11·5			69	·540	1·9	0			0	0·78	−0·78	0	0·78	−0·78	0	Jask.		
				2		24		5	S 52° W	3·3	3·4			69	·568	1·2	3			0·52	0·26	+0·26	0·52	0·26	+0·26	0·24	Muscat.		
15	4			3	2		2	5	N 45° W	2·4	3·1			72	·228	2·2	1			0·20			0·20			0·10	Baghdad.	Arabia.	
																	2			1·01			1·01			0·69	Bussrah.		
7		18	6						N 56° E	12·0§	11·8	12·4	− 5	71	·615	4·1	2			0·33	0·37	−0·04	0·33	0·37	−0·04	0·15	Aden.		
		6	17	8					S 88° E	23·5	21·1			88	·839	3·0	4			1·33			1·33			0·90	Perim.		
		2	1	9	10	8	1		S 5° E					72	·124	3·1	1			0·11	0·29	−0·18	0·11	0·29	−0·18	0·11	Kabul .	Afghanistan.	
29	1				1				Calm	0·9	0·8					2·9	0			0	0·19	−0·19	0	0·19	−0·19	0	Kashgar .	Central Asia.	
	9	13	4	1	1		1	2	N 34° E					70	·792	3·6	3			0·58			0·58			0·18	Amini Devi.	Arabian Sea Islands.	
	8	13	3	5	1		1		N 49° E	3·9	4·2			72	·778	3·1	1			0·59			0·59			0·59	Minicoy.		
	9	17	2	1	1	1			N 36° E	6·4	6·0			82	·893	6·2	8			4·16			4·16			0·80	Zanzibar .	Africa.	
3	2	21	3					2	N 42° E	7·0	6·8			88	·889	5·1	10			5·81			5·81			1·70	Do. Dunga.		

data for that station are not utilised in calculating the provincial variations.

§ Mean of 23 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M.

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Burma Coast and Bay Islands.	Port Blair		29·950	29·844	·106	29·893	+·019	29·885	86·5	75·7¶	10·8	88·7	70·9	17·8	83·2	81·5	80·3¶	+0·5	72·1	76·2	76·4	74·9
	Rangoon					Not	recorded		85·7	65·6	20·1	89·8	60·6	29·2	77·0	84·0	74·2	−1·2	63·6	69·8	71·6	68·3
	Diamond Island		30·009	·896	·113	·948	+·003	·924	83·9	72·5	11·4	88·8	68·2	20·6	80·4	81·5	77·2	+0·4	68·0	72·6	71·7	70·8
	Cocos Island	111	29·957	·861	·096	·904	?	·918	82·3	75·4	6·9	83·9	71·9	12·0	80·1	79·0	77·6	+0·8	68·9	71·7	71·5	70·7
	Akyab		30·059	·948	·111	30·002	+·009	·965	80·7	62·0	18·7	84·2	55·3	28·9	72·2	76·4	70·7	−1·5	63·6†	68·3	70·3	67·4
Bengal and Orissa.	Chittagong		·000	·893	·107	29·913	+·004	·880	78·0	57·1	20·9	82·8	53·1	29·7	70·9	75·2	67·3	−0·1	56·7	66·1	66·5	63·1
	Calcutta (Alipore)		·106	·991	·115	30·039	+·015	30·006	77·5	55·9	21·6	81·7	51·2	30·5	70·9	75·8	65·9	+0·6	54·8	62·5	62·9	60·0
	Saugor Island		·099	·985	·114	·034	+·015	·004	77·2	58·1	19·1	80·9	53·0	27·9	71·6	74·5	66·6	+0·1	55·5	64·8	64·1	61·8
	False Point		·102	·995	·107	·047	+·009	·010	78·2	57·4	20·8	82·6	53·0	29·6	73·8	75·8	66·8	+0·2	56·9	65·4	65·4	62·6
Chhattisgarh Plain and Chota Nagpur.	Hazaribagh		28·072	27·969	·103	28·010	+·011	·015	73·4	51·5	21·9	78·9	47·2	31·7	66·3	70·8	61·5	+1·0	46·9	54·6	56·0	52·5
	Darbhanga		29·966	29·843	·123	29·899	+·007	·025	75·6	52·4	23·2	81·2	45·8	35·4	67·9	73·5	63·4	−0·2	50·9	60·0	61·7‡	57·5
	Allahabad		·821	·709	·112	·753	0	·027	77·3	46·7	30·6	85·3	42·1	43·2	66·9	74·9	60·3	−0·4	45·6	57·1	60·3	54·3
Upper Sub-Himalayan.	Dehra Dun		27·842	27·758	·084	27·789	+·013	·060	69·1	44·8	24·3	73·7	40·4	33·3	59·3	64·6	54·9	−1·2	41·7	50·5	52·7	48·3
	Roorkee		29·214	29·117	·097	29·153	+·014	·048	72·9	41·4	31·5	77·6	37·1	40·5	59·9	69·0	55·3	−1·2	40·3	52·2	55·6	49·4
	Meerut		·368	·269	·099	·310	+·005	·048	74·2	44·8	29·4	81·0	41·4	39·6	59·2	70·4	58·0	+0·8	42·2	51·1	55·5	49·6
	Lahore		·423	·335	·088	·367	+·012	·070	74·9	41·6	33·3	83·0	37·0	46·0	60·7	72·8	56·4	+3·2	39·1	52·3	58·1	49·8
	Ludhiana		·305	·216	·089	·249	+·022	·069	71·1	44·8	26·3	77·9	39·1	38·8	59·7	68·9	56·2	+1·6	42·2	51·0	54·3	49·2
Indus Valley and N.W. Rajputana.	Peshawar		·038	28·937	·101	28·976	+·008	·125	68·8	38·5	30·3	75·1	33·7	41·4	57·0	64·8	51·4	+0·5	35·7	48·3	51·9	45·3
	Jacobabad		·974	29·862	·112	29·906	+·011	·058	79·4	43·2	36·2	88·3	35·4	52·9	65·9	75·6	59·0	+1·1	40·6	54·2	59·1	51·3
	Kurrachee		30·123	30·012	·111	30·062	+·010	·043	83·2	57·2	26·0	87·6	50·4	37·2	74·3	79·2	68·8	+1·8	51·2	61·8	67·4	60·1
E. Rajputana, C. India and Gujarat.	Jaipur		28·687	28·590	·097	28·627	+·016	·054	78·7	52·3	26·4	87·2	41·9	45·3	70·3	76·0	63·5	+3·5	45·4	55·3	58·8	53·1
	Udaipur		·174	·057	·117	1.6		·028	79·7	50·3	29·4	86·6	44·4	42·2	70·9	77·8	64·5		46·6	56·1	58·6	53·8
	Deesa		29·626	29·512	·114	29·561	+·005	29·565	83·5	57·8‡	30·7	94·3	49·9	44·4	79·7	86·2	72·5‡	+4·3	47·7	59·3	61·7	56·3
	Jamnagar		30·041	·922	·119	·981		·988	84·5	57·1	27·4	90·5	47·3	43·2	75·5	82·6	70·3		51·8‡	60·7	63·0	58·4
Deccan.	Belgaum		27·489	27·380	·109	27·431	+·009	·837	82·7	60·0	22·7	86·5	54·9	31·6	74·9	80·6	70·9	+1·5	56·3	62·1	62·2	60·2
	Sholapur		28·474§	28·343‖	·131	28·407	+·012	·949‖	86·1‖	60·7‖	25·4	90·7	51·4	39·2	77·2§	84·3‖	72·6††	+1·9	51·5‖	62·5§	63·4‖	59·2
	Poona		·217	·092	·125	·155	+·009	·938	86·3	54·7	31·6	92·3	47·0	45·3	76·8	84·8	70·5	+1·7	50·7	58·7	62·1	57·1
	Akola		29·180	29·043	·137	29·104	+·026	30·001	85·1	50·0¶	35·1	89·3	42·5	46·8	74·3	84·0	66·6¶	+0·3	46·3	58·2	61·4	55·4
	Buldana	2,132	27·947	27·834	·113	27·883	+·019	29·971	80·5	57·6	22·9	84·6	54·8	29·8	74·7	78·6	68·0	+0·6	48·8	57·1	58·2	54·7
	Khandwa		29·056	28·919	·137	28·981	+·021	·994	86·4	52·2	34·2	91·7	44·6	47·1	73·1	84·8	68·3	+2·9	45·6	57·5	62·1	55·1
	Nagpur		·084	·964	·120	29·017	+·033	30·016	83·0	53·8	29·2	87·6	50·2	37·4	71·6	80·7	67·2	+0·4	47·8	57·3	60·4	55·2
	Do. (Sanitary Commr.'s Office).		·105	·976	·129	·034		·024	83·5	53·5	30·0	88·2	49·5	38·7	72·5	81·8	68·1		48·3	58·2	61·4	56·9
	Hyderabad (Deccan).		28·385	·270	·115	28·324	+·001	29·971	83·3	58·9	24·4	87·4	54·3	33·1	75·9	80·0	70·3	+1·4	?	64·5	65·5	?
West Coast	Bombay		30·024	29·913	·111	29·962	+·012	·939	86·5	71·9	14·6	90·3	68·1	22·2	77·8	82·6	77·6	+1·6	65·3	68·5	72·6	68·8
	Karwar		·000	·872	·128	·929	+·024	·905	88·3	68·3	20·0	90·7	61·6	29·1	79·2	86·2	77·1	+1·3	64·6	69·2	72·6	68·8

† Mean of 18 days. ‡ Mean of 30 days. § Mean of 27 days. ‖ Mean of 26 days.

II.

at 65 Stations in India, Burma, etc., for December, 1901.

Vapour Tension.					Humidity.					Cloud.				Wind direction. Number of winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
¶																									%	%						
·742	·814	·802	·786	−·041	83¶	72	68	74	− 5	3·3	4·4	3·9	−0·8		10	27	8	14	1			2	N 61° E	N 58° E	66	66	159	181			Port Blair	Burma Coast and Bay Islands.
·567	·638	·613	·606	−·045	89	68	53	70	− 2	3·3	5·2	4·3	+1·4																		Rangoon	
·619	702	·647	·656	−·027	78	67	60	68	− 5	2·2	2·9	2·6	−0·8	4	4	29	10	2		1	1	11	N 36° E	N 58° E	61	48	127*	212			Diamond Island	
·622	·668	·680	·657	−·023	73	65	68	69	− 2	4·0	4·4	4·2	+0·7		9	34	18					1	N 51° E	N 24° E	85	85	168	P	0·62	0·25	Cocos Island	
·579†	·641	·666	·650	+·042	95†	81	72	83	+ 3	1·4	1·4	1·4	−0·9		1	21	10				17	13	N 2° W	N 8° W	40	41	54*	57			Akyab	
·459	·580	·537	·525	+·003	97	76	61	78	+ 2	2·4	2·7	2·6	+0·4		8	22	3	1		2	3	23	N 2° W	N 24° W	61	53	69*	66			Chittagong	Bengal and Orissa.
·417	·457	·405	·426	−·006	93	60	45	66	− 4	2·1	2·7	2·4	+0·7		30	2				2	4	24	N 24° W	N 23° W	83	62	67	61			Calcutta (Alipore).	
·439	·527	·462	·476	−·020	90	68	54	71	− 2	3·3	3·8	3·6	+1·3		37	8			1	3	4	9	N 8° W	N 3° E	74	59	152	169			Saugor Island.	
·463	·518	·489	·490	−·006	97	62	54	71	− 3	1·8	2·2	2·0	−0·5	1	21	22	8	1	1		2	6	N 25° E	N 32° E	69	58	103*	151			False Point	
·267	·283	·270	·273	−·001	70	43	35	49	− 3	2·7	3·5	3·1	+1·0	6	23	2				3	6	22	N 31° W	N 44° W	71	56	130*	119			Hazaribagh	
·358	·417	·396‡	·390	−·032	90	61	48‡	66	− 7	0·8	0·5	0·7	−0·2	37	1	1	3	2		4	11	3	S 88° W	S 81° W	18	53	23	49			Darbhanga	Gangetic Plain and Chota Nagpur.
·294	·339	·333	·322	−·018	92	52	39	61	− 5	2·4	3·1	2·8	+1·3	7	4	2	2	3	2	3	22	17	N 70° W	N 47° W	53	25	79*	60			Allahabad	
·229	·261	·258	·249	−·027	76	52	42	57	− 6	2·2	2·7	2·5	−0·1	54						5	3		S 63° W	S 75° W	11	17	3	31			Dehra Dun	
·239	·292	·269	·267	−·022	91	57	38	62	− 2	1·5	1·6	1·6	−0·6	42			3			2	15	N 52° W	N 67° W	21	15	28	32			Roorkee	Upper Sub-Himalayas.
·238	272	·247	·252	−·032	80	54	33	56	− 6	2·3	1·6	2·0	+0·2	27			1		3	22	9	N 52° W	N 61° W	48	44	27*	37			Meerut	
·208	·283	·292	·261	−·013	79	53	36	56	− 2	1·6	1·0	1·3	−1·1	36	3		2		3		6	12	N 56° W	N 35° W	24	20	20	33			Lahore	
·236	·260	·232	·243	−·034	80	51	33	54	− 8	1·5	2·2	1·9	−1·3	9	1	7		2		4	24	15	N 69° W	N 43° W	55	27	35*	27			Ludhiana	
·177	·236	·234	·215	−·012	76	51	38	55	− 5	2·9	2·6	2·8	−0·7	51	3	1	1	1	1	1	2	1	N 28° W	S 4° E	3	8	25*	61			Peshawar	
223	·271	·286	·260	+·023	79	43	33	51	+ 4	1·5	2·0	1·8	−0·4	44	3	2	2	1	3	1		6	N 11° W	N 15° W	7	18	26*	39			Jacobabad	Indus Valley and N.-W. Rajputana.
·296	394	520	·403	+·035	63	46	53	54	+ 1	1·3	2·1	1·7	−0·1	3	3	22	10	3	3	8	6	4	N 51° E	N 41° E	27	23	125*	217			Kurrachee	
·222	254	·285	·254	−·017	57	34	32	41	− 8	2·3	3·5	2·9	+0·8	2	2	14	9	4	5	12	6	8	N 53° E	N 19° W	3	24	60	71			Jaipur	
·276	·270	·258	2c8		76	36	26	46		2·5	3·4	3·0		37	4	3	11	3		1	1	2	N 69° E		21		32*				Udaipur	E. Rajputana, C. India and Gujarat.
·207‡	·237	228	·226	−·028	43‡	24	18	28	− 8	2·4	2·6	2·5	+0·8		7	16	12	5	3	4	8	7	N 39° E	N 14° E	29	50	174	194			Deesa	
309‡	·336	·316	·319		65‡	38	29	44		1·5	1·7	1·6		1	22	22	4			2	1	11	N 12° E		72		218*				Jamnagar	
·415	·403	·336	385	+·013	79	46	33	53	+ 3	3·6	4·6	4·1	+1·5		2	13	29	13	1	2	2		S 89° E	N 88° E	71	67	277	299			Belgaum	Deccan.
·270‡	·285§	·328‡	·330	−·042	50‡	40§	28‡	40	− 8	3·6	4·0	3·8	+0·9	1		12	12	27	1				S 74° E	S 83° E	66	66	292* ††	182			Sholapur	
·324	·271	·278	·291	−·033	25	29	23	42	− 1	3·1	3·7	3·4	+0·9	2	1	10	20	20		6	2	1	S 74° E	N 85° E	57	54	179*	133			Poona	
·269¶	·272	·256	·266	−·065	74	32	22	43	− 8	3·8	4·0	3·9	+2·2	6	5	18	24	6	1			2	N 71° E	N 51° E	68	57	79*	80			Akola	
·239	·252	·234	·242	−·082	50	29	24	34	−13	2·9	2·5	2·7	+0·3		10	13	18	14	4	1		2	N 80° E	N 82° E	57	43	139*	132	*Nil*	*Nil*	Buldana	
·228	·283	·273	·261	−·058	58	35	23	39	−11	3·3	2·7	3·0	+1·2	7	1	7	16	17	6	5		3	S 64° E	N 62° E	48	42	83	62			Khandwa	
·262	·298	·274	·278	−·071	62	38	26	42	−10	3·4	3·5	3·5	+1·2	30	2	19	7	2				2	N 53° E	N 57° E	40	54	46	83			Nagpur	
·278	·212	·297	·296		67	39	27	44		2·6	3·2	2·9		24		21		2				15	N 13° E		40		18*				Do, (Sanitary Commr.'s Office)	
?	470	·454	?	?		52	44	?	?	3·1	3·3	3·2	+0·8	16		6	18	22					S 73° E	S 72° E	63	65	79	81			Hyderabad (Deccan).	
·537	·578	·573	·596	−·019	69	61	60	63	− 6	2·6	3·1	3·0	+1·2		3	12	17	1			11	18	N 6° E	N 16° E	39	58	201	236			Bombay	West Coast.
·569	·585	·620	·591	−·012	81	58	50	63	− 4	2·1	1·9	2·0	+0·6	2	18	15	3	1	4	1	11	7	N 5° W	N 6° W	46	54	83	66			Karwar	

†† Mean of 25 days. ¶ Mean of 29 days. * Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 65 Stations

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
South India.	Periyakulam		29·084	28·957	·127	29·026			84·0	65·1	18·9	86·7	58·0	28·7	77·6	81·2	73·5		63·0	69·2	69·7	67·2
	Salem		·116	29·000	·116	·057	+·017	29·941	85·5	64·7	20·8	88·1	57·2	30·9	78·5	81·1	73·8	−0·4	63·3	69·3	70·3	67·6
	Chitaldroog		27·636	27·528	·108	27·581	−·001	·917	81·7	61·3	20·4	87·0	54·9	32·1	74·3	79·1	70·8	+0·5	58·2	64·8	65·2	62·7
	Bangalore		·047	26·945	·102	26·995	+·013	·932	77·6	58·0	19·6	81·1	52·1	29·0	70·2	75·0	67·2	−0·2	56·9	62·0	62·6	60·5
	Hassan		26·977	·874	·103	·925	+·006	·921	76·5	56·8	19·7	81·3	47·9	33·4	72·0	75·3	66·4	−0·8	55·8	62·2	61·8	59·9
	Mysore		27·533	27·416	·117	27·475	+·011	·920	80·5	59·8	20·7	83·4	52·0	31·4	73·3	78·2	69·6	−0·8	58·8	64·1	64·7	62·5
	Madras		30·054	29·947	·114	29·997	+·023	·950	82·3	68·7	13·6	85·5	63·4	22·1	79·5	79·2	74·9	−1·1		72·1	71·4	70·8
	Bellary		28·586	28·453	·133	28·519	+·012	·945	86·1	62·0	24·1	91·0	55·1	35·9	76·9	83·1	72·9	+0·6	58·6	62·5	64·7	62·4
	Waltair		29·885	29·772	·112	29·829		30·000	80·7	67·4	13·3	84·2	63·5	20·7	78·0	77·6	73·3		58·5	65·3	65·7	63·2
Hill Station, Baluchistan.	Quetta		24·796	24·713	·083	24·743	+·029		59·2	27·3	31·9	67·8	17·6	50·2	49·1	54·7	42·1	−0·1	26·4	39·4	42·2	36·0
Hill Stations, Northern India.	Leh		19·780	19·684	·096	19·728	+·023		36·1	12·5	23·6	46·1	8·0	38·1	25·6	32·3	23·6	0	11·4	15·8	21·3	16·2
	Srinagar		25·084	24·985	·099	25·022	−·009		51·8	24·8	27·0	60·4	19·0	41·4	38·0	50·1	37·9	+0·7	23·7	35·8	46·2	35·2
	Simla (Ridge)		23·220	23·163	·057	23·180	+·026		50·2	39·2	11·0	57·9	30·3	27·6	46·4	46·2	43·4	−1·7	32·4	35·7	37·2	35·1
	Chakrata		·384	·322	·062	·342	+·007		55·2	36·9	16·3	64·0	30·4	33·6	48·7	48·0	45·0	−0·5	32·4	39·0	39·0	36·8
	Ranikhet		24·226	24·153	·073	24·175	+·026		56·4	42·8	13·6	62·3	30·0	32·3	51·1	51·8	48·2	−1·1	37·2	42·8	43·2	41·1
	Muktesar		22·950	22·884	·066	22·917			54·1	38·0	16·1	62·7	29·9	33·8	48·9	48·1	44·5		31·7	38·7	39·6	36·7
	Katmandu	4,388	25·741	25·614	·127	25·676	?		66·0	39·2	26·8	70·3	36·2	40·1	53·2	60·5	51·3	−2·2	37·9	48·5	51·4	45·9
	Darjeeling		23·074	23·011	·063	23·040	−·002		?	?	?	?	?	?	?	?	?	?	?	?	?	?
Hill Stations, Central India.	Mount Abu		26·202	26·128	·074	26·157	+·007		69·4	56·0	13·4	75·1	48·7	26·4	66·3	66·9	62·0	+2·4	46·2	51·1	51·7	49·6
	Pachmarhi		·622	·533	·089	·571	+·021		71·6	45·9	25·7	7[illegible]	39·8	36·2	66·8	69·3	58·3	+1·0	41·8	51·9	54·0	49·2
	Chikalda	3,642	·495	·398	·097	·439	+·009		73·7	55·9	17·8	77·6	52·1	25·5	68·8	71·5	64·3	+1·1	47·1	53·9	55·5	52·2
Hill Stations, South India	Wellington		24·316	24·243	·073	24·280	+·013		67·5	48·0	19·5	72·2	33·6	35·6	63·7	62·7	53·5	+0·6	44·5	54·5	56·4	51·8
	Kodai Kanal		22·880	22·806	·074	22·838			60·5	47·6	12·9	67·3	42·2	25·1	57·5	55·2	52·7		41·4	49·4	50·6	47·2
	Ootacamund		23·112	23·041	·071	23·077			63·3	46·7	16·6	68·4	34·6	33·8	60·4	58·3	53·8		41·2	49·6	50·6	47·1
Extra India.	Aden		30·005	29·914	·091	29·933	+·012	29·990	80·6	72·0	8·6	86·5	67·7	18·8	78·1	79·5	76·2	−0·6	66·8	69·3	68·3	68·3
	Perim		29·875	·769	105	·825	+·026	·962	83·7	74·4	9·3	87·2	69·4	17·8	80·5	80·8	78·3	−0·2	71·1	76·4	75·3	74·4
	Minicoy		30·004	·924	·080	·559		·892	85·9			88·3			83·8	83·0				75·9	75·1	
	Zanzibar		29·90†	·830	·110	·885	+·008	·886†	85·7	79·3	6·4	87·5	77·0	10·5	83·3	85·1	82·4	+0·1	74·8	78·0	78·1	77·0
	Port Victoria (Seychelles).	15	·989	·905	·084	·947	+·011	·886	82·4	73·4	9·0	85·0	70·1	14·9	80·6	81·5	77·7	−1·3	72·2	75·5	75·5	74·4
	Mauritius (Pamplemousses).	181				·840	+·008	·968				89·6	64·7	24·9			77·5	−0·9				

† Mean of 30 days. ‡ Mean of 27½ days.

II—*concluded.*

in India, Burma, etc., for December, 1901—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind direction. Number of winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																									%	%						
·551	·605	·575	·586		88	64	54	71		4·4	5·1	4·8		13		4	16	9	4	7	5	4	S 52° E		26		41°				Periyakulam	South India.
·570	·599	·615	·591	+·002	92	60	59	70	− 1	4·9	6·0	5·5	+1·2	15	2	1	41	1			2		N 87° E	N 77° E	66	50	76°	92			Salem	
·453	·498	·453	·468	+·049	93	59	46	63	+ 7	3·8	3·3	3·6	+0·5	2		13	34	13					E	N 83° E	84	82	171°	199			Chitaldroog	
·456	·463	·430	·450	−·005	96	63	50	70	+ 2	3·4	3·2	3·3	−0·6		3	20	36	3					N 74° E	N 70° E	87	84	195	116			Bangalore	
·439	·450	·400	·429	−·023	93	57	46	65	0	4·6	4·4	4·5	+0·5		1	30	27	4					N 69° E	N 76° E	89	82	75°	95			Hassan	
·490	·488	·449	·476	+·022	94	59	47	67	+ 5	6·4	4·9	5·7	+1·9		1	23	25	12			1		N 80° E	N 80° E	81	84	237°	281			Mysore	
	·690	·667	·703	−·001		69	67	81	+ 2	5·4	4·8	5·1	−0·3		21	36	4	1					N 33° E	N 25° E	89	79	180	178			Madras	
·456	·423	·395	·425	−·042	80	45	35	53	− 5	5·7	5·5	5·6	+1·9	4	1	3	41	12	1				S 83° E	S 86° E	84	69	90°	76			Bellary	
·377	·458	·477	·437		56	48	50	51		3·4	3·7	3·6				39	20	1	1	1			N 62° E		87		134				Waltair	
·137	·146	·144	·142	−·009	91	42	33	55	− 2	2·0	2·0	2·0	−0·9	46	4				2		5	5	N 57° W	N 61° W	16	29	18°	59			Quetta	Hill Station, Baluchistan.
·067	·025	·040	·044	−·036	81	18	20	40	−23?	3·6	5·3	4·5	−1·1			2	2	2	27	28	3		S 20° W	S 14° W	77	38	50	28			Leh	Hill Stations, Northern India.
·119	·187	·273	·193	+·018	88	81	75	81	+ 1	3·0	3·9	3·5	−1·8	23	10	4	1	4	2	1	3	14	N 22° W	S 84° E	31	6	43°	66			Srinagar	
·117	·101	·131	·116	−·021	50	53	42	42	− 3	3·1	3·7	3·4	−0·5	22	10	3		8	13	1		5	S 44° E	S 11° W	8	14	97	98			Simla (Ridge)	
·120	·141	·146	·136	−·015	52	42	44	46	− 5	2·5	3·5	3·0	−0·1	17	7	2	1	12	22			1	S 25° E	S 64° W	39	15	167	106			Chakrata	
·167	·192	·192	·184	−·017	61	52	51	55	− 3	2·8	2·7	2·8	+0·2	19	2	4	3	3		13	11	7	S 85° W	S 51° W	27	23	50°	37			Ranikhet	
·119	·131	·158	·136		53	39	48	47*		2·6	3·4	3·0		15	1	1	2	9	1	9	10	14	S 83° W		27		119°				Muktesar	
·216	·292	·278	·262	−·005	87	72	52	70	− 3	1·2	3·4	2·3	−0·5	6		3	11	7			32	3	S 88° W	N 67° W	26	47	9	22	*Nil*	*Nil*	Katmandu	
?	?	?	?	?	?	?	?	?	?	3·9	4·4	4·2	−0·1	8	2	12	6	13	2	4	5	10	N 67° E	N 55° W	14	3	48°	72			Darjeeling	
·203	·203	·210	·205	−·010	45	32	32	36	− 6	3·2	3·5	3·4	+1·7		10	6	2	9	8	13	4	10	S 69° W	N 13° E	13	13	107°	93			Mount Abu	Hill Stations, Central India.
·222	·216	·243	·227	−·048	71	34	34	46	− 9	3·2	3·0	3·1	+1·0	23	3	11	7	8	3	2	3	2	N 82° E	N 31° E	24	21	45°	64			Pachmarhi	
·224	·246	·259	·243	−·060	50	35	34	40	−11	2·2	2·2	2·2	−0·2	48	4			1		7	2		S 75° W	S 74° W	10	8	102	117	*Nil*	*Nil*	Chikalda	
·269	·335	·394	·333	−·019	77	58	69	68	− 9	4·1	4·9	4·5	−0·9	4	7	5	10	26	10				S 61° E	S 41° E	58	61	62	55			Wellington	Hill Stations, South India.
·215	·278	·329	·275		63	60	75	68		3·7	4·9	4·3			5	12	13	13			1	9	N 65° E		41		337				Kodai Kanal§	
·210	·250	·295	·252		63	49	61	58		4·2	4·7	4·5		19	3	12	17	6		1		4	N 70° E		45		74°				Ootacamund	
·594	·601	·562	·585	−·048	75	63	56	65	− 4	4·0	2·6	3·3	−0·1	6		33	8	14	1				N 73° E	S 87° E	69	71	‡ 286°	313			Aden	Extra India.
·722	·862	·831	·805	+·174?	84	82	79	82	+18	1·5	0·8	1·2	−0·4			5	31	23	3				S 73° E	S 60° E	83	83	508°	458			Perim	
	·768	·766				67	67			3·3	3·4	3·4			13	22	12	9	2	1	1		N 59° E		63		† 100°				Minicoy	
·804	·893	·864	·854	−·003	80	78	75	78	0	7·1	4·1	5·6	+1·7		18	24	8	2	7	2	1		N 44° E	N 35° E	56	62	146°	152			Zanzibar	
·783	·820	·806	·803	−·008	96	78	75	83	+ 2	6·4	6·5	6·5	−0·3	6	5	6	1	3	2	1	7	31	N 40° W	N 44° W	56	61	140	156	9·42	2·82	Port Victoria (Seychelles).	
			·711	+·024				76	+ 3																		278	261	6·10	1·53	Mauritius (Pamplemousses).	

§ Wind variable 9.

* Corrected.

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal prepared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Department. Hence they have not the same validity as the isobars in the land area of India itself, but it is probable they deviate very little from the actual.

The mean 8 a.m. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table I of the 8 a.m. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

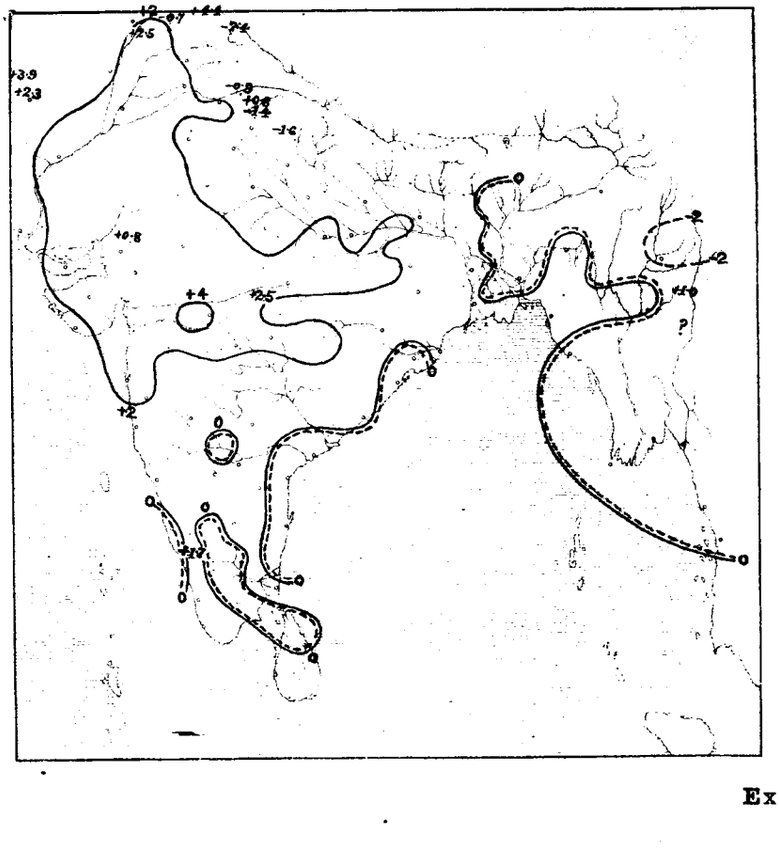
Velocity of	0 to 2 miles per hour	...	one feather added to the wind arrow
" "	2 to 5 " " "	...	two feathers " " " "
" "	5 to 10 " " "	...	three " " " " "
	10 to 20		four " " " " "

LITHO. BY J.N. MUNDLE.

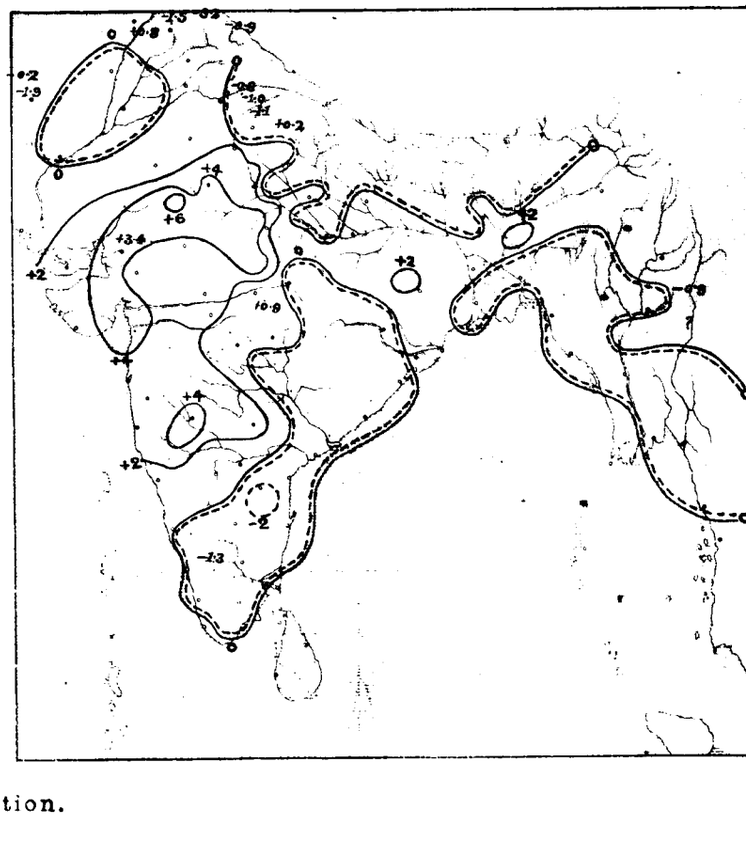
Explanation.

The Chart shows the variation of the mean 8 a.m. pressure of the month from the normal by means of lines drawn for equal amounts of variation (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of deficient pressure or negative variations.

MAXIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

Continuous lines indicate that the mean maximum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

CHART SHEWING THE VARIATION OF THE MEAN DAILY TEMPERATURE OF THE MONTH FROM THE NORMAL.

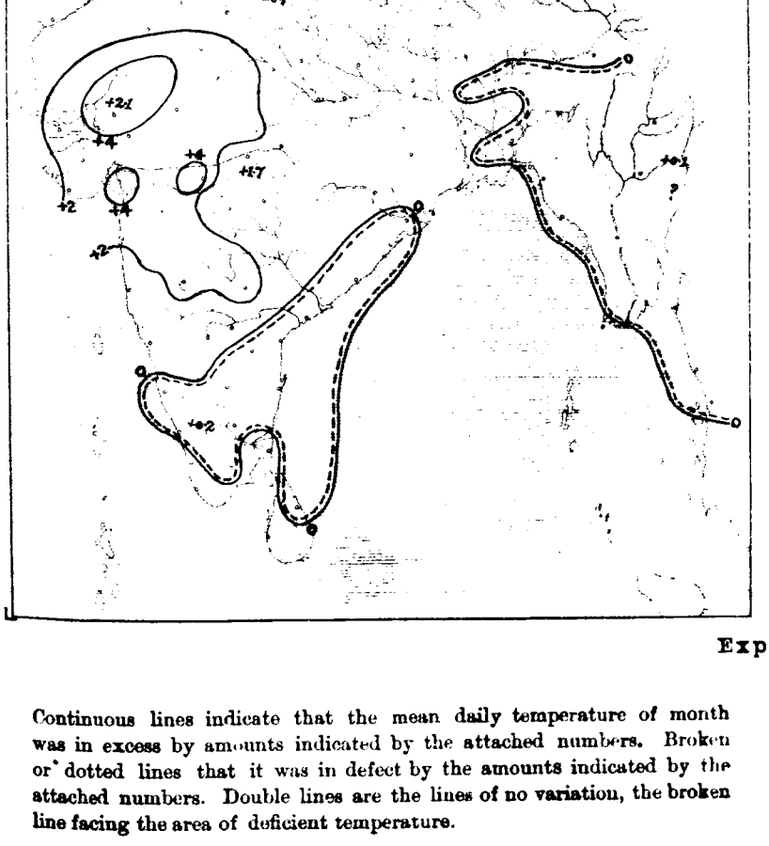
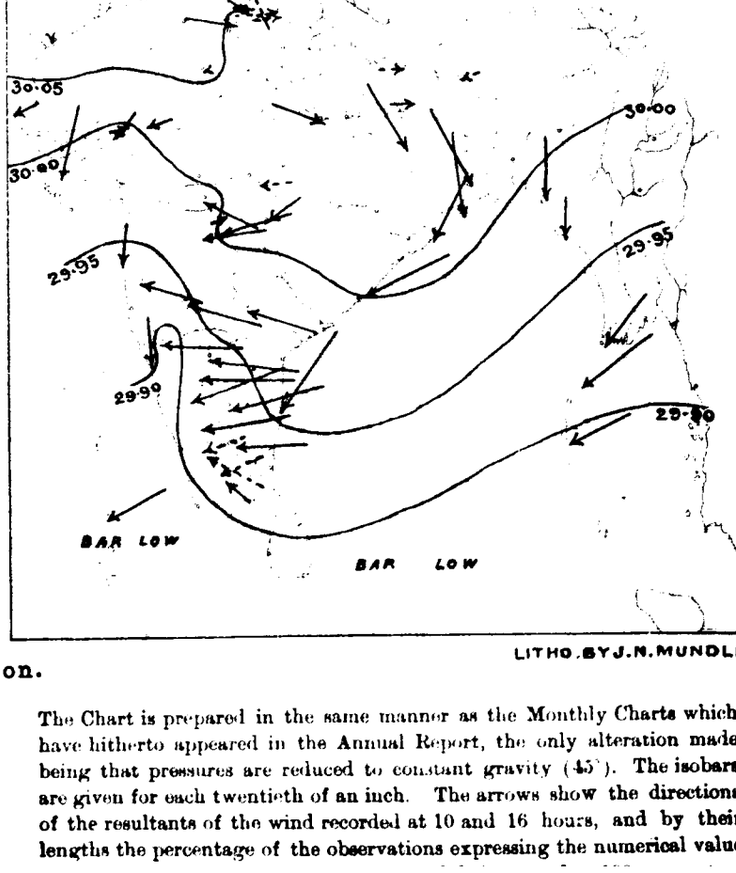


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF DECEMBER 1901.



LITHO. BY J. N. MUNDLE

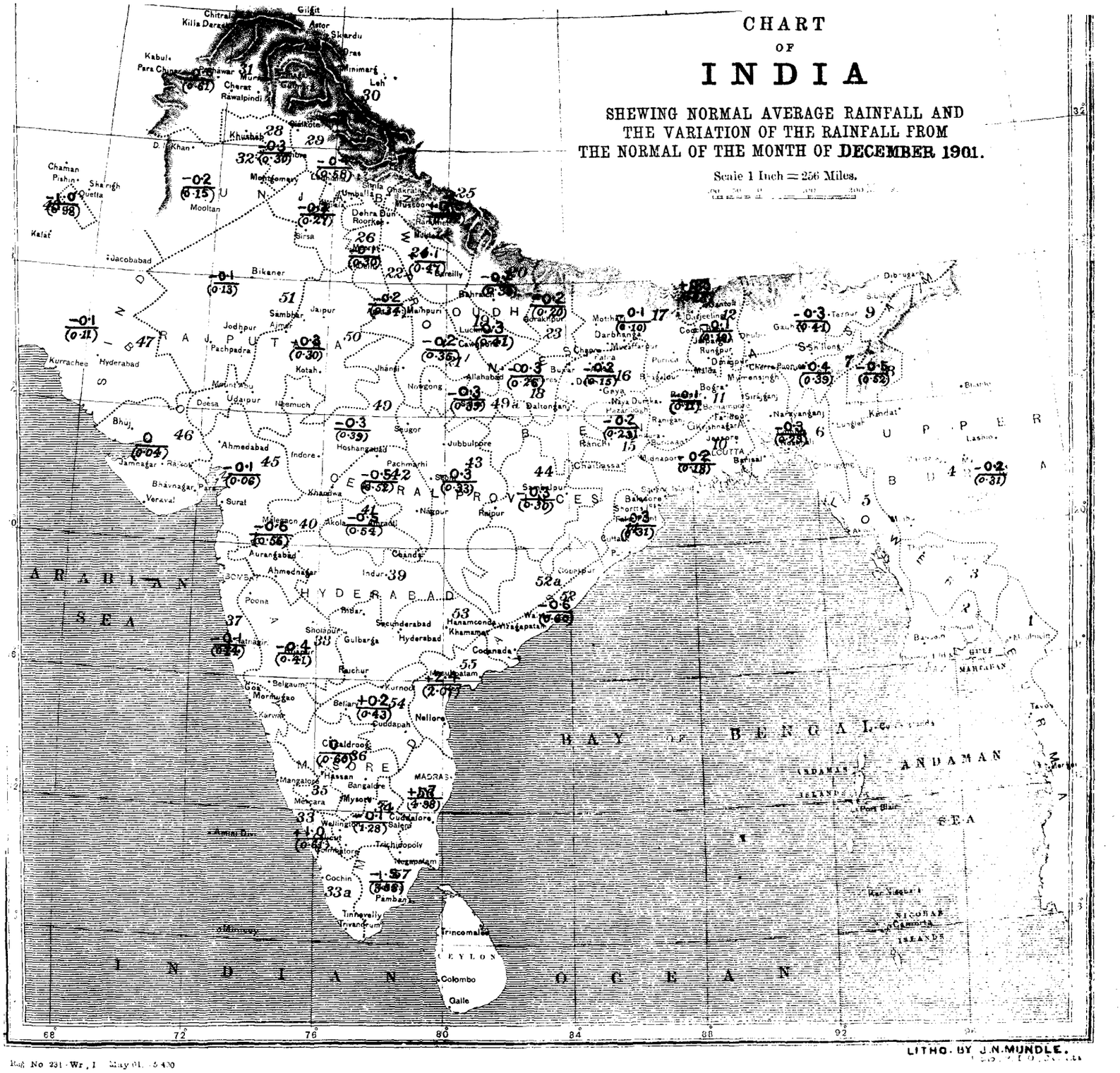
Explanation.

Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of deficient temperature.

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions of the resultants of the wind recorded at 10 and 16 hours, and by their lengths the percentage of the observations expressing the numerical value

Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The data used in the preparation of this Chart are the rainfall returns of all the observatories in India (182 in number), except those at the Hill Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.



Reg. No 231-Wr., 1 May 01. 5,430

Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
16. South Bihar
17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., Hills
31. North Punjab
32. West do.
33. Malabar
33a Travancore
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khamgaon
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar
47. Sind
48. Baluchistan Hills
49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. W. Rajputana
52. Madras, East Coast, North
52(a). Do. do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South