GOVERNMENT OF INDIA.

India. METEOROLOGICAL DEPARTMENT.

THE

INDIA WEATHER REVIEW

FOR THE YEAR

1894.

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1894

BY

JOHN ELIOT, M.A., F.R.S.,

METEOROLOGICAL REPORTER TO THE GOVERNMENT OF INDIA.

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September 14, 1999

Corrigenda in the Monthly Weather Reviews and Annual Summary for the year 1894.

Page.	Column.	Part.	Subject.
5	1	January 1894 .	The decimal point should be transferred to the left of each of the groups printed in the column of 'Mean aqueous vapour pressure from normal' in the tabular statement.
			For 3·90, + 2·16; 1·33, + 0·06; 1·64, + 0·70; 0·46, —0·63; 7·60, + 3·7 and 13·21, +1·03 *read* 3·97, +2·23; 1·34, +0·08; 1·67+0·73; 0·47 — 0·62; 7·82, +3·99 and 13·61, + 1·43 respectively against Upper Sub-Himalayas in columns 4 and 6 under 'Rainfall' in Table I of January, February, March, May, June and July, and accordingly the entries against 'Upper Sub-Himalayas' in the tabular statement printed in pages 5, 53, 95, 187, 232 should be corrected.
			·009 is to be added to the 'Mean pressure of Puri reduced to sea-level and to constant gravity 45° lat.' in Table I from January to September.
			Add 0·71, 0·15, 0·38, 0·02, 2·22 and 3·98 to the rainfall of the month, of Bareilly, in Table I for January, February, March, May, June and July respectively, and accordingly correct all other entries having reference to them.
			Add + 1·1 to the mean temperature variation from normal of Simla (Ridge) in Table II of January to May and +0·6 to those of June to August, and read — 0·8 for the temperature variation of that station for September.
152	...	April „ .	*Read* —0·4, +1·4 and —0·5 against Punjab Sub-montane, Hill Districts and Punjab North-West respectively in the column of 'Minimum' under 'Variation from normal of month of'.
169	...	Ditto „ .	*Add* 0·12 to the normal rainfall of Bidar and correct the entries in columns 6, 8 and 9 accordingly.
169	...	Ditto „ .	*For* "—0·97" *read* —0·79 against Pamban in column 9 under 'rainfall'.
170	...	Ditto „ .	*For* '275' *read* 255 against Trichinopoly in the column of 'Elevation'.
171	...	Ditto „ .	*Read* 0 against Rajahmundry in the column of 'Percentage variation' under 'Wind velocity'.
172	...	Ditto „ .	Deduct 0·3 from the mean maximum of Aden and accordingly correct the entries in columns 3, 6, 7 and 8 under 'Temperature of air'.
			The following corrections are to be applied to the entries against Naya Dumka in columns 1, 3, 4 and 6 under Pressure of Table I:—+·004 May to August, —·001 September, —010 October to December.
			—·050 is to be applied to the entries against Cocos Island in columns 1, 2, 4 and 6 under 'Pressure' of Table I from May to December.
222	...	May „ .	*For* 27·821 *read* 27·421 against Chitaldroog in column 4 under 'Pressure'.
256	1	June „ .	*Read* 'Mean normal, June' and 'Variation from normal' respectively for the headings of columns 2 and 3 under 'Rainfall' in the 2nd tabular statement.
267	...	Ditto „ .	*Read* 8·25 *for* the normal number of rainy days against 'Puri'.
271	...	Ditto „ .	*Read* 6·89 in the column of 'Normal rainfall of month' against Deccan.
271	...	Ditto „ .	*Add* 0·09 to the entry in the column of 'Rainfall of month' against Bidar, and those in columns 6, 7 and 9 under 'Rainfall' are to be corrected accordingly.
273	...	Ditto „ .	*For* "28" *read* 29 against Gnatong in column 1 under 'Rainfall'.
337	...	July „ .	*For* 24·13 and —16·64 *read* 23·86 and —16·91 against Dhubri in columns 7 and 9 under 'Rainfall' respectively.
349	...	Ditto „ .	*For* "?" *read* 524 against Cocos Island in column 1 under 'Wind velocity'.

Corrigenda in the Monthly Weather Reviews and Annual Summary for the year 1894—continued.

Page.	Column.	Part.	Subject.
369	2	August 1894 .	*Omit* the last two lines of the para. following the tabular statement.
			Deduct 0·27 from the total rainfall of Dhubri in Table I of August and September, and correct accordingly the figures in the column of 'variation from normal'.
			Add 0·02 to the entries against Burdwan in columns 4 and 7 under 'Rainfall' in Table I of August and to the total rainfall of September, and correct the variations accordingly.
			Deduct ·014 from the pressure values of Chittagong in both tables I and II of September and ·002 from those of October to December.
			Deduct 0·67 from the entries under 'Rainfall' against Kashgar in Table I of September, and add 0·07 to those of October, November and December.
478	...	October „ .	*For* "25·114" *read* 26·114 against Teheran in column 1 under 'Pressure.'
492	...	November „ .	*For* "+·006" and "—·008" *read* + ·019 and —·021 against Lahore in columns 4 and 5 respectively of the 2nd tabular statement.
524	...	Ditto „ .	*For* "·918" *read* 29·918 against Vizagapatam in column 2 under 'Pressure'.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JANUARY, 1894.

INTRODUCTION.

THE monthly review of the weather in India for the month of January 1894 is based on observations taken daily at 8 A.M. at 205 stations, and on additional observations recorded at 10 A.M. and 4 P.M. at 88 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 are issued up 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, 1894.

The month of January may be termed the first month of the north-east monsoon proper. North-east winds prevail over the whole of the Arabian Sea and Bay of Bengal to the north of the equatorial belt of low pressure. The normal features of the weather in India are moderate temperature, and large daily range of temperature over Northern and Central India and the Deccan, moderate amount of aqueous vapour in the air, and a large range of humidity caused by the large diurnal variation of temperature (frequently giving rise to heavy mists at night), clear skies and fine bright weather, with light to moderate winds, which are generally opposite in direction to those that prevail in the south-west monsoon.

Weather is usually fine throughout the whole month in the Peninsula. In Northern and Central India it is disturbed at intervals by shallow depressions or feeble cyclonic storms which either form in North-Western India or advance from Baluchistan. These depressions are generally shallow and ill-defined, but extensive. These (primary) depressions, which usually advance eastwards across Northern India, frequently give rise to deep secondary stationary depressions in the Punjab. When a primary depression is not accompanied with a secondary depression, it either gives no rain or light to moderate scattered rain over Northern and Central India. When primary depressions give rise to secondary depressions in the Punjab, the double disturbances usually give heavy rain in North-Western India, heavy to excessive snowfall in the Himalayan mountain areas, and very stormy weather in the Punjab and Afghan hills. These storms hence form one of the most important abnormal features of the month. They usually produce large and marked temperature changes. A warm wave in which temperature is frequently from 5° to 15° above the normal generally immediately precedes each storm, and a dry cool wave follows in its rear.

In the Weather Review of the month of December it

was stated that a cold weather disturbance appeared in Baluchistan on the 29th of that month, and that it gave general and more or less heavy rain over the greater part of North-Western India. Pressure gave way simultaneously over Persia, Baluchistan, South-East Arabia and the north of the Arabian Sea on the 29th, and a depression lay over that area on the 30th. A shallow but well defined depression lay over the north-west frontier districts of India on the 31st, where it filled up on the 1st January. A slight residual disturbance, shown chiefly by irregular barometric movements and changes in Northern India, gave slightly disturbed weather on the 2nd and 3rd, after which skies cleared in North-Western India and fine dry weather set in for a short period. The disturbance gave more or less general rain to Baluchistan, Sind, Rajputana, the Punjab and North-Western Provinces. Numerous hail-storms occurred in Rajputana on the evening of the 31st and morning of the 1st. The rainfall accompanying the disturbance in North-Western India was chiefly received during thunder-storms, and was hence very unequally distributed. Falls in 24 hours, exceeding three inches in amount, were received at several stations in the Punjab. The following is a brief statement of the average rainfall received during the disturbance in North-Western India:—

PROVINCE.	Period of rainfall.	Average total rainfall.
		Inches.
Baluchistan . . .	From 30th to 3rd . .	0·52
Sind	From 31st to 2nd . .	0·23
Rajputana . . .	From 30th to 2nd . .	0·71
Punjab	From 30th to 2nd . .	1·47
North-Western Provinces and Oudh . . .	From 31st to 2nd . .	0·31
Central India . . .	From 31st to 2nd . .	0·30

The warm wave which crossed the frontier in front of this disturbance was in Rajputana on the 1st, in the eastern districts of the North-Western Provinces and north-eastern districts of the Central Provinces on the 2nd, and in Chota Nagpur and West Bengal on the 3rd (*i.e.*, the 24 hours preceding 8 A.M. of the 3rd).

As usual, a cool wave followed in the rear of the disturbance. It covered the Indus valley on the 2nd and passed through Rajputana on the 3rd, and thence extended slowly across Northern India during the following three days. The mean temperature of the whole of Northern India, which was 3° above the normal on the 1st, was reduced to 3½° below it on the 7th.

Fine clear weather continued in Northern and Central India from the 4th to the 9th, on which day pressure began to give way and temperature to increase rapidly in Upper India. This was due to a very feeble disturbance which formed in or passed through Baluchistan on the 10th and Rajputana on the 11th and disappeared during the next 24 hours. It gave light to moderate showers in Baluchistan and the Punjab (chiefly the hill and submontane districts). Although the disturbance was very feeble it was preceded by a well-marked warm wave and followed by a cool wave. Thus the mean temperature at Quetta, which was 10·9° above the normal for the 24 hours preceding 8 A.M. of the 10th was reduced to 10·3° below it for the 24 hours period preceding 8 A.M. of the 13th. The temperature changes due to these two waves were moderate to large in North-Western India and slight in North-Eastern India.

Fine clear weather was re-established in North-Western India on the 13th and continued for five days, when a rapid rise of temperature in Upper Sind indicated the advent of the third disturbance of the month. The following gives an account of the origin of this disturbance, as inferred from the observations in the Persian and Indian areas. During this period strongly marked anti-cyclonic conditions prevailed in European Russia, and also (to a less, marked extent) over the east of the Mediterranean Sea and no change occurred in either of these areas during the origin of the disturbance under discussion. Pressure was unusually high in Persia on the 11th, on which day it was two-tenths of an inch above the mean of the month at Ispahan and nearly three-tenths above it at Teheran. Pressure gave way steadily and continuously over the Persian area (*i.e.*, Persia, South-East Arabia and Baluchistan) for several days, and was lowest at Baghdad and in West Persia on the 18th, in Central and Eastern Persia on the 19th and in Baluchistan on the 20th. The total fall of pressure at Teheran from the 11th to the 19th was ·595″. These facts hence appear to indicate that the depression formed in West and Central Persia, and that it was transferred eastwards. The temperature conditions in the Persian area during the formation of the depression are very interesting. The following gives temperature data for five stations on three days, *viz.*, the 10tha nd 11th when pressure was highest and on the 15th, 17th, or 18th, that is, immediately before pressure had fallen to its lowest:—

STATION.	Date.	MAXIMUM TEMPERATURE.		MINIMUM TEMPERATURE.		Cloud at 8 A.M.
		Actual.	Variation from mean of month.	Actual.	Variation from mean of month.	
		°	°	°	°	
Baghdad . .	10th	56·3	+0·8	41·9	+4·8	0
	11th	58·5	+3·0	39·3	+2·2	0
	18th	60·1	+4·6	45·0	+7·9	0
Teheran . .	10th	36·5	—4·2	29·3	+3·4	10
	11th	35·3	—5·4	30·1	+4·2	10
	18th	46·7	+6·0	33·2	+7·3	5
Ispahan . .	10th	50·2	+6·4	30·4	+7·4	10
	11th	44·3	—0·5	23·2	+0·2	0
	17th	51·3	+7·5	30·2	+7·2	0
Bushire . .	10th	59·7	+0·6	49·8	+0·2	...
	11th	59·7	+0·6	48·8	—0·8	...
	15th	70·8	+11·7	61·7	+12·1	...
Jask . . .	10th	74·1	+2·6	62·3	+3·1	...
	11th	74·1	+2·6	59·3	+0·1	...
	17th	79·1	+7·6	65·7	+6·5	...

Temperature was hence in more or less general excess in Persia during nearly the whole period from the 10th and 11th, when pressure was abnormally high, to the 17th or 18th, by which dates pressure had fallen considerably below the mean of the month and hence probably below the normal.

This depression and disturbance began to give showery weather to Baluchistan on the 17th and to Upper India on the 18th. The depression passed into India on the 19th but was ill defined, and it is not possible to trace its advance with exactness. Unsettled rainy weather continued in North-Western India until the 23rd. The Punjab, the western districts of the North-Western Provinces, East Rajputana, and the hill districts obtained a heavy burst of rain from this disturbance. The following gives a brief statement of the rainfall due to it :—

Province.	Period of Rainfall.	Average amount.
		Inches.
Baluchistan	From 17th to 22nd	1·35
Sind	From 18th to 21st	0·36
Rajputana	From 20th to 23rd	0·33
Punjab	From 20th to 23rd	1·67
North-Western Provinces and Oudh	From 19th to 23rd	0·85

Temperature was considerably in excess in Central and North-Eastern India during the prevalence of this rainy weather, and was more or less below it in Upper India. The cool area extended eastwards on the 24th and 25th and on the 26th temperature was below the normal over the whole of Northern and Central India by amounts averaging 2½°. Skies had cleared in North-Western India on the 24th but began to cloud again on the 25th, due to the advance of a depression through Baluchistan. This depression had apparently formed in Persia under similar conditions to the previous but further south. It was in Central Rajputana on the 27th, and disappeared during the next 48 hours, during which it was obscured by the formation of a deepish secondary depression in the Punjab. It formed rapidly on the 28th and disappeared as rapidly on the 29th. This disturbance gave moderate rain or snow in Baluchistan and the Punjab hill districts, and light rain in the Punjab. The warm wave in front of this storm advanced across Northern India between the 27th and 31st; and the cold wave which followed it was in the Indus valley and Baluchistan on the 30th and in Rajputana, Central India and the North-Western Provinces on the 31st.

The chief features of the meteorology were hence the four disturbances described above. As judged by the amount of the barometric changes and the winds in the plains they were very feeble and ill defined cyclonic storms. They however gave unusually heavy rain to Baluchistan and North-Western India. One of the more remarkable features was the very strong winds they gave rise to in the Punjab hill districts. Thus the mean air movement at Murree was nearly double the normal value.

Pressure—The mean pressure of the whole of India was ·020″ below the normal. Pressure was relatively to this general condition in slight excess in the Peninsula and North-Western India and in slight defect in North-Eastern India and Burma. These local variations were small and apparently of little importance. Pressure was in defect at the hill stations, more especially when compared with the neighbouring plain stations. The deficiency was greatest at Murree and at the high level stations of Leh and Kailang in the Western Himalayas. This condition usually accompanies more disturbed weather than usual in Upper India in January.

The following gives the mean pressure variations and anomalies for the eleven meteorological provinces of India:

Meteorological Province.	Variation of 8 A.M. mean pressure of month from normal.	Pressure anomaly.
	″	″
Burma Coast and Bay Islands	−·048	−·028
Burma Inland	−·035	−·015
Assam	−·039	−·019
Bengal and Orissa	−·029	−·009
Gangetic Plain and Chota-Nagpur	−·029	−·009
Upper Sub-Himlayas	−·010	+·010
Indus Valley and North-West Rajputana	+·001	+·021
East Rajputana, Central India and Gujarat	−·011	+·009
Deccan	−·015	+·005
West Coast	−·021	−·001
South India	−·023	−·003

Temperature—The mean maximum or day temperature differed little from the normal over the whole of Burma and India excepting the north-western districts where it was in slight to considerable defect. The deficiency ranged between 4° and 7° in the Punjab, North-West Rajputana and Sind. It was absolutely greatest at Murree (—8·1°) Sirsa (—6·9°) and Rawalpindi (—6·1°). The day temperature was very slightly above the normal in the peninsula, North-East India and Burma. The mean minimum temperature of the month was above the normal except in Assam, Burma, the Madras coast districts, Lower Sind and the hill districts of Upper India. It was more than 2° above the normal over a large part of the interior including Berar, Khandesh, East Rajputana and Central India, the South-East Punjab and the North-We ern Provinces (except the submontane districts). The excess was absolutely greatest at the following stations: Ajmere (4·2°), Allahabad (+3·6°), Benares, (+3·4°), Sutna (+3·8°), Ludhiana (+3·2°), and Lahore (+3·0°). The mean temperature of the month

was approximately normal over by far the greater part of the country. It was in slight defect in Burma and Assam, the Madras coast districts and Upper India. It differed more than 2·5° from the normal at the following stations in the Indus valley; Rawalpindi (—3·0°) Hyderabad (—3·2°) Kurrachee, Peshawar and Dera Ismail Khan (each—2·6°). There were two small areas in which the mean temperature was more than 2° above the average of the month. The first included Allahabad (+2·3°) and Sutna (+2·1°), and the second Akola (+2·4°) and Khandwa (+2·2°).

Both the day and night temperatures were in defect by nearly equal amounts at the hill stations in Northern India, and hence the mean temperature was below the normal to a larger extent than in the adjacent plains. The deficiency was very marked at Murree (—6·2°), Quetta (—4·7°), and Simla (—3·1°).

It has been pointed out that the four disturbances of the month in North-Western India gave rise to a succession of warm and cool waves which advanced eastwards across Northern India and produced large and rapid changes of temperature. The precipitation in the plains and hills of Northern India was nearly as large in amount as in January 1893, but differed considerably in one important respect, *viz.*, that the elevation above which snow fell in the hill districts was much higher in January 1894 than in January 1893. The average difference was probably 2,000 feet. As a result of this the cool waves were much less severe, as is seen by the following comparative statement of the lowest night temperatures at eight typical stations in these two months:—

Station.	January 1894.		January 1893.	
	Lowest temperature observed during month.	Rainfall of month.	Lowest temperature observed during month.	Rainfall of month.
	°	Inches.	°	Inches.
Quetta	14·8	3·97	17·3	3·61
Murree	24·5	8·55	19·2	9·05
Gnatong	11·1	0·44	—5·5	2·73
Roorkee	36·9	2·46	35·8	1·78
Jeypore	42·2	1·34	38·2	1·07
Peshawar	33·4	1·96	32·9	3·17
Lahore	38·2	3·91	33·7	2·01
Allahabad	43·9	0·15	41·4	1·56

The lowest night temperatures in Northern India were registered during the passage of the cool waves. In the hill districts they were generally recorded on the 29th and 30th after the last disturbance of the month. They were in no way remarkable, and in this respect the meteorology of January 1894 contrasts strikingly with the corresponding month of last year, when the cold was unusually severe in the hill districts.

The following table gives temperature variation data for the eleven meteorological provinces of India.

Meteorological Province.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma Coast and Bay Islands	—0·1	+0·2	+0·1
Burma Inland	0	—1·1	—0·6
Assam	+0·7	—1.2	—0·3
Bengal and Orissa	+0·7	0	+0·4
Gangetic Plain and Chota Nagpur	+0·7	+2·0	+1·4
Upper Sub-Himalayas	—4·2	+1·7	—1·2
Indus Valley and North-West Rajputana	—4·8	+0·2	—2·3
East Rajputana, Central India and Gujara	—1·1	+2·0	+0·5
Deccan	+0·7	+1·6	+1·2
West Coast	+0·9	+0·1	+0·5
South India	0	0	0

Winds.—The mean air motion during the month presents few features of importance. The four cold weather disturbances of the month were very feeble and gave strong winds only in the hills. Hence the air movement was on the whole weaker and more unsteady and irregular than usual in January. Winds were normal in character in Burma and slightly weaker than usual in Bengal. Winds were more northerly and less westerly in Orissa, West Bengal, Chota-Nagpur and Bihar, thus showing that the current down the Gangetic plain was feebler than usual. Winds were very light in Upper India. In the Indus valley the mean winds were from north-east instead of north-north-west, probably due to the influx from Baluchistan and Afghanistan during the advance of the cool waves across Northern India being feebler than usual. Winds were normal in the Peninsula. They were unusually strong at the hill stations, the average daily amount of wind as recorded by the anemometer being 61 per cent. in excess of the normal at Murree and 42 per cent. at Chakrata.

Humidity and cloud.—The air was slightly drier in Burma, Assam and Bengal, but the deficiency was much less marked than in December 1893. It was much damper in the North-Western Provinces, the Punjab, Rajputana, Sind, Central India and the northern districts of the Central Provinces. The increased humidity was most marked at Lahore (+16) and Ludhiana, Jacobabad, Ajmere and Nowgong, at each of which stations the mean humidity of the month was 12 above the normal. Humidity was very largely in excess at the hill stations, more especially at Murree (+21), and Quetta (+15). The air was somewhat drier in the Bombay or West coast districts.

There was slightly less cloud than usual in Burma and North-Eastern India. Cloud was on the other hand in excess in North-Western and Central India. The excess

was greatest in the Punjab and the Upper India hill districts. There was on the whole less cloud than usual in the Peninsula. Skies were most free from cloud in the Bombay and Arakan coast districts, where the mean cloud amount of the month was less than 0·5. They were most clouded in the Punjab (5·0) and the adjacent hills (7·2).

The following table gives variation data of the mean aqueous vapour pressure, relative humidity, and cloud amount in ten of the eleven meteorogical provinces of India.

Division.	Variation of		
	Mean aqueous vapour pressure from normal.	Mean humidity from normal.	Mean cloud amount from normal.
	"		
Burma Coast and Bay Islands	−0·30	−4	−0·5
Assam	−0·11	−2	−1·7
Bengal and Orissa	−0·19	−5	−0·5
Gangetic Plain and Chota Nagpur	+0·20	0	−0·3
Upper Sub-Himalayas	+0·41	+11	+1·2
Indus Valley and North-West Rajputana.	+0·15	+7	+0·7
East Rajputana, Central India and Gujarat.	+0·50	+9	+0·4
Deccan	+0·23	+2	0
West Coast	−0·15	−3	−0·4
South India	+0·11	+2	+0·2

Rainfall.—The rainfall of the month occurred chiefly during the four disturbances of the month, *viz.*, from the 31st to the 3rd, the 10th to the 12th, the 19th to the 23rd and the 26th to the 28th. These disturbances were shallow diffused depressions which passed eastwards across North-Western India, and hence did not advance into Bihar and Bengal. The precipitation accompanying them was hence confined to Baluchistan and North-Western and Central India. It commenced in each disturbance in Baluchistan and extended slowly eastwards, and continued, more especially in the case of the first and third disturbances, for two or three days in the Punjab and Western Himalayas after the apparent disappearance of the depression which had initiated the rainfall. The rainfall of the month was absolutely or practically *nil* in Bombay, Burma, Bengal, Bihar and Chota Nagpur. It was small in amount in the eastern districts of the North-Western Provinces and in Assam and below the normal of the month to a moderate extent. It was on the other hand in moderate excess generally in Sind, Rajputana, and Central India, and largely in excess in the Punjab, more especially the eastern and south-eastern districts. In some districts, as for example, Lahore, Gurdaspur, and Sialkot the rainfall of the month was four to eight times its normal amount. Madras and Southern India received occasional showers which gave it a total in slight excess. A series of heavy thunder showers in the Chingleput district on the 1st gave it an average of 1·09 inches on that day, and a similar series of storms in the Tanjore district on the 13th and 14th gave it an average fall of 1·49 inches for these two days. These were the only large and general rainfalls of the month in the Madras Presidency. The following table gives comparative rainfall data of the eleven meteorological provinces :—

Meteorological Province.	Rainfall.		
	Mean actual for January 1894.	Mean normal for January.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	0·02	0·31	−0·29
Burma Inland	0	0·02	−0·02
Assam	0·14	0·90	−0·76
Bengal and Orissa	0·01	0·44	−0·43
Gangetic Plain and Chota Nagpur	0·14	0·71	−0·57
Upper Sub-Himalayas	3·90	1·74	+2·16
Indus Valley and North-West Rajputana.	1·4	0·54	+0·80
East Rajputana, Central India and Gujarat.	0·64	0·38	+0·37
Deccan	0·15	0·34	−0·17
West Coast	0·19	0·24	−0·05
South India	0·54	0·36	+0·02

The snowfall reports indicate that the fall in the higher and more interior ranges of the Western Himalayas in the month of January was probably considerably above the average. The fall in the lower ranges was not large in amount and alternated with rain, and hence there was no accumulation on these ranges at the end of the month. The snowfall in Afghanistan and Baluchistan was either normal or in slight excess. The only information available for the Eastern Himalayas indicates that in Sikkim at least the month was much more open and milder than usual.

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 of 0·4 inch in diameter.

Casella 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.	Delhi.	Negapatam.
Akyab.	Dinajpur.	Noakhali.

Arrah.	Faridpur.	Nowgong.
	Ghazipur.	Perim.
Barisal.	Gorakhpur.	Rajahmundry.
		Rampur Boalia.
Bhamo.	Hyderabad (Sind).	Ranchi.
Bhuj.	Jalpaiguri.	Rawalpindi.
Bogra.	Madras (Port Office).	Rangpur.
Bushire.	Mandalay.	Sambhar.
	Mangalore.	
Chittagong.	Mergui.	Sialkot.
Chapra.	Midnapore.	Silchar.
Cochin.	Mooltan.	Sirajganj.
Cocos Island.	Motihari.	Surat.
Comilla.	Mymensingh.	Toungoo.
Cuddapah.	Naya Dumka.	

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.		Bhavnagar.
	Kailang.	Malegaon.
Chanda.	Karwar.	Mercara.
Chikalda.	Katmandu.	
	Kotagiri.	Sirsa.
Dehra.	Kurnool.	
Gnatong.	Leh.	

At Bombay and Calcutta, large Newman's standards on Fortin's principle, with adjustable scales and tubes of more than 0·5" 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 Camorta, Mandalay, Kendat, Bhamo, Yamethin, Fort Stedman, Minbu, Lashio, Daltonganj, Kuch Fort, Gilgit, Gantok, Teheran, Ispahan, Jask, Muskat, Baghdad, Kashgar, Amini Divi, Shortt's Island, Veraval, Bhavnagar, Bijapur, Aurangabad, Indur, Bider, Cherat, Mussoorie, Gnatong, Kodaikanal, Kotagiri and Perim, 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.," 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 of the month reduced to 32° F, the mean 8 A.M. pressure corrected to constant gravity and to sea-level, the highest and 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 observations, 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 at all stations except Zanzibar (for which crude means are used) by taking the means of the 10 and 16 hours' observations with additive corrections for each month, derived from the observations of the same or a neighbouring station.

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 ·05" or $\frac{1}{20}$th of an inch. The second chart (Plate II) gives the variation 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 year period, 1878-93, the same period being selected for all stations, 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 six years in the case of Chamba to forty-four 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 a comparison of these observations and the normal daily or monthly 8 A.M. values.

The mean 8 A.M. pressure for the month of the whole of India was ·020″ below the normal. The following gives variation and anomaly data for each of the eleven provinces :—

METEOROLOGICAL PROVINCE.	Variation of the mean 8 A.M. pressure of month from normal.	Pressure anomaly.	Variation of mean temperature of month from the normal.
	″	″	″
Burma Coast and Bay Islands	−·048	−·028	+0·1
Burma Inland	−·035	−·015	−0·6
Assam	−·039	−·019	−0·3
Bengal and Orissa	−·029	−·009	+0·5
Gangetic Plain and Chota Nagpur.	−·029	−·009	+1·4
Upper Sub-Himalayas	−·010	+·010	−1·3
Indus Valley and North-West Rajputana.	+·001	+·021	−2·3
East Rajputana, Central India and Gujarat.	−·011	+·009	+0·5
Deccan	−·015	+·005	+1·2
West Coast	−·021	−·001	+0·5
South India	−·023	−·003	0

Pressure was relatively to the normal in excess in North-Western and Central India and the greater part of the Peninsula. The anomalies were less than ·020″ except at the following stations in the North Punjab and Indus Valley :—

STATION.	Variation of the mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Sialkot	+·004	+·024
Rawalpindi	+·007	+·027
Peshawar	+·003	+·023
Jacobabad	+·004	+·024
Hyderabad	+·016	+·036
Kurrachee	+·014	+·034

Pressure was in relative defect over the remainder of India, but the anomalies were less than ·020″ except in Lower Burma and Arakan and at Port Blair. The following gives data for this area :—

STATION.	Variation of the mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Port Blair	−·042	−·022
Rangoon	−·059	−·039
Diamond Island	−·052	−·032
Toungoo	−·044	−·024
Akyab	−·047	−·027

The most remarkable feature in the pressure distribution of the month was the large deficiency at the hill stations, as compared with the neighbouring plain stations in Northern India :—

HILL STATION.	Variation of pressure from normal (a).	Neighbouring Plain Station.	Variation of pressure from normal (b).	Vertical pressure anomaly or (a)−(b).
	″		″	″
Quetta	−·023	Jacobabad	+·004	−·027
Murree	−·042	Rawalpindi	+·007	−·049
Leh	−·082	Lahore	−·001	−·081
Simla	−·029	Ludhiana	0	−·029

The deficiency of pressure at the hill stations in Central and Southern India was practically the same in amount as at the neighbouring plain stations.

The following were the principal features of the mean pressure distribution of the month :—

1st.—Pressure was in moderate defect over the Indian area.

2nd.—Pressure was in relative defect in North-Eastern India and Burma, the deficiency slightly exceeding ·02″ in Lower Burma and the Andamans.

3rd.—Pressure was in relative excess over the remainder of India. The excess was small except in the Indus Valley and North Punjab, where it averaged ·03.″

4th.—Pressure was very deficient at the hill stations relatively to the plains or low-level stations in Baluchistan and Upper India. This was on the whole the most prominent feature of the month.

Barometric depressions and cold weather storms of the month.

It was stated in the Weather Review for December that a depression appeared, or more probably formed, in Sind and Baluchistan on the 29th and 30th, and that this disturbance intensified slightly on the 31st and formed the chief feature of the weather in North-Western India during the first three days of January. The following gives an account of this storm which, although feeble, gave a general and moderately heavy burst of rain to North-Western India.

Disturbance of the 29th December to the 3rd of January.—This disturbance, as is shown by the observations at stations in Persia and Baluchistan, did not travel as a cyclonic storm from these areas into India. Pressure was very considerably above the normal at Baghdad, Bushire, and Quetta on the 21st and 22nd by amounts ranging from ·11″ at Quetta to ·23″ at Baghdad. Fine weather with light to moderate northerly winds and moderate cloud prevailed at the Persian stations.

Temperature was very considerably in excess at Quetta and probably in Persia, but means for stations in that area are not available. Pressure gave way during the next three days in Persia and Baluchistan, and was normal or slightly in defect on the 25th. It was very steady during the next three days at Bushire, Muscat, Jask and Quetta, and hence probably over the greater part of Persia and Baluchistan. It increased rapidly on the 28th and was above the normal to a slight extent on the 28th and 29th at Baghdad and Bushire. It then began to fall over the whole area, including Persia, Baluchistan, South-East Arabia and North-Western India, in such a manner as to indicate a general simultaneous change over the area, and not the transmission of a depression from west to east.

The history of the disturbance hence begins with the 29th December when pressure was normal in South Persia and Baluchistan, and was in slight defect over North-Western India and normal in North-Eastern India and the Peninsula. The most striking feature was the excessive temperature in Baluchistan and probably East Persia. The following gives variation data for the only stations in the Persian area for which there are normal means :—

Station.	Variation from normal.			Cloud at 8 A.M.
	Maximum temperature.	Minimum temperature.	Mean temperature.	
	°	°	°	
Quetta	+12·0	+15·9	+14·0	6
Bushire	− 1·5	− 3·5	− 2·5	?
Baghdad	+ 4·0	+ 0·5	+ 2·2	0

The following gives 8 A.M. data at six stations :—

Station.	Barometer.			Wind.		Cloud.	Rainfall in past 24 hours.
	Actual.	Change in past 24 hours.	Variation from normal.	Direction.	Average hourly velocity during past 24 hours.		
	"	"	"				
Baghdad	29·779	+·144	+·050	Calm	2	0	*Nil*
Bushire	30·136	+·099	+·020	N	14	?	*Nil*
Ispahan	24·680	+·200	?	W	6	0	*Nil*
Muscat	30·002	+·019	?	W	3	0	*Nil*
Quetta	24·659	−·046	−·063	Calm	0	6	*Nil*
Jacobabad	30·040	+·021	−·061	Calm	1	10	*Nil*

Weather was fine and skies clear in Persia and cloudy at Quetta and in Upper India, and the wind data show that winds were normal in direction over the whole area, but were very light in North-Western India.

30th December.—Pressure gave way over the whole of India and the countries to the west, including Persia and Arabia. The following gives 8 A.M. data for the same stations as on the preceding day :—

Station.	Barometer.			Wind.		Cloud.	Rainfall in past 24 hours.
	Actual.	Change in past 24 hours.	Variation from normal.	Direction.	Average hourly velocity during past 24 hours.		
	"	"	"				"
Baghdad	29·754	−·025	+·025	NW	2	0	*Nil*
Bushire	30·122	−·014	+·005	NE	9	?	*Nil*
Ispahan	24·610	−·070	?	NNE	2	1	*Nil*
Muscat	29·999	−·003	?	SW	3	8	0·50
Quetta	24·579	−·080	−·147	NNW	1	10	0·22
Jacobabad	29·914	−·126	−·181	Calm	1	10	*Nil*

Weather was hence unchanged in Persia. It was now showery in Baluchistan and the humidity had increased from 26 to 88 per cent. at Quetta. Skies were overcast in the Punjab, and were more or less clouded over the whole of North-Western India. Temperature was very largely in excess at Quetta and in North-Western India.

31st December.—The following 8 A.M. data show that pressure continued to give way in Persia.

Station.	Barometer.			Wind.		Cloud.	Rainfall in past 24 hours.
	Actual.	Change in past 24 hours.	Variation from normal.	Direction.	Average hourly velocity during past 24 hours.		
	"	"	"				Inches.
Baghdad	29·666	−·088	−·060	NW	8	0	*Nil*
Bushire	30·014	−·108	−·100	NW	9	...	*Nil*
Ispahan	24·430	−·180	?	W	2	0	*Nil*
Muscat	29·876	−·123	?	WNW	3	0	*Nil*
Quetta	24·499	−·080	−·229	Calm	1	6	0·17
Jacobabad	29·869	−·045	−·228	Calm	2	0	*Nil*

These observations indicate that although pressure had decreased in Persia, winds were normal in direction and strength and skies clear. Pressure had fallen rapidly in the Punjab and Rajputana and a well marked depression had hence formed in North-Western India. The following observations indicate the position of the central depression :—

Station.	Barometer.			Wind.			Rainfall in past 24 hours.
	Actual.	Change in past 24 hours.	Variation from normal.	Direction.	Average hourly velocity during past 24 hours.		
	"	"	"				Inches.
Deesa	29·832	−·086	−·214	SSE	10	6	*Nil*
Bickaneer	29·793	−·147	?	ESE	6	10	0·18
Mooltan	29·882	−·117	−·229	NE	1	10	0·14
Jacobabad	29·869	−·045	−·228	Calm	2	0	*Nil*
Hyderabad	29·851	−·061	−·241	NNE	4	10	0·36
Quetta	24·499	−·080	−·229	Calm	1	6	0·17

A large area of nearly uniform deficiency of pressure (averaging ·23″) hence covered East Baluchistan, Sind, the South-West Punjab and West Rajputana. Skies were heavily clouded over the whole of North-Western India, and light to moderate rain had fallen generally in Baluchistan, the Punjab and West Rajputana

1st January.—Pressure had increased rapidly in North-Western India, the rise exceeding a sixth of an inch over the greater part of the Punjab and the low pressure area which was in Rajputana on the 31st had hence almost filled up. Numerous local hail-storms occurred in Rajputana and Central India on the morning of the 1st, and rain had fallen generally in the East Punjab, Rajputana and Central India.

2nd January.—The pressure changes were irregular, and weather continued in a slightly disturbed state during the next 48 hours. The slight residual disturbance extended to the Central Provinces, and showers were recorded during the preceding and next 24 hours in the Central Provinces, Central India, the western districts of the North-Western Provinces, East Rajputana and the East and North Punjab. Skies cleared on the 4th and 5th, and well marked anti-cyclonic conditions were established in North-Western and Central India for a short period.

The available data appear to establish that the storm did not advance as a travelling depression from Baluchistan or Persia. It formed in East Baluchistan and Sind on the 30th during a period of general large decrease of pressure over probably the whole of Southern Asia, including Persia, Arabia, India and the adjacent seas. It filled up on the 1st almost as rapidly as it formed, but a slight residual disturbance gave showery weather for 48 hours afterwards. The following gives a statement of the rainfall due to the storm :—

Division.	Rainfall during 24 hours preceding 8 A.M. of date.				
	30th.	31st.	1st.	2nd.	Total.
	Inches.	Inches.	Inches.	Inches.	Inches.
Punjab	0·04	0·42	0·64	0·37	1·47
Rajputana . . .	0·01	0·29	0·33	0·08	0·71
Sind	Nil	0·16	0·01	0·06	0·23
Central India . . .	Nil	0·04	0·17	0·09	0·30
North-Western Provinces and Oudh . .	Nil	0·04	0·15	0·08	0·27
Central Provinces . .	Nil	Nil	Nil	Nil	Nil

Some heavy falls occurred in the Punjab during the storm of which the following are the most noteworthy :—

Date.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches
31st December 1893 .	Gujranwala .	Ramnagar . .	5·25
" " .	" .	Wazirabad . .	5·00
" " .	" .	Hafizabad . .	4·72
" " .	" .	Khangah Dogran .	3·20
" " .	" .	Meluana . .	3·20
1st January 1894 .	" .	Kila Didar Singh .	3·00
" " .	" .	Meluana . .	3·20
" " .	Sialkot . .	Zafarwal . .	3·27
" " .	Gujrat . .	Gujrat . .	4·63
" " .	" . .	Kharian . .	3·54
" " .	Jhang . .	Badwali . .	4·50

No large or important change occurred in the pressure distribution over India between the 5th and 9th.

Feeble disturbance of the 10th to the 12th January.—A feeble cyclonic storm gave showery weather to the Persian stations and Baghdad on the 6th and 7th. It is probable this disturbance was transmitted eastwards and that it began to affect the weather in Baluchistan on the 9th and 10th. The European observations at this time show that an anti-cyclone of considerable intensity lay over the whole of Russia, and that no cyclonic storm was transmitted eastwards from the Mediterranean area. The disturbance was hence almost certainly generated in Persia or Beluchistan.

Pressure gave way in Baluchistan on the 8th and in Sind on the 9th, whilst it was rising generally in India. Skies were clear in Baluchistan on the morning of the 8th, but clouded over during the next 24 hours and weather became showery on the afternoon of the 9th. Cloud extended on the evening of the 9th over Upper India and skies became overcast in the Punjab and hill districts on the morning of the 10th, but were clear over the remainder of India (except South Madras). A very shallow depression lay over Sind on the morning of the 10th. So far as can be judged from the pressure changes and variations, this slight disturbance was propagated eastwards and was in Central Rajputana on the morning of the 11th and filled up or disappeared over the North-Western Provinces Himalayas on the 12th. Light showers of little importance fell on the 10th, 11th and 12th in the Punjab and western districts of the North-Western Provinces, when the weather cleared up until the 16th.

Feeble disturbance of the 17th to the 23rd January.—Weather was fine in the Persian area from the 10th to the 17th. Pressure was very largely above the normal on the 10th and 11th, on which days it was nearly two-tenths of an inch in excess at Baghdad and Bushire and

one-tenth of an inch at Quetta and was probably (judging from the means of the month) three-tenths in excess at Teheran and Ispahan. It fell steadily at all these stations from the 11th to the 18th or 19th. The total fall ranged from six-tenths at Teheran to three tenths at Baghdad, and a quarter of an inch at Bushire and Quetta. The observations for this period embodied in the daily charts, issued by the London Meteorological Office, establish clearly that this depression was not transmitted eastwards from Europe, as anti-cyclones lay over Russia and the Mediterranean during the whole of this period. This depression hence formed over an area in which strongly marked anti-cyclonic conditions had previously prevailed, including the whole of Persia, East Arabia and Baluchistan. No rain or snow fell during this period at the great majority of stations in Persia from which reports are now received. At Kashan snow fell on the 14th, 16th and 19th Baghdad had a slight shower on the 12th and Teheran on the 13th.

The barometer was lowest at Baghdad on the 18th, at Bushire, Teheran and Isp han on the 19th, and at Muscat, Jask and Quetta on the 20th, and hence the area or seat of minimum low pressure either extended or was transferred eastwards at an average rate of between 400 and 500 miles per diem from the 18th to the 20th. Whilst these large changes were in progress in the Persian area, pressure had also given way more or less steadily in India. The following gives the mean daily change of pressure from the 12th to the 18th over India :—

	Mean pressure change in 24 hours preceding 8 A.M. of							Resultant fall of pressure in period 12th to 17th.
	12th.	13th.	14th.	15th.	16th.	17th.	18th.	
	"	"	"	"	"	"	"	"
Extra Tropical India .	—.020	+·011	—·009	—·045	—·002	—·027	+.036	—.092
Tropical India . .	—.013	—·010	—·015	—·024	—·005	—·004	+·007	—·071
Whole India . .	—.017	+·002	—·011	—·035	—·003	—·017	+·023	—·081

Pressure hence decreased steadily from the 12th to the 17th over the whole of India as well as in Baluchistan and Persia. The fall was, however, much greater in the latter area than elsewhere, and a deepish depression lay over Central Persia on that day. It was transmitted or extended eastwards during the next three days. It is however very noteworthy that the fall of the barometer and the amount of depression below the normal were greatest in the place of origin, Central Persia, and that they decreased eastwards, and that both changes were small when the disturbance passed into India. These facts hence appear to indicate that there are very interesting features in the changes from anti-cyclonic to cyclonic conditions which occasionally occur in the plateau of Iran and Baluchistan, independently of the meteorological changes in progress in Europe or Northern Asia. Skies clouded over in Baluchistan on the 16th and in the Panjab and hill districts on the 17th. Showers were received in Baluchistan on the 17th and 18th. The charts of the next four days do not show any well defined depression area in Northern India. An examination of the pressure changes and variations from the normal indicates that a very shallow depression passed through Baluchistan on the 20th, Sind and the South-West Punjab on the 21st, and Central and East Rajputana on the 22nd when it either filled up or gave rise to a moderately large fall of pressure on the 23rd and 24th in North-Eastern India. The East Punjab received light rain on the 19th, Baluchistan, Sind, North Rajputana, the Punjab and the North-Western Provinces on the 20th, Baluchistan, Sind, the Punjab and western districts of the North-Western Provinces, Bundelkhand and Baghelkhand on the 21st, the Punjab, the north-western districts of the North-Western Provinces, and the north-eastern districts of Rajputana on the 22nd, and the north-western districts of the North-Western Provinces on the 23rd. Skies cleared in North-Western India during the next 24 hours for a very short period before the advent of the fourth disturbance of the month.

Cold weather cyclonic storm of the 25th to the 29th January.—This disturbance apparently originated under somewhat similar circumstances to the previous. Pressure increased very rapidly from the 18th or 19th to the 22nd in Persia and was on that date above the normal by amounts ranging from one to two-tenths of an inch.

The recovery of pressure accompanying the disappearance of the previous disturbance continued in India, until the 21st, when pressure began to give way and it decreased steadily until the 25th over the whole of India *pari passu* with the fall in the Persian area. Skies, which had cleared for a brief period on the 24th, clouded over again in North-Western India on the night of that day and the morning of the 25th and were generally overcast at 8 A.M. of the 25th in Sind, the South-West Punjab and the Punjab hill districts, as well as in Baluchistan. Light showers had fallen in Sind and Baluchistan during the 24 hours preceding 8 A.M. of the 25th.

Pressure decreased over Persia until the 25th, the fall, however, being much larger at the southern stations of Bushire, Muscat and Jask than at Teheran and Ispahan. The depression, hence formed in Persia but considerably further south than the preceding depression and lay over Muscat and Jask on the 25th. It was transferred eastwards and lay over Baluchistan on the 26th. The following gives a brief account of the chief features of the disturbance in India:—

26th January.—Pressure had given way locally in Sind, Rajputana and Baluchistan and a shallow depression lay

over Kathiawar, Sind and Baluchistan. Skies were now overcast over the whole of the Punjab and at the hill stations, but were less clouded in Sind and Rajputana. Rain and snow had fallen in moderately large amounts in Baluchistan.

The most notewothy falls in Baluchistan registered at 8 A.M. of the 26th were 2·7 inches at Fuller's Camp, 2·05 inches at Hirok, 1·34 inches at Shebo, and 1·32 inches at Shalabagh. The average rainfall at the 50 raingauge stations in Baluchistan was 0·56 inch.

27th January.—Pressure had given way locally in Rajputana and Central India and had risen briskly to rapidly in Sind, Kathiawar and Baluchistan. The depression was apparently passing through Rajputana, but was very faintly indicated by the pressure observations. Light showers had fallen in Baluchistan, and in and near the hills in Upper India. Winds had increased rapidly at Murree, and this fact, taken in conjunction with a slight local fall of the barometer in the North Punjab and at Srinagar, indicated a tendency to the formation of a secondary depression in the Punjab.

28th January.—Pressure had given way very rapidly in the Punjab and at the hill stations and a deepish depression (a secondary to the feeble primary disturbance of the previous two days) lay over the Punjab.

The following table gives meteorological observations at stations in the North and Central Punjab:—

Station.	Barometer.			Wind.		Cloud.	Rainfall in past 24 hours.	Weather.
	Pressure 8 A.M.	Change in past 24 hours.	Variation from normal.	Direction.	Average hourly velocity during past 24 hours.			
	"	"	"				Inches.	
Dera Ismail Khan	29·960	—·150	—·101	Calm	1	0	*Nil*	
Khushab . .	·940	—·144	?	Calm	1	3	0·13	
Sialkot . .	·916	—·141	—·098	Calm	0	8	0·68	
Rawalpindi .	·890	—·193	—·092	W	0	9	0·67	
Peshawar . .	·928	—·225	—·130	S	2	3	0·21	
Cherat . .	25·598	—·184	?	NNW	10	8	0·31	
Murree . .	23·671	—·154	—·138	SW	19	10	1·61	
Srinagar . .	24·693	—·282	?	W	1	10	0·45	
Gilgit . .	?	—·280	?	?	?	10	0·08	Snow-storm.
Leh . . .	19·396	—·202	?	?	?	10	*Nil*	

The winds were extraordinarily feeble at the plains stations in the North Punjab, where the motion was hence almost solely vertical. Winds were strong at Murree and Cherat and cyclonic in direction with respect to a centre to the north of Murree. Moderate rain had fallen in the Punjab and heavy snow in the Kashmir and Punjab Himalayas during the previous 24 hours. The primary depression was very faintly indicated by the observations. It was passing through Baghelkhand and the adjacent districts of the North-Western Provinces and Central Provinces. Skies were clear or very lightly clouded in that area.

29th January.—The depression in the Punjab had filled up during the previous 24 hours as rapidly as it formed. The following gives observations at the same stations as are given above for the 28th:—

Station.	Barometer.			Wind.		Cloud.	Rainfall in past 24 hours.	Weather.
	Pressure 8 A.M.	Change in past 24 hours.	Variation from normal.	Direction.	Average hourly velocity during past 24 hours.			
	"	"	"				Inches.	
Dera Ismail Khan	30·162	+·202	+·089	N	5	0	*Nil*	
Khushab . .	·139	+·199	?	Calm	1	2	*Nil*	
Sialkot . .	·114	+·198	+·079	Calm	1	0	·003	
Rawalpindi .	·127	+·237	+·116	NE	1	0	·003	
Peshawar . .	·185	+·257	+·107	SW	3	1	·022	
Cherat . .	25·790	+·192	?	N	11	0	·041	Strong-wind.
Murree . .	23·811	+·140	0	SE	13	0	·025	Snow-storm.
Srinagar . .	24·921	+·228	?	Calm	1	10	·115	Snow-storm.
Leh . . .	19·534	+·138	?	?	?	0	*Nil*	

Snow had continued to fall in the hill districts during the 28th; but skies cleared during the night, and at 8 A.M. of the 29th they were clear over the whole of North-Western India, including the hill districts, and well-marked anti-cyclonic conditions were established which continued for some days.

This disturbance originated in the Persian Gulf during a period of general decrease of pressure in the Indian and Persian areas. It formed further south than the preceding depression or over South Persia and the Persian Gulf. (It is interesting to note in connection with this that the *Weekly Weather Report* issued by the English Meteorological Office shows that the Russian anti-cyclone lay further south than usual during the whole period, whilst this depression was being generated.) The depression advanced eastwards somewhat more rapidly than the previous depression and along a more southerly track through South Baluchistan and Lower Sind. It is noteworthy in connection with this feature that it was the only disturbance during the month which gave rise to a secondary depression in the Punjab. It is not possible to trace the track of the central primary depression with exactness.

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.

Hills to the west of the Dera Ismail Khan district.—The following gives a brief statement of the snow-storms of the month in this area.

1st and 2nd January.—Slight snow fell down to 7,000 feet on the Pirghal (11,500 feet) and Takht Suleman to a depth of about one foot. The fall on Kundi Ghar (8,140 feet) was also about one foot, and on Girnisar (5,050 feet) it was only about one inch and melted away in a few hours.

20th and 21st January.—Heavy and continuous snow fell during this disturbance on the hills. The fall was between 2 and 3 feet in amount in the Pirghal, Takht-Suleman and Kundi Ghar. On Girnisar and Ghana (about 5,000 feet high) the fall was a few inches only in depth. Snow fell down to about 4,500 feet during this period.

27th January.—Slight snow fell on all the hills. At Kashmir Kar (5,000 feet high) about three inches fell.

The weather generally cleared very quickly after each storm, and was clear, bright and cold in the intervals between the storms. The following gives the depth of snow at the end of the month on well-known peaks or ranges:—

NAME OF MOUNTAIN RANGE OR PEAK.	Elevation.	Depth of snow.
	Feet.	
Pirghal	11,500	About 3 feet.
Kundi Ghar	8,140	Between 2 and 3 feet.
Ziarat	6,500	Ditto.
Kanighuram	6,500	Ditto.
Kashmir Kar	5,000	About one foot.

(2) *Shirani country.*—The total snowfall during January on the Kesar Ghar, Takht-Suleman and Azmara Ghar is reported to be about 5 feet. The weather was even colder than usual during the storms.

(3) *Kurram.*—Snow fell on the 30th and 31st December and the 2nd, 11th, 18th, 19th, and 21st January in this district. The total fall of the period from the 30th December to 25th January was 20 feet on the Sufed Koh and 27 inches at Para Chinar in the Kurram valley. The snow fell down to a height of about 5,000 feet on the 30th and 31st December and 2nd January, to 4,000 feet on the 11th, 18th and 19th, and to 3,000 feet on the 21st. The snow-storms came with westerly winds (unlike last year when they generally came from the east). The depth of snow at the end of the month was probably from 10 to 20 feet on the crest of the Sufed Koh, and at least 10 feet on the passes from Kurram to Jellalabad. The snowfall up to date has been somewhat below the average and the weather drier and warmer than usual.

(4) *Hills to the west of the Bannu district.*—The following gives a summary in tabular form of the snowfall on well-known peaks in independent territory to the west of Bannu:

Mountain.	Height.	Reported Snowfall.
Pirghal	11,580	Snow fell from the 24th to the 27th January. Depth of snowfall 2 feet.
Shoidar	10,000	Snowfall during the period, 24th to 27th, was 2 feet.
Shawal	?	Total snowfall during the period 24th to the 27th was 1½ feet.
Zangra	?	Ditto.
Kaya	?	Ditto.

The amount of the snowfall over the mountain districts to the west of Bannu is reported by the natives inhabiting these districts to have ranged from 2 to 6 feet in depth.

(5) *Kabul.*—Snow fell on 12 days during the month. The amounts were generally small and the total fall of the month was only 2¼ feet. The snowfall was general in North Afghanistan. The weather was very cold and much more cloudy than usual during the whole month. The snowfall during the month was larger in amount than in the corresponding month of last year.

II.—KASHMIR AND PANJAB HIMALAYAS.

(1). *Hazara Hills.*—The following is a summary of the report for the period ending 15th January:

"November and December were unusually free from rain, which only fell on the 31st December, ending with a slight fall of snow that thawed as it fell. This rain continued till the 3rd January. Rain fell again on the 10th and continued till the 12th. Rain again began on the 17th. There was a fall of snow on the 3rd which melted as it fell in the Abbottabad plain (4,100 feet high.) Snow still lies on the surrounding hills (about 5,000 feet high.)

The rainfall of the 31st December is said to have ended in snow on the higher ranges and snow has fallen since on the 1st, 2nd and 11th January. The roads beyond Kagan village are said to be closed, and 4 or 5 feet of snow to have fallen on some of the higher ranges, but accurate information is not procurable. The snowfall so far is reported to be ordinary. The lower hills have little or no snow on them, but from the heavy clouds which have passed and given but little rain, and the presence of migratory birds, it appears the snowfall has been chiefly in the higher ranges beyond the district."

The following gives the reported depth of snow on the 15th January.—

	Depth.
Kagan hills	2 feet
Konsh and Bhagarmang hills . .	1 foot
Kagan higher hills . . .	6 to 10 feet
Black Mountain, 8,000 feet high . .	3 feet

(2) *Hills adjacent to Murree.*—Snow fell at Murree on the 1st, 2nd, 5th, 10th, 11th, 12th, 15th, 16th, 17th, 18th, 19th, 21st, 22nd, 27th, 28th and 29th. The total fall amounted to 9 feet. The largest falls were on the 22nd when 2⅛ feet were registered, and the 1st and 2nd January when 2½ feet were recorded. The fall during the month at Kahuta was 5 feet.

(3) *Ladakh.*—The report for the period, 15th December to the 15th January, states that several slight falls occurred during the period. "The snow fell to a height of 10,000 feet but quickly melted, leaving the snow line at 12,000 feet on north slopes and 13,000 feet on south slopes. All the higher passes are closed. The Zoji pass on the Kashmir road is reported to be very deep in snow, and the mails are sent across with great difficulty. The weather has been more windy than usual, and the snowfall normal or slightly above the average."

A second report for the last fortnight of January received from the Superintendent of the Observatory at Leh states that snow fell on five days during that period. "The falls were very extensive and were heaviest to the south and south-west of Leh. The whole of Ladakh was under snow at the end of the month. The fall of the 21st and 22nd is reported by traders to have extended north to the Chinese Frontier. Snow is stated to be lying 12 feet deep on the Zoji pass between Leh and Kashmir. The Poto pass, 60 miles west of Leh and 13,000 feet in elevation, was blocked by the fall of the 21st to the 24th January, an event of very rare occurrence. Communication was closed in all directions at the end of the month, except along the Indus valley. The universal opinion in Leh is that the snowfall during the present winter is decidedly above the average. Notwithstanding the excessive snowfall in Ladakh, the weather was, if anything, not so cold as usual in Leh during January."

Chamba.—The Deputy Conservator of Forests has sent the following full report of the snowfall in that state from 1st September 1893 to 15th January 1894:—

"Snow fell in Killar in Pangi, Chamba valley, altitude about 8,600 feet, during the storm from the 17th to 20th September (exact dates of falls not certain), to a depth of about 8 inches. And from reports it appears that the snow line descended somewhat below 8,000 feet. This snow melted rapidly below about 12,000 feet. At the same time the snow line on the south (Ravi) side of the Chenab Ravi range descended to about 11,000 feet. On the Sach pass, 14,400 feet, there appear to have been about 2½ feet to 3 feet of snow. On the 2nd November there was a sprinkling of snow on the ranges round Chamba down to about 11,000 feet, but no rain fell in Chamba. November and the first few days of December appeared colder than usual. Then till the 15th, it was more or less cloudy and warmer, and almost daily there were very slight falls of snow on the higher ranges down to about 12,000 feet. But only in one place, *viz.*, at Gharosan, some 12 miles north of Chamba town, where 4 inches of snow fell at 6,000 feet on the 12th, does there appear to have been any decided snowfall."

"From the 15th up to the 30th the weather was generally cloudy and rather warmer than usual. On the evening of the 25th and early morning of the 26th, there was on the Dalhousie range a slight fall of snow mixed with rain down to 7,000 feet. But this did not lie. Further in on the hills, particularly to the north-west, there was rather more snow. Thus on the Padri pass, a little over 9,000 feet, between Jammu and Chamba territory there was 9 inches, and in the same direction at Langera (7,000 feet) there were about 4 inches, and the snow line appears to have descended to 6,000 feet. And on the north in the Tisa direction there were 4 inches at 8,700 feet, 2 inches at 8,000 feet, and nominal to ½ inch at Thanela at 6,000 feet. On the 31st December the first heavy snowfall began on the Dalhousie range, and on and after that date snow fell frequently over Kalatop."

The following gives accurate measurements of the snowfall at five places in Chamba from the 31st December to 15th January:—

	Kalatop height 8,000 feet.		Bohar Forest, 12 miles East of Chamba.				Tisa, height 5,000 feet.		Thanela height 7,000 feet.	
			5,000 feet.		6,000 feet					
	Feet	Inches.	Feet.	Inches.	Feet.	Inches.	Feet.	Inches.	Feet.	Inches.
31st December	0	6	...		...		...		...	
1st January .	1	3	0	5	0	9	0	0¾	1	1
2nd " .	2	6	0	2	0	3	0	1½	1	0
3rd " .	1	6	0	1	0	2	0	1	0	6
4th " .	0	9	...		...		...		...	
10th " .	0	4	Rain		0	2	0	2	1	0
11th " .	0	5	Do.		0	1	...		0	4
12th " .	...		...		...		...		0	0½
13th " .	...		Rain		Rain		...		0	0¼
14th " .	...		Do.		Do.		...		0	3
15th " .	..		...		...		0	2	0	10
Total snowfall of first fortnight of January .	7	3	0	8	1	5	0	7¼	5	0¾

The depth of snow at the end of the first fortnight of January at certain positions in Chamba is given below:—

Position.	Depth of Snow. Feet.	Inches.
Bohar Forest	•	1
Tisa	*Nil*	
Thanela	1	6

III. HIMALAYAN DISTRICTS OF THE NORTH WESTERN PROVINCES.

Almora.—The following is an abstract of a report received from the Commissioner of Kumaon :—

(1) *Malla Danpur.*—The following gives the periods and amount of snowfall during the month :—

	Feet.	Inches.
1st and 2nd January . . .	3	0
8th " . . .	0	6
18th to 22nd " . . .	4	0
27th to 28th " . . .	1	0
TOTAL	8	6

The preceding states the average fall of snow on the well known peaks of Pindari, Kantela and Pankua.

(2) *Malla Johar.*—

	Feet.	Inches.
1st and 2nd January . . .	4	0
19th to 22nd " . . .	8	0
27th to 28th " . . .	2	6

The fall was heaviest on the 21st when three feet are stated to have fallen.

Malla Byans, Chaudans and Darma.—Snow fell to a depth of 2½ feet on the 3rd and of 7 feet during the storm from the 19th to the 23rd.

The snow accumulation in the beginning of February was 11 feet on the peaks of Pindari, Kantela and Pankua, 21½ feet on the high passes of Ralumdhura and Utadhura in Malla Johar, and 9 feet deep on the passes of Malla Byans. The weather was more cloudy than usual, but the snowfall less than in January 1893.

Summary of the preceding snowfall data.—The information is not so complete as to furnish an accurate view of the snowfall distribution up to date during the present winter. The snowfall in Afghanistan appears to have been larger than last year and was probably normal in amount. In the Western Himalayas a large amount of snow has fallen, probably considerably above the normal over the higher elevations. The humid current giving rise to the precipitation appears to have been lower than usual, as it occurred chiefly as rain at much higher elevations than in January 1893. At the level of the Punjab hill stations rain was more frequent than usual, and hence there has been no large accumulation of snow on the lower and middle ranges such as characterised the preceding winter For the same reason probably the storms were accompanied with unusually strong winds in the hills, but the weather was on the whole normal warmer than usual in the interior ranges as represented by Leh, Kailang and Gnatong. The snowfall on the lower ranges of Hazara, Hunza and Kashmir was probably not above the normal, and the snow accumulation at the end of the month was small in amount. In Ladakh and the districts to the north and probably in the higher ranges in Kashmir and Kulu, the snowfall has up to date been above the normal, and the passes are blocked to an unusual extent and the accumulation is large, but probably such as occurs in a moderately severe winter in those areas.

In Kumaon the snowfall also appears to have been heavy. The winter began early, and promised to be very severe. The fall in January 1894 was, however, considerably less than in the corresponding month of 1893, and hence it is probable that the accumulation is not much larger than that of an ordinary winter.

No snowfall reports have been received for the Eastern Himalayan area. The observations at Darjeeling indicate that the snowfall on Sikkim during January was unusually small in amount, and the winter more open and milder than usual.

The snowfall conditions in the Afghan and Himalayan mountain areas are hence not unfavourable to the prospects of the south-west monsoon.

Summary of special Storm Reports.

An occasional feature of the cold weather disturbances of the month in the plains of Northern India is the occurrence of thunderstorms and hailstorms. The first disturbance of the month gave an extensive series of hailstorms in Rajputana.

Special storm reports were received from five observers during the month. The following gives a brief statement of these storms :—

1st :—Severe thunderstorm and hailstorm at Chikalda at 2 P.M. The observer also notes that thunderstorms and hailstorms occurred in all the neighbouring villages on the 1st and 2nd, but that little or no damage to the crops was caused.

3rd :—Hailstorm at Lahore.

4th :—A severe earthquake shock is reported by the observer to have been felt at Gorakhpur at 4-16 P.M. Many buildings in the city were thrown down by the shock.

19th :—Thunderstorm at Allahabad from 9-20 A.M. to 11 A.M.

20th :—Thunderstorm at Dehli at 3-30 P.M.

27th :—Thunderstorm at Pachpadra.

Reports of the numerous hailstorms which occurred during the first and third disturbances of the month in Rajputana and Berar have been received from the authorities in these areas, through the Political Agents or other officials. The following gives a brief summary of these reports :—

1st January, Amraoti district.—A hailstorm occurred

in four villages of the Morsi Taluk including an area of about 4 miles in diameter. The storm lasted half an hour. Some of the stones were as large as limes. Slight damage was done to crops and buildings

Gwalior State.—A hailstorm occurred at 7 A.M. in the villages of Bishnia, Bhatkhetri, Kotra, Mata and Awari, Pargana Nahergah, in Mandsour. Much damage was done to opium and other crops. The largest stones are reported to have weighed 4lbs. (?) at Bishnia and to have been as large as apples in the remaining villages.

Indore State.—A hailstorm passed over Bolia Taluka Sathkhera of Indore at 4-30 A.M. The storm lasted above 30 minutes, and the size of the stones was about that of a betelnut.

Bhopal State.—A hailstorm occurred in the Taluka of Tappa Suklia. No damage was done to the crops.

Jaora State.—Hailstorms occurred at a large number of villages in this state on the night of the 31st December. The stones were small and inflicted no damage on the crops.

Bikanir State.—Hailstorms of moderate intensity occurred on the 1st in the Sudr, Sujangarh and Mirzawallah Tahsils. Little or no damage was caused by these storms.

3rd January, Bikanir State.—Hailstorm passed over the Nohar and Hanumangarh Tahsils. The largest stones are stated to have been of the size of limes.

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

Arabian Sea.—Moderate to fresh northerly winds obtained in the Persian Gulf, the Gulf of Oman, and along the Mekran coast on the 1st, and weather was showery in that region. Over the Arabian Sea and Gulf of Aden fine weather with light to moderate north-east monsoon winds prevailed, except perhaps in the centre, where winds were unsteady and weather slightly unsettled, with occasional squalls. Conditions were also slightly disturbed to the south-west of Ceylon. The average force of the winds was 2·7. Winds increased in strength, particularly in the Gulf of Aden, where also the weather became squally. The S.S. *City of Dundee* experienced heavy rain squalls in this area on the 2nd. The average wind force had increased to 3·3. Conditions improved in the centre of the sea during the next 24 hours, but remained unchanged elsewhere. Winds increased rapidly in the Persian Gulf, and on the morning of the 4th were of force 4 to 6. They averaged 3·4 in force over the whole sea area at 8 A.M. of the 4th. They fell off in strength during the next 24 hours, more especially in the Persian Gulf and in the Gulf of Aden, and weather cleared in these areas Fine clear weather with light to moderate north-east monsoon winds was re-established over the whole sea area on the 5th, on which day the average wind force was only 2·7. Winds increased in strength during the next six days and were of average force 4·1 on the 11th and 12th. Weather was disturbed with heavy rain and squalls in the Persian Gulf and the Gulf of Oman from the 7th to the 10th. Steady strong winds continued in the Arabian Sea (averaging in force 4 for the whole area) until the 16th, when the air movement began to take off in all parts of the sea, and the mean force decreased to 2·9 on the morning of the 17th. An important change occurred during the next 24 hours in the Persian Gulf and at the head of the Arabian Sea, where winds increased in force and the weather became unsettled. The S.S. *Assyria* about 80 miles to the south of Kurrachee, at 8 A.M. of the 18th, experienced north-east winds of force 6, and unsettled weather with vivid lightning. The average force of the winds over the whole sea area was 3·1. The air movement decreased steadily during the next two days in all parts of the Arabian Sea, and on the morning of the 20th the average force was 2·3. On the other hand winds had increased in the Persian Gulf where very strong westerly winds and squally weather prevailed on the morning of the 20th. The ship *Lapwing* had north-west winds of force 8, a rough sea and squally weather on the morning of the 20th. In the Gulf of Oman south-westerly winds were blowing on this day. Winds increased considerably in the south and south-east of the sea during the next 24 hours, and their average force was 3·4 on the morning of the 21st. In the Persian Gulf, on the other hand, winds fell off in strength, at the same time shifting round to northerly directions, and the weather cleared. Steady north-east monsoon winds and fine weather prevailed generally on the 22nd, but on the morning of the 23rd conditions became again unsettled in the Persian Gulf. The disturbed weather extended rapidly eastwards during the next 24 hours. Weather was squally and rainy all over the Persian Gulf and at the head of the Arabian Sea during the next three days. Fine weather was re-established on the morning of the 27th. Winds increased during the remainder of the month and averaged 4·7 in force on the 30th and 4·6 on the 31st. The increase in the air movement, although general, was greatest in the Gulf of Aden and the south of the Red Sea (due apparently to conditions over Nubia and Abyssinia) where gales (force 8 and 9) were experienced by several vessels on the morning of the 31st.

Bay of Bengal.—At the commencement of the month light north-easterly winds prevailed generally over the Bay, and weather was fine and clear. Further south, at the entrance to the Bay, winds were of force 4 to 5 and

north-westerly in direction in the eastern half and north-easterly in the western half. Weather was unsettled with rain and squalls over nearly the whole of the area lying between Ceylon and the Nicobars. The average force of the winds was 2·9. Winds shifted round to north-east in the eastern half of the entrance to the Bay on the 7th and the weather improved in the south of the Bay, and on the morning of the 8th fine weather with north-easterly winds prevailed generally. The average wind force on the 8th was the same as on the 1st. No change occurred until the afternoon of the 11th when the air movement began to increase in the west of the Bay, and the weather became rainy near the Coromandel coast. On the morning of the 12th, moderate to fresh north-easterly winds prevailed in that area, and the average wind force for the whole of the Bay had increased to 3·3. Winds increased further in force in the west of the Bay, and weather was slightly more unsettled during the next 24 hours. The air movement averaged 3·6 in force on the morning of the 13th. The S.S. *Nairung* at anchor on that day at Pondicherry experienced thick rainy weather and a moderate sea. Weather cleared up in this area in the afternoon, and fine clear weather obtained over the whole of the Bay on the morning of the 14th. Winds decreased rather rapidly during the next two days, more especially in the west of the Bay, and on the 17th the average force had decreased 2·7. Winds, however, increased rapidly again and on the morning of the 18th were of average force 4·1 The increase was most marked in the eastern half of the entrance to the Bay, where winds of force 5 to 6 were blowing on the morning of the 18th. The air movement decreased steadily on the 19th, 20th and 21st and averaged 2·6 in force on the 22nd, and 2·3 on the 23rd. Weather was rainy and squally at the entrance to the Bay on the 20th and 21st. The S.S. *Bucephalus* experienced frequent hard rain squalls in the early morning of the 20th, and the S. *Leicester Castle* squally weather on the 21st. Winds remained almost steady in force during the next two days, but rose rather rapidly on the afternoon of the 25th, and on the morning of the 26th averaged 3·1 in force. A considerable decrease in the strength of the winds occurred in the west of the Bay during the next 24 hours, and on the morning of the 27th, the average force of the winds in that area was only 1·1 as compared with 2·8 on the previous day. The average force of the winds for the whole of the Bay was only 1·8. Winds again increased in force during the remainder of the month, averaging 2·5 on the 29th and 3·1 on the 31st, on which day they were light to moderate in force over the Bay, and moderate to fresh at the entrance to the Bay.

Temperature of the Air.

The mean temperature data are given in Table I and Table II under the heading "Temperature of the air." In Table I they are based upon observations of the dry bulb thermometer 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 a 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 this definition, agree in almost all cases closely with the variations as determined by the use of true daily means based on readings at 16 hours, in addition to those 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 alsoshown. 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 Darjeeling, Katmandu, Quetta, Mercara, Wellington, Aden, Mount Abu, and Zanzibar (for all of which crude means are given), and Vizagapatam and Madras. For Vizagapatam the mean of observations at 4, 10, 16, and 22 hours is given, and for Madras the means as given in the registers sent by the Government Astromomer.

The methods of exposing the thermometers will be found fully described in the Indian Meteorologists' Vade-Mecum, 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. They have been derived from all the available trustworthy temperature data for each station, and hence for very varying number of years, ranging from 46 years in the case of Bombay to 10 years in the case of Kailang.

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.

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

The mean maximum or day temperature in January 1894 was below the normal in North-Western India and was normal or in slight excess over the remainder of India and in Burma. The deficiency in the day temperature was large in amount (exceeding 4°) in the Punjab, Sind, North-West Rajputana and Baluchistan, or in the areas chiefly affected by the four disturbances of the month. The following gives data for stations at which the deficiency was 5° or upwards:—

Station.	Mean maximum temperature.		
	Actual, January 1894.	Normal, January.	Variation from normal.
	°	°	°
Hyderabad	70·9	76·4	−5·5
Sirsa	64·4	71·3	−6·9
Ludhiana	62·6	67·6	−5·0
Lahore	61·8	67·4	−5·6
Sialkot	61·0	66·6	−5·6
Rawalpindi	57·2	63·3	−6·1
Peshawar	58·4	63·9	−5·5
Dera Ismail Khan	63·8	69·1	−5·3

The deficiency was as large in amount at the hill stations as at the neighbouring plain stations. The following gives data:—

Station.	Mean maximum temperature.		
	Actual, January 1894.	Normal, January.	Variation from normal.
	°	°	°
Leh	29·9	?	?
Murree	39·8	47·9	−8·1
Quetta	44·1	51·5	−7·4

The mean minimum or night temperature was in slight defect in Burma, Assam, East Bengal and the Madras coast districts. It was in excess over the whole of the interior of India. The area of greatest excess included the North-Western Provinces, North-East Rajputana, Berar, Bundelkhand, Baghelkhand, and parts of the Central Provinces, in which the mean night temperature was from 2° to 4° above the normal. The following gives data for the stations at which the excess was 3° or upwards: —

Station.	Mean minimum temperature.		
	Actual, January 1894.	Normal, January.	Variation from normal.
	°	°	°
Sutna	51·1	47·3	+3·8
Benares	51·4	48·0	+3·4
Allahabad	51·3	47·7	+3·6
Ludhiana	46·9	43·7	+3·2
Lahore	44·9	41·9	+3·0
Ajmere	49·1	44·9	+4·2

The mean minimum temperature of the month was below the normal at the hill stations in Upper India, but to a less extent than the day temperature:—

Station.	Mean minimum temperature.		
	Actual, January 1894.	Normal, January.	Variation from normal.
	°	°	°
Murree	31·2	35·4	−4·2
Simla	34·1	36·5	−2·4
Quetta	27·3	29·3	−2·0
Leh	10·3	?	?
Kailang	15·5	?	?

The mean temperature of the month differed little from the normal over by far the greater part of India. It was very slightly below the normal in Assam, Upper Burma

and Madras, and was above it generally to a small extent in Bengal, Bihar, Chota Nagpur, the North Deccan, Bombay, Berar, Central Provinces, Central India, South Rajputana and the eastern and central districts of the North-Western Provinces. The excess was over 2° in two small areas for which data are given in the following table:—

Station.	Mean daily temperature.		
	Actual, January 1894.	Normal, January.	Variation from normal.
	°	°	°
Akola	71·3	68·9	+2·4
Khandwa	69·9	67·7	+2·2
Pachmarhi	61·2	59·1	+2·1
Sutna	63·1	61·0	+2·1
Allahabad	63·2	60·9	+2·3

The mean temperature of the month was below the normal in North-Western India to the north of a line joining Kurrachee and Bareilly. The deficiency exceeded 2° in the North Punjab and Lower Sind. The following gives data for stations in these two areas:—

Station.	Mean daily temperature.		
	Actual, January 1894.	Normal January.	Variation from normal.
	°	°	°
Hyderabad	60·7	63·9	−3·2
Kurrachee	63·0	65·6	−2·6
Peshawar	49·0	51·6	−2·6
Rawalpindi	47·6	50·6	−3·0
D. I. Khan	52·3	54·9	−2·6
Sialkot	52·4	54·7	−2·3

Temperature was very considerably in defect at the hill stations in Upper India.

Station.	Mean daily temperature.		
	Actual, January 1894.	Normal January.	Variation from normal.
	°	°	°
Leh	18·5	18·7	−0·2
Kailang	21·1	22·2	−1·1
Murree	35·6	41·8	−6·2
Quetta	35·7	40·4	−4·7
Simla	39·0	42·1	−3·1
Chakrata	40·4	43·3	−2·9
Ranikhet	45·6	47·0	−1·4

The chief features of the mean temperature conditions of the month were as follows:—

(1) Day temperature in moderate to largish defect in Upper India and adjacent mountain districts. It was in slight excess elsewhere.

(2) Night temperature in slight to moderate excess in the interior of India and normal or in very slight defect in Burma and Madras.

(3) Mean temperature in slight to moderate defect (*i.e.*, between 1° and 4°) in Upper India, normal in Burma, Madras, Bombay and Bengal, and in slight excess (between 1° and 2°) in Berar, Baghelkhand, and the western districts of the Central Provinces.

(4) Temperature largely in defect both by day and night at the hill stations of Upper India, normal at Darjeeling and Wellington, and in slight excess at Pachmarhi.

The following table gives comparative data for 50 of the 51 meteorological areas or districts into which India is divided:—

Province.	Division.	Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean daily.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	87·6	63·5	75·5	24·1	35·9	−0·6	−0·7	+0·1
	Lower Burma	86·0	66·4	76·2	19·7	26·9	0	+1·3	−1·3
	Central do.	86·3	53·8	70·0	32·5	44·3	0	−1·1	+1·1
	Upper do.	77·7	49·2	63·5	28·5	38·0	?		?
	Arakan	81·8	58·1	69·9	23·7	34·0	+0·4	−1·4	+1·8
Bengal and Assam	Eastern Bengal	77·5	52·5	65·0	25·1	34·0	+0·9	−0·9	+1·8
	Assam (Surma)	78·6	51·6	65·1	27·0	36·3	+1·4	−0·7	+2·1
	Do. (Brahmaputra)	72·0	50·2	61·1	21·8	29·0	+0·3	−1·5	+1·8
	Deltaic Bengal	78·1	54·8	66·5	23·3	35·0	+0·5	0	+0·5
	Central do.	78·0	53·5	65·7	24·5	35·6	+0·7	+1·4	−0·7
	North do.	74·7	49·7	62·2	25·0	33·8	?	?	?
	Orissa	81·0	61·5	71·3	19·5	31·9	+0·9	+0·3	+0·6
	Chota Nagpur	77·6	51·9	64·7	25·7	41·1	+2·0	+0·3	+1·7
	Bihar (South)	75·7	52·9	64·3	22·8	36·0	+1·5	+2·1	−0·6
	Do. (North)	74·3	50·7	62·5	23·6	34·2	+0·5	+1·5	−1·0

Province.	Division.	Temperature. Mean maximum.	Mean minimum.	Mean daily.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Range.
		°	°	°	°	°	°	°	°
North-Western Provinces and Oudh.	North-Western Provinces (East)	73·9	51·1	62·5	22·8	36·1	0	+2·9	−2·9
	Oudh (South)	73·9	48·2	61·1	25·7	40·4	+0·1	+1·9	−1·8
	Do. (North)	73·0	? 41·8	57·4	? 31·2	? 43·3	?	?	?
	North-Western Provinces (Central)	72·7	48·8	60·6	24·0	39·7	?	?	?
	Do. do. (West)	72·9	51·9	62·4	21·0	35·8	−1·9	+2·3	−4·2
	Do. do. (Submontane)	66·7	46·8	56·5	19·7	35·1	−2·5	+1·8	−4·3
Punjab	Punjab (South)	64·9	46·9	56·0	18·0	32·7	−6·3	+1·7	−8·0
	Do. (Central)	61·8	44·9	53·4	16·9	31·6	−5·6	+3·0	−8·6
	Do. (Submontane)	63·8	46·4	55·1	17·4	34·1	−5·0	+3·2	−8·2
	Do. (Hill Districts)	41·0	32·0	36·6	9·0	26·2	−6·0	−3·3	−2·7
	Do. (North-West)	60·4	40·0	50·2	20·4	32·4	−5·7	+0·5	−6·2
	Do. (West)	63·8	42·4	53·1	21·5	38·8	−5·1	+0·7	−5·8
Bombay and Malabar Coast Districts (Madras).	Malabar	87·1	70·2	78·7	16·9	23·4	+1·1	−0·2	+1·3
	Madras (South Central)	87·5	63·5	70·5	24·0	34·6	+0·1	−0·2	+0·3
	Coorg	79·7	59·3	69·5	20·4	30·8	−0·5	+1·4	−1·9
	Mysore	82·1	57·2	69·7	24·9	35·4	+2·8	+0·3	+2·5
	Konkan	85·4	67·3	76·4	18·1	26·3	+0·5	+0·4	+0·1
	Bombay Deccan	85·5	57·6	71·6	28·0	39·1	+0·5	+0·7	−0·2
	Hyderabad (North)	84·3	58·8	71·5	25·6	38·5	?	?	?
	Khandesh	85·1	53·7	69·5	31·4	45·7	+1·1	+2·3	−1·2
Central Provinces and Berar.	Berar	85·4	57·9	71·7	27·5	41·4	+1·1	+2·6	−1·5
	Central Provinces (West)	84·6	55·3	70·0	29·3	45·4	+1·4	+1·6	−0·2
	Do. (Central)	79·8	52·8	66·3	27·0	44·6	+0·4	+1·4	−1·0
	Do. (East)	83·0	56·5	69·7	26·5	40·2	+1·5	+1·3	+0·2
Bombay (North)	Gujarat	85·3	58·5	71·9	26·9	38·5	+0·6	+1·5	−0·9
	Kathiawar	82·1	57·7	69·9	24·3	39·5	−0·6	+1·6	−2·2
	Sind	72·7	50·7	61·7	21·8	43·0	−3·9	−0·3	−3·6
Rajputana and Central India.	Central India (East)	74·5	50·1	62·3	24·5	43·2	−0·5	+3·0	−3·5
	Rajputana (East), Central India (West)	75·4	50·4	62·9	25·1	39·8	−1·1	+2·1	−3·2
	Do. (West)	72·1	47·8	59·9	24·3	43·1	−4·5	−1·2	−3·3
Madras	East Coast (North)	82·3	65·1	73·7	17·2	28·7	−0·2	−0·6	+0·4
	Hyderabad (South)	85·4	60·4	72·9	25·0	37·9	−0·6	+0·7	−1·3
	Madras (Central)	88·2	61·4	74·8	26·8	39·5	−0·9	+0·3	−1·2
	East Coast (Central)	84·8	66·2	75·5	18·7	29·8	+0·1	−0·4	+0·5
	Do. (South)	83·6	67·8	75·5	15·8	27·8	−0·3	−0·3	0
	Madras (South)	86·1	71·5	78·8	14·6	23·5	−0·1	−0·3	+0·2

The larger changes of the temperature conditions of India were determined by the four disturbances of the month. These storms were confined to North-Western India, and did not, as is frequently the case in January, advance from Baluchistan across Northern India into Bengal and Burma. Each disturbance was preceded by a warm wave and followed by a cool wave. These waves advanced across the whole of Northern India, but in a more irregular manner than usual, due chiefly to the abnormal character of the disturbances.

At the commencement of the month the first disturbance was giving rain to North-Western and Central India. The depression filled up on the 1st, but slightly disturbed weather with light but fairly general rain continued over that area until the morning of the 3rd when skies cleared and fine dry weather set in and continued until the 9th.

The following gives variation data for the 24 hours preceding 8 A.M. of the 1st, when temperature was more or less considerably in excess in Northern and Central India in front of the disturbance crossing North-West

India, and a cool wave was advancing across the North-West Frontier.

Province.	Variation from normal of		
	Mean maximum temperature	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·5	−1·1	−0·3
Bengal and Assam	+2·7	+1·8	+2·3
North-Western Provinces and Oudh	−2·0	+9·9	+4·0
Punjab	−8·6	+9·9	+0·7
Sind and Rajputana	−5·5	+9·0	+1·8
Central India and Gujarat	+1·7	+7·7	+4·7
Central Provinces and Berar	+2·7	+7·2	+5·0
Bombay	−0·8	+3·5	+1·4
Madras	+1·2	+4·1	+2·7
Quetta (Baluchistan)	−5·6	+0·8	−2·4

The warm and cool waves advanced eastwards during the next three days. The following gives the largest variations from the normal in the areas covered by these waves from the 1st to the 4th and illustrates their eastward advance :—

Date.	Cool wave.		Warm wave.	
	Station.	Mean temperature variation from normal.	Station.	Mean temperature variation from normal.
		°		°
1st	Quetta	−2·4	Sutna	+8·8
,,	Peshawar	−6·2	Khandwa	+7·9
2nd	Mount Abu	−4·1	Jubbulpore	+7·9
,,	Hyderabad	−1·7	Gya	+7·4
3rd	Bickaneer	−5·4	Gya	+5·9
,,	Indore	−5·4	Purnea	+5·2
4th	Bickaneer	−6·9	Cuttack	+5·7
,,	Indore	−6·9	Burdwan	+4·9

A second cold wave entered North-Western India from Baluchistan on the 5th, and hence on the 6th temperature was more or less considerably in defect over Northern India, but continued in excess in the Peninsula (*i.e.*, to the south of the Satpuras). The following gives variation data for the 6th :—

Province.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·5	−0·7	−0·1
Bengal and Assam	−0·3	−0·1	−0·2
North-Western Provinces and Oudh	−3·9	−1·3	−2·6
Punjab	−6·2	+0·3	−3·0
Sind and Rajputana	−6·3	−2·0	−4·2
Gujarat and Central India	−7·1	−1·4	−4·3
Central Provinces and Berar	−1·5	+3·9	+1·2
Bombay	−1·6	+1·4	−0·1
Madras	+1·4	+2·2	+1·8
Quetta (Baluchistan)	−7·5	−5·5	− ·5

No important change occurred until the 9th, when temperature increased very rapidly in Baluchistan and the Indus Valley, and a warm wave was crossing the frontier. This warm wave advanced quickly across Northern India during the next three days. The following gives data for this wave and also of the cool wave (during the same period) which was in front of it :—

Date.	Warm wave.		Cool wave.	
	Station.	Variation of mean temperature from normal.	Station.	Variation of mean temperature from normal.
		°		°
10th	Quetta	+10·9	Jubbulpore	−5·4
,,	Jacobabad	+9·4	Sambalpur	−5·3
11th	Hyderabad	+7·9	Jubbulpore	−6·7
,,	Jacobabad	+6·4	Sambalpur	−5·1
12th	Ajmere	+5·9	Seoni	−5·8
,,	Sambhar	+5·2	Cuttack	−4·3

This warm wave preceded the second disturbance of the month, which gave light rain in the North and East Punjab and moderate snow in the Punjab, and Kashmir Himalayas. The cold wave in the rear of this disturbance crossed the North-West Frontier on the 13th, and during the four following days two cold waves separated by a warm wave were slowly advancing eastwards across Northern India. The following shows the position of the

greatest temperature variations due to these waves from the 13th to 17th:—

Date.	West cold wave.		Warm wave.		East cold wave.	
	Station.	Mean temperature variation from normal.	Station.	Mean temperature variation from normal.	Station.	Mean temperature variation from normal.
		°		°		°
13th	Quetta .	−10·3	Sambhar	+4·7	Cuttack .	−3·3
14th	Quetta .	−7·1	Jhansi .	+5·6	Cuttack .	−3·3
"	Jacobabad	−4·8	Jeypore .	+4·2	False Point	−3·2
15th	Sirsa .	−6·8	Sutna .	+3·7	Saugor Island .	−4·2
16th	Sirsa .	−7·2	Allahabad	+4·9	Chittagong	−1·9
"	Lahore .	−4·5	Patna .	+3·4	Sibsagar .	−1·9
17th	Rajkot .	−4·0	Saugor Island .	+4·2	Chittagong	−2·0
"	Agra .	−2·6	Gaya .	+3·8	Akyab .	−2·0

The third disturbance of the month began to give showery weather to Baluchistan on the 17th. It extended slowly eastwards, and the whole of North-Western India received moderate rain from the 19th to the 23rd. In the Western Himalayan districts, more or less heavy snow fell daily during the period. The warm wave preceding this disturbance advanced across the North-West Frontier on the 17th and 18th, and was followed by the cool wave on the 19th. Temperature increased in Central and North Eastern India whilst this disturbance lasted, and was hence largely in excess from the 19th to the 23rd, during which period it continued more or less considerably in defect in North-Western India. The following table gives the variation of the mean daily temperature from the normal in Northern and Central India during this period from the 19th to the 23rd:—

Station or District.		Variation of mean temperature from normal for the 24 hours preceding 8 A.M. of				
		19th.	20th.	21st.	22nd.	23rd.
		°	°	°	°	°
Cool area	Quetta . .	−3·0	−6·4	−3·9	−13·8	−12·3
	Punjab . .	−2·6	−0·6	−2·4	−3·1	−6·1
	Sind and Rajputana	−0·2	−0·7	−0·5	+2·3	−2·3
Warm area	North-Western Provinces and Oudh . .	+3·4	+1·6	+2·7	+3·3	+3·5
	Gujarat and Central India .	+2·8	+2·2	+4·3	+4·4	+3·4
	Berar and Central Provinces .	+2·5	+2·9	+3·4	+3·5	+4·2
	Bengal and Assam	−0·1	+0·7	+2·2	+4·2	+5·1

The cool wave proper following this disturbance, as is seen from the preceding table, passed through Baluchistan on the 22nd and 23rd, and began to affect the Punjab on the 23rd The temperature conditions prevailing during this period (with these two exceptions) were determined in part by the distribution of rainfall and of cloud.

A brief interval of fine weather followed from the 23rd to the 25th or 26th. During this period the cold wave, the character of which is shown very clearly by the data for Quetta in the preceding table, advanced across Northern India, displacing the warm wave, and on the 26th temperature was below the normal over the whole of India. The following provincial variation data for this period illustrate the eastward progress of this cool wave:—

District.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	23rd.	24th.	25th.	26th.
	°	°	°	°
Punjab	−6·1	−7·0	−6·1	−3·4
Sind and Rajputana . . .	−2·3	−5·2	−4·9	−4·5
North-Western Provinces and Oudh	+3·5	−2·3	−4·0	−3·9
Bengal and Assam . . .	+5·1	+3·9	+1·2	−1·9
Gujarat and Central India . .	+3·4	−0·9	−2·2	+0·8
Berar and Central Provinces .	+4·2	+3·4	+1·1	+1·1

On the 26th the Satpuras separated the area of deficient temperature to the north from the area of excessive temperature to the south even more sharply than usual.

Another disturbance now began to influence the temperature conditions of Northern India. This disturbance gave moderate to heavy rain in the Punjab, and snow in the adjacent mountain districts on the 27th and 28th. The following variation data for the 27th and following days show the position of the warm and cool waves related to this storm:—

Station or District.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	27th.	28th.	29th.	30th.	31st.
	°	°	°	°	°
Quetta	−5·2	−9·0	−16·5	−14·5	−8·1
Punjab	−4·7	−1·9	−2·4	−3·2	−4·1
Sind and Rajputana .	−1·2	+1·8	−4·4	−6·3	−5·2
N.-W. Provinces and Oudh	−1·7	+2·9	+4·0	−0·4	−1·9
Gujarat and Central India .	+4·4	+5·0	+1·3	−2·3	−2·6
Bengal and Assam . .	−2·6	−0·4	+2·0	+2·9	+0·3

The preceding remarks have given all the important features of the varying temperature conditions during the month. They were chiefly determined by the four disturbances of the month, each of which gave moderate rain to North-Western India and more or less heavy snow in the Afghan and Punjab mountain districts. Each disturbance gave rise to a warm wave and a cool wave which advanced across Northern India in periods of three or four days, and their intensity was partly dependent upon the character of the disturbances. A note-worthy feature was that the temperature effects of the storms were restricted to Northern or Extra Tropical India (*i.e.*, to the north of the Satpuras) and the Bombay coast districts. Another interesting feature was the marked tendency for the temperature conditions in the Deccan and Southern India to vary inversely

to those of North-Eastern India. The following gives the mean temperature variations of Madras and Bengal on the days when they were most marked in Bengal:—

Date.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.	
	Bengal and Assam.	Madras.
	°	°
8th	—3·6	+1·1
17th	+1·2	—1·6
19th	—0·1	—2·0
22nd	+4·2	—0·5
23rd	+5·1	—0·6
27th	—2·6	—0·7
29th	+2·0	—0·2

This inverse relation is of importance, more especially in connection with the occurrence of rainfall in the two areas of Extra Tropical and Tropical India.

The lowest minimum temperatures of the month in Northern India occurred during the passage of the cold waves. In the hill districts they were generally registered on the 29th or 30th after the last disturbance of the month, and in the Punjab, Sind and Rajputana on the 10th and 11th. They were in no way remarkable, and lower temperatures have been frequently observed in January than were recorded during the month under discussion. The actual amount of the precipitation in January 1893 was about the same in the plains and hills of North-Western India as in January 1894, but in the former it fell as snow down to much lower levels than in the latter month. This difference in the character of the precipitation in part at least explains the higher minimum temperatures in the latter month. It may be noted that the difference is as strongly marked in the mean minimum as in the absolute minimum temperatures.

The following gives comparative data of the rainfall and minimum temperature of the two months at certain typical stations in North-Western India, January 1893 and January 1894.

Station.	January 1894.		January 1893.	
	Rainfall.	Minimum temperature.	Rainfall.	Minimum temperature.
	Inches.	°	Inches.	°
Leh	0·65	10·3	*Nil*	7·1
Kailang	4·28	15·5	3·79	8·6
Murree	8·55	31·2	9·05	29·2
Quetta	3·93	27·3	3·61	27·8
Gnatong	0·44	19·8	2·73	7·2
Peshawar	1·96	39·7	3·17	40·1
Lahore	3·91	44·9	2·01	41·9
Roorkee	2·46	46·6	1·78	45·4
Agra	1·54	50·5	0·52	48·9
Jeypore	1·34	50·5	1·07	46·5
Allahabad	0·15	51·3	1·56	48·9
Patna	0	52·4	0·83	50·2
Calcutta	0	55·7	0·70	54·1

The following table gives the mean variation of temperature, week by week during the month, and also for the whole month, for the larger political divisions of India, taken from the weekly weather summaries published in the *Gazette of India.*

Division.	Variation from normal of mean temperature.					
	31st December 1893 to 6th January 1894.	7th to 13th.	14th to 20th.	21st to 27th.	28th to 23rd February.	For whole month.
	°	°	°	°	°	°
Burma	—0·1	—0·3	—0·4	+0·9	+1·2	0
Bengal and Assam.	+0·2	—1·6	+0·3	+1·7	+1·4	+0·6
North-Western Provinces and Oudh.	+1·3	—0·9	+1·9	—0·3	0	+0·4
Punjab	—0·2	—0·4	—2·0	—4·7	—2·9	—2·1
Sind and Rajputana.	—0·5	+1·0	—0·9	—2·3	—3·5	—1·2
Central India and Gujarat.	+0·8	—1·2	+1·1	+2·0	—0·7	+0·5
Central Provinces and Berar.	+2·6	—3·4	+1·0	+2·9	+5·0	+1·2
Bombay	—0·2	+0·3	+0·6	+1·6	+0·4	+0·7
Madras	+2·1	0	—1·2	—0·6	0	0

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 heading "Wind." In these columns are shown the number of days the wind at 8 A.M. blew from each of eight points, and also the mean daily air movement. The mean direction of the wind at 8 A.M. for each station is given in a separate column. It 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 heading "Wind" is shown the number of times that each of eight wind directions were observed at the hours of record, the trigonometrical resultant of these observations computed by Lambert's formula, the mean diurnal movement of the air, and the

average monthly values of the last two data computed from the previous wind observations at the stations.

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 excess of 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 comparison of the mean wind directions (determined from the 10 and 16 hours' wind observations) and the corresponding normal mean wind directions.

Winds were normal in strength and direction in Lower Burma and at Port Blair.

In Bengal winds were steadier than usual, but were on the whole slightly below their normal strength. The mean directions at the Bengal stations differed from the normal very irregularly, neighbouring stations showing opposite deflections. Winds were feeble and more unsteady than usual in Assam.

Winds were steadier and stronger in Bihar and the eastern districts of the North-Western Provinces, and were more northerly (or less westerly) than usual. This deflection in the mean air movement, which was evidently related to the irregularity and weakness of the winds in Bengal, was shown most strikingly at the following stations in Chota Nagpur and South-West Bengal :—

Station.	Mean wind direction.		
	Actual, January 1894.	Normal, January.	Increased northing.
	°	°	°
Hazaribagh	N. 38 W.	N. 62 W.	+24
Burdwan	N. 16 W.	N. 32 W.	+16
Calcutta	N. 12 W.	N. 38 W.	+26

The increased northing of the winds was as strongly exhibited at the Orissa stations as in West Bengal and Chota Nagpur.

Winds were light and unsteady in the western districts of the North-Western Provinces, the mean velocity of the air movement as registered by the anemometers in use barely amounting to 48 miles per diem.

The air movement in the Indus Valley differed more largely from the normal than in any other part of India. The following gives data for three stations in that area: —

Station.	Mean wind direction.			Mean steadiness per cent.	
	Actual, January 1894.	Normal, January.	Increased eastiug.	January, 1894.	Normal, January.
Mooltan . . .	N. 41° E.	N. 9° W.	+50°	34	24
Jacobabad . .	N. 32 E.	N. 10 W.	+42	6	27
Kurrachee . .	N 46 E.	N. 23 W.	+69	84	17

The mean air movement was hence north-easterly instead of north-north-westerly. This would appear to indicate that the influx of dry cold winds from the Baluchistan plateau was much feebler than usual in January 1894.

Winds were of normal strength and steadiness in Rajputana, Central India and the Central Provinces, but varied irregularly in direction from the normal. They were on the whole more easterly than usual in the Central Provinces. Winds were steadier in the Deccan and Madras, and were normal in direction except perhaps locally at Vizagapatam, where however the exposure of the wind instruments is not very satisfactory. Winds were slightly weaker and less steady at the west coast stations and varied somewhat irregularly.

Winds at the hills stations in Upper India were very largely influenced by the four disturbances of the month, which gave frequent strong cyclonic winds. Hence the mean wind direction at all stations where the exposure of the anemometer is satisfactory was from some south-easterly direction. The following gives data illustrating these two features :—

Station.	Mean wind direction.		Mean wind velocity in miles per diem.		
	Actual, January 1894.	Normal, January.	Actual, January, 1894.	Normal, January.	Percentage variation.
	°	°			
Murree . . .	S. 45 E.	S. 54 E.	318	198	+61
Srinagar . . .	S. 29 E.	?	67	?	?
Simla . . .	S. 26 E.	S. 31 W.	150	?	?
Chakrata . .	S. 25 E.	S. 66 W.	162	114	+42

The air movement over India during the month hence presented few abnormal features of importance. The month was remarkably free from well-defined cold weather storms. The four disturbances of the month were ill-defined and diffused, and hence they tended to give unsteady irregular winds in the plains. The mean air movement of the month was on the whole slightly weaker and less steady than usual and the variations due to local conditions were unusually pronounced. Winds were, on the other hand, abnormally strong at the hill stations in Upper India, and their mean direction was determined by the cyclonic circulation in the middle atmospheric strata accompanying the disturbances of the month.

Humidity and Cloud.

The hygrometric data for 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 *Vade-mecum*, which are 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 5 to 20 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 5 to 20 years of the available cloud data for the same hours.

The air was slightly drier than usual in Burma, Assam and Bengal. This was the continuation of a feature which was very marked in December in Burma and Assam. The absolute humidity was on the whole most markedly in defect in Bengal and the relative humidity in Burma. The following gives comparative data for these areas:—

Division.	Mean aqueous vapour pressure.			Mean humidity.		
	Actual, January 1894.	Normal January.	Variation from normal.	Actual, January 1894.	Normal, January.	Variation from normal.
	"	"	"	%	%	
Burma . .	·542	·569	−027	65	70	− 5
Assam . .	·414	·425	−011	77	79	−2
Bengal . .	·421	·443	−022	65	70	−5

The air was on the other hand abnormally damp in the North-Western Provinces, the Punjab, Rajputana, Sind and Central India, and the northern districts of the Central Provinces or in the areas which received more or less general rainfall from the four disturbances of the month. The following gives comparative data for these areas:—

Division.	Mean aqueous vapour pressure.			Mean humidity.		
	Actual, January 1894.	Normal, January.	Variation from normal.	Actual, January 1894.	Normal, January.	Variation from normal.
	"	"	"	%	%	
North-Western Provinces and Oudh.	·330	·300	+ ·030	67	63	+ 4
Punjab . .	·282	·258	+ ·024	72	62	+ 10
Rajputana .	·309	·264	+ ·045	56	47	+ 9
Sind . .	·311	·280	+ ·031	60	51	+ 9
Central India .	·361	·289	+ ·072	69	57	+ 12

In all these areas there was, as indicated by the absolute humidity, more aqueous vapour than usual in the lower air strata. The relative humidity was very considerably in excess, partly from the above cause and partly from the decreased temperature of the month. The mean relative humidity was more than ten above the normal at Lahore (+ 16), Ludhiana (+ 12), Jacobabad (+ 12), Ajmere (+ 12) and Nowgong (+ 12).

The humidity was as largely in excess at the hill stations in North-Western India where, however, it was almost solely due to the abnormally low temperature which prevailed during the month. Thus the mean relative humidity of the month was 21 in excess at Murree, 15 at Quetta, 13 at Mount Abu, and 11 at Chakrata.

The mean humidity conditions of the month differed little from the normal in Berar, the western and central districts of the Central Provinces and the Deccan. The air was drier than usual in the Bombay coast districts where the mean humidity of the month was in defect by amounts ranging from 3 to 6. The humidity variations from the normal were large and irregular in Madras. Thus the mean relative humidity of the month was 13 in excess at Bellary and 6 at Madras, and was 7 in defect at Trichinopoly and 5 at Salem.

The following gives a brief summary of the abnormal features of the hygrometric conditions of the month:—

(1) Lower humidity than usual in Burma, Assam and Bengal.

(2) Increased humidity in North-Western and Central India. The increase was most marked in the South-East Punjab and at the hill stations.

(3) Decreased humidity in the west coast districts.

(4) Irregular variations in Southern India.

The humidity conditions during the month in India were chiefly determined by the rainfall distribution. Hence the variations in the amount of cloud from the normal are similar in their general character to the humidity variations.

The mean amount of cloud for the month was in slight defect in Burma, Bengal and Assam as is shown by the following data:—

Area.	Mean amount of cloud.		
	Actual, January 1894.	Normal, January.	Variation from normal.
Port Blair (Andamans) . . .	3·9	3·3	+0·6
Burma	1·2	2·1	−0·9
Bengal	1·0	1·7	−0·7
Assam	1.8	3·5	−1·7

It was more or less considerably in excess in the North-Western Provinces, the Punjab, Rajputana, Sind, Central India and the north-eastern districts of the Central Provinces. The following gives comparative data:—

Division.	Mean amount of cloud.		
	Actual, January 1894.	Normal, January.	Variation from normal.
North-Western Provinces	3·5	2·9	+0·6
Punjab	5·0	3·7	+1·3
Sind	3·1	2·7	+0·4
Rajputana	2·9	2·6	+0·3
Central India	3·1	2·9	+0·2
Punjab Hills	7·2	6·4	+0·8

The amount of cloud was generally less than usual in the Deccan and Madras.

Skies were most free from cloud at the stations for which data are given below:—

Station.	Mean amount of cloud.		
	Actual, January 1894.	Normal, January.	Variation from normal.
Bombay	0·3	1·5	—1·2
Karwar	0·3	0·9	—0·6
Akyab	0·1	1·5	—1·4
Chittagong	0·9	1·4	—0·5
Calcutta	0·8	1·5	—0·7
Berhampore	0·9	2·2	—1·3
Cuttack	0·8	1·7	—0·9
Darbhanga	0·8	1·5	—0·7
Dhubri	0·6	1·9	—1·3

Skies were hence most serene in the Bombay and Arakan coast districts and in South-West Bengal, Orissa (interior) and some parts of North Bengal and Bihar.

The chief features of the cloud distribution of the month were as follows:—

(1) Increased cloud in North-Western and Central India.

(2) Decreased cloud in North-Eastern India and Burma.

(3) Decreased cloud in the west coast districts.

(4) Skies were practically free from cloud during the month in the Bombay and Arakan coast districts and South-West Bengal. They were most heavily clouded in Upper India.

(5) The amount of cloud was greatest in the Punjab and the Western Himalayas and Afghan mountain districts.

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 Gazette. 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 January 1894 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 170 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 indicating the rainfall.

Northern India usually receives light to moderate rain in the month of January from cold weather cyclonic storms. The precipitation is heaviest as a rule 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.

In January 1894 the precipitation occurred chiefly as rain or sleet up to elevations of about 6,000 feet, and hence the accumulation of snow in the lower ranges at the end of the month was comparatively small, considering the amount of the preciptation. Whether this was due to the humid current in which the condensation occurred being at a lower level than usual, can only be surmised; but the character and appearance of the clouds, as observed from the hill stations, appear to support this supposition.

The month of January 1894 was on the whole more disturbed and showery than usual in North-Western India. Four cold weather disturbances affected North-Western India. They gave moderate rain chiefly to Baluchistan, the Punjab, Rajputana and the western districts of the North-Western Provinces, and more or less heavy snow in the hill districts. January 1894 resembles January 1893 in the number of its disturbances, and the unusually heavy precipitation in North-Western India. In January and February 1893, the precipitation occurred as snow in the hill districts down to unusually low levels (1,800 to 3,000 feet in the Afghan and Western Himalaya mountain districts), whereas in January 1894, snow as a rule did not fall below 4,000 or 5,000 feet.

It is remarkable that the rainfall of January 1894, in North-Western India, which was largely above the normal was due to usually feeble and diffused disturbances and depressions in India, although they undoubtedly owed their origin to large and extensive pressure changes over the Persian and North-West India areas. It is also noteworthy that the depressions did not advance into North-Eastern India, which hence received no rain during the month. They gave moderate to heavy snow in the Western Himalayas, but the snowfall occurred only at higher elevations than usual in January, and hence the snow accumulation accompanying the storms was confined to the mountain ranges over 8,000 feet in elevation.

The first disturbance which commenced in Baluchistan on the 29th December lasted until the 3rd January. It gave light rain to Sind, moderately heavy rain to Rajputana and the North-Western Provinces, and moderate to heavy rain to the Punjab, and more especially to the eastern districts, including Gurdaspur, Amritsar, Ferozepur, Sialkot and Gujrat.

The second was a very feeble disturbance, lasting from the 10th to the 12th. It gave light to moderate rain to Baluchistan and the North and East Punjab, and moderate snow in the hill districts.

The third disturbance commenced in Baluchistan on the 17th, and extended to North-Western India on the 19th. It gave unsettled weather with light to moderate rain (in many cases accompanying thunderstorms) to the whole of North-Western and Central India until the 23rd. The precipitation during this period was heaviest in the Punjab and north-western districts of the North-Western Provinces.

The fourth disturbance passed from Baluchistan into India on the 26th. It was the only primary storm which gave rise to a secondary depression in the Punjab. This formed on the 28th and filled up on the 29th. The double disturbance gave moderate rain to the North and East Punjab, moderate snow in the hill districts, and light showers in Baluchistan, Upper Sind and Rajputana.

The following table gives comparative rainfall data of the month for the fifty-one meteorological districts or divisions into which India is divided. In the case of Burma, Bengal, the North-Western Provinces, Punjab, Bomba, Rajputana, Central India, Madras, the data are derived from the statements published in the provincial gazettes which were received in time to be utilized in the preparation of the table. The data in the case of the remaining provinces are based on the weekly telegrams received from District Officers inthose provinces :—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, January 1894.	Average normal, January.	Average actual, January 1894.	Average normal, January.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim	0·3	?	0·10	?	?
	Lower Burma	0	?	0	?	?
	Central do.	0	?	0	?	?
	Upper do.	0	?	0	?	?
	Arakan	0	?	0	?	?

Province.	Division.	Number of rainy days. Average actual, January 1894.	Number of rainy days. Average normal, January.	Rainfall. Average actual, January 1894.	Rainfall. Average normal, January.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Bengal and Assam	Eastern Bengal	0	0·2	0	0·57	—0·57
	Assam (Surma)*	?	?	0	0·87	—0·87
	Do. (Brahmaputra)*	?	?	0·37	1·00	—0·63
	Deltaic Bengal	0	0·9	0	0·46	—0·46
	Central do.	0	0·9	0	0·42	—0·42
	North do.	0	1·2	0·01	0·64	—0·63
	Orissa	0·3	0·7	0·11	0·37	—0·26
	Chota Nagpur	0·1	1·4	0·02	0·68	—0·66
	Bihar (South)	0·3	1·4	0·06	0·62	—0·56
	Do. (North)	0	1·3	0	0·61	—0·61
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·8	1·3	0·25	0·64	—0·39
	Oudh (South)	1·5	1·4	0·55	0·72	—0·17
	Do. (North)	1·0	1·3	0·26	0·78	—0·52
	North-Western Provinces (Central)	2·5	1·3	0·91	0·58	+0·33
	Do. do. (West)	3·0	1·3	1·50	0·53	+0·97
	Do. do. (Submontane)	4·4	2·2	2·12	1·48	+0·64
Punjab	Punjab (South)	5·2	1·2	2·37	0·56	+1·81
	Do. (Central)	5·1	1·5	2·86	0·73	+2·13
	Do. (Submontane)	7·6	2·4	4·57	1·57	+3·00
	Do. (Hill Districts)	11·5	4·2	7·67	3·36	+4·31
	Do. (North-West)	6·8	2·8	4·18	1·97	+2·21
	Do. (West)	3·2	1·3	1·28	0·61	+0·67
Bombay and Malabar Coast Districts (Madras).	Malabar	0·1	0·3	0·08	0·19	—0·11
	Madras (South Central)	0·1	0·3	0·03	0·12	—0·09
	Coorg	0	?	0·01	?	?
	Mysore*	?	?	0·01	0·08	—0·07
	Konkan	0·2	0·2	0·12	0·12	0
	Bombay Deccan	0	0·2	0	0·07	—0·07
	Khandesh	0·1	0·2	0·03	0·10	—0·07
Central Provinces and Berar.	Berar*	?	?	0·10	0·42	—0·32
	Central Provinces (West)*	?	?	0·07	0·49	—0·42
	Do. (Central)*	?	?	0·36	0·56	—0·20
	Do. (East)*	?	?	0·03	0·50	—0·47
Bombay (North)	Gujarat	0·3	0·2	0·13	0·06	+0·07
	Kathiawar	0·2	0·2	0·11	0·05	+0·06
	Sind	0·2	?	0·58	0·38	+0·20
Rajputana and Central India.	Central India (East)	1·4	?	0·47	0·62	—0·15
	Rajputana (East), Central India (West)	1·7	?	0·92	0·25	+0·67
	Do. (West)	1·3	?	0·40	0·23	+0·17
Madras	East Coast (North)	0·4	0·3	0·21	0·19	+0·02
	Do. (do.)	1·0	0·3	0·48	0·07	+0·41
	Hyderabad (South)*	?	?	0·05	0·17	—0·12
	Madras (Central)	0·1	0·1	0·05	0·05	0
	East Coast (Central)	1·0	0·6	0·72	0·48	+0·24
	East Coast (South)	1·4	0·8	1·00	0·48	+0·52
	Madras (South)	0·4	1·0	0·12	0·61	—0·49

NOTE.—The figures entered against divisions with asterisk have been obtained from the weekly telegraphic reports.

Bengal and Burma were practically rainless during the month.

Showers were received in Upper Assam, chiefly in the Sibsagar and Lakhimpur districts, on the 17th and 18th, and again on the 24th and 25th. The total amounts were not large, averaging less than an inch. No rain fell in the remaining districts of the province.

The rainfall of the month was very unequally distributed in the North-Western Provinces. Little or no rain was received in the eastern districts. The following gives the chief periods during which rain fell:—

1st.—From the 1st to the 3rd January. The southern and western districts and the hill districts received moderate rain, the central districts (including Oudh) light local showers and the eastern districts little or no rain. The fall was on the whole heaviest in the Central Doab and Trans-Jumna districts.

2nd.—From the 19th to the 23rd. The submontane and central districts obtained moderately heavy rain during this period. The rainfall was fairly general, but light in the southern and eastern districts.

3rd.—On the 27th and 28th, when the hill districts and Rohilkhand received light showers.

The following table gives a comparative statement of the rainfall and its variation from the normal in the six meteorological divisions of the North-Western Provinces and Oudh :—

Meteorological Division.	Number of rainy days.			Rainfall.		
	Average actual, January 1894.	Variation from normal.	Percentage variation.	Average actual, January 1894.	Variation from normal.	Percentage variation.
				Inches.	Inches.	
Oudh, South	1·5	+0·1	+7	0·55	−0·17	−24
Oudh, North	1·0	−0·3	−23	0·26	−0·52	−67
North-Western Provinces, East.	0·8	−0·5	−38	0·25	−0·39	−61
Ditto ditto Central	2·5	+1·2	+92	0·91	+0·33	+57
Ditto ditto West	3·0	+1·7	+131	1·50	+0·97	+183
Ditto ditto Submontane	4·4	+2·2	+100	2·12	+0·64	+43

Rain fell generally over the Punjab during each of the four disturbances of the month.

The first disturbance gave rain during the first four days of the month. The rainfall was heavy in the east and south-east districts and moderate to light in the north and west of the Province. It was heaviest in the hill districts, and in Gurdaspur, Amritsar, Ferozepore, Sialkot and Gujrat. The following amounts in 24 hours exceeding 3 inches were recorded during this period :—

District.	Station.	Rainfall.	Date.
		Inches.	
Jhang	Bhadwali	4·50	1st
Gujrat	Gujrat	4·63	"
	Kharian	3·54	"
Gujranwala	Meluana	3·20	"
Sialkot	Zafarwal	3·27	"

The second disturbance gave light showers on the 11th and 12th in the hill and submontane districts from Peshawar to Jullunder.

The third disturbance gave the largest and heaviest burst of rain during the month. The rainfall commenced on the 19th and lasted until the 23rd. It was, on the whole, most general and heaviest in the Lahore, Umballa, Gurdaspur and Sialkot districts and the hill districts, and was very light in the western and south-western districts.

The fourth disturbance gave rain from the 27th to the 29th, chiefly in the northern, north-eastern and hill districts. The falls were not large in the plains, but heavy snow appears to have fallen in the interior of the hill districts, more especially in Kashmir and Kulu.

The rainfall was, as is usual in the cold weather, very unequally distributed. It was generally in excess, and at the great majority of stations in the east and south-east districts it was very largely in excess. The following gives a few noteworthy examples of large local excess :—

District.	Station	Rainfall.		Variation from normal.
		Average actual, January 1894.	Average normal, January.	
		Inches.	Inches.	Inches.
Abottabad	Abbottabad	8·94	2·95	+5·99
Lahore	Lahore	4·07	0·66	+3·41
	Kasur	4·29	0·43	+3·86
Gurdaspur	Gurdaspur	7·87	1·54	+6·33
	Dalhousie	12·27	2·28	+9·99
Simla	Simla	7·99	1·50	+6·49
Kulu	Kulu	10·95	4·94	+6·01
	Dharmsala	10·98	4·77	+6·21
Sialkot	Zafarwal	9·03	1·67	+7·36
	Sialkot	8·12	1·50	+6·62

The preceding show that at many stations in the East and North-East Punjab the excess was very large, and the rainfall from four to ten times the normal amount.

The following gives comparative rainfall data for the six meteorological areas into which the province is divided :—

Meteorological Division.	Number of rainy days.			Rainfall.		
	Average actual, January 1894.	Variation from normal.	Percentage variation.	Average actual, January 1894.	Variation from normal.	Percentage variation.
				Inches.	Inches.	
Punjab, South	5·2	+4·0	+333	2·37	+1·81	+323
Ditto Central	5·1	+3·6	+240	2·86	+2·13	+292
Ditto Submontane	7·6	+5·2	+217	4·57	+3·00	+191
Ditto Hill Districts	11·5	+7·3	+174	7·67	+4·31	+128
Ditto North-West	6·8	+4·0	+143	4·18	+2·21	+112
Ditto West	3·2	+1·9	+146	1·28	+0·67	+110

In British Baluchistan the month was unusually rainy. Showers were received from the 1st to the 3rd and on the

10th. General and moderately heavy rain fell daily from the 17th to the 21st. The rain during this period was heaviest on the 20th. Moderate general rain was received from the 25th to the 27th. The average number of rainy days during the month was 5·8, and the average rainfall of the 50 rain-guage stations in that area was 2·79 inches. The normal average rainfall of the month at these stations is almost certainly less than 1·5 inches. The following gives comparative data of the only stations for which normal data have been obtained :—

Station.	Rainfall.				
	Average actual.	Average normal.	Variation.	Percentage variation.	Average actual number of rainy days.
	Inches.	Inches.	Inches.	Inches.	
Kalat	2·12	1·69	+0·43	+26	8
Pishin	3·83	3·07	+0·76	+25	9
Quetta	4·03	1·83	+2·20	+120	10

The rainfall of the month was hence more or less considerably in excess over the whole of British Baluchistan.

In Rajputana the rainfall was very irregularly distributed. Thunderstorms and hailstorms occurred very generally on the 1st and 2nd over the whole of Raputana, except the Dholepur State. The third disturbance of the month gave rain from the 20th to the 23rd. The rainfall due to this disturbance was light and scattered in the western states, Ulwar and was general and moderately heavy in Jeypore, and Bhurtpore. Dholepur, Kotah, Kerowlee and Ajmere received no rain during this disturbance. The second and fourth disturbances of the month gave no rain in Rajputana. The rainfall of the month was in general excess, the excess being greatest in those states which received rain during the second disturbance. The following gives comparative data for the larger states :—

State.	Rainfall.			
	Average actual, January 1894.	Average normal, January.	Variation. from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Jodhpore	0·28	0·22	+0·06	+27
Jeypore	1·23	0·32	+0·91	+284
Ajmere	0·49	0·20	+0·29	+145
Bhurtpore	1·84	0·38	+1·46	+384
Ulwar	1·72	0·49	+1·23	+251
Kotah	0·59	0·16	+0·43	+269
Kerowlee	0·30	0·37	—0·07	−19
Oodeypore	0·13	0·09	+0·04	+44

The first and third disturbance of the month gave light local showers in Central India. The total rainfall of the month was generally below the normal. The following gives data for the larger divisions or states :—

State.	Rainfall.			
	Average actual, January 1894.	Actual normal, January	Variation from normal.	Percentage. variation.
	Inches.	Inches.	Inches.	
Rewah	0·58	0·99	−0·41	−41
Bhopal	0·34	0·52	−0·18	−35
Gwalior	0·27	0·24	+0·03	+13
Bundelkhand	1·06	0·54	+0·52	+96

Over by far the greater part of the Bombay Presidency no rain fell during the month. Light showers were received in the Thana district and in some parts of Kathiawar and Gujarat on the 1st. Light showers fell in Sind on the 18th, 19th, 20th and 21st and again on the 25th, 26th and 27th which gave it a total average of ·58 inch, slightly more than the small normal average of the month.

Light to moderate showers were received in the coast districts of Madras, chiefly between the 3rd and 5th, and 12th to 14th. During this first period the rainfall was light, but occurred in all the coast districts from Ganjam to Tanjore. The rainfall of the second period occurred chiefly in the Coromandel coast districts, and was moderately heavy in the Tanjore district, which received an average of 1·56 inches during this period. The following gives average rainfall data for each district of the presidency drawn up from the rainfall statement for the month published in the Fort St. George Gazette :—

District.	Rainy days.		Rainfall.		Variation from normal.
	Average actual, January 1894.	Normal, January.	Average actual, January 1894.	Normal, January.	
			Inches.	Inches.	Inches.
Ganjam	0·3	0·4	0·16	0·20	−0·04
Viazagapatam	0·3	0·3	0·21	0·16	+0·05
Godavari	0·5	0·3	0·20	0·16	+0·04
Kistna	0·5	0·3	0·35	0·27	+0·08
Nellore	1·0	0·6	0·72	0·48	+0·24
Madras	1·0	1·0	0·39	0·94	−0·55
Chingleput	1·5	0·7	1·24	0·45	+0·79
North Arcot	0·6	0·5	0·18	0·30	−0·12
South Arcot	1·4	0·7	1·05	0·41	+0·64
Tanjore	2·4	1·3	1·84	0·88	+0·96
Trichinopoly	0·8	0·6	0·29	0·24	+0·05
Madura	0·4	0·8	0·11	0·44	—0·33
Tinnevelly	0·5	1·3	0·13	0·83	−0·70
Malabar	0·2	0·3	0·13	0·24	−0·11
South Canara	0	0·1	0	0·13	−0·13
Salem	0·1	0·3	0·03	0·11	−0·08
Coimbatore	0·1	0·3	0·03	0·13	−0·10
Nilgiris	1·6	0·9	0·58	0·40	+0·18
Cuddapah	0·1	0·2	0·03	0·09	−0·06
Anantapur	0	0·1	0	0·03	−0·03
Bellary	0	0·1	0	0·05	−0·05
Kurnool	0·3	0·1	0·15	0·03	+0·12

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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. Burma Coast and Bay Islands.		...	...	−·051	...	...	...	...	...	...	...	86·2	−0·1	65·1	+0·2	75·6	+0·1	21·1	...	...	...	...	30·6
Bay Islands	Port Blair	61	29·898	?	29·891	29·966	21st	29·849	4th	·117	77·2	85·3	?	74·8	?	80·0	?	10·5	87·4	15th	70·0	29th	17·4
	Camorta	?	29·922	?	?	29·977	22nd	29·879	24th	·098	80·0	83·8	?	75·9	?	79·8	?	7·9	85·5	17th & 20th.	71·3	29th	14·2
Tenasserim	Mergui	96	29·884	?	29·913	29·986	10th	29·822	24th	·164	76·2	88·2	?	68·9	?	78·5	?	19·3	91·6	20th	60·2	12th	31·4
	Tavoy	26	29·964	?	29·921	30·059	12th	29·901	25th	·158	69·2	89·5	?	63·2	?	76·4	?	26·3	93·2	20th	53·2	2 days	40·0
	Moulmein	94	29·896	−·040	29·930	30·039	10th	29·803	25th	·236	67·1	88·6	+0·3	64·4	−1·2	76·5	−0·5	24·2	92·5	3 days	58·9	12th	33·6
	Toungoo	181	29·807	−·044	29·939	29·913	10th	29·709	25th	·204	62·1	83·9	−1·4	57·4	−0·2	70·7	−0·8	26·5	88·7	27th	50·1	8th	38·6
Lower Burma	Rangoon	41	29·943	−·059	29·922	30·046	10th	29·865	25th	·181	66·6	89·5	+0·8	63·9	0	76·7	+0·4	25·6	93·2	2 days	57·2	2 days	36·0
	Bassein	27	29·968	−·061	29·931	30·070	10th	29·877	25th	·193	66·3	86·1	+0·7	62·4	+1·4	74·3	+1·1	23·7	89·7	22nd	58·5	1st	31·2
	Diamond Island	41	29·941	−·052	29·917	30·026	10th	29·861	25th	·165	74·9	82·5	−1·4	72·8	+2·5	77·6	+0·6	9·7	84·5	3 days	70·9	2 days	13·6
Arakan	Akyab	20	29·994	−·047	29·957	30·072	2 days	29·914	25th	·158	62·4	81·8	+0·4	58·1	−1·4	69·9	−0·5	23·7	87·2	31st	53·2	8th	34·0
2. Burma Inland		...	...	−·035	...	...	...	...	...	...	...	81·1	0	50·5	−1·1	65·8	−0·6	30·6	...	...	...	...	41·4
Central Burma	Thayetmyo	134	29·873	−·035	29·956	29·996	10th	29·757	25th	·239	60·2	85·4	0	52·5	−1·1	69·0	−0·6	32·9	92·1	27th	47·2	8th	44·9
	Minbu	?	29·851	?	?	29·967	10th	29·725	25th	·242	62·4	86·5	?	55·2	?	70·9	?	31·3	91·6	27th	50·0	2 day	41·6
	Yamethin	?	29·332	?	?	29·445	11th	29·198	25th	·247	62·4	86·9	?	53·6	?	70·2	?	33·3	92·6	25th	46·1	2 days	46·5
	Fort Stedman	?	27·066	?	?	27·139	11th	26·952	28th	·187	51·5	79·3	?	45·6	?	62·5	?	33·7	86·2	25th	40·1	3 days	46·1
Upper Burma	Mandalay	?	29·759	?	?	29·881	10th	29·611	25th	·270	64·1	82·2	?	54·8	?	68·6	?	27·4	88·0	27th	51·2	4 days	36·8
	Kindat	?	29·677	?	?	29·797	10th	29·539	26th	·258	54·2	76·5	?	52·2	?	64·4	?	24·3	79·8	3 days	46·9	27th	32·9
	Lashio	?	27·207	?	?	27·316	14th	27·041	25th	·275	49·3	74·0	?	44·1	?	59·1	?	29·9	78·1	25th	38·1	18th	40·0
	Bhamo	?	29·643	?	?	29·747	11th	29·511	26th	·236	51·4	78·0	?	45·8	?	61·9	?	32·2	83·0	25th	40·9	19th	42·1
3. Assam		...	...	−·039	...	...	...	...	...	...	...	74·2	+0·7	50·7	−1·2	62·4	−0·3	23·5	...	...	...	...	13·4
Assam (Surma)	Silchar	104	29·950	−·033	30·012	30·035	21st	29·858	24th	·177	57·5	78·6	+1·4	51·6	−0·7	65·1	+0·4	27·0	82·0	12th	45·7	26th	36·3
Brahmaputra	Sibsagar	333	29·743	−·029	30·056	29·850	10th	29·569	24th	·281	50·8	69·3	−0·6	48·2	−1·6	58·7	−1·1	21·1	72·9	13th	43·1	2nd	29·8
	Dhubri	115	29·919	−·054	29·996	30·014	10th	29·782	24th	·232	54·8	74·7	+1·2	52·2	−1·4	63·5	−0·1	22·5	77·1	18th	49·0	9th	28·1
4. Bengal and Orissa		...	...	−·029	...	...	...	...	...	...	...	77·7	+0·7	54·4	0	66·0	+0·4	23·3	...	...	...	...	34·0
East Bengal	Chittagong	87	29·951	−·032	29·991	30·024	21st	29·881	24th	·143	59·5	78·7	+0·9	53·9	−1·5	66·3	−0·3	24·8	82·7	2 days	49·6	8th	33·1
	Lungleh	?	?	?	?	?	?	?	?	?	58·1	65·6	?	50·8	?	58·2	?	14·8	71·9	22nd	45·7	2 days	26·2
	Noakhali	43	29·974	?	29·966	30·051	21st	29·887	29th	·164	58·0	77·6*	?	51·5	?	64·6*	?	26·1	81·5	22nd	46·0	7th	35·5
	Comilla	36	30·005	?	29·990	30·087	21st	29·923	24th	·164	59·8	78·6	?	51·8	?	65·3	?	26·8	82·9	24th	46·6	7th	36·3
	Sirajganj	46†	29·989	?	29·980	30·072	10th	29·877	24th	·195	57·3	76·5*	?	50·2	?	63·4*	?	26·3	79·8	22nd	44·5	26th	35·3
	Dacca	20	30·012	−·044	29·981	30·099	13th	29·921	29th	·178	59·2	79·0	+0·8	54·9	−0·1	66·9	+0·3	24·2	84·1	24th	51·3	19th & 26th.	32·8
	Barisal	13	30·022	−·031	29·981	30·115	21st	29·935	29th	·180	60·5	77·3	+0·8	53·7	−1·3	65·6	−0·2	23·6	82·3	24th	50·0	4 days	32·3
	Mymensingh	59	29·981	−·022	29·995	30·066	21st	29·871	24th	·195	55·6	75·1	+0·6	51·3	−1·1	63·2	−0·3	23·8	77·6	2 days	45·6	26th	32·0
Deltaic Bengal	Faridpur	46	30·005	?	30·001	30·079	21st	29·914	29th	·165	58·5	74·6	?	52·8	?	63·8	?	21·8	81·5	3 days	48·0	2 days	33·5
	Jessore	33	30·019	−·028	30·000	30·107	10th	29·929	29th	·178	59·6	78·1	+0·1	53·2	0	65·7	+0·1	24·9	83·6	23rd	47·9	8th	35·7
	Calcutta	21	30·034	−·036	30·002	30·118	13th	29·946	29th	·172	60·8	78·1	+1·2	55·7	+0·3	66·9	+0·8	22·4	84·2	23rd	50·2	2 days	34·0
	Saugor Island	25	30·035	−·023	30·005	30·115	10th	29·963	28th	·152	63·8	76·7	+0·1	59·6	+0·2	68·2	+0·2	17·1	82·7	24th	52·8	15th	29·9
	Krishnagar	47	30·003	?	30·002	30·085	10th	29·906	29th	·179	59·5	78·7	?	51·4	?	65·0	?	27·3	83·5	23rd	46·0	8th	37·5
	Midnapore	149	29·917	?	30·020	29·986	10th	29·834	29th	·152	63·1	82·6	?	56·6	?	69·6	?	26·0	89·3	2 days	50·2	2 days	39·1

* Mean of 30 days. † Changed to 49 feet from 7th January 1894.

I.

in India, Burma, etc., in January 1894.

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.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour.	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 January to 31st January 1894.	Normal rainfall for period, 1st January to 31st January.	Variation from normal of period.			
...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	0·02	0·31	−0·29	...	...	...	...	**1. Burma Coast and Bay Islands.**	
1	10	12	2	1	1	...	1	3	7·0	7·0	0	81	·755	3·9	0	?	?	0·09	0·81	− 0·72	0·09	0·81	− 0·72	0·09	Port Blair .	Bay Islands.
...	9	14	8	...	...	...	...	...	7 3	?	?	79	·814	5·2	4	?	?	4·04	?	?	4·04	?	?	2·68	Camorta.	
...	13	4	4	...	...	...	1	9	1·6	2·0	−20	80	·731	4·9	0	?	?	0·09	0·61	− 0·52	0·09	0·61	− 0·52	0·09	Mergui .	Tenasserim.
29	1	...	...	...	...	...	...	1	1·1	?	?	86	·623	0·3	0	?	?	0	0·16	− 0·16	0	0·16	− 0·16	0	Tavoy.	
...	5	6	8	...	1	2	4	5	3·6	2·4	+50	89	·607	3·2	0	0·09	−0·09	0	0·51	−0·51	0	0·51	− 0·51	0	Moulmein.	
12	13	...	...	...	...	...	...	6	1·2	1·9	−37	90	·504	1·6	0	0·27	−0·27	0	0·12	− 0·12	0	0·12	− 0·12	0	Toungoo.	
...	5	9	5	1	3	3	2	3	4·6	4·3	+ 7	83	·539	2·0	0	0·27	−0·27	0	0·17	− 0·17	0	0·17	− 0·17	0	Rangoon .	Lower Burma.
10	4	9	3	...	...	...	...	5	4·3	2·9	+48	88	·568	1·4	0	0	0	0	0·17	− 0·17	0	0·17	− 0·17	0	Bassein.	
1	15	12	1	...	...	...	...	2	11·5	6·6	+74	75	·647	2·5	0	0·44	−0·44	0	0·18	− 0·18	0	0·18	− 0·18	0	Diamond Island.	
...	24	6	1	...	...	...	...	...	3·8	2·6	+46	84	·478	0·2	0	0·18	−0·18	0	0·08	− 0·08	0	0·08	− 0·08	0	Akyab .	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0·02	−0·02	...	...	...	...	**2. Burma Inland.**	
...	9	8	4	2	1	...	4	3	2·6	2·4	+ 8	80	·424	0·5	0	0	0	0	0·02	− 0·02	0	0·02	− 0·02	0	Thayetmyo	Central Burma.
8	1	...	...	1	...	...	4	17	5·9	?	?	78	·439	0·1	0	?	?	0	?	?	0	?	?	0	Minbu.	
16	10	1	...	1	1	...	...	2	4·1	?	?	77	·435	0	0	?	?	0	?	?	0	?	?	0	Yamethin.	
30	...	...	...	...	...	...	...	1	?	?	?	89	·340	1·1	0	?	?	0	?	?	0	?	?	0	Fort Stedman.	
17	6	3	...	2	1	...	...	2	1·3	?	?	83	·494	0·6	0	?	?	0	?	?	0	?	?	0	Mandalay .	Upper Burma.
14	1	...	...	...	...	...	7	9	2·5	?	?	96	·407	9·2	0	?	?	0	?	?	0	?	?	0	Kindat.	
...	12	14	...	...	2	1	...	2	?	?	?	92	·324	3·6	0	?	?	0	?	?	0	?	?	0	Lashio.	
1	11	6	1	3	...	3	3	3	?	?	?	89	·339	3·0	0	?	?	0	?	?	0	?	?	0	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·14	0·90	−0·76	...	...	...	...	**3. Assam.**	
26	...	...	1	2	2	...	...	...	1·9	2·0	−5	90	·428	2·0	0	1·91	−1·91	0	0·77	− 0·77	0	0·77	− 0·77	0	Silchar .	Assam (Surma)
23	...	3	1	3	...	1	...	...	0·1	1·8	−94	100	·374	1·9	3	4·09	−1·09	0·41	1·48	− 1·07	0·41	1·48	− 1·07	0·15	Sibsagar .	Brahmaputra.
7	6	10	2	1	1	4	...	...	3 2	3·9	−18	92	·395	0·8	0	1·29	−1·29	0	0·44	− 0·44	0	0·44	− 0·44	0	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·01	0·44	−0·43	...	...	...	...	**4. Bengal and Orissa.**	
11	5	13	2	...	...	...	...	...	1·7	3·7	−54	89	·453	0·8	0	0·82	−0·82	0	0·39	− 0·39	0	0·39	− 0·39	0	Chittagong	East Bengal.
		Not	reco	rded					?	?	?	72	·347	?	0	?	?	0	?	?	0	?	?	0	Lungleh.	
...	13	13	3	...	...	...	1	1	2·5	?	?	90	·436	0·6	0	1·10	−1·10	0	0·62	− 0·62	0	0·62	− 0·62	0	Noakhali.	
19	4	...	1	...	...	2	2	3	1·3	?	?	85	·439	0·8	0	1·53	−1·53	0	0·68	− 0·68	0	0·68	− 0·68	0	Comilla.	
21	...	...	...	...	...	4	5	1	1·3	?	?	91	·429	0·6	0	1·11	−1·11	0	0·45	− 0·45	0	0·45	− 0·45	0	Sirajganj.	
13	6	2	1	...	1	...	2	6	2·6	2·1	+24	84	·429	0·7	0	1·09	−1·09	0	0·32	− 0·32	0	0·32	− 0·32	0	Dacca.	
28	1	1	...	...	...	...	...	1	1·6	?	?	87	·457	0·3	0	1·30	−1·30	0	0·77	− 0·77	0	0·77	− 0·77	0	Barisal.	
10	1	9	5	2	...	1	1	2	1·6	?	?	92	·405	0·6	0	0·80	−0·80	0	0·38	− 0·38	0	0·38	− 0·38	0	Mymensingh.	
23	3	...	...	...	...	1	2	2	1·0	?	?	92	·457	0·3	0	0·85	−0·85	0	0·34	− 0·34	0	0·34	− 0·34	0	Faridpur .	Deltaic Bengal.
27	...	...	...	...	1	...	...	3	1·3	1·6	−19	86	·440	0·5	0	0·82	−0·82	0	0·49	− 0·49	0	0·49	− 0·49	0	Jessore.	
25	2	1	...	1	...	...	...	2	1·3	3·0	−57	83	·444	0·6	0	0·82	−0·82	0	0·38	− 0·38	0	0·38	− 0·38	0	Calcutta.	
...	11	11	3	...	...	...	3	3	7·4	6·3	+17	89	·529	1·1	0	1·00	−1·00	0	0·23	− 0·23	0	0·23	− 0·23	0	Saugor Island.	
5	2	2	3	...	1	1	7	10	2·9	?	?	80	·409	1·0	0	0·88	−0·80	0	0·30	− 0·30	0	0·30	− 0·30	0	Krishnagar.	
8	15	3	...	...	...	2	...	3	1·8	?	?	65	·381	0·5	0	1·00	−1·00	0	0·61	− 0·61	0	0·61	− 0·61	0	Midnapore.	

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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.
Central Bengal	Bankura	298	29·732	?	29·999	29·811	10th	29·640	29th	·171	60·9	80·7	?	55·9	?	68·3	?	24·8	87·5	30th	49·1	8th	38·4
	Raniganj	334	29·723	?	30·028	29·803	10th	29·629	28th	·174	59·0	79·5	?	55·1	?	67·3	?	24·4	86·0	23rd	49·2	8th	36·8
	Burdwan	99	29·958	−·033	30·010	30·043	10th	29·871	24th	·172	60·3	79·2	+0·7	55·8	+1·1	67·5	+0·9	23·4	85·5	23rd	50·1	8th	35·4
	Naya Dumka	489	29·540	?	30·019	29·633	10th	29·445	24th	·188	57·9	77·6	?	52·5	?	65·1	?	25·1	83·6	23rd	47·1	9th	36·5
	Berhampore	67	29·990	−·033	30·008	30·071	10th	29·900	24th	·171	58·8	77·5	+0·7	55·0	+1·7	66·2	+1·2	22·5	82·3	30th	50·2	3 days	32·1
	Rampur Boalia.	70	29·974	?	29·997	30·056	13th	29·880	24th	·176	60·2	75·8	?	52·3	?	64·0	?	23·5	80·1	22nd	46·6	7th	33·5
	Malda	72	29·962	?	29·999	30·053	10th	29·833	24th	·220	57·0	76·8	?	50·0	?	63·4	?	26·8	80·8	23rd	42·5	7th	38·3
	Bogra	61	29·971	−·015	29·988	30·066	10th	29·862	24th	·204	57·4	76·6	+0·9	51·0	−0·6	63·8	+0·1	25·6	79·8	22nd	46·2	3 days	33·6
North Bengal	Dinajpur	123	29·913	−·029	29·998	30·011	10th	29·784	24th	·227	55·2	75·4	+0·1	50·2	+1·0	62·9	+0·6	25·2	79·6	23rd	45·0	26th	34·6
	Rangpur	123	29·913	?	29·999	30·009	10th	29·795	24th	·214	53·5	74·9	?	48·8	?	61·9	?	26·1	77·4	23rd	42·4	7th	35·0
	Jalpaiguri	284	29·754	−·020	30·011	29·872	10th	29·611	24th	·261	55·2	73·7	+0·6	50·1	−0·6	61·9	0	23·6	76·4	2 days	44·6	25th	31·8
Orissa	Balasore	56	29·997	−·034	30·002	30·080	10th	29·911	29th	·169	61·8	81·8	+1·7	56·6	+0·9	69·2	+1·3	25·2	89·4	23rd	50·5	3 days	38·9
	False Point	21	30·036	−·030	29·999	30·112	2 days	29·952	24th	·160	65·6	80·1	+1·3	58·6	−0·3	69·3	+0·5	21·5	84·4	23rd	52·5	3 days	31·9
	Cuttack	80	29·971	−·035	29·997	30·052	10th	29·887	24th	·165	65·1	85·0	+0·4	60·8	+0·9	72·9	+0·7	24·2	91·7	29th	54·4	9th	37·3
	Shortt's Island	?	30·035	?	?	30·117	13th	29·955	24th	·162	71·5	77·7	?	67·9	?	72·8	?	9·8	85·2	23rd	63·7	9th	21·5
	Puri	15	30·032	?	29·987	30·113	10th	29·948	25th	·165	67·5	80·5	?	63·6	?	72·1	?	16·9	87·7	30th	57·6	9th	30·1
5. Gangetic Plain and Chota Nagpur.		...	...	−·029	...	...	...	...	...	...	...	74·9	+0·7	51·2	+2·0	63·1	+1·4	23·8	...	...	...	...	37·3
Chota Nagpur	Hazaribagh	2,007	27·982	−·031	30·022	28·057	21st	27·907	28th	·150	57·4	74·8	+2·0	50·8	+0·3	62·8	+1·2	24·0	81·8	29th	42·3	7th	39·5
	Ranchi	2,128	27·859	?	30·012	27·924	21st	27·793	28th	·131	58·7	74·8	?	52·4	?	63·6	?	22·4	81·0	29th	45·5	9th	35·5
	Daltonganj	730?	29·334	?	30·058	29·421	11th	29·227	28th	·194	60·4	78·4	?	49·7	?	64·0	?	28·7	86·3	29th	40·5	9th	45·8
	Chaibassa	760	29·268	−·016	30·015	29·346	10th	29·185	29th	·161	59·6	82·4	+2·2	54·6	+1·1	68·5	+1·6	27·8	90·4	29th	46·7	9th	43·7
Bihar, South	Gaya	375	29·679	−·027	30·029	29·760	10th	29·584	28th	·176	59·5	77·4	+1·7	53·2	+1·7	65·3	+1·7	24·2	84·6	22nd	47·4	8th	37·2
	Dehri	351	29·714	?	30·039	29·804	10th	29·627	28th	·177	60·5	76·7	?	55·3	?	66·1	?	21·4	83·3	29th	50·0	3 days	33·3
	Patna	183	29·868	−·043	30·015	29·962	10th	29·765	29th	·197	56·3	74·0	+1·3	52·4	+2·5	63·2	+1·9	21·6	80·1	30th	45·4	26th	34·7
	Arrah	190	29·859	?	30·014	29·948	10th	29·759	28th	·189	55·8	75·6	?	51·0	?	63·3	?	24·6	82·7	30th	45·1	7th	37·6
	Buxar	239	29·820	?	30·029	29·917	10th	29·724	28th	·193	58·8	74·8	?	52·4	?	63·6	?	22·4	81·6	22nd	44·4	2 days	37·2
Bihar, North	Purnea	125	29·907	−·047	29·994	30·013	10th	29·776	24th	·237	53·8	74·3	−0·4	49·9	+2·0	62·2	+0·8	24·4	79·8	23rd	45·3	2 days	34·5
	Bhagalpur	160	29·876	?	29·997	29·971	10th	29·771	24th	·200	57·6	76·0	?	50·7	?	63·4	?	25·3	80·8	2 days	46·0	3 days	34·8
	Darbhanga	166	29·875	−·039	30·006	29·977	10th	29·755	24th	·222	55·8	73·6	+1·4	53·1	+1·0	63·4	+1·2	20·5	78·3	30th	47·1	26th	31·2
	Muzaffarpur	178	29·874	?	30·018	29·979	10th	29·770	29th	·209	54·6	73·3	?	50·4	?	61·8	?	22·9	79·2	30th	46·3	26th	32·9
	Motihari	224	29·797	?	29·994	29·892	10th	29·700	2 days	·192	53·8	73·7	?	48·3	?	61·0	?	25·4	80·2	30th	43·9	7 days	36·3
	Chapra	181	29·883	?	30·029	29·975	10th	29·781	29th	·194	56·4	74·7	?	51·6	?	63·1	?	23·1	81·1	30th	45·7	8th	35·4
N.-W. Provinces (Eastern Districts).	Benares	267	29·793	−·019	30·034	29·874	10th	29·694	28th	·180	55·4	74·3	−0·1	51·4	+3·4	62·9	+1·7	22·9	81·6	29th	45·5	10th	36·1
	Allahabad	309	29·751	−·021	30·036	29·836	10th	29·660	28th	·176	56·3	75·0	+1·0	51·3	+3·6	63·2	+2·3	23·7	82·0	29th	43·9	9th & 10th	38·1
N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·784	−·031	30·016	29·886	10th	29·686	28th	·200	56·3	72·4	−0·8	50·5	+1·6	61·5	+0·4	21·9	79·5	30th	45·3	25th & 26th	34·2
Oudh, South	Lucknow	370	29·684	−·019	30·042	29·755	10th	29·590	28th	·165	51·6	73·9	+0·1	48·3	+2·0	61·1	+1·0	25·6	81·4	29th	42·2	10th	39·2
Oudh, North	Bahraich	403	29·658?	?	30·054?	29·763	10th	29·486	31st	·277	52·2	73·0	?	41·8?	?	57·4?	?	31·2?	80·4	29th	37·1?	30th & 31st	43·3?
N.-W. Provinces (Central).	Cawnpore	416	29·647	?	30·053	29·719	10th	29·547	28th	·172	54·5	73·4*	?	49·5	?	61·2*	?	23·9*	82·6	29th	41·0	10th	41·6
	Mainpuri	516	29·589	?	30·041	29·608	10th	29·452	28th	·156	52·2	72·0	?	48·0	?	60·0	?	24·0	78·3	19th	40·5	10th	37·8

* Mean of 26 days.

I—*continued.*

in India, Burma, etc., in January 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 31st January 1894.	Normal rainfall for period, 1st January to 31st January.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
18	2	...	...	...	...	...	4	7	1·7	?	?	74	·399	0·9	0	1·10	− 1·10	0·01	0·37	− 0·36	0·01	0·37	− 0·36	0·01	Bankura	Central Bengal.
6	2	...	...	...	...	...	5	18	1·8	?	?	82	·408	0·1	0	1·05	− 1·05	0	0·33	−0·33	0	0·33	− 0·33	0	Raniganj.	
13	9	...	...	...	...	...	2	7	1·5	1·8	−17	70	·365	0·7	0	0·27	− 0·27	0	0·23	− 0·23	0	0·23	− 0·23	0	Burdwan.	
12	4	...	...	1	...	...	4	10	2·6†	?	?	72	·348	0·3	0	1·28	− 1·28	0	0·58	− 0·58	0	0·58	− 0·58	0	Naya Dumka	
7	2	1	2	1	...	6	10	2	1·6	1·8	−11	86	·429	0·8	0	0·73	− 0·73	0	0·39	− 0·39	0	0·39	− 0·39	0	Berhampore.	
11	8	2	...	...	...	4	6	...	3·8	?	?	75	·420	0·4	0	0·80	− 0·80	0	0·40	− 0·40	0	0·40	− 0·40	0	Rampur Boalia.	
4	...	...	...	...	...	6	...	21	2·4	?	?	84	·391	0·3	0	0·90	− 0·90	0	0·43	− 0·43	0	0·43	− 0·43	0	Malda.	
12	2	6	1	1	...	1	6	2	2·0	?	?	82	·394	0	0	0·85	− 0·85	0	0·45	− 0·45	0	0·45	− 0·45	0	Bogra.	
1	1	6	1	...	...	...	11	11	1·9	?	?	86	·378	0·2	0	0·90	− 0·90	0	0·40	− 0·40	0	0·40	− 0·40	0	Dinajpur	North Bengal.
4	...	5	9	3	1	1	7	1	1·3†	?	?	91	·376	0·1	0	0·75	− 0·75	0	0·58	− 0·58	0	0·58	− 0·58	0	Rangpur.	
10	11	5	2	...	...	...	...	3	1·3	?	?	89	·387	1·8	0	1·21	− 1·21	0	0·55	− 0·55	0	0·55	− 0·55	0	Jalpaiguri.	
2	8	6	2	...	...	5	4	4	3·2	?	?	83	·459	0·3	0	0·75	− 0·75	0	0·49	− 0·49	0	0·49	− 0·49	0	Balasore	Orissa.
...	15	...	1	...	...	3	3	9	5·8	6·0	−3	89	·569	2·0	0	0·82	− 0·82	0	0·63	− 0·63	0	0·63	− 0·63	0	False Point.	
22	2	2	...	...	...	2	3	...	1·4	1·4	0	73	·458	0·6	0	0·45	− 0·45	0	0·23	− 0·23	0	0·23	− 0·23	0	Cuttack.	
...	5	9	1	1	...	1	3	4	9·8	?	?	75	·583	0·5	0	?	?	0	?	?	0	?	?	0	Shortt's ‡ Island.	
14	15	2	...	...	...	...	...	...	6·1	?	?	81	·549	1·4	1	0·50	+ 0·50	0·15	0·25	− 0·10	0·15	0·25	− 0·10	0·15	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·14	0·71	−0·57	...	...	...	...	**5. Gangetic Plain and Chota Nagpur.**	
6	2	...	1	1	1	6	7	7	7·6	4·9	+ 55	67	·322	1·2	0	1·27	−1·27	0	0·55	− 0·55	0	0·55	− 0·55	0	Hazaribagh.	Chota Nagpur.
15	1	...	...	...	1	3	6	5	5·3	?	?	66	·331	1·6	0	1·53	−1·53	0	0·64	− 0·64	0	0·64	− 0·64	0	Ranchi.	
...	1	1	3	...	...	4	6	16	3·2	?	?	71	·376	2·1	1	?	?	0·11	?	?	0·11	?	?	0·11	Daltonganj.	
5	...	...	...	1	4	15	6	...	1·0	?	?	73	·379	1·4	0	1·55	− 1·55	0	0·73	− 0·73	0	0·73	− 0·73	0	Chaibassa.	
...	2	...	3	4	5	4	10	3	6·7	1·6	+319	71	·366	1·6	0	1·09	− 1·09	0	0·62	− 0·62	0	0·62	− 0·62	0	Gaya	Bihar, South.
...	...	...	3	1	1	20	4	2	4·9	?	?	75	·400	0·7	0	1·43	− 1·43	0·06	0·62	− 0·56	0·06	0·62	− 0·56	0·06	Dehri.	
6	...	1	...	1	3	6	13	1	3·7	2·0	+ 85	81	·371	1·6	0	1·18	− 1·18	0	0·66	− 0·66	0	0·66	− 0·56	0	Patna	
...	4	...	1	1	2	5	15	3	2·8	?	?	84	·381	1·4	0	1·70	− 1·70	0·03	0·71	− 0·68	0·03	0·71	− 0·68	0·03	Arrah.	
1	1	2	...	...	3	9	14	1	3·6	?	?	76	·385	1·9	1	1·80	− 0·80	0·35	0·79	− 0·44	0·35	0·79	− 0·44	0·34	Buxar.	
4	3	...	...	...	...	5	14	5	3·1	1·7	+ 82	91	·381	0	0	0·55	− 0·55	0	0·60	− 0·60	0	0·60	− 0·60	0	Purnea	Bihar, North.
25	...	...	...	...	...	1	5	...	1·1	?	?	78	·373	0·7	0	1·30	− 1·30	0	0·48	− 0·48	0	0·48	− 0·48	0	Bhagalpur.	
9	1	...	2	1	...	8	9	1	3·6	2·3	+ 57	88	·395	0·9	0	1·27	− 1·27	0	0·69	− 0·69	0	0·69	− 0·69	0	Darbhanga.	
6	...	...	1	2	...	9	11	2	3·7	?	?	92	·397	1·0	0	1·53	− 1·53	0	0·79	− 0·79	0	0·79	− 0·79	0	Muzaffarpur.	
8	...	3	2	...	...	5	11	2	5·0	?	?	90	·383	1·5	0	1·41	− 1·41	0	0·65	− 0·65	0	0·65	− 0·65	0	Motihari.	
5	...	1	2	1	1	10	11	...	3·7	?	?	86	·393	1·9	0	1·70	− 1·70	0·02	0·66	− 0·64	0·02	0·66	− 0·64	0·02	Chapra.	
11	...	2	1	2	...	12	2	1	3·5	2·9	+ 21	89	·395	2·5	2	1·55	+ 0·45	0·41	0·79	− 0·38	0·41	0·79	− 0·38	0·22	Benares	N.-W. Provinces (Eastern Districts).
4	4	2	3	...	...	4	6	8	4·2	1·9	+121	80	·376	2·7	0	2·09	− 2·09	0·15	0·85	− 0·70	0·15	0·85	− 0·70	0·09	Allahabad	
...	3	1	2	1	2	3	16	3	2·2	1·7	+ 29	79	·367	1·5	0	1·18	− 1·18	0·05	0·84	− 0·79	0·05	0·84	− 0·79	0·05	Gorakhpur	N.-W. Provinces (East Sub-montane).
25	...	...	...	...	...	...	6	...	1·2	2·4	− 50	85	·329	2·6	1	1·64	− 0·64	0·20	1·10	− 0·90	0·20	1·10	− 0·90	0·18	Lucknow	Oudh, South.
3	...	5	1	1	...	2	2	17	3·9	?	?	91	·366	2·2	1	?	?	0·25	0·86	− 0·61	0·25	0·86	− 0·61	0·22	Bahraich	Oudh, North.
5	4	2	3	2	1	1	6	7	4·3	?	?	86	·370	2·3	4	1·40	+ 2·60	0·73	0·64	+ 0·09	0·73	0·64	+ 0·09	0·30	Cawnpore	N.-W. Provinces (Central).
17	...	...	1	1	...	...	3	9	1·7	?	?	86	·342	4·0	3	?	?	0·73	0·61	+ 0·12	0·73	0·61	+ 0·12	0·28	Mainpuri.	

‡ Wind observations of 24 days. † Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
6. Upper—Sub-Himalayas		...	...	−·010	...	...	...	...	...	...	...	63·9	−4·2	45·5	+1·7	54·7	−1·2	18·3	...	...	...	...	33·1
N.-W. Provinces (Sub-montane).	Bareilly	568	29·455	−·026	30·031	29·541	10th	29·364	28th	·177	50·5	68·1	−2·2	47·7*	+1·6	58·0*	−0·3	20·4	75·2	19th	41·7	31st	33·5
	Dehra Dun	2,233	27·755	−·013	30·066	27·818	10th	27·651	25th	·197	48·5	63·9	−1·7	45·9	+1·2	54·3	−0·3	18·0	72·5	13th	39·5	6th	33·0
	Roorkee	887	29·126	−·018	30·049	29·213	10th	29·032	25th	·181	47·9	66·6	−2·9	46·6	+2·3	56·6	−0·3	20·0	75·8	13th	36·9	7th	38·9
	Meerut	737	29·297	−·010	30·058	29·373	10th	29·209	28th	·164	49·3	67·0	−3·1	46·8	+2·2	57·0	−0·5	20·2	75·2	14th	40·1	31st	35·1
Punjab, Central.	Delhi	718	29·314	−·022	30·048	29·385	6th	29·230	28th	·155	51·4	65·4	−5·6	48·6	+0·6	57·1	−2·5	16·8	73·1	14th	44·1	31st	29·0
	Lahore	702	29·341	−·009	30·071	29·444	6th	29·215	28th	·229	47·9	61·8	−5·6	44·9	+3·5	53·4	−1·1	16·9	69·8	12th	38·2	16th & 31st	31·6
Punjab (Sub-montane).	Umballa	962?	29·122	?	30·057	29·197	21st	29·038	28th	·159	49·6	64·9	?	45·9	?	55·4	?	19·0	74·0	13th	38·0	9th	36·0
	Ludhiana	812	29·229	0	30·072	29·297	10th	29·114	28th	·183	49·3	62·6	−5·0	46·9	+3·2	54·8	−0·9	15·7	71·6	12th	39·4	31st	32·2
Punjab, North	Sialkot	829	29·204	+·004	30·074	29·301	6th	29·060	28th	·241	47·1	61·0	−5·6	43·8	+1·0	52·4	−2·3	17·2	66·0	1st & 20th	36·3	24th	29·7
	Rawalpindi	1,649	28·369	+·007	30·088	28·475	6th	28·194	28th	·281	42·0	57·2	−6·1	38·0	+0·1	47·6	−3·0	19·2	64·1	10th	32·4	16th	31·7
7. Indus Valley and North-West Rajputana.		...	...	+·001	...	...	...	...	...	...	...	67·5	−4·8	45·5	+0·2	56·5	−2·3	22·1	...	...	...	...	39·8
Punjab, West	Peshawar	1,110	28·977	+·003	30·116	29·056	6th	28·802	28th	·254	42·4	58·4	−5·5	39·7	+0·3	49·0	−2·6	18·7	67·7	9th	33·4	23rd	34·3
	Mardan	?	?	?	?	?	...	?	...	?	41·9	64·9	?	38·4	?	51·6	?	26·5	66·2	1st	32·4	25th	33·8
	Khushab	612	29·449	?	30·085	29·545	6th	29·309	28th	·236	45·9	63·0	?	41·9	?	52·5	?	21·1	73·9	10th	35·1	24th	38·8
	Montgomery	558	29·508	?	30·083	29·613	6th	29·397	21st	·216	47·1	63·5	?	42·9	?	53·2	?	20·6	74·3	10th	36·7	5th	37·6
	D. I. Khan	573	29·503	−·006	30·102	29·591	6th	29·367	28th	·224	44·4	63·8	−5·3	40·8	+0·2	52·3	−2·6	23·0	73·2	9th & 10th	33·0	23rd	40·2
	Mooltan	420	29·677	−·004	30·105	29·777	6th	29·562	21st	·215	47·5	65·0	−4·8	43·8	+1·1	54·4	−1·9	21·2	76·3	10th	37·6	31st	38·7
	Sirsa	662	29·394	−·002	30·075	29·501	6th	29·304	28th	·197	48·2	64·4	−6·9	45·2	+2·7	54·8	−2·1	19·2	72·5	11th	36·2	15th	36·3
Sind and Cutch.	Jacobabad	186	29·914	+·004	30·078	30·043	6th	29·806	21st	·237	47·9	68·1	−5·2	44·5	+1·4	56·3	−2·0	23·6	82·5	11th	34·5	29th	48·0
	Hyderabad	117	30·001	+·016	30·081	30·120	7th	29·865	1st	·255	52·9	70·9	−5·5	50·4	−0·8	60·7	−3·2	20·5	85·7	11th	42·5	30th	43·2
	Kurrachee	49	30·068	+·014	30·071	30·186	30th	29·914	1st	·272	57·8	72·3	−4·4	53·8	−0·8	63·0	−2·6	18·5	80·0	11th	43·1	30th	36·9
	Bhuj	395	29·660	−·019	30·030	29·750	7th	29·549	1st	·201	60·5	79·0	−1·1	54·0	−0·8	66·5	−1·0	25·0	87·9	27th	44·0	30th & 31st	43·9
Rajputana, West	Bickaneer	753	29·299	?	30·067	29·432	6th	29·185	1st	·247	51·9	67·4	−4·5	49·0	−1·2	58·2	−2·9	18·4	81·2	11th	42·6	31st	38·6
	Pachpadra	380	29·712	?	30·075	29·879	8th	29·563	20th	·316	56·5	76·7	?	46·6	?	61·6	?	30·1	85·6	11th & 13th	38·0	15th	47·6
8. East Rajputana, Central India and Gujarat.		...	...	−·011	...	...	...	...	...	...	...	77·8	−1·1	53·2	+2·0	65·5	+0·5	24·6	...	...	...	...	39·3
Rajputana, East	Jeypore	1,431	28·605	−·013	30·078	28·714	6th	28·534	20th & 28th. 3 days	·180	54·3	72·2	−1·5	50·5	+2·1	61·4	+0·3	21·7	80·0	28th	42·2	5th	37·8
	Sambhar*	1,254	28·776	−·009	30·069	28·891	6th	28·703		·188	53·0	71·4	−1·0	47·6†	+1·7†	59·4†	+0·4	23·8	78·8	28th	40·5	5th	38·3
	Ajmere	1,611	28·432	−·009	30·103	28·545	6th	28·362	20th	·183	52·2	71·8	−2·2	49·1	+4·2	60·5	+1·0	22·7	79·4	28th	40·9	7th	38·5
	Deesa	466	29·581	−·017	30·031	29·671	7th	29·486	26th	·185	59·0	81·8	−0·9	54·2	+2·8	68·0	+1·0	27·6	89·7	27th	50·1	29th	39·6
Kathiawar	Rajkot	429	29·619	−·008	30·024	29·699	7th	29·502	26th	·197	61·5	83·6	−0·6	52·8	+1·6	68·2	+0·5	30·8	93·4	27th	44·0	30th	49·4
	Veraval	?	30·032	?	29·992	30·119	29th	29·943	26th	·176	65·9	81·4	?	60·9	?	71·2	?	20·5	87·6	24th	53·3	18th	34·3
	Bhavnagar	?	30·032	?	30·019	30·104	29th	29·948	1st & 26th	·156	61·6	81·1	?	59·5	?	70·3	?	21·6	90·4	27th	55·5	17th & 31st	34·9
Central India	Nowgong	757	29·298	−·021	30·060	29·388	6th	29·204	28th	·184	55·2	74·0	−1·3	49·0	+2·1	61·5	+0·4	25·0	83·1	29th	39·6	10th	43·5
	Indore	1,823	28·195	−·006	30·048	28·272	7th	28·130	17th	·142	57·5	78·3	−0·5	50·4	+0·1	64·4	−0·2	27·9	87·0	28th	43·1	8th	43·9
	Neemuch	1,630	28·399	+·002	30·069	28·503	7th	28·335	1st	·168	55·7	77·0	−0·4	50·4	+1·6	63·7	+0·6	26·6	84·8	28th	43·9	8th	40·9
Gujarat	Surat	36	30·005	−·022	29·986	30·059	10th & 29th	29·939	1st	·120	63·4	86·9	+0·6	57·9	+1·5	72·4	+1·1	29·0	95·2	27th	53·2	20th	40·0
	Ahmedabad	176	29·893	?	30·028	29·976	7th	29·811	26th	·165	63·3	83·7	?	59·0	?	71·4	?	24·7	89·2	27th	52·2	30th	37·0
N.-W. P., West	Agra	555	29·510	−·021	30·065	29·596	6th	29·441	19th	·155	53·1	71·1	−2·4	50·5	+2·0	60·8	−0·2	20·6	78·1	14th	43·5	17th	34·6
	Jhansi	858	29·213	0	30·077	29·302	6th	29·120	19th	·182	58·3	74·6	−1·4	53·2	+2·6	63·9	+0·6	21·4	84·4	14th	46·9	11th	37·5

* Mean of 30 days. † Mean of 29 days.

I—*continued.*

in India, Burma, etc., in January 1894—continued.

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind velocity: Mean velocity in miles per hour.	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 31st January 1894.	Normal rainfall for period, 1st January to 31st January.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·90	1·74	+2·16	...	...	...	...	**6. Upper—Sub-Himalayas.**	
18	1	1	...	2	...	...	3	6	1·5	2·8	−46	84	·320	3·6	5	2·36	+2·64	1·55	1·10	+ 0·45	1·55	1·10	+ 0·45	0·58	Bareilly	N.-W. Provinces (Sub-montane).
30	...	1	...	...	...	...	...	...	0·4	1·8	−78	84	·292	5·7	6	3·73	+2·27	2·76	2·54	+ 0·22	2·76	2·54	+ 0·22	0·86	Dehra Dun.	
14	2	...	2	1	...	1	...	11	1·3‡	2·2	−41	90	·307	4·5	5	2·73	+2·27	2·46	1·76	+ 0·70	2·46	1·76	+ 0·70	0·84	Roorkee.	
14	...	1	1	...	...	2	11	2	1·9	2·1	− 9	83	·302	4·3	4	2·45	+1·55	3·58	1·27	+ 2·31	3·58	1·27	+ 2·31	1·55	Meerut.	
20	...	...	1	1	...	3	6	...	1·5	3·0	− 50	82	·314	4·5	6	1·82	+4·18	3·45	1·24	+ 2·21	3·45	1·24	+ 2·21	1·60	Delhi	Punjab, Central.
18	1	2	...	3	1	...	3	3	1·9	1·9	0	87	·294	5·0	7	2·00	+5·00	3·91	1·06	+ 2·85	3·91	1·06	+ 2·85	1·52	Lahore.	
14	...	...	...	4	...	...	...	13	2·3	?	?	91	·325	4·9	7	?	?	3·90	1·15	+2·75	3·90	1·15	+2·75	1·12	Umballa	Punjab (Sub-montane).
19	...	...	...	1	2	...	5	4	2·0	1·1	+82	90	·320	5·7	10	3·00	+7·00	3·78	1·97	+1·81	3·78	1·97	+1·81	0·76	Ludhiana.	
27	1	...	2	...	...	...	1	...	1·5	1·4	+ 7	87	·286	4·5	10	2·36	+7·64	8·12	2·49	+5·63	8·12	2·49	+5·63	2·72	Sialkot	Punjab, North.
18	2	3	...	...	...	...	1	7	1·3	1·9	−32	92	·252	5·8	6	4·00	+2·00	5·46	2·84	+2·62	5·46	2·84	+2·62	1·68	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·46	0·54	+0·80	...	...	...	...	**7. Indus Valley and North-West Rajputana.**	
11	1	...	...	3	9	6	...	1	3·2	2·5	+28	81	·222	4·7	6	2·73	+3·27	1·96	1·77	+0·19	1·96	1·77	+0·19	0·67	Peshawar	Punjab, West.
?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	6	?	?	2·87	?	?	2·87	?	?	0·90	Mardan.	
21	1	4	1	...	1	2	...	1	1·3†	?	?	82	·261	4·6	5	1·30	+3·70	1·70	0·52	+1·18	1·70	0·52	+1·18	0·61	Khushab.	
17	4	3	1	1	...	2	3	...	2·6	?	?	86	·284	4·3	3	0·90	+2·10	1·44	0·24	+1·20	1·44	0·24	+1·20	0·60	Montgomery	
19	1	2	...	...	1	2	1	5	2·1	1·4	+50	67	·199	3·4	1	1·45	−0·45	0·42	0·53	−0·11	0·42	0·53	−0·11	0·24	D. I. Khan.	
16	2	9	...	2	...	...	...	2	0·9	1·7	−47	79	·266	4·4	3	1·27	+1·73	0·93	0·48	+0·45	0·93	0·48	+0·45	0·46	Mooltan.	
21	2	...	2	1	...	...	3	2	2·7	2·6	+4	88	·305	4·3	5	1·36	+3·64	2·01	0·90	+1·11	2·01	0·90	+1·11	0·61	Sirsa.	
27	1	1	1	...	...	...	...	1	1·7	2·1	−19	71	·243	4·5	5	0·73	+4·27	1·20	0·25	+0·95	1·20	0·25	+0·95	0·32	Jacobabad	Sind and Cutch.
4	21	1	1	...	1	...	...	3	8·1	7·2	+13	71	·287	2·8	1	0·90	+0·10	0·34	0·31	+0·03	0·34	0·31	+0·03	0·10	Hyderabad.	
...	...	30	1	...	...	...	...	...	11·3	10·0	+13	82	·405	3·4	4	1·18	+2·82	2·81	0·72	+2·09	2·81	0·72	+2·09	1·25	Kurrachee.	
11	5	3	2	2	1	...	2	5	7·5	6·0	+25	57	·313	3·3	0	?	?	0	0·11	−0·11	0	0·11	−0·11	0	Bhuj.	
7	4	2	1	3	1	4	2	7	3·5	2·9	+21	76	·301	4·4	6	?	?	2·38	0·30	+2·08	2·38	0·30	+2·08	0·58	Bickaneer	Rajputana, West.
4	8	7	...	4	...	...	...	8	2·5	2·8	−11	66	·301	6·0	2	?	?	0·86	0·37	+0·49	0·86	0·37	+0·49	0·46	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·64	0·38	+0·37	...	...	...	...	**8. East Rajputana, Central India and Gujarat.**	
6	2	5	3	1	1	2	8	3	2·3	3·9	−41	73	·325	4·0	3	1·60	+1·40	1·34	0·69	+0·65	1·34	0·69	+0·65	0·92	Jeypore	Rajputana, East.
6	7	5	6	2	1	...	2	1	5·0	4·5	+11	76	·315	3·2	2	1·10	+0·90	0·48	0·47	+0·01	0·48	0·47	+0·01	0·29	Sambhar.*	
16	...	4	1	4	...	1	2	3	3·0	1·9	+58	81	33·6	3·1	3	1·45	+1·55	0·57	0·52	+0·05	0·57	0·52	+0·05	0·32	Ajmere.	
1	8	10	2	1	...	1	4	4	8·2	8·6	−5	59	·299	2·2	1	0·36	+0·64	0·64	0·17	+0·47	0·64	0·17	+0·47	0·64	Deesa.	
11	5	9	2	2	1	...	...	1	5·0	5·2	−4	63	·357	1·6	0	0·20	−0·20	0	0·04	−0·04	0	0·04	−0·04	0	Rajkot	Kathiawar.
2	12	17	...	...	...	...	...	...	3·8	?	?	57	·366	2·2	0	?	?	0	?	?	0	?	?	0	Veraval.	
...	1	...	...	...	...	11	6	13	8·3	?	?	74	·409	1·3	1	?	?	0·44	?	?	0·44	?	?	0·44	Bhavnagar.	
12	4	2	2	...	1	2	4	4	1·6	1·4	+14	84	·336	3·0	4	1·73	+2·27	1·30	0·65	+0·65	1·30	0·65	+0·65	0·40	Nowgong	Central India.
10	8	3	...	2	4	1	2	1	1·9	2·5	−24	74	·354	1·3	0	0·36	−0·36	0·03	0·18	−0·15	0·03	0·18	−0·15	0·02	Indore.	
1	4	15	8	3	2	...	1	...	5·8	8·1	−28	64	·290	2·8	0	0·45	−0·45	0	0·30	−0·30	0	0·30	−0·30	0	Neemuch.	
...	9	4	2	...	2	1	2	11	?	5·2	?	71	·424	0·7	1	0·18	+0·82	0·30	0·05	+0·25	0·30	0·05	+0·25	0·30	Surat	Gujarat.
2	3	11	9	3	1	...	...	1	4·6	?	?	58	·343	3·2	1	?	?	0·19	?	?	0·19	?	?	0·19	Ahmedabad	
5	...	3	...	4	...	2	...	17	4·0	3·5	+14	79	·324	3·7	3	1·27	+1·73	1·54	0·53	+1·01	1·54	0·53	+1·01	0·63	Agra	N.-W. P., West.
13	3	1	1	1	...	7	...	5	1·4	2·2	−36	70	·346	2·3	2	1·18	+0·82	2·07	0·59	+1·48	2·07	0·59	+1·48	1·64	Jhansi.	

* Wind directions of 30 days. † Mean of 29 days. ‡ Mean of 27 days.

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

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.
9. Deccan		...	...	−·015	...	...	...	...	...	...	...	83·7	+0·7	56·7	+1·6	70·2	+1·2	27·0	...	...	...	...	41·1
Bombay, Deccan	Belgaum	2,524	27·474	−·010	29·966	27·525	22nd	27·417	4th & 5th	·108	66·5	82·8	−0·3	57·7	+0·3	70·3	0	25·1	87·2	26th	54·4	10th	32·8
	Sholapur	1,590	28·429	−·017	30·003	28·488	11th	28·365	4th	·123	67·9	87·0	−0·4	59·7	+2·0	73·4	+0·8	27·3	92·7	30th	52·1	10th	40·6
	Poona	1,840	28·175	−·018	30·019	28·236	22nd	28·126	4th	·110	62·3	87·3	+2·2	54·8	−0·2	71·1	+1·0	32·5	93·0	27th	50·0	9th & 11th	43·0
	Bijapur	1,946	28·064	?	29·994	28·122	22nd	28·006	4th	·116	66·7	85·1	?	58·0	?	71·6	?	27·1	89·3	4 days	48·6	10th	40·7
Khandesh	Malegaon	1,430	28·588	−·020	30·022	28·663	7th & 8th	28·533	16th	·130	62·7	86·2	+1·1	54·3	+2·3	70·3	+1·7	31·9	93·4	27th	47·5	11th	45·9
	Ahmednagar	2,152	27·867	?	30·020	27·930	22nd	27·812	4th	·118	62·9	84·0	?	53·1	?	68·6	?	30·9	89·3	26th	43·9	10th	45·4
Berar	Akola	930	29·096	−·017	30·012	29·158	22nd	29·050	24th	·108	63·5	86·4	+2·0	56·2	+2·8	71·3	+2·4	30·2	92·9	28th	46·7	10th & 11th	46·2
	Amraoti	1,215	28·806	−·014	30·014	28·878	10th	28·757	24th	·121	65·8	84·4	+0·2	59·6	+2·3	72·0	+1·3	24·8	90·4	28th	53·9	13th	36·5
Central Provinces, West.	Khandwa	1,044	28·979	−·020	30·024	29·059	7th	28·908	1st	·151	61·3	85·4	+2·0	54·3	+2·4	69·9	+2·2	31·1	92·2	28th	44·1	11th	48·1
	Hoshangabad	1,020	...	...	...	...	...	...	Observations not recorded.							...	...	...	...	...	...	...	...
	Nagpur	1,025	29·008	−·013	30·023	29·072	7th	28·944	24th	·128	66·3	83·7	+0·7	56·3	+0·8	70·0	+0·8	27·4	92·3	29th	49·7	8th	42·6
Central Provinces, Central.	Chanda	634	29·397	−·025	30·008	29·470	10th	29·339	24th	·131	61·8	84·9	0	56·0	+1·4	70·5	+0·7	28·9	93·4	29th	47·1	11th & 12th	46·3
	Seoni	2,033	27·990	−·008	30·038	28·059	22nd	27·944	24th	·115	60·3	78·9	−0·1	52·3	+1·0	65·6	+0·5	26·6	87·6	29th	44·0	12th	43·6
	Jubbulpore	1,327	28·707	−·012	30·058	28·780	10th	28·643	2nd	·137	56·9	77·8	+0·6	50·5	+2·2	64·2	+1·4	27·3	86·4	28th	40·9	11th	45·5
	Saugor	1,762	28·256	−·008	30·051	28·333	7th	28·198	28th	·135	57·1	77·5	+0·9	52·2	+0·9	64·9	+0·9	25·3	86·8	28th	44·0	8th	42·8
Central Provinces, East.	Raipur	970	29·071	−·008	30·030	29·141	10th	29·001	24th	·140	64·2	82·8	+1·8	57·3	+2·0	70·0	+1·9	25·5	90·3	29th	50·8	12th	39·5
	Sutna	1,040	28·994	−·021	30·050	29·072	6th	28·914	28th	·158	56·4	75·0	+0·4	51·1	+3·8	63·1	+2·1	23·9	84·0	29th	41·2	11th	42·8
	Sambalpur	463	29·574	−·012	30·009	29·658	10th	29·497	24th	·161	62·8	83·1	+1·1	55·7	+0·6	69·4	+0·9	27·4	87·5	25th & 31st	46·7	9th	40·8
Hyderabad, North.	Aurangabad	?	28·176	?	?	28·234	22nd	28·114	5th	·120	70·0	86·6	?	57·3*	?	72·0*	?	29·3	91·0	26th & 28th	50·4	9th	40·6
	Indur	?	?	?	?	?	?	?	?	?	68·9	84·7	?	57·6	?	71·1	?	27·1	92·3	31st	48·0	12th	44·3
	Bidar	?	27·857	?	?	27·921	22nd	27·806	4th	·115	69·3	81·7	?	61·4	?	71·5	?	20·3	87·7	28th	57·1	20th	30·6
Hyderabad, South.	Gulbarga	1,502	28·516	?	30·007	28·588	9th	28·456	5th	·132	66·4	85·9	?	59·5	?	72·7	?	26·4	91·1	30th	53·8	10th	37·3
	Raichur	1,378	28·612?	?	?	28·703	22nd	28·517	6th	·186	69·2	86·7	?	64·2	?	75·5	?	22·5	92·1	30th & 31st	60·2	10th & 11th	31·9
	Hyderabad (Deccan).	1,690	28·334	−·019	30·020	28·403	22nd	28·281	5th	·122	64·4	83·5	−0·6	58·6	+0·7	71·1	+0·1	24·9	91·4	30th	51·8	10th	39·6
	Secunderabad	1,787	28·251	?	30·037	28·316	22nd	28·198	25th	·118	63·9	83·9	?	58·9	?	71·4	?	25·0	93·6	30th	52·1	10th	41·5
	Khamamet	373	29·675	?	29·926	29·740	22nd	29·613	25th	·127	67·8	86·9	?	60·8	?	73·9	?	26·1	94·0	30th	54·7	10th	39·3
10. West Coast		...	...	−·021	...	...	...	...	...	...	...	86·2	+0·9	68·6	+0·1	77·4	+0·5	17·5	...	...	...	...	25·0
Konkan	Bombay	37	29·990	−·010	29·968	30·038	22nd	29·919	25th	·119	71·7	83·1	+0·9	68·7	+0·8	76·0	+0·9	14·4	87·5	8th	66·0	5th	21·5
	Ratnagiri	110	29·899	−·006	29·950	29·945	12th	29·835	25th	·110	72·5	87·4	0	66·4	+0·3	76·9	+0·2	21·0	93·4	9th	63·4	12th	30·0
	Mormugao	60	29·957	?	29·954	29·998	11th	29·893	5th	·105	70·9	85·6	?	68·6	?	77·1	?	17·0	89·0	4 days	65·8	10th	23·2
	Goa	23	30·016	−·006	29·953	30·062	11th	29·949	4th	·113	72·7	83·8	?	67·2	?	75·5	?	16·6	89·0	27th	61·0	5th	28·0
	Karwar	44	29·957	−·019	29·935	29·999	10th & 12th	29·897	24th	·102	67·9	87·1	+0·6	65·8	0	76·5	+0·3	21·3	91·3	23rd	62·4	1st & 4th	28·9
Malabar	Cochin	10	29·973	−·023	29·911	30·023	27th	29·927	5th	·096	74·4	90·0	+1·4	71·3	+0·1	80·7	+0·8	18·7	92·3	3 days	67·8	31st	24·5
	Callcut	27	29·959	−·045	29·916	30·011	27th	29·910	25th	·101	73·9	86·7	?	69·3	?	78·0	?	17·4	89·3	24th	65·6	19th & 20th	23·7
	Mangalore	65	29·921	−·037	29·919	29·978	27th	29·866	25th	·112	73·9	88·7	+0·8	68·8	−0·5	78·7	+0·2	19·9	94·3	8th	66·0	3 days	28·3
	Trivandrum	198	29·772	?	29·903	29·819	31st	29·724	5th	·095	74·3	83·0	?	71·5	?	77·3	?	11·5	85·0	24th	68·0	3 days	17·0
11. South India		...	...	−·023	...	...	...	...	...	...	...	84·2	0	64·3	0	74·3	0	19·9	...	...	...	...	30·9
Madras, South.	Pamban	37	29·970	?	29·934	30·011	31st	29·907	5th	·104	76·7	81·6	?	74·9	?	78·2	?	6·7	83·3	3rd & 8th	71·2	3 days	12·1
	Tinnevelly	168	29·855	?	29·954	29·899	31st	29·795	5th	·104	74·7	89·0	?	71·4	?	80·2	?	17·6	93·7	29th & 31st.	66·4	30th	27·3
	Madura	447	29·565	−·017	29·957	29·607	31st	29·515	4th & 5th	·092	73·6	87·8	−0·1	68·2	−0·3	78·0	−0·2	19·6	93·4	29th	62·2	30th	31·2

* Mean of 29 days.

I—*continued.*

in India, Burma, etc., in January 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 31st January 1894.	Normal rainfall for period, 1st January to 31st January.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	0·15	0·34	—0·17	...	...	...	..	**9. Deccan.**	
11	...	1	13	4	1	1	...	...	?	10·9	?	58	·374	1·9	0	0·27	−0·27	0	0·06	−0·06	0	0·06	−0·06	0	Belgaum .	BOMBAY, DECCAN.
2	1	2	8	17	1	...	...	...	10·3	7·1	+45	54	·371	1·5	0	0·36	−0·36	0	0·11	−0·11	0	0·11	−0·11	0	Sholapur.	
28	...	...	1	1	...	...	...	1	4·8	5·7	−16	60	·341	0·7	0	0·36	−0·36	0	0·06	−0·06	0	0·06	−0·06	0	Poona.	
3	1	...	3	16	3	1	...	4	4·3	?	?	60	·394	2·5	0	0·20	−0·20	0	?	?	0	?	?	0	Bijapur.	
...	2	1	1	...	...	2	13	12	7·6	3·9	+95	63	·359	2·1	0	0·27	−0·27	0	0·16	−0·16	0	0·16	−0·16	0	Malegaon .	KHANDESH.
18	2	1	...	3	2	...	1	4	4·1	?	?	71	·418	0·7	0	?	?	0	?	?	0	?	?	0	Ahmednagar.	
7	1	7	10	2	1	...	2	1	3·9	3·4	+15	60	·356	2·6	0	0·45	−0·45	0	0·43	−0·43	0	0·43	−0·43	0	Akola .	BERAR.
2	...	7	17	5	...	...	...	..	4·2	3·2	+31	59	·376	1·4	0	0·55	−0·55	0·06	0·39	−0·33	0·06	0·39	−0·33	0·05	Amraoti.	
10	...	6	4	1	...	2	2	6	3·6	2·8	+ 29	61	·330	1·3	0	0·45	−0·45	0·11	0·31	− 0·20	0·11	0·31	− 0·20	0·09	Khandwa .	CENTRAL PROVINCES, WEST.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Hoshangabad.	
10	14	5	...	...	...	...	...	2	3·8	3·1	+ 23	60	·387	1·6	1	0·64	+0·36	0·12	0·55	− 0·43	0·12	0·55	−0·43	0·12	Nagpur.	
14	2	1	6	7	...	...	1	...	1·7	2·1	− 19	76	·428	1·5	1	?	?	0·42	0·37	+ 0·05	0·42	0·37	+ 0·05	0·40	Chanda .	CENTRAL PROVINCES, CENTRAL.
...	5	11	2	4	1	3	3	2	1·5	2·7	− 44	78	·412	1·8	1	1·18	− 0·18	0·10	0·63	− 0·53	0·10	0·63	− 0·53	0·10	Seoni.	
4	2	5	...	11	8	...	...	1	2·1	2·2	− 5	82	·386	2·1	1	1·73	−0·73	0·46	0·76	− 0·30	0·46	0·76	− 0·30	0·46	Jubbulpore.	
10	2	10	3	5	...	1	...	...	2·2	2·8	− 21	74	·348	1·8	1	1·36	−0·36	0·56	0·70	− 0·14	0·56	0·70	− 0·14	0·49	Saugor.	
15	2	3	4	...	1	3	2	1	1·4	2·6	− 46	64	·393	1·4	0	0·45	−0·45	0·05	0·20	− 0·15	0·05	0·20	− 0·15	0·05	Raipur .	CENTRAL PROVINCES, EAST.
5	7	2	2	2	1	...	4	8	4·4	4·0	+ 10	77	·354	1·3	2	1·73	+0·27	0·55	1·05	− 0·50	0·55	1·05	− 0·50	0·23	Sutna.	
...	11	13	2	2	...	...	...	3	4·0	1·6	+150	75	·433	1·5	0	?	?	0	0·30	− 0·30	0	0·30	− 0·30	0	Sambalpur.	
13	1	4	5	4	1	1	1	1	4·2	?	?	49	·359	0·7	0	?	?	0	0·19	− 0·19	0	0·19	− 0·19	0	Aurangabad	HYDERABAD, NORTH.
15	1	1	2	5	4	1	1	1	3·2	?	?	71	·500	0·6	1	?	?	0·16	0·05	+ 0·11	0·16	0·05	+ 0·11	0·16	Indur.	
...	2	...	6	10	7	5	1	0	5·9	?	?	64	·463	0·3	1	?	?	0·33	0	+0·33	0·33	0	+0·33	0·33	Bidar.	
16	2	...	5	6	2	...	...	...	5·7	?	?	66	·433	1·1	2	?	?	0·58	0·08	+ 0·50	0·58	0·08	+ 0·50	0·40	Gulbarga.	HYDERABAD, SOUTH.
...	1	5	7	12	6	...	...	...	7·3	?	?	63	·452	1·8	0	?	?	0	?	?	0	?	?	0	Raichur.	
22	...	1	1	6	1	...	...	...	3·6	?	?	79	·484	2·0	0	?	?	0·09	0·09	0	0·09	0·09	0	0·05	Hyderabad (Deccan).	
8	...	3	16	3	...	1	...	...	4·9	3·8	+ 29	76	·449	1·5	0	?	?	0·11	?	?	0·11	?	?	0·09	Secunderabad.	
30	1	...	...	...	...	...	...	...	4·2	?	?	81	·560	0·3	0	?	?	0	?	?	0	?	?	0	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	0·19	0·24	—0·05	...	...	...	...	**10. West Coast.**	
...	5	12	12	1	1	...	...	...	9·2	10·1	− 9	76	·598	0·6	1	0·27	+ 0·73	0·22	0·13	+ 0·09	0·22	0·13	+ 0·09	0·22	Bombay.	KONKAN.
2	2	4	4	14	5	...	...	...	4·9	9·8	− 50	65	·525	2·1	0	0·45	−0·45	0	0·22	− 0·22	0	0·22	− 0·22	0	Ratnagiri.	
...	2	2	12	15	...	...	...	...	8·4	?	?	83	·632	0·2	0	?	?	0	?	?	0	?	?	0	Mormugao.	
1	...	29	1	...	...	...	...	...	3·3	?	?	61	·492	0	0	?	?	0	0·25	− 0·25	0	0·25	− 0·25	0	Goa.	
6	...	21	4	...	...	...	...	...	2·2	?	?	79	·537	0·6	0	0·27	−0·27	0	0·12	− 0·12	0	0·12	− 0·12	0	Karwar.	
1	2	25	2	...	...	...	1	...	5·0	?	?	71	·615	1·7	0	0·82	−0·82	0	0·59	− 0·59	0	0·59	− 0·59	0	Cochin .	MALABAR.
...	...	9	21	1	...	...	...	...	11·9	?	?	80	·661	1·5	1	0·38	+0·62	1·48	0·08	+ 1·40	1·48	0·08	+ 1·40	1·48	Calicut.	
1	...	3	23	4	...	...	...	...	2·8	3·9	− 28	72	·607	1·7	0	0·10	−0·10	0	0·09	− 0·09	0	0·09	− 0·09	0	Mangalore.	
3	1	14	8	3	...	...	1	1	1·8	?	?	82	·703	2·9	0	?	?	0·01	0·64	− 0·63	0·01	0·64	− 0·63	0·01	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·54	0·36	+0·02	...	...	...	...	**11. South India.**	
...	6	22	3	...	...	...	...	...	14·1	?	?	82	·753	3·9	2	1·50	+0·50	0·51	1·80	− 1·29	0·51	1·80	− 1·29	0·37	Pamban .	MADRAS, SOUTH.
...	14	...	...	...	...	...	2	15	5·9	?	?	76	·662	6·2	1	2·20	−1·20	0·20	?	?	0·20	?	?	0·10	Tinnevelly.	
3	13	8	...	...	...	...	...	7	4·4	5·4	− 19	73	·612	2·4	0	1·00	−1·00	0	0·33	− 0·33	0	0·33	− 0·33	0	Madura .	

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Madras, South, Central.	Salem	940	29·099	−·028	29·998	29·143	31st	29·044	4th	·099	71·6	88·6	+0·3	63·5	+0·2	76·0	+0·3	25·1	94·4	30th	57·5	3 days	36·9
	Coimbatore	1,348	28·661	−·020	29·980	28·697	10th	28·620	4th	·077	69·8	86·4	−0·2	63·5	−0·5	75·0	−0·4	22·9	90·9	29th	58·6	4 days	32·3
Coorg	Mercara	3,781	26·277	?	29·961	26·323	27th	26·225	25th	·098	61·3	76·0	−0·5	57·4	+1·4	66·7	+0·5	18·6	80·0	26th & 30th	53·7	18th & 19th.	26·3
	Chitaldroog	2,405	27·607	?	29·969	27·662	29th	27·546	4th	·116	69·2	83·3	?	61·2	?	72·3	?	22·1	88·1	30th	52·9	19th	35·2
Mysore	Bangalore	3,019	27·013	?	29·978	27·065	22nd	26·959	4th	·106	64·4	82·2	+2·8	57·3	+0·7	69·8	+1·8	24·9	87·8	30th	51·9	19th	35·9
	Hassan	3,091	26·952	?	29·986	26·992	22nd	26·902	4th	·090	65·9	81·0	?	54·9	?	67·9	?	26·1	85·4	26th	47·0	29th	38·4
	Mysore	2,518	27·498	?	29·982	27·533	11th & 22nd	27·446	4th	·087	66·4	83·0	?	59·5	?	71·3	?	23·5	86·4	30th & 31st	55·3	25th	31·1
Madras, East Coast, South.	Negapatam	31	29·980	−·026	29·940	30·025	22nd	29·926	4th	·099	74·8	80·5	−1·3	70·5	−0·1	75·5	−0·7	10·0	83·7	26th	65·7	30th	18·0
	Cuddalore	12	30·015	?	29·957	30·063	31st	29·952	4th	·111	72·3	81·4†	?	67·0	?	73·6†	?	14·4	86·3	31st	55·8	17th	30·5
	Trichinopoly	255	29·766	−·025	29·961	29·813	22nd	29·714	4th	·099	73·9	87·5	+0·3	66·9	0	77·2	+0·2	20·6	92·5	29th & 30th	60·4	29th & 30th.	32·1
	Madras	22	30·016	−·033	29·969	30·073	22nd	29·961	4th	·112	73·4	84·8	+0·1	66·7	−0·9	75·8	−0·4	18·1	91·5	31st	61·0	31st	30·5
Madras, East Coast, Central.	Nellore	71	29·964	?	29·970	30·026	22nd	29·910	25th	·116	72·4	86·2	?	67·0	?	76·6	?	19·2	92·7	30th & 31st	63·6	16th	29·1
	Masulipatam	15	30·041	−·012	29·991	30·100	22nd	29·977	25th	·123	70·8	83·4	+ 0·1	65·3	−0·1	74·4	−0·2	18·1	92·1	30th	61·7	16th	30·4
Madras, Central	Cuddapah	433	29·604	?	29·989	29·663	22nd	29·542	25th	·121	72·6	88·3	?	64·9	?	76·6	?	23·4	95·1	30th & 31st	59·3	19th	35·8
	Kurnool	923	29·099	?	29·993	29·162	22nd	29·044	3 days	·118	68·1	89·8	?	58·6	?	74·2	?	31·2	96·2	4th & 26th	49·7	9th	46·5
	Bellary	1,475	28·541	−·016	29·995	28·605	22nd	28·478	4th	·127	68·1	86·6	− 0·9	60·8	+0·3	73·7	−0·3	25·8	92·4	30th & 31st	56·1	19th	36·3
Madras, East Coast, North.	Rajahmundry	112	29·928	?	29·981	29·995	22nd	29·870	3rd	·125	70·0	87·6	?	64·6	?	76·1	?	23·0	94·0	3 days	59·9	23rd	34·1
	Cocanada	26	30·020	?	29·981	30·088	11th	29·960	25th	·128	70·5	81·7	?	65·0	?	73·4	?	16·7	92·2	30th	60·5	15th	31·7
	Vizagapatam	31	30·015	−·028	29·984	30·082	11th	29·945	25th	·137	72·6	78·8	− 0·2	69·9	−0·6	74·4	−0·4	8·9	84·9	30th	65·9	19th	19·0
	Gopalpur	21	30·033	?	29·995	30·116	11th	29·944	25th	·172	64·8	81·1	?	60·9	?	71·0	?	20·2	84·7	22nd	54·6	9th	30·1
12. Hill Stations		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	Kachh Fort	?	23·944	?	?	24·090	7th & 11th	23·780	21st	·310	29·0	?	?	19·4	?	?	?	?	?	...	11·0	2 days	?
	Pishin	?	?	?	?	?	?	?	?	?	?	45·2	?	23·2	?	34·2	?	22·0	60·0	9th	12·9	22nd	47·1
	Quetta	5,502	24·658	−·023	?	24·806	7th	24·471	20th	·335	30·0	44·1	− 7·4	27·3	−2·0	35·7	−4·7	16·8	63·2	10th	14·8	30th	48·4
Africa	Sherino	?	?	?	?	?	?	?	?	?	31·7*	45·6	?	30·3a	?	38·7a	?	15·3	60·7	1st	21·9	29th	38·8
	Kalat	?	?	?	?	?	?	?	?	?	31·8	47·6	?	23·2	?	35·4	?	24·4	65·1	10th	10·0	28th	55·1
	Chaman	5,488	25·761	?	?	25·929	11th	25·523	20th	·406	35·9	47·3	?	31·7	?	39·5	?	15·6	65·1	10th	20·6	30th	44·5
Northern India	Srinagar	5,204	24·946	?	?	25·167	9th	24·693	28th	·474	36·0	36·7	?	26·6	?	31·7	?	10·1	44·5	6th	20·6	31st	23·9
	Gilgit	?	?	?	?	?	...	?	...	?	34·2	45·3	?	32·1	?	38·7	?	13·2	52·9	13th	27·9	24th	25·0
	Cherat	?	25·758	?	?	25·841	6th	25·593	28th	·213	38·0	43·7	?	36·0	?	39·9	?	7·7	53·2	10th	29·1	22nd	24·1
	Murree	6,344	23·811	−·042	?	23·900	6th	23·671	28th	·229	33·7	39·8	− 8·1	31·2	−4·2	35·6	−6·2	8·6	56·7	10th	24·5	26th	32·2
	Poo	?	...		Not recorded						?	38·3	?	23·6	?	31·0	?	14·7	44·6	10th	16·0	24th	28·6
	Simla	7,224	23·093	−·029	?	23·189	11th	23·001	3rd	·188	37·6	43·8	− 2·6	34·1	−2·4	39·0	−2·5	9·7	53·3	9th & 10th	28·6	24th	24·7
	Chakrata	7,052	23·233	−·030	?	23·314	11th	23·121	3rd	·193	38·0	46·6	− 4·0	34·2	−1·8	40·4	−2·9	12·4	61·3	10th	29·1	25th	32·2
	Mussooree	?	23·563	?	?	23·648	12th	23·466	3rd & 25th	·182	39·1	46·4	?	36·0	?	41·2	?	10·4	56·7	9th	30·5	5th	26·2
	Ranikhet	6,069	24·115	−·020	?	24·184	21st	24·032	24th	·152	41·9	52·3	− 1·9	38·9	−0·8	45·6	−1·4	13·4	62·2	10th	33·0	21st	29·2
	Gnatong	?	18·867	?	?	18·940	21st	18·766	26th	·174	26·7	37·4	?	19·8	?	28·6	?	17·6	47·4	11th	10·1	5th	37·3
	Darjeeling	7,421	22·953	−·025	?	23·073	10th	22·793	25th	·280	58·7	46·6	+ 1·6	34·4	−0·2	40·5	+0·7	12·2	54·8	1st	31·2	5th	23·6
	Gantok	?	24·490	?	?	24·596	10th	24·342	24th & 25th	·254	43·4	57·4	?	39·7	?	48·6	?	17·7	65·3	1st	36·4	6th	28·9
Central India	Mount Abu	3,945	26·120	−·018	?	26·196	7th	26·049	1st	·147	56·2	64·1	− 2·9	51·0	−0·1	57·6	−1·5	13·1	71·6	27th	42·1	29th	29·5
	Pachmarhi	3,528	26·557	−·003	?	26·618	22nd	26·492	4th	·126	63·7	72·1	+ 1·2	50·3	+2·9	61·2	+2·1	21·8	79·2	28th	41·3	10th & 11th	37·9
South India	Wellington	6,200	24·286	−·023	?	24·328	28th	24·247	25th	·081	54·9	66·2	− 0·4	44·3	−1·2	55·2	−0·8	21·9	72·2	29th	37·1	19th	35·1
	Kottagiri	?	23·862	?	?	23·914	28th	23·810	14th	·104	56·6*	64·2	?	46·8	?	55·5	?	17·4	70·9	29th	34·0	27th	36·9

† Mean of 22 days. * Mean of 30 days. a Mean of 19 days.

I—*continued.*

in India, Burma, etc., in January 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 31st January 1894.	Normal rainfall for period, 1st January to 31st January.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
17	3	7	2	...	...	1	1	...	4·6	5·0	− 8	69	·543	3·1	0	0·36	− 0·36	0	0·31	− 0·31	0	0·31	− 0·31	0	Salem	Madras, South, Central.
...	13	9	9	...	...	...	...	...	4·2	3·1	+ 35	79	·578	4·1	0	0·64	− 0·64	0	0·19	− 0·19	0	0·19	− 0·19	0	Coimbatore.	
...	...	11	18	1	...	...	...	1	7·9	4·3	+ 84	80	·436	3·3	0	0·30	−0·30	0	0·04	− 0·04	0	0·04	− 0·04	0	Mercara	Coorg.
2	1	1	13	12	...	1	...	1	8·7	?	?	59	·417	1·9	0	?	?	0	?	?	0	?	?	0	Chitaldroog	
...	...	8	18	5	...	...	...	...	7·5	?	?	76	·463	2·1	0	?	?	0	0·19	− 0·19	0	0·19	−0·19	0	Bangalore	Mysore.
6	...	5	12	8	...	...	...	...	3·2	?	?	72	460	3·7	0	?	?	0	?	?	0	?	?	0	Hassan.	
...	1	15	12	1	1	..	...	1	10·4	?	?	76	·490	2·5	0	?	?	0	?	?	0	?	?	0	Mysore	
13	7	9	...	...	...	...	...	2	3·8	5·4	− 30	85	·734	6·1	3	2·82	+0·18	3·86	1·46	+ 2·40	3·86	1·46	+ 2·40	3·25	Negapatam	Madras, East Coast, South.
...	13	3	1	..	...	...	2	12	2·7	?	?	93	·740	3·4	3	1·40	+ 1·60	4·22	?	?	4·22	?	?	2·80	Cuddalore.	
10	7	12	2	...	...	...	...	...	2·6	4·7	− 45	75	·625	2·9	1	0·91	+0·09	0·29	0·26	+ 0·03	0·29	0·26	+0·03	0·29	Trichinopoly.	
5	11	4	1	...	...	2	2	6	4·7	6·1	− 23	83	·686	3·8	2	1·36	+0·64	1·32	0·58	+ 0·74	1·32	0·58	+ 0·74	0·93	Madras.	
12	3	...	...	...	1	...	1	14	3·7	?	?	87	·691	5·7	1	0·60	+ 0·40	1·64	?	?	1·64	?	?	1·04	Nellore	Madras, East Coast, Central.
6	16	7	1	1	...	...	...	...	4·3	5·2	− 17	84	·638	1·6	0	0·27	− 0·27	0·09	0·12	− 0·03	0·09	0·12	− 0·03	0·09	Masulipatam.	
...	...	2	3	18	4	1	...	3	?	?	?	73	·583	2·8	0	0·20	− 0·20	0	0·02	− 0·02	0	0·02	− 0·02	0	Cuddapah.	Madras, Central.
26	...	...	...	...	...	...	5	...	?	?	?	70	·486	1·2	1	0·60	+ 0·40	0·13	0·08	+ 0·05	0·13	0·08	+ 0·05	0·13	Kurnool.	
9	..	...	1	10	10	...	...	1	3·7	3·3	+ 12	74	·513	3·0	0	0·18	− 0·18	0	0·13	− 0·13	0	0·13	− 0·13	0	Bellary.	
2	28	...	...	...	...	...	...	1	?	?	?	70	·516	2·1	1	0·30	+ 0·70	0·12	0·08	+ 0·04	0·12	0·08	+ 0·04	0·12	Rajahmundry	Madras, East Coast, North.
...	18	1	...	...	...	...	...	12	8·0	?	?	76	·567	1·2	0	0·50	− 0·50	0·07	0·14	− 0·07	0·07	0·14	− 0·07	0·07	Cocanada.	
...	1	...	...	...	...	1	23	6	0·6	1·8	− 66	72	581	1·4	0	0·64	− 0·64	0	0·19	− 0·19	0	0·19	− 0·19	0	Vizagapatam.	
...	15	...	...	...	...	...	...	16	8·8	6·5	+35	78	·481	0·4	0	0·38	− 0·38	0	0·18	− 0·18	0	0·18	− 0·18	0	Gopalpur.	
..	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	**12. Hill Stations.**	
...	...	...	9	...	...	...	21	...	?	?	?	63	·103	3·3	0	?	?	0	?	?	0	?	?	0	Kachh Fort*	Baluchistan.
?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	9	?	?	3·83	?	?	3·83	?	?	1·13	Pishin.	
30	...	...	...	1	...	...	...	...	1·5	3·8	− 61	87	·151	4·3	10	4·36	+ 5·64	3·93	2·11	+ 1·82	3·93	2·11	+ 1·82	0·82	Quetta.	
...	1	7	3	5	4	5	2	4	3·2	?	?	70†	·129†	1·3	7	?	?	6·14	?	?	6·14	?	?	1·45	Shirino.	
...	...	...	1	...	15	1	2	12	?	?	?	?	?	?	8	?	?	2·12	?	?	2·12	?	?	0·40	Kalat.	
11	1	2	3	6	3	4	1	...	5·6	?	?	72‡	·155	6·2	5	?	?	1·30	?	?	1·30	?	?	0·60	Chaman.	
17	...	...	1	6	4	...	2	1	3·2	?	?	98	·158	9·6	14	?	?	7·16	?	?	7·16	?	?	1·32	Srinagar.	Northern India.
?	?	?	?	?	?	?	?	?	?	?	?	71	·139	8·0	1	?	?	0·25	?	?	0·25	?	?	0·12	Gilgit.	
...	22	...	...	2	1	...	1	5	21·5	?	?	71	·161	5·8	6	?	?	3·18	?	?	3·18	?	?	0·84	Cherat.	
2	3	...	4	20	1	1	...	...	13·2	8·1	+ 63	81	·152	6·2	16	3·18	+12·82	8·55	3·52	+ 5·03	8·55	3·52	+ 5·03	1·82	Murree.	
23	...	1	2	1	...	1	1	2	?	?	?	?	?	6·8	11	?	?	3·89	?	?	3·89	?	?	0·85	Poo.	
7	4	4	3	4	8	...	...	1	6·0‖	2·0	+200	63	·135	6·1	11	4·27	+ 6·73	7·99	2·35	+ 5·64	7·99	2·35	+ 5·64	2·43	Simla.	
4	...	9	17	...	...	...	1	...	6·9†	4·8	+44	67	·149	5·0	12	?	?	9·66	3·53	+ 6·13	9·66	3·53	+ 6·13	2·25	Chakrata.	
...	3	3	10	4	...	...	3	8	?	?	?	73	·174	5·0	11	3·30	+ 7·70	6·15	?	?	6·15	?	?	1·89	Mussooree.	
22	2	...	5	...	...	1	1	...	1·2	1·4	− 14	70	·185	5·4	9	3·71	+5·29	4·86	2·94	+ 1·92	4·86	2·94	+ 1·92	1·35	Ranikhet.	
...	1	...	6	7	...	4	1	12	6·4	?	?	67	·098	0·8	2	?	?	0·44	?	?	0·44	?	?	0·30	Gnatong.	
6	...	2	13	2	1	4	2	1	6·0	2·6	+131	79a	·186a	3·3	0	1·71	− 1·71	0·02	?	?	0·02	?	?	0·02	Darjeeling.	
...	7	1	8	3	6	3	3	...	1·9	?	?	86	·205	4·4	2	?	?	0·99	?	?	0·99	?	?	0·43	Gantok.	
5	...	8	...	1	2	11	1	3	6·0	4·8	+ 25	54	·244	2·4	1	0·73	+ 0·27	0·60	0·42	+ 0·18	0·60	0·42	+ 0·18	0·60	Mount Abu	Central India.
5	1	1	2	4	7	7	2	2	2·7	3·1	− 13	52	·306	1·7	1	1·55	− 0·55	1·03	0·51	+ 0·52	1·03	0·51	+ 0·52	1·03	Pachmarhi.	
19	1	6	2	2	1	...	...	...	2·3	2·4	− 4	65	·282	2·5	3	1·75	+ 1·25	0·86	1·04	− 0·18	0·86	1·04	− 0·18	0·38	Wellington.	South India.
0	2	2	8	6	8	2	2	1	3·4	?	?	63	·283	2·0	3	?	?	1·30	?	?	1·30	?	?	0·45	Kottagiri	

* Wind observations for 30 days. † Mean of 30 days. ‡ Mean of 27 days. ‖ Mean of 28 days.
a Mean of 25 days.

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

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. Extra India ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ceylon	Colombo	40	29·937	−·015	29·903	30·015	22nd	29·889	5th	·126	81·1	87·0	?	70·9	?	79·0	?	16·1	90·0	3 days	66·0	29th & 30th	24·0
Persia	Meshed	?	...	...	...	...	...	Not	received		...	...	...	...	...	...	...	...	...	...	...	...	...
	Teheran	?	26·135	?	?	26·395	11th	25·800	19th	·595	29·8	40·7	?	25·9	?	33·1	?	14·8	51·0	3rd	19·6	26th	31·4
	Ispahan	?	?	?	?	?	?	?	?	?	29·6	43·8	?	23·0	?	33·4	?	20·8	53·9	16th	11·6	29th	42·3
	Bushire	14	30·156	?	30·128	30·308	28th	30·011	25th	·297	54·0	59·1	?	49·6	?	54·4	?	9·5	70·8	15th	40·6	21st	30·2
	Jask	?	?	?	?	?	?	?	?	?	62·6	71·5	?	59·2	?	65·3	?	12·3	79·1	17th	46·3	29th	32·8
Arabia	Muscat	?	30·082	?	?	30·263	28th	29·928	20th	·335	68·9	72·1	?	67·4	?	69·8	?	4·7	76·0	10th	57·9	27th	18·1
	Baghdad	?	29·741	?	?	29·948	21st	29·544	18th	·404	40·9	55·5	?	37·1	?	46·3	?	18·4	61·3	12th	24·0	19th	37·3
	Aden	94	29·965	−·019	29·993	30·030	30th	29·873	25th	·157	74·3	79·8	− 1·8	73·1	+0·8	76·4	−0·5	6·7	84·8	1st	68·4	20th	16·4
	Perim	?	29·813	?	?	29·889	4th	29·704	2nd	·185	75·8	82·1	?	73·0	?	77·5	?	9·1	85·3	21st	68·9	28th	16·4
Afghanistan	Kabul	?	?	?	?	?	?	?	?	?	22·0	33·0	?	19·3	?	26·3	?	13·7	47·3	6th	5·4	31st	41·9
Central Asia	Kashghar	?	25·830	?	?	26·100	31st	25·620	22nd	?	15·3	27·8	?	10·1	?	18·9	?	17·7	41·8	12th	−2·7	15th	44·5
Arabian Sea Islands.	Amini Divi*	15	29·978	?	29·921	30·013	22nd	29·945	19th	·068	81·0	85·9	?	73·9	?	79·9	?	12·0	87·8	15th	69·0	12th	18·8
	Minicoy	10	29·973	?	29·908	30·023	27th & 28th	29·903	30th	·120	78·7	86·4	?	76·2‡	?	81·3	?	10·2	88·7	10th	73·2	27th	15·5
Africa	Zanzibar	73	29·903	?	29·903	29·964	10th	29·841	6th	·123	81·5	86·6	?	79·3	?	82·9	?	7·3	88·4	7th & 27th.	72·2	10th	16·2

‡ Mean of 17 days. * Mean of 22 days.

I—*concluded.*

in India, Burma, etc., in January 1894—concluded.

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.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour.	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 January to 31st January 1894.	Normal rainfall for period, 1st January to 31st January.	Variation from normal of period.			
																									13. Extra India.	
...	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...		
1	8	17	4	1	...	...	...	...	9·5	8·4	+ 13	69	·736	3·8	4	?	?	2·58	2·92	− 0·34	2·58	2·92	− 0·34	1·96	Colombo	Ceylon.
...	...	...	...	...	...	...	...	...	...	...	Not	received		...	..	...	...	...	...	...	...	...	...	...	Meshed	Persia.
11	10	4	...	...	...	...	..	4	2·5	?	?	76	·129	4·9	3	?	?	0·61	?	?	0·61	?	?	0·24	Teheran	
...	2	1	...	3	2	6	10	7	3·6	?	?	85	·142	3·9	0	?	?	0	?	?	0	?	?	0	Ispahan	
...	2	12	5	7	...	...	..	5	5·4	7·9	- 32	75	·321	?	4	?	?	1·12	3·63	− 2·51	1·12	3·63	− 2·51	0·54	Bushire.	
...	12	11	2	3	1	...	...	2	12·0	?	?	68	·393	...	...	...	...	...	...	...	...	...	...	...	Jask.	
...	1	1	3	5	4	2	9	4	4·3	?	?	68	·434	3·3	1	?	?	0·44	?	?	0·44	?	?	0·39	Muscat¶	Arabia.
16	6	2	...	1	3	...	...	3	?	?	?	84	·225	1·5	2	?	?	1·49	?	?	1·49	?	?	1·22	Baghdad.	
8	...	7	14	2	...	...	...	...	12·5	12·0	+ 4	79	·667	6·3	1	?	?	0·23	0·28	− 0·05	0·23	0·28	− 0·05	0·19	Aden.	
...	1	8	11	8	...	1	...	2	20·4	?	?	74	·654	4·0	1	?	?	0·20	?	?	0·20	?	?	0·20	Perim.	
...	...	...	24	...	...	7	...	...	?	?	?	?	?	0	0	?	?	0	?	?	0	?	?	0	Kabul	Afghanistan.
15	2	...	5	...	1	2	5	...	1·5	?	?	?	?	7·9	5	?	?	1·20	?	?	1·20	?	?	0·60	Kashghar.†	Central Asia.
...	10	10	1	...	...	...	...	1	?	?	?	74	·777	5·6	0	?	?	0	?	?	0	?	?	0	AminiDivi††	Arabian Sea Islands.
7	9	12	3	...	...	...	...	...	5·9	?	?	78	·774	3·1	1	?	?	0·30	?	?	0·30	?	?	0·30	Minicoy.	
...	10	14	1	1	3	1	...	...	9·2	?	?	82	·885	4·9	5	?	?	6·79	?	?	6·79	?	?	2·86	Zanzibar.	Africa.

¶ Mean of 29 days. † Wind directions of 30 days only. †† Wind directions of 22 days only.

Table

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

Meteorological Province.	Station.	Height of the 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 to 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	...	29·912	29·800	·112	29·851	−·042	29·843	85·3	74·8	10·5	87·4	70·0	17·4	81·2	83·6	79·2	−0·2	71·0	74·8	75·6	73·8
	Rangoon	...	·958	·826	·132	·891	−·061	·869	89·7	63·9	25·8	93·4	57·0	36·4	76·5	87·1	74·4	+0·6	60·5	67·9	69·7	66·0
	Diamond Island	...	·963	·842	·121	·899	−·065	·875	82·4	72·8	9·6	84·4	70·8	13·6	78·1	80·0	76·6	+0·8	67·9	70·5	71·0	69·8
	Cocos Island	111	·876	·771	·105	·820	?	·861	82·6	74·0	8·6	84·4	71·7	12·7	79·6	79·0	77·0	?	61·2	71·4	71·4	68·1
	Akyab	...	30·017	·899	·118	·952	−·046	·915	81·9	58·1	23·8	87·2	53·1	34·1	72·8	78·5	69·5	−0·7	55·2	64·5	67·4	62·4
Assam.	Silchar	...	29·971	·835	·136	·903	−·030	·961	78·6	51·6	27·0	82·0	45·7	36·3	66·9	76·3	63·8	+0·5	50·7	61·5	64·0	58·7
	Sibsagar	...	·755	·613	·142	·681	−·051	·986	69·4	48·2	21·2	73·2	43·1	30·1	58·0	69·1	57·9	+0·1	47·7	57·1	62·0	55·6
	Dhubri	...	·952	·809	·143	·874	−·051	·948	74·8	52·2	22·6	77·2	49·0	28·2	62·0	73·2	62·1	−0·1	51·8	57·7	61·9	57·1
Bengal and Orissa.	Chittagong	...	·980	·862	·118	·917	−·028	·955	78·8	53·9	24·9	83·0	49·6	33·4	70·4	75·3	65·9	−0·2	52·9	63·6	65·4	60·6
	Dacca	...	30·040	·912	·128	·969	−·037	·939	79·1	54·9	24·2	84·0	51·4	32·6	70·0	76·7	67·0	+1·0	52·6	61·7	63·0	59·1
	Calcutta (Alipore)	...	·062	·930	·132	·984	−·032	·951	78·1	55·7	22·4	84·1	50·1	34·0	69·8	77·3	66·0	+0·8	54·6	60·8	62·5	59·3
	Ditto (Chowringhee).	...	·068	?	?	?	?	?	79·1	56·2	22·9	85·9	49·9	36·0	71·6	?	?	?	55·3	63·1	?	?
	Saugor Island	...	·057	·927	·130	·982	−·024	·952	76·8	59·6	17·2	82·9	52·8	30·1	71·6	75·2	67·4	+0·3	57·1	65·0	66·0	62·7
	Burdwan	...	29·988	·848	·140	·906	−·030	·956	79·3	55·8	23·5	85·8	50·1	35·7	69·3	78·0	66·8	+0·8	54·4	58·9	61·8	58·3
	Berhampore	...	30·012	·880	·132	·934	−·029	·951	77·5	55·0	22·5	82·3	50·2	32·1	68·2	76·2	65·5	+0·8	52·3	60·4	62·5	58·4
	False Point	...	·063	·944	·119	·999	−·030	·961	80·1	58·6	21·5	84·2	52·3	31·9	74·9	76·9	68·2	+0·1	58·4	67·1	67·8	64·4
	Cuttack	...	29·993	·852	·141	·919	−·039	·942	85·2	60·8	24·4	91·8	54·5	37·3	75·1	84·2	72·1	+1·3	59·0	64·3	66·3	63·2
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	28·018	27·908	·110	27·955	−·025	·944	74·7	50·8	23·9	81·8	42·3	39·5	66·5	72·6	61·8	+1·0	46·4	55·3	58·0	53·2
	Patna (Bankipur)	...	29·896	29·775	·121	29·827	−·039	·970	73·9	52·4	21·5	80·1	45·4	34·7	65·4	72·6	62·6	+2·1	50·1	58·3	61·2	56·6
	Darbhanga	...	·911	·782	·129	·838	−·038	·964	73·6	53·1	20·5	78·3	47·1	31·2	64·9	72·5	62·9	+0·8	51·9	59·3	61·4	57·6
	Allahabad	...	·782	·659	·123	·708	−·023	·989	76·0	51·3	24·7	82·9	43·7	39·2	65·2	74·3	62·5	+2·0	48·7	57·5	60·1	55·4
	Ghazipur	220	·861	·742	·119	·791	−·030	·973	74·8	52·1	22·7	80·8	46·3	34·5	66·3	73·8	62·3	+2·9	49·9	58·5	60·6	56·4
	Lucknow	...	·715	·610	·105	·654	−·016	·996	73·9	48·4	25·5	81·4	42·2	39·2	64·5	71·2	61·9	+1·0	46·8	56·8	58·8	54·1
Upper Sub-Himalayas.	Dehra Dun	...	27·783	27·698	·085	27·731	−·013	1·005	64·4	45·9	18·5	72·6	39·3	33·3	55·9	60·8	53·8	−1·2	43·7	51·3	53·6	49·5
	Roorkee	...	29·168	29·073	·095	29·109	−·004	1·009	66·7	46·6	20·1	75·8	37·0	38·8	56·0	64·1	55·5	−0·4	45·3	52·2	55·1	50·9
	Meerut	...	·334	·240	·094	·278	−·006	1·018	67·0	46·8	20·2	75·0	40·3	34·7	57·3	64·9	55·9	−0·2	46·4	52·2	55·1	51·2
	Lahore	...	·379	·298	·081	·327	−·001	1·049	61·8	44·9	16·9	69·8	38·2	31·6	54·4	60·0	51·8	−0·1	43·7	50·8	53·6	49·4
	Ludhiana	...	·264	·173	·091	·207	+·004	1·033	62·8	47·0	15·8	71·5	39·2	32·3	55·8	61·0	53·5	+0·9	46·5	52·3	54·4	51·0
Indus Valley and N.-W. Rajputana.	Peshawar	...	·011	28·918	·093	28·953	+·010	1·113	58·7	39·7	19·0	67·7	33·4	34·3	50·3	57·2	47·7	−1·9	37·8	45·5	48·3	43·9
	Mooltan	...	·700	29·620	·080	29·648	+·021	1·064	65·2	43·8	21·4	76·3	37·5	38·8	55·7	63·9	53·1	−0·9	42·0	48·1	53·6	47·9
	Jacobabad	...	·947	·842	·105	·883	+·014	1·038	67·9	44·6	23·3	82·6	34·4	48·2	59·2	65·8	54·7	−2·0	41·3	51·0	53·7	48·7
	Kurrachee	...	30·074	·994	·080	30·025	+·015	1·028	72·3	53·8	18·5	80·0	43·2	36·8	67·9	70·1	62·2	−3·0	49·6	59·5	60·5	56·5
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·646	28·544	·102	28·584	+·005	1·037	72·4	50·3	22·1	80·0	41·9	38·1	63·4	69·8	59·4	+0·7	46·2	54·1	56·7	52·3
	Ajmere	...	·458	·354	·104	·399	−·009	1·022	71·9	49·2	22·7	79·2	40·9	38·3	61·6	70·9	59·8	+2·2	46·4	54·2	59·2	53·3
	Deesa	...	29·604	29·490	·114	29·535	−·004	·966	81·8	53·9	27·9	89·5	50·1	39·4	71·5	80·3	68·0	+0·5	49·4	57·8	60·8	56·1
	Nowgong	...	·319	·198	·121	·249	−·018	·987	73·6	48·9	24·7	83·4	39·6	43·8	63·6	72·0	60·6	+0·2	48·6	56·6	60·0	55·1
	Agra	...	·548	·431	·117	·478	−·002	1·017	71·0	50·1	20·9	78·1	43·5	34·6	61·9	70·0	59·8	+1·0	47·2	55·1	58·7	53·7
Deccan.	Belgaum	...	27·485	27·363	·122	27·419	−·017	·846	83·2	57·7	25·5	87·2	54·6	32·6	75·0	81·6	70·0	+0·1	54·2	60·3	60·9	58·5
	Sholapur	...	28·446	28·303	·143	28·372	−·015	·900	87·2	59·5	27·7	92·5	52·2	40·3	77·2	86·0	72·7	+0·9	53·3	63·0	65·4	60·5
	Poona	...	·187	·049	·138	·116	−·017	·888	87·5	54·8	32·7	93·0	49·9	43·1	76·3	85·5	70·8	+1·8	51·0	60·0	62·3	57·7
	Akola	...	29·119	·971	·148	29·037	−·019	·924	86·9	56·2	30·7	93·0	46·5	46·5	75·4	85·6	70·5	+2·6	52·1	62·3	65·6	60·0
	Buldana	2,132	27·896	27·776	·120	27·828	−·015	·899	82·1	59·3	22·8	88·9	54·3	34·6	74·8	80·7	69·6	+1·2	52·8	59·8	60·9	57·9

II.

at 88 Stations in India, Burma, etc., for January 1894.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from										Wind Steadiness.		Wind Velocity.						
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 of the month.	Heaviest fall during the month.	Station.	Meteorological Province.
·710	·778	·779	·756	−·038	83	73	68	74	− 2	4·1	3·6	3·9	+0·6	...	22	28	7	3	1	...	...	1	N 36° E	N 39° E	79	78	166	159	...	...	Port Blair	Burma Coast and Bay Islands.
·481	·571	·494	·515	−·053	81	63	38	61	− 5	1·5	1·5	1·5	−0·8	...	7	19	12	4	6	3	...	3	N 64° E	N 22° E	43	35	97	96	...	...	Rangoon	
·618	·645	·640	·635	−·006	76	67	62	68	− 4	1·8	2·1	2·0	−0·4	2	18	13	2	4	...	...	1	22	N 4° W	N 6° E	64	74	276*	147	...	...	Diamond Island	
·371	·663	·668	·568	?	44	65	67	59	?	2·1	2·5	2·3	?	...	37	18	6	...	...	...	...	...	N 21° E	?	87	?	508*	?	*Nil*	*Nil*	Cocos Island.	
·402	·500	·528	·476	−·021	82	62	54	66	− 5	0	0·1	0·1	−1·4	...	28	7	1	...	1	1	16	8	N 24° W	N 23° W	64	39	94	65	...	...	Akyab	
·361	·476	·436	·424	−·002	94	73	48	72	− 2	1·8	2·8	2·3	−0·9	40	...	...	1	5	9	4	2	1	S 5° W	S 29° E	24	27	46*	47	...	...	Silchar	Assam.
·328	·457	·463	·416	−·008	96	94	65	85	− 1	2·4	2·8	2·6	−2·8	35	...	17	3	5	...	2	...	...	N 67° E	N 61° E	31	51	29	43	...	...	Sibsagar	
·384	·423	·405	·403	−·022	97	76	49	74	− 2	0·5	0·7	0·6	−1·3	13	4	12	12	4	3	9	5	...	N 89° E	N 74° E	19	20	74	93	...	...	Dhubri	
·391	·500	·496	·462	−·005	93	67	56	72	− 1	0·8	0·9	0·9	−0·5	4	7	12	5	3	1	4	6	20	N 18° W	N 24° W	40	48	48*	89	...	...	Chittagong	Bengal and Orissa.
·366	·440	·395	·401	−·035	85	60	43	63	− 6	1·0	1·0	1·0	−0·6	11	5	4	...	...	3	7	20	12	N 74° W	N 53° W	52	32	64	51	...	...	Dacca	
·415	·417	·371	·401	−·036	92	57	39	63	− 8	0·8	0·7	0·8	−0·7	6	25	7	3	1	...	1	7	12	N 12° W	N 38° W	61	38	31	68	...	...	Calcutta (Alipore).	
·430	·468	?	?	?	94	60	?	?	?	?	?	?	?	?	?	?	?	?	Not	recorde	d.		?	?	?	?	?	?	*Nil*	*Nil*	,, (Chowringhee).	
·440	·534	·524	·499	−·029	85	69	60	71	− 5	1·3	1·4	1·4	−0·3	...	28	10	1	...	10	4	3	6	N 5° W	N 1° E	63	19	180	151	...	...	Saugor Island.	
·409	·361	·340	·370	−·024	90	50	35	59	− 4	0·8	1·3	1·1	−0·6	10	30	3	...	1	...	...	5	13	N 16° W	N 32° W	68	46	37*	43	...	...	Burdwan	
·361	·425	·388	·391	−·004	83	61	43	62	− 8	0·8	0·9	0·9	−1·3	11	8	2	2	...	2	3	16	18	N. 57° W.	N 41° W	53	50	40	43	...	...	Berhampore	
·493	·565	·561	·540	−·003	99	65	60	75	− 4	2·7	2·5	2·6	+0·6	...	14	6	19	3	4	3	3	10	N 38° E	N 51° E	35	22	142*	147	...	...	False Point	
·482	·462	·412	·452	−·020	89	53	35	59	− 6	0·5	1·1	0·8	−0·9	10	23	11	3	2	...	...	5	8	N 3° E	N 45° E	56	11	34	33	...	...	Cuttack	
·266	·306	·305	·292	+·025	71	47	38	52	+ 1	1·4	2·0	1·7	−0·6	3	17	...	1	1	3	3	4	30	N 38° W	N 62° W	66	54	186	118	...	...	Hazaribagh	Ganzetic Plain and Chota Nagpur.
·337	·399	·401	·379	+·016	84	63	51	66	− 1	1·3	1·6	1·5	−1·0	1	3	7	2	2	2	...	38	7	N 75° W	N 83° W	61	45	88	48	...	...	Patna (Bankipur).	
·327	·436	·403	·405	+·007	92	70	50	71	0	0·7	0·8	0·8	−0·7	5	2	1	2	4	4	10	21	13	S 86° W	S 80° W	52	47	86	59	...	...	Darbhanga	
·319	·379	·336	·345	+·005	83	60	40	61	− 7	2·5	2·4	2·5	+0·5	2	6	5	7	4	1	1	11	25	N 36° W	N 34° W	43	20	106	50	...	...	Allahabad	
·335	·393	·364	·364	+·034	84	61	44	63	+ 5	1·9	1·6	1·8	−0·2	10	...	...	4	5	2	8	32	1	S 71° W	S 76° W	53	38	43	37	0·24	0·23	Ghazipur	
·304	·360	·335	·333	+·032	88	60	44	64	+ 4	2·9	3·1	3·0	+0·1	46	...	...	...	...	...	2	14	...	S 86° W	N 57° W	24	41	32	57	...	...	Lucknow	
·262	·324	·324	·303	?	84	73	62	73	?	4·8	5·3	5·1	+1·0	33	2	1	1	2	3	4	9	4	S 80° W	S 75° W	20	17	122	43	...	...	Dehra Dun	
·291	·342	·316	·316	+·032	91	77	54	74	+ 9	4·5	4·2	4·4	+1·0	20	5	2	4	4	1	6	9	11	N 65° W	N 72° W	23	16	31	52	...	...	Roorkee	Upper Sub-Himalayas.
·317	·328	·315	·320	+·035	97	69	51	72	+ 8	4·6	3·7	4·2	+1·0	19	1	1	4	2	...	5	22	8	N 84° W	N 49° W	40	45	43	50	...	...	Meerut	
·273	·327	·329	·310	+·045	90	77	64	77	+16	4·8	4·7	4·8	+1·5	13	9	2	6	3	2	1	6	20	N 61° W	N 25° W	37	21	43	45	...	...	Lahore	
·315	·346	·341	·334	+·053	96	78	63	79	+12	5·2	5·7	5·5	+1·4	23	9	...	1	2	5	...	14	8	N 64° W	N 56° W	31	25	47	30	...	...	Ludhiana	
·208	·247	·235	·230	+·005	84	68	52	68	+ 6	4·9	4·8	4·9	+0·2	17	4	3	3	4	3	10	7	11	S 48° W	S 19° E	14	6	75*	60	...	...	Peshawar	
·246	·239	·278	·254	−·006	85	55	48	63	+ 4	4·9	4·7	4·8	+2·0	24	3	22	1	4	...	4	...	4	N 41° E	N 9° W	34	24	15*	37	...	...	Mooltan	Indus Valley and N.-W. Rajputana.
·226	·270	·256	·251	+·039	74	55	43	57	+12	3·7	4·3	4·0	+1·1	56	1	3	1	...	...	...	...	1	N 32° E	N 10° W	6	27	40*	49	...	...	Jacobabad	
·307	·404	·403	·371	+·023	73	59	55	62	+ 6	2·6	1·8	2·2	−0·4	...	13	33	15	...	...	...	1	...	N 46° E	N 23° W	84	17	271	237	...	...	Kurrachee	
·300	·309	·303	·304	+·036	81	53	42	59	+ 8	3·5	4·2	3·9	+0·7	...	2	8	5	5	4	9	20	9	N 88° W	N 15° E	31	21	56	91	...	...	Jeypore	
·287	·333	·363	·328	+·065	80	60	48	63	+12	2·6	2·9	2·8	+0·5	3	1	12	3	11	7	6	14	5	S 24° W	N 82° E	11	8	73	47	...	...	Ajmere	E. Rajputana, C. India and Gujarat.
·305	·301	·275	·294	+·033	72	39	27	46	+ 8	1·8	1·9	1·9	−0·4	...	13	22	4	1	...	2	9	10	N 5° E	N 3° W	53	39	210	207	...	...	Deesa	
·346	·373	·364	·361	+·072	98	63	46	69	+12	2·9	3·3	3·1	+0·2	1	11	3	14	...	1	4	14	14	N 29° W	N 24° W	35	22	38*	32	...	...	Nowgong	
·294	·350	·350	·331	+·043	79	63	48	63	+ 7	3·5	3·1	3·3	+0·9	...	...	8	...	14	...	4	...	36	N 34° W	N 64° W	35	35	96	82	...	...	Agra	
·380	·343	·281	·335	−·017	79	40	26	49	+ 3	2·0	2·1	2·1	+0·5	...	3	7	18	20	8	4	1	1	S 64° E	S 71° E	58	50	246	261	...	...	Belgaum	Deccan.
·334	·402	·370	·368	+·026	65	43	30	46	+ 3	0·9	2·6	1·8	−0·2	2	1	8	6	35	6	2	1	1	S 53° E	S 60° E	68	55	245*	171	...	...	Sholapur	
·329	·317	·274	·307	−·016	76	35	23	45	+ 4	0·6	1·6	1·1	−0·7	13	...	7	14	13	1	7	2	5	S 69° E	S 63° E	31	24	113	137	...	...	Poona	
·340	·391	·366	·366	+·045	75	44	30	50	+ 2	2·4	2·9	2·7	+1·4	4	9	8	8	8	6	6	8	5	N 57° E	N 54° E	6	30	93	83	...	...	Akola	
·324	·330	·292	·316	0	64	38	28	43	− 1	0·4	2·3	1·4	−0·8	...	11	3	2	8	14	6	3	15	S 89° W	N 76° E	13	21	146*	134	0·03	0·03	Buldana	

* Corrected.

Table.

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88 Stations

Meteorological Province.	Station.	Height of barometer 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 to gravity, 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Deccan—*continued.*	Khandwa	...	28·977	28·856	·121	28·909	—·026	29·914	85·6	54·6	31·0	92·2	44·1	48·1	74·6	83·9	69·0	+2·3	49·9	60·5	63·1	57·8
	Hoshangabad	...									Imperfect.											
	Nagpur	...	29·024	·882	·142	·945	—·010	·935	83·9	56·3	27·6	92·1	49·6	42·5	73·1	82·6	69·1	+0·9	52·7	61·3	64·2	59·4
	Jubbulpore	...	28·725	28·587	·128	·653	-·011	·963	78·0	50·5	27·5	86·6	40·9	45·7	66·3	76·5	63·2	+1·6	49·8	58·5	61·9	56·7
	Saugor	...	·283	·167	·116	·217	—·006	·957	77·7	52·2	25·5	86·9	44·0	42·9	68·4	76·2	63·9	+0·9	49·1	57·6	61·5	56·1
	Raipur	...	29·091	·947	·144	29·011	—·016	·931	83·0	57·3	25·7	90·3	51·0	39·3	73·2	81·3	68·9	+2·1	52·8	61·2	63·4	59·0
	Sutna	...	·022	·896	·126	28·919	—·018	·977	75·0	51·1	23·9	84·0	41·2	42·8	66·6	74·5	62·2	+2·1	48·0	57·0	59·5	54·8
	Hyderabad (Deccan).	...	28·356	·233	·123	·289	?	·927	83·8	58·6	25·2	91·6	51·7	39·9	75·6	80·9	70·5	?	56·5	64·4	64·0	61·6
West Coast.	Bombay	...	30·008	29·888	·120	29·939	—·013	·917	83·1	68·7	14·4	87·3	65·8	21·5	75·6	80·1	74·8	+1·7	63·6	67·9	71·0	67·5
	Ratnagiri	...	29·912	·792	·120	·843	—·011	·891	87·2	66·5	20·7	93·5	63·3	30·2	83·1	82·8	75·3	+0·2	61·6	68·8	72·5	67·6
	Karwar	...	·966	·846	·120	·897	—·021	·873	87·3	65·6	21·7	91·3	62·1	29·2	78·8	84·2	75·2	−0·1	62·2	68·9	72·0	67·7
	Cochin	...	·977	·859	·118	·909	—·012	·846	90·0	71·3	18·7	92·5	68·0	24·5	83·3	86·0	79·3	+0·7	67·7	71·7	74·0	71·1
South India.	Salem	...	·103	28·959	·144	·034	—·021	·910	88·6	63·4	25·2	94·2	57·3	36·9	79·7	85·2	74·5	+0·3	61·4	67·5	68·4	65·8
	Mysore	...	27·511	27·389	·122	27·450	?	·874	83·2	59·5	23·7	86·8	55·3	31·5	73·8	81·3	70·9	?	57·2	64·1	64·5	61·9
	Mercara	...	26·295	26·185	·110	26·243	—·016	·875	76·4	57·2	19·2	80·3	53·5	26·5	65·9	74·5	66·4	+1·1	54·1	60·2	65·3	59·9
	Bangalore (Fort)	...	27·027	·907	·120	·966	—·035	·872	82·3	57·3	25·0	87·8	52·1	35·7	73·7	78·6	68·9	+1·1	55·5	62·0	62·2	59·9
	Hassan	...	26·963	·842	·121	·902	?	·866	81·1	54·7	26·4	85·4	47·0	38·4	72·9	79·3	67·5	?	50·3	61·0	61·3	57·5
	Chitaldroog	...	27·619	27·492	·127	27·552	?	·867	83·5	61·1	22·4	88·0	53·0	35·0	75·0	82·0	71·9	?	53·6	62·0	62·2	59·3
	Trichinopoly	...	29·770	29·638	·132	29·707	—·016	·895	87·5	66·9	20·6	92·6	60·3	32·3	82·3	84·9	75·9	+0·4	64·6	69·3	69·7	67·9
	Madras	...	30·031	·929	·102	·977	—·015	·929	85·1	66·4	18·7	91·2	60·6	30·6	80·4	81·1	75·1	−0·4	?	72·2	71·8	70·7
	Bellary	...	28·558	28·444	·144	28·482	+·002	·896	86·8	60·7	26·1	92·9	56·1	36·8	77·6	85·5	73·3	+0·1	57·5	68·1	69·5	65·0
	Vizagapatam	...	30·042	29·916	·126	29·969	—·024	·938	78·9	69·8	9·1	84·9	65·9	19·0	76·1	79·0	75·7	0	62·9	68·8	70·5	67·4
	Cocanada	...	·047	·916	·131	·982	?	·944	81·9	65·0	16·9	92·4	60·7	31·7	78·3	80·2	73·0	?	63·6	69·8	71·4	68·3
Hill Station, Baluchistan.	Quetta	...	24·683	24·613	·070	24·638	—·020	?	44·1	27·3	16·8	63·3	14·9	48·4	37·2	41·1	35·1	−5·1	27·0	34·0	36·8	32·6
Hill Stations, Northern India	Leh	11,503	19·577	19·509	·068	19·544	—·082	?	29·9	10·3	19·6	41·9	−6·5	48·4	20·5	24·5	18·5	−0·2	9·8	17·0	21·6	16·1
	Srinagar	...	24·966	24·895	·071	24·921	?	?	36·3	26·6	9·7	44·5	20·6	23·9	31·9	34·7	31·0	?	26·2	30·5	32·6	29·7
	Murree	...	23·844	23·807	·037	23·815	—·046	?	39·9	31·4	8·5	56·5	27·3	29·2	36·3	36·2	34·2	−5·2	28·9	32·9	33·6	31·9
	Chamba	3,005	27·048	26·964	·084	27·005	+·001	?	55·6	40·1	15·5	71·8	33·2	38·6	46·9	51·0	45·5	−3·0	38·6	43·1	45·4	42·4
	Kailang	10,087	20·751	20·697	·054	20·723	—·030	?	31·8	15·5	16·3	39·5	2·0	37·5	23·7	26·5	21·1	−1·1	14·4	20·3	22·7	19·1
	Simla (Ridge)	...	23·123	23·070	·053	23·086	—·024	?	44·0	34·0	10·0	53·3	28·6	24·7	40·2	40·6	37·7	−3·3	30·3	34·3	36·2	33·7
	Simla (Chapslee)	...	?	?	?	?	?	?	46·1	34·2	11·9	61·9	28·3	33·6	40·8	?	?	?	31·1	34·9	?	?
	Chakrata	...	·274	·213	·061	·234	—·028	?	46·9	34·2	12·7	61·5	29·2	32·3	41·3	42·5	39·0	−2·8	31·7	36·6	38·2	35·5
	Ranikhet	...	24·137	24·078	·059	24·093	—·017	?	52·5	39·0	13·5	62·2	33·0	29·2	46·9	49·9	44·6	−1·6	36·9	41·5	43·1	40·5
	Katmandu	4,388	25·728	25·615	·113	25·666	—·027	?	63·4	35·8	27·6	69·1	31·2	37·9	48·6	58·8	48·4	−2·2	34·0	44·7	49·1	42·6
	Darjeeling	...	22·990	22·909	·081	22·944	—·013	?	46·2	34·4	11·8	53·2	31·2	22·0	42·6	43·3	39·6	+0·4	33·0	39·3	40·4	37·6
	Demagiri	?	?	?	?	?	?	?	85·0	52·7	32·3	89·9	48·1	41·8	64·9	72·3	65·7	+2·1	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	72·1	57·0	15·1	74·6	50·4	24·2	64·5	70·1	64·1	?	?	57·2	60·3	?
Hill Stations, Central India.	Mount Abu	...	26·151	26·072	·079	26·100	—·032	?	64·0	51·0	13·0	71·7	42·1	29·6	60·4	61·3	56·8	−1·4	45·1	50·0	51·6	48·9
	Pachmarhi	...	·574	·484	·090	·521	+·001	?	72·3	50·3	22·0	79·2	41·1	38·1	67·1	69·7	59·0	+2·0	46·7	55·3	56·6	52·8
	Chikalda	3,642	·458	·357	·101	·400	—·015	?	73·3	57·2	16·1	80·0	52·4	27·6	66·9	71·8	63·1	+0·8	51·6	57·0	58·8	55·8

II—*continued.*

in India, Burma, etc., for January 1894—continued.

Vapour tension.					Humidity.					Cloud.				Wind direction. Number of winds from											Wind steadiness.		Wind velocity.						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 of the month.	Heaviest rainfall during the month.	Station.	
·307	·356	·321	·328	−·001	71	41	27	47	−3	1·1	1·6	1·4	−0·1	2	4	13	4	2	7	10	8	12	N. 55° W.	N. 25° E.	18	23	86	69	...	...	Khandwa	Deccan—*continued.*
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	?	N. 59° E.	?	39	?	58	...	...	Hoshangabad	
·357	·398	·371	·374	+·023	78	49	33	53	+2	1·4	2·2	1·8	−0·4	5	3	18	11	5	10	5	2	3	S. 53° E.	N. 72° E.	39	30	92	73	...	...	Nagpur	
·355	·399	·377	·377	+·048	94	62	41	66	+6	2·0	2·4	2·2	+0·1	7	13	13	...	9	10	...	5	5	N. 37° E.	N. 8° E.	19	17	50	50	...	...	Jubbulpore	
·317	·348	·367	·344	+·071	80	50	42	57	+9	1·9	2·3	2·1	+0·6	...	8	11	5	13	6	10	2	7	S. 79° E.	N. 13° E.	13	24	52	66	...	...	Saugor	
·350	·385	·351	·359	+·006	72	47	33	50	−4	1·3	2·1	1·7	+0·2	15	3	12	8	...	1	6	7	7	N. 2° E.	N. 5° E.	17	21	30*	67	...	...	Raipur	
·318	·351	·328	·332	+·065	77	53	38	56	+5	1·0	2·2	1·6	−0·5	2	17	6	5	2	4	...	4	22	N. 16° W.	N. 16° W.	53	27	105*	100	...	...	Sutna	
·437	·469	·388	·432	?	88	54	37	60	?	2·3	1·9	2·1	?	5	...	5	10	36	2	2	2	...	S. 55° E.	?	71	?	87*	?	...	...	Hyderabad (Deccan,)	
·525	·581	·642	·583	+·004	74	66	62	67	−3	0·2	0·3	0·3	−1·2	...	5	12	14	1	...	...	6	24	N. 1° E.	N. 6° E.	48	63	224	242	...	...	Bombay	
·486	·517	·661	·554	−·001	75	46	59	60	0	1·4	1·2	1·3	+0·7	...	8	...	5	7	3	5	15	19	N. 66° W.	N. 34° W.	39	30	195*	216	...	...	Ratnagiri	West Coast.
·517	·577	·624	·573	−·022	82	59	54	65	−4	0·3	0·2	0·3	−0·6	4	...	18	...	...	...	...	19	21	N. 38° W.	N. 5° W.	56	53	52	?	...	...	Karwar	
·632	·623	·680	·645	−·041	82	55	55	64	−6	0·9	2·2	1·6	−0·4	1	9	20	1	...	...	1	28	2	N. 32° W.	S. 11° W.	45	13	118	?	...	...	Cochin	
·523	·515	·470	·503	−·064	89	51	40	60	−5	3·7	5·2	4·5	+1·9	6	11	31	10	2	...	...	...	2	N. 44° E.	S. 84° E.	74	61	110	115	...	...	Salem	
·445	·478	·401	·441	?	90	56	38	61	?	3·0	3·2	3·1	?	...	1	13	44	3	1	...	...	...	N. 83° E.	?	90	?	245*	?	...	...	Mysore	South India.
·385	·448	·520	·451	+·025	82	68	61	70	+8	2·2	2·5	2·4	−0·7	...	4	23	26	7	...	...	...	2	N. 70° E.	N. 68° E.	79	60	188	105	...	...	Mercara	
·426	·426	·374	·409	+·010	89	51	39	60	−1	2·2	1·9	2·1	−0·6	...	1	18	34	9	...	...	...	...	N. 82° E.	N. 88° E.	87	83	179*	92	...	...	Bangalore (Fort)	
·319	·405	·337	·354	?	72	50	34	52	?	3·6	3·9	3·8	?	3	...	19	30	10	...	...	...	...	N. 83° E.	?	82	?	82*	?	...	...	Hassan	
·323	·397	·316	·345	?	60	47	29	45	?	1·8	2·3	2·1	?	1	...	14	30	15	2	...	...	...	S. 87° E.	?	82	?	183*	?	...	...	Chitaldroog	
·583	·546	·527	·552	−·057	88	50	45	61	−7	3·1	4·5	3·8	−0·4	7	8	41	6	...	...	...	...	...	N. 43° E.	N. 48° E.	82	77	60	115	...	...	Trichinopoly	
?	·684	·658	·695	+·055	?	67	63	80	+6	4·5	4·1	4·3	+0·4	...	13	31	13	3	...	...	2	...	N. 47° E.	N. 48° E.	77	76	111	143	...	...	Madras	
·440	·573	·528	·516	+·109	82	60	43	62	+13	3·4	3·5	3·5	+1·3	...	2	4	26	25	5	...	...	...	S. 69° E.	S. 69° E.	81	68	85	80	...	...	Bellary	
·482	·620	·646	·583	+·002	65	68	65	66	+1	1·4	1·5	1·5	−0·2	...	11	11	3	9	4	8	14	2	N. 43° W.	S. 60° E.	10	42	16	42	...	...	Vizagapatam	
·575	·618	·655	·616	?	92	64	63	73	?	1·2	0·9	1·1	?	...	2	25	11	17	...	...	2	5	N. 72° E.	?	60	?	193*	?	...	...	Cocanada	
·147	·168	·179	·165	+·007	97	76	71	81	+15	4·3	4·4	4·4	+0·2	47	1	...	...	...	3	3	5	3	S. 79° W.	N. 83° W.	16	27	37*	84	...	...	Quetta	Hill Station, Baluchistan.
·063	·070	·095	·076	+·004	85	62	70	72	+7	7·8	7·5	7·7	+1·2	3	...	3	4	5	18	26	3	...	S. 17° W.	S. 8° E.	63	24	32	24	0·65	0·20	Leh	Hill Stations, Northern India.
·139	·155	·161	·151	?	96	85	80	87	?	9·3	8·8	9·1	?	43	1	1	2	5	5	1	...	4	S. 29° E.	?	8	?	67*	?	...	...	Srinagar	
·137	·155	·167	·154	+·015	79	76	81	79	+21	6·5	7·6	7·1	+1·2	1	...	1	5	48	6	...	...	1	S. 45° E.	S. 54° E.	89	35	318*	198	...	...	Murree	
·219	·237	·243	·233	+·017	87	74	67	76	+10	6·0	6·5	6·3	+0·3	41	1	...	3	2	2	1	3	9	N. 60° W.	S. 70° E.	11	13	53*	64	11·90	1·76	Chamba	
·079	·086	·093	·086	−·013	86	66	65	72	0	6·8	6·8	6·8	+0·1	...	3	2	2	2	10	15	11	17	S. 79° W.	S. 68° W.	47	48	28	20	4·28	1·01	Kailang	
·129	·140	·170	·141	−·010	66	59	69	61	+3	5·4	7·1	6·3	+0·9	5	6	8	4	3	29	2	...	...	S. 26° E.	S. 31° W.	39	19	150	?	...	...	Simla (Ridge)	
·141	·144	?	?	?	71	60	?	?	?	5·6	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	7·11	1·79	Simla (Chapslee)	
·155	·171	·189	·172	+·016	80	69	71	73	+11	5·9	6·1	6·0	+1·3	6	...	9	18	3	2	1	18	5	S. 25° E.	S. 66° W.	16	9	162	114	9·66	2·25	Chakrata	
·200	·208	·211	·206	+·015	84	66	60	70	+8	4·7	4·9	4·8	+0·8	30	4	2	8	...	...	...	18	...	N. 58° W.	S. 70° W.	16	17	31	43	...	...	Ranikhet	
·180	·253	·241	·225	−·028	84	74	49	69	−5	2·1	3·4	2·8	−0·6	1	3	1	1	1	1	3	35	16	N. 76° W.	N. 78° W.	77	64	25	?	0·14	0·14	Katmandu	
·175	·207	·223	·201	−·002	88	77	79	81	+1	5·4	6·8	6·1	+0·4	5	...	4	14	1	...	10	19	7	W.	S. 84° W.	23	22	112	62	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	5	4	26	2	1	...	19	5	N. 49° E.	N. 50° W.	19	34	?	?	*Nil*	*Nil*	Demagiri	
?	·386	·413	?	?	?	63	56	?	?	1·8	3·5	2·7	−0·1	...	...	...	5	13	22	20	1	1	S. 2° W.	S. 4° W.	72	53	?	?	*Nil*	*Nil*	Tura	
·236	·244	·273	·251	+·053	63	47	51	54	+13	1·9	2·1	2·0	−0·6	...	5	10	1	7	3	16	12	8	S. 87° W.	N. 83° W.	35	6	145*	113	...	...	Mount Abu	Hill Stations, Central India.
·283	·305	·310	·300	+·023	76	46	43	55	+1	2·0	2·5	2·3	0	11	4	3	1	4	10	13	8	8	S. 59° W.	N. 68° W.	32	13	51	73	...	...	Pachmarhi	
·322	·353	·348	·341	+·031	68	54	45	56	+4	2·7	3·1	2·9	+0·9	23	3	...	...	4	20	1	4	7	S. 23° W.	S. 48° W.	27	24	143	118	0·37	0·32	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88 Stations

Meteorological Province.	Station.	Height of the 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 to 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.
Hill Stations, South India.	Wellington	...	24·297	24·219	·078	24·258	—·011	?	66·3	44·4	21·9	72·2	37·1	35·1	61·1	62·0	54·3	—0·8	42·3	51·6	53·7	49·2
Extra India.	Muscat	...	30·103	30·009	·094	30 056	?	?	72·0	67·5	4·5	76·0	57·9	18·1	70·6	71·4	69·6	?	61·0	63·7	64·8	63·2
	Aden	...	29·974	29·858	·116	29·908	—·028	29·935	79·5	72·8	6·7	82·7	68·4	14·3	76·4	78·1	75·8	—0·1	68·2	70·3	70·0	69·5
	Perim	...	·838	·724	·114	·773	?	?	82·3	73·0	9·3	85·2	68·9	16·3	78·7	78·9	76·8	?	69·1	70·9	70·6	70·2
	Minicoy	...	·987	·882	·105	·931	?	·856	86·5	?	?	88·7	?	?	81·9	83·4	?	?	71·6	74 9	75·4	74·0
	Zanzibar	...	·898	·791	·107	·845	?	·843	86·7	79·3	7·4	88·5	72·2	16·3	83·3	85·9	82·8	?	77·4	77 9	78·2	77·8

II—*concluded.*

in India, Burma, etc., for January 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from											Wind Stradiness.		Wind Velocity.						
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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·255	·289	·330	·291	—·009	85	56	61	67	−1	2·6	4·2	3·4	+0·1	...	1	9	8	30	12	2	...	...	S. 51° E.	S. 14° E.	71	62	58	53	...	...	Wellington .	Hill Station, South India.
·457	·511	·529	·499	?	67	66	68	67	?	3·2	2·6	2·9	?	...	2	10	13	4	...	1	10	22	N. 9° W.	?	34	?	103	?	...	...	Muscat .	Extra India.
·630	·662	·626	·639	−·005	78	73	65	72	0	5·8	1·7	3·8	−0·1	6	12	...	28	10	3	1	...	...	N. 88° E.	N. 84° E.	57	70	333	309	...	...	Aden .	
·662	·655	·640	·652	?	82	67	65	71	?	2·2	0·9	1·6	?	...	1	5	34	18	...	1	...	3	S. 82° E.	?	77	?	487	?	...	...	Perim .	
?	·771	·777	?	?	?	71	68	?	?	3·8	4·3	4·1	?	6	26	27	3	...	...	...	...	...	N. 26° E.	?	81	?	141	195	...	...	Minicoy .	
·916	·885	·862	·886	?	92	77	70	80	?	3·6	3·1	3·4	?	...	14	28	7	2	2	3	1	3	N. 37° E.	N 27° E.	63	60	244	195	6·79	2·86	Zanzibar .	

G. I. C. P. O.—No. 129 Meteor.—17 5-94.—400.

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.

Reg. No. 189, Wr., I.—April 93.—500.—190 R., May 93 —6,500.

Litho., S. I. O., Calcutta.

J.N.M

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.

Ref No. 199, Wr., I.—April 93.—500.—199 R., May 93 – 5,500.

Litho., S. I. O., Calcutta.

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

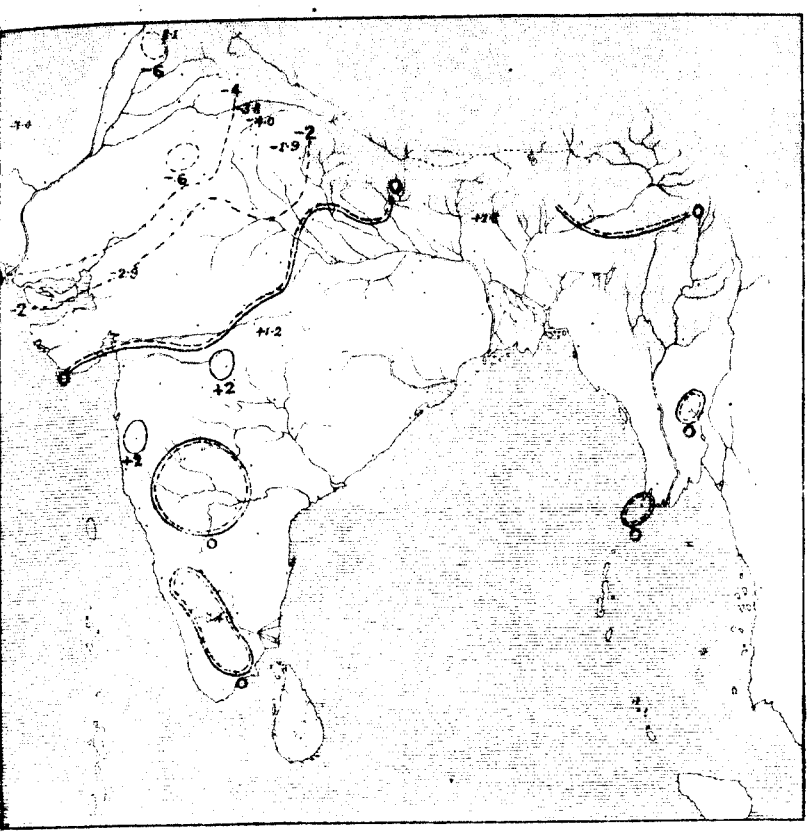
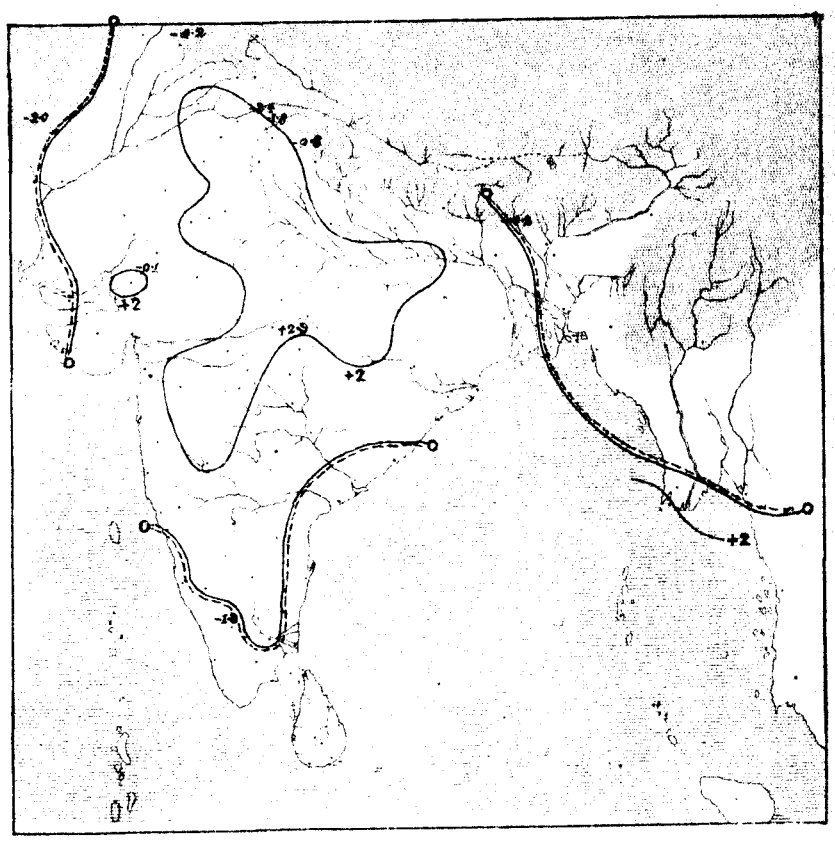


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

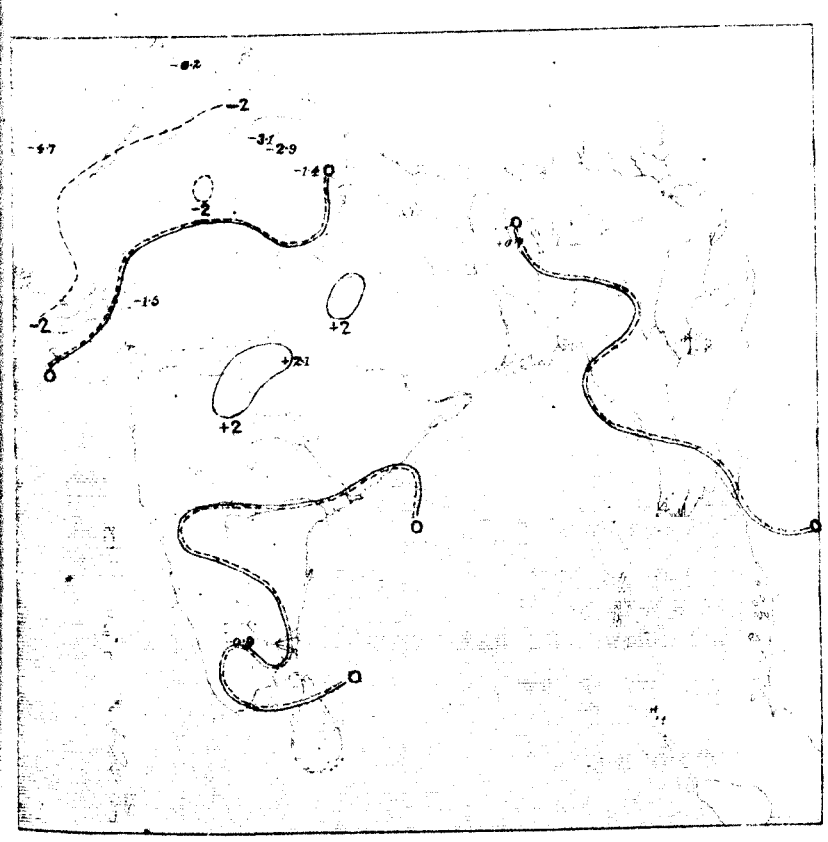
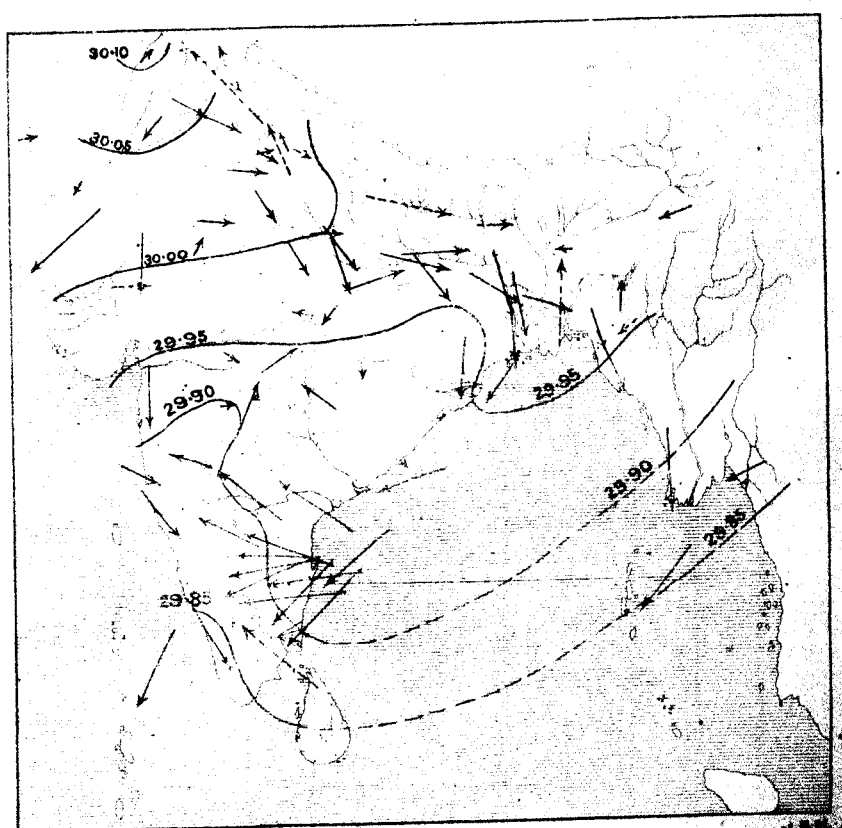


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF JANUARY 1894.



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 of the resultant; a length of $\frac{1}{8}$th of an inch being equal to 100 per cent.

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. 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. 194, Wr. I.—April 93—500—199 R., May 93—5,500.

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 51 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 name of the districts 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 figures.

1. Tenasserim	15. Behar (North)	29. Madras (South Central)	43. Central India (East)
2. Lower Burma	16. North Western Provinces (East)	30. Coorg	43(a.) Do. do. (a)
3. Central do.	17. Oudh (South)	31. Mysore	44. Rajputana (East) Central India (West)
4. Upper do.	18. Do. (North)	32. Konkan	45. Rajputana (West))
5. Arakan	19. North Western Provinces (Central)	33. Bombay Deccan	46. East Coast (North)
6. Eastern Bengal	20. Do. do. (West)	34. Hyderabad (North)	46(a.) Do. do. (a)
7. Assam (Surma)	21. Do. do. (Submontane)	35. Khandeish	47. Hyderabad (South)
8. Do. (Brahmaputra)	22. Punjab (South)	36. Berar	48. Madras (Central)
9. Deltaic Bengal	23. Do. (Central)	37. Central Provinces (West)	49. East Coast (Central)
10. Central do.	24. Do. (Submontane)	38. Do. (Central)	50. East Coast (South)
11. North do.	25. Do. (Hill Districts)	39. Do. (East)	51. Madras (South)
12. Orissa	26. Do. (North West)	40. Guzerat	
13. Chota Nagpore	27. Punjab (West)	41. Kattiawar	
14. Behar (South)	28. Malabar	42. Sind	

Reg. No. 109, Wr. I.—April 93—500.—109 B. May 93—6,500.
Litho., S. I. O., Calcutta.

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, FEBRUARY, 1894.

INTRODUCTION.

THIS Review of the weather in India during the month of February 1894 is based on observations taken daily at 8 A.M. at 203 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 88 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 February 1894.

February is usually the last month of the cold weather in Northern India. Temperature increases rapidly, more especially in the latter half of the month, and pressure decreases slowly in Upper India. The north-east winds in the Bay of Bengal and Arabian Sea usually diminish slightly in strength during the month. The general character of the air movement in India in February is similar to January. An important change, however, commences at the head of the Bay in the latter half of the month. Local southerly winds usually set in on the Bengal coast. These extend at first to a short distance from the coast landwards and seawards and are very unsteady, but gradually increase in intensity and volume, and become an important feature of the air movement in India during the hot-weather months. The setting in of these winds usually accompanies the appearance of a shallow depression in West Bengal and Chota Nagpur. It is at first very feeble, but gradually developes, and becomes an important feature of the pressure distribution of the hot-weather months.

The chief disturbances of February are cold-weather storms similar in all respects to the corresponding storms of the preceding month. In North-Eastern India there are periods of slight local disturbances shown chiefly by the occurrence of series of thunderstorms at irregular intervals after the setting in of the hot-weather southerly winds on the Bengal coast.

The month of February 1894 was somewhat more disturbed than usual. A series of three disturbances occurred during the month, which were characterized by small pressure changes in India, but which nevertheless gave heavier rain than usual in the plains of Northern India. Although they belonged undoubtedly to the class of disturbances known as cold-weather storms, they had some of the features of the larger disturbances of the hot-weather season in Northern India.

Fine clear weather prevailed over nearly the whole of India at the commencement of the month. Temperature was considerably below the normal in Upper India due to the advance of a cool wave. It was largely in excess in Central India, the Central Provinces and North Deccan. Weather was slightly disturbed in the centre of this warm area, and local thunderstorms and hailstorms occurred in

North-Eastern India and the Peninsula. Series of thunderstorms gave moderate rain in Bengal on the 3rd, and in Central and South Madras on the 3rd, 4th and 5th. The cool wave in Upper India on the 1st had extended across Northern India during this period, and produced a slight temporary reduction of temperature on the 2nd and 3rd in the area of abnormally high temperature in Central India and the north of the Peninsula. Temperature increased rapidly on the 4th and 5th, and on the 6th was considerably above the normal over the whole of the interior of Northern India and the Peninsula. The excess on that day was greatest at Khandwa and Indore where the mean temperature of the 24 hours preceding 8 A.M. of the 6th was 9° above the normal.

The weather of the next week was chiefly determined by the passage of a feeble depression or low pressure wave through Northern India. This appears to have originated in the Mediterranean during the last week of January. It passed through Persia as a moderately deep depression on the 3rd and 4th, and gave moderate rain and snow on these days to that area. It advanced into Baluchistan on the 6th and into Sind and West Rajputana on the 7th. Baluchistan received general rain and snow from the 4th to the 7th. The depression advanced across Northern India as a very shallow low pressure area, at a rate averaging about 350 miles per diem. It was in East Rajputana, Bundelkhand and Baghelkhand on the 8th, Bihar and Chota Nagpur on the 9th, Central and East Bengal on the 10th, and disappeared during the next 24 hours, passing probably across Upper Burma. The disturbance gave a moderate burst of rain to the Punjab, the North-Western Provinces, Bihar, Central India, Berar and Khandesh from the 7th to the 9th. Its passage through Bengal and Upper Burma gave much cloud but no rain to those areas. Moderately heavy snow fell on the higher elevations of the Western Himalayas during the eastward progress of the storm across Northern India, but the snow did not fall to so low an elevation as is usual in February, and hence its effect in reducing temperature after the weather cleared up was smaller than usual. A feeble cool wave crossed the frontier on the 8th, and advanced eastwards along the Gangetic Plain during the next four days.

It reduced temperature to a moderate extent in that area, but its influence was very slight to the west of Bihar, or to the south of Rajputana and the North-Western Provinces. Temperature continued in general excess in Central and North-Eastern India and the north of the Peninsula. On the 12th temperature was more or less in excess over the whole of India, the excess on that day being absolutely greatest at Mooltan (8°·6) and Deesa (7°·9) and averaging nearly 3° for the whole of India.

Pressure had given way rapidly in Persia on the 8th and 9th, and the disturbance thus initiated gave general rain or snow to that area from the 8th to the 11th or 12th. It apparently filled up without advancing as a definite depression across Baluchistan. Skies, however, clouded over in Upper India and Baluchistan, and light rain was received from the 10th to the 14th in Baluchistan, and on the 13th and 14th in the North Punjab.

Temperature had further increased relatively to the normal during this period over nearly the whole of Northern and Central India and the north of the Peninsula, and was in large excess on the 14th and 15th. The excess on the 15th averaged 6° for the whole of India excluding Madras, and was absolutely greatest in Rajputana and Central India. The following table, giving temperature variation data of the 15th for the three stations at which the temperature was most largely in excess, illustrates the character of the temperature conditions of the period :—

Station.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Jeypore	+ 10·9	+ 13·0	+ 12·0
Roorkee	+ 8·8	+ 14·9	+ 11·9
Jhansi	+ 12·0	+ 10·1	+ 11·1

Light to moderate thunder showers were received in the Punjab, Rajputana and the western districts of the North-Western Provinces on the 16th and 17th, either as a residual effect of the disturbance which originated in Persia on the 9th and 10th, or, as is more probable, an effect of a thermal disturbance due to the abnormally high temperature conditions of the period in North-Western and Central India.

The rainfall produced a moderate reduction of temperature in North-Western and Central India and the area of greatest excess of temperature was hence transferred to the eastern districts of the North-Western Provinces on the 17th, and to Bengal on the 18th and 19th. Thus the mean temperature of the 24 hours preceding 8 A.M. of the 18th averaged 8° above the normal in Bengal. This temperature disturbance was followed by slightly unsettled weather of the ordinary hot-weather type in North-Eastern India. Series of thunderstorms occurred daily from the 20th to the end of the month which gave moderate rain to Bengal and moderately heavy rain in Assam. This "hot-weather disturbance" in fact initiated the spring rains in Assam.

Weather was also disturbed during the same period in Persia. Pressure fell below the normal on the 21st, and changed rapidly and very irregularly during the remainder of the month. Showery thundery weather hence prevailed over that area, and extended as far eastwards as Baluchistan, which received daily rain from the 22nd to the end of the month. A depression appeared in Sind and

West Rajputana on the morning of the 28th. This depression almost certainly formed in that area and was not due to the advance of a low pressure wave from Persia. Moderately heavy general rain had fallen over the whole of the Punjab and the western districts of the North-Western Provinces during the previous 24 hours, and the disturbance continued to be the chief feature of the first week of March. The temperature conditions of the last week of the month varied rather rapidly and irregularly from day to day, but throughout the whole period temperature continued in moderate excess in Central India and the northern half of the Peninsula.

Pressure.—The mean pressure of the month of the whole of India was ·010″ in excess and hence practically normal. The pressure anomalies were also small in amount, and hence the distribution of the mean pressure of the month was approximately normal over the whole Indian area. Pressure was, relatively to the general condition, in slight excess in Northern India and in very slight defect in the Peninsula. Pressure was in slight to moderate excess at the hill stations as compared with the neighbouring plain stations. This change in the character of the vertical pressure anomalies indicated the probability that the cold weather season would not be prolonged beyond its normal period, as was the case in February 1893, when the vertical pressure anomalies were negative and large in amount.

Temperature.—One of the more remarkable features of the month was that the precipitation in the mountain districts of North-Western India occurred as rain to much higher elevations than is usual in February, although weather was more disturbed than usual and the rainfall above the average in Northern India. Hence there was no large accumulation of snow over the lower ranges and the snowfall in the Himalayan area exercised very little influence on the temperature conditions of the plains of India.

The mean maximum or day temperature was in slight defect in Sind, the Punjab and North-Western Provinces and also the North Deccan and South Madras. It was more or less considerably in excess in Burma, North-Eastern India, Central India and the north of the Peninsula. The excess ranged between 2° and 4° in Assam, East and North Bengal, the greater part of Chota Nagpur, the Central Provinces, Berar and Khandesh, and was on the whole greatest in Assam and North Bengal.

The mean minimum or night temperature was normal in amount in the southern half of the Peninsula and was more or less in excess over the remainder of India and in Burma. The excess was large and exceeded 4° in the greater part of Northern and Central India. It was largest in two areas, one including the northern districts of the Central Provinces and the adjacent districts of Central India and the other North Bengal and North Bihar. In these two areas it ranged in amount between 5° and 6°.

The mean temperature of the month was practically normal in the south and centre of the Peninsula, and was normal or in slight excess in North-Western India. It was more or less largely above the normal in the belt of country stretching across from Assam and Upper Burma to Khandesh and South-West Rajputana over which the mean temperature was more than 2° above the normal. It was most largely in excess in two areas for which data are given below :—

	Station.	Variation from normal of		
		Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
		°	°	°
North Central Provinces.	Jubbulpore	+3·1	+5·4	+4·3
	Saugor	+3·4	+5·1	+4·3
	Hoshangabad	+2·2	+5·9	+4·1
	Indore	+3·7	+5·0	+4·4
	Khandwa	+3·5	+6·0	+4·8
Ben. Gal.	Dhubri	+3·8	+4·2	+4·0
	Jalpaiguri	+4·0	+5·3	+4·7
	Dinajpur	+3·1	+6·1	+4·6

The preceding data indicate that in these areas there was a large increase both in the day and the night temperature and hence a general elevation of temperature due to persistent conditions during the month.

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

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

Winds.—Were lighter and even more unsteady than usual in the Punjab and Gangetic plain. They were on the other hand much stronger at the hill stations. The average wind velocity of the month at Murree was 63 per cent. in excess, at Chakrata 34 per cent. and at Mount Abu 22 per cent. Southerly winds were later in commencing on the Bengal coast than usual, and hence the

mean wind directions of the Bengal stations differed considerably from the normal and were much more northerly and westerly than usual. Winds were also more northerly over the whole of Central India, Rajputana, and the greater part of the Central Provinces. Winds were exceptionally strong at Aden and Perim, as was the case in February 1893, when weather was also more disturbed than usual in the Persian area and Northern India.

Humidity and Cloud.—The air was somewhat damper than usual at Port Blair and in Burma, Assam and East Bengal. The mean humidity conditions of the month were practically normal in South Bengal and Orissa. There was a large excess of vapour in the air in Chota Nagpur, Bihar, the North-Western Provinces, Sind, Rajputana, Central India and the northern districts of the Central Provinces. Over the greater part of that area the relative humidity was 10 or upwards above the normal. The increased humidity was greatest in the two areas represented by the stations of Sutna (+18), Nowgong (+16), Lahore (+16), and Ludhiana (+15). The increased humidity was on the whole less marked at the hill stations in Northern India than in the neighbouring plains.

The air was on the whole slightly damper than is usual in February in the Peninsula. There were some local exceptions, of which the most noteworthy were Bombay, Cochin and Trichinopoly.

The mean amount of cloud was slightly in excess in Burma and Bengal. It was largely in excess over the whole of North-Western and Central India, Bihar, Chota Nagpur and the northern districts of the Central Provinces. Over the greater part of that area in which the mean cloud amount of the month ranges between two and three, the excess was over two or the cloud amount of the month was nearly double that of normal years. The excess was as large in actual amount in the hill districts of Northern India, but was much smaller relatively to the normal (averaging 5·0).

Skies were most free from cloud during the month in the west coast districts between Bombay and Karwar, where the mean cloud amount as indicated by the data of three stations was only 0·4.

The following table gives variation data for the month of February 1894 of the mean aqueous vapour pressure, humidity and cloud :—

Division.	Variation of		
	Mean aqueous vapour pressure from normal.	Mean humidity from normal.	Mean cloud amount from normal.
	"		
Burma Coast and Bay Islands .	+·058	+ 2	−0·1
Assam	+·080	+ 4	0
Bengal and Orissa . . .	+·042	− 1	+0·6
Gangetic plain and Chota Nagpur.	+·112	+13	+2·1
Upper Sub-Himalayas . .	+·083	+14	+2·3
Indus Valley and North-West Rajputana.	+·050	+ 8	+1·7
East Rajputana, Central India, and Gujarat.	+·074	+10	+1·3
Deccan	+·054	+ 4	+0·4
West Coast	+·011	− 1	−0·6
South India	+·043	+ 5	+0·1

Rainfall.—The rainfall of the month was above the normal over by far the greater part of India. It was due in part to cold-weather storms or disturbances, and in part to thermal disturbances (of the hot-weather type). The chief periods of rainfall were from the 7th to the 10th, the 13th to the 17th, and the 20th to the end of month. The first disturbance was a cold-weather storm, and gave general and moderately heavy rain to North-Western India and Bihar. During the second period the rainfall was partly due to a cold-weather storm in Persia and Baluchistan and in part to a thermal disturbance in Central India. The Punjab, North-Western Provinces, Central India and Bihar received moderate rain during this period. The rainfall of the third period was restricted to North-Eastern India from the 20th to the 27th and was due to a disturbance of the hot-weather type. A cold-weather depression which formed in Upper Sind on the 28th, began to give heavy rain to North-Western India on the last day of the month.

The chief features of the rainfall distribution of the month were as follows :—

(1). Abnormally heavy rain and snow in Baluchistan.

(2). Heavier rain or snow than usual in the Western Himalayas. The snowfall did not extend so low down as usual and hence the accumulation due to the increased snowfall, merely increased the depth of the snow on the higher interior ranges and did not give (as sometimes occurs in February) an abnormally large extension of snow surface to the north and west of Upper India.

(3). Heavier rain than usual in the Gangetic plain.

(4). Increased rain in Assam due to moderate steady rain throughout the last week of the month.

(5). Less rain than usual in Burma and Bengal.

(6). Normal or slightly increased rainfall in other districts.

The following table gives comparative rainfall data for the eleven meteorological provinces of India based on the rainfall data of 187 meteorological stations :—

Meteorological Province.	Rainfall.		
	Mean actual for February 1894.	Mean normal for February.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	0·26	0·43	—0·17
Burma Inland	0·13	?	?
Assam	3·12	1·32	+1·81
Bengal and Orissa	0·56	0·97	—0·40
Gangetic plain and Chota Nagpur	1·11	0·46	+0·65
Upper Sub-Himalayas	1·33	1·27	+0·06
Indus Valley and North-West Rajputana	0·62	0·56	+0·02
East Rajputana, Central India, and Gujarat.	0·22	0·19	+0·09
Deccan	0·55	0·21	+0·28
West Coast	0·24	0·17	+0·10
South India	0·38	0·26	+0·19

Atmospheric Pressure.

The mean pressure of the Indian land area was ·010″ above the normal. Relatively to this general condition pressure was in slight defect in the Peninsula, and in slight excess in Northern India. The pressure anomalies were small, exceeding ·02″ for two stations only, *viz.*, Sialkot (+·025″) and Calicut (—·029″). These pressure conditions gave a slightly increased range of pressure over India. The only important feature of the mean pressure conditions of the month was the excess at the hill stations in Northern India as compared with the plain stations. The following data illustrate this feature :—

Hill Station.	Variation from normal pressure.	Plain Station.	Variation from normal pressure.	Vertical pressure anomaly (Hill Plain).
	″		″	″
Quetta	+·020	Jacobabad	+·020	0
Leh	+·064	Lahore	+·016	+·048
Murree	+·032	Peshawar	+·017	+·015
Simla	+·051	Ludhiana	+·029	+·022
Chakrata	+·054	Roorkee	+·019	+·035
Darjeeling	+·058	Dhubri	+·009	+·049
Mount Abu	+·007	Deesa	—·004	+·011

There was hence a general relative excess of pressure at the hill stations, moderate n amount and largest in the Eastern and Central Himalayas.

The mean pressure distribution of February 1894 was hence characterized by the following features :—

(1). The mean pressure of the whole Indian area was practically normal.

(2). Pressure was locally in slight excess in Northern India, the excess being on the whole greatest in amount in the East Punjab, but did not exceed an average of ·015″ in that area.

(3). Pressure was locally in defect in the Peninsula. The deficiency was greatest in Malabar where it averaged ·02″ and was hence small in amount.

(4). Pressure was in excess at the hill stations relatively to the neighbouring plain stations. The excess increased in amount eastwards from the Punjab to the Sikkim Himalayas.

A comparison of these features with the pressure abnormal conditions of February 1893 shows that the pressure distribution in the two months agreed in all except the last point. In February 1893 pressure was in large relative defect at the hill stations, whereas in February 1894 it was in moderate excess.

Barometric depressions and cyclonic storms of the month.

The month of February 1894 was on the whole more disturbed than usual in Northern India, Baluchistan and Persia. The barometric changes accompanying the disturbances were large and well marked in Persia. They were on the contrary very slight and irregular in India, and it is hence hardly possible to trace these disturbances as definite cyclonic storms and depressions in that area. The following gives a brief account of the disturbances of the month :—

Disturbance of the 6th to the 10th February.—It is possible this disturbance may have been

the continuation of a depression which formed in the Mediterranean in the last week of January. The charts issued by the English Meteorological Office show that a depression formed over the Central Mediterranean and Italy on the 27th and 28th and that it was transferred slowly eastwards. It lay over the Grecian Archipelago on the 31st and Asia Minor on the 1st. It was apparently of small intensity as it is defined in the chart of the 31st by the isobar of 29·8″.

The following gives the barometric changes from the 1st to the 7th at the stations named below:—

Date.	Barometric change in 24 hours preceding 8 A.M. of date.				
	Baghdad.	Bushire.	Ispahan.	Muscat.	Quetta.
	″	″	″	″	″
2	—·194	—·160	—·225	—·064	—·041
3	+·091	—·054	—·035	—·082	+·036
4	+·004	+·122	+·095	—·057	—·034
5	+·053	—·016	—·020	+·051	+·032
6	+·059	+·030	+·090	+·012	—·140
7	—·092	—·017	—·130	+·058	+·094

These observations show that a wave of low pressure was transmitted eastwards during this period, and that it was in about the longitude of Baghdad on the 2nd, of Bushire and Ispahan on the 3rd, of Muscat on the 4th, and of Quetta on the 6th. The fall was not large enough when superimposed on the normal pressure conditions of the period to give rise to a well marked low pressure area in the weather charts of the period.

The disturbance did not give rise to stormy winds or squally weather in the Persian Gulf. The strongest winds experienced during this period by vessels contributing logs were only of force 4 to 5 (on the 3rd and 4th). The disturbance apparently gave general rain or snow in Persia. Thus at the Dasht Arjin station on the Indo-European telegraph line, 2 feet 4 inches of snow were reported on the 2nd, and 3rd. Snow began to fall on the Baluchistan highlands on the 2nd, and continued until the 6th, on which day the low pressure wave or depression was passing through that area.

The barometric changes in India during the period from the 1st to the 6th were large. Pressure gave way very rapidly in North-Western India on the 1st and 2nd, and recovered as rapidly on the 3rd and 4th. Central India, the eastern districts of the North-Western Provinces and Bihar had thunderstorms (in some case accompanied with hail) on the 2nd and 3rd. Pressure again gave way generally in India on the 5th and 6th, rapidly in North-Western India and briskly elsewhere, and began to rise again on the 7th in virtue of the oscillatory series of changes which formed the chief feature of the pressure conditions of this period in India.

The following gives a history of the depression which advanced from Baluchistan into North-Western India during the 24 hours preceding 8 A.M. on the 7th.

7th February.—The low pressure area, which was passing through Baluchistan on the 6th, was apparently in Western and Central Rajputana on the 7th, and was indicated chiefly by the isabnormals, which showed a slight deficiency in that area (pressure being in excess in other parts of India). Light to moderate rain had fallen generally in the North and East Punjab, Central India and the North-Western Provinces, in many cases accompanying thunderstorms.

8th February.—A large and general increase of pressure had occurred during the previous 24 hours and pressure was now more or less in excess over the whole of India. The excess was least in Bundelkhand and East Rajputana, and it is hence almost certain that the low pressure wave or depression was passing through that area. Cloudy weather prevailed over the whole of North-Western and Central India, but skies were beginning to clear in the Punjab. Thunderstorms, in many cases accompanied with hail, had given moderate rain to the East Punjab, the North-Western Provinces and the eastern states of Central India.

9th February.—The pressure changes were small, compared with those of the previous day. The chief feature was a moderate fall in the eastern districts of the North-Western Provinces due to the transfer of the low pressure wave to that area. Winds were light and irregular in the Gangetic plain; but northerly winds held steadily in Bengal, thus indicating that the rainfall was not due to sea winds in the lower atmospheric strata. Light to moderate rain had fallen during the previous 24 hours in the South-East Punjab, the North-Western Provinces, Central India, the Central Provinces and Bihar, accompanying in the majority of cases thunderstorms.

10th February.—Pressure had given way rapidly in North and West Bengal, and the low pressure wave, which had passed through Bihar during the previous 24 hours, was now in Bengal. Its passage through Bengal and Bihar gave rise to larger pressure changes than during its previous movement across North-Western India. Skies had, however, cleared generally in Northern and Central India, and were clear in Bengal at 8 A. M. Light showers had fallen at some of the hill stations, but with that exception the disturbance had ceased to give rain.

11th February.—Pressure had increased briskly in North-Eastern India, and the low pressure area had either passed into Upper Burma or had ceased to influence the pressure conditions in the lower atmospheric stata.

The disturbance has hence been probably traced to a depression which formed in the Mediterranean on the 27th and 28th of January, and which was transmitted east-

wards. In its later stages when passing through Baluchistan and India, it was not shown as a definite depression in the daily weather charts. The pressure changes and variations from the normal indicate its existence as a shallow low pressure belt or wave transmitted eastwards with nearly uniform velocity. It was in about—

Long. 20°E	on the 30th	January.
Long. 25°E	on the 31st	"
Long. 32°E	on the 1st	February.
Long. 38°E	on the 2nd	"
Long. 45°E	on the 3rd	"
Long. 65°E	on the 6th	"
Long. 72°E	on the 7th	"
Long. 78°E	on the 8th	"
Long. 83°E	on the 9th	"
and Long 88°E	on the 10th	"

If the disturbance was, as on the whole appears to be probable, due to the eastward transfer of a low pressure wave, it advanced with a fairly uniform velocity of between 300 and 400 miles daily. Although it was a very feeble disturbance as gauged by its barometric features in India, it gave a general and moderately heavy burst of rain to Baluchistan, the Punjab, North-Western Provinces, Central India and Bihar. The following gives a summary of the rainfall in India during the storm :—

Division.	Average actual rainfall in 24 hours preceding 8 A.M. of date.							
	3rd.	4th.	5th.	6th.	7th.	.	9th.	Total. 3rd to 9th.
	"	"	"	"	"	"	"	"
Baluchistan .	0·02	0·14	0·54	0·35	0·11	0	0	1·16
Punjab . .	0·01	0	0·01	0·04	0·19	0·11	0·09	0·45
Rajputana .	0	0	0	0	0	0	0	0
Sind . .	0	0	0	0	0·02	0·01	0	0·03
North-Western Provinces and Oudh.	0·26	0·01	0	0·03	0·17	0·35	0·28	1·10
Central India .	0·05	0	0	0·04	0·17	0·23	0·07	0·56
Bihar . .	0·33	0	0	0	0	0·02	0·07	0·42

Feeble disturbance of the 10th to the 16th of February.—The disturbance originated in the plateau of Iran as the English weather charts show that high pressure prevailed steadily over the Mediterranean area from the beginning of the month until the 11th, when a shallow depression formed in the Gulf of Lyons. This was apparently transmitted eastwards and lay over the Central Adriatic Sea on the 13th, and over the Black Sea and Asia Minor on the 14th.

The following tables give the pressure changes for each 24 hours period from the 8th to the 18th, and the differences between the actuals and the mean of the month for stations in Persia and Baluchistan and at Mount Abu. There are no normal means for the Persian stations, and hence the mean of the month is taken as an approximate estimate of the normal mean pressure of the period, in order to obtain a rough estimate of the variations from the normal pressure conditions :—

Date.	Barometric change in 24 hours preceding 8 A.M. of date.					
	Baghdad.	Bushire.	Teheran.	Muscat.	Quetta.	Mount Abu.
8th . . .	−·023	−·027	+·090	−·012	+·054	+·030
9th . . .	−·250	−·248	−·165	−·094	−·016	+·020
10th . . .	+·040	+·033	−·165	−·132	+·072	+·043
11th . . .	+·270	+·209	+·135	+·130	−·029	−·018
12th . . .	+·099	+·085	+·120	+·102	−·024	+·032
13th . . .	+·059	−·041	+·180	+·014	0	−·042
14th . . .	−·056	−·009	+·040	−·032	−·022	−·057
15th . . .	−·220	+·010	−·165	+·047	+·030	+·040
16th . . .	−·034	+·011	−·145	−·006	−·006	−·020
17th . . .	+·138	−·028	+·015	−·019	−·026	+·019
18th . . .	+·038	−·032	+·095	−·020	−·014	−·058

Date.	Pressure variation from the actual or normal mean of the month.					
	Baghdad.	Bushire.	Teheran.	Muscat.	Quetta.	Mount Abu.
8th . . .	+·012	+·056	+·091	+·071	+·034	+·012
9th . . .	−·238	−·192	−·074	−·023	+·018	+·029
10th . . .	−·196	−·159	−·239	−·155	+·093	+·072
11th . . .	+·074	+·050	−·104	−·025	+·067	+·062
12th . . .	+·173	+·135	+·016	+·077	+·052	+·098
13th . . .	+·232	+·094	+·196	+·091	+·061	+·061
14th . . .	+·176	+·085	+·236	+·059	+·038	+·005
15th . . .	−·044	+·095	+·071	+·106	+·067	+·046
16th . . .	−·078	+·106	−·074	+·100	+·065	+·029
17th . . .	+·060	+·078	−·059	+·081	+·039	+·050
18th . . .	+·098	+·046	+·036	+·061	+·022	−·006

The figures in the preceding tables show that a depression formed or appeared in the Persian area on the 9th, and that it advanced eastwards as it affected West Persia on the 9th and East Persia on the 10th. It did not, however, pass into Baluchistan and India as the pressure changes in those areas throughout the period from the 8th to the 15th were small in amount and pressure was steadily above the average by moderate amounts. The barometric changes in North-Western India and Baluchistan were at this time in fact in no way related to that depression, but were evidently due to local actions and conditions.

The disturbance gave moderate rain and snow in Persia. The following gives information received from stations on the Indo-European Telegraph Line :—

Station.	Date.	Precipitation.
Soh	9th and 10th ,	Snow.
Dasht Arjin . .	8th to 10th ,	Snow and rain measuring 3·7 inches by raingauge.
Kazeroon . . .	8th and 9th ,	Rain.
Sivand . . .	8th to 10th ,	Snowing from 7 P. M. of 8th to 2-30 P.M. of 10th.

The disturbance hence almost certainly gave general and probably moderate to heavy precipitation over Persia.

Baluchistan apparently shared in the fall due to the disturbance, as moderate general rain or snow fell in that area from the 10th to the 12th. The following gives returns for three stations:—

Station.	Rainfall in 24 hours preceding 8 a.m. of			
	10th.	11th.	12th.	Total of period.
Pishin	0·03	0·38	0·59	1·00
Chaman	0·19	0·45	0·29	0·93
Quetta	0·04	0·38	0·38	0·80

It is possible that the largish fall of the barometer at Baghdad on the 15th and 16th may have been due to the passage across Asia Minor and Asiatic Turkey of the depression which formed in the Gulf of Lyons on the 11th and 12th and undoubtedly advanced eastwards so far as Asia Minor on the 14th. It, however, apparently filled up on the 16th and did not pass further eastwards as a low pressure wave. Weather was showery in Baluchistan and the Punjab on the 14th, 15th, 16th, and 17th. Pressure was steadily above the normal in Northern India during this period of slight rainfall in the plains of Upper India and of snow in the Punjab Himalayas, and it is not possible to trace the rainfall to any cyclonic disturbance or barometric depression in North-Western India. It was perhaps a residual effect of the low pressure waves in Persia during the period.

A short period of fine weather followed in Northern India until the beginning of the fourth week of the month, when weather again became unsettled. The disturbance was of a somewhat complicated character, as it was apparently in part due to two pressure waves in Persia and in part to actions in North-Eastern India, accompanying and resulting from unusully high temperature in Northern and Central India.

Feeble disturbance of the 20th to the 28th February.—The following tables give the pressure changes and the variations from the means of the month at stations in Persia, Baluchistan, and Upper India from the 20th to the 28th:—

Date.	Barometric change in 24 hours preceding 8 a.m. of date.								
	Baghdad.	Bushire.	Teheran.	Muscat.	Quetta.	Jacobabad.	Mount Abu.	Jeypore.	Simla.
20th .	+·002	+·007	0	−·014	+·012	+·015	+·073	+·099	+·092
21st .	−·081	−·073	−·100	+·046	+·058	+·133	+·011	+·013	+·044
22nd .	+·089	+·062	+·005	−·038	−·019	−·098	−·017	−·034	−·046
23rd .	−·110	−·062	0	−·061	−·075	−·121	−·058	−·101	−·086
24th .	−·215	−·101	−·085	−·093	+·048	+·007	−·036	−·067	−·032
25th .	+·181	−·084	−·075	−·030	−·130	−·011	+·008	+·067	+·002
26th .	+·136	+·082	−·005	+·011	+·045	+·071	+·061	+·033	+·062
27th .	−·134	−·045	+·045	−·014	−·048	−·021	−·026	−·033	−·020
28th .	−·078	−·109	−·030	+·026	−·096	−·132	−·076	−·141	−·094

Date.	Pressure variation from mean of month or normal.								
	Baghdad.	Bushire.	Teheran.	Muscat.	Quetta.	Jacobabad.	Mount Abu.	Jeypore.	Simla.
20th .	+·043	+·043	+·096	−·002	+·047	−·030	+·021	+·043	+·051
21st .	−·038	−·030	−·004	+·044	+·104	+·102	+·030	+·047	+·092
22nd .	+·051	+·032	+·001	+·006	+·084	+·013	+·016	+·027	+·041
23rd .	−·059	−·030	+·001	−·055	+·007	−·103	−·043	−·073	−·047
24th .	−·274	−·130	−·084	−·148	+·051	−·091	−·080	−·120	−·081
25th .	−·093	−·214	−·159	−·178	−·073	−·093	−·068	−·042	−·073
26th .	+·043	−·132	−·164	−·167	−·019	−·007	−·001	+·004	−·013
27th .	−·091	−·177	−·119	−·181	−·062	−·015	−·023	−·017	−·031
28th .	−·169	−·286	−·149	−·155	−·157	−·140	−·099	−·140	−·123

Pressure was low in the South Mediterranean and North Africa on the 20th, 21st, and 22nd, but that low pressure appears to have been local and stationary and the pressure conditions in Persia during the period 23rd to the 28th were almost certainly not related to that depression.

The pressure data in the preceding tables show that a large fall occurred in Asiatic Turkey and Persia on the 23rd, 24th, and 25th. The depression due to that fall was greatest at Baghdad on the 24th, and at Bushire, Muscat, and Jask on the 25th. Whilst this depression was forming in Persia, independent but probably similar actions had caused a large decrease of pressure in North-Western India. The depression due to this fall was greatest at Jacobabad and in the West Punjab on the 23rd and at Jeypore and Agra on the 24th. Hence, so far as can be judged the pressure changes in Persia were due to local actions in that area resulting in the formation of a shallowish depression in West Persia on the 24th and 25th. At the same time independent actions in Northern India caused a large fall of pressure apparently due to the persistent abnormally high temperature in Central India. This local thermal disturbance gave rise to local thunderstorms on the 24th, 25th, 26th and 27th, chiefly in the north of the Peninsula, Central India, and Bengal. A shallowish depression appeared in Sind and West Rajputana on the 28th. It is possible that this may have been the continuation of the depression which was in West Persia on the 24th and Central and East Persia on the 25th. The observations at Quetta, Kach Fort, Kalat, Jask and Muscat, however, are opposed to this supposition, and the barometric observations given above for the period 26th to 28th appear to indicate that the weather conditions were slightly disturbed over the whole Persian area and Northern India. Pressure was considerably below the normal over the whole area. Skies were clouded and weather was more or less showery and rainy. Thus all the Persian stations report showers from the 21st to the end of the month. Dasht Arjin and Sivand had severe thunderstorms on the 24th, which gave very heavy rain. Baluchistan had daily rain from the 22nd to the end of the month, and the rainfall was unusually heavy in that area on the 26th, 27th, and 28th.

In Assam and Bengal weather was showery from the 20th to the end of the month, and Assam received much heavier rainfall than is usual for the period. Sind, Central India, and the North-Western Provinces obtained frequent showers on the 22nd and 23rd. Rajputana, on the other hand, received no rain during this period, and the Punjab (except the hill districts) no rain until the 27th and 28th, when general and moderately heavy rain fell over the whole province.

The consideration of the whole of the observations hence indicates that a depression had formed in Persia on the 23rd and 24th and that it gave a short period of disturbed weather with heavy rain in that area. The abnormal temperature conditions which had prevailed in Northern and Central India for some time previously had also simultaneously caused a considerable fall of pressure in India, associated with showery weather in North-Eastern India and the north of the Peninsula. A second double disturbance of the same character was again shown on the 28th.

Pressure fell rapidly in the whole Persian area on the 27th, and on the morning of the 28th, a deepish depression area lay over Central Persia. Simultaneously an equally large fall of pressure had occurred in North-Western India, and a moderate depression lay over Sind and West Rajputana. The following observations indicate its position and character at 8 A.M. of the 28th:—

Station.	Pressure.			Wind.		Cloud.	
	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.		
	"	"	"				"
Mooltan	29·893	−·065	−·087	ENE	1	5	0·18
Jacobabad	29·809	−·132	−·140	SE	4	10	
Hyderabad	29·821	−·095	−·123	SW	9	6	
Deesa	29·871	−·035	−·086	W	7	10	
Mount Abu	26·004	−·076	−·099	SW	9	10	
Pachpadra	29·832	−·092	?	Calm	2	10	
Bickaneer	29·767	−·137	?	S	4	10	

Heavy general rain had fallen in Baluchistan and the Punjab during the previous 24 hours and the disturbance was one of considerable importance. Its history will be given in full in the March Review.

Summary of the Reports of the weather and snowfall in the mountain districts to the north and north-west of India.

The following is a statement of the information relating to the snowfall of the month of February 1894 in the Himalayan and Afghan mountain areas received up to date:

I.—AFGHAN MOUNTAIN DISTRICTS.

(1) *Kurram District.*—Light snow showers fell on the first four days of the month of February and again on the 26th and 27th.

(2) *Shirani country (west of Dera Ismail Khan).*—Snow fell on the following dates:—3rd to 5th, the 7th, and 16th to 18th on all the higher ranges. The snowfall was not general, and the average fall on the higher ranges was about 6½ feet

(3) *Kabul.*—Snow fell on the 4th, 5th, 6th, 7th, 11th, 12th, 13th, 16th, and 27th. The total fall was nearly 1½ feet. This snowfall was general over all the neighbouring districts, and all the higher hills visible from Kabul were at the end of the month thickly clad with snow. The fall during the present winter up to the end of February is generally regarded as greater than that of the corresponding period of the previous winter.

(4) *Khyber District.*—Snow fell in Tirah and Bara on two occasions. The average depth in the former place was 3 feet and in the latter it varied between 1 and 2 feet. On the Lakka Sar, the highest peak in the Loargi hills, the fall on two occasions was 1 foot, which soon melted On the Sur Ghar range the heaviest fall was reported to exceed 4 feet in depth. The snowfall of the present winter is locally considered as below the average.

II.—KASHMIR AND PUNJAB HIMALAYAS.

(1) *Hazara District.*—The following is an abstract of a report of the weather and snowfall in this district received from the Deputy Commissioner:

"Weather was cloudy from the 1st to the 5th, when it began to rain and ended in snow on the 7th. From the 8th to 10th it was fine, but cloudy, when rain recommenced and continued until the 17th. There was a heavy fall of hail on the 20th. Rainy weather again set in on the 28th.

"The following gives the depth of snow in the beginning of March on the higher elevations in the district:—

Kagan hills	2 to 4 feet.
Honsh and Bhogarmang hills	1 to 2 "
Jacha and Punjal	1 to 2 "
Kawai and Jared	2 "
Balakot	1 foot.
Agror hills	6 inches.
Gali range	3 to 4 feet.

"The snowfall on the lower ranges is reported to be less than usual, but the cold more severe."

(2) *Murree and adjacent hills.*—The following gives comarative data of the snowfall in this area :—

Station.	Snowfall during month of February							
	1894.		1893.		1892.		1891.	
	Ft.	Ins.	Ft.	Ins.	Ft.	Ins.	Ft.	Ins.
Murree	4	10	13	10	0	5	12	6
Kahuta	*Nil*		6	0	*Nil*		2	6

The fall was hence moderate in amount at Murree and barely one-third of that of February 1893.

Ladakh.—The following interesting account of the snowfall and weather during the month in Ladakh has been received from the Superintendent, Meteorological Observatory, Leh :

"Snow fell on 14 days during the month, *viz.*, the 4th, 5th, 7th, 8th, 9th, 10th, 13th, 14th, 15th, 17th, 19th, 20th, 24th, and 28th. The total precipitation as measured by the observatory rain-gauge was 0·88 inch. The falls usually occurred in the morning, from 6 A. M. to 11 A. M., or mid-day. The general weather has been warm; but the afternoon thaw did not remove the morning snow.

"According to information received up to February 15th, snow was lying at altitudes down to 9,000 feet and had been so since January 21st on the most exposed places. The sun has little power and the streams have apparently no increase of water towards evening.

"Snow is reported as lying all down the Indus Valley as far as Skardo, increasing in quantity with the decreasing altitude. On February 25th snow was 5½ inches deep on a field in Leh exposed all day to the sun. On the same date the snow in a village of the same height as Leh but on the north slope of a mountain was over 2 feet. There is no accurate information at present of the snow accumulation. The Poto Pass is reported open for parties of men, not for ponies even when unladen. This implies a depth of 4 feet at least. The destruction of the telegraph line over Zoji Pass is of annual occurrence; but this year the line between Kargil and Dras has been destroyed, which was not the case in the unusual winter of 1890-91. On about February 10th, the efforts of over 100 men were required to get 19 mail bags over the Zoji Pass; and several had to be left behind on the south side. According to the latest information received at the end of the month, all passes are blocked, the best known landmarks being covered. By the known height of such landmarks the accumulation of snow is estimated at 20 feet on passes 17,000 feet high. In the open valley snow has been lying continuously since January 21st, a very rare occurrence. The same is reported from altitudes lower than 8,000 feet. The universal opinion is that the fall of snow during the winter has been quite abnormal."

(4) *Chamba.*—The following gives in full a valuable report on the snowfall in the Chamba State received from the Conservator of Forests. "The dates and amount of the snowfall reported at selected positions in Chamba and Dalhousie and the neighbourhood are given below :—

Date.	Dalhousie range.					
	Kalatop, 8,000 feet.		Bolun, 6,000 feet.		Surkhigali, 5,000 feet.	
	Feet.	Inches.	Feet.	Inches.	Feet.	Inches.
6, 7	0	4	...		Rain.	
8	0	5	...		Do.	
13, 14	0	3	...		Do.	
15 & 16	0	6	0	3	0	2
23	...		...		...	
27 & 28	Rain		...		...	

Date.	Chamba and up to 20 miles east.					
	Chamba, 3,000 feet.		Bohar, 5,000 feet.		Kundi, 7,000 feet.	
	Feet.	Inches.	Feet.	Inches.	Feet.	Inches.
7	Rain		0	2	0	2
8	Do.		0	2	0	4
14	Do.		Rain		0	1
15 & 16	Do.		Do.		0	2
27 & 28	Do.		Do.		down to 5,500 feet. Rain.	

Date.	Tisa direction up to 40 miles north of Chamba.					
	Tisa, 5,000 feet.		Chanan, 6,500 feet.		Thanela, 7,000 feet.	
	Feet.	Inches.	Feet.	Inches.	Feet.	Inches.
2	...		...		0	3
4	...		...		0	1
6	...		...		1	2
7	Slight rain		...		1	2
8	Do.		...		0	10
15 & 16	...		...		...	
23	...		0	2	0	3
27 & 28	Rain		Rain		0	3

The weather was throughout the month cold and windy with much rain between the snowfalls at lower elevations. Generally below 8,000 feet eastward of Chamba there has been much more rain than snow.

On Choari, the pass from Chamba to Nurpur, some 8,400 feet high, there were 2 to 3 feet of snow on the 15th instant in a somewhat warm situation. At Kalatop there were then 4 feet at 8,000 feet and 6 feet on Danikund at 9,000 feet.

About Tisa, some 40 miles north of Chamba, there were on the same date 4 feet of snow at 8,000 feet, 2⅔ feet at 7,000 (Thanela), 2 feet at 6,500 (Chanan), and no snow lying at Bhandal and Tisa."

"From personal observation and enquiries on the spot, it appears probable that the snowfall on Dalhousie Range, down to about 8,000 feet, has been much the same as in the winter of 1890-91. Information also shows that the snowfall and accumulation are similar in character and amount from 7,000 feet upwards further inside the hills. From this fact, and from local opinions and the appearance of the snows as viewed from Chamba it is almost certain that the snowfall and accumulation on the first high range between Chamba and Pangi and Lahoul have been heavier than usual, and about the same as in 1890-91. Nothing is so far known about Pangi. At low elevations below 8,000 or 7,000 feet the snowfall has been smaller than usual, rain having usually fallen instead of snow."

(5) *Kulu.*—The following information respecting the snowfall in this district during February 1894 has been received from the Assistant Commissioner:

"Snow fell on 13 days in the Kulu Tahsil, *viz.*, on the 4th, 5th, 7th, 8th, 9th, 13th, 14th, 15th, 16th, 17th, 19th, 24th and 28th, and on 12 days in the Plach Tahsil. These falls did not in any case extend down below 4,000 feet. There was frequent rain in the lower valleys. The snow on the lower hills melted rapidly during the latter part of the month in consquence of frequent rain.

The passes were with one or two exceptions closed during the month. The following table gives the reported depth of snow on the higher passes and peaks on the 25th of the month with corresponding data for the past four years:—

Tahsil.	Name of pass.	Height above sea level in feet.	Reported depth of snow on 25th February									
			1894.		1893.		1892.		1891.		1890.	
			Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
Kulu	Rotang	13,000	19	0	29	0	6	0	19	0	15	0
	Hamta	14,500	16	0	24	6	6	0	16	0	9	0
	Barsai	...	12	0	19	6	4	0	9	0	6	0
	Chandarkhani	...	12	0	26	0	8	0	15	0	12	6
	Bujadhar	...	11	0	19	0	1	6	13	0	...	
	Lohri Achri	...	11	0	19	0	5	0	10	0	4	0
	Bhubu	10,000	8	0	17	6	5	0	9	0	4	0
	Pastari	...	5	0	12	0	4	0	8	0	9	0
Plach	Srikhand	15,000	18	0	33	0	9	0	35	0	...	
	Chul	...	6	0	24	0	3	0	13	0	5	0
	Maghin	...	6	0	20	0	3	0	11	0	5	0
	Tikar	...	6	0	20	0	3	0	11	0	...	
	Dundku	...	8	0	22	0	4	0	15	0	6	0
	Nuhnu	...	4	0	10	0	2	0	7	0	4	0
	Jalori	10,500	6	0	20	0	3	0	10	0	4	0
	Raghopur	...	6	0	21	0	3	0	11	0	6	0
	Lamri	...	6	0	22	0	3	0	11	0	4	6
	Sakiran	...	6	6	19	0	3	0	12	0	5	0
	Supakun	...	9	0	19	0	6	0	17	0	8	0
	Gargarasan	17,000	11	0	24	0	7	0	21	0	8	0
	Basleo	11,000	6	0	22	0	4	0	12	0	6	0
	Plach	...	9	0	23	0	5	0	14	0	8	0
	Tirath	...	11	0	24	0	5	0	14	0	8	6

The snowfall during the month is said to be similar to that of February 1892.

III.—HIMALAYAN DISTRICTS OF THE NORTH-WESTERN PROVINCES.

Almora District.—1st.—Malla Danpur.—The following gives the chief snowfalls on the peaks of Pindari, Kantela, and Pankua during the month of February:—

Date.	Fall. Feet.	Inches.
2nd and 3rd	2	0
6th to 9th	4	0
16th and 17th	1	0
23rd and 24th	0	6
27th and 28th	2	0
Total	9	6

The snowfall during the present winter has been neither so severe nor so heavy as in the winter of 1892 93.

2nd.—Malla Johar.—The fall on the passes of Rolumdhura and Utadhura was as follows:—

	Feet.	Inches.
5th	3	0
7th and 8th	5	0
9th	2	0
13th	1	0
27th	2	0
28th	3	6
Total	16	6

The fall is less than in February 1893, when an average of 36 feet was reported.

3rd.—Malla Byans, Chandans, and Darma.—Snow is stated to have fallen on seven days during the month in every part of this tahsil. The reported depth was 6 feet. The weather was colder than usual and strong winds preceded and accompanied the snowstorms. Snow began to fall earlier than usual, and a severe winter was anticipated. The natives of the district now consider that the fall was less than that of last winter.

IV.—ASSAM HIMALAYAS.

Lukhimpur.—The Assistant Commissioner, North Lakhimpur writes:

"In most years snow is occasionlly seen during the cold weather months on the summits of the Daphla hills (over 8,000 feet high). This year snow has been very rarely seen, whereas last year it was seen continuously for about a month. It is certain that there has been decidedly less snow on these hills than last year and probably less than the average."

Resumé of the snowfall information.—The reports shew clearly that although the precipitation on the lower ranges was probably not much below the normal, it occurred chiefly as rain and not as snow. The

contrast between the characteristic features of the precipitation of February 1893 and February 1894 is very marked. In the former month it occurred as snow and increased very considerably the large accumulation due to the heavy snowfall of the preceding month of January 1893. In the latter month it fell chiefly as rain, and hence it tended to melt the moderate accumulation due to the heavier snowfall than usual in January 1894. There was hence at the end of the month no snow lying on the lower and outer ranges of the Himalayas and little on the Afghan mountains. On the other hand, the reports indicate that the snowfall has been heavier on the higher ranges and that the increased precipitation was most marked on the higher and more interior ranges. There was hence at the end of the month a large accumulation of snow on the higher ranges usually covered by snow, and probably over the whole mountain area to the east of Kashmir. The extent of snow clad surface was, on the whole, probably somewhat less than usual, but the depth of accumulation in the higher valleys and ranges is undoubtedly considerable. The information at present available indicates that the snowfall during the past winter was probably normal in amount on the Central Himalayas and deficient on the Eastern Himalayas.

Summary of Special Storm Reports.

Local thunderstorms and hailstorms occasionally occur in the month of February during the periods of general disturbance known as cold-weather storms. They also occur during hot weather disturbances, when temperature increases more rapidly than usual and is considerably above the normal. Severe local storms appear to be more frequent under the latter conditions than during the cold-weather disturbances. The number of storms reported during the month was greater than usual, and hailstorms appear to have been abnormally frequent. The following reported storms only were of sufficient importance to be deserving of record :—

2nd.—Severe thunderstorm at Allahabad from 6 P.M. to 11 P.M. and hailstorm at 8 P M. Hailstorm from north-west at Sutna (4-30 P.M.). In neighbouring villages the hailstones in some cases weighed 2 oz. and inflicted much damage on the crops.

6th.—Thunderstorm at Khandwa at 9-30 P.M.

8th.—Thunderstorm at Khandwa. Thunderstorm with hail (from south-east) at Jubbulpore.

15th.—Thunderstorm at Pachpadra at 5-45 P.M.

19th—Thunderstorm at Allahabad, 11 P.M.

25th.—Thunderstorm with hail at Pachpadra.

26th.—Duststorm and thunderstorm at Nagpur, 3-30 P.M. to 5-30 P.M. Hailstorms in the immediate neighbourhood of the town damaged the standing crops.

The following gives an abstract of reports of hailstorms in Rajputana and Central India received through the Political Agents :—

Pathari State, 7th February.—Hailstorm at Banroti village in the Pathari State, which almost completely destroyed the standing crops.

Bhopal State.—Hailstorms are reported to have occurred on the night of the 8th in the southern half of the State and on the 10th and the 27th in the northern half of it. The largest hailstones are reported to have weighed about 1½lbs.(?). In some of the villages affected by the storms the crops (particularly the opium) were completely destroyed and in others they were so severely damaged that only a four-anna crop was expected.

Bikanir State, 16th February.—Hailstorms in the Sujangarh and Nohur Tehsils of Bikanir. The stones were of the size of small plums, and there was little or no damage caused to the crops.

Goona State. 18th February—Severe hailstorm (at about 8 P.M.) in the Goona State which totally destroyed the crops in 17 villages. The stones were in some places as large as plums.

Kashmir State. 19th February.—Severe hailstorm at Udampor in the Kashmir state. The largest hailstones weighed 128 grains.

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

Arabian Sea.—At the commencement of the month fresh to strong north-east monsoon winds prevailed in the west and centre of the Arabian Sea and light to moderate winds in the north and south-east. Weather was however fine over the whole area. Winds decreased in force (more especially in the west and centre) during the next five days from an average of 4·2 on the 1st to 2·4 on the 6th. Weather was showery in the Persian Gulf on the 3rd. Winds increased in strength in the south-east of the sea on the 7th and averaged 3·4 in force. They also increased over the remainder of the Arabian Sea and in the Persian Gulf on the 8th and were of average force 3·8. Weather was disturbed with heavy rain and strong south-easterly winds in the Persian Gulf from the 8th to the 10th, and in the Gulf of Oman on the 12th and 13th. Strong winds (force 6 to 8) set in over the Gulf of Aden on the afternoon of the 14th

and prevailed until the 16th when they fell off. The mean force on the 16th was 4·4. Winds decreased steadily in strength during the next ten days, and on the 26th averaged only 2·7 in force. A recovery in the strength of the air movement took place during the last two days of the month, and the mean force on the 28th had increased to 3·7. Weather was more or less disturbed in the Persian Gulf from the 19th up till the end of the month, though the winds were throughout this period only light to moderate in strength.

It will be seen from the preceding account of the weather conditions of the month that weather was steadily fine over the whole sea area except the Persian Gulf where there were three periods of more or less unsettled conditions, *viz.*, the 3rd, the 8th to the 10th, and the 19th to the 28th.

Bay of Bengal.—At the commencement of the month fine weather with light to moderate north-east monsoon winds obtained in the Bay except in the neighbourhood of the Coromandel and East Ceylon coasts, where winds were of force 5 to 6 and weather slightly unsettled. The mean force of the winds on the 1st was 3·3. Winds decreased in force in the south-west of the Bay until the 4th, when they averaged 2·4. Weather cleared there on the 5th and was generally fine. Winds increased during the next four days and were of average force 3·5 on the 9th. They fell off in strength from the 10th to the 13th, when they averaged only 2·0 in force. South-westerly winds set in at the head of the Bay and prevailed during the remainder of the month, except from the 19th to the 22nd, when they were replaced by northerly winds. Winds averaged 2·0 on the 18th, but strengthened during the next four days and averaged 3·2 on the 22nd. They decreased during the remainder of the month and averaged 2·4 on the 28th. Fine clear weather prevailed generally during the month except in the south-west, where slightly disturbed weather was experienced during the first four days of the month.

Temperature of the Air.

The temperature conditions of the month of February 1894 in India were such as usually occur, when the winter snowfall in the Himalayan and Afghan regions is normal in character or less than the usual amount.

The mean day or maximum temperature of the month was in slight defect in the Deccan and North-Western India. The deficiency in these areas was less than 2° in amount, except in the small area represented by the stations of Sirsa (−2°·0), Lahore (−2°·4), and Ludhiana (−3°·3). Over the remainder of India the mean day temperature was in excess, more especially in a broad belt stretching across the head of the Peninsula, including Gujarat, Khandesh, Berar, the Central Provinces and Chota Nagpur, and also in East and North Bengal and Assam over the greater part of which areas it exceeded 3°. The following gives data for the stations at which the excess was over 3° :—

Station.	Mean maximum temperature.		
	Actual, February 1894.	Normal, February.	Variation of actual from normal.
	°	°	°
Indore	86·2	82·5	+3·7
Khandwa	92·0	88·5	+3·5
Akola	93·4	90·3	+3·1
Saugor	84·0	80·6	+3·4
Jubbulpore	85·0	81·9	+3·1
Raipur	89·9	86·8	+3·1
Balasore	87·7	83·5	+4·2
Sibsagar	76·0	72·7	+3·3
Dhubri	80·9	77·1	+3·8
Jalpaiguri	78·9	74·9	+4·0
Bogra	82·5	79·1	+3·4
Silchar	83·6	79·9	+3·7
Chittagong	84·6	81·5	+3·1

The mean minimum temperature was above the normal over the whole of India with only one or two local exceptions. It was more largely in excess than the day temperature. The excess was more than 2° over the whole of Burma, Northern India, and the northern half of the Peninsula and was upwards of 4° in amount in the sub-montane districts of Northern India and in South Rajputana, Central India, the Central Provinces, Berar and Khandesh. The excess was more than 5° in amount in two areas, one including North Bengal and Bihar, and the other Berar, the northern districts of the Central Provinces and the adjacent districts of Central India. The following gives data for these two areas :—

Province.	Station.	Mean minimum temperature.		
		Actual, February 1894	Normal, February.	Variation of actual from normal.
		°	°	°
North Bengal and Bihar.	Patna	58·0	52·6	+5·4
	Durbhanga	59·0	53·7	+5·3
	Purnea	56·1	50·7	+5·4
	Dinajpur	57·3	51·2	+6·1
	Jalpaiguri	56·1	50·8	+5·3
Berar, Central Provinces, Central India, and N.-W. Provinces.	Amraoti	66·1	60·9	+5·2
	Khandwa	60·9	54·9	+6·0
	Hoshangabad	61·0	55·1	+5·9
	Saugor	59·3	54·2	+5·1
	Jubbulpore	57·0	51·6	+5·4
	Sutna	56·6	51·0	+5·6
	Allahabad	56·8	50·9	+5·9

The mean temperature was normal or in slight excess in the Punjab, Sind, and the North-Western Provinces and the south and centre of the Peninsula and was in moderate

excess (from 2° to 5°) in a broad belt stretching across the head of Peninsula from Gujarat and South-West Rajputana to East Bengal and Assam. It was more than 4° in excess in two areas for which data are given below :—

Province.	Station.	Mean daily temperature.		
		Actual.	Normal.	Variation of actual from normal.
		°	°	°
North Bengal	Dhubri	69·9	65·9	+4·0
	Jalpaiguri	67·5	62·8	+4·7
	Dinajpur	69·4	64·8	+4·6
Central Provinces (North).	Jubbulpore	71·1	66·8	+4·3
	Saugor	71·7	67·4	+4·3
	Hoshangabad	74·3	70·2	+4·1
	Khandwa	76·5	71·7	+4·8
	Indore	71·4	67·0	+4·4

The temperature conditions at the hill stations in Northern India were similar to those which obtained at the neighbouring plains stations, that is, the maximum temperature was in slight defect, the night temperature in moderate excess and the mean temperature of the month in slight excess.

The following sums up the chief features of the mean temperature conditions of the month :—

(1) The mean day and night temperature and hence also the mean temperature were practically normal in the south and centre of the Peninsula (*i. e.*, south of Lat. 18° N.).

(2) In North-Western India (*i.e.*, the North-Western Provinces, Punjab, Sind and North-West Rajputana), the night temperature was in moderate excess and the day temperature in slight to moderate defect. Hence the mean temperature of the month was practically normal, but the mean daily range of temperature was considerably less than usual (from 3 to 8°).

(3) In the intermediate area, including the greater part of Rajputana, Central India, Khandesh, Berar, the Central Provinces, Bihar, Bengal, Assam and Burma, both the day and night temperature and hence also the mean were more or less considerably above the normal. The mean daily range was slightly less than usual as the night temperature was more largely in excess than the day temperature. These conditions were most marked in two areas, *viz.*, North Bengal and the northern districts of the Central Provinces, in which the mean temperature of the month was more than 4° above the normal.

The following gives temperature variation data for each of the 50 meteorological divisions into which India is divided :—

Province.	Division.	Actual Temperature.					Variation from normal of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Diurnal Range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	91·3	68·0	79·6	23·3	34·2	+0·9	+3·4	−2·5
	Lower Burma	90·0	70·5	80·3	19·4	25·6	+1·3	+3·6	−2·3
	Central do.	92·3	58·3	75·3	34·0	43·8	+0·9	+2·6	−1·7
	Upper do.	85·0	56·3	70·7	28·7	41·3	?	?	?
	Arakan	86·2	62·7	74·5	23·5	36·5	+1·6	+1·8	−0·2
Bengal and Assam	Eastern Bengal	81·7	59·4	70·6	22·3	36·1	+2·4	+3·6	−1·2
	Assam (Surma)	83·6	58·3	71·0	25·3	35·1	+3·7	+3·3	+0·4
	Do. (Brahmaputra)	78·5	57·2	67·9	21·3	33·2	+3·6	+3·3	+0·3
	Deltaic Bengal	84·2	61·1	72·7	23·2	38·8	+1·7	+1·8	−0·1
	Central do.	83·3	59·1	71·2	24·2	38·8	+1·8	+3·7	−1·9
	North do.	80·3	56·4	68·3	23·9	35·2	+3·6	+5·7	−2·1
	Orissa	85·7	67·1	76·4	18·6	31·5	+2·3	+1·7	+0·6
	Chota Nagpur	83·1	57·4	70·3	25·7	39·5	+3·6	+3·1	+0·5
	Bihar (South)	79·7	58·2	69·0	21·5	37·2	+0·4	+3·9	−3·5
	Do. (North)	78·3	57·1	67·7	21·2	36·3	+1·1	+5·4	−4·3
North-Western Provinces and Oudh.	North-Western Provinces (East)	77·2	56·4	66·8	20·8	36·0	−2·2	+5·0	−7·2
	Oudh (South)	77·6	53·0	65·3	24·6	44·3	−0·9	+2·7	−3·6
	North-Western Provinces (Central)	77·4	52·3	64·9	25·1	43·3	?	?	?
	Do. do. (West)	78·6	56·1	67·4	22·6	41·0	−0·8	+3·1	−3·9
	Do. do. (Submontane)	72·0	51·5	61·8	20·5	38·5	−0·8	+4·0	−4·8
Punjab	Punjab (South)	72·2	51·5	61·9	20·7	39·8	−3·0	+2·7	−5·7
	Do. (Central)	68·1	49·3	58·8	18·8	38·1	−2·4	+5·4	−7·8
	Do. (Submontane)	60·8	50·1	59·9	19·7	39·4	−3·3	+4·2	−7·5
	Do. (Hill Districts)	46·9	36·3	41·7	10·6	29·1	−1·7	+2·7	−4·4
	Do. (North-West)	67·0	46·0	56·5	21·0	41·0	−0·6	+3·9	−4·5
	Do. (West)	71·0	48·2	59·6	22·9	44·9	−0·8	+3·4	−4·2

Province.	Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of Maximum.	Minimum.	Diurnal range.
		°	°	°	°	°	°	°	°
Bombay and Malabar Coast Districts (Madras).	Malabar	88·4	72·1	80·2	16·4	26·1	+1·5	−0·2	+1·7
	Madras (South Central)	90·2	65·3	77·8	24·9	35·9	−2·6	+0·4	−3·0
	Coorg	84·2	61·9	73·1	22·4	34·8	−1·0	+1·8	−2·8
	Mysore	86·3	59·5	72·9	26·7	37·3	+1·2	+0·5	+0·7
	Konkan	86·7	70·2	78·5	16·5	29·2	+2·0	+2·1	−0·1
	Bombay Deccan	90·9	61·6	76·3	29·3	39·2	−0·1	+1·1	−1·2
	Hyderabad (North)	90·2	63·3	76·8	26·9	36·8	?	?	?
	Khandesh	90·2	58·3	74·3	32·0	43·4	+2·4	+4·2	−1·8
Central Provinces and Berar.	Berar	92·6	63·5	78·1	29·1	38·5	+2·6	+4·8	−2·2
	Central Provinces (West)	90·2	61·4	75·8	28·8	41·9	+2·6	+4·9	−2·3
	Ditto (Central)	86·8	59·1	73·0	27·7	39·9	+2·3	+4·2	−1·9
	Ditto (East)	90·0	63·0	76·6	27·0	37·8	+2·7	+3·3	−0·6
Bombay (North)	Gujarat	91·3	62·0	76·6	29·3	47·6	+3·0	+2·9	+0·1
	Kathiawar	85·6	60·4	73·0	25·2	43·8	+0·6	+2·3	−1·7
	Sind and Cutch	79·0	55·0	67·0	24·0	50·6	−1·3	+1·7	−3·0
Rajputana and Central India.	Central India (East)	79·2	55·4	67·3	23·8	42·9	−0·6	+4·9	−5·5
	Rajputana (East) Central India (West)	82·0	55·1	68·6	26·9	45·3	+2·0	+4·4	−2·4
	Ditto (West)	79·4	52·7	66·1	26·7	48·8	−0·1	+0·6	−0·7
Madras	East Coast (North)	86·0	68·7	77·4	17·4	29·8	+0·4	−1·3	+1·7
	Hyderabad (South)	91·5	64·6	78·1	26·9	36·4	−1·2	+0·1	−1·3
	Madras (Central)	92·8	65·3	79·1	27·5	40·4	−1·6	−0·3	−1·3
	East Coast (Central)	88·1	68·6	78·3	19·5	30·4	−0·3	−0·1	−0·2
	Ditto (South)	86·4	69·9	78·2	16·5	25·3	−0·5	+1·2	−1·7
	Madras (South)	89·3	72·9	81·1	16·3	25·2	−1·6	+1·1	−2·7

The following gives a brief statement of the larger changes in the temperature conditions prevailing in India during the month.

At the commencement of the month a cool wave was passing across North-Western India. Temperature was considerably above the normal in the Central Provinces. The following gives temperature variation data for the 1st:—

Meteorological Province.	Variation from normal of Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·8	+1·8	+1·8
Bengal and Assam	+1·1	+0·2	+0·7
N.-W. Provinces and Oudh	−2·6	+1·3	−0·7
Punjab	−4·9	−3·4	−4·2
Sind and Rajputana	−4·9	−5·3	−5·1
Central India and Gujarat	−2·7	+0·1	−1·3
Central Provinces and Berar	+4·2	+6·4	+5·3
Bombay	0	−0·1	−0·1
Madras	+1·1	−1·1	0

The cool wave extended eastwards on the 2nd and 3rd, and at the same time temperature increased with unusual rapidity in Northern India, and on the 6th it was more or less considerably above the normal over the whole of India except South Bengal to which the cool wave had now extended. The following gives variation data for that day:—

Meteorological Province.	Variation from normal of Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+2·0	+3·8	+2·9
Bengal and Assam	−0·6	+0·7	+0·1
N.-W. Provinces and Oudh	−1·3	+4·3	+1·5
Punjab	−1·6	+3·5	+1·0
Sind and Rajputana	−0·5	+5·5	+2·5
Central India and Gujarat	+2·1	+7·3	+4·7
Central Provinces and Berar	+2·9	+6·3	+4·6
Bombay	+2·4	+7·3	+4·9
Madras	−1·1	+2·7	+0·8

A cool wave affected the north-west frontier districts during the next three days, but the most important feature was the persistent abnormal excess of temperature in Rajputana, Central India, and the Central Provinces. The following gives data for the stations at which the excess of

temperature was greatest on each day from the 7th to the 16th :—

Date.	Station.	Variation from normal of		
		Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
		°	°	°
7th	Indore	+ 7·7	+14·5	+11·1
8th	Do.	+ 7·0	+10·0	+ 8·5
9th	Do.	+ 5·2	+11·5	+ 8·4
10th	Jubbulpore	+ 5·9	+13·0	+ 9·5
11th	Surat	+ 9·5	+10·2	+ 9·9
12th	Mooltan	+ 6·2	+11·0	+ 8·6
13th	Indore	+ 7·7	+13·9	+10·8
14th	Jeypore	+ 7·8	+14·1	+11·0
15th	Do.	+10·9	+13·0	+12·0
"	Roorkee	+ 8·8	+14·9	+11·9
16th	Khandwa	+ 7·9	+16·6	+12·3
"	Roorkee	+11·2	+17·5	+14·4

This period was hence characterized by much higher temperature than usual, the excess being nearly as marked in the day as in the night temperature. The following table giving mean variation data for the 15th, a day typical of the period, shows that the excess was very large in Rajputana, Central India and the North-Western Provinces and the northern districts of the Central Provinces :—

Meteorological Province.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·9	+1·1	+1·0
Bengal and Assam	+4·4	+4·3	+4·4
N.-W. Provinces and Oudh	+7·4	+8·8	+8·1
Punjab	−0·7	+6·8	+3·1
Sind and Rajputana	+3·8	+8·9	+6·4
Central India and Gujarat	+6·4	+8·7	+7·6
Central Provinces and Berar	+5·1	+4·6	+4·9
Bombay	+3·7	+2·6	+3·2
Madras	−0·8	−1·9	−1·4

A cool wave appeared in the frontier districts on the 16th. It extended eastwards and caused a moderate reduction of temperature. The following gives mean temperature variation data for the 16th and the 22nd illustrating the fall of temperature due to the advance of this feeble cool wave :—

Meteorological Province.	Variation from normal of mean temperature on the		
	16th.	22nd.	Change of mean temperature from the 16th to the 22nd.
	°	°	°
Burma	−0·1	+2·3	+2·4
Bengal and Assam	+6·1	+3·4	−2·7
N.-W. Provinces and Oudh	+8·8	+1·1	−7·7
Punjab	+5·3	+3·7	−1·6
Sind and Rajputana	+0·9	+2·5	+1·6
Central India and Gujarat	+6·4	+1·1	−5·3
Central Provinces and Berar	+6·8	+3·0	−3·8
Bombay	+2·5	+0·3	−2·2
Madras	−1·7	−0·7	+1·0

During the remainder of the month temperature varied much less from the normal than it had done during the first three weeks. The changes were small but rapid and due to the occurrence of local rainfall in different parts of Northern India. The following variation data of the 28th illustrate the conditions prevailing during this period :—

Meteorological Province.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	−0·1	+1·2	+0·6
Bengal and Assam	−3·0	+2·5	−0·3
N.-W. Provinces and Oudh	−3·2	+4·6	+0·7
Punjab	−6·2	+4·5	−0·9
Sind and Rajputana	−3·2	+3·7	+0·3
Central India and Gujarat	+0·6	+5·4	+3·0
Central Provinces and Berar	−0·3	+3·1	+1·4
Bombay	−0·2	+1·3	+0·6
Madras	−1·0	+0·4	−0·3

The following table gives the variations of the mean temperature week by week during the month. The data are

taken from the weekly weather reviews published in the *Gazette of India* :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE FOR WEEK ENDING				
	10th February.	17th February.	24th February.	3rd March.	For whole month.
	°	°	°	°	°
Burma	+3·3	+1·9	+1·9	+0·4	+2·1
Bengal and Assam . .	+2·5	+4·3	+3·6	+0·5	+2·9
N.-W. Provinces and Oudh.	+1·0	+4·4	+1·7	−1·7	+1·4
Punjab	−0·8	+3·5	+2·0	−1·5	+1·3
Sind and Rajputana .	+0·3	+3·2	+1·5	+0·7	+1·5
Central India and Gujarat	+2·9	+5·2	+0·9	+2·6	+2·4
Central Provinces and Berar.	+4·3	+4·5	+2·5	+1·0	+3·4
Bombay . . .	+2·9	+3·6	+0·1	+0·6	+1·6
Madras	−0·2	−0·7	−0·4	+0·2	−0·3

The preceding discussion has shown that a series of three cool waves appeared on the frontier and advanced eastwards causing a moderate temporary reduction of temperature in Northern India. They were, however, much less influential than the cool waves of the month frequently are, more especially when there is heavy snowfall in the Afghan plateau or the Western Himalayan area. The chief feature of the month was undoubtedly the excessive temperature (both by day and night) which prevailed in the Central Provinces, Central India, and South Rajputana almost continuously from the 4th to the 24th or 25th.

Winds.

The normal direction of the air movement in the Indian land and sea area in February is almost identical with that of January. In consequence of the increase of temperature and decrease of pressure which usually commences in February, the gradients favouring the southerly air movement in the Indian monsoon area diminish and the north-east winds in the Arabian Sea and Bay of Bengal are hence, as a rule, slightly feebler in February than in January.

A further consequence of the increasing temperature is a tendency to the setting in of local southerly winds in South Bengal. This is usually associated with the formation of a low pressure area in Chota Nagpur or West Bengal, which develops into the hot weather depression and the trough of low pressure of the rains running from Orissa west-north-westwards to Upper Sind.

The rapid increase of temperature in the Deccan at this time also causes a considerable change in the air movement at the Coromandel coast stations, where the winds gradually shift to south-east and become the long shore winds of March and April.

Winds in February 1894 were very light and on the whole more unsteady than usual in Sind, the Punjab and the western districts of the North-Western Provinces. They were also more westerly and less northerly than usual.

Winds were of normal strength and steadiness in the eastern districts of the North-Western Provinces and Bihar and contained a much stronger northerly component than usual. The following data for three stations illustrate the feature :—

STATION.	DIRECTION.		
	Average February 1894.	Normal, February.	Increased nothing.
Allahabad	N 60° W	N 66° W	+ 6°
Patna	N 57° W	N 79° W	+ 22°
Hazaribagh	N 31° W	N 68° W	+ 37°

Winds were on the whole lighter than usual in Bengal, and were remarkably unsteady, more especially in the southern and eastern districts. Thus at Saugor Island the mean percentage of steadiness was only 11, the normal being 23, and at Dacca it was 18, the normal being 35. In West Bengal and Bihar the chief feature was the unusual strength of the northerly component, indicating an abnormal prevalence of northerly winds. The following gives data for three stations :—

STATION.	DIRECTION.		
	Average February 1894.	Normal, February.	Increased northing.
Calcutta	N 28° W	S 81° W	+ 71°
Burdwan	N 25° W	N 58° W	+ 33°
Berhampore	N 59° W	N 72° W	+ 13°

Winds were slightly stronger than the normal in Assam and Burma and at Port Blair and were hence characterized by the same features as were present in a more marked degree in December and January. The following gives mean data for these three areas :—

DISTRICT.	MEAN DAILY WIND VELOCITY IN MILES.			STEADINESS.		
	Actual, February 1894.	Normal, February.	Percentage variation.	Average percentage, February 1894.	Normal percentage, February.	Variation from normal.
Andamans . .	128	115	+ 11	77	76	+ 1
Burma . .	149	130	+ 15	50	52	− 2
Assam . .	75	70	+ 7	34	30	+ 4

Winds were on the whole of normal strength and steadiness in Rajputana and Central India, but the local irregularities were large. The only common feature at all the stations in that area was the abnormally strong northerly element in the mean winds of the month.

In the Central Provinces and North Deccan, on the other hand, the chief feature was the unusual prevalence of southerly winds. The mean winds at all stations in that area almost without exception were from southerly directions. The following gives examples :—

District.	Station.	Direction.		
		Average, February 1894.	Normal, February.	Increased southing.
Bombay Deccan	Poona	S 43° E	N 28° W	large
Berar	Akola	S 14° W	N 1° E	large
Central Provinces	Nagpur	S 81° E	N 55° E	+ 44°
Hyderabad	Hyderabad	S 48° E	S 71° E	?

Winds were not so strong as usual at Bombay and Ratnagiri, but were normal in strength and direction at the Malabar and Coromandel coast stations and in the Madras Deccan. They were stronger in Mysore and Coorg.

One of the more important features of the air movement of the month was the unusual strength of the winds at the hill stations in Northern and Central India. The following gives data for those stations at which the exposure of the anemometers is most satisfactory :—

Station.	Mean daily wind velocity in miles.			
	Actual, February 1894.	Normal, February.	Variation from normal.	Percentage variation.
Murree	319	196	+ 123	+ 63
Chakrata	167	125	+ 42	+ 34
Mount Abu	160	131	+ 29	+ 22
Pachmarhi	114	92	+ 22	+ 24

Another interesting feature was the unusual strength of the winds in the Gulf of Aden as indicated by the wind data for Aden and Perim given below :—

Station.	Mean daily wind velocity in miles.			
	Actual, February 1894.	Normal, February.	Variation from normal.	Percentage variation.
Aden	521	332	+ 189	+ 57
Perim	629	?	?	?

Humidity and Cloud.

The mean absolute and relative humidity of the air was in moderate excess at Port Blair and in Burma, Assam and East Bengal. The following gives mean data :—

Division.	Mean aqueous vapour pressure.			Mean relative humidity.		
	Actual, February 1894.	Normal, February.	Variation from normal.	Actual, February 1894.	Normal, February.	Variation from normal.
	"	"	"	%	%	
Andamans (Port Blair).	·853	·814	+·039	77	77	0
Burma	·656	·591	+·065	70	68	+2
Assam	·501	·421	+·080	76	72	+4
East Bengal	·553	·476	+·077	71	67	+4

The amount of aqueous vapour present in the air was slightly above the normal in South and West Bengal and Orissa. The following gives data for three stations :—

Station.	Mean aqueous vapour pressure.			Mean relative humidity.		
	Actual, February 1894.	Normal, February.	Variation from normal.	Actual, February 1894.	Normal, February.	Variation from normal.
	"	"	"	%	%	
Calcutta	·491	·487	+·004	64	68	—4
Burdwan	·436	·397	+·039	58	56	+2
Cuttack	·532	·520	+·012	59	62	—3

The amount of aqueous vapour present in the air was unusually large in Bihar, Chota Nagpur, the North-Western Provinces, Central India, Rajputana, the Punjab and Sind. As temperature varied only to a small extent from the normal, the relative humidity was also very largely in excess. The following gives comparative data for each of these political divisions :—

Division.	Mean aqueous vapour pressure.			Mean relative humidity.		
	Actual, February 1894.	Normal, February.	Variation from normal.	Actual, February 1894.	Normal, February.	Variation from normal.
	"	"	"	%	%	
Chota Nagpur	·327	·244	+·083	50	42	+8
Bihar	·471	·363	+·108	70	60	+10
North-Western Provinces.	·382	·293	+·089	66	54	+12
Central India	·388	·253	+·135	61	44	+17
Rajputana	·302	·246	+·056	45	38	+7
Punjab	·327	·267	+·060	68	58	+10
Sind	·297	·221	+·076	54	40	+14

The data show that the air was abnormally damp over the whole of that area, the absolute humidity being most largely at excess in the eastern districts of the North-Western Provinces and Bihar, and the relative humidity in the Punjab and eastern states of Central India. The mean humidity of the month was 15 or upwards in excess at Ludhiana (+ 15), Lahore (+ 16), Nowgong in Bundelkhand (+ 16) and Sutna in Baghelkhand (+ 18).

The air was also damper at all the hill stations in Northern and Central India but the increased humidity was less pronounced at the level of the hill stations than in the plains. The following gives data for five representative stations :—

Station.	Mean aqueous vapour pressure.			Mean relative humidity.		
	Actual, February 1894.	Normal, February.	Variation from normal.	Actual, February 1894.	Normal, February.	Variation from normal.
	"	"	"	%	%	
Quetta	·203	·164	+·039	75	65	+10
Leh	·076	·077	—·001	70	65	+ 5
Murree	·166	·151	+·015	67	63	+ 4
Darjeeling	·239	·211	+·028	82	79	+ 3
Mount Abu	·250	·176	+·074	44	34	+10

The humidity of the air was also generally in slight excess in Madras and the Deccan, and was normal or in very slight defect in the west coast districts. The variations were nowhere large, and the following data for three stations show the general character of the mean humidity conditions of the month in that area :—

Station.	Mean aqueous vapour pressure.			Mean relative humidity.		
	Actual, February 1894.	Normal, February.	Variation from normal.	Actual, February 1894.	Normal, February.	Variation from normal.
	"	"	"	%	%	
Madras	·738	·664	+·074	79	73	+6
Bangalore	·414	·394	+·020	55	52	+3
Hyderabad	·454	?	?	54	?	?

The chief features of the humidity conditions of the month were :—

(1) Slightly increased humidity in Burma and Bengal.

(2) Large excess of aqueous vapour in the air in North-Western and Central India and the North Deccan. The excess was on the whole greatest in Central India where the air contained 53 per cent. more vapour than usual, and the humidity averaged 17 above the normal (39 per cent.).

(3) The air was considerably damper than usual at the hill stations in North-Western India and Central India, but the increase was on the whole slightly less marked than at the level of the plains.

(4) The air was slightly damper in the Deccan and Southern India, with some local exceptions.

The variations in the mean cloud amount of the month from the normal ran parallel with those of the mean humidity described above. This is explained by the fact that the increased humidity was due to the rainfall distribution of the month and hence to the amount and duration of cloud. The mean amount of cloud during the month was practically normal at Port Blair and in Burma, Assam and East Bengal, and was in slight excess in South and West Bengal and Orissa.

The following gives data for these areas :—

Division.	Mean cloud amount.		
	Actual.	Normal.	Variation from normal.
Burma	1·6	1·8	−0·2
Assam	3·4	3·4	0
East Bengal	2·4	1·7	+0·7
West Bengal	2·8	2·0	+0·8
Orissa	2·6	2·2	+0·4

The cloud amount was unusually large in Chota Nagpur, Bihar, the North-Western Provinces, the Punjab and Sind; and also, but to a less extent than in the previously named districts, in Rajputana. Comparative data for the political divisions are given in the following table :—

Division.	Mean cloud amount.		
	Actual.	Normal.	Variation from normal.
Chota Nagpur	4·2	2·0	+2·2
Bihar	3·5	2·0	+1·5
North-Western Provinces	4·8	2·5	+2·3
Punjab	5·9	3·6	+2·3
Sind	4·9	3·4	+1·5
Central India	4·1	2·6	+1·5
Rajputana	3·4	2·6	+0·8

There was also an increased amount of cloud at the hill stations. The excess averaged 2·1 for the Himalayan hill stations and was 1·1 for Quetta and 0·3 at Pachmarhi.

The mean cloud was in excess in the Central Provinces and Berar and was normal in amount or in slight defect in the Deccan and Southern India. The variations in these areas were small except in the northern districts of the Central Provinces.

The mean cloud amount of the month was less than 1·0 at the stations for which data are given below :—

Station.	Mean cloud amount.		
	Actual.	Normal.	Variation from normal.
Poona	0·8	1·4	−0·6
Karwar	0·2	0·6	−0·4
Bombay	0·5	1·3	−0·8
Ratnagiri	0·5	0·4	+0·1
Belgaum	0·7	1·6	−0·9
Bangalore	0·8	2·2	−1·4

The data establish that skies were most serene in the west coast districts from Bombay to Karwar and also in the districts along the eastern base of the West Ghats from Poona to Bangalore.

They were, as is usual in February, most clouded in the Himalayan area where the mean cloud amount ranged between 4·9 at Katmandu and 9 at Murree and 8·2 at Srinagar.

The following summarises the chief features of the cloud distribution of the month:—

(1) The amount of cloud in February 1894 was in slight excess in Bengal and was normal in Burma and Assam.

(2) It was in large excess over the Gangetic Plain, the Punjab, Rajputana, Sind, Central India and the northern districts of the Central Provinces. The average of the month for the North-Western Provinces and Chota Nagpur was double the normal.

(3) It was in slight excess in the East Deccan and Madras coast districts, and in moderate defect in the West Deccan, Mysore, and the west coast districts.

(4) It was in moderate excess in the Western Himalayas and Baluchistan.

(5) Skies were most free from cloud in the west coast districts between Bombay and Karwar, the amount averaging only 0·4 for the month.

Rainfall.

Rainfall in February is usually due to the occurrence of storms of the type known as cold weather storms. The rainfall is chiefly received in Northern India, and is generally heaviest in the Punjab and along the foot of the hills. Bengal, Lower Burma and Malabar occasionally obtain thunder showers, but, as a rule, the conditions for these storms do not occur before March.

The rainfall of the month of February occurred during three disturbances of somewhat unusual character. The first disturbance was a cold weather storm of very feeble intensity which crossed Northern India. The second and third disturbances were not due to cold weather storms of the previous type but to atmospheric movements over India produced by the abnormally high temperature which prevailed during a considerable part of the month over the greater part of Northern and Central India. These disturbances gave on the whole more abundant rain than usual over Northern and Central India. The following were the chief periods of rainfall:—

1st.—From the 2nd to 3rd. Central India, the North-Western Provinces and Bihar obtained light to moderate rain during this period. It was heaviest and most general in the eastern districts of the North-Western Provinces.

2nd.—From the 7th to the 9th. This was on the whole the period of most general rainfall during the month. The submontane and hill districts of the Punjab received general rain on the 8th and 9th, the North-Western Provinces and Central India general and moderately heavy rain from the 7th to the 9th, and Bihar moderate rain on the 8th and 9th.

3rd.—From the 13th to the 17th. Light showers fell in the Punjab during this period and in the hill and submontane districts of the North-Western Provinces on the 17th.

4th.—From the 20th to 28th. The rainfall during the greater part of this period was confined to Bengal and Assam. Bihar and Bengal had general rain on the 20th and Bengal showers from 20th to the 24th, giving fairly general rain. From the 25th to the 28th Assam had heavy rain and East and North Bengal occasional local thunder showers. The Punjab and North-Western Provinces received general rain on the 28th from a disturbance which continued during the first three days of March.

The rainfall was in slight to moderate excess over nearly the whole of India. The following were the chief features of the rainfall distribution of the month:—

(1) Little or no rain fell in Burma, Rajputana, Bombay coast districts, Hyderabad, Madras Deccan and the districts of Nellore and Kistna.

(2) Excessive precipitation in Baluchistan which received four or five times its normal amount.

(3) Large excess in the North-Western Provinces and slight excess in Central India and the Punjab.

(4) Excessive precipitation in the Punjab and Kashmir Himalayas.

(5) Moderate excess in Assam and slight excess in Bengal, the Central Provinces and the Deccan and Madras generally.

The following table gives mean actual, mean normal and variation rainfall data for the 51 meteorological divisions or districts, into which India is divided, in the same form as in the previous months and has been prepared in exactly the same manner as hitherto:—

Province.	Division.	Rainy Days. Actual, February 1894.	Rainy Days. Normal, February.	Rainfall. Actual, February 1894.	Rainfall. Normal, February.	Variation.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	0	0·05	−0·05
	Lower Burma*	?	?	0	0·18	−0·18
	Central do.*	?	?	0·09	0·15	−0·06
	Upper do.*	?	?	0·02	?	?
	Arakan*	?	?	0·03	0·14	−0·11
Bengal and Assam	Eastern Bengal	1·8	1·7	1·00	1·01	−0·01
	Assam (Surma)*	?	?	3·12	1·82	+1·30
	Do. (Bhramaputra)*	?	?	2·49	1·19	+1·30
	Deltaic Bengal	1·2	1·8	0·55	1·17	−0·62
	Central do.	1·3	1·4	0·47	0·76	−0·29
	North do.	1·8	1·4	0·75	0·49	+0·26
	Orissa	0·6	1·5	0·24	0·91	−0·67
	Chota Nagpur	1·6	1·3	0·58	0·64	−0·06
	Bihar (South)	2·3	1·1	0·78	0·43	+0·35
	Do. (North)	1·5	1·1	0·73	0·44	+0·29
North-Western Provinces and Oudh.	North-Western Provinces (East)	3·9	0·8	1·84	0·34	+1·50
	Oudh (South)	3·4	0·6	1·85	0·23	+1·62
	Do. (North)	3·9	0·8	1·97	0·31	+1·66
	North-Western Provinces (Central)	2·8	0·6	1·20	0·21	+0·99
	Do. do. (West)	1·1	0·8	0·48	0·31	+0·17
	Do. do. (Submontane)	3·7	1·8	1·81	1·10	+0·71
Punjab	Punjab (South)	2·0	1·1	0·65	0·45	+0·20
	Do. (Central)	1·8	1·2	0·61	0·50	+0·11
	Do. (Submontane)	3·3	2·4	1·53	1·30	+0·23
	Do. (Hill Districts)	7·6	4·5	5·66	3·19	+2·47
	Do. (North-West)	3·8	2·7	1·70	1·57	+0·13
	Do. (West)	2·7	1·1	0·87	0·44	+0·43
Bombay and Malabar Coast Districts (Madras).	Malabar	0·4	0·2	0·24	0·16	+0·08
	Madras (South Central)	1·0	0·2	0·76	0·13	+0·63
	Coorg	0	?	0·01	?	?
	Mysore*	?	?	0·06	0·04	+0·02
	Konkan	0	0	0·01	0	+0·01
	Bombay Deccan	0·6	0·1	0·33	0·03	+0·30
	Khandesh	0·8	0	0·44	0·03	+0·41
Central Provinces and Berar.	Berar	0·3	?	0·12	0·15	−0·03
	Central Provinces (West)*	?	?	0·19	0·22	−0·03
	Do. (Central)*	?	?	0·62	0·32	+0·30
	Do. (East)*	?	?	0·47	0·37	+0·10
Bombay (North)	Gujarat	0	0	0	0·02	−0·02
	Kathiawar	0	0	0	0·09	−0·09
	Sind	1·1	?	0·33	0·31	+0·02
Rajputana and Central India.	Central India (East)	1·7	?	0·79	0·32	+0·47
	Rajputana (East) Central India (West)	0·2	?	0·05	0·26	−0·21
	Rajputana (West)	0·3	?	0·06	0·12	−0·06
Madras	East Coast (North)	0·9	0·4	0·54	0·22	+0·32
	Do. (do). (a)	1·5	0·4	0·43	0·19	+0·24
	Hyderabad (South)*	?	?	0	0·13	−0·13
	Madras (Central)	0·3	0·1	0·16	0·03	+0·13
	East Coast (Central)	0·4	0·2	0·09	0·19	−0·10
	Do. (South)	1·3	0·2	0·84	0·30	+0·54
	Madras (South)	0·9	0·8	0·58	0·57	+0·01

NOTE.—The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

No rain (*i.e.*, less than an average of a tenth of an inch) fell in Coorg, Mysore, Konkan, Gujarat, Kathiawar, Rajputana, Hyderabad, Madras, East Coast Central and Burma.

Baluchistan received unusually frequent rainfall during the month. There were three well marked rainy periods, *viz.*, from the 3rd to the 7th, the 10th to the 16th and from the 22nd to the 28th. The average rainfall of the month as measured at the 50 stations on the railway between Jacobabad and Quetta was 3·61 inches, the normal of the month probably not exceeding one inch. The following gives comparative data for the three stations of which normal rainfall means are available :—

Station.	Rainfall. Actual, February 1894.	Rainfall. Normal, February.	Rainfall. Variation.
	Inches.	Inches.	Inches.
Kalat	7·48	1·78	+5·70
Peshin	5·95	1·35	+4·60
Quetta	5·81	1·50	+4·31

These figures also suggest that the rainfall was from four to five times the normal fall of the month.

The rainfall of the month in the Punjab was normal in amount and distribution except in the hill districts where the precipitation was much heavier than usual. The chief periods of rainfall were:—

(1) The 6th to the 9th when the hill districts and the eastern and northern districts received moderate rain.

(2) The 13th to the 17th. The whole province received rain during this period, but it was general and moderately heavy only in the northern districts, and the hill districts.

(3) The 27th and 28th during which the whole province received light to moderate rain.

The following is a summary of the rainfall data of the month published in the *Punjab Gazette*:—

Division.	Rainy days.			Rainfall.		
	Actual, February 1894.	Normal, February.	Variation from normal.	Actual, February 1894.	Normal, February.	Variation from normal.
				Inches.	Inches.	Inches.
Punjab South	2·0	1·1	+0·9	0·65	0·45	+0·20
Do. Central	1·8	1·2	+0·6	0·61	0·50	+0·11
Do. Submontane	3·3	2·4	+0·9	1·53	1·30	+0·23
Do. Hills	7·6	4·5	+3·1	5·66	3·19	+2·47
Do. North-West	3·8	2·7	+1·1	1·70	1·57	+0·13
Do. West	2·7	1·1	+1·6	0·87	0·44	+0·43

The only remarkable feature was the frequent and heavy precipitation in the hill districts. The following gives several examples of the excessive rainfall of the month in those districts:—

District.	Station.	Rainfall.		
		Actual, February 1894.	Normal, February.	Percentage variation.
		Inches.	Inches.	
Simla	Kasauli	5·84	1·78	+228
	Simla	7·48	1·48	+405
	Kilba	16·93	5·30	+31
Kangra	Kulu	6·51	4·51	+44
	Dharamsala	7·69	4·18	+84
Gurdaspur	Dalhousie	7·99	3·52	+127
Rawalpindi	Murree	8·45	1·38	+512

The rainfall at several of these stations, as for example, Murree, Simla and Kasauli was as largely in excess relatviely to the normal as in Baluchistan.

The chief periods of rainfall in the North-Western Provinces were as follows:—

1st.—The 2nd and 3rd, when Rohilkhand, Oudh and the eastern districts received moderate rain. The following large falls were reported:—

District.	Station.	Rainfall in past 24 hours.	Date.
		Inches.	
Gonda	Gonda	2·65	2nd
Kheri	Nighasan	2·76	3rd
Bahraich	Nanpara	2·33	3rd
Partabgarh	Kunda	3·11	3rd

2nd.—The 7th to the 9th, during which the whole province received moderate general rain, except the districts of Aligarh, Bulandshahr and Muttra, in which no rain fell during this period. The following falls in 24 hours exceeding 3 inches were received:—

District.	Station.	Rainfall in past 24 hours.	Date.
		Inches.	
Dehra Dun	Mussoorie	4·62	8th
	Ambari	3·80	8th
Partabgarh	Kunda	3·16	8th

Some local showers were received on the 17th, 20th and 28th.

The rainfall of the month was below the normal in the three districts of Muthra, Aligarh, and Bulandshahr which received practically no rain. It was more or less in excess over the remainder of the province. The excess was large in Oudh and the eastern and the central districts.

The following gives data for the six divisions of the province:—

Division.	Number of rainy days.		Rainfall.		
	Actual, February 1894.	Variation from normal.	Actual, February 1894.	Normal, February	Percentage variation.
			Inches.	Inches.	
Oudh North	3·9	+3·1	1·97	0·31	+535
Do. South	3·4	+2·8	1·85	0·23	+704
N.-W. P. (East)	3·9	+3·1	1·84	0·34	+441
Do. Central	2·8	+2·2	1·20	0·21	+471
Do. Submontane	3·7	+1·9	1·81	1·10	+ 65
Do. (West)	1·1	+0·3	0·48	0·31	+ 55

Practically no rain fell in Assam during the first fortnight of the month. Rain fell daily from the 18th to the end of the month, and the showers, accompanying thunderstorms, were in some cases very heavy.

The following gives some of the more noteworthy falls :—

District.	Station.	Rainfall in past 24 hours.	Date.
		Inches.	
Lakhimpur	Jaipur	3·96	18th
	Moran	2·68	"
Cachar	Nemotha	2·80	19th
	Bikrampur	2·79	"

The rainfall of the month was hence in general excess in that area, the excess averaging 86 per cent. in the Brahmaputra Division and 124 per cent. in the Surma Division :—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, February 1894.	Variation from normal.	Mean actual, February 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Surma	4·9	+2·2	3·03	+1·68	+124
Brahmaputra	5·4	+1·7	2·47	+1·14	+86

North and South Bihar and the northern districts of North Bengal received moderately heavy and general rain on the 2nd and 3rd, chiefly on the latter day, and Bihar again on the 8th and 9th and also on the 20th. No rain fell during the first and second periods in Bengal and Chota Nagpur with the exception noted above.

The last eight days of the month (*i.e.*, 20th to 28th) formed a period of slightly unsettled weather with frequent showers in Orissa, Chota Nagpur, North Bihar and Bengal, more especially in the northern and eastern districts. Falls exceeding one inch were recorded at a large number of stations in East Bengal on the 24th and 27th. The rain fall of the month was nowhere large in amount. It was in general moderate excess in Bihar and North Bengal, normal in East Bengal and in moderate defect over the remainder of that province. The following gives comparative data :—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, February 1894.	Variation from normal.	Actual, February 1894.	Normal, February.	Percentage variation from normal.
			Inches.	Inches.	
Bengal East	1·8	+0·1	1·00	1·01	− 1
Do. North	1·8	+0·4	0·75	0·49	+ 53
Do. Deltaic	1·2	−0·6	0·55	1·17	− 53
Bengal Central	1·3	−0·1	0·47	0·76	− 38
Orissa	0·6	−0·9	0·24	0·91	− 74
Chota Nagpur	1·6	+0·3	0·58	0·64	− 9
North Bihar	1·5	+0·4	0·73	0·44	+ 66
South Do.	2·3	+1·2	0·78	0·43	+ 81

Thunder showers were received in Berar and the Central Provinces on the 6th, 7th, 8th and 9th. The remainder of the month was practically rainless in these two areas. The average slightly exceeded the normal mean (a third of an inch) in the eastern and central districts of the Central Provinces and was small in amount in the western districts and in Berar.

Rain was received in the eastern states of Central India during the first and second disturbances of the month, *i.e.*, from the 1st to the 3rd and from the 7th to the 9th. The rainfall was moderately heavy in Bundelkhand and Baghelkhand. The latter received an average of 1·3 inches, the normal being four-tenths of an inch, and the former an average of 1·9 inches, or 1·5 inches in excess of the normal.

Light showers fell in the Deccan districts of the Bombay Presidency on the 5th, 6th, 7th and 8th, and in Sind on the 7th and the 15th and 16th. The amounts were small and averaged only a third of an inch. No rain fell during the month over the remainder of the Bombay Presidency.

The central and southern districts of Madras received moderate and general rain between the 3rd and the 5th.

The rainfall was heaviest and most general on the 4th, on which day an average of more than half an inch was received in several districts including South Arcot (1·1 inches), North Arcot (0·77 inch), Trichinopoly (0·54 inch), Salem (0·84 inch) and Nilgiris (0·88 inch).

The districts of Ganjam and Vizagapatam had light to moderate showers between the 23rd and 27th. The Ganjam district obtained a total average fall of 1·1 inches during this period, and the Vizagapatam district 0·8 inch.

The districts of Godavari, Kistna, Nellore, Anantapur, Bellary and Kurnool received actually or practically no rain during the month.

The following gives a summary of the rainfall data of the month published in the *Fort Saint George Gazette* :—

District.	Number of rainy days.		Rainfall.		
	Actual, February 1894.	Normal, February	Actual, February 1894.	Normal, February.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam	2·1	0·8	1·10	0·45	+0·65
Vizagapatam	1·3	0·4	0·82	0·19	+0·63
Godavari	0	0·2	0·05	0·12	−0·07
Kistna	0	0·2	0	0·06	−0·06
Nellore	0·4	0·2	0·09	0·19	−0·10
Chingleput	1·2	0·2	0·62	0·42	+0·20
Madras	2·0	0·2	1·14	0·28	+0·86
North Arcot	1·3	0·2	0·88	0·21	+0·67
South Arcot	1·6	0·2	1·48	0·20	+1·28
Tanjore	1·7	0·5	0·59	0·54	+0·05
Trichinopoly	1·0	0·1	0·58	0·11	+0·47
Madura	1·0	0·5	0·77	0·39	+0·38
Tinnevelly	0·8	1·2	0·38	0·81	−0·43
Malabar	0·4	0·4	0·21	0·26	−0·05
South Canara	0·6	0	0·82	0·02	+0·80
Salem	1·0	0·2	0·86	0·10	+0·76
Coimbatore	1·0	0·2	0·63	0·17	+0·46
Nilgiris	1·3	0·5	1·19	0·23	+0·96
Cuddapah	0·5	0·1	0·53	0·06	+0·47
Anantapur	0·1	0·1	0·03	0·03	0
Bellary	0	0	0	0·02	−0·02
Kurnool	0	0·1	0	0·01	−0·01

Table

Abstract of Observations taken at 8 A.M. at 203

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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.		...	...	+·006	...	...	...	...	...	...	...	89·9	+1·2	69·3	+3·2	79·6	+2·2	20·7	...	...	...	...	29·5
Bay Islands	Port Blair	61	29·931	?	29·923	29·985	15th	29·852	24th	·133	79·7	88·1	?	77·4	?	82·8	?	10·7	91·3	27th	75·7	5th & 16th.	15·6
Tenasserim	Mergui	96	29·932	?	29·962	30·018	3rd	29·839	24th	·179	76·1	90·1	?	69·9	?	80·0	?	20·2	93·1	9th	60·2	4th	32·9
	Tavoy	26	30·010	?	29·966	30·085	4th	29·926	24th	·159	72·1	91·2	?	67·6	?	79·4	?	23·6	95·2	28th	57·2	4th	38·0
	Moulmein	94	29·935	+·046?	29·968	30·027	3rd	29·853	24th	·174	72·5	92·1	+0·8	70·1	+2·6	81·1	+1·7	22·0	95·0	27th	65·9	2 days	29·1
	Toungoo	181	29·819	+·007	29·948	29·898	3rd	29·717	24th	·181	69·3	91·7	+1·0	64·4	+4·2	78·1	+2·2	27·3	94·7	3 days	58·1	16th	36·6
Lower Burma	Rangoon	41	29·974	+·006	29·952	30·058	3rd	29·883	24t	·175	71·3	94·6	+2·2	68·8	+3·6	81·7	+2·9	25·8	97·1	2 days	62·8	16th	34·3
	Bassein	27	29·987	+·019?	29·950	30·057	3rd	29·897	24th	·160	72·0	91·8	+2·3	68·0	+4·1	79·9	+3·2	23·8	94·7	22nd	64·5	16th	30·2
	Diamond Island.	41	29·966	−·004	29·942	30·032	3rd	29·888	24th	·143	76·5	83·5	−0·6	74·8	+3·0	79·2	+1·2	8·7	85·6	6th	73·4	3 days	12·2
Arakan	Akyab	20	30·004	0	29·967	30·069	4th	29·899	24th	·170	67·4	86·2	+1·6	62·7	+1·8	74·5	+1·7	23·5	92·2	2 days	55·7	1st	36·5
II.—Burma Inland		...	...	+·016	...	...	...	...	...	...	...	88·6	+0·9	57·3	+2·6	73·0	+1·8	31·3	...	...	...	...	42·5
Central Burma	Thayetmyo	134	29·871	+·016	29·951	29·950	8th	29·766	24th	·184	67·0	93·3	+0·9	58·6	+2·6	76·0	+1·8	34·7	96·6	22nd	52·2	1st	44·4
	Minbu	?	29·848	?	?	29·940	8th	29·725	24th	·215	69·2	95·2	?	60·9	?	78·1	?	34·3	98·6	2 days	54·0	1st	44·6
	Yamethin	?	29·335	?	?	29·405	8th	29·218	24th	·187	69·2	94·6	?	61·2	?	77·9	?	33·4	99·1	21st	55·1	1st	44·0
	Fort Stedman.	?	27·065	?	?	27·129	8th	26·950	24th	·179	59·0	86·0	?	52·5	?	69·3	?	33·5	90·1	10th	48·0	2 days	42·1
Upper Burma	Mandalay	?	29·748	?	?	29·825	8th	29·643	24th	·182	70·1	91·0	?	63·0	?	77·0	?	28·0	95·0	19th	56·7	1st	38·3
	Kendat	?	29·667	?	?	29·763	12th	29·552	24th	·211	61·1	83·2	?	57·5	?	70·4	?	25·7	90·8	19th	53·3	10th	37·5
	Lashio	?	27·250	?	?	27·307	12th	27·078	2nd	·229	55·5	81·0	?	50·0	?	65·5	?	31·0	89·6	12th	41·6	7th	48·0
	Bhamo	?	29·639	?	?	29·742	8th	29·554	18th	·188	61·5	84·7	?	54·3	?	69·5	?	30·4	89·1	2 days	47·9	1st	41·2
III.—Assam		...	...	+·010	...	...	...	...	...	...	...	80·0	+3·4	57·6	+3·3	68·5	+3·4	22·4	...	...	...	...	34·2
Assam (Surma)	Silchar	104	29·947	+·010	30·007	30·025	8th	29·832	24th	·193	63·9	83·0	+3·1	58·3	+3·3	70·7	+3·2	24·7	88·7	12th	52·4	2nd	36·3
Brahmaputra	Sibsagar	333	29·720	+·010	30·027	29·829	12th	29·552	18th	·277	58·1	76·0	+3·3	55·5	+2·4	65·8	+2·9	20·5	82·0	17th	49·2	13th	32·8
	Dhubri	115	29·911	+·009	29·987	30·008	8th	29·764	18th	·244	61·9	80·9	+3·8	58·9	+4·2	69·1	+4·0	22·0	86·3	19th	52·7	5th	33·6
IV.—Bengal and Orissa		...	...	+·012	...	...	...	...	...	...	...	83·2	+2·3	60·7	+3·2	71·9	+2·7	22·5	...	...	...	...	36·6
East Bengal	Chittagong	87	29·949	+·010	29·986	30·039	4th	29·838	24th	·201	66·0	84·6	+3·1	60·8	+2·3	72·7	+2·7	23·8	88·7	22nd	51·1	1st	37·6
	Lungleh	?	?	?	?	?	?	?	?	?	62·6	71·7	?	56·8	?	64·3	?	14·9	76·9	8th & 9th.	50·2	1st	26·7
	Noakhali	43	29·969	?	29·960	30·056	4th	29·861	24th	·195	67·8	83·0	?	60·1	?	71·5	?	22·9	86·9	21st	51·0	1st	35·9
	Comilla	36	29·991	?	29·976	30·093	4th	29·879	24th	·214	66·6	84·1	?	*59·6	?	*71·8	?	24·5	89·9	19th	49·1	1st	40·8
	Sirajganj	49	29·977	?	29·978	30·082	4th	29·873	25th	·209	64·0	82·2	?	56·7	?	69·5	?	25·5	88·3	19th	49·8	1st	38·5
	Narayanganj	20	30·001	−·001	29·970	30·103	4th	29·905	26th	·198	65·4	84·7	+1·0	61·5	+3·7	73·2	+2·4	23·2	90·6	19th	54·8	5th	35·8
	Barisal	13	30·009	−·005	29·968	30·108	4th	29·900	24th	·208	67·8	83·1	+3·1	62·1	+4·0	72·6	+3·6	21·0	89·3	18th	53·0	1st	36·3
	Mymensingh	59	29·975	+·006	29·988	30·073	4th	29·878	24th	·195	62·7	80·3	+2·5	57·8	+4·2	69·1	+3·4	22·5	86·9	19th	49·5	5th	37·4
Deltaic Bengal	Faridpur	46	29·994	?	29·989	30·095	4th	29·890	28th	·205	64·2	81·4	?	59·1	?	70·3	?	22·3	86·5	3 days	51·0	1st	35·5
	Jessore	33	30·003	+·010	29·984	30·115	4th	29·884	28th	·231	65·9	84·5	+1·4	58·9	+2·3	71·8	+1·9	25·6	92·5	18th	47·9	1st	44·6
	Calcutta	21	30·021	+·010	29·989	30·130	4th	29·900	28th	·230	66·1	83·6	+2·0	61·6	+1·8	72·6	+1·9	22·0	91·6	18th	54·2	6th	37·4
	Saugor Island	25	30·014	+·014	29·984	30·110	4th	29·890	24th	·220	71·0	82·6	+1·7	66·5	+1·4	74·5	+1·6	16·1	86·2	2 days	56·4	1st	29·8
	Krishnagar	47	29·995	?	29·990	30·105	4th	29·871	28th	·234	65·6	84·4	?	57·7	?	71·0	?	26·7	91·4	18th	47·2	1st	44·2
	Midnapore	149	29·902	?	30·002	30·011	4th	29·776	28th	·235	69·1	88·8	?	62·5	?	75·7	?	26·3	97·3	18th	56·2	6th	41·1

* Mean of 27 days.

I.

Stations in India, Burma, etc., in February 1894.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	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.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·26	0·43	−0·17	...	...	...	...	**I.—Burma Coast and Bay Islands.**	
1	4	14	7	2	...	...	...	...	5·3	5·1	+ 4	84	·848	3·6	0	?	?	0	1·17	− 1·17	0·09	1·98	− 1·90	0	Port Blair	Bay Islands.
...	6	5	6	6	2	1	...	2	?	2·0	?	81	·732	4·6	4	?	?	2·21	1·43	+ 0·78	2·30	2·04	+ 0·26	1·18	Mergui	Tenasserim.
28	...	...	...	...	...	...	...	...	1·1	?	?	88	·702	0·5	1	?	?	0·11	?	?	0·11	?	?	0·11	Tavoy.	
...	...	4	9	6	...	3	5	1	3·1	2·4	+29	88	·706	3·5	0	0·45	−0·45	0·05	0·20	− 0·15	0·05	0·71	− 0·66	0·05	Moulmein.	
14	8	...	...	2	3	...	...	1	0·9	1·9	−53	83	·601	2·4	0	0·36	−0·36	0	0·18	− 0·18	0	0·30	− 0·30	0	Toungoo.	
...	...	1	2	...	7	10	6	2	3·0	3·9	−23	90	·691	1·2	0	0·45	−0·45	0	0·34	− 0·34	0	0·51	− 0·51	0	Rangoon	Lower Burma.
5	1	...	...	2	1	2	1	16	4·8	3·8	+26	90	·711	2·3	0	0·45	−0·45	0	0·30	− 0·30	0	0·47	− 0·47	0	Bassein.	
2	16	1	1	1	...	...	2	5	8·9	7·2	+24	83	·753	1·8	0	0·40	−0·40	0	0·10	− 0·10	0	0·28	− 0·28	0	Diamond Island.	
...	19	7	1	1	...	...	...	...	3·6	3·4	+ 6	86	·577	1·0	0	0·36	−0·36	0	0·11	− 0·11	0	0·19	− 0·19	0	Akyab	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·13	?	?	...	...	...	...	**II.—Burma Inland.**	
3	2	5	2	...	...	...	9	7	2·2	4·2	−48	69	·461	0·2	0	0	0	0	0·01	− 0·01	0	0·03	−0·03	0	Thayetmyo	Central Burma.
10	1	...	1	3	1	1	2	9	5·4	?	?	68	·489	0	0	?	?	0	?	?	0	?	?	0	Minbu.	
15	3	1	...	7	...	...	...	2	3·7	?	?	77	·552	0	0	?	?	0	?	?	0	?	?	0	Yamethin.	
28	...	...	...	...	...	...	...	...	?	?	?	82	·411	0·4	0	?	?	0	?	?	0	?	?	0	Fort Stedman	
8	5	1	1	3	4	3	2	1	1·6	?	?	68	·492	0·8	0	?	?	0	?	?	0	?	?	0	Mandalay	Upper Burma.
20	...	1	...	...	...	...	2	5	1·8	?	?	97	·525	6·0	1	?	?	0·66	?	?	0·66	?	?	0·62	Kendat.	
1	9	15	...	...	...	...	...	3	?	?	?	88	·387	4·2	1	?	?	0·13	?	?	0·13	?	?	0·13	Lashio.	
2	7	9	...	2	..	1	...	7	1·3	?	?	80	·437	2·6	1	?	?	0·25	?	?	0·25	?	?	0·25	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·12	1·32	+1·81	...	...	...	...	**III.—Assam.**	
20	...	...	1	1	2	2	2	...	3·1	2·8	+11	89	·530	3·8	6	3·91	+1·09	4·84	1·63	+ 3·21	4·84	2·40	+ 2·44	1·78	Silchar	Assam (Surma).
10	...	16	...	...	...	1	...	1	1·4	2·2	−37	98	·479	3·8	8	4·55	+3·45	3·34	1·80	+ 1·54	3·75	3·28	+ 0·47	1·10	Sibsagar	Brahmaputra.
4	2	4	8	4	1	3	1	1	4·3	4·0	+8	90	·497	3·0	2	0·71	+1·29	1·19	0·52	+ 0·67	1·19	0·96	+ 0·23	0·72	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·56	0·97	−0·40	...	...	...	...	**IV.—Bengal and Orissa.**	
2	6	13	5	1	...	...	...	1	3·4	4·4	−23	89	·571	2·0	2	1·55	+0·45	0·76	0·63	+ 0·13	0·76	1·02	− 0·26	0·53	Chittagong	East Bengal.
			Not	reco	rded				?	?	?	74	·419	?	3	?	?	1·47	?	?	1·47	?	?	0·88	Lungleh.	
...	5	11	5	2	1	3	...	1	3·2	?	?	90	·614	2·5	2	1·60	+0·40	2·07	0·91	+ 1·16	2·07	1·53	+ 0·54	1·17	Noakhali.	
5	1	3	4	...	2	7	...	6	2·3	?	?	89	·587	3·0	3	2·00	+1·00	2·19	0·87	+ 1·32	2·19	1·55	+ 0·64	1·32	Comilla.	
16	...	2	1	1	2	1	4	1	1·8	?	?	90	·536	2·2	1	1·47	− 0·47	0·65	1·01	− 0·36	0·65	1·46	− 0·81	0·53	Sirajganj.	
5	9	2	2	...	4	1	...	5	3·3	2·6	+27	86	·549	3·6	2	1·91	+0·09	1·28	1·51	− 0·23	1·28	1·83	− 0·55	1·06	Narayanganj.	
21	2	2	...	...	1	2	...	...	2·5	?	?	87	·606	2·8	2	1·75	+0·25	0·48	?	?	0·48	1·77	− 1·29	0·38	Barisal.	
6	2	6	9	1	...	2	2	...	2·7	?	?	89	·509	3·1	3	1·30	+1·70	1·03	?	?	1·02	1·39	− 0·37	0·63	Mymensingh.	
17	7	...	...	...	2	1	...	1	1·4	?	?	91	·554	1·1	1	2·05	−1·05	0·10	1·41	−1·31	0·10	1·75	− 1·65	0·10	Faridpur	Deltaic Bengal.
13	6	...	...	1	...	2	1	5	2·0	2·0	0	82	·526	2·5	1	2·00	−1·00	0·24	1·48	− 1·24	0·24	1·97	− 1·73	0·24	Jessore.	
14	5	2	2	...	2	2	1	...	1·4	3·8	−63	85	·549	1·3	1	1·64	−0·64	0·25	1·24	− 0·99	0·25	1·62	− 1·37	0·19	Calcutta.	
...	8	6	1	...	1	8	2	2	9·6	7·9	+22	88	·676	3·2	1	2·00	−1·00	0·55	1·34	− 0·79	0·55	1·57	− 1·02	0·44	Saugor Island.	
4	3	3	3	1	1	2	6	5	3·4	?	?	75	·476	2·3	1	1·55	−0·55	0·11	1·04	− 0·93	0·11	1·34	− 1·23	0·11	Krishnagar.	
4	8	6	1	...	1	2	...	6	2·6	?	?	65	·455	1·4	1	1·40	−0·40	0·21	0·89	− 0·68	0·21	1·50	− 1·29	0·16	Midnapore.	

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

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.
Central Bengal.	Bankura	298	29·718	?	29·981	29·855	4th	29·597	28th	·258	66·2	85·8	?	61·5	?	73·7	?	24·3	93·1	17th	55·2	1st	37·9
	Raniganj	334	29·710*	?	30·010*	29·820	4th	29·587	28th	·233	64·8*	84·1*	?	60·3*	?	72·2*	?	23·8	91·5	18th	55·2	6th	36·3
	Burdwan	99	29·942	+·014	29·992	30·059	4th	29·810	28th	·249	66·5	84·4	+1·2	61·0	+2·9	72·7	+2·1	23·4	92·0	18th	52·6	1st	39·4
	Naya Dumka	489	29·524	?	29·994	29·644	4th	29·389	25th	·255	64·5	83·1	?	58·2	?	70·7	?	24·9	90·1	17th	49·6	1st	40·5
	Berhampore	67	29·974	+·014	29·993	30·095	9th	29·850	24th	·245	64·1	82·6	+0·7	59·9	+4·0	71·3	+2·4	22·7	88·6	19th	51·4	1st	37·2
	Rampur Boalia.	70	29·959	?	29·980	30·082	9th	29·839	25th	·243	65·6	81·4	?	58·8	?	70·1	?	22·6	87·9	19th	48·1	1st	39·8
	Malda*	72	29·946	?	29·981	30·054	4th	29·819	25th	·235	63·7	82·5	?	55·9	?	69·2	?	26·6	88·6	19th	45·5	2nd	43·1
	Bogra	61	29·960	+·021	29·976	30·072	9th	29·845	18th	·227	64·1	82·5	+3·4	57·4	+4·1	70·0	+3·8	25·1	89·2	19th	51·2	1st	38·0
North Bengal	Dinajpur	123	29·903	+·017	29·986	29·997	4th	29·791	24th	·206	63·0	81·5	+3·1	57·3	+6·1	69·4	+4·6	24·2	86·1	3 days	50·4	1st	35·7
	Rangpur	123	29·907	?	29·990	30·015	4th	29·779	18th	·236	61·7	80·4	?	55·7	?	68·1	?	24·7	86·2	19th	49·0	4th & 5th.	37·2
	Jalpaiguri	284	29·752	+·031?	30·008	29·845	9th	29·600	18th	·245	62·1	78·9	+4·0	56·1	+5·3	67·5	+4·7	22·8	83·9	18th	51·1	2 days	32·8
Orissa	Balasore	56	29·983	+·009	29·938	30·093	4th	29·851	24th	·242	68·8	87·7	+4·2	62·9	+2·7	75·3	+3·5	24·8	95·4	18th	55·5	3rd	39·9
	False Point	21	30·022	+·018	29·985	30·104	12th	29·913	24th	·191	71·6	83·7	+1·1	65·4	+1·1	74·5	+1·1	18·3	89·0	2 days	58·5	2 days	30·5
	Cuttack	80	29·951	+·005	29·976	30·039	9th	29·835	24th	·204	71·1	91·5	+1·5	66·5	+1·4	79·0	+1·5	25·0	98·2	18th	60·3	3rd	37·9
	Shortt's Island	?	30·014	?	?	30·108	8th	29·895	24th	·213	75·2	81·8	?	71·2	?	76·5	?	10·6	86·6	11th	67·4	7th	19·2
	Puri	15	30·014	?	29·969	30·091	8th	29·902	24th	·189	73·9	84·0	?	69·7	?	76·8	?	14·3	92·7	18th	62·6	8th	30·1
V.—Gangetic Plain and Chota Nagpur.		...	...	+·012	...	...	...	...	...	...	...	79·1	+0·3	56·7	+4·2	68·0	+2·3	22·6	...	...	...	...	38·1
Chota Nagpur	Hazaribagh	2,007	27·983	+·015	30·000	28·055	4th	27·854	25th	·241	62·9	80·3	+2·6	56·3	+2·4	68·3	+2·5	24·0	88·5	17th	50·2	5th	38·3
	Ranchi	2,128	27·861	?	29·999	27·959	4th	27·739	25th	·220	62·6	79·6	?	56·7	?	68·2	?	22·9	88·2	17th	51·6	3rd	36·6
	Daltonganj	730?	29·303†	?	30·015†	29·448	4th	29·169	25th	·279	67·9	84·3	?	55·9	?	70·1	?	28·4	91·3	16th	49·0	12th	42·3
	Chaibassa	760	29·255	+·011	29·989	29·363	8th	29·141	25th	·222	66·5	88·2	+4·5	60·6	+3·7	74·4	+4·1	27·6	96·0	17th	55·2	6th	40·8
Bihar (South)	Gaya*	375	29·660	+·013	30·006	29·792	4th	29·528	24th	·264	64·4	82·2	+0·9	58·2	+2·4	70·2	+1·7	24·0	91·4	17th	52·3	1st	39·1
	Dehri	351	29·684	?	30·004	29·834	4th	29·537	24th	·297	66·4	80·8	?	60·4	?	70·6	?	20·4	90·3	17th	54·0	4th & 5th	36·3
	Patna	183	29·851	0	29·995	29·980	3rd	29·702	25th	·278	62·9	77·9	−0·1	58·0	+5·4	67·9	+2·7	19·9	85·7	16th	50·4	1st	35·3
	Arrah	190	29·842	?	29·993	29·972	3rd	29·693	28th	·279	62·2	79·5	?	57·0	?	68·3	?	22·5	89·1	17th	49·9	1st	39·2
	Buxar	239	29·794	?	30·000	29·941	3rd	29·640	25th	·301	62·9	78·1	?	57·5	?	67·8	?	20·6	87·6	18th	51·4	1st & 5th	36·2
Bihar (North)	Purnea	125	29·897	+·010	29·983	30·007	4th	29·783	24th	·224	60·3	79·9	+1·1	56·1	+5·4	68·0	+3·3	23·8	89·2	20th	48·5	1st	40·7
	Bhagalpur	160	29·862	?	29·980	29·985	4th	29·740	28th	·245	63·5	81·0	?	57·4	?	69·2	?	23·6	86·2	17th	48·0	1st	38·2
	Darbhanga	166	29·862	+·014	29·990	29·972	4th	29·743	18th	·229	61·7	77·2	+1·0	59·0	+5·3	68·1	+3·2	18·2	83·8	18th	50·6	1st	33·2
	Muzaffarpur	178	29·861	?	30·002	29·976	8th	29·726	28th	·250	61·6	76·3	?	57·0	?	66·7	?	19·3	83·7	18th	48·3	1st	35·4
	Motihari	224	29·792	?	29·980	29·899	3rd	29·662	28th	·237	61·3	76·9	?	54·9	?	65·9	?	22·0	83·2	18th	46·9	1st	36·3
	Chapra	181	29·862	?	30·005	29·992	3rd	29·709	28th	·283	63·1	78·2	?	58·0*	?	68·1*	?	20·2	85·4	16th & 18th	51·5	1st	33·9
N.-W. P. (Eastern Districts).	Benares	267	29·768	+·016	30·006	29·914	3rd	29·608	25th	·306	61·0	78·5	−1·9	55·8	+4·4	67·1	+1·3	22·7	88·2	17th	50·0	12th	38·2
	Allahabad	309	29·720	+·007	30·000	29·857	3rd	29·565	28th	·292	62·2	78·0	−1·7	56·8	+5·9	67·4	+2·1	21·2	88·6	17th	51·4	4th & 12th.	37·2
N.-W. P. (East Submontane).	Gorakhpur	256	29·764	+·020	29·992	29·901	3rd	29·611	28th	·250	61·9	75·0	−3·0	56·5	+4·6	65·8	+0·8	18·5	82·4	18th & 26th	49·8	6th	32·6
Oudh (South)	Lucknow	370	29·671	+·025?	30·023	29·816	3rd	29·516	28th	·300	59·0	77·6	−0·9	53·0	+2·7	65·3	+0·9	24·6	90·3	17th	46·0	4th	44·3
Oudh (North)	Bahraich	403	29·634	?	30·023	29·776	8th	29·475	25th	·301	58·8	75·2	?	?	?	?	?	?	82·4	15th & 16th	?	?	?
N.-W. Provinces (Central).	Cawnpore	416	29·614	?	30·014	29·761	3rd	29·463	28th	·298	60·1	78·2	?	52·8	?	65·5	?	25·4	88·4	17th	44·5	4th	43·9
	Mainpuri	516	29·512	?	30·019	29·659	3rd	29·347	28th	·312	57·4	76·6	?	51·8	?	64·2	?	24·8	86·3	25th	43·6	16th	42·7

* Mean of 27 days. † Mean of 21 days.

I—*continued.*

in India, Burma, etc., in February 1894—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.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	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 January to 28th February 1894.	Normal rainfall for period 1st January to 28th February.	Variation from normal of period, 1st January to 28th February.			
17	3	...	...	...	...	...	4	4	2·1	?	?	71	·434	2·5	3	1·75	+1·25	1·19	0·87	+ 0·32	1·20	1·24	− 0·04	0·75	Bankura .	Central Bengal.
7	3	2	...	...	1	...	2	12	2·3†	?	?	90*	·554*	1·1†	2	1·35	+0·65	0·58	1·19	− 0·61	0·58	1·52	− 0·94	0·26	Raniganj.‡	
7	8	6	1	1	1	1	...	3	1·9	2·3	−17	68	·445	2·3	1	1·64	−0·64	0·68	1·01	− 0·33	0·68	1·24	− 0·56	0·62	Burdwan.	
...	7	...	1	...	1	1	5	13	3·5	?	?	71	·432	0·5	2	1·44	+0·56	0·45	0·72	− 0·27	0·45	1·30	− 0·85	0·21	Naya Dumka.	
5	3	...	3	...	2	5	3	7	2·1	2·4	−13	85	·510	2·3	1	1·73	−0·73	0·65	1·19	− 0·54	0·65	1·58	− 0·93	0·61	Berhampore.	
4	12	2	...	1	2	3	3	1	3·9	?	?	82	·519	1·9	2	1·35	+0·65	0·37	0·79	− 0·42	0·37	1·19	− 0·82	0·17	Rampur Boalia.	
4	...	...	...	4	2	11	1	5	2·8	?	?	83	·492	0·9	1	1·10	−0·10	0·22	0·52	− 0·30	0·22	0·95	− 0·73	0·19	Malda.	
6	2	3	4	1	...	2	8	2	2·4	?	?	90	·495	1·9	2	1·35	+0·65	0·29	?	?	0·29	1·30	− 1·01	0·10	Bogra.	
4	1	2	2	3	1	...	6	9	1·7	?	?	84	·484	1·6	0	1·25	−1·25	0·04	?	?	0·04	0·90	− 0·86	0·04	Dinajpur .	North Bengal.
2	...	4	8	5	1	4	4	...	2·1†	?	?	90	·498	1·4	0	1·00	−1·00	0·04	0·39	− 0·35	0·04	0·97	− 0·93	0·04	Rangpur.	
9	4	7	5	1	...	1	1	...	2·0	?	?	86	·482	3·9	2	1·05	+0·95	0·77	?	?	0·77	0·83	− 0·06	0·58	Jalpaiguri.	
1	6	2	1	...	1	8	5	4	4·2	?	?	76	·539	0·5	0	2·20	−2·20	0·03	?	?	0·03	1·85	− 1·82	0·03	Balasore .	Orissa.
...	9	...	...	...	..	9	1	9	7·5	7·5	0	88	·688	3·5	0	1·55	−1·55	0·06	0·99	− 0·93	0·06	1·62	− 1·56	0·06	False Point.	
21	...	2	1	...	...	3	1	...	2·1	2·2	− 5	75	·566	2·1	0	1·36	−1·36	0·03	0·58	− 0·55	0·03	0·81	− 0·78	0·03	Cuttack.	
...	7	6	...	...	1	6	8	...	12·2	?	?	80	·699	0·4	0	?	?	0·10	?	?	0·10	?	?	0·08	Shortt's Island	
15	5	...	2	...	...	3	2	1	9·0	?	?	84	·709	1·4	0	1·20	−1·20	0	0·86	− 0·86	0·15	1·11	− 0·96	0	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·11	0·46	+0·65	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**	
4	4	...	2	1	1	1	7	8	7·7	6·5	+18	67	·382	3·9	2	1·45	+0·55	0·56	0·77	− 0·21	0·56	1·39	− 0·83	0·25	Hazaribagh.	Chota Nagpur.
16	1	...	1	...	...	...	2	8	5·8	?	?	68	·389	1·9	3	1·94	+1·06	2·50	1·10	+ 1·40	2·50	1·74	+ 0·76	1·31	Ranchi.	
...	2	1	1	2	3	10	3	6	4·6	?	?	67	·455	2·5	0	?	?	0·08	?	?	0·19	?	?	0·08	Daltonganj.	
4	3	1	1	...	2	9	6	2	1·8	?	?	65	·423	2·6	1	1·35	−0·35	0·57	0·84	− 0·27	0·57	1·57	− 1·00	0·52	Chaibassa.	
...	1	...	4	2	7	3	10	1	5·8	2·6	+123	79	·479	3·0	2	0·73	+1·27	0·42	0·65	− 0·23	0·42	1·27	− 0·85	0·20	Gaya . .	Bihar (South).
...	...	2	...	1	4	15	3	3	4·9	?	?	74	·473	0·9	3	0·67	+2·33	0·76	0·20	+ 0·56	0·82	0·82	0	0·35	Dehri.	
3	...	...	2	...	4	5	13	1	3·1	2·9	+ 7	79	·459	3·9	2	0·82	+1·18	1·11	0·56	+ 0·55	1·11	1·22	− 0·11	0·88	Patna.	
...	2	...	1	1	2	6	8	8	2·5	?	?	84	·467	2·8	1	0·85	+0·15	1·10	0·45	+ 0·65	1·13	1·16	−0·03	0·84	Arrah.	
...	1	1	2	1	2	9	10	2	3·3	?	?	80	·461	3·7	4	1·10	+2·90	1·66	0·36	+ 1·30	2·01	1·15	+0·86	1·09	Buxar.	
7	3	2	1	...	1	1	10	3	3·6	2·5	+ 44	91	·476	1·1	2	1·00	+1·00	0·48	0·67	− 0·19	0·48	1·27	−0·79	0·29	Purnea .	Bihar (North).
23	...	...	...	...	...	2	3	...	0·9	?	?	78	·461	3·1	1	1·25	−0·25	0·51	0·48	+ 0·03	0·51	0·96	−0·45	0·41	Bhagalpur.	
3	2	3	4	2	1	5	6	2	3·5	3·3	+ 6	88	·486	2·2	1	1·27	−0·27	0·78	0·55	+ 0·23	0·78	1·24	−0·46	0·64	Darbhanga.	
9	...	1	3	1	...	4	7	3	2·8	?	?	93	·501	2·3	1	1·26	−0·26	1·36	0·41	+ 0·95	1·36	1·20	+0·16	1·11	Muzaffarpur.	
3	...	5	3	1	...	7	6	3	5·6	?	?	88	·480	2·8	2	1·06	+0·94	0·72	0·35	+ 0·37	0·72	1·00	−0·28	0·54	Motihari.	
7	3	...	1	...	2	9	4	2	3·0	?	?	84	·489	4·9	2	0·80	+1·20	1·46	0·33	+ 1·13	1·48	0·99	+0·49	1·16	Chapra.	
10	1	2	1	...	4	8	2	...	3·6	4·1	− 12	80	·482	4·1	4	0·82	+3·18	1·23	0·37	+ 0·86	1·64	1·16	+0·48	0·62	Benares .	N.-W. P. (Eastern Districts).
6	2	2	2	3	2	5	4	2	4·1	2·7	+ 52	81	·465	4·6	4	0·64	+3·36	3·06	0·28	+ 2·78	3·21	1·13	+1·08	1·38	Allahabad.	
2	2	1	3	1	3	2	11	3	1·7	2·3	− 26	80	·448	3·0	4	0·73	+3·27	1·57	0·41	+ 1·16	1·62	1·25	+0·37	0·92	Gorakhpur .	N.-W. P. (East Submontane).
26	...	...	...	...	...	...	2	...	0·5	3·3	− 85	81	·409	5·7	5	0·55	+4·45	1·31	0·25	+ 1·06	1·51	1·35	+0·16	0·34	Lucknow.	Oudh (South).
6	2	1	...	2	...	7	2	8	4·8	?	?	82	·418	3·5	4	?	?	1·87	0·63	+ 1·24	2·12	1·49	+0·63	1·04	Bahraich .	Oudh (North).
6	3	1	2	1	1	3	4	7	3·9	?	?	79	415	3·9	3	0·60	+2·40	0·66	0·28	+ 0·38	1·39	0·92	+0·47	0·35	Cawnpore .	N.-W. Provinces (Central).
21	...	...	1	1	1	...	...	4	1·5	?	?	83	·394	5·1	4	?	?	0·65	0·16	+ 0·49	1·38	0·77	+0·61	0·23	Mainpuri.	

* Mean of 20 days.
† „ of 27 „

‡ Wind direction of 27 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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		...	...	+·024	...	...	...	...	...	...	...	69·8	−1·7	50·2	+3·8	60·0	+1·1	19·6	...	...	...	...	38·5
N.-W. Provinces (Submontane).	Bareilly	568	29·441	+·025	30·008	29·553	3rd	29·273	28th	·280	56·3	74·0	−0·9	52·8	+4·0	63·4	+1·6	21·2	83·3	15th & 16th.	45·2	1st	38·1
	Dehra Dun	2,233	27·751	+·026	30·040	27·876	3rd	27·621	28th	·255	53·5	68·8	0	50·0	+3·3	59·4	+1·7	18·8	76·5	16th	42·0	3rd	34·5
	Roorkee	887	29·107	+·019	30·017	29·265	3rd	28·967	28th	·298	54·3	72·5	−0·6	52·0	+4·8	62·3	+2·1	20·5	83·8	16th	43·1	3rd	40·7
	Meerut	738	29·266	+·015	30·016	29·415	3rd	29·134	28th	·281	54·7	72·7	−1·7	51·3	+3·8	62·0	+1·1	21·4	82·7	16th	42·1	1st	40·6
Punjab (Central)	Delhi	718	29·295	+·013	30·021	29·431	3rd	29·137	28th	·294	56·3	71·2	−3·9	53·5	+2·0	62·4	−1·0	17·7	82·1	15th	44·6	2nd	37·5
	Lahore	702	29·325	+·023	30·046	29·469	3rd	29·150	28th	·319	52·9	68·1	−2·4	49·3	+5·4	58·8	+1·5	18·8	76·3	22nd	38·2	1st	38·1
Punjab (Submontane).	Umballa	962 ?	29·110*	?	30·038*	29·238	3rd	28·972	28th	·266	52·9	71·3	?	49·5	?	60·4	?	21·8	81·5	16th	39·0	3rd	42·5
	Ludhiana	812	29·202	+·029	30·036	29·343	3rd	29·039	28th	·304	53·5	68·2	−3·3	50·6	+4·2	59·4	+0·5	17·6	75·1	23rd	38·9	3rd	36·2
Punjab (North)	Sialkot	830	29·186	+·035	30·044	29·329	3rd	29·005	28th	·324	52·5	67·4	−1·9	48·8	+3·5	58·1	+0·8	18·6	76·0	22nd	38·3	1st	37·7
	Rawalpindi	1,649	28·353	+·030	30·050	28·479	10th	28·191	28th	·288	47·9	63·9	−0·5	44·1	+3·6	54·0	+1·6	19·8	72·6	22nd & 23rd	33·9	2nd & 3rd	38·7
VII.—Indus Valley and N.-W Rajputana.		...	...	+·015	...	...	...	...	...	...	...	74·4	−0·9	50·7	+2·0	62·6	+0·6	23·7	...	...	...	...	46·0
Punjab (West)	Peshawar	1,110	28·954	+·017	30·073	29·117	4th	28·794	28th	·323	49·9	66·2	+0·5	46·2	+4·7	56·3	+2·6	20·0	78·1	22nd & 23rd.	33·9	1st	44·2
	Mardan	?	?	?	?	?	?	?	?	?	48·4	70·3	?	44·7	?	57·5	?	25·6	77·1	22nd & 23rd.	33·8	1st	43·3
	Khushab	612	29·425	?	30·050	29·557	10th	29·256	28th	·301	53·0	69·9	?	47·8	?	58·9	?	22·1	79·9	22nd	38·1	1st	41·8
	Montgomery	558	29·487	?	30·053	29·606	4th	29·312	28th	·294	53·2	71·1	?	47·8	?	59·5	?	23·3	81·3	23rd	35·5	1st	45·8
	D. I. Khan	573 ?	29·475	+·006	30·063	29·646	10th	29·319	28th	·336	51·5	70·4	−1·3	46·6	+2·5	58·5	+0·6	23·8	82·2	22nd	35·9	5th	46·3
	Mooltan	420	29·653?	+·020?	30·074?	29·832	10th	29·478	28th	·354	54·3	72·6	−0·3	50·4	+4·3	61·5	+2·0	22·2	83·3	23rd	37·6	1st	45·7
	Sirsa	662	29·369	+·024	30·043	29·518	10th	29·205	28th	·313	52·7	73·1	−2·0	49·4	+3·4	61·3	+0·7	23·7	82·3	15th & 24th.	40·2	1st & 3rd.	42·1
Sind and Cutch	Jacobabad	186	29·885	+·020	30·045	30·059	4th	29·653	28th	·406	56·2	75·0	−2·1	51·3	+3·5	63·2	+0·8	23·7	89·0	24th	36·0	1st	53·0
	Hyderabad	117	29·967	+·022	30·045	30·098	4th	29·749	28th	·349	59·1	78·3	−1·7	55·5	+1·4	66·9	−0·2	22·8	93·2	25th	42·5	1st	50·7
	Kurrachee	49	30·028	+·012	30·031	30·141	8th	29·836	25th	·305	61·5	77·5	−1·5	55·2?	−2·5?	66·4?	−2·0?	22·3	86·0	22nd	47·1	1st	38·9
	Bhuj	395	29·636	0	30·001	29·720	3rd	29·498	25th	·222	65·5	84·1	+0·3	58·2	+0·3	71·2	+0·3	25·9	94·5	27th	46·5	1st	48·0
Rajputana (West)	Bickaneer	753	29·274	?	30·030	29·432	10th	29·035	28th	·397	57·9	75·1	−0·1	54·0	+0·6	64·6	+0·3	21·1	84·2	13th & 24th.	44·1	1st	40·1
	Pachpadra	380	29·678	?	30·038	29·843	13th	29·492	28th	·351	58·6	83·6	?	51·4	?	67·5	?	32·2	95·5	25th	38·0	3rd	57·5
VIII.—East Rajputana, Central India and Gujarat.		...	...	+·006	...	...	...	...	...	...	...	83·4	+1·2	57·3	+3·8	70·4	+2·5	26·2	...	...	..	...	44·6
Rajputana (East)	Jeypore	1,431	28·587	+·010	30·042	28·718	10th	28·381	28th	·337	60·0	78·9	+1·0	55·2	+5·2	67·1	+3·1	23·7	89·1	15th	44·2	1st	44·9
	Sambhar	1,254	28·755	+·014	30·036	28·882	10th	28·545	28th	·337	56·9	77·9	+1·5	50·8*	+2·7*	64·4*	+2·1	27·1	86·4	14th & 15th.	41·9	1st & 3rd.	44·5
	Ajmere	1,611	28·410	+·011	30·061	28·552	10th	28·203	28th	·349	57·9	78·2	+0·9	54·0	+5·6	66·1	+3·3	24·2	85·4	14th & 15th.	44·8	3rd	40·6
	Deesa	466	29·558	−·004	30·001	29·657	3rd	29·433	25th	·224	65·1	88·6	+2·9	58·1	+3·4	73·4	+3·2	30·5	95·8	25th & 26th.	45·6	2nd	50·2
Kathiawar	Rajkot	429	29·602	+·001	30·002	29·678	3rd	29·482	25th	·196	66·0	88·0	+0·6	56·4	+2·3	72·2	+1·5	31·6	95·9	14th & 27th.	43·0	2nd	52·9
	Veraval	?	30·017	?	29·977	30·083	3rd	29·895	25th	·188	67·9	83·1	?	61·7	?	72·4	?	21·4	89·6	17th	52·3	2nd & 3rd	37·3
	Bhavnagar	?	30·007	?	29·994	30·090	3rd	29·881	25th	·209	66·3	85·8	?	63·2	?	74·5	?	22·6	92·2	28th	51·0	3rd	41·2
Central India	Nowgong	757	29·264	−·002	30·014	29·387	4th	29·108	28th	·279	61·0	79·6	−0·7	54·2	+4·2	66·9	+1·8	25·4	90·5	17th	46·0	4th	44·5
	Indore	1,823	28·178	+·010	30·001	28·265	11th	28·071	28th	·194	65·3	86·2	+3·7	56·6	+5·0	71·4	+4·4	30·6	91·5	3 days	44·6	3rd	46·9
	Neemuch	1,630	28·372	+·011	30·017	28·499	10th	28·193	28th	·306	62·3	82·2	+1·7	55·9	+4·4	69·1	+3·1	26·3	90·8	14th	45·9	3rd	44·9
Gujarat	Surat	36	29·990	−·010?	29·970	30·071	3rd	29·935	23rd	·136	68·5	92·6	+3·0	61·3	+2·9	76·9	+3·0	31·3	100·2	13th & 14th.	52·1	2nd	48·1
	Ahmedabad	176	29·863	?	29·995	29·969	3rd	29·752	25th	·217	68·1	89·9	?	62·7	?	76·3	?	27·2	97·2	14th	50·2	2nd	47·0
N.-W. P. (West)	Agra	555	29·483	+·007	30·031	29·614	4th	29·312	28th	·302	58·4	76·9	−1·3	54·1	+2·4	65·5	+0·6	22·8	85·6	15th	45·4	1st	40·2
	Jhansi	858	29·183	+·015	30·037	29·314	3rd	29·025	28th	·289	61·2	80·3	−0·2	58·0	+3·8	69·2	+1·8	22·3	93·6	17th	51·9	3 days	41·7

* Mean of 27 days.

I—*continued.*

in India, Burma, etc., in February 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st January to 28th February.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·33	1·27	+ 0·06	...	...	...	...	**VI.—Upper Sub-Himalayas.**	
14	3	1	...	2	...	...	1	7	1·4	4·0	— 65	83	·382	4·1	2	1·18	+0·82	0·32	0·61	— 0·29	1·87	1·71	+ 0·16	0·22	Bareilly	N.-W. Provinces (Submontane).
26	...	1	...	...	...	...	1	...	0·8*	2·0	— 60	79	·329	7·1	5	3·00	+2·00	4·47	1·93	+ 2·54	7·23	4·47	+ 2·76	3·42	Dehra Dun.	
14	...	1	2	3	1	...	1	6	3·1†	2·8	+ 11	86	·366	5·3	4	2·09	+1·91	1·38	1·22	+ 0·16	3·84	2·98	+ 0·86	0·45	Roorkee.	
15	...	1	...	...	...	...	8	4	1·8	2·6	— 31	82	·363	4·3	2	1·27	+0·73	0·49	0·79	— 0·30	4·07	2·06	+ 2·01	0·30	Meerut.	
22	...	...	...	...	...	2	4	...	1·5	3·6	— 58	77	·355	5·3	2	1·00	+1·00	0·39	0·61	— 0·22	3·84	1·85	+ 1·99	0·21	Delhi	Punjab (Central).
19	1	1	...	1	1	...	2	3	1·4	2·4	— 42	87	·352	5·9	3	2·00	+1·00	0·76	1·10	— 0·34	4·67	2·16	+ 2·51	0·32	Lahore.	
19	...	...	...	1	...	...	...	8	1·9	?	?	90	·363	5·7	5	?	?	1·15	1·07	+ 0·08	5·05	2·20	+ 2·85	0·44	Umballa	Punjab (Submontane).
20	2	1	...	...	...	...	...	5	1·2	1·6	— 25	89	·370	6·5	4	1·82	+2·18	1·11	1·23	— 0·12	4·85	3·20	+ 1·65	0·43	Ludhiana.	
25	...	...	1	...	...	1	1	...	1·1	1·7	— 35	84	·335	5·1	4	2·45	+1·55	1·19	1·70	— 0·51	9·31	4·19	+ 5·12	0·69	Sialkot	Punjab (North).
17	2	2	1	...	...	...	1	5	1·1	2·4	— 54	89	·301	5·1	5	3·18	+1·82	2·03	2·41	— 0·38	7·49	5·25	+ 2·24	0·87	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·62	0·56	+ 0·02	...	...	...	...	**VII.—Indus Valley and N.-W. Rajputana.**	
9	...	...	...	1	4	10	2	2	3·7	3·3	+ 12	77	·280	5·7	3	2·00	+1·00	0·94	0·98	— 0·04	2·90	2·75	+ 0·15	0·47	Peshawar	Punjab (West).
Not recorded.									?	?	?	?	?	?	5	?	?	2·04	?	?	4·91	?	?	0·68	Mardan.	
23	...	1	...	...	...	2	...	2	1·3	?	?	77	·309	5·0	3	1·70	+1·30	0·61	1·29	— 0·68	2·31	1·28	+ 1·03	0·22	Khushab.	
18	3	1	2	1	...	...	2	1	2·5	?	?	82	·332	5·2	2	1·10	+0·90	0·69	0·88	— 0·19	2·13	0·87	+ 1·26	0·39	Montgomery.	
17	1	...	...	...	...	1	1	8	1·7	2·0	— 15	65	·253	5·1	1	0·91	+0·09	0·86	0·52	+ 0·34	1·28	1·05	+ 0·23	0·61	D. I. Khan.	
10	2	11	1	...	...	4	...	...	0·9	2·4	— 63	72	·313	5·0	3	1·00	+2·00	0·71	0·38	+ 0·33	1·64	0·86	+ 0·78	0·23	Mooltan.	
21	2	1	...	1	...	...	1	2	2·2	3·4	— 35	83	·342	5·1	2	0·55	+1·45	0·35	0·27	+ 0·08	2·36	1·17	+ 1·19	0·19	Sirsa.	
25	...	1	...	2	...	...	...	...	2·0	3·0	— 33	68	·314	5·2	0	1·00	—1·00	0·05	0·40	— 0·35	1·25	0·65	+ 0·60	0·05	Jacobabad	Sind and Cutch.
9	10	1	...	...	1	1	...	6	7·7	7·0	+ 10	64	·331	3·5	1	0·30	+0·70	0·54	0·23	+ 0·31	0·88	0·54	+ 0·34	0·51	Hyderabad.	
...	4	20	3	...	...	...	1	...	7·3	10·5	— 30	85?	·489?	2·7	2	0·36	+1·64	0·93	0·31	+ 0·62	3·68	1·03	+ 2·65	0·70	Kurrachee.	
3	9	...	3	1	2	...	5	5	8·1	6·7	+ 21	54	·354	2·9	0	?	?	0	0·11	— 0·11	0	0·22	— 0·22	0	Bhuj.	
4	5	5	1	1	1	...	1	10	4·0	3·7	+ 8	68	·338	6·1	1	?	?	0·23	0·22	+ 0·01	2·61	0·52	+ 2·09	0·23	Bickaneer	Rajputana (West).
20	2	3	...	...	...	...	...	2	1·6	3·3	— 52	58	·288	5·2	0	?	?	0·05	0·09	— 0·04	0·91	0·46	+ 0·45	0·05	Pachpadra.‡	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·22	·0·19	+ 0·09	...	...	...	...	**VIII.—East Rajputana, Central India and Gujarat.**	
10	4	4	...	...	...	1	5	4	2·4	4·4	— 45	62	·326	5·4	1	0·60	+0·40	0·23	0·19	+ 0·04	1·57	0·88	+ 0·69	0·17	Jeypore	Rajputana (East).
9	10	3	2	2	1	...	...	1	5·2	5·3	— 2	64	·299	4·0	0	0·55	—0·55	0	0·21	— 0·21	0·48	0·68	— 0·20	0	Sambhar.	
10	1	7	2	2	1	...	1	4	3·0	2·5	+ 20	67	·331	3·5	0	0·64	—0·64	0·01	0·30	— 0·29	0·58	0·82	— 0·24	0·01	Ajmere.	
...	7	14	2	...	...	...	3	2	9·1‖	9·0	+ 1	45	·280	2·9	0	0·27	—0·27	0·01	0·10	— 0·09	0·65	0·27	+ 0·38	0·01	Deesa.	
2	7	8	3	...	...	...	2	6	5·8	6·2	— 6	61	·406	0·5	0	0·10	— 0·10	0	0·08	— 0·08	0	0·12	— 0·12	0	Rajkot	Kathiawar.
14	8	4	..	...	...	...	...	2	2·5	?	?	58	·406	1·5	0	?	?	0	?	?	0	?	?	0	Veraval.	
...	1	...	...	...	1	19	...	7	9·1	?	?	70	·462	1·1	0	?	?	0	?	?	0·44	?	?	0	Bhavnagar.	
11	2	3	2	1	1	1	4	3	2·3	1·7	+ 35	77	·414	5·6	3	0·73	+2·27	1·67	0·27	+ 1·40	2·97	0·92	+ 2·05	0·94	Nowgong	Central India.
9	6	2	1	2	6	1	1	...	2·6	3·0	— 13	66	·414	2·3	0	0·55	—0·55	0	0·18	— 0·18	0·03	0·36	— 0·33	0	Indore.	
1	3	11	8	3	1	1	...	...	6·2	9·1	— 32	55	·308	3·8	0	0·55	—0·55	0	0·19	— 0·19	0	0·49	— 0·49	0	Neemuch.	
...	5	3	...	...	...	1	6	13	?	5·4	?	65	·470	0·2	0	0	0	0	0·01	— 0·01	0·30	0·06	+ 0·24	0	Surat	Gujarat.
2	6	8	4	2	...	...	1	3	5·2	?	?	51	·356	2·6	0	?	?	0	?	?	0·19	?	?	0	Ahmedabad.	
1	...	5	..	3	...	1	...	18	3·8	4·0	— 5	74	·367	5·1	0	0·36	—0·36	0·06	0·21	— 0·15	1·60	0·74	+ 0·86	0·02	Agra	N.-W. P. (West).
8	2	4	...	4	2	6	...	2	1·6	2·7	— 41	64	·377	3·9	2	1·09	+0·91	1·08	0·33	+ 0·75	3·15	0·92	+ 2·23	0·85	Jhansi.	

* Mean of 26 days.
† „ of 27 „
‖ „ of 21 „

‡ Wind direction for 27 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

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.
IX.—Deccan	...	...	...	+·005	...	...	...	...	...	...	...	89·7	+1·6	61·8	+3·6	75·7	+2·7	28·0	...	...	...	...	39·1
Bombay (Deccan)	Belgaum	2,524	27·478	+·012	29·954	27·541	12th	27·356	24th	·185	69·9	87·5	−1·1	60·8	+1·3	74·2	+0·1	26·7	92·3	28th	54·9	2nd	37·4
	Sholapur	1,590	28·416	+·005	29·973	28·497	12th	28·273	24th	·224	73·1	93·0	−0·8	64·0	+2·3	78·5	+0·8	29·0	97·7	26th & 28th.	59·6	9th	38·1
	Poona	1,840	28·167	+·003	29·996	28·239	12th	28·060	24th	·179	66·3	92·4	+1·6	58·4	+0·9	75·4	+1·3	34·0	95·5	19th & 28th.	51·5	3rd	44·0
	Bijapur	1,946	28·058	?	29·966	28·137	12th	27·929	24th	·208	72·2	90·5	?	63·2	?	76·9	?	27·3	94·2	3 days	57·1	20th	37·1
Khandesh	Malegaon	1,430	28·569	−·003	29·983	28·651	12th	28·477	24th	·174	69·3	92·2	+2·4	59·1	+4·2	75·7	+3·3	33·1	95·9	14th	47·5	3rd	48·4
	Ahmednagar	2,152	27·858	?	29·992	27·936	12th	27·753	25th	·183	67·4	88·2	?	57·4	?	72·8	?	30·8	90·8	27th	52·5	3rd & 18th	38·3
Berar	Akola	930	29·065	−·001	29·968	29·151	12th	28·953	25th	·198	69·6	93·4	+3·1	60·9	+4·3	77·2	+3·7	32·5	96·9	14th & 19th.	53·6	3rd	43·3
	Amraoti	1,215	28·783	+·010	29·974	28·869	12th	28·668	25th	·201	72·5	91·8	+2·1	66·1	+5·2	79·0	+3·7	25·7	94·9	19th & 22nd.	61·3	3rd	33·6
Central Provinces (West).	Khandwa	1,044	28·951	−·008	29·982	29·042	10th	28·842	25th	·200	68·0	92·0	+3·5	60·9	+6·0	76·5	+4·8	31·1	96·2	14th & 16th.	48·1	3rd	48·1
	Hoshangabad*	1,020	28·977	−·022	29·990	29·077	12th	28·851	28th	·226	65·7	87·5	+2·2	61·0	+5·9	74·3	+4·1	26·5	93·4	17th	52·8	4th	40·6
	Nagpur	1,025	28·986	+·011	29·986	29·083	12th	28·860	28th	·223	72·7	91·1	+2·0	62·2	+2·9	76·7	+2·5	28·9	95·3	18th	58·2	3rd & 4th	37·1
Central Provinces (Central).	Chanda	634	29·372	+·002	29·973	29·456	12th	29·251	25th	·205	68·4	92·4	+0·8	62·0	+3·2	77·2	+2·0	30·4	96·9	16th	57·1	4 days	39·8
	Seoni	2,033	27·977	+·019	30·002	28·069	12th	27·853	28th	·216	65·5	85·6	+1·7	58·0	+2·9	71·8	+2·3	27·6	91·2	18th	52·9	4th & 24th	38·3
	Jubbulpore	1,327	28·682	+·009	30·012	28·788	12th	28·545	28th	·243	64·2	85·0	+3·1	57·0	+5·4	71·1	+4·3	28·0	91·4	3 days	51·4	12th	40·0
	Saugor	1,762	28·233	+·015	30·004	28·332	3rd	28·098	28th	·234	63·6	84·0	+3·4	59·3	+5·1	71·7	+4·3	24·7	91·3	17th	49·9	3rd	41·4
Central Provinces (East).	Raipur	970	29·048	+·020	29·993	29·148	12th	28·920	25th	·228	70·6	89·9	+3·1	63·9	+4·0	77·0	+3·6	26·0	94·4	16th	58·7	7th	35·7
	Sutna	1,040	28·963	0	30·007	29·095	4th	28·807	28th	·288	62·3	78·8	−0·4	56·6	+5·6	67·7	+2·6	22·2	92·1	17th	50·8	5th	41·3
	Sambalpur	463	29·551	+·013	29·978	29·641	8th	29·441	28th	·200	69·4	90·0	+2·2	62·1	+2·6	76·1	+2·4	27·9	95·5	17th	55·7	13th	39·8
Hyderabad (North).	Aurangabad	?	28·162	?	?	28·240	12th	28·063	24th	·177	73·3	91·3	?	60·6	?	76·0	?	30·7	95·0	28th	55·6	21st	39·4
	Indur	?	?	?	?	?	?	?	?	?	74·5	91·2	?	63·7	?	77·4	?	27·5	94·6	28th	56·9	10th	37·7
Hyderabad (South).	Bidar*	?	27·848	?	?	27·931	12th	27·720	24th	·211	75·0	88·2	?	65·6	?	76·9	?	22·6	92·6	28th	59·4	8th	33·2
	Gulbarga	1,502	28·499	?	29·969	28·572	12th	28·346	24th	·226	72·9	92·3	?	63·8	?	78·1	?	28·5	97·0	28th	60·2	9th	36·8
	Raichur	1,378	28·612	?	29·954	28·704	12th	28·487	24th	·217	73·1	92·7	?	66·8	?	79·8	?	25·9	96·1	3 days.	60·7	15th	35·4
	Hyderabad (Deccan).	1,690	28·328	−·001	29·997	28·400	12th	28·216	24th	·184	69·1	89·8	−1·2	62·8	+0·1	76·3	−0·6	27·0	93·4	20th	58·3	9th & 17th.	35·1
	Secunderabad	1,787	28·246	?	30·017	28·318	12th	28·131	24th	·187	67·7	90·6	?	63·0	?	76·8	?	27·6	97·2	4th	58·5	8th & 17th	38·7
	Khamamet	373	29·662	?	29·939	29·731	8th & 9th.	29·547	24th	·184	73·1	92·1	?	66·6	?	79·4	?	25·5	96·4	19th	60·2	17th	36·2
X.—West Coast	...	...	...	+·001	...	...	...	...	...	...	...	87·5	+1·8	71·0	+1·2	79·3	+1·5	16·4	...	...	...	...	27·8
Konkan	Bombay	37	29·983	−·002	29·961	30·033	9th & 12th.	29·872	25th	·161	73·8	83·9	+1·4	70·9	+2·5	77·5	+2·0	13·0	88·5	14th & 16th.	64·5	3rd	24·0
	Ratnagiri	110	29·894	+·013	29·944	29·944	16th	29·791	24th	·150	75·7	89·2	+2·9	69·5	+2·6	79·4	+2·8	19·7	97·4	14th	62·4	3rd	35·0
	Mormugoa	60	29·956	?	29·952	29·996	8th	29·850	24th	·146	74·1	87·5	?	71·7	?	79·6	?	15·8	93·0	13th	66·3	3rd	26·7
	Goa	23	30·015	+·022	29·952	30·060	9th	29·914	24th	·146	74·5	85·0	?	70·7	?	77·9	?	14·3	91·5	14th	66·0	5th	25·5
	Karwar	44	29·964	+·007	29·941	30·011	8th	29·865	24th	·146	70·1	87·9	+1·7	68·4	+1·3	78·1	+1·5	19·5	98·3	14th	63·4	16th	34·9
Malabar	Cochin	10	29·982	−·005	29·920	30·026	12th	29·908	24th	·118	77·0	90·5	+1·0	72·9	−0·2	81·7	+0·4	17·6	98·3	14th	67·8	1st	30·5
	Calicut	27	29·969	−·019	29·926	30·011	12th	29·891	24th	·120	76·7	88·5	?	70·7	?	79·6	?	17·8	91·3	14th	66·6	1st & 2nd	24·7
	Mangalore	65	29·932	−·010	29·930	29·972	16th	29·852	24th	·120	76·4	89·7	+1·9	71·3	−0·1	80·5	+0·9	18·4	98·8	14th	68·0	3 days	30·8
	Trivandrum	198	29·787	?	29·917	29·819	7th	29·713	25th	·106	76·4	84·9	?	73·3	?	79·1	?	11·6	88·0	12th	69·5	2nd	18·5
XI.—South India	...	...	...	+·006	...	...	...	...	...	...	...	87·8	−0·7	66·9	+0·2	77·4	−0·2	20·9	...	...	...	...	31·8
Madras (South)	Pamban	37	29·976	?	29·940	30·016	16th	29·883	24th	·133	78·7	84·7	?	75·5	?	80·1	?	9·2	89·8	16th	71·2	1st	18·6
	Tinnevelly	168	29·859	?	29·958	29·905	12th	29·762	24th	·143	76·6	92·6	?	73·0	?	82·8	?	19·6	95·7	28th	68·9	1st & 19th.	26·8
	Madura	447	29·571	+·001	29·961	29·615	8th	29·476	24th	·139	75·7	90·5	−1·6	70·3	+1·1	80·4	−0·3	20·2	94·4	25th & 28th.	64·2	1st	30·2

* Mean of 27 days.

I—*continued.*

in India, Burma, etc., in February 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period from 1st January to 28th February.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·55	0·21	+0·28	...	...	...	...	**IX.—Deccan.**	
11	1	1	9	4	1	...	...	1	?	10·0	?	48	·354	0·5	1	0·09	+0·91	0·50	0·02	+ 0·48	0·50	0·08	+ 0·42	0·50	Belgaum	Bombay (Deccan).
1	2	1	4	14	2	1	...	3	10·4	6·5	+ 60	42	·343	0·7	0	0·09	−0·09	0	0·03	− 0·03	0	0·14	− 0·14	0	Sholapur.	
18	1	...	3	1	...	2	1	2	5·5	6·3	− 13	54	·356	0·1	1	0	+1·00	0·41	0·04	− 0·37	0·41	0·10	+ 0·31	0·36	Poona.	
1	...	1	2	10	1	5	1	7	5·1	?	?	46	·365	0·5	0	0·10	−0·10	0	?	?	0	?	?	0	Bijapur.	
...	1	...	1	1	...	2	12	11	9·1	5·0	+ 82	58	·427	1·2	0	0·18	−0·18	0·01	0·05	− 0·04	0·01	0·21	− 0·20	0·01	Malegaon	Khandesh.
21	2	1	...	3	...	...	...	1	4·4	?	?	71	·489	0·1	3	?	?	2·62	?	?	2·62	?	?	1·69	Ahmednagar.	
8	...	1	6	6	2	1	1	3	4·8	3·8	+ 26	46	·337	1·0	1	0·18	+0·82	0·51	0·13	+ 0·38	0·51	0·56	− 0·05	0·51	Akola	Berar.
2	1	5	11	4	...	2	2	1	5·8	3·7	+ 57	44	·354	0·8	0	0·27	−0·27	0	0·19	− 0·19	0·06	0·58	− 0·52	0	Amraoti.	
5	1	3	6	2	1	2	6	2	4·5	3·6	+ 25	51	·348	1·3	0	0·18	−0·18	0·02	0·06	− 0·04	0·13	0·37	− 0·24	0·01	Khandwa	Central Provinces (West).
9	...	13	5	...	...	...	...	...	2·6	2·9	− 10	64	·408	2·7	1	0·36	+0·64	0·85	0·23	+ 0·62	0·88	0·48	+ 0·40	0·71	Hoshangabad.*	
7	7	11	1	...	...	...	1	1	5·1	3·9	+ 31	51	·414	1·1	0	0·91	−0·91	0	0·27	− 0·27	0·12	0·82	− 0·70	0	Nagpur.	
1	...	2	9	12	...	...	1	3	2·9	2·7	+ 7	66	·464	1·2	2	?	?	0·74	0·23	+0·51	1·16	0·60	+ 0·56	0·57	Chanda	Central Provinces (Central).
...	3	10	1	3	...	5	2	4	2·0	2·9	− 31	74	·468	2·7	0	1·55	−1·55	0·04	0·75	− 0·71	0·14	1·38	− 1·24	0·03	Seoni.	
8	5	4	...	10	...	...	1	...	2·7	2·5	+ 8	72	·430	3·3	2	0·91	+1·09	0·34	0·47	− 0·13	0·80	1·23	− 0·43	0·17	Jubbulpore.	
2	3	9	5	5	4	...	...	...	3·5	2·8	+ 25	65	·374	2·3	3	0·82	+2·18	1·04	0·30	+ 0·74	1·60	1·00	+ 0·60	0·60	Saugor.	
15	2	3	1	1	...	2	3	1	2·1	3·7	− 43	59	·441	2·6	2	0·73	+ 1·27	0·24	0·33	− 0·09	0·29	0·53	− 0·24	0·13	Raipur	Central Provinces (East).
6	8	2	3	5	1	...	2	1	5·3	4·7	+ 13	76	·413	3·3	5	1·18	+3·82	1·90	0·59	+ 1·31	2·45	1·64	+ 0·81	0·57	Sutna.	
...	5	11	5	2	1	...	1	3	3·5	1·7	+106	71	·515	2·5	1	?	?	1·44	0·51	+ 0·93	1·44	0·81	+ 0·63	1·31	Sambalpur.	
6	2	5	3	3	5	4	...	...	4·6	?	?	42	·346	0·3	1	?	?	1·53	0·03	+ 1·50	1·53	0·22	+ 1·31	1·43	Aurangabad	Hyderabad (North).
4	2	...	4	8	4	3	1	2	5·9	?	?	61	·524	0·6	0	?	?	0	0·01	− 0·01	0·16	0·06	+ 0·10	0	Indur.	
...	...	...	3	5	8	10	1	...	7·3	?	?	64	·555	0	0	?	?	0	0·01	− 0·01	0·33	0·01	+ 0·32	0	Bidar.*	
15	...	2	3	5	2	1	...	...	6·8	?	?	65	·529	0·7	1	?	?	0·15	0·12	+ 0·03	0·73	0·20	+ 0·53	0·15	Gulbarga	Hyderabad (South).
...	1	1	2	14	6	1	3	...	7·6	?	?	56	·466	0·6	0	?	?	0	?	?	0	?	?	?	Raichur.	
19	...	...	1	6	1	...	1	...	4·1	?	?	73	·523	1·5	2	?	?	0·60	0·04	+ 0·56	0·69	0·13	+ 0·56	0·34	Hyderabad (Deccan).	
13	..	1	9	4	...	...	...	1	4·6	3·8	+ 21	73	·492	1·5	2	?	?	1·26	?	?	1·37	?	?	1·10	Secunderabad	
14	...	...	...	11	3	...	...	...	6·1	?	?	79	·650	1·5	0	?	?	0	?	?	0	?	?	0	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·24	0·17	+0·10	...	...	...	...	**X.—West Coast.**	
...	9	10	6	2	...	...	...	1	8·5	10·7	− 21	74	·627	0·7	0	0	0	0	0·01	− 0·01	0·22	0·14	+ 0·08	0	Bombay	Konkan.
5	3	4	4	6	4	...	1	1	4·8	9·8	− 51	67	·588	0·5	0	0	0	0	0	0	?	0·22	− 0·22	0	Ratnagiri.	
...	4	3	3	17	1	...	...	...	8·2	?	?	82	·700	0·1	0	?	?	0	?	?	0	?	?	0	Mormugoa.	
...	...	24	3	1	...	...	...	...	3·6	?	?	71	·620	0	0	?	?	0	0	0	0	0·25	− 0·25	0	Goa.	
...	...	26	2	...	...	...	...	...	2·7	?	?	82	·605	0·3	0	0	0	0	0	0	0	0·12	− 0·12	0	Karwar.	
1	2	22	3	...	...	...	...	...	5·0	?	?	75	·706	0·2	1	1·00	0	1·10	0·62	+ 0·48	1·10	1·21	− 0·11	1·04	Cochin	Malabar.
1	...	11	16	...	...	...	...	...	13·2	?	?	77	·704	1·4	0	0·13	−0·13	0·02	0·22	−0·20	1·50	0·30	+1·20	0·02	Calicut.	
...	1	9	15	3	...	...	...	...	2·7	3·5	− 23	72	·665	0·8	1	0	+1·00	0·32	0·01	+ 0·31	0·32	0·10	+ 0·22	0·32	Mangalore.	
8	1	6	10	...	...	...	...	3	3·3	?	?	81	·740	1·0	1	?	?	0·76	0·51	+0·25	0·77	1·15	−0·38	0·69	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·38	0·26	+0·19	...	...	...	...	**XI.—South India.**	
..	3	15	10	...	...	...	...	...	11·8	?	?	79	·777	3·4	0	0·50	−0·50	0·02	0·13	− 0·11	0·53	1·93	− 1·40	0·02	Pamban	Madras (South).
...	12	3	...	...	...	...	1	12	5·6	?	?	76	·703	5·6	1	1·50	−0·50	0·14	?	?	0·34	?	?	0·14	Tinnevelly	
1	11	7	2	2	...	...	...	5	3·6	5·0	− 28	75	·676	2·1	1	0·45	+0·55	0·62	0·31	+ 0·31	0·62	0·64	− 0·02	0·60	Madura.	

* Mean of 27 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

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.
Madras (South Central).	Salem	940	29·102	−·009	29·996	29·160	7th	29·012	24th	·148	74·1	91·8	−1·7	66·1	+1·3	79·0	−0·2	25·7	95·9	28th	58·4	18th	37·5
	Coimbatore	1,348	28·665	−·004	29·979	28·718	12th	28·578	24th	·140	70·7	88·6	−3·4	64·5	−0·5	76·5	−2·0	24·1	93·9	28th	59·6	1st & 19th.	34·3
Coorg	Mercara	3,781	26·297	+·008	29·960	26·361	12th	26·226	24th & 25th.	·135	64·5	80·2	−1·0	59·1	+1·8	69·7	+0·4	21·1	84·5	29th	51·2	2nd & 3rd	33·3
	Chitaldroog	2,405	27·609	?	29·952	27·672	12th	27·498	24th	·174	73·2	88·2	?	64·6	?	76·4	?	23·6	92·6	25th	56·4	8th	36·2
Mysore	Bangalore	3,019	27·020	−·008	29·970	27·079	12th	26·921	24th	·158	67·8	86·4	+1·2	59·4	+0·5	72·9	+0·9	27·0	91·8	28th	53·4	15th	38·4
	Hassan	3,091	26·961	?	29·978	27·019	12th	26·876	24th	·143	68·8	85·1	?	56·9	?	71·0	?	28·2	89·0	28th	49·9	1st	39·1
	Mysore	2,518	27·505	?	29 974	27·576	12th	27·413	24th	·163	69·5	87·3	?	62·3	?	74·9	?	25·0	91·4	28th	56·9	2nd	34·5
Madras (East Coast, South).	Negapatam	31	29·989	−·003	29·950	30·042	16th	29·900	24th	·142	78·3	83·6	−0·7	73·5	+2·0	78·5	+0·7	10·1	88 7	27th	68·7	1st	20·0
	Cuddalore	12	30·019	?	29·960	30·067	16th	29·927	24th	·140	75·1	84·0	?	69·0	?	76·5	?	15·0	85·3	9 days	62·3	15th	23·0
	Trichinopoly	255	29·772	−·003	29·966	29·823	15th	29·684	24th	·139	75·7	91·1	−0·9	69·2	+1·3	80·2	+0·2	21·9	94·0	25th	62·9	19th	31·1
	Madras	22	30·015	−·004	29·968	30·063	16th	29·921	24th	·142	75·7	86·8	+0·2	68·0	+0·3	77·4	+0·3	18·8	89·5	1st	62·5	17th	27·0
Madras (East Coast, Central).	Nellore	71	29·960	?	29·965	30·023	13th	29·840	24th	·183	75·0	89·6	?	69·4	?	79·5	?	20·2	94·4	19th	65·6	17th	28·8
	Masulipatam	15	30·032	+·020	29·982	30·096	8th & 12th.	29·927	24th	·169	74·2	86·5	−0·3	67·7	−0·1	77·1	−0·2	18·8	94·1	18th	62·2	17th	31·9
Madras (Central)	Cuddapah	433	29·589	?	29·971	29·660	12th	29·463	24th	·197	75·5	93·0	?	67·8	?	80·4	?	25·2	99·2	28th	61·4	15th	37·8
	Kurnool	923	29·085	+·003	29·970	29·161	12th	28·929	25th	·232	72·3	93·1	−1·3	63·3	−0·5	78·2	−0·9	29·8	97·2	28th	53·7	17th	43·5
	Bellary	1,475	28·534	+·018	29·975	28·600	12th	28·402	24th	·198	72·9	92·3	−1·8	64·8	0	78·6	−0·9	27·5	98·5	25th	58·6	17th	39·9
Madras (East Coast, North).	Rajahmundry	112	29·924	+·033	29·975	29·988	8th	29·826	24th	·162	74·4	92·2	+0·5	67·9	−0·5	80·1	0	24·3	98·0	18th	62·0	8th	36·0
	Cocanada	26	30·015	+·019	29·976	30·083	8th	29·912	24th	·171	73·2	85·2	+1·4	67·2	−2·1	76·3	−0·4	18·0	94·2	18th	63·0	8th	31·2
	Vizagapatam	31	30·003	+·009	29·972	30·078	8th	29·906	24th	·172	75·9	81·9	−0·6	73·0	−1·2	77·4	−0·9	8·9	85·9	19th	67·9	9th	18·0
	Gopalpur	21	30·016	?	29·977	30·100	8th	29·902	24th	·098	70·4	84·7	?	66·5	?	75·6	?	18·2	95·2	18th	61·1	8th	34·1
XII.—Hill Stations.																							
Baluchistan	Kachh Fort	?	23·973*	?	?	24·080	10th & 21st.	23·850	6th & 28th.	·230	36·2*	54·6‡	?	28·0*	?	41·6‡	?	26·6	63·0	6 days	13·0	1st & 4th.	50·0
	Pishin	?	?	?	?	?	?	?	?	?	?	53·4	?	31·1	?	42·3	?	22·3	66·1	22nd & 26th	17·9	1st	48·2
	Quetta	5,502	24·681	+·020	?	24·767	21st	24·492	28th	·275	38·1	50·3	−1·8	34·4	+3·0	42·3	+0·6	15·9	62·7	22nd	20·8	1st & 5th	41·9
	Shirino	?	?	?	?	?	?	?	?	?	38·9	52·6	?	36·1†	?	44·9†	?	16·5	67·3	24th	27·6	8th	39·7
	Kalat	?	?	?	?	?	?	?	?	?	38·9	52·5	?	31·0	?	41·8	?	21·5	66·7	21st	8·6	7th	58·1
	Chaman	5,488	25·740	?	?	25·811	1st	25·584	28th	·227	43·2	56·5	?	39·1	?	47·8	?	17·4	69·1	22nd	26·1	1st	43·0
Northern India	Srinagar	5,204	25·003	?	?	25·198	11th	24·786	28th	·412	32·5	39·3	?	28·3	?	33·8	?	11·0	50·0	27th	10·1	3 days	30·9
	Gilgit	?	26·176	?	?	26·580	10th	25·980	28th	·600	?	?	?	36·4	?	?	?	?	?	?	29·9	8th	?
	Cherat	?	25·779	?	?	25 896	10th	25·626	28th	·270	44·6	52·8	?	41·7	?	47·3	?	11·1	64·3	27th	31·6	1st	32·7
	Murree	6,344	23·847	+·032	?	23·952	10th	23·710	28th	·242	40·1	47·4	−0·1	36·9	+3·0	42·2	+1·5	10·5	58·1	22nd	29·5	5th & 7th.	28·6
	Poo	?			Not recorded.						?	39·0	?	23·5	?	31·3	?	15·5	46·3	20th	16·5	3rd	29·8
	Simla	7,224	23·130	+ 051	?	23·260	15th	22·971	28th	·289	41·9	48·2	−3·3	38·4	+2·4	43·3	−0·5	9·8	53·3	23rd	29·3	3rd	24·0
	Chakrata	7,052	23·360	+·054	?	23·484	15th	23·219	28th	·265	41·6	51·7	+0·8	38·1*	+2·4*	44·8*	+1·6	13·6	59·8	12th	29·1	3rd	30·7
	Mussooree	?	23·591	?	?	23·710	15th	23·456	28th	·254	43·1	51·0	?	39·2	?	45·1	?	11·8	58·7	13th	31·5	9th	27·2
	Ranikhet	6,069	24·158	+·059	?	24·265	16th	24·039	28th	·226	46·6	56·4	+1·2	43·4	+2·8	49·9	+2 0	13·0	63·2	12th & 17th.	32·5	3rd	30·7
	Gnatong	?	18·901	?	?	18·995	7th	18·824	24th	·171	27·8	39·5	?	21·3	?	30·4	?	18·2	47·4	2 days	15·1	24th	32·3
	Darjeeling	7,421	23·000	+·058	?	23·083	7th	22·897	24th	·186	43·0	50·5	+4·3	38·9	+4·8	44·7	+4·6	11·6	56·3	2 days	34·8	1st	21·5
	Gantok	?	24·521	?	?	24·626	8th	24·404	24th	·222	47·6	61·5	?	44·0*	?	52·8*	?	17·5	67·4	16th	38·0	25th	29·4

* Mean of 27 days.
† „ of 17 „
‡ „ of 26 „

I—*continued.*

in India, Burma, etc., in February 1894—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.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	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 January to 28th February 1894.	Normal rainfall for period, 1st January to 28th February.	Variation from normal of period.				
12	3	12	1	...	...	...	...	...	5·5	5·6	− 2	71	·607	1·5	1	0·09	+0·91	0·66	0·30	+ 0·36	0·66	0·61	+ 0·05	0·66	Salem	Madras (South Central).
...	11	7	10	...	...	...	...	...	4·0	3·2	+ 25	82	·622	4·1	2	0·30	+1·70	2·51	0·29	+ 2·22	2·51	0·48	+ 2·03	1·53	Coimbatore.	
...	3	6	14	2	...	...	1	2	6·9	4·0	+ 73	78	·479	2·0	0	0·30	−0·30	0	0·07	− 0·07	0	0·11	− 0·11	0	Mercara	Coorg.
2	...	2	8	9	...	4	1	2	8·8	?	?	52	·420	1·1	0	?	?	0	?	?	0	?	?	0	Chitaldroog.	
...	...	6	13	4	2	2	1	...	7·2	3·6	+100	71	·481	1·6	1	0·18	+0·82	0·22	0·11	+ 0·11	0·22	0·30	− 0·08	0·22	Bangalore	Mysore.
10	...	2	8	6	1	...	...	1	3·6	?	?	69	·487	1·8	0	?	?	0·01	?	?	0·01	?	?	0·01	Hassan.	
2	3	11	6	...	2	2	2	...	9·8	?	?	74	·533	1·2	0	?	?	0·01	?	?	0·01	?	?	0·01	Mysore.	
6	3	12	3	1	...	...	...	3	7·2	3·6	+100	80	·773	5·2	2	0·55	+·145	0·65	0·53	+ 0·12	4·51	1·99	+ 2·52	0·50	Negapatam.	Madras (East Coast, South).
...	9	1	2	...	...	...	1	15	2·9	?	?	94	·817	2·0	1	0·40	+0·60	0·88	?	?	5·10	?	?	0·83	Cuddalore.	
16	4	7	1	...	...	...	...	...	2·0	4·1	− 51	78	·694	2·7	1	0	+1·00	0·51	0·90	− 0·39	0·80	1·16	− 0·36	0·51	Trichinopoly.	
4	4	3	2	...	1	5	5	4	4·6	5·0	− 8	85	·757	3·2	2	0·09	+1·91	1·14	0·20	− 0·94	2·46	0·78	+ 1·68	0·85	Madras.	
14	1	...	...	1	7	1	...	4	4·4	?	?	87	·758	5·1	0	0·20	−0·20	0·04	?	?	1·68	?	?	0·04	Nellore	Madras (East Coast, Central).
6	13	4	..	2	2	...	...	1	2·6	5·1	− 49	89	·751	2·4	0	0·27	−0·27	0	0·17	− 0·17	0·09	0·29	− 0·20	0	Masulipatam	
...	...	2	7	11	5	2	...	1	?	?	?	69	·605	1·5	1	0·10	+0·90	0·59	0·06	+ 0·53	0·59	0·08	+ 0·51	0·59	Cuddapah	Madras (Central).
21	...	...	1	...	1	1	4	...	?	?	?	62	·502	1·0	0	0	0	0	0	0	0·13	0·08	+ 0·05	0	Kurnool.	
10	...	...	1	12	2	...	1	2	3·7	4·0	− 8	66	·534	1·4	0	0·09	−0·09	0	0·04	− 0·04	0	0·17	− 0·17	0	Bellary.	
7	12	6	...	...	1	1	...	1	?	?	?	66	·568	2·5	0	0·30	−0·30	0	0·17	− 0·17	0·12	0·25	− 0·13	0	Rajahmundry	Madras (East Coast, North).
...	17	3	...	...	...	...	1	7	7·2	?	?	77	·628	0·6	0	0·40	−0·40	0	0·43	− 0·43	0·07	0·57	− 0·50	0	Cocanada.	
...	3	...	...	...	...	2	21	2	0·9	2·0	− 55	72	·646	1·1	0	0·18	−0·18	0	0·11	− 0·11	0	0·30	− 0·30	0	Vizagapatam.	
...	8	...	...	...	1	2	2	15	9·6	9·6	0	82	·607	0·3	2	1·13	+0·87	0·70	0·55	+ 0·15	0·70	0·73	− 0·03	0·50	Gopalpur.	
																									XII.—Hill Stations.	
...	...	1	6	2	1	1	13	2	?	?	?	68*	·156*	3·7*	7	?	?	3·38	?	?	3·38	?	?	1·27	Kachh Fort‡	Baluchistan.
				Not	recorded.				?	?	?	?	?	?	10	?	?	5·95	?	?	9·78	?	?	1·51	Pishin.	
23	...	...	...	1	1	2	1	...	3·6	4·4	− 18	80	·192	5·7	11	4·09	+6·91	5·80	2·21	+ 3·59	9·73	4·32	+ 5·41	1·26	Quetta.	
...	4	4	1	4	3	3	2	7	3·3*	?	?	77	·189	2·3	12	?	?	7·12	?	?	13·26	?	?	1·52	Shirinо.	
...	...	...	1	...	23	...	...	4	?	?	?	?	?	?	9	?	?	3·61	?	?	5·72	?	?	0·81	Kalat.	
6	...	1	3	11	4	2	...	1	7·9	?	?	75	·222	6·6	8	?	?	2·90	?	?	6·20	?	?	1·35	Chaman.	
15	...	...	2	6	5	...	...	...	2·8	?	?	94	·174	9·6	10	?	?	4·25	?	?	11·41	?	?	1·09	Srinagar	Northern India.
			Not	recorde	d.				?	?	?	67	·159	7·6	2	?	?	0·43	?	?	0·68	?	?	0·20	Gilgit.	
6	11	...	...	...	...	1	...	10	17·9	?	?	64	·188	6·8	4	?	?	2·40	?	?	5·58	?	?	0·84	Cherat.	
2	1	3	5	14	...	...	...	3	13·3	8·2	+ 62	63	·151	6·9	10	3·36	+6·64	5·46	3·73	+ 1·73	14·01	7·25	+ 6·76	1·40	Murree.	
17	1	2	2	...	2	1	...	3	?	?	?	?	?	7·1	15	?	?	7·49	?	?	11·38	?	?	1·53	Poo.	
7	3	5	2	4	5	...	...	2	5·9†	2·5	+136	·55	·144	7·2	7	4·36	+2·64	7·48	2·68	+ 4·80	15·47	5·03	+10·44	1·74	Simla.	
5	...	6	13	1	1	2	...	...	7·0	5·4	+ 29	63	·162	6·5	7	?	?	10·18	3·81	+ 6·37	19·84	7·34	+12·50	5·14	Chakrata.	
...	1	4	5	6	2	...	2	8	?	?	?	67	·183	5·4	7	3·50	+3·50	8·61	?	?	14·76	?	?	5·54	Mussooree.	
18	...	3	2	...	1	1	2	1	1·9	2·0	− 5	68	·217	6·3	8	4·09	+3·91	3·29	1·95	+ 1·34	8·15	4·89	+ 3·26	0·98	Ranikhet.	
2	...	3	4	4	...	1	1	13	7·7	?	?	78	·118	3·5	8	?	?	3·48	?	?	5·92	?	?	1·20	Gnatong.	
5	1	1	8	1	1	6	3	2	6·3	5·1	+ 24	81	·226	5·1	5	2·29	+2·71	1·89	0·63	+ 1·26	1·91	1·35	+ 0·56	0·64	Darjeeling.	
...	4	4	1	6	3	2	6	2	?	?	?	84	·280	4·8	6	?	?	4·23	?	?	5·22	?	?	1·20	Gantok.	

* Mean of 27 days.
† ,, of 25 ,,
‡ Wind direction of 26 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of barometer above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Central India	Mount Abu	3,945	26·123	+·007	?	26·220	12th	26·004	28th	·216	61·2	69·6	+0·7	55·8	+2·6	62·7	+1·7	13·8	77·1	14th	43·6	3rd	33·5
	Pachmarhi	3,528	26·553	+·024	?	26·643	12th	26·456	25th	·187	68·3	79·1	+4·0	56·3	+5·6	67·7	+4·8	22·8	83·7	15th	50·2	4th & 24th.	33·5
South India	Wellington	6,200	24·308	—·005	?	24·370	12th	24·236	24th	·134	58·9	69·3	—1·2	46·0	—0·7	57·7	—1·0	23·3	74·2	24th & 28th,	38·7	2nd	35·5
	Kottagiri	?	23·879	?	?	23·939	12th	23·749	4th	·190	57·9	67·6	?	49·7	?	58·7	?	17·9	74·7	24th	42·0	15th	32·7
XIII.—Extra India.																							
Ceylon	Colombo	40	29·959	+·005	29·924	29·987	8th	29·888	25th	·099	84·0	88·8	?	72·0	?	80·4	?	16·8	92·0	15th	68·0	1st	24·0
Persia	Meshed	?				Not recorded.					33·0	47·3	?	26·0	?	36·7	?	21·3	64·7	26th	2·0	2nd	62·7
	Teheran	?	26·002	?	?	26·240	14th	25·765	10th	·475	38·9	50·2	?	†33·6	?	†42·1	?	16·6	64·8	21st	20·2	1st	44·6
	Ispahan†	?	?	?	?	?	?	?	?	?	39·9	54·5	?	31·5	?	43·1	?	23·0	63·2	24th	23·9	13th & 14th.	39·3
	Bushire	14	30·041	?	30·013	30·219	1st	29·755	28th	·464	59·1	64·4	?	55·3	?	59·9	?	9·1	76·6	25th	47·1	15th	29·5
	Jask*	?	30·016	?	?	30·217	1st	29·728	10th	·489	68·1	75·3	?	63·7	?	69·5	?	11·6	79·1	27th	56·3	1st	22·8
Arabia	Muskat	?	30·025	?	?	30·190	1st	29·844	28th	·346	70·4	72·8	?	68·9	?	70·9	?	3·9	78·9	11th	62·7	1st	16·2
	Baghdad	?	29·616	?	?	29·848	13th	29·342	24th	·506	48·3	61·5	?	44·0	?	52·8	?	17·5	71·0	21st	35·5	26th	35·5
	Aden*	94	29·920	—·036	29·917	30·029	1st	29·775	28th	·254	75·5	80·2	—2·2	73·8	+0·9	77·0	—0·7	6·4	82·3	3 days	69·4	4th & 7th	12·9
	Perim	?	29·762	?	?	29·864	3rd	29·589	28th	·275	76·9	83·8	?	74·1	?	79·0	?	9·7	85·0	21st	71·9	1st	13·1
Afghanistan	Kabul	?	?	?	?	?	?	?	?	?	27·0	40·4	?	22·7	?	31·6	?	17·7	53·6	24th & 26th	8·9	1st	44·7
Central Asia	Kashghar	?	25·785	?	?	26·050	15th	25·473	28th	·577	26·8	45·3	?	22·5	?	33·9	?	22·8	62·8	25th	8·8	2nd	54·0
Arabian Sea Islands.	Minicoy	10	29·991	?	29·926	30·031	12th	29·896	27th	·135	79·8	87·5	?	?	?	?	?	?	88·9	9th	?	?	?
Africa	Zanzibar	7	29·905	?	29·904	29·949	13th	29·847	25th	·102	82·7	87·2	?	80·4	?	83·8	?	6·8	89·2	23rd	78·9	27th	10·3

* Mean of 26 days.
† „ of 27 „

I—*concluded.*

in India, Burma, etc., in February 1894—concluded.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.											Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	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 January to 28th February 1894.	Normal rainfall for period, 1st January to 28th February.	Variation from normal of period.	Heaviest rainfall during month.		
5	...	6	1	1	1	7	4	3	6·6	5·6	+ 18	45	·248	3·2	0	0·36	−0·36	0	0·36	−0·36	0·60	0·78	− 0·18	0	Mount Abu.	CENTRAL INDIA.
7	...	1	5	3	3	6	2	1	4·8	3·8	+ 26	44	·300	2·2	1	0·82	+0·18	0·28	0·45	−0·17	1·31	0·96	+ 0·35	0·22	Pachmarhi.	
14	1	6	5	1	1	...	...	...	2·7	2·7	0	57	·291	1·9	2	0·50	+1·50	1·76	1·53	+0·23	2·62	2·57	+ 0·05	1·43	Wellington.	SOUTH INDIA.
...	1	2	6	9	6	2	...	1	6·2	?	?	58	·279	1·8	2	0·50	+1·50	1·97	0·20	+1·77	3·27	0·73	+ 2·54	1·72	Kottagiri‡.	
																									XIII.—Extra India.	
2	7	9	4	2	1	2	1	...	7·2	6·2	+ 16	67	·788	1·6	2	?	?	0·52	2·63	−2·11	3·10	5·55	− 2·45	0·33	Colombo.	CEYLON.
16	...	1	1	2	...	2	3	3	?	?	?	?	?	4·9	3	?	?	1·48	?	?	1·62	?	?	0·67	Meshed.	PERSIA.
14	6	3	...	...	...	...	1	4	3·0	?	?	69	·166	5·4	6	?	?	1·91	?	?	2·52	?	?	0·67	Teheran.	
...	1	1	2	1	2	6	8	6	5·3†	?	?	72	·176	4·1	0	?	?	0	?	?	0	?	?	0	Ispahan.	
...	...	12	2	9	...	1	...	4	4·3	?	?	79	·401	?	10	?	?	4·04	?	?	5·16	?	?	0·93	Bushire.	
...	8	4	9	2	1	...	...	2	14·0*	?	?	73	·513	0·8	3	?	?	2·07	?	?	2·07	?	?	1·70	Jask.†	
...	2	1	5	3	3	2	5	7	?	?	?	77	·574	3·4	2	?	?	2·24	?	?	2·68	?	?	1·61	Muskat.	ARABIA.
8	5	2	1	3	4	3	...	2	10·0	?	?	83	·285	2·3	5	?	?	7·92	?	?	9·41	?	?	6·23	Baghdad.	
2	1	5	16	2	...	...	...	...	10·2	12·9	− 21	79	·693	5·6	0	?	?	0	0·33	−0·33	0·23	0·61	− 0·38	0	Aden.†	
...	...	9	13	6	...	...	...	...	26·0	?	?	77	·713	2·7	0	?	?	0	?	?	0·20	?	?	0	Perim.	
...	...	...	19	...	...	9	...	...	?	?	?	?	?	?	2	?	?	2·17	?	?	4·77	?	?	0·43	Kabul.	AFGHANISTAN.
5	4	1	4	2	1	...	6	5	2·3	?	?	?	?	3·8	0	?	?	0	?	?	1·20	?	?	0	Kashghar.	CENTRAL ASIA.
1	10	11	2	2	...	...	...	2	6·0	?	?	77	·785	3·5	0	?	?	0·04	?	?	0·31	?	?	0·04	Minicoy.	ARABIA SEA ISLANDS.
...	6	19	...	1	1	1	...	...	7·8	?	?	79	881	5·9	2	?	?	0·69	?	?	7·48	?	?	0·42	Zanzibar.	AFRICA.

* Mean of 24 days.
† ,, ,, 26 ,,
‡ Wind direction of 27 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88

Meteorological Province.	Station.	Height of the 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 to 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	...	29·952	29·835	·117	29·889	+·001	29+·880	88·3	77·4	10·9	91·3	75·7	15·6	83·5	86·5	81·9	+ 2·2	74·3	77·6	78·7	76·9
	Rangoon	...	·991	·846	·145	·915	+·002	·892	94·7	68·8	25·9	97·0	62·8	34·2	81·2	90·9	79·1	+ 3·1	66·1	72·5	73·8	70·8
	Diamond Island	...	·998	·872	·126	·930	—·006	·906	83·4	74·8	8·6	85·7	73·5	12·2	80·4	81·3	78·1	+ 1·5	71·6	73·8	73·8	73·1
	Cocos Island	111	·910	·806	·104	·854	?	·898	85·0	74·5	10·5	88·1	73·0	15·1	81·3	81·0	78·3	?	60·6	74·5	74·6	69·9
	Akyab	...	30·035	·907	·128	·963	+·009	·926	86·3	62·6	23·7	92·2	55·7	36·5	76·5	82·2	73·9	+ 1·6	59·9	69·5	72·6	67·3
Assam.	Silchar	...	29·961	·820	·141	·887	0	·944	83·0	58·3	24·7	88·7	52·4	36·3	72·3	81·1	69·7	+ 2·8	57·4	66·0	67·3	63·6
	Sibsagar	...	·736	·599	·137	·666	—·004	·965	75·8	55·5	20·3	82·0	49·2	32·8	65·8	74·9	64·3	+ 3·2	54·9	63·2	66·3	61·5
	Dhubri	...	·939	·787	·152	·859	—·009	·931	80·8	58·8	22·0	86·3	52·7	33·6	67·8	78·5	67·8	+ 3·3	58·3	63·0	66·4	62·5
Bengal and Orissa.	Chittagong	...	·969	·854	·115	·905	0	·941	84·9	60·8	24·1	89·1	51·1	38·0	76·8	80·6	72·3	+ 2·2	59·8	69·1	71·0	66·6
	Dacca	...	30·030	·888	·142	·952	—·001	·920	84·8	61·5	23·3	90·7	54·6	36·1	74·1	82·7	72·9	+ 3·0	59·2	66·8	68·6	64·9
	Calcutta (Alipore)	...	·045	·907	·138	·965	+·013	·932	84·0	62·0	22·0	91·5	54·1	37·4	74·1	83·1	72·4	+ 2·6	60·0	65·9	66·7	64·2
	Do. (Chowringhee).	...	·086	?	?	?	?	?	85·3	62·3	23·0	92·3	54·4	37·9	76·4	?	?	?	60·7	67·7	?	?
	Saugor Island	...	·035	·907	·128	·958	+·010	·928	82·8	66·5	16·3	86·6	56·3	30·3	77·3	80·4	73·5	+ 1·4	63·7	70·6	71·7	68·6
	Burdwan	...	29·968	·824	·144	·878	—·001	·931	84·8	60·9	23·9	92·2	52·6	39·6	74·6	83·4	72·0	+ 1·7	58·7	63·5	65·6	62·6
	Berhampore	...	·992	·856	·136	·911	+·011	·927	82·9	59·9	23·0	88·6	51·4	37·2	73·0	81·9	70·7	+ 2·1	57·0	64·8	66·8	62·9
	False Point	...	30·045	·924	·121	·982	+·007	·945	83·7	65·2	18·5	88·8	58·5	30·3	80·2	80·7	73·2	+ 1·2	64·9	71·8	72·7	69·8
	Cuttack	...	29·972	·823	·149	·898	0	·921	91·7	66·5	25·2	98·2	60·4	37·8	80·2	90·7	78·1	+ 2·6	64·4	69·0	70·0	67·8
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	28·014	27·898	·116	27·952	+·013	·921	80·6	56·3	24·3	88·5	50·2	38·3	71·1	78·0	67·7	+ 2·1	50·8	58·9	60·8	56·8
	Patna (Bankipur)	...	29·876	29·753	·123	29·809	+·008	·949	78·1	58·0	20·1	85·7	50·4	35·3	70·7	76·8	67·6	+ 2·5	55·7	63·0	64·6	61·1
	Darbhanga	...	·891	·766	·125	·823	+·011	·948	77·4	59·0	18·4	83·9	50·6	33·3	69·7	76·4	67·8	+ 3·1	57·9	63·8	65·7	62·5
	Allahabad	...	·753	·628	·125	·682	+·004	·958	78·2	56·8	21·4	88·7	51·4	37·3	69·9	77·2	66·8	+ 1·4	54·3	62·0	63·8	60·0
	Ghazipur	220	·828	·708	·120	·760	—·001	·911	79·5	58·1	21·4	87·4	52·0	35·4	70·8	77·0	67·7	+ 4·1	56·2	63·1	63·7	61·0
	Lucknow	...	·706	·598	·108	·645	+·036	·983	77·8	53·2	24·6	90·3	46·2	44·1	69·4	75·5	65·2	+ 0·4	51·6	60·9	62·0	58·1
Upper Sub-Himalayas.	Dehra Dun	...	27·778	27·695	·083	27·730	+·023	·983	68·3	49·8	18·5	76·6	41·8	34·8	60·7	64·5	57·5	+ 0·6	47·2	54·7	56·7	53·0
	Roorkee	...	29·140	29·044	·096	29·084	+·016	·969	72·2	52·0	20·2	83·8	43·3	40·5	62·8	69·6	60·8	+ 1·8	50·2	57·1	59·8	55·7
	Meerut	...	·297	·198	·099	·242	+·010	·972	72·9	51·3	21·6	83·9	42·1	41·8	63·0	71·0	61·2	+ 0·2	51·0	56·6	58·7	55·4
	Lahore	...	·350	·271	·079	·301	+·016	1·012	68·1	49·1	19·0	76·1	38·2	37·9	59·6	66·5	57·6	+ 1·0	47·4	55·0	57·9	53·4
	Ludhiana	...	·231	·144	·087	·179	+·020	·905	68·2	50·6	17·6	75·5	39·0	36·5	60·0	66·9	58·5	+ 0·9	49·7	56·0	58·9	54·9
Indus Valley and N.-W. Rajputana.	Peshawar	...	28·975	28·886	·089	28·921	+·013	1·062	66·3	46·3	20·0	78·1	34·0	44·1	58·1	64·9	55·4	+ 3·1	43·5	50·9	53·5	49·3
	Mooltan	...	29·665	29·580	·085	29·613	+·028	1·021	72·6	50·4	22·2	83·3	37·6	45·7	61·5	71·6	60·7	+ 2·3	47·6	53·0	57·9	52·8
	Jacobabad	...	·915	·798	·117	·847	+·026	·998	75·5	50·5	25·0	88·8	35·8	53·0	66·2	73·4	61·9	0	47·6	55·5	57·8	53·7
	Kurrachee	...							Observations imperfect.													
E. Rajputana, Central India and Gujarat.	Jeypore	...	28·616	28·505	·111	28·551	+·009	·982	79·3	55·0	24·3	89·0	44·1	44·9	69·4	77·1	66·6	+ 3·5	49·9	56·7	59·8	55·5
	Ajmere	...	·434	·316	·118	·371	—·002	·971	79·6	54·0	21·6	85·4	44·8	40·6	67·7	77·7	66·4	+ 3·8	49·5	57·0	61·6	56·0
	Deesa	...	29·577	29·448	·129	29·504	—·002	·927	88·8	58·1	30·7	95·9	45·8	50·1	77·9	87·6	73·2	+ 2·8	50·9	59·7	62·8	57·8
	Nowgong	...	·283	·160	·123	·214	—·015	·942	86·3	54·2	26·1	90·5	46·0	44·5	69·9	78·2	66·5	+ 1·6	52·9	60·5	62·9	58·8
	Agra	...	·512	·391	·121	·443	+·008	·974	77·1	54·3	22·8	85·6	45·2	40·4	67·4	75·7	65·1	+ 0·8	51·0	58·6	61·6	57·1
Deccan.	Belgaum	...	27·492	27·358	·134	27·421	+·004	·827	87·9	60·4	27·5	93·4	55·0	38·4	79·5	86·0	73·1	+ 0·3	55·4	60·5	62·2	59·4
	Sholapur	...	28·436	28·282	·154	28·354	+·005	·866	93·2	64·0	29·2	98·2	59·8	38·4	82·4	91·6	78·9	+ 0·9	53·6	63·7	66·3	61·2
	Poona	...	·179	·037	·142	·107	+·007	·862	92·6	58·4	34·2	97·4	51·5	45·9	81·0	90·4	75·0	+ 2·0	53·5	61·0	63·1	59·2
	Akola	...	29·088	·930	·158	29·003	—·011	·877	93·7	61·1	32·6	97·5	53·6	43·9	82·2	92·6	76·8	+ 3·9	53·9	64·1	67·2	61·7
	Buldana	2,132	27·883	27·758	·125	27·815	0	·860	88·3	64·1	24·2	92·5	58·0	34·5	80·3	86·8	75·6	+ 2·2	54·0	60·9	62·4	59·1
	Khandwa	...	28·956	28·817	·139	28·881	—·017	·874	92·3	60·9	31·4	96·2	48·6	47·6	79·5	90·6	76·0	+ 4·9	52·8	62·6	65·2	60·2

II.

Stations in India, Burma, etc., in February 1894.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Total rainfall of the month.	Heaviest fall of the month.	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.				
																									%	%						
·809	·871	·879	·853	+·039	86	76	70	77	0	3·8	2·1	3·0	+0·2	1	5	26	16	7	1	...	...	...	N. 66° E.	N. 41° E.	77	76	128	115	...	...	Port Blair	Burma Coast and Bay Islands.
·608	·686	·608	634	+·058	86	65	43	64	+1	1·4	2·6	2·0	0	...	2	2	4	4	15	12	8	4	S. 29° W.	S. 46° W.	45	18	78	92	...	...	Rangoon	
·734	·749	·732	·738	+·057	85	72	68	75	+2	1·8	2·1	2·0	−0·1	3	10	3	4	2	1	1	9	23	N. 36° W.	N. 25° W.	55	86	220*	168	...	...	Diamond Island.	
·345	·766	·775	·628	?	40	72	73	62	?	1·5	1·0	1·3	?	...	37	10	5	...	...	...	1	1	N. 13° E.	?	82	?	482*	?	0·15	0·15	Cocos Island.	
·484	·629	·676	·596	+·079	84	69	61	72	+3	1·1	0·3	0·7	−0·4	...	17	10	1	1	...	1	23	3	N. 35° W.	N. 27° W.	53	45	88	84	...	...	Akyab	
·463	·561	·486	·503	+·065	94	71	47	71	+1	3·6	3·9	3·8	+0·7	22	...	2	6	4	2	10	9	1	S. 34° W.	S. 33° E.	21	25	84*	64	...	...	Silchar	Assam.
·429	·549	·534	·504	+·056	96	87	62	82	+1	3·6	3·7	3·7	−1·8	18	...	31	...	...	...	1	1	5	N. 34° E.	N. 58° E.	53	53	34	51	...	...	Sibsagar	
·487	·513	·490	·497	+·118	97	75	51	75	+11	2·4	2·8	2·6	+1·0	4	3	13	15	2	4	11	3	1	S. 89° E.	S. 22° E.	27	13	108	95	...	...	Dhubri	
·510	·615	·633	·586	+·082	94	66	61	74	+4	1·5	1·8	1·7	0	1	7	11	2	4	4	5	12	10	N. 42° W.	N. 38° W.	27	30	83*	106	...	...	Chittagong	Bengal and Orissa.
·482	·561	·513	·519	+·072	87	67	46	67	+3	2·9	3·2	3·1	+1·3	6	6	6	1	6	8	6	10	7	S. 83° W.	S. 76° W.	18	35	78	63	...	...	Dacca	
·497	·537	·439	·491	+·004	89	63	39	64	−4	1·9	1·5	1·7	−0·1	4	12	10	4	1	2	6	12	5	N. 28° W.	S. 81° W.	31	23	55	85	...	...	Calcutta (Alipore).	
·518	·573	?	?	?	91	62	?	?	?	?	?	?	?										Not recorded.						0·25	0·25	Do. (Chowringhee.)	
·567	·667	·667	·634	+·011	85	70	64	73	−3	3·8	2·8	3·3	+1·3	...	12	8	1	1	16	10	2	5	S. 63° W.	S. 50° W.	11	23	230	189	...	...	Saugor Island.	
·469	·441	·398	·436	+·039	87	51	34	58	+2	2·2	3·5	2·9	+1·1	3	17	6	2	1	2	3	7	15	N. 25° W.	N. 58° W.	53	43	45*	52	...	...	Burdwan	
·431	·508	·459	·466	+·072	83	62	42	62	−2	1·8	3·4	2·6	+0·7	1	7	1	5	1	1	6	14	20	N. 59° W.	N. 72° W.	55	44	50	56	...	...	Berhampore	
·620	·671	·704	·665	+·040	98	65	67	77	−1	3·8	3·5	3·7	+1·1	...	9	3	8	3	24	...	4	5	S. 21° E.	S. 12° W.	21	16	180*	185	...	...	False Point	
·576	·564	·457	·532	+·012	89	55	33	59	−3	1·4	1·6	1·5	−0·3	6	14	10	5	2	4	10	5	...	N. 9° E.	S. 16° W.	16	13	51	50	...	...	Cuttack	
·306	·354	·322	·327	+·083	68	47	34	50	+8	3·5	4·8	4·2	+2·2	3	13	3	4	2	3	2	6	20	N. 31° W.	N. 68° W.	48	60	183	156	...	...	Hazaribagh.	Gangetic Plain and Chota Nagpur.
·417	·478	·450	·448	+·099	86	64	50	67	+10	4·7	4·3	4·5	+2·1	1	7	4	4	1	3	2	19	15	N. 57° W.	N. 79° W.	50	47	76	71	...	...	Patna (Bankipur).	
·470	·518	·495	·494	+·117	93	71	56	73	+10	2·3	2·4	2·4	+0·9	9	1	1	4	3	2	6	17	13	N. 84° W.	S. 72° W.	43	46	82	88	...	...	Darbhanga	
·394	·454	·419	·422	+·097	85	63	47	65	+10	4·6	5·9	5·3	+3·3	...	3	5	6	5	2	6	12	17	N. 60° W.	N. 66° W.	32	25	98	20	...	...	Allahabad.	
·431	·482	·418	·443	+·178	89	65	47	67	+27	3·6	3·4	3·5	+1·8	23	...	...	3	1	...	14	15	...	S. 64° W.	S. 82° W.	43	58	28	55	1·71	1·06	Ghazipur.	
·364	·424	·378	·389	+·097	89	60	45	64	+13	5·0	5·8	5·4	+2·5	52	...	...	...	...	...	...	4	...	W	N. 58° W.	7	44	14	78	...	...	Lucknow	
·295	·359	·366	·340	?	83	68	61	70	?	5·7	7·1	6·4	+2·3	19	2	2	3	3	5	8	7	5	S. 59° W.	S. 85° W.	21	19	21	48	...	...	Dehra Dun	Upper Sub-Himalayas.
·345	·396	·388	·376	+·093	88	70	54	71	+11	4·5	5·2	4·9	+1·6	11	1	5	8	...	2	6	12	11	N. 64° W.	N. 52° W.	25	23	75	68	...	...	Roorkee	
·375	·360	·335	·363	+·075	97	66	46	70	+14	3·9	5·5	4·7	+1·9	9	3	1	4	1	...	4	25	9	N. 77° W.	N. 54° W.	52	52	42	93	...	...	Meerut	
·312	·378	·371	·354	+·077	88	74	57	73	+16	5·9	6·3	6·1	+2·6	16	10	2	2	...	...	...	12	14	N. 41° W.	N. 25° W.	50	30	33	57	...	...	Lahore	
·350	·401	·399	·383	+·087	93	77	61	77	+15	6·9	7·1	7·0	+3·0	26	10	1	...	2	2	...	3	12	N. 32° W.	N. 48° W.	32	39	24	41	...	...	Ludhiana	
·253	·287	·273	·271	+·042	79	60	46	62	+5	5·0	5·4	5·2	+0·9	9	2	4	7	9	5	4	7	9	S.	N. 21° W.	5	9	88*	80	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·300	·297	·305	·301	+·032	81	54	40	58	+5	5·5	5·2	5·4	+2·7	16	...	27	...	5	...	2	...	6	N. 43° E.	N. 5° E.	45	18	16*	51	...	...	Mooltan	
·301	·308	·281	·297	+·076	80	48	35	51	+14	4·7	5·1	4·9	+1·5	47	...	7	...	2	...	...	...	...	N. 63° E.	N. 17° E.	12	36	51*	69	...	...	Jacobabad.	
...	...	...	...	...	...	...	...	...	Observations imperfect.					...	...	...	...	...	...	...	...	...	...	N. 80° W.	...	27	...	252	...	...	Kurrachee	
·304	·309	·306	·306	+·052	69	43	33	48	+5	4·4	4·4	4·4	+1·6	...	7	14	2	2	2	8	12	9	N. 36° W.	N. 9° W.	32	38	60	104	...	...	Jeypore	E. Rajputana, Central India, and Guarat.
·303	·337	·352	·331	+·075	72	50	37	53	+9	2·8	2·9	2·9	+0·6	5	3	16	4	7	3	2	12	4	N. 27° E.	S. 77° W.	16	8	78	63	...	...	Ajmere	
·284	·276	·247	·269	+·042	57	29	19	35	+6	2·9	2·7	2·8	+0·3	...	9	17	4	...	...	...	8	8	N. 5° E.	N. 28° W.	59	36	228	215	...	...	Deesa	
·390	·406	·375	·390	+·115	91	57	41	63	+16	4·4	5·3	4·9	+1·7	...	6	7	12	1	4	2	17	7	N. 32° W.	N. 52° W.	20	33	55*	41	...	...	Nowgong	
·338	·380	·366	·361	+·085	79	57	42	59	+12	4·5	5·3	4·9	+2·5	...	...	12	1	5	...	5	...	33	N. 29° W.	N. 75° W.	50	38	90	97	...	...	Agra	
·382	·294	·269	·315	−·018	72	29	22	41	+3	0·2	1·1	0·7	−0·5	...	4	4	13	15	6	5	4	1	S. 55° E.	S. 78° E.	41	23	258	241	...	...	Belgaum	Deccan.
·288	·361	·332	·327	+·014	48	33	22	34	0	0·8	1·9	1·4	−0·2	4	1	3	8	23	5	4	1	7	S. 48° E.	S. 33° E.	43	32	248*	160	...	...	Sholapur	
·255	·292	·240	·296	+·007	71	27	17	39	+7	0·1	1·4	0·8	−0·8	9	...	2	12	15	1	7	5	5	S. 43° E.	N. 28° W.	28	21	135	150	...	...	Poona	
·327	·361	·328	·339	+·058	60	33	21	38	+3	1·3	2·9	2·1	+0·7	4	3	3	9	6	8	11	7	5	S. 14° W.	N. 1° E.	21	25	108	93	...	...	Akola	
·297	·299	·264	·287	+·007	50	29	21	33	−1	0·1	2·1	1·1	−0·8	...	6	2	4	2	14	15	7	6	S. 46° W.	N. 5° W.	37	29	144*	147	1·23	1·04	Buldana	
·304	·360	·308	·324	+·008	56	36	21	38	−4	1·4	2·0	1·7	+0·4	...	7	5	1	5	4	12	11	11	N. 85° W.	N. 8° W.	36	32	111	88	...	...	Khandwa	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88

Meteorological Province.	Station.	Height of the 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 to 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.
Deccan—*concld.*	Hoshangabad	...	29·001	28·847	·154	28·918	−·033	29·898	87·5	61·0	26·5	93·2	53·0	40·2	75·2	87·2	74·1	+3·8	55·8	63·1	66·3	61·7
	Nagpur	...	28·999	·850	·149	·919	+·009	·893	91·3	62·2	29·1	98·0	58·2	39·8	80·3	89·5	76·0	+2·2	55·6	64·8	66·3	62·2
	Jubbulpore	...	28·701	·561	·140	·625	−·005	·914	85·4	57·0	28·4	91·7	51·4	40·3	73·6	83·9	70·6	+4·4	55·3	62·3	64·7	60·7
	Saugor	...	·253	·132	·121	·187	+·006	·903	84·5	59·2	25·3	91·5	49·7	41·8	75·0	83·0	71·3	+4·1	54·3	61·4	64·0	59·9
	Raipur	...	29·064	·919	·145	·986	+·001	·891	90·1	64·0	26·1	94·6	58·9	35·7	79·8	88·4	76·3	+4·5	57·1	64·9	66·2	62·8
	Sutna	...	28·995	·857	·138	·918	−·003	·935	P	56·6	P	P	50·8	P	71·1	78·9	P	P	53·4	60·9	62·7	59·0
	Hyderabad (Deccan).	...	·349	·216	·133	·277	P	·897	89·9	62·8	27·1	93·6	58·3	35·3	80·7	86·7	75·6	P	59·8	66·6	66·5	64·3
West Coast.	Bombay	...	30·002	29·873	·129	29·929	+·005	·906	84·0	70·9	13·1	88·6	64·6	24·0	78·0	81·4	77·1	+2·0	65·3	69·9	72·6	69·3
	Ratnagari	...	29·909	·787	·122	·839	+·006	·888	89·3	69·5	19·8	97·5	62·3	35·2	85·4	85·1	78·6	+2·6	64·7	71·5	75·1	70·4
	Karwar	...	·978	·846	·132	·903	−·003	·878	88·0	68·2	19·8	98·5	63·3	35·2	80·8	85·5	77·7	+1·2	P	71·0	75·4	P
	Cochin	...	·993	·869	·124	·922	+·005	·859	90·6	73·0	17·6	98·3	67·8	30·5	84·3	86·4	81·0	+0·3	70·1	74·2	76·1	73·5
South India.	Salem	...	·113	28·956	157	·039	−·005	·908	91·9	66·1	25·8	96·1	53·2	37·9	81·5	89·1	77·3	0	64·3	69·4	70·3	68·0
	Mysore	...	27·524	27·386	·138	27·455	P	·860	87·6	62·2	25·4	92·0	56·7	35·3	77·5	85·3	74·3	P	60·0	67·4	69·2	65·5
	Mercara	...	26·318	26·205	·113	26·266	+·012	·873	80·3	59·0	21·3	84·4	51·0	33·4	70·9	78·3	69·1	+0·6	54·7	62·7	68·4	62·1
	Bangalore (Fort)	...	27·040	·913	·127	·976	−·010	·851	86·6	59·4	27·2	91·7	53·5	38·2	77·0	83·5	72·2	+0·6	56·6	63·9	63·7	61·4
	Hassan	...	26·974	·848	·126	·910	P	·853	85·3	56·9	28·4	90·4	49·9	40·5	77·1	83·2	70·6	P	52·2	63·0	63·3	59·5
	Chitaldroog	...	27·625	27·489	·136	27·552	P	·846	88·5	64·6	23·9	93·0	56·3	36·7	79·4	87·0	76·2	P	54·3	62·7	63·0	60·0
	Trichinopoly	...	29·777	29·631	·146	29·708	+·001	·894	91·3	69·2	22·1	94·0	63·1	30·9	87·1	89·5	78·8	+0·8	67·0	71·4	71·8	70·1
	Madras	...	30·040	·928	·112	·979	+·011	·932	86·7	68·2	18·5	89·2	62·5	26·7	82·2	83·0	77·6	−0·1	P	73·9	73·9	72·4
	Bellary	...	28·555	28·402	·153	28·474	+·031	·873	92·6	64·8	27·8	98·5	58·7	39·8	82·6	90·9	79·0	−0·6	59·6	70·1	71·2	67·0
	Vizagapatam	...	30·031	29·906	·125	29·959	+·008	·928	82·0	73·0	9·0	85·9	67·7	18·2	79·5	82·2	79·0	+0·1	66·5	71·5	73·4	70·5
	Cocanada	...	·044	·909	·135	·977	P	·939	85·5	67·1	18·4	94·2	63·0	31·2	80·9	83·6	75·8	P	65·7	72·6	74·1	70·8
Hill Station. Baluchistan.	Quetta	—	24·695	24·615	·080	24·648	+·011	P	51·0	34·2	16·8	62·7	20·6	42·1	44·3	48·7	42·0	+0·6	33·5	39·5	42·5	38·5
Hill Stations, Northern India.	Leh	11,503	19·683	19·611	·072	19·653	+·064	P	33·0	1·05	22·5	39·9	1·3	38·6	22·2	27·0	21·6	−0·7	9·6	18·3	23·0	17·0
	Srinagar	...	25·016	24·937	·079	24·970	P	P	40·0	28·2	11·8	49·8	19·1	30·7	34·5	38·7	33·8	P	27·9	33·2	36·4	32·5
	Murree	...	23·877	23·838	·039	23·850	+·027	P	47·2	36·8	10·4	58·0	29·3	28·7	43·3	42·5	40·3	+0·8	32·7	37·4	38·1	36·1
	Chamba	3,005	27·040	26·947	·093	27·000	+·016	P	62·3	45·9	16·4	72·5	38·6	33·9	52·8	59·2	52·0	+1·6	43·4	47·5	50·8	47·1
	Kailang	10,087	20·811	20·763	·048	20·793	+·049	P	34·3	16·9	17·4	42·9	5·0	37·9	25·1	29·5	23·0	+2·3	51·8	22·2	25·7	21·2
	Simla (Ridge)	...	23·147	23·096	·051	23·115	+·040	P	47·9	38·2	9·7	53·3	29·3	24·0	44·4	45·1	41·8	+0·2	33·8	37·5	40·2	37·2
	Simla (Chapslee)	...	...	Not	record	ed.	...	...	51·6	38·2	13·4	60·0	30·0	30·0	45·2	P	P	P	33·7	38·1	P	P
	Chakrata	...	23·387	23·328	·059	23·350	+·042	P	51·0	38·1	12·9	59·9	28·9	31·0	45·7	46·3	42·6	+0·8	34·5	39·1	41·0	38·2
	Ranikhet	...	24·185	24·119	·066	24·141	+·057	P	55·8	43·5	12·3	63·4	32·4	31·0	51·1	51·6	48·0	+0·5	40·2	45·2	46·2	43·9
	Katmandu	4,388	25·733	25·631	·102	25·677	+·024	P	68·1	43·0	25·1	74·5	33·6	40·9	54·4	63·9	54·5	+1·7	41·5	50·1	53·5	48·4
	Darjeeling	...	23·036	22·958	·078	22·992	+·058	P	50·6	38·9	11·7	56·3	34·8	21·5	45·9	48·1	44·2	+3·5	37·4	42·6	44·8	41·7
	Demagiri	P		Not	record	ed.			82·7	57·7	25·0	88·9	51·1	37·8	70·4	74·8	68·2	+3·2		Not re	corded.	
	Tura	3,943		Not	record	ed.			78·5	61·6	16·9	82·8	56·5	26·3	71·1	75·4	69·3	P	P	62·3	63·6	P
Hill Stations, Central India.	Mount Abu	...	26·150	26·068	·082	26·100	−·005	P	69·9	55·7	14·2	77·1	43·6	33·5	65·2	67·7	62·9	+2·4	47·3	52·2	54·2	51·2
	Pachmarhi	...	·574	·471	·100	·518	+·020	P	79·3	56·3	23·0	83·5	50·2	33·3	73·4	77·2	67·1	+4·9	50·4	57·5	58·6	55·5
	Chikalda	3,642	·455	·349	·106	·396	+·005	P	80·5	62·8	17·7	84·8	54·1	30·7	73·6	79·0	71·0	+3·2	53·0	58·5	59·3	56·9

II—*continued.*

Stations in India, Burma, etc., in February 1894—continued.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Total rainfall of the month.	Heaviest fall of the month.	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.				
																									%	%						
·386	·431	·387	·399	+·092	71	50	30	50	+ 6	2·2	3·3	2·8	+1·3	26	2	11	9	...	1	2	4	1	N. 50° E.	N. 58° E.	24	18	64	65	...	...	Hoshangabad.	Deccan—*concld.*
·364	·424	·358	·382	+·060	65	41	26	44	+ 4	0·7	2·5	1·6	−0·3	...	3	13	13	6	3	8	1	4	S. 81° E.	N. 55° E.	30	17	123	93	...	...	Nagpur	
·419	·422	·373	·405	+·094	89	52	33	58	0	2·7	3·0	2·9	+0·8	10	10	10	1	6	3	5	6	5	N. 5° W.	N. 3° W.	17	20	64	59	...	...	Jubbulpore.	
·381	379	·360	·373	+·133	79	46	32	52	+14	2·0	2·5	2·3	+0·9	...	6	10	6	10	5	13	1	5	S. 54° E.	N. 6° W.	14	24	86	68	...	...	Saugor	
·381	·416	·355	·384	+·037	64	42	26	44	− 1	2·2	3·7	3·0	+1·6	14	3	6	4	2	1	10	13	3	S. 89° W.	N. 40° W.	22	13	49*	93	...	...	Raipur	
·373	·410	·372	·385	+·155	81	55	39	58	+18	3·3	3·0	3·2	+1·2	2	13	3	8	2	3	...	6	14	N. 16° W.	N. 41° W.	28	38	126*	116	...	...	Sutna	
·481	·481	·401	·454	?	83	46	32	54	?	0·6	1·5	1·1	?	4	1	4	7	30	6	2	2	...	S. 48° E.	?	66	?	100*	?	...	...	Hyderabad (Deccan).	
·555	·627	·684	·622	+·016	73	65	64	67	− 2	0·9	0·1	0·5	−0·8	...	5	8	10	2	...	...	8	23	N. 16° W.	N. 4° W.	46	60	205*	256	...	...	Bombay	West Coast.
·551	·591	·740	·627	+·035	76	50	61	62	0	0·4	0·5	0·5	+0·1	...	6	...	1	6	1	7	22	13	N. 81° W.	N. 52° W.	55	52	184*	219	...	...	Ratnagiri	
?	·629	·714	?	?	?	60	59	?	?	0·2	0·1	0·2	−0·4	1	...	13	...	...	...	...	22	20	N. 49° W.	N. 50° W.	64	61	63	?	...	...	Karwar	
·703	·714	·759	·725	−·017	86	61	61	69	− 2	0·8	1·1	1·0	−1·1	3	8	10	1	1	...	3	25	5	N. 54° W.	N. 89° W.	48	28	124	?	...	...	Cochin	
·584	·559	·493	·545	−·010	90	52	37	60	+ 3	2·2	3·5	2·9	+1·1	4	13	30	6	1	...	1	1	...	N. 39° E.	S. 75° E.	75	53	132	129	...	...	Salem	South India.
·498	·548	·520	·522	?	88	58	42	63	?	1·3	1·4	1·4	?	8	1	10	30	4	1	1	..	1	N. 84° E.	?	69	?	235*	?	...	...	Mysore	
·383	·476	·582	·479	+·080	76	63	60	67	+ 9	2·1	2·2	2·2	−0·3	...	3	9	20	12	...	1	3	8	N. 77° E.	N. 59° E.	46	35	160	95	...	...	Mercara	
·433	·446	·364	·414	+·020	84	49	33	55	+ 3	1·1	0·5	0·8	−1·4	...	...	13	26	12	1	2	1	1	S. 88° E.	S. 67° E.	71	66	174*	86	...	...	Bangalore (Fort.)	
·344	·415	·353	·371	?	73	45	31	50	?	2·3	2·9	2·6	?	...	1	14	22	14	2	...	1	2	N. 89° E.	?	69	?	90*	?	...	...	Hassan	
·298	·365	·281	·315	?	49	37	22	36	?	0·7	1·5	1·1	?	1	1	9	23	12	...	2	4	4	N. 89° E.	?	52	?	182*	?	...	...	Chitaldroog	
·637	·561	·545	·581	−·029	89	44	39	57	− 5	1·9	2·4	2·2	−0·6	12	5	35	3	1	...	...	...	...	N. 44° E.	N. 65° E.	73	74	48	101	...	...	Trichinopoly.	
?	·729	·716	·738	+·074	?	66	63	79	+ 6	4·0	2·0	3·0	+0·4	...	4	21	15	11	4	1	...	...	N. 80° E.	E.	66	68	114	119	...	...	Madras	
·451	·582	·520	·518	+·158	73	53	36	54	+17	1·7	3·0	2·4	+1·1	3	...	...	17	25	3	1	14	6	S. 59° E.	S. 56° E.	59	50	89	94	...	...	Bellary	
·560	·678	·720	·653	+·011	68	67	65	67	+ 2	1·4	1·4	1·4	+0·1	...	4	4	2	5	15	9	15	2	S. 41° W.	S. 11° W.	39	43	21	49	...	...	Vizagapatam.	
·617	·694	·719	·676	?	92	66	63	74	?	1·3	0·9	1·1	?	1	...	14	15	20	1	...	2	3	S. 85° E.	?	62	?	171*	?	..	...	Cocanada	
·190	·202	·217	·203	+·039	94	68	63	75	+10	5·0	5·6	5·3	+1·1	18	1	1	1	5	6	5	12	7	S. 67° W.	N. 76° W.	30	30	88*	96	...	...	Quetta	Hill Station, Baluchistan.
·063	·072	·094	·076	−·061	86	60	65	70	+ 5	8·2	7·4	7·8	+1·1	5	1	7	4	5	22	10	1	1	S. 8° E.	S. 25° E.	46	18	20	33	1·20	0·35	Leh	Hill Stations, Northern India.
·152	·178	·194	·175	?	96	87	80	88	?	8·8	7·5	8·2	?	34	2	3	2	8	6	1	...	...	S. 48° E.	?	21	?	64*	?	...	...	Srinagar	
·145	·165	·188	·166	+·015	68	61	70	67	+ 4	6·4	7·3	6·9	+1·4	1	2	3	...	38	6	4	...	2	S. 39° E.	S. 39° E.	69	29	319*	196	...	...	Murree	
·257	·270	·279	·267	+·041	82	67	57	69	+ 6	7·7	8·3	8·0	+2·5	26	2	1	1	6	1	1	3	15	N. 49° W.	N. 21° E.	20	7	73	86	6·92	1·72	Chamba	
·086	·098	·111	·099	−·006	86	69	66	74	− 3	8·0	8·2	8·1	+1·8	...	7	...	2	4	4	9	19	11	N. 87° W.	S. 69° W.	50	64	22	26	5·07	0·81	Kailang	
·146	·157	·201	·168	+·016	63	55	67	61	+ 6	6·7	8·2	7·5	+2·2	9	5	6	3	4	24	3		...	S. 22° E.	S. 22° W.	38	28	134	?	...	...	Simla (Ridge).	
·148	·160	?	?	?	65	55	?	?	?	6·9	?	?	?	Not	r	ec	or	de	d.	.	...	...	?	?	?	?	?	?	5·12	1·56	Simla (Chapslee).	
·165	·172	·204	·181	+·021	73	60	67	67	+ 5	6·7	7·4	7·1	+2·3	2	1	8	19	7	1	5	10	3	S. 87° E.	S. 54° E.	25	3	167	125	...	...	Chakrata	
·219	·249	·262	·243	+·051	78	66	70	71	+11	5·8	8·1	7·0	+2·6	37	...	3	4	1	3	1	5	2	S. 20° W.	S. 55° W.	2	24	46	52	...	...	Raniket	
·244	·314	·294	·288	+·044	86	73	50	70	+ 5	3·8	6·0	4·9	+1·8	3	1	...	2	9	1	2	30	8	S. 86° W.	N. 82° W.	52	67	29	?	0·90	0·42	Katmandu	
·209	·241	·295	·239	+·028	87	78	79	82	+ 3	6·4	8·1	7·3	+1·6	2	2	8	2	...	5	9	23	4	S. 88° W.	S. 85° W.	44	33	152	121	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	...	...	27	3	2	1	24	...	S. 51° E.	N. 55° W.	12	32	?	?	1·08	0·53	Demagiri	
?	·465	·456	?	?	?	61	52	?	?	3·5	4·1	3·8	+1·4	...	2	1	2	2	22	21	2	4	S. 26° W.	S. 12° W.	64	66	?	?	0·37	0·20	Tura	
·236	·246	·269	·250	+·074	53	39	39	44	+10	3·2	2·6	2·9	+0·1	...	7	8	..	4	6	16	5	10	S. 88° W.	N. 71° W.	25	24	160*	131	...	...	Mount Abu	Hill Stations, Central India.
·304	·294	·281	·293	+·057	67	36	30	44	+ 2	1·5	2·9	2·2	+0·3	2	7	2	7	2	7	12	11	6	S. 73° W.	N. 49° W	25	24	111*	92	...	...	Pachmarhi.	
·293	·319	·279	·297	+·013	51	39	28	39	− 2	1·6	4·1	2·9	+1·4	21	4	...	...	3	20	2	2	4	S. 14° W.	N. 83° W.	30	26	141	143	*Nil*	*Nil*	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and at 4 P.M. at 88

Meteorological Province.	Station.	Height of the 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 to 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.
Hill Station, S. India.	Wellington	...	24·323	24·245	·078	24·284	−·007	29+ ?	69·5	46·0	23·5	74·4	38·9	35·5	64·6	65·1	56·6	−1·3	43·7	52·5	55·1	50·4
Extra India.	Muscat	...	30·046	29·945	·101	29·996	?	?	73·1	68·9	4·2	78·9	62·7	16·2	71·9	72·8	71·0	?	64·3	66·7	67·6	66·2
	Aden	...	29·940	·809	·131	·867	−·042	·893	80·4	73·8	6·6	82·5	69·3	13·2	77·0	79·2	76·8	0	69·2	71·2	70·5	70·3
	Perim	...	·780	·653	·127	·709	?	?	83·8	74·1	9·7	85·2	71·9	13·3	80·7	80·2	78·0	?	70·7	72·8	72·9	72·2
	Minicoy	...	30·013	·896	·117	·950	?	·885	87·6	?	?	88·9	?	?	83·3	84·7	?	?	72·7	75·9	76·6	75·1
	Zanzibar	...	29·906	·795	·111	·851	?	·850	87·0	80·5	6·5	89·2	78·9	10·3	83·6	86·5	83·6	?	76·9	78·0	78·1	77·6

II—*concluded.*

Stations in India, Burma, etc., in February 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.						
														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 of the month.	Heaviest fall of the month.	Station.	Meteorological Province.
																									%	%						
·268	·273	·334	·292	+ ·012	84	46	54	61	+ 4	1·8	3·1	2·5	0	...	4	8	6	26	11	1	...	...	S. 55° E.	S. 31° E.	64	60	66	62	...	...	Wellington.	Hill Station, S. India.
·546	·591	·614	·584	?	77	75	75	76	?	2·8	3·4	3·1	?	...	1	12	16	4	4	2	2	15	N. 49° E.	?	32	?	90	?	...	...	Muscat .	Extra India.
·654	·687	·630	·656	0	78	74	63	72	0	6·0	0·5	3·3	−0·8	1	...	13	25	12	1	...	...	...	S. 89° E.	N. 81° E.	81	72	521	332	...	...	Aden .	
·710	·703	·716	·710	?	84	67	69	73	?	0·9	0·2	0·6	?	...	...	7	29	20	...	...	...	...	S. 79° E.	?	87	?	629	?	...	...	Perim .	
?	·795	·807	?	?	?	69	68	?	?	3·5	3·8	3·7	?	...	25	22	5	1	...	...	...	3	N. 25° E.	?	74	?	144	?	...	...	Minicoy .	
·877	·886	·849	·870	?	84	77	67	76	?	4·5	2·7	3·6	?	...	14	31	5	2	2	...	1	4	N. 40° E.	N. 25° E.	76	26	221*	162	...	...	Zanzibar .	

* Corrected.

G. I. C. P. O.—No. 3 Meteor.—7-6-94.—400.

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.

Reg. No. 199, Wr., I.—April 93.—500.—199 R., May 93.—5,500.

Litho., S. I. O., Calcutta.

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.

Reg. No. 199, Wr., I.—April 93.—500.—199 R., May 93 —5,500.

Litho., S. I. O., Calcutta.

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

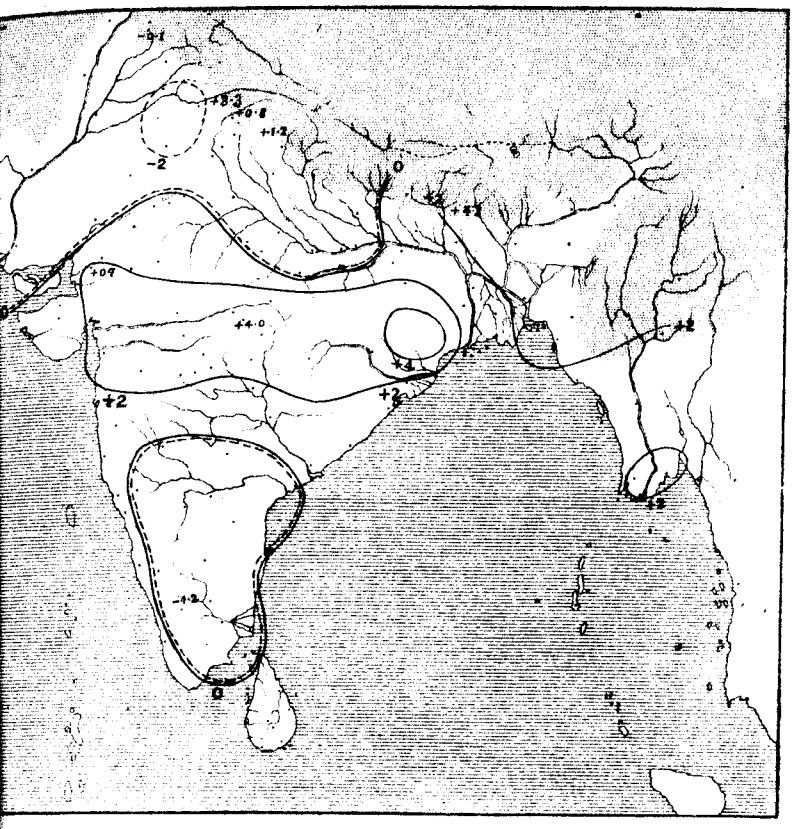
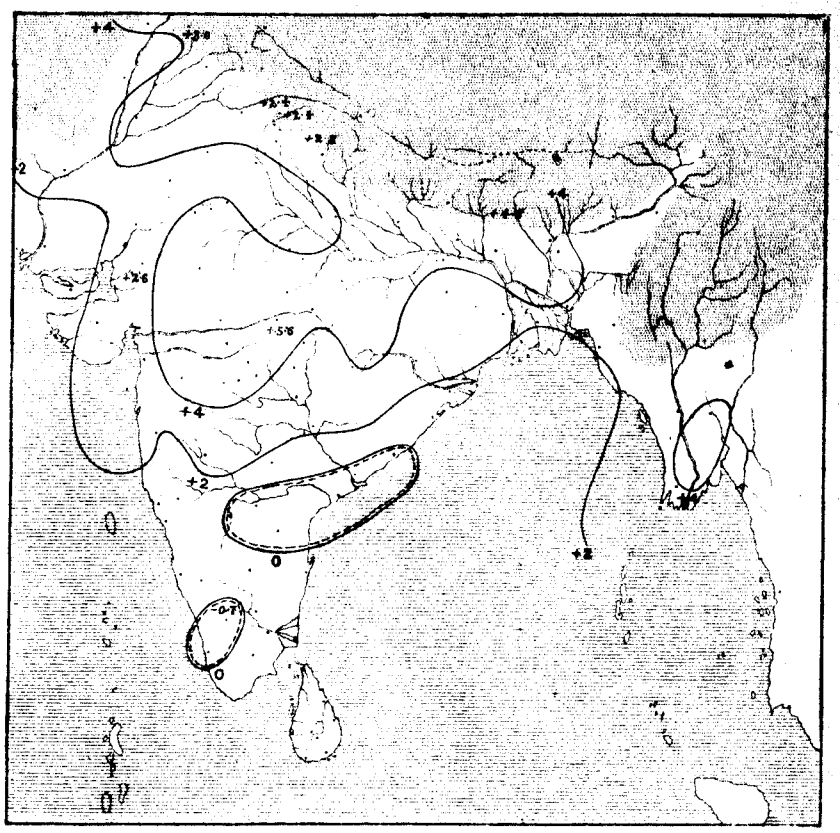


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

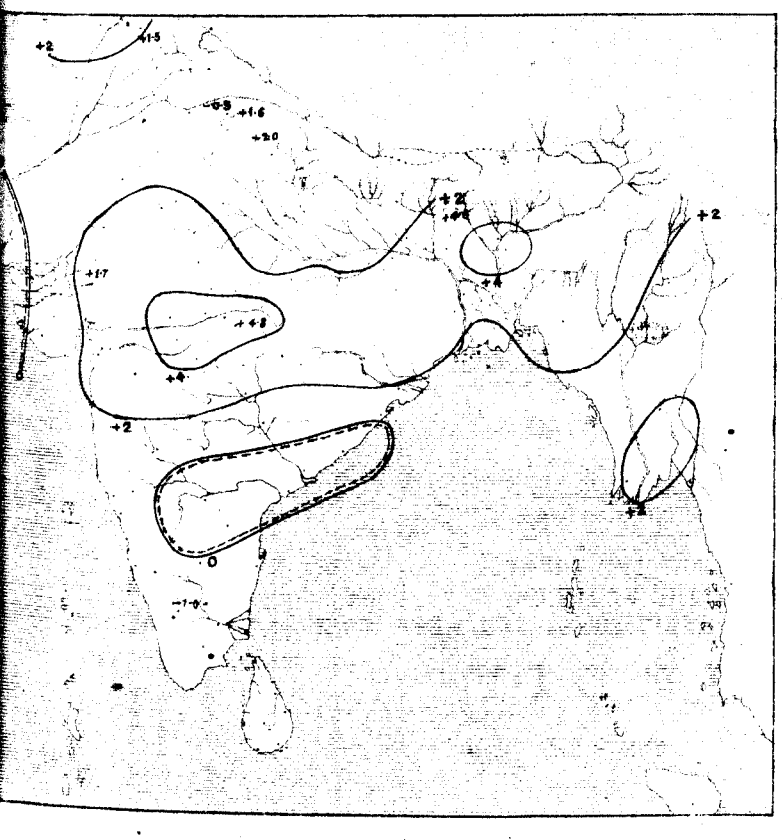
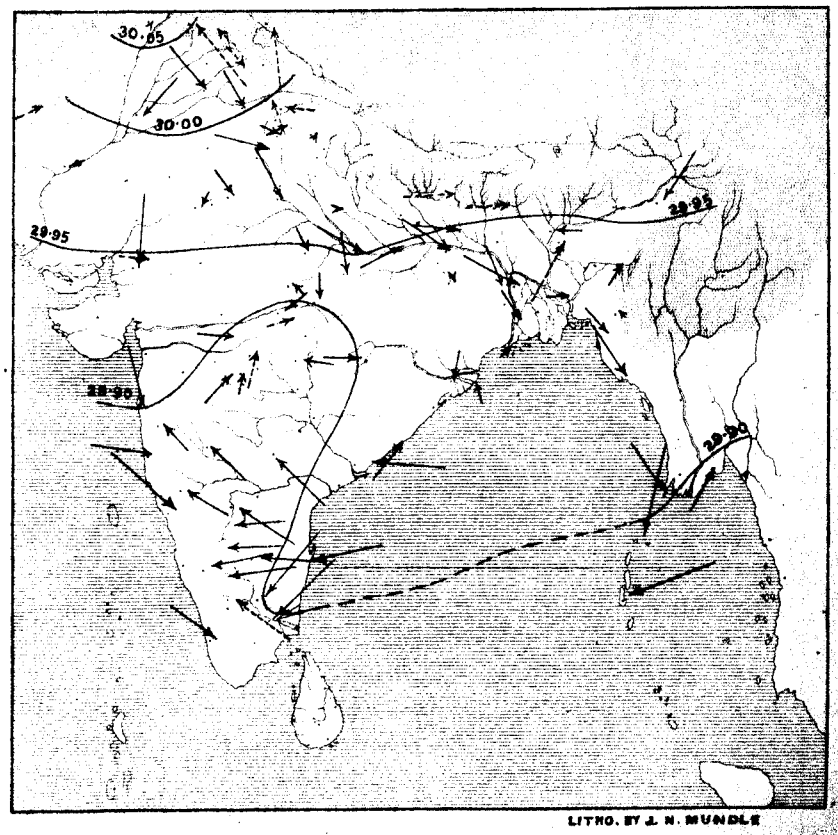


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF FEBRUARY 1894.



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.

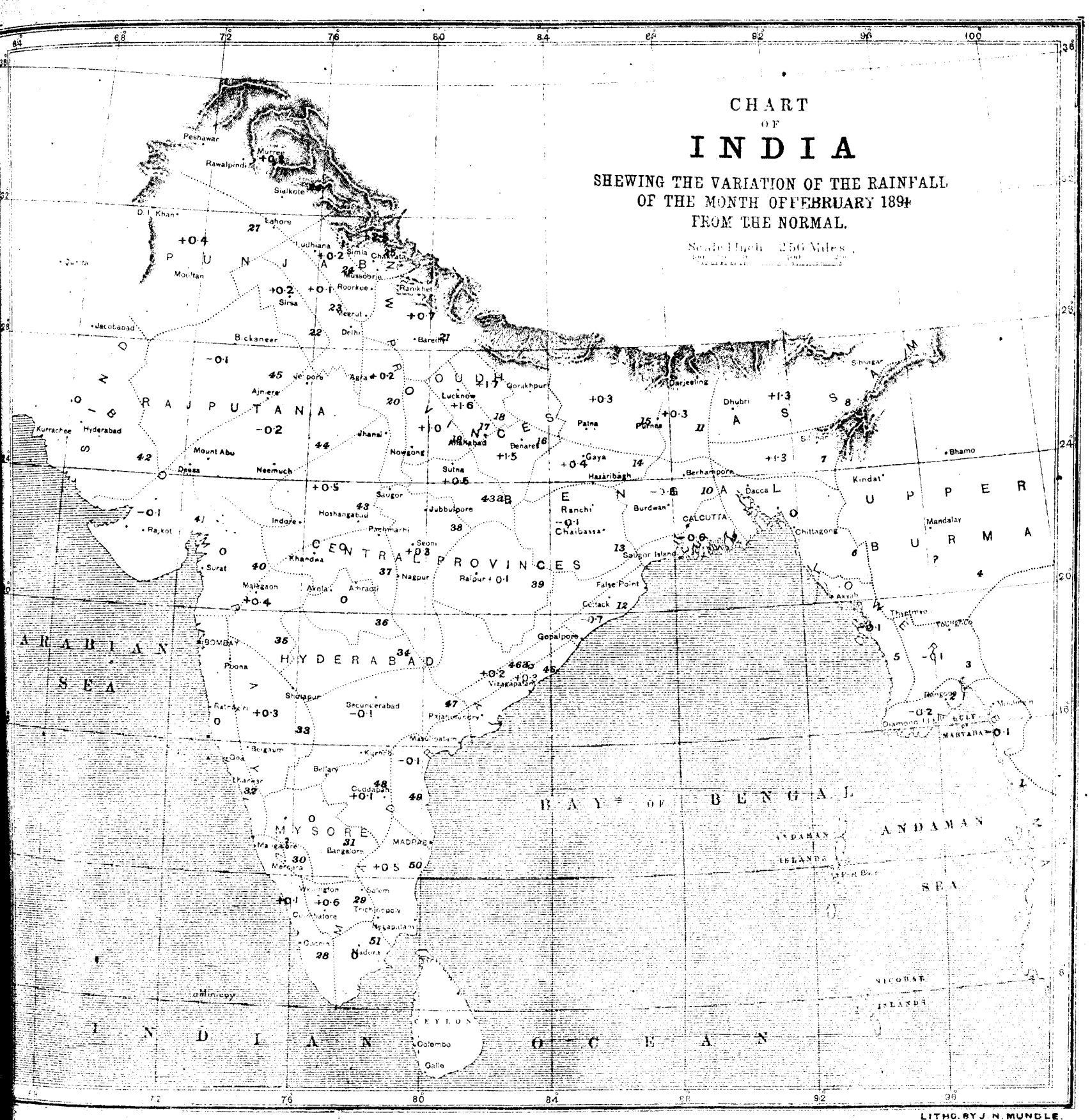
The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions of the resultants of the wind recorded at 10 and 16 hours, and by their lengths the percentage of the observations expressing the numerical value of the resultant; a length of ⅕th of an inch being equal to 100 per cent.

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 used in the preparation of this Chart are the rainfall returns of all the observatories in India, 182 in number. The double line or 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 n a tenth of an inch). The dotted line faces the area of no rainfall.

No. 199, Wr., I.—April 93.—500.—199 R., May 93.—5,500.

Litho., S. I. O. Calcutta.



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 51 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 name of the districts 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 figures.

1. Tenasserim
2. Lower Burma
3. Central do.
4. Upper do.
5. Arakan
6. Eastern Bengal
7. Assam (Surma)
8. Do. (Brahmaputra)
9. Deltaic Bengal
10. Central do.
11. North do.
12. Orissa
13. Chota Nagpore
14. Behar (South)
15. Behar (North)
16. North Western Provinces (East)
17. Oudh (South)
18. Do. (North)
19. North Western Provinces (Central)
20. Do. do. (West)
21. Do. do. (Submontane)
22. Punjab (South)
23. Do. (Central)
24. Do. (Submontane)
25. Do. (Hill Districts)
26. Do. (North West)
27. Punjab (West)
28. Malabar
29. Madras (South Central)
30. Coorg
31. Mysore
32. Konkan
33. Bombay Deccan
34. Hyderabad (North)
35. Khandeish
36. Berar
37. Central Provinces (West)
38. Do. (Central)
39. Do. (East)
40. Guzerat
41. Kattiawar
42. Sind
43. Central India (East)
43 a. Do. do. (a)
44. Rajputana (East) Central India (West)
45. Rajputana (West))
46. East Coast (North)
46(a.) Do. do. (a)
47. Hyderabad (South)
48. Madras (Central)
49. East Coast (Central)
50. East Coast (South)
51. Madras (South)

Reg. No. 199, Wr., I.—April 93.—500.—199 R., May 93 —5,500.

Litho., S. I. O., Calcutta.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, MARCH, 1894.

INTRODUCTION.

THIS Review of the weather in India during the month of March 1894 is based on observations taken daily at 8 A.M. at 204 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 88 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 1894.

The month of March is usually the commencement of the hot weather in Northern and Central India. The hottest area in February in India is defined by the isotherm of 80°, and includes the South Deccan and the Tinnevelly, Madura, Trichinopoly and Coimbatore districts of South Madras. The North Punjab is the coolest area at this time. The mean temperature of Peshawar and Rawalpindi, allowance being made for elevation above the sea, is slightly below 60°. Temperature during the next month increases least rapidly in Southern India and most rapidly in Central and Northern India, the rise of temperature varying from 3° in Southern India to about 10° in Northern India. The area of highest mean temperature for the month of March includes the whole of the Deccan, Berar and the greater part of the Central Provinces. In that area the mean daily temperature of the month slightly exceeds 85°, the highest mean temperatures being those at Cuddapah (87°·7), Kurnool (86°·9), Sironcha (85°·4) and Bellary (85°·2). When allowance is made for elevation above the sea, the temperature in the South and Central Deccan ranges from 87° to 89°. The lowest temperatures obtain in March as in February in the North Punjab, where the mean daily temperature averages 65° during the month.

The slow change from the cold weather distribution of pressure to the hot weather and south-west monsoon distribution commences in March. Pressure continues highest in Upper India, but the difference of pressure between Upper and Southern India usually diminishes from a mean of ·2″ in February to a mean of ·1″ in March. An important change in the distribution of pressure occurs during this month, accompanying the setting in of southerly winds on the Bengal coast. The combination of these winds with the westerly winds of the Gangetic plain and the easterly winds down the Assam Valley tends to give a permanent cyclonic circulation in North-Eastern India,

and to develop a shallow depression, the central area of which usually lies over Chota Nagpur and the Bilaspur and Sambalpur districts of the Central Provinces.

At the commencement of the month conditions were abnormal, pressure was very largely in defect over the whole of India, and there were low pressure areas in Bengal, Sind and Persia. Temperature was considerably in defect in Upper India and in moderate excess at the head of the Peninsula. The Sind depression advanced eastwards on the 2nd and 3rd, and was apparently absorbed into the Bengal stationary depression on the 4th. The Persian depression also advanced eastwards and crossed the north-west frontier on the night of the 3rd as a shallow primary depression. A deep secondary depression formed rapidly and lay over the North Punjab on the 4th. It filled up equally rapidly on the 5th, and a general large rise of pressure over the whole of India on the 6th, 7th and 8th obliterated that depression and the Bengal stationary depression. During the whole of this period from the 1st to the 7th, weather was more or less disturbed in Northern India, with frequent duststorms and thunderstorms. Baluchistan, the Punjab, Kashmir, and the Upper India hill districts received moderate to heavy rain during this period. Assam and Bengal had frequent thundershowers. The Chittagong Hill Tracts and the Chittagong, Tippera, Faridpur and Noakhali districts of East Bengal received some exceptionally heavy downpours during thunderstorms on the 2nd, 3rd and 4th. The heaviest was a fall of 7·52 inches at Rangamati, in the South Lushai Hills on the 3rd.

Temperature on the 4th was more or less above the normal over the whole of India, with the exception of the north-west frontier, across which a cool wave was advancing. The depression due to the cool wave was greatest in Baluchistan on the 5th, in Rajputana on the 6th, Central India and the North-Western Provinces on the 7th, and Bengal and the Central Provinces on the 8th. The mean temperature of the whole of India, which was about 2° above the normal on the 5th, was reduced to nearly 2° below it on the 8th.

Pressure continued steadily below the normal over the whole of India during this period. A very feeble local disturbance gave light showers to the Punjab and Kashmir on the 10th and 11th, and to Assam on the 11th and 12th. A second cool and dry wave, apparently due to abnormally high pressure conditions in Persia and Central Asia, advanced through Baluchistan on the 10th and across the frontier districts on the 11th, into Rajputana on the 12th, Central India on the 13th, and Bihar and Bengal on the 14th and 15th. The reduction of temperature due to this wave was much greater than that resulting from the first cool wave. Thus on the 12th the mean temperature of the whole of Northern and Central India (*i.e.*, to the north of Lat. 22°N.) was 8° below the normal. Remarkably low humidities were recorded during the advance of this wave. The following gives a few examples:—

Date.	Hour.	Station.	Humidity. Percentage of saturation.
10th . .	4 P.M.	Jacobabad	5
11th . .	4 P.M.	Deesa	7
		Buldana	8
		Poona	5
12th . .	4 P.M.	Deesa	8
		Poona	6
13th . .	4 P.M.	Deesa	7
14th . .	4 P.M.	Khandwa	9
15th . .	4 P.M.	Khandwa	7

A wave of high pressure accompanied the advance of this cool dry wave, which raised pressure above the normal over the whole of India on the 13th (for the first time during the month). Pressure continued more or less in excess during the remainder of the month. The following gives mean pressure variation of the whole of India for the period, the 9th to the 15th, illustrating this remarkable change:—

Date.	Mean change of pressure over India during 24 hours preceding 8 A.M. of day.	Mean variation of pressure from normal of day in India.
	"	"
9th	+·012	—·047
10th	—·020	—·063
11th	+·027	—·037
12th	0	—·027
13th	+·058	+·041
14th	+·018	+·067
15th	—·028	+·046

Temperature increased rapidly in Baluchistan and Upper India on the 13th and 14th. A feeble disturbance which affected Baluchistan and Upper India from the 13th to the 16th gave light to moderate occasional showers in Baluchistan from the 13th to the 15th, Kashmir on the 14th and 15th, and the Punjab on the 15th and 16th. Temperature was largely in defect in Central India and the north of the Peninsula during this period. A feeble cool wave crossed the frontier on the 16th, which reduced temperature in Northern and Central India during the next four days. Meanwhile weather had become disturbed in South Madras, and a series of thunderstorms gave moderate to heavy rain to the districts of Tinnevelly, Malabar, Madura, Tanjore and Trichinopoly. The Tinnevelly district, for example, received an average of 1·5 inches

on the 17th. This rainfall reduced temperature considerably in South India, and at the end of this period, on the 21st, temperature was in slight to moderate excess over the whole of India, with the exception of Madras. Weather again became slightly disturbed in North-Western and Central India, apparently due to local hot weather actions. Baluchistan received moderate showers from the 20th to the 23rd, and the North and West Punjab and Kashmir from the 22nd to the 24th. Central India and the Central Provinces were visited by thunderstorms between the 20th and 24th, the rainfall accompanying which caused a large but very temporary reduction of temperature. A cool dry wave advanced through Baluchistan and Sind on the 23rd and 24th, the Punjab and Rajputana on the 25th, and Central India and the North-Western Provinces on the 26th, into Bihar on the 27th, beyond which it did not pass. The wave reduced humidity to a more marked extent than it did temperature, and unusually dry weather obtained over the whole of North-Western and Central India during the last week of the month.

The following gives the lowest humidities recorded during this period :—

DATE.	Hour.	Station.	Humidity. Percentage of saturation.
26th	4 P.M.	Poona	5
		Deesa	8
		Khandwa	7
27th	...	Poona	8
		Deesa	9
		Khandwa	9
28th	...	Jacobabad	9
		Sutna	5
29th	...	Deesa	6
30th	...	Raipur	7
31st	...	Sutna	8

Pressure.—The mean pressure of the whole Indian area was ·017 inch below the normal. Relatively to this general condition pressure was in slight excess in North-Western India and in very slight defect in the Peninsula, and in slight to moderate defect in North-Eastern India and Burma. The pressure anomalies ranged between ·02″ and ·03″ in Arakan, East Bengal and Assam. Pressure at the hill stations was in slight defect when compared with the neighbouring plain stations, but the differences were very small, and indicated that the vertical distribution of pressure was practically normal in Northern India.

The following gives mean pressure variation data for eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF	
	Mean monthly pressure.	Pressure anomaly.
	″	″
Burma Coast and Bay Islands	−·033	−·016
Burma Inland	?	?
Assam	−·041	−·024
Bengal and Orissa	−·031	−·014
Gangetic Plain and Chota Nagpur	−·020	−·003
Upper Sub-Himalayas	−·010	+·007
Indus Valley and North-West Rajputana.	−·006	+·011
East Rajputana, Central India, and Gujarat.	−·002	+·015
Deccan	−·008	+·009
West Coast	−·022	−·005
South India	−·025	−·008

Temperature.—The mean temperature of the month was below the normal over nearly the whole of extra tropical India, partly in consequence of the weather being more disturbed and showery in Upper India than usual, and partly probably as a result of the heavy snowfall in the interior and higher ranges of the Kashmir and Punjab Himalayas. The reduction of temperature was greatest in the Punjab and the submontane districts of the North-Western Provinces and adjacent hill districts.

The mean maximum or day temperature was normal or in slight excess in the coast districts of the Bay of Bengal and Arabian Sea. It was in defect over the whole of the interior, the deficiency exceeding 2° in the Punjab, North-Western Provinces and Bundelkhand, and was more than 4° in the Central and East Punjab and Rohilkhand. It was absolutely greatest at Ludhiana (—6°·0), Lahore (—4° 9), Dera Ismail Khan (—4°·7) and Rawalpindi (—4°·6).

The mean night temperature was in slight excess in the Peninsula and Burma (or Tropical India), and in slight to moderate defect in Northern and Central India (or Extra Tropical India).

The variations were greater numerically than 2° in an area including Nowgong (—2°·8), Lucknow (—2°·6), Meerut (—2°·2), and Agra (—2°·4).

The mean temperature of the month was in general slight excess in the Peninsula and Burma, and the variations in these areas were, with one or two exceptions, less than 1° in amount. The mean temperature was below the normal over the whole of Extra Tropical India (*i.e.*, Northern and Central India). The deficiency was more than 2° in the Punjab and the North-Western Provinces, and exceeded 3° at the following stations :—Meerut (—3°·2), Ludhiana (—3°·8), Dera Ismail Khan (—3°·8) Bikaneer (—3°·4), and Rawalpindi (—3°·2).

The variations of the mean temperature conditions from the normal at the hill stations were similar in character to those at the neighbouring plain stations, and generally approximately the same in amount. Temperature was below the normal at all the Himalayan hill stations, the deficiency being greatest at the highest stations, *e.g.*, Leh (—3°·4) and Kailang (—2°·9).

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

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

As noted above, the chief feature of the temperature changes during the month was the passage across Northern India of three very dry and cool waves. The first entered North-West India on the 5th and advanced eastwards across Northern India during the next four days; the second crossed the frontier on the 11th before the effect of the preceding cold wave had passed away, and the third advanced across Northern India between the 24th and 28th.

Winds.—Winds were slightly steadier in the Punjab and North-Western Provinces and less northerly in direction than usual. Winds were feeble but slightly steadier than usual in Bengal. They were very unsteady in Sind and were somewhat feebler than usual in Rajputana. They were very unsteady and even more irregular than usual in the Deccan and winds were more northerly and steadier than usual at the west coast stations.

Humidity and cloud.—The humidity conditions of the month were practically normal in Burma, Assam, and Orissa. The air was drier than usual in Bengal, Chota Nagpur and Bihar. The deficiency was very large in South-West Bengal. Thus the humidity was 14 in defect at Calcutta and Berhampore and 11 at Burdwan. The air was on the other hand damper in the North-Western Provinces, the Punjab and the Peninsula, over nearly the whole of which it contained more moisture than usual. Humidity was largely in excess in the area of diminished temperature in Upper India, more especially the East and Central Punjab. The air contained less vapour than usual in Rajputana and the Upper India hill districts. Humidity was however in slight excess in these areas in consequence of the mean temperature of the month being lower than usual.

The cloud amount was in general slight excess in the Peninsula and Burma and also at Port Blair or over the whole of Tropical India (to the south of Lat. 22° N). It was on the other hand in slight defect in Extra Tropical India (*i.e.*, Northern and Central India). The deficiency was greatest in Assam, Rajputana and Sind, in which it ranged from 0·8 to 1·3. It was also in defect at the hill stations in Northern and Central India, and the deficiency was as marked at Leh and Kailang as at the lower hill stations, and was hence common to the whole Himalayan area. The variations of the cloud distribution of the month hence differed largely from those of the rainfall.

The following table gives variation data of the mean aqueous vapour pressure, humidity and cloud amount of the month in ten meteorological provinces in India:—

Meteorological Province.	Variation from normal of		
	Mean aqueous vapour pressure of month.	Mean humidity of month.	Mean cloud amount of month.
	"	"	
Burma Coast and Bay Islands	+·015	−1	+0·4
Assam	+·001	+1	−0·6
Bengal and Orissa	—·041	−6	−0·2
Gangetic Plain and Chota Nagpur	—·039	−2	0
Upper Sub-Himalayas	+·006	+6	—0·5
Indus Valley and North West Rajputana.	—·033	—1	−0·7
East Rajputana, Central India, and Gujarat.	—·025	0	−0·6
Deccan	+·019	+2	+0·6
West Coast	—·001	−2	+0·4
South India	+·031	+4	+0·3

Rainfall.—There were five periods of disturbance and rainfall during the month. The most important disturbance of the month lasted from the 1st to the 8th. It was a cold weather storm, consisting of a feeble primary

depression which advanced across Northern India, and a deep secondary depression which affected Upper India only. Baluchistan, the Punjab and Kashmir received moderate to heavy rain during the period, and Assam and North-East Bengal light rain. The Punjab had light rain showers on the 10th and 11th and Assam on the 11th and 12th. The Punjab, Baluchistan and Kashmir received light to moderate rain between the 13th and 16th during the third disturbance of the month. The fourth disturbance affected Southern India only, and gave that area moderate to heavy rain between the 16th and 21st. The last disturbance of the month, due to hot weather actions, gave showers to Baluchistan, the Punjab and Kashmir from the 21st to the 24th, and to the Central Provinces and Central India from the 20th to the 24th. The total rainfall of the month was in moderate to largish excess in Baluchistan, the Punjab and Kashmir, and also in Southern India and Malabar. It was practically normal in Bengal and Burma and in moderate defect in Assam (16 per cent.).

The following gives a comparative statement of the rainfall of the month in eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	RAINFALL.		
	Mean actual for March 1894.	Mean normal for March.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	0·43	0·52	−0·03
Burma Inland	0·84	0·78	+0·07
Assam	4·44	5·27	−0·83
Bengal and Orissa	1·84	1·68	−0·14
Gangetic Plain and Chota Nagpur	0·10	0·49	−0·39
Upper Sub-Himalayas	1·64	0·95	+0·70
Indus Valley and North-West Rajputana.	0·82	0·41	+0·31
East Rajputana, Central India, and Gujarat.	0·10	0·18	−0·06
Deccan	0·38	0·46	−0·11
West Coast	1·53	0·58	+1·14
South India	0·71	0·53	+0·02

Atmospheric Pressure.

The mean pressure of the whole of India, determined from the 8 A.M. observations of 95 stations, was ·017″ below the normal. Pressure was relatively to the general condition in very slight excess in North-Western and Central India, the Central Provinces, Berar and Bombay, and was in slight to moderate defect in the remainder of India The local anomalies were small and less than ·02″, except in Arakan, Assam and East Bengal, for which data are given in the following table:—

PROVINCE.	STATION.	PRESSURE.	
		Variation from normal.	Anomaly.
		″	
ASSAM	Sibsagar	−·046	−·029
	Dhubri	−·037	−·020
	Silchar	−·041	−·024
EAST BENGAL	Dacca	−·043	−·026
	Chittagong	−·042	−·025
	Barisal	−·041	−·024
	Mymensingh	−·042	−·025
	Bogra	−·039	−·022
ARAKAN	Akyab	−·043	−·026

Pressure was in slight defect at the hill stations as compared with the neighbouring plain stations. The following gives data:—

HILL STATION.	Variation from normal pressure.	PLAIN STATION.	Variation from normal pressure.	Vertical pressure anomaly (Hill−Plain).
	″		″	″
Quetta	+·012	Jacobabad	+·002	+·010
Leh	−·017	Lahore	−·004	−·013
Kailang	−·028	Lahore	−·004	−·024
Murree	−·031	Peshawar	−·015	−·016
Simla	−·029	Ludhiana	−·009	−·020
Chakrata	−·024	Roorkee	−·012	−·012
Darjeeling	−·025	Dhubri	−·037	+·012
Mount Abu	−·008	Deesa	+·001	−·009

There were hence no strongly marked abnormal features in the mean pressure distribution of the month. The following summarizes the chief features:—

(1) Slight general deficiency of pressure in the whole Indian land area.

(2) Very slight local excess of pressure in North-West and Central India (averaging ·01″).

(3) Slight local deficiency in Bengal, Lower Burma, and Southern India and moderate deficiency in Assam, Arakan, and East Bengal (averaging ·025″).

(4) Slight deficiency of pressure at the high level stations of Leh and Kailang relatively to the plains of India.

Barometric depressions and cold weather disturbances of the month.

There were during the month five periods of disturbance, four of which affected Northern India and the fifth Southern India. These periods were the 1st to the 6th, the 10th to the 12th, the 13th to the 16th, the 16th to the 21st, and the 21st to the 24th. The following gives a brief history of these disturbunces, of which all except the first were very feeble and diffused :—

Disturbance of the 1st to the 6th March.—The weather charts issued by the English office show that high pressure (ranging between 30·1″ and 30·4″) prevailed over the Mediterranean and South and Central Russia during the last week of February and the first week of March. Pressure gave way rapidly in the Persian area on the 27th and 28th of February, and was considerably below the normal at the commencement of the month under discussion. The following gives variation data at stations in that area from the 26th February to 4th March :—

Date.	Pressure variatation from mean of the month.					
	Baghdad.	Teheran	Ispahan.	Bushire.	Muscat.	Jask.
	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.
February 26th	+·043	—·164	—·089	—·132	—·167	—·143
„ 27th	—·091	—·119	—·164	—·177	—·181	—·141
„ 28th	—·169	—·149	—·159	—·286	—·155	—·148
March 1st	—·120	—·180	—·235	—·136	—·097	—·122
„ 2nd	—·225	—·170	—·265	—·196	—·135	—·220
„ 3rd	—·048	—·175	—·255	—·023	—·187	—·232
„ 4th	—·012	—·035	...	+·039	—·001	—·142

Date.	Pressure variation from mean of the month.			
	Quetta.	Cherat.	Kailang.	Leh.
	Inch.	Inch.	Inch.	Inch.
March 1st	—·195	—·122	—·251	—·270
„ 2nd	—·142	—·086	—·143	—·143
„ 3rd	—·177	—·137	—·137	—·142
„ 4th	—·217	—·433	—·362	—·387
„ 5th	—·113	—·198	—·241	—·297

The preceding data show that a low pressure wave or depression passed eastwards from Asiatic Turkey and West Persia between the 2nd and 4th.

Pressure was lowest and most below the mean of the month on the 2nd at Baghdad, Teheran, Ispahan and Bushire, on the 3rd at Muscat and Jask, and on the 4th at Quetta. Weather was showery in Persia at the commencement of the month. It is hence clear that a depression formed in West Persia, and that it was of large extent, but of moderate intensity, pressure in the central area of lowest pressure being probably not more than a quarter of an inch below the normal.

1st March.—Pressure at the beginning of the month was largely in defect over the whole of Northern India, and the deficiency was even larger in amount at the hill stations in Northern India than at the adjacent plain stations. Pressure had given way briskly during the previous 24 hours in North-Western India, and a shallow but fairly well marked depression lay over Sind and West Rajputana.

As pointed out in the February Review this depression formed in North-Western India on the 27th and 28th of February during a period of general and large decrease of pressure below the normal over the whole Indian and Persian area.

Pressure had decreased rapidly in North-Eastern India during the previous 24 hours and at 8 A.M. of the 1st a shallow depression lay over Bihar and Bengal, the formation of which was due to local actions accompanying this general decrease of pressure. The following pressure variation data for the 1st show clearly the character of the pressure distribution on that day :—

Province.	Pressure.	
	Change in 24 hours preceding 8 A.M. of 1st.	Variation from normal.
	″	″
Bengal and Assam	—·127	—·171
Bihar and Chota Nagpur	—·139	—·192
North-Western Provinces	—·053	—·134
Punjab	—·022	—·159
Rajputana and Sind	—·038	—·124
Baluchistan (Quetta)	—·028	—·195
East Persia (Jask and Muscat)	+·030	—·110
West Persia (Ispahan and Bushire)	+·054	—·186
Asiatic Turkey (Baghdad)	+·025	—·120

These figures show first that pressure was about ·15″ below the normal over the whole Indian and Persian area, and that there were three areas of deficient or low pressure relative to the general condition. These were (1st) Bengal and Bihar, (2nd) Baluchistan, Sind and West Rajputana, and (3rd) West Persia. They were separated by areas of slightly increased pressure relative to the general condition. There hence appears to be one of two explanations possible, *viz.*, that waves of high and low pressure were following each other with abnormal rapidity across the Indian monsoon area, or that these depressions were due to local actions during a period of generally disturbed weather over an unusually large area. The latter appears to be the more probable explanation.

Weather was hence disturbed over the whole of Northern and Central India on the 1st, and rain had fallen during the previous 24 hours in Baluchistan, Kashmir and Upper India, and in Bengal and Assam. Skies were clear in the Decan and Lower Burma, but were more or less clouded in other districts.

2nd March.—Pressure had increased briskly in Sind and Baluchistan and fallen briskly in the western districts of the North-Western Provinces, and the depression in Upper India had, so far as can be judged, been transferred to the central districts of the North-Western Provinces. The barometric changes in Bengal were very small, and the depression in that area was unchanged in position or character. Light to moderate showers had fallen in Assam, Bengal, Bihar, the North-Western Provinces, the Punjab, and Baluchistan. The rainfall was, on the whole, heaviest and most general in the Punjab. Skies were, as on the 1st, heavily clouded in Northern and Central India.

The Persian depression had intensified during the day, and was apparently central over the area including Teheran, Ispahan and Baghdad, and it now began to advance eastwards and affect the weather in Baluchistan.

3rd March.—The Persian depression had advanced into Central and East Persia. Pressure had increased rapidly at Baghdad and Bushire and fallen to a slight extent at Jask and Muscat and also at Quetta. Pressure was lowest at Jask, Teheran and Ispahan, which probably defined the central area of the depression. Pressure had fallen briskly in North Bihar and Bengal, and the depression in the North-Western Provinces had apparently been absorbed into the Bengal depression, as there was now no indication in Northern India of its existence as an independent disturbance. Pressure was from two-tenths to a quarter of an inch in defect over the whole of Bengal and Bihar. Some showers had been received in the Punjab, Bengal, Assam and Upper Burma, but the rainfall was small in amount compared to that of the previous two days. Skies were practically clear in the Gangetic Plain, but were heavily clouded in Upper India and Baluchistan.

4th March.—The depression which was in Central and East Persia at 8 A.M. of the previous day was, so far as can be judged, in Baluchistan and entering India. Its presence was however completely obscured by a deep secondary depression in the Punjab which had formed very rapidly during the previous 24 hours. The following table gives data, showing the character and position of this secondary depression :—

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.	
* Leh .	...	—·266	—·403	N	0	10	0·18	Overcast.
Murree .	...	—·256	—·406	SE	27	10	2·57	Continuous rain.
Cherat .	...	—·296	?	SE	12	10	1·84	Showery.
Rawalpindi .	29·459	—·328	—·470	E	1	10	2·47	Drizzling.
Peshawar .	·478	—·284	—·496	SE	3	10	0·68	Showery.
Khushab .	·466	—·321	?	NE	3	4	1·69	Showery.
Montgomery	·513	—·290	?	W	9	4	0·37	Thunderstorm.
Lahore .	·483	—·298	—·456	SE	4	10	0·40	Strong wind.

* 10 A.M. observations.

The central depression, in which pressure was nearly half an inch below the normal, hence covered the North Punjab. Winds were very feeble, the average velocity at the plain stations named in the preceding table during the previous 24 hours whilst the depression was forming and intensifying, was only 4 miles per hour. At Murree, on the other hand, winds were very strong, averaging 27 miles per hour. Heavy general rain had fallen in the north and centre of the Punjab, and in Baluchistan and Kashmir. Pressure had increased briskly in Bengal, and the stationary depression in that area was hence less pronounced than on the 3rd. Showers had fallen in Assam and Upper Burma.

5th March.—Pressure had increased very rapidly in Upper India, and the secondary depression had filled up to a considerable extent. The following gives data for stations in that area showing the rapid increase of pressure :—

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.	Inch.	Inch.				Inches.	
*Leh .	...	+·083	—·320	E	2	7	...	
Murree .	...	+·174	—·238	SE	15	10	1·23	Thunderstorm with hail.
Cherat .	...	+·235	?	N	12	0	0·60	
Rawalpindi.	29·743	+·284	—·231	Calm	2	9	0·22	Thunderstorm.
Peshawar .	·800	+·322	—·212	Calm	3	0	0·07	
Khushab .	·716	+·250	?	Calm	4	0	...	
Montgomery	·722	+·209	?	N W	11	0	...	
Lahore .	·700	+·217	—·257	SE	4	0	...	

* 10 A. M. observations.

Skies had cleared during the previous 24 hours in Baluchistan and over the greater part of the Punjab, and several stations in the Punjab reported calms at 8 A. M. The charts showing pressure isabnormals, indicate that the primary disturbance was now passing through East Rajputana, Bundelkhand, and the adjacent districts. The double disturbance had given general rain to the North-Western Provinces and the South-East Punjab, and the Punjab and Kashmir Hills during the previous 24 hours.

Pressure had given way in the Peninsula and Bengal, and the depression in the latterarea was slightl y deeper and more marked than on the 4th. Practically no rain had fallen in Bengal.

6th March.—The pressure changes of the previous 24 hours were somewhat irregula r.Pressure had incr eased in Upper India and also in Bengal. A slight local fall of the barometer in the eastern districts of the Central Provinces and Chota Nagpur indicated that the very shallow primary depression was passing through that area. It was, however, of slight importance and filling up. Skies had cleared over the whole of Northern and Central India,

with the exception of East and South Bengal. Showers had fallen in South Bengal, Assam, and Upper Burma and the Upper India hill districts.

A very rapid increase of pressure occurred during the next 48 hours over the whole Indian area, which completely modified the pressure distribution. The following table shows the contrast between the conditions prevailing on the morning of the 6th and on the 8th and 9th :—

PROVINCE.	MEAN VARIATION FROM NORMAL		Change in 48 hours.
	6th	8th	
	"	"	"
Bengal	—·252	—·100	+·152
Bihar	— 266	—·097	+·169
North-Western Provinces and Oudh.	—·225	—·061	+·164
Punjab	—·211	— 042	+·169
Sind and Rajputana	—·197	—·052	+.145
Central India	— 184	—·044	+.140

The preceding data establish that in the 48 hours preceding 8 A.M. of the 8th, pressure had increased by nearly equal amounts over the whole of Northern and Central India.

The primary depression was, so far as can be judged from the pressure changes and variations, absorbed into the Bengal stationary depression on the 7th, which had been very persistent during this period. It shifted to some extent eastwards and finally filled up on the 9th in East Bengal. Assam and Upper Burma received numerous light to moderate showers on the 7th and 8th.

The disturbance of the 1st to the 8th March in India, was interesting in several respects. Pressure was normal or in slight excess over the Indian area at the beginning of the fourth week of February. It then decreased rather rapidly over the whole of India and Persia, and was more or less largely in defect over the whole area on the 27th and 28th. Two depressions were in existence on the morning of the 28th,—one in Sind and Rajputana, and the other in West Persia. They were almost unchanged in character and position on the 1st, on which day a third depression appeared or formed in Bengal. The Sind depression advanced eastwards and was absorbed into the stationary Bengal depression on the 3rd. The depression, which had originated on the 28th in West Persia, also advanced eastwards and passed through Baluchistan on the 3rd. A deep secondary depression formed in the Punjab during the next 24 hours, and filled up on the 5th and 6th. The primary depression passed eastwards, but was almost completely obscured on the 4th and 5th by the deep secondary depression in Upper India, and was practically of no importance in its passage across Northern India.

The following gives a summary of the rainfall accompanying the storm :—

PROVINCE.	AVERAGE ACTUAL RAINFALL DURING 24 HOURS PRECEDING 8 A. M. OF							Total 28th February to 6th March.
	28th February.	1st March.	2nd March.	3rd March.	4th March.	5th March.	6th March.	
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Baluchistan	0·56	0·19	0·21	0·51	0·51	0·01	0·01	2·00
Punjab	0·20	0·24	0·11	0·09	0·53	0·22	0·01	1·40
Kashmir	0·25	0·08	0·27	1·06	0·71	0·10	0	2·47
Rajputana	0	0	0·01	0	0·05	0·02	0	0·08
N.-W. Provinces and Oudh.	0·09	0·15	0·02	0	0·12	0·26	0·02	0·66
Central India	0	0	0	0	0	0	0	0
Bihar	0	0·05	0·02	0	0	0·02	0	0·09
Bengal	0·06	0·22	0·38	0·18	0·09	0·04	0·31	1·28

Feeble disturbance of the 10th to the 13th March.—On the morning of the 9th pressure was in slight to moderate excess in Baluchistan and Persia and was normal in North-West India and in slight to moderate defect in North-Eastern India. Pressure fell rapidly on the 10th in the South-East Punjab and the adjacent hill districts and increased rapidly over the whole of North-Western India during the next 24 hours. The slight disturbance indicated by these large and rapid local changes in North-Western India accompanied thunderstorms in the Punjab and hailstorms and snow storms in the Kashmir and Punjab Himalayas. Strongly marked anti-cyclonic conditions were established on the 12th in North-Western India. Assam and East Bengal received thundershowers of little importance on that day. A dry and cool wave advanced over Northern India on the 11th, 12th and 13th, and pressure increased very rapidly in the areas affected by the wave, so that on the morning of the 13th pressure was for the first time during the month in general excess in Northern India and continued above the normal for some time.

Feeble disturbance of the 13th to the 16th March in Baluchistan and North-Western India.—The pressure changes in Persia during the second and third periods of disturbance of the month were small, and pressure was steadily in considerable excess. Dry weather with clear skies and low temperature obtained throughout the whole period in that area. Pressure gave way briskly in Upper India on the 13th, and the pressure changes were large and somewhat irregular in that area during the next three days. They, however, indicate clearly that a feeble low pressure wave was transmitted eastwards across Northern India between the 14th and 17th. Baluchistan received light showers on the 13th, 14th, and 15th, Kashmir on the 14th and 15th, and the North Punjab on the 15th and 16th. The precipitation during this disturbance was small and of little importance.

Feeble disturbance in Southern India from the 16th to the 20th March.—During the previous disturbance pressure had been persistently in considerable excess in Northern India. Pressure gave way briskly in Southern India on the 16th, and an area of deficient and low pressure formed over the Malabar coast districts and adjacent sea area. It intensified slightly during the next 24 hours and was unchanged in character and position on the 17th and 18th.

Pressure increased briskly in Malabar and the low pressure area disappeared on the 19th. Weather was slightly disturbed with frequent thunderstorms in South Madras during this period. The following gives a summary of the rainfall accompanying the feeble disturbance in the southern districts of that presidency :—

District.	Average actual Rainfall during 24 hours preceding 8 A.M. of March.						Total 16th to 21st March.
	16th.	17th.	18th.	19th.	20th.	21st.	
	Inches.	Inches.	Inches.	nhes.	Inches.	Inches.	Inches.
Tanjore . . .	0·11	0·37	0·39	0·06	0·08	0·10	1·11
Trichinopoly . .	0	0·25	0·16	0·01	0·23	0	0·65
Madura . . .	0·33	0·63	0·17	0·86	0·05	0·30	2·34
Tinnevelly . .	0·28	1·50	0·05	0·62	0·17	0·02	2·64
Malabar . .	0	0·45	0·53	1·45	0·03	0·09	2·55
South Canara .	0	0	0·03	0·10	0·01	0·20	0·34
Salem . . .	0	0	0·01	0·31	0·05	0	0·37
Coimbatore . .	0	0·03	0·60	0·41	0·02	0·01	0·67
Nilgiris . . .	0	0·30	0·61	0·77	1·00	0·22	2·90

Feeble disturbance of the 21st to the 24th March in Baluchistan and Upper India.—A very shallow depression formed in Sind on the 20th, apparently due to hot weather actions. It lay over Upper Sind and the South-West Punjab on the morning of the 21st, when the depression below the normal was less than a tenth of an inch. Weather was feebly disturbed over a large part of the interior in India, and numerous hot-weather storms had occurred during the previous 24 hours in North-Western and Central India and the Deccan. The depression was unchanged in position and character on the 22nd. Duststorms and thunderstorms had again visited the Punjab, Central Provinces, and Baghelkhand. Pressure increased locally in Upper Sind and the South-West Punjab during the day and the depression filled up before the morning of the 23rd, when pressure was in slight to moderate excess over the whole of India. Baluchistan received light rain from this disturbance from the 20th to the 23rd, the Punjab and Kashmir from the 22nd to the 24th, and the Central Provinces and Central India thundershowers from the 20th to the 24th. The following gives mean rainfall data for the disturbance :—

Province.	Average actual Rainfall during 24 hours preceding 8 A.M. of March.					Total 20th to 24th March.
	20th.	21st.	22nd.	23rd.	24th.	
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Baluchistan . . .	0·02	0·03	0·08	0·03	0	0.16
Kashmir . . .	0	0	0·24	0·22	0·06	0·52
Punjab . . .	0	0	0·04	0·03	0·05	0·12
Baghelkhand . . .	0	0·01	0·04	0	0·01	0·06
Central Provinces . .	0·01	0	0·02	0·02	0·04	0·09

A rapid increase of pressure in Upper India re-established anti-cyclonic conditions and fine clear and very dry weather in North-Western and Central India on the 24th. The reduction of humidity at several stations in the Central Provinces ranged between 30 and 50. The lowest humidities recorded on this day at 4 P.M. were Sutna 10, Khandwa 14 and Raipur 18.

Pressure decreased rapidly in North-Western India on the 26th, whilst it increased briskly in North-East India. Pressure increased slowly but steadily during the remainder of the month, and was during the whole of this period in largish excess in Northern and Central India and in slight excess in Southern India.

One of the more noteworthy features of the month was the persistent deficiency of pressure in the Indian area during the first twelve days of the month, and the equally persistent excess of pressure during the latter half of the month. In both cases the abnormal features were strongly exhibited in Northern India, and more especially in North-Eastern India.

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

I.—THE AFGHAN MOUNTAINS.

(1) *Shirani Country.*—The following report was forwarded by the Extra Assistant Commissioner, Kulachi :—

"Snow fell on the 1st, 2nd, 3rd, 4th, and 10th March 1894 on the higher ranges of Abeshta, Marmand, Nawateza, Mizrighar and Gat. The total depth of the snowfall amounted to 4 feet on the higher ranges.

The temperature during the periods of snowfall was very low.

The weather was damp, and there was much cloud.

The snowfall, as far as it can be ascertained, was less in extent than during the corresponding period of the previous year.

(2) *Hills to the west of the Dera Ismail Khan District.*—No snow fell in the hills adjoining the Tank Tahsil during the month under report.

(3) *Kurram District.*—The following falls are reported to have occurred during the month in the neighbouring hills :—

DATE.	Height to which snowfall descended.	Depth of snowfall.
	Feet.	
9th . .	5,000	Light.
23rd . .	9,000	6 inches.

(4) *Kabul.*—Snow fell in small amounts on the 4th and 7th.

The snow melted rapidly during the month, and there were only a few patches on the highest mountains visible from Kabul at the end of the month.

II.—KASHMIR AND PUNJAB HIMALAYAS.

(1) *Hills adjacent to Murree.*—The total snowfall during the month at Murree was 1 foot and 10 inches (as compared with 4 feet 10 inches last month), and at Kahuta *nil.*

(2) *Huzara District.*—Rain commenced on the 28th February and continued to the 2nd March. Rain fell again from the 4th to the 7th. On the 10th there was sleet, on the 11th hail, and on the 14th and 15th rain. In the intervals between the rain it was cloudy. Weather was unusually cold during March.

The following gives the depth of snow lying on the 15th of March on the following hills :—

Kagan hills	2 feet.
Kagan higher hills	3 to 4 "
Konsh and Bhogarmang hills . . .	1 to 2 "
Jacha and Panjal	1 to 2 "
Kawai and Jared	2 "
Balakot	1 foot.
Agror hills	6 inches.
Gali range	3 to 4 feet.

On the whole the snowfall this year has been little. Weather was unusually cold and rainy for March, clouds passing over as usual this winter. The crops are in good condition. The snowfall on the lower ranges was less than the normal and the cold more severe.

(3) *Kashmir.*—The following report has been received from the Superintendent of the Meteorological Observatory, Srinagar, Kashmir.

January—Snow fell on the 1st, 2nd, 10th, 11th, 12th, 13th, 18th, 19th, 20th, 21st, 22nd, 27th, and 28th. The total fall was 4·2 feet. The largest amount was recorded on the 28th, when snow fell to the depth of a foot at Srinagar.

All the passes were blocked with snow at the end of the month and on the higher passes (*e.g.* Banikal) there was over 6 feet of snow lying. The month was not nearly so cold as January 1893. The snowfall of the month was much more than the normal. The month was one of practically continuous bad weather with very frequent snow showers.

February—Snow fell daily from the 4th to the 9th and again from the 15th to the 17th. The whole fall was 2·6 feet.

March—Snow fell to the depth of one foot on the 4th and 12th.

(4) *Ladakh.*—The Revd. Mr. Shawe, Superintendent of the Leh Observatory, writing on the 22nd March reports that snow fell on the 1st, 2nd, 3rd, 4th, 11th, and 14th of that month and adds :—

"Snow was lying till the 16th instant at the lowest point available for observation in the open valley at an elevation of 10,500 feet. Since then a gradual thaw has taken place, but the snow line is still 10,000 feet in exposed situations.

"The snow fell almost entirely during the night and early morning, and seems to have been general in all directions.

"There is no accurate information as to the extent of the snow accumulation in the neighbouring mountains as all the passes are blocked. The ordinary land-marks are covered, and the depth of snow at 17,000 feet may be estimated at about 30 feet. The mails are kept running over the Zoji pass (11,000 feet) only by extraordinary exertions, more than 100 men being employed according to information received.

"There is as yet no cultivation possible, the fields being still under snow. At 10,000 feet cultivation is said to have begun.

"The snowfall is quite unparalleled and lying much longer than usual. At this time of year, early seeds should be in the ground, but this is quite impossible this year."

The following additional remarks on the snowfall and character of the past winter are extracted from a later letter received from Mr. Shawe :—

"As regards the snowfall, the unanimous opinion is that the past winter is quite unprecedented. This opinion is fully borne out by the records of the observatory as far as they go. The total snowfall registered here since November 1st has exceeded three times the average of all years since 1885.

"A comparison naturally suggests itself with the winter of 1890-91, which was then rightly considered quite abnormal. I find that the snowfall up to date has been twice the amount in the past winter as compared with 1890-91. The daily maximum temperature week for week has been as a rule slightly higher, whilst the nightly minimum has been very decidedly above that of 1890-91.

"The past winter has been characterised by the unusual number of snowfalls. From the very beginning of December till the middle of March there has been at least one fall every week, whereas usually many weeks pass in the winter without any snow.

"The large area of snowfall is also remarkable. I have questioned people from all parts and have always heard the same report. If anything, more snow seems to have fallen lower down the Indus Valley than in the higher parts. Many passes usually open have been either temporarily or entirely closed, so that information from some districts has been entirely unavailable.

"In ordinary years, the snow seldom remains on the ground for more than two or three days, but since January 21st the whole country has been continually covered with snow. For the past fortnight a steady but slow thaw has set in, so that the fields in the Indus Valley at 10,500 feet are now free from snow. So are rocky slopes viewing south up to 12,000 feet. But round Leh itself (11,500 feet), there are still 4 to 6 inches of snow on the most exposed fields."

(5). *Chamba.*—A full and valuable report has been received from the Deputy Conservator of Forests.

The following table gives the dates and amount of snowfall during the month of March at selected sites in the Chamba State :—

Date.	Dalhousie Range.			Chamba and up to 20 miles east.		
	Kalatop 8,000 feet.	Balun 6,000 feet.	Surkhi galli 5,000 feet.	Chamba 3,000 feet.	Bohar 5,000 feet.	Kundi 7,000 feet.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
3rd .	6	Rain	Rain	Rain	Rain	Rain
9th .	15	6	4	Rain	1½	4

Date.	Tisa direction up to 40 miles north of Chamba.			Bhandal Valley up to 40 miles north-west of Chamba.
	Tisa 5,000 feet.	Chanan 6,500 feet.	Thanela 7,000 feet.	Bhandal 5,600 feet.
	Inches.	Inches.	Inches.	Inches.
3rd and 4th .	...	5	8	...
9th and 10th .	1½	11	18	6

Weather was cold and windy with much rain between snowfalls at lower elevations. Generally below 8,000 feet or 9,000 feet eastwards of Chamba, there has been much more rain than snow.

On Choari, the pass from Chamba to Nurpur, about 8,400 feet in height, there were 2 to 3 feet of snow on the 15th of the month in a somewhat warm situation. At Kalatop there were then 4 feet at 8,000 feet and 6 feet in Dainkund at 9,000 feet.

About Tisa, some 40 miles north of Chamba, there were 4 feet at 8,000 feet. At Thanela (7,000 feet) it lay nearly 3 feet thick and at Chanan (6,500 feet high) 2 feet deep.

(6). *Kulu.*—Snow fell on the 1st, 2nd, 4th, 5th, 10th, 11th, 14th, 15th, 16th, 17th, 23rd, and 24th in Kulu Tahsil, and on the 1st, 2nd, 4th, 5th, 10th, 16th, 17th, 20th, 22nd, 23rd, and 24th on the higher passes of the Plach Tahsil. The fall of the 10th March was the most general and occurred down to an elevation of 5,200 feet.

During the second fortnight of the month there was much hot sunshine which melted the snow rapidly. Some Lahoulis succeeded in crossing the Rotang Pass on the 30th. The snowfall of the month was similar in character to that of 1893.

The following table shows the reported depth of snow on the higher passes of the sub-division on the 25th of the month and on the same date of the past four years for comparison :—

Tahsil.	Name of Pass.	Height above sea-level in feet.	Depth of snow on 25th of				
			March 1894.	March 1893.	March 1892.	March 1891.	March 1890.
			Feet.	Feet.	Feet.	Feet.	Feet.
Kulu.	Rotang . . .	13,000	16	27	5	13	16
	Hamta . . .	14,500	15	25	4	13	10
	Barsai . . .	?	11	14	3	9	7
	Chander Khani .	?	11	26	4	14	6
	Bajadhar . .	?	10	15½	1	10	10
	Lohri Achri . .	?	10	12	1⅔	8	6
	Bhabbu . . .	10,000	6	12	1	9	3½
	Pastari . . .	?	4	10	2	9	7½
	Majhang . .	?	1½	6	?	5	2
Plach.	Srikhand . .	15,000	20	40	10	39	16
	Chul . . .	?	6	20	1	9½	4
	Maghin . . .	?	8	19	1	11	5
	Tikar . . .	?	8	14	1	9	?
	Dundku . . .	?	9	15	2	15	6
	Nohnu . . .	?	3	6	1	7	2
	Ramgarh . .	?	½	?	?	½	?
	Jalori . . .	10,500	8	14	1	7	4
	Raghopur . .	?	10	14	1	8	5
	Lamtri . . .	?	7	15	1	8	5
	Sakiran . . .	?	8	15	2	13	?
	Supakun . . .	?	10	15	2	23	8
	Basleo . . .	11,000	8	15	1	9	6
	Plach . . .	?	9	20	2	11	11
	Tirath	?	12	25	3	15	12

(7) *Lahoul.*—The Revd. Mr. Heyde, Superintendent of the Kailang Observatory, has forwarded the following report of the weather and snowfall in Lahoul during the past winter :—

"From the 26th of December to the 10th of April there have been 48 days on which snow has fallen at Kailang.

"During that period 18·56 inches of snow water have been registered which are equal to about 16½ feet of snow. Kailang is situated at a height of 10,000 feet above sea level.

"As to cold the present winter was much less severe than the last. The snow frequently fell so wet that it could not

be reliably measured, and therefore chiefly the snow which was caught by the funnel of the raingauge has been melted and the water obtained measured.

"During the period under consideration there has been much more wind than last year, but no snow storm properly so called has occurred.

"A comparison with former winters shows that during the last one much fewer avalanches fell than could be expected from the masses of snow which have fallen on the higher hills around Kailang.

"The natives attribute this to the wind which predominated during the period by which the snow had been beaten and hardened.

"From Spiti and Zanskar no information has been received yet as to what the winter has been like there. At Tupangi it appears it has been the same as in Lahoul.

"To-day (10th April) the snow here at Kailong lies still 4 feet deep on level fields. The great amount of snow accumulation makes the air cool and the melting of the snow goes on so slowly that on fields earth has to be thinly spread over the snow, in order to hasten its disappearance before the end of April when ploughing is to begin.

"The natives assert that a fall of snow of 1 foot down in the valley (10,000 feet) means from 2 to 3 feet on heights like the Rotang and Bara-la-cha Passes, 13,000 and 16,000 feet respectively.

"If so, the present depth of snow on those heights cannot be less than 25 feet and probably rather more.

"The Rotang Pass has been practicable for men during the past twelve days.

"Very strong winds are reported to prevail on that pass at present.

"In spite of so much snow during this winter season the prevailing temperature must be said to have been strikingly warm. Only once or twice the minimum thermometer fell below zero Fahr., in the beginning of March.

"According to natives and my own observations winters like the present are, generally speaking, followed by favourable seasons in Lahoul in regard to the crops as well as to health."

Upper Sutlej Valley.—The Deputy Conservator of Forests, Simla district, has forwarded the following note of the snowfall at and near Kilba during the winter:—

"On the 7th of December snow fell as low as 4,000 feet and was preceded by a slight westerly wind. In February the snow line was 5,700 feet for a few days. The snowfalls that occurred between December and the 1st March were ushered in by high westerly winds, and the average depth of each fall was 2 feet.

"The storms during January and February extended over the whole of Bushahr as far as could be seen, while the sky was overcast by dense masses of moisture laden clouds proceeding from the west. In March the storms were more or less local. In the intervals between the snow-storms, northerly winds prevailed with bright weather and clear skies.

"On the 30th March I crossed the Bishho Pass 11,000 feet between Kulu and Bushahr. The depth of snow by the gauge on the top of the pass was 6 feet 9 inches, and at 8,000 feet there were patches of snow remaining. The villagers say that there was 14 feet of snow on the pass in February and at Marang and Tangi, 10,000 feet high, in Upper Kanawar, the same depth was reported. On the Balder Pass over the Trans-Sutlej Range into Spiti, (15,000 feet) the depth of snow at date is said to be 15 feet, on the Rupin Pass, 15,000 feet, the same, at Runaul, 10,000 feet, on the Hindustan Thibet Road, 6 feet and the road above 8,000 feet is blocked with large accumulations of snow varying from 2 to 6 feet in depth. Snowfalls have been unusually frequent and heavy. In Kanawar above Kilba 6,000 feet, there is a snow bridge over the river. East of Nachar banks of snow formed from slips have closed the road to ponies.

"The temperature at elevations below 7,000 feet was unusually high, while at high altitudes it seems to have been normal. The amount of cloud is said to have been greater than usual and the moisture in excess of former years. The crops at elevations below 6,000 feet have suffered from excessive rainfall and are of a yellow colour in consequence.

"The people state that the snowfall at high elevations was greater than that of last year, which was very heavy; but that below 7,000 feet it was lighter and did not descend as low as last year; but that the rain at such elevations was heavy and continuous. Much damage has been done to houses and great loss in cattle and sheep has resulted from the long continued heavy snowfalls.

"The height of the snow line on the hills opposite Kilba at different dates throughout the month is given below:—

Date.	Height to which the snow line descended.	State of weather.
	Feet.	
1st . . .	5,750	
4th . . .	9,500	Weather very cold.
5th . . .	10,000	Ditto.
11th . . .	6,750	Fall of snow.
22nd . . .	9,000	Ditto
24th . . .	8,000	Slight fall of snow."

The Revd. Mr. Schreve, Poo, sends the following account of the weather experienced in that part of the Upper Sutlej Valley during the past winter:—

"Snow fell on the 31st December and 1st January, amount 1½ feet. It fell in the Sutlej Valley, but melted away in a few days.

"Snow fell from the 11th to 22nd January with the exception of the 17th. The total fall was about 4 feet.

"Snowstorms occurred between the 2nd and the 9th of February which increased the depth of snow in the valley to 5 feet.

"The following falls occurred between the 13th February and the 14th April, the amounts of precipitation being given as measured by the raingauge :—

DATE.	Total precipitation.
	Inches.
13th to 17th February	2·78
19th to 20th	0·25
28th February and 1st March	0·51
3rd to 5th March	2·38
10th and 11th	0·07
14th	0·10
16th and 17th	0·20
22nd to 24th	0·17

Giving a total of 7·46 inches equivalent of upwards of 6 feet of snow in that period.

"No snow fell in April except on the 6th in the valley. The snow line was never lower than 12,500 feet in April. Weather calm during all of the snowstorms mentioned. In the intervals between the snowstorms light winds. The snowstorms have probably extended over the Upper Sutlej Valley as far as the high plains of Thibet. People say the accumulation of snow on the Runang Pass (14,300 feet above sea level) is from 10 to 12 feet.

"The weather during the whole winter was hence abnormally cold and damp and with much rain. The crops are a little behind, but are in a good condition.

"I have lived seven winters in various parts of the Western Himalayas, but have never experienced such a severe winter and so many and heavy snowfalls. The natives say they do not remember such heavy snowfalls as have occurred during the past two winters 1893 to 1894."

III.—NORTH-WESTERN PROVINCES HIMALAYAS (KUMAON).

Malla Danpur.—The following gives the snowfall on the peaks of Pindari, Kantela, and Pankua during the first fortnight of March :—

DATE.	Amount of snow.	
	Feet.	Inches.
2nd to 4th	2	0
10th	1	0

The weather was warmer and damper than usual.

Malla Johar.—Snow fell on the following occasions on the passes of Ralumdhura and Utadhura in this tahsil :—

DATE.	Amount of snow.	
	Feet.	Inches.
3rd	2	6
4th	3	6
9th	1	6

The weather was colder and damper than usual in the opinion of the natives of this district.

Malla Byans, Chandans and Darma.—Snow fell in this tahsil as below :—

DATE.	Amount of snow.	
	Feet.	Inches.
1st	1	0
2nd	1	0
3rd	0	6
4th	1	0
5th	0	6

The general opinion is, that although snow began unusually early this year, the snowfall is considerably less than last year but is probably above the normal.

IV.—ASSAM HIMALAYAS.

Kamrup.—The Deputy Commissioner states that at the Bhutia Darbars held at Darranga and Sobankhatta he made special enquiries from the hill rajas as to the snowfall of this year in the Himalayas. They all agreed that the fall had been normal and far less than that of last year.

Durrang.—The Deputy Commissioner of this district writes that no accurate information is available, but the Bhutias who came down to the plains to trade and receive their annual stipend, declare that the snowfall was greater this year than in previous years. This, however, is not borne out by the fact that more Bhutias than usual have come down with produce. When the snowfall is heavy, the passes get blocked and the Bhutias cannot come. He therefore only gives the Bhutia account of the matter for what it is worth.

Resumé of the snowfall information.—The information given above is interesting and gives probably fairly complete and reliable data for estimating the character of the snowfall of the past winter. In Baluchistan and Afghanistan, the precipitation was much above the normal, but it occurred as rain during the greater part of the winter over the plateau areas, and hence there was no snow accumulation except on the highest ranges, and even there it was probably not above the normal at the end of March.

The precipitation has also been much heavier in the Punjab and Kashmir Himalayas, but it occurred as rain to much higher elevations than usual, and hence there was no accumulation of snow on the lower ranges at the end of the month. In the higher and more interior ranges the snowfall has undoubtedly been excessive and the valleys and passes are hence blocked with snow to an unusual extent. The snowfall appears to have been most excessive in Ladakh and the higher Kashmir ranges.

The snowfall was, so far as can be judged, normal in amount in Kumaon and the accumulation at the end of the month was probably below the normal to some extent The snowfall in the Assam and Sikkim Himalayas has, on the other hand, undoubtedly been much less than usual. The chief features of the snowfall during the past winter may hence be summarized as follows :—

(1) Excessive snowfall on the higher ranges of the Punjab and Kashmir Himalayas, normal snowfall on those of the Kumaon Himalayas and deficient snowfall in the Eastern Himalayan area.

(2) The heavy snowfall was restricted to the higher elevations. On the lower ranges the precipitation of the period occurred chiefly as rain.

(3) There was no large snow accumulation at the end of the month on the Afghan plateau or over the lower ranges of the Himalayas.

(4) The snow accumulation at the end of March on the higher ranges was less than the normal in the Eastern Himalayas and probably in Kumaon, but was undoubtedly considerably larger than usual on the higher elevations of the Kashmir and Punjab Himalayas.

Summary of special storm Reports.

The following gives a brief summary of the more important storms of which special reports were received during the month :—

4th March.—Thunderstorm at Allahabad from 11-20 P.M. to 1 A.M.

5th March.—Thunderstorm at Calcutta at 6-30 P.M.

11th March.—Nor'wester and hailstorm at Calcutta between 3·40 P.M. and 4 P.M. The following gives a brief summary of observations taken during the storm :—

Hour.	Barometer reduced to 32°	Temperature.	Humidity.	Wind.
	"	°	%	
3-10 P.M.	29·704	87·2	64	SSW
3-40 P.M.	·744	...	...	SSE
3-50 P.M.	·742	...	...	NW
3-55 P.M.	·806	...	...	NW
3-57 P.M.	·788	...	...	NW
4 P.M.	·718	67·8	98	WNW

The preceding observations illustrate the large and rapid fluctuations of pressure which frequently occur during this class of storms. Temperature decreased nearly 20° in 50 minutes and humidity increased from 64 to 98. The total precipitation during the storm was 0·86 inch, which fell in 20 minutes.

16th March.—Duststorm at Khandwa at 6 P.M.

17th March.—Severe thunderstorm at Calicut. Rainfall during the storm 2·24 inches. Thunderstorm at Allahabad from 9-25 P.M. to 11 P.M.

19th March.—Thunderstorm at Khandwa.

20th March.—Severe thunderstorm at Belgaum with very strong winds.

21st March.—Thunderstorm at Allahabad.

23rd March.—Thunderstorm with hail at Chikalda at 3-30 P.M.

24th March.—Thunderstorm at Belgaum.

28th March.—Thunderstorm at Belgaum at 4 P.M.

29th March.—Thunderstorm at Poona at 6-40 P.M. and at Chikalda at 4 P.M.

30th March.—Duststorm at Poona at 2 P.M.

31st March.—Thunderstorm at Malegaon at 4-15 P.M. and at Poona 4-40 P.M.

Reports of hailstorms have also been received from district and other officers. The following gives a statement of the more destructive of these storms during March 1894 :—

4th March.—A severe hailstorm visited a part of the Tahsil Nakur in the Saharanpur district. The storm passed from west to east and lasted about an hour. Some of the hailstones were reported to be about 8 oz. in weight. The storm caused some damage to the crops of eight villages.

18th March.—Slight hailstorm in the Balaghat district of the Central Provinces. It caused little or no damage.

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

Arabian Sea.—At the beginning of the month south-east winds (force 2 to 5) prevailed in the neighbourhood of the Arabian coast and normal north-easterly winds over the remainder of the Arabian Sea and in the Gulf of Aden. Weather was generally fine. In the Persian Gulf the winds were westerly in direction and the weather slightly disturbed. The mean wind force at 8 A.M. of the 1st was 3·1. Weather was showery in the Gulf of Aden during the next three days and the winds more easterly than usual. In the Persian Gulf westerly wind strengthened

considerably on the 2nd and were of force 5 to 6 on the morning of the 3rd. Weather also had become more unsettled in that area. Thus the S.S. *Kilwa* off Jask at 8 A.M. of the 3rd experienced north-west winds of force 6 and heavy rain squalls. Winds had fallen off considerably in strength during the previous 48 hours in the centre and west of the Arabian Sea and were very unsteady. The mean wind force for the whole of the Arabian Sea had decreased to 2·4 at 8 A.M. of the 3rd. Weather improved rapidly in the Persian Gulf during the day and was fine with moderate north-west winds on the morning of the 4th. On the other hand winds increased considerably in strength over the Arabian Sea, particularly in the north, and the wind force averaged 3·6 at 8 A.M. of the 4th. Normal northerly winds (though slightly stronger than usual) and fine weather prevailed during the next four days. Winds increased slightly in strength in the east and centre on the 8th and were of mean force 4·0 on the morning of the 9th. Winds decreased steadily over the whole area until the 14th, on the morning of which day the mean wind force was 2·8. They again strengthened rapidly during the next two days and averaged 3·9 on the morning of the 16th. The increase, although general, was greatest in the south-east, where fresh to strong north-east winds and squally rainy weather were experienced on the 16th. Weather was also slightly unsettled with north-westerly winds in the Persian Gulf from the 14th to the 16th. Conditions continued feebly unsettled in the south-east of the Arabian Sea until the 23rd, although the winds decreased rapidly and were very light and unsteady. During the remainder of the month the air movement decreased steadily and averaged 2·3 on the 30th and 2·5 on the 31st. On the other hand, strong easterly winds and a rough sea prevailed in the Gulf of Aden from the 24th to 30th. Weather was fine and clear over the whole area during this period, except to the west of the Ceylon coast, where heavy rain was experienced on the last two days of the month.

There was at the end of the month a tendency to the establishment of the normal hot weather winds on the Sind, Cutch and Kathiawar coasts.

Bay of Bengal.—Normal north-easterly winds and fine weather prevailed uninterruptedly throughout the month in the centre and south of the Bay, except for a brief period extending from the 14th to the 18th, when showery weather was experienced in the neighbourhood of the East Ceylon coast. At the head of the Bay and on the Orissa coast light to moderate south-westerly winds obtained more or less steadily.

As is usually the case, the air movement was very unsteady during the month; the mean wind force for the whole area ranging between 3·7 on the 6th and 1·7 on the 31st.

Temperature of the Air.

The mean day or maximum temperature was normal or in slight excess in the coast districts of both the Bay of Bengal and Arabian Sea. The excess was over 1° at Kurrachee (+1°·3), Rajahmundry (+1°·6), Cuttack (+1°·4), Calcutta (+1°·3), Jessore (+1°·2), and perhaps Dhubri (+1°·2). The mean maximum temperature was in defect over the whole of the interior. The deficiency exceeded 2° in the North-Western Provinces, Baghelkhund and the Punjab, and over a portion of that area defined by the following stations, it was more than 4°:—

Province.	Station.	Mean maximum temperature.		
		Actual, March 1894.	Normal, March.	Variation of actual from normal.
		°	°	°
North-Western Provinces and Oudh	Bareilly	83·5	87·6	−4·1
	Meerut	82·8	86·9	−4·1
	Roorkee	81·4	85·8	−4·4
Punjab	Ludhiana	70·2	85·2	−6·0
	Lahore	78·8	83·7	−4·9
	Sialkot	77·8	81·8	−4·0
	Rawalpindi	72·1	76·7	−4·6
	D.-I.-Khan	79·3	84·0	−4·7

The mean minimum or night temperature of the month was below the normal in the whole area to the north of Lat. 23° or in Extra Tropical India and in excess to the south of that parallel. The variations were, however, small in amount and less than 2° in all cases, with the exception of the stations in the western and central districts of the North-Western Provinces and Bundelkhand for which data are given below:—

Station.	Mean minimum temperature.		
	Actual, March 1894.	Normal, March.	Variation of actual from normal.
	°	°	°
Nowgong	58·0	60·8	−2·8
Lucknow	58·0	60·6	−2·6
Agra	60·4	62·8	−2·4
Delhi	60·0	62·1	−2·1
Meerut	55·6	57·8	−2·2

The mean temperature of the month was in slight excess in Burma, South Bengal and the Peninsula (*i.e*, south of Lat. 23° N.) and was below the normal to the north of that parallel, the deficiency increasing in amount northwards. The deficiency was more than 2° in amount over nearly the whole of the North-Western Provinces and the Punjab; and exceeded 3° at the following stations :—

Station.	Mean daily temperature.		
	Actual, March 1894.	Normal, March.	Variation of actual from normal.
	°	°	°
Rawalpindi	60·4	63·6	−3·2
D.-I.-Khan	65·9	69·7	−3·8
Ludhiana	67·4	71·2	−3·8
Meerut	69·2	72·4	−3·2
Bickaneer	74·1	77·5	−3·4

The temperature conditions of the hill stations in Upper India were similar to those of the neighbouring plain stations. The mean day and night temperatures of the month were below the normal; the deficiency being greater in the maximum than in the minimum temperature. Hence also the mean temperature of the month was in moderate defect at these hill stations. The following gives data for six stations :—

Station.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Murree	−4·9	−0·8	−2·8
Simla	−6·9	−1·1	−4·0
Quetta	−2·3	+0·3	−1·0
Mount Abu	−3·2	−1·3	−2·3
Pachmarhi	−1·5	+0·4	−0·6
Darjeeling	−1·5	−1·1	−1·3

The mean temperature of the month was in slightly greater defect at the high level stations of Leh (−3°·4) and Kailang (−2°·9) than at the lower hill stations.

The following summarises the chief features of the mean temperature conditions of the month :—

(1) Temperature was on the average of the month in slight excess both by day and night in the Peninsula and Burma.

(2) Temperature was more or less in defect both by day and night in Northern India. The deficiency increased in amount northwards from the Satpuras and westwards from Bengal, and was greatest in the Punjab and the western districts of the North-Western Provinces. The deficiency was most marked in the day temperature.

(3) The temperature variations at the hill stations were similar in character and amount to those of the neighbouring plain stations.

The following table gives comparative data for 50 of the 51 meteorological areas or divisions into which India is divided :—

Meteorological Province.	Meteorological Division.	Actual Temperature.					Variation from normal of		
		Mean maximum.	Mean minimum.	Mean daily.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°		°	°	°	°
Burma	Tenasserim	84·4	71·6	84·0	22·8	32·4	+0·4	+2·6	−2·2
	Lower Burma	92·4	73·4	82·9	19·0	26·4	+0·3	+1·5	−1·2
	Central do.	97·1	66·5	81·8	30·6	44·9	−0·5	+1·5	−2·0
	Upper do.	87·7	61·7	74·7	26·0	44·8	−2·7	+1·1	−3·8
	Arakan	90·0	70·1	80·1	19·7	35·5	+1·1	+1·3	−0·2
Bengal and Assam	Eastern Bengal	85·5	65·8	75·7	19·7	35·9	−0·4	+0·3	−0·7
	Assam (Surma)	83·6	64·5	74·1	19·1	35·4	−1·7	+1·1	−2·8
	Do. (Brahmaputra)	82·5	61·5	72·0	21·0	36·3	−0·4	−0·8	+0·4
	Deltaic Bengal	92·1	69·6	80·7	22·2	41·0	+1·2	+0·6	+0·6
	Central do.	92·5	65·0	78·8	27·5	44·7	0	−0·9	+0·9
	North do.	87·0	59·3	73·2	27·7	44·3	−0·3	−0·6	+0·3
	Orissa	90·6	74·4	82·6	16·2	29·7	+1·5	+1·4	+0·1
	Chota Nagpur	90·2	63·8	77·1	26·4	44·0	+1·0	+0·3	+0·7
	Bihar (South)	90·6	63·5	77·1	27·1	44·3	−1·9	−1·8	−0·1
	Do. (North)	88·6	60·8	74·9	27·8	44·7	−1·0	−1·1	+0·1

Meteorological Province.	Meteorological Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean daily.	Mean daily range.	Absolute range.	Variation from normal of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
North-Western Provinces and Oudh.	North-Western Provinces (East)	89·6	61·0	75·3	28·6	45·2	−2·9	−1·3	−1·6
	Oudh (South)	89·1	58·0	73·6	31·1	49·3	−2·3	−2·6	+0·3
	North-Western Provinces (Central)	89·5	57·7	73·6	31·8	51·1	?	?	?
	Do. do. (West)	90·9	63·0	77·0	27·9	47·9	−1·5	−1·2	−0·3
	Do. do. (Submontane)	81·1	55·5	68·3	25·6	45·7	−3·8	−1·7	−2·1
Punjab	Punjab (South)	83·9	57·8	70·9	26·1	49·1	−3·1	−1·9	−1·2
	Do. (Central)	78·8	54·7	66·8	24·1	49·6	−4·9	−0·1	−4·8
	Do. (Submontane)	80·5	55·1	67·8	25·4	49·0	−6·0	−1·6	−4·4
	Do. (Hill Districts)	55·4	42·8	49·2	12·6	40·6	−5·9	−0·9	−5·0
	Do. (North-West)	75·9	50·5	63·2	25·4	48·3	−3·8	−1·5	−2·3
	Do. (West)	81·0	55·0	68·0	26·0	53·3	−4·0	−1·7	−2·3
Bombay and Malabar Coast Districts (Madras).	Malabar	89·1	76·7	83·0	12·4	19·3	+0·6	+0·6	0
	Madras (South Central)	96·0	71·3	83·7	24·7	35·2	−1·4	+1·1	−2·5
	Coorg	88·3	67·0	77·6	21·4	32·6	−1·9	+1·9	−3·8
	Mysore	91·6	66·2	78·9	25·4	35·3	+2·5	+1·9	+0·6
	Konkan	86·5	74·6	80·6	11·9	24·4	+0·1	+1·1	−1·0
	Bombay Deccan	96·6	67·3	82·0	29·4	42·0	−0·3	+0·8	−1·1
	Hyderabad (North)	96·3	69·0	82·7	27·3	39·1	?	?	?
	Khandesh	95·3	63·1	79·3	32·2	50·3	−0·7	−0·2	−0·5
Central Provinces and Berar.	Berar	97·6	68·6	83·1	29·1	46·9	−1·1	+1·4	−2·5
	Central Provinces (West)	95·5	66·5	81·0	29·1	46·4	−1·8	+0·9	−2·7
	Do. (Central)	93·0	63·9	78·5	29·1	46·5	−1·8	−0·2	−1·6
	Do. (East)	96·7	68·9	82·9	27·8	41·8	−0·1	+1·0	−1·1
Bombay (North)	Gujarat	95·8	67·1	81·5	28·7	46·4	−0·2	+1·1	−1·3
	Kathiawar	91·2	65·3	78·3	25·8	48·2	−1·7	−1·2	−0·5
	Sind	90·4	63·8	77·1	26·6	52·5	−0·6	−0·2	−0·4
Rajputana and Central India.	Central India (East)	89·3	59·5	74·5	29·9	49·6	−3·2	−1·5	−1·7
	Rajputana (East), Central India (West)	90·0	59·9	75·0	30·1	52·8	−1·3	−1·0	−0·3
	Do. (West)	90·6	59·3	75·0	31·4	57·1	−1·8	−5·0	+3·2
Madras	East Coast (North)	90·9	75·3	83·1	15·6	26·7	+1·6	−0·2	+1·8
	Hyderabad (South)	98·1	71·6	84·9	26·5	37·7	−1·1	+0·3	−1·4
	Madras (Central)	100·6	73·1	86·9	27·5	39·9	−0·1	+0·2	−0·3
	East Coast (Central)	94·0	73·1	83·5	20·9	33·1	−0·1	+0·1	−0·2
	Do. (South)	91·7	73·9	82·8	17·8	31·6	+0·6	+0·7	−0·1
	Madras (South)	93·5	76·1	84·8	17·4	26·5	−0·8	+1·8	−2·6

The following gives a summary of the more important changes in the temperature conditions over India during the month.

Temperature at the beginning of the month was in moderate to large defect in the Punjab and North-Western Provinces, and in slight to moderate excess in Bengal, Central India, and the Central Provinces; and normal elsewhere.

Temperature increased on the 2nd and 3rd over the whole of India, but most rapidly in North-Western India, and was on the 4th more or less in excess over the whole of India except the Punjab and Assam.

The following gives mean temperature variation data of the 1st and 4th for comparison :—

Province.	Variation from normal of: Mean temperature during 24 hours preceding 8 A.M. of 1st.	Mean temperature during 24 hours preceding 8 A.M. of 4th.	Abnormal change.
	°	°	°
Burma	−0·4	+2·0	+2·4
Bengal and Assam	+1·3	+2·3	+1·0
N.-W. Provinces and Oudh	−4·8	+1·2	+6·0
Punjab	−4·9	−2·6	+2·3
Sind and Rajputana	−0·7	+3·5	+4·2
Central India and Gujarat	+2·4	+3·6	+1·2
Central Provinces and Berar	+1·8	+4·3	+2·5
Bombay	+0·8	+2·0	+1·2
Madras	−0·4	+3·8	+4·2

It should be remembered that the last column represents the abnormal change (or increase) of temperature, that is the increase additional to that usual at the season. This at once follows from the fact that the variations given in the first and second figure columns are variations, not from the same mean, but from normal means for each of the dates in question.

A cool wave began to affect the North-West Frontier districts on the 5th. It gradually extended eastwards to the North-Western Provinces and Central India during the next three days, and the area of increased temperature which had covered Northern India on the 4th was hence displaced eastwards. The following table gives variation data for the stations at which temperature was most largely in excess and defect on each day from the 5th to the 9th :—

Date.	Cool wave. Station.	Variation of mean temperature from normal.	Warm wave. Station.	Variation of mean temperature from normal.
		°		°
5th	Quetta	−8·6	Sutna	+9·1
	Peshawar	−8·4	Raipur	+7·4
6th	Murree	−8·8	Balasore	+9·8
	Bickaneer	−5·8	Chaibassa	+7·8
7th	Lucknow	−6·2	False Point	+4·8
	Roorkee	−5·3	Akyab	+4·8
8th	Nowgong	−5·6	Thayetmyo	+5·1
	Berhampore	−5·0	Akyab	+2·7
9th	Chittagong	−6·9	Moulmein	+2·1
	Jessore	−5·2		

The cool wave had by the 9th reduced temperature below the normal over the whole of India with the exception of Madras and Lower Burma. The following gives variation data for the 24 hours preceding 8 A.M. of the 9th :—

Province.	Variation from normal of: Mean maximum temperature.	Mean minimum temperature.	Mean temperature.	Abnormal change from 4th to 9th.
	°	°	°	°
Burma	−0·9	+2·5	+0·8	−1·2
Bengal and Assam	−1·2	−3·9	−2·6	−4·9
North-Western Provinces and Oudh.	−2·7	−3·7	−3·2	−4·4
Punjab	−5·9	−0·9	−3·4	−0·8
Sind and Rajputana	−1·8	−1·0	−1·4	−4·9
Central India and Gujarat	−1·7	−1·6	−1·7	−5·3
Central Provinces and Berar.	−2·4	−3·5	−3·0	−7·3
Bombay	−0·6	−1·9	−1·3	−3·3
Madras	+3·3	+3·1	+3·2	−0·6

Before the effect of the cool wave had passed away, a second wave advanced across the North-West Frontier on the 10th and 11th and produced a further considerable reduction of temperature.

The following data giving the largest variations of temperature on each day from the 10th to the 14th illustrate the eastward march of this cool wave :—

Date.	Station.	Variation from normal of: Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
		°	°	°
10th	Murree	−18·6	−12·7	−15·7
	Quetta	−16·0	−8·7	−12·4
11th	Bickaneer	−16·3	−10·5	−13·4
	Hyderabad	−9·6	−12·6	−11·1
12th	Ajmere	−9·8	−14·3	−12·1
	Nowgong	−10·9	−12·1	−11·5
	Agra	−10·1	−12·7	−11·4
13th	Nowgong	−9·8	−13·0	−11·4
	Sutna	−10·1	−11·1	−10·6
14th	Burdwan	−6·2	−10·0	−8·1
	Benares	−6·1	−9·2	−7·7

The following gives variation data for the 12th when the combined influence of the two cool waves in diminishing temperature below the normal was greatest and most general :—

Province.	Variation from normal of: Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	−0·1	+0·1	0
Bengal and Assam	−1·1	−3·1	−2·1
N.-W. Provinces and Oudh	−8·5	−8·0	−8·3
Punjab	−7·9	−8·7	−8·3
Sind and Rajputana	−6·3	−11·7	−9·0
Central India and Gujarat	−9·0	−10·3	−9·7
Central Provinces and Berar	−3·5	−7·8	−5·7
Bombay	−1·2	−4·7	−3·0
Madras	+0·6	+1·7	+1·2

A warm wave began to affect Baluchistan on the 14th, and it rapidly extended over Northern India on the 15th and 16th, and raised temperature considerably above the normal over nearly the whole of Northern and Central India on the 17th. Thus the mean temperature of the previous 24 hours averaged 4° above the normal in Central India, Berar and the Central Provinces and 2° in the North-Western Provinces, Bombay and Rajputana. A feeble cool wave, due to disturbed weather in Upper India on the 15th and 16th, slightly modified the temperature conditions in Northern India during the next four days. South Madras had numerous thunder showers from the 17th to 21st which gave that area moderately heavy rain and reduced temperature considerably below the normal.

The following variation data for the 21st illustrate the temperature conditions in India at the end of this period and show that temperature was in moderate general excess :—

PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·9	+2·5	+1·7
Bengal and Assam	+2·1	—1·3	+0·4
N.-W. Provinces and Oudh	—0·3	+2·7	+1·2
Punjab	—0·1	+1·6	+0·8
Sind and Rajputana	+1·0	+3·0	+2·0
Central India and Gujarat	—1·9	+5·2	+1·7
Central Provinces and Berar	—1·2	+5·7	+2·3
Bombay	—1·3	+3·3	+1·0
Madras	—2·1	+0·1	—1·0

Weather was slightly disturbed in Central India and the Central Provinces between the 20th and 24th and numerous thunderstorms and duststorms occurred which cooled the air considerably. A disturbance due to hot weather actions which affected Baluchistan from the 20th to 23rd, and the Punjab and Kashmir from the 22nd to the 24th, was followed by the appearance of a cool wave in Baluchistan. It advanced eastwards during the next three days, and caused a considerable reduction of temperature in Northern India from the 24th to the 27th.

The following data illustrate its progress :—

Date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8A.M. of date.
		°
23rd	Quetta	—4·9
24th	D. I. Khan	—10·9
	Jacobabad	—8·0
25th	Ludhiana	—7·1
	Bickaneer	—7·0
26th	Roorkee	—9·1
	Ajmere	—8·7
27th	Berhampore	—5·2
	Gaya	—7·8

Temperature on the 27th was more or less considerably in defect over the whole of Northern India and in slight to moderate excess in the Peninsula. A warm wave appeared on the North-West Frontier during the last two days of the month. The mean temperature of the 24 hours preceding 8 A.M. of the 31st was 7·3° in excess at Quetta and 6·4° at Jacobabad.

The following table giving mean temperature variation data for the 27th and 31st shows the increase of temperature during that period :—

PROVINCE.	VARIATION FROM NORMAL OF		
	Mean temperature during 24 hours preceding 8A.M. of 27th.	Mean temperature during 24 hours preceding 8.AM. of 31st.	Abnormal change from 27th to 31st.
	°	°	°
Burma	+1·9	+0·5	—1·4
Bengal and Assam	—2·6	+0·5	+3·1
N.-W. Provinces and Oudh	—6·0	—1·1	+4·9
Punjab	—2·3	+2·7	+5·0
Sind and Rajputana	—3·0	+3·4	+6·4
Central India and Gujarat	—3·7	+0·8	+4·5
Central Provinces and Berar	—2·8	—1·1	+1·7
Bombay	—0·1	—0·3	—0·2
Madras	+2·0	—1·7	—3·7

The preceding data afford an illustration of the tendency of the temperature changes in the Peninsula and Lower Burma to be opposite in character to the changes in Northern India.

The following table gives the variation of the mean daily temperature from the normal week by week during the month in nine of the larger provinces or political divisions of the Empire :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE, FOR WEEK ENDING MARCH.				
	10th	17th	24th	31st	For whole month.
	°	°	°	°	°
Burma	+0·9	—0·1	+1·3	+1·3	+0·8
Bengal and Assam	+0·6	—1·8	+1·5	—0·6	—0·1
North-Western Provinces and Oudh.	—2·0	—3·1	+0·2	—3·9	—2·3
Punjab	—3·6	—4·2	—1·2	—1·6	—2·8
Sind and Rajputana	—1·3	—2·7	—0·9	—1·1	—1·3
Central India and Gujarat	—1.3	—3·3	—0·6	—2·1	—1·4
Central Provinces and Berar.	+0·6	—1·9	+0·1	—1·5	—0·4
Bombay	—0·1	—0·1	+0·8	+0·6	+0·3
Madras	+3·2	0	—1·2	—0·4	+0·4

in Assam, Rajputana and Sind and small in amount in the remaining divisions :—

PROVINCE.	MEAN CLOUD AMOUNT.		
	Actual average, March 1894.	Normal average, March.	Variation from normal.
Assam	3·5	4·3	—0·8
Bengal	2·8	3·0	—0·2
Bihar	1·6	2·1	—0·5
North-Western Provinces and Oudh	2·1	2·3	—0·2
Punjab	3·2	3·6	—0·4
Sind	1·8	3·1	—1·3
Rajputana	1·8	2·6	—0·8
Central India	2·4	2·5	—0·1

The mean cloud proportion was on the other hand in slight to moderate excess in the Peninsula. The following gives data :—

PROVINCE OR AREA.	MEAN CLOUD AMOUNT.		
	Actual average, March 1894.	Normal average, March.	Variation from normal.
Berar	3·0	1·9	+1·1
Central Provinces	2·8	2·1	+0·7
Bombay Deccan	2·5	2·3	+0·2
Madras Deccan	3·7?	2·2	+1·5?
Bombay Coast	1·9	1·1	+0·8
Madras Coast	1·9	2·2	—0·3

The preceding data show that the excess in the amount of cloud was greatest in Berar, the Madras Deccan and the Bombay coast districts.

There was less cloud than usual at the Northern India hill stations and a moderate excess at the Central and Southern India hill stations. The deficiency over the Himalayan area was as marked at Leh and Kailang as at the lower hill stations. The following gives data for six typical stations :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual average, March 1894.	Normal average, March.	Variation from normal
Leh	5·8	6·4	—0·6
Murree	5·2	6·0	—0·8
Darjeeling	4·9	5·2	—0·3
Mount Abu	1·3	2·6	—1·3
Pachmarhi	2·8	2·1	+0·7
Wellington	3·2	3·0	+0·2

The following summarizes briefly the chief features of the cloud distribution of the month :—

(1) There was more cloud than usual in Burma and the Peninsula and also in the Andamans. The excess was not large and was greatest in Berar, the Madras Deccan, the Central Provinces and Bombay coast districts.

(2) There was somewhat less cloud than usual over the whole of Northern and Central India, (*i.e.*, Extra Tropical India). The deficiency was greatest in Sind and Rajputana.

(3) There was also less cloud at the hill stations in Northern India and more at the hill stations in the Peninsula. The deficiency probably extended over the Western Himalayan area as it was as large at Leh as at Murree and Darjeeling.

It may be noted that the variations in temperature appear to be more directly related to the variations in the amount of cloud than to rainfall or any other element of observations in this month.

The mean amount of cloud was less than 1·0 at two stations only, *viz.*, Cocanada (0·9) and Darbhanga (0·9).

Rainfall.

The chief periods and areas of rainfall during the month of March 1894 were as follows :—

1st.—From the 1st to the 8th. The rainfall during this period was chiefly due to a disturbance of the cold weather type. Baluchistan, Kashmir, the Punjab, and Upper India received general and moderately heavy rain, and Bengal (chiefly East and North), Assam and Upper Burma showers, more especially on the 1st, 5th, 6th, 7th, and 8th.

2nd.—From the 10th to the 12th during which the Punjab received light showers on the 10th and 11th, and Assam on the 11th and 12th.

3rd.—From the 13th to the 16th. The disturbance during this period, like the previous, was confined to Upper India. Baluchistan had light showers daily from the 13th to the 15th, Kashmir on the 14th and 15th, and the Punjab on the 15th and 16th.

4th.—From the 16th to the 21st, when the southern districts of Madras, Mysore and Coorg were visited by series of thunderstorms daily which gave moderate to heavy rain over the greater part of that area.

5th.—From the 21st to the 24th. This was a feeble hot weather disturbance which chiefly affected Upper India and the Central Provinces Baluchistan received light to moderate showers from the 21st to the 23rd, the Punjab and Kashmir from the 22nd to the 24th. In the Central Provinces and Central India (East) light local showers were received during this period.

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

(1) Considerable deficiency in Assam and moderate deficiency in Bengal (except East Bengal which received nearly double its normal amount).

(2) Slight deficiency in the Central Provinces, the North-Western Provinces, Central India and Rajputana.

(3) Moderate to largish excess in the Punjab (except the south and central districts where rainfall was normal), Kashmir and Baluchistan.

(4) Moderately large excess in South Madras and Malabar and slight excess in Bombay.

Meteorological Province.	Meteorological Division.	Rainy days.		Rainfall.		
		Actual, March 1894.	Normal, March.	Actual, March 1894.	Normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	0·80	0·25	+0·55
	Lower Burma*	?	?	0	0·09	−0·09
	Central do.*	?	?	0	0·08	−0·08
	Upper do.*	?	?	0·64	?	?
	Arakan*	?	?	0·14	0·35	−0·21
Bengal and Assam	Eastern Bengal	4·4	3·6	5·40	2·84	+2·56
	Assam (Surma)*	?	?	4·42	8·92	−4·50
	Do. (Brahmaputra)*	?	?	2·45	3·88	−1·43
	Deltaic Bengal	1·2	2·5	0·84	1·80	−0·96
	Central do.	0·4	1·6	0·11	0·93	−0·82
	North do.	1·0	2·2	0·22	1·53	−1·31
	Orissa	0·7	1·8	0·29	1·04	−0·75
	Chota Nagpur	0·1	1·7	0·02	0·86	−0·84
	Bihar (South)	0·2	0·9	0·07	0·37	−0·30
	Do. (North)	0·5	0·8	0·11	0·39	−0·28
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·5	0·7	0·10	0·26	−0·16
	Oudh (South)	0·2	0·7	0·05	0·30	−0·25
	Do. (North)	0·5	0·9	0·21	0·43	−0·22
	North-Western Provinces (Central)	0·4	0·7	0·09	0·29	−0·20
	Do. do. (West)	0·6	1·0	0·18	0·36	−0·18
	Do. do. (Submontane)	2·0	1·8	1·41	1·05	+0·36
Punjab	Punjab (South)	1·2	0·8	0·36	0·44	−0·08
	Do. (Central)	1·6	1·0	0·47	0·48	−0·01
	Do. (Submontane)	3·3	1·7	1·54	1·11	+0·43
	Do. (Hill Districts)	6·0	4·4	4·67	3·45	+1·22
	Do. (North-West)	4·1	2·7	2·00	1·72	+0·28
	Do. (West)	2·5	1·2	1·38	0·61	+0·77
Bombay and Malabar Coast Districts (Madras).	Malabar	3·3	0·8	2·55	0·44	+2·11
	Madras (South Central)	1·0	0·9	0·56	0·54	+0·02
	Coorg	5·2	?	2·40	?	?
	Mysore*	?	?	0·71	0·32	+0·39
	Konkan	0·6	0·2	0·36	0·07	+0·29
	Bombay Deccan	1·6	0·4	0·98	0·18	+0·80
	Hyderabad (North)*	?	?	?	?	?
	Khandesh	0·9	0·1	0·29	0·03	+0·26
Central Provinces and Berar.	Berar	1·3	?	0·45	0·35	+0·10
	Central Provinces (West)*	?	?	0·50	0·28	+0·22
	Do. (Central)*	?	?	0·24	0·50	−0·26
	Do. (East)*	?	?	0·07	0·64	−0·57
Bombay (North)	Gujarat	0·1	0	0·03	0·01	+0·02
	Kathiawar	0·2	0·1	0·07	0·05	+0·02
	Sind	0·1	?	0·02	0·28	−0·26

Meteorological Province.	Meteorological Division.	Rainy days.		Rainfall.		
		Actual, March 1894.	Normal, March.	Actual, March 1894.	Normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
Rajputana and Central India.	Central India (East)	0·4	?	0·10	0·21	—0·11
	Rajputana (East), Central India (West)	0·3	?	0·09	0·14	—0·05
	Do. (West)	0·4	?	0·11	0·08	+0·03
Madras	East Coast (North)	0·1	0·8	0·03	0·50	—0·47
	Do. (do.)	0	2·0	0	1·01	—1·01
	Hyderabad (South)*	?	?	0·03	0·51	—0·48
	Madras (Central)	0·3	0·3	0·09	0·14	—0·05
	East Coast (Central)	0·1	0·3	0·01	0·21	—0·20
	East Coast (South)	0·6	0·5	0·41	0·38	+0·03
	Madras (South)	3·1	1·5	2·67	1·06	+1·61

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

The rainfall of the month was less than a tenth of an inch in Chota Nagpur, Bihar, a large part of the North-Western Provinces, including South Oudh and the central districts of the North-Western Provinces, Rajputana, Central India, Gujarat, Kathiawar, Sind, and North and Central Madras.

In Baluchistan there were three periods of fairly general rainfall, *viz.*, from the 1st to the 4th, the 13th to the 15th, and the 21st to the 23rd. The rainfall was general and heavy during the first period, many stations registering falls over one inch in 24 hours. The largest fall was 3·06 inches at Kach on the 4th. The rainfall of the month was considerably in excess and was probably nearly double the normal rainfall. The following gives comparative data for the three stations, for which normal means are available:—

Station.	Rainfall.		
	Average actual, March 1894.	Average normal, March.	Variation from normal.
	Inches.	Inches.	Inches.
Peshin	3·76	1·48	+2·28
Quetta	3·24	1·92	+1·32
Kalat	2·61	1·77	+0·84

Kashmir had unusually frequent and heavy rain during the month. The following gives the rainy periods:—

1st.—From the 1st to the 4th. This gave the heaviest burst of rain during the month. Ramban received 3·15 inches and Poonch 2·50 inches on the 3rd.

2nd.—The 9th and 10th. The rainfall was light to moderate in amount.

3rd.—The 14th and 15th, when moderate rain was received.

4th.—From the 22nd and 23rd, when moderate rain was received.

The total rainfall of the month was large in amount and probably much above the normal. At Leh, the only station for which normal rainfall data are available, the precipitation was more than three times the normal amount.

The Punjab received more or less general rain from four out of the five disturbances of the month. The first period of rainfall was from the 1st to the 5th. The precipitation was heavy in the hill districts and in the Gurdaspur, Jhelum, Gujrat, Rawalpindi, and Shahpur districts.

The following gives the more noteworthy rainfalls during this period:—

Date.	District.	Station.	Rainfall in preceding 24 hours.
			Inches.
4th	Gurdaspur	Dalhousie	3·53
,,	Kangra	Palampur	3·54
5th	,,	Hamirpur	3·29

The rainfall of the second and third periods (*viz.*, the 10th and 11th, and the 16th and 17th) was almost restricted to the submontane districts from Peshawar to Amritsar and the hill districts. The rainfall was light to moderate in amount. The whole of the province, with the exception of the south-eastern districts, received rain between the 22nd and 24th during the fourth disturbance of the month; but the amounts were not large.

The province hence received not only more frequent rain than usual, but the precipitation during the first

period was large in amount and heavier than generally occurs in March. The rainfall of the month was hence in moderate to considerable excess, except in the southern and central districts, where it was normal in amount. The following gives comparative data :—

Meteorological Division.	Rainy days.			Rainfall.		
	Actual, March 1894.	Normal, March.	Variation from normal.	Actual, March 1894.	Normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
Punjab South	1·2	0·8	+0·4	0·36	0·44	−0·08
" Central	1·6	1·0	+0·6	0·47	0·48	−0·01
" Submontane.	3·3	1·7	+1·6	1·54	1·11	+0·43
" Hills	6·0	4·4	+1·6	4·67	3·45	+1·22
" North-West.	4·1	2·7	+1·4	2·00	1·72	+0·28
" West	2·5	1·2	+1·3	1·38	0·61	+0·77

In the North-Western Provinces showers were received during the first disturbance of the month. The rainfall was light and very irregularly distributed. It was heaviest and most general in the hill districts and adjacent plain districts. The following summary of the rainfall data, published in the provincial gazette, shows that the rainfall of the month was below the small normal fall of the month in all divisions, except that including the submontane districts :—

Meteorological Division.	Number of rainy days.			Rainfall.		
	Mean actual, March 1894.	Mean normal, March.	Variation from normal.	Mean actual, March 1894.	Mean normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
Oudh North	0·5	0·9	−0·4	0·21	0·43	−0·22
" South	0·2	0·7	−0·5	0·05	0·30	−0·25
N.-W. Provinces (East)	0·5	0·7	−0·2	0·10	0·26	−0·16
" " (Central)	0·4	0·7	−0·3	0·09	0·29	−0·20
" " (Submontane)	2·0	1·8	+0·2	1·41	1·05	+0·36
" " (West)	0·6	1·0	0·4	0·18	0·36	−0·18

March was a drier month than usual over nearly the whole of Bengal. Thunder showers were received during the first week of the month. North Bengal obtained fairly general rain on the 1st and South-West Bengal on the 6th. A large portion of East Bengal received very heavy rain during series of thunderstorms from the 1st to the 8th and some unusually heavy falls were recorded, of which the following were the most noteworthy :—

Date.	District.	Station.	Rainfall in preceding 24 hours.
			Inches.
1st	Chittagong	Kodala	4·50
2nd	Faridpur	Madaripur	4·70
"	Noakhali	Noakhali	4·78
"	"	Ramganj	4·65
"	Chittagong	Mirsarai	5·82
3rd	"	"	5·07
"	South Lushai hills	Rangamati	7·52
"	"	Demagiri	4·21
4th	"	Rangamati	5·34
"	"	Demagiri	4·96

The rainfall of the month was in large excess in Eastern Bengal, which obtained nearly double its normal amount.

It was more or less in defect over the remainder of the province and was less than a tenth of an inch in average total amount (or practically *nil*) in Chota Nagpur and South Bihar.

The following table gives a statement of the rainfall data of the month published in the provincial gazette :—

Meteorological Division.	Number of rainy days.			Rainfall.		
	Mean actual, March 1894.	Mean normal, March.	Variation from normal.	Mean actual, March 1894.	Mean normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
Bengal East	4·4	3·6	+0·8	5·40	2·84	+2·56
" North	1·0	2·2	−1·2	0·22	1·53	−1·31
" Deltaic	1·2	2·5	−1·3	0·84	1·80	−0·96
Orissa	0·7	1·8	−1·1	0·29	1·04	−0·75
Chota Nagpur	0·1	1·7	−1·6	0·02	0·86	−0·84
North Bihar	0·5	0·8	−0·3	0·11	0·39	−0·28
South Bihar	0·2	0·9	−0·7	0·07	0·37	−0·30

Assam received daily showers from the 1st to the 6th. The rainfall during this period was heavy in Cachar.

Nemotha in that district recorded 9·5 inches on the 5th. Little or no rain fell in the districts of Goalpara and Kamrup. Showers were also received on the 11th and 12th and on the 17th and 18th in Cachar and the eastern districts of the Brahmaputra Valley and on the 19th and 20th in Upper Assam. No rain fell from the 20th to the end of the month, which was an unusually dry period. The following comparative data for the province show that the rainfall of the month was considerably below the normal :—

Meteorological Division.	Number of rainy days.		Rainfall.		
	Mean actual.	Variation from normal.	Mean actual.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Assam (Surma)	8·0	−0·7	7·46	−1·00	−12
" (Brahmaputra)	5·3	−2·3	2·33	−1·80	−44

Practically no rain fell in Lower Burma. In Upper Burma showers were received between the 1st and 9th, the 7th and 8th being days of fairly general rainfall in that area. Occasional showers fell in Tenasserim. The following gives a summary of the rainfall data for the month published in the Provincial Gazette.

Meteorological Division.	Number of rainy days.			Rainfall.		
	Actual, March 1894.	Normal, March.	Variation from normal.	Actual, March 1894.	Normal, March.	Variation from normal.
				Inch.		
Tenasserim	1·3	?	?	0·95	?	?
Lower Burma	0·1	?	?	0·01	?	?
Central "	0	?	?	0	?	?
Upper "	1·8	?	?	0·75	?	?
Arakan	0·8	?	?	0·95	?	?

The Central Provinces and Berar received occasional showers during the last disturbed period of the month, *viz.*, from the 20th to the 24th. The total rainfall of the month, which was nowhere large, was in slight excess in Berar and the western districts of the Central Provinces, and in defect in the central and eastern districts.

The following gives a summary of the rainfall data as published in the Provincial Gazette which were received after the table on page 113 was prepared :—

Meteorological Division.	Number of rainy days.			Rainfall.		
	Actual, March 1894.	Normal March.	Variation from normal.	Actual, March 1894.	Normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
Central Provinces (West)	1·1	0·6	+0·5	0·37	0·28	+0·09
" " (Central)	0·5	0·8	—0·3	0·13	0·41	—0·28
" " (East)	0	1·1	—1·1	0·01	0·51	—0·50
Berar	1·3	?	?	0·45	0·35	+0·10

The rainfall of the month was practically *nil* in Sind, Kathiawar and Gujarat. Over the remainder of the Bombay Presidency local thunder showers were received during the last ten days of the month. The rainfall due to these storms was generally light and scattered. They, however, gave moderately heavy and fairly general rain in the Deccan districts on the 21st and 29th. The rainfall of the month was in general excess, more especially in the Deccan. The following gives a summary of the rainfall data of the month :—

Meteorological Division.	Number of rainy days.			Rainfall.		
	Mean actual, March 1894.	Mean normal, March.	Variation from normal.	Mean actual, March 1894.	Mean normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
Konkan	0·6	0·2	+0·4	0·36	0·07	+0·29
Bombay Deccan	1·6	0·4	+1·2	0·98	0·18	+0·80
Khandesh	0·9	0·1	+0·8	0·29	0·03	+0·26
Gujarat	0·1	0	+0·1	0·03	0·01	+0·02
Kathiawar	0·2	0·1	+0·1	0·07	0·05	+0·02
Sind	0·1	?	?	0·02	0·28	—0·26

No rain fell in the northern and central districts of Madras. The southern districts received daily rain from the 16th to the 21st. This rainfall accompanied series of thunderstorms and was very irregularly distributed. The following large amounts in 24 hours were recorded :—

Date.	District.	Station.	Rainfall in past 24 hours.
			Inches.
17th	Tinnevelly	Tenkarai	3·10
19th	Madura	Morekulam	3·55
"	"	Kodaikanal	3·80
"	Malabar	Palaghat	4·00
20th	Nilgiris	Kotagiri	3·13
27th	Malabar	Tellicherry	3·35
"	"	Ponani	3·00

The rainfall of the month was in large excess in Malabar and South Madras. The former division received an average of 2·55 inches, nearly six times the normal fall of the month, and the latter 2·67 inches, nearly three times the normal.

The following gives comparative data for the six divisions of the Madras Presidency :—

Meteorological Division.	Number of rainy days.			Rainfall.		
	Mean actual, March 1894.	Mean normal, March.	Variation from normal.	Mean actual, March 1894.	Mean normal March.	Variation from normal.
				Inches.	Inches.	Inches.
Madras, Central	0·3	0·3	0	0·09	0·14	—0·05
Madras East Coast, Central.	0·1	0·3	—0·2	0·01	0·21	—0·20
Madras East Coast, South.	0·6	0·5	+0·1	0·41	0·38	+0·03
Madras, South	3·1	1·5	+1·6	2·67	1·06	+1·61
Madras South, Central.	1·0	0·9	+0·1	0·56	0·54	+0·02
Malabar	3·3	0·8	+2·5	2·55	0·44	+2·11

APPENDIX.

Additional Hailstorm Reports.

6th, 7th, and 8th February.—There were severe hailstorms in the Parganas of Pachhar and Ranode, District Bajrangarh in Goona. The crops in 50 villages in the Pachhar Pargana, and in 18 villages in the Ranode Pargana, were destroyed. The storms lasted from 15 minutes to an hour and were accompanied by severe thunder. The stones were said in some places a pound in weight.(?)

6th, 7th, and 9th February.—There were severe hailstorms in the Parganas of Miana and Bajrangarh in Goona. The crops in 15 villages in Miana, and in 10 villages in the Bajrangarh Parganas, were destroyed. The storms were accompanied by severe thunder and lightning. The stones were said to be in some places a pound in weight.(?)

1st March.—At about 2 P.M. a very heavy hailstorm occurred at the Maunpungas Village, South Lushai Hills. It lasted about three-quarters of an hour. The hail stones were very large, some being the size of pigeon eggs. It was followed by a severe thunderstorm.

5th March.—Very severe hailstorm visited Lungleh in the South Lushai Hills, 2 P.M. It was accompanied by a powerful north-west wind, exceptionally severe thunder and lightning. The account of the storm states that "The hail continued falling for seven minutes and such was the force of the driving wind that panes of glass were smashed by the stones. Two stones that entered a room after smashing a pane of glass were about 1¾" in diameter. They were composed of a number of small stones rolled together like a snowball. Hail did not melt off the ground for over half hour after storm, though the sun came out."

A severe hailstorm was experienced at Karwan in the Kachin Hills in Bhamo on the same day. The stones were stated by Mr. G. Moore Lane, Assistant Superintendent of Police, to have been of the size of small eggs.

A hailstorm also occurred in the Gorakhpur district on the same day. It seems to have entered the Gopalgunge sub-division from the Gorakhpur district at its south-western corner. It travelled northwards and passed into the Gorakhpur sub-division. It re-entered the sub-division at its north-west corner and travelled eastward and finally crossed the Ganduk and passed into the Bettia sub-division in the Champaran district. The path was about 28 miles long, and its breadth varied from half a mile to two miles.

17th March.—A hailstorm occurred at about 4 A.M. in the villages of Kitch and Baharo Khokhar of Ratodero Taluka in Shikarpur district and Mahabat Gopang Kadurbaksh Maini and Amirbaksh Jalbani of Shahdadpur Taluka in the Upper Sind Frontier district. The hailstones were about ¼ inch in diameter and the storm lasted for a few minutes only. It was accompanied by thunder and rain, and its direction was from west to east. The storm was not severe and did no damage to the crops. The area covered by it in the five villages through which it passed, was about 20 square miles.

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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. Burma Coast and Bay Islands.		...	...	−·033	...	...	...	...	...	...	...	92·9	+0·5	72·6	+1·8	82·8	+1·2	20·2	...	...	...	...	29·4
Bay Islands	Port Blair	61	29·877	?	29·869	29·940	14th	29·813	5th	·127	80·4	91·3	?	77·1	?	84·2	?	14·2	94·1	31st	74·1	17th	20·0
	Camorta	?	...			Imper	fect	...	...	...	...	...			Imper	fect	...	...	...	...	...	...	...
Tenasserim	Mergui	96	29·865	?	29·893	29·937	13th	29·793	25th	·144	80·3	90·9	?	72·5	?	81·7	?	18·4	92·6	10th & 30th.	67·6	4th	25·0
	Tavoy	26	29·947	?	29·903	30·031	13th	29·857	25th	·174	76·1	94·4	?	69·1	?	81·8	?	25·3	97·2	15th	60·2	1st	37·0
	Moulmein	94	29·866?	?	29·899?	29·967	13th	29·785	25th	·182	78·0	94·8	+1·0	73·7	+1·5	84·3	+1·3	21·1	97·4	3 days	68·8	2nd	28·6
	Toungoo	181	29·739	−·023	29·866	29·839	14th	29·647	25th	·192	76·5	97·5	−0·2	71·1	+3·6	84·3	+1·7	26·4	101·2	28th	62·2	2 days	39·0
Lower Burma	Rangoon	41	29·897	−·034	29·875	30·022	13th	29·789	25th	·233	75·4	97·2	+0·9	72·4	+1·5	84·8	+1·2	24·8	100·1	4 days	67·8	3rd	32·3
	Bassein	27	29·915	?	29·878	30·026	13th	29·817	25th	·209	76·6	95·1	+0·9	70·8	+0·7	83·0	+0·8	24·3	98·7	2 days	65·0	3rd	33·7
	Diamond Island	41	29·904	−·031	29·880	30·006	13th	29·806	25th	·200	80·1	84·8	−0·8	77·0	+2·3	80·9	+0·8	7·8	87·1	30th	73·9	1st	13·2
Arakan	Akyab	20	29·913	−·043	29·876	30·042	14th	29·819	6th	·223	75·5	90·0	+1·1	70·1	+1·3	80·1	+1·2	19·9	97·2	26th	61·7	10th	35·5
2. Burma Inland		...	...		...	...	...	...	...	...	...	92·4	−1·6	64·1	+1·3	78·3	−0·2	28·3	...	...	...	...	44·9
Central Burma	Thayetmyo	134	29·783	?	29·861	29·899	14th	29·698	5th	·201	77·3	99·2	−0·5	67·7	+1·5	83·5	+0·5	31·5	102·1	5 days	58·7	11th	43·4
	Minbu	?	29·743	?	?	29·878	14th	29·634	3rd	·244	76·8	101·4	?	68·5	?	85·0	?	32·9	106·6	26th	60·5	10th	46·1
	Yamethin	?	29·240	?	?	29·318	14th	29·164	25th	·184	77·5	98·9	?	69·2	?	84·1	?	29·7	104·1	2 days	58·1	11th	46·0
	Fort Stedman	?	26·972	?	?	27·051	16th	26·871	6th	·180	68·3	88·9	?	60·5	?	74·7	?	28·4	95·1	3 days	51·0	10th	44·1
Upper Burma	Mandalay	?	29·649	?	?	29·758	14th	29·532	5th	·226	79·0	95·2	?	68·5	?	81·9	?	26·7	103·1	29th	61·1	10th	42·0
	Kindat	?	29·541	?	?	29·679	14th	29·389	6th	·290	66·6	87·2	−2·7	61·2	+1·1	74·2	−0·8	26·0	96·8	4 days	54·3	2 days	42·0
	Lashio*	?	27·106	?	?	27·216	1st	27·036	18th	·180	63·9	83·2	?	56·0	?	69·6	?	27·2	101·0	18th	48·0	11th	53·0
	Bhamo	?	29·518	?	?	29·611	14th	29·367	6th	·244	66·5	85·1	?	60·9	?	73·0	?	24·2	96·1	2 days	53·9	10th	42·2
3. Assam		...	...	−·041	...	...	...	...	...	...	...	82·8	−0·8	62·5	−0·2	72·7	−0·5	20·3	...	...	...	...	36·0
Assam (Surma)	Silchar	104	29·823	−·041	29·882	29·968	14th	29·635	5th	·333	69·6	83·6	−1·7	64·5	+1·1	74·1	−0·3	19·1	92·3	25th	56·9	14th	35·4
Brahmaputra	Sibsagar	333	29·590	−·046	29·891	29·757	13th	29·319	6th	·438	64·2	77·2	−2·0	60·3*	+0·2	68·8*	−0·9	16·9	88·4	31st	55·7	21st	32·7
	Dhubri	115	29·772	−·037	29·845	29·953	14th	29·557	6th	·396	67·4	87·7	+1·2	62·7	−1·8	75·2	−0·3	25·0	96·5	25th	56·7	9th	39·8
4. Bengal and Orissa		...	...	−·031	...	...	...	...	...	...	...	89·9	+0·5	67·1	+0·2	78·4	+0·3	22·6	...	...	...	...	39·1
East Bengal	Chittagong	87	29·835	−·042	29·871	29·972	14th	29·653	6th	·319	73·6	84·7	−1·5	68·4	+0·7	76·6	−0·4	16·3	91·7	29th	62·1	2 days	29·6
	Lungleh	?			Not r	ecorded.					66·4	73·0	?	60·8	?	66·9	?	12·2	80·8	25th	53·2	9th	27·6
	Noakhali	43	29·857?	?	29·847?	30·000	14th	29·696	3rd	·304	77·1	86·4	?	69·4	?	77·9	?	17·0	94·1	30th	60·0	27th	34·1
	Comilla	36	29·872	?	29·857	30·011	14th	29·708	3rd	·303	74·3	87·8	?	67·8	?	77·8	?	20·0	95·3	25th	58·9	13th	36·4
	Sirajganj	49	29·838	?	27·838	30·000	14th	29·672	5th	·328	72·5	89·9	?	61·8	?	75·9	?	28·1	98·4	25th	52·1	13th	46·3
	Narayanganj	26	29·874	−·037	29·845	30·029	14th	29·697	3rd	·332	74·7	90·2†	+0·2	68·8†	+0·4	79·5†	+0·3	21·4	97·1	25th	61·3	13th	35·8
	Barisal	13	29·882?	−·041?	29·841?	30·042	14th	29·710	3rd	·332	?	?	?	?	?	?	?	?	?	...	?	...	?
	Mymensingh	59	29·835	−·042	29·847	29·996	14th	29·660	5th	·336	70·4	86·7	+0·2	63·9	−0·2	75·3	?	22·8	95·4	25th	54·1	13th	41·3
Deltaic Bengal	Faridpur	46	29·863	?	29·858	30·015	14th	29·702	3rd	·313	72·9	86·9	?	65·2	?	76·1	?	21·7	97·5	25th	54·5	13th	43·0
	Jessore	33	29·871	−·028	29·852	30·029	14th	29·699	3rd	·330	75·3	93·7	+1·2	?	?	?	?	?	101·0	25th	?	...	?
	Calcutta	21	29·883	−·028	29·850	30·024	14th	29·701	5th	·323	75·8	91·7	+1·3	69·7	0	80·7	+0·7	22·0	99·0	25th	59·7	9th	39·3
	Saugor Island	25	29·886	−·021	29·855	30·013	14th	29·703	5th	·310	79·5	88·2	+1·0	76·2	+1·2	82·2	+1·1	12·0	97·2	26th	65·9	9th	31·3
	Krishnagar	47	29·851	?	29·847	30·003	14th	29·685	5th	·318	76·5	93·9	?	65·5	?	79·7	?	28·4	101·4	25th	53·3	13th	48·1
	Midnapore	149	29·767	?	29·863	29·895	14th	29·588	5th	·307	80·2	98·4	?	71·3	?	84·8	?	27·1	105·4	25th	62·2	9th	43·2

* Mean of 30 days. † Mean of 22 days.

I.

in India, Burma, etc., in March 1894.

Wind Direction, Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 March 1894.	Normal rainfall for period, 1st March to 31st March.	Variation from normal of period 1st March to 31st March.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·43	0·52	−0·03	...	...	...	...	**1. Burma Coast and Bay Islands.**	
5	2	6	4	3	...	...	4	7	4·1	4·4	−7	84	·876	2·6	0	?	?	0	0·47	− 0·47	0	0·47	− 0·47	0	Port Blair .	Bay Islands.
...	...	...				Imperfect			?	?	?	?	?	?	3?	?	?	3·58?	?	?	3·58?	?	?	2·88	Camorta.	
...	8	...	3	3	1	3	2	11	1·7	2·0	−15	81	·835	4·4	4	?	?	2·84	2·48	+ 0·36	2·84	2·48	+ 0·36	0·95	Mergui .	Tenasserim.
28	...	...	...	...	...	...	...	2	1·2	?	?	84	·767	0·4	0	?	?	0	?	?	0	?	?	0	Tavoy.	
...	...	2	7	8	6	7	1	...	5·1	3·0	+70	82	·790	4·5	1	0·36	+0·64	1·05	0·41	+0·64	1·05	0·41	+ 0·64	1·05	Moulmein.	
8	3	...	1	12	5	...	...	2	2·5	2·8	−11	76	·713	3·9	0	0·18	−0·18	0	0·05	− 0·05	0	0·05	− 0·05	0	Toungoo.	
...	1	...	...	...	5	10	11	4	4·9	5·0	− 2	86	·760	2·3	0	0·36	−0·36	0	0·28	− 0·28	0	0·28	− 0·28	0	Rangoon .	Lower Burma.
12	...	...	...	...	2	4	...	13	5·9	4·9	+20	85	·782	2·5	0	0	0	0	0·02	− 0·02	0	0·02	− 0·02	0	Bassein.	
3	6	...	1	...	...	1	5	15	7·9	7·9	0	77	·790	4·0	0	0	0	0	0·01	− 0·01	0	0·01	− 0·01	0	Diamond Island.	
...	6	17	2	1	4	1	...	...	4·6	3·7	+24	83	·726	2·9	0	0·82	−0·82	0·02	0·42	− 0·40	0·02	0·42	− 0·40	0·02	Akyab .	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·84	0·78	+0·07	...	...	...	...	**2. Burma Inland.**	
...	2	2	...	1	5	5	6	10	4·9	5·2	− 6	62	·579	0·3	0	0	0	0	0·05	− 0·05	0	0·05	− 0·05	0	Thayetmyo.	Central Burma.
11	2	...	1	11	2	1	...	3	7·7	?	?	58	·542	0·3	0	?	?	0	?	?	0	?	?	0	Minbu.	
5	1	...	...	24	...	...	...	1	5·5	?	?	63	·595	0·2	1	?	?	0·20	?	?	0·20	?	?	0·13	Yamethin.	
22	...	...	...	...	...	8	...	1	?	?	?	71	·495	1·2	1	?	?	0·23	?	?	0·23	?	?	0·16	Fort Stedman.	
8	3	1	1	3	14	1	...	...	4·5	?	?	55	·530	1·9	2	?	?	0·82	?	?	0·82	?	?	0·66	Mandalay .	Upper Burma.
19	1	...	...	1	...	1	5	4	1·2	?	?	88	·573	3·5	3	?	?	1·70	1·51	+0·19	1·70	1·51	+ 0·19	0·63	Kindat.	
...	9	14	...	...	...	5	...	2	?	?	?	82	·490	4·1	3	?	?	2·32	?	?	2·32	?	?	1·30	Lashio.*	
...	9	14	...	...	...	5	...	2	2·7	?	?	82	·529	3·0	4	?	?	1·46	?	?	1·46	?	?	0·95	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4·44	5·27	−0·83	...	...	...	...	**3. Assam.**	
23	...	...	6	1	...	1	...	...	3·3	3·3	0	86	·627	4·6	8	9·82	−1·82	9·71	8·81	+ 0·90	9·71	8·81	+ 0·90	2·97	Silchar .	Assam (Surma).
14	...	14	...	1	1	1	...	...	2·8	2·8	0	93	·564	5·7	10	9·27	+0·73	3·46	4·83	− 1·37	3·46	4·83	− 1·37	0·64	Sibsagar .	Brahmaputra.
1	3	11	6	2	1	4	2	1	5·4	6·3	−14	73	·490	1·7	0	2·29	−2·29	0·15	2·16	− 2·01	0·15	2·16	− 2·01	0·09	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·84	1·68	−0·14	...	...	...	...	**4. Bengal and Orissa.**	
1	4	8	7	6	3	1	1	...	5·1	5·8	−12	92	·765	3·5	8	3·45	+4·55	12·44	2·56	+ 9·88	12·44	2·56	+ 9·88	2·96	Chittagong	East Bengal.
		Not	reco	rded					?	?	?	68	·435	?	6	?	?	11·80	?	?	11·80	?	?	2·80	Lungleh.	
...	1	4	4	3	4	10	2	3	3·1	?	?	89	·832	3·0	4	3·65	+0·35	8·01	3·55	+ 4·46	8·01	3·55	+ 4·46	4·78	Noakhali.	
2	...	1	3	2	21	...	1	1	4·1	?	?	91	·771	4·4	6	4·41	+1·59	4·53	3·76	+ 0·77	4·53	3·76	+ 0·77	1·86	Comilla.	
12	...	1	2	2	1	10	3	...	2·8	?	?	70	·551	2·4	1	2·26	−1·26	0·16	1·28	− 1·12	0·16	1·28	− 1·12	0·16	Sirajganj.	
		Not	reco	rded	...	...	...	...	?	4·7	?	82	·708	4·0	6	4·00	+2·00	4·22	3·11	+ 1·11	4·22	3·11	+ 1·11	1·18	Narayanganj	
20	...	...	...	...	3	3	2	3	3·3	?	?	?	?	3·4	3	4·65	−1·65	5·74	2·72	+ 3·02	5·74	2·72	+ 3·02	3·55	Barisal.	
3	...	6	9	7	1	3	1	1	3·6	?	?	79	·594	3·5	2	5·90	− 3·90	1·18	2·24	− 1·06	1·18	2·24	− 1·06	0·90	Mymensingh.	
17	...	1	...	...	6	5	1	1	1·9	?	?	85	·676	2·5	3	3·85	−0·85	1·93	2·93	− 1·00	1·93	2·93	− 1·00	1·60	Faridpur .	Deltaic Bengal.
14	1	...	...	2	2	5	4	3	2·7	3·2	−16	75	·668	2·9	2	3·64	−1·64	1·07	2·42	− 1·35	1·07	2·42	− 1·35	0·76	Jessore.	
9	...	2	...	...	7	7	...	6	3·8	5·5	−31	77	·689	2·7	2	2·09	−0·09	1·50	1·43	+ 0·07	1·50	1·43	+ 0·07	1·01	Calcutta.	
...	7	2	...	...	6	9	4	3	13·9	12·3	+13	82	·830	4·5	1	2·18	−1·18	0·33	1·63	− 1·30	0·33	1·63	− 1·30	0·33	Saugor Island.	
1	1	2	1	3	4	6	9	4	5·1	?	?	59	·538	3·0	0	2·20	−2·20	0·06	1·48	− 1·42	0·06	1·48	− 1·42	0·06	Krishnagar.	
5	7	6	...	2	4	4	...	3	3·9	?	?	57	·558	1·6	0	2·20	−2·20	0·07	1·46	− 1·39	0·07	1·46	− 1·39	0·07	Midnapore.	

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

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.
Central Bengal	Bankura	298	29·594	?	29·838	29·714	14th	29·425	5th	·289	76·3	95·2	?	68·8	?	82·1	?	26·4	102·1	18th & 25th	59·8	13th	42·3
	Raniganj	334	29·563	?	29·854	29·713	14th	29·393	5th	·320	72·5	94·2	?	67·0	?	80·6	?	27·2	102·4	25th	58·4	13th	44·0
	Burdwan	99	29·803	−·023	29·851	29·945	14th	29·625	5th	·320	76·0	93·7	+0·1	68·1	−0·4	80·9	−0·2	25·6	101·2	25th	58·1	14th	43·1
	Naya Dumka	489	29·388	?	29·843	29·535	14th	29·223	6th	·312	75·1	93·1	?	65·0	?	79·1	?	28·1	101·7	25th	55·6	13th	46·1
	Berhampore	67	29·832	−·020	29·848	29·981	14th	29·662	5th	·319	72·4	92·2	−0·6	65·5	−0·5	78·9	−0·6	26·7	100·2	25th	55·2	13th	45·0
	Rampur Boalia.	70	29·816	?	29·837	29·966	14th	29·650	5th	·316	74·0	90·4	?	63·9	?	77·2	?	26·5	99·1	25th	54·4	14th	44·7
	Malda*	72	29·802	?	29·828	29·975	14th	29·625	6th	·350	73·6	91·5	?	59·9	?	75·7	?	31·6	99·6	25th	51·5	13th	48·1
	Bogra†	61	29·800	−·039	29·815	29·970	14th	29·642	5th	·328	72·2	90·0	+0·5	61·8	−1·8	75·9	−0·7	28·2	97·2	5 days	53·0	13th	44·2
North Bengal	Dinajpur	123	29·763	?	29·843	29·953	14th	29·553	6th	·400	71·2	89·8	+0·6	60·5	−1·0	75·2	−0·2	29·3	97·6	2 days	51·4	13th	46·2
	Rangpur	123	29·763	?	29·844	29·950	14th	29·558	6th	·392	68·5	87·4*	?	58·4	?	73·0*	?	29·0	95·6	24th	50·1	13th	45·5
	Jalpaiguri	284	29·609	?	29·860	29·795	14th	29·373	6th	·422	68·0	83·9	−1·1	59·0	−0·2	71·5	−0·7	24·9	92·9	31st	51·6	3 days	41·3
Orissa	Balasore	56	29·849	−·022	29·852	29·978	13th	29·663	5th	·315	78·0	94·5	+3·4	71·4	+1·6	83·0	+2·5	23·1	101·5	26th	62·1	9th	39·4
	False Point	21	29·898	−·023	29·861	30·026	14th	29·737	5th	·289	79·7	87·2	−0·4	73·4	+1·2	80·3	+0·4	13·8	93·5	26th	64·0	9th	29·5
	Cuttack	80	29·823	−·033	29·847	29·944	14th	29·666	5th	·278	79·2	98·2	+1·4	74·1	+1·4	86·2	+1·4	24·1	103·3	26th	66·8	9th	36·5
	Shortt's Island	?	29·887	?	?	30·020	14th	29·716	5th	·304	80·2	86·7	?	76·5	?	81·6	?	10·2	93·4	26th	74·6	4th & 20th	18·8
	Puri	15	29·886	?	29·841	30·013	14th	29·728	5th	·285	79·6	86·6	?	76·7*	?	81·7*	?	9·9	93·7	2nd	69·6	9th	24·1
5. Gangetic Plain and Chota Nagpur.		...	...	−·020	...	...	...	...	...	...	...	89·5	−1·5	61·6	−1·2	75·7	−1·4	28·0	...	...	...	...	45·3
Chota Nagpur	Hazaribagh	2,007	27·879	−·022	29·850	27·994	14th	27·716	6th	·278	72·7	88·1	−0·6	63·6	−0·3	75·9	−0·5	24·5	95·3	18th	53·7	12th	41·6
	Ranchi	2,128	27·765	?	29·852	27·872	14th	27·604	6th	·268	72·3	87·3	?	63·4	?	75·4	?	23·9	94·1	18th	54·3	13th	39·8
	Daltonganj	730?	29·150	?	29·828	29·272	15th	29·004	5th	·268	65·0	88·9	?	60·2	?	74·6	?	28·7	99·8	25th	50·0	13th	49·8
	Chaibassa	760	29·133	−·012	29·849	29·254	13th	28·987	6th	·267	76·1	96·6	+2·5	68·1	+0·9	82·4	+1·7	28·5	102·5	25th	57·9	13th	44·6
Bihar, South	Gaya	375	29·520	−·024	29·857	29·661	14th	29·378	1st	·283	73·3	91·3	−2·4	63·0*	−3·2*	77·1*	−2·8*	28·3*	100·3*	18th	54·8	13th	45·5
	Dehri	351	29·550?	?	29·860?	29·654	14th	29·386	3rd	·268	76·2	91·4	?	66·5	?	79·0	?	24·9	99·4	31st	58·0	13th	41·4
	Patna	183	29·704	−·022	29·843	29·859	14th	29·536	6th	·323	72·8	89·7	−1·4	63·2	−0·4	76·5	−0·9	26·5	99·0	31st	54·2	14th	44·8
	Arrah	190	29·696	?	29·843	29·840	14th	29·538	6th	·302	71·3	91·3	?	61·8	?	76·6	?	29·5	99·4	25th & 31st	53·9	8th	45·5
	Buxar	239	29·651	?	29·851	29·781	14th	29·505	6th	·276	71·3	89·4	?	63·0	?	76·2	?	26·4	98·5	31st	54·4	7th	44·1
Bihar, North	Purnea	125	29·754	−·028	29·836	29·940	14th	29·553	6th	·387	68·5	88·9	−1·3	59·6	−0·8	74·3	−1·1	29·3	97·8	31st	50·3	10th	47·5
	Bhagalpur	160	29·717	?	29·833	29·889	14th	29·534	6th	·355	73·6	90·7	?	62·9	?	76·8	?	27·8	99·8	31st	53·0	8th	46·8
	Darbhanga	166	29·710	−·035	29·835	29·894	14th	29·528	6th	·366	68·4	87·0	−0·7	61·8	−1·4	74·5	−1·1	25·2	95·5	2 days	55·4	2 days	40·1
	Muzaffarpur	178	29·704	?	29·841	29·890	14th	29·523	6th	·367	68·6	87·0	?	59·6	?	73·3	?	27·4	95·7	31st	52·3	8th & 10th	43·4
	Motihari	224	29·638	?	29·826	29·822	14th	29·444	6th	·378	68·0	88·2‡	?	57·7	?	73·8‡	?	30·5	96·0	25th & 31st	49·9	10th & 13th	46·1
	Chapra	181	29·713	?	29·852	29·872	14th	29·542	6th	·330	72·8	89·6	?	63·0	?	76·4	?	26·6	98·1	25th	54·1	12th	44·0
N.-W. Provinces (Eastern Districts).	Benares	267	29·635	−·011	29·867	29·757	14th	29·483	6th	·274	69·9	90·2	−3·1	60·1	−2·2	75·2	−2·7	30·1	98·8	31st	52·5	14th	46·3
	Allahabad	309	29·593	−·017	29·865	29·702	14th	29·440	6th	·262	71·5	89·9	−3·4	61·1	−1·1	75·5	−2·3	28·8	99·1	17th	52·9	13th	46·2
N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·616?	−·022?	29·838?	29·759	14th	29·426	6th	·333	70·0	88·7	−2·1	61·9	−0·6	75·3	−1·4	26·8	97·8	31st	54·8	13th	43·0
Oudh, South	Lucknow	370	29·539	+·003	29·881	29·663	14th	29·382	6th	·281	69·1	89·1	−2·3	58·0	−2·6	73·6	−2·5	31·1	98·3	31st	49·0	7th	49·3
Oudh, North	Bahraich	403	29·488?	?	29·867?	29·620	14th	29·285	6th	·335	67·6	87·1	?	?	?	?	?	?	96·4	31st	?	?	?
N.-W. Provinces (Central).	Cawnpore	416	29·481	?	29·869	29·593	14th	29·331	6th	·262	70·6	89·7	?	58·4	?	74·1	?	31·3	98·9	31st	49·5	7th	49·4
	Mainpuri	516	29·388	?	29·881	29·495	14th	29·231	6th	·264	67·4	89·2	?	57·0	?	73·1	?	32·2	99·8	31st	47·1	7th & 12th	52·7

* Mean of 30 days. † Mean of 23 days ‡ Mean of 24 days.

I—*continued.*

in India, Burma, etc., in March 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 March 1894.	Normal rainfall for period, 1st March to 31st March.	Variation from normal of period 1st March to 31st March.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
17	1	...	...	1	...	2	4	6	2·9	?	?	48	·437	2·4	0	1·85	− 1·85	0·07	1·25	− 1·18	0·07	1·25	− 1·18	0·07	Bankura .	Central Bengal.
2	6	4	1	1	1	...	6	10	2·9	?	?	48	·388	0·8	0	1·45	− 1·45	0·06	0·65	− 0·59	0·06	0·65	− 0·59	0·03	Raniganj.	
10	2	1	1	1	2	4	5	5	2·1	3·4	−38	55	·493	3·6	1	1·82	− 0·82	0·18	1·73	− 1·55	0·18	1·73	− 1·55	0·18	Burdwan.	
8	1	1	1	1	1	1	8	9	3·8*	?	?	41	·354	1·1	0	1·28	− 1·28	0·03	0·70	− 0·67	0·03	0·70	− 0·67	0·03	Naya Dumka	
5	...	1	2	...	2	12	6	3	2·9	3·4	−15	63	·497	2·5	0	1·64	− 1·64	0·12	1·21	− 1·09	0·12	1·21	− 1·09	0·09	Berhampore.	
11	...	3	1	...	1	9	4	2	4·5	?	?	69	·582	1·9	1	1·35	− 0·35	0·29	0·81	− 0·52	0·29	0·81	− 0·52	0·25	Rampur Boalia.	
1	...	...	...	...	1	18	3	7	3·4	?	?	54	·440	1·8	1	1·10	− 0·10	0·20	0·74	− 0·54	0·20	0·74	− 0·54	0·20	Malda.*	
2	1	2	4	2	1	5	5	1	3·8	?	?	64	·500	1·6	1	3·50	− 2·50	0·15	0·82	− 0·67	0·15	0·82	− 0·67	0·15	Bogra.†	
1	3	1	...	...	1	...	25	...	3·0	?	?	55	·416	1·5	1	2·60	− 1·60	0·20	0·97	− 0·77	0·20	0·97	− 0·77	0·20	Dinajpur .	North Bengal.
2	1	4	7	5	3	4	4	1	3·2	?	?	70	·487	1·0	0	1·60	− 1·60	0·05	1·30	− 1·25	0·05	1·30	− 1·25	0·05	Rangpur.	
7	2	9	8	4	...	...	...	1	2·5	?	?	69	·475	2·5	1	5·79	− 4·79	0·13	1·80	− 1·67	0·13	1·80	− 1·67	0·10	Jalpaiguri.	
2	1	2	1	...	3	16	6	...	5·9	?	?	76	·747	1·3	1	3·85	− 2·85	0·36	1·35	− 0·99	0·36	1·35	− 0·99	0·28	Balasore .	Orissa.
1	5	1	...	...	5	15	3	1	11·3	10·9	+4	84	·860	4·2	0	2·00	− 2·00	0	1·26	− 1·26	0	1·26	− 1·26	0	False Point.	
16	...	2	...	...	4	7	2	...	3·3	3·5	−6	74	·741	2·6	1	1·64	− 0·64	0·16	1·34	− 1·18	0·16	1·34	− 1·18	0·16	Cuttack.	
...	3	1	...	...	4	17	4	2	16·9	?	?	81	·833	1·4	0	?	?	0·04	?	?	0·04	?	?	0·04	Shortt's Island.	
11	1	...	1	...	...	18	...	...	12·5	?	?	85*	·360*	2·2	0	0·80	− 0·80	0	0·52	− 0·52	0	0·52	− 0·52	0	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·10	0·49	−0·39	...	...	...	...	**5. Gangetic Plain and Chota Nagpur.**	
4	5	...	1	...	2	3	7	9	9·8	7·4	+ 32	37	·292	3·0	0	1·82	−1·82	0·03	0·96	− 0·93	0·03	0·96	− 0·93	0·03	Hazaribagh.	Chota Nagpur.
14	1	...	1	...	1	5	3	6	7·0	?	?	43	·339	2·9	1	2·32	−1·32	0·16	1·09	− 0·93	0·16	1·09	− 0·93	0·11	Ranchi.	
...	3	...	...	...	2	11	4	11	6·0	?	?	66	·412	3·4	0	?	?	0·01	?	?	0·01	?	?	0·01	Daltonganj.	
4	1	2	...	1	1	15	5	2	2·3	?	?	48	·430	2·3	0	2·20	− 2·20	0·66	1·21	− 1·15	0·06	1·21	− 1·15	0·03	Chaibassa.	
...	...	...	3	3	9	6	8	2	7·0	3·3	+112	61	·499	2·8	0	1·18	− 1·18	0·02	0·58	− 0·56	0·02	0·58	− 0·56	0·02	Gaya .	Bihar, South.
1	...	...	1	...	6	15	7	1	8·1	?	?	58	·519	1·5	0	1·14	− 1·14	0·02	0·70	− 0·68	0·02	0·70	− 0·68	0·02	Dehri.	
5	...	...	2	...	...	7	16	1	4·8	3·4	+ 41	43	·342	2·1	1	0·82	+ 0·18	0·23	0·48	− 0·25	0·23	0·48	− 0·25	0·18	Patna	
...	3	...	1	...	3	10	10	4	4·3	?	?	50	·385	1·5	0	0·95	− 0·95	0·02	0·34	− 0·32	0·02	0·34	− 0·32	0·02	Arrah.	
...	...	...	1	...	4	7	17	2	5·5	?	?	49	·356	2·1	0	0·85	− 0·85	0·09	0·28	− 0·19	0·09	0·28	− 0·19	0·09	Buxar.	
1	1	6	2	2	1	6	6	6	6·7	3·4	+ 97	66	·461	0·5	0	0·73	− 0·73	0·06	0·49	− 0·43	0·06	0·49	− 0·43	0·06	Purnea .	Bihar, North.
12	...	1	1	...	4	8	4	1	3·0	?	?	47	·382	2·7	1	0·65	+ 0·35	0·14	0·33	− 0·19	0·14	0·33	− 0·19	0·13	Bhagalpur.	
2	1	2	3	2	2	6	8	5	5·0	4·5	+ 11	60	·418	1·6	1	0·91	+ 0·09	0·20	0·41	− 0·21	0·20	0·41	− 0·21	0·17	Darbhanga.	
5	...	2	3	1	...	9	10	1	4·9	?	?	68	·477	1·5	0	1·05	− 1·05	0·04	0·42	− 0·38	0·04	0·42	− 0·38	0·04	Muzaffarpur.	
2	...	3	3	1	1	6	11	4	7·8	?	?	64	·442	1·1	0	0·82	− 0·82	0·13	0·37	− 0·24	0·13	0·37	− 0·24	0·06	Motihari.	
1	...	...	1	1	1	10	14	3	6·3	?	?	54	·427	1·9	1	0·75	+ 0·25	0·17	0·29	− 0·12	0·17	0·29	− 0·12	0·16	Chapra.	
9	...	...	1	2	4	10	5	...	4·9	4·8	+ 2	66	·486	2·3	0	0·64	− 0·64	0·09	0·28	− 0·19	0·09	0·28	− 0·19	0·09	Benares .	N.-W. Provinces (Eastern Districts).
5	2	...	2	1	2	4	9	6	4·6	2·8	+ 64	50	·387	2·3	1	0·73	+ 0·27	0·15	0·32	− 0·17	0·15	0·32	− 0·17	0·14	Allahabad .	
4	4	1	...	...	1	2	16	3	3·2	3·6	− 11	53	·390	1·1	0	0·73	− 0·73	0·07	0·42	− 0·35	0·07	0·42	− 0·35	0·05	Gorakhpur	N.-W. Provinces (East Sub-montane).
25	1	...	...	...	...	...	5	...	1·2	4·0	− 70	54	·377	2·2	1	1·00	0	0·25	0·37	− 0·12	0·25	0·37	− 0·12	0·23	Lucknow .	Oudh, South.
2	3	1	1	...	...	9	2	13	6·0	?	?	74	·504	1·5	0	?	?	0·08	0·47	− 0·39	0·08	0·47	− 0·39	0·08	Bahraich .	Oudh, North.
7	3	1	1	1	1	4	7	6	4·8	?	?	52	·385	1·7	0	0·80	− 0·80	0·07	0·24	− 0·17	0·07	0·24	− 0·17	0·07	Cawnpore .	N.-W. Provinces (Central).
29	...	1	1	...	...	1	2	6	1·7	?	?	64	·434	1·7	0	?	?	0	0·24	− 0·24	0	0·24	− 0·24	0	Mainpuri.	

* Mean of 30 days. † Mean of 23 days.

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
6. Upper—Sub-Himalayas		...	...	−·010	...	...	...	...	...	...	...	79·6	−4·5	55·0	−1·5	67·3	−3·0	24·7	...	...	...	...	47·1
N.-W. Provinces (Sub-montane).	Bareilly	568	29·313	−·003	29·866	29·426	14th	29·146	6th	·280	64·8	83·5	−4·1	57·1	−1·9	70·3	−3·0	26·4	93·9	31st	48·7	11th	45·2
	Dehra Dun	2,233	27·644	−·025	29·888	27·745	24th	27·450	3rd	·295	61·0	76·6	−2·8	54·0	−1·3	65·3	−2·1	22·6	89·0	30th & 31st	45·0	11th & 12th	44·0
	Roorkee	887	28·986	−·012	29·878	29·093	14th	28·823	6th	·270	61·9	81·4	−4·4	55·1	−1·3	68·3	−2·9	26·3	92·7	30th & 31st	45·6	12th	47·1
	Meerut	738	29·142	−·009	29·872	29·241	14th	28·984	4th & 6th	·257	64·9	82·8	−4·1	55·6	−2·2	69·2	−3·2	27·2	93·5	30th & 31st	47·1	12th	46·4
Punjab, Central.	Delhi	718	29·173	−·011	29·881	29·267	24th	28·986	4th	·281	66·9	82·3	−5·9	60·0	−2·1	71·2	−4·0	22·3	94·6	31st	50·6	13th	44·0
	Lahore	702	29·187	−·013	29·889	29·303	17th	28·790	4th	·513	62·3	78·8	−4·9	54·7	−0·1	66·8	−2·5	24·1	95·8	31st	46·2	12th	49·6
Punjab (Sub-montane).	Umballa	962?	28·985	?	29·894	29·091	24th	28·683	4th	·408	60·1	81·7	?	54·5	?	68·1	?	27·2	97·0	31st	46·5	11th	50·5
	Ludhiana	812	29·071	−·009	29·886	29·182	14th	28·769	4th	·413	63·0	79·2	−6·0	55·6	−1·6	67·4	−3·8	23·6	94·1	31st	46·7	12th	47·4
Punjab, North	Sialkot	830	29·057	−·003	29·894	29·181	24th	28·747	4th	·434	61·9	77·8	−4·0	54·3	−1·0	66·1	−2·5	23·5	93·6	31st	46·2	11th & 12th	47·4
	Rawalpindi	1,652	28·246	−·003	29·910	28·384	24th	27·821	4th	·563	55·2	72·1	−4·6	48·7	−1·7	60·4	−3·2	23·4	89·5	31st	40·0	10th & 11th	49·5
7. Indus Valley and North-West Rajputana.		...	...	−·006	...	...	...	...	...	...	...	85·0	−1·7	57·5	−1·4	71·3	−1·6	27·5	...	...	...	...	52·9
Punjab, West	Peshawar	1,110	28·834	−·015	29·931	29·025	24th	28·394	4th	·631	67·1	73·8	−2·9	50·0	−1·7	61·9	−2·3	23·8	90·5	30th	40·9	5th	49·6
	Mardan	?	?	?	?	?	...	?	...	?	55·6	79·7	?	48·8	?	64·2	?	30·9	88·1	31st	41·5	8th	46·6
	Khushab	612	29·290	?	29·896	29·432	24th	28·864	4th	·568	64·0	79·3	?	55·0	?	67·2	?	24·3	96·9	31st	46·1	11th	50·8
	Montgomery	558	29·351	?	29·899	29·473	24th	28·970	4th	·503	65·7	82·3	?	54·8	?	68·6	?	27·5	100·9	31st	44·0	11th	56·9
	D. I. Khan	573	29·338	?	29·913	29·502	24th	28·945	4th	·557	58·5	79·3	−4·7	52·6	−2·8	65·9	−3·8	26·7	98·1	31st	43·8	6th & 11th	54·3
	Mooltan	420	29·507	−·010	29·917	29·664	24th	29·165	4th	·499	63·7	83·0	−3·3	57·4	−0·6	70·2	−2·0	25·6	100·4	31st	49·2	11th & 12th	51·2
	Sirsa	662	29·235	−·008	29·890	29·345	24th	28·939	4th	·406	63·0	85·4	−0·3	55·5	−1·6	70·5	−1·0	29·9	101·3	31st	47·2	11th	54·1
Sind and Cutch.	Jacobabad	186	29·737	+·002	29·891	29·870	25th	29·515	4th	·355	70·0	89·5	−1·6	59·6	+0·2	74·5	−0·7	29·9	105·9	31st	45·0	11th	60·9
	Hyderabad	117	29·837	+·014	29·910	29·966	25th	29·671	4th	·295	71·1	92·1	−1·2	64·7	+0·2	78·4	−0·5	27·4	105·7	31st	50·5	11th	55·2
	Kurrachee	49	29·904	−·013	29·906	30·010	25th	29·750	6th	·260	69·9	87·3	+1·3	65·4*	−0·9*	76·6*	+0·2	21·9	93·5	30th	52·5	11th	46·0
	Bhuj*	395	29·545	−·014	29·901	29·622	13th	29·419	6th	·203	74·5	92·6	−0·9	65·3	−0·4	79·0	−0·7	27·3	102·0	30th	54·0	11th & 12th	48·0
Rajputana, West	Bickaneer	753	29·156	?	29·892	29·263	12th	28·901	4th	·362	67·6	87·6	−1·8	60·5	−5·0	74·1	−3·4	27·1	102·1	31st	50·6	12th & 13th	51·5
	Pachpadra	380	29·572	?	29·920	29·720	25th	29·376	4th	·344	69·9	93·6	?	58·0	?	75·8	?	35·6	106·5	31st	43·9	11th	62·6
8. East Rajputana, Central India and Gujarat.		...	...	−·002	...	...	...	...	...	...	...	91·2	−1·4	62·4	−1·0	76·8	−1·3	28·8	...	...	...	...	50·1
Rajputana, East	Jeypore	1,431	28·490	−·005	29·912	28·586	24th	28·311	4th	·275	69·2	89·1	−1·0	59·6	−1·4	74·4	−1·2	29·5	99·6	31st	47·7	12th	51·9
	Sambhar	1,254	28·655	−·003	29·905	28·748	24th	28·465	4th	·283	67·4	87·6	−0·6	56·0†	−3·3†	71·9†	−2·0	31·6	98·5	31st	43·9	12th	54·6
	Ajmere	1,611	28·321	−·007	29·931	28·429	24th	28·135	4th	·294	68·4	87·0	−2·2	58·8	−0·4	73·0	−1·3	28·2	98·4	31st	44·3	12th	54·1
	Deesa	466	29·482	+·001	29·914	29·557	24th	29·348	6th	·209	74·5	95·4	−0·4	63·4	−0·5	79·4	−0·5	32·0	104·9	30th & 31st	49·6	11th	55·3
Kathiawar	Rajkot	429	29·537	+·005	29·928	29·609	24th	29·416	6th	·193	74·3	94·6	−1·7	61·4	−1·2	78·0	−1·5	33·2	104·4	30th	46·0	11th	58·4
	Veraval	?	29·947	?	29·907	30·009	24th	29·842	6th	·167	74·6	87·5	?	65·6	?	76·6	?	21·9	98·6	17th	55·3	12th	43·3
	Bhavnagar	...	29·937	?	29·923	30·003	23rd	29·843	6th	·160	73·5	91·4	?	69·0	?	80·2	?	22·4	100·3	31st	57·5	12th	42·8
Central India	Nowgong	757	29·158	−·011	29·891	29·242	13th	29·010	4th	·232	69·4	90·2	−3·1	58·0	−2·8	74·2	−3·0	32·2	98·5	31st	47·0	13th	51·5
	Indore	1,823	28·113	0	29·907	28·196	30th	27·975	6th	·221	72·0	90·4	−2·1	61·0	+0·4	75·7	−0·9	29·4	97·5	17th	46·6	12th	50·9
	Neemuch	1,630	28·303	+·009	29·914	28·398	24th & 30th	28·151	4th	·247	71·8	90·4	−1·5	60·5	−1·0	75·5	−1·3	29·9	99·8	31st	49·9	13th	49·9
Gujarat	Surat	36	29·937?	−·003?	29·916?	29·999	14th	29·853	6th	·146	75·0	95·9	−0·2	66·8	+1·1	81·4	+0·5	29·1	104·7	29th	58·0	14th	46·7
	Ahmedabad	176	29·795	?	29·924	29·872	24th	29·664	6th	·208	75·7	95·6	?	67·3	?	81·5	?	28·3	105·3	29th	57·2	11th	46·1
N.-W. P., West	Agra	555	29·360	−·012	29·892	29·457	14th	29·203	4th	·254	68·7	89·1	−2·4	60·4	−2·4	74·8	−2·4	28·7	100·0	31st	48·9	12th	51·1
	Jhansi	858	29·077	−·001	29·906	29·169	14th	28·894	4th	·275	74·4	92·6	−0·5	65·6	+0·1	79·1	−0·2	27·0	102·1	31st	57·4	12th	44·7

* Mean of 29 days. † Mean of 30 days.

I—*continued.*

in India, Burma, etc., in March 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 March 1894.	Normal rainfall for period, 1st March to 31st March.	Variation from normal of period, 1st March to 31st March.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·64	0·95	+0·70	...	...	...	...	6. Upper—Sub-Himalayas.	
13	1	...	1	1	...	...	1	14	1·6	4·2	− 63	62	·382	2·0	2	1·82	+0·18	0·83	0·94	− 0·11	0·83	0·94	− 0·11	0·43	Bareilly .	N.-W. Provinces (Sub-Montane).
31	...	...	...	...	...	...	...	...	1·2	2·3	− 48	63	·338	2·8	3	2·64	+0·36	2·64	1·07	+ 1·57	2·64	1·07	+ 1·57	1·72	Dehra Dun.	
11	1	1	1	6	1	...	...	10	3·7	2·9	+ 28	69	·379	2·5	2	1·82	+0·18	1·77	0·72	+ 1·05	1·77	0·72	+ 1·05	1·45	Roorkee.	
9	...	...	1	...	...	1	14	6	2·3	2·7	− 15	59	·359	2·4	1	1·55	−0·55	0·96	0·77	+ 0·19	0·96	0·77	+ 0·19	0·89	Meerut.	
9	2	1	1	...	2	3	10	3	3·2	3·9	− 18	53	·332	1·8	2	1·18	+0·82	1·39	0·56	+ 0·83	1·39	0·56	+ 0·83	1·15	Delhi .	Punjab, Central.
5	5	1	4	2	1	1	7	5	2·8	3·1	− 10	73	·408	2·5	4	1·36	+2·64	0·98	0·73	+ 0·25	0·98	0·73	+ 0·25	0·40	Lahore.	
13	...	1	...	2	...	...	...	15	2·3	?	?	82	·424	2·5	3	?	?	1·25	0·73	+ 0·52	1·25	0·73	+0·52	0·53	Umballa .	Punjab (Sub-Montane).
18	3	1	...	1	...	1	...	7	1·6	1·8	−11	69	·400	3·3	2	2·36	−0·36	0·71	0·99	− 0·28	0·71	0·99	−0·28	0·41	Ludhiana.	
20	1	...	6	1	...	...	2	1	1·8	1·9	− 5	70	·389	2·5	2	2·64	−0·64	2·02	1·18	+0·84	2·02	1·18	+0·84	0·64	Sialkot .	Punjab, North.
20	1	1	1	...	...	1	3	4	1·6	2·6	−38	80	·351	3·7	6	3·91	+2·09	3·80	1·76	+2·04	3·80	1·76	+2·04	2·47	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·82	0·41	+0·31	...	...	...	...	7. Indus Valley and North-West Rajputana.	
12	2	...	...	4	5	5	1	2	3·7	3·7	0	77	·362	4·0	2	3·55	−1·55	1·46	1·70	−0·24	1·46	1·70	−0·24	0·68	Peshawar .	Punjab, West.
				Not	recorded				?	?	?	?	?	?	4	?	?	2·01	?	?	2·01	?	?	1·06	Mardan.	
19	...	6	...	1	...	2	...	3	2·9	?	?	60	·357	2·7	3	1·60	+1·40	2·77	0·54	+2·23	2·77	0·54	+2·23	1·69	Khushab.	
8	3	4	3	2	4	...	2	5	4·1	?	?	60	·361	2·5	2	1·00	+1·00	0·83	0·41	+0·42	0·83	0·41	+0·42	0·46	Montgomery	
18	1	1	...	...	...	1	2	8	2·2	2·1	+ 5	73	·360	2·9	3	1·55	+1·45	1·78	0·63	+1·15	1·78	0·63	+1·15	0·85	D. I. Khan.	
17	...	1	...	1	...	5	...	7	0·9	2·1	−57	63	·375	2·1	1	1·18	−0·18	0·99	0·38	+0·61	0·99	0·38	+0·61	0·93	Mooltan.	
11	2	3	1	2	3	3	2	4	4·7	3·8	+24	63	·359	2·1	2	0·55*	+1·45	0·36	0·37	−0·01	0·36	0·37	−0·01	0·26	Sirsa.	
14	2	1	7	5	...	1	1	...	3·5	3·9	−10	39	·280	2·1	0	0·73	−0·73	0	0·14	−0·14	0	0·14	−0·14	0	Jacobabad.	Sind and Cutch.
13	3	...	...	...	5	5	1	4	15·2	8·3	+83	48	·377	0·8	0	0·50	−0·50	0·04	0·14	−0·10	0·04	0·14	−0·10	0·04	Hyderabad.	
...	...	13	4	1	...	3	3	7	6·8	11·8	−42	?80†	?·616†	1·4	0	0·55	−0·55	0·02	0·23	−0·21	0·02	0·23	−0·21	0·02	Kurrachee.	
2	7	...	...	...	...	...	10	10	11·3	8·3	+36	55	·470	2·7	1	?	?	0·10	0·09	+0·01	0·10	0·09	+0·01	0·10	Bhuj.*	
2	3	4	6	2	5	2	1	6	4·9	4·3	+14	51	·349	2·4	0	?	?	0	0·20	−0·20	0	0·20	−0·20	0	Bickaneer .	Rajputana, West.
24	1	1	...	...	2	3	...	...	2·6	4·1	−37	47	·361	3·2	1	?	?	0·25	0·07	+0·18	0·25	0·07	+0·18	0·25	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·10	0·18	−0·06	...	...	...	...	8. East Rajputana, Central India and Gujarat.	
8	3	1	...	...	2	7	7	3	3·5	5·7	−39	46	·324	1·9	1	0·50	+0·50	0·27	0·39	−0·12	0·27	0·39	−0·12	0·27	Jeypore .	Rajputana, East.
10	7	4	3	1	1	...	3	2	6·0	6·2	−3	43	·287	1·6	0	0·64	−0·64	0	0·36	−0·36	0	0·36	−0·36	0	Sambhar.	
12	1	4	...	5	2	5	1	1	4·7	3·6	+31	49	·343	1·4	1	0·27	+0·73	0·41	0·17	+0·24	0·41	0·17	+0·24	0·41	Ajmere.	
...	3	8	1	2	...	1	11	5	8·1	8·9	−9	41	·333	1·9	0	0·18	−0·18	0·02	0·05	−0·03	0·02	0·05	−0·03	0·02	Deesa.	
4	4	7	3	...	...	1	4	8	8·0	8·1	−1	64	·549	0·7	0	0	0	0·01	0·01	0	0·01	0·01	0	0·01	Rajkot .	Kathiawar.
6	17	1	...	...	1	...	2	4	4·0	?	?	59	·505	2·8	0	?	?	0	?	?	0	?	?	0	Veraval.	
...	...	1	...	...	1	16	4	9	11·7	?	?	72	·599	2·0	0	?	?	0	?	?	0	?	?	0	Bhavnagar.	
7	2	1	1	1	1	8	5	5	2·9	2·3	+26	50	·358	2·8	1	0·55	+0·45	0·14	0·27	−0·13	0·14	0·27	−0·13	0·11	Nowgong .	Central India.
6	7	4	...	...	2	4	4	4	3·5	3·7	−5	47	·372	1·1	0	0	0	0·05	0·02	+0·03	0·05	0·02	+0·03	0·02	Indore.	
3	1	8	4	3	1	2	7	2	7·6	9·1	−16	33	·252	2·3	0	0·18	−0·18	0	0·08	−0·08	0	0·08	−0·08	0	Neemuch.	
...	7	1	...	2	...	7	5	9	?	6·5	?	66	·587	1·2	0	0	0	0	0	0	0	0	0	0	Surat .	Gujarat.
2	5	7	4	4	1	1	2	4	5·1	?	?	47	·413	2·4	0	?	?	0·01	?	?	0·01	?	?	0·01	Ahmedabad	
...	...	6	...	2	...	3	...	20	4·5	4·5	0	49	·331	1·0	2	0·82	+1·18	0·45	0·31	+0·14	0·45	0·31	+0·14	0·23	Agra . .	N.-W. P., West.
10	1	1	...	...	1	10	...	8	2·5	3·4	−26	37	·324	1·3	0	1·00	−1·00	0·04	0·35	−0·31	0·04	0·35	−0·31	0·04	Jhansi.	

* Mean o 29 days. † Mean of 16 days.

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

Meteorological Province or District.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
9. Deccan		...	...	−·009	...	...	...	...	...	...	...	95·8	−1·2	67·4	+0·5	81·7	−0·4	28·5	...	...	...	...	43·1
Bombay, Deccan	Belgaum	2,524	27·417	−·014	29·866	27·486	31st	27·310	6th	·176	74·6	92·8	−1·0	64·9	+0·9	78·9	−0·1	27·9	96·3	3 days	59·9	7th & 12th	36·4
	Sholapur*	1,590	28·345	−·010	29·881	28·433	31st	28·236	6th	·197	78·6	+99·0	−0·9	70·1†	+1·8	84·6	+0·5	28·9	102·7	25th	62·1	9th & 10th.	40·6
	Poona	1,840	28·107	−·012	29·906	28·194	31st	28·002	6th	·192	73·2	98·1	+0·9	64·1	−0·2	81·1	+0·4	34·0	103·5	26th & 29th.	53·9	12th	49·6
	Bijapur	1,946	27·992	?	29·875	28·050	29th	27·888	6th	·162	77·8	96·6	?	69·9	?	83·2	?	26·7	102·3	27th	63·0	9th	39·3
Khandesh	Malegaon	1,430	28·514	−·004	29·903	28·582	31st	28·400	6th	·182	76·9	96·6	−0·7	63·5	−0·2	80·1	−0·5	33·1	102·8	29th	51·0	12th	51·8
	Ahmednagar	2,152	27·796	?	29·898	27·874	30th	27·686	6th	·188	73·8	93·9	?	62·7	?	78·4	?	31·2	99·2	29th	50·4	12th	48·8
Berar	Akola	930	28·997	+·001?	29·883	29·096	30th	28·879	6th	·217	76·8	98·1	−0·8	66·9	+1·0	82·5	+0·1	31·2	103·7	29th	54·1	12th	49·6
	Amraoti	1,215	28·721	?	29·899	28·801	29th	28·595	6th	·206	76·7	97·1	−1·3	70·2	+1·8	83·6	+0·3	26·9	104·9	29th	60·8	9th & 13th.	44·1
Central Provinces, West.	Khandwa	1,044	28·884	−·007	29·899	28·961	14th	28·749	6th	·212	74·1	96·2	−1·3	65·4	+0·4	80·8	−0·5	30·8	104·2	29th	51·6	12th	52·6
	Hoshangabad	1,020	28·903	−·019	29·899	28·984	13th	28·745	6th	·239	72·8	92·6	−3·5	65·5	+1·2	79·1	−1·2	27·1	99·4	17th	55·3	12th	44·1
	Nagpur	1,025	28·897	−·002	29·880	28·991	13th	28·746	6th	·245	80·1	97·8	−0·7	68·5	+1·0	83·2	+0·2	29·3	100·8	4 days	58·2	13th	42·6
Central Provinces, Central.	Chanda	634	29·281	−·008	29·869	29·360	13th	29·140	6th	·220	76·5	99·2	−1·0	67·4	+0·1	83·3	−0·5	31·8	104·9	26th	56·6	8th & 9th	48·3
	Seoni	2,033	27·900	−·001	29·892	27·967	30th	27·734	6th	·233	72·4	91·6	−1·9	63·8	+0·3	77·8	−0·8	27·8	96·2	31st	56·0	8th & 9th	40·2
	Jubbulpore	1,327	28·596?	−·005?	29·902?	28·680	14th	28·438	6th	·242	71·1	90·6	−2·5	60·3	−0·7	75·5	−1·6	30·3	97·0	17th & 31st.	48·4	13th	48·6
	Saugor	1,762	28·158	+·007	29·896	28·233	31st	28·002	6th	·236	71·4	90·4	−1·9	64·0	−0·4	77·2	−1·2	26·4	98·4	31st	49·4	12th	49·0
Central Provinces, East.	Raipur	970	28·918	+·001?	29·875	29·042	13th	28·797	6th	·245	77·6	96·7	+0·3	69·3	+0·8	83·1	+0·6	27·4	100·9	25th & 28th.	59·7	13th	41·2
	Sutna	1,040	28·867	−·012	29·888	28·959	14th	28·709	6th	·250	71·6	88·4	−3·2	60·9	−0·2	74·7	−1·7	27·5	97·0	17th	49·3	13th	47·7
	Sambalpur	463	29·431	−·013	29·848	29·541	13th	29·282	6th	·259	76·6	96·6	−0·4	68·5	+1·1	82·6	+0·4	28·1	102·5	25th	60·2	15th	42·3
Hyderabad, North.	Aurangabad	?	28·089	?	?	28·176	31st	27·978	6th	·198	78·1	96·9	?	65·5	?	81·2	?	31·4	102·1	29th	58·3	12th	43·8
	Indur	?	?	?	?	?	...	?	...	?	80·2	97·4	?	69·9	?	83·7	?	27·5	101·7	26th	59·5	9th	42·2
	Bidar	?	27·778	?	?	27·851	29th	27·704	5th	·147	79·3	94·6	?	71·7	?	83·2	?	22·9	98·3	26th & 27th.	67·0	29th	31·3
Hyderabad, South.	Gulbarga	1,502	28·413	?	29·856	28·498	30th	28·296	6th	·202	81·0	99·0	?	71·1	?	85·1	?	27·9	103·1	26th & 27th	62·5	23rd	40·6
	Raichur	1,378	28·537?	?	29·855?	28·631	30th	28·391	6th	·240	80·9	99·4	?	73·9	?	86·7	?	25·5	104·5	27th	69·6	17th	34·9
	Hyderabad (Deccan).	1,690	28·246	−·022	29·886	28·334	30th	28·110	6th	·224	76·5	96·6	−1·1	69·8	+0·3	83·2	−0·4	26·8	101·4	26th	63·7	9th	37·7
	Secunderabad	1,787	28·165?	?	29·905?	28·253	30th	28·037	6th	·216	75·3	97·2	?	69·5	?	83·4	?	27·7	103·2	26th	65·0	9th & 19th	38·2
	Khamamet	373	29·556	?	?	29·649	29th	29·366	5th	·283	79·0	98·4	?	73·7	?	86·1	?	24·7	105·7	26th	68·8	22nd	36·9
10. West Coast		...	...	−·022	...	...	...	...	...	...	...	87·7	+0·3	75·6	+0·9	81·6	+0·6	12·1	...	...	...	...	22·2
Konkan	Bombay	37	29·920	−·017	29·897	29·972	30th	29·843	6th	·129	77·9	86·3	+0·7	74·3	+0·9	80·3	+0·8	12·0	91·0	26th	67·5	12th	23·5
	Ratnagiri	110	29·830	−·015	29·879	29·878	30th	29·749	6th	·129	78·8	87·1	−0·6	73·5	+1·2	80·4	+0·3	13·6	94·4	26th	65·4	12th	29·0
	Mormugao	60	29·895	?	29·890	29·940	13th & 31st.	29·816	6th	·124	79·9	87·0	?	75·4	?	81·2	?	11·6	91·0	30th	62·3	12th	28·7
	Goa	23	29·941	−·007	29·878	29·992	31st	29·869	5th	·123	79·0	84·4	?	75·8	?	80·1	?	8·6	89·0	30th	71·0	3 days	18·0
	Karwar	44	29·893	−·025	29·869	29·943	31st	29·806	6th	·137	76·3	87·9	+0·1	74·1	+1·1	81·0	+0·6	13·8	91·3	30th	68·3	12th	23·0
Malabar	Cochin	10	29·934	−·023	29·872	30·000	31st	29·851	6th	·149	82·1	91·6	+1·0	77·5	+0·8	84·6	+0·9	14·1	93·3	3 days	72·7	19th	20·6
	Calicut	27	29·915	−·040	29·872	29·974	31st	29·832	6th	·142	81·3	89·5	?	76·0	?	82·8	?	13·5	91·8	24th & 30th.	73·0	3 days	18·8
	Mangalore	65	29·881	−·026	29·878	29·929	31st	29·795	6th	·134	80·9	89·2	+0·2	76·2	+0·4	82·7	+0·3	13·0	92·9	31st	70·0	29th	22·9
	Trivandrum	198	29·744	?	29·873	29·806	19th	29·662	6th	·144	79·4	86·1	?	77·2	?	81·7	?	8·9	88·0	16th & 18th.	73·0	17th	15·0
11. South India		...	...	−·025	...	...	...	...	...	...	...	93·3	+0·3	72·4	+0·7	82·8	+0·4	20·9	...	...	...	...	32·3
Madras, South.	Pamban	37	29·907	?	29·871	29·969	15th	29·815	6th	·154	82·0	88·8	?	77·6	?	83·2	?	11·2	92·3	11th	73·2	16th	19·1
	Tinnevelly	168	29·784	?	29·881	29·844	14th	29·684	6th	·160	80·4	95·6	?	76·5	?	86·1	?	19·1	102·5	5th	73·4	2nd	29·1
	Madura	447	29·498	−·028	29·882	29·575	14th	29·402	6th	·173	80·6	96·1	−0·8	74·3	+1·8	85·2	+0·5	21·8	101·0	27th & 28th.	69·6	1st	31·4

* Mean of 27 days.
† " " 26 "

I—*continued.*

in India, Burma, etc., in March 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 March 1894.	Normal rainfall for period, 1st March to 31st March.	Variation from normal of period, 1st March to 31st March 1894.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·38	0·46	−0·11	...	...	...	..	**9. Deccan.**	
10	6	2	1	1	1	...	3	7	?	11·6	?	53	·460	2·4	2	1·00	+1·00	1·93	0·35	+1·58	1·93	0·35	+1·58	1·73	Belgaum	Bombay, Deccan.
3	5	4	...	4	...	1	1	9	9·7	7·4	+31	37	·367	2·4	0	0·36	−0·36	0·06	0·34	−0·28	0·06	0·34	−0·28	0·06	Sholapur.*	
11	1	2	...	2	...	2	7	6	7·8	8·3	− 6	49	·396	2·1	0	0·36	−0·36	0	0·05	−0·05	0	0·05	−0·05	0	Poona.	
2	1	7	...	2	2	4	1	12	6·0	?	?	50	·483	2·1	3	0·03	+2·97	1·26	?	?	1·26	?	?	0·65	Bijapur.	
2	2	2	1	...	2	3	9	10	10·4	6·4	+63	72	·663	2·2	1	0	+1·00	0·26	0·03	+0·23	0·26	0·03	+0·23	0·22	Malegaon	Khandesh.
6	12	1	1	1	1	...	2	7	7·4	?	?	65	·553	1·6	3	?	?	1·28	?	?	1·28	?	?	0·58	Ahmednagar.	
3	2	2	5	2	2	3	6	6	6·3	4·4	+43	47	·433	2·4	1	0·82	+0·18	0·31	0·55	−0·24	0·31	0·55	−0·24	0·27	Akola	Berar.
1	1	8	5	1	...	3	8	4	6·1	4·0	+53	37	·346	2·2	2	0·45	+1·55	0·37	0·40	−0·03	0·37	0·40	−0·03	0·22	Amraoti.	
2	3	3	5	...	2	3	5	8	6·3	4·6	+ 37	41	·346	1·7	2	0·18	+1·82	0·31	0·13	+ 0·18	0·31	0·13	+ 0·18	0·19	Khandwa	Central Provinces, West.
16	...	4	7	...	1	1	1	1	2·1	2·6	− 19	46	·380	2·8	0	0·36	−0·36	0·15	0·23	− 0·08	0·15	0·23	− 0·08	0·06	Hoshangabad.	
3	9	6	1	1	1	...	3	7	6·0	4·5	+ 33	38	·396	2·5	0	1·00	−1·00	0·16	0·61	− 0·45	0·16	0·61	− 0·45	0·06	Nagpur.	
4	6	6	6	5	...	...	...	4	2·9	3·2	− 9	44	·411	2·0	0	?	?	0·06	1·49	− 1·43	0·06	1·49	− 1·43	0·04	Chanda	Central Provinces, Central.
...	...					Not	recorde	d	?	3·4	?	56	·452	3·1	3	1·73	+1·27	0·94	0·70	+ 0·24	0·94	0·70	+ 0·24	0·63	Seoni.	
15	3	1	...	4	1	2	5	...	1·9	3·0	− 37	46	·353	3·2	1	0·82	+0·18	0·13	0·51	− 0·38	0·13	0·51	− 0·38	0·10	Jubbulpore.	
6	4	3	3	4	2	6	2	1	3·8	3·2	+ 19	42	·335	1·7	1	0·64	+0·36	0·25	0·26	− 0·01	0·25	0·26	− 0·01	0·13	Saugor.	
4	4	7	3	...	...	5	5	3	4·9	4·7	+ 4	39	·368	2·1	0	1·00	−1·00	0·03	0·81	− 0·78	0·03	0·81	− 0·78	0·03	Raipur	Central Provinces, East.
5	8	...	2	1	1	...	5	9	5·4	5·5	− 2	46	·349	2·1	0	0·91	−0·91	0·05	0·50	− 0·45	0·05	0·50	− 0·45	0·05	Sutna.	
...	8	12	2	2	2	1	2	2	3·7	2·0	+ 85	52	·479	2·9	0	?	?	0	1·20	− 1·20	0	1·20	− 1·20	0	Sambalpur.	
10	2	7	3	2	2	2	...	3	5·0	?	?	38	·365	1·6	2	?	?	0·83	0·06	+ 0·77	0·83	0·06	+ 0·77	0·15	Aurangabad	Hyderabad, North.
2	8	4	6	2	1	...	2	6	5·6	?	?	47	·491	2·5	1	?	?	0·20	0·27	− 0·07	0·20	0·27	− 0·07	0·20	Indur.	
...	9	6	1	...	3	8	...	4	7·1	?	?	55	·558	0·3	2	?	?	0·73	0·34	+ 0·39	0·73	0·34	+ 0·39	0·60	Bidar.	
2	5	9	6	4	2	2	1	...	8·7	?	?	57	·598	2·5	1	?	?	0·74	0·21	+ 0·53	0·74	0·21	+ 0·53	0·71	Gulbarga.	Hyderabad, South.
...	2	3	2	7	9	2	2	4	6·9	?	?	48	·507	1·5	0	?	?	0	?	?	0	?	?	0	Raichur.	
12	2	3	5	3	1	...	2	3	4·0	?	?	57	·526	2·0	0	?	?	0	0·75	− 0·75	0	0·75	−0·75	0	Hyderabad (Deccan).	
10	2	2	5	2	...	...	1	9	3·7	5·0	− 26	55	·482	1·6	0	?	?	0	?	?	0	?	?	0	Secunderabad.	
6	...	...	...	16	9	...	...	...	7·5	?	?	78	·780	2·5	0	?	?	0	?	?	0	?	?	0	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·53	0·58	+1·14	...	...	...	...	**10. West Coast.**	
...	10	9	4	4	1	1	1	1	10·9	11·5	− 5	75	·722	2·4	0	0·09	− 0·09	0·06	0·03	+ 0·03	0·06	0·03	+ 0·03	0·02	Bombay.	Konkan.
4	10	7	...	3	1	1	...	5	5·6	9·9	− 43	71	·702	2·0	1	0	+1·00	0·16	0·01	+ 0·15	0·16	0·01	+ 0·15	0·16	Ratnagiri.	
1	15	1	1	3	7	1	1	1	10·6	?	?	80	·817	2·3	0	?	?	0·01	?	?	0·01	?	?	0·01	Mormugao.	
11	7	8	1	1	1	...	...	2	5·1‡	?	?	76	·757	2·9	0	?	?	0	0	0	0	0	0	0	Goa.	
9	5	14	1	...	...	2	...	...	3·5	?	?	84	·759	2·6	0	0	0	0·06	0	+ 0·06	0·06	0	+ 0·06	0·05	Karwar.	
4	6	20	1	...	...	...	...	...	6·8	?	?	78	·865	2·0	4	2·45	+1·55	2·71	2·44	+ 0·27	2·71	2·44	+ 0·27	2·03	Cochin	Malabar.
11	2	5	6	5	...	...	...	2	14·5	?	?	78	·834	3·6	5	0·63	+4·37	3·89	0·52	+ 3·37	3·89	0·52	+ 3·37	2·24	Calicut.	
10	5	5	5	5	...	...	...	1	2·8	3·4	− 18	79	·836	3·5	1	0·10	+0·90	0·84	0·06	+ 0·78	0·84	0·06	+ 0·78	0·78	Mangalore.	
14	7	4	3	...	...	...	...	3	4·5	?	?	85	·860	3·0	6	?	?	6·06	1·57	+ 4·49	6·06	1·57	+ 4·49	2·14	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·71	0·53	+0·02	...	...	...	...	**11. South India.**	
...	...	1	14	9	4	1	2	...	8·3	?	?	83	·914	3·7	4	1·30	+2·70	2·33	0·79	+ 1·54	2·33	0·79	+ 1·54	1·15	Pamban	Madras, South.
...	6	6	...	2	1	1	2	13	4·4	?	?	78	·812	5·6	3	2·40	+0·60	3·35	?	?	3·35	?	?	2·97	Tinnevelly.	
5	10	7	2	2	1	...	...	4	2·4	4·1	− 41	76	·807	2·8	1	0·36	+0·64	0·20	0·61	− 0·41	0·20	0·61	− 0·41	0·20	Madura	

* Mean of 27 days. † Mean of 26 days. ‡ Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

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.
Madras, South Central.	Salem	940	29·028	−·033	29·909	29·103	30th	28·925	5th & 6th	·178	79·5	97·6	−0·8	72·5	+1·9	85·1	+0·6	25·1	101·4	9th & 26th	66·4	1st	35·0
	Coimbatore	1,348	28·588?	−·040?	29·887?	28·665	30th	28·492	6th	·173	75·3	94·4	−1·9	70·1	+0·3	82·3	−0·8	24·3	97·9	9th	62·6	2nd	35·3
Coorg	Mercara	3,781	26·258?	−·012?	29·875?	26·312	31st	26·174	5th	·138	68·9	82·6	−1·9	63·1	+1·9	72·8	0	19·5	88·0	9th	59·7	25th	28·3
	Chitaldroog	2,405	27·546	?	29·861	27·607	31st	27·449	6th	·158	78·3	94·0	?	70·8	?	82·4	?	23·2	98·2	26th & 27th.	61·4	27th	36·8
Mysore	Bangalore	3,019	26·968	−·028	29·881	27·035	30th	26·866	6th	·169	73·8	92·9	+2·5	66·2	+1·9	79·6	+2·2	26·7	96·8	27th	58·9	1st	37·9
	Hassan	3,091	26·911	?	29·893	26·968	31st	26·825	6th	·143	73·5	89·6	?	64·1	?	76·8	?	25·5	94·0	26th	57·8	1st	36·2
	Mysore	2,518	27·459?	?	29·904?	27·520	31st	27·328	6th	·192	74·1	92·4	?	68·3	?	80·4	?	24·1	95·9	27th	64·0	1st	31·9
Madras, East Coast, South.	Negapatam	31	29·918	−·026	29·878	29·981	14th	29·822	5th	·159	81·8	89·1	+0·4	75·2	0	82·2	+0·2	13·9	95·7	27th	62·2	5th	33·5
	Cuddalore	12	29·940	?	29·881	30·022	14th	29·834	6th	·188	80·7	88·9	?	73·3	?	81·1	?	15·6	95·8	27th	66·2	1st	27·6
	Trichinopoly	255	29·698	−·029	29·887	29·773	30th	29·592	6th	·181	80·9	97·9	+0·4	74·3	+1·7	86·1	+1·1	23·6	104·1	27th	69·4	1st	34·7
	Madras	22	29·931	−·030	29·884	30·012	15th	29·829	6th	·183	80·8	90·7	+1·0	72·8	+0·4	81·8	+0·7	17·9	98·5	26th	68·0	1st	30·5
Madras, East Coast, Central.	Nellore	71	29·861	?	29·866	29·961	15th	29·732	6th	·229	80·5	96·6	?	73·6	?	85·1	?	23·0	103·3	26th	69·1	1st	34·2
	Masulipatam	15	29·935	−·021	29·885	30·024	15th	29·864	6th	·220	80·2	91·3	−0·1	72·5	+0·1	81·9	0	18·8	99·2	25th	67·2	19th	32·0
Madras, Central	Cuddapah	433	29·492	?	29·864	29·585	15th	29·369	6th	·216	84·4	102·0	+0·8	76·3	+1·3	89·1	+1·1	25·7	107·3	27th	70·6	16th	36·7
	Kurnool	923	28·995	−·020	29·857	29·072	30th	28·871	6th	·201	82·2	100·4	−0·3	70·8	−1·2	85·6	−0·8	29·6	106·3	27th	65·3	16th & 17th.	41·0
	Bellary	1,475	28·456	−·008	29·869	28·523	30th	28·362	6th	·161	80·5	99·5	−0·9	72·3	+0·5	85·9	−0·2	27·2	105·0	27th	63·1	17th	41·9
Madras, East Coast, North.	Rajahmundry	112	29·824	−·020	29·874	29·920	15th	29·697	6th	·223	80·5	97·5	+1·6	74·7	+0·9	86·2	+1·3	22·8	103·6	5th	70·0	22nd	33·6
	Cocanada	26	29·916	−·017	29·877	30·012	15th	29·788	6th	·224	79·2*	92·7*	+3·2	74·4*	0	83·1*	+1·6	19·3	98·2	9th & 25th.	70·5	16th & 22nd.	27·7
	Vizagapatam	31	29·899	−·034	29·868	30·010	14th	29·753	6th	·257	82·0	87·4	+1·2	79·0	−0·6	83·2	+0·3	8·4	91·3	31st	75·9	1st	15·4
	Gopalpur	21	29·889	?	29·850	30·010	14th	29·730	6th	·280	77·7	87·3	?	73·9	?	80·6	?	13·4	100·7	26th	70·1	16th	30·6
12. Hill Stations		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	Kuch Fort*	?	23·961	?	?	24·120	30th	23·750	4th	·370	47·6	56·4	?	36·9	?	46·6	?	19·5	72·0	31st	25·0	10th	47·0
	Pishin	?	?	?	?	?	...	?	...	?	?	64·3	?	35·3	?	49·9	?	29·0	83·1	30th & 31st.	22·9	11th	60·2
	Quetta	5,502	24·661	+·012	?	24·805	25th	24·440	4th	·365	47·9	62·2	−2·3	40·0	+0·3	51·1	−1·0	22·2	78·7	31st	28·3	11th	50·4
	Sherino	?				Not recorded.					47·8	62·1†	?	43·9	?	53·4†	?	18·2	73·4	27th	31·1	10th	42·3
	Kalat	?	?	?	?	?	...	?	...	?	48·0	62·5	?	35·1	?	48·9	?	27·4	77·7	30th	20·4	11th	57·3
	Chaman	4,311	25·707	?	?	25·863	25th	25·419	4th	·444	53·9	65·9	?	46·2	?	56·1	?	19·7	84·0	31st	33·1	10th	50·9
Northern India	Srinagar	5,204	24·925	?	?	25·093	29th	24·504	4th	·589	41·4	52·1	?	37·0	?	44·6	?	15·1	69·8	31st	32·1	5 days	37·7
	Gilgit	?	25·990	?	?	26·200	12th	25·700	4th & 5th	·500	50·0	66·1‡	?	45·4	?	56·4‡	?	20·7	79·6	22nd	36·9	11th	42·7
	Cherat	?	25·708	?	?	25·823	24th	25·275	4th	·548	52·9	61·2	?	47·8	?	54·5	?	13·4	81·3	31st	36·1	10th	45·2
	Murree	6,344	23·807	−·031	?	23·953	31st	23·422	4th	·531	46·7	53·8	−4·9	43·0	−0·8	48·4	−2·8	10·7	73·1	31st	29·5	10th	43·6
	Poo	?	?	?	?	?	...	?	...	?	?	46·2	?	29·1	?	37·6	?	17·1	58·1	31st	21·0	8th	37·1
	Simla	7,224	23·081	−·029	?	23·223	31st	22·879	6th	·344	48·3	54·5	−6·9	43·4	−1·1	49·0	−4·0	11·1	67·5	31st	31·6	11th	35·9
	Chakrata	6,909	23·312	−·024	?	23·498	31st	23·105	6th	·393	48·7	58·9	−3·0	42·5*	−1·6	50·6*	−2·3	16·4	72·3	30th	31·6	11th	40·7
	Mussooree	?	23·536	?	?	23·679	31st	23·332	6th	·347	49·1	58·0	?	44·0	?	51·0	?	14·0	70·3	30th & 31st.	35·0	11th	35·3
	Ranikhet	6,069	24·093	−·012	?	24·228	31st	23·891	6th	·337	52·0	63·2	−1·9	47·7	−1·2	55·5	−1·6	15·5	75·5	30th	38·0	1st	37·5
	Gnatong	?	18·834	?	?	18·978	31st	18·649	6th	·329	31·3	39·4	?	23·3	?	31·4	?	16·1	54·9	31st	12·6	12th	42·3
	Darjeeling	7,421	22·943	−·025	?	23·156	31st	22·704	6th	·452	48·1	55·2	−1·5	42·3	−1·1	48·8	−1·3	12·9	68·9	31st	35·6	8th	33·3
	Gantok	?	24·437	?	?	24·623	31st	24·209	6th	·414	52·9	64·3	?	47·5	?	55·9	?	16·8	77·4	31st	40·4	8th	37·0
Central India	Mount Abu	3,945	26·084	−·008	?	26·179	30th	25·914	6th	·265	66·8	75·3	−3·2	60·5	−1·3	67·9	−2·3	14·8	86·2	31st	50·5	5th	35·7
	Pachmarhi	3,528	26·500	+·003	?	26·581	30th & 31st.	26·343	6th	·238	71·5	83·0	−1·5	60·8	+0·4	72·0	−0·6	22·2	89·7	17th	47·3	13th	42·4
South India	Wellington	6,200	24·291	−·019	?	24·345	31st	24·215	6th	·130	64·0	73·8	+0·1	52·1	−0·7	63·0	−0·3	21·7	78·2	5th	47·7	16th	30·5
	Kottagiri	?	23·878	?	?	23·910	16th	23·832	5th	·078	62·3	72·2	?	53·7	?	63·0	?	18·5	79·4	5th	40·0	18th	39·4

* Mean of 30 days. † Mean of 25 days. ‡ Mean of 24 days.

I—*continued.*

in India, Burma, etc., in March 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 March 1894.	Normal rainfall for period, 1st March to 31st March.	Variation from normal of period, 1st March to 31st March.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
5	2	15	1	2	3	2	1	...	5·1	5·5	− 7	72	·733	2·9	1	1·64	− 0·64	0·80	0·88	− 0·08	0·80	0·88	− 0·08	0·74	Salem	Madras, South Central.
...	7	5	4	...	13	1	1	...	2·6	3·3	− 21	82	·725	4·3	3	1·18	+ 1·82	0·96	0·59	+ 0·37	0·96	0·59	+ 0·37	0·52	Coimbatore.	
...	15	2	4	1	...	2	2	5	5·5	3·4	+ 62	81	·585	2·8	6	2·00	+ 4·00	2·69	0·87	+ 1·82	2·69	0·87	+ 1·82	1·12	Mercara	Coorg.
1	...	1	2	3	1	8	11	4	7·2	?	?	53	·510	2·2	1	?	?	0·41	?	?	0·41	?	?	0·41	Chitaldroog.	
2	...	1	4	6	5	8	5	...	4·9	3·6	+ 36	71	·603	2·0	2	0·82	+ 1·18	0·45	0·54	− 0·09	0·45	0·54	−0·09	0·32	Bangalore	Mysore.
13	2	2	2	2	2	2	3	3	3·0	?	?	69	·572	4·0	3	?	?	2·36	?	?	2·36	?	?	1·61	Hassan.	
12	...	...	3	3	1	8	4	...	8·5	?	?	78	·655	2·4	2	?	?	1·02	?	?	1·02	?	?	0·47	Mysore.	
7	...	5	1	3	5	3	4	3	11·5	3·6	+219	79	·856	4·0	2	0·73	+ 1·27	1·58	0·54	+ 1·04	1·58	0·54	+ 1·04	1·22	Negapatam	Madras, East Coast, South.
...	2	1	...	..	6	5	8	9	2·0	?	?	88	·924	2·2	0	1·50	− 1·50	0	?	?	0	?	?	0	Cuddalore.	
24	1	1	1	2	1	1	...	...	1·4	3·8	− 63	71	·754	3·1	1	0·82	+0·18	0·20	0·55	− 0·35	0·20	0·55	− 0·35	0·11	Trichinopoly.	
...	...	1	5	6	10	8	1	...	6·2	6·4	− 3	79	·835	3·2	0	0·64	−0·64	0	0·39	− 0·39	0	0·39	− 0·39	0	Madras.	
6	...	...	...	11	13	...	...	1	6·0	?	?	83	·866	5·4	0	0·40	− 0·40	0	?	?	0	?	?	0	Nellore	Madras, East Coast, Central.
8	2	...	...	2	13	4	1	1	4·1	6·8	− 40	84	·867	3·8	0	0·27	− 0·27	0	0·12	− 0·12	0	0·12	− 0·12	0	Masulipatam.	
...	1	3	9	9	4	2	1	2	?	?	?	58	·683	3·0	0	0·20	− 0·20	0	0·06	− 0·06	0	0·06	− 0·06	0	Cuddapah.	Madras, Central.
23	1	...	2	1	1	...	3	...	?	?	?	50	·547	1·6	0	0·67	− 0·67	0	0·54	− 0·54	0	0·54	− 0·54	0	Kurnool.	
11	...	...	1	3	1	1	3	11	3·9	4·6	− 15	48	·514	3·3	0	0·73	− 0·73	0	0·22	− 0·22	0	0·22	− 0·22	0	Bellary.	
3	5	3	4	1	1	2	8	4	?	?	?	72	·769	3·8	0	0·05	− 0·05	0	0·43	− 0·43	0	0·43	− 0·43	0	Rajahmundry	Madras, East Coast, North.
...	11	1	...	...	1	3	5	10	6·2	?	?	81*	·808*	1·7	0	0·60	− 0·60	0	0·53	− 0·53	0	0·53	− 0·53	0	Cocanada.	
...	...	...	...	...	...	2	28	1	1·2	3·0	− 60	72	·787	2·4	0	1·09	− 1·09	0	0·39	− 0·39	0	0·39	− 0·39	0	Vizagapatam.	
5	3	...	...	...	3	15	2	3	15·4	11·8	+ 31	83	·784	0·4	0	1·13	− 1·13	0	0·90	− 0·90	0	0·90	− 0·90	0	Gopalpur.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**12. Hill Stations.**	
6	...	...	3	...	...	3	5	5	?	?	?	63	·209	2·9	5	?	?	2·40	?	?	2·40	?	?	1·38	Kuch Fort*	Baluchistan.
Not recorded									?	?	?	?	?	?	8	?	?	3·77	?	?	3·77	?	?	1·20	Pishin.	
29	...	1	...	...	...	...	1	...	3·3	4·8	− 31	63	·223	3·4	5	4·91	+ 0·09	3·24	1·70	+ 1·54	3·24	1·70	+ 1·54	1·43	Quetta.	
...	1	3	2	10	3	3	3	6	5·6	?	?	80	·275	1·4	11	?	?	3·39	?	?	3·39	?	?	0·78	Shirino.	
...	5	...	...	...	19	1	...	6	?	?	?	?	?	0	0	?	?	0	?	?	0	?	?	0	Kalat.	
13	...	1	2	8	2	5	...	...	9·1	?	?	61	·253	3·9	7	?	?	2·36	?	?	2·36	?	?	0·65	Chaman.	
22	2	1	1	2	2	...	1	...	1·8	?	?	93	·244	6·3	8	?	?	4·47	?	?	4·47	?	?	1·25	Srinagar.	Northern India.
Not recorded							...	...	?	?	?	43	·150	4·0	3	?	?	0·45	?	?	0·45	?	?	0·20	Gilgit.	
1	20	...	...	4	...	1	1	4	15·4	?	?	55	·210	4·5	7	?	?	4·53	?	?	4·53	?	?	1·84	Cherat.	
3	4	4	2	14	...	...	1	3	11·2	9·4	+ 19	49	·150	4·5	12	5·36	+ 6·64	7·39	3·65	+ 3·74	7·39	3·65	+ 3·74	2·57	Murree.	
16	1	...	7	1	2	1	3	...	?	?	?	?	?	3·8	7	?	?	4·18	?	?	4·18	?	?	2·12	Poo.	
11	6	5	2	3	4	...	...	...	5·5†	2·8	+ 96	44	·143	3·3	6	4·64	+ 1·36	5·14	2·24	+ 2·90	5·14	2·24	+ 2·90	1·50	Simla.	
2	...	11	14	2	...	...	1	1	7·8	5·9	+ 32	55	·183	2·9	6	4·80	+ 1·20	4·09	2·39	+ 1·70	4·09	2·39	+ 1·70	2·14	Chakrata.	
...	3	4	7	3	...	1	2	11	?	?	?	55	·188	2·5	6	?	?	3·80	?	?	3·80	?	?	2·12	Mussooree.	
23	...	1	...	...	...	4	2	1	3·5	2·6	+ 35	60	·231	2·2	3	4·00	−1·00	3·25	2·24	+ 1·01	3·25	2·24	+ 1·01	1·65	Ranikhet.	
...	1	...	...	8	...	2	5	11	8·0	?	?	71	·119	3·1	8	?	?	2·22	?	?	2·22	?	?	0·50	Gnatong.	
5	1	6	5	4	...	3	4	3	8·9	6·6	+ 35	76	·256	4·1	0	4·29	− 4·29	0·32	1·63	− 1·31	0·32	1·63	− 1·31	0·08	Darjeeling.	
...	2	4	5	3	2	5	7	3	2·7	?	?	75	·299	3·3	8	?	?	1·59	?	?	1·59	?	?	0·34	Gantok.	
2	4	8	1	2	...	5	3	6	8·9	6·7	+ 33	41	·259	1·9	1	0·27	+ 0·73	0·48	0·12	+ 0·36	0·48	0·12	+ 0·36	0·48	Mount Abu	Central India.
3	...	4	5	3	2	2	9	3	6·4	4·6	+ 39	35	·267	3·2	0	0·73	− 0·73	0·18	0·32	− 0·14	0·18	0·32	− 0·14	0·08	Pachmarhi.	
25	...	3	2	1	...	...	...	...	2·4	2·8	− 14	59	·355	2·2	5	3·13	+ 1·87	5·54	2·81	+ 2·73	5·54	2·81	+ 2·73	2·24	Wellington.	South India.
...	3	...	9	7	5	6	1	...	4·6	?	?	69	·385	1·9	6	2·30	+3·70	5·92	1·63	+ 4·29	5·92	1·63	+ 4·29	2·29	Kottagiri.	

* Mean of 30 days. † Mean of 20 days.

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

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. Extra India ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ceylon	Colombo.	40	29·922	−·011	29·888	29·996	·31st	29·857	18th	·139	84·1	88·3	?	75·0	?	81·7	?	13·3	91·0	16th	72·0	12th	19·0
Persia	Meshed	?				Not recorded.					44·1	58·2	?	37·1	?	47·7	?	21·1	82·0	28th	22·0	4th	60·0
	Teheran§	?	25·090	?	?	26·250	9th	25·810	1st	·440	48·9	60·4	?	40·5	?	50·5	?	19·9	74·3	30th	27·5	6th	46·8
	Ispahan‡	?	?	?	?	?	...	?	...	?	49·1	64·2	?	37·1	?	50·7	?	27·1	74·9	28th	28·0	8th	46·9
	Bushire	14	30·018	?	29·989	30·166	14th	29·822	2nd	·344	65·8	71·9	?	60·5	?	66·2	?	11·4	91·4	30th	51·3	8th	40·1
	Jask	?	30·030†	?	?	30·378	23rd	29·798	3rd	·58	71·3§	79·0§	?	65·8§	?	72·4§	?	13·2	86·1	30th	61·3	3 days	24·8
Arabia	Muscat	?	29·987	?	?	30·109	9th	29·800	3rd	·309	73·6	76·4	?	71·7	?	74·1	?	4·7	81·4	29th & 30th.	65·3	4th	16·1
	Baghdad	?	29·592	?	?	29·792	8th	29·258	30th	·534	56·0	69·3	?	50·4§	?	59·8§	?	18·9	80·1	23rd	39·9	6th	40·2
	Aden*	94	29·909	+·005	29·935	29·977	14th	29·758	1st	·219	78·1	82·8	− 2·4	76·1	+1·4	79·5	−0·5	6·7	86·8	20th	70·9	10th	15·9
	Perim	?	29·753	?	?	29·835	14th	29·599	1st	·236	78·6	85·1	?	75·8§	?	80·4§	?	9·3	87·5	30th	71·1	3rd	16·4
Afghanistan	Kabul	?				Not recorded.					41·0	57·1	?	36·5	?	46·8	?	20·6	80·5	31st	28·4	8th & 10th	52·1
Central Asia	Kashgar	?	25·740	?	?	26·090	7th	25·480	20th	·610	42·1§	55·6	?	36·3	?	46·0	?	19·3	79·4	31st	27·2	2nd	52·2
Arabian Sea Islands.	Minicoy	10	29·949	?	29·884	30·010	31st	29·882	6th	·128	81·6	88·8	?	?	?	?	?	?	91·9	30th	75·2	17th	16·7
Africa	Zanzibar.	73	29·916	?	29·915	29·982	26th	29·871	1st & 20th.	·111	82·3	85·7	?	79·5	?	82·	?	6·2	88·8	20th	74·4	1st	14·4

* Mean of 27 days. † Mean of 28 days. ‡ Mean of 29 days. § Mean of 30 days.

I—*concluded.*

in India, Burma, etc., in March 1894—concluded.

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind velocity: Mean velocity in miles per hour.	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 March 1894.	Normal rainfall for period, 1st March to 31st March.	Variation from normal of period, 1st March to 31st March 1894.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**13. Extra India.**	
6	4	2	2	3	4	6	2	2	6·2	5·0	+ 24	73	·856	4·4	7	?	?	7·40	4·65	+2·75	7·40	4·65	+ 2·75	1·81	Colombo	CEYLON.
20	1	1	1	2	...	4	1	1	?	?	?	?	?	5·5	6	?	?	2·28	?	?	2·28	?	?	0·87	Meshed	PERSIA.
13	5	6	2	...	...	...	1	3	4·3‡	?	?	52	·182	4·1	8	?	?	2·71	?	?	2·71	?	?	0·92	Teheran.‖	
...	1	2	2	...	...	1	15	8	7·4†	?	?	58	·214	3·4	3	?	?	0·85	?	?	0·85	?	?	0·35	Ispahan.‡	
...	3	8	1	8	...	2	...	9	6·1	8·9	− 31	70	·442	0	4	?	?	1·31	0·72	+ 0·59	1·31	0·72	+ 0·59	0·75	Bushire.	
...	7	3	3	3	1	...	6	7	13·7‡	?	?	68	·527	0·3	2	?	?	1·03	?	?	1·03	?	?	0·74	Jask.‖	
...	1	...	3	2	2	2	10	11	4·4	?	?	68	·567	1·2	1	?	?	0·28	?	?	0·28	?	?	0·23	Muscat	ARABIA.
11	...	3	...	2	1	7	2	5	9·0	?	?	83‡	·366‡	1·6	12	?	?	4·39	?	?	4·39	?	?	0·75	Baghdad.	
1	1	9	14	2	...	...	...	...	13·1	14·9	− 12	78	·748	5·9	2	?	?	1·73	1·16	+ 0·57	1·73	1·16	+ 0·57	1·55	Aden.*	
1	...	6	14	4	2	1	...	3	23·2	?	?	75	·735	3·9	0	?	?	0	?	?	0	?	?	0	Perim.	
...	...	...	17	...	...	12	2	...	?	?	?	?	?	?	6	?	?	2·72	?	?	2·72	?	?	1·20	Kabul	AFGHANISTAN.
9	1	5	5	2	...	1	3	4	2·8	?	?	(b) 69	(b) ·210	5·8‖	2	?	?	0·41	?	?	0·41	?	?	0·13	Kashgarh(a)	CENTRAL ASIA.
5	7	2	2	2	...	1	2	10	7·0	?	?	79	·855	4·4	6	?	?	3·06	?	?	3·06	?	?	2·15	Minicoy	ARABIAN SEA ISLANDS.
...	2	15	2	...	3	5	1	3	6·0	?	?	81	·897	4·9	10	?	?	5·34	?	?	5·34	?	?	1·32	Zanzibar	AFRICA.

* Mean of 27 days. † Mean of 28 days. (b) Mean of 23 days. ‡ Mean of 29 days. (a) Wind directions for 30 days. ‖ Mean of 30 days.

Table

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

Meteorological Province.	Station.	Height of the barometer 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 to gravity, 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·898	29·781	·117	29·829	−·028	29·819	91·5	77·1	14·4	94·1	74·1	20·0	85·8	88·7	82·5	+1·2	74·6	78·7	79·9	77·7
	Rangoon	...	·908	·764	·144	·838	−·030	·815	97·3	72·5	24·8	100·2	68·0	32·2	84·7	93·0	82·1	+1·9	69·7	74·4	75·2	73·1
	Diamond Island	...	·927	·811	·116	·858	−·030	·834	85·0	77·0	8·0	86·6	73·7	12·9	82·8	83·0	79·4	+0·8	73·8	75·4	75·7	75·0
	Cocos Island	111	·852	·751	·101	·792	?	·833	89·3	76·6	12·7	91·6	73·3	18·3	84·7	85·4	80·9	?	73·0	76·8	76·9	75·1
	Akyab	...	·938	·823	·115	·876	−·033	·838	90·1	70·2	19·9	97·1	61·8	35·3	83·3	86·7	79·8	+1·7	66·9	74·9	76·4	72·7
Assam.	Silchar	...	·834	·701	·133	·764	−·041	·819	84·2	64·5	19·7	93·3	56·9	36·4	75·5	82·3	73·4	0	63·1	69·8	71·1	68·0
	Sibsagar	...	·607	·465	·142	·536	−·053	·831	78·0	60·3	17·7	90·4	55·7	34·7	70·0	77·2	68·0	+0·4	59·9	65·5	68·1	64·5
	Dhubri	...	·791	·635	·156	·710	−·045	·780	88·4	62·7	25·7	97·2	56·7	40·5	74·6	85·7	73·9	−0·7	60·0	65·1	67·4	64·1
Bengal and Orissa.	Chittagong	...	·864	·746	·118	·799	−·031	·834	85·1	68·4	16·7	91·7	62·1	29·6	79·9	82·6	76·6	−0·2	67·7	75·4	75·8	73·0
	Narayanganj	...	·894	·756	·138	·821	−·029	·788	91·0	68·7	22·3	97·3	61·2	36·1	80·6	86·5	79·4	+0·9	66·1	71·1	70·8	69·5
	Calcutta (Alipore)	...	·900	·763	·137	·825	−·030	·792	92·0	69·6	22·4	98·8	59·8	39·0	83·5	90·3	80·0	+0·6	65·7	70·7	70·1	68·8
	Ditto (Chowringhee).	...	·902	?	?	?	?	?	93·0	69·9	23·1	98·5	60·9	37·6	85·2	?	?	?	66·7	72·3	?	?
	Saugor Island	...	·902	·773	·129	·831	−·027	·799	88·4	76·2	12·2	97·1	65·9	31·2	83·5	85·6	80·5	+0·9	72·2	76·2	76·5	75·0
	Burdwan	...	·822	·678	·144	·741	−·019	·787	94·2	68·1	26·1	101·2	58·1	43·1	84·2	92·3	80·6	−0·4	62·3	66·7	67·0	65·3
	Berhampore	...	·846	·705	·141	·767	−·022	·782	92·6	65·5	27·1	100·2	55·2	45·0	82·9	91·5	78·7	0	58·4	66·7	67·5	64·2
	False Point	...	·913	·796	·117	·854	−·032	·816	87·3	73·4	13·9	93·7	64·2	29·5	85·0	84·3	78·5	+0·5	72·2	77·0	76·6	75·2
	Cuttack	...	·836	·686	·150	·765	−·037	·786	98·5	74·1	24·4	103·5	67·0	36·5	84·3	96·1	84·2	+2·0	71·6	74·6	74·5	73·6
Gangetic Plain and Chota Naopur.	Hazaribagh	...	27·902	27·791	·111	27·842	−·024	·770	88·5	63·6	24·9	96·9	53·7	43·2	80·1	86·1	75·8	+0·3	51·6	59·8	61·2	57·5
	Patna (Bankipur)	...	29·719	29·592	·127	29·651	−·026	·786	90·3	63·2	27·1	99·3	54·2	45·1	82·3	89·0	76·8	−0·4	54·6	63·4	64·7	60·9
	Darbhanga	...	·733	·596	·137	·660	−·030	·780	87·6	61·8	25·8	95·8	55·4	40·4	78·2	87·3	75·1	−1·0	58·3	64·6	66·2	62·9
	Allahabad	...	·614	·493	·121	·543	−·011	·812	90·4	61·1	29·3	98·9	53·1	45·8	81·1	89·6	75·7	−2·6	54·7	63·5	64·4	60·9
	Ghazipur	220	·677	·559	·118	·610	−·028	·783	91·0	63·3	27·7	98·8	55·3	43·5	82·4	88·6	76·9	0	57·6	61·7	65·9	62·8
	Lucknow	...	·565	·453	·112	·503	+·010	·830	89·9	57·9	32·0	98·3	49·0	49·3	81·6	88·1	74·2	−2·3	53·2	68·4	64·5	60·4
Upper Sub-Himalayas.	Dehra Dun	...	27·667	27·586	·081	27·619	−·016	·823	77·8	54·0	23·8	89·4	45·1	44·3	69·2	74·2	64·9	−2·3	49·2	57·3	58·1	54·7
	Roorkee	...	29·012	28·915	·097	28·957	−·003	·819	82·5	55·1	27·4	94·9	45·5	49·4	72·2	80·6	68·3	−1·6	52·1	60·2	62·0	58·1
	Meerut	...	·165	29·068	·097	29·109	−·008	·817	84·0	55·6	28·4	96·5	47·1	49·4	75·4	82·6	69·3	−2·2	53·5	60·5	61·9	58·6
	Lahore	...	·213	·130	·083	·166	−·004	·860	79·8	54·7	25·1	96·3	46·2	50·1	70·8	78·6	66·8	−1·0	52·0	61·2	63·1	58·8
	Ludhiana	...	·097	·011	·086	·048	−·008	·840	80·4	55·5	24·9	94·7	46·7	48·0	72·6	78·8	67·4	−2·4	53·4	61·2	63·1	59·2
Indus Valley and N.-W. Rajputana.	Peshawar	...	28·849	28·761	·088	28·799	−·015	·917	74·4	50·0	24·4	90·5	41·1	49·4	66·3	73·2	61·8	−1·4	46·9	57·0	58·4	54·1
	Mooltan	...	29·522	29·435	·087	29·473	+·008	·869	84·1	57·5	26·6	101·9	49·2	52·7	71·4	82·8	70·3	−0·7	52·4	60·3	65·2	59·3
	Jacobabad	...	·754	·627	·127	·685	−·001	·830	96·5	59·5	31·0	108·7	45·0	63·7	80·4	88·7	74·3	−0·7	50·7	60·2	62·8	57·9
	Kurrachee	...	Not yet received.																			
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·517	28·404	·113	28·455	+·006	·860	89·6	59·4	30·2	102·1	47·2	54·9	79·2	87·7	73·9	−0·9	50·1	60·5	62·9	57·8
	Ajmere	...	·337	·224	·113	·277	−·006	·840	87·7	58·8	28·9	99·6	44·8	54·8	78·5	86·9	73·6	+0·4	52·0	61·2	64·7	59·3
	Deesa	...	29·499	29·367	·132	29·427	+·003	·842	95·9	63·3	32·6	105·1	49·8	55·3	84·9	94·6	80·3	−0·5	54·1	63·4	65·5	61·0
	Nowgong	...	·170	·048	·122	·101	−·012	·810	90·7	58·0	32·7	99·0	47·0	52·0	80·1	89·2	74·2	−3·0	53·4	62·1	64·2	59·9
	Agra	...	·383	·263	·120	·311	−·006	·825	89·8	60·4	29·4	102·3	48·9	53·4	79·3	88·6	74·3	−2·0	52·4	61·5	64·0	59·2
Deccan.	Belgaum	...	27·430	27·297	·133	27·363	−·021	·746	92·7	65·0	27·7	96·5	60·1	36·4	84·1	88·1	77·2	0	60·4	64·4	67·1	63·9
	Sholapur	...	28·354	28·196	·158	28·272	−·016	·762	99·1	70·1	29·0	102·8	61·9	40·9	87·9	97·3	84·2	0	57·0	65·2	68·1	63·4
	Poona	...	·110	27·964	·146	·043	−·013	·778	98·0	64·0	34·0	103·7	54·1	49·6	85·6	94·7	80·5	+0·7	57·1	63·2	65·1	61·8
	Akola	...	29·008	28·847	·161	·923	−·010	·786	98·1	67·1	31·0	103·7	54·0	49·7	87·1	96·5	83·1	+0·2	57·9	67·0	69·8	64·9
	Buldana	2,132	27·810	27·683	·127	27·742	−·019	·768	92·5	68·2	24·3	99·1	59·1	40·0	83·7	90·3	80·7	−1·7	58·1	62·9	64·0	62·3

II.

at 88 Stations in India, Burma, etc., for the month of March 1894.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from											Wind Steadiness.		Wind Velocity.		Total rainfall of the month.	Heaviest rain fall during the month.	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.				
·828	·886	·903	·872	+·003	89	71	67	76	−1	3·5	3·6	3·6	+0·7	3	4	15	9	20	1	2	5	3	N 89° E	N 56° E	40	69	99	100	...	...	Port Blair	Burma Coast and Bay Islands.
·693	·719	·641	·684	+·010	87	60	42	63	−1	2·0	3·2	2·6	+0·5	...	2	1	...	2	17	19	14	6	S 50° W	S 20° W	61	58	117	114	...	...	Rangoon	
·786	·780	·792	·786	+·010	85	70	70	75	−1	2·5	2·5	3·0	+0·8	2	2	2	1	...	2	4	11	38	N 59° W	N 42° W	74	85	186*	185	...	...	Diamond Island	
·763	·815	·811	·800	?	82	68	66	72	?	1·9	1·5	1·7	?	2	30	5	3	2	2	8	3	5	N 9° W	?	47	?	500*	?	*Nil*	*Nil*	Cocos Island.	
·623	·759	·776	·719	+·036	83	67	61	71	−1	2·1	1·9	2·0	−0·1	...	3	15	4	2	9	2	24	3	N 72° W	N 58° W	19	26	111	91	...	...	Akyab	
·565	·655	·619	·613	+·028	93	75	58	75	+3	3·8	4·5	4·2	−0·2	33	...	1	10	2	1	6	8	1	S 9° W	S 60° E	8	22	79*	76	...	...	Silchar	Assam.
·515	·573	·574	·555	+·011	97	79	63	80	+1	5·2	4·6	4·9	−1·2	13	2	43	1	1	...	2	...	...	N 46° E	N 57° E	69	59	51	66	...	...	Sibsagar	
·488	·495	·431	·471	−·035	85	59	37	61	0	1·8	1·2	1·5	−0·9	5	1	14	6	2	1	15	14	4	N 86° W	S 81° E	16	14	129	151	...	...	Dhubri	
·677	·824	·806	·769	+·082	96	81	73	83	+9	4·0	2·2	3·1	−0·1	1	2	7	7	10	9	9	11	6	S 14° W	S 54° W	19	20	124*	139	...	...	Chittagong	Bengal and Orissa.
·613	·641	·552	·589	−·048	86	63	45	61	−6	2·8	2·7	2·8	−0·3			Imperfect							?	S 23° W	?	54	?	114	...	...	Naryanganj	
·589	·592	·471	·551	−·124	81	52	35	56	−14	2·0	2·2	2·1	−0·3	1	2	2	1	...	12	23	9	12	S 62° W	S 32° W	56	49	88	125	...	...	Calcutta (Alipore).	
·618	·634	?	?	?	84	53	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	?	?	?	?	1·09	0·55	,, (Chowringhee).	
·746	·813	·801	·786	−·036	82	71	66	73	−6	3·6	2·6	3·1	−0·6	...	8	2	...	5	25	19	2	1	S 20° W	S 33° W	55	60	331	295	...	...	Saugor Island.	
·491	·430	·329	·417	−·116	71	37	22	43	−11	2·5	3·0	2·8	+0·4	7	11	2	1	1	3	6	13	18	N 57° W	S 78° W	52	43	51*	79	...	...	Burdwan	
·398	·447	·356	·400	−·112	63	41	25	43	−14	2·5	2·7	2·6	−0·2	6	1	1	3	...	4	12	25	10	S 84° W	S 76° W	60	44	69	82	...	...	Berhampore	
·778	·820	·822	·807	+·020	94	68	69	77	−5	3·5	2·6	3·1	0	...	2	2	3	8	30	14	3	...	S 4° W	S 38° W	68	58	269*	268	...	...	False Point	
·743	·686	·566	·665	+·003	88	53	35	58	−4	1·7	2·6	2·2	−0·3	4	11	9	2	4	14	13	4	1	S 20° W	S 16° W	13	43	80	81	...	...	Cuttack	
·239	·268	·233	·247	−·042	40	26	19	28	−6	3·0	3·9	3·5	+1·0	2	14	3	...	1	3	2	8	29	N 41° W	N 75° W	68	61	235	178	...	...	Hazaribagh	Gangetic Plain and Chota Nagpur.
·320	·334	·289	·315	−·088	55	31	21	36	−9	2·1	2·5	2·3	−0·5	...	2	1	2	...	1	3	33	20	N 74° W	N 74° W	77	48	115	84	...	...	Patna (Bankipur).	
·447	·421	·358	·409	−·052	80	44	29	51	−3	0·9	0·8	0·9	−0·5	3	3	2	4	4	2	9	22	13	N 86° W	S 78° W	48	27	119	113	...	...	Darbhanga	
·351	·356	·276	·328	−·042	64	34	20	39	−3	2·4	2·4	2·4	+0·4	...	3	...	1	1	3	8	16	30	N 70° W	N 65° W	71	34	110	74	...	...	Allahabad	
·406	·382	·343	·377	+·049	69	35	26	43	+9	1·6	1·8	1·7	+0·1	16	...	...	...	...	...	9	34	3	S 84° W	S 83° W	69	51	58	69	0·33	0·33	Ghazipur	
·350	·346	·297	·331	−·031	73	33	23	43	0	2·0	2·9	2·5	−0·3	44	...	...	...	...	...	...	15	3	N 81° W	N 54° W	29	49	?	97	...	...	Lucknow	
·298	·330	·286	·303	?	72	47	36	52	?	2·6	3·4	3·0	−0·5	20	1	2	2	1	5	11	17	3	S 69° W	N 78° W	39	25	28	55	...	...	Dehra Dun	Upper Sub-Himalayas.
·354	·367	·311	·344	+·013	82	48	32	54	+5	2·1	2·1	2·1	−0·4	16	7	4	3	1	...	3	12	16	N 46° W	N 58° W	42	23	88	70	...	...	Roorkee	
·386	·334	·282	·334	−·035	87	39	27	51	+1	2·0	1·8	1·9	−0·7	8	1	3	2	...	3	2	29	14	N 77° W	N 51° W	60	44	57	63	...	...	Meerut	
·357	·418	·378	·384	+·028	83	57	41	60	+11	2·6	2·5	2·6	−0·6	3	12	3	6	4	3	4	9	18	N 37° W	N 10° W	37	33	67	73	...	...	Lahore	
·386	·394	·374	·385	+·019	87	51	40	59	+5	3·2	4·2	3·7	−0·3	20	7	3	...	8	1	1	3	19	N 31° W	N 47° W	29	33	44	46	...	...	Ludhiana	
287	·355	·313	·318	−·012	78	57	41	59	+2	3·7	4·3	4·0	−0·9	8	3	7	12	8	8	4	4	8	S 75° E	N 11° E	18	17	84*	90	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
329	·380	·392	·367	−·023	70	51	36	52	0	2·2	2·9	2·6	+0·1	22	...	3	...	4	...	13	...	20	N 77° W	N 11° W	31	21	16*	49	...	...	Mooltan	
·261	·258	·232	·250	−·063	50	26	19	32	−6	1·8	1·8	1·8	−1·3	42	2	1	7	3	1	1	...	5	N 67° E	N 67° E	10	26	86*	92	...	...	Jacobabad	
																													...	...	Kurrachee	
·281	·302	·269	·284	−·032	56	30	21	35	−3	1·8	2·8	2·3	−0·6	2	3	2	...	4	6	25	16	4	S 59° W	N 24° W	61	31	86	128	...	...	Jeypore	E. Rajputana, C. India and Gujarat.
·313	·330	·340	·328	−·010	62	35	27	41	+1	1·6	1·8	1·7	−0·7	1	4	7	1	5	3	16	18	7	S 81° W	S 61° W	40	28	114	91	...	...	Ajmere	
·308	·305	·251	·288	−·030	52	27	15	31	+1	1·5	1·2	1·4	−1·0	...	6	10	3	3	1	2	21	14	N 48° W	N 88° W	43	35	200	213	...	...	Deesa	
·358	·323	·267	·316	−·021	72	32	20	41	+2	2·4	2·9	2·7	−0·3	1	4	1	5	3	...	7	27	14	N 78° W	N 63° W	56	34	65*	55	...	...	Nowgong	
·298	·313	·274	·296	−·031	57	31	22	37	−1	1·2	2·2	1·7	−0·4	...	...	5	1	5	...	11	...	40	N 54° W	N 70° W	56	39	110	108	...	...	Agra	
·474	·362	·406	·414	+·006	76	32	31	46	+5	1·7	3·3	2·5	+0·4	...	8	10	6	6	4	8	10	6	N 26° W	S 88° W	12	8	?	279	...	...	Belgaum	Deccan.
·315	·344	·325	·328	−·004	41	26	18	28	−2	2·0	3·2	2·6	0	2	3	11	3	13	4	1	7	10	N 53° E	N 51° E	13	9	236*	185	...	...	Sholapur	
·390	·307	·255	·317	−·008	65	26	16	36	+6	2·0	3·0	2·5	+0·1	4	2	7	4	4	1	12	15	13	N 80° W	N 41° W	34	42	188	199	...	...	Poona	
·370	·402	·376	·383	−·092	54	32	22	36	+8	2·0	4·0	3·0	+1·4	4	6	5	7	3	4	3	12	18	N 43° W	N 43° W	34	44	151	108	...	...	Akola	
·356	·320	·293	·331	+·040	51	29	20	34	+6	1·7	4·1	2·9	+0·7	...	7	7	1	4	5	7	5	26	N 48° W	N 28° W	42	50	188*	180	0·49	0·19	Buldana	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88 Stations

Meteorological Province.	Station.	Height of barometer 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 to gravity, 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Deccan—*continued.*	Khandwa	...	28·891	28·749	·142	28·815	−·008	29·798	96·2	65·4	30·8	104·2	51·6	52·6	84·5	94·2	80·7	−0·5	54·1	63·3	65·9	61·1
	Hoshangabad	...	·919	·764	·155	·837	−·027	·802	93·0	65·5	27·5	99·4	55·3	44·1	82·4	92·3	79·5	−1·1	55·4	64·4	66·5	62·1
	Nagpur	...	·904	·748	·156	·821	−·002	·780	97·8	68·6	29·2	100·8	58·2	42·6	86·7	95·7	83·6	0	57·7	66·7	69·8	64·7
	Jubbulpore	...	·611	·475	·136	·538	−·004	·807	91·0	60·3	30·7	98·0	48·3	49·7	80·6	89·2	75·6	−1·3	54·9	62·3	65·6	60·9
	Saugor	...	·175	·055	·120	·110	+·005	·797	90·9	64·0	26·9	98·8	49·3	49·5	82·4	89·3	77·5	−0·6	53·3	61·6	63·6	59·5
	Raipur	...	·962	·807	·155	·880	−·010	·778	97·0	69·3	27·7	100·7	59·9	40·8	86·6	95·4	83·7	+1·0	57·0	65·1	67·8	63·3
	Sutna	...	·881	·757	·124	·811	−·010	·804	89·0	60·9	28·1	97·5	49·1	48·4	81·9	87·9	74·9	−1·7	52·2	61·2	62·6	58·7
	Hyderabad (Deccan.)	...	·261	·124	·137	·189	?	·779	96·8	69·8	27·0	101·4	63·6	37·8	87·0	94·9	82·8	?	62·8	68·5	69·2	66·8
West Coast.	Bombay	...	29·929	29·807	·122	29·862	−·014	·839	86·4	74·3	12·1	91·0	67·6	23·4	81·3	83·2	79·8	+1·0	68·7	73·2	73·7	71·9
	Ratnagiri	...	·842	·723	·119	·777	−·014	·824	87·3	73·6	13·7	94·2	65·4	28·8	83·8	83·9	79·8	+0·1	69·3	74·0	75·6	73·0
	Karwar	...	·916	·796	·120	·850	−·020	·825	87·9	74·1	13·8	91·5	68·2	23·3	83·1	84·6	80·3	+0·1	?	74·9	76·8	?
	Cochin	...	·944	·828	·116	·880	−·018	·817	91·7	77·5	14·2	93·5	72·7	20·8	86·8	88·0	83·9	+0·7	75·3	78·3	78·8	77·5
South India.	Salem	...	·035	28·868	·167	28·958	−·030	·815	97·8	72·5	25·3	101·6	66·2	35·4	86·3	94·8	83·2	+1·5	69·7	74·4	73·6	72·6
	Mysore	...	27·474	27·325	·149	27·400	?	·780	92·3	68·3	24·0	95·9	64·2	31·7	81·0	90·3	79·8	?	66·6	70·5	70·0	69·0
	Mercara	...	26·278	26·164	·114	26·227	−·013	·812	82·7	63·0	19·7	88·3	59·7	28·6	75·3	77·9	71·7	+0·2	60·2	67·8	71·4	66·5
	Bangalore (Fort)	...	·981	·845	·136	·915	−·034	·752	93·0	66·3	26·7	97·1	59·0	38·1	82·0	89·8	78·9	+1·9	61·3	68·6	67·1	65·7
	Hassan	...	·919	·794	·125	·859	?	·777	89·5	64·1	25·4	94·0	57·8	36·2	81·1	85·3	75·8	?	58·4	66·2	65·5	63·4
	Chitaldroog	...	27·557	27·418	·139	27·487	?	·752	94·1	70·8	23·3	98·4	61·5	36·9	84·3	92·3	82·0	?	58·6	66·8	65·7	63·7
	Trichinopoly	...	29·702	29·543	·159	29·629	−·032	·811	98·2	74·4	23·8	104·1	69·5	34·6	89·6	95·1	84·3	+1·1	71·5	73·9	73·4	72·9
	Madras	...	·946	·826	·120	·885	−·023	·837	90·9	73·2	17·7	98·3	68·5	29·8	86·5	86·2	81·3	+0·5	?	76·5	77·1	75·5
	Bellary	...	28·468	28·314	·154	28·389	−·002	·767	99·6	72·3	27·3	105·0	63·1	41·9	88·8	96·8	85·3	−0·5	63·0	69·1	69·2	67·1
	Vizagapatam	...	29·914	29·789	·125	29·845	−·032	·814	87·7	79·0	8·7	90·4	75·9	14·5	84·6	86·0	84·0	+0·7	72·0	75·8	77·0	74·9
	Coconada	...	·938	·789	·149	·864	?	·824	92·8	74·4	18·4	98·2	70·3	27·9	85·3	90·8	83·1	?	72·2	76·2	77·5	75·3
Hill Station, Baluchistan.	Quetta	...	24·670	24·601	·069	24·628	+·010	?	62·8	39·9	22·9	79·5	28·4	51·1	55·4	60·6	50·8	−0·3	37·3	45·5	47·7	43·5
Hill Stations, Northern India.	Leh	11,503	19·681	19·602	·079	19·647	−·017	?	41·8	17·5	24·3	52·9	5·3	47·6	30·9	37·3	29·0	−3·4	16·2	24·5	29·8	23·5
	Srinagar	...	24·938	24·863	·075	24·893	?	?	52·8	37·0	15·8	70·3	32·1	38·2	44·4	51·6	44·6	?	36·3	42·4	47·5	42·0
	Murree	...	23·834	23·806	·028	23·813	−·036	?	55·0	42·9	12·1	73·0	29·3	43·7	50·3	50·3	48·0	−2·1	35·9	41·3	42·7	40·0
	Chamba	3,005	26·943	26·851	·092	26·908	−·023	?	70·1	49·2	20·9	84·6	36·7	47·9	59·8	67·4	58·0	−2·6	45·5	50·8	54·3	50·2
	Kailang	10,087	20·801	20·745	·056	20·784	−·028	?	39·8	18·0	21·8	47·9	−1·0	48·9	28·9	34·8	26·7	−2·9	16·8	25·1	29·9	23·9
	Simla (Ridge)	...	23·105	23·066	·039	23·079	−·030	?	55·4	43·4	12·0	67·5	31·6	35·9	51·1	52·7	48·9	−2·0	36·0	41·6	44·1	40·5
	Simla (Chapslee)	?	?	?	?	?	?	?	60·2	43·1	17·1	74·1	31·6	42·5	53·4	?	?	?	36·2	42·6	?	?
	Chakrata	...	·334	·281	·053	·299	−·029	?	59·8	42·4	17·4	72·1	31·5	40·6	54·3	56·1	50·5	−1·6	37·0	44·6	45·8	42·5
	Ranikhet	...	24·119	24·050	·069	24·078	−·007	?	64·1	47·7	16·4	75·4	37·9	37·5	58·3	61·8	55·5	−1·2	42·4	48·1	49·4	46·6
	Katmandu	4,388	25·638	25·535	·103	25·588	−·038	?	76·1	45·4	30·7	86·0	38·2	47·8	64·8	70·4	58·7	−2·7	43·7	54·2	56·7	51·5
	Darjeeling	...	22·963	22·881	·082	22·923	−·024	?	56·1	42·3	13·8	71·9	35·6	36·3	51·6	52·9	48·3	−0·5	39·2	46·6	46·8	44·0
	Demagiri	?	?	?	?	?	?	?	82·5	62·7	19·8	88·9	58·1	30·8	74·9	79·3	71·8	−1·5	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	86·3	67·2	19·1	95·1	60·0	35·1	79·0	83·8	76·1	?	?	63·6	64·0	?
Hill Stations, Central India.	Mount Abu	...	26·108	26·025	·083	26·061	−·013	?	75·8	60·6	15·2	86·2	50·5	35·7	70·4	74·1	67·7	−1·9	48·9	54·5	56·1	53·2
	Pachmarhi	...	·519	·418	·101	·464	+·002	?	83·3	60·9	22·4	89·7	47·5	42·2	75·6	81·2	73·5	−0·5	50·3	57·1	58·7	55·4
	Chikalda	3,642	·396	·286	·110	·334	−·019	?	84·8	64·8	20·0	91·3	58·4	32·9	75·7	82·0	76·0	−1·6	53·7	58·2	60·3	57·4

II—*continued.*

in India, Burma, etc., for the month of March 1894—continued.

Vapour tension.					Humidity.					Cloud.				Wind direction. Number of winds from											Wind steadiness.		Wind velocity.						
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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·288	·325	·290	·301	−·006	45	27	18	30	−1	2·1	2·9	2·5	+0·8	3	6	4	8	1	5	6	10	19	N. 53° W.	N. 46° W.	32	48	147	113	...	...	Khandwa	Deccan—*continued.*
·324	·388	·335	·349	+·028	50	35	22	36	+3	2·7	3·5	3·1	+1·2	28	...	5	8	...	3	5	9	4	S. 86° W.	N. 55° W.	6	15	50	61	...	...	Hoshangabad	
·352	·412	·414	·393	+·056	49	32	25	35	+3	1·9	3·1	2·5	0	...	9	11	7	3	6	6	10	10	N. 20° W.	N. 20° W.	19	6	145	108	...	...	Nagpur	
·374	·341	·340	·351	+·020	70	33	25	42	+4	3·2	3·1	3·2	+0·9	14	4	3	1	3	6	4	15	12	N. 80° W.	N. 69° W.	35	22	47	70	...	...	Jubbulpore	
·279	·296	·271	·282	+·004	47	27	20	31	0	2·1	2·4	2·2	+0·8	...	6	7	5	10	...	19	4	11	S 79. W	N. 53° W.	13	33	85	78	...	...	Saugor	
·310	·336	·365	·320	−·048	42	26	19	29	−8	1·7	3·2	2·5	+0·5	2	5	13	14	1	1	9	17	10	N. 51° W.	N. 79° W.	34	20	119*	118	...	...	Raipur	
·293	·291	·255	·280	+·029	53	27	19	33	+2	2·0	2·2	2·1	+0·1	5	10	2	3	3	2	2	13	22	N. 48° W.	N. 55° W.	52	39	136*	137	...	...	Sutna	
·488	·466	·394	·449	?	67	37	24	42	?	1·2	1·9	1·6	?	12	2	7	6	14	6	2	7	5	S. 57° E.	?	18	?	96*	?	...	...	Hyderabad (Deccan,)	
·633	·712	·707	·684	−·032	74	66	62	67	−6	2·3	1·3	1·8	+0·1	...	7	8	5	2	3	...	10	27	N. 32° W.	N. 28° W.	52	55	261	274	...	...	Bombay	
·666	·715	·774	·719	+·012	80	62	67	69	+1	1·6	2·4	2·0	+1·4	...	11	...	...	...	1	11	14	25	N. 63° W.	N. 72° W.	71	60	245*	236	...	...	Ratnagiri	West Coast.
?	·758	·820	?	?	?	67	69	?	?	1·7	2·1	1·9	+0·3	...	2	2	...	...	...	6	23	29	N. 67° W.	N. 80° W.	81	70	84	?	...	...	Karwar	
·850	·858	·866	·858	+·018	90	67	66	74	−1	2·1	3·2	2·7	−0·2	4	3	4	2	...	1	...	35	13	N. 70° W.	N. 81° W.	68	47	163	?	...	...	Cochin	
·694	·693	·552	·646	+·009	87	55	35	59	+5	2·8	4·5	3·7	+1·4	6	2	18	10	6	12	7	1	...	S. 73° E.	S. 55° E.	35	42	121	129	...	...	Salem	
·634	·616	·482	·576	?	91	58	34	61	?	2·3	3·5	2·9	?	25	3	8	13	5	1	3	2	2	N. 78° E.	?	27	?	204*	?	...	...	Mysore	South India.
·487	·589	·701	·596	+·117	85	69	74	76	+14	3·9	5·2	4·6	+0·9	...	8	4	7	7	4	7	10	15	N. 56° W.	N. 42° W.	21	18	129	78	...	...	Mercara	
·489	·545	·403	·479	+·023	76	50	29	52	+2	2·1	1·9	2·0	−0·6	3	1	8	15	15	5	8	6	1	S. 54° E.	S. 22° E.	37	50	117*	86	...	...	Bangalore (Fort)	
·427	·475	·400	·434	?	71	46	35	51	?	3·8	6·1	5·0	?	1	2	11	13	12	5	4	8	6	S. 9° E.	?	24	?	71*	?	...	...	Hassan	
·346	·444	·304	·365	?	46	38	20	35	?	2·7	3·8	3·3	?	2	3	10	15	8	2	6	8	8	N. 68° E.	?	16	?	150*	?	...	...	Chitaldroug	
·736	·626	·533	·632	−·039	87	45	33	55	−3	2·7	3·1	2·9	−0·3	21	...	11	20	8	...	2	...	...	N. 89° E.	S. 86° E.	52	51	35	95	...	...	Trichinopoly	
?	·779	·812	·808	+·040	?	62	65	76	+2	2·8	2·1	2·5	+0·1	...	...	1	13	29	14	5	...	...	S. 39° E.	S. 50° E.	77	81	149	152	...	...	Madras	
·463	·466	·372	·434	+·046	58	34	21	38	+5	2·8	4·5	3·7	+1·5	9	3	2	17	6	2	5	4	14	N. 53° E.	S. 26° E.	11	20	92	110	...	...	Bellary	
·686	·788	·816	·763	+·018	69	66	65	67	+1	1·1	1·5	1·3	−0·6	...	...	...	...	1	17	25	19	...	S. 46° W.	S. 45° W.	82	58	29	68	...	...	Vizagapatam	
·763	·784	·768	·772	?	89	64	54	69	?	1·2	0·5	0·9	?	...	...	1	6	21	2	16	12	4	S. 11° W.	?	40	?	149*	?	...	...	Cocanada	
·203	·211	·210	·208	0	80	48	41	56	0	3·4	4·0	3·7	−0·5	28	3	1	1	...	...	2	14	12	N. 66° W.	S. 65° W.	36	36	79*	107	...	...	Quetta	Hill Station, Baluchistan.
·084	·083	·107	·091	−·009	84	48	49	60	+3	5·2	6·4	5·8	−0·6	2	2	12	7	5	17	10	5	2	S. 20° E.	S. 37° W.	27	18	39	50	0·69	0·24	Leh	Hill Stations, Northern India.
·207	·253	·294	·251	?	93	85	76	85	?	5·6	5·6	5·6	?	39	4	3	1	3	3	...	3	6	N. 22° W.	?	10	?	42*	?	...	...	Srinagar	
·141	·172	·200	·171	−·021	56	53	60	56	+2	4·8	5·6	5·2	−0·8	3	3	2	2	30	17	3	1	1	S. 31° E.	S. 35° E.	66	28	269*	210	...	...	Murree	
·265	·269	·273	·269	−·008	75	54	44	58	+4	4·3	6·4	5·4	−0·2	18	7	...	3	5	1	1	2	25	N. 35° W.	N. 1° E.	39	19	112*	118	6·48	2·54	Chamba	
·089	·107	·128	·108	−·019	86	66	64	72	0	4·7	6·7	5·7	−0·6	...	1	1	...	2	6	27	18	7	S. 64° W.	S. 64° W.	71	71	21	32	6·44	1·74	Kailang	
·140	·169	·204	·171	−·026	51	46	52	50	−1	3·4	5·4	4·4	−0·5	10	8	3	1	1	23	7	1	3	S. 14° W.	S. 42° W.	29	31	127	?	...	...	Simla (Ridge)	
·147	·166	?	?	?	54	43	?	?	?	3·4	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	3·13	0·94	Simla (Chapslee)	
·166	·198	·206	·189	−·006	62	49	48	53	+1	2·8	5·3	4·1	+0·1	2	...	7	14	7	1	9	20	2	S. 34° W.	S. 56° W.	11	8	188	138	...	...	Chakrata	
·219	·240	·229	·229	−·002	67	50	43	53	0	2·2	2·7	2·5	−1·3	31	...	1	1	...	...	11	11	7	S. 85° W.	S. 56° W.	35	44	79	71	...	...	Ranikhet	
·267	·302	·308	·293	−·013	87	51	42	61	0	2·6	3·7	3·2	−0·6	1	1	...	4	6	3	4	39	4	S. 80° W.	N. 74° W.	60	66	32	?	1·31	0·91	Katmandu	
·212	·271	·262	·246	−·009	77	71	66	71	−2	4·3	5·5	4·9	−0·3	1	2	6	5	2	3	27	7	8	S. 62° W.	S. 77° W.	39	43	228	160	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	...	...	27	5	14	...	16	...	S 40° E.	S. 88° W.	37	21	?	?	12·96	5·04	Demagiri	
?	·416	·372	?	?	?	43	34	?	?	3·6	3·5	3·6	+0·8	...	...	...	...	1	32	23	6	...	S. 23° W.	S. 13° W.	87	69	?	?	*Nil*	*Nil*	Tura	
·219	·250	·250	·239	+·026	42	35	30	36	+5	1·5	1·0	1·3	−1·3	...	8	7	1	2	...	17	17	10	N. 77° W.	S. 85° W.	47	39	212*	159	...	...	Mount Abu	Hill Stations, Central India.
·253	·263	·241	·252	+·004	46	30	23	33	+1	2·7	2·9	2·8	+0·7	3	8	5	6	5	2	6	20	7	N. 68° W.	N. 57° W.	29	36	151*	109	...	...	Pachmarhi	
·291	·291	·277	·286	−·010	48	33	26	36	+3	2·5	4·3	3·4	+1·2	24	7	1	1	2	6	1	4	16	N. 50° W.	N. 52° W.	27	34	192	172	0·65	0·39	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88 Stations

Meteorological Province.	Station.	Height of the barometer 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 to gravity, 45° Lat.	Temperature of air. Mean maximum.	Temperature of air. Mean minimum.	Temperature of air. Mean daily range.	Temperature of air. Highest maximum.	Temperature of air. Lowest minimum.	Temperature of air. Absolute range.	Temperature of air. Mean 10 hours.	Temperature of air. Mean 16 hours.	Temperature of air. Mean daily.	Temperature of air. Variation from normal.	Temperature, wet-bulb. Mean minimum.	Temperature, wet-bulb. Mean 10 hours.	Temperature, wet-bulb. Mean 16 hours.	Temperature, wet-bulb. Mean daily.
Hill Stations, South India.	Wellington	...	24·303	24·218	·085	24·261	—·013	?	73·8	52·1	21·7	78·4	47·9	30·5	69·4	69·0	61·8	—0·4	49·6	57·2	58·1	54·9
	Muscat	...	30·005	29·920	·085	29·962	?	?	76·6	71·7	4·9	81·4	65·3	16·1	75·0	76·3	74·1	?	63·5	68·4	68·8	66·9
Extra India.	Aden	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Perim	...	29·778	·657	·121	·705	?	?	85·2	75·8	9·4	87·3	71·1	16·2	81·8	81·9	79·7	?	71·1	73·8	73·9	72·9
	Minicoy	...	·969	·861	·108	·913	?	·840	89·0	?	?	91·9	?	?	84·6	85·6	?	?	75·0	77·9	78·2	77·0
	Zanzibar	...	·918	·811	·107	·865	?	·864	86·0	79·5	6·5	88·8	74·4	14·4	83·4	85·5	82·7	?	76·3	78·5	78·6	77·8
	Seychilles	15	·956	·868	·088	·912	?	·851	83·5	76·8	6·7	84·9	73·6	11·3	81·7	82·4	79·9	?	72·6	76·2	76·6	75·2

II—*concluded.*

in India, Burma, etc., for the month of March 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from											Wind Steadiness.		Wind Velocity.					
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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·334	·344	·373	·350	+·016	84	49	54	62	+3	2·8	3·5	3·2	+0·2	...	1	11	8	33	3	1	...	...	S. 63° E.	S. 43° E.	76	63	56	62	...	...	Wellington	Hill Station, South India.
·482	·617	·607	·569	?	61	70	67	66	?	1·2	1·4	1·3	?	...	5	6	14	3	1	2	8	23	N. 14° W.	?	35	?	106	?	...	...	Muscat	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	N. 83° E.	...	73	...	355	...	...	Aden	Extra India.
·701	·728	·730	·721	?	79	67	67	71	?	2·4	1·0	1·7	?	...	1	7	23	20	5	6	...	...	S. 65° E.	?	66	?	560	?	...	...	Perim	
?	·867	·867	?	?	?	73	71	?	?	4·2	4·7	4·5	?	2	20	3	4	2	2	4	7	18	N. 28° W.	?	52	?	168	?	...	...	Minicoy	
·863	·911	·885	·885	?	86	79	72	79	?	4·8	3·8	4·3	?	...	9	20	8	2	10	9	2	2	N. 64° E.	N. 39° E.	24	12	144*	150	...	...	Zanzibar	
·748	·833	·839	·807	?	81	77	76	78	?	6·6	7·1	6·9	?	2	13	5	2	3	3	...	7	27	N. 31° W.	?	57	?	130	?	6·56	2·04	Seychilles	

G. I. C. P. O.—No. 10 Meteor.—26-7-94.—400.

* 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.

Reg. No. 199, Wr., I.—April 93.—500.—199 R., May 93 —6,800.

Litho., S. I. O., Calcutta.

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.

Litho., S. I. O., Calcutta.

Reg. No. 199, Wr., I.—April 93.—500.—199 R., May 93.—5,500.

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

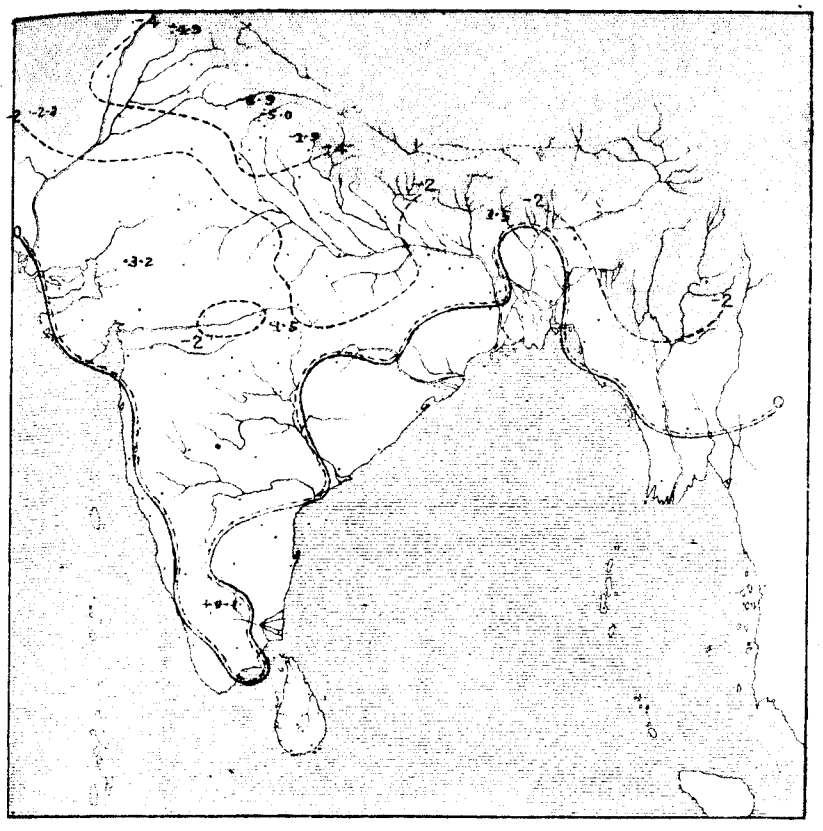
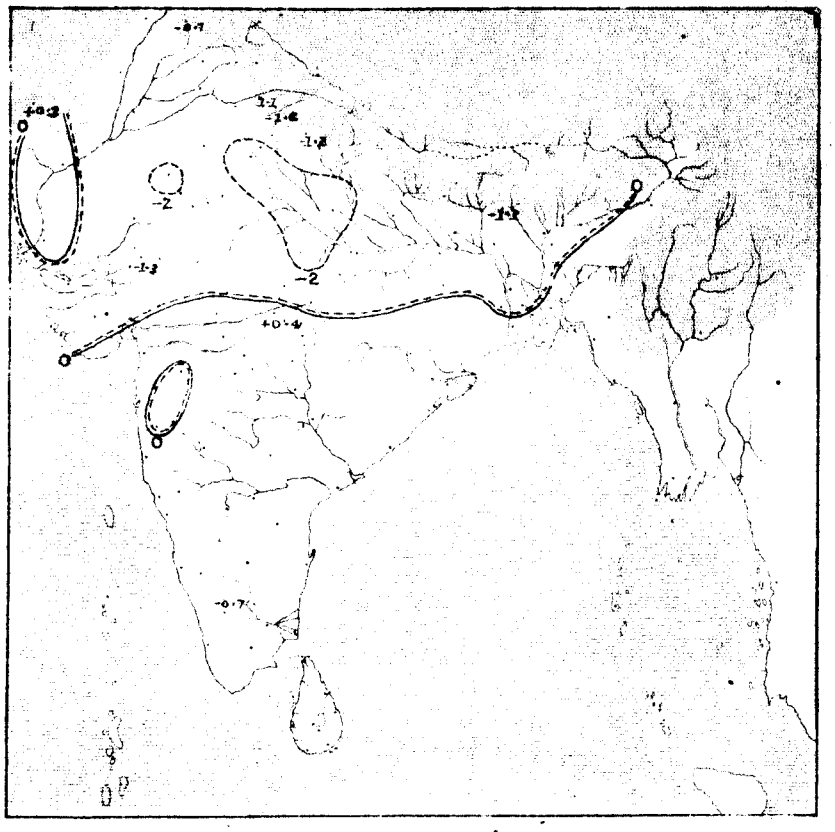


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

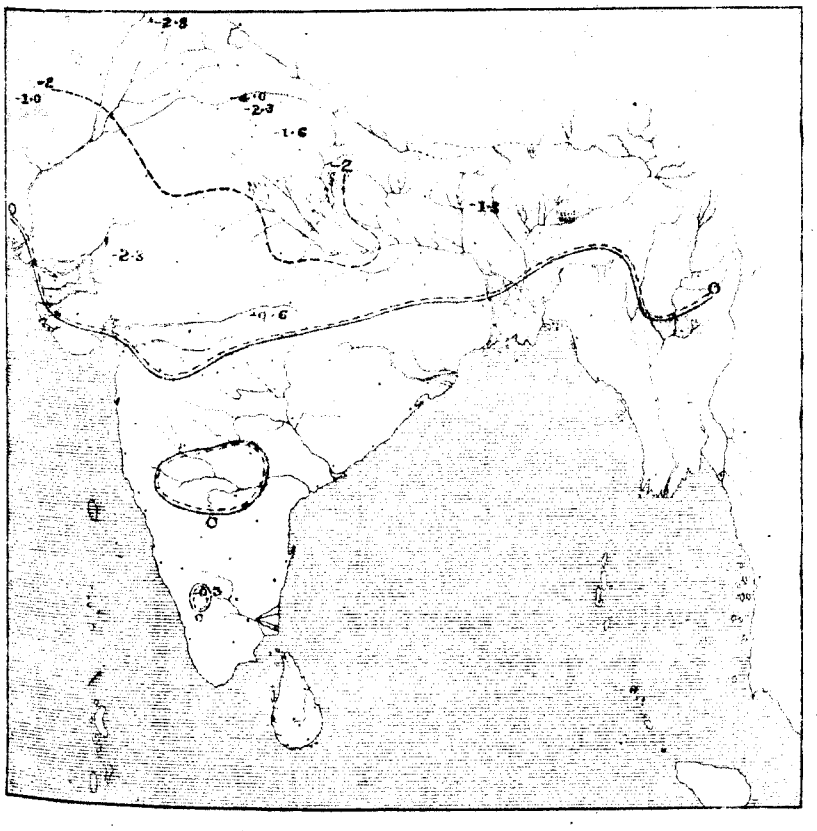
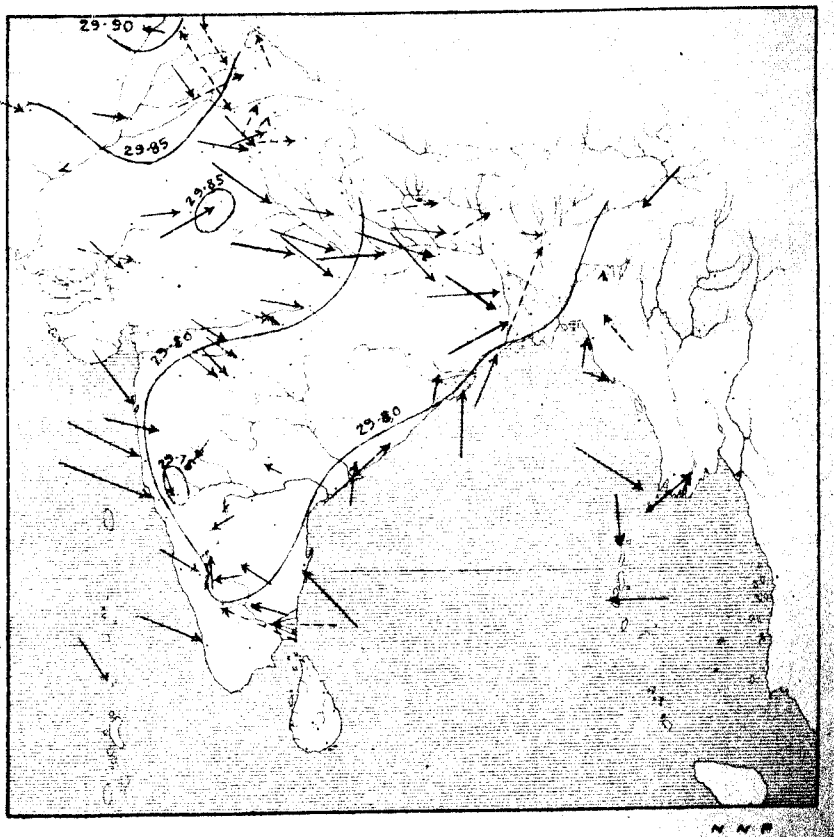


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF MARCH 1894.



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 of the resultant; a length of ⅕th of an inch being equal to 100 per cent.

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 used in the preparation of this Chart are the rainfall returns of all the observatories in India, 182 in number. The double line or 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 a tenth of an inch). The dotted line faces the area of no rainfall.

No. 199, Wr., I.—April 03—500.—199 R., May 93—5,500.

Litho. S. I. O. Calcutta.

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 a used in the preparation of this Chart are the rainfall returns of all the observatories in India, 182 in number. The double line or 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 n a tenth of an inch). The dotted line faces the area of no rainfall.

No. 190, Wr., I.—April 93.—500.—199 R., May 93.—5,500.

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 51 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 name of the districts can be at once ascertained by referring to the following list to the number given near the right hand boundary of each district in small slanting figures.

Tenasserim	15. Behar (North)	29 Madras (South Central)	43. Central India (East)
Lower Burma	16. North Western Provinces (East)	30. Coorg	43(a.) Do. do. (a)
Central do.	17. Oudh (South)	31. Mysore	44. Rajputana (East) Central India (West)
Upper do.	18. Do. (North)	32. Konkan	45. Rajputana (West))
Arakan	19. North Western Provinces (Central)	33. Bombay Deccan	46. East Coast (North)
Eastern Bengal	20. Do. do. (West)	34. Hyderabad (North)	46(a.) Do. do. (a)
Assam (Surma)	21. Do. do. (Submontane)	35. Khandeish	47. Hyderabad (South)
Do. (Brahmaputra)	22. Punjab (South)	36. Berar	48. Madras (Central)
Deltaic Bengal	23. Do. (Central)	37. Central Provinces (West)	49. East Coast (Central)
Central do.	24. Do. (Submontane)	38. Do. (Central)	50. East Coast (South)
North do.	25. Do. (Hill Districts)	39. Do. (East)	51. Madras (South)
Orissa	26. Do. (North West)	40. Guzerat	
Chota Nagpore	27. Punjab (West)	41. Kattiawar	
Behar (South)	28. Malabar	42. Sind	

No. 189, Wr., I.—April 93.—500.—169 R., May 93.—5,500

Litho., S. I. O., Calcutta.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, APRIL, 1894.

INTRODUCTION.

THIS Review of the weather in India during the month of April 1894 is based on observations taken daily at 8 A.M. at 203 stations and on additional observations taken at 10 A.M. and 4 P.M. at 89 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 utilised. 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, 1894.

April is the second month of the hot-weather period or season in Northern and Central India. The most important meteorological feature of the month is the more or less steady increase of temperature which occurs during the month. At the end of March the area of maximum temperature covers the Central and North Deccan. The mean temperature in that area at that time averages 92°. Temperature increases about 10° in Upper India, 5° in Central India, and remains practically unchanged in Ceylon and Southern India. Hence the area of maximum temperature is transferred northwards during the month, and at the end of the month includes the North Deccan, the Central Provinces, and the adjacent districts of South Bihar, the North-Western Provinces and Central India.

The increase of temperature in India during the month produces a corresponding change in the distribution of pressure. Pressure falls rapidly in Northern India, and more especially in Upper and Central India, and the area of minimum pressure is usually transferred northwards to North-Western India during the month. Pressure at the end of the month is highest in the coast districts and adjacent sea areas, but the gradients are small except in the neighbourhood of the coast and at the time of greatest heat during the day when steepish gradients obtain over a narrow belt near the coasts. These afternoon gradients are steepest in the west coast districts and the Bengal and Orissa coast districts.

Local sea winds or land and sea breezes prevail in the coast districts. In the interior of Northern India and Burma the winds blow down the river plains and valleys. The westerly winds of the Gangetic plain are usually of considerable intensity and of high temperature. The air motion over the greater part of the interior occurs chiefly during the day hours, the nights being generally almost calm.

One of the important meteorological features of the month is the hot-weather depression area which usually covers the eastern districts of the Central Provinces and Chota Nagpur. It is almost certainly a product, and not the cause, of the system of converging winds which obtain

at this time in North-Eastern India, *viz.*, westerly winds in the Gangetic plain, easterly winds in Assam and North Bengal, and southerly winds in Bengal and Orissa.

The chief disturbances of the month belong almost exclusively to the class of hot-weather storms. They are usually accompanied with thunder and rain or hail in the coast districts and near the hills of Northern and Southern India. In the drier districts of North-Western India they usually give no rain and belong to the class known as duststorms. Thunderstorms are of most frequent occurrence in Assam and Bengal, more especially the eastern and northern districts, and these provinces hence receive a considerable amount of rain during the month. Southern India and Tenasserim also obtain moderate rain during the month, and the rainfall in these areas appears to be, in part at least, due to brief temporary advances of moist southerly winds from the equatorial belt.

Pressure conditions at the beginning of the month were approximately normal. Temperature was largely in excess in North-Western India and a shallow hot-weather depression lay over Upper Sind. Pressure decreased rapidly in North-Western India during the next 24 hours, and the Upper Sind depression intensified slightly and advanced eastwards across the South Punjab on the 3rd and broke up at the foot of the Punjab hills on the 4th. Numerous duststorms occurred in Upper India on the 3rd; but they gave as a rule no rain. High temperature conditions continued in North-Western India and a hot-weather depression appeared in Upper Sind on the 5th. It advanced eastwards on the 6th to the foot of the Punjab hills, and thunderstorms and duststorms visited the greater part of the Punjab and the Punjab hills, which areas and Kashmir received light to moderate rain on the 5th and 6th.

The following gives the daily variations of temperature in North-West India from the 1st to the 5th :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	1st.	2nd.	3rd.	4th.	5th.
	°	°	°	°	°
Punjab	+4·0	+4·8	+6·9	+6·1	+6·3
Sind and Rajputana	+5·5	+4·7	+6·0	+5·3	+4·1
North-Western Provinces and Oudh.	−1·3	+0·8	+1·3	+2·6	+1·9

Thunderstorms occurred daily in Assam and the greater part of Bengal during the period from the 3rd to the 6th. Pressure fell rapidly in North-Eastern India on that day and the 7th and a depression lay over North Bengal and Bihar on the 7th and three following days. The southerly winds at the head of the Bay strengthened considerably and the dry land winds in the Gangetic plain intensified and extended eastwards to Central Bengal. Cachar received a very heavy burst of rain during the period, which gave rise to local floods of considerable severity. The following gives rainfall data for this period of the districts of Sylhet and Cachar :—

District.	Rainfall in 24 hours preceding 8 A.M. of				Total of period.
	7th.	8th.	9th.	10th.	
	Inches.	Inches.	Inches.	Inches.	Inches.
Sylhet	1·14	0·37	0·60	1·57	3·68
Cachar	1·74	2·55	3·10	3·38	10·77

The Assam hills also received moderately heavy rain during the same period. The prevalence of westerly winds in West and Central Bengal gave unusually high temperature to Bengal. The following gives data for four stations illustrating the excessive temperature in that area :—

Station.	Variation from normal of mean temperature of the 24 hours preceding 8 A.M. of		
	8th.	9th.	10th.
	°	°	°
Calcutta	+5·0	+3·8	+3·9
Berhampore	+2·0	+4·4	+1·8
Purnea	+4·4	+3·6	+3·5
Chaibassa	+5·2	+5·7	+3·1

A cool wave crossed the North-West Frontier from Baluchistan on the 7th and advanced slowly eastwards during the next three days. On the 10th temperature was in moderate defect over the whole of North-Western and Central India. The deficiency averaged, for example, 3° in the Punjab and North-Western Provinces, and 2° in Sind, Rajputana and Central India.

A rapid local increase of pressure in North-Eastern India during the next 48 hours not merely filled up the depression in North Bengal, but substituted high pressure conditions in that area. At the same time temperature increased rapidly in North-Western India and a wave of excessive temperature spread eastwards from the North-West Frontier. A depression due to hot-weather conditions appeared on the 12th in Upper Sind. It intensified slightly during the next 24 hours and advanced eastwards across the South Punjab to the foot of the hills, where it disappeared on the 14th. This gave a short period of disturbed weather in Baluchistan and Upper India. Baluchistan,

Kashmir and the Punjab received light to moderate rain from the 13th to the 15th. This caused a large temporary reduction of temperature in Upper India on the 14th and 15th. The Central Provinces and Deccan were visited by thunderstorms on the 15th and 16th and temperature also fell considerably below the normal in these areas, and remained in defect for some days afterwards and until the 22nd.

Thunderstorms occurred in Assam, Bengal, Malabar and South Madras from the 18th to the 21st. At the commencement of that period temperature was considerably below the normal over nearly the whole of India, the deficiency on the 18th averaging 6° in the Central Provinces, 5° in the North-West Provinces, 4° in the Punjab and Rajputana and 3° in Central India. The rainfall in Bengal was general and heavy on the 18th and 19th, and caused a very large reduction of temperature. Thus on the 19th temperature averaged 7° in defect in Bengal and on the 20th 6° in defect. Temperature on the other hand increased very rapidly in Upper India and was considerably in excess in Sind and Baluchistan on the 20th, on which day a hot-weather depression again appeared in Sind. It advanced on the 22nd and 23rd across the South Punjab and gave duststorms in the Punjab plains and thundershowers in the Punjab hills and Kashmir. The breaking up of this storm was followed by a very rapid increase of pressure in Upper India on the 24th and the advance of a dry cool wave across Northern India. The following gives the greatest deficiency of temperature in the area covered by the cool wave and the greatest excess in the hot wave area (or area of increased temperature) in front of the cool wave from the 24th to the 27th :—

Date.	Cool wave.		Warm wave.	
	Station.	Mean temperature variation from normal.	Station.	Mean temperature variation from normal.
		°		°
24th	Quetta	—12·3	Jhansi	+6·5
"	Jacobabad	—10·0	Agra	+6·5
25th	Jacobabad	—10·3	Seoni	+5·0
"	D. I. Khan	— 7·1	Jubbulpore	+7·4
26th	Sambhar	— 8·0	Benares	+4·4
27th	Raipur	— 7·6	Silchar	+5·1

Meanwhile important changes were in progress in the Bay of Bengal. South-west winds set in over the entrance to the Bay on the 23rd and 24th and advanced into the Andaman Sea on the latter day and gradually extended northwards. Weather became squally and rainy in the southern half of that sea on the 25th and 26th. Pressure began to give way and winds to shift round to easterly directions on the Lower Burma coast on the 27th. This feeble depression to the north-east of Port Blair intensified rapidly into a storm of small extent, but of considerable intensity on the 28th. It advanced north-eastwards and crossed the Burma coast near the mouth of the Rangoon River about 9 A.M. on the 29th and passed to the east of Rangoon about 11 A.M. The storm broke up during the next 24 hours. The whole of Lower and Central Burma received moderate to heavy rain on the 29th and 30th. The storm was similar in all its chief features to a storm which occurred about the same period in April 1893 (the 25th to the 28th).

During the period, whilst the storm was forming, very hot weather prevailed in Bengal, due chiefly to the abnormal extension of westerly winds into West Bengal. Temperature was slightly below the normal in North-Western and Central India, where the air was abnormally dry.

The following gives some of the more remarkable humidity percentages recorded during this very dry period :—

Date.	Station.	Humidity at 4 P.M. of date.
		%
25th	Deesa	2
26th	"	4
27th	"	2
27th	Meerut	5
27th	Khandwa	5
28th	Meerut	5
28th	Pachmarhi	5
28th	Sutna	5

Atmospheric pressure.—The mean pressure of the Indian land area was ·019″ below the normal. The local anomalies were unusually small in amount, indicating that the relative mean pressure distribution was very approximately normal. Pressure was relatively to the general condition in slight local defect in Burma, Assam, Sind, the Punjab, Rajputana, Central India and the Carnatic, and in slight excess elsewhere. The anomalies were however less than ·02″ in amount at all stations, except perhaps Rangoon (—·025″).

The following table gives pressure variation data for ten meteorological provinces :—

Meteorological Province.	Variation from normal of mean monthly pressure.	Mean anomaly.
	"	"
Burma Coast and Bay Islands	—·035	—·016
Assam	—·020	—·001
Bengal and Orissa	—·014	+·005
Gangetic Plain and Chota Nagpur	—·016	+·003
Upper Sub-Himalayas	—·016	+·003
Indus Valley and North-West Rajputana	—·028	—·009
East Rajputana, Central India and Gujarat	—·024	—·005
Deccan	—·017	+·002
West Coast	—·011	+·008
South India	—·019	0

Temperature.—The mean temperature conditions of the month differed very slightly from the normal.

The mean day or maximum temperature was in slight excess in the area of slightly deficient pressure in North-Western India and also in Assam and Lower Burma. The excess in those areas was less than 2° at all stations, except Jacobabad (+2·3°) and perhaps Kurrachee (+2·9°). It was in slight defect over the remainder of India, except in the area defined by the following stations in the Peninsula, where it was more than 2° below the normal:—

Belgaum (—3·3°), Coimbatore (—3·3°), Mercara(—3·2°), Seoni (—2·8°), Sholapur (—2·7°), Bellary (—2·5°) and Hoshangabad and Hyderabad, Deccan, (—2·1°.)

The mean night temperature was in slight defect in the Gangetic plain, Central India and the Central Provinces and generally in excess elsewhere, but the variations were small, in the majority of cases being less than 1° and in one case only exceeding 2°.

The mean temperature of the month was in slight excess in Burma, Assam, the South-West Punjab, Rajputana, Sind and the Bombay coast districts, and in slight defect over the remainder of India. The departures from the normal were less than 2° at all stations, except Coimbatore (—2·5°) and Kurrachee (+2·1°).

The variations of the temperature conditions from the normal at the hill stations were generally very small in amount. Temperature was in slight defect at Leh and Kailang and in slight excess at the Lower Himalayan stations.

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

Meteorological Province.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.
	°	°	°
Burma Coast and Bay Islands.	+0·3	+0·8	+0·6
Burma Inland	−2·1	+0·9	−0.7
Assam	+1·0	+0·6	+0·8
Bengal and Orissa	−0·8	−0·1	−0·5
Gangetic Plain and Chota Nagpur.	−1·3	−0·8	−1·1
Upper Sub-Himalayas	−0·8	−0·6	−0·7
Indus Valley and North-West Rajputana.	+1·5	+0·2	+0·9
East Rajputana, Central India and Gujarat.	+0·5	−0·3	+0·1
Deccan	−1·2	−0·1	−0·7
West Coast	−0·1	−0·2	−0·1
South India	−1·3	−0·2	−0·8

Winds.—Winds were very unsteady at Port Blair and (to a less extent) in Lower Burma, due to an early temporary advance of monsoon humid winds in the south and centre of the Bay in the last ten days of the month. Winds were on the whole normal in strength and steadiness in Bengal, but were more southerly and less westerly at the coast stations of False Point and Saugor Island and more westerly in Central and West Bengal. Winds were slightly stronger in the Gangetic plain and were more northerly and less westerly than usual. Winds were very unsteady and feeble in Sind. In the Central Provinces, Deccan and Mysore, winds were slightly stronger and steadier than usual and more directly from the west.

Humidity and Cloud.—The air was slightly drier than usual in Burma and over the whole of Northern and Central India. The variations from the normal were generally small in amount and were greatest in South Bengal. Thus the mean relative humidity of the month was 7 in defect at Calcutta. The air was damper at Leh and Kailang and drier at the Lower Himalayan hill stations and at Quetta and Pachmarhi. As the absolute humidity was practically normal at these stations, the variations of the relative humidity were determined by the local temperature conditions, the mean temperature of the month being in excess at all of these stations, except Leh and Kailang.

The air generally contained slightly more vapour in the Deccan and Southern India and the humidity was more or less above the normal. The increased humidity was most marked at Wellington (+10), Bellary (+7), Bangalore (+6) and Mercara (+6).

There was more cloud than usual at Port Blair and in Burma and North-Eastern India. The excess was greatest at Port Blair (+1·8) and diminished in amount northwards and westwards. The mean cloud amount was, on the other hand, in defect over the whole of Central and North-Western India and the adjacent hill districts. The deficiency was greatest in Sind, the South-West Punjab and the Punjab hills, in which it ranged between 1·0 and 2·0. The cloud amount was in excess in the Peninsula, to a slight extent in the north (*i.e.*, the Central Provinces, Berar and the North Deccan), and to a moderate extent in Southern India.

The following table gives variation data of the mean aqueous vapour pressure, mean humidity and mean cloud amount of ten meteorological provinces for the month of April 1894:—

Meteorological Province.	Variation of		
	Mean aqueous vapour pressure from normal.	Mean humidity from normal.	Mean cloud amount from normal.
	in.		
Burma Coast and Bay Islands.	−·016	−2	+0·9
Assam	+·013	−2	−0·3
Bengal and Orissa	−·013	−3	+0·6
Gangetic Plain and Chota Nagpur.	−·015	0	+0·4
Upper Sub-Himalayas	−·017	−2	−0·8
Indus Valley and North-West Rajputana.	+·024	−1	−1·3
East Rajputana, Central India and Gujarat.	−·039	−3	−0·3
Deccan	0	+1	+0·5
West Coast	+·011	0	+0·6
South India	+·001	+3	+0·9

Rainfall.—The rainfall of the month averaged less than a tenth of an inch in amount (and was hence practically *nil*) in Sind, Rajputana, the southern and central districts of the Punjab, the North-Western Provinces and Central India. It was small in amount and of little importance except for its effect in temporarily reducing temperature over the remainder of India, except in the following districts, (1) Baluchistan, Kashmir and the Punjab, (2) North-Eastern India, (3) Burma and (4) Southern India, including the greater part of Madras and the Deccan.

In Upper India, three depressions which formed in Upper Sind, passed eastwards across theSouth Punjab to the foot of the hills. They gave duststorms and thunderstorms chiefly in the Punjab and Kashmir and the Punjab hills, during the following periods, the 3rd to the 6th, the 13th to the 16th, and the 21st to the 24th. Baluchistan obtained moderate rain during the second period The rainfall of the month was in slight excess in the north and west of the Punjab. North-Eastern India received more or less heavy rain chiefly from thunderstorms during the following three periods, *viz.*, the 1st to the 12th, the 16th to the 22nd, and the 24th to the 28th. The rainfall was exceptionally heavy in the Cachar and Sylhet districts from the 7th to the 10th.

The rainfall was more irregularly distributed than usual in North-Eastern India. It was in moderate excess in Cachar (46 per cent.) and North Bengal (69 per cent.) and in moderate defect in the Assam Valley and East Bengal and normal in South-West Bengal, Bihar and Chota Nagpur.

Burma obtained early and heavy rain on the 29th and 30th from the cyclonic storm which passed into it from the Andaman Sea on the 29th. The rainfall was in large excess both in Central and Lower Burma (108 per cent. and 27 per cent., respectively), and was below the normal in Arakan.

Southern India obtained more frequent rain than usual in April. The chief periods of rainfall were the 2nd and 3rd, the 5th to the 11th, the 18th to the 21st, and the 26th to the end of the month. The rain fell chiefly as thundershowers but the last burst was due to a more general invasion of humid winds from the Arabian Sea, which occurred simultaneously with the storm in the Bay. The rainfall of the month was hence in large excess in Malabar (+2·8 inches or 121 per cent.), Mysore (+1·5 inches or 112 per cent.) and the Coromandel or east coast districts.

The following table gives comparative rainfall data of the eleven meteorological provinces of the Empire :—

Meteorological Province.	Rainfall.		
	Mean actual for April.	Mean normal for April.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	7·22	2·28	+4·75
Burma Inland	1·83	1·05	+0·92
Assam	11·81	9·57	+2·25
Bengal and Orissa	2·43	2·36	+0·10
Gangetic Plain and Chota Nagpur.	0·30	0·37	−0·06
Upper Sub-Himalayas	0·38	0·63	−0·25
Indus Valley and North-West Rajputana.	0·57	0·39	+0·09
East Rajputana, Central India and Gujarat.	0·05	0·07	0
Deccan	0·35	0·41	−0·16
West Coast	2·49	1·73	+1·07
South India	1·93	1·12	+0·39

Atmospheric Pressure.

The mean pressure of the whole of India for the month of April was ·019″ below the normal of the period. Relatively to the general condition pressure was in very slight defect in the South-West Punjab, Sind, Kathiawar, Rajputana, Central India, Assam and Burma, and the Carnatic.

The pressure anomalies were in almost all cases very small and exceeded ·020″ only at Rangoon (—·025″).

There was a very slight excess of pressure at the hill stations relatively to the adjacent plains. The relative distribution of pressure, both horizontal and vertical, hence agreed very closely with the normal, and the only feature of importance in the mean pressure distribution was the general deficiency (moderate in amount) over the whole Indian area. The following data giving the actual variations of pressure at certain stations show that the deficiency extended over the whole Indian monsoon area.

Station.	Variation of the mean 8 A.M. pressure of month from normal
	″
Colombo	−·018
Port Blair	−·031
Sibsagar	−·035
Peshawar	−·006
Aden	+·001

Barometric Depressions and Cyclonic Storm of the month.

At the commencement of the month pressure was approximately normal. Shallow hot-weather depressions lay over Upper Sind and North West Rajputana and the eastern districts of the North-West Provinces. Pressure gave way rapidly on the 2nd in Upper India and the Sind depression intensified slightly, whilst the depression in the North-Western Provinces filled up and disappeared. The Sind depression advanced eastwards during the day and was

in the South Punjab on the morning of the 3rd and filled up over the Puujab Himalayas during the next 24 hours.

Series of duststorms occurred in the plains of North-Western India on the 3rd and thunderstorms in the Punjab hill districts. A depression was again shown in Upper Sind on the 5th. Very large and irregular barometric changes occurred during the next 48 hours, and weather was more or less disturbed over the greater part of Northern India. Numerous duststorms and thunderstorms occurred during the period in the Punjab and adjacent hill districts. Thunderstorms and nor-westers gave during this period daily rain to Assam and the greater part of Bengal. For example, Assam received an average of 0·66 inch on the 5th and of 0·72 inch on the 6th. Pressure fell very rapidly in North and Central Bengal and Assam on the 6th, and a depression in which pressure was two-tenths of an inch below the normal lay over North Bengal on the morning of the 7th. Gradients were steep in Bengal and very strong southerly winds prevailed in South Bengal and strong westerly winds in Bihar. This depression remained unchanged in position and character during the next three days. Practically no rain fell in Bengal or Orissa during this period. Assam (more especially Cachar), on the other hand, obtained heavy rain.

The following gives the more noteworthy falls :—

Date.	District.	Station.	Rainfall in past 24 hours.
			Inches.
7th	Cachar	Bikrampur	5·18
8th	"	Silchar	5·34
"	"	Bikrampur	8·48
"	"	Dewan	5·84
9th	"	Nemotha	10·36

The following gives average rainfall data of the Sylhet and Cachar districts for the period, the 7th to the 10th.

District.	Rainfall in 24 hours preceding 8 A. M. of				Total of period.
	7th.	8th.	9th.	10th.	
	Inches.	Inches.	Inches.	Inches.	Inches.
Sylhet	1·14	0·37	0·60	1·57	3·68
Cachar	1·74	2·55	3·10	3·38	10·77

Pressure increased rapidly in North-Eastern India on the 10th and 11th and the depression in that area not only disappeared, but on the morning of the 12th pressure was considerably in excess in Assam and North Bengal and was in moderate defect in Sind and the South-West Punjab, where a shallow depression due to hot-weather actions was forming. It intensified slightly and passed eastwards across the South Punjab and North Rajputana during the next 48 hours, when it disappeared. Duststorms and thunderstorms visited the Punjab, Kashmir and Baluchistan on the 13th and 14th, and gave moderately heavy rain to stations in the North Punjab. Duststorms also occurred in the Central Provinces and Deccan and gave in some cases light rain showers, chiefly in the Bombay Deccan.

Pressure now increased in North-Western India relatively to North-Eastern India, and a shallow depression (with moderate gradients in the eastern quadrant) lay over Chota Nagpur and Bihar on the 16th and 17th. The pressure changes, although generally small, were very irregular during the next four days. During this period, from the 17th to the 21st, thunderstorms and nor-westers gave frequent rain in Assam and Bengal. The rainfall due to these storms was moderate in amount and was heaviest in East Bengal. Weather was also slightly disturbed in Southern India and Burma during this period, and a feeble advance of humid winds gave light to moderate rain showers in Tenasserim and Southern India. The Chingleput district received an average of 0·77 inch and the South Arcot district of 1·18 inches on the 19th. The rainfall was most general in the Coromandel coast district and was light and sporadic in Malabar.

Meanwhile on the 20th and 21st a depression due to hot-weather conditions and actions had again formed over Upper Sind. This depression advanced across the Punjab on the 22nd and was in the East Punjab on the 23rd. It filled up during the next 24 hours after having given thundershowers in the North Punjab, Kashmir and the Punjab hills and duststorms in the South Punjab and Rajputana.

A shallow stationary depression due to high temperature had covered Central Burma for some days previously. Showers fell in that area for the first time on the 24th. The chief feature of the last week of the month was an advance of humid winds in the Arabian Sea and the Bay of Bengal, which gave rise to a small cyclonic storm in the Andaman Sea. The following gives an account of this storm.—

Cyclonic storm of the 27th to the 30th April.—The observations at Port Blair show very clearly the advance of strong humid winds over the centre and south of the Bay in the last week of the month. The mean daily velocity of the period, the 1st to the 22nd, averaged 94 miles per diem and ranged between 70 and 132 miles. Winds were very variable in direction during the whole of this period. The cloud amount averaged 3·7 and the total rainfall of this period was 0·56 inch. The following gives

8 A.M. observations at Port Blair for the period, the 23rd to 30th :—

Date.	Pressure.		Wind.		Cloud.	Rainfall.
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Change in past 24 hours.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.		
	"	"				Inches.
23rd . .	29·798	−·042	Calm	5	4	0·07
24th . . .	804	+·006	W	4	9	0·04
25th . .	·765	−·039	SSW	5	9	1·01
26th . . .	·759	−·006	WSW	8	10	1·09
27th . . .	·720	−·039	W	7	10	2·89
28th . . .	·645	−·075	W	17	10	4·69
29th . . .	·639	−·006	WSW	12	10	2·85
30th . . .	·712	+·073	WSW	10	8	0·15

The preceding data show clearly the advance and intensification of south-west humid winds and the barometric and other changes accompanying this advance. Similar information is given by the logs of vessels. Thus on the 21st, weather was fine in the west of the Bay and cloudy and showery in the south and east. Winds were very variable, 8 out of 19 ships over the southern half of the Bay reporting variable winds or calms. Three vessels out of nine experienced squally weather in the south of the Bay on the 22nd, and six vessels out of ten on the 23rd; but winds were still very variable and light. The following gives a brief sketch of the weather and conditions in the Bay preceding and during the storm.

24th April.—Weather was fine with moderate winds in the north of the Bay and was fine and skies generally clear in the north and centre of the Andaman Sea. The S. *Victoria Regina* in Lat. 0° 24′ N. and Long. 86° 18′ E. at 8 A.M. had west-south-west winds force 4 at that hour and hard squalls of wind and rain in the afternoon. The S.S. *Khandalla* near Galle had squally-looking weather. At Minicoy in the Arabian Sea, weather was cloudy, gloomy and showery, and winds moderate from west-north-west, but increasing in force.

25th April.—Conditions were unchanged over the greater part of the Andaman Sea. In the north and centre light winds force 2 prevailed. Winds were very irregular in direction. The information of the weather in the south of the Andaman Sea for this day is even more meagre than for the 24th. The S.S. *Pentakota* proceeding from Rangoon to Singapore had fine weather with light southerly winds (force 2) in the morning. She passed into squally weather in the evening and at 8 P.M. in about Lat. 14° 30′ N. and Long. 96° 30′ E. she began to experience strong squalls and had frequent heavy squalls of wind and rain. The wind shifted from south to south-west and increased in strength as she proceeded. Weather was squally in the Straits of Malacca and over the entrance to the Bay.

The following gives observations for Port Blair, Colombo and Minicoy :—

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.			
	"	"	"				"	
Minicoy .	29·880	+·047	?	ENE	21	10	0·46	Squally with rain, thunder and lightning.
Colombo .	29·787	−·002	−·061	SSW	8	4	1·45	Sea slight.
Port Blair .	29·765	−·039	?	SSW	5	9	1·01	Thunder and lightning.

The data furnished by ships indicate that a humid current of considerable intensity was established in the south of the Andaman Sea, and that it was extending and advancing northwards and had advanced at least as far north as Lat. 12° on this day. This is confirmed by the Port Blair observations and the Minicoy and Colombo data show that it was part of a much larger advance of humid winds which were giving squally weather and much rain in the south-east of the Arabian Sea and the entrance to the Bay.

26th April.—Pressure had given way to a slight extent over nearly the whole Indian area, but the changes were not only small but apparently unimportant. Malabar had received moderately heavy rain from thunderstorms. The following gives 8 A.M. observations taken at stations round the Andaman Sea :—

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 .	29·759	−·006	?	WSW	8	10	1·09	...
Mergui .	29·877	+·064	?	SSE	2	10	1·26	...
Tavoy .	29·840	+·030	?	Calm	1	8		...
Rangoon .	29·786	−·028	−·058	WSW	6	3		...
Diamond Island.	29·775	−·025	−·069	NW	4	9		Distant lightning.

Skies were slightly clouded in Lower Burma and clear in Central Burma. The winds at Rangoon and Diamond Island were determined by the pressure conditions in the

interior of Burma. Winds were as yet moderate at Mergui and Port Blair, and pressure had increased slightly at Mergui and Tavoy.

Pressure was nearly a tenth of an inch higher on the Tenasserim than on the Coromandel coast, and the Andaman Sea and Tenasserim was as yet an area of high pressure relative to Burma and the whole of the Bay and India. Moderately heavy rain was now falling at Port Blair and Mergui The following gives 8 A.M. observations taken on board vessels in the Andaman Sea during the day:—

Name of vessel.	Position at 8 A.M.		Barometer corrected.	Wind at 8 A.M.		State of sea.	Weather.
	Latitude N.	Longitude E.		Direction.	Force.		
	° ′	° ′	″				
S.S. *Pentakota*	12 23	96 46	29·780	SSW	5	Moderate head.	Frequent heavy squalls and rain.
S.S. *Wing Sang*	11 29	95 37	·765	SW	4	Slight.	Squally.
S.S. *Kut Sang*	9 27	96 57	·747	S	4	Moderate.	Rainy.
S.S. *Thibet*	5 49	93 36	·817	SW by W	5		Rainy.

The preceding data show that weather was becoming rapidly disturbed and very squally in the southern half of the Andaman Sea.

27th April.—Pressure had increased over the whole of India, but the changes were everywhere small and evidently due to feeble general actions extending over the whole of India.

The following gives 8 A.M. data of the Burmese coast stations:—

Station.	Pressure.			Wind.			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.	Cloud.		
	″	″	″				Inches	
Port Blair	29·720	—·039	?	W	7	10	2·89	Gloomy.
Mergui	·858	—·019	?	SSW	1	10	2·70	
Tavoy	·831	—·009	?	Calm	3	10	0·67	
Rangoon	·788	+·002	—·053	ESE	6	10	0·11	
Diamond Island.	·752	—·023	—·088	ENE	9	9	0·03	Sea rough.

Pressure was hence beginning to fall locally and a slight tendency shown to the formation of an area of low pressure. Winds had shifted round to easterly directions in Lower Burma and were now cyclonic in character in the northern half of the Andaman Sea. They were as yet only of ordinary strength and the change in the air movement during the previous 24 hours was of direction and not of increased strength. The land observations however clearly establish that an area of depression and cyclonic circulation had been initiated in the North Andaman Sea during the previous 24 hours and that rain had occurred in front of an advance of humid winds in the south-east of the Bay.

The following extracts from the logs of vessels show the character of the weather in the sea area on this day:—

Name of vessel.	Hour.	Position at 8 A.M.		Barometer corrected.	Wind at 8 A.M.		State of sea.	Weather.
		Lat. N.	Long. E.		Direction.	Force.		
	″	° ′	° ′	″				
S. *Victoria Regina*	8 A.M.	6 54	86 3	29·763	WSW	4	...	Sharp squalls of wind and rain.
S.S. *Thibet*	8 A.M.	5 36	91 1	·794	SW	5	...	4 P.M. heavy squalls of wind and rain.
S.S. *Pentakota*	8 A.M.	9 1	97 26	·820	WSW	5	Heavy cross.	4 A.M. hard squalls of wind and much rain.
S.S. *Bhundara*	4 A.M.	...	...	...	Calm	0	S. swell.	
,,	8 A.M.	14 45	94 9	·730	NNW	2	...	Showery.
,,	4 P.M.	...	...	·690	NNE	2		
S.S. *Wing Sang*	8 A.M.	15 22	92 46	·635	N	3	Smooth	Cloudy.

Weather was now very squally in the south of the Bay and the south and centre of the Andaman Sea and was cloudy and showery in the north.

28th April.—Pressure had decreased during the previous 24 hours briskly to rapidly over the whole of Northern India and in Burma. The observations at the Burma stations indicated the presence of a cyclonic storm of some intensity in the Andaman Sea.

The following gives data:—

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	29·645	—·075	?	W	17	10	4·69	Squally and drizzling.
Mergui	29·700	—·158	?	SSE	3	8	2·47	Thunder and lightning.
Tavoy	29·702	—·129	?	Calm	2	10	0·05	
Rangoon	29·652	—·136	—·185	ENE	6	9	0·12	
Diamond Island	29·633	—·119	—·203	NE	19	10	...	Sea rough.

A depression of some intensity hence covered the northern half of the Andaman Sea. Weather was squally with much rain at Port Blair. Skies were clouding over in Burma and showers were falling in the coast districts.

The following gives observations recorded on board vessels in the storm area :—

Hour.	Name of vessel.	Position. Lat. N.	Position. Long. E.	Barometer.	Wind. Direction.	Wind. Force.	State of sea.	Weather.
		° ′	° ′	″				
8 A.M.	S.S. *Thibet* .	5 32	88 41	29·805	W	5 to 6	High .	Squally.
8 A.M.	S.S. *Bhundara*	13 00	91 33	29·667	NW	4	S. swell	4 A.M. much lightning to N. E.
Noon	,,	12 42	91 07	29·642	NW	5	High cross swell.	
4 P.M.	,,	...	...	29·612	NW	4	Heavy confused	8 P.M. frequent sharp squalls with rain.
Noon	S.S. *Goa* .	near ris	Prepa-Island.	...	NE			
8 A.M.	S.S. *Ajax* .	15·33	97 36	...	E			
4 P.M.	,,	...	...	...	SE	...	...	Cloudy with increasing wind.
Mid-night.	,,	...	...	...	SE	6	...	Heavy squalls of rain.

The information is as hitherto very scanty, and whilst it confirms the inferences from the land observations, it does not add further or more definite information. The whole of the observations suggest that the centre of the depression was in about Lat. 14° N. and Long. 94½° or 95° E. The Captain of the S.S. *Goa* thus describes the weather he experienced on this day:—

"On Friday the 27th the weather, which had been hitherto the ordinary weather of the season, began to change and came to squally with heavy banks forming to eastwards; the wind unsteady in force and direction; the barometer falling slowly and fierce and continuous lightning to east and north-east. The continued until Saturday at noon when my position was 36 miles due west of Cow and Calf (the north end of Preparis Island). I passed the Island at 3·15 P.M. and almost immediately afterwards the weather assumed a more threatening appearance. The barometer fell rapidly. Heavy squalls from north east and the sea got up very quickly. Meanwhile the sky to east and north-east became of the bluish-black hue noticeable in cyclonic weather."

The observations hence establish that a cyclonic storm of some intensity had formed in the north of the Andaman Sea, and that the centre was in about Lat. 14° N. and Long. 94½ E. Weather was squally with strong winds in the outskirts of the storm, but no vessel was near the centre during the day.

April 29th.—Pressure had given way over the whole Indian area. The fall was large at the Lower Burma coast stations. The observations indicate that the depression and storm area lay over the Gulf of Martaban and that the centre was a little distance to the south of the mouth of the Rangoon River. Moderate to heavy rain had fallen in Lower Burma.

The following gives observations at the land 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	
Port Blair .	29·639	—·006	?	WSW	12	10	2·85	Overcast with lightning.
Tavoy . .	29·651	—·051	?	Calm	3	10	2·52	
Moulmein .	29·550	—·139	?	SE	4	10	0·84	
Rangoon .	29·488	—·164	—·342	NNE	9	10	1·23	
Thayetmyo .	29-609	—·050	—·180	WNW	14	10	1·85	
Bassein .	29·572	—·091	—·233	N	6	10	1·45	
Diamond Island .	29·580	—·053	—·248	NNW	20	10	3·55	Sea rough.

The preceding data establish that the storm area (or area of strong winds, force 6 and upwards) was of comparatively small extent and that the storm was of considerable intensity.

The following gives data extracted from the logs of ships that experienced the storm on this day :—

Hour.	Name of vessel.	Position. Lat. N.	Position. Long. E.	Barometer.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
3 A.M.	S.S. *Warora*	...	...	29·36	NW by W	9	Blowing a heavy gale with hard squalls.
8 A.M.	,,	...	...	·52	Do.	9	Continuous rain with hard squalls.
Noon	,,	14·07	95·02	·58	Do.		
4 P.M.	,,	...	...	·50	W	5	Squally.
9 A.M.	S.S. *Pundua*	Left	Ran-goon.	·20?			
Noon	,,	...	...	...	NNW	9	Wind increasing to heavy gale with violent rain.
4 P.M.	,,	...	...	...	W	7	Moderate gale and light rain.
8 P.M.	,,	...	...	...	W	6	Squally.
8 A.M.	S.S. *Maharani*	15·44	94·28	·52	NW	8	Heavy squalls and blinding rain.
Noon	,,	15·44	94· 2	·55	NE	7	Heavy squalls.
4 P.M.	,,	...	...	·49	NW	6to5	Frequent heavy rain squalls.
8 P.M.	,,	...	...	·50	W	5	Dark cloudy weather with strong breeze.

The Captain of the S.S. *Goa*, which was in the western quadrant of the cyclone on the morning of the 29th, thus describes the weather he experienced:—"At midnight I struck soundings of 23 fathoms south of Baragua flats, by which time the wind had increased to a fresh gale and the beam sea became more distressing till 2 A.M., when the barometer having fallen to 29·50″ and the wind increasing rapidly, I deemed it advisable to heave-to. At 2-30 A.M. the wind hauled to north-north-west and then gradually veered to westward till 4 A.M., when it remained steady for a while at west-north-west, and the barometer began to rise. It was now blowing a heavy gale and though my sheltered position (under the lea of Baragua Flats and about 15 miles south-west of Krishna Light) gave no scope for the sea to rise in proportion to the wind, the foaming and hissing of the flying spray were sufficient indication of what the sea must have been at that time a few miles to the southward. The barometer then stood at 29·57″, after which it rose very gradually and the wind began to take off at 5 A.M. At daybreak the weather was so thick that I could not see half a mile round the ship. So I manœuvred the ship in the same soundings till 8-45 A.M., when the weather showed signs of clearing. At noon I sighted Krishna Light bearing north-north-west and then proceeded full speed, the weather hourly improving. At 4 P.M., when I reached the Pilot Brig, it was moderately fine and the barometer stood at 29·68″."

The Captain of the S.S. *Ajax* in the south-east quadrant lying off the Island of Kalagauk, 20 miles south of Double Island (Lat. 15° 53′ N and Long. 97° 36′ E) had a strong south-easterly gale at 5 A.M. From 9 A.M. to noon heavy squalls of wind and blinding rain passed over the vessel. At noon the squalls were very heavy. The wind veered to south for a short time and weather cleared a little. At 2 P.M., the wind veered to south-west for a short time and backed again to south for about half an hour. At 3 P.M. the wind began to veer to south-west and west and weather cleared up rapidly and sea went down.

The available information hence appears to establish that the cyclonic storm had increased considerably in intensity during the previous 24 hours, and the barometric depression at the centre actually exceeded four-tenths, and perhaps was at least five-tenths of an inch in amount. The storm had marched in a north-easterly direction and the centre at 8 A.M., was near the mouth of the Rangoon River and passed a little distance to the east of Rangoon about 11 A.M. of the 29th.

30th April.—Pressure had risen slightly over the whole of India and had increased very rapidly in Lower Burma and briskly in Upper Burma.

The observations at the Burma stations show that the storm had completely broken up and that light to moderate irregular winds obtained in that area. The following gives 8 A.M. observations at six stations in illustration:—

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.	
Diamond Island	29·720	+·140	−·102	WSW	14	10	3·19	Sea rough.
Rangoon .	·710	+·222	−·116	SSW	...	10	2·59	Gale of wind.
Moulmein .	·767	+·217	...	ESE	19	10	4·00	
Toungoo .	·689	+·111	−·116	S	5	10	2·15	
Thayetmyo .	·688	+·079	−·092	SSW	14	5	0·06	
Mandalay .	·394	+·045	?	N	3		0·19	

Heavy rain had fallen during the previous day in Lower Burma and light to moderate rain in Upper Burma.

Weather had improved rapidly in the North Andaman Sea and vessels in that area reported moderate winds (force 4) and cloudy weather with occasional showers.

The preceding storm was in the time and circumstances of its origin and its line of march almost identical with the storm of the 25th to the 28th April 1893, and was in fact almost an exact repetition of that storm.

Both storms were generated during an unusually early advance of humid south-west monsoon winds. In the present case, the advance was exhibited almost as strongly in the south-east of the Arabian Sea off the Malabar coast as in the south of the Bay. The advance apparently commenced over the entrance to the Bay on the 22nd and 23rd and the current was directed east-north-eastwards into the Andaman Sea, and began to give squally weather on the 24th over the southern half of the Andaman Sea. The Port Blair observations show that winds strengthened and rain fell in increasing amounts from the 24th. The current began to affect the North Andaman Sea on the 27th, and a barometric depression and cyclonic circulation commenced to form. It was well marked on the 28th when it began to advance north-eastwards, and increased rapidly in intensity during the day. The centre was in the Gulf of Martaban on the early morning of the 29th and passed over the entrance to the Rangoon River probably between 9 and 10 A.M., and to the east of Rangoon about 11 A.M. The storm broke up very rapidly during the day.

The storm formed during a period of general and large decrease of pressure in India. The following gives data :—

DATE.	Mean change of pressure in India.	Mean variation of pressure from normal in India.
	"	"
25th	−·022	−·026
26th	−·009	−·032
27th	+·024	−·002
28th	−·055	−·053
29th	−·049	−·092
30th	+·018	−·057

In the preceding table the pressure data for Burma have not been taken into consideration, and hence the effect of the fall of pressure due to cyclonic actions in Burma is not included in the preceding mean data.

The following gives a summary of the rainfall in Burma accompanying the storm :—

DIVISION.	RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF			Total of period.
	28th.	29th.	30th.	
Tenasserim	1·66	2·14	2·63	6·43
Lower Burma	0·40	1·31	0·88	2·59
Central "	0·31	0·98	0·70	1·99
Upper "	0·03	0·15	0·22	0·40
Arakan	0·03	0·20	0·36	0·59

Summary of the reports of the weather and snowfall in the mountain districts to the north and north-west of India.

The following gives a full summary of the whole of the information under this head received up to date. This information establishes that little or no snow fell in the highlands of Afghanistan and Baluchistan, and that the snow accumulation of the winter melted rapidly during the month, and to such an extent that there was no snow lying at the end of the month, except on the higher peaks of the Safed Koh, Paghman, and other high ranges in that area. Light to moderate snow appears to have fallen on the higher elevations of the Western Himalayas, but the total amount was small. Hence although the fall of the previous three months had been considerably larger than the normal in the higher and interior ranges of the Kashmir and Punjab Himalayas, the accumulation on these ranges at the end of April, although large, was melting fast and was exercising little influence on the meteorology of India. The chief feature of the snowfall of the preceding winter was undoubtedly the excessive amount in Ladakh and the only area in which there was a considerable extension of snow-clad surface in the month of April was Ladakh and the districts to the north.

(1) AFGHAN MOUNTAIN DISTRICTS.

(1) *Kurram.*—The following gives the dates and amounts of the snowfall during the month on the Sufed Koh :—

DATE.	Height to which snow descended.	Depth of snowfall on crest.
	Feet.	
4th	9,000	3 inches.
6th	9,000	3 "
13th	9,000	1 foot.
22nd	10,000	4 inches.

(2) *Hills west of Dera Ismail Khan*—No snow is reported to have fallen on these hills during the month.

(3) *Kabul.*—No snow fell on the neighbouring hills during the month, and the snow had entirely melted on the tops of these hills before the end of the month. Rain fell at Kabul on 9 days during the month, giving a total of 2·77 inches.

II.—KASHMIR AND PUNJAB HIMALAYAS.

(1) *Hazara.*—No snow fell in the lower ranges of this district.

(2) *Gilgit.*—The Agency Surgeon writes as follows :—"The snowfall was less than usual in November and December (as compared with former years). It was heavy in January, February and March, thus bringing the total snowfall of the winter above the average in the opinion of the inhabitants of the district. As irrigation in Gilgit is dependent on the annual snowfall and not on glaciers, the people look forward to a bumper harvest."

(3) *Leh (Ladakh).*—The following report has been received from the Superintendent, Leh Observatory :—"Snow fell during the month on four days, *viz.*, 3rd, 4th, 5th and 6th, the total amount being nearly 1 foot. It fell during the night and early morning, completely covering the valley at 10,500 feet, but melted almost completely during the day. At present the snow line is slowly receding, standing on April 30th at about 13,000 feet on south slopes. Each snowfall was succeeded by bright sunshine. Snowfall extended westwards as far as Kashmir. Since April 7th weather has been fairly bright, but cool. Ploughing has just begun at the end of April, decidedly later than usual."

The following additional information is extracted from a letter received from Mr. Shawe, dated the 16th May:—

"With regard to the past winter, I am sorry that I cannot add much information. According to statements of the people, the snowfall in Nubra, the valley immediately north of Leh and parallel to the Indus, separated by a ridge of about 20,000 feet average height, has been above the normal; but the people do not seem to have been so impressed by the large quantity of snow as the Ladakhis have been. I have had two letters from gentlemen spending the winter in Yarkand. The first, dated in February, spoke of the weather as having been 'not very cold': no mention is made of snow. The second letter, dated at the beginning of March, intimates the writer's intention of starting immediately for the Pamirs. This would seem to imply very little snow. But, on the other hand, natives here state that their correspondents in Yarkand made mention of heavy snow.

"With regard to the Karakorum, absolutely no information is available. In the second letter just referred to, the gentleman speaks of reaching Leh in the middle of June. This would be early in the season and would imply very little snow. The people here say that a few people from Yarkand have already reached Nubra. If this is true, definite information may soon be obtainable; but I greatly question the accuracy of my information. Besides that, we are at present having very bad weather (6 inches snow on Whit-Monday), and the passes are temporarily blocked again."

(4) *Lahoul.*—The Reverend Mr. Heyde, Superintendent of the Kailang Observatory, has forwarded the following report of the weather and snowfall of Lahoul during the past winter. "From the 26th of December to the 10th of April there have been 48 days on which snow has fallen at Kailang. During that period 18·56 inches of snow water have been registered, equal to about 16½ feet of snow. Kailang is situated at a height of 10,000 feet above sea-level. As to cold, the present winter was much less severe than the last. The snow frequently fell so wet that it could not be reliably measured, and therefore chiefly the snow which was caught by the funnel of the rain gauge has been melted and the water obtained measured. During the period under consideration there has been much more wind than last year; but no snowstorm, properly so called, has occurred. A comparison with former winter shows that during this last one fewer avalanches fell than might have been expected from the masses of snow which have fallen on the higher hills around Kailang. The natives attribute this to the wind which predominated during the period, by which the snow had been beaten and hardened. From Spiti and Zanskar no information has been received yet as to what the winter has been like there. In Pangi it appears it has been the same as in Lahoul. To-day (10th April) the snow here at Kailang lies still 4 feet deep on level fields. The great amount of snow accumulation makes the air cool and the melting of the snow goes on so slowly that on fields earth has to be thickly spread over the snow in order to hasten its disappearance before the end of April, when the ploughing is to begin. The natives assert that a fall of snow of 1 foot down in the valley (10,000 feet) means from 2 to 3 feet on passes like the Rotang and Bara-la-cha, 13,000 and 16,000 feet respectively. If so, the present depth of snow on these heights cannot be less than 25 feet or rather more. The Rotang Pass has been practicable for men during the past 12 days. Very strong winds are reported to prevail on that pass at present. In spite of so much snow during this winter season the prevailing temperature must be said to have been strikingly warm. Only once or twice the minimum thermometer fell below zero in the beginning of March. According to natives and others and my own observations winters like the present are, generally speaking, followed by favourable seasons in Lahoul in regard to the crops as well as to health.

"It may also be noted that snow is falling much later than usual in this valley. Our last storm was on the 4th, 5th and 6th, when upwards of 2 feet fell at Kailang, and it is reported that 4 to 5 feet fell on the neighbouring heights and passes."

(5) *Chamba.*—The Deputy Conservator of Forests, Chamba Division, reports as follows:—"No snow fell at ordinary elevations, *i.e.*, below 8,000 feet, during the month. There were rain or hailstorms on the 6th, 8th and 13th April, and light showers at other times; but no snow fell on these occasions below 10,000 feet. And from distant appearance little or no snow fell at higher elevations. The weather was unusually clear and bright during the greater part of the period, interrupted with a few thunderstorms, sometimes accompanied with rain and sometimes with hail. At one point on a ridge to the north-west of Chamba State, at an elevation of 11,000 feet, I found (15th April) some 5 feet of snow still left, and there was almost continuous snow on the cold slopes down to 8,000 or even 7,500 feet. On the warm slopes, as a rule, the snow line did not descend much below 10,000 feet. In ravines masses of snow still remain down to 6,000 feet. The accumulations in ravines seem larger than was the case in 1892-93, the rain falling along with the snow having apparently caused the latter to slide more than usual. Last month I reported that above Dalhousie the snowfall appeared to have been much the same as in 1890-91. Further in the hills, north and north-west of Chamba, the snowfall seems to have been rather heavier than in 1890-91."

A complete return of the snowfall during the period at the forest station of Kilar (8,600 feet in elevation) in Pangi in the Chenab valley from the 15th November to the

15th April has also been received from the Deputy Conservator. The following is an abstract :—

Month.	Number of days on which snow fell.	Total snowfall of month.		Heaviest snowfall in 24 hours.		
				Date.	Amount.	
		Feet.	Inches.		Feet.	Inches.
November	Nil	Nil				
December	11	2	1½	7th	1	2
January	17	8	9	1st	1	7
February	14	6	8½	15th	1	8
March	13	3	6	11th	0	9
April 1st to 15th	4	0	9½	14th	0	3
TOTAL	59	21	10½			

(6) *Kulu.*—Snow fell on the 5th, 6th, 9th and 14th on the Kulu Tahsil, and on the 3rd, 5th, 7th, 8th, 14th, 16th and 20th in the Plach Tahsil, on the higher passes and mountains (at elevations about 10,000 feet). Weather during the month was hotter and finer than usual and snow hence melted rapidly. Lahulis do not expect to be able to cross the Rotang Pass with laden animals before the 15th June. The snowfall during the month was the same in character as in 1893. The following table gives the depth of snow on the higher passes at the end of the month and similar data for the corresponding months of the past four years :—

Tahsil.	Name of pass.	Height.	Approximate depth of snow on 30th April 1894.	Depth of snow on 25th April.			
				1893.	1892.	1891.	1890.
		Feet.	Feet.	Feet.	Feet.	Feet	Feet.
Kulu	Rotang	13,000	13	13	3	10	6
	Hamta	14,500	10	11	2½	?	8
	Chander Khani	?	9	12	3½	10	3
	Barsai	?	6	6	2	5	3
	Bujadhar	?	8	6	½	4	3½
	Lori Achri	?	7	5	*Nil.*	3	2
	Pushtari	?	2	4	...	3	½
	Bhubhu	10,000	2	5	...	5	1½
	Majang	?	...	2	...	0	½
Plach	Chul	?	3	11	...	4	2
	Sirikand	15,000	15	30	6	36	17
	Maghian	?	4	9	*Nil.*	4	2
	Tikkar	?	3	6	...	...	...
	Dundku	?	5	6	...	7	4
	Nunu	?	2	1	...	2	...
	Jalori	10,500	4	6	...	4	1
	Raghopur	?	5	6	...	5	2
	Himri	?	3	7	...	4	1
	Sakiran	?	4	7	...	5	1
	Suphakun	?	6	15	...	12	15
	Gargarasan	17,000	8	25	...	12	8
	Bashleo	11,000	3	15	...	4	2
	Plach	?	4	20	...	7	6
	Tirath	?	7	25	...	10	7

III.—NORTH-WESTERN PROVINCES HIMALAYAS.

Kumaon.—The following information relating to the snowfall in this district has been received from the Commissioner of Kumaon :—

Malla Danpur.—Snow fell on the 3rd, 4th, 5th, 13th and 19th on the passes of Pindari, Kataula and Pankua to an average depth of 11 inches.

Malla Byans, Chandans and Darma.—There were snowstorms on the 2nd and 19th on the higher elevations. The total snowfall of the month is reported to have amounted to 1 foot and 6 inches.

Malla Johar.—Snow fell on the 1st, 4th, 5th, 13th, 20th and 28th on the Utadhura and Ralumdhura passes. The total fall of the month is estimated at 1 foot and 3 inches.

The snowfall of the month was slightly less than in April 1893. The weather is stated to have been more cloudy and damper.

Summary of Special Storm Reports.

The following gives a statement of the more important local storms, of which special reports were received from observers. The month was on the whole less disturbed than usual, and none of the storms reported were of exceptional violence. The whole of the storms were of the ordinary hot-weather type, *viz.*, thunderstorms with heavy rain or hail in Bengal and the submontane districts of the Gangetic plain and the West Deccan, and duststorms in the driest and hottest parts of the country :—

1st.—Thunderstorms at Chikalda, (at 1 P.M.), and at Pachpadra from 1 P.M. to 4-30 P.M. The barometer at Pachpadra rose from 29·596″ at 4-30 P.M. to 29·700″ at 5 P.M. when the storm was passing away. Duststorm at Poona at 5-30 P.M.

2nd.—Severe thunderstorms at False Point (7-30 P.M. to 9 P.M.) and Mymensingh (2-30 P.M. to 5 P.M.) Duststorm at Jubbulpore (at noon).

3rd.—Duststorm at Delhi (3-30 P.M.).

4th.—Severe thunderstorm at Hyderabad Deccan, (2-30 A.M. to 3-20 A.M.). The storm is stated to have been quite local, affecting an area of only about 40 square miles. Violent duststorm at Kurnool from east (2-45 P.M. to 3-45 P.M.). Severe duststorm at Lahore from west.

6th.—Thunderstorm at Belgaum (3-15 P.M. to 4 P.M.). Duststorm at Poona (5-15 P.M. to 6 P.M.).

9th.—Severe hailstorm at Saydi village near Mandalay. The storm lasted about half an hour and the hailstones are said to have been as large as walnuts. The storm is said to be the most severe that has been experienced in the Mandalay District for 50 years. It caused the entire destruction of the tobacco crop on Saydi Island.

10th.—Thunderstorms at Masulipatam (5-30 P.M. to 6 P.M.) and Hyderabad Deccan (7-45 P.M.).

11th.—Thunderstorm at Hyderabad, Deccan, (5-50 A.M. to 7 A.M.).

12th.—Violent duststorm at Jacobabad from south-west (4 P.M. to 5-15 P.M.). The mean velocity of the wind during the storm at Jacobabad from 4-15 P.M. to 4-30 P.M. as recorded by an anemometer was 76 miles per hour. Much damage was done to trees in the station. Temperature fell slightly during the storm and the barometer was remarkably steady throughout.

13th.—Duststorm at Delhi (3-30 P.M. to 4-30 P.M.) and at Hyderabad, Sind, (4-20 P.M.).

14th.—Duststorm at Allahabad (1-30 A.M.).

16th.—Violent duststorm at Allahabad (4-30 A.M. to 6 A.M.).

17th.—Duststorm at Allahabad at 1-30 A.M. Storm came from west-north-west. There was no thunder nor lightning during the storm, a most unusual circumstance. Duststorm at Hyderabad, Sind, (at 5-25 P.M.).

18th.—Severe thunderstorm at Masulipatam (2 P.M. to 3 P.M.). Rainfall during the storm 2·45 inches. The temperature at 2 P.M. was 79°·5 and fell to 65°·8 during the storm.

20th.—Duststorm at Deesa (3 P.M. to 4-25 P.M.). Hailstorm at False Point (3-30 P.M. to 4-10 P.M.). Thunderstorm at Pachpadra (5 P.M.).

25th.—Violent hailstorm at Mysore (6 P.M. to 6-30 P.M.). Many trees in the station were blown down.

26th.—Thunderstorm at Hyderabad, Deccan, (2-45 P.M. to 3-30 P.M.).

30th.—Duststorm at Hyderabad, Sind, (6-30 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 normal westerly winds prevailed in the Persian Gulf and along the Sind and Kathiawar coasts and north-easterly winds in the centre and south. Along the Konkan coast and in the Gulf of Aden winds were very unsteady and variable. The air movement was generally light and weather fine. Winds increased slowly in strength during the next five days, more specially in the Gulf of Aden, where fresh to strong winds prevailed on the morning of the 6th. The mean wind force for the whole of the Arabian Sea on that day was 3·0 as compared with 2·2 on the 1st. Weather was unchanged except over a small area between the Maldives and Ceylon, where it was rainy with southerly winds. The air movement decreased rather rapidly in the Gulf of Aden during the next 24 hours, and the wind for all parts of the sea averaged 2·5 on the morning of the 7th. Weather was still unsettled between the Maldives and Ceylon. It, however, improved rapidly during the day and on the morning of he 8th, fine weather with westerly winds obtained over hat area. No important change occurred during the next 8 hours except that normal north-westerly winds set in off he Konkan coast. The mean wind force at 8 A.M. of the 10th was 2·2. Conditions were very disturbed during the day in the south-east of the sea and Minicoy reported a rainfall of 1·60 inches at 8 A.M. of the 11th. An important change was also in progress in the Persian Gulf and the Gulf of Oman (due to a general disturbance in Persia), where winds were shifting round to southerly directions. Skies had clouded over in this area during the previous 24 hours and rain was falling in the coast districts from Bushire to Jask. Thus the S.S. *Henry Bolckow* off Jask experienced a squall with blinding rain, small hail and continuous lightning at 5 A.M. of the 12th. Fine weather set in on the 13th in this area, but the winds continued from between east and south for six days afterwards. Large and rapid changes occurred in the air movement during the next 12 days (more especially in the Gulf of Aden), but they did not affect the weather which was hence fine and settled during the whole of this period, except on the 19th, when rain squalls were experienced in the south-east of the sea. The mean wind force during this period ranged from 1·9 on the 20th to 3·1 on the 23rd. An important change occurred on the 24th and 25th in the south-east of the sea, where south-westerly winds set in and weather became very squally. Thus

the S.S. *Argus* in about Lat. 9° N. and Long. 76° E. at 8 A.M. of the 26th had south-west winds and squally weather with heavy rain and vivid lightning, and the S.S. *Peshawar* at anchor at Colombo at the same hour experienced south-westerly winds with heavy rain. These southerly humid winds held steadily over the south-east of the sea during the remainder of the month and occasioned very rough squally weather. Winds of force 6 to 7 were experienced by several vessels during this period in that area. Over the remainder of the sea winds were remarkably unsteady and light at this time, and notwithstanding the prevalence of strong winds in the south-east, the wind force for the whole area averaged 2·5 on the 30th or 0·6 less than on the 23rd.

Bay of Bengal.—At the commencement of the month normal south-westerly winds prevailed on the Bengal, Orissa and Ganjam coasts; but over the remainder of the Bay, winds were even more unsteady and variable than usual in April. Weather was fine and clear, except in the Straits of Malacca, where it was squally with much rain. The S.S. *Pentakota* in Lat. 7° 23′ N. and Long. 98° 31′ E. at 8 A.M. of the 1st had hard squalls and heavy rain in the early morning. The air movement was generally light to moderate, and averaged 2·2 for the whole area. Conditions remained unchanged until the 3rd, on which day the weather improved in the Straits of Malacca, but became unsettled in the neighbourhood of the South and East Ceylon coasts. Thus the ship *Saint Mungo* in Lat. 7° 36′ N. and Long. 84° 19′ E. on the morning of the 4th experienced heavy rain. The air movement increased rather rapidly during the next 48 hours, more especially to the north-east of Ceylon, where weather was also very disturbed. The mean wind force for the whole area had increased to 3·1 at 8 A.M. of the 6th. No change of importance occurred during the next ten days, except that the air movement varied considerably in force from day to day, the average wind force for the whole area ranging between 3·3 on the 10th and 2·0 on the 13th. During this period squalls were of occasional occurrence in the neighbourhood of Ceylon. Local south-westerly winds at the head of the Bay strengthened rapidly on the 16th and weather was unsettled (with strong winds and occasional rain squalls) in the north-west corner of the Bay during the next two days. Thus the S S. *Chindwara* off False Point on the morning of the 17th experienced "fierce squalls, heavy rain and vivid lightning." An important change occurred on the 17th in the Equatorial belt and sea area to the south. Fresh south-east trades winds appeared to the south of Lat. 9° S. and began to advance north-wards as south-west winds. Thus the S. *Victoria Regina* in Lat. 9° S. and Long. 83° E. at 8 A.M. of the 17th had fresh E. S. E. winds, and the ship *County of Peebles* in Lat. 3° 21′ S. and Long. 80° 36′ E. at the same hour south-westerly winds. The south-east trades intensified rapidly during the day, and very strong south-west winds and unsettled squally weather were experienced in the eastern half of the Equatorial belt on the 18th. Thus the S. *Victoria Regina*, now in Lat. 6° S. and Long. 84° E. had south-south-west winds of force 9, a high sea and hurricane squalls and thick rain. So far as can be judged from the scanty data available for the Equatorial region, the humid air-current was advancing northwards at the rate of about 180 miles a day. No change occurred in the Bay beyond a steady decrease in the force of the winds until the morning of the 21st, when the influence of the south-west winds from the Equatorial region began to be felt in the extreme south. Weather was fine on this day in the west and centre of the Bay, but showery in the south and south-east. Winds were however still very variable in that area, except in the extreme north, where normal south-west breezes prevailed. The mean wind force for the whole area averaged 2·1 or 1·1 less than on the 17th. The influence of the moist southerly winds increased and extended steadily during the next two days in the south of the Bay; but the winds continued to be light and variable in that region. Thus only 3 vessels out of 9 experienced squally weather in the south of the Bay on the 22nd, and 6 vessels out of 10 on the 23rd, Winds increased during the next 24 hours, more especially in the south-west of the Bay, and on the morning of the 24th averaged 2·7 in force. Weather was generally fine in the north and centre, and squally in the south and south-east. Winds were also much less variable than previously. An important change occurred during the next 24 hours in the south and centre of the Bay, where southerly winds were established at least as far north as Lat. 12° N. These humid winds increased and extended steadily north-eastwards on the 26th and 27th and averaged 3·3 in force on the 28th as compared with 2·0 on the 22nd. Weather was very squally on the 27th in the south and centre, more especially in the south of the Andaman Sea, where there was a tendency towards the formation of a low pressure area. Weather continued fine in the west and north. Weather became further unsettled in the Andaman Sea during the day and a storm was generated in that area. It increased in intensity and advanced north-eastwards to the Burma coast, which it crossed to the east of Rangoon on the morning of the 29th. Heavy squalls, blinding rain, a high confused sea and gales of wind (force 7 to 8) were experienced in the storm area by the S.S. *Shahazada*, *Maharani*, *Warora*, *Goa* and *Ajax* on the morning of the 29th. In the south of the Bay also weather was squally with fresh to strong south-west winds. In the north and west of the Bay weather was unaffected by the storm and was fine. The mean wind force for the whole area averaged 4·0 at 8 A.M. of this day. Weather improved rapidly in the Andaman Sea during the next 24 hours, and the vessels in that area

on the morning of the 30th reported light to moderate winds and cloudy weather. Strong south-west winds were still blowing over the entrance to the Bay; but the weather there also had improved considerably. The mean wind force for the whole area averaged 3·3 at 8 A.M. of the 30th.

Temperature.

The mean day or maximum temperature of the month was in slight excess in Burma, Assam, the South-West Punjab, Sind, Rajputana, Kathiawar and North Bombay. The variations at stations in these areas were less than 2°, except at Jacobabad, where the mean maximum temperature of the month was 2·3° above the normal and perhaps Kurrachee (+2°·9). It was in slight defect over the remainder of India, except in the area defined by the following stations where it was more than 2° below the normal of the month:—

Station.	Mean Maximum Temperature.		
	Actual, April 1894.	Normal, April.	Variation from normal.
	°	°	°
Coimbatore	94·8	98·1	−3·3
Belgaum	93·1	96·4	−3·3
Mercara	81·3	84·5	−3·2
Sholapur	102·5	105·2	−2·7
Bellary	101·4	103·9	−2·5
Hyderabad, Deccan	100·1	102·2	−2·1

The variations of the mean minimum or night temperature from the normal were even smaller than those of the maximum. The mean minimum temperature was in slight excess in Assam, Burma, the west and south of the Peninsula, Sind, Kathiawar, West Rajputana and the South Punjab. The variations in the majority of cases were less than 1° and in no case (except perhaps Lucknow) exceeded 2°.

The mean temperature of the month was in slight excess in Assam, Burma, Rajputana, Sind, Kathiawar and the Bombay coast districts. The variations were small in amount, and in no case, except Coimbatore, exceeded 2° in amount.

Temperature at the hill stations in Northern India was slightly above the normal and was in slight defect at Pachmarhi and Wellington.

The mean temperature conditions were hence very approximately normal.

The following gives temperature data for 51 meteorological divisions of the Empire:—

Province.	Division.	Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean daily.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	95·0	75·0	85·0	20·0	27·7	+1·0	+1·6	−0·6
	Lower Burma	94·3	76·8	85·6	17·4	25·1	0	+0·5	−0·5
	Central do.	102·4	75·3	88·9	27·2	39·9	−1·9	−0·2	−1·7
	Upper do.	93·7	68·6	81·2	25·1	39·9	−2·2	+1·9	−4·1
	Arakan	91·8	76·1	84·0	15·7	24·4	−0·1	+0·4	−0·5
Bengal and Assam	Eastern Bengal	91·2	73·2	82·1	17·9	30·9	−0·2	0	−0·2
	Assam (Surma)	88·2	68·7	78·5	19·5	49·1	+0·6	−0·2	+0·8
	Do. (Brahmaputra)	86·6	69·2	77·8	17·5	31·5	+1·3	+0·7	+0·6
	Deltaic Bengal	95·1	75·6	85·2	19·5	35·1	−0·8	−0·1	−0·7
	Central do.	98·5	73·7	86·1	24·7	38·6	−1·8	−0·3	−1·5
	North do.	90·6	69·3	79·7	22·0	39·0	+0·6	+0·1	+0·5
	Orissa	92·3	77·8	85·1	14·5	31·7	−1·4	0	−1·4
	Chota Nagpur	98·2	72·5	84·8	26·9	39·1	−0·5	+0·5	−1·0
	Bihar (South)	100·8	73·4	87·1	27·4	40·1	−1·6	−1·0	−0·6
	Do. (North)	96·6	70·5	83·6	26·1	39·7	−1·2	0	−1·2
North-Western Provinces and Oudh.	North-Western Provinces (East)	101·2	71·1	86·2	30·1	42·3	−1·5	−1·1	−0·4
	Oudh (South)	101·4	68·0	84·7	33·4	46·3	−0·9	−3·0	+2·1
	Do. (North)	99·4	69·3	84·4	30·1	41·5	?	?	?
	North-Western Provinces (Central)	102·2	68·9	85·6	33·3	46·1	?	?	?
	Do. do. (West)	104·2	74·5	89·4	29·7	43·5	+0·9	−0·3	+1·2
	Do. do. (Submontane)	96·3	65·7	81·0	30·7	43·2	−0·3	−1·2	+0·9
Punjab	Punjab (South)	101·0	70·9	86·0	30·1	45·2	+0·5	+0·2	+0·3
	Do. (Central)	95·5	65·8	80·7	29·7	47·6	−1·1	+1·1	−2·2
	Do. (Submontane)	97·5	66·3	81·9	31·2	47·4	−0·1	+1·4	+0·3
	Do. (Hill Districts)	68·9	52·8	60·9	16·2	36·4	−2·3	−0·4	−3·7
	Do. (North-West)	88·8	60·7	74·8	28·1	46·1	−1·1	−0·5	−0·6
	Do. (West)	97·2	66·6	81·9	30·6	49·3	+1·0	·2	+1·2

Province.	Division.	Temperature. Mean maximum.	Mean minimum.	Mean daily.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Range.
		°	°	°	°	°	°	°	°
Bombay and Malabar Coast Districts (Madras).	Malabar	89·7	77·3	83·5	12·4	19·1	−0·3	−1·3	+1·0
	Madras (South Central)	97·3	74·2	85·8	23·1	32·1	−2·3	−0·4	−1·9
	Coorg	81·3	64·2	72·8	17·1	24·3	−3·2	+0·1	−3·3
	Mysore	91·7	68·6	80·2	23·2	34·4	−1·0	−0·9	−0·1
	Konkan	89·1	78·9	84·0	10·1	16·9	+0·2	+1·0	−0·8
	Bombay Deccan	99·1	70·6	84·9	28·5	39·9	−1·8	−0·8	−1·0
	Hyderabad (North)	100·6	74·9	87·7	25·7	38·7	?	?	?
	Khandesh	100·8	69·9	85·3	30·9	48·6	+0·1	+1·1	−1·0
Central Provinces and Berar.	Berar	104·1	75·2	89·6	28·9	45·2	−1·5	+0·4	−1·9
	Central Provinces (West)	104·0	74·3	89·1	29·7	43·3	−1·0	−0·2	−0·8
	Do. (Central)	101·8	72·2	87·0	29·6	43·9	−1·2	−0·5	−0·7
	Do. (East)	103·7	76·3	90·0	27·4	39·6	−1·0	0	−1·0
Bombay (North)	Gujarat	102·5	74·5	88·5	28·0	42·9	−0·1	+1·9	−2·0
	Kathiawar	96·7	72·5	84·6	24·2	41·6	+1·4	0	+1·4
	Sind	100·4	72·0	86·2	28·4	48·0	+2·0	+0·9	+1·1
Rajputana and Central India.	Central India (East)	101·7	69·8	85·7	32·0	44·8	−1·0	−1·3	+0·3
	Rajputana (East) Central India (West)	101·0	69·8	85·5	31·2	46·4	+0·7	−0·4	+1·1
	Do. (West)	104·6	71·5	88·1	33·1	50·4	+1·5	−1·0	+2·5
Madras	East Coast (North)	92·3	78·4	85·4	13·9	26·7	−0·9	−1·3	+0·4
	Hyderabad (South)	101·4	76·4	88·9	25·0	37·9	−2·1	+0·7	−2·8
	Madras (Central)	103·1	78·9	91·0	24·2	32·9	−1·4	+0·3	−1·7
	East Coast (Central)	97·2	77·4	87·3	19·8	36·1	−1·6	−0·2	−1·4
	Do. (South)	94·4	77·6	86·0	16·8	32·1	−0·4	+0·2	−0·6
	Madras (South)	95·5	78·5	87·0	17·0	28·0	−1·6	+0·7	−2·3

Temperature at the beginnign of the month was largely in excess over nearly the whole of North-Western India. The excess on the 1st was greatest at Murree (+10·8°), Quetta (+12·4°) and Jacobabad (+9·1°). It was in moderate excess in Assam and in moderate to considerable defect in the Deccan. The abnormal temperature conditions in North-Western India intensified slightly during the next three days. Rainfall on the 4th and 5th in Bengal and the Punjab produced a considerable reduction of temperature in these areas on the 5th and 6th. A cool wave spread over North-Western India during the next four days, whilst temperature increased rapidly in Bengal and was largely in excess on the 8th and 9th. The following mean temperature variation data of the 1st, 5th and 9th, illustrate the large and rapid changes due to the conditions of the period:—

Province or area.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st.	5th.	9th.
	°	°	°
Burma	+1·0	+0·7	+2·4
Bengal and Assam	+0·9	−1·8	+3·2
North-Western Provinces and Oudh.	−1·3	+1·9	−2·1
Punjab	+4·0	+6·3	−3·1
Sind and Rajputana	+5·5	+4·1	−1·5
Central India and Gujarat	+0·8	+1·1	−0·4
Central Provinces and Berar	−1·7	+1·0	−0·3
Bombay	−0·8	−1·0	−2·1
Madras	−0·4	−0·4	+2·2

The cool wave continued to extend eastwards and a warm wave or wave of excessive temperature appeared in Baluchistan and the North-West Frontier districts on the 11th, and advanced rapidly across Northern and Central India.

The following table gives mean temperature variation data for the 11th and 13th:—

Province or area.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 11th.	13th.	Change of mean temperature from the 11th to 13th.
	°	°	°
Burma	+0·2	−2·0	−2·2
Bengal and Assam	+1·4	−0·7	−2·1
North-Western Provinces and Oudh	−3·1	+1·3	+4·4
Punjab	−0·7	+6·5	+7·2
Sind and Rajputana	−0·6	+3·4	+4·0
Central India and Gujarat	−1·5	+1·2	+2·7
Central Provinces and Berar	−1·8	+1·0	+2·8
Bombay	−1·1	+1·4	+2·5
Madras	−2·4	−0·3	+2·1

Weather was disturbed with thunderstorms in the Punjab, Baluchistan and Kashmir from the 13th to the 16th, and in Bengal, Assam and Madras from the 16th to the 21st, and again in the Punjab and Kashmir from the 21st to the 23rd. Large and rapid changes of temperature hence occurred. The effect of the rainfall in reducing tempera-

ture was most strongly shown on the 19th and 20th. The following gives the mean variation data for these two days:—

Province or area.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	19th.	20th.
	°	°
Burma	+0·4	—0·3
Bengal and Assam	—7·2	—6·2
North-Western Provinces and Oudh	—3·6	—4·7
Punjab	—1·0	—2·1
Sind and Rajputana	+2·1	+1·4
Central India and Gujarat	—0·7	+1·5
Central Provinces and Berar	—5·4	—0·5
Bombay	—0·3	+0·5
Madras	—2·6	—4·6

The mean temperature of the 24 hours preceding 8 A.M. of the 19th ranged from 10° to 12° below the normal over nearly the whole of West Bengal, Bihar and Chota Nagpur. Temperature increased rapidly during the next four or five days and an area of excessive temperature gradually extended eastwards from the frontier districts on the 20th, over nearly the whole of Northern India on the 23rd. The following gives mean variation data for Northern and Central India for these days:—

Province or area.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		Change of mean temperature from the 20th to 23rd.
	20th.	23rd.	
	°	°	°
Quetta (Baluchistan)	+4·6	—0·2	—4·8
Bengal and Assam	—6·2	—0·9	+5·3
North-Western Provinces and Oudh	—4·7	+1·1	+5·8
Punjab	—2·1	+3·3	+5·4
Sind and Rajputana	+1·4	+5·7	+4·3
Central India and Gujarat	+1·5	+5·2	+3·7
Central Provinces and Berar	—0·5	+2·1	+2·6
Bombay	+0·5	+2·2	+1·7
Madras	—4·6	—0·5	+4·1

A cool wave advanced from Baluchistan into Upper India on the 24th and across the whole of North-Western India during the next three days. The following gives mean variation data for the 24th and 27th in illustration:—

Province or area.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		Change of mean temperature from the 24th to 27th.
	24th.	27th.	
	°	°	°
Quetta (Baluchistan)	—12·3	—4·4	+7·9
Punjab	—0·5	—3·4	—2·9
Sind and Rajputana	—2·3	—3·3	—1·0
Central India and Gujarat	+1·7	—2·6	—4·3
North-Western Provinces and Oudh	+3·4	—3·1	—6·5
Central Provinces and Berar	+3·1	—1·3	—4·4
Bengal and Assam	+0·6	+0·5	—0·1

The data for the 24th should also be compared with those of the 23rd.

During the remaining three days of the month temperature was in slight to moderate defect over the greater part of India. It increased to a moderate extent in Bengal and Assam on the 28th and 29th and fell very rapidly on the 30th in Burma due to the rainfall accompanying the cyclonic storm which passed from the Andaman Sea into Lower Burma on the 29th. The following variation data for the 30th illustrate the conditions obtaining at the end of the month:—

Province or area.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	—10·3	+1·0	—4·7
Bengal and Assam	+4·2	—0·3	+2·0
North-Weastern Provinces and Oudh	—0·1	—6·8	—3·5
Punjab	+3·9	—3·1	+0·4
Sind and Rajputana	+1·8	—2·6	—0·4
Central India and Gujarat	—0·5	—2·5	—1·5
Central Provinces and Berar	—2·4	—3·6	—3·0
Bombay	—2·6	—2·7	—2·7
Madras	+0·7	—2·5	—0·9

The following table gives the variations of the mean temperature week by week during the month. The data are taken from the weekly weather reviews published in the *Gazette of India*:—

Province or area.	Variation from normal of mean temperature for week ending				
	7th April.	14th April.	21st April.	28th April.	For whole month.
	°	°	°	°	°
Burma	+0·3	+0·6	+0·6	+0·6	+0·3
Bengal and Assam	—0·2	+1·3	—2·9	+0·2	—0·4
North-Western Provinces and Oudh.	+1·3	—0·8	—2·5	—0·5	—0·5
Punjab	+4·1	—0·5	—2·5	—1·4	—0·1
Sind and Rajputana	+4·4	+0·2	+0·1	—1·1	+0·8
Central India and Gujarat	+0·9	+0·1	—0·4	+0·1	0
Central Provinces and Berar.	—0·2	+0·3	—3·0	+0·9	—0·7
Bombay	—0·5	—0·6	—0·3	+0·8	—0·3
Madras	—0·6	—0·1	—1·6	—0·6	—0·7

Winds.

Winds were less steady than usual in Burma and the Bay Islands. The percentage giving steadiness at Port Blair was only 15 as compared with the normal 45. The mean wind direction at that station was S. 8° E. the normal being N. 84° E. These variations from the normal air movement of the month at Port Blair were evidently due to the earlier advance than usual of south-west winds in the south and centre of the Bay during the last ten days of the month. Similar conditions obtained in April 1893. The mean winds of the month were normal in direction in Lower Burma, but were slightly stronger than usual.

Winds were considerably steadier in Orissa and Bengal and were on the whole slightly stronger than usual. The mean directions were less westerly at the coast stations of False Point and Saugor Island and (as usually occurs under these conditions in the hot weather) they were more westerly in the interior at Calcutta, Berhampore and Burdwan. The following gives data for these stations in illustration :—

Station.	Mean wind direction.		
	Actual, April 1894.	Normal, April.	Increased westing.
	°	°	°
False Point	S 7 W	S 38 W	— 31
Saugor Island	S 5 W	S 20 W	— 15
Calcutta	S 18 W	S 3 W	+ 15
Burdwan	N 27 W	S 40 W	
Berhampore	S 26 W	S 23 W	+ 3

Easterly winds extended along the foot of the hills in Northern India as far west as Darbhanga and Gorakhpur, and were steadier than usual. In the Gangetic plain winds were very steady, and were generally stronger. The chief feature was the abnormally strong northerly component in the prevailing north-west winds of the month. The following gives examples :—

Station.	Mean wind direction.		
	Actual, April 1894.	Normal, April.	Increased northing.
	°	°	°
Patna	N 5 W	N 38 W	+33
Allahabad	N 37 W	N 52 W	+15
Agra	N 68 W	N 84 W	+16
Ludhiana	N 48 W	N 59 W	+11

Winds were, as usual in April, light in the Punjab, but were approximately normal in character. They were very unsteady in Sind, and the deflections of the mean winds of the month from the normal directions large and irregular, but were in part due to the abnormal pressure conditions of the last fortnight of the month.

Winds were steadier, and on the whole slightly stronger in Berar, the Central Provinces and the Deccan, and the westerly component was much stronger than usual, more especially in the West Deccan and Mysore. The following gives four examples :—

Station.	Mean wind direction.		
	Actual, April 1894.	Normal, April.	Increased westing.
	°	°	°
Sholapur	N 49 W	N 18 E	+67
Poona	N 84 W	N 35 W	+49
Belgaum	N 71 W	S 88 W	+21
Bangalore	S 76 W	S 33 W	+43

Winds were more southerly than usual at the eastern stations in the Central Provinces. Winds were steadier than usual in the west coast districts, more especially the Konkan, and the westerly element of the mean wind directions of the month was strongly marked.

Humidity and Cloud.

There was somewhat less moisture present in the air at Port Blair and in Lower Burma and Bengal. The deficiency was nowhere large, and was most marked at Calcutta, False Point, Saugor Island and Rangoon, for which data are given below :—

Station.	Absolute humidity.			Relative humidity.		
	Average actual, April 1894.	Average normal, April.	Variation from normal.	Average actual, April 1894.	Average normal, April.	Variation from normal.
	"	"	"	%	%	
Rangoon	·725	·790	—·065	62	67	—5
False Point	·881	·906	—·025	78	84	—6
Saugor Island	·913	·939	—·026	75	80	—5
Calcutta	·738	·815	—·077	64	71	—7

The absolute humidity was below the normal at the great majority of stations in Bihar, the North-Western Provinces, the Punjab, Rajputana, Upper Sind and Central India. The humidity data for Mooltan are misleading, as the observatory shed was removed sometime ago to another part of the Hospital compound, which, it is to be feared, is frequently watered in the hot weather by the order of the local authorities, and hence the increased humidity shown by the observations is probably due solely

to that cause. The following gives comparative data for the provinces named above :—

Province or area.	Absolute humidity.			Relative humidity.		
	Average actual, April 1894.	Average normal, April.	Variation from normal.	Average actual, April 1894.	Average normal, April.	Variation from normal.
	"	"	"	%	%	
Bihar	·511	·515	−·004	47	46	+1
North-Western Provinces and Oudh	·346	·376	−·030	31	33	−2
Punjab	·390	·402	−·012	44	45	−1
Upper Sind	·317	·380	−·063	26	34	−8
Rajputana	·333	·358	−·025	28	30	−2
Central India	·288	·316	−·028	26	27	−1

The humidity variations of the month from the normal in the Central Provinces, Berar and the Deccan were somewhat irregular. They were, however, small in amount and indicate that the humidity conditions were, on the mean of the month, practically normal. Humidity was in moderate excess in the South Deccan, Mysore and South India. The excess in the relative humidity averaged 7 at Bellary, 6 at Mercara and Bangalore and 1 at Madras.

The air was on the whole slightly drier in the west coast districts, (Ratnagiri is apparently an exception, but it is probable, the humidity observations at that station were occasionally incorrect. Indian observers are, it may be noted, sometimes very careless in the matter of providing a sufficient supply of water for the wet-bulb, more especially in dry hot weather.)

The air was damper at the high level stations of Leh and Kailang, as temperature was lower than usual, and was drier at the lower hill stations of Murree, Simla, Chakrata and Ranikhet, due to the increased temperature of the month, as the mean absolute humidity of the month at these stations was practically normal. The mean relative humidity of the month was 7 in defect at Murree, 6 at Simla, 4 at Quetta and 3 at Ranikhet. It was on the other hand 10 in excess at Wellington where the air was not only cooler, but contained more aqueous vapour than usual.

The chief features of the humidity conditions of the month were hence as follows :—

1st.—They were on the average of the whole of India, and also of each of the ten large divisions of Tropical and Extra-Tropical India, approximately normal.

2nd.—Humidity was in slight defect in Burma, Bengal, the Gangetic plain, the Punjab, Upper Sind, Rajputana and Central India. The variations were nowhere large, but were on the whole greatest in Bengal, Orissa and Upper Sind.

3rd.—The air was, on the whole, damper in Berar, the Central Provinces, Deccan and Southern India. The variations from the normal humidity conditions were small and irregular in the Central Provinces. The air was considerably damper than usual in Mysore, the Madras and Bombay Deccan and at the hill station of Wellington in Southern India.

4th.—The air was, on the whole, slightly drier in the west coast districts.

5th.—The air contained the normal amount of aqueous vapour in the Western Himalayas and hence the relative humidity was above the normal in the interior stations where temperature was in defect, and in defect at the lower stations where temperature was above the normal to a moderate extent.

There was more cloud than usual at Port Blair and in Burma, Bengal, Bihar, Orissa, Chota Nagpur and the eastern districts of the North-Western Provinces. The following data show, that the increased amount was considerable at Port Blair and in Orissa :—

Province or Station.	Mean amount of cloud.		
	Actual, April 1894.	Normal, April.	Variation from normal.
Port Blair	5·9	4·1	+1·8
Bengal	3·9	3·4	+0·5
Assam	4·9	5·2	−0·3
Orissa	4·0	2·9	+1·1
Chota Nagpur	4·4	2·6	+1·8
Bihar	1·3	1·6	−0·3
Allahabad	2·1	1·4	+0·7

The mean cloud amount of the month was below the normal over the whole of North-Western and Central India. The deficiency was largest in the Punjab and Sind, and skies were unusually free from cloud in that area. The following gives comparative data :—

Province or Area.	Mean amount of cloud.		
	Actual, April 1894.	Normal, April.	Variation from normal.
North-Western Provinces and Oudh.	1·7	1·8	−0·1
Punjab	2·0	3·0	−1·0
Sind	0·7	2·4	−1·7
Rajputana	1·4	2·0	−0·6
Central India	2·0	2·1	−0·1
Upper India hill stations	3·5	4·9	−1·4
Quetta (Baluchistan)	2·1	3·5	−1·4

The data indicate that the deficiency in the cloud amount was even greater at the hill stations in Northern India than at the neighbouring plain stations. There was, on the other hand, more cloud than usual over the whole of the Peninsula, and the increased cloud was as largely shown at the hill stations of Pachmarhi, Chikalda and Wellington as at the neighbouring plain stations.

The following gives comparative data in illustration :—

Area or Station.	Mean amount of cloud.		
	Actual April, 1894.	Normal, April.	Variation from normal.
Burma	3·7	3·1	+0·6
Central Provinces . . .	3·0	2·2	+0·8
Bombay Deccan . . .	3·3	2·8	+0·5
Madras Deccan . . .	4·7	3·4	+1·3
Madras Coast . . .	3·9	3·3	+0·6
West Coast	2·8	2·2	+0·6
Wellington	5·8	4·5	+1·3
Pachmarhi	2·6	2·1	+0·5
Chikalda	3·9	2·3	+1·6

The mean cloud amount was less than 1·0 at the following stations for which data are given:—

Station.	Mean amount of cloud.		
	Actual April, 1894.	Normal, April.	Variation from normal.
Mooltan	0·6	1·7	—1·1
Jacobabad	0·8	2·7	—1·9
Kurrachee	0·6	2·0	—1·4

The following summarizes the chief features of the mean cloud distribution of the month :—

1st.—There was a slight excess of cloud in North-Eastern India and Burma, greatest at Port Blair, and diminishing northwards and westwards.

2nd.—There was less cloud than usual in North-Western and Central India, the deficiency increasing to a maximum in Upper India and at the neighbouring hill stations.

3rd.—The mean amount of the cloud was in excess in the Peninsula, the excess being on the whole greatest in Malabar and South Madras.

4th.—Skies were most serene in Sind and the South-West Punjab.

Rainfall.

The total rainfall of the month was actually or practically *nil* (*i.e.*, less than a tenth of an inch) over the whole of the North-Western Provinces and Oudh, the South and Central Punjab, Sind, Kathiawar, Gujarat, Rajputana, Central India and the eastern districts of the Central Provinces.

Light to moderate rain was received in the following areas during the month :—

1st.—Burma, which obtained heavy rain during the last four days of the month from the cyclonic storm of the month.

2nd.—Bengal and Assam. Assam (Surma) and North Bengal obtained much heavier rain than usual, chiefly during the first fortnight of the month.

d.—The Punjab.

4th.—Southern India, including the whole of Madras, the Bombay Deccan, Mysore and Hyderabad which had frequent and heavy rain at intervals during the month.

The chief periods of rainfall during the month were as follows :—

1st.—From the 2nd to the 11th when Assam and East Bengal received moderately heavy rain.

2nd.—The 18th to the 21st when Bengal, and Southern India obtained moderate rain from thunderstorms.

3rd.—The 24th to the end of the month. Bengal received normal rain during the first three days of the period and Southern India and Burma moderate to heavy rain during the last four days of the period.

The following table gives comparative rainfall data of the month for the 51 meteorological divisions of India :—

Province.	Division.	Rainy Days. Actual, April 1894.	Rainy Days. Normal, April.	Rainfall. Actual, April 1894.	Rainfall. Normal, April.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	4·16	3·46	+0·70
	Lower Burma*	?	?	2·06	1·62	+0·44
	Central do.*	?	?	2·62	1·26	+1·36
	Upper do.*	?	?	1·18	?	?
	Arakan*	?	?	0·86	1·86	−1·00
Bengal and Assam	Eastern Bengal	4·5	5·4	2·70	4·09	−1·39
	Assam (Surma)	10·7	12·7	13·08	11·37	+1·71
	Do. (Bhramaputra)	10·3	12·1	6·49	7·88	−1·39
	Deltaic Bengal	4·0	3·7	2·68	2·56	+0·12
	Central do.	2·5	2·4	1·38	1·42	−0·04
	North do.	6·0	4·9	5·72	3·41	+2·31
	Orissa	3·2	2·1	1·61	1·28	+0·33
	Chota Nagpur	1·1	1·1	0·52	0·44	+0·08
	Bihar (South)	0·3	0·6	0·12	0·24	−0·12
	Do. (North)	1·3	1·3	0·81	0·80	+00·1
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·2	0·4	0·04	0·14	−0·10
	Oudh (South)	0	0·3	0	0·12	−0·12
	Do. (North)	0	0·4	0	0·17	−0·17
	North-Western Provinces (Central)	0	0·3	0	0·10	−0·10
	Do. do. (West)	0	0·4	0	0·12	−0·12
	Do. do. (Submontane)	0·3	0·7	0·08	0·41	−0·33
Punjab	Punjab (South)	0	0·7	0·01	0·30	−0·29
	Do. (Central)	0·2	0·8	0·06	0·34	−0·28
	Do. (Submontane)	1·0	1·3	0·31	0·62	−0·31
	Do. (Hill Districts)	2·7	3·5	0·93	2·32	−1·39
	Do. (North-West)	3·0	2·2	1·42	1·25	+0·17
	Do. (West)	1·3	1·0	0·74	0·49	+0·25
Bombay and Malabar Coast Districts (Madras).	Malabar	7·4	3·4	5·02	2·27	+2·75
	Madras (South Central)	3·9	2·2	2·04	1·49	+0·55
	Coorg	10.2	?	4·36	?	?
	Mysore	5·1	2·3	2·78	1·21	+1·57
	Konkan	0·6	0·6	0·35	0·29	+0·06
	Bombay Deccan	2·2	1·8	1·08	0·80	+0·28
	Khandesh	0·3	0·3	0·12	0·12	0
Central Provinces and Berar.	Berar	0·4	?	0·12	0·23	−0·11
	Central Provinces (West)	0·3	0·5	0·13	0·20	−0·07
	Do. (Central)	0·5	0·7	0·18	0·29	−0·11
	Do. (East)	0·2	1·0	0·08	0·55	−0·47
Bombay (North)	Gujarat	0	0	0	0·01	−0·01
	Kathiawar	0	0·1	0	0·08	−0·08
	Sind	0	?	0·01	0·21	−0·20
Rajputana and Central India.	Central India (East)	0·1	?	0·04	0·12	−0·08
	Rajputana (East) Central India (West)	0·1	?	0·03	0·08	−0·05
	Rajputana (West)	0·1	?	0·02	0·06	−0·04
Madras	East Coast (North)	2·6	1·0	1·60	0·49	+1·11
	Do. (do). (a)	6·5	2·4	3·82	0·89	+2·93
	Hyderabad (South)*	?	?	0·36	0·73	−0·37
	Madras (Central)	1·9	0·9	0·81	0·45	+0·36
	East Coast (Central)	1·5	0·4	0·90	0·19	+0·71
	Do. (South)	2·3	0·9	1·91	0·61	+1·30
	Madras (South)	3·7	2·6	2·08	1·96	+0·12

NOTE.—The figures entered against divisions marked with asterisk have been obtained from the weekly telegraphic reports.

Assam received daily rain from the 2nd to the 11th. This rainfall was especially heavy in the Cachar and Sylhet districts and gave rise to severe floods in some parts of the Cachar district. The following gives a statement of the rainfall at four stations in the Cachar district and at Cherra Punji during the period :—

STATION.	RAINFALL IN PAST 24 HOURS.									Total of period
	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.	
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Silchar	0·54	0·44	0·70	0·52	2·75	5·34	3·36	3·80	3·84	21·29
Bikrampur	0·66	0·58	0·60	3·33	5·18	8·48	3·29	3·45	0·04	25·61
Dewan	0·13	0·20	0·56	0·90	1·30	5·84	2·79	1·65	0·65	14·02
Badarpur	0·23	0·70	0·57	1·13	1·85	2·12	3·62	4·15	4·00	18·37
Cherra Punji	0·92	1·50	1·40	1·19	3·88	1·12	5·22	5·90	1·26	22·39

This rainfall was general over the whole province on the 3rd, 4th, 5th, 6th and 7th. The rainfall during the last four days of the period occurred chiefly in Silchar, Sylhet and Upper Assam.

Moderate and fairly general rain was received between the 18th and 20th and again from the 26th to the 28th. The following gives a summary of the rainfall data of the province as published in the *Assam Gazette* and shows that the rainfall was in moderate excess in Sylhet and Cachar and in moderate defect in the Brahmaputra valley :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.			
	Actual, April 1894.	Normal, April.	Variation from normal.	Actual, April 1894.	Normal, April.	Variation from normal.	Percentage variation.
				Inches.	Inches.	Inches.	
Assam (Surma) .	10·7	12·1	—2·0	13·08	1·37	+1·71	+15
Do. (Brahmaputra)	10·3	12·1	—1·8	6·49	7·88	—1·39	—18

The chief periods of rainfall in Bengal were as follows :—

1st.—From the 3rd to the 6th, when Orissa and North-East Bengal obtained moderate rain. No rain fell in Bihar and Chota Nagpur during this period.

2nd.—From the 16th to the 21st, during which the whole of Bengal, Orissa and North Bihar received moderately heavy rain and Chota Nagpur light local showers.

3rd.—From the 25th to 27th, North Bengal obtained heavy rain during this period and the remainder of the province light local showers.

The following heavy falls were registered on the 25th :—

District.	Station.	Rainfall in past 24 hours.
		Inches.
Kuch Bihar . . .	Kuch Bihar	7·25
Do. . . .	Dinhatta	6·19

The rainfall of the month was in considerable excess in North Bengal and varied little from the normal over the remainder of the province except in East Bengal and South Bihar where it was in moderate defect. The following table gives data for the eight meteorological divisions of the province, based on the complete rainfall returns published in the *Calcutta Gazette* :—

DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Mean actual.	Variation from normal.	Actual.	Variation of actual from normal.	Percentage variation from normal.
			Inches	Inches.	
Bengal East .	4·5	—0·9	2·70	—1·39	—34
Do. North .	6·0	+1·1	5·72	+2·31	+68
Do. Deltaic .	4·0	+0·3	2·68	+0·12	+5
Do. Central .	2·5	+0·1	1·38	—0·04	—3
Orissa . . .	3·2	+1·1	1·61	+0·33	+26
Chota Nagpur .	1·1	0	0·52	+0·08	+18
North Bihar .	1·3	0	0·81	+0·01	+1
South Bihar .	0·3	—0·3	0·12	—0·12	—50

The month was practically rainless in the North-Western Provinces and also in the southern and central districts of the Punjab. Moderate showers were received in the western, northern and north-eastern districts and the hill districts of the Punjab on the 5th, 6th and 7th, and again on the 13th and 14th and in the northern districts on the 21st and 23rd. The rainfall of the month was in slight excess in the north-western and western districts, and less than the normal in the submontane districts and the hill districts. The hill districts received an average of 0·93 inch, or 1·39 inches less than the normal and the month was hence unusually dry in that area. The following gives comparative data for the six divisions of the province :—

DIVISION.	RAINY DAYS.			RAINFALL.		
	Actual.	Normal.	Variation from normal.	Actual.	Normal.	Variation from normal.
				Inches.	Inches.	Inches.
Punjab South . .	0	0·7	—0·7	0·01	0·30	—0·29
Do. Central . .	0·2	0·8	—0·6	0·06	0·34	—0·28
Do. Submontane .	1·0	1·3	—0·3	0·31	0·62	—0·31
Do. Hills . .	2·7	3·5	—0·8	0·93	2·32	—1·39
Do. North-West .	3·0	2·2	+0·8	1·42	1·25	+0·17
Do. West . .	1·3	1·0	+0·3	0·74	0·49	+0·25

Baluchistan received light showers between the 12th and 16th. The total fall of the month ranged between *nil* (at several stations) and 2·70 inches (at Fuller's Camp). Kashmir had heavier rain than usual. It fell chiefly during three periods, *viz.*, the 3rd to the 7th, the 13th, and the 22nd to the 24th. The total fall of the month at Srinagar was 4·07 inches, probably considerably above the normal. 1·05 inches fell at Leh, the normal being one-tenth of an inch.

The Central Provinces and Berar received light and sporadic showers from thunderstorms chiefly during the third and fourth weeks of the month The rainfall was considerably less than the small normal average of the month, more especially in the eastern districts. The following gives comparative data:—

Division.	Number of rainy days.		Rainfall.		
	Actual, April 1894.	Variation from normal.	Actual, April 1894.	Variation from normal.	Percentage variation.
			Inches.	Inches.	
Central Provinces (East) .	0·2	—0·8	0·08	—0·47	—85
Ditto (Central)	0·5	—0·2	0·18	—0·11	—38
Ditto (West).	0·3	—0·2	0·13	—0·07	—35
Berar	0·4	?	0·12	—0·11	—48

The Bombay Deccan received occasional rain from thunderstorms. The chief periods of disturbance and rain were the 7th, the 13th to the 15th, and the 21st to the 28th. The rainfall was, as usual when due to hot weather storms, very irregularly distributed, but was in excess over the gre ater part of the area. The following gives data:—

District.	Rainy days.		Rainfall.		
	Average actual, April 1894.	Average normal, April.	Average actual, April 1894.	Average normal, April.	Variation from normal.
			Inches.	Inches.	Inches.
Bijapur . . .	2·4	1·7	1·25	0·78	+0·47
Belgaum . . .	2·5	2·5	1·05	1·23	—0·18
Satara	1·9	1·5	0·95	0·71	+0·24
Sholapur . . .	1·0	0·9	0·28	0·38	—0·10
Poona	1·3	0·8	0·50	0·30	+0·20
Ahmednagar . . .	0·9	0·4	0·34	0·17	+0·17
Nasik	0·3	0·2	0·07	0·10	—0·03
Khandesh . . .	0·1	?	0·06	0·02	+0·04

The whole area received a mean total amount of 1·08 inches or 0·28 inch in excess of the normal. The Konkan and Khandesh received some light sporadic showers of no importance. No rain fell in Sind, Cutch, Kathiawar and Guarat.

The Madras Presidency obtained more frequent and heavier rain than usual. The following gives the chief periods:—

1st.—The 3rd to the 6th, when the southern districts obtained light to moderate rain.

2nd.—The 9th and 10th, during which all districts, except South Arcot, Tanjore, Trichinopoly Tinnevelly, Kurnool, Bellary and Anantapur received light rain.

3rd.—The 14th to the 20th. Rain fell during this period in all districts, except Cuddapah, Kurnool, Anantapur and Bellary. This rainfall was heavy and general in many districts. Thus the Trichinopoly district received an average of 1·66 inches, the Tanjore district of 1·40 inches and the South Arcot district of 1·18 inches on the 19th.

4th.—From the 26th to the 30th, during which the Malabar coast districts and South Madras (*i.e.*, the districts south of the latitude of Madras) received daily moderate rain. The Trichinopoly district obtained an average of 1·01 inches on the 30th and the South Canara district of 1·19 inches on the 27th.

The following table gives a comparative statement of the rainfall in each Collectorate of the Presidency:—

District.	Number of rainy days.		Rainfall.			Percentage variation.
	Actual, April 1894.	Normal, April.	Actual, April 1894.	Normal.	Variation from normal.	
				Inches.	Inches.	Inches.
Ganjam . .	3·2	1·6	1·73	0·77	+0·96	+125
Vizagapatam .	3·7	1·4	2·32	0·68	+1·64	+241
Godavari . .	1·9	0·4	0·93	0·25	+0·68	+272
Kistna . .	1·7	0·4	1·50	0·21	+1·29	+614
Nellore . .	1·5	0·4	0·90	0·19	+0·71	+374
Chingleput .	1·7	0·5	1·53	0·26	+1·27	+488
Madras . .	2·0	0·7	0·86	0·63	+0·23	+37
North Arcot .	1·9	0·7	1·23	0·37	+0·86	+232
South Arcot .	2·4	0·7	2·10	0·42	+1·68	+400
Tanjore . .	2·6	1·2	1·95	0·91	+1·04	+114
Trichinopoly .	3·5	1·5	3·33	1·18	+2·15	+182
Madura . .	4·2	2·6	2·57	2·25	+0·32	+14
Tinnevelly .	3·1	2·5	1·53	1·58	—0·05	—3
Malabar . .	8·4	4·4	5·47	3·04	+2·43	+80
South Canara .	5·6	2·0	4·23	1·16	+3·07	+265
Salem . .	3·9	2·0	1·90	1·17	+0·73	+62
Coimbatore .	3·9	2·5	2·22	1·87	+0·35	+19
Nilgiri . .	9·5	5·5	3·79	3·58	+0·21	+6
Cuddapah .	1·1	0·7	0·53	0·34	+0·19	+56
Anantapur .	2·3	0·9	1·15	0·45	+0·70	+156
Bellary . .	2·9	1·3	0·91	0·54	+0·37	+69
Kurnool . .	1·6	0·9	0·74	0·48	+0·26	+54

Table

Abstract of Observations taken at 8 A.M. at 203

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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.		...	...	−·035	...	...	...	...	...	...	...	94·0	+0·3	76·2	+0·8	85·1	+0·6	17·8	...	...	...	...	25·8
Bay Islands	Port Blair	61	29·813	?	29·805	29·911	5th	29·648	29th	·263	83·8	91·8	?	79·2	?	85·5	?	12·6	96·3	9th	74·6	29th	21·7
Tenasserim	Mergui	96	29·815	?	29·843	29·913	10th	29·664	29th	·249	81·5	90·2	?	74·3	?	82·3	?	15·9	95·1	5th	71·6	20th	23·5
	Tavoy	26	29·886	?	29·843	29·978	5th	29·694	29th	·284	80·4	93·2	?	73·3	?	83·3	?	19·9	97·7	15th	71·7	3rd & 4th	26·0
	Moulmein	94	?	?	?	?	...	?	...	?	82·9	96·1	+1·8	76·9	+1·1	86·5	+1·5	19·2	99·4	2 days	72·8	27th	26·6
	Toungoo	181	29·676	−·033	29·799	29·793	5th	29·455	29th	·338	82·7	100·3	+0·2	75·4	+2·1	87·9	+1·2	24·9	104·7	15th	70·2	13th	34·5
Lower Burma	Rangoon	41	29·832	−·044	29·810	29·942	5th	29·510	29th	·432	80·2	98·8	+0·8	76·0	+0·1	87·4	+0·5	22·8	102·6	5 days	72·9	2 days	29·7
	Bassein	27	29·857	?	29·819	29·975	5th	29·609	29th	·366	81·3	96·5	+0·6	75·1	0	85·8	+0·3	21·4	100·7	2 days	70·9	2 days	29·8
	Diamond Island.	41	29·845	−·032	29·820	29·961	5th	29·604	29th	·357	83·1	87·5	−1·3	79·4	+1·3	83·5	0	8·1	90·6	28th	74·9	29th	15·7
Arakan	Akyab	20	29·851	−·029	29·814	29·974	5th	29·639	29th	·335	82·6	91·8	−0·1	76·1	+0·4	84·0	+0·2	15·7	94·6	2 days	70·2	13th	24·4
II.—Burma Inland		...	...	?	...	...	...	...	...	...	...	96·8	−2·1	70·7	+0·9	83·8	−0·7	26·1	...	...	...	...	39·7
Central Burma	Thayetmyo	134	29·717	−·016?	29·793	29·842	5th	29·533	29th	·309	82·8	101·1	−1·9	75·2	−0·2	88·2	−1·1	25·9	104·1	5 days	66·1	13th	38·0
	Minbu	?	29·679	?	?	29·811	5th	29·524	29th	·287	81·7	103·6	?	75·4	?	89·5	?	28·2	108·6	15th	66·1	13th	42·5
	Yamethin	?	29·182	?	?	29·306	5th	29·027	29th	·279	83·5	102·6	?	75·2	?	88·9	?	27·4	106·1	2 days	67·0	2 days	39·1
	Fort Stedman.	?	26·964	?	?	27·107	1st	26·813	30th	·294	75·6	92·5	?	65·6	?	79·1	?	26·9	95·6	2 days	57·0	13th	38·6
Upper Burma	Mandalay	?	29·576	?	?	29·698	5th	29·403	29th	·295	84·8	101·0	?	77·0	?	89·0	?	24·0	105·0	2 days	68·1	17th	36·9
	Kendat	?	29·468	?	?	29·616	5th	29·313	8th	·303	74·9	94·3	−2·2	68·3	+1·9	81·3	−0·2	26·0	103·7	9th	61·7	16th	42·0
	Lashio	?	27·068	?	?	27·137	1st	26·904	30th	·233	69·5	87·2	?	61·9	?	74·6	?	25·3	92·5	2 days	54·0	4th	38·5
	Bhamo	?	29·456	?	?	29·580	5th	29·318	8th	·262	73·9	92·4	?	67·2	?	79·8	?	25·2	100·0	27th	57·9	1st	42·1
III.—Assam		...	...	−·020	...	...	...	...	...	...	...	87·1	+1·0	69·2	+0·6	78·1	+0·8	17·9	...	...	...	...	32·8
Assam (Surma)	Silchar	104	29·760	−·019	29·817	29·838	12th	29·580	30th	·258	75·1	88·2	+0·6	69·4	+0·5	78·8	+0·5	18·8	97·6	30th	62·2	11th	35·4
Brahmaputra	Sibsagar	333	29·517	−·035	29·812	29·670	5th	29·282	8th	·388	71·2	82·6	0	66·7	+0·3	74·6	+0·2	15·9	90·7	30th	63·0	5th	27·7
	Dhubri	115	29·708	−·005	29·779	29·849	5th	29·476	8th	·373	75·5	90·6	+2·5	*71·6	+1·0	*81·0	+1·8	19·0	102·3	2 days	67·0	2 days	35·3
IV.—Bengal and Orissa		...	...	−·014	...	...	...	...	...	...	...	93·6	−0·8	72·9	−0·1	83·8	−0·5	19·6	...	...	...	...	34·5
East Bengal	Chittagong	87	29·776	−·019	29·811	29·895	5th	29·607	29th	·288	80·2	88·6	0	73·4	−0·1	81·0	−0·1	15·2	94·7	30th	66·1	12th	28·6
	Lungleh	?	?	?	?	?	...	?	?	?	70·2	77·0	?	64·5	?	70·8	?	12·5	86·3	28th	59·2	20th	27·1
	Noakhali	43	29·793	?	29·783	29·901	5th	29·646	29th	·255	80·5	90·0	?	73·5	?	81·8	?	16·5	95·0	30th	66·1	12th	28·9
	Comilla	35	29·804	?	29·788	29·908	5th	29·649	29th	·259	80·4	92·2	?	72·5	?	82·4	?	19·7	97·3	29th	66·3	20th.	31·0
	Sirajganj	49	29·766	?	29·765	29·861	5th	29·603	29th	·258	78·7	92·4	?	71·7	?	82·1	?	20·7	101·4	8th	63·5	3rd	37·9
	Narayanganj	26	29·804	−·008	29·776	29·910	5th	29·648	29th	·262	80·2	91·8	−1·4	74·1	−0·2	82·9	−0·8	17·7	97·6	30th	68·2	3 days	29·
	Barisal	13	29·813	−·015	29·771	29·924	5th	29·656	29th	·268	82·1	91·8	+0·6	74·8	−0·1	83·3	+0·3	17·0	97·3	30th	67·4	12th	29·9
	Mymensingh	59	29·769	−·018	29·780	29·876	2 days	29·612	8th	·264	77·3	90·6	+0·2	72·2	+0·4	81·4	+0·3	18·4	98·2	8th	67·4	12th	30·
Deltaic Bengal	Faridpur	46	29·788	?	29·783	29·883	5th	29·629	29th	·254	79·4	88·6	?	73·1	?	80·8	?	15·5	97·5	2nd & 9th.	65·9	21st	31·6
	Jessore	33	29·787	−·009	29·767	29·885	5th	29·621	29th	·264	81·7	97·2	−1·4	†74·2	−0·9	85·1	−1·2	23·0	105·5	9th	66·4	21st	39·1
	Calcutta	21	29·787	−·014	29·754	29·887	5th	29·631	29th	·256	81·2	94·5	−0·9	75·3	−0·4	84·9	−0·7	19·2	103·4	8th	65·2	21st	38·2
	Saugor Island	25	29·793	−·011	29·762	29·960	5th	29·624	29th	·276	84·2	90·8	0	80·5	+0·7	85·7	+0·4	10·3	96·2	11th	73·0	19th	23·2
	Krishnagar	47	29·752	?	29·748	29·847	21st	29·592	29th	·255	81·9	98·0	?	74·6	?	86·3	?	23·4	100·7	1st	66·4	1st	34·
	Midnapore	149	29·666	?	29·761	29·766	5th	29·513	29th	·253	83·7	101·2	?	75·6	?	88·4	?	25·6	111·9	9th	67·9	18th	44·0

* Mean of 29 days. † Mean of 21 days.

I.

Stations in India, Burma, etc., in April 1894.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·22	2·28	+4·75	...	...	...	...	**I.—Burma Coast and Bay Islands.**	
6	1	1	1	3	...	3	9	6	5·2	4·9	+ 6	84	·945	5·1	8	?	?	13·35	2·18	+11·17	13·35	2·65	+10·70	4·69	Port Blair	Bay Islands.
...	6	1	3	7	4	1	...	8	1·5	2·1	−29	81	·867	5·2	11	?	?	16·81	5·46	+11·35	19·65	7·94	+11·71	4·20	Mergui	Tenasserim.
30	...	...	...	...	...	...	...	...	1·6	?	?	84	·868	3·3	6	?	?	8·71	?	?	12·38	?	?	2·80	Tavoy.	
...	2	1	6	6	10	4	...	1	7·5	3·2	+134	75	·816	4·8	3	4·00	−1·00	5·26	2·95	+ 2·31	6·31	3·36	+ 2·95	4·00	Moulmein.	
6	2	...	...	14	7	...	...	1	3·0	4·0	−25	72	·819	1·6	4	2·82	+1·18	4·21	2·09	+ 2·12	4·21	2·14	+ 2·07	2·15	Toungoo.	
...	2	1	2	1	1	5	11	7	5·9	5·7	+ 4	79	·820	2·2	5	2·18	+2·82	4·25	1·83	+ 2·42	4·25	2·11	+ 2·14	2·59	Rangoon	Lower Burma.
6	2	2	...	1	...	1	5	13	5·8	5·1	+14	80	·850	4·2	4	2·09	+1·91	5·03	1·48	+ 3·55	5·03	1·50	+ 3·53	1·94	Bassein.	
1	4	1	1	...	...	1	6	16	8·9	7·2	+24	74	·834	4·4	2	1·09	+0·91	6·77	1·16	+ 5·61	6·77	1·17	+ 5·60	3·55	Diamond Island.	
...	7	12	4	...	5	1	...	1	4·6	4·0	+15	78	·869	3·9	1	1·00	0	0·55	1·08	− 0·53	0·57	1·50	− 0·93	0·55	Akyab	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·83	1·05	+ 0·92	...	...	...	...	**II.—Burma Inland.**	
...	...	2	...	6	9	3	3	7	7·2	7·0	+ 3	63	·740	0·8	2	1·09	+0·91	2·27	0·80	+ 1·47	2·27	0·85	+1·42	1·85	Thayetmyo	Central Burma.
1	2	1	3	16	1	...	2	4	9·3	?	?	63	·686	0·2	5	?	?	2·01	?	?	2·01	?	?	0·73	Minbu.	
4	2	1	...	22	...	...	...	1	7·2	?	?	60	·678	0·4	2	?	?	0·37	?	?	0·57	?	?	0·16	Yamethin.	
12	...	...	...	...	...	9	...	9	...	?	?	68	·606	2·1	4	?	?	3·07	?	?	3·30	?	?	2·33	Fort Stedman	
5	1	...	...	4	13	6	...	1	4·3	?	?	52	·720	2·0	1	?	?	0·35	?	?	1·17	?	?	0·19	Mandalay	Upper Burma.
9	2	...	1	2	1	...	8	7	2·1	?	?	81	·699	3·3	3	?	?	1·66	1·30	+ 0·36	3·36	2·81	+ 0·55	0·64	Kendat.	
...	11	13	...	...	...	4	...	2	...	?	?	79	·567	4·7	5	?	?	3·86	?	?	6·18	?	?	1·83	Lashio.	
11	6	5	...	...	..	3	3	2	4·0	?	?	85	·717	3·6	5	?	?	1·06	?	?	2·52	?	?	0·25	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11·81	9·57	+2·25	...	...	...	...	**III.—Assam.**	
20	...	3	6	...	...	...	..	...	4·8	3·4	+41	85	·736	5·7	14	14·55	−0·55	23·54	14·69	+ 8·85	33·25	23·50	+ 9·75	5·34	Silchar	Assam (Surma).
9	3	13	1	2	1	...	1	...	2·8	2·9	− 3	90	·693	6·2	9	13·55	−4·55	7·41	9·16	− 1·75	10·87	13·99	− 3·12	2·09	Sibsagar	Brahmaputra.
3	1	13	9	...	1	3	...	...	8·5	8·0	+6	79	·693	4·7	9	6·71	+2·29	4·49	4·85	− 0·36	4·64	7·01	− 2·37	1·34	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·43	2·36	+0·10	...	...	...	...	**IV.—Bengal and Orissa.**	
...	3	3	6	8	8	...	1	1	6·3	7·1	−11	83	·855	4·0	3	4·18	−1·18	0·86	4·21	− 3·35	13·30	6·77	+ 6·53	0·33	Chittagong	East Bengal.
			Not	reco	rded.				?	?	?	74	·543	?	4	?	?	1·37	?	?	13·17	?	?	0·50	Lungleh.	
...	2	2	6	2	6	9	1	2	5·6	?	?	86	·900	4·1	4	4·35	−0·35	2·13	4·23	− 2·10	10·14	7·78	+ 2·36	0·96	Noakhali.	
...	1	1	10	6	11	1	...	...	6·1	?	?	89	·922	3·5	5	6·47	−1·47	2·32	5·20	− 2·88	6·85	8·96	− 2·11	0·88	Comilla.	
6	...	...	2	7	14	1	...	...	4·5	?	?	84	·814	4·1	4	4·21	−0·21	2·59	2·78	− 0·19	2·75	4·06	− 1·31	1·10	Sirajganj.	
1	1	1	4	5	11	6	1	...	7·5	6·7	+12	84	·866	4·4	8	6·30	+1·70	3·00	4·81	− 1·81	7·22	7·92	− 0·70	0·90	Narayanganj.	
10	...	2	...	1	11	6	...	...	5·0	?	?	80	·884	4·1	4	4·65	−0·65	2·86	3·24	− 0·38	8·60	5·96	+ 2·64	2·30	Barisal.	
1	...	3	11	13	2	...	...	...	4·6	?	?	83	·787	5·2	5	5·90	−0·90	2·93	3·89	− 0·96	4·11	6·13	− 2·02	0·87	Mymensingh.	
8	...	1	2	2	15	2	...	...	3·7	?	?	86	·866	2·8	11	5·70	+5·30	7·96	3·74	+ 4·22	9·89	6·67	+ 3·22	2·35	Faridpur	Deltaic Bengal.
3	...	...	1	12	11	3	...	...	3·9	4·5	−13	82	·888	4·2	3	4·82	−1·82	2·90	3·42	− 0·52	3·97	5·84	− 1·87	1·26	Jessore.	
5	...	...	...	2	13	9	1	...	5·1	7·5	−32	81	·869	3·5	4	2·73	+1·27	3·47	1·36	+ 2·11	4·97	2·79	+ 2·18	1·62	Calcutta.	
...	...	...	...	...	20	9	1	...	19·1	16·7	+14	79	·918	6·1	0	2·36	−2·36	0·07	0·91	− 0·84	0·40	2·54	− 2·14	0·04	Saugor Island.	
...	...	1	1	3	16	8	1	...	6·8	?	?	75	·818	3·9	3	3·35	−0·35	2·13	2·49	− 0·36	2·19	3·97	− 1·78	1·20	Krishnagar.	
2	2	1	...	5	12	8	...	...	6·3	?	?	66	·752	2·1	4	2·85	+1·15	1·75	1·50	+ 0·25	1·82	2·96	− 1·14	0·66	Midnapore.	

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

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.
Central Bengal.	Bankura*	298	29·466	?	29·714	29·588	5th	29·320	29th	·268	82·8	101·3	?	75·1	?	88·2	?	26·2	109·1	9th	65·7	19th	43·4
	Raniganj	345	29·456	?	29·741	29·546	5th	29·312	29th	·234	80·5	101·7	?	75·2	?	88·4	?	26·5	107·5	9th	68·3	19th	39·2
	Burdwan	99	29·695	−·018	29·741	29·783	5th	29·540	29th	·243	80·6	98·4	−2·2	75·5*	−0·1	86·9*	−1·2	22·9	104·8	9th	70·2	21st	34·6
	Naya Dumka	489	29·280	?	29·723	29·384	5th	29·142	29th	·242	*83·0	99·8	?	74·2	?	87·0	?	25·6	105·2	8th	67·9	9th & 20th	37·3
	Berhampore	67	29·734	−·008	29·750	29·823	21st	29·571	29th	·252	80·1	98·7	−1·5	74·2	−0·2	86·5	−0·9	24·5	105·2	9th	67·5	1st	37·7
	Rampur Boalia.	70	29·723	?	29·743	29·827	21st	29·569	29th	·258	81·5	96·3	?	73·4	?	84·9	?	22·9	104·0	8th	65·1	20th	38·9
	Malda*	80	29·714	?	29·738	29·823	5th	29·533	8th	·285	81·7	97·4	?	70·9	?	84·2	?	26·5	103·9	10th	63·4	1st	40·5
	Bogra	61	29·749†	?	29·763†	29·844	5th	29·595	7th	·249	79·2	94·0‡	−1·6	71·3‡	−0·6	82·7‡	−1·1	22·7	103·3	2nd	66·2	4th	37·1
North Bengal	Dinajpur	123	29·679	−·008	29·756	29·809	5th	29·481	8th	·328	77·6	?	?	70·5	+0·1	?	?	?	?	?	63·3	2 days	?
	Rangpur	123	29·694	?	29·772	29·825	5th	29·486	8th	·339	77·5	91·6	?	69·7	?	80·7	?	21·9	100·7	10th	61·0	1st	39·7
	Jalpaiguri	284	29·542	?	29·787	29·683	5th	29·309	8th	·374	76·0	89·6	+0·6	67·6	0	78·6	+0·3	22·0	98·4	11th	60·1	10th	38·3
Orissa	Balasore	56	29·744	−·017	29·746	29·857	5th	29·588	29th	·269	83·2	96·7	−0·7	76·1	0	86·4	−0·4	20·6	107·5	8th	69·4	2 days	38·1
	False Point	21	29·811	−·010	29·774	29·931	5th	29·656	29th	·275	83·2	88·7	−1·9	77·6	−0·1	83·2	−1·0	11·1	99·5	29th	69·6	2 days	29·9
	Cuttack	80	29·732	−·022	29·754	29·848	5th	29·577	29th	·271	84·3	100·8	−1·5	78·0	0	89·5	−0·8	22·8	109·8	8th	69·8	18th	40·0
	Shortt's Island	?	29·796	?	?	29·979	1st	29·647	29th	·332	82·4	87·7	?	78·3	?	83·0	?	9·4	95·0	29th	69·3	18th	25·6
	Puri	9	29·799	?	29·754	29·918	5th	29·618	29th	·300	81·6	87·4	?	78·9	?	83·2	?	8·5	94·2	30th	69·1	18th	25·1
V.—Gangetic Plain and Chota Nagpur.		...	...	−·016	...	...	...	...	...	...	...	99·4	−1·3	71·3	−0·8	85·2	−1·1	28·3	...	...	...	...	41·0
Chota Nagpur	Hazaribagh	2,007	27·782	−·028	29·709	27·870	1st	27·653	29th	·217	81·6	97·7	−0·5	72·2	0	85·0	−0·3	25·5	103·2	26th	66·1	20th	37·1
	Ranchi	2,128	27·676	?	29·719	27·772	1st	27·561	29th	·211	81·4	96·3	?	71·2	?	83·8	?	25·1	101·2	15th	66·4	1st	34·8
	Daltonganj	730?*	29·032*	?	29·718*	29·134	12th	28·878	29th	·256	78·6	100·5	?	70·3	?	85·5	?	30·2	108·3	26th & 27th.	63·0	1st	45·3
	Chaibassa	760	29·021	−·015	29·723	29·131	1st	28·892	29th	·239	84·0	?	?	76·3	+0·5	?	?	?	?	?	68·9	19th	...
Bihar (South)	Gaya	375	29·392	−·024	29·718	29·483	1st	29·264	30th	·219	84·2	101·8	−1·8	72·5§	−1·9	87·1§	−1·9	29·3	107·0	26th	61·7	1st	45·3
	Dehri	351	29·425	?	29·728	29·521	1st	29·276	29th	·245	87·1	102·1	?	75·0	?	88·5	?	27·1	107·4	26th & 27th	68·0	18th & 19th	39·4
	Patna	183	29·592	−·016	29·727	29·704	5th	29·453	8th	·251	81·8	99·5	−1·4	73·3	0	86·4	−0·7	26·2	104·7	26th	65·2	2nd	39·5
	Arrah	190	29·574	?	29·715	29·683	5th	29·438	29th	·245	82·7	101·0*	?	72·9	?	86·9*	?	28·1	106·0	26th	67·0	13th	39·0
	Buxar	239	29·531	?	29·724	29·632	5th	29·403	29th	·229	82·4	99·8	?	73·4	?	86·6	?	26·4	105·5	26th	68·3	18th	37·2
Bihar (North)	Purnea	125	29·666	−·008	29·746	29·813	5th	29·470	8th	·343	77·9	96·0	−1·2	70·2	+0·6	83·1	−0·3	25·8	102·8	8th	62·3	6th	40·5
	Bhagalpur	160	29·615	?	29·728	29·733	5th	29·453	8th	·280	81·3	97·7	?	71·4	?	84·5	?	26·3	104·3	17th	64·5	1st	39·8
	Darbhanga	166	29·614	−·013	29·735	29·754	5th	29·428	8th	·326	78·8	95·1	−1·2	71·2	−0·6	83·2	−0·9	23·9	101·5	8th	65·4	2nd	36·1
	Muzaffarpur	178	29·601	?	29·733	29·737	5th	29·430	8th	·307	78·2	95·6	?	69·6	?	82·6	?	26·0	101·2	8th	62·8	2nd	38·4
	Motihari	224	29·552	?	29·734	29·675	5th	29·361	8th	·314	78·8	96·1	?	68·3	?	82·2	?	27·8	103·0	8th	58·9	11th	44·1
	Chapra	181	29·602	?	29·736	29·718	5th	29·468	29th	·250	82·9	99·2	?	72·3	?	85·7	?	26·9	104·5	26th	65·5	2nd	39·0
N.-W. P. (Eastern Districts).	Benares	267	29·501	−·013	29·725	29·587	5th	29·372	29th	·215	81·1	102·0	−1·5	70·2	−2·0	86·1	−1·8	31·8	106·3	26th & 30th	62·2	1st	44·1
	Allahabad	309	29·456	−·022	29·719	29·551	15th	29·315	29th	·236	84·4	102·5	−1·5	71·4	−0·7	87·0	−1·1	31·1	107·1	26th	63·4	1st	43·7
N.-W. P. (East Submontane).	Gorakhpur	256	29·509	−·004	29·725	29·625	5th	29·357	8th	·268	79·0	99·2	−1·6	71·7	−0·7	85·5	−1·2	27·5	104·3	26th	65·2	1st	39·1
Oudh (South)	Lucknow	370	29·396	−·012	29·725	29·478	5th	29·247	29th	·231	81·6	101·4	−0·9	68·0	−3·0	84·7	−2·0	33·4	105·3	25th	59·0	1st	46·3
Oudh (North)	Bahraich	403	29·358	?	29·723	29·473	5th	29·225	29th	·248	81·4	99·4	?	69·3	?	84·4	?	30·1	104·5	29th	63·0	1st	41·5
N.-W. Provinces (Central).	Cawnpore	416	29·344	?	29·718	29·438	11th	29·202	29th	·236	83·1	101·4	?	69·1	?	85·2	?	32·3	105·4	25th	62·5	3rd	42·9
	Mainpuri	516	29·249	?	29·724	29·346	11th	29·118	29th	·228	81·5	103·0	?	68·9	?	86·0	?	34·1	109·7	24th	63·0	10th	46·7

* Mean of 29 days. † Mean of 24 days. ‡ Mean of 23 days. § Mean of 27 days.

I—*continued.*

in India, Burma, etc., in April 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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, 1894.	Normal rainfall for period 1st March to 30th April.	Variation from normal of period, 1st January to 28th February.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
8	...	1	2	5	6	1	6	...	4·5	P	P	65	·716	3·0	2	2·80	−0·80	0·60	1·46	− 0·86	0·67	2·71	− 2·04	0·46	Bankura*	Central Bengal.
1	...	2	1	6	5	9	2	4	5·2	P	P	63	·666	1·3	3	2·15	+0·85	1·29	1·26	+ 0·03	1·35	1·91	− 0·56	0·82	Raniganj.	
1	...	...	2	2	10	14	1	...	4·8	4·8	0	75	·788	3·6	4	3·09	+0·91	1·58	1·54	+ 0·04	1·76	3·27	− 1·51	0·60	Burdwan.	
2	1	...	4	7	6	1	5	4	7·6	P	P	54*	·598*	0·9	5	2·44	+2·56	1·39	0·99	+ 0·40	1·42	1·69	− 0·27	0·50	Naya Dumka.	
1	...	1	3	3	15	6	1	...	4·3	5·2	−17	78	·802	4·0	2	2·45	−0·45	1·21	1·29	− 0·08	1·33	2·50	− 1·17	1·00	Berhampore.	
4	...	1	1	9	4	11	...	...	5·5	P	P	83	·895	2·4	4	2·56	+1·44	2·49	1·42	+ 1·07	2·78	2·23	+ 0·55	1·13	Rampur Boalia.	
1	...	2	...	13	1	10	...	2	4·0	P	P	68	·740	2·9	1	1·55	−0·55	0·28	0·94	− 0·66	0·48	1·68	− 1·20	0·22	Malda.	
...	...	1	12	8	...	3	...	...	3·7	P	P	78	·775	2·9	4	3·50	+0·50	7·19	2·21	+ 4·98	7·34	3·03	+ 4·31	3·51	Bogra.	
...	2	6	11	2	1	...	8	...	2·3	P	P	76	·718	3·9	4	2·60	+1·40	4·00	1·87	+ 2·13	4·20	2·84	+ 1·36	1·75	Dinajpur	North Bengal.
...	...	2	15	8	4	1	...	...	3·5	P	P	80	·754	2·7	5	4·40	+0·60	4·45	3·14	+ 1·31	4·50	4·44	+ 0·06	1·13	Rangpur.	
3	1	4	11	10	...	...	...	1	3·9	P	P	72	·644	5·5	5	5·79	−0·79	3·52	4·08	− 0·56	3·65	5·88	− 2·23	1·12	Jalpaiguri.	
2	...	...	2	...	4	20	2	...	9·0	P	P	76	·857	1·8	5	3·85	+1·15	2·04	2·52	− 0·48	2·40	3·87	− 1·47	1·11	Balasore	Orissa.
1	...	1	...	...	11	13	4	...	13·8	13·3	+ 4	80	·909	5·5	5	1·18	+3·82	2·49	0·50	+ 1·99	2·49	1·76	+ 0·73	1·32	False Point.	
4	...	1	...	1	7	15	1	1	5·3	5·1	+ 4	69	·804	3·4	2	1·00	+1·00	0·66	0·54	+ 0·12	0·82	1·88	− 1·06	0·34	Cuttack.	
...	...	...	...	...	11	18	...	...	10·3†	P	P	81	·891	1·9	3	P	P	2·69	P	P	2·73	P	P	1·50	Shortt's Island ‡	
5	...	...	...	...	...	22	3	...	12·7	P	P	84	·911	4·0	1	0·90	+0·10	0·72	0·55	+ 0·17	0·72	1·07	− 0·35	0·70	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·30	0·37	−0·06	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**	
1	4	0	2	1	5	9	6	2	8·8	8·4	+ 5	37	·393	2·8	1	0·73	+0·27	0·65	0·25	+0·40	0·68	1·21	− 0·53	0·54	Hazaribagh.	Chota Nagpur.
9	1	1	1	2	2	11	2	1	6·6	P	P	46	·492	2·5	3	1·75	+1·25	0·50	0·64	− 0·14	0·66	1·73	− 1·07	0·28	Ranchi.	
...	4	3	4	2	1	4	4	8	6·4	P	P	54	·539	3·3	0	P	P	0·01	P	P	0·02	P	P	0·01	Daltonganj.	
2	0	2	1	1	3	11	8	2	3·7	P	P	53	·615	3·6	2	1·55	+0·45	1·21	0·67	+ 0·54	1·25	1·88	− 0·63	0·83	Chaibassa.	
...	...	1	12	1	8	1	7	...	7·6	3·8	+100	52	·599	3·0	0	0·27	−0·27	0	0·15	− 0·15	0·01	0·73	− 0·72	0	Gaya	Bihar (South).
...	...	...	4	5	4	11	5	1	5·7	P	P	50	·636	0·9	0	0·29	−0·29	0·07	0·11	− 0·04	0·09	0·81	− 0·72	0·04	Dehri.	
...	...	6	13	1	1	1	8	...	5·4	4·4	+23	50	·529	1·7	0	0·36	−0·36	0·02	0·24	− 0·22	0·25	0·72	− 0·47	0·02	Patna.	
...	2	8	5	3	...	2	6	4	4·3	P	P	48	·534	0·8	0	0·50	−0·50	0	0·22	− 0·22	0·02	0·56	−0·54	0	Arrah.	
...	...	1	11	...	1	4	12	1	4·9	P	P	41	·454	1·0	0	0·40	−0·40	0·02	0·17	− 0·15	0·11	0·45	−0·34	0·02	Buxar.	
...	...	10	13	2	...	1	2	2	8·8	3·6	+144	70	·671	0·5	2	1·64	+0·36	1·91	1·21	+ 0·70	1·97	1·70	+0·27*	1·38	Purnea	Bihar (North).
7	1	4	6	6	2	3	1	...	3·0*	P	P	58	·601	1·9	2	1·35	+0·65	1·28	0·77	+ 0·51	1·42	1·10	+0·32	1·16	Bhagalpur.	
...	...	2	12	10	...	3	3	...	5·8	5·1	+14	78	·606	1·3	1	1·45	−0·45	0·42	0·53	− 0·11	0·62	0·94	−0·32	0·41	Darbhanga.	
1	...	2	12	9	...	2	3	1	5·2	P	P	68	·661	1·3	1	1·05	−0·05	0·32	0·58	− 0·26	0·36	1·00	−0·64	0·25	Muzaffarpur.	
2	...	8	10	3	...	3	3	1	7·0	P	P	68	·663	1·5	0	1·35	−1·35	0·06	0·78	− 0·72	0·19	1·15	−0·96	0·03	Motihari.	
...	1	1	9	6	1	4	5	3	5·7	P	P	55	·619	0·8	0	0·65	−0·65	0	0·28	− 0·28	0·17	0·57	−0·40	0	Chapra.	
9	1	7	1	1	2	8	1	...	1·1	5·0	− 78	54	·578	1·0		0·27	−0·27	0	0·08	− 0·08	0·09	0·36	−0·27	0	Benares	N.-W. P. (Eastern Districts).
3	1	3	4	1	4	5	5	4	4·6	3·2	+ 44	36	·426	1·5	0	0·55	−0·55	0·02	0·11	− 0·09	0·17	0·43	−0·26	0·02	Allahabad.	
3	3	3	7	2	3	1	7	1	2·9	4·4	− 34	52	·524	1·3	0	0·73	−0·73	0	0·43	− 0·43	0·07	0·85	−0·78	0	Gorakhpur	N.-W. P. (East Submontane).
18	1	...	7	...	1	1	1	1	0	4·4	−100	37	·400	2·5	0	0·27	−0·27	0	0·02	− 0·02	0·25	0·39	−0·14	0	Lucknow	Oudh (South).
1	...	1	7	8	...	1	4	8	4·1	P	P	51	·564	1·2	0	P	P	0	0·34	− 0·34	0·08	0·81	−0·73	0	Bahraich	Oudh (North).
4	3	1	1	7	1	4	6	3	3·6	P	P	39	·442	1·0	0	0·50	−0·50	0	0·11	− 0·11	0·07	0·35	−0·28	0	Cawnpore	N.-W. Provinces (Central).
24	1	...	...	3	...	1	1	...	1·0	P	P	43	·447	1·1	0	P	P	0	0·12	− 0·12	0	0·36	−0·36	0	Mainpuri.	

* Mean of 29 days.
† „ of 28 „

‡ Wind observations for 29 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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	...	...	...	...	...	...	...	95·2	−0·8	65·8	−0·6	80·5	−0·7	29·4	...	...	...	...	44·2
N.-W. Provinces (Submontane).	Bareilly	569	29·192	−·001	29·726	29·286	15th	29·049	29th	·237	78·5	98·1	−1·4	67·1	−1·6	82·6	−1·5	31·0	103·4	24th	61·7	1st & 9th	41·7
	Dehra Dun	2,233	27·560	−·019	29·745	27·675	5th	27·425	29th	·250	72·7	91·2	+1·0	63·9	−0·4	77·6	+0·3	27·3	97·5	24th	59·0	1st	38·5
	Roorkee	887	28·863	−·018	29·721	28·975	5th	28·722	29th	·253	77·1	97·4	−0·7	65·5	−1·1	81·5	−0·9	31·9	104·2	24th	58·3	10th	45·9
	Meerut	738	29·012	−·017	29·716	29·129	14th	28·878	29th	·251	79·2	98·5	+0·1	66·1	−1·8	82·3	−0·9	32·4	106·5	24th	60·0	1st	46·5
Punjab (Central)	Delhi	718	29·045	−·014	29·726	29·151	14th	28·902	29th	·249	81·0	93·4	−2·0	73·3	0	85·9	−1·0	25·1	106·1	24th	66·9	1st	39·2
	Lahore	702	29·046	−·022	29·722	29·184	15th	28·887	29th	·297	76·9	95·5	−1·1	65·8	+1·1	80·7	0	29·7	105·8	23rd & 24th.	58·2	9th	47·6
Punjab (Submontane).	Umballa	?	28·852?	?	29·725?	29·055?	14th	28·694?	29th	·361?	75·1?	99·1?	?	65·3?	?	82·2?	?	33·8?	107·5?	24th	57·0?	8th	50·5?
	Ludhiana	812	28·931	−·027	29·71[illegible]	29·050	14th & 15th	28·783	29th	·267	78·3	97·5	−0·1	66·3	−0·4	81·9	−0·3	31·2	107·0	24th	59·6	11th	47·4
Punjab (North)	Sialkot	830	28·921	−·013	29·728	29·051	15th	28·767	29th	·284	76·9	94·5	−0·4	66·1	+0·1	80·3	−0·2	28·4	104·2	23rd	59·3	8th	44·9
	Rawalpindi	1,652	28·130	−·017	29·742	28·264	15th	27·979	30th	·285	68·5	85·8	−2·2	58·4	−1·2	72·1	−1·7	27·4	96·0	30th	50·0	9th	46·0
VII.—Indus Valley and N.-W. Rajputana.		...	...	−·028	...	...	...	...	...	...	...	98·3	+1·5	68·0	+0·2	83·2	+0·9	30·3	...	...	...	...	48·9
Punjab (West)	Peshawar	1,110	28·722	−·006	29·782	28·863	14th	28·551	30th	·312	71·2	85·8	−0·8	60·4	−0·3	73·2	−0·6	25·4	100·0	30th	55·0	9th	45·0
	Mardan	?	?	?	?	?	?	?	?	?	69·3	89·2	?	57·9	?	73·6	?	31·3	101·4	30th	52·8	26th	48·6
	Khushab	612	29·134	?	29·718	29·283	15th	28·972	30th	·311	78·5	94·4	?	66·8	?	80·7	?	27·6	106·0	30th	57·0	14th	49·0
	Montgomery	558	29·193	?	29·718	29·345	15th	29·039	30th	·306	81·8	100·1	?	66·8	?	83·5	?	33·3	108·9	23rd	58·5	9th	50·4
	D. I. Khan	573	29·192	−·041	29·745	29·349	15th	29·007	30th	·342	74·3	94·4	+0·1	64·7	−0·9	79·6	−0·4	29·7	106·1	30th	55·7	14th	50·4
	Mooltan	420	29·341	−·039	29·734	29·474	15th	29·170	30th	·304	78·9	99·7	+1·9	68·1	+0·6	83·9	+1·3	31·6	109·4	30th	61·2	14th	48·2
	Sirsa	682	29·086	−·028	29·714	29·198	15th	28·947	30th	·251	79·9	103·5	+3·0	68·4	+0·3	86·0	+1·7	35·1	112·4	23rd	61·3	9th & 10th.	51·1
Sind and Cutch	Jacobabad	186	29·573	−·031	29·721	29·719	15th	29·414	30th	·305	82·6	104·4	+2·3	69·0	+0·1	86·7	+1·2	35·4	113·2	30th	56·5	25th	56·7
	Hyderabad	117	29·693	−·010?	29·764	29·818	24th	29·567	30th	·251	81·6	102·8	+0·9	73·3	+1·3	88·0	+1·1	29·5	113·2	22nd	67·0	24th	46·2
	Kurrachee	49	29·772	−·031	29·772	29·890	16th	29·661	29th	·229	79·2	92·4	+2·9	73·7	+1·2	83·1	+2·1	18·7	107·7	22nd	65·4	24th	42·3
	Bhuj	395	29·435	−·023	29·783	29·519	1st	29·337	29th	·182	82·4	101·9	+1·7	71·8	+0·8	86·9	+1·3	30·1	112·1	22nd	65·4	28th	46·7
Rajputana (West)	Bickaneer	753	29·020	?	29·729	29·131	15th	28·884	30th	·247	83·3	102·1	+1·5	75·0	−1·0	88·6	+0·3	27·1	109·5	23rd	66·5	11th	43·0
	Pachpadra	380	29·408	?	29·746	29·574	6th	29·269	10th	·305	79·0	107·0	?	68·0	?	87·5	?	39·0	116·0	24th	58·3	26th	57·7
VIII.—East Rajputana, Central India and Gujarat.		...	...	−·024	...	...	...	...	...	...	...	100·8	+0·5	71·6	−0·3	86·2	+0·1	29·2	...	...	...	...	44·4
Rajputana (East)	Jeypore	1,431	28·376	−·020	29·754	28·461	15th	28·249	29th	·212	82·9	101·8	+1·3	69·1	−0·2	85·5	+0·6	32·7	109·6	23rd	63·1	28th	46·5
	Sambhar	1,254	28·538	−·017	29·747	28·632	14th	28·416	29th	·216	81·8	99·9	+0·7	68·4	−1·9	84·2	−0·6	31·5	107·5	23rd	59·9	10th	47·6
	Ajmere	1,611	28·209	−·021	29·768	28·314	14th	28·082	29th	·232	82·9	99·2	+0·6	70·7	+0·5	85·0	+0·6	28·5	106·9	23rd	61·2	10th	45·7
	Deesa	466	29·366	−·025	29·786	29·468	1st	29·263	19th	·205	83·5	104·9	+2·0	71·5	+0·5	88·2	+1·3	33·4	113·0	23rd	65·0	3rd & 26th.	48·0
Kathiawar	Rajkot	429	29·427	−·020	29·810	29·524	15th	29·323	19th	·201	81·9	103·6	+1·4	69·0	0	86·3	+0·7	34·6	112·4	23rd	59·9	3rd	52·5
	Veraval	?	29·855	?	29·815	29·950	1st	29·767	30th	·183	79·5	87·4	?	72·4	?	79·9	?	15·0	101·6	24th	65·3	2nd	36·3
	Bhavnagar	?	29·822	?	29·808	29·924	5th	29·733	19th	·191	83·8	99·0	?	76·1	?	87·5	?	22·9	106·9	23rd	71·0	9th	35·9
Central India	Nowgong	757	29·021	−·031	29·731	29·105	14th	28·888	29th	·217	82·8	102·4	−1·5	68·3	−2·7	85·3	−2·1	34·1	109·1	23rd & 24th.	62·0	1st	47·1
	Indore	1,823	28·021	−·012	29·766	28·114	14th	27·926	29th	·188	83·3	100·2	0	68·9	−0·2	84·6	−0·1	31·3	107·1	23rd & 24th.	62·1	18th	45·0
	Neemuch	1,630	28·214	+·002	29·782	28·310	14th	28·113	29th	·197	83·9	99·9	−0·5	69·9	−0·8	84·9	−0·7	30·0	108·1	23rd & 24th.	63·7	4th	44·4
Gujarat	Surat	36	29·832	−·029	29·812	29·947	1st	29·736	25th	·211	83·6	100·0	−0·1	73·7	+1·9	86·9	+0·9	26·3	108·6	24th	66·0	3rd	42·6
	Ahmedabad	176	29·683	?	29·808	29·817	1st	29·595	19th	·222	84·8	104·9	?	75·3	?	90·1	?	29·6	113·3	23rd	70·1	3rd & 25th.	42·2
N.-W. P. (West)	Agra	555	29·215	−·035	29·728	29·324	14th	29·088	29th	·236	82·9	103·8	+1·0	72·5	−1·0	88·2	0	31·3	112·5	24th	66·3	12th	46·2
	Jhansi	858	28·940	−·021	29·743	29·047	14th	28·806	29th	·241	87·3	104·5	+0·7	76·4	+0·5	90·5	+0·6	28·1	112·2	24th	71·4	1st & 15th.	40·8

I—*continued.*

in India, Burma, etc., in April 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·38	0·63	−0·25	...	...	...	...	**VI.—Upper Sub-Himalayas.**	
15	...	4	2	7	...	...	1	1	1·9	4·5	− 58	45	·446	1·1	0	0·15	−0·15	0	0·17	− 0·17	0·83	1·11	− 0·28	0	Bareilly .	N.-W. Provinces (Submontane).
26	1	...	...	...	...	...	1	1	1·4	2·6	− 46	46	·374	2·4	0	1·45	−1·45	0	0·53	− 0·53	2·64	1·60	+ 1·04	0	Dehra Dun.	
14	2	1	2	4	...	3	1	3	3·4	3·2	+ 6	42	·391	1·4	1	1·18	−0·18	0·30	0·42	− 0·12	2·07	1·14	+ 0·93	0·30	Roorkee.	
11	...	...	4	1	...	...	11	3	1·9	2·4	− 21	39	·384	1·4	0	0·73	−0·73	0·02	0·24	− 0·22	0·98	1·01	− 0·03	0·02	Meerut.	
5	1	...	2	2	...	8	12	...	3·2	3·9	− 18	33	·346	1·1	1	0·64	+0·36	0·27	0·24	+ 0·03	1·66	0·80	+ 0·86	0·22	Delhi . .	Punjab (Central).
8	6	3	2	5	...	...	3	3	3·6	3·3	+ 9	48	·433	1·0	2	1·45	+0·55	0·40	0·46	− 0·06	1·38	1·19	+ 0·19	0·20	Lahore.	
10	...	3	1	5	...	...	...	11	2·1	?	?	66	·569	1·6	0	?	?	0·03	0·53	− 0·50	1·28	1·26	+ 0·02	0·02	Umballa .	Punjab (Submontane).
19	1	2	1	2	2	...	...	3	1·7	2·1	− 19	47	·445	1·8	0	1·55	−1·55	0	0·85	− 0·85	0·71	1·84	− 1·13	0	Ludhiana.	
15	5	2	3	1	...	...	3	1	2·8	2·3	+ 22	46	·410	1·6	3	2·09	+0·91	0·79	0·91	− 0·12	2·81	2·09	+ 0·72	0·30	Sialkot .	Punjab (North).
13	...	5	3	1	...	...	1	7	2·0	2·8	− 29	63	·436	2·5	5	3·27	+1·73	2·03	1·95	+ 0·08	5·83	3·71	+ 2·12	1·22	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·57	0·39	+0·09	...	...	...	...	**VII.—Indus Valley and N.-W. Rajputana.**	
13	1	2	1	5	4	1	2	1	4·5	4·2	+ 7	63	·470	2·6	6	3·36	+2·64	2·55	1·84	+ 0·71	4·01	3·54	+ 0·47	1·13	Peshawar	Punjab (West).
			Not	recorde	d.				?	?	?	?	?	?	4	?	?	1·59	?	?	3·60	?	?	0·94	Mardan.	
13	2	12	...	1	...	...	1	1	6·0	?	?	38	·354	1·1	2	1·30	+0·70	1·01	0·62	+ 0·39	3·78	1·16	+ 2·62	0·76	Khushab.	
6	4	2	3	7	3	2	3	...	5·6	?	?	38	·414	0·9	0	0·70	−0·70	0·05	0·11	− 0·06	0·88	0·52	+ 0·36	0·05	Montgomery.	
12	1	8	3	...	...	...	1	5	2·7	2·4	+ 13	57	·483	1·1	2	1·64	+0·36	1·92	0·77	+ 1·15	3·70	1·40	+ 2·30	1·41	D. I. Khan.	
11	1	9	...	2	...	6	...	1	1·9	2·5	− 24	54	·533	0·5	0	0·36	−0·36	0	0·07	− 0·07	0·99	0·45	+ 0·54	0	Mooltan.	
6	5	3	3	4	2	2	2	3	6·6	4·0	+ 65	36	·356	1·5	0	0·64	−0·64	0·02	0·31	− 0·29	0·38	0·68	− 0·30	0·02	Sirsa.	
15	1	2	8	1	1	1	...	1	4·5	3·9	+ 15	35	·389	1·6	0	0·27	−0·27	0	0·20	− 0·20	0	0·34	− 0·34	0	Jacobabad .	Sind and Cutch.
5	3	1	...	1	5	13	1	1	18·9	10·2	+ 78	48	·506	0·9	0	0	0	0·05	0·04	+ 0·01	0·09	0·18	− 0·09	0·05	Hyderabad.	
...	...	6	...	...	...	10	10	4	9·1	14·0	+ 35	76	·767	1·7	0	0·45	−0·45	0	0·33	− 0·33	0·02	0·56	− 0·54	0	Kurrachee.	
...	3	...	...	...	1	2	13	11	12·9	10·9	+ 18	53	·543	0·8	0	?	?	0	0·18	− 0·18	0·10	0·27	− 0·17	0	Bhuj.	
1	2	1	2	1	8	7	3	5	5·3	4·7	+ 11	44	·496	1·9	0	?	?	0·02	0·17	− 0·15	6·02	0·37	− 0·35	0·22	Bickaneer .	Rajputana (West).
21	...	...	...	4	2	2	...	1	4·1	4·5	− 9	42	·409	2·3	1	?	?	0·15	0·01	+ 0·14	0·40	0·08	+ 0·32	0·15	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·05	0·07	0	...	...	...	...	**VIII.—East Rajputana, Central India and Gujarat.**	
8	1	...	...	1	2	7	9	2	3·7	5·7	− 35	34	·381	1·7	0	0·30	−0·30	0	0·09	− 0·09	0·27	0·48	− 0·21	0	Jeypore .	Rajputana (East).
8	5	...	1	...	...	...	1	15	5·7	7·0	− 19	30	·322	1·3	0	0·30	−0·30	0	0·08	− 0·08	0	0·44	− 0·44	0	Sambhar.	
10	2	2	...	1	...	2	13	...	6·2	5·0	+ 19	34	·373	1·2	0	0·18	−0·18	0·05	0·06	− 0·01	0·46	0·23	+ 0·23	0·05	Ajmere.	
...	4	3	...	...	1	5	12	5	8·6	9·4	− 9	42	·454	0·6	1	0	+1·00	0·11	0·01	+ 0·10	0·13	0·06	+ 0·07	0·11	Deesa.	
...	3	1	...	...	...	2	10	14	10·5	11·1	− 5	55	·589	0·8	0	0·10	−0·10	0	0·02	− 0·02	0·01	0·03	− 0·02	0	Rajkot .	Kathiawar.
2	9	...	...	...	...	1	8	10	6·0	?	?	76	·764	3·0	0	?	?	0	?	?	0	?	?	0	Veraval.	
...	...	...	...	...	...	21	4	5	12·9	?	?	62	·708	0·7	0	?	?	0	?	?	0	?	?	0	Bhavnagar.	
2	1	...	2	2	2	14	5	2	3·1	2·8	+ 11	32	·359	2·0	0	0	0	0·03	0·06	− 0·03	0·17	0·33	− 0·16	0·03	Nowgong .	Central India.
2	10	2	...	...	1	3	7	5	3·6	4·4	− 18	48	·552	1·1	0	0	0	0	0·06	− 0·06	0·05	0·08	− 0·03	0	Indore.	
...	...	4	5	...	...	7	8	6	8·4	10·3	− 18	27	·307	1·3	1	0·09	+0·91	0·36	0·09	+ 0·27	0·36	0·17	+ 0·19	0·36	Neemuch.	
...	1	1	...	...	2	14	5	7	...	8·0	...	65	·753	0·9	0	0	0	0	0·01	− 0·01	0	0·01	− 0·01	0	Surat . .	Gujarat.
2	5	3	...	...	1	4	5	7	4·8†	?	?	49	·572	2·8	0	?	?	0	?	?	0·01	?	?	0	Ahmedabad.*	
2	...	1	..	4	...	10	...	13	4·4	4·7	− 6	29	·322	1·0	0	0·55	−0·55	0	0·14	− 0·14	0·45	0·45	0	0	Agra . .	N.-W. P. (West).
4	4	2	...	...	3	9	2	6	2·7	4·2	− 36	24	·308	0·8	1	0·55	+0·45	0·18	0·13	+ 0·05	0·22	0·48	− 0·26	0·12	Jhansi.	

* Wind direction for 28 days.
† Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
IX.—Deccan	...	...	...	−·017	...	...	...	...	...	...	...	101·6	−1·2	73·7	−0·1	87·8	−0·7	28·0	...	...	...	...	41·1
Bombay (Deccan)	Belgaum	2,524	27·372	−·003	29·811	27·452	1st	27·295	19th	·157	75·2	93·1	−3·3	67·2	−0·1	80·2	−1·7	25·9	97·3	13th & 20th.	62·9	15th	34·4
	Sholapur	1,590	28·275	−·005	29·795	28·350	1st	28·178	25th	·172	82·5	102·5	−2·7	73·9	−1·1	88·2	−1·9	28·6	108·7	25th & 26th.	68·0	15th & 30th	40·7
	Poona	1,840	28·043	−·016	29·815	28·137	1st	27·967	19th	·170	79·7	101·7	+0·6	68·5	−1·3	85·1	−0·4	33·2	107·5	26th	62·4	3rd & 4th	45·1
	Bijapur	1,946	27·932	?	29·798	28·037	1st	27·852	25th	·185	80·7	99·2	?	72·9	?	86·1	?	26·3	105·3	25th	66·0	15th & 30th.	39·3
Khandesh	Malegaon	1,430	28·425	−·017	29·785	28·516	15th	28·346	29th	·170	85·7	102·9	+0·1	72·0	+1·1	87·5	+0·6	30·9	108·3	24th	61·4	4th	46·9
	Ahmednagar	2,152	27·730	?	29·792	27·826	1st	27·643	26th	·183	82·0	98·6	?	67·7	?	83·1	?	30·9	105·2	26th	55·0	30th	50·2
Berar	Akola	930	28·887	−·020	29·752	29·002	1st	28·786	25th	·216	85·9	104·8	−0·9	73·9	−0·1	89·4	−0·5	30·9	113·1	25th	66·3	19th	46·8
	Amraoti	1,215	28·601	−·016	29·757	28·724	5th	28·500	29th	·224	84·6	103·3	−2·0	76·4	+0·9	89·8	−0·6	26·9	111·3	3 days	67·8	2nd	43·5
Central Provinces (West).	Khandwa	1,044	28·779	−·025	29·768	28·886	5th	28·685	29th	·201	85·5	104·9	+0·7	75·5	+1·2	90·2	+1·0	29·4	111·7	24th	68·1	18th	43·6
	Hoshangabad*	1,020	28·792	−·037	29·763	28·896	1st	28·692	29th	·204	83·7	102·8	−2·1	72·9	−0·3	87·9	−1·2	29·9	110·0	24th	67·8	4 days	42·2
	Nagpur	1,025	28·783	−·020	29·747	28·900	5th	28·661	29th	·239	87·4	104·2	−1·5	74·4	−1·6	89·3	−1·6	29·8	111·3	24th	67·1	3rd	44·2
Central Provinces (Central).	Chanda	634	29·175	−·017	29·748	29·292	5th	29·057	29th	·235	85·9	105·6	−1·5	76·2	−0·1	90·9	−0·8	29·4	111·9	24th	68·1	2nd	43·8
	Seoni	2,033	27·800	−·015	29·747	27·912	5th	27·672	29th	·240	82·8	98·5	−2·8	70·7	−1·0	84·6	−1·9	27·8	106·2	25th	62·0	18th	44·2
	Jubbulpore	1,327	28·479	−·022	29·750	28·578	5th	28·351	29th	·227	83·1	101·5	−0·2	69·5	−1·0	85·6	−0·6	32·0	108·5	25th	63·3	2nd & 19th.	45·2
	Saugor	1,762	28·048	−·024	29·738	28·153	14th	27·923	29th	·230	83·5	101·4	−0·2	72·4	0	86·9	−0·1	29·0	109·4	24th	67·2	18th	42·2
Central Provinces (East).	Raipur	970	28·834	−·015	29·739	28·929	5th	28·689	29th	·240	87·1	103·2	−1·1	75·8	−1·0	89·5	−1·1	27·4	109·5	24th	68·7	18th	40·8
	Sutna	1,040	28·733	−·027	29·723	28·831	14th	28·594	29th	·237	84·7	101·0	−0·5	71·2	+0·2	86·1	−0·2	29·8	106·6	24th & 25th.	64·2	1st	42·4
	Sambalpur	463	29·321	−·018	29·727	29·429	5th	29·179	29th	·250	86·2	104·1	−0·8	76·7	+1·0	90·4	+0·1	27·4	108·0	25th	69·7	1st	38·3
Hyderabad (North).	Aurangabad	?	28·012	?	?	28·114	1st	27·931	20th	·183	86·5	102·5	?	71·9	?	87·2	?	30·6	109·0	24th	63·8	1st	45·2
	Indur	?	?	?	?	?	...	?	...	?	87·1	102·0	?	77·6	?	89·9	?	24·4	108·6	25th	69·2	2nd	39·4
	Bidar	?	27·697	?	?	27·779	1st	27·615	25th	·164	83·4	97·2	?	75·1	?	86·1	?	22·1	99·5	12th & 13th.	68·1	15th	31·4
Hyderabad (South).	Gulbarga	...	28·340	?	29·769	28·430	1st	28·239	25th	·191	84·3	102·2	?	75·0	?	88·6	?	27·2	109·1	25th	64·6	27th	34·5
	Raichur	1,378	28·477	?	29·782	28·570	1st	28·401	25th	·169	84·7	102·0	?	78·6	?	90·3	?	23·4	107·0	25th	71·1	13th	35·9
	Hyderabad (Deccan).	1,690	28·169	−·034	29·785	28·265	1st	28·045	29th	·220	82·7	100·1	−2·1	75·7	+0·7	88·0	−0·7	24·4	106·9	25th	70·7	5th	36·2
	Secunderabad	1,787	28·092	?	29·805	28·182	1st	27·973	29th	·209	81·5	101·3	?	74·8	?	88·1	?	26·5	107·8	25th	70·4	3 days	37·4
	Khamamet	373	29·476	?	29·731	29·590	5th	29·314	29th	·276	83·5	101·6	?	77·9	?	89·7	?	23·7	107·2	9th	71·8	5th	35·4
X.—West Coast	...	...	...	−·011	...	...	...	...	...	...	...	89·4	−0·1	78·2	−0·2	83·8	−0·1	11·1	...	...	...	...	17·8
Konkan	Bombay	37	29·854	−·013	29·831	29·926	1st	29·776	19th	·150	81·9	88·9	+0·7	78·0	+0·6	83·5	+0·7	10·9	91·5	25th	74·0	3rd	17·5
	Ratnagiri	110	29·780	+·003	29·829	29·862	1st	29·703	19th	·159	82·9	89·7	−0·2	78·2	+1·5	84·0	+0·7	11·5	92·4	15th & 16th.	73·9	5th*	18·5
	Mormugoa	60	29·841	?	29·836	29·922	1st & 5th.	29·757	19th	·165	83·6	90·2	?	79·4	?	84·8	?	10·8	93·0	3 days.	75·4	5th	17·6
	Goa	23	29·892	−·001	29·829	29·980	1st	29·813	19th	·167	82·9	86·6	?	80·4	?	83·5	?	6·2	89·0	14th	75·0	5th & 6th	14·0
	Karwar	44	29·842	−·015	29·817	29·924	1st	29·754	19th	·170	81·1	90·0	+0·1	78·7	+0·9	84·4	+0·5	11·3	91·8	14th & 25th.	75·1	15th	16·7
Malabar	Cochin	10	29·888	−·014	29·826	29·968	1st	29·828	26th	·140	82·1	91·6	+0·5	77·0	−1·3	84·3	−0·4	14·6	93·8	14th	72·7	17th	21·1
	Calicut	27	29·865	−·029	29·821	29·945	1st	29·794	26th	·151	82·0	90·5	−0·8	77·0	−0·8	83·8	−0·8	13·5	92·8	15th & 25th	73·5	3 days	19·3
	Mangalore	65	29·830	−·012	29·828	29·918	1st	29·776	25th	·142	32·1	90·2	−0·6	77·1	−1·8	83·6	−1·2	13·1	92·8	15th & 24th.	70·5	27th	22·3
	Trivandrum	198	29·701	?	29·829	29·775	6th	29·622	19th	·153	81·2	86·6	?	78·2	?	82·4	?	8·4	89·0	3 days	75·5	5th & 27th	13·5
XI.—South India	...	...	...	−·019	...	...	...	...	...	...	...	94·7	−1·3	75·6	−0·2	85·2	−0·8	19·2	...	...	...	...	31·2
Madras (South)	Pamban	37	29·844	?	29·808	29·938	6th	29·746	29th	·192	84·5	90·9	?	79·9	?	85·4	?	11·0	93·8	25th	72·2	20th	21·6
	Tinnevelly	168	29·718	?	29·815	29·829	6th	29·640	29th	·189	84·1	97·1	?	78·6	?	87·9	?	18·5	102·4	19th & 25th.	71·9	20th	30·5
	Madura	447	29·429	−·020	29·810	29·526	6th	29·326	29th	·200	83·3	98·5	−1·6	76·9	+0·7	87·7	−0·5	21·6	103·5	25th	71·5	20th	32·0

I—*continued.*

in India, Burma, etc., in April 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity: Mean velocity in miles per hour.	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 1894.	Normal rainfall for period from 1st March to 30th April.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·35	0·41	−0·16	...	...	...	...	**IX.—Deccan.**	
8	...	...	3	3	...	3	9	4	...	13·1	...	65	·565	4·1	3	3·36	−0·36	0·72	1·72	− 1·0	2·65	2·07	+ 0·58	0·43	Belgaum	Bombay (Deccan).
1	4	1	1	3	1	5	3	11	10·7	8·2	+ 30	42	·469	3·6	1	1·20	−0·20	0·27	0·57	− 0·30	0·33	0·91	− 0·58	0·16	Sholapur.	
3	1	...	...	1	3	4	7	11	9·6	9·9	− 3	43	·429	1·9	2	1·09	+0·91	0·47	0·54	− 0·07	0·47	0·59	− 0·12	0·37	Poona.	
1	2	3	...	1	1	6	9	7	6·7	?	?	64	·665	3·0	1	1·80	−0·80	0·51	?	?	1·77	?	?	0·41	Bijapur.	
2	3	1	...	...	1	2	7	14	13·1	7·7	+ 70	57	·706	1·8	1	0·18	+0·82	0·29	0·10	+ 0·19	0·55	0·13	+ 0·42	0·29	Malegaon	Khandesh.
6	12	3	1	2	...	...	...	6	11·0	?	?	65	·746	1·4	2	?	?	0·27	?	?	1·55	?	?	0·15	Ahmednagar.	
1	5	...	1	...	1	1	13	8	7·4	5·4	+ 37	30	·352	2·4	0	0·36	−0·36	0	0·16	− 0·16	0·31	0·71	− 0·40	0	Akola	Berar.
1	2	2	2	2	1	9	9	2	5·9	4·4	+ 34	34	·396	2·2	0	0·45	−0·45	0	0·25	− 0·25	0·37	0·65	− 0·28	0	Amraoti.	
4	...	3	1	...	1	...	12	9	7·0	5·6	+ 25	28	·337	1·8	0	0·18	−0·18	0	0·17	− 0·17	0·31	0·30	+ 0·01	0	Khandwa	Central Provinces (West).
10	...	3	3	1	2	7	4	...	1·7	2·9	− 41	32	·366	2·7	1	0·09	+0·91	0·42	0·16	+ 0·26	0·57	0·39	+ 0·18	0·35	Hoshangabad.	
5	5	4	2	2	4	2	2	4	6·0	5·3	+ 13	35	·443	3·0	1	0·82	+0·18	0·18	0·34	− 0·16	0·34	0·95	− 0·61	0·12	Nagpur.	
1	1	...	4	10	4	5	3	2	3·9	3·8	+ 3	40	·495	2·9	0	?	?	0·02	0·38	− 0·36	0·08	1·87	− 1·79	0·01	Chanda	Central Provinces (Central).
...	...	...	...	...	...	...	...	...	...	3·8	...	57	·629	3·8	1	0·45	+0·55	0·40	0·35	+ 0·05	1·34	1·05	+ 0·29	0·26	Seoni.	
6	2	...	...	5	8	2	5	2	2·7	3·5	− 23	30	·337	2·8	0	0·27	−0·27	0·07	0·18	− 0·11	0·20	0·69	− 0·49	0·04	Jubbulpore.	
11	...	3	...	3	2	4	7	...	3·5	3·7	− 5	27	·307	1·6	0	0·09	−0·09	0·07	0·10	− 0·03	0·32	0·36	− 0·04	0·07	Saugor.	
5	3	1	1	...	1	9	8	2	7·1	5·9	+ 20	34	·439	2·7	0	1·00	+1·00	0·08	0·47	− 0·39	0·11	1·28	− 1·17	0·08	Raipur	Central Provinces (East).
2	10	..	1	...	2	1	4	10	5·8	6·8	− 15	26	·314	1·3	0	0·27	+0·27	0·04	0·12	− 0·08	0·09	0·62	− 0·53	0·04	Sutna.	
...	2	1	2	9	8	5	2	1	4·7	2·6	+ 81	50	·628	2·7	0	?	?	0·06	0·51	− 0·45	0·06	1·71	− 1·65	0·06	Sambalpur.	
12	2	2	1	1	...	4	3	5	4·6	?	?	28	·346	1·6	1	?	?	0·16	0·18	− 0·02	0·99	0·24	+ 0·75	0·12	Aurangabad	Hyderabad (North).
1	3	1	1	1	5	5	5	8	7·6	?	?	47	·603	2·7	0	?	?	0·03	0·31	− 0·28	0·23	0·58	− 0·35	0·03	Indur.	
...	4	1	1	1	2	7	6	8	6·4	?	?	52	·583	0·6	2	?	?	0·68	0·71	− 0·03	1·41	0·92	+ 0·49	0·48	Bidar.	
5	4	3	1	1	4	4	2	6	10·1	?	?	56	·663	3·0	1	?	?	0·43	0·71	− 0·28	1·17	0·92	+ 0·25	0·21	Gulbarga	Hyderabad (South).
...	2	1	1	2	3	7	8	6	7·8	?	?	56	·670	1·6	1	?	?	0·51	?	?	0·51	?	?	0·44	Raichur.	
7	2	1	2	1	2	1	9	5	4·6	?	?	54	·597	2·1	3	?	?	0·88	0·67	+ 0·21	0·88	1·42	− 0·54	0·56	Hyderabad (Deccan).	
4	1	2	1	4	...	3	6	9	4·3	5·3	− 19	51	·545	2·2	3	?	?	0·78	?	?	0·78	?	?	0·25	Secunderabad	
5	1	...	...	13	11	...	...	...	8·4	?	?	72	·836	2·8	2	?	?	1·87	?	?	1·87	?	?	1·69	Khamamet.	
...	...	...	...	...	...	...	..	.	...	...	...	...	...	...	...	...	...	2·49	1·43	+1·07	...	...	...	...	**X.—West Coast.**	
...	5	4	3	3	7	4	2	2	9·1	11·3	− 19	76	·833	3·1	0	0	0	0·01	0·01	0	0·07	0·04	+ 0·03	0·01	Bombay	Konkan.
4	3	1	...	2	1	7	5	7	5·0	11·1	− 55	74	·829	4·1	0	0·09	−0·09	0·02	0·07	− 0·05	0·18	0·08	+ 0·10	0·02	Ratnagiri.	
...	9	...	3	5	1	1	5	6	8·4	?	?	76	·881	4·6	0	?	?	0·05	?	?	0·06	?	?	0·05	Mormugoa.	
12	6	5	...	...	...	3	3	1	...	?	...	71	·807	4·2	0	?	?	0	0·07	− 0·07	0	0·07	− 0·07	0	Goa.	
8	1	11	2	...	1	2	2	3	3·1	?	?	79	·827	3·3	0	0·36	− 0·36	0	0·41	− 0·41	0·06	0·41	− 0·35	0	Karwar.	
15	5	9	...	1	...	...	...	...	5·6	?	?	79	·868	4·5	12	5·55	+6·45	6·12	4·37	+ 1·75	8·83	6·81	+ 2·02	1·47	Cochin	Malabar.
6	6	5	6	3	...	...	...	4	13·2	?	?	80	·864	5·4	9	3·13	+5·87	8·45	3·17	+ 5·28	12·34	3·69	+ 8·55	2·45	Calicut.	
6	6	4	8	4	...	1	...	1	2·8	3·7	− 24	78	·855	5·3	8	1·00	+7·00	3·70	1·13	+ 2·57	4·54	1·19	+ 3·35	1·45	Mangalore.	
7	9	6	...	...	1	...	...	7	5·0	?	?	81	·868	3·7	7	?	?	4·04	4·58	− 0·54	10·10	6·15	+ 3·95	1·34	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·93	1·12	+0·39	...	...	...	...	**XI.—South India.**	
1	..	...	5	9	7	8	...	...	8·9	?	?	76	·900	3·9	4	1·30	+2·70	1·80	4·13	− 2·33	4·13	4·92	− 0·97	1·00	Pamban	Madras (South).
...	4	2	2	1	...	5	5	11	4·5	?	?	69	·809	5·2	4	3·40	+0·60	1·39	?	?	4·74	?	?	0·77	Tinnevelly	
8	5	2	4	7	1	...	...	3	2·2	3·6	− 39	73	·837	3·6	4	1·82	+2·18	1·16	1·88	− 0·72	1·36	2·49	− 1·13	0·37	Madura.	

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Madras (South Central).	Salem	940	28·964	−·024	29·836	29·069	6th	28·879	29th	·190	82·7	99·7	−1·3	76·4	+0·8	88·1	−0·3	23·3	104·9	19th	71·0	11th	33·9
	Coimbatore	1,348	28·520	−·026	29·620	28·616	6th	28·456	29th	·160	77·7	94·8	−3·3	72·0	−1·6	83·4	−2·5	22·8	98·4	24th	68·1	26th	30·3
Coorg	Mercara	3,781	26·224	−·004	29·816	26·338	1st	26·157	26th	·181	69·6	81·3	−3·2	64·2	+0·1	72·8	−1·6	17·1	85·5	14th & 23rd.	61·2	3rd & 28th	24·3
	Chitaldroog	2,404	27·499	P	29·810	27·580	1st	27·428	19th	·152	78·3	94·7	P	71·7	P	83·2	P	23·0	98·2	24th	61·9	26th	36·3
Mysore	Bangalore	3,019	26·920	−·025	29·818	26·996	1st	26·859	29th	·137	75·3	92·2	−1·0	68·3	−0·9	80·3	−1·0	23·9	95·8	13th	58·4	26th	37·4
	Hassan	3,091	26·865	P	29·842	26·938	1st	26·796	26th	·142	73·5	88·5	P	65·9	P	77·2	P	22·6	92·7	24th	60·7	28th	32·0
	Mysore	P	27·411	P	29·843	27·491	1st	27·344	26th	·147	75·2	91·5	P	68·4	P	80·0	P	23·1	94·9	24th	63·0	12th	31·9
Madras (East Coast, South).	Negapatam	31	29·851	−·019	29·811	29·949	6th	29·715	29th	·234	84·3	92·1	−0·5	78·3	−0·5	85·2	−0·5	13·8	101·2	30th	67·7	19th	33·5
	Cuddalore	12	29·860	P	29·801	29·959	6th	29·724	29th	·235	84·0	91·9	P	76·6	P	84·3	P	15·3	99·3	30th	68·2	19th	31·1
	Trichinopoly	275	29·627	−·019	29·814	29·725	6th	29·497	29th	·228	84·3	100·3	−0·8	78·2	+0·9	89·3	+0·1	22·1	105·2	19th	71·4	19th	33·8
	Madras	22	29·851	−·029	29·803	29·957	6th	29·712	29th	·245	84·5	93·1	+0·2	77·2	+0·1	85·2	+0·2	15·9	103·5	30th	73·5	20th	30·0
Madras (East Coast, Central).	Nellore	71	29·779	P	29·783	29·888	6th	29·636	29th	·252	85·1	100·9	P	77·8	P	89·4	P	23·1	107·3	9th & 10th,	73·6	16th	33·7
	Masulipatam	15	29·847	−·017	29·797	29·957	5th	29·674	29th	·283	84·0	93·4	−1·6	77·0	−0·2	85·2	−0·9	16·4	105·7	30th	67·2	10th	38·5
Madras (Central)	Cuddapah	433	29·423	P	29·790	29·509	6th	29·330	18th	·179	88·7	105·0	−0·1	81·6	+1·0	93·3	+0·5	23·4	108·8	18th	76·9	2nd & 6th,	31·9
	Kurnool	923	28·926	−·019	29·781	29·020	5th	28·819	29th	·201	85·0	102·9	−1·7	78·0	−0·3	90·5	−1·0	24·9	107·3	25th	73·0	27th & 28th.	34·3
	Bellary	1,475	28·397	−·002	29·800	28·484	1st	28·325	25th	·159	83·9	101·4	−2·5	77·2	+0·4	89·3	−1·2	24·2	104·5	25th	71·9	13th	32·6
Madras (East Coast, North).	Rajahmundry	112	29·743	−·020	29·792	29·854	5th	29·585	29th	·269	84·2	99·1	−1·3	78·3	−0·3	88·8	−0·8	20·8	105·1	30th	72·1	3rd	33·0
	Cocanada	26	29·834	−·012	29·796	29·952	5th	29·666	29th	·286	*83·9	*95·2	*−0·4	†78·6	†−0·7	*86·9	−0·6	16·6	102·8	30th	71·0	19th	31·8
	Vizagapatam	31	29·821	−·016	29·790	29·940	5th	29·646	29th	·294	84·2	88·7	−0·1	81·4	−1·9	85·1	−1·0	7·3	93·4	30th	75·4	19th	18·0
	Gopalpur	21	29·801	P	29·762	29·917	5th	29·638	29th	·279	80·3	87·0	P	76·3	P	81·7	P	10·7	91·2	29th	68·1	18th	23·1
XII.—Hill Stations.																							
Baluchistan	Kuch Fort	P	23·939	P	P	24·050	24th	23·820	13th	·230	58·8	P	P	41·7	P	P	P	P	P	P	27·0	P	P
	Pishin	P	P	P	P	P	P	P	P	P	P	78·0	P	41·2	P	59·6	P	36·8	90·1	30th	34·9	24th	55·2
	Quetta	5,502	24·625	+·004	P	24·749	24th	24·534	13th	·215	60·1	74·2	+0·6	45·3	−1·1	59·8	−0·3	28·9	84·7	30th	35·8	9th	49·9
	Shirino	P	P	P	P	P	P	P	P	P	59·8	74·2	P	53·2	P	63·4	P	21·0	87·0	30th	40·1	15th	46·9
	Kalat	P	P	P	P	P	P	P	P	P	57·8	74·8	P	39·2	P	57·1	P	35·6	80·7	4th	26·0	25th	54·7
	Chaman	P	25·652	...	P	25·819	24th	25·525	20th	·294	67·3	79·3	P	55·5	P	67·4	P	23·8	90·0	4th	45·1	7th	44·9
Northern India	Srinagar	5,204	24·902	...	P	25·045	21st	24·793	8th	·252	52·7	65·2	P	46·4	P	55·8	P	18·8	74·8	27th & 30th.	42·7	3rd	32·1
	Gilgit	P	25·772 (a)	...	P	25·900	1st	25·620	13th	·280	60·5	74·7	P	54·2	P	64·4	P	20·5	83·9	30th	47·9	17th	36·0
	Cherat	P	25·662	...	P	25·757	1st	25·555	8th	·202	63·1	75·3	P	57·3	P	66·3	P	18·0	87·4	30th	45·2	14th	42·2
	Murree	6,344	23·807	−·012	P	23·913	1st	23·695	8th	·218	59·3	68·0	−0·4	53·3	+1·3	60·7	+0·5	14·7	79·6	30th	39·5	14th & 15th,	40·1
	Poo	P			Not recorded.						P	59·8	P	39·9	P	49·9	P	19·9	71·2	24th	34·0	6th & 7th,	37·2
	Simla	7,224	23·103	+·001	P	23·209	5th	22·972	8th	·237	58·6	67·2	−4·1	54·0	+1·5	60·6	−1·3	13·2	75·4	24th	44·1	5th	31·3
	Chakrata	6,909?	23·317	−·010	P	23·460	5th	23·216	29th	·244	60·6	70·9	+0·3	52·9	+0·9	61·9	+0·6	18·0	76·8	24th	47·7	10th	29·1
	Mussooree	P	23·545	...	P	23·643	5th	23·436	29th	·213	61·5	72·0	P	54·9	P	63·5	P	17·1	78·8	25th	48·5	21st	30·3
	Ranikhet	6,069	24·088	+·005	P	24·182	14th	23·987	29th	·195	64·6	74·8	+0·4	57·6	+0·6	66·2	+0·5	17·2	81·5	26th	49·0	18th	32·5
	Gnatong	P	18·830	P	P	18·939	4th	18·715	7th	·224	38·1	46·5	P	30·5	P	38·5	P	16·0	52·4	13th	24·6	30th	27·8
	Darjeeling	7,421	22·962	+·007	P	23·057	5th	22·800	8th	·257	54·9	62·2	+0·8	48·6	+1·1	55·4	+1·0	13·6	71·9	1st	43·1	19th	28·8
	Gantok	P	24·445	P	P	24·534	14th	24·263	8th	·271	59·9	71·1	P	53·0	P	62·0	P	18·1	81·2	1st	45·0	17th	36·2

(a) Not reduced to 32°.
* Mean of 20 days.
† " of 21 "

I—*continued.*

in India, Burma, etc., in April 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
4	3	6	1	4	7	4	1	...	4·2	5·0	− 16	68	·767	3·5	4	2·27	+1·73	0·91	1·58	− 0·67	1·71	2·46	− 0·75	0·33	Salem	Madras (South Central).
...	9	...	1	...	14	6	...	...	2·9	3·5	− 17	80	·766	4·3	3	2·18	+0·82	0·81	1·71	− 0·90	1·77	2·30	− 0·53	0·29	Coimbatore.	
...	15	5	...	...	1	...	2	7	6·1	3·8	+ 61	82	·607	4·7	8	4·70	+3·30	2·65	2·72	− 0·07	5·34	3·59	+ 1·75	0·67	Mercara	Coorg.
...	...	...	2	...	2	13	9	4	8·6	?	?	63	·612	2·9	2	?	?	0·85	?	?	1·26	?	?	0·40	Chitaldroog.	
3	...	1	2	2	2	7	12	1	4·5	3·5	+ 30	74	·646	2·1	4	1·18	+2·82	2·91	1·15	+ 0·76	3·36	1·69	+ 1·67	1·11	Bangalore	Mysore.
8	3	2	1	...	...	2	6	8	3·1	?	?	78	·643	4·5	11	?	?	6·69	?	?	9·05	?	?	1·60	Hassan.	
10	...	1	...	1	2	6	7	3	8·5	?	?	80	·694	2·4	8	?	?	5·75	?	?	6·77	?	?	1·97	Mysore.	
1	...	...	4	5	8	6	4	2	11·6	5·2	+123	75	·880	4·7	1	0·55	+0·45	0·89	0·35	+ 0·54	2·47	0·89	+ 1·58	0·82	Negapatam.	Madras (East Coast, South).
...	...	1	...	1	6	11	3	8	2·2	?	?	84	·992	3·8	2	0·60	+1·40	2·80	?	?	2·80	?	?	2·68	Cuddalore.	
18	...	...	1	1	1	4	4	1	1·3	4·0	− 68	66	·776	4·8	3	1·27	+1·73	3·42	1·53	+ 1·89	3·62	2·08	+ 1·54	1·65	Trichinopoly.	
...	...	...	...	4	16	7	2	1	7·6	7·9	− 4	75	·892	5·0	2	0·27	+1·73	0·86	0·62	+ 0·24	0·86	1·01	− 0·15	0·48	Madras.	
2	...	1	1	7	17	1	1	...	7·4	?	?	75	·911	5·3	1	0·30	+0·70	0·26	?	?	0·26	?	?	0·14	Nellore	Madras (East Coast, Central).
2	1	...	...	6	13	5	2	1	5·6	8·8	− 36	82	·958	5·1	3	0·27	+2·73	3·80	0·15	+ 3·65	3·80	0·27	+ 3·53	2·50	Masulipatam	
...	...	2	4	9	2	4	4	5	...	?	?	54	·726	3·3	0	0·70	−0·70	0·15	0·38	− 0·23	0·15	0·44	− 0·29	0·09	Cuddapah	Madras (Central).
13	1	3	6	1	2	...	4	...	...	?	?	53	·640	3·1	2	1·33	+0·67	0·80	0·65	+ 0·15	0·80	1·19	− 0·39	0·36	Kurnool.	
3	...	2	1	2	...	1	6	15	5·2	5·2	?	51	·594	4·1	2	1·27	+0·73	0·43	0·58	− 0·15	0·43	0·80	− 0·37	0·21	Bellary.	
1	5	...	1	2	2	6	8	5	...	?	...	72	·858	6·3	3	0·70	+2·30	1·04	0·39	+ 0·65	1·04	0·82	+ 0·22	0·65	Rajahmundry	Madras (East Coast, North).
2	5	...	2	1	...	4	7	9	6·9	?	?	76†	·888†	2·9	1	0·50	+0·50	1·07	0·21	+ 0·86	1·07	0·74	+ 0·33	1·03	Cocanada.	
...	...	...	...	...	...	5	24	1	1·4	3·9	− 64	73	·847	4·5	2	0·36	+1·64	1·38	0·49	+ 0·89	1·38	0·88	+ 0·50	1·11	Vizagapatam.	
...	1	...	...	...	8	18	2	1	17·5	14·5	+ 21	86	·878	1·7	2	0·78	+1·22	2·64	0·54	+ 2·10	2·64	1·44	+ 1·20	2·17	Gopalpur.	
XII.—Hill Stations.																										
9	1	...	2	2	2	2	11	1	?	?	?	47	·227	1·6	2	?	?	0·86	?	?	3·26	?	?	0·43	Kuch Fort	Baluchistan.
				Not	recorded.				?	?	?	?	?	?	1	?	?	1·07	?	?	4·84	?	?	0·98	Pishin.	
30	...	...	...	...	...	...	...	...	1·8	4·8	− 63	47	·249	1·9	2	3·55	−1·55	1·59	1·20	+ 0·39	4·83	2·90	+ 1·93	0·90	Quetta.	
...	...	6	1	7	6	4	2	2	6·0	?	?	56	·287	?	3	?	?	1·30	?	?	4·69	?	?	0·85	Shirino.	
...	7	...	...	...	21	...	...	2	?	?	?	?	?	?	1	?	?	0·23	?	?	0·23	?	?	0·19	Kalat.	
6	...	...	...	8	7	6	2	1	9·3	?	?	75	·278	2·3	3	?	?	0·70	?	?	3·06	?	?	0·40	Chaman.	
16	1	1	...	3	3	...	2	4	2·8	?	?	87	·344	4·9	7	?	?	4·09	?	?	8·56	?	?	1·09	Srinagar	Northern India.
			Not	rec	orde	d.			?	?	?	46	·236	5·1	4	?	?	1·74	?	?	2·19	?	?	0·73	Gilgit.	
...	16	...	...	4	1	...	...	9	16·4	?	?	54	·302	3·2	5	?	?	3·80	?	?	8·33	?	?	2·00	Cherat.	
3	4	2	5	11	1	...	...	4	11·3	8·7	+ 30	40	·193	3·2	5	6·64	−1·64	2·41	3·40	− 0·99	9·80	7·05	+ 2·75	1·66	Murree.	
21	...	...	2	5	1	1	...	...	?	?	?	?	?	2·9	8	?	?	2·06	?	?	6·24	?	?	0·54	Poo.	
8	9	2	1	1	7	1	...	1	6·8*	2·9	+134	41	·199	2·2	1	4·09	−3·09	0·26	1·90	− 1·64	5·40	4·14	+ 1·26	0·15	Simla.	
18	...	...	2	3	...	2	4	1	7·7	6·1	+ 26	42	·222	2·3	2	?	?	0·58	1·48	− 0·90	4·67	3·87	+ 0·80	0·40	Chakrata.	
...	4	4	12	3	1	...	...	6	...	?	?	45	·245	2·4	1	1·10	−0·10	0·14	?	?	3·94	?	?	0·10	Mussooree.	
25	...	1	...	...	1	2	1	...	3·4	3·0	+ 13	47	·282	1·4	0	2·55	−2·55	0·07	1·11	− 1·04	3·32	3·35	− 0·03	0·07	Ranikhet.	
...	...	2	...	12	1	1	5	9	5·3	?	?	71	·163	4·4	16	?	?	8·48	?	?	10·70	?	?	1·18	Gnatong.	
7	1	3	6	...	2	5	6	...	7·8	8·4	− 7	75	·321	5·3	10	6·86	+3·14	5·13	4·53	+ 0·60	5·45	6·16	− 0·71	2·12	Darjeeling.	
...	4	1	1	2	5	10	6	...	2·8	?	?	81	·417	2·9	14	?	?	9·26	?	?	10·85	?	?	1·26	Gantok.	

* Mean of 20 days.
† " of 21 "

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Central India	Mount Abu	3,945	26·030	—·025	?	26·121	1st	25·949	8th	·172	76·4	84·7	−0·9	69·5	+1·2	77·1	+0·2	15·2	92·2	23rd	63·8	9th	28·4
	Pachmarhi	3,528	26·434	—·009	?	26·530	5th	26·326	29th	·204	80·9	92·2	−0·1	68·8	−0·5	80·5	−0·3	23·4	99·7	24th & 25th,	62·2	19th & 1st	37·5
South India	Wellington	6,200	24·253	—·025	?	24·327	6th	24·187	29th	·140	66·4	74·4	−1·5	54·8	−1·2	64·6	−1·4	19·6	78·7	24th	52·2	20th.	26·5
	Kottagiri	?	23·842	?	?	23·902	2nd	23·791	3 days	·111	63·8	71·9	?	55·8	?	63·9	?	16·1	76·7	23rd	38·8	1st	37·9
XIII.—Extra India.																							
Ceylon	Colombo	40	29·866	—·018	29·832	29·927	1st	29·812	18th	·115	83·6	67·8	?	75·0	?	81·4	?	12·8	90·0	25th	70·5	26th	19·5
Persia	Meshed	?				Not recorded.					83·7	66·4	?	44·1	?	55·3	?	22·3	85·0	30th	36·0	21st	49·0
	Teheran*	?	26·003	?	?	26·200	5th	25·765	14th	·435	59·7	70·8	?	49·3	?	60·1	?	21·5	85·4	30th	36·6	2nd	48·8
	Isphahan	?	?	?	?	?	?	?	?	?	58·0	70·7	?	45·0	?	57·9	?	25·7	86·5	30th	35·1	22nd	51·4
	Bushire	14	29·920	?	29·891	30·128	23rd	29·745	14th	·383	72·9	79·9	?	66·6	?	73·3	?	13·3	94·0	30th	59·2	12th	34·8
	Jask‡	?	29·938	?	?	30·114	23rd	29·805	9th	·309	82·0	87·7	?	73·2	?	80·5	?	14·5	92·1	21st & 27th,	62·8	11th	29·3
Arabia	Muskat	?	29·864	?	?	30·065	23rd	29·728	30th	·337	82·5	85·2	?	80·1	?	82·7	?	5·1	90·1	21st	74·6	12th	15·5
	Baghdad	?	+29·547	?	?	29·727	22nd	29·422	14th	·305	65·0	76·2	?	58·9	?	67·5	?	17·3	86·3	26th	52·0	19th	34·3
	Adea	94	29·851	+·006	29·877	29·941	1st	29·804	28th	·137	81·5	88·4	−2·1	78·5	+0·8	83·5	−0·7	9·9	94·3	23rd	74·4	26th	19·9
	Perim	?	29·701	?	?	29·797	1st	29·633	27th	·164	81·8	88·2	?	78·7	?	83·5	?	9·5	90·7	17th	76·5	12th	14·2
Afghanistan	Kabul	?	?	?	?	?	...	?	...	?	60·3	70·3 (a)	?	46·0	?	58·2 (a)	?	24·3	85·1	30th	36·9	24th	48·2
Central Asia	Kashgar	?	25·546*	?	?	25·900	27th	25·230	14th	·670	59·4*	74·2	?	50·1*	?	62·6	?	·1	85·5	1st	37·5	8th	48·0
Arabian Sea Islands.	Minicoy	10	29·908	?	29·843	29·976	1st	29·838	19th	·138	83·6	91·0	?	...	...	—	...	..	94·3	29th	...	...	...
Africa	Zanzibar	73	29·954	?	29·954	30·026	25th	29·904	10th	·122	79·6	84·9	?	77·4	?	81·1	?	7·5	87·0	16th	73·7	20th	13·3

* Mean of 27 days.
† " of 28 "
‡ " of 29 "
(a) " of 25 "

I—*concluded.*

in India, Burma, etc., in April 1894—concluded.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	3	3	...	1	...	11	7	5	9·3	7·7	+ 21	28	·261	1·1	0	0·09	−0·09	0·02	0·06	−0·04	0·50	0·18	+ 0·32	0·02	Mount Abu.	CENTRAL INDIA.
...	3	2	4	2	2	...	11	6	6·0	5·3	+ 13	23	·236	2·2	0	0·45	−0·45	0	0·23	−0·23	0·18	0·55	− 0·37	0	Pachmarhi.	
22	2	1	1	...	2	2	...	...	2·2	2·9	− 24	69	·450	3·9	8	4·50	+ 3·50	3·07	2·78	+0·29	8·61	5·59	+ 3·02	1·20	Wellington .	SOUTH INDIA.
...	6	4	3	4	6	4	...	3	3·8	?	?	89	·526	1·6	13	4·80	+ 8·20	4·65	3·36	+1·29	10·57	4·99	+ 5·58	1·09	Kottagiri.	
																									XIII.—Extra India.	
1	...	2	...	5	6	13	3	...	7·5	5·6	+ 34	77	·893	5·4	12	?	?	12·46	12·32	+0·14	19·86	16·97	+ 2·89	2·63	Colombo .	CEYLON.
16	...	...	...	...	...	2	11	1	?	?	?	?	?	3·7	4	?	?	2·59	?	?	4·87	?	?	0·87	Meshed .	PERSIA.
9	6	2	2	...	6	1	1	...	4·9*	?	?	47	·235	2·4	1	?	?	0·94	?	?	3·65	?	?	0·75	Teheran.‡ (a)	
...	3	...	3	2	...	4	8	8	(a) 7·8†	?	?	57	·280	0·9	2	?	?	0·50	?	?	1·35	?	?	0·30	Isphahan.†	
...	2	8	2	3	...	...	...	15	6·7	9·1	− 26	57	·460	?	0	?	?	0·13	0·68	−0·55	1·44	1·40	+ 0·04	0·08	Bushire.	
...	...	...	2	4	4	4	13	1	13·2†	?	?	61	·677	0	1	?	?	0·21	?	?	1·24	?	?	0·21	Jask.	
...	2	...	6	3	4	2	6	7	4·2	?	?	57	·633	0·5	1	?	?	0·20	?	?	0·48	?	?	0·20	Muskat .	ARABIA.
4	5	1	4	5	2	3	2	4	?	?	?	77	·473	1·7	5	?	?	2·48	?	?	6·87	?	?	1·22	Baghdad.	
9	...	9	11	1	...	...	...	...	9·5	14·8	− 36	78	·839	3·2	0	?	?	0	0·66	−0·66	1·73	1·82	− 0·09	0	Aden.	
1	1	...	10	9	1	1	2	5	17·6	?	?	76	·826	3·9	0	?	?	0	?	?	0	?	?	0	Perim .	
...	...	...	13	...	...	9	3	5	?	?	?	? (b)	? (b)	?	9	?	?	2·77	?	?	5·49	?	?	0·72	Kabul .	AFGHANISTAN.
...	1	1	6	2	...	5	5	4	6·2	?	?	64	·331	3·1	0	?	?	0	?	?	0·41	?	?	0	Kashgar .	CENTRAL ASIA.
2	3	2	2	1	...	...	7	11	8·4†	?	?	77	·883	4·2	4	?	?	2·96	?	?	4·02	?	?	1·60	Minicoy† .	ARABIAN SEA ISLANDS.
...	...	1	...	1	15	13	...	...	9·1	?	?	83	·841	4·7	10	?	?	3·55	?	?	8·89	?	?	0·63	Zanzibar .	AFRICA.

* Mean of 28 days.
† Wind observations for 28 days.

‡ (a) Mean of 27 days.
(b) „ of 24 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89

Meteorological Province	Station.	Height of the 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 to 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	...	29·830	29·724	·106	29·770	−·031	29·761	91·8	79·2	12·6	96·4	74·6	21·8	87·1	87·5	83·6	− 0·1	76·6	80·5	80·4	79·1
	Rangoon	...	·834	·692	·142	·767	−·036	·744	98·6	76·1	22·5	102·6	72·9	29·7	87·9	93·4	84·9	+ 0·4	72·7	75·8	76·6	75·0
	Diamond Island	...	·857	·747	·110	·794	−·032	·770	87·5	79·6	7·9	90·6	75·1	15·5	85·2	85·0	82·1	+ 0·1	76·0	77·1	77·1	76·7
	Cocos Island	111										Imperfect.										
	Akyab	...	·865	·749	·116	·804	−·028	·766	91·9	76·0	15·9	94·6	70·2	24·4	88·1	88·1	83·2	+ 0·4	72·6	79·7	79·2	77·3
Assam.	Silchar	...	·767	·618	·149	·694	−·029	·749	88·2	69·4	18·8	97·2	62·2	35·0	80·4	86·1	78·2	+ 0·5	67·2	74·1	75·5	72·3
	Sibsagar	...	·537	·389	·148	·461	−·037	·753	82·6	66·7	15·9	92·2	63·0	29·2	76·2	81·7	73·9	+ 0·8	66·2	71·6	73·8	70·6
	Dhubri	...	·722	·566	·156	·638	−·010	·706	90·4	71·4	19·0	102·3	66·8	35·5	80·2	86·4	79·9	+ 0·8	67·2	72·3	73·0	70·8
Bengal and Orissa.	Chittagong	...	·793	·679	·114	·730	−·018	·765	88·8	73·4	15·4	96·0	66·0	30·0	85·0	86·1	80·6	+ 0·1	72·0	78·0	78·1	76·0
	Naryangunge	...	·816	·677	·139	·745	−·011	·715	91·9	74·1	17·8	99·5	68·1	31·4	84·3	88·8	81·9	− 0·4	70·9	77·6	77·1	75·2
	Calcutta (Alipore)	...	·796	·663	·133	·728	−·022	·695	94·6	75·4	19·2	103·3	65·1	38·2	87·0	92·1	84·4	− 0·4	71·5	77·5	75·7	74·9
	Do. (Chowringhee).	...	·802	?	?	?	?	?	95·8	75·2	20·6	103·6	64·9	38·7	88·8	?	?	?	73·0	79·9	?	?
	Saugor Island	...	·807	·680	·127	·739	−·017	·707	90·9	80·4	10·5	96·0	73·1	22·9	87·6	87·4	84·0	+ 0·6	76·2	80·3	80·5	78·0
	Burdwan	...	·707	·562	·145	·633	−·017	·677	98·6	75·5	23·1	105·0	70·2	34·8	87·3	96·2	85·5	− 1·7	70·9	74·8	75·0	73·6
	Berhampore	...	·739	·588	·151	·662	−·015	·676	98·8	74·2	24·6	105·2	67·5	37·7	88·5	96·6	85·1	− 1·1	68·7	76·3	74·4	73·1
	False Point	...	·822	·700	·122	·759	−·011	·722	88·8	77·5	11·3	99·3	69·5	29·8	85·8	85·2	81·5	− 0·5	74·5	79·3	78·9	77·6
	Cuttack	...	·732	·590	·142	·666	−·030	·687	101·0	78·0	23·0	109·3	70·0	39·3	91·6	96·7	86·7	+ 0·2	74·6	77·7	78·0	76·7
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·800	27·685	·115	27·745	−·029	·633	97·8	72·2	25·6	103·2	66·1	37·1	89·3	94·0	84·5	+ 0·5	57·8	65·5	65·5	63·0
	Patna	...	29·600	29·459	·141	29·527	−·020	·659	99·6	73·3	26·3	104·7	65·2	39·5	90·2	98·0	85·9	− 0·7	64·0	70·7	70·3	68·3
	Darbhanga	...	·627	·480	·147	·552	−·020	·668	95·4	71·1	24·3	101·8	65·4	36·4	86·4	94·5	82·9	− 1·6	66·8	72·1	72·1	70·3
	Allahabad	...	·468	·339	·129	·399	−·027	·659	102·8	71·4	31·4	107·3	62·6	43·7	94·7	101·7	87·3	− 0·3	60·5	68·9	68·6	66·0
	Ghasipur	220	·545	·415	·130	·476	−·027	·645	101·6	73·4	28·2	106·5	67·5	39·0	93·5	98·4	87·2	+ 0·2	65·7	69·7	70·0	68·5
	Lucknow	...	·413	·286	·127	·348	−·015	·663	101·7	68·2	33·5	107·0	59·0	48·0	93·7	99·9	85·8	− 1·6	58·8	67·9	68·2	65·0
Indus Valley and N.-W. Rajputana.	Dehra Dun	...	27·575	27·486	·089	27·519	−·023	·657	91·5	63·9	27·6	97·4	58·9	38·5	82·1	88·1	77·4	+ 0·4	55·2	63·2	64·1	60·8
Upper Sub-Himalayas.	Roorkee	...	28·881	28·767	·114	28·815	−·020	·646	97·8	65·5	32·3	104·7	58·4	46·3	88·3	95·6	81·7	− 0·5	57·6	66·8	67·5	64·9
	Meerut	...	29·034	·919	·115	·970	−·025	·653	98·8	66·4	32·4	106·5	60·1	46·4	90·1	96·5	82·5	+ 0·2	58·6	66·0	66·7	63·8
	Lahore	...	·067	·963	·104	29·010	−·026	·679	95·9	65·8	30·1	106·3	58·4	47·9	85·9	94·6	80·9	+ 1·0	58·9	67·1	68·7	64·9
	Ludhiana	...	28·954	·848	·106	28·895	−·032	·655	98·0	66·2	31·8	107·0	59·6	47·4	88·1	95·8	82·1	+ 0·7	58·9	67·2	68·5	64·8
	Peshawar	...	·734	·632	·102	·678	−·013	·766	86·1	60·5	25·6	100·0	55·0	45·0	78·4	83·9	73·2	+ 0·9	55·3	64·2	65·7	61·7
	Mooltan	...	29·358	29·249	·109	29·299	−·035	·679	100·0	68·1	31·9	109·9	61·2	48·7	86·9	98·3	84·0	+ 2·6	61·1	72·0	76·3	69·8
	Jacobabad	...	·586	·465	·121	·521	−·032	·659	104·5	68·7	35·8	113·8	56·5	57·3	94·1	102·6	86·5	+ 1·4	56·0	68·7	70·0	64·9
	Kurrachee	...	·779	·695	·084	·736	−·043	·737	93·4	73·8	19·6	108·0	65·2	42·8	86·3	89·0	81·7	+ 2·5	70·1	77·2	78·2	75·2
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·392	28·286	·106	28·334	−·015	·701	102·0	69·1	32·9	109·6	63·1	46·5	92·7	99·3	85·5	+ 0·9	56·5	67·3	68·5	64·1
	Ajmere	...	·224	·113	·111	·162	−·023	·685	99·3	70·7	27·2	106·9	61·2	45·7	80·4	97·8	85·9	+ 0·8	58·8	66·7	69·0	64·8
	Deesa	...	29·374	29·243	·131	29·304	−·023	·709	105·0	71·5	33·5	113·2	65·0	48·2	93·2	103·0	88·5	+ 1·2	60·4	68·5	67·7	65·5
	Nowgong	...	·029	28·903	·126	28·961	−·035	·645	102·7	68·2	34·7	109·1	62·0	47·1	94·0	100·9	85·4	− 1·9	58·0	67·3	67·9	64·4
	Agra	...	·231	29·101	·130	29·157	−·035	·652	103·9	72·5	31·4	112·5	66·3	46·2	94·3	102·0	88·2	+ 0·2	58·2	67·4	69·2	64·2
Deccan.	Belgaum	...	27·376	27·249	·127	27·316	−·008	·695	93·1	67·2	25·9	97·5	62·9	34·6	84·2	87·8	78·3	− 1·0	63·6	67·3	70·3	67·1
	Sholapur	...	28·273	28·115	·158	28·193	−·011	·670	102·6	74·0	28·6	108·9	68·0	40·9	91·1	100·3	87·4	− 1·4	62·5	68·7	70·7	67·3
	Poona	...	·038	27·900	·138	27·975	−·016	·693	101·7	68·5	33·2	107·5	62·3	45·2	90·6	97·9	84·6	0	61·4	65·5	67·2	64·7
	Akola	...	·893	28·736	·157	28·810	−·028	·655	105·7	73·9	31·8	113·2	66·2	47·0	95·3	104·6	90·3	0	61·6	69·4	72·4	67·6
	Buldana	2,132	27·720	27·594	·126	27·652	−·031	·643	99·5	75·8	23·7	106·4	65·0	41·4	90·8	97·3	87·9	− 0·1	60·0	64·8	66·0	63·5
	Khandwa	...	28·780	28·631	·149	28·701	−·031	·661	105·2	75·5	29·7	111·7	68·1	43·6	95·1	103·2	90·9	+ 1·6	58·8	67·8	68·7	65·1

II.

Stations in India, Burma, etc., in April 1894.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.					
														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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
																									%	%						
·875	·955	·942	·924	−·008	88	75	72	78	0	5·2	6·5	5·9	+1·8	6	1	5	8	13	4	6	11	6	S. 8° E.	N. 84° E.	15	45	126	113	...	...	Port Blair	Burma Coast and Bay Islands.
·761	·729	·685	·725	−·065	85	56	45	62	−5	2·3	4·7	3·5	+0·2	...	4	3	3	2	13	11	15	5	S. 58° W.	S. 24° W.	41	60	148	136	...	...	Rangoon	
·850	·821	·828	·833	−·025	84	67	69	74	−2	4·0	3·6	3·8	+0·8	2	3	2	1	2	...	4	15	31	N. 58° W.	N. 58° W.	70	73	216*	168	...	...	Diamond Island.	
...	...	...	...	...	...	...	...	...	...	Imperfect.		...	...	...	...	...	...	...	...	...	...	...	...	?	...	...	...	...	...	...	Cocos Island.	
·757	·901	·878	·849	+·033	84	68	66	73	0	4·1	3·2	3·7	+0·7	...	1	6	9	1	11	4	23	5	S. 70° W.	S. 75° W.	27	40	109	97	...	...	Akyab	
·664	·765	·744	·728	+·009	92	74	61	76	0	5·6	5·4	5·5	+0·2	41	2	4	6	2	...	2	2	1	N. 65° E.	S. 86° E.	12	21	115*	81	...	...	Silchar	Assam.
·641	·717	·734	·698	+·030	97	79	69	81	−6	5·7	5·5	5·6	−1·3	16	1	37	...	2	1	3	...	...	N. 49° E.	N. 59° E.	57	51	86*	67	...	...	Sibsagar	
·622	·691	·639	·654	0	81	68	54	68	0	3·7	3·5	3·6	+0·3	6	2	22	12	2	1	11	4	...	N. 67° E.	N. 74° E.	32	32	205	192	...	...	Dhubri	
·770	·868	·858	·832	+·014	93	72	69	78	+1	4·0	2·4	3·2	−0·8	...	1	3	1	6	12	18	9	10	S. 49° W.	S. 12° W.	47	37	151*	169	...	...	Chittagong	Bengal and Orissa.
·721	·855	·778	·785	−·022	85	72	58	72	−1	5·1	4·4	4·8	+0·9	...	2	1	3	15	23	10	3	2	S. 4° E.	S. 4° E.	63	60	178	165	...	...	Naryangunge	
·724	·816	·673	·738	−·077	82	64	46	64	−7	2·9	3·2	3·1	+0·4	...	1	1	1	10	21	16	8	2	S. 8° W.	S. 3° W.	63	73	124	175	...	...	Calcutta (Alipore).	
·788	·903	?	?	?	90	67	?	?	?	?	?	?	...	?		?	?	?	?	?	?	?	?	?	?	?	?	?	3·72	1·54	Do. (Chowringhee.)	
·850	·939	·851	·913	−·026	82	72	73	75	−5	5·5	5·0	5·3	+0·8	...	...	...	...	8	38	13	...	1	S. 5° W.	S. 20° W.	89	76	448	401	...	...	Saugor Island.	
·718	·697	·586	·674	+·021	81	56	35	58	+4	2·6	4·6	3·6	+1·2	...	3	1	2	9	15	18	10	2	N. 27° W.	S. 40° W.	55	40	112*	114	...	...	Burdwan	
·635	·748	·559	·647	+·017	75	57	34	55	−4	2·5	4·5	3·5	+0·3	2	...	1	4	1	24	17	6	5	S. 26° W.	S. 23° W.	60	32	101	124	...	...	Berhampore	
·820	·917	·907	·881	−·025	86	74	74	78	−6	4·4	5·7	5·1	+2·0	...	...	...	...	5	41	12	2	...	S. 7° W.	S. 38° W.	90	79	332*	336	...	...	False Point	
·816	·763	·709	·763	−·005	85	52	42	59	−3	1·8	3·9	2·9	+0·1	1	1	1	1	2	37	12	2	3	S. 12° W.	S. 17° W.	73	62	129	124	...	...	Cuttack	
·307	·337	·279	·308	+·012	39	25	19	28	0	2·8	5·9	4·4	+1·8	1	21	5	3	...	7	5	6	12	N. 73° W.	N. 74° W.	20	49	213	201	...	...	Hazaribagh.	Gangetic Plain and Chota Nagpur.
·432	·498	·383	·455	−·013	58	38	23	40	−1	1·3	1·7	1·5	−0·5	1	1	11	15	1	1	1	13	16	N. 5° W.	N. 38° W.	30	27	130	108	...	...	Patna	
·606	·600	·494	·567	+·006	79	49	32	53	+2	1·1	1·0	1·1	0	3	...	3	16	14	3	3	10	8	S. 54° E.	S. 24° E.	22	8	142	138	...	...	Darbhanga	
·388	·365	·259	·337	−·053	50	23	13	29	−3	1·6	2·5	2·1	+0·7	...	7	6	6	5	3	3	10	20	N. 37° W.	N. 52° W.	35	25	110	86	...	...	Allahabad.	
·536	·416	·360	·437	+·037	65	27	20	37	+5	0·9	1·8	1·4	+0·5	18	...	1	5	2	...	13	14	7	S. 77° W.	N. 82° W.	37	43	88	87	*Nil*	0	Ghazipur.	
·378	·341	·270	·329	−·077	55	22	14	30	−4	1·9	1·4	1·7	−0·3	5	7	...	18	3	4	1	9	13	N. 7° E.	N. 53° W.	17	44	?	106	...	...	Lucknow.	
·330	·349	·304	·328	?	56	32	23	37	?	2·3	2·6	2·5	−0·3	8	2	2	1	3	8	15	15	4	S. 59° W.	N. 79° W.	47	21	31	62	...	...	Dehra Dun	Upper Sub-Himalayas.
·376	·375	·301	·351	+·032	60	28	18	35	+1	1·3	1·0	1·2	−0·9	22	1	2	6	2	3	6	14	4	S. 75° W.	N. 73° W.	22	10	80	76	...	...	Roorkee	
·393	·318	·261	·324	−·075	61	23	15	33	−5	1·6	1·6	1·6	−0·4	12	1	1	6	2	...	6	22	10	N. 83° W.	N. 53° W.	42	44	46	60	...	...	Meerut	
·411	·415	·359	·395	+·007	65	34	23	41	+4	0·2	1·2	0·7	−1·9	6	11	4	7	2	1	4	8	17	N. 27° W.	N. 19° W.	38	26	85	80	...	...	Lahore	
·403	·390	·335	·370	−·035	63	30	21	38	−6	1·7	3·1	2·4	−0·6	16	9	2	3	2	7	...	9	12	N. 48° W.	N. 59° W.	27	27	38	52	...	...	Ludhiana	
·378	·427	·408	·404	−·007	71	46	38	52	−2	2·6	4·7	3·7	−0·9	7	6	13	9	1	2	5	5	12	N. 7° E.	N. 9° E.	30	24	109*	104	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·459	·589	·617	·555	+·101	68	46	34	50	+6	0·2	0·9	0·6	−1·1	10	1	13	...	8	...	16	...	12	N. 69° W.	N. 26° W.	7	13	43*	59	...	...	Mooltan	
·288	·364	·300	·317	−·063	41	23	14	26	−8	0·5	1·1	0·8	−1·9	36	3	2	5	9	...	1	3	1	S. 76° E.	S. 34° E.	15	18	104*	94	...	...	Jacobabad.	
·697	·820	·825	·780	+·065	83	66	61	70	+1	0·8	0·4	0·6	−1·4	...	...	11	2	...	...	12	16	3	N. 85° W.	S. 62° W.	38	80	229	345	...	...	Kurrachee	
·305	·346	·317	·323	+·006	42	23	17	27	−1	1·3	2·4	1·9	−0·3	2	...	2	1	2	7	27	17	2	S. 54° W.	N. 43° W.	70	53	86	133	...	...	Jeypore	E. Rajputana, Central India, and Gujarat.
·347	·363	·350	·353	−·038	45	26	20	30	−4	1·1	1·7	1·4	−0·6	1	4	3	...	2	2	7	34	7	N. 86° W.	S. 74° W.	68	52	152	131	...	...	Ajmere	
·386	·370	·210	·322	−·044	50	25	10	28	0	0·4	1·2	0·8	−1·0	...	5	4	...	...	1	11	23	14	N. 77° W.	N. 89° W.	67	53	206	225	...	...	Deesa	
·351	·311	·245	·303	−·078	51	20	12	28	−3	1·3	2·8	2·1	−0·2	...	2	2	4	...	2	4	37	9	N. 83° W.	N. 76° W.	68	54	74*	68	...	...	Nowgong	
·301	·313	·277	·296	−·043	37	19	13	23	−5	1·0	1·2	1·1	−0·3	...	...	3	...	4	...	16	1	36	N. 68° W.	N. 84° W.	59	44	104	114	...	...	Agra	
·547	·461	·527	·512	−·007	82	40	41	54	+4	1·7	4·7	3·2	+0·6	...	6	5	4	3	...	8	21	9	N. 71° W.	S. 88° W.	45	25	?	314	...	...	Belgaum	Deccan.
·428	·425	·382	·412	+·030	51	29	20	33	+4	2·8	5·4	4·1	+0·7	3	8	6	3	7	1	10	6	16	N. 49° W.	N. 18° E.	27	14	257*	205	...	...	Sholapur	
·462	·319	·287	·356	−·027	66	22	16	35	+4	1·7	3·6	2·7	+0·2	...	1	1	2	4	...	13	19	29	N. 84° W.	N. 35° W.	62	49	230	232	...	..	Poona	
·391	·374	·367	·377	+·092	47	23	17	29	+7	1·5	3·5	2·5	+0·8	2	21	1	3	...	...	2	21	10	N. 43° W.	N. 48° W.	63	57	178	131	...	...	Akola	
·326	·292	·254	·290	−·024	37	20	14	24	−2	0·7	3·5	2·1	−0·4	...	16	2	2	...	1	3	11	25	N. 41° W.	N. 31° W.	70	55	177*	213	0·82	0·79	Buldana	
·293	·341	·273	·302	−·045	33	20	13	22	−5	1·6	3·5	2·6	+0·7	3	3	5	2	...	2	1	23	21	N. 60° W.	N. 49° W.	63	62	168	140	...	...	Khandwa	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89

Meteorological Province.	Station.	Height of the barometer 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 to gravity 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Deccan—*concld.*	Hoshangabad	...	28·797	28·644	·153	28·716	−·049	29·657	103·0	72·9	30·1	110·1	67·6	42·5	94·2	101·7	88·6	−0·8	58·5	67·8	70·2	65·5
	Nagpur	...	·784	·633	·151	·704	−·019	·646	104·5	74·3	30·2	111·4	67·1	44·3	94·5	101·3	89·5	−0·8	61·2	70·6	70·9	67·6
	Jubbulpore	...	·482	·345	·137	·409	−·030	·644	101·9	69·6	32·3	108·4	63·2	45·2	92·8	99·2	86·1	−0·1	59·1	66·4	68·5	64·7
	Saugor	...	·058	27·931	·127	27·990	−·029	·633	101·8	72·4	29·4	109·4	67·4	42·0	94·0	100·0	87·6	+0·9	57·6	64·6	66·4	62·9
	Raipur	...	·838	28·687	·151	28·758	−·024	·639	103·4	75·8	27·6	109·5	68·7	40·8	91·4	101·0	89·8	−0·1	61·1	70·1	70·5	67·2
	Sutna	...	·741	·616	·125	·674	−·032	·639	101·2	71·2	30·0	106·6	64·2	42·4	95·0	99·1	86·4	−0·1	57·0	66·1	66·3	63·1
	Hyderabad (Deccan).	...	·173	·039	·134	·103	?	·679	100·4	75·7	24·7	107·2	70·5	36·7	90·9	97·4	87·3	?	66·7	72·0	71·9	70·2
West Coast.	Bombay	...	29·859	29·741	·118	29·793	−·013	·775	88·9	77·9	11·0	91·4	74·2	17·2	84·4	85·8	82·5	−0·1	73·7	77·5	77·5	76·2
	Ratnagiri	...	·783	·671	·112	·725	−·002	·773	89·7	78·3	11·4	92·6	73·9	18·7	86·4	86·3	83·1	+0·7	74·7	78·1	79·4	77·4
	Karwar	...	·858	·746	·112	·800	−·012	·775	90·1	78·6	11·5	92·1	75·3	16·8	86·3	87·4	83·6	+0·9	74·6	77·3	78·2	76·7
	Cochin	...	·899	·798	·101	·847	−·006	·784	91·4	76·8	14·6	93·5	72·9	20·6	86·1	88·8	83·4	−0·9	74·5	78·4	79·8	77·6
South India.	Salem	...	28·964	28·801	·163	28·892	−·031	·744	99·8	76·4	23·4	105·1	71·1	34·0	88·9	95·4	85·8	−0·2	72·6	75·8	75·7	74·7
	Mysore	...	27·428	27·286	·142	27·357	?	·737	91·4	68·4	23·0	94·9	63·0	31·9	81·7	87·8	79·0	?	67·2	72·7	71·9	70·6
	Mercara	...	26·236	26·136	·100	26·195	−·007	·788	81·0	64·2	16·8	85·6	61·0	24·6	74·9	75·1	71·1	−1·8	62·3	68·3	69·4	66·7
	Bangalore (Fort)	...	·926	·795	·131	·865	−·033	·702	92·0	68·3	23·7	95·6	58·6	37·0	82·3	87·2	79·0	−2·0	64·3	70·8	68·7	67·9
	Hassan	...	·870	·751	·119	·815	?	·737	88·3	65·9	22·4	92·7	60·7	32·0	80·0	83·4	75·9	?	61·3	69·5	69·6	66·8
	Chitaldroog	...	27·503	27·368	·140	27·433	?	·691	94·6	71·7	22·9	98·2	61·9	36·3	84·4	93·2	82·8	?	62·7	70·1	69·2	67·3
	Trichinopoly	...	29·633	29·462	·171	29·557	−·027	·737	100·2	78·2	22·0	105·2	71·3	33·9	91·0	97·6	87·4	+0·4	73·8	75·6	75·8	75·1
	Madras	...	·858	·732	·126	·802	−·021	·753	93·6	77·4	16·2	103·6	73·5	30·1	89·5	87·9	84·3	−0·5	?	78·7	79·2	78·1
	Bellary	...	28·404	28·246	·158	28·324	+·004	·695	101·4	77·2	24·2	104·5	72·1	32·4	90·4	98·5	88·3	−1·1	68·6	72·0	72·3	71·0
	Vizagapatam	...	29·836	29·706	·130	29·768	−·021	·736	88·8	81·3	7·5	93·2	75·4	17·8	86·5	86·8	85·5	−0·8	73·2	78·0	78·9	76·7
	Cocanada	...	·844	·693	·151	·769	?	·714*	95·2*	78·6*	16·6	102·7	71·0	31·7	88·3*	92·1*	86·1*	?	74·8*	78·1*	79·8*	77·5*
Hill Station, Baluchistan.	Quetta	—	24·633	24·560	·073	24·589	+·005	?	74·4	45·4	29·0	86·4	35·9	50·5	66·7	71·8	59·2	+0·3	41·5	51·7	54·2	49·2
Hill Stations, Northern India.	Leh	11,503	19·729	19·652	·077	19·697	+·020	?	53·9	30·2	23·7	68·7	25·5	43·2	44·2	49·3	42·2	−0·6	27·3	33·8	36·6	32·6
	Srinagar	...	24·918	24·822	·096	24·862	?	?	65·7†	46·4	19·3†	78·3	42·7	35·6	56·7	64·5†	55·6†	?	45·2	53·5	58·9	52·5
	Murree	...	23·836	23·801	·035	23·811	−·013	?	68·2	53·3	14·9	79·5	39·3	40·2	63·5	65·0	59·9	+1·5	43·1	49·8	51·8	48·2
	Chamba	3,005	26·866	26·765	·101	26·828	−·033	?	83·6	58·2	25·4	93·3	51·6	41·7	71·6	80·6	70·0	+0·5	52·3	58·5	60·4	57·1
	Kailang	10,087	20·841	20·797	·044	20·831	+·023	?	49·6	28·7	20·9	60·8	21·0	39·8	41·8	46·1	38·1	−2·2	26·7	34·7	37·8	33·1
	Simla (Ridge)	...	23·117	23·069	·048	23·085	−·009	?	67·4	53·6	13·8	75·4	44·1	31·3	61·7	65·5	60·0	+0·3	43·7	48·5	50·6	47·5
	Simla (Chapslee)	...	?	?	?	?	?	?	73·6	53·7	19·9	80·9	45·3	35·6	65·4	?	?	?	44·1	50·3	?	?
	Chakrata	...	23·339	23·278	·061	23·301	−·010	?	71·1	52·7	18·4	76·7	47·8	28·9	66·1	67·8	61·1	+1·4	43·8	51·6	52·3	49·2
	Ranikhet	...	24·109	24·028	·081	24·058	−·005	?	75·0	57·5	17·5	81·3	48·9	32·4	69·8	71·9	65·5	+0·8	49·3	54·2	54·4	52·6
	Katmandu	4,388	25·578	25·484	·094	25·529	−·033	?	83·3	53·2	30·1	90·8	46·2	44·6	72·6	77·1	66·4	0	50·7	60·4	61·4	57·5
	Darjeeling	...	22·979	22·893	·086	22·934	−·004	?	61·9	48·6	13·3	69·0	43·1	25·9	57·4	58·4	54·5	+0·8	45·4	52·0	52·8	50·2
	Demagiri	...	?	?	?	?	?	?	87·6	70·1	17·5	92·9	66·2	26·7	81·1	86·0	78·5	−0·2	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	88·9	72·1	16·8	96·9	61·4	35·5	83·0	84·7	79·5	?	?	71·4	70·3	?
Hill Stations, Central India.	Mount Abu	...	26·049	25·964	·085	26·002	−·030	?	84·8	69·5	15·3	92·2	63·8	28·4	79·7	83·1	76·7	+0·9	53·5	59·1	60·9	57·[illegible]
	Pachmarhi	...	·445	26·337	·108	·387	−·010	?	92·4	68·8	23·6	99·7	62·0	37·7	85·0	90·2	81·6	+0·3	54·2	60·3	61·4	58·6
	Chikalda	3,642	·319	·214	·105	·262	−·025	?	91·8	72·5	19·3	99·2	65·4	33·8	83·6	89·5	83·0	+0·1	55·9	60·6	61·8	59·4

* Mean of 21 days. † Mean of 29 days.

II—*continued.*

Stations in India, Burma, etc., in April 1894—continued.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.					
														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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
																									%	%						
·317	·354	·347	·339	−·003	39	22	17	26	− 1	1·7	3·8	2·8	+0·5	14	...	6	5	1	8	8	14	4	S. 60° W.	S. 89° W.	23	32	40	70	...	...	Hoshangabad.	Deccan—*concld.*
·382	·452	·377	·404	+·041	45	28	19	31	+ 4	2·3	5·5	3·9	+0·9	...	9	6	5	8	8	11	5	8	S. 55° W.	N. 63° W.	7	20	143	127	...	...	Nagpur	
·374	·324	·322	·340	+·011	52	22	18	31	+ 2	2·4	3·4	2·9	+0·7	5	3	2	1	8	7	6	19	9	S. 74° W.	N. 66° W.	37	32	65	81	...	...	Jubbulpore.	
·301	·243	·234	·259	−·042	38	16	12	22	− 4	0·9	2·5	1·7	+0·3	...	6	6	2	7	6	15	11	7	S. 67° W.	N. 73° W.	28	47	82	90	...	...	Saugor	
·346	·411	·338	·365	−·045	39	25	17	27	− 6	2·3	5·3	3·8	+1·4	5	3	...	1	...	1	17	26	7	S. 83° W.	N. 88° W.	70	35	174*	150	...	...	Raipur	
·293	·284	·239	·272	+·023	38	17	13	23	+ 1	1·3	2·2	1·8	0	1	13	3	1	1	·6	3	15	17	N. 54° W.	N. 60° W.	52	55	134*	168	...	...	Sutna	
·546	·549	·465	·520	?	62	38	27	42	?	1·6	4·2	2·9	?	7	2	5	4	13	3	5	10	11	S. 63° W.	?	8	?	111*	?	...	...	Hyderabad (Deccan).	
·779	·846	·833	·819	+·002	82	71	68	74	− 1	1·5	1·3	1·4	−0·8	...	2	...	2	2	7	6	21	20	N. 85° W.	N. 52° W.	61	55	216	271	...	...	Bombay	West Coast.
·814	·853	·914	·861	+·067	84	68	73	75	+ 5	2·9	4·1	3·5	+2·7	...	7	...	...	...	1	18	19	15	N. 85° W.	N. 76° W.	70	67	203*	242	...	...	Ratnagiri	
·803	·818	·842	·821	−·006	82	65	65	71	− 2	1·8	2·7	2·3	0	...	1	...	...	...	...	15	14	30	S. 76° W.	N. 84° W.	78	75	76	?	...	...	Karwar	
·825	·872	·904	·867	−·019	89	70	66	75	− 2	3·0	5·1	4·1	+0·3	12	2	3	...	...	1	1	32	9	N. 76° W.	N. 82° W.	63	55	130	?	...	...	Cochin	
·750	·716	·625	·697	−·039	83	52	39	58	0	4·2	6·0	5·1	+1·5	7	3	8	4	7	13	11	4	3	N. 8° E.	S. 7° W.	8	37	102	112	...	...	Salem	South India.
·652	·694	·587	·644	?	93	64	46	68	?	2·9	5·5	4·2	?	23	2	4	6	2	3	6	9	5	S. 87° W.	?	12	?	208*	?	...	...	Mysore	
·538	·620	·658	·605	+·016	90	71	76	79	+ 6	5·0	7·5	6·3	+0·9	...	9	1	5	2	2	13	13	15	N. 73° W.	N. 70° W.	45	45	150	80	...	...	Mercara	
·558	·623	·489	·557	+·021	81	57	39	59	+ 6	3·2	3·9	3·6	+0·2	...	2	8	12	4	3	10	16	5	S. 76° W.	S. 33° W.	10	52	110*	85	...	...	Bangalore (Fort),	
·491	·600	·565	·552	?	77	59	50	62	?	4·4	7·3	5·9	?	5	7	13	5	5	4	5	7	9	N. 4° E.	?	20	?	75*	?	...	...	Hassan	
·460	·560	·416	·479	?	60	48	27	45	?	2·5	4·9	3·7	?	...	4	6	5	3	...	5	18	19	N. 59° W.	?	47	?	181*	?	...	...	Chitaldroog.	
·775	·681	·601	·686	−·038	80	47	34	54	− 1	4·1	4·6	4·4	−0·1	28	...	4	9	8	1	5	5	...	S. 50° E.	S. 54° E.	20	17	32	99	...	...	Trichinopoly.	
?	·839	·882	·881	+·015	?	61	67	75	+ 1	3·5	2·8	3·2	+0·3	...	1	...	5	29	16	6	2	1	S. 25° E.	S. 40° E.	72	83	180	186	...	...	Madras	
·597	·559	·470	·542	+·053	64	39	25	43	+ 7	3·7	6·8	5·3	+2·1	3	3	12	5	1	2	1	8	25	N. 26° W.	S. 37° W.	47	11	127	126	...	...	Bellary	
·702	·855	·890	·816	−·023	65	67	70	67	0	3·6	4·5	4·1	+1·5	...	2	...	...	2	18	24	14	...	S. 40° W.	S. 48° W.	75	64	330	91	...	...	Vizagapatam.	
·814	·828	·854	·832	?	83	62	57	68	?	2·1	1·9	2·0	?	...	...	2	5	17	5	17	11	3	S. 15° W.	?	43	?	169*	?	...	...	Cocanada	
·227	·232	·237	·232	−·024	74	35	33	47	− 4	1·2	3·0	2·1	−1·4	39	...	...	...	2	5	1	7	6	S. 74° W.	N. 81° W.	18	36	43*	101	...	...	Quetta	Hill Station, Baluchistan.
·126	·107	·109	·114	+·069	76	39	33	49	+ 6	5·5	6·5	6·0	−0·3	...	5	11	10	3	9	7	9	6	N. 61° E.	S. 54° W.	3	19	77	72	1·01	0·39	Leh	Hill Stations, Northern India.
·291	·376	·444†	·370†	?	91	81	74†	82†	?	4·0	4·9	4·5	?	38	6	5	1	3	4	...	1	2	N. 42° E.	?	10	?	62*	?	...	...	Srinagar	
·177	·217	·251	·215	−·017	46	39	42	42	− 7	3·4	4·2	3·8	−1·6	1	5	...	2	26	13	5	4	3	S. 21° E.	S. 40° E.	50	16	258*	216	...	...	Murree	
·329	·342	·296	·322	+·009	67	45	30	48	0	3·7	5·4	4·6	−1·9	16	8	2	2	4	...	...	3	25	N. 31° W.	N. 10° W.	47	17	128*	115	1·89	0·97	Chamba	
·128	·146	·160	·145	−·022	81	56	54	64	+ 2	3·2	5·5	4·4	−1·6	...	...	...	...	1	1	26	25	7	S. 72° W.	S. 61° W.	84	72	35	51	4·09	1·35	Kailang	
·187	·206	·217	·202	−·042	47	38	35	40	− 6	2·0	2·8	2·4	−1·8	4	12	4	1	2	18	10	4	5	S. 49° W.	S. 69° W.	22	38	149	?	...	...	Simla (Ridge).	
·192	·210	?	?	?	47	35	?	?	?	2·1	?	?	?	Not	r	e	c	o	r	d	e	d.	...	...	?	?	?	?	0·22	0·10	Simla (Chapslee).	
·195	·235	·233	·221	+·017	50	37	35	41	− 2	2·2	3·7	3·0	−0·6	3	...	1	10	9	1	16	18	2	S. 39° W.	S. 68° W.	35	19	190	143	0·58	0·40	Chakrata	
·269	·261	·244	·258	−·004	57	36	32	41	− 3	2·2	3·0	2·6	−0·6	23	...	2	...	4	1	11	10	9	S. 80° W.	S. 62° W.	33	47	82	84	...	...	Ranikhet	
·349	·390	·368	·370	+·013	85	50	41	60	+ 1	2·8	4·9	3·9	−0·4	2	2	...	23	1	3	3	26	...	S. 49° W.	N. 83° W.	10	62	33	?	1·44	0·81	Katmandu	
·274	·336	·347	·320	−·003	80	73	72	75	0	5·8	6·4	6·1	0	...	3	7	4	1	4	16	20	2	S. 74° W.	S. 72° W.	42	49	190	202	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	2	...	31	1	5	...	21	...	S. 19° E.	S. 36° W.	18	6	?	?	2·56	2·00	Demagiri	
?	·638	·579	?	?	?	57	51	?	?	3·7	4·7	4·2	+0·9	...	3	...	1	1	29	20	2	4	S. 25° W.	S. 5° W.	70	67	?	?	5·71	1·35	Tura	
·230	·268	·283	·260	+·012	32	26	25	28	0	0·5	1·6	1·1	−1·1	...	4	4	...	1	4	25	16	6	S. 72° W.	S. 76° W.	60	53	217	187	...	...	Mount Abu	Hill Stations, Central India.
·256	·239	·212	·236	−·014	37	21	16	24	− 2	2·0	3·1	2·6	+0·5	4	2	6	7	1	1	5	29	5	N. 78° W.	N. 58° W.	38	47	113*	128	...	...	Pachmarhi.	
·260	·267	·235	·254	−·022	33	24	17	25	− 1	2·7	5·1	3·9	+1·6	14	15	3	...	1	1	...	8	18	N. 32° W.	N. 40° W.	55	48	185	192	0·22	0·19	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and at 4 P.M. at 89

Meteorological Province.	Station.	Height of the 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 to 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.
Hill Station, S. India.	Wellington . .	...	24·261	24·181	·080	24·221	—·018	?	74·4	54·8	19·6	78·2	52·2	26·0	70·7	67·9	63·0	−1·9	53·7	60·7	61·0	58·4
Extra India.	Muscat . .	...	29·879	29·804	·075	29·842	?	?	85·4	80·1	5·3	96·3	74·6	21·7	83·5	84·6	82·5	?	67·0	73·3	74·0	71·4
	Aden . . .	...	·860	·731	·129	·787	+·001	29·812	88·6	78·5	10·1	94·7	74·5	20·2	83·9	86·3	83·0	+0·3	72·2	76·5	75·7	74·8
	Perim . . .	...	·718	·593	·125	·647	?	?	88·3	78·6	9·7	90·3	76·5	13·8	84·8	85·6	82·8	?	74·0	76·7	76·8	75·9
	Minicoy . .	...	·923	·820	·103	·865	?	·800	90·8	?	?	94·3	?	?	86·8	87·8	?	?	76·1	79·1	79·6	78·3
	Zanzibar . .	...	·932	·841	·091	·887	?	·886	84·9	77·4	7·5	87·0	73·6	13·4	81·6	83·8	80·9	?	73·9	76·4	76·2	75·5
	Sychelles . .	...	·950	·869	·081	·910	?	·847	85·1	77·6	7·5	86·4	75·2	11·2	83·4	83·9	81·0	?	73·5	76·6	77·0	75·7

II—*concluded.*

Stations in India, Burma, etc., in April 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.					
														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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
																									%	%						
·403	·429	·465	·432	+·040	93	57	69	73	+10	4·3	7·2	5·8	+1·3	1	3	7	7	29	10	1	...	2	S. 55° E.	S. 49° E.	62	68	53	64	...	...	Wellington.	Hill Station, S. India.
·491	·679	·703	·624	?	49	61	60	57	?	0·8	1·2	1·0	?	...	3	9	16	1	1	...	1	29	N. 3° E.	?	47	?	102	?	...	...	Muscat .	Extra India.
·710	·817	·751	·759	—·022	73	71	60	68	— 2	2·8	0·6	1·7	—1·0	6	1	12	30	2	6	...	...	1	N. 86° E.	N. 81° E.	67	61		373	*Nil*	*Nil*	Aden .	
·781	·813	·805	·800	?	80	68	66	71	?	2·0	0·5	1·3	?	...	2	2	28	18	1	...	3	10	S. 83° E.	?	45	?	459	?	...	...	Perim .	
?	·891	·902	?	?	?	70	69	?	?	4·4	5·0	4·7	?	2	10	5	2	1	...	2	18	16	N. 47° W.	?	59	?	202	?	...	...	Minicoy .	
·790	·844	·805	·813	?	84	78	70	77	?	4·0	4·6	4·3	?	...	...	1	...	17	30	12	...	...	S. 5° E.	S. 12° W.	84	64	222	155	...	...	Zanzibar .	
·772	·827	·836	·812	?	82	72	72	75	?	4·5	5·7	5·1	?	...	2	5	4	7	16	2	4	20	S. 69° W.	?	13	?		?	...	...	Sychelles .	

G. I. C. P. O.—No. 22 Meteor.—3-8-94.—400.

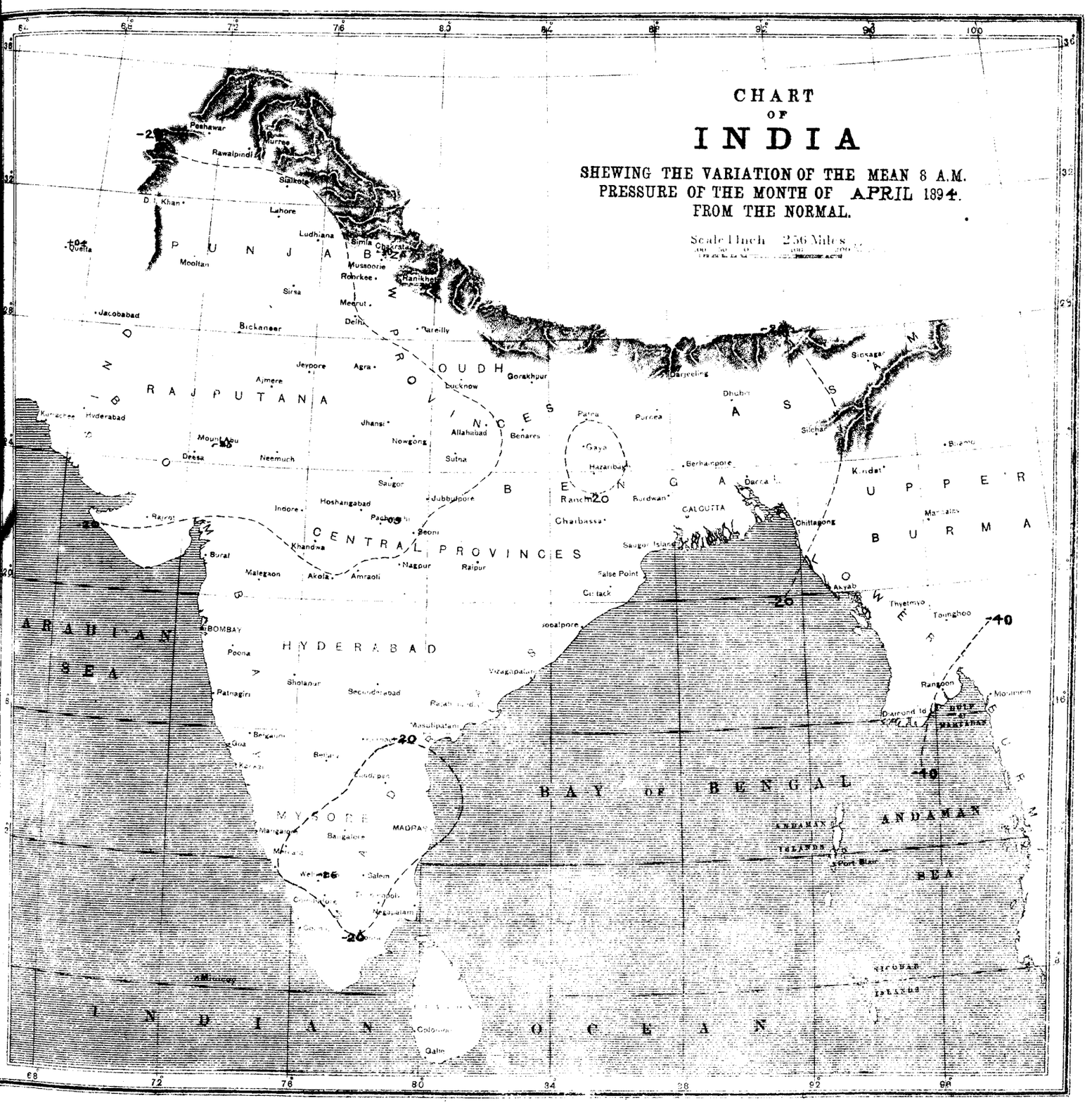
Explanation.

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.

Reg. No. 199, Wr., I.—April 93.—500.—199 R., May 93.—6,600.

Litho., S. I. O., Calcutta.



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.

Reg. No. 199, Wr., I.—April 93.—500.—199 R., May 93 —5,500.

Litho., S. I. O., Calcutta.

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

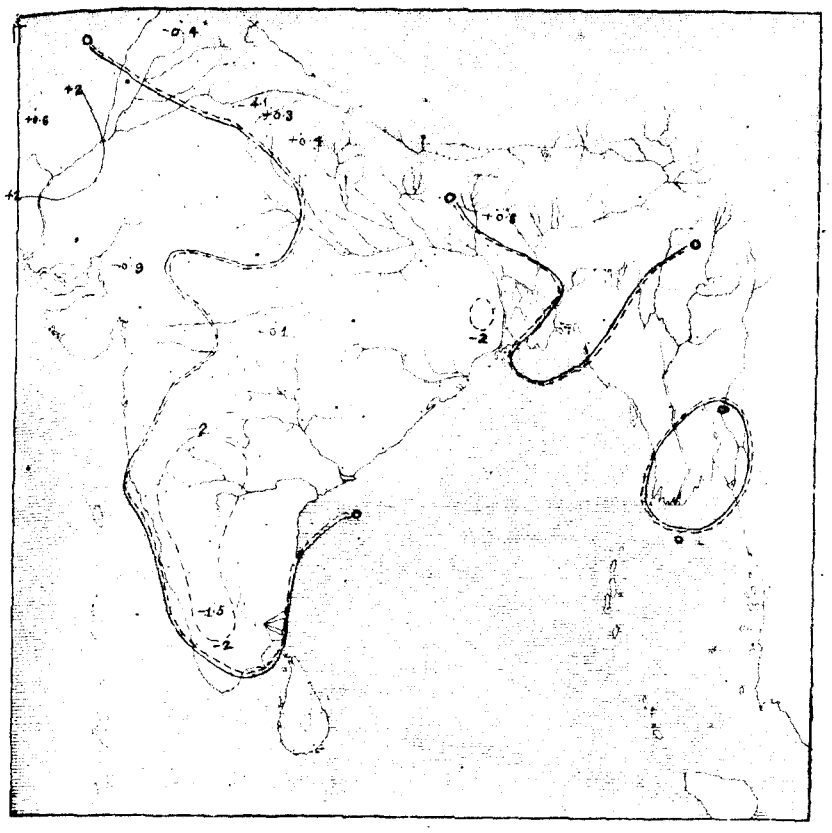
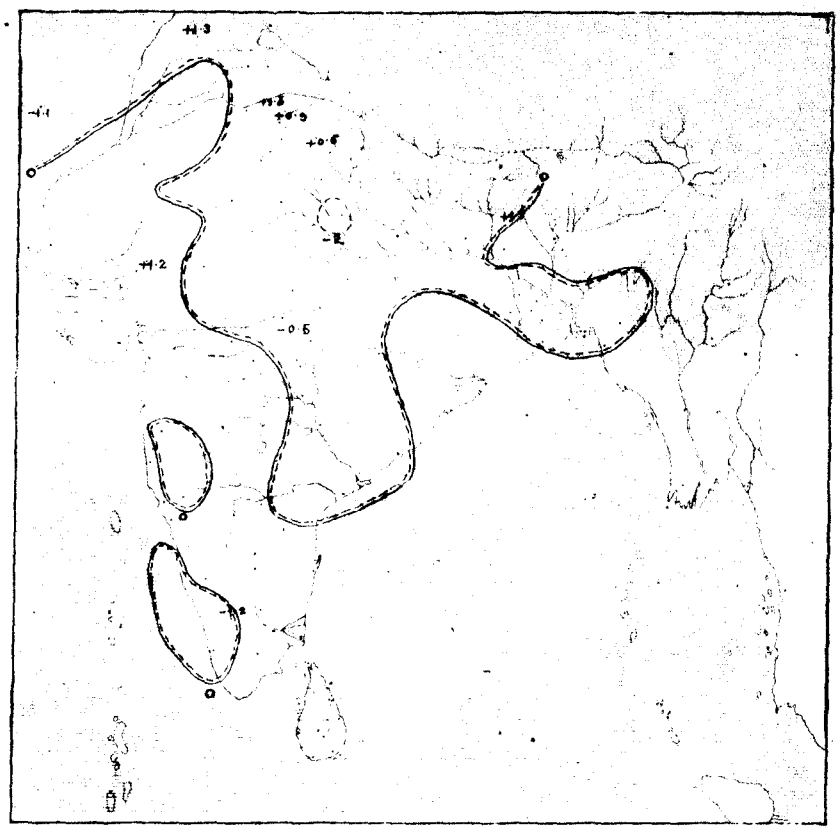


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

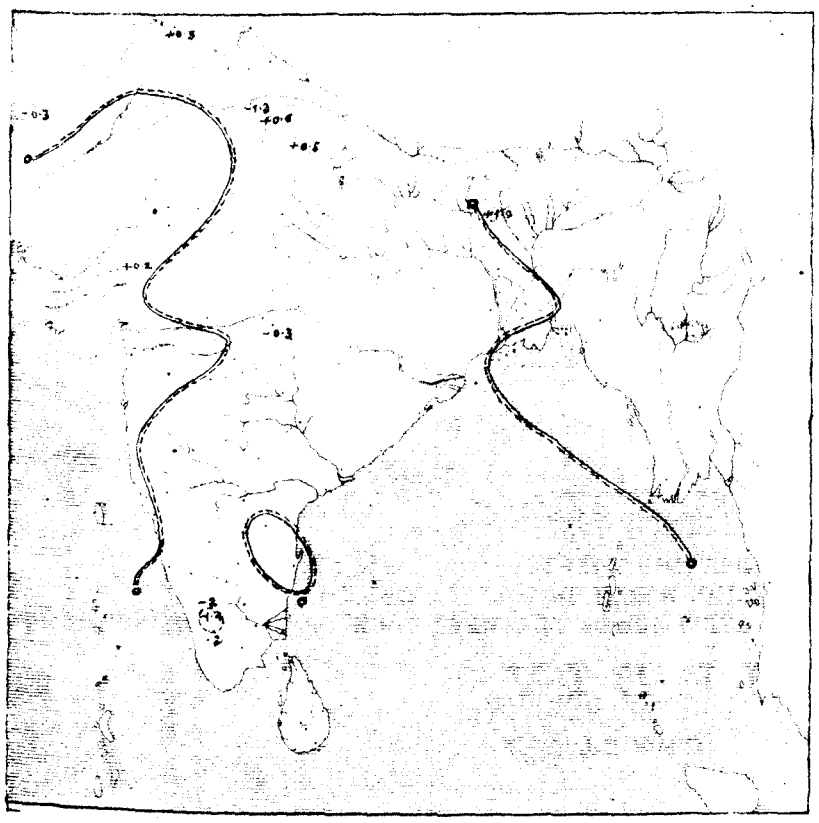
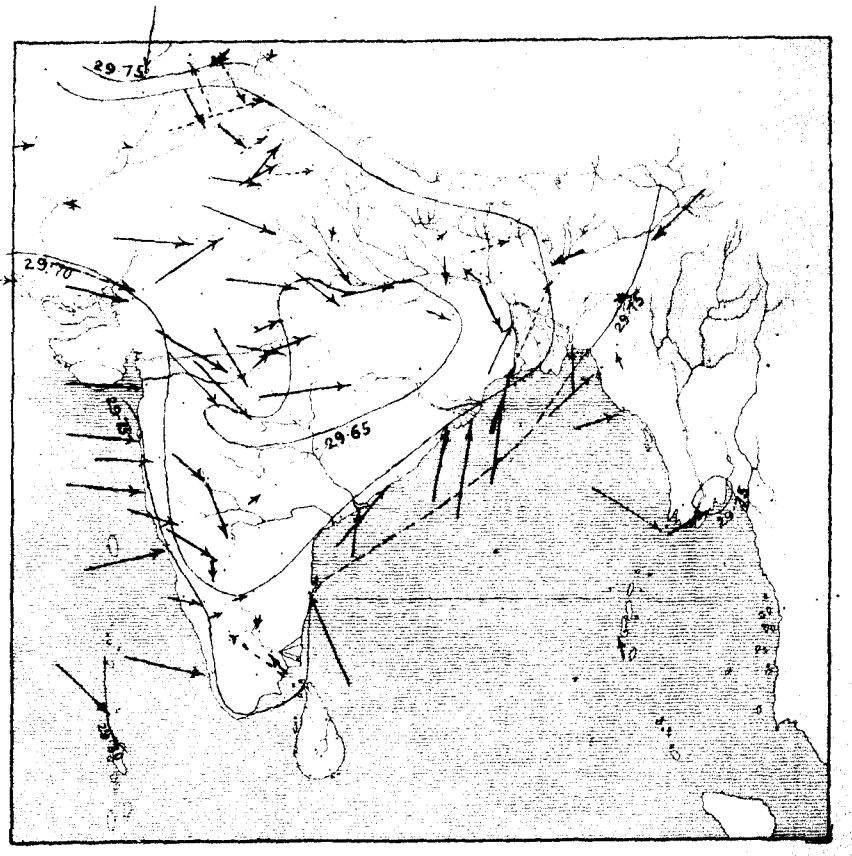


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF APRIL 1894.



K.M.G.

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 lengths the percentage of the observations expressing the numerical value of the resultant: a length of ⅛th of an inch being equal to 100 per cent.

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. 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. 199, Wr., I.—April 93.—800.—199 R., May 93.—5,500.

Litho., S. I. O. Calcutta.

K. M. G.

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 51 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 name of the districts 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 figures.

1. Tenasserim	15. Behar (North)	29 Madras (South Central)	43. Central India (East)
2. Lower Burma	16. North Western Provinces (East)	30. Coorg	43(a). Do. do. (a)
3. Central do.	17. Oudh (South)	31. Mysore	44. Rajputana (East) Central India (West)
4. Upper do.	18. Do. (North)	32. Konkan	45. Rajputana (West))
5. Arakan	19. North Western Provinces (Central)	33. Bombay Deccan	46. East Coast (North)
6. Eastern Bengal	20. Do. do (West)	34. Hyderabad (North)	46(a). Do. do. (a)
7. Assam (Surma)	21. Do. do (Submontane)	35. Khandeish	47. Hyderabad (South)
8. Do (Brahmaputra)	22. Punjab (South)	36 Berar	48. Madras (Central)
9. Deltaic Bengal	23. Do (Central)	37. Central Provinces (West)	49. East Coast (Central)
10. Central do.	24. Do. (Submontane)	38. Do (Central)	50 East Coast (South)
11. North do.	25. Do (Hill Districts)	39. Do. (East)	51. Madras (South)
12. Orissa	26. Do. (North West)	40. Gujarat	
13. Chota Nagpore	27. Do. (West)	41. Kathiawar	
14. Behar (South)	28. Malabar	42. Sind	

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Litho. S. I. O., Calcutta.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, MAY, 1894.

INTRODUCTION.

THIS Review of the weather in India during the month of May 1894 is based on observations taken daily at 8 A.M. at 202 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 89 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 1894.

May is usually the last month of the hot weather season in India, and completes the temperature and pressure conditions essential to the establishment of the south-west monsoon. The area of maximum temperature at the commencement of the month usually includes the Central Provinces, Berar and the southern districts of the North-Western Provinces. As temperature in May generally increases more rapidly in North-Western India than elsewhere, the area of maximum temperature (or the thermal focus as it has been termed) is usually transferred to Sind, the South-West Punjab and West Rajputana before the third week of the month. That area generally continues to be the area of maximum temperature in India during the rains (*i.e.* until the third or fourth week of September). The maximum temperature of the year in India is usually observed in that area in the last week of May, or the first week of June.

Pressure is usually slightly lower on the average in Northern than in Southern India at the commencement of the month. Pressure decreases rapidly in Upper India during the month, and the total range or difference of pressure between the Equatorial Belt and Upper India increases and establishes the baric gradients necessary for the extension of south-east trade winds across the Equator and their continuance northwards into India as south-west monsoon winds.

This change takes place, it should be remembered, not by the concentration and intensification of the indraugh

to the hot area in Upper India, but by the advance of a vast mass of humid air impelled northwards by its own momentum and energy, and by pressure "a tergo."

Usually one or more advances of strongish humid winds, probably from the Equatorial Belt, occur in May, and give moderate to heavy rain to Ceylon, Malabar and Tenasserim, but the great permanent advance, which forms the setting in of the south-west monsoon proper, does not generally commence until the end of May or beginning of June.

Over the whole of North-Western, Central and Northern India (with the exception of Bengal and Assam), the air in May is very dry, the temperature excessive, and the skies clouded with dust raised by the strong hot land winds, which usually prevail during the day at this period. The heat is occasionally mitigated for brief intervals by thunderstorms or duststorms. These hot weather storms occur during periods of slight barometric disturbance, and occasionally give very heavy rain, chiefly in Bengal and Assam, and in and near the hills in Bihar, the North-Western Provinces and the Punjab. Hence Assam and Bengal (more especially the northern and eastern districts) usually receive a large amount of rain, the average fall of the month in Bengal and Assam ranging from 4 inches in West Bengal to 52 inches at Cherrapunji in the Khasia Hills and averaging 10 inches for the whole area.

The weather during the months of January, February and March 1894 had been, to some extent, exceptional. The previous year (1893) had been one of abundant rain, and India appears at present to be passing through a cycle of increased rainfall. The precipitation of the cold weather of 1894 was considerably above the normal, but to a less extent than in the corresponding period of 1893. The cold weather of 1894 was chiefly remarkable for the excessive snowfall on the higher elevations of the Western Himalayas and the Karakoram Range and on the Pamirs and in Chinese Turkistan and for more frequent rain and less snow than usual on the lower elevations of the Western Himalayas, and in Baluchistan and Afghanistan. The temperature and pressure conditions of India in April show that the snow accumulation in Ladakh and Chinese Turkistan was exercising no influence on its meteorology, and this has been further confirmed by the prevalence of more intense hot weather conditions over the whole of Northern and Central India during the month of May.

The following gives a brief sketch of the chief features of the meteorology of the month.

At the commencement of the month the pressure conditions were practically normal except in the West Punjab where a shallow depression had formed due to hot weather actions. Temperature was in moderate excess in Upper and North-Eastern India. The cyclonic storm, which had given a heavy burst of rain to Burma on the last three days of April, had filled up, but weather continued to be cloudy and showery in that area. The depression in the West Punjab advanced across the South and Central Punjab on the 3rd and broke up at the foot of the hills on the 4th. Duststorms (accompanied in some cases with rain) occurred on the 3rd and 4th in the Punjab and thunderstorms in the hill districts. Local thunderstorms gave moderate showers in Southern India and Bengal, more especially on the 4th and 6th. Temperature was above the normal over nearly the whole of India from the 4th to the 7th, but was in moderate defect in Burma, where daily showers continued to be received. The most important feature of this period was the unusually high temperature in Assam. Thus, the mean temperature of that province was 6°·3 in excess on the 4th, 6°·1 on the 5th, 7°·5 on the 6th and 6°·7 on the 7th.

The second week of the month, from the 8th to the 13th, was characterised by remarkably large pressure changes which altered the pressure distribution to an important extent. Pressure gave way very rapidly on the 8th and 9th over the whole of India, the fall being abnormally large in the Punjab and averaging nearly a quarter of an inch in the North Punjab. Pressure was from two to three-tenths of an inch below the normal of the period on the 8th and 9th in the Punjab, and the total pressure gradient over India was nearly five-tenths of an inch, or as large as usually obtains during strong bursts of monsoon winds in July and August. The local sea-winds on the North Bombay and Bengal Coasts strengthened very considerably, and very strong winds prevailed on the 8th, 9th, and 10th over nearly the whole of Northern and Central India and the Central Provinces. Burma and Bengal received frequent showers (giving moderate rain) on the 8th, 9th and 10th, but dry hot weather prevailed in other districts. A hot weather depression which formed in the West Punjab and Upper Sind on the 10th, advanced across the South and Central Punjab on the 12th, and disappeared during the next 24 hours. Its eastward advance was accompanied by the occurrence of numerous duststorms and thunderstorms on the 11th and 12th in the Punjab and adjacent hills.

Temperature continued in more or less general excess over nearly the whole of the interior of India during this period from the 8th to the 13th. The rainfall in Assam and East Bengal produced a considerable reduction of temperature in that area, and during the remainder of the month temperature was generally below the normal in those two areas. The strong westerly winds in Lower Sind, Cutch, Kathiawar and South-West Rajputana cooled the air below the normal of the period to a moderate extent. Temperature was most considerably in excess during this period in the Punjab, and the excess in that area averaged 2½° on the 8th, 5° on the 9th, 7° on the 10th, 3° on the 11th and 2° on the 12th. Westerly land winds also prevailed during this period on the Madras Coast instead of the usual south-east winds, and hence the period from the 8th to the 13th was

also one of large excess of temperature in that area. For example, the mean temperature of the 24 hours preceding 8 A. M. of the 9th was 5° above the normal at Madras, and on the 10th 7° in excess at Masulipatam and 6° at Madras.

From the 10th to the 13th pressure increased over the whole of India, but the rise was very unequal in amount in different parts. The changes, however, established the abnormal pressure conditions which formed the most important feature of the meteorology of the month. Pressure was by these changes raised more or less above the normal in the western half of the Peninsula and North Bombay (*i.e.*, Gujarat, Kathiawar and Cutch), in which areas it was in considerable excess relatively to the general condition. It was reduced more or less below the normal in Northern India, the relative deficiency being greatest in the submontane districts of the North-Western Provinces and Bihar. The chief result of these conditions was the displacement of the hot weather area or trough of low pressure northwards from the southern edge of the Gangetic plain to the foot of the hills. This distribution of pressure lasted without any large or important change for a fortnight, *i.e.*, from the 13th to the 28th. The pressure distribution and gradients were favourable for strong winds over nearly the whole country and for the abnormal extension of dry hot westerly winds over the whole of Bihar into West Bengal and across the Deccan to the Madras Coast districts. The chief features of this period were hence abnormally strong winds and great dryness and increased temperature of the air over by far the greater part of India. These effects were most exaggerated in two areas which are usually more or less under the influence of sea winds during the month, *viz.*, the Madras coast districts and the area including Bihar, Chota Nagpur and West Bengal. The same conditions and actions which gave unusually dry westerly winds in the Gangetic plain gave very strong south winds at the head of the Bay. These humid winds were directed chiefly towards East and North Bengal and Assam, which hence received frequent and abundant rain during this period, and hence as a further result temperature was more or less considerably in defect in those areas. There was hence a very sharp contrast between the meteorological conditions of the eastern and western districts of North-Eastern India.

The following statement gives mean daily temperature variations of nine provinces or political divisions of India from the 13th to the 27th, illustrating the temperature conditions of the period :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.														
	13th.	14th.	15th.	16th.	17th.	18th.	19th.	20th.	21st.	22nd.	23rd.	24th.	25th.	26th.	27th.
	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma . . .	+0·2	0	+1·5	−0·3	−1·1	−2·7	−1·6	−1·1	−0·4	−0·9	−2·3	−3·6	−2·6	−1·0	−2·6
Bengal and Assam .	+1·8	+2·4	+3·3	+3·4	+3·3	+3·6	+3·6	+2·8	+2·9	+3·5	+2·7	+1·1	+2·2	+4·3	+4·8
North-Western Provinces and Oudh .	+4·2	+4·8	+3·6	+3·0	+3·1	+3·2	+3·9	+2·5	+3·5	+1·2	+2·5	+3·4	+4·6	+5·2	+5·9
Punjab . . .	+1·9	+4·6	+4·6	+1·6	+1·3	+0·2	+1·0	+2·9	+4·6	−1·4	+1·5	+2·6	+2·8	+3·6	+3·8
Sind and Rajputana .	+0·5	−1·1	−1·6	−1·1	−0·6	−0·2	−1·2	−1·1	−1·2	+0·2	+1·4	+1·8	+2·2	+2·4	+3·0
Central India and Gujarat . .	−1·1	−1·7	−1·3	−1·8	−1·4	−1·2	−0·8	−1·5	−1·1	−1·1	0	+0·8	+1·9	+2·3	+2·1
Central Provinces and Berar . . .	+1·1	+0·4	+0·6	+0·2	−0·6	−0·5	+0·4	−0·5	−0·1	+0·2	+0·8	+1·4	+2·8	+4·1	+3·9
Bombay . . .	+0·1	+0·1	−0·1	+0·1	−0·7	−0·5	+0·3	0	−0·6	−0·5	+0·4	+0·6	+0·8	+1·0	+1·2
Madras . . .	+2·1	+1·8	+2·2	+2·3	+3·4	+1·8	+1·8	+0·1	+0·2	−0·3	+0·6	−1·2	+0·2	+1·7	+1·5

The more remarkable features of this period are more clearly shown by the following variation data for typical stations at which the conditions were most marked. Silchar is selected as typical of the humid and cool conditions in the eastern districts of North-Eastern India, Patna of the dry and hot conditions of the western districts of Bengal and Bihar, Mooltan of the hot conditions in Upper India, Deesa of somewhat cooler conditions than usual in North Bombay, Bangalore of the cooler conditions in the Deccan, and Madras of the increased temperature due to the prevalence of land winds in the west coast districts of the Bay.

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.														
	13th.	14th.	15th.	16th.	17th.	18th.	19th.	20th.	21st.	22nd.	23rd.	24th.	25th.	26th.	27th.
	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Silchar .	+0·4	+1·9	+3·7	+2·1	+3·1	+1·1	−4·2	−2·0	−3·5	−2·3	−5·6	−7·9	−2·4	−7·9	−7·5
Patna . .	+5·8	+6·2	+6·6	+6·7	+6·0	+4·4	+5·3	+7·5	+7·7	+8·0	+6·5	+4·1	+6·2	+10·3	+9·3
Mooltan .	+2·0	+5·2	+3·8	+4·0	+2·8	+3·2	+2·0	+5·1	+3·7	+2·5	+2·2	+2·5	+2·4	+3·8	+5·1
Deesa . .	−3·0	−4·3	−2·6	−2·7	−1·9	−1·5	−2·1	−0·9	−1·0	−1·6	−1·1	−0·9	+0·8	+0·9	+0·8
Bangalore .	+0·5	−1·3	−3·4	−1·2	−0·1	−0·7	−0·3	−2·9	−1·4	−1·5	−0·4	−1·6	+0·5	+1·0	+0·7
Madras .	+5·7	+2·4	+4·5	+5·8	+6·4	+3·9	+2·8	+0·5	−2·3	+2·3	+1·1	+1·4	−2·1	+0·1	+0·1

As already stated, this period, from the 13th to the 28th, was one of frequent rain in Burma, East and North Bengal and Assam. Occasional hot weather disturbances (*e.g.*, duststorms and thunderstorms), occurred in North-Western India and the Peninsula, but the whole period was free from any large general disturbance, and was hence even drier than usual. Series of thunderstorms occurred at intervals in Malabar and South Madras, but the permanent advance of monsoon winds, which usually commences in the third or fourth week of May on the Malabar Coast, was delayed until the first week of June, and hence the rainfall of this period in Malabar and South Madras was largely below the normal.

Important pressure changes were initiated on the 29th. Pressure began to give way generally in India during the remainder of the month, thus tending to establish pressure conditions favourable to the advance of the monsoon currents. Pressure fell rather rapidly in Ganjam and the Circars and increased locally in Bengal and Orissa, and the eastern half of the trough of low pressure was hence displaced southwards, and at the end of the month lay over the eastern districts of the Central Provinces, Ganjam, the Circars and South Orissa. Easterly winds hence extended westwards over West Bengal into Bihar, reducing temperature and increasing humidity, and thunderstorms occurred over the whole of Bengal on the last two days of the month.

No large change of conditions took place in the remainder of India during this period from the 28th to the end of the month, and it was hence one of excessive heat and dryness over by far the greater part of Northern and Central India. The highest temperatures of the year were recorded during this period, and very low humidities, ranging from 4 to 10, were registered during the hottest period of the day at many stations in Northern and Central India. This period in fact formed the culmination of the hot weather and preceded by a few days the permanent advance of the monsoon in the Arabian Sea and the Bay of Bengal towards India.

Pressure.—The mean pressure of the Indian land area was ·023″ below the normal. Pressure was locally in defect over the whole of Northern India, to the north of a line running through Jacobabad, Jhansi, Raipur, Cocanada and Akyab. The deficiency increased northwards from that line and was large in amount (exceeding ·04″) in the submontane districts of the North-Western Provinces and Bihar and was absolutely greatest at Darbhanga (—·057″) and Patna (—·055″). Pressure was, on the other hand, more or less in local excess over nearly the whole of the Peninsula (to the south of the line defined above) and in the North Bombay districts and South-West Rajputana The excess was large in the west coast districts and West Deccan, where it ranged between ·04″ and ·06.″ The positive anomalies were ·05″ or upwards at the following stations:—Ratnagiri (+·060″), Rajkot (+·059″), Deesa (+·051″), Bellary (+·051″), Karwar and Bombay (each +·050″).

There was hence an abnormal gradient (on the mean of the month) between Bihar and the Bombay coast, favouring westerly winds, of upwards of a tenth of an inch.

The following gives a summary of the pressure variation data of the eleven meteorological provinces of India:—

Meteorological Province.	Barometric variation.	Anomaly.
	″	″
Burma Coast and Bay Islands	—·016	+·007
Burma Inland	+·003	+·026
Assam	—·058	—·035
Bengal and Orissa	—·054	—·031
Gangetic Plain and Chota Nagpur	—·062	—·039
Upper Sub-Himalayas	—·058	—·035
Indus Valley and North-West Rajputana	— 028	—·005
East Rajputana, Central India and Gujarat	0	+·023
Deccan	—·002	+·021
West Coast	+·022	+·045
South India	— 007	+·016

Temperature.—The variations of the mean maximum and minimum temperature of the month from the normal, were similar in general character over the whole of India.

The mean day temperature was in moderate defect in Burma (due chiefly to more frequent rainfall than usual) and in the West Deccan, Lower Sind, Cutch, Kathiawar and Gujarat and in South-West Rajputana, caused mainly by the influence of the strong westerly sea winds of the month. The deficiency exceeded 4° at Toungoo (—4°·4) and Rangoon (—4°·3). The mean maximum or day temperature was in excess over the remainder of India, the excess being more than 2° over the whole of Northern India. There were two areas, in which it was over 4°, one including the South-West Punjab, and the other West Bengal, Chota Nagpur, Bihar and the eastern districts of the North-Western Provinces. The greatest excess of temperature (over 5°) was experienced at the following stations:—Chaibassa (+6°·1), Berhampore (+5°·8), Patna (5°·5) and Mooltan (+5°·1). Chaibassa, Berhampore and Patna hence defined the area of greatest excess of the day temperature.

The mean minimum or night temperature of the month was below the normal in Burma, Upper Assam, the Deccan, Mysore, Lower Sind, Cutch, Kathiawar and South-West Rajputana. The negative variations were small, in no case exceeding 2°. The mean night temperature was in excess in other districts, the excess being most marked in the South and Central Punjab, West Bengal, Chota Nagpur, Bihar and the eastern districts of the North-Western Provinces. It was 4° or upwards at the following stations :—Hazaribagh (+4°·3), Gaya (+4°·2), Chaibassa +(4°·0) and Lahore (+4°·1).

The mean temperature of the month was below the normal to a slight extent in Lower Sind, Cutch, Kathiawar, Gujarat, the South Deccan and Mysore, and to a moderate extent in Burma and Upper Assam. The deficiency exceeded 2° at the following stations:—Rangoon (−2°·6), Toungoo (—2°·6), Thayetmyo (—2°·3), Moulmein (—2°·2) and Bassein (—2°·1). The mean temperature was above the normal over the remainder of India. The increase was more than 2° in amount over the whole of Northern India (except East Bengal) and in the eastern districts of the Central Provinces. It exceeded 4° in amount in the South-West Punjab, West Bengal, Chota Nagpur, and South and Central Bihar. The following gives the largest positive departures from the normal:—Chaibassa (+5°·1), Gaya (+4°·5), Hazaribagh (+4°·3), Patna (+4°·2) and Berhampore (+4°·1) in the Bengal hot area and Mooltan (+4°·3) in the South-West Punjab hot area.

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

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

The mean temperature of the month exceeded 95° at the following stations :—

Station.	Mean daily temperature, May, 1894.
Jhansi	97·9
Sambalpur	97·2
Nagpur	96·7
Chaibassa	96·5
Chanda	96·5
Raipur	96·4
Agra	96·3
Jacobabad	96·2
Bickaneer	96·2
Khamamet	95·8
Gaya	95·6
Dehri	95·5
Allahabad	95·5
Sirsa	95·1

The areas in which the mean temperature was greatest and exceeded 95° hence included (1) the greater part of South Bihar, the southern districts of the North-Western Provinces and the eastern districts of the Central Provinces, and (2) Upper Sind and North-West Rajputana.

The highest day temperatures of the month were recorded during the last four days, from the 27th to the 31st of the month in Northern and Central India. This period was also, that, in which the highest mean daily temperatures occurred. The highest day temperature was 120° registered on the 29th at Jacobabad, which is not so high as occasionally occurs in the hottest periods in Upper Sind. Higher day temperatures were recorded in some parts of West Bengal, Chota Nagpur and the Madras coast districts than have been previously experienced, and the month was one of the hottest on record in Central Bengal, Chota Nagpur, the adjacent districts of West Bengal and the eastern districts of the Central Provinces.

Winds.—The chief feature of the air movement was its greater intensity than usual due to the exaggerated hot weather conditions of the month. As might be anticipated from these conditions the westerly hot winds in the Gangetic plain and the local sea winds across the Bengal and North Bombay coasts were most largely affected. Winds were hence most considerably in excess of their normal strength in these areas. The following gives data show-

ing the effect of the abnormal hot weather conditions in increasing the air movement in different parts of India:—

Division.	Mean Velocity in miles per diem.		
	Actual, May 1894.	Normal May.	Percentage variation.
Burma	104	141	−26
Bengal	250	184	+36
Assam	126	104	+21
Bihar	167	132	+27
Chota Nagpur	262	210	+25
North-Western Provinces and Oudh	108	88	+23
Punjab	72	80	−10
Sind	253(?)	264	− 4
Rajputana	282	220	+28
Central India	203	140	+45
Central Provinces	187	148	+26
Berar	308	208	+48
Deccan	289	269	+ 7
West Coast	239	252	− 5
East Coast	111	138	−20

The mean directions of the air movement did not differ much from the normal. Winds were on the whole more westerly in the Deccan and Central Provinces and more northerly on the Bombay Coast. Westerly winds prevailed to a much greater extent in Bihar and West Bengal, and hence gave a very strongly marked westerly component to the mean wind directions of the month.

Humidity and cloud.—The air was somewhat damper than usual in Burma, East Bengal and Assam. It was abnormally dry in West Bengal, Bihar, Chota Nagpur, the North-Western Provinces, the Punjab, Rajputana and Central India. As might be expected from the prevalence of abnormal westerly winds in Bihar and West Bengal during the third and fourth weeks of the month, humidity was most largely below the normal in these areas. The deficiency in the relative humidity was 10 or upwards at Lucknow (—13), Patna (—12) and Hazaribagh and Meerut (—10). The air was as abnormally dry at the hill stations in Upper India as on the plains of Northern India. The mean relative humidity was 14 in defect at Ranikhet, 13 at Chakrata and 11 at Murree. It was, on the other hand, in slight excess at Kailang (+5) and Leh (+2). The air was generally drier than usual in the Peninsula, but the variations were much smaller than in Northern India. The humidity was most considerably in defect at Trichinopoly (—7) and Salem (—6). It was on the other hand in slight excess at Bangalore, Poona and Belgaum, and was normal at Sholapur.

The variations in the amount of cloud from the normal agreed in general character with those of the humidity and also of rainfall. There was somewhat more cloud than usual in Burma, East Bengal, Assam and at the coast stations of Bengal and Orissa. The mean cloud proportion was small in amount and considerably below the average over the whole of West Bengal, the Gangetic plain, the Punjab, Upper Sind, Rajputana, Central India and the Central Provinces, and to a somewhat less extent in the East Deccan and the coast districts of the Peninsula. It was in slight excess at Belgaum and Sholapur, and in the West Deccan. Cloud was almost as largely in defect (relatively to the normal amount) at the hill stations in Northern India as on the neighbouring plains.

Skies were practically cloudless during the month (*i.e.*, the cloud proportion was 0·5 or less) in Upper Sind, the South-West Punjab and in the districts of Bihar and the North-Western Provinces represented by Patna and Ghazipur and at Mount Abu in Rajputana.

The following table gives variation data of the mean aqueous vapour pressure, humidity and cloud amount of the month in ten meteorological provinces of India:—

Meteorological Province.	Mean variation from normal of		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
	"		
Burma Coast and Bay Islands	+·004	+6	+1·8
Assam	+·002	+1	+0·3
Bengal and Orissa	+·014	−4	−0·1
Gangetic Plain and Chota Nagpur	−·051	−7	−1·0
Upper Sub-Himalayas	−·013	−5	−0·8
Indus Valley and North-West Rajputana	+·001	−3	−0·3
East Rajputana, Central India and Gujarat	−·027	−3	−0·6
Deccan	−·010	−2	−0·5
West Coast	−·005	−2	−0·7
South India	−·018	−2	−0·8

Rainfall.—The rainfall of the month was almost entirely due to local thunderstorms and was hence generally lighter than usual and very irregularly distributed. No cyclonic storm formed in the Bay during the month, as no important advance of monsoon winds occurred in the Bay. The permanent advance of monsoon winds in the Arabian Sea occurred much later than usual and hence the West coast districts received no general rain from monsoon winds, such as they usually obtain in the last week of the month.

The rainfall of the month was hence small in amount and much below the normal of the period in Malabar and the Konkan and the whole of Mysore and Coorg,

South and Central Madras. It was also small in amount and below the average to a moderate extent in the Punjab and the hill districts of Upper India. The month was practically or actually rainless in Baluchistan, Sind, Cutch, Kathiawar, Khandesh, Gujarat, Berar, the Central Provinces, Central India and the greater part of Rajputana and the North Western Provinces. The westerly winds established in the southern half of the Bay in the last week of April gave steady moderate rain to Burma during the month, and the rainfall was hence largely in excess in that area. Thus Tenasserim received 64 per cent. above its normal amount, Lower Burma 37 per cent. in excess, Central Burma 12 per cent. in excess and Upper Burma about its normal amount. Also, as invariably occurs in April or May when hot weather conditions are more intense than usual in Northern India, Assam and East Bengal received more frequent and heavier rain than usual. The rainfall of the month averaged about 25 per cent. above the normal in Assam and 21 per cent. in East Bengal. The following gives comparative data for the eleven meteorological provinces of the empire:—

METEOROLOGICAL PROVINCE.	RAINFALL.		
	Mean actual for May 1894.	Mean normal for May	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	16·31	11·80	+3·15
Burma Inland	5·70	4·62	+2·81
Assam	15·17	15·01	+0·16
Bengal and Orissa	5·25	6·95	−2·01
Gangetic Plain and Chota Nagpur	0·29	1·99	−1·69
Upper Sub-Himalayas	0·46	1·09	−0·63
Indus Valley and North-West Rajputana	0·15	0·47	−0·32
East Rajputana, Central India, and Gujarat	0·23	0·50	−0·22
Deccan	0·25	0·99	−0·80
West Coast	1·39	6·04	−4·51
South India	1·88	2·69	−1·14

Atmospheric Pressure.

The mean pressure of the whole of India for May 1894 was ·023″ below the normal pressure of the month. The local pressure conditions or anomalies were strongly marked. Pressure was relatively to the general condition in defect (or the pressure anomalies were negative) to the north of a curved line through Jacobabad, Bickaneer, Jhansi, Raipur, Cocanada, Akyab and Mandalay. Over the greater part of that area the negative anomalies exceeded ·02″ in amount and were greater than ·04″ in the submontane districts of the North-Western Provinces, Bihar, North Bengal and Assam. The following gives data for stations in that area:—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Roorkee	−·068	−·045
Bareilly	−·064	−·041
Gorakhpur	−·072	−·049
Patna	−·078	−·055
Darbhanga	−·080	−·057
Purnea	−·069	−·046
Burdwan	−·072	−·049
Berhampore	−·064	−·041
Dinajpur	−·063	−·040
Dhubri	−·062	−·039
Sibsagar	−·067	−·044

Pressure was in relative excess in the remainder of India and the positive anomalies were large in the western half of the Peninsula and North Bombay. The following gives data for the stations at which the positive anomalies were greater than ·04″:—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Deesa	+·028	+·051
Neemuch	+·022	+·045
Rajkot	+·036	+·059
Indore	+·024	+·047
Surat	+·017	+·040
Malegaon	+·022	+·045
Bombay	+·027	+·050
Poona	+·021	+·044
Sholapur	+·021	+·044
Ratnagiri	+·037	+·060
Karwar	+·027	+·050
Belgaum	+·024	+·047
Mangalore	+·018	+·041
Bellary	+·028	+·051

Pressure was below the normal at the hill stations in Northern India, but by amounts considerably smaller than at the neighbouring plain stations, and hence the vertical pressure anomalies were positive. This is almost invariably the case in the hot weather in Northern India when pressure is more or less in defect, and is due mainly, if not entirely, to higher temperature and more intense hot weather

conditions than usual. The following gives data for six pairs of stations :—

HILL STATION.	Variation from normal pressure.	PLAIN STATION.	Variation from normal pressure.	Vertical pressure anomaly (Hill – Plain).
	"		"	"
Leh . . .	+·018	Lahore . .	–·064	+·082
Murree . .	–·016	Rawalpindi .	–·044	+·028
Simla . . .	–·017	Ludhiana . .	– 059	+·042
Chakrata . .	–·021	Roorkee . .	–·068	+·047
Ranikhet . .	–·023	Bareilly . .	–·064	+·041
Quetta . .	+·002	Jacobabad . .	–·035	+·037

The following gives the chief features of the pressure conditions of the month :—

(1). Pressure was in moderate defect in the Indian area.

(2). Pressure was relatively to the general condition in moderate to large defect in Northern India, the deficiency being largest in the submontane districts of the North-Western Provinces, Bengal and Assam where it ranged between ·04″ to ·06″.

(3). Pressure was in local excess in the Peninsula and North Bombay, the increased pressure being greatest in the West coast districts and the West Deccan, Khandesh, Gujarat and Kathiawar in which it ranged between ·04″ and ·06″.

(4). Pressure was in excess at the hill stations relatively to the plain stations, indicating that the decreased pressure in Northern India was chiefly due to higher temperature than usual in the plains of India.

Barometric depressions of the month.

The cyclonic storm which passed into Burma from the Andaman Sea on the 29th of April filled up during the next 24 hours, and a very rapid recovery of pressure took place on the 30th in North-Eastern India and Burma and high pressure conditions were established in that area, on the morning of the 1st. A shallow low pressure area due to hot weather actions, lay over the South-West Punjab. Pressure increased slightly during the next 48 hours over the whole of India and the Punjab depression remained almost unchanged in position and character until the morning of the 3rd. During the next 24 hours it advanced rather rapidly eastwards to the foot of the Simla and Mussooree hills. Duststorms (in some cases giving light showers) occurred in the North and East Punjab on the 4th and thunderstorms in the hill districts on the 5th and 6th. Light showers fell daily at this time in Burma and some parts of Southern India.

Pressure was more or less considerably above the normal over the whole of India on the 5th. It now began to give way generally and decreased most rapidly in the West Punjab where pressure was lowest on the 6th and 7th. During the next 24 hours (or from 8 A.M. of the 7th to the same hour of the 8th) pressure decreased very largely over the whole of the Indian area. The fall was one of the greatest and most general which has occurred for many years during the hot weather in India. The following table gives data in illustration :—

PROVINCE.	Variation of pressure from normal at 8 A.M. of 7th.	Change of pressure in 24 hours preceding 8 A.M. of 8th.	Variation from normal at 8 A.M. of 8th.
	"	"	"
Panjab	–·007	–·204	–·198
Rajputana	–·015	–·123	–·126
North-Western Provinces .	+·014	–·183	–·166
Bihar and Chota Nagpur .	–·014	–·114	–·136
Bengal and Orissa . .	–·019	–·124	–·143
Assam	–·027	–·144	–·170
Central India . . .	0	–·111	–·110
Berar and Central Provinces .	–·027	–·086	–·108
Gujarat and Kathiawar . .	–·023	–·060	–·092
Bombay	+·015	–·040	–·026
Madras	+·002	–·069	–·067
Burma	+·002	– 091	–·083

The following data show that the fall occurred over a much larger area than India :—

STATION.	Pressure change in 24 hours preceding 8 A.M. of 8th.	STATION.	Pressure change in 24 hours preceding 8 A.M. of 8th.
	"		"
Zanzibar	−·046	Quetta	−·100
Seychelles	−·030	Gilgit	−·240
Minicoy	−·029	Kashgar	−·160
Perim	−·059	Leh	−·100
Bushire	−·113	Kailang	−·080
Teheran	−·090	Gantak	−·163
Muscat	−·114	Wellington	−·035
Sibsagar	−·173		
Bhamo	−·099		
Mergui	−·049		
Colombo	−·026		

The preceding data show that the fall occurred over the whole of the Indian monsoon area and extended into Central Asia as far north at least as Kashgar. It was also almost as strongly marked (relatively to the actual pressure) at the high level stations of Leh and Kailang as at the level of the plains of Northern India. It is the most remarkable example that has taken place for some years of the large general simultaneous changes of pressure which occur over the whole Indian land and sea area and which are in no way associated with cyclonic movements or with the advance of pressure waves in any definite direction and of which the only explanation appears to be that they are expansional movements of the atmosphere over very large areas, due chiefly, if not entirely, to cumulative thermal conditions and actions.

The result of the changes in India was to give abnormally low pressure on the 8th in the North Punjab and steep gradients in the Peninsula and North-Western India. Pressure was below the normal by amounts ranging from ·02″ in South India and ·08″ in Lower Burma to ·19″ in Assam and ·22″ in the North-West Punjab. Pressure gave way again on the 8th in North-Western India, thus further intensifying the abnormal conditions previously existing in India. Very strong winds now obtained, more especially in the coast districts of Bengal and on the coasts of Sind, Cutch and Kathiawar. The range of pressure on the 8th and 9th over India was nearly five-tenths of an inch, and hence the total gradient on these days was nearly as large as obtains during strong bursts of south-west monsoon winds. These conditions intensified the local winds obtaining at this time in India and strong southerly winds now prevailed on the Bengal coast and strong westerly winds in the west coast districts, more especially in Sind, Cutch and Kathiawar.

The following table gives the mean air movement of typical stations in different parts of India during the 24 hours preceding 8 A.M. of the 6th, 7th, 8th and 9th for comparison with the normal velocities which are also stated :—

	STATION.	AVERAGE HOURLY VELOCITY IN MILES OF 24 HOURS PRECEDING 8 A.M. OF THE				Normal hourly velocity in miles in May.
		6th.	7th.	8th.	9th.	
BENGAL COAST	Saugor Island	16	19	22	25	15
GANGETIC PLAIN	Patna	10	6	5	7	5
	Allahabad	7	10	4	5	4
	Lahore	3	2	2	3	3
WEST COAST	Bhuj	15	12	17	30	?
	Bombay	9	8	8	14	10
DECCAN AND RAJPUTANA.	Deesa	8	7	9	20	13
	Khandwa	11	7	12	14	9
	Sholapur	8	11	11	14	10
	Bellary	5	6	6	11	8

The preceding data show that there was a very considerable increase in the air movement on the 8th and 9th, and that it was most marked in the Bengal and North Bombay coast districts and the Deccan. The indraught of these humid winds across the Bengal and Burma coasts gave frequent thundershowers in Orissa and Bengal, from the 8th to the 13th, during which period Burma also continued to receive light to moderate general rain. Pressure recovered rapidly, but very unequally in Upper India on the 10th (*i.e.*, during the 24 hours preceding 8 A.M. of the 10th), and a fairly well marked hot weather depression lay over the South-West Punjab and Upper Sind on the 10th and 11th. Pressure on the morning of the 11th was in slight to moderate excess over the whole of India except South Madras where it was in very slight defect. The depression in Upper India advanced across the Central Punjab on the 12th, and broke up over the Punjab Himalayas during the next 24 hours. Dust-storms and thundershowers occurred on the 12th in the Punjab and Rohilkhand and the hill districts. Pressure fell very irregularly on the 12th and 13th, more especially in North-Eastern India and South Madras, and these two areas were visited on these days by numerous thunder-storms which in some cases gave very heavy rain.

The pressure changes of the 12th and 13th made a considerable modification in the distribution of pressure which was very persistent during the remainder of the month. Pressure gave way on these two days to a much greater extent in Northern India, and more especially North-Eastern India, than in the Peninsula (more especially, the west coast). Pressure continued in excess in the Peninsula, but was more or less in defect in Northern India, the deficiency being most marked in North Bengal and Bihar. The hot weather trough of low pressure was hence transferred from its normal position to the submontane districts of Northern India. This distribution of pressure continued unchanged in general character from

the 13th to the 29th. The following variation data for eight typical stations illustrate it fully:—

STATION.	VARIATION FROM NORMAL OF 8 A.M. PRESSURE OF					
	13th.	16th.	19th.	22nd.	25th.	28th.
	"	"	"	"	"	"
Lahore . .	−·095	+·015	+·007	+·011	−·058	−·146
Roorkee . .	−·115	−·054	−·019	−·012	−·130	−·210
Patna . .	−·143	−·083	−·081	−·079	−·172	−·192
Dhubri . .	−·147	−·057	−·057	−·050	−·163	−·134
Nagpur . .	−·026	+·041	+·021	+·037	−·009	−·082
Secunderabad .	−·033	+·031	+·039	+·054	+·013	−·054
Bombay . .	+·007	+·066	+·053	+·051	+·038	+·001
Kurrachee .	+·009	+·021	+·047	+·026	+·058	−·010

The preceding data show clearly the general character of the pressure distribution during the period and described in the following paragraph.

Pressure had fallen considerably over the greater part of the Indian area on the 13th but increased to a moderate extent on the 14th and 15th. The daily pressure changes during the next week were generally small in amount but were characterized by much irregularity (such as invariably accompanies the occurrence of duststorms and thunderstorms in Northern and Central India during the hot weather). Pressure gave way rapidly on the 24th and 25th and was largely below the normal over nearly the whole area during the remainder of the month. During the whole period there was a large local deficiency in Northern India, greatest in the submontane districts of the North-Western Provinces, North Bihar and Bengal, and a considerable local excess in the western half of the Peninsula. This abnormal distribution gave unusually strong westerly winds in the Gangetic plain. These winds extended across Bihar and Chota Nagpur into West Bengal, and hence the whole of this period was one of great heat and dryness in Northern India, and more especially in Bihar and West Bengal. Strong southerly winds blew across the Bengal coast, and these humid winds gave frequent thundershowers to North and East Bengal and Assam, the chief period of disturbance in that area being from the 20th to the 24th. Weather was also slightly disturbed in the Punjab on the 16th, 17th and 18th, during which period a local depression due to hot weather actions formed in the West Punjab, and marched eastwards to the foot of the Punjab hills. A feeble disturbance of similar character gave duststorms and thunderstorms in the Punjab on the 21st, 22nd and 23rd.

In Southern India thunderstorms were more numerous than usual during this period, but generally gave very moderate rain The chief periods of disturbance in that area were the 12th and 13th, the 18th to the 20th and the 23rd to the 25th.

During the last three days of the month pressure gave way locally in the north-west of the Bay, and hence the eastern half of the trough of low pressure was displaced southwards and lay over Chota Nagpur and Orissa on the 29th and 30th, and on the 31st was transferred further south to the coast districts of North Madras. This modified the wind system in North-Eastern India very largely. Easterly winds advanced across Central and West Bengal into Bihar and series of thunderstorms occurred over the whole of Bengal on the 29th, 30th and 31st.

Summary of the reports of the weather and snowfall in the mountain districts to the north, and north-west of India.

I. AFGHAN MOUNTAINS.

(1) *Hills bordering the Kohat district.*—No snow fell on these mountains during the month.

II. PUNJAB AND KASHMIR HIMALAYAS.

(1) *Ladakh.*—The Revd. Mr. Shawe, Superintendent of the Leh Observatory, writes that snow fell on the 12th, 13th, 14th, 15th, 16th, and 31st. It was heavy on the higher mountain ranges and caused the temporary closing of the passes. Snow fell as low down as 10,000 feet, but melted very rapidly. Passes above 16,000 feet were reported to be closed at the end of the month. All the lower passes, more especially those on the Srinagar Road, were however open.

(2). *Lahoul.*—The Revd. A. W. Heyde, Superintendent of the Kailang Observatory, writes: "From the 10th to the 16th of May much snow has fallen on the hills of Lahoul. At Kailang it fell mostly in the form of sleet. 2·25 inches have been registered during these four days, which are equal to more than 2 feet of snow at Kailang. The quantity of snow on the hills above Kailang which has fallen from the 10th to the 15th of May appears to be great, very likely from 4 to 5 feet or more. To-day (16th May) it snowed from early morning to 2 P.M., half a foot falling in that time."

(3). *Kulu.*—The following report was received from the Assistant Commissioner: "There were falls of snow on the higher passes on the 12th, 13th, 15th, and 16th, in the Kulu tahsil and on the 13th, 15th, 16th, 17th and 22nd in the Plach tahsil. There has been much hot sunshine during the month and the snow has melted rapidly.

The following table gives the reported depth of snow on the higher passes at the end of the month and corresponding data for the past four years for comparison:—

Tahsil.	Name of Pass.	Elevation.	Depth of snow at the end of May				
			1894.	1893.	1892.	1891.	1890.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
Kulu	Rotang	13,000	9	9	1 foot	9	5
	Hamta	14,500	6	7	½ "	12	6
	Chandankhani	?	7	8	*Nil*	8	½ foot
	Barsai	?	4	2	½ foot	5	1 "
	Bujadhar	?	5	2	?	2	?
	Lohri Achri	?	4	2	?	*Nil*	*Nil*
	Bhubu	10,000	1 foot	1 foot	?	*Nil*	*Nil*
Plach	Srikand	15,000	12	15	4 feet	32	12
	Gargarasan	17,000	2	4	1 foot	4	2
	Plach	?	1 foot	1 foot	?	2	1 foot
	Tirath	?	1 "	4	1 foot	2	1 "

The snowfall in the month under report was similar to that of May 1893.

III. THE NORTH-WESTERN PROVINCES HIMALAYAS.

Almora District.—Very light snow fell on two or three occasions during May, but the total fall was very small in amount and less than in 1893.

Summary of snowfall data of the cold weather of 1893-94.

The following summary is taken from a memorandum published in the *Gazette of India* :—

The most important feature of the past cold weather was undoubtedly that the precipitation occurred as rain to much higher elevations than usual, and hence there was no large snow accumulation on the lower ranges in March, such as formed so striking a feature of last year's meteorology.

November and December 1893 were finer months than usual in Persia and Baluchistan. There were numerous disturbances in Persia in January and February 1894, and the rainfall and snowfall were apparently much heavier than usual in that area and Baluchistan. There were occasional falls of snow in the higher ranges of the Western Himalayas in September, October, November and December 1893 ; but the winter on the whole began somewhat later than usual, and considerably later than in the years 1890-91 and 1892-93. There were several disturbances in January and February which were connected with large depressions in Persia, but they were in almost all cases feeble and diffused, and the majority of them filled up in North-Western India, and did not pass eastwards into Bengal. The rainfall of the period was hence in moderate excess in the Punjab, and was normal in Rajputana and the North-Western Provinces. The chief feature of these disturbances was that, although feeble, they chiefly affected the Western Himalayas, where the winter was much more cloudy and windy than usual and weather gloomy. The disturbances gave unusually frequent falls of snow and rain, the precipitation increasing rapidly in amount with elevation, and being unusually large on the higher elevations in the interior.

The data show that the snowfall was undoubtedly considerable and probably above the average, in Afghanistan in the months of January and February 1894, and was larger in amount than during the previous winter. Little or no snow fell in that area after the beginning of March, and hence the snow melted rapidly, and there was practically none on the Safed Koh at the end of April.

The snowfall was undoubtedly excessive in the higher ranges of the Kashmir and Punjab Himalayas, and was abnormally heavy in Ladakh, where it was, in the opinion of the natives of the district, "unprecedented." The information for the Karakoram mountains and the areas to the north is very small. It indicates that the snowfall was above the normal, but not to the same extent as in Ladakh. In consequence of the character of the precipitation on the lower ranges of the Western Himalayas, there was no abnormal extension of snow-clad surface in April and May, and the heavy fall probably chiefly affected the depth of snow over the higher elevations above the normal snow line, and filled up the intermediate valleys and gorges, where there were undoubtedly large accumulations of snow in May. There have also been occasional falls during April and May, which have added to the snow accumulation on the higher ranges. These falls, however, so far as can be judged, have not been much more frequent or heavier than occur in ordinary years. Hence it is almost certain there was a large accumulation at the end of May on the higher ranges of the Western Himalayas, and probably also on the Karakoram mountains ; but, as already stated, it was chiefly an increase of depth over the area of permanent snow, and not an extension of the snow-clad surface over a much larger area than usual.

Snow began to fall early on the Kumaun hills, and there were frequent snowstorms in January, February, and March. If the estimates of the snowfall may be accepted as accurate, they indicate that 40 to 60 feet fell during the winter on the higher passes and ranges, and that the fall was somewhat less than last year. This agrees with the opinion of the natives of the district.

The snowfall in Sikkim was much lighter than usual in January and February. The past three months have been unusually stormy, and the precipitation larger than usual. There were a large number of snowstorms at Gnatong in April and the beginning of May, and the weather at that station suggests that it is probable there was more snow than usual during the months of April and May in the Sikkim and Assam Himalayas.

The reports received from Assam indicate that the fall on the Assam Himalayas during the winter proper (as at Gnatong) was less than usual.

The chief features may be summarized as follows :—

1st.—Moderately heavy snow in Afghanistan and Baluchistan in January and February. The winter closed earlier than usual, and snow melted rapidly in March and April.

2nd.—Frequent rain and occasional snow on the lower ranges of the Western Himalayas, and more frequent snow on the higher ranges. The snowfall was exceptionally heavy in Ladakh, and probably on the Karakoram range. There was hence a large accumulation on the higher ranges of the Kashmir and Punjab Himalayas during the months of February and March; but it is probable that the chief result at the end of the month of May was a greater depth of snow over the permanent snow area and not an abnormally large extension of snow-clad surface.

4th.—Moderately heavy snowfall on the North-Western Provinces Himalayas, but less than in the preceding winter.

5th.—Unusually light snowfall during the months of January and February on the Sikkim and Assam Himalayas; but there were probably heavy falls on the higher ranges during the months of April and May.

6th.—The snowfall hence chiefly occurred during the winter months, and the fall was, so far as can be judged, not excessive.

7th.—The snow accumulation in May was probably large in the region of permanent snow on the Western Himalayas, but there was no abnormal extension of snow-clad surface.

Summary of special storm reports.

The following gives a statement of the chief local storms of which reports were received during the month. These storms were all of the ordinary hot weather type, *viz.*, thunderstorms or hailstorms in Bengal, the North-Western Provinces, the Deccan and Madras; and duststorms in the hottest and driest districts of Northern and Central India, more especially the Punjab and Rajputana. They were apparently of slight to moderate intensity, and in no case do they appear to have caused much damage to property :—

3rd.—Duststorm at Peshawar at 4-50 P.M. to 6 P.M.

5th.—Duststorms at Ludhiana at 4-40 P.M. and Delhi at 3-45 P.M. (which came from west-north-west).

6th.—Duststorm at Allahabad at 6-45 P.M. It came from east.

8th.—Duststorm at Pachpadra. The strongest winds during the storm, as indicated by a Robinson's anemometer, were of velocity 130 (?) miles per hour.

9th.—Duststorm at Deesa during which winds of velocity 56 miles per hour were recorded.

10th.—Duststorms at Lahore at 3-45 P.M. and thunderstorm at imla at 2 P.M. Severe north-wester at Faridpur at 4-15 P.M. which did much damage to property.

11th.—Thunderstorm at Delhi at 1-30 P.M. A succession of three duststorms passed over Hyderabad (Sind) during the day, the most violent at 7-50 A.M.

12th.—Duststorms at Hyderabad (Sind) at 9-45 A.M. and at Pachpadra at 3 A.M. The observer states that there were cold and hot gusts alternately, and that the wind squalls were excessively strong and caused much damage. Violent hailstorm at Cherat at 2 A.M., lasting 15 minutes.

13th.—Thunderstorm at Cuddapah at 5-30 P.M. Northwester at Barisal at 3 P.M.

15th.—Thunderstorm at Simla at 6 A.M. to 7 A.M.

16th.—Duststorms at Lahore at 3 A.M., Montgomery at 2-30 A.M., Lala Musa at 4 A.M., and Amritsar at 4-10 A.M. The barometer at Lahore rose from 29·002″ at 2-50 A.M. to 29·088″ at 4 A.M. Thunderstorm at Simla at 7 A.M., lasted until 7-45 A.M.

17th.—Duststorm at Pachpadra at 7 P.M.

18th.—Duststorm at Ajmere at 4-30 P.M.

20th.—Duststorm at Peshawar at 5 P.M. The barometer rose from 28·58″ at 5 P.M. to 28·70″ at 5-40 P.M.

21st.—Duststorm at Cawnpore at 7-5 P.M. to 7-45 P.M. Thunderstorm with hail at Simla 3-30 P.M. to 5 P.M. Hailstorm at Chikalda at 5-40 P.M.

22nd.—Thunderstorm at Hyderabad (Deccan) at 3-35 P.M. to 4-30 P.M. Duststorm at Cherat at 4-5 P.M. to 6 P.M.

23rd.—Thunderstorms at Cuddapah at 4-30 P.M. to 5-30 P.M., and Poona at 5 P.M. to 5-30 P.M.

26th.—Severe thunderstorm at Belgaum at 4 P.M. Three men were killed by lightning during the storm.

28th.—Thunderstorm at Chittagong from midnight to 2 A.M. Very heavy rain and terrific thunder and lightning. Large trees were uprooted by the winds and the corrugated roof of the railway shed was carried away some distance. Rainfall during storm 2·06 inches. A shock of earthquake is said to have occurred at 1 A.M. during the storm.

29th.—Thunderstorm at Calicut at 6 P M. to 8 P.M.

31st.—Violent duststorm at Gorakhpur at 6-30 P.M. Amount of wind as registered by the anemometer between 6-30 and 6-50 P.M. was 59·8 miles. (?) Thunderstorm at Simla 4-20 P.M. to 5-10 P.M.

The following reports of hailstorms have been received from District officers :—

28th.—Hailstorm at Meherpur sub-division and a part of Thana Teyhatta in the Nadia district, Bengal. The report states that "the sky became overcast with cloud on the evening of the day and at first the rain fell in large drops with small hailstones; but soon after fell in torrents with big hailstones, which covered the area of the court compound in a short time. The size of the big stones was about three-quarters of an inch in diameter and the quantity of rain measured by the rain gauge was 0·55 inch, which fell within about half an hour. Throughout the whole period of the storm there were every now and then flashes of lightning accompanied by loud thunder. Excessive heat had been felt for some days previous."

29th.—Hailstorm at Kodaikanal and neighbourhood. The weather for some days previous had been very hot and sultry. The storm commenced about 4-30 P.M. and lasted about an hour. It extended as far as Perijur and Pachalur, about 30 miles from Kodaikanal. After the storm was over, the wind from the north-east blew warm for some time.

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

Arabian Sea.—At the beginning of the month normal north-westerly winds (force 2 to 5) were blowing in the Persian Gulf and along the West Coast. Over the remainder of the sea (excepting the neighbourhood of Ceylon, where south-west winds prevailed) the winds were very unsteady and variable in direction. Weather was, however, generally fine. The mean wind force for the whole area, as recorded on board 30 vessels, was 2·8. No important change occurred during the next six days, except that the air movement decreased to an average of 2·1 on the 3rd and increased again to an average of 3·3 on the 7th. Normal south-westerly winds set in over the centre, south and west of the sea during the next 24 hours and continued more or less steadily until the 17th when they became again unsteady. Abnormal south-westerly winds were also experienced from the 8th to the 10th on the Bombay coast. Weather was fine with more or less cloud during this period, except in the south-east of the sea, where squalls were of frequent occurrence. The mean air movement ranged from 3·5 on the 8th, and 4·0 on the 9th (when it was strongest) to 2·6 on the 17th. During the remainder of the month, the winds were very unsteady over the centre, south and west of the sea; but along the whole length of the west coast north-westerly winds (slightly more northerly than usual) continued. Weather was fine with some cloud over the whole area from the 18th to the 27th, except in the extreme south-east where it was unsettled with occasional squalls; but during the last four days conditions were disturbed over a larger area, including the centre, west, south and south-east. Several vessels in these areas experienced heavy rain squalls during this period. The air movement during this period fluctuated considerably from day to day, the mean wind force for the whole area ranging from 2·0 on the 27th to 3·3 on the 31st.

Bay of Bengal.—At the commencement of the month light to moderate normal south-westerly winds prevailed in the north and west of the Bay and the weather was generally fine over that area. On the other hand, the advance of the south-west monsoon winds that had occurred in the last week of the previous month in the south and south-east of the Bay, was not yet quite spent and hence south-west monsoon winds, force 2 to 5, and rainy squally weather still held in that region. The mean wind force for the whole area averaged 2·8 at 8 A.M. of the 1st. No change occurred until the morning of the 7th, when winds became very unsteady in the eastern half of the Bay (and the Equatorial region) and the weather improved

in the south and south-east. Very large and important pressure changes occurred over the whole monsoon area during the next 48 hours, which established unusually steep gradients in the Indian area and the Bay. In consequence, winds strengthened very rapidly in force and the mean wind force increased from 2·7 on the 6th to 3·9 on the 8th and 4·0 on the 9th. It is, however, remarkable that notwithstanding the unusual steepness of the gradients, the winds continued very unsteady in direction and the weather practically fine over the centre, east and south of the Bay, and also over the Equatorial region to the south. The unsteadiness of the winds during this period is shown strikingly by the wind data of Port Blair, which had, for instance, a west-north-west wind at 8 A. M. of the 7th, a west-south-west wind on the 8th and a calm on the 9th. The abnormal pressure conditions passed away during the next two days, and the mean wind force decreased to 3·0 on the 10th and 11th. Normal south-westerly winds set in again over the south of the Bay on the 12th, and on th e morning of the 13th moderate to strong south-west winds prevailed over the greater part of the Bay. It is also noteworthy that although the pressure difference between the south of the Bay and North-Western India on the 13th was only half of that of the 9th, the air movement on the other hand was fully as strong and averaged 4·4. Weather was fine with passing clouds on this day, except over the Andaman Sea and off the Coromandel Coast, where it was squally and thundery. Weather improved off the Coromandel Coast during the next 24 hours, but was very unsettled over the whole of the south-east of the Bay during the next three days. The wind force for the whole area averaged 4·1 on the morning of the 17th. Winds decreased rapidly during the next 24 hours and averaged only 2·9 at 8 A. M. of the 18th. Winds and weather were unchanged during the next six days, except in the south-east, where weather was unsettled with occasional squalls and rain. The mean air movement for the whole area was 3·3 on the morning of the 24th. Winds, however, strengthened considerably during the next 48 hours, particularly in the north and west of the Bay and averaged 4·5 on the morning of the 26th. South-westerly gales were experienced off the Orissa and Ganjam coasts on this day. Thus the S.S. *Baron Elibank* in Lat. 20¼° N. and Long. 87½° E. at 8 A.M. had south-west winds, force 9, and the ship *Lena* in Lat. 18¾° N. and Long. 87½° E., south-west winds of force 7. Weather was, however, generally fine. During the remainder of the month, the air movement decreased steadily and averaged 3·4 at 8 A.M. of the 31st. Weather was, however, slightly unsettled during this period over nearly the whole of the Bay.

Temperature of the air.

The mean maximum or day temperature of the month was above the normal over the whole Indian area with the exception of Burma, Upper Assam, the South Deccan, Mysore, Lower Sind, Cutch, Kathiawar and Gujarat. The deficiency in these districts was small, except in Lower Burma, where it exceeded 2°. The following gives data for the stations, at which the deficiency was more than 3°:—

Province.	Station.	Mean maximum temperature.		
		Actual.	Normal.	Variation of actual from normal.
		°	°	°
Burma	Toungoo	91·8	96·2	−4·4
	Thayetmyo	95·5	99·4	−3·9
	Rangoon	88·2	92·5	−4·3
	Moulmein	86·6	90·0	−3·4

The excess in the remainder of India was greater than 2° over the whole of Northern India, except the eastern half of Bengal and also over the coast districts of Madras and the eastern districts of the Central Provinces. It was more than 4° in the Eastern districts of the North Western Provinces, the greater part of Bihar, Chota Nagpur, West Bengal and the South Punjab. The following gives data for these areas:—

Province.	Station.	Mean maximum temperature.		
		Actual.	Normal.	Variation of actual from normal.
		°	°	°
South Punjab	Mooltan	109·8	104·7	+5·1
	Sirsa	111·0	106·2	+4·8
Bihar, Chota Nagpur and West Bengal.	Chaibassa	109·5	103·4	+6·1
	Burdwan	102·0	97·2	+4·8
	Berhampore	101·5	95·7	+5·8
	Patna	105·1	99·6	+5·5
	Gaya	108·8	104·1	+4·7
	Hazaribagh	102·6	98·3	+4·3
North-Western Provinces and Oudh.	Gorakhpur	104·6	100·5	+4·1
	Lucknow	108·2	104·1	+4·1

Chaibassa, Patna and Berhampore were hence the centres of the greatest excess of day temperature.

The variations of the mean minimum temperature were similar in character and distribution to those of the maximum. Thus the mean night temperature of the month was

below the normal in Burma, Upper Assam, the Deccan, Mysore, Lower Sind, Cutch, Kathiawar and South-West Rajputana. The variations in these areas were small, in no case exceeding 2°.

The night temperature was most largely in excess in the South and Central Punjab, the eastern districts of the North-Western Provinces, Bihar, Chota Nagpur, Orissa and West Bengal. The following gives data for stations in these areas, at which the excess of the night temperature was over 3° :—

Province.	Station.	Mean minimum temperature.		
		Actual.	Normal.	Variation of actual from normal.
		°	°	°
Punjab	Lahore	76·3	72·2	+4·1
	Mooltan	79·3	75·9	+3·4
	Sirsa	79·2	76·0	+3·2
Bihar and Chota Nagpur.	Hazaribagh	78·6	74·3	+4·3
	Gaya	82·3	78·1	+4·2
	Chaibassa	82·8	78·8	+4·0
Central Provinces	Sambalpur	84·0	80·9	+3·1

The mean temperature of the month was below the normal to a slight extent in Lower Sind, Cutch, Kathiawar and Gujarat, the South Deccan and Mysore, and to a moderate extent in Burma and Upper Assam. The deficiency was more than 2° in amount at the following stations in Lower Burma :—

Province.	Station.	Mean daily temperature.		
		Actual.	Normal.	Variation of actual from normal.
		°	°	°
Burma	Toungoo	83·8	86·4	−2·6
	Rangoon	82·3	84·9	−2·6
	Thayetmyo	86·2	88·5	−2·3
	Moulmein	80·7	82·9	−2·2
	Bassein	82·4	84·5	−2·1

The mean temperature of the month was more than 2° in excess over the whole of Northern India (except East Bengal) and the eastern districts of the Central Provinces. It was upwards of 4° in excess in two areas, for which data are given below :—

Province.	Station.	Mean daily temperature.		
		Actual.	Normal.	Variation of actual from normal.
		°	°	°
Punjab	Mooltan	94·6	90·3	+4·3
	Sirsa	95·1	91·1	+4·0
Bihar, Chota Nagpur and West Bengal.	Chaibassa	96·5	91·4	+5·1
	Gaya	95·6	91·1	+4·5
	Hazaribagh	90·6	86·3	+4·3
	Patna	92·6	88·4	+4·2
	Berhampore	90·0	85·9	+4·1

The day and night temperatures were as largely in excess at the hill stations in Upper India as at the neighbouring plain stations.

The following gives data for four stations :—

Station.	Variation from normal of mean		
	Maximum temperature of month.	Minimum temperature of month.	Daily temperature.
	°	°	°
Murree	+2·2	+3·0	+2·6
Simla	+3·2	+1·6	+2·4
Chakrata	+4·2	+3·8	+4·0
Ranikhet	+6·1	+4·8	+5·5

Temperature was normal at Leh, in slight defect at Kailang and Quetta, and in moderate defect at Darjeeling.

The following sums up the chief features of the mean temperature conditions of the month :—

(1) Moderate deficiency in the day and night temperature over the whole of Burma, due to more frequent rain than usual.

(2) Slight deficiency in the South Deccan and Mysore, due to more frequent thundershowers than usual, and in Sind, Cutch, Kathiawar, Gujarat and South-West Rajputana caused by the unusual strength of the sea winds in those areas during the month.

(3) Large excess of temperature over the whole of Northern India (except East Bengal), the eastern districts of Central India and the Central Provinces. The excess was most pronounced in Bihar, Chota Nagpur and West Bengal, where it was mainly due to the remarkable persistence and strength of the dry hot westerly winds in these areas during the latter half of the month.

(4) Large excess of temperature at the lower hill stations in Northern India.

The following table gives temperature data for each of the 51 meteorological divisions into which India is divided :—

Province.	Division.	Actual Temperature.					Variation.		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	88·0	74·6	81·3	13·4	21·1	−3·9	−0·8	−3·1
	Lower Burma	87·9	77·0	82·5	10·9	18·6	−3·2	−0·5	−2·7
	Central do.	94·0	74·5	84·3	19·4	32·6	−3·9	−0·6	−3·3
	Upper do.	92·5	72·9	82·7	19·6	32·6	−2·4	0	−2·4
	Arakan	89·6	77·0	83·3	12·6	24·9	−0·9	−0·8	−0·1
Bengal and Assam	Eastern Bengal	91·1	75·2	83·1	16·0	30·5	+1·4	+0·4	+1·0
	Assam (Surma)	88·2	72·4	80·3	15·8	28·4	+0·2	+0·3	−0·1
	Do. (Brahmaputra)	86·5	72·6	79·5	13·9	26·2	?−2·1	+0·4	?−2·5
	Deltaic Bengal	96·9	79·0	88·0	17·9	33·2	+2·5	?+2·2	?+0·3
	Central do.	101·6	78·6	90·1	23·0	40·6	+4·1	+1·7	+2·4
	North do.	90·9	74·0	82·5	16·9	28·4	+1·9	?+1·8	?+0·1
	Orissa	95·2	81·7	88·5	13·5	25·1	?+2·8	+2·5	?+0·3
	Chota Nagpur	106·2	80·1	93·2	26·1	40·8	+5·2	+4·2	+1·0
	Bihar (South)	107·0	81·2	94·1	25·7	39·6	+5·1	+3·6	+1·5
	Do. (North)	100·5	77·5	89·0	23·0	38·1	+2·8	+2·3	+0·5
North-Western Provinces and Oudh.	North-Western Provinces (East)	107·4	80·3	93·9	27·1	43·4	+3·7	?+2·4	?+1·3
	Oudh (South)	108·2	79·5	93·9	28·7	47·7	+4·1	+2·8	+1·3
	Do. (North)	106·5	77·8	92·2	28·7	42·1	?	?	?
	North-Western Provinces (Central)	108·1	79·7	94·0	28·4	45·6	?	?	?
	Do. do. (West)	110·2	84·0	97·1	26·3	39·8	+3·2	+2·5	+0·7
	Do. do. (Submontane)	104·2	74·8	89·6	29·4	44·4	+4·1	+1·2	+2·9
Punjab	Punjab (South)	109·0	80·9	94·9	28·1	41·8	+3·7	?+3·3	?+0·4
	Do. (Central)	106·3	76·3	91·3	30·0	43·7	+3·5	+4·1	−0·6
	Do. (Submontane)	107·4	76·4	91·9	31·1	47·3	+3·5	+2·8	+0·7
	Do. (Hill Districts)	79·1	60·1	69·6	19·1	36·6	+2·7	+2·3	+0·4
	Do. (North-West)	101·9	70·4	86·1	31·5	48·0	?+2·5	?+0·8	?+1·7
	Do. (West)	108·4	78·0	93·2	30·5	44·8	+4·3	+2·8	+1·5
Bombay and Malabar Coast Districts (Madras).	Malabar	89·4	78·3	83·9	11·1	18·3	+0·7	+0·4	+0·3
	Madras (South Central)	97·3	74·1	85·8	23·2	32·1	+0·5	−0·4	+0·9
	Coorg	85·3	67·3	76·3	18·0	26·0	?−2·3	0	?−2·3
	Mysore	88·9	67·3	78·2	21·6	31·1	−1·6	−1·2	−0·4
	Konkan	90·0	80·7	85·4	9·4	16·1	+0·6	+0·8	−0·2
	Bombay Deccan	99·0	72·0	85·5	27·0	35·5	−0·2	−0·4	+0·2
	Hyderabad (North)	102·9	78·1	90·5	24·8	32·2	?	?	?
	Khandesh	102·2	71·7	87·0	30·5	41·9	+0·2	−0·2	+0·4
Central Provinces and Berar.	Berar	107·2	80·4	93·9	26·8	35·7	?+0·1	+0·6	?−0·5
	Central Provinces (West)	107·7	81·4	94·6	26·4	37·2	?+0·4	+1·0	?−0·6
	Do. (Central)	107·0	79·1	93·1	27·9	41·3	+1·5	+0·5	+1·0
	Do. (East)	110·0	83·6	96·8	26·4	39·9	+3·5	+2·6	+0·9
Bombay (North)	Gujarat	101·8	78·1	90·0	23·7	36·2	−0·7	+0·2	−0·9
	Kathiawar	97·5	77·4	87·4	20·1	31·2	−1·1	−1·4	+0·3
	Sind and Cutch	103·2	77·5	90·2	25·7	39·0	+0·3	+0·2	+0·1
Rajputana and Central India.	Central India (East)	108·0	79·8	93·9	28·3	43·6	+2·0	?+2·9	?−0·9
	Rajputana (East), Central India (West)	104·5	77·8	91·2	26·7	37·9	+0·3	?+0·9	?−0·6
	Do. (West)	108·6	80·0	94·4	28·6	43·4	+2·6	+1·0	+1·6
Madras	East Coast (North)	96·6	82·5	89·6	14·1	29·5	?+2·2	+0·4	?+1·8
	Hyderabad (South)	104·2	80·1	92·2	24·1	35·8	+0·3	+1·9	−1·6
	Madras (Central)	103·7	80·0	91·9	23·7	35·8	−0·2	−0·3	+0·1
	East Coast (Central)	105·2	82·4	93·8	22·9	37·9	+3·2	+0·8	+2·4
	Do. (South)	100·7	80·4	90·6	20·3	31·1	?+3·4	+0·9	?+2·5
	Madras (South)	102·1	79·6	90·9	22·6	31·3	+1·6	+1·6	0

The following gives a brief statement of the more important features of the temperature conditions throughout the month.

Temperature at the commencement of the month was below the normal in Burma, the Peninsula and the North-Western Provinces, and in moderate excess in North-East

ern India, the Punjab and Rajputana. The following gives mean variation data for the 24 hours preceding 8 A.M. of the 1st :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	−4·6	+0·6	−2·0
Bengal and Assam	+5·3	+0·6	+3·0
N.-W. Provinces and Oudh	+1·6	−4·9	−1·7
Punjab	+5·2	−0·2	+2·5
Sind and Rajputana	+2·5	+2·1	+2·3
Central India and Gujarat	+0·6	−2·8	−1·1
Central Provinces and Berar	−1·3	−2·6	−2·0
Bombay	−2·2	−1·4	−1·8
Madras	−1·1	−2·0	−1·6

No large or more important change occurred during the next week except that temperature increased more rapidly than usual in the north of the Peninsula and the North-Western Provinces and from the 3rd to the 8th was more or less above the normal over the whole of the country except Southern India and Burma where more frequent rain than usual reduced it below the normal. The chief feature of the period was undoubtedly the very high temperature in North and East Bengal and Assam. The following gives the greatest excess of temperature in North-Eastern India and also in North-Western and Central India on each day from the 1st to the 8th, with the name of the station at which it was recorded :—

DATE.	NORTH-EASTERN INDIA.		NORTH-WESTERN INDIA.	
	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.
		°		°
1st	Silchar	+5·9	Mooltan	+8·2
2nd	Silchar	+6·7	Mooltan	+9·0
3rd	Dhubri	+6·6	Rawalpindi	+8·2
4th	Silchar	+7·2	Mooltan	+5·8
5th	Dhubri	+7·3	Roorkee	+5·1
6th	Silchar	+7·6	Sutna	+5·0
7th	Dhubri	+7·8	Mooltan	+5·5
8th	Jalpaiguri	+6·9	Peshawar	+7·2

The preceding data show that the area of greatest excess of temperature in North-Eastern India during this period included Silchar and Dhubri, and in North-Western India it was during the greater part of the time in the West Punjab.

Very large and unusual pressure changes occurred on the 8th and 9th which reduced pressure very considerably below the normal in North-Western India. The increased gradients caused winds to strengthen rapidly in the coast districts and more especially in Orissa and South Bengal. The humid winds in Bengal gave daily thunderstorms from the 8th to the end of the month in Assam and East and North Bengal and hence temperature fell below the normal in those areas and continued below it during nearly the whole of the remainder of the month, the amount and extent of the deficiency depending from day to day upon the distribution of the rainfall.

Temperature was during the period from the 8th to the 12th, more or less in excess over the whole of India with the exception of the North Bombay districts and Burma, Assam and the greater part of Bengal. The variations were not large except in the Punjab and the North-Western Provinces, where temperature was most in excess during this period. The following gives variation data of the 12th in illustration :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
Burma	−1·5	+1·0	−0·3
Bengal and Assam	+1·0	+1·9	+1·5
North-Western Provinces and Oudh	+2·2	+2·5	+2·4
Punjab	+1·1	+2·8	+2·0
Sind and Rajputana	−1·2	+2·2	+0·5
Central India and Gujarat	−2·0	+1·0	−0·5
Central Provinces and Berar	−0·1	+3·2	+1·6
Bombay	0·5	−0·7	−0·1
Madras	+1·9	+0·8	+1·4

The very large fall of pressure in the North Punjab on the 8th caused a large downrush of air from the neighbouring Afghan plateau or hills. This descending air was, by the act of descent, very largely heated above the normal temperature of the air in the Punjab plains and hence the 9th and following days were unusually hot over the North and West Punjab. This effect was most strongly exhibited in the Peshawar valley on the 8th and 9th. The following gives temperature variation data of Peshawar from the 6th to the 11th in illustration :—

DATE.	Average hourly wind velocity during 24 hours preceding 8 A.M. of date.	VARIATION FROM NORMAL OF			Lowest humidity.	Cloud 8 A.M.
		Maximum temperature.	Minimum temperature.	Mean temperature.		
	Miles.	°	°	°	%	
6th	2	+6·5	−4·4	+1·1	15	0
7th	2	+4·9	−1·1	+1·9	13	0
8th	5	+10·0	+4·3	+7·2	10	0
9th	13	+12·8	+16·3	+14·6	8	0
10th	7	+10·2	+4·9	+7·6	16	9
11th	2	+6·7	+5·0	+5·9	31	9

The increase of temperature at Peshawar was hence shown most strongly on the 9th when strong and very dry westerly winds were blowing and was even more marked

in the night than the day temperature. The conditions under which it occurred are shown fully by the wind, cloud and humidity data given in the table.

Pressure on the 10th, 11th and 12th increased very irregularly, and these changes gave rise to a very abnormal and persistent distribution of pressure. From the 13th to the 28th there was a very large relative deficiency of pressure in the submontane districts of Bihar and the North-Western Provinces and a considerable excess in Western India.

This distribution gave stronger winds on the Bengal coast, but they were directed chiefly to Assam and North and East Bengal which hence received more frequent thundershowers than usual and enjoyed a comparatively low temperature. Strong westerly hot and dry land winds prevailed over the whole of the Gangetic Plain and extended into West Bengal where temperature was hence largely above the normal during the whole period. The sea-winds in the West coast districts were also stronger than usual and hence gave a lower temperature in the North Bombay districts and West Deccan than usual. The westerly winds in the Deccan, however, extended across to the Madras coast districts and displaced the sea breezes usually prevailing there in May The features of this period from the 12th to the 28th were hence very broadly marked. The most important of these abnormal conditions were:

(1) Excessively high temperature in West Bengal, Bihar and Chota Nagpur, and diminished temparature in East Bengal and Assam. The following gives the greatest excess and deficiency of temperature in these two areas on each day from the 16th to the 28th:—

Date.	Area of increased temperature, West Bengal, Chota Nagpur and Bihar.		Area of decreased temperature, East Bengal and Assam.	
	Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.	Station.	Variation from norm a of mean temperature of 24 hours preceding 8 A.M. of date.
		°		°
16th	Patna	+ 6·7	Sibsagar	− 2·7
17th	Burdwan	+ 7·1	Mymensingh	− 1·3
18th	Calcutta	+ 7·1		
19th	Berhampore	+ 7·8	Silchar	− 4·2
20th	Patna	+ 7·5	Sibsagar	− 3·0
21st	Patna	+ 7·7	Silchar	− 3·5
22nd	Patna	+ 8·0	Sibsagar	− 7·0
	Dinajpur	+ 8·6		
23rd	Chaibassa	+ 8·3	Sibsagar	− 8·0
24th	Berhampore	+ 8·4	Silchar	− 7·9
25th	Chaibassa	+ 10·7	Sibsagar	− 8·3
26th	Chaibassa	+ 12·6	Sibsagar	− 9·1
	Berhampore	+ 10·7	Silchar	− 7·9
	Patna	+ 10·3		
27th	Berhampore	+ 11·4	Sibsagar	− 10·2
	Chaibassa	+ 11·2	Silchar	− 7·5
	Burdwan	+ 10·5		
28th	Chaibassa	+ 13·9	Silchar	− 8·0
	Hazaribagh	+ 10·4	Sibsagar	− 6·9

The preceding data show that the conditions were remarkably persistent throughout the whole period, and that the contrast between the excessive temperature of West Bengal and low temperature of Assam and East Bengal was most strongly exhibited on the 26th, 27th and 28th, for which data are given for several stations.

(2) Much higher temperature than usual in the Madras coast districts, although temperature was on the whole lower than usual in the Deccan districts from which the winds that gave increased temperature in the coast districts were blowing. The following data establish this contrast for the period the 17th to the 24th:—

Date.	Area of increased temperature, Madras.		Area of decreased temperature, Deccan.	
	Station.	Variation of mean temperature of 24 hours preceding 8 A.M. of date.	Station.	Variation o f mean temperature of 24 hours preceding 8 A.M. of date.
		°		°
17th	Madras	+ 6·4	Bangalore	− 0·1
	Masulipatam	+ 6·2		
18th	Cocanada	+ 8·2	Kurnool	− 0·6
	Madras	+ 3·9	Bangalore	− 0·7
19th	Cocanada	+ 5·2	Bangalore	− 0·3
	Masulipatam	+ 6·0		
20th	Cocanada	+ 5·1	Bellary	− 4·4
21st	Cocanada	+ 5·8	Bellary	− 4·0
	Masulipatam	+ 3·9	Bangalore	− 1·4
22nd	Masulipatam	+ 4·9	Kurnool	− 2·2
23rd	Cocanada	+ 2·8	Kurnool	− 3·4
			Bellary	− 3·1
24th	Negapatam	+ 1·8	Bellary	− 6·4

The temperature variations over the remainder of India were much smaller than in the areas for which data are given above. The following gives mean temperature variation data for every third day from the 13th to the 28th. They represent fairly the temperature conditions in all provinces except Bengal, where the excessive temperature in one half of the province was partially compensated by the deficient temperature in the other half:—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.					
	13th.	16th.	19th.	22nd.	25th.	28th.
	°	°	°	°	°	°
Burma	+ 0·2	− 0·3	− 1·6	− 0·9	− 2·6	− 4·1
Bengal and Assam	+ 1·8	+ 3·4	+ 3·6	+ 3·5	+ 2·2	+ 3·6
N.-W. Provinces and Oudh	+ 4·2	+ 3·0	+ 3·9	+ 1·2	+ 4·6	+ 5·2
Punjab	+ 1·9	+ 1·6	+ 1·0	+ 1·4	+ 2·8	+ 1·8
Sind and Rajputana	+ 0·5	− 1·1	− 1·2	+ 0·2	+ 2·2	+ 2·8
Central India and Gujarat	− 1·1	− 1·8	− 0·8	− 1·1	+ 1·9	+ 1·1
Central Provinces and Berar	+ 1·1	+ 0·2	+ 0·4	+ 0·2	+ 2·8	+ 2·9
Bombay	+ 0·1	+ 0·1	+ 0·3	− 0·5	+ 0·8	+ 1·3
Madras	+ 2·1	+ 2·3	+ 1·8	− 0·3	+ 0·2	+ 2·0

On the 29th and two following days the pressure conditions changed in North-Eastern India, and easterly winds extended across Chota Nagpur into Bihar reducing temperature very largely. The chief effect of this was to transfer the area of greatest excess of temperature westwards into the eastern districts of the Central Provinces. The following data for the 29th, 30th, and 31st, similar in character to those given in a preceding table, illustrate this change :—

Date.	Area of increased temperature.		Area of decreased temperature.	
	Station.	Variation from normal of mean temperature.	Station.	Variation from normal of mean temperature.
		°		°
29th	Chaibassa	+12·8	Sibsagar	−10·7
			Silchar	− 7·5
30th	Chaibassa	+11·2	Silchar	− 8·3
	Sambalpur	+ 8·0	Dhubri	− 6·2
31st	Sambalpur	+ 8·4	Dhubri	− 1·4
	Chaibassa	+ 4·2		

The transfer of the eastern portion of the trough of low pressure southwards intensified the westerly winds in the Deccan and gave a short period of great heat on the 30th and following days in the Madras coast districts. The following data illustrate this change :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.				
	27th.	28th.	29th.	30th.	31st.
	°	°	°	°	°
Vizagapatam	−0·4	+0·4	+0·7	+0·6	+0·9
Masulipatam	−0·9	+5·1	+3·0	+1·5	+8·4
Madras	+0·1	+2·1	+2·5	+4·6	+5·8

The following gives temperature variation data for the last day of the month :—

Meteorological Province.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	−1·3	−1·7	−1·5
Bengal and Assam	+0·9	+0·8	+0·9
N.-W. Provinces and Oudh	+2·8	+2·4	+2·6
Punjab	+0·8	−0·4	+0·2
Sind and Rajputana	−0·1	+0·2	+0·1
Central India and Gujarat	+1·2	−1·5	−0·2
Central Provinces and Berar	+5·0	−0·4	+2·3
Bombay	+4·1	+1·7	+2·9
Madras	+6·7	+2·9	+4·8

The following gives data of the highest maximum temperatures recorded during the period in Upper India, and in the areas of greatest excess of temperature in North-Eastern India and the Madras coast districts, and the highest maximum temperatures previously recorded in May at these stations for comparison :—

Station.	Highest maximum temperature recorded in May 1894.	Date on which recorded.	Highest maximum temperature recorded in May previous to 1894.	Year in which recorded.
	°		°	
Jacobabad	120·0	29th	123·0	1888
Mooltan	114·5	27th and 29th	120·3	1890
Pachpadra	119·5	9th	123·1	1886
Rajahmundry	114·1	31st	116·1	1892
Nellore	113·8	31st	115·7	1892
Masulipatam	114·7	31st	114·7	1892
Khamamet	114·7	31st	115·2	1892
Sambalpur	116·5	30th	114·5	1886
Chanda	115·4	30th	116·6	1879 and 1889
Patna	114·1	27th	113·8	1874
Chaibassa	117·8	29th	116·0	1884
Gaya	114·1	28th	116·0	1884
Balasore	111·0	27th	107·5	1889 and 1892
Midnapore	117·4	29th	114·4	1889
Bankura	117·1	28th	115·1	1889
Calcutta	104·9	18th	105·3	1879

The hottest period of the month was during the last week from the 27th to the 31st. In consequence of the peculiar conditions of the period the highest temperatures in what is normally the hottest part of India in May (*i.e.*, Upper Sind, the South-West Punjab and West Rajputana) were not so high as are frequently experienced in May, whereas in the areas of abnormal excess of temperature including the Madras coast districts, West Bengal, South Bihar and Chota Nagpur, very high maximum temperatures were recorded which in a few cases, *e.g.*, Patna, Balasore, Midnapore and Bankura were higher than have been previously recorded.

The following table gives the variation of the mean temperature week by week during the month. The data are taken from the weekly weather reviews published in the *Gazette of India* :—

Division.	Variation from normal of mean temperature for week ending					
	5th May.	12th May.	19th May.	26th May.	2nd June.	For whole month.
	°	°	°	°	°	
Burma	−2·3	−2·5	−0·6	−1·7	−2·2	−1·9
Bengal and Assam	+2·2	+1·4	+3·1	+2·8	+1·5	+2·3
North-Western Provinces and Oudh.	−0·3	+1·9	+3·7	+3·3	+3·7	+2·9
Punjab	+2·4	+3·0	+2·2	+2·8	+2·0	+3·3
Sind and Rajputana	+1·0	+1·9	−0·8	+0·8	+1·7	+1·1
Central India and Gujarat	−0·6	+1·2	−1·3	+0·2	+0·9	+0·1
Central Provinces and Berar	−0·9	+1·3	+0·2	+1·2	+3·4	+1·3
Bombay	−1·0	+0·1	−0·1	+0·2	+2·2	+0·2
Madras	−1·5	+0·4	+2·2	+0·2	+3·2	+0·7

Winds.

Winds were more steady, but weaker than usual at Port Blair and the Burma stations. They were on the average of the month more westerly at Port Blair and Rangoon, and less westerly at Diamond Island and Akyab. Winds were remarkably steady and very much stronger than usual in Bengal and Orissa. The following gives data for four stations:—

Station.	Velocity in miles per diem.			Steadiness.		
	Mean actual, May 1894.	Normal, May.	Percentage variation.	Actual percentage, May 1894.	Normal percentage, May.	Variation.
False Point	403	324	+24	90	71	+19
Saugor Island	558	367	+52	90	69	+21
Calcutta	214	172	+24	84	66	+18
Chittagong	208	153	+36	52	38	+14

As might be expected from the abnormal pressure features of the last fortnight of the month, winds were more westerly than usual over the whole of Bengal and Orissa, with the exception of Saugor Island and False Point, where winds almost invariably show an opposite deflection to that of the inland stations. The following data illustrate this:—

Station.	Wind Direction.		
	Mean, May 1894.	Normal, May.	Variation westerly.
False Point	S 17° W	S 31° W	−14°
Saugor Island	S 1° E	S 2° W	−13°
Cuttack	S12° W	S 5° W	+ 7°
Chittagong	S 15° W	S	+15°
Calcutta	S 22° W	S 11° E	+33°
Berhampore	S 7° E	S 36° E	+29°

Winds were largely above their normal strength in Bihar, Chota Nagpur and the North-Western Provinces and were also remarkably steady. The following gives mean data for these areas as well as for Bengal, showing the increased air movement:—

Province.	Velocity in miles per diem.		
	Mean actual, May 1894.	Normal, May.	Percentage variation.
Bengal	250	184	+36
Orissa	273	225	+21
Bihar	167	132	+27
Chota Nagpur	262	210	+25
North-West Provinces	108	88	+23
Punjab	72	80	−10

Easterly winds usually extend across the northern districts of Bihar into the eastern districts of the North-Western Provinces and give a well marked easterly component to the wind direction. In the present month this influence only extended westwards as far as Bihar. The following gives data for stations in these two areas and also for Hazaribagh and Sutna:—

Station.	Wind direction.		Steadiness.		
	Mean, May 1894.	Normal, May.	Actual percentage, May 1894	Normal percentage, May.	Variation.
	°	°			
Darbhanga	S 70 E	S 86 E	60	59	+ 1
Patna	N 26 E	N 54 E	31	38	− 7
Allahabad	N 46 W	N 8 E	58	20	+38
Lucknow	S 64 W	N 15 E	3	15	−12
Hazaribagh	N 80 W	S 77 W	32	15	+17
Sutna	N 64 W	N 50 W	77	52	+25

Winds were on the whole normal in strength and steadiness in the Punjab and Sind and present no unusual features.

Winds were, on the other hand, much stronger and steadier and more directly from the west in Rajputana and Central India. The following data for three stations illustrate two of these features:—

Station.	Velocity in miles per diem.			Wind direction.		
	Mean actual, May 1894.	Normal, May.	Percentage variation.	Mean, May 1894.	Normal, May.	Variation westerly.
				°	°	°
Ajmere	332	181	+83	S 87 W	S 60 W	+27
Deesa	345	321	+ 7	S 77 W	S 55 W	+22
Nowgong	159	81	+96	N 88 W	N 70 W	+18

Similar features characterized the winds in Berar, the Central Provinces and the Deccan, as is shown by the data of the following stations:—

Station.	Velocity in miles per diem.			Wind direction.		
	Mean actual, May 1894.	Normal, May.	Percentage variation	Mean, May 1894.	Normal, May.	Variation westerly.
				°	°	°
Akola	308	208	+48	N 54 W	N 51 W	+ 3
Nagpur	239	168	+42	N 56 W	N 41 W	+15
Poona	342	337	+ 1	N 74 W	N 55 W	+19
Bellary	205	200	+ 3	N 71 W	N 76 W	− 5

The increased air movement in this area was hence most strongly shown in Berar and the Central Provinces.

Winds were less steady at Bombay, but more steady at Ratnagiri and Karwar. They were slightly more northerly than usual and were practically normal in strength. Winds were lighter than usual in Southern India, so far as that area is represented by the stations of Salem, Trichinopoly and Madras, and were also on the whole less steady. The following gives data for these three stations, where the mean winds of the month differed little in direction from the normal :—

Station.	Velocity in miles per diem.			Steadiness.		
	Mean actual, May 1894.	Normal, May.	Percentage variation.	Actual, percentage, May 1894.	Normal percentage, May.	Variation.
Madras	211	220	− 4	47	66	−19
Trichinopoly	109	145	−25	68	59	+ 9
Salem	81	100	−19	48	61	−13

The air movement of the month was unusually vigorous at all the hill stations in Northern and Central India and was also much steadier than usual. Winds were normal in direction, except at Simla, where northerly winds prevailed to an unusual extent, and at Murree, where westerly winds were more frequent than usual. The following gives data showing the increased velocity of the air motion at the hill stations :—

Station.	Velocity in miles per diem.		
	Mean actual, May 1894.	Normal, May.	Percentage, variation.
Murree	217	193	+12
Chakrata	200	147	+36
Ranikhet	130	87	+49
Darjeeling	200	149	+34
Mount Abu	351	231	+52
Pachmarhi	235	164	+43

The chief features of the mean air movement in India during the month of May were as follows :—

(1) Slightly lighter but steadier winds than usual in Burma and at Port Blair.

(2) Much stronger and steadier winds in Bengal and the Gangetic Plain. Winds were more westerly than usual in the interior and more especially in Bengal, but were less westerly at the coast stations of Saugor Island and False Point.

(3) Winds were slightly weaker than usual in the Punjab.

(4) Winds were much stronger in Rajputana, Central India, Kathiawar and Gujarat, and were even more directly from the west than usual.

(5) Winds were much stronger in the Central Provinces, Berar and the West Deccan and were probably normal in the South or Madras Deccan.

(6) Winds were somewhat lighter than usual in the Bombay and Madras coast districts.

The peculiar features of the air movement of the month were hence strictly related to the abnormal temperature and pressure conditions of the month.

Humidity and Cloud.

There was on the whole somewhat more aqueous vapour in the air on the average of the month in Burma, Assam and East Bengal, and humidity was above the normal to a moderate extent, as temperature was below the mean of the month in these districts. The mean humidity of the month was 8 in excess at Rangoon, 7 at Diamond Island, 6 at Akyab and 3 at Chittagong and Sibsagar.

The air was much drier than usual and the relative humidity considerably below the normal over the whole of West Bengal, Chota Nagpur, Bihar, the North-Western Provinces and the Punjab, in which the dry westerly winds of the hot weather prevailed more strongly and steadily than usual. The following gives comparative data :—

Division.	Absolute Humidity.			Relative Humidity.		
	Actual.	Normal.	Variation.	Actual.	Normal.	Variation.
	"	"	"			
West Bengal	·801	·808	−·007	61	69	−8
Orissa	·926	·897	+·029	69	74	−5
Chota Nagpur	·405	·472	−·067	30	40	−10
Bihar	·690	·722	−·032	53	58	−5
North-Western Provinces and Oudh.	·446	·498	−·052	30	37	−7
Punjab	·500	·480	+·020	37	40	−3

The relative humidity of the month was 10 or upwards in defect at Lucknow (—13), Patna (—12), and Hazaribagh and Meerut (—10). The deficiency was also as large at the lower hill stations in Northern India as at the plain stations, but was due chiefly to increased temperature. The mean humidity percentage of the month was 14 below the normal at Ranikhet, 13 at Chakrata and 11 at Murree. The deficiency decreased in amount in proceeding into the interior of the hills and at the high level stations of Kailang and Leh the humidity was in slight excess.

Humidity was practically normal in the west coast districts from Sind to Malabar and also in the West Deccan, Khandesh and South-West Rajputana, due to the unusual strength of the westerly winds of the month. The following gives data for six representative stations :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual.	Normal.	Variation.	Actual.	Normal.	Variation.
	"	"	"			
Kurrachee	·896	·881	+·015	72	73	—1
Deesa	·518	·584	—·066	41	39	+2
Sholapur	·453	·464	—·011	36	36	0
Poona	·500	·510	—·010	46	43	+3
Bombay	·835	·881	—·046	70	74	—4
Karwar	·860	·853	+·007	73	74	—1

The air was, on the other hand, much drier in the Central Provinces, South Deccan and Madras coast districts, as is shown by the following data for five representative stations :—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual.	Normal.	Variation.	Actual.	Normal.	Variation.
	"	"	"			
Nagpur	·376	·428	—·052	23	28	—5
Raipur	·413	·471	—·058	25	33	—8
Salem	·708	·769	—·061	58	64	—6
Trichinopoly	·673	·738	—·065	50	57	—7
Madras	·919	·870	+·049	67	69	—2

The abnormal pressure conditions during the greater part of the month gave an unusual extension of hot dry land winds over nearly the whole of Northern and Central India and remarkably low humidities were frequently registered, more especially between the 1st and the 8th in Northern India, the 14th and 17th in West and Central Bengal, and the 24th and 29th in Northern and Central India generally. The following gives some of the more remarkable humidity percentages recorded in each of these periods :—

Date.	Hour.	Station.	Humidity.
1st	4 P.M.	Burdwan	19
"	"	Hazaribagh	9
"	"	Allahabad	7
"	"	Lucknow	6
"	"	Nowgong	5
2nd	"	Lucknow	6
4th	"	Khandwa	7
5th	"	Khandwa	7
"	"	Jacobabad	7
6th	"	Deesa	5
"	"	Saugor	5
7th	"	Deesa	5
"	"	Khandwa	7
8th	"	Nowgong	4
"	"	Deesa	4
"	"	Peshawar	10
12th	"	Jacobabad	5
14th	"	Burdwan	18
16th	"	Burdwan	16
25th	10 A.M.	Jacobabad	8
"	4 P.M.	Saugor	8
"	"	Lucknow	8
"	"	Patna	9
"	"	Berhampore	16
26th	10 A.M.	Jacobabad	7
"	4 P.M.	Saugor	9
"	"	Lucknow	7
"	"	Patna	8
27th	10 A.M.	Peshawar	7
"	4 P.M.	Hazaribagh	8
"	"	Berhampore	14
"	"	Roorkee	5
28th	"	Roorkee	4
"	"	Lucknow	9
29th	"	Roorkee	8

The minimum humidity of the day ranged between 7 and 15 at a large number of stations in the Gangetic Plain during the last dry period of the month.

The chief features of the mean humidity conditions of the month were :—

(1) The air was slightly damper and contained more aqueous vapour than usual in Burma, East Bengal and Assam, but the variations were small.

(2) The air was much drier than usual over nearly the whole of the interior of India, including West and North Bengal, Bihar, Chota Nagpur, the North-Western Provinces, the Punjab, East Rajputana, Central India, Berar, the Central Provinces and the Deccan generally. The deficiency was on the whole most marked in Chota Nagpur and West Bengal, and at the hill stations in Upper India.

(3) The air was also much drier in the Madras coast districts.

(4) The air was slightly damper in Lower Sind, Kathiawar, South-West Rajputana and at some stations in the West Deccan and Mysore.

Skies were more clouded than usual in Burma, Assam and East Bengal and at the Bengal and Orissa coast stations. The following gives data :—

Division or Station.	Mean cloud amount.		
	Actual, May 1894.	Normal May.	Variation from normal.
Burma	7·6	5·8	+1·8
Assam	6·5	6·2	+0·3
East Bengal	5·9	5·2	+0·7
False Point	5·6	4·5	+1·1
Saugor Island	6·6	5·5	+1·1

Over the whole of Northern India, with the exceptions named above, and also in Central India, the cloud amount was more or less considerably below the normal of the month. The following gives data in illustration :—

Division.	Mean cloud amount.		
	Actual, May 1894.	Normal May.	Variation from normal.
West Bengal	3·8	4·7	—0·9
Chota Nagpur	3·0	3·4	—0·4
Bihar	0·7	2·4	—1·7
North-Western Provinces and Oudh	1·1	1·8	—0·7
Punjab	1·5	2·1	—0·6
Upper Sind	0·3	1·2	—0·9
Rajputana	1·0	1·7	—0·7
Central India	1·5	2·8	—1·3
Central Provinces	2·2	2·8	—0·6

Over a considerable part of that area, including Bihar and the Eastern districts of the North-Western Provinces, Upper Sind, West and Central Rajputana and the South-West Punjab, the mean cloud amount was less than 1·0.

The following gives cloud data for stations in these areas :—

Province.	Station.	Mean cloud amount.		
		Actual.	Normal	Variation of actual from normal.
(South-West) Punjab	Mooltan	0	1·1	—1·1
Upper Sind	Jacobabad	0·3	1·2	—0·9
Bihar	Patna	0·4	2·7	—2·3
	Darbhanga	0·9	2·0	—1·1
North-Western Provinces (East).	Ghazipur	0·5	1·3	—0·8
	Allahabad	0·9	1·6	—0·7
Rajputana	Ajmere	0·7	1·6	—0·9
	Deesa	0·7	1·5	—0·8
	Mount Abu	0·2	1·6	—1·4

The amount of cloud was generally in defect in the Peninsula, but to a less extent than in Northern India. There were a few local exceptions, chiefly in the Bombay Deccan. Thus at Belgaum the mean cloud amount of the month was 0·3 in excess and at Sholapur it was 0·2 in excess. The following gives data for the large divisions of the Peninsula :—

Division.	Mean cloud amount.		
	Actual	Normal	Variation from normal.
Deccan	2·4	2·9	—0·5
West Coast	3·0	3·7	—0·7
South India	4·1	4·9	—0·8

The cloud amount was about as largely in defect at the hill stations in North-Eastern India and Central India as at the adjacent plain stations.

The chief features of the mean cloud distribution of the month were :—

(1) There was slightly more cloud than usual in Burma, Assam, East Bengal and the Orissa and South Bengal coast districts.

(2) There was also somewhat more cloud than usual in the areas affected by the strong sea winds of the month in the North Bombay coast districts, including Lower Sind, Cutch and Kathiawar.

(3) There was less cloud than usual over the remainder of India, the deficiency being on the whole largest in Bihar.

Rainfall.

The rainfall of the month of May is usually small in amount, and of little economic importance over by far the greater part of the country, including the Punjab, Rajputana, the North-Western Provinces, Central India, Berar the Central Provinces, the North Deccan and North Bombay. Moderate to heavy rain is usually received in three areas :

1st.—Bengal and Assam.

2nd.—Lower Burma and Tenasserim.

3rd.—Southern India, more especially Malabar.

The rainfall in the first of these areas is due to frequent thundershowers which are heaviest and most frequent in East Bengal and Assam and the northern districts of North Bengal. The average rainfall of the month in Bengal proper ranges from 2 inches in the western districts to 10 inches at Mymensingh in East Bengal, and 14 inches at Kuch Bihar in North Bengal. In Assam it ranges from 9 inches in the Central Assam valley districts to 73 inches at Cherrapunji.

In the second and third areas the rainfall in the earlier part of the month is usually due to thundershowers, and in the latter part to the advance of south-west monsoon winds, which usually begin to give rain in Malabar and

Tenasserim in the third or fourth week of May. The average rainfall in Malabar in May is 9 inches, and in Tenasserim about 14 inches.

The rainfall of the month of May 1894 was below the normal over the whole of India with the exception of Burma, East Bengal and Assam. The rainfall of the month averaged less than a tenth of an inch, and was hence actually or practically *nil*, in Baluchistan, Sind, Kathiawar, Khandesh, Gujarat, Berar, the Central Provinces, Central India, the greater part of Rajputana and the North-Western Provinces, and the West Punjab. The rainfall in the remaining districts occurred chiefly during thunderstorms, and was even more irregularly distributed than usual. In Upper India the periods of disturbance and thunderstorms were the 11th and 12th, the 15th to 18th, and the 22nd and 23rd. In Bengal they were from the 8th to the 13th and from the 20th to the end of the month in East and North Bengal and Assam. In Madras the chief periods were the 1st to 4th, the 12th and 13th, the 18th to 21st and the 23rd to 26th.

The following table gives comparative rainfall data for the 51 meteorological divisions of India.

Province.	Division.	Rainy Days. Actual, May 1894.	Rainy Days. Normal, May.	Rainfall. Actual, May 1894.	Rainfall. Normal, May.	Rainfall. Variation from Normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	34·11	20·83	+13·28
	Lower Burma*	?	?	16·48	12·00	+4·48
	Central do.*	?	?	9·29	8·27	+1·02
	Upper do.*	?	?	6·02	?	?
	Arakan*	?	?	15·54	20·34	—4·80
Bengal and Assam	Eastern Bengal	11·6	10·9	11·41	9·36	+2·05
	Assam (Surma)	19·0	16·3	25·80	17·82	+7·98
	Do. (Brahmaputra)	17·0	15·0	16·32	11·76	+4·56
	Deltaic Bengal	5·2	8·0	3·46	6·20	—2·74
	Central do.	4·3	6·9	2·66	5·02	—2·36
	North do.	10·8	10·8	9·33	10·20	—0·87
	Orissa	1·4	5·7	0·60	3·76	—3·16
	Chota Nagpur	1·4	4·2	0·66	2·33	—1·67
	Bihar (South)	0·9	2·6	0·38	1·81	—1·43
	Do. (North)	1·7	4·1	0·92	3·11	—2·19
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·1	1·0	0·03	0·52	—0·49
	Do. do. (Submontane)	0·7	2·3	0·21	1·34	—1·13
	Oudh (South)	0·3	1·2	0·09	0·57	—0·48
	Do. (North)	0·1	1·8	0·03	0·95	—0·92
	North-Western Provinces (Central)	0·3	1·0	0·08	0·40	—0·32
	Do. do. (West)	0·5	1·0	0·14	0·41	—0·27
Punjab	Punjab (South)	0·6	1·1	0·17	0·48	—0·31
	Do. (Central)	0·8	1·5	0·27	0·65	—0·38
	Do. (Submontane)	1·2	1·9	0·32	0·85	—0·53
	Do. (Hill Districts)	4·1	5·3	2·00	2·66	—0·66
	Do. (North-West)	1·6	2·0	0·49	1·05	—0·56
	Do. (West)	0·2	1·1	0·07	0·50	—0·43
Bombay and Malabar Coast Districts (Madras).	Malabar	4·3	8·2	3·19	7·17	—3·98
	Madras (South Central)	6·9	5·9	3·93	4·03	—0·10
	Coorg	6·4	?	2·74	?	?
	Mysore*	?	?	3·46	3·48	—0·02
	Konkan	0·5	2·4	0·21	1·72	—1·51
	Bombay Deccan	2·8	3·5	1·51	1·83	—0·32
	Khandesh	0·2	1·7	0·07	1·07	—1·00
Central Provinces and	Berar	0·3	?	0·05	?	?
	Central Provinces (West)	0·1	1·0	0·06	0·48	—0·42
	Do. (Central)	0·1	1·3	0·04	0·57	—0·53
	Do. (East)	0·3	1·6	0·09	0·85	—0·76
Bombay (North)	Gujarat	0·2	0·5	0·06	0·30	—0·24
	Kathiawar	0·2	0·4	0·09	0·24	—0·15
	Sind	0	?	0	0·11	—0·11
Rajputana and Central India.	Central India (East)	0	?	0·02	0·40	—0·38
	Rajputana (East) and Central India (West)	0·5	?	0·18	0·59	—0·41
	Rajputana (West)	0·2	?	0·10	0·50	—0·40
Madras	East Coast (North)	2·0	3·4	0·93	2·29	—1·36
	Do. (do.) (a)	4·5	5·3	2·16	2·98	—0·82
	Hyderabad (South)*	?	?	0·99	2·06	—1·07
	Madras (Central)	3·0	3·0	1·48	1·89	—0·41
	East Coast (Central)	1·4	1·8	0·49	1·66	—1·17
	East Coast (South)	2·3	3·4	1·17	3·22	—2·05
	Madras (South)	2·4	3·4	1·38	2·10	—0·72

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

Rain fell more frequently than usual in Assam and the rainfall of the month was in considerable excess. The following gives comparative data based on the complete rainfall returns for the month published in the *Assam Gazette*:—

Division.	Number of rainy days.		Rainfall.		
	Mean actual.	Variation from normal.	Mean actual.	Normal.	Percentage variation from normal.
			Inches.	Inches.	
Surma . .	19·0	+2·7	25·80	17·82	+45
Brahmaputra .	17·0	+2·0	16·32	11·70	+39

Burma received steady and almost daily rain during the month. The chief periods of rainfall as indicated by the data published in the Daily Weather Reports of the period were: the 1st to the 9th, the 16th to the 24th and the 27th to the end of the month. The rainfall of the month was very largely in excess in Tenasserim (64 per cent.) and in moderate excess in Burma, the amount decreasing absolutely as well as relatively to the normal from the coast districts to Upper Burma. It was in moderate defect in Arakan (24 per cent.). The following table gives comparative data:—

Division.	Number of rainy days.		Rainfall.		
	Mean actual.	Variation from normal.	Mean actual.	Normal.	Percentage variation from normal.
			Inches.	Inches.	
Tenasserim .	?	?	34·11	20·83	+64
Lower Burma .	?	?	16·48	12·00	+37
Central Burma .	?	?	9·29	8·27	+12
Upper Burma .	?	?	6·02	?	?
Arakan . .	?	?	15·54	20·34	−24

Baluchistan, Sind and the greater part of Rajputana and Central India received no rain during the month. Kashmir obtained occasional showers, the most general rainfall occurring between the 12th and 15th. The rainfall of the month was probably considerably above the normal. This was especially the case at Leh, which received 1·2 inches, during the month or eleven times the normal fall of the month.

The Punjab received local showers, chiefly in the eastern and northern districts, during three periods of slight disturbance, *viz.*, the 11th and 12th, the 14th to the 17th, and the 22nd and 23rd. During the second period the hill districts of Simla and Kulu received moderately heavy rain. The rainfall of the month was below the normal in all districts, the percentage deficiency being small for the hill districts. The rainfall decreased in amount westwards to Jhang, Dera Ismail Khan, Dera Ghazi Khan, Muzaffargarh, Mooltan, and Montgomery, which were rainless during the month. The following gives a summary of the rainfall data of the month:—

Division.	Rainy days.			Rainfall.		
	Actual.	Normal.	Variation from normal.	Actual.	Normal.	Variation from normal.
				Inches.	Inches.	Inches
Punjab, South .	0·6	1·1	−0·5	0·17	0·48	−0·31
„ Central .	0·8	1·5	−0·7	0·27	0·65	−0·38
„ Submontane	1·2	1·9	−0·7	0·32	0.85	−0·53
„ Hills .	4·1	5·3	−1·2	2·00	2·66	−0·66
„ North-West	1·6	2·0	−0·4	0·49	1·05	−0·56
„ West .	0·2	1·1	−0·9	0·07	0·50	−0·43

Jeypore and Ajmere in Rajputana had light showers between the 18th and 21st; but the amounts were small and unimportant.

Light showers were received in the North-Western Provinces, chiefly on the 6th, 7th and 11th. The greater part of the province was rainless during the month, and the rainfall was in defect in all divisions by amounts ranging from three-tenths of an inch (or 80 per cent.) in the central districts to 0·92 inch (or 97 per cent.) in the northern districts, and to 1·13 inches (or 84 per cent.) in the submontane districts. Almora and Garhwal obtained frequent showers between the 5th and the 15th; but they were very light and the rainfall was only 30 per cent. of the normal of the month, and hence considerably in defect.

No rain fell in Berar, the Central Provinces and Hyderabad (Deccan).

Chota Nagpur and Bihar received light local showers between the 4th and 12th; but the rainfall was very irregularly distributed, and at many stations it was nil. Orissa had light showers, chiefly on the 20th and 21st. South-West Bengal obtained moderate and fairly general rain daily from thunderstorms between the 8th and 12th and again on the 31st. North and East Bengal received light occasional showers during the first week of the month and almost daily rain during the last three weeks of the month. The rainfall was heaviest and most general between the 8th and 13th, the 20th and 24th, and the 28th and the 31st. The following falls during thunderstorms, exceeding 4 inches, were recorded:—

Date.	District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
12th . .	Jalpaiguri . .	Alipur Duar . .	4·49
13th . .	Dinajpur . .	Dinajpur . .	4·47
21st . .	Chittagong . .	Kutubdia . .	4·98
22nd . .	Darjeeling . .	Buxa . . .	5·45
23rd . .	Chittagong . .	Chandpur . .	4·10
25th . .	Darjeeling . .	Buxa . . .	4·86
28th . .	Chittagong . .	Kutubdia . .	5·36
30th . .	Chittagong . .	Kutubdia . .	4·52

Rain fell even more frequently at Gnatong (elevation 11,000 feet) than in the North Bengal Plains or at Darjeeling. It received a total of 26·24 inches on 24 days during the month.

The rainfall of the month was practically normal in amount in North Bengal and in moderate excess in East Bengal, but was more or less considerably in defect over the remainder of the province, the percentage deficiency increasing westwards. The following gives a summary of the complete rainfall data of the month published in the *Calcutta Gazette*:—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, May 1894.	Normal, May.	Mean actual, May 1894.	Normal, May.	Variation from normal.
			"	"	"
Bengal (East) . .	11·6	10·9	11·41	9·36	+2·05
" (North) . .	10·8	10·8	9·33	10·20	−0·87
" (Central) . .	4·3	6·9	2·66	5·02	−2·36
" (Deltaic) . .	5·2	8·0	3·46	6·20	−2·74
Orissa	1·4	5·7	0·60	3·76	−3·16
Chota Nagpur . .	1·4	4·2	0·66	2·33	−1·67
North Bihar . .	1·7	4·1	0·92	3·11	−2·19
South " . .	0·9	2·6	0·38	1·81	−1·43

No rain fell in Sind and less than an average of a tenth of an inch in the Khandesh, Gujarat and Kathiawar divisions of the Bombay Presidency. The North Kanara districts of the Konkan obtained light showers at intervals, during the month, but the total fall was small, averaging barely an inch in amount. Practically no rain fell in the remaining districts of the Konkan. The Deccan districts received occasional rain from thunderstorms during the month. The chief periods of disturbance were, the 5th to the 7th, the 20th and 21st and the 24th to the 27th. The rainfall of the month was largest in the Southern districts of Dharwar and Belgaum in which it slightly exceeded 3 inches. The rainfall diminished in amount northwards to Poona and Sholapur, in which it averaged about three-tenths of an inch. The rainfall was in slight to moderate excess in the southern districts and was on the average in the whole area three-tenths of an inch or 18 per cent. below the normal. The following gives rainfall comparative data for the six meteorological divisions of the Bombay Presidency:—

Division.	Number of rainy days.			Rainfall.		
	Mean actual, May 1894.	Mean normal, May.	Variation from normal.	Mean actual, May 1894.	Mean normal, May.	Variation from normal.
				Inches.	Inches.	Inches.
Konkan . .	0·5	2·4	−1·9	0·21	1·72	−1·51
Bombay Deccan	2·8	3·5	−0·7	1·51	1·83	−0·32
Khandesh .	0·2	1·7	−1·5	0·07	1·07	−1·00
Gujarat . .	0·2	0·5	−0·3	0·06	0·30	−0·24
Kathiawar .	0·2	0·4	−0·2	0·09	0·24	−0·15
Sind . .	0	?	?	0	0·11	−0·11

In the Madras Presidency thunderstorms gave more or less frequent rain. The permanent advance of monsoon winds, which usually occurs in the last week of the month, was considerably delayed, and did not occur until the end of the first week of June. The rainfall was hence very considerably in defect in those areas which receive heavy rain during the monsoon, and hence more especially in Malabar, Canara and South Madras. The periods of most general rain due to local thunderstorms were the 3rd to the 6th, the 12th and 12th, the 18th to the 21st and the 28th to the 31st.

The following gives rainfall data for each of the 22 Collectorates of the Presidency:—

District.	Number of rainy days.		Rainfall.		
	Actual.	Normal.	Actual.	Normal.	Variation from normal.
			"	"	"
Ganjam . . .	2·2	4·1	0·98	2·57	−1·59
Vizagapatam . .	2·5	4·2	1·34	2·70	−1·36
Godavari . . .	0·2	2·8	0·86	2·00	−1·14
Kistna	1·2	2·6	0·37	1·73	−1·36
Nellore . . .	1·4	1·8	0·49	1·66	−1·17
Chingleput . . .	0·2	2·1	0·12	2·56	−2·44
Madras . . .	0	1·1	0	2·21	−2·21
North Arcot . . .	3·8	3·5	1·92	2·95	−1·03
South Arcot . . .	3·0	3·4	1·56	3·30	−1·74
Tanjore . . .	1·5	3·5	0·56	3·34	−2·78
Trichinopoly . . .	3·8	4·6	2·31	4·02	−1·71
Madura . . .	3·3	3·8	1·98	2·33	−0·35
Tinnevelly . . .	1·5	2·9	0·72	1·79	−1·07
Malabar . . .	5·9	9·0	4·64	8·39	−3·75
South Canara . .	1·4	7·1	0·62	5·40	−4·78
Salem . . .	7·7	6·2	4·27	4·31	−0·04
Coimbatore . . .	5·8	5·5	3·45	3·69	−0·24
Nilgiri	8·9	9·8	4·33	6·31	−1·98
Cuddapah . . .	2·6	2·8	1·25	1·92	−0·67
Anantapur . . .	3·0	3·2	1·42	2·39	−0·97
Bellary . . .	3·9	3·5	2·47	1·94	+0·53
Kurnool . . .	2·8	2·2	0·88	1·19	−0·31

Table

Abstract of Observations taken at 8 A.M. at 202 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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. Burma Coast and Bay Islands.		...	...	−·015	...	...	...	...	...	...	...	88·0	−3·1	76·0	−0·7	82·0	−1·9	12·0	...	...	...	...	20·2
Bay Islands	Port Blair	61	29·782	?	29·774	29·839	7th	29·670	31st	·169	81·7	86·6	?	77·7	?	82·2	?	8·9	90·1	1st	74·1	31st	16·0
	Camorta	?																					
Tenasserim	Mergui	96	29·787	?	29·815	29·872	21st	29·688	25th	·184	80·8	87·1	?	74·0	?	80·6	?	13·1	90·4	26th	70·1	16th	20·3
	Tavoy	26	29·855	?	29·812	29·918	22nd	29·757	14th	·161	78·9	86·5	?	73·8	?	80·2	?	12·7	90·7	2 days	71·7	10th	19·0
	Moulmein	94			Not r	ecorded.					78·1	86·6	−3·4	74·8	−0·9	80·7	−2·2	11·8	91·5	5th	71·8	18th	19·7
	Toungoo	181	29·628	−·017	29·752	29·719	3rd	29·500	13th	·219	80·5	91·8	−4·4	75·7	−0·7	83·8	−2·6	16·1	97·7	16th	72·2	2 days	25·5
Lower Burma	Rangoon	41	29·787	−·027?	29·765	29·864	2nd	29·677	16th	·187	78·7	88·2	−4·3	76·3	−0·9	82·3	−2·6	11·9	92·2	14th	73·9	2 days	18·3
	Bassein	27	29·803	−·010	29·765	29·882	3rd	29·700	14th	·182	79·9	89·1	−2·9	75·6	−1·3	82·4	−2·1	13·5	93·2	13th	70·9	28th	22·3
	Diamond Island	41	29·790	−·012	29·766	29·858	2 days	29·705	14th	·153	82·9	86·5	−2·5	79·1	+0·6	82·8	−1·0	7·4	88·6	4 days	73·4	29th	15·2
Arakan	Akyab	20	29·776	−·020	29·739	29·875	3rd	29·635	31st	·240	81·7	90·0	−0·5	77·0	0·8	83·5	−0·7	13·0	95·3	6th	69·2	29th	26·1
2. Burma Inland		...	...	−·012	...	...	...	...	...	...	...	93·2	−3·2	73·7	−1·2	83·5	−2·2	19·5	...	...	...	...	32·6
Central Burma	Thayetmyo	134	29·657	−·027	29·733	29·764	3rd	29·552	17th	·212	82·1	95·5	−3·9	76·9	−0·6	86·2	−2·3	18·6	105·1	16th	72·6	27th	32·5
	Minbu	?	29·618	?	?	29·733	4th	29·514	17th	·219	81·9	97·8	?	77·0	?	87·4	?	20·8	108·1	16th	70·1	29th	38·0
	Yamethin	?	29·124	?	?	29·222	3rd	29·020	17th	·202	81·3	95·5	?	75·2	?	85·4	?	20·3	104·1	17th	71·0	2 days	33·1
	Fort Stedman	?	26·888	?	?	27·013	4th	26·791	14th	·222	76·4	87·0	?	69·0	?	78·0	?	18·0	90·6	17th	64·0	29th	26·6
Upper Burma	Mandalay	?	29·519	?	?	29·640	6th	29·405	17th	·235	85·2	97·8	?	79·1	?	88·5	?	18·7	106·1	16th	72·6	29th	33·5
	Kindat	?	29·389	+·003	?	29·507	5th	29·276	26th	·231	79·4	93·3	−2·4	73·5	−1·8	83·4	−2·1	19·8	100·8	2 days	66·6	29th	34·2
	Lashio	?	26·994	?	?	27·111	3rd	26·924	31st	·187	72·1	85·9	?	65·9	?	75·9	?	20·0	92·5	18th	62·0	2 days	30·5
	Bhamo	?	29·386	?	?	29·504	6th	29·278	31st	·226	78·8	92·9	?	72·9	?	82·9	?	20·0	99·1	4th	66·8	2 days	32·3
3. Assam		...	...	−·058	...	...	...	...	...	...	...	87·0	−1·0	72·5	+0·4	79·8	−0·5	14·5	...	...	...	...	26·9
Assam (Surma)	Silchar	104	29·661	−·044	29·717	29·799	4th	29·516	26th	·283	76·8	88·2	+0·2	72·4	+0·3	80·3	+0·3	15·8	96·6	2 days	68·2	27th	28·4
Brahmaputra	Sibsagar	333	29·413	−·067	29·704	29·561	4th	29·265	20th	·296	75·0	84·2	−2·1	71·0	−0·5	77·6	−1·3	13·2	93·2	6th	68·0	29th	25·2
	Dhubri	115	29·603	−·062	29·672	29·789	4th	29·404	27th	·385	77·4	88·7	?	74·1	+1·3	81·4	?	14·6	95·2	5th	68·1	28th	27·1
4. Bengal and Orissa		...	...	−·054	...	...	...	...	...	...	...	95·3	+2·7	77·5	+1·6	86·4	+2·2	17·8	...	...	...	...	32·5
East Bengal	Chittagong	87	29·682	−·026	29·715	29·811	4th	29·551	27th	·260	81·5	89·2	+1·2	75·0	0·1	82·1	+0·6	14·2	96·2	1st	68·6	30th	27·6
	Lungleh	?			Not r	ecorded.					70·6	77·9	?	64·9	?	71·4	?	13·0	84·8	2nd	58·2	29th	26·6
	Noakhali	43	29·687	?	29·677	29·834	4th	29·523	27th	·311	83·3	89·6	?	75·9	?	82·8	?	13·7	97·0	2nd	67·4	10th	29·6
	Comilla	36	29·696	?	29·680	29·857	4th	29·508	27th	·349	81·1	91·3	?	74·2	?	82·8	?	17·1	99·8	1st	67·8	9th & 10th	32·0
	Sirajganj	49	29·647	?	29·646	29·824	4th	29·417	27th	·407	81·1	93·3	?	73·8*	?	83·4*	?	19·5	102·3	1st	66·3	2nd	36·0
	Narayanganj	26	29·686	−·058	29·654	29·858	3rd	29·489	27th	·369	82·4	92·5	+1·7	76·1	+0·6	84·3	+1·2	16·4	99·6	1st	67·7	10th	31·9
	Barisal	13	29·695	−·050	29·653	29·856	3rd	29·519	27th	·337	85·3	92·7	+1·6	77·5	+0·9	85·1	+1·3	15·2	98·3	1st	69·9	2 days	
	Mymensingh	59	29·660	−·057	29·670	29·818	4th	29·441	27th	·377	78·9	89·4	+1·1	73·6	+0·1	81·5	+0·6	15·8	97·7	1st	69·6	28th	28·1
Deltaic Bengal	Faridpur	46	29·670	?	29·664	29·853	4th	29·459	27th	·394	82·5	89·6	?	75·9	?	82·8	?	13·7	98·5	1st	67·9	11th	30·6
	Jessore*	33	29·660	−·058	29·639	29·847	4th	29·453	27th	·394	85·0	98·1	+3·9	77·3	+0·9?	87·7	+2·4?	20·8	104·0	2 days	68·9	11th	35·1
	Calcutta	21	29·659	−·058	29·625	29·851	4th	29·464	27th	·387	85·3	95·9	+2·4	79·7	+2·8	87·9	+2·6	16·2	104·9	18th	71·7	11th	33·2
	Saugor Island	25	29·670	−·047	29·639	29·867	4th	29·505	27th	·362	86·7	92·8	+1·3	83·3	+2·8	88·0	+2·1	9·5	94·7	22nd	74·5	12th	20·2
	Krishnagar	47	29·621	?	29·615	29·821	4th	29·418	27th	·403	84·8	99·1	?	77·9	?	88·5	?	21·2	105·2	19th	68·2	2nd	37·0
	Midnapore	149	29·531	?	29·624	29·721	4th	29·334	27th	·387	87·7	106·1	?	80·0	?	93·1	?	26·1	117·4	29th	74·1	2nd & 8th	43·3

* Mean of 30 days.

I.

in India, Burma, etc., in May 1894.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 1894.	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.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16·31	11·80	+3·15	...	...	...	...	**1. Burma Coast and Bay Islands.**	
3	...	...	...	1	3	12	10	2	6·5	7·3	−11	88	·950	7·2	15	?	?	14·70	15·74	− 1·04	28·05	18·39	+ 9·66	3·67	Port Blair	Bay Islands.
																									Camorta	
..	4	1	...	2	8	7	4	5	1·4	2·1	−33	85	·898	5·3	18	?	?	15·96	16·86	− 0·90	35·61	24·80	+10·81	2·70	Mergui	Tenasserim.
29	...	...	...	...	...	2	...	...	1·1	?	?	89	·881	5·2	15	?	?	27·13	?	?	35·84	?	?	6·42	Tavoy.	
...	2	5	4	5	6	3	2	4	7·1	3·1	+129	92	·878	8·5	21	15·45	+5·55	23·25	17·45	+5·80	29·56	20·81	+ 8·75	4·52	Moulmein.	
10	...	...	...	16	5	...	...	...	2·9	3·9	−26	88	·926	9·1	13	9·36	+3·64	6·58	5·77	+ 0·81	10·79	7·91	+ 2·88	1·17	Toungoo.	
...	...	1	2	1	8	11	7	1	3·2	5·0	−36	92	·909	7·6	19	12·27	+6·73	13·29	9·42	+ 3·87	17·54	11·53	+ 6·01	1·97	Rangoon	Lower Burma.
6	...	1	1	3	5	5	3	7	3·7	4·5	−18	89	·910	6·3	18	11·18	+6·82	13·30	8·33	+ 4·97	18·33	9·83	+ 8·50	2·90	Bassein.	
2	...	4	1	1	3	14	3	3	5·4	7·0	−23	80	·899	8·8	17	10·18	+6·82	11·56	8·55	+ 3·01	18·33	9·72	+ 8·61	2·05	Diamond Island.	
2	3	9	7	3	5	1	...	1	4·1	3·5	+17	87	·944	7·4	16	10·09	+5·91	21·00	12·30	+ 8·70	21·57	13·80	+ 7·77	3·41	Akyab	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5·70	4·62	+2·81	...	...	...	...	**2. Burma Inland.**	
...	...	...	...	15	15	1	...	...	7·4	7·3	+ 1	77	·836	5·9	9	6·64	+2·36	5·40	3·72	+ 1·68	7·67	4·57	+ 3·10	1·15	Thayetmyo	Central Burma.
1	...	...	...	27	1	...	...	2	10·4	?	?	78	·852	2·4	6	?	?	3·36	?	?	5·37	?	?	1·22	Minbu.	
4	...	...	...	21	6	...	...	...	10·4	?	?	77	·825	2·7	7	?	?	3·28	?	?	3·85	?	?	0·80	Yamethin.	
18	...	...	...	...	...	12	1	...	?	?	?	81	·746	5·2	12	?	?	5·14	?	?	8·44	?	?	1·10	Fort Stedman.	
5	...	...	...	9	13	4	...	...	7·2	?	?	69	·829	5·1	11	?	?	5·49	?	?	6·66	?	?	2·23	Mandalay	Upper Burma.
11	1	...	...	2	1	2	7	7	1·9	?	?	84	·843	3·8	11	?	?	9·46	5·52	+3·94	12·82	8·33	+ 4·49	3·09	Kindat.	
...	10	13	...	...	...	5	...	3	?	?	?	85	·655	5·2	13	?	?	4·25	?	?	10·43	?	?	1·46	Lashio.	
12	1	4	1	1	2	7	...	3	4·0	?	?	82	·802	5·4	11	?	?	9·18	?	?	11·70	?	?	2·25	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15·17	15·01	+0·16	...	...	...	...	**3. Assam.**	
21	...	3	4	1	...	1	...	1	4·2	3·4	+24	87	·798	7·8	19	17·27	+1·73	22·68	18·63	+ 4·05	55·93	42·13	+13·80	5·14	Silchar	Assam (Surma).
14	...	11	3	1	...	2	...	...	2·6	2·9	−10	92	·798	7·2	16	16·91	−0·91	10·90	12·22	− 1·32	21·76	26·21	− 4·45	2·34	Sibsagar	Brahmaputra.
5	...	7	11	3	...	4	...	1	7·7	7·0	+10	84	·797	8·1	16	15·13	+0·87	11·94	14·19	− 2·25	16·58	21·20	− 4·62	3·80	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5·25	6·95	−2·01	...	...	...	...	**4. Bengal and Orissa.**	
1	...	3	6	14	6	1	...	...	7·8	6·4	+22	84	·908	5·6	18	10·91	+7·09	17·03	10·14	+ 6·89	30·33	16·91	+13·42	2·99	Chittagong	East Bengal.
		Not	reco	rded					?	?	?	81	·607	?	21	?	?	18·73	?	?	31·90	?	?	2·63	Lungleh.	
...	...	1	5	8	7	7	1	2	8·0	?	?	91	1·039	5·1	11	10·00	+1·00	14·26	9·82	+ 4·44	24·40	17·60	+ 6·80	2·52	Noakhali.	
...	...	...	15	8	7	1	...	...	8·4	?	?	90	·961	5·7	12	11·47	+0·53	10·61	10·35	+ 0·26	17·46	19·31	− 1·85	2·83	Comilla.	
5	2	3	4	7	10	...	...	...	6·1	?	?	81	·862	6·8	12	9·95	+2·05	5·57	7·27	− 1·70	8·32	11·33	− 3·01	0·92	Sirajganj.	
...	...	2	4	7	10	4	3	1	10·1	6·2	+63	84	·933	6·8	10	10·55	−0·55	9·24	9·21	+ 0·03	16·46	17·13	− 0·67	1·64	Narayanganj	
6	...	...	...	4	18	3	...	...	7·0	?	?	79	·973	6·9	7	10·00	−3·00	8·43	8·03	+ 0·40	17·03	13·99	+ 3·04	3·23	Barisal.	
1	1	2	14	11	2	...	...	...	6·4	?	?	84	·829	6·6	14	13·05	+0·95	8·61	11·03	− 2·42	12·72	17·16	− 4·44	2·24	Mymensingh.	
4	...	...	5	2	18	2	...	...	4·6	?	?	85	·955	5·2	10	10·70	−0·70	8·43	8·90	− 0·47	18·32	15·57	+ 2·75	2·72	Faridpur	Deltaic Bengal.
4	...	...	1	8	11	6	...	...	5·3	4·9	+ 8	85	1·025	5·9	8	9·18	−1·18	7·86	7·62	+ 0·24	11·83	13·46	− 1·63	2·12	Jessore.*	
..	...	...	1	2	15	13	...	...	8·9	7·1	+25	80	·975	5·1	5	7·82	−2·82	3·00	6·12	− 3·12	7·97	8·91	− 0·94	1·51	Calcutta.	
...	...	...	...	2	23	6	...	...	23·2	15·3	+52	82	1·045	8·1	2	7·09	−5·09	0·38	5·19	− 4·81	0·78	7·73	− 6·95	0·23	Saugor Island.	
...	...	...	4	5	18	4	...	...	9·1	?	?	76	·915	4·3	7	7·55	−0·55	4·71	5·83	− 1·12	6·90	9·80	− 2·90	1·48	Krishnagar.	
...	...	1	...	3	17	10	...	...	8·1	?	?	68	·895	1·6	3	7·05	−4·05	0·86	5·13	− 4·27	2·68	8·09	− 5·41	0·35	Midnapore.	

* Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 202 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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.
Central Bengal	Bankura	298	29·328	?	29·572	29·548	4th	29·140	27th	·408	87·9	106·8	?	80·5	?	93·7	?	26·3	117·1	28th	73·6	2nd	43·5
	Raniganj	334	29·326	?	29·605	29·508	4th	29·107	27th	·401	86·6	105·8	?	80·5	?	93·2	?	25·3	114·8	28th	73·9	11th	40·9
	Burdwan		29·563	−·072	29·608	29·766	4th	29·348	27th	·418	84·7	102·0	+4·8	79·6	+2·4	90·8	+3·6	22·4	112·3	27th	72·0	11th	40·3
	Naya Dumka	489	29·151	?	29·587	29·368	4th	28·918	27th	·450	87·9	104·4	?	80·0	?	92·2	?	24·4	114·7	28th	72·8	4th	41·9
	Berhampore	67	29·604	−·064	29·619	29·813	4th	29·374	27th	·439	82·8	101·5	+5·8	78·4	+2·4	90·0	+4·1	23·1	112·7	27th	69·7	2 days	43·0
	Rampur Boalia.	70	29·593	?	29·612	29·796	4th	29·351	27th	·445	83·8	97·4	?	77·8	?	87·6	?	19·6	105·0	28th	69·6	2nd	35·4
	Malda*	72	29·584	?	29·607	29·802	4th	29·331	27th	·471	85·2	100·7	?	77·6	?	89·2	?	23·1	112·5	27th	70·0	4th	42·5
	Bogra	61	29·624	?	29·637	29·795	4th	29·418	27th	·377	80·8	94·0	+1·8	74·6	+0·4	84·3	+1·1	19·4	102·3	1st	67·2	8th	35·1
North Bengal	Dinajpur	123	29·565	−·063	29·642	29·750	4th	29·332	27th	·418	79·7	93·7	+2·6	75·3	+1·6	84·5	+2·1	18·4	102·6	22nd	69·2	2 days	33·4
	Rangpur†	123	29·587	?	29·664	29·762	4th	29·368	26th & 27th	·394	78·5	90·3	?	73·5	?	81·9	?	16·8	95·8	21st	68·7	9th	27·1
	Jalpaiguri	284	29·435	?	29·677	29·600	4th	29·220	27th	·380	78·3	88·7	+1·1	73·1	+2·0?	81·0	?	15·6	94·9	1st	70·1	3 days	24·8
Orissa	Balasore	56	29·613	−·056	29·614	29·809	4th	29·427	27th	·382	86·6	100·2	+4·6	80·1	+2·2	90·1	+3·4	20·1	111·0	27th	73·8	2 days	37·2
	False Point	21	29·686	−·034	29·648	29·847	4th	29·525	28th	·322	86·0	90·9	−0·2?	81·8	+2·6	86·4	+1·2?	9·1	93·0	14th	76·6	10th	16·4
	Cuttack	80	29·602	−·053	29·623	29·761	4th	29·443	28th	·318	86·4	105·3	+3·9	82·1	+2·6	93·7	+3·3	23·2	111·3	2 days	76·8	2nd	34·5
	Shortt's Island	?	29·667	?	?	29·837	4th	29·485	27th & 28th	·352	85·8	90·0	?	82·0	?	86·0	?	8·0	93·8	14th	74·8	10th	19·0
	Puri	15	29·678	?	29·633	29·830	4th	29·524	28th	·306	84·6	89·6	?	82·5	?	86·1	?	7·1	94·7	14th	76·1	3rd	18·6
5. Gangetic Plain and Chota Nagpur.		...	...	−·062	...	...	...	...	...	...	...	105·3	+4·1	79·5	+3·1	92·4	+3·7	25·7	...	...	...	...	41·0
Chota Nagpur	Hazaribagh	2,007	27·683	−·040	29·579	27·845	4th	27·503	27th	·342	88·6	102·6	+4·3	78·6	+4·3	90·6	+4·3	24·0	108·6	28th & 29th	70·3	1st	38·3
	Ranchi	2,128	27·569	?	29·577	27·715	4th	27·401	27th	·314	88·2	102·2	?	78·2	?	90·2	?	24·0	107·5	3 days	69·9	6th	37·6
	Daltonganj	730?	?	?	?	?	?	?	?	?	86·5	110·5	?	80·7	?	95·6	?	29·8	114·7	30th	70·0	1st	44·7
	Chaibassa	760	28·894	−·048	29·582	29·063	4th	28·707	28th	·356	99·9	109·5	+6·1	82·8	+4·0	96·5‡	+5·1	26·7	117·8	29th	75·2	2nd	42·6
Bihar, South	Gaya	375	29·246	?	29·565	29·407	4th	29·043	27th	·364	91·6	108·8	+4·7	82·3	+4·2	95·6	+4·5	26·5	114·1	28th	71·8	8th	42·3
	Dehri	351	29·282	?	29·575	29·446	4th	29·100	28th	·346	95·6	108·4	?	82·6	?	95·5	?	25·8	114·5	3 days	73·0	1st	41·5
	Patna	183	29·447	−·078	29·580	29·680	4th	29·223	27th	·457	87·8	105·1	+5·5	80·1	+2·9	92·6	+4·2	25·0	114·1	27th	75·2	2 days	38·9
	Arrah	190	29·435	?	29·572	29·640	4th	29·218	26th	·422	88·9	106·4	?	80·5	?	93·5	?	25·9	113·9	27th & 28th	75·5	8th	38·4
	Buxar	239	29·391	?	29·58	29·560	4th	29·188	27th	·372	89·0	106·1	?	80·7	?	93·4	?	25·4	111·9	28th	74·8	1st & 2nd	37·1
Bihar, North	Purnea	125	29·543	−·069	29·621	29·773	4th	29·301	27th	·472	82·1	97·1	+2·6	76·2	+2·6	86·7	+2·6	20·9	106·3	26th	70·2	8th	36·1
	Bhagalpur	160	29·481	?	29·593	29·735	4th	29·240	27th	·495	85·3	101·3	?	77·2	?	89·3	?	24·1	111·8	27th	71·0	4th	40·8
	Darbhanga	166	29·481	−·080	29·599	29·717	4th	29·258	26th	·459	83·8	98·3	+2·9	77·8	+2·0	88·1	+2·5	20·5	107·0	27th	70·2	1st	36·8
	Muzaffarpur	178	29·470	?	29·600	29·693	4th	29·257	26th	·436	83·7	101·1	?	77·7	?	89·4	?	23·4	109·2	27th	71·2	5th	38·0
	Motihari	224	29·420	?	29·599	29·638	4th	29·184	27th	·454	84·2	100·1	?	76·4	?	88·3	?	23·7	108·0	22nd	68·8	10th	39·2
	Chapra	181	29·460	?	29·591	29·677	4th	29·240	26th	·437	88·0	104·9	?	79·8	?	92·4	?	25·1	113·2	27th	75·6	8th	37·6
N.-W. Provinces (Eastern Districts).	Benares	267	29·361	−·058	29·578	29·509	3rd	29·140	27th	·369	89·7	108·4	+3·8	80·3	+1·8?	94·4	+2·8?	28·1	114·8	28th	67·1	1st	47·7
	Allahabad	309	29·317	−·060	29·574	29·458	3rd	29·111	27th	·347	92·6	109·3	+3·1	81·6	+2·9	95·5	+3·0	27·7	114·2	28th & 29th	71·3	1st	42·9
N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·368	−·072	29·580	29·546	4th	29·136	27th	·410	85·8	104·6	+4·1	79·1	+2·4	91·9	+3·3	25·5	112·4	27th	72·7	1st	39·7
Oudh, South	Lucknow	370	29·259	−·055	29·581	29·430	3rd	29·040	27th	·390	90·6	108·2	+4·1	79·5	+2·8	93·9	+3·5	28·7	113·8	29th	66·1	1st	47·7
Oudh, North	Bahraich	403	29·217	?	29·573	29·405	3rd	28·989	26th	·416	89·0	106·5	?	77·8	?	92·2	?	28·7	113·6	27th & 28th	71·5	1st & 3rd	42·1
N.-W. Provinces (Central).	Cawnpore	416	29·208	?	29·573	29·358	3rd	29·017	27th	·341	91·5	106·6	?	79·9	?	93·3	?	26·7	113·9	30th	69·0	1st	44·9
	Mainpuri	516	29·117	?	29·579	29·268	3rd	28·953	26th & 28th	·315	91·4	109·6	?	79·5*	?	94·6*	?	30·1	114·7	30th	68·5	1st	46·2

* Mean of 30 days. † Mean of 27 days. ‡ Mean of 28 days.

I—*continued.*

in India, Burma, etc., in May 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st May to 31st May.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
8	...	...	2	11	7	...	2	1	5·3	?	?	64	·822	2·7	3	8·45	− 5·45	0·83	3·87	− 3·04	1·50	6·58	− 5·08	0·34	Bankura	Central Bengal.
6	...	4	1	7	2	7	2	2	11·3	?	?	65	·801	2·1	2	5·50	− 3·50	3·15	3·13	+ 0·02	4·50	5·04	− 0·54	2·42	Raniganj.	
1	...	2	1	1	13	11	2	...	6·4	5·5	+16	76	·904	4·6	7	7·18	− 0·18	4·65	6·97	− 2·32	6·41	10·24	− 3·83	1·47	Burdwan.	
...	1	1	8	8	5	3	2	3	6·8	?	?	57	·726	1·2	1	5·22	− 4·22	0·60	3·48	− 2·88	2·02	5·17	− 3·15	0·42	Naya Dumka	
3	...	...	7	5	12	3	1	...	5·5	5·5	0	82	·922	6·0	3	8·64	− 5·64	1·49	6·05	− 4·56	2·82	8·55	− 5·73	0·84	Berhampore.	
6	...	...	...	12	3	9	1	...	7·3	?	?	83	·976?	3·6	4	7·90	− 3·90	1·70	5·44	− 3·74	4·48	7·67	− 3·19	0·84	Rampur Boalia.	
...	...	4	...	14	5	6	...	1	4·7	?	?	74	·904	3·1	4	5·65	− 1·65	1·86	4·13	− 2·27	2·34	5·81	− 3·47	0·89	Malda.‡	
1	...	1	12	14	2	1	...	...	4·2	?	?	81	·862	5·7	10	9·30	+ 0·70	6·88	8·37	− 1·49	14·22	11·40	+ 2·82	1·76	Bogra.	
...	...	2	20	8	...	...	...	1	2·5	?	?	80	·817	6·0	2	7·60	− 5·60	4·64	7·22	− 2·58	8·84	10·06	− 1·22	3·06	Dinajpur	North Bengal.
1	...	3	15	4	4	...	...	...	3·3	?	?	87	·844	4·6	7	10·40	− 3·40	4·71	10·22	− 5·51	9·21	14·66	− 5·45	2·03	Rangpur.*	
1	1	8	12	8	1	...	...	...	4·8	?	?	82	·791	6·9	11	12·00	− 1·00	7·76	11·96	− 4·20	11·41	17·84	− 6·43	1·17	Jalpaiguri.	
...	...	...	...	...	12	18	1	...	11·2	?	?	76	·967	2·5	3	8·50	− 5·50	0·76	4·97	− 4·21	3·16	8·84	− 5·68	0·28	Balasore	Orissa.
...	...	...	...	1	10	19	1	...	16·9	12·6	+34	82	1·023	7·3	0	5·20	− 5·20	0·12	6·60	− 6·48	2·61	8·36	− 5·75	0·06	False Point.	
4	...	...	1	1	13	12	...	...	5·9	5·1	+16	69	·919	3·7	0	6·09	− 6·09	0·17	4·93	− 4·76	0·99	6·81	− 5·82	0·12	Cuttack.	
...	...	...	...	...	16	15	...	...	19·9	?	?	84	1·035	4·1	1	?	?	0·49	?	?	3·22	?	?	0·45	Shortt's Island.	
2	...	...	...	...	1	27	1	...	17·8	?	?	87	1·029	5·4	0	3·45	− 3·45	0	2·58	− 2·58	0·72	3·65	− 2·93	0	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·29	1·99	−1·69	...	...	...	...	**5. Gangetic Plain and Chota Nagpur.**	
...	1	...	...	2	3	11	6	8	10·9	8·8	+ 24	38	·492	1·5	2	4·73	−2·73	0·68	2·64	− 1·96	1·36	3·85	− 2·49	0·54	Hazaribagh.	Chota Nagpur
2	...	...	1	2	3	13	8	2	8·4	?	?	47	·609	1·3	2	5·00	−3·00	0·31	3·17	− 2·86	0·97	4·90	− 3·93	0·12	Ranchi.	
...	3	4	6	1	1	...	7	9	8·7	?	?	53	·669	2·8	0	?	?	0	?	?	0·02	?	?	0	Daltonganj.	
...	2	...	1	...	2	11	12	3	3·1	?	?	50	·701	2·8	2	6·11	− 4·11	0·37	4·17	− 3·80	1·62	6·05	− 4·43	0·22	Chaibassa.	
...	2	2	13	1	1	3	6	2	7·8	3·9	+100	53	·771	2·5	0	2·45	− 2·45	0	1·50	− 1·50	0·01	1·93	− 1·92	0	Gaya	Bihar, South.
...	...	3	7	3	1	6	10	1	8·0	?	?	34	·529	0·3	0	1·57	− 1·57	0·04	1·42	− 1·38	0·13	2·23	− 2·10	0·04	Dehri.	
...	...	3	19	2	...	1	5	1	6·8	4·8	+ 42	57	·722	0·8	0	3·18	− 3·18	0	2·24	− 2·24	0·25	2·96	− 2·71	0	Patna	
...	4	6	4	7	1	3	4	2	5·1	?	?	53	·705	0·6	0	2·60	− 2·60	0	1·80	− 1·80	0·02	2·36	− 2·34	0	Arrah.	
...	...	3	12	1	...	1	8	6	6·6	?	?	41	·550	0·8	0	2·15	− 2·15	0	1·03	− 1·03	0·11	1·48	− 1·37	0	Buxar.	
...	1	7	20	3	...	...	...	...	6·6	3·4	+ 94	75	·826	0·9	2	5·45	− 3·45	1·96	5·08	− 3·12	3·93	6·78	− 2·85	1·35	Purnea	Bihar, North.
12	...	2	8	4	1	2	...	2	4·0	?	?	68	·818	1·6	2	4·15	− 2·15	0·94	2·59	− 1·65	2·36	3·69	− 1·33	0·57	Bhagalpur.	
...	...	2	15	12	2	...	...	...	6·9	5·9	+ 17	72	·829	1·7	1	4·73	− 3·73	0·42	3·20	− 2·78	1·04	4·14	− 3·10	0·42	Darbhanga.	
1	...	1	15	13	...	...	1	...	6·8	?	?	76	·886	1·0	0	3·35	− 3·35	0·04	2·72	− 2·68	0·40	3·72	− 3·32	0·04	Muzaffarpur.	
...	...	7	14	8	...	1	...	1	7·7	?	?	66	·782	0·7	2	4·25	− 2·25	0·87	2·50	− 1·63	1·06	3·65	− 2·59	0·73	Motihari.	
...	...	...	9	13	1	...	5	3	7·3	?	?	58	·748	0·6	0	2·20	− 2·20	0	1·52	− 1·52	0·17	2·09	− 1·92	0	Chapra.	
4	...	6	4	...	...	5	11	1	6·5	5·2	+ 25	47	·638	0·9	0	1·45	− 1·45	0	0·72	− 0·72	0·09	1·08	− 0·99	0	Benares	N.-W. Provinces (Eastern Districts).
...	1	3	4	2	1	1	10	9	7·5	3·8	+ 97	37	·552	1·2	0	1·18	− 1·18	0	0·39	− 0·39	0·17	0·82	− 0·65	0	Allahabad	
...	4	4	7	4	5	1	6	...	3·3	3·9	− 15	58	·712	0·9	1	2·64	− 1·64	0·16	1·37	− 1·21	0·23	2·22	− 1·99	0·16	Gorakhpur	N.-W. Provinces (East Sub-montane).
3	...	2	11	2	...	...	13	...	?	4·3	?	36	·501	1·3	0	1·91	− 1·91	0·03	1·10	− 1·07	0·28	1·49	− 1·21	0·03	Lucknow	Oudh, South.
...	1	2	11	7	1	1	3	5	5·5	?	?	51	·701	0·4	0	?	?	0	1·42	− 1·42	0·08	2·23	− 2·15	0	Bahraich	Oudh, North.
2	1	2	3	1	...	3	11	8	6·2	?	?	40	·594	0·5	1	1·1	− 0·1	0·55	0·56	− 0·01	0·62	0·91	− 0·29	0·52	Cawnpore	N.-W. Provinces (Central).
8	1	1	1	1	...	...	4	15	2·7	?	?	35	·519	1·5	0	?	?	0	0·66	− 0·66	0	1·02	− 1·02	0	Mainpuri	

* Mean of 27 days. ‡ Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 202 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
6. Upper—Sub-Himalayas		...	...	−·058	...	...	...	...	...	...	...	104·8	+3·7	75·4	+2·1	90·1	+3·0	29·4	...	...	...	...	44·8
N.-W. Provinces (Sub-montane).	Bareilly	568	29·041	−·064	29·563	29·207	5th	28·822	29th	·385	88·7	106·4†	+3·8†	77·0	+1·6	92·0†	+2·7	29·4	111·9	29th & 30th.	68·7	1st	43·2
	Dehra Dun	2,233	27·439	−·068	29·582	27·594	3rd	27·240	27th	·354	80·6	99·1	+5·4	71·6	+1·7	85·4	+3·6	27·5	105·5	29th	65·0	6th	40·5
	Roorkee	887	28·723	−·068	29·560	28·883	3rd	28·500	27th	·383	86·4	105·5	+3·4	74·9	+0·9	90·3	+2·2	30·6	112·7	30th	64·8	1st	47·9
	Meerut	738	28·874	−·057	29·561	29·036	3rd	28·663	27th	·373	88·6	105·7	+3·8	75·7	+0·7	90·7	+2·3	30·0	111·9	30th	66·0	1st	45·9
Punjab, Central.	Delhi	718	28·913	?	29·578	29·073	3rd	28·713	27th	·360	89·3	106·9	+2·6	82·5	+3·3?	94·7	+3·0?	24·4	113·0	29th	74·5	4th	38·5
	Lahore	702	28·891	−·054	29·548	29·033	6th	28·723	9th	·310	88·1	106·3	+3·5	76·3	+4·1	91·3	+3·8	30·0	111·8	29th	68·1	1st	43·7
Punjab (Sub-montane).	Umballa	962?	28·721	?	29·576	28·886	3rd	28·524	28th	·362	84·7	107·4	?	76·1	?	91·7	?	31·3	115·8	30th	67·0	1st & 15th	48·8
	Ludhiana	812	28·794	−·059	29·556	28·935	6th	28·591	27th	·34	89·5	107·4	+3·5	76·6	+2·8	92·1	+2·2	30·8	115·3	30th	70·0	6th	45·8
Punjab, North	Sialkot	830	28·776	−·047	29·557	28·932	6th	28·603	27th	·329	89·4	105·9	+3·5	76·5	+2·7	91·2	+3·1	29·4	111·3	29th	67·3	1st	44·0
	Rawalpindi	1,652	27·997	−·044	29·564	28·155	4th	27·801	27th	·354	80·1	?97·3‡	‡+0·1?	?65·7‡	?−0·9‡	?82·0‡	?	30·6	109·5	27th	59·6	6th	49·9
7. Indus Valley and North-West Rajputana.		...	...	−·028	...	...	...	...	...	...	...	106·0	+2·2	76·9	+1·2	91·4	+1·7	29·2	...	...	...	...	43·5
Punjab, West	Peshawar	1,110	28·566	−·037	29·588	28·752	4th	28·380	9th	·372	83·9	100·6‡	+2·9	70·0	+0·6	85·3‡	+1·8	30·6	108·5	9th	60·0	5th	48·5
	Mardan	?	...	...	Not recorded.		...	...	...	...	84·4	103·6	?	68·3	?	85·9	?	35·3	108·5	29th	59·0	6th	49·5
	Khushab	612	28·979	?	29·545	29·148	4th	28·807	9th	·341	90·5	106·6	?	77·5	?	92·0	?	29·1	112·0	29th	67·0	1st	45·0
	Montgomery	558	29·031	?	29·541	29·189	5th	28·841	9th	·348	93·0	110·5	?	78·6	?	94·6	?	31·9	116·9	29th	70·5	6th	46·4
	D. I. Khan	573	29·023	−·072	29·558	29·235	4th	28·840	9th	·395	86·2	106·8	+3·5	76·4	+2·2	91·6	+2·9	30·4	111·1	29th	65·8	6th	45·3
	Mooltan	420	29·176	−·059	29·557	29·378	4th	28·983	9th	·395	88·9	109·8	+5·1	79·3	+3·4	94·6	+4·3	30·5	114·5	27th & 29th.	72·1	6th	42·4
	Sirsa	662	28·947	−·047	29·558	29·080	3rd	28·765	27th	·315	90·2	111·0	+4·8	79·2	+3·2	95·1	+4·0	31·8	116·4	29th	71·3	1st	45·1
Sind and Cutch.	Jacobabad	186	29·427	−·035	29·570	29·588	4th	29·252	9th	·336	91·0	114·3	+3·9	78·0	+1·1	96·2	+2·5	36·3	120·0	29th	67·1	5th	52·9
	Hyderabad	117	29·570	+·006	29·639	29·691	4th	29·379	9th	·312	85·0	105·5	−1·3	78·0	−0·3	91·8	−0·8	27·5	113·2	6th & 7th	74·0	4th & 13th.	39·2
	Kurrachee	49	29·696	+·010	29·696	29·818	4th	29·500	9th	·318	83·6	92·4	−0·5	78·4	−0·1	85·4	−0·3	14·0	95·0	5th	71·8	8th	23·2
	Bhuj*	395	29·389	+·010	29·734	29·467	4th	29·207	9th	·260	84·7	100·4	−0·9	75·5	−0·1	88·0§	−0·5	24·9	110·6	7th	69·9	1st	40·9
Rajputana, West	Bickaneer	753	28·891	?	29·586	29·004	4th	28·696	27th	·308	90·1	109·0	+2·6	83·2	+1·0	96·2	+1·8	25·8	114·4	29th	78·5	3rd	35·9
	Pachpadra	380	29·312	?	29·644	29·445	4th	29·049	22nd	·396	83·4	108·1	?	76·7	?	92·5	?	31·4	119·5	9th	68·7	6th	50·8
8. East Rajputana, Central India and Gujarat.		...	...	·0	...	...	...	...	...	...	...	103·7	+0·7	78·7	+0·7	91·2	+0·6	25·0	...	...	...	...	36·9
Rajputana, East	Jeypore	1,431	28·278	−·013	29·640	28·407	3rd	28·119	27th	·288	88·0	107·2	+1·7	76·8	+0·6	92·0	+1·2	30·4	111·2	29th	71·0	21st	40·2
	Sambhar	1,254	28·438	−·011	29·629	28·562	3rd	28·261	27th	·301	88·0	104·7	+0·4	79·9	+1·8	92·3	+1·1	24·8	109·0	27th	69·4	7th	39·6
	Ajmere	1,611	28·120	−·003	29·661	28·222	3rd	27·971	27th	·251	87·2	103·7	+0·5	80·9	+3·2?	92·3	+1·9?	22·8	107·9	27th & 28th	73·6	6th & 7th.	34·3
	Deesa	466	29·318	+·028	29·737	29·406	4th	29·177	9th	·229	84·1	106·2	0	76·5	−1·1	91·4	−0·6	29·7	113·0	7th	70·5	4th	42·5
Kathiawar	Rajkot	429	29·382	+·036	29·761	29·457	4th	29·251	9th	·206	84·2	104·3	−1·1	73·8	−1·4	89·1	−1·3	30·5	109·9	8th	70·3	1st	39·6
	Veraval	?	29·821	?	29·781	29·886	16th	29·722	27th	·164	82·2	86·7	?	78·6	?	82·7	?	8·1	93·1	6th	70·3	6th	22·8
	Bhavnagar	?	29·800	?	29·785	29·868	4th & 29th.	29·698	9th	·170	87·6	101·4	?	79·7	?	90·5	?	21·7	106·4	6th & 29th	75·2	3rd	31·2
Central India	Nowgong	757	28·913	−·025	29·604	29·037	3rd	28·770	27th	·267	92·4	108·7	+1·4	78·6	?	93·7	?	30·1	113·6	3 days	69·0	1st	44·6
	Indore	1,823	27·973	+·024	29·713	28·055	3rd	27·860	27th	·195	84·8	102·2	−0·2	76·0	+0·7	89·2	+0·3	26·2	106·1	3 days	70·6	5th	35·5
	Neemuch	1,630	28·133	+·022	29·691	28·232	4th	27·994	27th	·238	86·0	102·9	−0·9	76·8	+0·4	89·9	−0·3	26·1	108·1	8th & 27th	73·6	3 days	34·5
Gujarat	Surat	36	29·804	+·017	29·782	29·883	15th	29·713	27th	·170	85·8	97·4	−0·7	77·8	+0·2	87·7	−0·3	19·6	105·2	5th	71·0	5th	34·2
	Ahmedabad	176	29·647 (a)	?	29·771 (a)	29·729	3rd	29·529	9th	·200	85·9‡	106·1†	?	78·4†	?	92·2†	?	27·7	115·3	7th	75·1	1st	38·2
N.-W. P., West	Agra	555	29·087	−·050	29·587	29·235	3rd	28·895	27th	·240	92·4	110·2	+3·5	82·3	+1·6	96·3	+2·6	27·9	115·5	28th, 29th & 30th	73·8	1st	41·7
	Jhansi	858	28·828	−·022	29·614	28·967	3rd	28·662	27th	·305	95·3	110·2	+2·8	85·6	+3·3	97·9	+3·1	24·6	114·2	28th, 29th & 30th	76·4	1st	37·8

* Mean of 19 days. † Mean of 29 days. ‡ Mean of 30 days. (a) Mean of 28 days. § Mean of 18 days.

I—*continued.*

in India, Burma, etc., in May 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	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.
...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·46	1·09	−0·63	...	...	...	...	**6. Upper—Sub-Himalayas.**	
3	...	...	1	9	1	...	1	16	4·8	5·2	− 8	39	·518	1·5	0	2·27	−2·27	0·05	0·84	− 0·79	0·88	1·95	−1·07	0·05	Bareilly	N.-W. Provinces (Sub-montane).
28	2	...	...	...	...	...	1	...	12·1	2·5	− 16	43	·446	2·1	0	4·09	−4·09	0·08	1·95	− 1·87	2·72	3·55	−0·83	0·06	Dehra Dun.	
17	1	...	2	6	...	...	2	3	5·2	3·7	+41	37	·462	0·8	1	2·00	−1·00	0·96	0·86	+ 0·10	3·03	2·00	+1·03	0·87	Roorkee.	
6	...	1	3	1	1	8	8	3	3·1	2·6	+19	34	·451	0·8	1	1·64	−0·64	0·15	0·69	−0·54	1·13	1·70	−0·57	0·15	Meerut.	
4	...	...	2	3	...	9	13	...	2·9	4·5	−36	32	·443	0·9	4	1·64	+2·36	1·11	0·78	+0·33	2·77	1·58	+1·19	0·35	Delhi	Punjab, Central.
7	8	2	5	3	2	1	2	1	3·6	3·3	+ 9	35	·464	1·0	0	2·00	−2·00	0·04	1·03	−0·99	1·42	2·22	−0·80	0·04	Lahore.	
10	...	...	...	2	...	...	1	18	2·5	?	?	65	·766	0·8	3	?	?	1·16	0·97	+0·19	2·44	2·23	+0·21	0·60	Umballa	Punjab (Sub-montane).
15	1	3	...	5	2	3	1	1	1·7	2·2	−23	40	·554	1·7	2	1·91	+0·09	0·40	0·78	−0·38	1·11	2·62	−1·51	0·16	Ludhiana.	
12	6	1	9	2	...	...	1	...	2·9	2·5	+16	31	·427	0·7	1	2·73	−1·73	0·12	1·23	−1·11	2·93	3·32	−0·39	0·12	Sialkot	Punjab, North.
20	2	4	3	1	...	...	...	1	1·7	2·8	−39	49	·507	2·3	2	3·00	−1·00	0·57	1·80	−1·23	6·40	5·51	+0·89	0·39	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·15	0·47	−0·32	...	...	...	...	**7. Indus Valley and North-West Rajputana.**	
13	3	1	1	2	2	4	2	3	4·8	4·8	0	40	·443	2·1	2	2·09	−0·09	0·79	0·75	+0·04	4·80	4·29	+0·51	0·41	Peshawar	Punjab, West.
				Not	recorde	d			?	?	?	?	?	?	0	?	?	0·22	?	?	3·82	?	?	0·09	Mardan.	
2	...	25	1	1	...	1	...	1	6·7	?	?	24*	·333*	1·0	1	1·0	0	0·13	0·41	−0·28	3·91	1·57	+2·34	0·13	Khushab.	
1	...	4	2	4	7	11	2	...	7·9	?	?	40	·605	0·5	0	1·1	−1·1	0	0·45	−0·45	0·88	0·97	−0·09	0	Montgomery	
12	5	8	4	...	1	...	...	1	2·7	2·3	+17	55	·684	0·1	0	0·82	−0·82	0	0·40	−0·40	3·70	1·80	+1·90	0	D. I. Khan.	
7	...	6	...	5	...	10	...	3	1·8	2·9	−38	51	·674	0	0	0·82	−0·82	0	0·42	−0·42	0·99	0·87	+0·12	0	Mooltan.	
3	...	...	1	3	3	9	11	1	8·1	4·8	+69	31	·440	1·2	3	1·82	+1·18	0·80	0·81	−0·01	1·18	1·49	−0·31	0·46	Sirsa.	
11	1	1	2	6	8	...	...	2	4·9	4·7	+ 4	41	·569	0·1	0	0·45	−0·45	0	0·10	−0·10	0	0·44	−0·44	0	Jacobabad	Sind and Cutch.
...	...	...	...	...	9	18	4	...	37·4	12·7	+194	60	·712	0·3	0	0·45	−0·45	0	0·25	−0·25	0·09	0·43	−0·34	0	Hyderabad.	
...	...	...	...	...	...	15	15	1	15·2	17·5	−13	81	·935	4·8	0	0	0	0	0	0	0·02	0·56	−0·54	0	Kurrachee.	
...	...	...	...	...	...	7	11	1	21·5	15·4	+40	60	·723	2·9	0	?	?	0	0·13	−0·13	0·10	0·40	−0·39	0	Bhuj.‡	
...	...	...	...	...	9	19	2	1	9·2	6·5	+42	43	·600	0·5	0	?	?	0·03	1·08	−1·05	0·05	1·45	−1·40	0·03	Bickaneer	Rajputana, West.
4	...	...	...	3	11	13	...	...	12·0	8·8	+36	64	·728	4·0	0	?	?	0	0·83	−0·83	0·40	0·91	−0·51	0	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·23	0·50	−0·22	...	...	...	...	**8. East Rajputana, Central India and Gujarat.**	
...	...	2	...	...	4	21	3	1	7·0	6·9	+ 1	41	·545	0·7	0	1·20	−1·20	0·14	0·45	−0·31	0·41	0·93	−0·52	0·07	Jeypore	Rajputana, East.
1	2	...	2	...	...	2	23	1	13·0*	9·9	+31	40	·530	0·4	2	1·27	+0·73	1·75	0·80	+0·95	1·75	1·24	+0·51	1·26	Sambhar.	
...	...	...	1	...	...	6	23	1	13·7	7·1	+93	44	·555	0·4	1	2·09	−1·09	0·20	0·75	−0·55	0·66	0·98	−0·32	0·15	Ajmere.	
...	...	...	...	...	...	11	17	3	14·3	13·4	+ 7	58	·677	2·3	0	0·55	−0·55	0	0·25	−0·25	0·13	0·31	−0·18	0	Deesa.	
...	1	...	...	...	...	4	20	6	15·0	14·6	+ 3	62	·732	2·3	1	0·36	+0·64	0·32	0·25	+0·07	0·33	0·28	+0·05	0·32	Rajkot	Kathiawar.
...	1	...	...	...	...	5	21	4	9·2	?	?	82	·904	4·7	0	?	?	0·08	?	?	0·08	?	?	0·06	Veraval.	
...	...	...	...	...	1	28	2	...	18·8	?	?	76	·998	2·1	0	?	?	0	?	?	0	?	?	0	Bhavnagar.	
1	...	3	...	...	...	1	25	1	6·6	3·4	+94	28	·428	1·2	1	1·09	−0·09	0·12	0·42	−0·30	0·29	0·75	−0·46	0·12	Nowgong	Central India.
...	3	...	...	...	...	1	19	8	6·6	6·1	+ 8	63	·751	0·2	0	1·36	−1·36	0	0·75	−0·75	0·05	0·83	−0·78	0	Indore.	
...	...	1	3	1	...	3	21	2	15·6	12·4	+26	45	·559	0·2	0	1·18	−1·18	0	0·59	−0·59	0·39	0·76	−0·40	0	Neemuch.	
...	...	...	...	...	1	11	15	4	?	12·7	?	63	·783	3·8	0	0·45	−0·45	0	0·19	−0·19	0	0·20	−0·20	0	Surat	Gujarat.
4	4	...	...	...	...	6	4	6	5·9†	?	?	60*	·755*	3·4*	0	?	?	0·03	?	?	0·04	?	?	0·03	Ahmedabad	
1	...	1	...	2	...	17	...	10	6·8	5·9	+15	30	·451	0·6	1	1·91	−0·91	0·40	0·60	−0·20	0·85	1·05	−0·20	0·31	Agra	N.-W. P., West.
...	6	...	1	1	4	3	4	12	5·3	4·8	+10	24	·405	0·3	1	1·36	−0·36	0·20	0·49	−0·29	0·42	0·97	−0·55	0·18	Jhansi.	

* Mean of 30 days. † Mean of 29 days. ‡ Mean of 19 days.

Table

Abstract of Observations taken at 8 A.M. at 202 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
9. Deccan		...	...	−·002	...	...	...	...	...	...	...	104·7	+1·2	78·3	+0·9	91·5	+1·0	26·5	...	...	...	...	37·4
Bombay, Deccan	Belgaum	2,524	27·352	+·024	29·786	27·409	15th	27·281	28th	·128	75·8	91·7	−1·5	67·5	−0·4	79·6	−1·0	24·2	98·0	31st	63·9	18th	34·1
	Sholapur	1,590	28·244	+·021	29·762	28·295	15th	28·174	28th	·121	82·8	104·3	0	76·2	+0·2	90·3	+0·1	28·1	107·7	5th	71·0	26th	36·7
	Poona	1,840	28·022	+·021	29·791	28·088	15th	27·939	27th	·149	80·1	99·6	+1·1	71·0	−0·9	85·3	+0·1	28·6	104·5	6th	67·4	17th	37·1
	Bijapur	1,948	27·904	?	29·768	27·964	15th	27·822	27th	·142	80·5	100·6	?	73·3	?	87·0	?	27·3	104·3	5th	68·5	1st	35·8
Khandesh	Malegaon	1,430	28·331	+·022	29·749	28·462	15th	28·301	27th	·161	86·1	103·9	+0·2	74·5	−0·2	89·2	0	29·4	109·3	7th	68·2	11th	41·1
	Ahmednagar	2,152	27·701	?	29·760	27·769	15th	27·616	27th	·153	82·1	100·4	?	68·9	?	84·7	?	31·5	104·7	7th	62·0	10th	42·7
Berar	Akola	930	28·832	+·002	29·690	28·916	16th	28·720	27th	·196	88·6	107·4	+0·3	80·9	+0·3	94·2	+0·3	26·5	111·1	8th	75·8	8th	35·3
	Amraoti	1,215	28·536	+·003	29·677	28·605	4th	28·426	27th	·179	89·4	107·0	−0·2?	79·9	+0·8	93·5	+0·3?	27·1	110·3	26th	76·8	1st	33·5
Central Provinces, West.	Khandwa	1,044	28·730	+·017	29·716	28·818	3rd	28·606	27th	·212	86·1	106·1	+0·1	81·1	+0·9	93·6	+0·5	25·0	110·7	8th	76·1	10th	34·6
	Hoshangabad	1,020	28·725	?	29·680	28·811	4th	28·605	27th	·206	90·4	106·7	−0·7?	80·1	+0·4	93·5	?	26·6	111·0	26th	75·7	3days	35·3
	Nagpur	1,025	28·689	−·012	29·637	28·796	4th	28·552	27th	·238	94·2	110·4	+1·8	82·9	+1·8	96·7	+1·8	27·5	115·4	28th	73·6	2nd	41·8
Central Provinces, Central.	Chanda	634	29·091	−·001	29·652	29·183	4th	28·961	27th	·222	93·5	111·0	+1·8	81·9	+0·4	96·5	+1·1	29·1	115·4	30th	72·0	1st	43·4
	Seoni	2,033	27·722	−·001	29·632	27·833	3rd	27·588	27th	·245	90·8	104·2	+1·0	76·7	0	90·5	+0·5	27·5	108·2	3 days	69·1	16th	39·1
	Jubbulpore	1,327	28·389	−·009	29·635	28·486	4th	28·246	27th	·240	91·5	106·8	+1·9	78·6	+0·2	92·7	+1·1	26·2	110·5	3 days	66·2	1st	44·3
	Saugor	1,762	27·973	+·002	29·639	28·074	3rd	27·839	27th	·235	89·0	105·8	+1·1	79·0	+1·4	92·5	+1·3	26·8	109·4	26th & 27th.	71·1	1st	38·3
Central Provinces, East.	Raipur	970	28·723	−·027	29·609	28·843	4th	28·578	27th	·265	95·2	109·6	+3·1	83·2	+2·1	96·4	+2·6	26·4	114·0	29th & 30th.	76·6	2nd & 3rd.	37·4
	Sutna	1,040	28·619	−·032	29·588	28·734	4th	28·472	27th	·262	93·6	107·8	+2·6	80·9	+2·9	94·1	+2·8	26·4	112·1	30th	69·6	1st	42·5
	Sambalpur	463	29·192	−·053	29·589	29·340	4th	29·031	27th	·309	94·2	110·3	+3·9	84·0	+3·1	97·2	+3·5	26·3	116·5	30th	74·2	1st	42·3
Hyderabad, North.	Aurangabad	?	27·978	?	?	28·039	15th & 16th	27·893	8th	·146	85·8	104·2	?	73·8	?	89·0	?	30·4	108·4	5th	70·1	11th	38·3
	Indor	?	...	Not	recorded.		...	...	...	...	89·3	105·9	?	82·8	?	94·4	?	23·1	110·3	31st	78·2	1st	32·1
	Bidar	?	27·651	?	?	27·699	5th	27·564	27th	·135	85·3	98·6	?	77·6	?	88·2	?	21·0	100·3	5th	74·0	20th	26·3
Hyderabad, South.	Gulbarga	1,502	28·304	?	29·728	28·354	15th	28·218	28th	·136	85·5	103·8	?	78·3	?	91·1	?	25·5	108·9	31st	72·6	6th	36·3
	Raichur	1,378	28·442	?	29·746	28·492	4th	28·350	31st	·142	84·6	102·8	?	79·2	?	91·1	?	23·6	108·0	31st	73·1	7th	34·9
	Hyderabad (Deccan).	1,690	28·108	−·004	29·711	28·180	4th	28·014	27th	·166	85·7	103·3	+0·3	79·8	+1·9	91·6	+1·1	23·5	107·4	30th & 31st	74·7	3rd & 20th	32·7
	Secunderabad.	1,787	28·030	?	29·728	28·097	5th	27·936	27th	·161	85·1	104·1	?	78·9	?	91·5	?	25·2	107·2	3 days	72·9	24th	34·3
	Khamamet	373	29·379	?	29·656	29·496	2nd	29·219	31st	·277	90·4	106·9	?	83·6	?	95·2	?	23·3	114·7	31st	73·8	4th	40·9
10. West Coast		...	...	+·023	...	...	...	...	...	...	...	89·8	+0·7	79·6	+0·6	84·7	+0·7	10·1	...	...	...	...	16·7
Konkan	Bombay.	37	29·841	+·027	29·818	29·914	15th	29·744	27th	·170	84·6	90·8	+0·8	81·1	+0·7	86·0	+0·8	9·7	92·0	3 days	79·5	4 days.	12·5
	Ratnagiri	110	29·766	+·037	29·814	29·834	2nd	29·678	27th	·156	85·4	91·1	+0·2	80·5	+1·4	85·8	+0·8	10·6	92·4	28th & 30th	78·9	13th & 17th.	13·5
	Mormugao	60	29·817	0	29·811	29·882	15th	29·724	27th	·158	85·1	90·3	?	81·2	?	85·8	?	9·1	94·0	9th	79·4	4 days	14·6
	Goa	23	29·872	+·032	29·809	29·938	15th	29·778	27th	·160	83·7	87·4	?	81·2*	?	84·3*	?	6·2	92·5	11th	78·0	1st	14·5
	Karwar	44	29·839	+·027	29·815	29·913	15th	29·736	28th	·177	82·8	90·6	+0·9	79·5	+0·4	85·1	+0·7	11·1	93·3	29th	71·1	5th	22·2
Malabar	Cochin	10	29·880	+·012	29·818	29·932	15th	29·790	27th	·142	82·1	90·5	+1·3	77·4	+0·2	84·0	+0·8	13·1	92·3	14th	72·7	25th	19·6
	Calicut	27	29·859	+·012	29·815	29·918	12th & 15th	29·762	27th	·156	82·8	90·1	+0·2	77·5	+0·2	83·8	+0·2	12·6	92·8	30th	69·6	12th	23·2
	Mangalore	65	29·823	+·018	29·820	29·880	3 days	29·724	28th	·156	83·8	90·4	+0·6	79·2	+0·8	84·8	+0·7	11·2	91·8	29th	74·4	1st & 6th	17·4
	Trivandrum	198	29·686	?	29·814	29·753	15th	29·596	31st	·157	82·1	86·6	?	79·1	?	82·8	?	7·5	90·0	31st	77·0	3rd	13·0
11. South India		...	...	−·007	...	...	...	...	...	...	...	97·3	+1·2	77·5	+0·2	87·4	+0·7	19·8	...	...	...	...	31·1
Madras, South.	Pamban	37	29·799	?	29·763	29·854	4th	29·690	31st	·164	85·4	90·8	?	81·6	?	86·2	?	9·2	92·8	5th & 13th	74·2	19th	18·6
	Tinnevelly	168	29·677	?	29·772	29·749	15th	29·566	31st	·183	88·0	102·5	?	80·7	?	91·7	?	21·8	104·5	3 days	75·9	12th	28·6
	Madura	447	29·379	−·009	29·757	29·448	4th	29·272	31st	·176	85·6	101·7	+1·6	78·4	+1·6	90·1	+1·6	23·3	105·0	31st	71·0	18th	34·0

* Mean of 29 days.

I—*continued.*

in India, Burma, etc., in May 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st May 1894.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
																									9. Deccan.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·25	0·99	−0·80	...	...	...	..		
2	3	...	...	...	...	...	14	12	?	18·1	?	68	·607	3·8	6	4·36	+1·64	1·30	2·62	−1·32	3·95	4·69	−0·74	0·45	Belgaum	Bombay, Deccan.
...	3	...	...	...	...	1	5	22	14·3	10·0	+ 43	49	·541	3·5	1	2·18	−1·18	0·35	1·15	−0·80	0·68	2·06	−1·38	0·24	Sholapur.	
...	...	...	...	...	...	3	15	13	14·2	14·2	0	55	·564	1·5	1	2·00	−1·00	0·32	1·65	−1·33	0·79	2·24	−1·45	0·19	Poona.	
...	1	...	...	...	...	6	14	10	9·4	?	?	67	·701	4·2	3	3·10	−0·10	0·51	?	?	2·28	?	?	0·23	Bijapur.	
...	1	...	...	...	...	5	17	8	19·0	10·4	+ 83	60	·733	1·8	0	1·27	−1·27	0	0·95	−0·95	0·55	1·08	−0·53	0	Malegaon	Khandesh.
4	11	1	...	...	...	...	3	12	14·3	?	?	77	·842	1·4	0	?	?	0	?	?	1·55	?	?	0	Ahmednagar.	
...	2	...	...	...	...	...	26	3	12·1	8·6	+ 41	40	·527	1·0	0	0·91	−0·91	0	0·48	− 0·48	0·31	1·19	−0·88	0	Akola	Berar.
...	2	2	...	...	...	2	14	11	8·0	6·0	+ 33	34	·482	1·2	1	1·73	−0·73	0·12	0·75	− 0·63	0·49	1·40	−0·91	0·12	Amraoti.	
...	...	...	...	...	...	...	18	13	13·1	9·1	+ 44	45	·554	0	0	1·09	−1·09	0	0·45	− 0·45	0·31	0·75	− 0·44	0	Khandwa	Central Provinces, West.
4	...	...	...	...	1	9	17	...	3·7	3·8	− 3	36	·514	0·8	0	1·18	−1·18	0	0·73	− 0·73	0·57	1·12	− 0·55	0	Hoshangabad.	
...	7	...	1	1	...	3	2	17	9·7	7·0	+ 39	26	·413	1·5	1	2·09	−1·09	0·16	0·80	− 0·64	0·50	1·75	− 1·25	0·14	Nagpur.	
...	1	...	1	4	...	3	7	15	5·6	4·9	+ 14	28	·441	1·6	0	?	?	0·02	0·89	− 0·87	0·10	2·76	− 2·66	0·02	Chanda	Central Provinces, Central.
...	...	...	...	...	...	...	...	...	?	4·6	?	41	·596	2·5	2	2·36	−0·36	0·67	0·76	− 0·09	2·01	1·81	+ 0·20	0·57	Seoni.	
3	...	...	...	...	1	6	15	6	4·5	4·5	0	31	·471	0·5	0	1·45	−1·45	0	0·71	− 0·71	0·20	1·40	− 1·20	0	Jubbulpore.	
4	1	...	...	...	...	9	15	2	5·7	4·4	+ 30	30	·407	0·5	0	1·27	−1·27	0·03	0·69	− 0·66	0·35	1·05	− 0·70	0·02	Saugor.	
2	1	...	...	...	...	9	10	9	9·7	7·4	+ 31	29	·489	3·3	0	2·91	−2·91	0	1·04	− 1·04	0·11	2·32	− 2·21	0	Raipur	Central Provinces, East.
...	2	1	2	...	...	...	19	7	9·7	8·1	+ 20	27	·425	0·4	0	1·64	−1·64	0·03	0·39	− 0·36	0·12	1·01	− 0·89	0·03	Sutna.	
...	1	1	2	6	6	13	1	1	5·2	3·0	+ 73	42	·673	3·2	0	?	?	0·04	2·05	− 2·01	0·10	3·76	− 3·66	0·04	Sambalpur.	
1	1	...	...	1	...	2	9	17	6·3	?	?	46	·558	1·0	0	?	?	0·06	0·75	− 0·69	1·05	0·99	+ 0·06	0·06	Aurangabad	Hyderabad, North.
...	2	...	...	...	...	2	5	22	11·2	?	?	45	·627	2·9	0	?	?	0	0·33	− 0·33	0·23	0·91	− 0·68	0	Indur.	
...	10	...	...	...	...	2	8	11	9·0	?	?	49	·584	1·2	2	?	?	0·40	1·07	− 0·67	1·81	2·24	− 0·43	0·22	Bidar.	
...	8	2	...	...	...	4	7	10	12·2	?	?	61	·746	3·9	0	?	?	0·10	1·39	− 1·29	1·27	2·31	− 1·04	0·06	Gulbarga.	Hyderabad, South.
...	...	...	...	...	...	3	14	14	10·4	?	?	54	·643	1·6	2	?	?	0·91	?	?	1·42	?	?	0·51	Raichur.	
1	2	...	...	...	...	1	16	11	6·8	?	?	46	·560	2·3	1	?	?	0·26	1·15	− 0·89	1·14	2·57	− 1·43	0·14	Hyderabad (Deccan).	
...	1	...	1	...	...	4	10	15	6·2	7·4	− 16	46	·550	2·2	2	2·55	−0·55	0·91	?	?	1·69	?	?	0·50	Secunderabad.	
9	2	...	...	5	5	2	5	3	7·9	?	?	55	·776	1·9	1	?	?	0·22	?	?	2·09	?	?	0·17	Khamamet.	
																									10. West Coast.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·39	6·04	−4·51	...	...	...	...		
...	3	2	2	...	3	5	10	6	9·2	9·9	− 7	71	·853	3·5	0	1·00	−1·00	0	0·94	− 0·94	0·07	0·98	− 0·91	0	Bombay.	Konkan.
...	8	2	...	...	1	4	1	15	6·6	11·2	− 41	70	·858	4·0	0	1·64	−1·64	0·06	1·89	− 1·83	0·24	1·97	− 1·73	0·06	Ratnagiri.	
...	17	1	...	...	...	...	2	11	12·3	?	?	75	·915	4·0	1	?	?	0·23	?	?	0·29	?	?	0·14	Mormugao.	
4	7	...	...	...	...	2	5	13	9·1*	?	?	69	·880	4·7	0	?	?	0·02	2·81	− 2·79	0·02	2·88	− 2·86	0·02	Goa.	
...	8	4	2	...	...	3	2	12	5·0	?	?	75	·843	3·4	1	4·09	−3·09	0·11	3·85	− 3·74	0·17	4·26	− 4·09	0·11	Karwar.	
12	8	8	1	...	...	...	...	2	6·1	2·2	+178	80	·881	4·1	8	13·45	−5·45	4·12	13·30	− 9·18	12·95	20·11	− 7·16	1·79	Cochin	Malabar.
4	12	3	2	1	...	...	...	9	17·1	?	?	78	·872	5·1	5	9·00	−4·00	7·32	8·05	− 0·73	19·66	11·74	+ 7·92	3·49	Calicut.	
5	11	6	3	1	...	...	...	5	3·4	4·6	− 26	75	·874	5·9	0	6·80	−6·80	0·22	7·67	− 7·45	4·76	8·86	− 4·10	0·06	Mangalore.	
1	13	5	...	..	...	...	1	11	7·5	?	?	82	·904	4·2	2	?	?	0·42	9·80	− 9·38	10·52	15·95	− 5·43	0·18	Trivandrum.	
																									11. South India.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·88	2·69	−1·14	...	...	...	...		
...	...	...	1	2	14	10	4	...	13·5	?	?	80	·986	3·3	1	2·3	−1·3	0·53	2·21	− 1·68	4·66	7·13	− 2·47	0·51	Pamban	Madras, South.
...	2	...	...	...	2	8	5	14	5·6	?	?	58	·769	5·5	0	3·8	−3·8	0·06	?	?	4·80	?	?	0·06	Tinnevelly.	
2	10	1	...	...	...	3	2	13	2·2	3·7	− 41	63	·786	1·6	4	4·00	0	1·80	2·87	− 1·07	3·16	5·36	− 2·20	1·18	Madura	

* Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 202 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Madras, South Central.	Salem	940	28·921	−·005	29·792	28·966	2nd	28·837	27th	·129	82·6	100·0	+1·2	75·9	+0·4	88·0	+0·8	24·1	104·4	18th	70·0	12th	34·4
	Coimbatore	1,348	28·505	+·006	29·792	28·558	3rd	28·420	30th	·138	78·7	94·5	−0·2	72·3	−1·2	83·5	−0·7	22·2	97·9	29th & 31st.	68·1	12th	29·8
Coorg	Mercara	3,781	26·212	?	?	26·260	15th	26·133	27th	·127	68·7	78·6	−2·3?	64·5	0	71·6	−1·2	14·1	82·0	31st	60·7	6th	21·3
	Chitaldroog	2,405	27·487	?	29·802	27·548	2nd	27·409	28th	·139	76·3	91·9	?	70·0	?	81·0	?	21·9	94·6	7th & 12th.	63·9	14th	30·7
Mysore	Bangalore	3,019	26·895	+·004	29·800	26·948	15th	26·809	28th	·139	73·6	89·7	−1·6	67·8	−1·2	78·8	−1·4	21·9	92·8	4th & 12th.	63·3	20th	29·5
	Hassan	3,091	26·851	?	29·828	26·918	15th	26 769	28th	·149	73·2	86·3	?	65·7	?	76·0	?	20·6	89·6	18th	58·7	15th	30·9
	Mysore	2,518	27·388?	?	29·818?	27·456	15th	27·310	28th	·146	75·4	90·8	?	68·5	?	79·7	?	22·3	94·9	14th	62·9	4th	32·0
Madras, East Coast, South.	Negapatam	31	29·788	−·008	29·747	29·859	4th	29·689	31st	·170	87·4	100·8*	+4·9	80·8	+0·9	?90·8*	?	20·0	106·8	12th	75·7	19th	31·1
	Cuddalore	12	29·792	?	29·733	29·852	6th	29·696	31st	·156	87·2	98·2	?	80·1	?	89·2	?	18·1	104·3	17th & 31st.	76·2	9th	28·1
	Trichinopoly	255	29·571	−·009	29·757	29·647	4th	29·484	31st	·163	85·7	103·1	+2·0	79·2	+1·0	91·2	+1·5	23·9	106·7	31st	72·4	21st	34·3
	Madras	22	29·772	−·017	29·725	29·846	5th	29·635	31st	·211	89·0	100·8	+3·2	81·6	+0·8	91·2	+2·0	19·2	108·0	17th	77·0	1st & 2nd	31·0
Madras, East Coast, Central.	Nellore	71	29·695	?	29·699	29·783	4th	29·551	31st	·232	91·8	108·0	?	82·7	?	95·3	?	25·3	113·8	31st	78·1	1st & 3rd	35·7
	Masulipatam	15	29·740	−·016	29·689	29·855	4th	29·552	31st	·303	89·9	102·4	+3·2	82·0	+0·8	92·3	+2·0	20·4	114·7	31st	74·6	4th	40·1
Madras, Central	Cuddapah	433	29·382	?	29·747	29·442	1st	29·285	31st	·157	90·2	106·6	+1·5	83·5	+0·2	95·1	+0·9	23·1	110·3	31st	74·3	23rd	36·0
	Kurnool	923	28·888	−·001	29·739	28·953	4th	28·805	28th	·148	85·9	101·1	−0·2	79·9	−0·5	92·0	−0·4	24·2	109·3	31st	73·5	4th	35·8
	Bellary	1,475	28·374	+·028	28·779	28·430	1st	28·291	28th	·139	82·5	100·4	−1·9	76·7	−0·5	88·6	−1·2	23·7	105·0	31st	69·5	24th	35·5
Madras, East Coast, North.	Rajahmundry	112	29·636	−·024	29·684	29·753	4th	29·458	31st	·295	87·7	104·9	+2·1	82·0	+0·7	93·5	+1·4	22·9	114·1	31st	70·0	4th	44·1
	Cocanada	26	29·722	−·017	29·683	29·841	4th	29·528	31st	·313	87·6	100·2	+3·3	82·5	+0·3	91·4	+1·8	17·7	109·3	18th	71·5	2nd	37·8
	Vizagapatam	31	29·705	−·029	29·673	29·817	3rd	29·567	30th	·250	87·9	91·4	+1·2?	85·2	+0·1	88·3	+0·7?	6·2	95·8	15th	80·9	2nd	14·9
	Gopalpur	21	29·674	?	29·635	29·831	4th	29·530	28th & 30th.	·301	84·0	89·9	?	80·2	?	85·1	?	9·7	97·2	14th	76·1	4th	21·1
12. Hill Stations		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	Kuch Fort	?	23·898	?	?	24·040	5th	23·760	9th	·280	71·8	77·6	?	47·4	?	62·5	?	30·2	83·0	3 days	40·0	3 days	53·0
	Pishin	?	?	?	?	?	?	?	?	?	?	91·3	?	44·4	?	67·8	?	46·9	95·1	2nd & 28th.	38·9	5th	56·2
	Quetta	5,502	24·579	+·002	?	24·731	5th	24·439	9th	·292	69·4	83·7	+0·8	49·5	−2·5	66·7	−0·9	34·2	89·6	29th	43·4	5th	46·2
	Sherino								Observations incomplete.														
	Kalat	?	?	?	?	?	?	?	?	?	63·9	80·5	?	37·3	?	58·9	?	43·2	88·9	13th	28·4	19th	60·5
	Chaman	4,311	25·594	?	?	25·748	4th	25·456	28th	·292	78·9	91·8	?	62·1	?	77·0	?	29·7	98·0	29th	46·1	18th	51·9
Northern India	Srinagar	5,204	24·834	?	?	24·956	4th	24·718	27th	·238	60·0	74·3	?	51·5	?	62·9	?	22·8	81·8	10th & 29th.	45·2	11th	36·6
	Gilgit	?	25·648	?	?	25·920	4th	25·420	23rd	·500	68·7	82·7	?	59·7	?	71·3	?	23·0	92·3	9th	53·1	12th	39·2
	Cherat	?	25·577	?	?	25·712	4th	25·433	27th	·279	75·1	89·8	?	67·9	?	78·9	?	21·9	96·4	30th	57·7	18th	38·7
	Murree	6,344	23·766	−·016	?	23·880	4th	23·643	27th	·237	69·1	78·1	+2·2	61·8	+3·0	70·0	+2·6	16·3	85·7	29th	48·9	15th	36·8
	Poo	?		Not	recorded						?	68·3†	?	47·3	?	57·8†	?	21·0	75·7	30th	38·0	13th	37·7
	Simla	7,224	23·054	−·017	?	23·169	3rd	22·910	27th	·259	64·8	74·3	+3·2	59·0	+1·6	66·7	+2·4	15·3	81·4	30th & 31st.	47·3	16th	34·1
	Chakrata	6,977	23·264	−·021	?	23·394	3rd	23·120	27th	·274	67·5	78·0	+4·2	59·7	+3·8	68·9	+4·0	18·3	85·3	30th	49·7	15th	35·6
	Mussooree	?	23·483	?	?	23·622	3rd	23·336	27th	·286	67·8	79·9	+4·3	61·6	+4·4	70·8	+4·4	18·3	87·8	30th	52·0	6th & 16th.	35·8
	Ranikhet	6,069	24·018	−·023	?	24·153	3rd	23·855	26th	·298	72·3	83·0	+6·1	64·2	+4·8	73·6	+5·5	18·8	88·6	28th	54·0	7th	34·6
	Gnatong	?				Not recorded.					42·1	48·2	?	36·3	?	42·3	?	11·9	58·4	31st	30·1	1st	28·3
	Darjeeling	7,421	22·907	−·035	?	23·056	3rd	22·752	27th	·304	57·6	63·8	+1·1	53·5	+2·8	58·8	+2·0	10·6	67·6	2 days	49·1	9th	18·5
	Gantak	?	24·382	?	?	24·678	1st	24·203	27th	·475	62·2	72·7	?	56·8	?	64·8	?	15·9	77·4	19th	54·0	9th & 10th.	23·4
Central India	Mount Abu	3,945	25·979	+·005	?	26·068	4th	25·850	9th	·218	75·2	86·3	−2·3	69·1	−1·8	77·7	−2·1	17·2	92·2	7th	59·9	14th	32·3
	Pachmarhi	3,528	26·378	+·018	?	26·464	4th	26·271	27th	·193	82·5	96·1	+1·5	76·4	+1·8	86·3	+1·7	19·7	99·7	26th & 29th.	67·7	2nd	32·0
South India	Wellington	6,200	24·235	−·001	?	24·277	4th	24·167	27th	·110	68·7	75·6	0	56·2	−2·2	65·9	−1·1	19·4	81·2	31st	53·2	4th & 26th.	28·0
	Kotagiri	?	23·829	?	?	23·862	4th	23·754	9th	·108	65·2	73·4	?	57·2	?	65·3	?	16·2	78·7	10th	53·0	4th	25·7

* Mean of 24 days. † Mean of 30 days.

I—*continued.*

in India, Burma, etc., in May 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	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.
3	...	...	...	...	5	15	5	3	3·3	4·4	−25	68	·764	3·5	8	8·64	−0·64	2·61	5·20	− 2·59	4·32	7·66	− 3·34	0·66	Salem	Madras, South Central.
...	...	2	2	...	17	10	...	...	3·7	5·3	−30	77	·763	3·4	3	6·45	−3·45	0·97	2·61	− 1·64	2·74	4·91	− 2·17	0·41	Coimbatore.	
...	8	2	1	...	...	1	5	14	8·3	5·3	+57	86	·610	6·1	8	10·00	−2·00	3·27	6·59	− 3·32	8·61	10·18	− 1·57	0·82	Mercara.	
...	...	...	1	...	1	10	13	6	10·9	?	?	71	·647	4·0	6	?	?	4·63	?	?	5·89	?	?	1·53	Chitaldroog.	Coorg.
...	...	...	...	...	...	11	18	2	5·7	5·5	+ 4	79	·668	3·2	11	7·55	+ 3·45	6·49	4·02	+ 2·47	9·85	5·71	+ 4·14	1·20	Bangalore	Mysore.
1	...	...	...	...	1	4	12	13	3·9	?	?	77	·631	5·8	8	?	?	7·79	?	?	14·48	?	?	3·12	Hassan.	
2	2	...	...	...	1	10	13	3	10·9	?	?	77	·677	2·9	8	?	?	4·07	?	?	10·84	?	?	1·03	Mysore.	
...	...	...	...	...	4	16	10	1	10·5	7·4	+42	65	·847	3·4	0	2·18	−2·18	0·03	1·94	− 1·91	2·50	2·83	− 0·33	0·03	Negapatam	Madras, East Coast, South.
...	1	...	...	...	9	12	6	3	2·0	?	?	80	1·033	2·0	1	1·5	−0·5	0·26	?	?	3·06	?	?	0·26	Cuddalore.	
3	...	...	...	...	...	14	12	2	4·6	6·0	−23	61	·747	3·4	3	3·91	−0·91	1·49	3·04	− 1·55	5·11	5·12	− 0·01	0·87	Trichinopoly.	
...	1	...	...	1	12	10	6	1	8·7	9·2	− 5	63	·887	2·6	0	1·45	−1·45	0	2·12	− 2·12	0·86	3·13	− 2·27	0	Madras.	
2	...	...	...	...	9	1	8	11	7·8	?	?	59	·880	4·5	1	2·1	−1·1	0·11	?	?	0·37	?	?	0·11	Nellore	Madras, East Coast, Central.
2	1	...	...	1	12	7	3	5	6·3	8·9	−29	73	1·025	5·1	0	2·73	−2·73	0·05	1·55	− 1·50	3·85	1·82	+ 2·03	0·05	Masulipatam.	
...	1	1	...	...	...	3	9	17	?	?	?	50	·710	3·5	2	3·40	− 1·40	0·83	1·60	− 0·77	0·98	2·04	− 1·06	0·57	Cuddapah.	Madras, Central.
1	1	4	15	4	2	1	2	1	?	?	?	52	·635	4·1	5	2·67	+ 2·33	1·37	1·16	+ 0·21	2·17	2·35	− 0·18	0·45	Kurnool.	
3	...	...	1	1	1	3	15	7	8·5	8·4	+ 1	56	·616	5·4	4	3·33	+ 0·64	3·66	1·70	+ 1·96	4·09	2·50	+ 1·59	2·30	Bellary.	
3	1	2	9	4	3	1	6	2	?	?	?	68	·890	6·5	5	4·20	+ 0·80	1·83	2·75	− 0·92	2·87	3·69	− 0·82	1·25	Rajahmundry	Madras, East Coast, North.
...	1	1	2	2	...	18	6	1	8·3*	?	?	73	·961	3·8	2	3·6	− 1·6	1·39	1·22	+ 0·17	2·46	1·96	+ 0·50	1·17	Cocanada.	
...	...	...	...	...	...	11	20	...	1·7	3·8	−55	71	·938	6·9	0	4·36	− 4·36	0·06	2·62	− 2·56	1·44	3·50	− 2·06	0·06	Vizagapatam.	
...	...	...	...	...	11	19	1	...	21·6	13·3	+62	84	·962	2·3	0	3·44	− 3·44	0	2·55	− 2·55	2·64	3·99	− 1·35	0	Gopalpur.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**12. Hill Stations.**	
5	6	1	...	...	...	...	5	14	?	?	?	30	·236	0·3	0	?	?	0	?	?	3·26	?	?	0	Kuch Fort	Baluchistan.
Not recorded									?	?	?	?	?	?	0	?	?	0	?	?	4·84	?	?	0	Pishin.	
31	...	...	...	...	...	...	...	...	1·3	4·7	−72	41	·299	0·6	0	1·18	− 1·18	0	0·41	− 0·41	4·83	3·31	+ 1·52	0	Quetta.	
Observations incomplete.																									Shirino.	
...	10	...	...	...	18	...	1	2	?	?	?	?	?	?	0	?	?	0	?	?	0·23	?	?	0	Kalat.	
13	...	...	...	...	3	12	3	...	8·1	?	?	26	·230	0·6	0	?	?	0	?	?	3·06	?	?	0	Chaman.	
15	2	3	2	3	4	...	1	1	4·1	?	?	83	·430	3·4	3	?	?	1·52	?	?	10·08	?	?	0·56	Srinagar.	Northern India.
...	...	...	...	...	...	...	...	...	?	?	?	47	·319	4·5	4	?	?	1·25	?	?	3·44	?	?	0·62	Gilgit.	
4	11	1	...	4	2	1	...	8	15·2	?	?	31	·239	2·1	3	?	?	0·75	?	?	9·03	?	?	0·36	Cherat.	
4	9	3	1	4	2	1	...	7	9·2	8·3	+11	32	·224	3·2	5	5·55	− 0·55	1·15	3·50	− 2·35	10·91	10·55	+ 0·39	0·32	Murree.	
20	...	1	2	2	2	1	2	...	?	?	?	?	?	2·4	3	?	?	1·55	?	?	3·74	?	?	0·62	Poo.*	
8	10	6	1	...	3	1	1	1	6·5†	2·9	+124	41	·241	2·2	6	6·18	− 0·18	3·17	3·64	− 0·47	8·57	7·78	+ 0·79	0·91	Simla.	
3	1	5	7	2	...	5	6	2	8·3	6·0	+ 38	36	·238	1·7	4	?	?	1·48	2·62	− 1·14	6·15	6·49	− 0·34	0·52	Chakrata.	
...	3	1	3	3	1	...	4	16	?	12·3	?	39	·259	1·6	3	4·55	− 1·55	0·86	?	?	4·80	?	?	0·50	Mussooree.	
16	...	...	...	...	...	5	6	4	5·4	3·3	+ 64	38	·300	1·0	2	6·00	−4·00	0·28	2·71	− 2·43	3·60	6·06	− 2·46	0·12	Ranikhet.	
2	2	4	3	10	...	3	1	6	5·3	?	?	87	·235	7·5	24	?	?	26·24	?	?	36·94	?	?	3·82	Gnatong.	
5	2	7	3	2	...	1	9	2	8·4	6·2	+ 35	89	·428	8·0	10	13·29	− 3·29	4·33	8·74	− 4·41	9·78	14·90	− 5·12	1·34	Darjeeling.	
...	3	9	3	...	2	10	4	...	2·2	?	?	86	·481	6·8	24	?	?	31·06	?	?	41·91	?	?	5·82	Gantak.	
...	1	...	...	...	1	19	8	2	14·7	9·4	+ 56	48	·395	0	1	1·45	− 0·45	0·52	1·18	− 0·66	1·02	1·36	− 0·34	0·52	Mount Abu	Central India.
...	...	1	...	...	...	3	22	5	9·8	6·8	+ 44	29	·317	1·3	0	2·09	− 2·09	0	0·66	− 0·66	0·18	1·21	− 1·03	0	Pachmarhi.	
23	3	2	...	...	...	...	1	2	2·6	3·0	− 13	62	·440	3·1	7	8·78	− 1·78	4·60	3·95	+ 0·65	13·21	9·54	+ 3·67	1·14	Wellington.	South India.
...	13	6	...	...	2	2	1	7	4·6	?	?	96	·598	2·1	13	10·50	+ 2·50	6·08	7·41	− 1·33	16·65	12·40	+ 4·25	0·78	Kottagiri.	

* Mean of 30 days. † Mean of 24 days.

Table

Abstract of Observations taken at 8 A.M. at 202 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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. Extra India ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ceylon	Colombo	40	29·859	+·005	29·825	29·913	4th	29·765	31st	·148	84·9	87·3	?	79·4	?	83·4	?	7·9	89·0	5th	75·0	24th	14·0
Persia	Meshed	?				Not recorded.					70·2	81·1	?	53·1	?	67·1	?	28·0	90·7	7th	44·5	19th	46·2
	Teheran†	?	25·979	?	?	26·100	7th	25·895	24th & 31st	·205	72·3	83·7	?	59·3	?	71·5	?	24·4	90·5	7th	46·0	2nd	44·5
	Ispahan	?	?	?	?	?	?	?	?	?	69·0	83·2	?	53·6	?	68·4	?	29·6	91·5	13th	45·2	1st	46·3
	Bushire	14	29·767	?	29·737	29·945	6th	29·654	29th	·291	82·8	88·3	?	75·9	?	82·1	?	12·4	94·8	18th & 19th.	66·1	3rd	28·7
Arabia	Muscat	?	29·733	?	?	29·922	5th	29·593	28th	·329	87·1	90·2	?	85·2	?	87·7	?	5·0	97·5	11th	80·1	3rd	17·4
	Baghdad	?	29·393	?	?	29·616	1st	29·284	17th	·332	77·8	91·0	?	69·9	?	80·5	?	21·1	99·7	29th	58·9	2nd	40·8
	Aden	94	29·767	−·003	29·792	29·882	7th	29·657	29th &31st.	·225	85·2	93·9	+ 0·2	81·4	+0·6	87·7	+0·4	12·5	98·8	29th	76·9	4th	21·9
	Perim	?	29·606	?	?	29·730	6th	29·469	29th	·261	85·7	92·9	?	82·1	?	87·5	?	10·8	97·8	20th	79·1	4th	18·7
Afghanistan	Kabul	?				Not recorded.					66·5	81·3	?	52·5	?	66·9	?	28·8	86·7	1st	47·9	19th	38·8
Central Asia	Kashgar	?	25·605	?	?	25·880	19th	25·360	1st	·520	?	77·6	?	54·9	?	66·2	?	22·7	91·3	2nd & 7th.	44·2	12th	47·1
Arabian Sea Islands.	Minicoy	10	29·906	?	29·841	29·962	15th	29·813	28th	·149	84·1	90·0	?	82·3*	?	86·2*	?	7·7	93·4	27th	77·6	20th	15·8
Africa	Zanzibar	73	29·998	?	29·998	30·049	7th	29·876	26th	·173	76·6	81·8	?	74·7	?	78·3	?	7·1	86·9	5th	71·1	23rd	15·8

* Mean of 21 days. † Mean of 30 days.

I—*concluded.*

in India, Burma, etc., in May 1894—concluded.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st March 1894.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
																									13. Extra India.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
...	...	...	...	...	...	20	11	...	10·7	8·5	+ 26	76	·920	4·6	7	?	?	3·07	11·79	−8·72	22·93	28·76	− 5·83	0·97	Colombo	Ceylon.
18	...	...	...	...	...	...	10	3	?	?	?	?	?	0·9	2	?	?	0·46	?	?	5·33	?	?	0·23	Meshed	Persia.
16	3	...	...	...	8	...	3	...	4·4*	?	?	42	·326	1·9	1	?	?	0·20	?	?	1·14	?	?	0·20	Teheran†	
...	4	8	...	...	...	...	8	11	5·3	?	?	53	·380	1·1	1	?	?	0·31	?	?	1·66	?	?	0·25	Ispahan	
...	...	4	3	6	...	...	1	17	7·5	8·9	− 16	64	·709	?	0	?	?	0	?	?	1·44	?	?	0	Bushire.	
...	1	...	5	1	1	1	6	16	4·1	?	?	67	·856	0	0	?	?	0	?	?	0·48	?	?	0	Muscat	Arabia.
9	13	4	1	1	...	...	...	3	9·2	?	?	61	·583	0	0	?	?	0·03	?	?	6·90	?	?	0·03	Baghdad.	
14	...	7	8	...	...	2	...	...	9·8	10·6	−8	79	·950	2·5	0	?	?	0	0·21	− 0·21	1·73	2·03	− 0·30	0	Aden.	
7	1	1	10	4	...	...	5	3	12·5	?	?	74	·907	2·6	0	?	?	0	?	?	0	?	?	0	Perim.	
...	...	...	11	...	...	9	5	6	?	?	?	?	?	?	0	?	?	0	?	?	2·77	?	?	0	Kabul	Afghanistan.
...	2	2	5	3	3	2	7	6	5·2	?	?	?	?	2·7	2	?	?	4·60	?	?	5·01	?	?	4·50	Kashgar	Central Asia.
...	1	...	...	...	...	1	16	13	12·0	?	?	74	·868	4·2	7	?	?	4·31	?	?	8·33	?	?	1·41	Minicoy	Arabian Sea. Islands.
...	...	...	1	2	17	11	...	...	10·4	?	?	87	·794	6·8	14	?	?	9·92	?	?	18·81	?	?	2·70	Zanzibar	Africa.

* Mean of 29 days. † Mean of 30 days.

Table

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

Meteorological Province.	Station.	Height of the barometer 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 to gravity, 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·792	29·704	·088	29·746	−·006	29·738	86·5	77·7	8·8	89·2	74·1	15·1	84·1	83·1	81·0	−1·2	75·6	80·1	78·8	78·1
	Rangoon	...	·796	·689	·107	·747	−·011	·724	88·0	76·1	11·9	92·2	73·4	18·8	82·3	82·1	79·7	−3·3	74·2	78·5	77·7	76·8
	Diamond Island	...	·803	·709	·094	·754	−·014	·729	86·4	79·2	7·2	88·8	73·4	15·4	83·3	84·2	81·9	−1·2	75·4	78·0	78·2	77·2
	Cocos Island	111	·751	·672	·079	·710	?	·781	88·4	77·8	10·6	91·4	69·9	21·5	84·5	84·0	81·7	?	74·7	79·9	78·9	77·8
	Akyab	...	·787	·680	·107	·738	−·023	·701	89·5	76·7	12·8	95·3	69·2	26·1	85·6	86·5	82·3	−1·0	73·9	80·9	81·5	78·7
Assam.	Silchar	...	·670	·539	·131	·605	−·045	·659	88·1	72·4	15·7	96·6	68·3	28·3	80·2	85·4	79·3	−0·2	71·1	74·7	76·7	74·2
	Sibsagar	...	·429	·298	·131	·363	−·063	·651	84·2	71·0	13·2	93·4	68·0	25·4	78·5	83·3	76·9	−0·4	70·4	74·8	76·5	73·9
	Dhubri	...	·613	·474	·139	·539	−·064	·607	88·0	73·8	14·2	94·3	67·9	26·4	79·8	85·8	78·8	+1·2	71·0	75·1	77·8	74·6
Bengal and Orissa.	Chittagong	...	·691	·590	·101	·642	−·030	·676	88·9	75·1	13·8	94·2	68·6	25·6	85·4	85·1	81·0	−0·1	73·2	79·9	80·2	77·7
	Narayanganj	..	·691	·575	·116	·635	−·052	·602	92·3	76·1	16·2	96·0	67·7	28·3	86·4	88·5	83·5	+0·9	72·8	79·8	79·7	77·5
	Calcutta (Alipore)	...	·666	·548	·118	·608	−·053	·574	95·5	79·7	15·8	105·1	71·6	33·5	89·7	93·2	87·4	+2·3	75·5	81·2	80·0	78·9
	Ditto (Chowringhee).	...	·669	?	?	?	?	?	97·3	79·5	17·8	105·0	71·3	33·7	91·8	?	88·4	?	76·6	80·1	?	?
	Saugor Island	...	·679	·566	·113	·625	−·046	·593	92·7	83·2	9·5	94·5	74·7	19·8	89·6	89·4	86·8	+1·7	79·9	83·7	83·6	82·4
	Burdwan	...	·572	·427	·145	·503	−·072	·546	101·9	79·6	22·3	112·3	72·2	40·1	90·2	99·3	89·2	+3·2	74·7	79·8	78·9	77·8
	Berhampore	...	·604	·457	·147	·534	−·069	·548	101·2	78·4	22·8	112·5	69·7	42·8	89·7	98·8	88·4	+3·9	73·0	80·8	78·9	77·6
	False Point	...	·693	·586	·107	·642	−·038	·603	90·8	81·8	9·0	93·2	76·8	16·4	88·7	88·2	85·4	+1·7	79·0	82·5	82·2	81·2
	Cuttack	...	·602	·475	·127	·549	−·060	·568	105·3	82·2	23·1	111·1	76·6	34·5	95·8	100·3	91·1	+3·4	77·5	80·9	81·1	79·8
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·690	27·588	·102	27·643	−·044	·505	102·7	78·7	24·0	108·7	70·1	38·6	95·4	98·7	89·6	+4·4	63·5	70·6	69·4	67·8
	Patna	...	29·449	29·323	·126	29·384	−·084	·515	105·0	80·1	24·9	113·9	75·3	38·6	95·7	103·3	91·7	+4·5	69·8	76·8	76·2	74·3
	Darbhanga	...	·493	·352	·141	·421	−·083	·525	98·3	77·8	20·5	107·0	70·4	36·6	89·1	97·9	87·5	+3·0	73·6	78·6	78·2	76·8
	Allahabad	...	·326	·206	·120	·266	−·058	·520	109·5	81·5	28·0	114·4	71·2	43·2	100·6	108·0	95·6	+3·7	67·3	75·2	76·9	73·1
	Ghazipur	220	·396	·281	·115	·338	−·075	·503	107·4	82·3	25·1	114·0	75·1	38·9	98·9	104·0	94·0	+4·4	72·2	73·3	74·4	73·3
	Lucknow	...	·269	·150	·119	·205	−·067	·515	108·4	79·5	28·9	114·0	66·3	47·7	99·4	106·1	94·0	+3·2	65·2	72·6	72·5	70·1
Upper Sub-Himalayas.	Dehra Dun	...	27·457	27·367	·090	27·412	−·067	·501	89·5	71·6	27·9	105·7	65·2	40·5	89·6	95·7	84·9	+2·5	59·2	68·6	69·0	65·6
	Roorkee	...	28·741	28·632	·109	28·681	−·060	·494	105·8	74·9	30·9	112·7	64·6	48·1	96·2	103·6	90·1	+2·5	63·5	71·0	71·8	68·8
	Meerut	...	·888	·783	·105	·828	−·055	·497	105·7	75·7	30·0	111·8	65·8	46·0	97·4	103·4	90·4	+2·2	65·0	71·1	70·8	68·9
	Lahore	...	·902	·814	·088	·851	−·064	·503	106·2	76·3	29·9	111·9	67·9	44·0	96·7	104·0	91·0	+4·5	64·1	71·8	73·8	69·9
	Ludhiana	...	·807	·716	·091	·755	−·058	·496	107·5	76·6	30·9	115·8	70·1	45·7	97·6	105·7	91·9	+4·2	65·5	74·8	77·4	72·6
Indus Valley and N.-W. Rajputana.	Peshawar	...	·564	·466	·098	·508	−·041	·563	100·7	70·2	30·5	108·5	60·4	48·1	91·1	97·3	85·0	+2·6	59·8	68·1	68·6	65·5
	Mooltan	...	29·189	29·080	·109	29·128	−·061	·498	109·7	79·3	30·4	114·5	72·1	42·4	94·5	108·1	94·4	+4·4	69·3	77·5	80·0	75·6
	Jacobabad	...	·439	·322	·117	·374	−·037	·507	114·3	77·7	36·6	120·0	67·0	53·0	102·5	112·9	95·9	+2·6	63·1	75·2	74·7	71·0
	Kurrachee	...	·703	·625	·078	·663	+·012	·664	92·4	78·4	14·0	94·9	71·9	23·0	88·6	89·1	83·7	−0·2	71·6	81·9	81·9	78·5
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·286	28·180	·106	28·232	−·013	·578	107·2	76·8	30·4	111·4	70·8	40·6	96·1	105·0	91·7	+1·4	64·2	72·0	71·4	69·2
	Ajmere	...	·130	·022	·108	·074	−·008	·581	103·7	80·9	22·8	107·9	73·6	34·3	93·4	102·7	92·0	+2·4	67·6	72·2	74·0	71·3
	Deesa	...	29·317	29·175	·142	29·245	+·017	·649	106·2	76·5	9·7	112·9	70·3	42·6	92·0	104·9	90·8	−0·3	69·1	73·8	71·9	71·6
	Nowgong	...	28·917	28·804	·113	28·861	−·027	·533	108·9	78·7	30·2	113·6	68·9	44·7	101·2	107·2	93·8	+0·6	64·9	71·4	71·9	69·4
	Agra	...	29·098	·979	·119	29·030	−·049	·515	110·4	82·3	28·1	115·5	73·8	41·7	101·5	106·8	95·9	+3·2	65·6	73·2	73·5	70·8
Deccan.	Belgaum	...	27·354	27·238	·116	27·300	+·017	·683	92·0	67·5	24·5	98·0	63·9	34·1	83·7	86·2	77·1	−0·5	65·7	69·2	72·3	69·1
	Sholapur	...	28·241	28·083	·158	28·164	+·014	·637	104·4	75·8	28·6	107·7	71·2	36·5	91·0	102·3	89·2	0	66·0	70·1	70·8	69·0
	Poona	...	·015	27·898	·117	27·965	+·019	·687	99·6	70·9	28·7	104·5	67·4	37·1	89·2	95·6	84·4	0	66·1	69·4	70·8	68·8
	Akola	...	·841	28·691	·150	28·765	+·006	·607	107·6	80·9	26·7	111·1	75·8	35·3	96·3	105·9	94·1	+0·4	66·1	73·0	72·7	70·6
	Buldana	2,132	27·680	27·563	·117	27·621	+·004	·606	101·4	76·3	25·1	105·1	70·7	34·4	90·2	99·5	88·7	0	62·6	69·1	66·7	66·2

II.

at 89 Stations in India, Burma, etc., for the month of May 1894.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from											Wind Steadiness.		Wind Velocity.					
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 of the month.	Heaviest rain fall during the month.	Station.	Meteorological Province.
·858	·975	·927	·920	−·022	90	83	82	85	+ 1	8·2	7·7	8·0	+1·7	...	1	1	...	3	12	27	15	3	S 49° W	S 34° W	71	48	154	166	...	...	Port Blair	Burma Coast and Bay Islands.
·823	·921	·895	·881	+·013	91	84	81	85	+ 8	7·2	8·1	7·7	+1·0	...	...	1	3	6	17	20	13	2	S 32° W	S 19° W	63	59	81	119	...	...	Rangoon	
·830	·890	·885	·868	−·030	83	78	75	79	+ 7	8·6	8·6	8·6	+3·1	2	1	1	3	1	7	28	11	8	S 58° W	S 76° W	61	45	127*	162	...	...	Diamond Island	
·821	·964	·927	·903	?	86	81	80	82	?	6·8	6·4	6·6	?	...	3	3	...	2	5	31	6	1	S 48° W	?	55	?	?	?	...	...	Cocos Island.	
·803	·995	1·010	·936	+·053	87	81	80	83	+ 6	7·4	5·8	6·6	+1·3	...	1	9	8	4	17	7	13	3	S 11° W	S 33° W	26	31	?	88	..	...	Akyab	
·747	·792	·806	·782	−·012	93	78	68	80	0	7·5	6·2	6·9	+0·7	33	1	4	11	4	2	1	3	3	N 88° E	N 75° E	17	10	98*	79	...	...	Silchar	Assam.
·740	·815	825	·793	+·009	97	84	74	85	+ 3	6·8	6·5	6·7	−1·1	27	1	27	2	1	...	4	...	...	N 49° E	N 56° E	40	37	79*	66	...	...	Sibsagar	
·725	·842	·848	·797	+·010	87	80	69	79	− 1	6·8	4·9	5·9	+1·3	5	4	21	11	5	2	9	2	3	N 64° E	N 70° E	34	21	200	168	...	...	Dhubri	
·796	·952	·969	·906	+·043	91	78	80	83	+ 3	6·8	5·5	6·2	+1·1	...	2	2	3	12	17	15	9	2	S 15° W	S	52	38	208*	153	...	...	Chittagong	Bengal and Orissa.
·772	·935	·903	·870	−·017	85	74	68	76	− 4	5·7	5·5	5·6	+0·3	...	3	...	3	16	28	6	3	1	S 9° E	S 19° E	64	60	236	149	...	...	Naryanganj	
·834	·951	·851	·879	−·017	82	68	55	68	− 8	3·6	1·7	2·7	−1·7	...	...	...	1	3	27	28	2	1	S 22° W	S 11° E	84	66	214	172	...	...	Calcutta (Alipore).	
·886	·997	?	?	?	90	67	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	3·08	1·27	,, (Chowringhee).	
·981	1·078	1·075	1·045	+·060	86	77	77	80	0	7·5	5·7	6·6	+1·1	...	...	...	1	8	45	8	...	...	S 1° E	S 12° W	90	69	558	367	...	...	Saugor Island.	
·800	·882	·720	·801	−·012	79	63	39	60	− 6	3·0	3·6	3·3	−0·7	...	2	3	4	8	18	19	5	3	S 16° W	S 9° E	52	52	152*	131	...	...	Burdwan	
·743	·934	·723	·800	−·002	77	67	41	62	− 9	3·3	5·0	4·2	−1·0	4	2	2	11	6	20	11	4	2	S 7° E	S 36° E	43	37	131	132	...	...	Berhamporè	
·959	1·030	1·019	1·003	+·042	88	76	76	80	− 3	5·6	5·5	5·6	+1·1	...	...	...	...	1	37	23	1	...	S 17° W	S 31° W	90	71	403*	324	...	...	False Point	
·884	·855	·806	·848	+·016	80	51	43	58	− 6	2·4	3·3	2·9	−1·0	5	2	2	2	5	27	15	3	1	S 12° W	S 5° W	61	61	142	125	...	...	Cuttack	
·407	·447	·360	·405	−·067	42	28	20	30	−10	1·5	4·5	3·0	−0·4	1	15	4	2	1	6	7	5	21	N 80° W	S 77° W	32	15	262	210	...	...	Hazaribagh	Gangetic Plain and Chota Nagpur.
·594	·671	·545	·603	−·082	60	42	27	43	−12	0·2	0·5	0·4	−2·3	...	2	13	22	...	...	...	16	9	N 26° E	N 54° E	31	38	166	118	...	...	Patna	
·780	·839	·700	·777	+·019	82	61	40	62	+ 2	1·1	0·7	0·9	−1·1	...	1	4	23	22	4	...	4	4	S 70° E	S 86° E	60	59	167	145	...	...	Darbhanga	
·484	·536	·514	·511	−·017	45	28	21	31	− 7	0·7	1·0	0·9	−0·7	...	6	3	7	1	1	1	16	27	N 46° W	N 8° E	58	20	181	99	...	...	Allahabad	
·662	·476	·446	·528	−·029	60	26	21	36	− 4	0·3	0·6	0·5	−0·8	11	...	1	12	...	...	2	31	5	N 83° W	N 10° W	37	9	65	82	*Nil*	*Nil*	Ghazipur	
·437	·461	·346	·415	−·127	45	25	15	28	−13	0·9	1·5	1·2	−0·7	8	...	2	22	3	...	...	27	...	S 64° W	N 15° E	3	15	?	102	...	...	Lucknow	
·351	·441	·378	·390	?	45	32	23	33	?	1·1	2·5	1·8	−1·0	5	4	3	3	...	1	16	22	6	S 87° W	S 76° W	53	17	51	59	...	...	Dehra Dun	Upper Sub-Himalayas.
·437	·424	·355	·405	−·010	51	26	17	31	− 4	0·4	1·1	0·8	−1·0	16	...	...	8	2	...	9	13	14	N 84° W	S 68° W	32	6	128	88	...	...	Roorkee	
·478	·410	·327	·405	−·098	54	23	15	31	−10	1·0	1·4	1·2	−0·6	5	...	...	5	6	2	13	21	10	S 74° W	N 32° W	47	24	75	63	...	...	Meerut	
·438	·447	·431	·439	+·004	48	26	21	32	− 1	1·1	1·7	1·4	−0·9	5	11	5	13	4	5	5	6	8	N 26° E	N 7° E	16	21	87	79	...	...	Lahore	
·483	·559	·564	·535	+·054	53	32	25	37	− 5	1·2	2·5	1·9	−0·3	24	7	3	1	3	4	1	12	7	N 59° W	N 57° W	23	10	41	56	...	...	Ludhiana	
·388	·404	·345	·379	−·046	54	29	20	34	− 6	1·8	3·5	2·7	−0·2	12	6	11	10	5	3	1	4	10	N 35° E	N 16° E	24	32	113*	118	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·588	·717	·649	·651	+·072	59	45	27	43	+ 1	0	0	0	−1·1	8	...	12	...	8	...	25	...	9	S 50° W	S 35° W	21	35	48*	68	...	...	Mooltan	
·392	·514	·350	·413	−·031	41	26	13	26	− 5	0·2	0·4	0·3	−0·9	27	3	2	...	11	7	4	2	6	S 1° E	S 61° E	14	17	118*	107	...	...	Jacobabad	
692	1·003	·993	·896	+·015	71	74	72	72	− 1	3·7	2·3	3·0	+1·0	...	...	...	...	...	...	32	30	...	S 67° W	S 60° W	92	85	388	420	...	...	Kurrachee	
·449	·486	·348	·428	+·003	48	28	15	30	− 1	0·5	2·6	1·6	−0·4	1	...	1	...	1	10	45	3	1	S 40° W	N 50° W	85	50	168	159	...	...	Jeypore	E. Rajputana, C. India and Gujarat.
·515	·529	·482	·509	−·009	49	35	23	36	− 2	0·1	1·2	0·7	−0·9	...	1	...	...	1	...	7	51	2	S 87° W	S 60° W	92	63	332	181	...	...	Ajmere	
·622	·590	·341	·518	−·066	67	40	16	41	+ 2	0·8	0·5	0·7	−0·3	...	...	...	...	...	...	24	32	6	S 77° W	S 55° W	89	76	345	321	...	...	Deesa	
·438	·372	·311	·374	−·033	44	19	13	25	− 6	1·0	2·9	2·0	−1·1	1	...	1	2	...	...	2	53	3	N 88° W	N 70° W	87	44	159*	81	...	...	Nowgong	
·411	·441	·378	·410	−·031	37	22	17	25	− 6	0·5	2·3	1·4	+0·2	...	...	6	...	...	...	16	...	40	N 59° W	N 72° W	67	30	167	139	...	...	Agra	
·614	·537	·622	·581	−·005	91	47	50	63	+ 3	2·8	4·7	3·8	+0·3	...	5	1	1	...	...	17	29	9	W	S 38° W	74	73	418	435	...	...	Belgaum	Deccan.
·520	·477	·363	·453	−·011	59	33	18	36	0	2·4	5·9	4·2	+0·2	...	9	2	...	...	...	7	12	32	N 54° W	N 41° W	77	46	342*	242	...	...	Sholapur	
·583	·473	·444	·500	−·010	77	35	27	46	+ 3	1·5	3·3	2·4	−0·6	...	1	...	...	...	...	4	33	24	N 74° W	N 55° W	89	66	342	337	...	...	Poona	
·446	·501	·306	·436	+·038	42	30	16	29	+ 2	0·9	3·1	2·0	−0·3	...	15	1	...	..	...	1	26	19	N 54° W	N 51° W	79	72	308	208	...	...	Akola	
·402	·452	·246	·367	−·075	44	33	13	30	− 5	0·5	2·8	1·7	−1·0	...	4	2	...	...	...	1	14	41	N 51° W	N 53° W	87	51	?	284	0·11	0·11	Buldana	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89 Stations

Meteorological Province.	Station.	Height of barometer 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 to gravity, 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Deccan—*continued.*	Khandwa	...	28·730	28·587	·143	28·658	+·013	·616	106·2	81·1	25·1	110·7	76·1	34·6	93·6	104·7	93·2	+0·8	65·0	72·2	70·6	69·3
	Hoshangabad	...	·720	·572	·148	·645	−·029	·576	106·8	79·8	27·0	111·1	75·7	35·4	97·7	106·0	93·0	−0·1	63·9	73·5	72·9	70·1
	Nagpur	...	·691	·555	·136	·622	−·012	·549	110·5	82·9	27·6	115·2	73·6	41·6	101·5	107·0	96·2	+2·0	64·1	71·8	72·1	69·3
	Jubbulpore	...	28·387	28·255	·132	28·320	−·015	29·538	107·0	78·6	28·4	110·7	66·4	44·3	98·7	104·5	92·1	+1·2	65·0	73·1	74·0	70·7
	Saugor	...	27·976	27·858	·118	27·916	+·001	·543	106·1	79·0	27·1	109·8	71·3	38·5	97·9	103·4	91·8	+2·2	62·0	70·2	69·5	67·2
	Raipur	...	28·720	28·585	·135	28·652	−·030	·509	109·8	83·2	26·6	114·2	76·6	37·6	101·5	106·9	96·1	+2·6	66·0	73·2	73·4	70·9
	Sutna	...	·626	·504	·122	·565	−·035	·514	107·4	80·9	26·5	112·1	69·6	42·5	101·3	105·4	93·9	+2·8	61·9	72·7	72·2	68·9
	Hyderabad (Deccan.)	...	·112	27·933	·129	·048	?	·612	103·6	79·8	23·8	107·3	74·5	32·8	93·4	99·8	90·8	?	67·9	72·2	72·7	70·9
West Coast.	Bombay	...	29·846	29·750	·096	29·796	+·030	·772	90·9	81·1	9·8	92·5	79·3	13·2	86·7	87·3	85·0	+0·3	75·4	78·1	78·5	77·3
	Ratnagiri	...	·769	·674	·095	·720	+·031	·766	91·2	80·5	10·7	92·9	78·9	14·0	88·7	88·3	85·0	+0·7	75·5	78·9	79·5	78·0
	Karwar	...	·852	·750	·102	·799	+·026	·774	90·6	79·5	11·1	93·3	71·1	22·2	87·0	87·5	84·1	+0·3	75·9	78·2	79·1	77·7
	Cochin	...	·889	·806	·083	·846	+·012	·782	90·5	77·3	13·2	92·1	72·7	19·4	85·5	87·8	83·2	+0·6	75·1	78·8	79·7	77·9
South India.	Salem	...	28·920	28·770	·150	28·857	−·022	·706	100·1	75·7	24·4	104·4	70·2	34·2	89·1	96·9	85·7	+1·1	71·7	76·2	77·1	75·0
	Mysore	...	27·403	27·275	·128	27·339	?	·720	91·0	68·6	22·4	95·1	62·9	32·2	80·6	87·7	78·9	?	66·9	71·7	72·1	70·2
	Mercara	...	26·223	26·139	·084	26·193	+·014	·792	78·7	64·4	14·3	81·9	60·6	21·3	73·1	74·9	70·6	−0·9	62·6	67·3	68·9	66·3
	Bangalore (Fort)	...	·900	·778	·122	·846	−·004	·686	89·7	67·8	21·9	92·9	63·5	29·4	80·1	87·7	78·3	−0·8	65·2	71·1	71·1	69·1
	Hassan	...	·854	·745	·109	·807	?	·733	86·5	65·7	20·8	89·6	58·7	30·9	78·9	82·7	75·2	?	61·1	69·8	71·1	67·3
	Chitaldroog	...	27·487	27·352	·135	27·821	?	·690	92·0	70·0	22·0	97·0	63·8	33·2	81·6	91·0	80·8	?	64·2	70·7	70·7	68·5
	Trichinopoly	...	29·578	29·418	·160	29·510	−·025	·689	103·3	79·2	24·1	106·8	72·6	34·2	93·0	100·5	89·2	+2·0	72·7	76·3	77·2	75·4
	Madras	...	·776	·654	·122	·725	−·010	·674	101·1	81·9	19·2	109·4	77·1	32·3	95·2	91·2	88·9	+1·7	?	80·6	81·4	80·3
	Bellary	...	28·379	28·225	·154	28·303	+·026	·674	100·7	76·7	24·0	105·0	69·5	35·5	89·0	98·4	87·7	−0·9	68·0	71·7	72·2	70·6
	Vizagapatam	...	29·712	29·601	·111	29·656	−·030	·624	91·4	85·0	6·4	95·5	81·0	14·5	90·1	90·6	89·1	+1·1	75·6	80·9	81·6	79·4
	Coconada	...	·723	·585	·138	·654	?	·615	100·2	82·1	18·1	109·1	71·3	37·8	93·0	96·4	90·2	?	76·9	81·3	82·2	80·1
Hill Station, Baluchistan.	Quetta	...	24·586	24·523	·063	24·546	+·005	?	83·7	49·6	34·1	89·5	43·5	46·0	76·9	81·9	66·2	−0·5	43·2	55·8	57·7	52·3
Hill Stations, Northern India.	Leh	11,503	19·727	19·652	·075	19·702	+·018	?	61·1	36·5	24·6	66·9	33·0	33·9	52·4	56·4	47·9	+0·4	31·4	39·1	40·7	37·1
	Srinagar	...	24·843	24·758	·085	24·792	?	?	74·1	51·5	22·6	81·8	45·8	36·0	65·0	72·3	62·4	?	50·3	60·1	64·9	58·4
	Murree	...	23·788	23·756	·032	23·762	−·023	?	78·1	61·7	16·4	85·6	48·9	36·7	72·8	74·7	69·5	+3·0	48·6	55·0	55·5	53·1
	Chamba	3,005	26·763	26·678	·085	26·733	−·046	?	92·3	63·9	28·4	100·2	58·4	41·8	79·1	87·7	76·6	+1·6	55·7	63·0	63·9	60·8
	Kailang	10,087	20·812	20·774	·038	20·805	+·024	?	59·7	36·7	23·0	68·9	31·0	37·9	50·9	53·5	46·4	−0·9	34·4	41·9	42·9	39·7
	Simla (Ridge)	...	23·073	23·042	·031	23·049	−·008	?	74·4	53·6	15·8	81·4	47·3	34·1	68·5	70·8	66·0	+1·3	47·8	53·1	54·2	51·7
	Simla (Chapslee)	?	?	?	?	?	?	?	79·4	58·9	20·5	87·8	48·0	39·8	71·8	?	?	?	47·9	54·1	?	?
	Chakrata	...	·282	·237	·045	·251	−·025	?	78·1	59·7	18·4	85·3	49·6	35·7	72·5	73·5	68·2	+3·7	47·7	55·1	55·4	52·7
	Ranikhet	...	24·033	·968	·065	·989	−·027	?	82·9	64·2	18·7	88·4	54·0	34·4	77·9	78·1	72·7	+5·2	52·9	58·8	58·8	56·9
	Katmandu	4,388	25·519	25·439	·080	25·475	−·033	?	87·8	60·6	27·2	94·4	55·7	38·7	79·3	82·1	72·5	+2·2	59·1	66·1	67·1	64·1
	Darjeeling	...	22·919	22·834	·085	22·870	−·044	?	63·8	53·6	10·2	67·8	49·3	18·5	60·2	61·2	58·5	+2·6	51·5	58·0	58·5	56·5
	Demagiri	?	?	?	?	?	?	?	87·9	72·5	15·4	93·9	67·2	26·7	82·4	85·8	79·7	−0·3	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	86·9	71·7	15·2	93·7	60·3	33·4	81·0	84·9	78·8	?	?	74·5	76·0	?
Hill Stations, Central India.	Mount Abu	...	25·992	25·917	·075	25·954	−·004	?	86·3	68·8	17·5	92·4	59·9	32·5	78·7	85·3	77·3	−2·3	57·1	63·8	66·4	62·4
	Pachmarhi	...	26·390	26·288	·102	26·338	+·016	?	96·1	76·4	19·7	99·5	67·7	31·8	87·7	93·9	85·8	+1·7	58·6	63·2	62·9	61·6
	Chikalda	3,642	·263	·169	·094	·215	−·004	?	94·2	72·8	21·4	97·8	68·1	29·7	84·0	92·3	83·1	+0·3	59·8	65·5	65·2	63·5

II—*continued.*

in India, Burma, etc., for the month of May 1894—continued.

Vapour tension.					Humidity.					Cloud.				Wind direction. Number of winds from											Wind steadiness.		Wind velocity.					
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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·422	·524	·320	·423	−·063	39	33	15	29	−5	0	1·7	0·9	−1·4	3	3	...	...	...	...	3	30	23	N. 70° W.	N. 61° W.	84	69	317	225	...	...	Khandwa	Deccan—*continued.*
·400	·529	·405	·445	−·012	39	30	18	29	−2	0·3	3·6	2·0	−0·5	12	1	...	...	...	1	13	26	9	S. 86° W.	W.	68	54	89	93	...	...	Hoshangabad	
·368	·409	·352	·376	−·052	33	20	15	23	−5	1·2	4·9	3·1	−0·8	...	7	4	...	2	1	7	13	28	N. 56° W.	N. 41° W.	64	44	239	168	...	...	Nagpur	
·456	·496	·464	·472	+·067	46	27	21	31	+1	0·5	3·2	1·9	−1·2	2	...	1	...	1	...	8	26	24	N. 77° W.	N. 62° W.	77	44	111	104	...	...	Jubbulpore	
·349	·392	·299	·347	−·018	35	22	14	24	−4	0·2	2·5	1·4	−0·5	...	1	...	...	...	...	23	22	16	S 86° W.	N. 87° W.	79	60	140	105	...	...	Saugor	
·414	·445	·381	·413	−·058	36	22	16	25	−8	2·6	5·3	4·0	+0·7	5	8	1	...	1	1	11	19	14	N. 75° W.	N. 78° W.	60	39	227*	190	...	...	Raipur	
·322	·446	·376	·381	+·026	31	22	17	23	−4	0·2	1·6	0·9	−1·4	2	4	...	2	1	...	...	28	25	N. 64° W.	N. 50° W.	77	52	247*	198	...	...	Sutna	
·536	·527	·462	·508	?	53	34	26	37	?	2·4	4·2	3·3	?	5	4	5	1	5	1	6	11	24	N. 57° W.	?	47	?	181*	?	...	...	Hyderabad (Deccan,)	
·804	·846	·856	·835	−·046	76	67	66	70	−4	2·6	1·5	2·1	−1·8	...	...	...	2	...	4	9	28	19	N. 86° W.	N. 82° W.	40	67	225	248	...	...	Bombay	
·819	·859	·892	·857	+·032	79	63	67	70	+1	2·7	3·4	3·1	+1·3	...	4	...	...	...	...	7	23	28	N. 69° W.	N. 73° W.	82	64	252*	255	...	...	Ratnagiri	West Coast.
·848	·847	·884	·860	+·007	84	66	68	73	−1	3·1	2·6	2·9	−0·3	...	2	...	...	...	...	2	9	49	N. 52° W.	N. 69° W.	92	81	123	?	...	...	Karwar	
·843	·895	·906	·881	−·012	90	73	69	77	−4	2·8	4·9	3·9	−1·8	4	3	3	...	...	...	...	35	17	N. 69° W.	W.	77	49	146	?	...	...	Cochin	
·728	·729	·667	·708	−·061	82	53	38	58	−6	2·5	5·4	4·0	−0·6	7	2	1	...	7	9	18	11	7	S. 50° W.	S. 50° W.	48	61	81	100	...	...	Salem	
·640	·669	·594	·634	?	92	64	46	67	?	2·9	4·0	3·5	?	4	2	5	2	1	1	6	33	8	N. 82° W.	?	60	?	258*	?	...	...	Mysore	South India.
·550	·605	·639	·598	−·017	91	75	74	80	0	5·4	6·4	5·9	−0·8	...	10	...	1	...	1	3	17	30	N. 55° W.	N. 68° W.	78	65	199	113	...	...	Mercara	
·594	·661	·572	·609	+·017	87	65	44	65	+3	2·8	3·2	3·0	−1·4	1	4	2	...	...	...	8	30	17	N. 76° W.	S. 71° W.	77	72	136*	133	...	...	Bangalore (Fort)	
·489	·624	·629	·581	?	77	63	57	66	?	3·8	6·0	4·9	?	...	3	...	...	...	1	14	23	21	N. 82° W.	?	77	?	93*	?	...	...	Hassan	
·531	·618	·499	·550	?	73	57	35	54	?	2·7	3·4	3·1	?	...	2	1	1	...	2	9	23	24	N. 76° W.	?	74	?	227*	?	...	...	Chitaldroug	
·718	·684	·617	·673	−·065	72	44	32	49	−8	2·8	4·0	3·4	−2·1	10	...	...	...	3	...	21	25	3	S. 70° W.	S. 82° W.	68	59	109	145	...	...	Trichinopoly	
?	·850	·940	·919	+·049	?	52	64	67	−2	2·3	2·1	2·2	−1·7	...	2	...	5	25	8	10	9	3	S. 9° E.	S. 15° E.	47	66	211	220	...	...	Madras	
·579	·563	·484	·535	−·035	63	41	26	43	0	4·3	6·3	5·3	+0·5	6	2	...	...	1	1	1	29	22	N. 71° W.	N. 76° W.	76	52	205	200	...	...	Bellary	
·754	·966	·966	·895	−·013	62	66	67	65	−4	4·8	4·3	4·6	+0·5	...	...	...	...	1	20	30	11	...	S. 37° W.	S. 41° W.	84	60	41	86	...	...	Vizagapatam	
·861	·914	·912	·896	?	78	60	54	64	?	2·1	1·9	2·0	?	...	1	1	3	14	12	18	11	2	S. 20° W.	?	53	?	202	?	...	...	Cocanada	
·217	·238	·225	·227	−·053	61	26	20	36	−6	0·4	1·3	0·9	0	46	1	...	...	...	...	1	7	7	N. 67° W.	N. 69° W.	23	51	33*	106	...	...	Quetta	Hill Station, Baluchistan.
·137	·129	·120	·129	+·006	63	35	29	42	+2	5·9	6·9	6·4	0	...	4	7	...	3	17	12	11	8	S. 55° W.	S. 72° W.	35	25	81	75	1·21	0·54	Leh	Hill Stations, Northern India.
·353	·466	·535	·451	?	91	75	68	78	?	2·5	5·2	3·9	?	41	3	2	...	6	7	1	...	1	S. 32° E.	?	13	?	98*	?	...	...	Srinagar	
·208	·253	·243	·236	−·025	40	32	28	33	−11	3·2	3·4	3·3	−1·0	2	4	1	1	10	24	8	5	6	S. 13° W.	S. 18° E.	46	13	217*	193	...	...	Murree	
·350	·390	·321	·354	+·016	59	40	26	42	−2	3·2	6·1	4·7	+0·2	22	6	3	...	3	2	...	5	21	N. 40° W.	N. 16° W.	39	14	115*	119	3·49	1·26	Chamba	
·180	·190	·188	·186	+·008	82	53	48	61	+5	3·7	7·6	5·7	−0·5	...	...	...	...	8	4	24	26	...	S. 54° W.	S. 61° W.	74	70	50	54	4·18	0·93	Kailang	
·222	·244	·250	·239	−·047	47	36	35	39	−8	2·0	4·0	3·0	−0·9	4	16	10	3	2	10	6	4	6	N. 6° W.	S. 66° W.	19	51	159	?	...	...	Simla (Ridge)	
·218	·237	?	?	?	46	31	?	?	?	1·9	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	2·87	0·83	Simla (Chapslee)	
·208	·255	·254	·239	−·035	41	33	33	36	−13	1·5	4·3	2·9	−0·8	7	1	3	5	1	2	22	20	1	S. 63° W.	S. 63° W.	52	29	200	147	...	...	Chakrata	
·287	·300	·299	·294	−·031	49	31	32	37	−14	0·6	1·6	1·1	−2·5	18	1	...	...	5	1	12	8	17	W.	S. 63° W.	40	46	130	87	...	...	Ranikhet	
·474	·491	·492	·482	−·003	89	50	45	61	−7	3·4	5·7	4·6	−0·7	1	1	1	13	3	1	5	33	4	S. 85° W.	S. 86° W.	39	64	47	?	1·91	0·76	Katmandu	
·364	·461	·465	·438	+·039	88	88	85	87	0	8·6	8·4	8·5	+1·2	5	...	6	5	1	1	20	14	5	S. 69° W.	S. 79° W.	42	46	200	149	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	...	...	42	1	...	...	19	...	S. 88° E.	S. 11° E.	39	6	?	?	18·21	4·45	Demagiri	
?	·783	·788	?	?	?	74	67	?	?	6·1	5·3	5·7	+0·8	...	5	...	...	...	26	27	...	4	S. 30° W.	S. 4° W.	69	58	?	?	15·44	2·15	Tura	
·335	·424	·432	·397	+·056	50	46	36	44	+9	0	0·3	0·2	−1·4	...	1	1	...	...	...	46	12	2	S. 57° W.	S. 62° W.	87	70	351*	231	...	...	Mount Abu	Hill Stations, Central India.
·292	·300	·219	·270	−·085	32	23	14	23	−9	0·8	2·7	1·8	−1·0	...	5	1	...	...	...	4	35	17	N. 73° W.	N. 55° W.	82	62	235*	164	...	...	Pachmarhi	
·368	·417	·311	·365	−·003	46	37	21	35	0	1·9	4·4	3·2	+0·5	1	18	...	...	...	...	...	14	29	N. 42° W.	N. 37° W.	84	63	279	226	0·21	0·16	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89 Stations

Meteorological Province.	Station.	Height of the 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 to 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.
Hill Stations, South India.	Wellington	...	24·240	24·165	·075	24·203	0	?	75·6	56·0	19·6	81·2	53·2	28·0	72·3	69·5	64·3	−1·5	53·7	61·9	60·9	58·8
	Muscat	...	29·743	29·670	·073	29·707	?	?	89·7	85·0	4·7	97·7	80·1	17·6	88·0	88·7	87·1	?	73·4	79·3	78·8	77·1
Extra India.	Aden	...	·776	·644	·132	·707	−·011	·731	93·9	81·4	12·5	98·3	76·9	21·4	88·8	90·8	86·8	+1·0	75·4	80·3	79·1	78·2
	Perim	...	·625	·503	·122	·561	?	?	93·2	82·1	11·1	98·0	79·1	18·9	88·6	89·8	86·8	?	76·6	79·8	80·1	78·8
	Minicoy	...	·919	·832	·087	·874	?	·809	90·0	82·3	7·7	93·4	77·6	15·8	86·6	87·0	85·3	?	76·1	78·7	78·8	77·9
	Zanzibar	...	30·010	·932	·078	·971	?	·972	81·6	74·7	6·9	86·9	71·1	15·8	78·2	80·8	77·9	?	72·5	74·5	74·7	73·9
	Seychilles	...	29·975	·897	·078	·936	?	·874	83·5	77·5	6·0	85·4	73·8	11·6	82·0	82·3	80·2	?	72·6	75·4	75·7	74·6

II—*concluded.*

in India, Burma, etc., for the month of May 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from										Wind Steadiness.		Wind Velocity.					
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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·390	·449	·449	·429	—·013	87	57	62	69	—1	3·9	7·0	5·5	—0·2	...	16	14	6	13	3	2	...	8	N. 45° E.	N. 88° E.	40	24	62	70	...	...	Wellington	Hill Station, South India.
·678	·890	·855	·808	?	56	68	64	63	?	0	0·3	0·2	?	...	3	10	18	1	2	...	3	25	N. 12° E.	?	42	?	98	?	...	...	Muscat	
·803	·919	·838	·853	+·003	75	68	58	67	—2	1·4	0·5	1·0	—0·9	14	1	7	16	1	17	5	1	...	S. 48° E.	S. 67° E.	37	40	284	257	...	...	Aden	Extra India.
·843	·900	·898	·880	?	77	67	64	69	?	1·0	1·3	1·2	?	3	...	9	29	4	1	...	10	6	N. 74° E.	?	40	?	315	?	...	...	Perim	
·843	·876	·873	·872	?	76	69	68	72	?	3·9	4·5	4·2	?	...	1	...	...	...	...	2	30	29	N. 69° W.	?	90	?	287	?	...	...	Minicoy	
·774	·808	·778	·786	?	90	84	75	83	?	5·9	5·0	5·5	?	...	...	...	1	15	34	11	...	...	S. 4° E.	S. 17° W.	85	?	215	179	...	...	Zanzibar	
·738	·793	·800	·777	?	78	72	73	74	?	4·5	4·7	4·6	?	...	...	4	4	42	6	...	2	4	S. 46° E.	?	71	?	196	?	...	...	Seychilles	

G. I. C. P. O.—No. 10 Meteor.—31-8-94.—400.

K.M.G.

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.

Reg. No. 155, Wx. I.—June 94.—5,000.

Zinco. ... Calcutta.

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

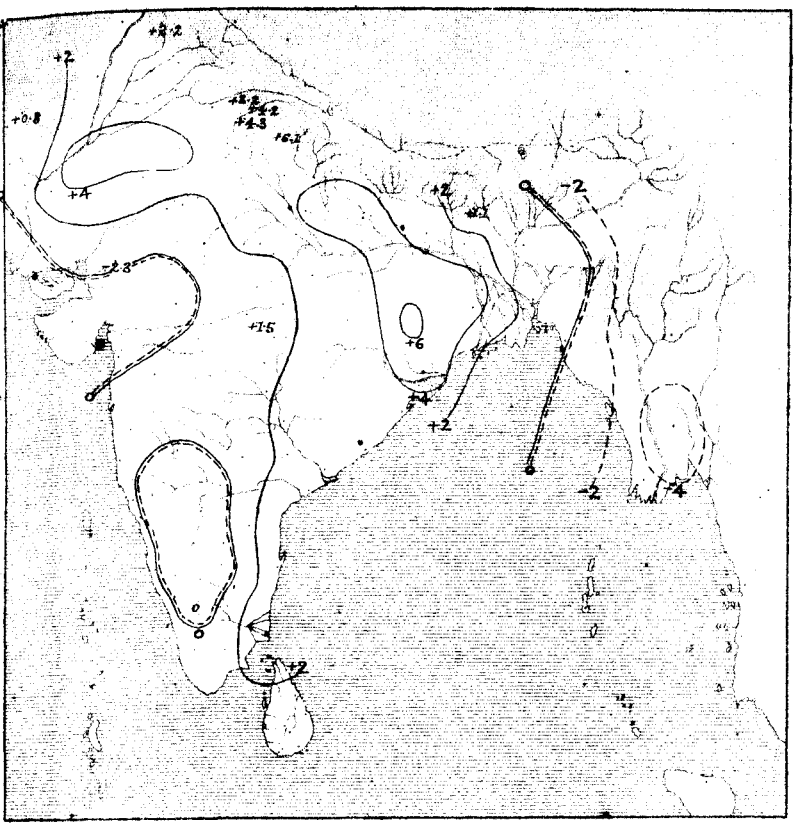
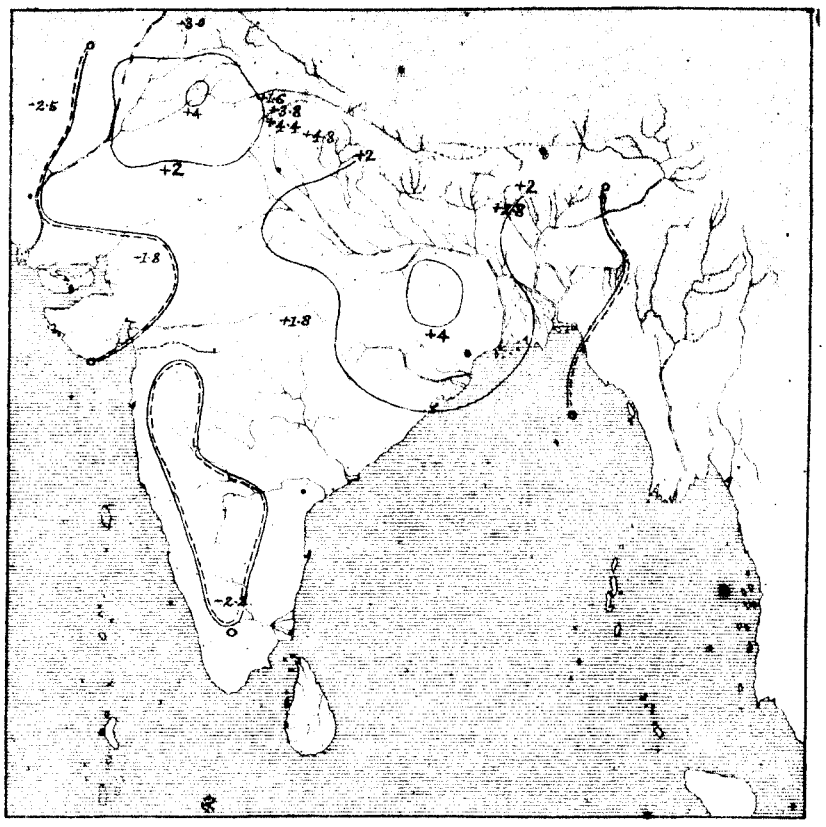


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



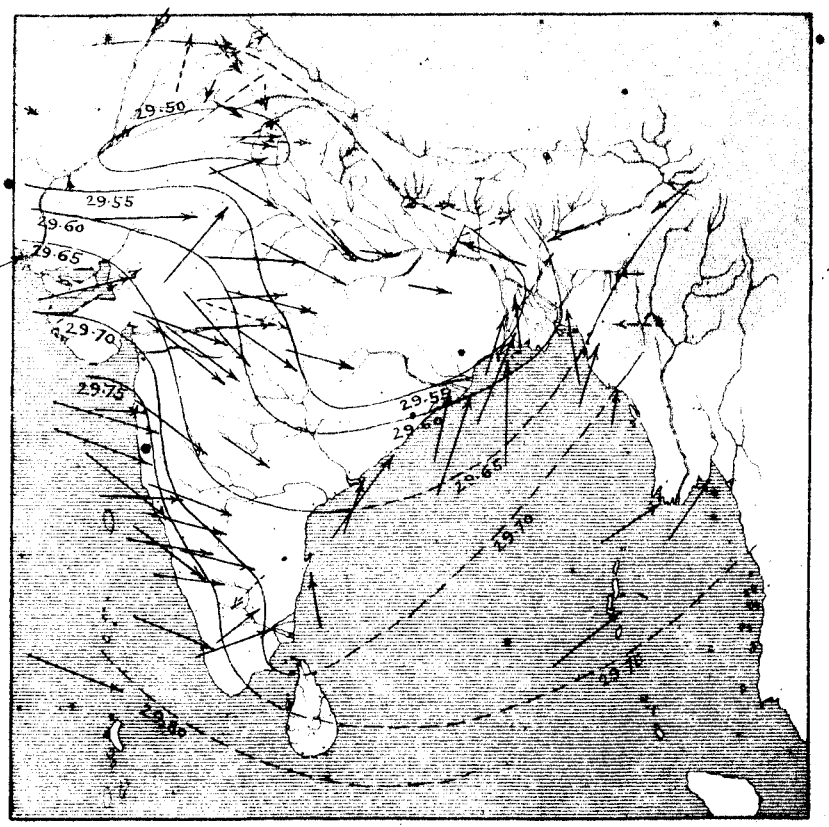
Explanation.

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 1894.



K. M. G.

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 of the resultant; a length of ⅕th of an inch being equal to 100 per cent.

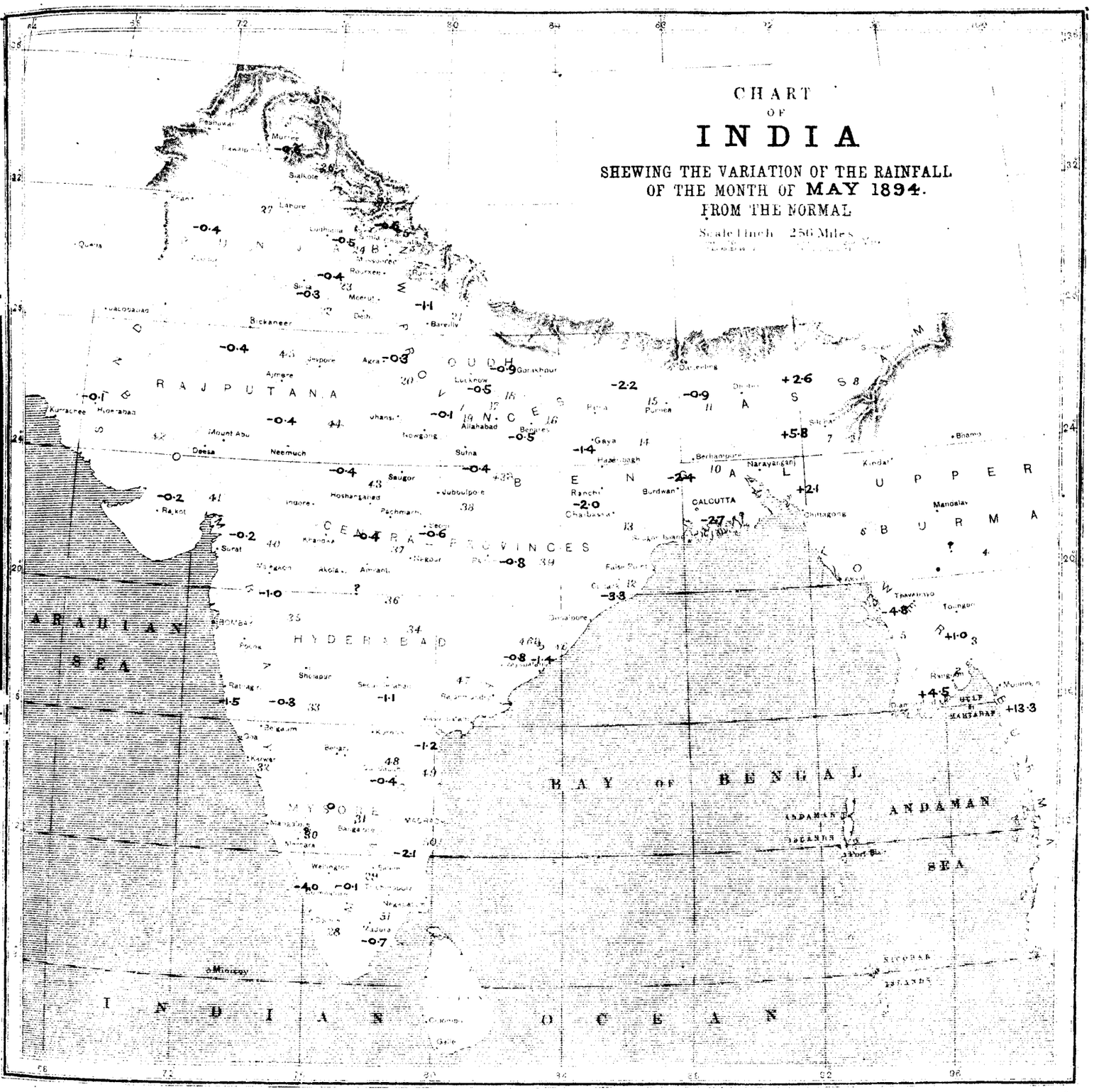
K. M. G.

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. 155, Wr. I—June 95.—8.(K).

Zincog. Calcutta.



K.M.G.

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 51 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 name of the districts 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 figures.

1. Tenasserim
2. Lower Burma
3. Central do.
4. Upper do.
5. Arakan
6. Eastern Bengal
7. Assam (Surma)
8. Do. (Brahmaputra)
9. Deltaic Bengal
10. Central do.
11. North do.
12. Orissa
13. Chota Nagpore
14. Behar (South)
15. Behar (North)
16. North Western Provinces (East)
17. Oudh (South)
18. Do. (North)
19. North Western Provinces (Central)
20. Do. do (West)
21. Do. do (Submontane)
22. Punjab (South)
23. Do (Central)
24. Do. (Submontane)
25. Do (Hill Districts)
26. Do. (North West)
27. Do. (West)
28. Malabar
29. Madras (South Central)
30. Coorg
31. Mysore
32. Konkan
33. Bombay Deccan
34. Hyderabad (North)
35. Khandeish
36. Berar
37. Central Provinces (West)
38. Do. (Central)
39. Do. (East)
40. Gujarat
41. Kathiawar
42. Sind
43. Central India (East)
43(a). Do. do. (a)
44. Rajputana (East) Central India (West)
45. Rajputana (West))
46. East Coast (North)
46(a). Do. do. (a)
47. Hyderabad (South)
48. Madras (Central)
49. East Coast (Central)
50. East Coast (South)
51. Madras (South)

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JUNE, 1894.

INTRODUCTION.

THIS Review of the weather in India during the month of June 1894 is based on observations taken daily at 8 A.M. at 203 stations and on additional observations taken at 10 A.M. and 4 P.M. at 88 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 June, 1894.

The most important feature of the meteorology of the month (and also of the year) is the advance of the South-West monsoon currents over the Arabian Sea and the Bay of Bengal into India, and their establishment in the latter area. Brief and partial advances of these currents occur occasionally in the month of May, but it is not until the last week of May or the first and second weeks of June, that the great advance occurs which culminates in the establishment of the "rainy season" in Central and Northern India.

Judging solely from the land observations, there are very considerable differences from year to year in the character of the advance of the monsoon currents over the Indian seas towards Northern India. In one year (for example, 1889) the Bombay branch of the monsoon current advanced northwards along the west coast from Malabar to Bombay or Surat at a fairly uniform rate of progression, whilst in another year (for example, 1890) it appears to have marched westwards across the centre of the Arabian Sea, and set in over the greater part of the west coast almost simultaneously. The manner of advance of the currents over India depends very largely upon the pressure and other weather conditions prevailing at the time in India, and hence differs largely from one year to another.

Temperature is usually excessive in the whole of Upper and Central India at the commencement of the month. The advance of the monsoon currents over the interior increases humidity rapidly, and brings up much cloud, and is followed by frequent rain showers. Hence temperature falls rapidly with their advance, and the area of excessive temperature retreats northwards to Sind, the West Punjab and North-West Rajputana. The highest maximum

temperatures of the year are hence occasionally recorded in that area in June or July.

The change from great heat and dryness of the air to moderate heat, excessive humidity and frequent rain-showers is usually not completed over Northern India until the third or fourth week of June, by which time the monsoon currents usually penetrate into the East and North Punjab.

There is always much disturbance and squally weather in front of the advancing monsoon. This squally weather, if conditions are favourable, may develop into a cyclonic storm. Hence cyclonic storms frequently accompany the great advance of the monsoon currents in the Arabian Sea and Bay of Bengal.

After the south-west monsoon currents are fully established in Northern India, small cyclonic storms form at short intervals in the Bay of Bengal or in Bengal. These storms constitute one of the more important and characteristic features of the rains. In June and July they usually march in a west or west-north-west direction along the trough of low pressure which generally stretches from Orissa to Sind or the South-West Punjab, and which in its eastern half separates the area in which easterly winds from the Bay of Bengal prevail from the area in which westerly winds from the Bombay coast obtain. These storms not only give heavy rain to the areas they traverse, but draw rain away for the time being from other districts to concentrate it in the comparatively narrow belt over which they pass. They are hence one of the most important of the causes of the irregular distribution of the monsoon rainfall.

At the commencement of the month hot weather conditions prevailed over the whole of India. Weather was showery in Burma to which area the south-west winds in the centre and south of the Bay were at this time chiefly directed. Temperature was in general excess in India and in moderate defect in Central and Upper Burma. It was largely above the normal in the Coromandel coast districts and Circars in consequence of the prevalence of abnormal north-westerly winds due to the pressure conditions in the Bay. Thus on the 1st the highest day temperatures were recorded in that area, the most noteworthy being those at Nellore (116°·2) and Masulipatam (114°·7). The day temperatures at these two stations were 14° above the normal day temperature of the period. Pressure during the next two or three days fell slowly but steadily in Upper India and gradients increased. Light showers began to fall in the west coast districts, but it was not until the 5th and 6th that heavy rain, the first burst of the monsoon, began to fall in the Malabar coast.

During this period, from the 1st to the 6th, temperature was steadily above the normal, but the area of greatest excess of temperature which was in the Madras coast districts on the 1st was transferred gradually northwards to the Punjab. Thus on the 3rd and 4th, the excess was greatest in the Central Provinces (slightly exceeding 4°), on the 5th and 6th in the South Punjab, on the 7th and 8th in the South-East Punjab and on the 9th and 10th in the North Punjab. The mean temperature of the 24 hours preceding 8 A.M. of the 9th was 8° above the normal at Sialkot and Sirsa and 10° at Murree.

The air was excessively dry during this period in Upper India and Baluchistan. The lowest humidity percentages recorded during the period were 5 on the 4th and 6 on the 6th at 4 P.M. at Murree, 8 on the 3rd and 4th at Quetta, and 7 on the 5th at Peshawar. The lowest humidity recorded during the month was 3 per cent. on the 13th at Quetta. The 4 P.M. humidity in the North and West Punjab and the Baluchistan plateau averaged less than 10 per cent. during this period from the 1st to the 6th. The highest temperatures of the month were recorded during this period, the most noteworthy being 121°·0 at Jacobabad on the 5th, 118°·9 at Montgomery on the 6th and 117°·4 at Sirsa on the 5th.

The second period of the month commenced on the 6th on which day heavy rain began to fall on the Malabar coast. Steepish gradients obtained over the Indian area, pressure being nearly half an inch lower in the North Punjab than in Ceylon and South Tenasserim. Malabar received heavy rain on the 6th and 7th, Calicut, for example, obtaining a total of 14 inches on these two days. The heavy rainfall extended northwards to Ratnagiri on the 8th and to Bombay on the 11th. Winds during this period had strengthened rapidly on the west coast, and strong monsoon winds prevailed as far north as Bombay on the 9th and the Cutch coast on the 11th. The first monsoon showers fell in the North Deccan and Central Provinces on the 7th and 8th and extended to Central India, Rajputana and the South-East Punjab on the 10th and 11th. The chief features of the progress of the Bombay monsoon current in 1894 were, first, that it advanced somewhat later than usual in the Arabian Sea and did not give rise to a cyclonic storm during its progress over that area, and, secondly, that it extended with unusual rapidity over the North Deccan and Central and North-Western India and was fully established in these areas within six days from the first heavy burst of rain on the Malabar coast. Its advance produced the usual large changes of temperature, humidity and cloud conditions which mark the commencement of the monsoon proper. To give one example, the mean humidity of the 7th at Murree was only 10 per cent. and on the 11th it was 69 per cent. Temperature fell very largely over the whole of North-Western and Central India during this period. The reduction of temperature from the 5th to the 12th was upwards of 8° over nearly the whole of that area, and was greatest in the Punjab where it averaged 11°. The transition from what may be termed the continental conditions of the hot weather period of the north-east

monsoon to the oceanic conditions of the south-west monsoon was hence effected with unusual rapidity.

Whilst these massive changes were in progress in Western and North-Western India, south-west winds in the Bay had increased in strength and extended to the north of the Bay and rain had fallen in increasing amounts in Burma and Bengal. Weather which was fine with light variable winds at the head of the Bay on the 10th and 11th became squally on the 12th, winds increasing from force 1 in the north-west angle of the Bay on the 11th to 6 on the morning of the 12th.

A cyclonic storm began to form on that day which initiated south-west monsoon conditions and rainfall in North-Eastern India and formed the chief feature of the third period of the month extending from the 12th to the 20th. The monsoon current during its advance in the north of the Bay was determined more largely towards East Bengal than usual. A depression began to form on the 12th in South-East Bengal where the current curved round from north to west. It developed rapidly during the day and was a shallow but well-defined cyclonic storm on the morning of the 13th. It began to drift in a westerly direction, at first slowly, but with gradually increasing velocity. The centre was a little to the north-east of Jessore on the morning of the 14th and to the north of Chaibassa on the 15th and had advanced about 230 miles during the previous 24 hours. It marched about 300 miles during the next 24 hours and was central near Sutna on the morning of the 16th and near Neemuch on the 17th, when it was travelling at the rate of about 15 miles per hour. During this period it was a shallow and somewhat extensive depression and had given moderate rain to the whole of North-Eastern India, Central India and the Central Provinces. It recurved during the day and advanced in a nearly northerly direction towards Central Rajputana and slowly filled up during its progress. The centre of the residual depression was nearly midway between Bickaneer and Sambhar at 8 A.M. of the 18th. Weather had been very disturbed during the previous 36 hours in the Kashmir and Punjab Himalayas and the adjacent submontane districts. The disturbance extended as far north into the interior as Kailang and Leh. The residual depression in Rajputana on the 18th probably advanced northwards and was absorbed in the disturbance over the Western Himalayan area, with the result that a very heavy downpour occurred in the hill and submontane districts of the Punjab during the next 24 hours. Falls exceeding 10 inches were reported by many stations in the submontane districts on the 19th, giving rise to severe floods. The fall at Kailang between the 16th and 20th was the heaviest experienced in June since the establishment of the observatory. The rainfall in the Kashmir Himalayas caused floods in the Kashmir valley. The flood in the Jammu river submerged the greater part of Srinagar and did much damage. Heavy snow fell on the higher elevations in Lahoul and Kashmir down to a level of 12,000 feet. The disturbance in its later stages hence gave moderately heavy rain in Central India and Rajputana and excessively heavy rain in Kashmir and the hill and submontane districts of the Punjab.

While the previous storm was breaking up in the Punjab, another storm was forming at the head of the Bay. Winds had fallen light in Bengal on the 18th and 19th, but strong monsoon winds continued in the centre of the Bay. A depression formed in the north-west angle of the Bay on the 19th and 20th, and began to move slowly north-westward on the 21st. It crossed the North Orissa coast during the night of the 21st and advanced through Chota Nagpur on the 22nd and 23rd to Baghelkhand and the eastern districts of the North-Western Provinces on the 24th. The indraught to the storm area during this period had determined moderate general rain to North-Eastern India and the Central Provinces. The Bombay current had fallen off considerably in strength and was giving light to moderate rain in the west coast districts and little or none in Upper India. The depression remained stationary in the eastern districts of the North-Western Provinces during the next three days. The rainfall in the storm area, which was moderate on the 24th, gradually increased in intensity until the 26th when a heavy downpour occurred in the Allahabad and neighbouring districts, falls of 6 to 9 inches in 24 hours being reported at 8 A.M. of the 27th. The depression intensified during this period of heavy rain and began to move slowly westwards. It passed through the Banda, Hamirpur and Jhansi districts of the North-Western Provinces into Bundelkhand on the 28th, giving excessive rain during its passage. Thus Nowgong in Bundelkhand registered 9·29 inches on the morning of the 28th. The depression continued to drift westwards into Central Rajputana, gradually filling up as it advanced and it finally disappeared before the morning of the 30th. The chief feature of the storm was the excessive and prolonged rain it gave to the south-eastern districts of the North-Western Provinces and to Bundelkhand. Whilst this storm was filling up on the 28th and 29th, another storm, the third of the series of cyclonic storms of the present monsoon, began to form in the north of the Bay. Its history will be given in the July Monthly Weather Review.

Pressure.—Pressure was on the average of the month ·022″ below the normal over the whole Indian area. The deficiency was slightly larger than that amount in North-Western India or pressure was, relatively to the general condition, in slight defect in that area. It was relatively in slight excess in the greater part of the Peninsula and North-Eastern India, but the local variations from the general condition were very small in amount, and in this respect the month contrasted

strikingly with the preceding month. Pressure was slightly less in defect at the hill stations than at the neighbouring plain stations, but the vertical anomalies were small and apparently of no significance. The following table gives the mean pressure variations and anomalies of the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	Variation from normal of 8 A.M. of pressure.	Anomaly.
	"	"
Burma Coast and Bay Islands	−·017	+·005
Burma Inland	−·016	+·006
Assam	−·013	+·009
Bengal and Orissa	−·018	+·004
Gangetic Plain and Chota Nagpur	−·019	+·003
Upper Sub-Himalayas	−·022	0
Indus Valley and North-West Rajputana	−·033	−·011
East Rajputana, Central India and Gujarat.	−·031	−·009
Deccan	−·025	−·003
West Coast	−·022	0
South India	−·018	+·004

Temperature.—The temperature conditions of the month were determined by the early extension of the monsoon currents over the whole of India in the second week of the month and by the subsequent distribution of the rainfall. The rainfall of the month was in defect in the Deccan and South India, North Bengal and the Indus valley. The mean temperature of the month was hence above the normal in these areas. Rainfall was, on the other hand, largely in excess in the East Punjab, Rajputana, Central India and the North-Western Provinces. Temperature was considerably in defect in these areas of large excess of rainfall. As is almost invariably the case in the hot weather and rains, the variations of the day and ight ntemperatures were the same in character but differed in amount, the variations of the latter being in almost every case less in amount than those of the day or maximum temperature. Both the day and night temperatures, and hence also the mean temperature of the month, were in slight to moderate excess in the Peninsula to the south of the parallel of 18° N. and in North Bengal and in slight excess in the Indus valley. The day temperature was 3° or more in excess at Madras (+3°·4), Salem (+3°·3) and Negapatam (+3°·0). The variations of the mean night or minimum temperature in these areas were less than 2°, except perhaps at Mooltan (+2°·3). The mean temperature was over 2° in excess at Salem (+2°·7), Madras +2°·4) and perhaps Mooltan (+2°·2).

Temperature was in defect over the remainder of India. The day temperature was considerably in defect over the East Punjab, Rajputana, Central India, Kathiawar and the greater part of the Central Provinces, and was most largely in defect in the area defined by the stations of Rajkot (4°·5 in defect), Hoshangabad (4°·9 in defect), Saugor (5°·8 in defect), Nowgong (4°·0 in defect) and Ajmere (4°·7 in defect). The night temperature was below the normal by small amounts, averaging generally less than 1° over the whole area of deficient day temperature. The mean temperature of the month was more than 2° in defect in two parts of that area, *viz.*, in the submontane districts of the Punjab, where the deficiency ranged between 2° 0 and 2°·2, and in a large area including Kathiawar, the greater part of Rajputana, Central India and the north-western districts of the Central Provinces. The deficiency was largest at Hoshangabad (−3°·4), Neemuch (−3°·2) and perhaps Nowgong (−3°·6). The mean temperature at the hill stations in Northern and Central India was also below the normal, but by smaller amounts than at the neighbouring plain stations. The deficiency was greatest at Pachmarhi, slightly exceeding 2°. The mean temperature of the month was in slight excess at the stations of Leh (+1°·9) and Kailang (+1°·0), thus showing that the cooling effect of the large snow accumulation of the previous winter had ceased.

The highest temperatures of the month were recorded in Upper India during the first week of the month on the 5th and 6th. Temperatures ranging between 118° and 121° were recorded at several stations in the Punjab and Upper Sind on these two days.

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

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.
	°	°	°
Burma Coast and Bay Islands	−0·5	+0·2	−0·2
Burma Inland	−1·3	−0·2	−0·8
Assam	+0·8	+0·3	+0·6
Bengal and Orissa	−0·6	−0·2	−0·4
Gangetic Plain and Chota Nagpur.	−1·7	−0·5	−1·1
Upper Sub-Himalayas	−2·9	−0·1	−1·5
Indus Valley and North-West Rajputana.	+0·8	+0·7	+0·8
East Rajputana, Central India and Gujarat.	−3·5	−0·7	−2·1
Deccan	−1·8	−0·1	−1·0
West Coast	+0·7	+0·5	+0·6
South India	+0·9	+0·2	+0·6

Winds.—Winds were on the average of the month weaker at the Burma coast stations, but slightly stronger at Port Blair and the Bengal coast stations. They were much stronger and steadier than usual in Bihar, Chota Nagpur and the North-Western Provinces, due chiefly to the early permanent establishment of the monsoon currents over Northern India. Winds were more westerly than usual at Port Blair and in Lower Burma, indicating a larger diversion of the monsoon current from the Bay across the Andaman Sea. The mean wind directions in Bengal, more especially South Bengal, were more easterly than usual. The Bay current was hence more largely determined westwards up the Gangetic plain than usual, and hence influenced North and East Bengal and Assam less than usual.

The Bombay monsoon current was later in being established than usual. It was strong between the 11th and the 21st, but somewhat feeble during the remainder of the month. The mean air movement was hence on the average of the month slightly below the normal at the coast stations. It was, on the contrary, above the normal to a moderate extent in the Deccan, the Central Provinces, Berar and Central India, but in defect in Rajputana and Sind. The excess in the former areas ranged from 11 per cent. in the Central Provinces to 17 per cent. in the Bombay Deccan.

Humidity and Cloud.—The mean humidity conditions of the month were practically normal in Burma, Bengal and Orissa. The average amount of aqueous vapour in the air was considerably larger than usual over the greater part of the interior of India, including Bihar, Chota Nagpur, the North-Western Provinces, the Central Provinces, Central India, the greater part of Rajputana and the Punjab; and, although temperature was below the normal, humidity was largely in excess. The excess in the amount of aqueous vapour increased westwards to a maximum at Roorkee, Ludhiana and Lahore, where the amount of aqueous vapour, as measured by its pressure, was more than 20 per cent. above the normal, and then decreased rapidly northwards to Peshawar and westwards to Mooltan and Jacobabad. The relative humidity, as measured by the percentage of saturation, was most largely above the normal at Ajmere (+14), Roorkee (+13), Sutna, Deesa and Ludhiana (+12) and Meerut and Jeypore (+11). The air was drier than usual at Mooltan and Quetta, and probably over the greater part of the Baluchistan plateau. The mean humidity conditions were very approximately normal in the West coast districts, Coorg, Mysore and the West Deccan. The air was drier than usual in the Madras Deccan, the Carnatic and South Madras where the humidity was most largely in defect at Trichinopoly and Bellary (—7 below the normal). The abnormally early extension of the monsoon currents to Upper India gave a considerable increase of humidity to the hill stations in the Western Himalayas. The increase was almost as marked at Leh and Kailang as at Simla and Murree. The mean humidity of the month was 9 in excess at Murree, 5 at Simla and 8 at Leh and Kailang.

There was much more cloud than usual at Port Blair, where skies were practically overcast during the whole month. The mean cloud amount of the month was in moderate excess in Burma and Bengal, and in moderate to large excess in the North-Western Provinces, the Punjab, Rajputana, Central India, Berar and the Central Provinces. The excess was most marked in the eastern districts of Rajputana and the adjacent districts of the North-Western Provinces. The cloud amount was in slight excess in the West coast districts and the West Deccan. It was in slight defect in Assam and in slight to large defect in the Carnatic and South Madras.

The following table gives variation data of the mean aqueous vapour pressure, mean humidity and mean cloud amount of ten meteorological provinces for the month of June 1894:—

Meteorological Province.	Variation of		
	Mean aqueous vapour pressure from normal.	Mean humidity from normal.	Mean cloud amount from normal.
	"		
Burma Coast and Bay Islands.	+·007	+1	+1·4
Assam	+·019	0	—0·2
Bengal and Orissa . . .	—·003	0	+·07
Gangetic Plain and Chota Nagpur.	+·041	+5	+1·0
Upper Sub-Himalayas . .	+·123	+13	+1·0
Indus Valley and North-West Rajputana.	+·014	—1	+0·7
East Rajputana, Central India and Gujarat	+·069	+11	+1·6
Deccan	+·043	+6	+1·1
West Coast.	+·019	0	+0·3
South India	—·26	—4	+0·2

Rainfall.—The circumstances under which the rainfall of the month occurred have been stated above in the general summary of the weather. The Bombay current was slightly later than usual in being established and was determined to its goal in Upper India much earlier than usual. Hence, the Deccan, South India and the West coast districts of Malabar and the South Konkan received less than their normal amount. The deficiency was nowhere large, but was greatest in Hyderabad and Mysore; Gujarat, Kathiawar, Cutch, Rajputana and Central India, on the other hand, received much more rain than usual. The

increased fall in Kathiawar and Gujarat was almost entirely due to heavier and steadier rain than usual, whereas in Rajputana and Central India it was largely the result of the passage of the first cyclonic storm of the month through these areas. The Central Provinces, Berar and Khandesh received amounts differing little from the normal. The only noteworthy feature was the excessive local rainfall at Saugor. The rainfall due to the Bengal current was more irregularly distributed. It was in large excess in Tenasserim and in slight defect in Lower Burma and Arakan. It was in slight defect in East and North Bengal and normal in Deltaic and Central Bengal and North Bihar. It was in large excess in the North-Western Provinces, due chiefly to the excessive rainfall accompanying the second storm of the month in that area. The excess averaged nearly 5 inches in the North-Western Provinces, or the mean rainfall of the province was slightly more than double the normal amount. The rainfall was most abnormal in the Punjab. It was practically normal in the western districts, as in Sind, and was excessive in the eastern districts, and more especially in the submontane districts, some of which, as, for example, Ferozepore, Umballa, Amritsar, Hoshiarpur, Gurdaspur, Sialkot, Gujarat and Ludhiana receiving from five to eight times the normal fall of the month.

The following table gives comparative rainfall data of the eleven meteorological provinces of the Empire :—

Meteorological Province.	Rainfall.		
	Mean actual for June 1894.	Mean normal for June.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands.	30·67	25·98	+3·25
Burma Inland . . .	8·50	10·20	+1·03
Assam	22·15	20·50	+1·64
Bengal and Orissa . . .	12·87	13·07	−0·48
Gangetic Plain and Chota Nagpur.	8·37	6·76	+1·63
Upper Sub-Himalayas . .	7·60	3·83	+3·77
Indus Valley and North-West Rajputana.	1·65	0·89	+0·90
East Rajputana, Central India and Gujarat.	8·08	4·32	+3·83
Deccan	6·53	6·89	+0·47
West Coast	24·46	28·45	−3·61
South India	2·97	4·56	−0·94

Atmospheric Pressure.

The mean pressure of the whole area was ·022″ below the normal. Relatively to this general condition, pressure was in slight defect in the Punjab, Sind, Kathiawar, Gujarat, Rajputana, Central India and the greater part of the Central Provinces and in very slight local excess over the remainder of India. The local variations were, however, small and less than ·02″ at all stations with the exception of Dhubri (+·020″) and Purnea (+·023″).

The pressure variations and anomalies of the month of June contrast strikingly with those of the previous hot weather months, and more especially those of May, when they were unusually large. As almost invariably happens under these conditions, the extension of the humid currents over India and the establishment of the uniform temperature and other conditions of the rains smoothed away the large abnormal pressure variations and conditions which obtained in May. Pressure was in defect to a slightly less extent at the hill stations than at the neighbouring plain stations; but the differences of the pressure variations at the level of the plain and the hill stations were so small as to indicate that the mean pressure conditions of the month were practically normal in the vertical direction.

The following gives data for six pairs of stations :—

Hill Station.	Variation from normal pressure.	Plain Station.	Variation from normal pressure.	Vertical pressure anomaly (Hill—Plain)
	″		″	″
Quetta . .	−·021	Jacobabad . .	−·033	+·012
Murree . .	−·025	Rawalpindi .	−·038	+·013
Leh . . .	−·003	Lahore . .	−·021	+·018
Simla . .	−·018	Ludhiana . .	−·029	+·011
Darjeeling .	−·011	Dhubri . .	−·002	−·009
Mount Abu .	−·044	Deesa . .	−·031	−·013

The only important feature of the pressure distribution in India of June 1894 was hence a general deficiency over the whole area, slightly greater in North-Western India than in the Peninsula. The relative pressure conditions both in the horizontal and vertical directions over India were practically normal.

Barometric Depressions and Cyclonic Storms of the Month.

At the commencement of the month pressure differed little from the normal except in South Madras and the Carnatic, where it was considerably in defect. Pressure gave way steadily in Northern India during the next three days and was in considerable defect in Upper India on the morning of the 4th, and steep gradients obtained in North-Western India. The total range of pressure over India at 8 A.M. of that day was ·45 inch. Heavy rain commenced on the Malabar coast during the next 24 hours and gradually extended northwards. A wave of low pressure advanced northwards in front of this area of heavy rain.

The following pressure variations of the west coast stations from the 5th to the 11th illustrate the advance of the low pressure in front of the rainfall:—

Station.	Variation of 8 A.M. pressure from normal on the						
	5th.	6th.	7th.	8th.	9th.	10th.	11th.
	"	"	"	"	"	"	"
Cochin . . .	—·013	—·003	+·010	—·003	+·025	+·025	+·033
Calicut . . .	—·025	—·004	+·500	+·017	+·046	+·028	+·036
Mangalore . .	—·025	—·008	—·041	+·023	+·050	+·040	+·019
Karwar . . .	—·004	—·032	—·071	+·027	+·056	+·050	+·033
Goa . . .	+·045	—·012	—·033	—·030	+·072	+·062	+·053
Ratnagiri . .	+·027	—·018	—·050	—·034	+·022	+·027	—·007
Bombay . . .	+·017	—·017	—·034	—·030	+·006	—·012	—·008
Surat . . .	+·028	—·012	—·026	—·024	0	—·019	—·034

The data show distinctly the advance of a very feeble low pressure wave, and given above should be compared with those of the waves of low pressure which accompanied the advance of the monsoon winds in 1892 and 1890, details of which will be found in the Monthly Review for June 1892 and the Annual Report for 1890. The low pressure wave was, as is at once seen by comparison with those of previous years, very feeble, and the setting in of the south-west monsoon in June 1894 in the Arabian Sea and the Bombay coast districts was characterised by the absence of the formation of a cyclonic storm, such as occurs on the average in about three years out of four. During this period whilst the Bombay monsoon current was advancing northwards along the coast, *i.e.*, from the 6th to the 9th, the pressure changes in India were generally small and somewhat irregular in Upper India. Pressure increased generally over India on the 8th and 9th and in the Gangetic plain on the 10th, and on the morning of the 11th the total range of pressure over India was barely three-tenths of an inch. Pressure was fairly uniform over the greater part of Northern India, and moderate gradients obtained in the Peninsula. Pressure began to give way again generally and more rapidly in North-Eastern India than elsewhere. This fall immediately preceded and accompanied the advance of a strong burst of monsoon winds over the north of the Bay and the formation of a cyclonic storm. At the beginning of the second week of the month light winds obtained at the head of the Bay, and moderate south-west winds in the centre and south of the Bay. They were, however, increasing in strength, and on the 9th and 10th were of force 4 to 6 in the centre of the Bay. The feeble south-west winds in the north of the Bay were rapidly converted by the pressure of the strong current in the centre of the Bay into strong winds directed chiefly to South East Bengal, and a depression began to form in that area immediately after the strong humid winds had begun to affect it. The following gives a history of the storm.

Cyclonic Storm of the 12th to the 19th June.—As already stated, south-westerly to westerly winds prevailed on the 10th and 11th over the south and centre of the Bay, where they ranged in force from 4 to 6. In the north of the Bay (north of Lat. 18° N.) winds were light and variable. Thus the S. *Sokoto* in Lat. 20° 26′ N. and Long. 87° 3′ E. at 8 A.M. of the 11th had fine weather with variable winds (force 2) throughout the day and the S.S. *Ethiopia* in Lat. 19° 47′ N. and Long. 89° 45′E. had variable winds force 2, and squally and rainy weather. The S.S. *Loodiana* in Lat. 17° 38′ N. and Long. 86° 43′ E. had south-west winds force 4 with torrents of rain. South-west winds giving heavy to torrential rain hence prevailed as far north as Lat. 18° N. at 8 A.M., and light variable winds at the Head of the Bay. Weather was fine near the Orissa coast, but was showery off the Arakan and Bengal coasts.

The following data for 8 A.M. of the 12th show that the south-west humid rain-giving winds had extended to the Bengal coast during the previous 24 hours:—

Name of Vessel.	8 A.M. position.				Barometer.	Wind.		Weather.
	Lat. N.		Long. E.			Direction.	Force.	
	°	′	°	′	"			
S.S. *Dilwara* .	20	17	87	35	29·571	SW	4	Rainy.
S.S. *Loodiana* .	20	48	87	58	29·497	SW by W	5	Squally
S.S. *Nawab*. .	21	26	88	06	29·485	SW by S	3	Overcast.

Whilst these changes were in progress at the head of the Bay, pressure had given way in Bengal. Skies had partially cleared in North and Central Bengal and the winds at stations in South Bengal had shifted considerably in direction and indicated that a cyclonic disturbance was forming in that area. The following gives data for four stations in East and South Bengal :—

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 .	29·573	—·114	—·027	SE	7	10	0·49	Distant lightning.
Dacca . .	29·556	—·118	—·004	SE	6	9	...	
Jessore . .	29·549	—·119	0	E	4	6	...	
Saugor Island	29·541	—·088	+·019	N	8	9	1·15	

These observations taken in conjunction with the marine data establish that a cyclonic storm was forming in the north-east angle of the Bay and South-East Bengal.

13th June.—Pressure had decreased briskly to rapidly over the whole of India. During the previous 24 hours pressure had given way on the whole more rapidly in the north-east of the Bay and South-East Bengal than elsewhere, and a well-defined depression had formed during the previous 24 hours. South-west winds of force 6 were reported by vessels generally in the north-east of the Bay. The S. S. *Kasara* off the Arakan coast near Akyab had heavy to dense rain squalls throughout the day. The following data show the position and character of the depression at 8 A.M. :—

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.	
Barisal . .	29·385	—·148	—·189	Calm	4	10	0·60	Gale of wind.
Chittagong .	29·355	—·218	—·239	ESE	13	10	3·13	
Noakhali .	29·396	—·159	—·210	NNE	11	9	0·83	
Comilla .	29·428	—·145	—·160	E	5	10	0·04	
Faridpur .	29·474	—·109	—·103	NE	3	8	...	
Narayanganj.	29·432	—·123	—·114	NE	7	9	0·03	
Jessore . .	29·457	—·092	—·076	ENE	4	9	...	

The central depression hence covered the area between the stations of Barisal, Noakhali and Chittagong. The cyclonic circulation was as yet very imperfectly developed, as south-west winds obtained at Saugor Island, Calcutta, and other stations immediately to the west of the central depression. It would hence appear that the depression was forming in that portion of the advancing monsoon current, where it was being deflected rather sharply to the west, and that its origin was mainly, if not entirely, a result of that deflection. Heavy rain had fallen during the previous 24 hours in Arakan and South-East Bengal. Little or no rain had been received in the remainder of Bengal. The rainfall was hence confined to the area of depression itself and the area over which strong humid winds prevailed in the north-east of the Bay.

14th June.—The depression had intensified during the preceding 24 hours and commenced to drift slowly westwards. The centre at 8 A.M. was near Faridpur as is shown by the following observations :—

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.	
Barisal . .	29·423	+·038	—·142	Calm	6	10	4·43	Continuous rain.
Narayanganj.	29·406	—·026	—·132	SE	14	10	1·43	
Faridpur .	29·360	—·114	—·212	SE	4	10	0·65	
Jessore . .	29·374	—·083	—·150	W	3	10	1·57	
Krishnagar .	29·407	—·044	—·132	WNW	5	10	0·64	
Calcutta .	29·437	—·012	—·064	W	4	10	0·32	

The centre of the depression was hence nearly midway between Faridpur and Jessore. Winds were cyclonic in direction over the whole central area, but were feeble except at Dacca. General rain had fallen over the whole of Bengal, East Bengal receiving the largest amounts. The following gives mean data for the six divisions of that province for the 13th and 14th :—

Division.	Average actual rainfall during 24 hours preceding 8 A.M. of date.	
	13th.	14th.
	Inches.	Inches.
South-West Bengal	0·10	0·95
North Bengal	0·18	0·33
East Bengal	0·73	1·31
Bihar	0·29	0·46
Orissa	0·50	0·55
Chota Nagpur	0·43	1·02

15th June.—Pressure had increased briskly in Assam and fallen briskly in Chota Nagpur and the depression at 8 A.M. of this day lay over the southern districts of Chota Nagpur and adjacent districts of West Bengal. The following 8 A.M. observations show the character of the storm on this day:—

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	29·409	—·065	—·092	S	22	10	1·94	Thunder-storm.
Balasore	29·396	—·081	—·114	SW	6	6	1·23	
Midnapore	29·395	—·065	—·129	SE	4	10	1·50	
Burdwan	29·425	—·009	—·074	E	5	10	0·71	
Hazaribagh	29·418	—·036	—·084	ENE	12	10	0·81	
Ranchi	29·413	—·049	—·113	N	11	10	2·60	
Chaibassa	29·358	—·101	—·148	W	3	10	1·79	

The centre was hence near Chaibassa in Lat. 23° N. and Long. 85½° E. and about 230 miles to the west of its position on the previous day at 8 A.M. Moderate to heavy general rain had again fallen in Bengal, Bihar, Chota Nagpur and Orissa. The rainfall during the previous 24 hours had been heaviest in the Midnapore, Bankura, Birbhum and Burdwan districts and was small in amount in East Bengal.

16th June.—Pressure had fallen briskly in the Central Provinces, Baghelkhand and the south-eastern districts of the North-Western Provinces. The depression had advanced during the previous 24 hours through a distance of about 310 miles and was now central in Baghelkhand. The centre was to the south of Sutna in Lat. 24° N. and Long. 80¾° E. The following gives 8 A.M observations of stations in the central 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	29·431	—·074	—·100	WSW	10	10	2·21	Gale of wind.
Daltonganj	...	...	...	ESE	7	10	0·65	
Allahabad	29·428	—·043	—·044	ENE	15	10	0·07	
Sutna	29·404	—·076	—·081	NE	6	10	1·46	
Jubbulpore	29·407	—·098	—·128	W	4	10	1·83	
Nowgong	29·443	—·024	—·057	NNW	4	10	0·70	Thunder-storm.

Strong easterly winds were now blowing in Bihar, and a well-defined cyclonic circulation obtained over the whole storm area. Winds were very light at Sutna and Jubbulpore, the stations nearest to the centre and at distances of about 60 miles from it. Moderate rain had fallen over Bengal, Bihar, Chota Nagpur and Baghelkhand. The indraught to the storm from the west coast was now giving rise to moderate to heavy general rain in the Central Provinces.

17th June.—Pressure had increased briskly to rapidly in the districts covered by the storm on the morning of the 16th, and fallen briskly in the western districts of Central India to which the storm had now advanced. The following data show its position at 8 A.M.:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Indore	29·439	—·051	—·144	SSW	3	10	0·29
Saugor	29·453	+·012	—·080	S	6	5	0·61
Jhansi	29·436	—·039	—·073	SE	8	8	0·80
Ajmere	29·449	—·050	—·100	N	3	9	0·70
Neemuch	29·400	—·085	—·156	WNW	6	10	2·56

The centre of the storm was near Neemuch in about Lat. 24¾° N. and Long. 75° E. and had hence advanced almost due west about 375 miles. Winds were cyclonic in direction in the storm area, but were below the normal strength of the winds in that area during the month.

Moderate rain had fallen in the Central Provinces and Central India and showers in Rajputana. The rainfall in the storm area was by no means excessive, no falls exceeding 3 inches being reported except in Jodhpur where some heavy local falls had been received during the previous 24 hours.

18th June.—Pressure had increased slightly in Central India and fallen briskly to rapidly in the Punjab and North Rajputana. The depression was now in West Rajputana. The following gives data showing its position and character at 8 A.M.:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Ajmere	29·332	—·117	—·224	S	9	9	1·75
Sambhar	29·344	—·089	—·176	SSE	18	10	0·48
Bickaneer	29·309	—·154	?	NNW	12	10	0·45
Pachpadra	29·378	—·033	?	Calm	3	10	0·45
Jacobabad	29·369	—·074	—·060	Calm	7	2	...

The observations show that a well-defined depression, central near Bickaneer, lay over Central and North Rajputana. The depression near the centre was slightly greater than on the previous day, and winds were blowing strongly at Sambhar and Bickaneer, the stations nearest the centre. It is hence probable that during the preceding 24 hours the Bombay current had commenced to feed into the storm area and changed the character of the storm to some extent.

The storm centre was in about Lat. 27½° N. and Long. 73¾° E. at 8 A.M., and had advanced in a mean north by west direction through a distance of about 200 miles during the previous 24 hours. Moderate to heavy rain had fallen in Gujarat, Rajputana and the South-East Punjab. Some very heavy falls were received in the submontane districts of the Punjab, of which the following were the most noteworthy :—

District.	Station.	Fall in previous 24 hours.
		Inches.
Jullundur . . .	Jullundur . . .	11·20
Gurdaspur . . .	Dalhousie . . .	10·47
Hoshiarpur . . .	Hoshiarpur . . .	5·70

The rainfall in the dry districts of the Punjab and Rajputana had caused a very large deduction of temperature.

19th June.—Pressure had risen rapidly in Rajputana and fallen rapidly at the foot of the Punjab hills. It had also fallen rapidly in the latter area during the preceding 24 hours and was now largely in defect and a well-marked depression lay over it. It is possible that this depression was the direct continuation of the storm in Rajputana, but the character of the pressure changes and of the rainfall appears to indicate that it was a secondary depression which formed under special conditions well ahead of the primary depression. Whatever view be taken of its formation it was now clearly part of the same general disturbance or cyclonic storm which had passed across Northern India during the previous five days.

The following gives 8 A.M. data of stations in the area of depression on the 19th :—

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	
Ludhiana .	29·391	—·003	—·095	SW	7	10	2·01	
Lahore . .	29·284	—·156	—·187	W	5	10	4·94	
Sialkot . .	29·286	—·154	—·183	WNW	6	10	2·80	
Rawalpindi .	29·231	—·126	—·183	Calm	4	9	0·16	
Simla . .	22·870	—·038	—·122	Var.	12	10	1·58	
Murree . .	23·528	—·111	—·184	NE	7	10	0·61	
Srinagar .	24·628	—·012	?	Calm	3	10	1·35	
Leh . .	19·627	+·005	?	SSW	1	10	0·43	Overcast
Kailang .	20·712	—·006	?	SE	1	10	2·79	Overcast.

The depression at these plain stations was nearly two-tenths of an inch in amount. The winds at the plain stations in that area were not cyclonic, but strong humid monsoon winds blowing from the west (and probably the continuation of the North Bombay monsoon current) towards the Punjab Himalayas, and hence the rainfall in the submontane districts was excessive. The following gives some of the more remarkable falls :—

District.	Station.	Heaviest fall in 24 hours.
		Inches.
Ferozepore . . .	Ferozepore . . .	10·86
	Moga . . .	10·05
	Zira . . .	10·73
Jullundur . . .	Nakodar . . .	11·19
Hoshiarpur . . .	Dasuya . . .	10·97
Gurdaspur . . .	Pathankot . .	11·58
	Gurdaspur . . .	11·00
	Batala . . .	8·42
	Aliwal . . .	8·21
	Madhopur . . .	8·00
Amritsar . . .	Tarn Taran . .	10·17
	Buchar . . .	9·26
	Amritsar . . .	7·63
	Ajnala . . .	7·59
Kangra	Nurpur . . .	11·12
Sialkot	Raya . . .	7·20

The precipitation accompanying the storm at this stage was hence a heavy cyclonic or torrential downpour in the Kangra hill district and the submontane districts of Jullundur, Amritsar, Gurdaspur, Hoshiarpur and Sialkot.

The winds were by no means strong, although above the normal of the period to a moderate extent.

20th June.—A rapid increase of pressure occurred during the previous 24 hours in Upper India which was greatest in the area of excessive rainfall. The depression had not merely filled up completely, but pressure was now in moderate excess in the East Punjab. The following 8 A.M. observations show these changes:—

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	
Ludhiana .	29·525	+ ·134	+ ·037	Calm	1	3	0·04	
Lahore .	29·549	+ ·265	+ ·063	E	5	10	1·38	
Sialkot . .	29·555	+ ·269	+ ·074	N	3	6	0·29	
Rawalpindi .	29·523	+ ·242	+ ·054	Calm	5	2	0	

Heavy rain had fallen in the Punjab hill districts and light to moderate rain in the plains of the East Punjab.

It has been stated above that the observations of the Punjab stations indicate that the depression in the East Punjab was not a mere continuation of the cyclonic storm advancing northwards from Rajputana, and this is further confirmed by the weather and rainfall in the Kashmir Himalayas. Very unusual rain fell in the valleys of Lahoul and Ladakh, and heavy snow on the higher elevations on the 17th, 18th and 19th. This abnormal precipitation gave rise to excessive floods in the Jammu river in the Kashmir valley. A large part of the town of Srinagar in Kashmir was flooded and much damage was done to property in the city. The following gives data showing the excessive character of the fall in Ladakh, Lahoul and North Kashmir :—

Station.	Rainfall of 24 hours preceding 8 A.M. of date				Total.	Normal total rainfall of month of June.
	17th.	18th.	19th.	20th.		
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Kailang . .	0·06	1·01	2·79	1·35	5·21	1·19
Kishtwar .	0·90	4·81	0·82	*Nil.*	6·53	?
Srinagar . .	*Nil*	0·15	1·60	0·27	2·02	?
Leh . .	*Nil*	0·63	0·43	0·02	1·08	0·19
Iskardo . .	*Nil*	0·68	0·15	0·09	0·92	?

The only stations for which there are normal data are Leh and Kailang. The average or normal rainfall in June at Leh is 0·19 inch and at Kailang 1·19 inches. The rainfall of this period at Kailang was the heaviest that has been experienced in the month of June since the establishment of the observatory. A brief account of the snowfall on the higher ranges near Kailang will be found in page 243.

The following statement gives the position of the centre and rate of advance of the storm on each date from the 13th to the 18th :—

Date.	Position of the centre of storm.		Distance made in past 24 hours.	Average rate of motion during preceding 24 hours in miles per hour.
	Lat. N.	Long. E.		
	° ′	° ′	Miles.	
13th, 8 A.M. .	22 45	91 15	...	...
14th " . .	23 5	89 45	150	6
15th " . .	23 0	85 30	230	9½
16th " . .	24 0	80 45	310	13
17th " . .	24 45	75 0	375	15½
18th " . .	27 30	73 45	200	8½

The storm ormed in front of the first strong (and permanent) advance of monsoon winds over the north of the Bay. It was apparently generated in South-East Bengal and the north-east angle of the Bay, where the humid current, which was at that time directed more strongly eastwards at the head of the Bay, recurved in its advance from north to west. The storm formed on the 12th and marched at first very slowly, and afterwards with increasing rapidity until it attained a velocity of about 15 miles per hour on the morning of the 17th. It advanced almost due west from the 13th to the 17th to Central India and then recurved to north passing through Central Rajputana on the 18th. Weather at this time and for two days previous was very disturbed with unusual rain in the interior of the Punjab and Kashmir Himalayas, and the cyclonic storm was apparently absorbed in that area of disturbance, and the combined action of the two gave a remarkably heavy burst of rain at the foot of the Punjab Himalayas and over the Punjab and Kashmir hill districts.

One of the more remarkable features of the present monsoon has been the continuous succession of depressions and cyclonic storms across Northern India. As soon as one storm commenced to fill up in North-Western India another appeared at the Head of the Bay. This feature of the meteorology of the monsoon of 1894 began to be exhibited from its commencement in June. Thus, when the preceding storm was filling up in Upper India on the 18th and 19th, another depression began to form in the north-west of the Bay. The following gives an account of this

depression, which was the chief feature of the weather of the next week in Upper India.

Cyclonic storm of the 20th to the 29th June.—The preceding storm had been maintained during its later stages by the Bombay current. The Bay current fell off rapidly in strength in North-Eastern India on the 17th and 18th, and on the morning of the 19th winds were very light in Bengal. Thus Calcutta and Burdwan reported calms at 8 A.M. of that day, and the air movement of the interior of Bengal averaged less than 3 miles per hour, or barely one-third of its normal rate. Strong south-west winds prevailed in the Bay to the south of Lat. 19° N.; but to the north of that parallel of latitude winds decreased rapidly in strength and were of force 1 and 2 only at the head of the Bay. The following data extracted from the logs of ships in that area illustrate this feature:—

Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Bhandara* .	17·47	84·16	29·549	SW	6	8 P.M. westerly squall with hard gusts of wind and rain.
Barque Quathlamba.	19·4	86·22	·467	WSW	6	Cloudy.
S.S. *Chyebassa* .	19·1	87·5	·506	WSW	...	Noon, occasional rain.
S.S. *Lindula* .	19·9	89·49	·505	W	...	Continuous heavy rain.
S.S. *Chindwara* .	20·8	86·44	...	SW	2	4 A.M. overcast.
S.S. *Husara* .	20·27	87·23	·477	SW	1	Cloudy.

The preceding data show that weather was squally and showery with strong winds in the centre of the Bay to the south of Lat. 19°N., but was fine and cloudy with light south-west winds in the north-west angle of the Bay. Pressure had fallen locally in this area during the previous 24 hours, and a depression formed during the day in that area of light unsteady south-westerly winds.

20th June.—Pressure had decreased briskly in the north-west corner of the Bay and winds had shifted round to north-easterly directions on the Bengal coast and to north-westerly directions in Orissa. A depression was hence now in process of formation in the north-west angle of the Bay. The following gives 8 A.M. observations at the coast stations:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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 .	29·435	—·065	—·120	NE	7	10	0·14
Balasore . .	·439	—·051	—·091	NE	3	5	2·57
False Point . .	·427	—·073	—·133	NW	8	9	0·12
Puri . . .	·416	—·080	...	N	8	8	0·40

The weather was of the usual character in these depressions, strong humid winds obtaining in the south and east quadrants and very light winds in the north-west quadrant. Thus the weather at 4 P.M. at Saugor Island is described as follows by the observer:—"Fine weather with light variable airs, sea smooth, but sky threatening and ugly from north east to east and from west to north" The Captain of the F. L. V. *Torch*, stationed at the Eastern Channel, south of Saugor Island, notes in his meteorological journal that gentle easterly winds force 3 and a heavy southerly swell prevailed during the day. The wind was puffy and variable during the preceding 24 hours." Weather was showery in Orissa; but little rain had fallen in Bengal.

21st June.—Pressure had increased briskly to rapidly in Burma and the east of the Bay and had fallen in the north-west angle. The depression had hence intensified to some extent and steep gradients now prevailed in the centre and south of the Bay where winds had increased in force and weather was now very squally. The S. *Peter Iredale* in Lat. 15° N. had heavy squalls and torrents of rain, and the S. *Engelhorn* in Lat. 14¾° N. had sharp squalls and heavy rain. The strongest reported winds were of force 8. Light winds, force 2, continued in the north-west quadrant of the depression. Thus the Barque *Quathlamba* in Lat. 20° 15′ N. and Long. 86° E. had fine weather and north-north-west winds, force 2. The only large changes in the Bay were the rapidly increasing strength of the humid winds in the centre of the Bay and the slow intensification of the central storm area or depression. The following gives 8 A.M. data of the 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 in velocity miles during past 24 hours.			
	″	″	″				Inch	
Saugor Island .	29·399	—·036	—·164	ENE	10	9	0·30	Sea smooth.
Balasore . .	·418	—·021	—·120	ENE	4	7	0·06	
False Point .	·401	—·026	—·169	NW	7	8	0·04	
Puri . .	·405	—·012	?	Calm	3	10	0·17	

Light to moderate rain had fallen in Bengal, chiefly due to the increasing indraught in the eastern quadrant.

22nd June.—The pressure changes were everywhere small in amount. Pressure had increased slightly in South-East Bengal and fallen in Orissa. The depression had begun to move during the previous 24 hours and the centre

crossed the North Orissa coast near Balasore early in the morning. It was at 8 A.M. a little to the north-west of Balasore in about Lat. 22° N. and Long. 86½° E. The following observations define its position at that hour :—

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	
Cuttack	29·424	+·029	—·150	SSW	3	10	1·48	
False Point	29·427	+·026	—·148	WSW	11	10	0·17	
Balasore	29·389	—·029	—·155	SSW	6	7	1·60	
Midnapore	29·402	—·052	—·148	NE	5	10	0·08	
Chaibassa	29·396	—·027	—·114	N	4	10	0·56	
Sambalpur	29·436	+·018	—·116	SW	5	10	1·67	

Fresh to strong southerly winds were now blowing in the north-west angle of the Bay. Winds were cyclonic in direction in the depression, but were nowhere very strong. Easterly winds in Bihar were however strengthening rapidly. Moderate rain had falleno ver the greater part of Bengal, Orissa, Chota Nagpur and Bihar. The following gives mean data for the 22nd and previous two days :—

DIVISION.	AVERAGE ACTUAL RAINFALL OF 24 HOURS PRECEDING 8 A.M. OF DATE.		
	20th.	21st.	22nd.
	Inch.	Inch.	Inch.
Bengal	0·17	0·29	0·41
Orissa	0·73	0·76	0·80
Bihar	0·27	0·18	0·17
Chota Nagpur	0·45	0·32	0·49

The rainfall at this stage was hence not of the concentrated character that frequently occurs in these cyclonic storms. The storm was already increasing the westerly winds in the Central Provinces and giving rise to increased rainfall in that area.

23rd June.—Pressure had increased briskly in South Bengal during the previous 24 hours. The other changes due to the movement of the storm were very small. The storm had advanced in a north-west direction through Chota Nagpur and was at 8 A.M. central to the west of Ranchi. The centre was at that time in about Lat. 23½° N. and Long. 84½° E. The following gives 8 A.M. observations at stations near the centre :—

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	
Charbasa	29·422	+·026	—·090	WSW	3	10	0·02	
Ranchi	29·438	+·006	—·086	Calm	7	10	0·46	
Hazaribagh	29·421	—·012	—·130	ESE	1	10	1·93	Thunder-storm.
Dehri	29·463	—·022	—·049	E	20	10	0·26	
Jubbulpore	29·529	+·016	—·060	NW	4	10	0·24	
Raipur	29·482	+·021	—·104	WNW	11	10	...	

The depression was extensive but shallow and, as usual under these circumstances, the rainfall was moderate in amount. Bengal, Bihar and the eastern districts of the North-Western Provinces had received general rain during the previous 24 hours. Winds were cyclonic in the area of low pressure, but were moderate in force. Winds were moderate to strong at the head of the Bay, but were weak on the Bombay coast, where their velocity was 25 per cent. below the normal.

24th June.—Pressure had given way briskly to rapidly in the eastern districts of the North-Western Provinces, to which the depression had now advanced. The following observations define the position of the storm at 8 A.M. :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.
	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.
Sutna	29·415	—·073	—·126	W	11	10	2·81
Allahabad	·396	—·069	—·131	WSW	7	10	1·51
Lucknow	·406	—·095	—·117	E	?	10	0·60
Cawnpore	·386	—·105	?	NE	3	10	1·20
Nowgong	·439	—·059	—·110	W	4	10	0·46

Pressure was in defect over the whole of India, the deficiency being somewhat greater in the low pressure area than elsewhere. The deficiency at Allahabad and Sutna, where it was greatest, was only ·13. The depression was hence, as hitherto, very shallow, but was slightly

more concentrated than on the previous day. It had determined light to moderate rain to Bengal, Bihar and the Central Provinces and moderately heavy rain to the eastern districts of the North-Western Provinces. Strong easterly winds were blowing in Bihar, but they were very light over nearly the whole of the North-Western Provinces, averaging 3 miles per hour in velocity at the majority of stations.

25th June.—The pressure changes over the whole of India were small in amount, and the low pressure area in the North-Western Provinces was unchanged in position. The following gives 8 A.M. observations at stations in that 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.			
	"	"	"				Ins.	
Sutna.	29·400	—·015	—·140	WSW	14	10	0·18	Gale of wind.
Allahabad	·363	—·033	—·161	S	5	10	1·98	
Lucknow	·437	+·031	—·086	Calm	0	10	0·22	
Cawnpore	·404	+·018	?	NE	4	9	0·41	
Nowgong	·435	—·004	—·110	W	2	10	0·50	

The centre of the depression was a little to the north-west of Allahabad, where pressure was ·16″ below the normal. Rain had fallen over the whole of North-Eastern India and the Central Provinces. It was moderately heavy in the Banda, Hamirpur, Cawnpore, Jalaun and Jhansi districts and falls exceeding three inches were recorded at several stations. The rainfall was hence nowhere excessive, and was heaviest in the western half of the low pressure area.

26th June.—Pressure had increased somewhat irregularly over the whole of India. The depression in the North-Western Provinces was practically unchanged in position and covered the eastern districts at 8 A.M. Data for stations in that area are given below:—

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.			
	"	"	"				Ins.	
Sutna.	29·507	+·107	—·032	W	14	8	0·42	Severe gale of wind.
Allahabad	29·430	+·067	—·096	WNW	7	10	4·81	
Lucknow	29·533	+·096	+·003	E	?	10	0·22	
Nowgong	29·547	+·112	+·002	W	4	10	0·81	
Cawnpore	29·498	+·094	?	NE	4	10	0·10	
Benares	29·405	—·021	—·120	W	6	10	0·65	

The cyclonic circulation in the depression was as plainly marked as hitherto, but was feeble. The only important feature about the storm was the increasing rainfall it was now giving. Falls exceeding four inches were registered at 8 A.M. at several stations in the Allahabad and Fatehpur districts. The increasing concentration of the rainfall accompanied considerable intensification of the storm during the next 24 hours.

27th June.—Pressure had fallen slightly to briskly at Allahabad and the neighbouring stations. The depression was almost unchanged in position, but steepish gradients now prevailed near the centre, whilst gradients were feeble in the outskirts of the storm area.

The following gives 8 A.M. data:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Benares	29·454	+·049	—·074	S	12	10	1·82
Gorakhpur	29·493	+·035	—·044	SSE	6	6	0·55
Allahabad	29·359	—·071	—·170	WSW	14	10	6·87
Lucknow	29·490	—·043	—·039	N	?	10	0·22
Cawnpore	29·484	—·014	?	NNE	3	10	0·73
Sutna	29·504	—·003	—0·38	W	13	10	0·40

Very heavy rain had fallen in the central area during the previous 24 hours. The following gives the mean fall in all districts that had obtained an average exceeding two inches and in the Jhansi district:—

District.	Avaerge actual rainfall.	Heaviest rainfall in district.
	Inches.	Inches.
Allahabad	5·93	8·41
Banda	3·31	7·45
Fatehpur	3·20	5·70
Hamirpur	3·40	8·11
Jhansi	1·94	4·00
Sultanpur	6·19	7·80
Partabgarh	5·08	5·60
Fyzabad	2·30	4·52

The following gives daily rainfall data for the divisions of the North-Western Provinces during this period from the 23rd to the 27th, during which the storm was stationary in the eastern districts of the North-Western Provinces :—

DIVISION.	AVERAGE ACTUAL RAINFALL OF 24 HOURS PRECEDING 8 A.M. OF DATE.					Total of period.
	23rd.	24th.	25th.	26th.	27th.	
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Oudh (North) . .	0·96	0·57	1·04	1·57	1·46	5·60
Oudh (South) . .	0·75	1·40	0·69	1·37	2·39	6·60
North-West Provinces (South-East).	0·50	0·95	0·74	1·68	2·64	6·51
North-West Provinces (Central).	1·05	1·74	1·30	0·81	1·59	6·49
North-West Provinces (West).	0·11	0·35	0·35	0·82	0·61	2·24
North-West Provinces (Sub-montane).	1·12	0·78	0·59	0·33	0·14	2·96
North-West Provinces (North-East).	0·09	0·45	1·27	2·79	0·96	5·56

28th June.—Pressure had increased rapidly at Allahabad and fallen rapidly at Jhansi and Nowgong. The depression had hence advanced slowly westwards during the previous 24 hours and was at 8 A.M. in Bundelkhand, the centre being in about Lat. 25½° N. and Long. 79½°E. The storm was not shown as a closed area on the chart of the day, but was clearly indicated by the cyclonic character of the winds in the storm area, as is seen from the following :—

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	
Sutna .	29·442	—·062	—·091	S	15	8	0·35	Severe gale of wind.
Cawnpore .	29·419	—·065	?	ESE	10	10	0·35	
Jhansi .	29·419	—.125	—·128	NW	4	9	2·50	
Nowgong .	29·412	—·127	—·133	W	8	10	9·29	
Saugor .	29·477	—·069	—·077	W	8	10	1·88	

Heavy rain had fallen in the Hamirpur, Jhansi and Banda districts of the North-Western Provinces and in Bundelkhand and Kotah as is shown by the following data :—

DISTRICT.	Average actual rainfall of 24 hours preceding 8 A.M. of 28th.	Heaviest rainfall in district.
	Inches.	Inches.
Hamirpur	2.32	5·11
Jhansi	2·63	5·28
Banda	3·57	7·74
Bundelkhand	3·70	9·29
Kotah	4·00	8·40

29th June.—Pressure had increased rapidly over the whole of North-Western India, and the depression was now very faintly shown. It had advanced from Bundelkhand into Rajputana and the wind directions indicated that it lay over the area defined by the stations of Agra, Jeypore, Ajmere, Neemuch and Jhansi. The depression was now of little importance and had given light to moderate rain chiefly to Rajputana during the preceding day. The most noteworthy feature of the weather of the previous 24 hours was a series of duststorms and thunderstorms, which had visited the East Punjab and hill districts during the preceding afternoon and which had been followed by a very rapid rise of pressure, averaging a quarter of an inch at the foot of the hills. The disturbance in Rajputana completely disappeared during the day. Another storm began to form in the north-west angle of the Bay on the 28th and 29th, when the previous storm was filling up. Its history belongs rather to the month of July than of June, and will hence be given in the July Review.

The following is a brief report of the general character of the storm as experienced at Allahabad :—" The disturbance was a rainstorm of unusually long continuance. It commenced on the 25th June and ended on the 28th. The wind blew with considerable force during the day time, the night winds being generally lighter. The highest velocity recorded by the anemograph was 32 miles between the hours of 5 and 6 on the morning of the 27th. Thunder and lightning were very rare during the storm and were only observed near the end of the storm on the night of the 28th. The rainfall was the principal feature of the storm and was unusually heavy."

The storm formed in the north-west angle of the Bay after a short period of weakness of the Bay current in Bengal. It was generated under the most common and, what might be termed, the normal conditions of storm formation in the Bay in June, July and August, on the 20th and 21st, and advanced along the trough of low pressure during the next three days to the eastern dis-

tricts of the North-Western Provinces. It was up to that time a shallow and somewhat extensive disturbance, giving moderate rain to the whole of North-Eastern India. The storm was practically stationary in the eastern districts of the North-Western Provinces and gave rainfall in increasing amounts until the 27th, on which day a cyclonic downpour was received over a small central area including the Allahabad and adjacent districts. The storm hence concentrated slightly on the 24th, 25th and 26th and rapidly on the 27th. It began again to move, advancing westwards through Banda, Jhansi and Bundelkhand into East and Central Rajputana, where it filled up on the 29th and 30th. The storm was hence chiefly noteworthy for the excessive and prolonged cyclonic rainfall it gave to the south-eastern districts of the North-Western Provinces and to Bundelkhand. The following gives the track of the storm from the 21st to the 24th :—

Date.	Position of the centre of Storm.		Distance made in past 24 hours.	Average rate of motion during preceding 24 hours in miles per hour.
	Lat. N.	Long. E.		
	° ′	° ′	Miles.	
21st June .	20 30	87 40	...	...
22nd „ .	22 0	86 30	120	5
23rd „ .	23 30	84 30	160	7
24th „ .	25 50	81 0	280	12

The following interesting note on the burst of the southerly monsoon of 1894, as observed at Coimbatore, has been forwarded by the Executive Engineer, and is given *in extenso* :—

"Coimbatore, lying slightly to the north of the direct line through the Palghat gap, is a very favourable place for watching the burst of the south-west monsoon, though the wind directions, as reported from the Coimbatore Observatory, are misleading, being much affected by a local eddy.

During the last ten days of May 1894 the usual preliminaries of the monsoon were noticed, more especially the westerly direction of the wind and the tendency of clouds to curl over the range of the Western Ghats. During the last four days of the month, however, the westerly wind failed again and the weather was remarkably close and sultry.

On the evening of the 30th there was a good deal of lightning, culminating about 11 P.M., in a remarkable electric storm, which apparently advanced in a long line reaching at least from the Nilgiri Hills to the Anamalais, the line bearing about N.N.W. to S.S.E. in direction. This storm was accompanied by a violent easterly wind and a few drops of rain and not much thunder. It travelled up against a westerly wind and disappeared to the west. There had been a good deal of lightning on the west slope of the ghats all the evening.

The 31st was again very sultry and a similar disturbance occurred about midnight. (Neither of these storms are in any way alluded to in the daily weather reports).

Early in the day of June 1st the west wind began to pour through the Palghat gap accompanied by cloudy and cool weather and the usual stream of low lying clouds reaching across the middle of the Coimbatore district opposite the Palghat gap, which is the distinguishing feature of the south-west monsoon in this district.

This stream of cloud and violent west winds has continued without any real intermission, though with varying intensity, more especially the diurnal relapse in the early morning, due probably to the tendency to a land wind, which affects the morning wind directions all along the west coast of the Peninsula.

I am inclined to think that the real current of the south-west monsoon reached Coimbatore on June 1st, though the current was not strong, and it was some days more before it was established to a sufficient depth to pour bodily over the Western Ghats."

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 snowfall in the Himalayan area is always small for June, as it is very unusual for heavy snow to fall even on the higher ranges in this month.

The following gives the whole of the information received relating to snowfall and weather in the Himalayan districts in June. From these reports it will be seen there was an unusually heavy and abnormal fall of snow on the higher elevations of the Kashmir Himalayas and in Lahoul from the 17th to the 19th of the month.

I. THE KASHMIR HIMALAYAS.

(1) *Ladakh.*—The Revd. T. B. Shawe, who has supplied most interesting and valuable information of the snowfall during the winter of 1893-94 in Ladakh, the Karakoram mountains and Chinese Turkestan, sends the follow-

ing additional information in a letter dated the 30th June, 1894 :—

"I am at last in receipt of news from Chinese Turkestan. A man has lately arrived and reports 'very much snow' all over the plain of the Pamirs. He says that the inhabitants considered the snow quite exceptionally great. He can say nothing about the temperature, whether above or below average; he says that he found it warm. But as he is a Ladakhi and can only compare with Ladakh temperature, his evidence goes for nothing. He travelled with a caravan of forty ponies, of which 15 were lost on the Karakoram. This very high percentage of losses shows that the snow there must be unusually deep. Although they only marched half stages, the remaining ponies were so used up that they would not cross the Tasser Pass, 17,000 feet, about 60 miles north of Leh. All this shows that the snow on the ranges north of Ladakh is much above the average. The road to Yarkand is at this season of the year usually open for regular traffic: such is evidently not the case this year."

(2) *Lahoul.*—The Revd. Mr. Heyde, Superintendent, Kailang Observatory, sends the following report of the snowfall in that district:—"Much rain and snow have fallen during the month in Lahoul. A total fall of 5·37 inches as measured by the observatory rain-gauge fell between the 16th and 19th. The highest mountains in Lahoul are about 20,000 feet. On the 18th the snow came down to about 15,000 feet; below this rain fell, but on the 19th the snowfall descended to 12,000 feet. Above this height much fresh snow must have fallen during the last three days. Since the observatory at Kailang was established over ten years ago so much rain has not been registered within 24 hours as was the case from the 18th to the 19th June. The heavy rain caused not a few landslips and mud avalanches in the neighbourhood of Kailang."

II.—THE NORTH-WESTERN PROVINCES HIMALAYAS.

Almora.—The snowfall report of this district gives data for the period from the 16th May to the 15th July 1894.

Malla Danpur.—Light snow fell on the 18th and 19th May, the 1st and 2nd June and 6th to the 10th June; but the total fall was only 6 inches in amount. The weather is stated to have been warmer than usual and the crops are progressing fairly.

Malla Johar, Malla Byans, Chandans and Darma.—No snow fell in these parganas or mallas during the whole period. Weather was warm and fine with occasional cloud throughout the period.

Summary of Special Storm Reports.

As stated in the pressure section two cyclonic storms formed during the month at the head of the Bay and in South Bengal. The special storm observations taken by certain observers during the passage of the storms across their stations have been utilized in the history of these storms given in the pressure section. A number of local disturbances also occurred during the month, of which reports have been sent in 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 and establishment of the south-west monsoon over the drier districts of Northern and Central India:—

1st.—Thunderstorm at Allahabad at 0-15 A.M.

2nd.—Duststorm at Peshawar (4-10 P.M.).

3rd.—Duststorm (with thunder) at Nagpur (4 P.M. to 6 P. M.).

5th.—Severe thunderstorm at Chikalda, 2 P. M. to 3-30 P.M.

6th.—Thunderstorm at Poona, 3 P. M. to 4 P.M. Duststorm at Hoshangabad, 5 P.M. to 5-30 P.M. Thunderstorms at Khandwa at 6 P. M. and Nagpur, 4-20 P.M. to 6-30 P.M. Duststorm at Delhi at 4-15 P.M.

8th.—Thunderstorm at Khandwa at 10 P.M. Thunderstorm at 5-30 A.M. and duststorm at 2-30 P.M. at Allahabad. Duststorm at Benares, 6-35 P. M.

9th.—Duststorms at Ludhiana at 5-15 P.M., Sirsa 4 P.M. to 4-30 P.M., and Lahore from 5 P.M. to 5-35 P.M. Thunderstorm preceded by duststorm at Ajmere from 2-45 P.M. to 3-15 P.M 1·2 inches of rain fell during this period, and temperature fell from 97°·5 to 81°·6. Thunderstorm at Allahabad at 5-15 P.M. Thunderstorm at Oodeypore which began at 7 P.M. 3·09 inches of rain fell during the storm.

10th.—Duststorm at Peshawar, 3-50 P.M. to 4-30 P.M. The mean velocity of the strongest winds was 44 miles per hour. Thunderstorm at Cherat 4-30 P.M. to 5 P.M. Thunderstorms at Jubbulpore, noon to 4 P.M., from north-west,

and at Chikalda during the night. Severe thunderstorm at Bombay 2 to 3 P.M.

11th.—Thunderstorm at Simla, 2-10 P.M. to 3 P.M. Wind was calm throughout the storm, the total amount indicated by the anemograph being only 4 miles.

12th.—Violent duststorm at Sholapur at 4 P.M. Strongest winds blew with a velocity of 36 miles per hour. Severe duststorm at Jacobabad, 5-30 to 5-45 A.M.

13th.—Duststorm at Cawnpore at 1-15 P.M. to 2 P.M.

14th.—Duststorms at Delhi at 5-10 P.M., Peshawar 3 to 5 P.M. (greatest recorded wind velocity 44 miles per hour), and Sirsa, 1-45 P.M. to 2-15 P.M. (greatest velocity of wind 44 miles per hour), and again from 4 P.M. to 4-20 P.M.

15th.—Thunderstorm at Pachpadra, 5 P.M. to 5-50 P.M. Amount of wind recorded by the anemometer from 5-30 to 5-50 P.M., was 49 miles (?). Total rainfall during storm 1·03 inches.

16th.—Thunderstorm at Pachpadra at 8 P.M., with very strong winds. Thunderstorm at Allahabad with very strong winds (greatest recorded velocity 40 miles per hour).

17th.—Duststorm at Hyderabad (Sind) from 3-20 P.M. to 3-35 P.M. (greatest recorded wind velocity 38 miles per hour). Duststorm at Allahabad at 2-40 P.M. (highest recorded velocity of wind 32·4 miles per hour).

19th.—Thunderstorm at Allahabad with very strong winds, 0-35 A.M. to 0-50 A.M. Storm came from N.N.W.

28th.—Thunderstorm at Simla, 3-30 P.M. to 4-20 P.M.

29th.—Duststorm at Jacobabad, 6 P.M. to 6-10 P.M. 9·6 miles of wind were recorded by the anemometer during this interval, giving a mean velocity of 57·6 miles per hour. Duststorm at Khandwa at 3-15 P.M.

30th.—Duststorm at Khandwa at 2-35 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 normal south-west winds of force 3 to 5 were blowing in the west and centre of the Arabian Sea and light to moderate north-west winds along the Konkan and Kathiawar coasts. In the Gulf of Aden abnormal south-east winds prevailed, while in the south and south-east winds were rather unsteady. Weather was generally fine, except in the central region, where it was showery. The air movement over the whole of the Arabian Sea averaged 3·3 in force. No change of importance occurred during the next 24 hours, except in the neighbourhood of the Laccadives, where the S.S. *Lindisfarne* and *Loodiana* experienced abnormal south-east winds and heavy continuous rain on the morning of the 2nd. Weather was showery to the north and east of Socotra and also along the Malabar coast on the 3rd. South-westerly winds set in over the south and south-east of the sea on the morning of the 4th and several vessels in these areas experienced heavy rain squalls. The squalls were most severe in the neighbourhood of the West Ceylon coast. Winds strengthened considerably in the south, south-east and west of the sea during the next 48 hours and on the morning on the 6th winds ranging in force between 4 and 7 were experienced by vessels in these areas. Along the Bombay and Kathiawar coasts and in the centre, winds were very unsteady and feeble and the mean force for the whole area was 3·1 or 0·8 less than on the 5th. Weather was squally with heavy rain in the Arabian Sea to the south of Lat. 15° N. and continued fine to the north of that parallel. The S.S. *Ocampo* in about Lat. 15° N. and Long. 53°E. at 8 A.M. of the 6th and proceeding to Bombay experienced very hard squalls and heavy continuous rain with lightning. Winds strengthened very rapidly during the next 24 hours, and on the morning of the 7th averaged 1·4 stronger than on the previous day. The monsoon current and squally weather had advanced rather slowly during the previous 24 hours to Lat. 16° N. The progress of the monsoon current was attended with lightning aud thunder. The monsoon winds continued to advance rather rapidly during the next three days, and on the morning of the 11th had reached the parallel of 24° N. There was as usual a tendency to the formation of a low pressure area in front of the advancing current, and hence winds were south-easterly on the Konkan and Kathiawar coasts on the 8th, 9th and 10th, but it passed away on the 11th, when the winds shifted to their monsoon directions on these coasts. Strongly marked monsoon conditions prevailed during the next three days over nearly the whole of the sea, and the air movement averaged 4·5 in force. During the remainder of the month monsoon winds continued steadily; but the weather was

moderate except in the neighbourhood of the west coast, where showers continued to be received. The average force of the winds at the end of the month was 3·9 or 0·6 less than on the 7th, when the first burst of the monsoon winds was in progress.

Bay of Bengal.—At the commencement of the month strong south-west winds with slightly squally weather prevailed over the entrance to the Bay, *i.e.*, to the south of the parallel of 9° N. Winds were light to moderate over the remainder of the Bay, and were unsteady. Weather was fine with passing clouds over this area, except in the south-east, where it was rainy. The average wind force for the Bay was 3·4, except off the Burma coast, where winds were of force 1 to 2 and averaged 1·5. The weather became more squally with increasing winds in the south and south-east of the Bay on the 2nd. The S.S. *Colaba* in Lat. 8° 22′N. and Long. 88° 50′E. at 8 A.M. of that day had hard squalls and a heavy sea, and the S.S. *Nowshera*, not more than 50 miles to the south of Diamond Island, heavy rain and a choppy sea. South-westerly winds prevailed generally; but the weather continued fine in the centre, north and west of the Bay. Winds had also increased off the Burma coast and were of average force 3·0. On the 3rd strong south-west winds, force 5 to 7, prevailed generally over the Bay to the south of Lat. 20° N. Further north, light to moderate south-west winds obtained. The average wind force as determined from the data of 16 vessels was 4·8 or 1·4 greater than on the 1st. Winds decreased steadily in all parts of the Bay during the next six days, and on the morning of the 9th winds of force 2 to 5 prevailed in the Bay, except in the extreme north, where the air movement was unusually light. The mean wind force for the whole area was only 2·9. During the whole of this period, from the 3rd to the 9th, weather was more or less squally in the south and south-east and centre of the Bay and fine over the remainder of the Bay. Winds increased rather rapidly in force during the next three days, particularly at the head of the Bay, where south-west winds of force 4 to 5 obtained on the morning of the 12th. They were more westerly than usual in the north of the Bay. Squally weather, which on the 9th was restricted to the south and centre of the Bay, had now extended northwards. The majority of vessels on the morning of the 12th, in all parts of the Bay, experienced squally rainy weather. The mean wind force was 4·1 at 8 A.M. of that day. Winds increased further in force during the next 24 hours, and on the morning of the 13th ranged from 4 to 6 in force. Weather also had become further disturbed, particularly in the north of the Bay, where the S.S. *Thorndale* experienced south-west winds of force 6 and squally weather at 8 A.M. The mean air movement had increased to 4·5. A barometric depression had formed in South-East Bengal and winds were hence shifting round to west at the head of the Bay. Westerly winds of force 5 and heavy rain were experienced by vessels near the Sandheads on the morning of the 14th. With the westward advance of the depression winds veered round to south-west during the next 24 hours at the head of the Bay, and hence normal south-west winds were blowing over the whole of the Bay on the morning of the 15th. The barometric depression was influencing the winds to a very considerable distance in the west of the Bay. Thus the S.S. *Cyrus*, about 150 miles to the south-east of Vizagapatam at 8 A.M. of the 15th, experienced south-west winds of force 7 and rainy weather. Weather had improved in the south of the Bay, but was rainy and squally over the remainder of the Bay. No change occurred during the next 24 hours, except that the south-east trades began to increase in the Equatorial region. Thus the ship *Manchester* in Lat. 1° 3′ S. and Long. 82° 39′E. at 8 A.M. of the 16th experienced east-south-east winds of force 6. Winds began to strengthen also in the south and centre of the Bay, and the weather became more and more squally. Thus the S.S. *Arratoon Apcar* in about Lat. 14°N. and Long. 93½°E. experienced squally weather with heavy rain at noon of the 18th. Winds increased further during the next 24 hours and ranged from 5 to 6 in force at 8 A.M. of the 19th, except in the north of the Bay, where they were very light. Weather had also become more disturbed, and very squally weather now prevailed as far north as Lat. 19° N. Thus the S. *Rowena* in Lat. 12½° N. and Long. 85½° E. had a stiff gale at 6 A.M. on the 19th, and the S.S. *Lindula* in Lat. 19° N. and Long. 89° 49′ E. continual heavy rain. During the next 24 hours a barometric depression formed in the north-west of the Bay, where winds were cyclonic in direction on the morning of the 20th. The storm developed during the next 48 hours and occasioned very strong winds and rough weather at considerable distances to the south and east. Thus the S.S. *Wanderer* in Lat. 19° 10′ N. and Long. 87½° E. at 8 A.M. of the 21st experienced south-west gales of force 8, and the S.S. *Shahzada* in about Lat. 19° N. and Long. 90° E. stormy winds, force 10, a tremendous sea and heavy squalls at 8 A.M. of the 22nd.

As usual in these storms, very light northerly winds prevailed in the north and west quadrants of the storm on the 20th and 21st. The air movement for the whole area averaged 5·0 on the 21st and 5·3 on the 22nd. Winds fell off rapidly in force during the next 24 hours, and weather moderated considerably, and on the morning of the 23rd was showery with moderate winds in the north of the Bay. The mean wind force had decreased to 4·2. Moderate to fresh south-west winds, and showery weather were experienced over the Bay until the 27th, when winds began to increase again in the south and centre of the Bay and the weather to become squally. This increase in the strength of the winds is shown clearly by the wind data of Port Blair, where the air movement increased from an average of 8

miles per hour on the 26th to 13 miles per hour on the 27th and 17 miles on the 28th. Weather was more or less rainy during this period, except in the extreme south, where it was fine. An important change occurred in the north of the Bay, where the winds shifted round to north-east and a depression began to form. The information for the north and centre of the Bay on the 29th and 30th is very scanty, and hence it is difficult to judge the extent to which the weather conditions in these areas were being influenced by the storm in the north of the Bay; but it is probable that its influence at this stage was far from being extensive. Fine weather prevailed in the west of the Bay and squally weather in the south. The mean wind force for the whole area was 3·8 at 8 A.M. of the 30th.

Temperature of the Air.

The mean temperature conditions of the month were mainly determined by the earlier advance than usual of the monsoon humid winds into the interior, more especially into Rajputana and the Punjab, and by the distribution of the rainfall.

The mean day or maximum temperature of the month was in slight excess in the West Punjab, North-West Rajputana and Sind and in North Bengal and in slight to moderate excess in the greater part of the Peninsula south of the parallel of 18° N. The excess was more than 2° in amount at the following stations in the Carnatic:—

Station.	Mean maximum temperature.		
	Actual, June 1894.	Normal, June.	Variation of actual from normal.
	°	°	°
Madras	101·5	98·1	+3·4
Negapatam	99·6	96·6	+3·0
Salem	97·6	94·3	+3·3
Kurnool	97·9	95·6	+2·3
Cuddapah	101·1	98·7	+2·4

The mean day temperature was below the normal over the remainder of India. The deficiency was more than 2° in Kathiawar, Central India, the northern and western districts of the Central Provinces, the greater part of Rajputana and the East Punjab. The deficiency was large, and exceeded 4° at the following stations in Rajputana, Central India, Kathiawar and the northern districts of the Central Provinces:—

Station.	Mean maximum temperature.		
	Actual, June 1894.	Normal, June.	Variation of actual from normal.
	°	°	°
Saugor	92·8	98·6	−5·8
Hoshangabad	93·6	98·5	−4·9
Neemuch	93·4	98·4	−5·0
Ajmere	95·6	100·3	−4·7
Rajkot	95·5	100·0	−4·5
Nowgong	98·5	102·5	−4·0

The variations of the mean minimum or night temperature from the normal were, as usual in the rains, similar in character, but smaller in amount than those of the mean day temperature.

The mean night temperature was above the normal in North Bengal, North Bihar, the Peninsula (south of a line joining Surat and Masulipatam), Sind and the West and South Punjab and below it over the remainder of India. The variations were less than 2° in amount, except locally at Salem (+2°·0), Peshawar (+2°·0) and perhaps Mooltan (+2°·3) and at Deesa (—2°·0).

The mean temperature of the month was below the normal over by far the greater part of North India. It was above it in North Bengal, the Peninsula (south of a line joining Bombay and Masulipatam), Sind and the West and South-West Punjab. The excess was less than 2° and hence small in amount in all these districts, except locally at Madras (+2°·4), Salem (+2°·7) and Mooltan (+2°·2).

The deficiency over the remainder of India in which

temperature was below the normal was less than 2° except in two areas for which data are given below :—

Area.	Station.	Mean daily temperature. Actual, June 1894.	Normal, June.	Variation of actual from normal.
		°	°	°
Submontane Districts of Upper India.	Rawalpindi	86·5	88·7	−2·2
	Ludhiana	90·9	93·0	−2·1
	Roorkee	88·2	90·2	−2·0
	Meerut	89·2	91·2	−2·0
Rajputana, Kathiawar, Central India and Northern and Western districts of the Central Provinces.	Hoshangabad	85·5	88·9	−3·4
	Neemuch	84·6	87·8	−3·2
	Nowgong	89·1	92·7	−3·6
	Jhansi	91·1	93·6	−2·5
	Saugor	85·3	87·8	−2·5
	Deesa	88·5	91·0	−2·5
	Seoni	82·2	84·6	−2·4
	Rajkot	86·3	88·7	−2·4
	Khandwa	85·5	87·8	−2·3
	Ajmere	88·0	90·2	−2·2
	Sambhar	89·6	91·7	−2·1
	Jeypore	89·6	91·6	−2·0

The variations of the temperature conditions at the hill stations in India were in all cases similar to those of the neighbouring plain stations, but generally smaller in amount. The mean temperature was in slight defect at the Upper India hill stations and in moderate defect at the Central India hill stations. The following gives data :—

Station.	Variation from normal of mean. Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Pachamri	−3·1	−1·0	−2·1
Mount Abu	−3·9	−1·2	−2·6
Murree	−1·6	+0·9	−0·4
Simla	−4·0	+1·5	−1·3
Chakrata	−2·2	+0·6	−0·8

Temperature in the interior of the Himalayas was on the other hand above the normal. Thus the mean temperature of the month at Kailang was 1°·0 in excess and of Leh 1°.9 in excess, thus confirming the statement in the snowfall report of the Almora district that in the Danpur Malla the weather was warmer than usual. The following table gives temperature data for 51 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 Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	84·6	74·5	79·5	10·1	16·9	−0·5	+0·3	−0·8
	Lower Burma	85·7	76·5	81·2	9·2	16·3	−0·2	+0·4	−0·6
	Central do.	90·5	74·8	82·7	15·7	24·2	−0·7	+0·6	−1·3
	Upper do.	91·1	76·5	83·8	14·6	23·7	−1·9	−0·9	−1·0
	Arakan	84·7	77·2	81·0	7·5	13·5	−1·2	−0·7	−0·5
Bengal and Assam	Eastern Bengal	87·5	77·1	82·3	10·4	18·7	−0·4	0	−0·4
	Assam (Surma)	90·5	76·4	83·4	14·1	24·8	+1·8	+0·3	+1·5
	Do. (Brahmaputra)	88·2	76·8	82·5	11·4	21·9	+0·4	+0·3	+0·1
	Deltaic Bengal	90·5	78·5	84·5	12·0	24·8	−1·3	−0·9	−0·4
	Central do.	92·3	78·2	85·3	14·1	27·0	−0·6	−0·2	−0·4
	North do.	89·5	77·1	83·3	12·4	21·8	+1·3	+1·1	+0·2
	Orissa	90·7	79·5	85·1	11·2	25·1	−1·4	−0·5	−0·9
	Chota Nagpur	93·8	77·4	85·6	16·4	35·0	−1·4	−0·5	−0·9
	Bihar (South)	96·7	80·1	88·4	16·6	31·9	−1·2	+0·4	−1·6
	Do. (North)	92·3	78·4	85·4	13·9	27·8	−1·1	+0·5	−1·6
North-Western Provinces and Oudh.	North-Western Provinces (East)	97·6	80·2	88·7	17·4	36·1	−2·7	−1·4	−1·3
	Oudh (South)	99·8	80·2	90·0	19·6	36·8	−1·7	−1·3	−0·4
	Do. (North)	96·8	78·6	87·7	18·2	35·5	?	?	?
	North-Western Provinces (Central)	100·6	81·6	91·1	19·0	37·8	?	?	?
	Do. do. (West)	101·2	83·0	92·1	18·2	39·9	−2·9	−1·4	−1·5
	Do. do. (Submontane)	96·9	78·2	87·6	18·7	37·7	−2·4	−0·4	−2·0

Province.	Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Punjab	Punjab (South)	104·7	83·4	94·1	21·3	39·8	−0·7	+0·3	−1·0
	Do. (Central)	102·7	80·9	91·8	21·8	41·7	−2·9	+1·1	−4·0
	Do. (Submontane)	102·1	79·5	90·8	22·6	44·0	−3·6	−0·6	−3·0
	Do. (Hill Districts)	82·9	64·8	73·9	18·1	35·3	−2·8	+1·2	−4·0
	Do. (North-West)	104·6	78·0	91·3	26·6	45·4	−1·9	+0·4	−2·3
	Do. (West)	108·0	82·4	95·3	25·6	42·3	+1·1	+1·0	+0·1
Bombay and Malabar Coast Districts (Madras).	Malabar	84·5	75·1	79·9	9·5	20·0	+0·8	+0·2	+0·6
	Madras (South Central)	93·9	73·2	83·5	20·7	30·4	+1·8	+0·7	+1·1
	Coorg	72·0	64·0	68·0	8·0	18·3	−0·2	+0·8	−1·0
	Mysore	83·6	67·2	75·5	16·4	28·3	−0·3	−0·1	−0·2
	Konkan	86·6	78·2	82·5	8·3	19·2	+0·7	+0·8	−0·1
	Bombay Deccan	89·4	71·6	80·6	17·8	34·4	+0·9	+0·6	+0·3
	Hyderabad (North)	93·0	74·0	83·5	19·0	35·7	?	?	?
	Khandesh	91·9	73·7	82·8	18·2	34·5	−0·5	+0·4	−0·9
Central Provinces and Berar.	Berar	94·7	76·4	85·5	18·3	36·5	−2·6	−0·5	−2·1
	Central Provinces (West)	94·2	77·5	85·9	16·7	36·5	−3·7	−1·0	−2·7
	Do. (Central)	93·3	77·1	85·3	16·2	37·7	−3·4	−0·3	−3·1
	Do. (East)	96·2	79·5	87·9	16·7	38·9	−0·7	+0·1	−0·8
Bombay (North)	Gujarat	94·7	79·6	87·2	15·1	29·0	−1·7	+0·1	−1·8
	Kathiawar	92·2	79·5	85·8	12·7	25·6	−4·5	−0·3	−4·2
	Sind and Cutch	102·1	82·3	92·2	19·8	32·0	+0·6	+0·6	0
Rajputana and Central India.	Central India (East)	97·3	80·2	88·8	17·2	37·6	−3·4	−1·7	−1·7
	Rajputana (East), Central India (West)	96·2	78·3	87·2	17·9	35·9	−3·7	−0·8	−2·9
	Do. (West)	104·1	82·5	93·3	21·7	37·9	+0·1	−0·1	+0·2
Madras	East Coast (North)	91·6	80·4	86·0	11·2	26·7	−1·4	−1·5	+0·1
	Hyderabad (South)	95·0	75·8	85·4	19·1	38·3	+0·4	+1·6	−1·2
	Madras (Central)	97·8	78·0	87·9	19·8	36·5	+1·5	+0·7	+0·8
	East Coast (Central)	100·9	81·6	91·3	19·3	41·4	+1·2	−0·2	+1·4
	Do. (South)	100·4	80·0	90·2	20·5	30·9	+2·8	+0·8	+2·0
	Madras (South)	95·8	80·0	88·0	15·8	27·4	+0·7	+1·6	−0·9

Weather was showery at the beginning of the month in Burma, Assam and Malabar, but the monsoon current had not yet commenced its permanent advance along the West coast of India. Temperature was hence in excess over nearly the whole of India, the excess being greatest in the Deccan and Coromandel coast districts. The following gives temperature variation data for the 1st:—

Province.	Variation from normal of Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	−0·1	−0·5	−0·3
Bengal and Assam	+1·6	−0·3	+0·7
N.-W. Provinces and Oudh	+4·3	−1·5	+1·4
Punjab	−0·2	−2·6	−1·4
Sind and Rajputana	+2·2	+0·1	+1·2
Central India and Gujarat	+0·7	−0·2	+0·3
Central Provinces and Berar	+3·5	+1·5	+2·5
Bombay	+4·9	+1·1	+3·0
Madras	+6·2	+3·1	+4·7

No large change occured during the next four days. Light showers fell in Malabar and the Konkan, but their effect in reducing temperature was small and hence temperature continued in general excess. The area of greatest excess of temperature was, however, transferred to North-Western India and the mean temperature of the 24 hours preceding 8 A.M. of the 5th averaged 5° in excess in the Punjab and 4° in excess in the North-Western Provinces and Rajputana. Heavy rain due to the advance of the monsoon proper began to fall in Malabar on the 5th and continued, extending slowly northwards on the 6th and 7th.

The Konkan obtained its first burst of heavy rain on the 7th and 8th. Showers were received in the Deccan on the 7th and the Central Provinces on the 8th. Moderate general rain due to a feeble advance of monsoon winds had also fallen in Bengal from the 6th to the 10th.

The humid currents extended with unusual rapidity into the interior and gave the first rainfall of the present monsoon to Upper India on the 9th. During the progress of the rain-giving currents into the interior, the area of greatest temperature and of greatest excess of temperature was transferred rapidly northwards. Thus the greatest excess of temperature in Northern India on the 8th (*i.e.*, the 24 hours preceding 8 A.M. of that date) was 7°·6 at Agra, on

the 9th, 8°·3 at Sirsa, and on the 10th 7°·4 at Peshawar. The large reduction of temperature produced by the rapid advance of the monsoon humid winds is shown by the following:—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		Reduction.	Humidity 8 A.M.		Change.
	5th.	12th.		5th.	12th.	
	°	°	°	%	%	
Burma	−0·4	−1·6	− 1·2	87	86	− 1
Bengal	+0·1	−0·4	− 0·5	80	79	− 1
North-Western Provinces	+4·0	−5·7	− 9·7	49	68	+19
Punjab	+5·0	−6·1	−11·1	36	62	+26
Sind and Rajputana	+3·6	−4·2	− 7·8	62	70	+ 8
Central India and Gujarat	+2·6	−5·2	− 7·8	60	80	+20
Central Provinces and Berar	+3·1	−5·5	− 8·6	52	82	+30
Bombay	+2·2	−4·3	− 6·5	78	88	+10
Madras	+0·6	−2·8	− 3·4	69	72	+ 3

The advance of the humid currents into the interior during the second week of June was hence accompanied by an average decrease of temperature of 8° to 11° over the greater part of the Punjab, Rajputana, Central India and the Central Provinces.

During the remainder of the month the temperature conditions depended upon the rainfall distribution and extension of the monsoon currents over the whole of India from the 12th to the end of the month. The Bombay current was strong until the 19th and 20th when it fell off considerably and gave only light to moderate rain. Northern India continued to receive frequent rain, which was in part determined to Upper India by the two cyclonic storms of the third and fourth weeks of the month, which advanced westwards across Northern India. North-Western and Central India hence received during the last fortnight of the month much more frequent and heavier rainfall than usual. Hence temperature continued more or less in defect over the whole of India, except the southern and central districts of Madras, where the rainfall at this time was unusually small in amount. The following data give the greatest depression of temperature on each day from the 15th to the end of the month and hence show the temperature conditions from an interesting point of view as they illustrate the very large local reduction of temperature in the interior of India accompanying an earlier commencement of the south-west monsoon than usual in North-Western and Central India.

Date.	Station.	Variation from normal		
		Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
		°	°	°
15th	Rajkot	−20·6	−5·4	−13·0
16th	Rajkot	−17·7	−3·8	−10·8
17th	Nowgong	−11·9	−5·6	− 8·8
18th	Ajmere	−18·1	−5·8	−12·0
19th	Sailkot	−24·2	−11·9	−18·1
20th	Sailkot	−20·5	−10·2	−15·4
21st	Cocanada	−15·0	−7·1	−11·1
22nd	Rajahmundry	−18·4	−6·5	−12·5
23rd	Chanda	−15·6	−5·9	−10·8
24th	Nowgong	−15·4	− 7·7	−11·6
25th	Nowgong	−14·9	− 6·6	−10·8
26th	Nowgong	−12·4	− 8·6	−10·5
27th	Nowgong	−15·0	− 8·3	−11·7
28th	Nowgong	−19·0	− 8·0	−13·5
29th	Jhansi	−15·1	− 7·3	−11·2
30th	Lahore	−17·3	− 5·1	−11·2

The following gives the variations of the mean temperature of the day for every third day from the 15th to the 30th:—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.					
	15th.	18th.	21st.	24th.	27th.	30th.
	°	°	°	°	°	°
Burma	−0·2	+1·7	−2·1	+0·3	−1·0	−0·6
Bengal and Assam	−2·4	+0·2	+1·1	−1·4	−0·5	+0·4
North-Western Provinces and Oudh.	−3·8	−3·6	−1·4	−7·1	−5·9	−2·2
Punjab	+1·7	−5·5	−3·5	−2·3	+0·2	−8·1
Sind and Rajputana	−0·2	−4·4	−2·2	+0·2	+0·4	−2·5
Central India and Gujarat	−4·8	−5·6	−2·8	−3·3	−2·9	−3·9
Central Provinces and Berar	−1·8	−1·8	−5·0	−7·8	−0·7	+0·2
Bombay	−0·1	−0·8	+1·0	+1·1	+1·7	+1·5
Madras	+0·4	+1·1	−2·9	+1·0	+2·5	+2·3

Temperature was hence throughout the whole of the period from the 12th to the end of the month below the

Humidity and Cloud.

The mean humidity conditions of the month differed very slightly from the normal in Burma and Bengal. The absolute humidity was somewhat greater than usual in Burma, and was normal or in very slight defect in Bengal and Orissa. The following gives comparative data for these areas :—

Province.	Absolute humidity.		
	Average actual, June 1894.	Average, normal June.	Variation from normal.
	"	"	"
Burma	·911	·903	+·008
Bengal	·944	·947	—·003
Orissa	·926	·930	—·004

The unusually early extension of the monsoon currents into Upper India substituted for the dry hot weather conditions, which usually prevail in that area, monsoon conditions of great dampness. Hence both the absolute and relative humidities were more or less largely in excess in Bihar, Chota Nagpur, the North-Western Provinces, Central India, Rajputana and the Punjab, the increase being most marked in the districts of North-Western India furthest from the sea. The mean humidity of the month was more than 10 in excess at the following stations in these areas :— Ajmere (+ 14), Roorkee (+ 13), Sutna, Deesa and Ludhiana (+ 12) and Meerut and Jeypore (+ 11). The absolute humidity was, both absolutely and relatively, most largely in excess at Roorkee, Ludhiana and Lahore, for which data are given below:—

Station.	Absolute humidity.			
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.
	"	"	"	
Roorkee . . .	·794	·637	+·157	+25
Ludhiana . . .	·767	·633	+·134	+21
Lahore	·727	·608	+·119	+20

The excess decreased in amount northwards from Lahore and was comparatively small in amount at Peshawar, where the mean humidity percentage of the month was only 2 in excess.

The following gives comparative data for this area of large excess of humidity:—

Province.	Absolute humidity.				Relative humidity.		
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.	Average actual, June 1894.	Average normal, June.	Variation from normal.
	"	"	"				
Bihar . . .	·898	·893	+·005	+ 1	75	73	+2
Chota Nagpur . .	·716	·685	+·031	+ 5	69	65	+4
North-West Provinces	·804	·715	+·089	+12	62	52	+10
Central India . .	·732	·676	+·056	+ 8	62	51	+11
Rajputana . .	·773	·695	+·078	+11	63	51	+12
Punjab . . .	·680	·624	+·056	+ 9	48	42	+6
Sind . . .	·851	·808	+·043	+ 5	59	57	+2

The humidity conditions differed little from the normal at the west coast stations. There was a slight excess of vapour, most marked at Ratnagiri. The mean humidity conditions were normal in Coorg and Mysore (as represented by Bangalore) and the Bombay or West Deccan. In the Madras Deccan and South Madras the air was drier than usual. The following give data for the two stations at which the increased dryness was most marked :—

Station.	Absolute humidity.				Relative humidity.		
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.	Average actual, June 1894.	Average normal, June.	Variation from normal.
	"	"	"				
Trichinopoly . .	·651	·712	—·061	—·9	50	57	—7
Bellary . . .	·581	·658	—·077	—·12	51	58	—7

Humidity was more or less considerably above the normal in Berar and the Central Provinces, (more especially the northern districts). The mean relative humidity was upwards of 10 in excess at Saugor (+15) and Jubbulpore (+12) The following gives comparative data :—

Province.	Absolute humidity.				Relative humidity.		
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.	Average actual, June 1894.	Average normal, June.	Variation from normal.
	"	"	"				
Central Provinces .	·763	·700	+·063	+9	69	59	+10
Berar . . .	·701	·679	+·022	+3	65	62	+3

Humidity was in moderate excess at Kurrachee and normal at Jacobabad. In a small area of the South-West Punjab represented by Mooltan, the air was considerably drier than usual owing probably to the abnormal prevalence of dry north-west winds in the Central districts of the Indus Valley. The average amount of aqueous vapour present in the air was 10 per cent. below the normal at that station and the humidity percentage 7 in defect.

The humidity conditions were as strongly marked at the hill stations in North-Western India as at the neighbouring plain stations. Humidity was more or less largely in excess at all the stations, the excess being greatest at Chakrata and Ranikhet and at Mount Abu in Rajputana. The excess was as large at Leh and Kailang as at Simla and Murree, shewing that the effect of the early indraught of humid winds to Upper India extended across the Himalayas into Ladakh. The following gives data for six stations :—

Station.	Absolute Humidity.				Relative humidity.		
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.	Average actual, June 1894.	Average normal, June.	Variation from normal.
	"	"	"				
Ranikhet . . .	·549	·460	+·089	+19	78	64	+14
Chakrata . . .	·489	·406	+·083	+20	79	65	+14
Simla . . .	·433	·413	+·020	+ 5	68	63	+ 5
Murree . . .	·410	·361	+·049	+14	55	46	+ 9
Leh	·209	·169	+·040	+24	46	38	+ 8
Kailang . . .	·272	·236	+·036	+15	61	53	+ 8

The Quetta humidity data show that the air was considerably drier in the Baluchistan plateau. The actual amount of vapour present as measured by its pressure was about 14 per cent. lower than the normal and the relative humidity was (as at Mooltan) 7 in defect.

Skies were clouded to an unusual extent at Port Blair. The mean cloud amount of the month was 9·2 or 2·0 above the normal. The amount of cloud was greater than usual over the whole of Northern and Central India with the exception of the Assam Valley, and locally at Berhampore in Bengal and Lahore in the Punjab. It is more than probable that the negative variations at those stations do not represent abnormal meteorological features or conditions, but the peculiarities of the observers. The following gives comparative data for the different provinces of Northern and Central India :—

Division.	Mean cloud amount.			
	Actual, June 1894.	Normal, June.	Variation from normal.	Percentage variation.
Burma	9·1	8·0	+1·1	+14
Bengal	8·1	7·5	+0·6	+ 8
Orissa	7·8	6·8	+1·0	+15
Chota Nagpur . .	9·0	7·3	+1·7	+23
Bihar	6·2	5·4	+0·8	+15
N. W. Provinces . .	5·2	3·9	+1·3	+33
Central India . .	6·5	5·3	+1·2	+23
Rajputana . . .	5·7	4·3	+1·4	+33
Sind	3·1	2·5	+0·6	+24
Punjab . . .	3·0	2·3	+0·7	+30
Hill Stations Upper India	6·1	4·9	+1·2	+24

The excess in the mean cloud amount was actually greatest at the following stations :— Agra (+2·6) and Jeypore and Hoshangabad (+2·3). The excess was almost as marked at the hill stations in Northern India as at the neighbouring plain stations. The cloud amount was in slight excess at Leh and Quetta and in moderate defect at Kailang.

There was slightly more cloud than usual in the west coast districts. The mean cloud amount of the month was in large defect at Trichinopoly (—2·8) and in slight defect at Mercara and Madras. It was in moderate excess in the Deccan and largely in excess in the Central Provinces and Berar. The following gives comparative data :—

Division.	Mean cloud amount.			
	Actual, June 1894.	Normal, June.	Variation from normal.	Percentage variation.
Madras Deccan . .	7·4	6·4	+1·0	+16
Bombay Deccan . .	8·0	7·5	+0·5	+ 7
Berar	6·7	6·4	+0·3	+ 5
Central Provinces . .	7·7	6·1	+1·6	+26

The following states briefly the chief features of the mean cloud conditions of the month :—

1st.—Cloud was in large excess at Port Blair.

2nd.—It was in moderate excess in Burma and Bengal, and in moderate to large excess over the North-Western Provinces, the Punjab, Rajputana, Central India, Berar and the Central Provinces. The excess was on the

whole greatest and most marked in East Rajputana and the adjacent districts of the North-Western Provinces.

3rd.—It was in slight defect in the Assam Valley and in slight excess in the west coast districts and the Deccan.

4th.—It was in slight to large defect in the Carnatic and South Madras.

Rainfall.

The conditions under which the monsoon currents were established over India have been fully stated under the previous section. The Malabar coast districts received light showers daily in the latter part of May and the first four days of June. On the 5th heavy rain fell and continued fairly steady, at the same time extending northwards. Karwar and Ratnagiri received their first burst of heavy rain on the 8th. The Deccan and Central Provinces began to receive moderate monsoon showers on the 7th and 8th. It was not until the 10th and 11th that Bombay and Kathiawar had heavy rain. The humid current advanced with unusual rapidity across Central India and Rajputana on the 10th to the South-East Punjab on the 11th on which dates the south-west monsoon rains were initiated in these areas. The Bombay current blew strongly from the 11th to the 20th and continued to give heavy and general rain to the whole of Bombay excepting Sind.

The monsoon current in the Bay had increased *pari passu* and a storm formed in South-East Bengal, which advanced west-north-westwards across Northern India, initiating the monsoon rains in North-Eastern India and giving moderately heavy rain to that area and also to Central India and Rajputana. During its final stages the South-East Punjab received exceptionally heavy downpours on the 18th and 19th. After this storm filled up, the Bombay current weakened and during the remainder of the month gave light to moderate rain to the west coast districts and North Deccan and little or none to North-Western India. The second storm of the month formed in the north-west angle of the Bay and drifted to the eastern districts of the North-Western Provinces. It gave moderately heavy rain to Bengal, Chota Nagpur and Bihar during its progress. It was stationary in the eastern districts of the North-Western Provinces from the 24th to the 27th, giving rain in increasing amounts. On the 27th the Allahabad and neighbouring districts had a cyclonic downpour and the depression intensified and moved westwards through Bundelkhand, to which it gave excessive rain on the 28th, passing into Rajputana, to which it determined moderate rain on the 29th and 30th.

The dates of the commencement of the monsoon rains in 1894 in different parts of India are as follows:—

	Date of commencement of the monsoon rains.
Malabar	6th June.
South Konkan	8th "
North Konkan	8th "
Kathiawar	11th "
North Deccan and Central Provinces	7th "
Central India	10th "
Rajputana	10th "
Bengal	14th "
Chota Nagpur	14th "
Bihar	14th "
North-Western Provinces	14th to 17th "
Punjab	11th to 17th "

The following table gives comparative rainfall data of June 1894, of the 51 meteorological districts of India. In the case of Bengal, the North-Western Provinces, the Punjab, Rajputana, Central India, Bombay, Madras, the Central Provinces and Coorg, the monthly rainfall statements published by the respective Local Governments were received in time to be utilized in the preparation of this table and hence the variations in the meteorological districts of those provinces given in the last column of that table and in Plate V are based on the whole of the available information. In the case of the remaining provinces the averages were derived from the data of the weekly rainfall telegrams for the period sent by the district officers in those provinces:—

Province.	Division.	Rainy Days.		Rainfall.		Variation from normal.
		Actual, June 1894.	Normal, June.	Actual, June 1894.	Normal, June.	
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	55·93	40·05	+15·88
	Lower Burma*	?	?	18·22	19·19	−0·97
	Central do.*	?	?	13·23	15·65	−2·42
	Upper do.*	?	?	4·87	?	?
	Arakan*	?	?	39·69	52·34	−12·65

Province.	Division.	Rainy days. Actual, June 1894.	Rainy days. Normal, June.	Rainfall. Actual, June 1894.	Rainfall. Normal, June.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Bengal and Assam	Eastern Bengal	17·8	16·9	16·69	18·93	−2·24
	Assam (Surma)*	?	?	34·94	37·16	−2·22
	Do. (Brahmaputra)*	?	?	15·36	15·50	−0·14
	Deltaic Bengal	14·6	12·8	10·86	10·66	+0·20
	Central do.	12·9	12·0	10·05	10·22	−0·17
	North do.	16·2	17·3	19·51	23·62	−4·11
	Orissa	12·4	9·9	11·31	8·03	+2·38
	Chota Nagpur	13·6	10·7	11·11	7·83	+3·28
	Bihar (South)	10·4	7·2	7·70	5·79	+1·91
	Do. (North)	11·0	9·0	8·48	8·61	−0·13
North-Western Provinces and Oudh.	North Western Provinces (East)	10·0	5·1	9·43	4·28	+5·15
	Oudh (South)	7·4	4·6	9·17	4·38	+4·79
	Do. (North)	8·9	5·6	9·18	4·93	+4·25
	North-Western Provinces (Central)	8·2	4·2	9·73	3·47	+6·26
	Do. do. (West)	5·8	3·7	5·19	2·72	+2·47
	Do. do. (Submontane)	9·7	5·9	9·64	5·55	+4·09
Punjab	Punjab (South)	4·1	2·0	6·27	1·40	+4·87
	Do. (Central)	5·3	2·7	4·29	2·18	+2·11
	Do. (Submontane)	6·4	3·2	10·85	2·84	+8·01
	Do. (Hill Districts)	10·7	6·9	13·88	4·78	+9·10
	Do. (North-West)	3·7	1·9	3·16	1·34	+1·82
	Do. (West)	1·7	1·2	1·06	0·65	+0·41
Bombay and Malabar Coast Districts (Madras).	Malabar	25·7	24·8	32·79	37·30	−4·51
	Madras (South Central)	1·8	3·8	1·17	2·03	−0·86
	Coorg	21·4	?	16·67	?	?
	Mysore*	?	?	2·50	4·87	−2·37
	Konkan	19·8	19·2	25·29	27·15	−1·86
	Bombay Deccan	8·7	8·2	5·38	5·75	−0·37
	Khandesh	8·3	7·6	5·23	5·69	−0·46
Central Provinces and Berar.	Berar*	?	?	7·22	7·82	−0·60
	Central Provinces (West)	12·2	8·8	8·41	7·49	+0·92
	Do. (Central)	13·2	9·1	10·76	8·22	+2·54
	Do. (East)	11·1	9·0	9·86	8·19	+1·67
Bombay (North)	Gujarat	9·7	6·7	10·74	6·26	+4·48
	Kathiawar	8·1	3·6	9·68	3·26	+6·42
	Sind	0·7	?	0·24	0·20	+0·04
Rajputana and Central India.	Central India (East)	10·4	?	9·75	6·02	+3·73
	Rajputana (East), Central India (West)	7·0	?	6·47	3·08	+3·39
	Rajputana (West)	4·4	?	3·91	1·57	+2·34
Madras	East Coast (North)	8·6	6·7	5·81	4·90	+0·91
	Do. (do). (a)	15·0	11·1	9·33	10·41	−1·08
	Hyderabad (South)*	?	?	1·54	4·50	−2·96
	Madras (Central)	2·3	4·8	1·05	2·63	−1·58
	East Coast (Central)	2·5	3·1	1·05	1·65	−0·60
	Do. (South)	1·9	3·8	0·88	2·27	−1·39
	Madras (South)	0·9	2·2	0·39	1·06	−0·67

*Note.—The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

The data in the final column of the preceding table which are charted in Plate V show that rainfall was in excess in 27 out of 51 meteorological divisions. The chief areas of deficient rainfall were, Madras (except the northern districts), Hyderabad, Mysore, Burma (except Tenasserim), Khandesh, Berar, North and East Bengal and Assam. The deficiency was large relatively to the normal and absolutely in Arakan (24 per cent.), North Bengal (17 per cent.) Mysore (49 per cent) and Madras and Hyderabad. The excess was large in the North-Western Provinces, the Punjab, Kathiawar, Gujarat, Rajputana and Central India, in all of which areas it was considerably

more than 50 per cent. It was moderate in amount in the Central Provinces, Orissa and Chota Nagpur.

The rains held steadily in Tenasserim and Lower and Central Burma during the month, rain falling daily in every district. The daily rainfalls were nowhere excessive; only three stations out of 56 receiving amounts in 24 hours exceeding 5 inches. These were:—

District.	Station.	Heaviest rainfall in 24 hours.
		Inches.
Amherst . . .	Moulmein . . .	6·88
Ditto . . .	Thaton . . .	6·07
Rangoon . . .	Rangoon . . .	5·16

In Upper Burma frequent light showers were received, but the rainfall throughout the whole period was local rather than general. The 20th and 21st were the only two days on which rain was received over the whole area. Arakan like Lower Burma had moderate to heavy daily rain throughout the period. The heaviest rainfall in 24 hours was 7·01 inches on the 2nd at Akyab.

The following gives a summary of the rainfall data for the month published in the *Burma Gazette*. The means in the case of Tenasserim and Central and Upper Burma differ to some extent from those in the preceding table, drawn up from the more limited information of the weekly rainfall telegrams. The two series of data however agree in the general character of the rainfall distribution:

Division.	No. of rainy days.		Rainfall.		
	Mean actual, June 1894.	Variation from normal.	Mean actual, June 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches	Inches.
Tenasserim . .	28·1	?	47·18	40·55	+6·63
Lower Burma . .	23·9	?	18·71	19·19	—0·46
Central Burma . .	16·9	?	14·46	15·65	—1·19
Upper Burma . .	8·8	?	6·42	?	?
Arakan . . .	26·2	?	36·76	52·34	—15·58

The rainfall of the month was in moderate excess in Tenasserim and was normal or in very slight defect in Lower, Upper and Central Burma. It was in considerable defect (nearly 25 per cent.) in Arakan. The precipitation was even steadier than usual in Burma and the distribution normal in amount over the whole of Burma, excepting Tenasserim and Arakan.

Cachar and Sylhet received daily rain throughout the month. In the Brahmaputra division the chief periods of rain were the 1st and 2nd, the 6th to the 8th, and the 14th to the 30th. The total rainfall of the month was practically normal in amount in the plain districts. It was considerably below the normal in the Garo and Khasi hills. Thus Cherra Punji received a total of only 65·48 inches, or 51·07 inches below the normal. The largest fall during the month at that station was only 10·7 inches less than the largest falls at several stations in the Punjab and the North-Western Provinces. The total fall at Jowai in the Khasi hills was 28·31 inches, or little more than a third of the normal amount, 75·02 inches.

Bengal received frequent rain, more or less local in character, almost daily from the 1st to the 11th. The rainfall was most general on the 5th, 8th and 11th. This rainfall occurred chiefly during local thunderstorms and was heaviest in East and North Bengal. South Bihar obtained some light local showers on the 10th and 11th, and North Bihar, Chota Nagpur, and Orissa light occasional showers. Some heavy downpours were received during the period in East Bengal the most remarkable being a fall of 12·5 inches at Netrokona in the Mymensingh district on the 7th.

The rains proper in Bengal were initiated by a cyclonic storm, which formed further north and east than usual, in South-East Bengal, on the 13th. It advanced westwards across South Bengal and Chota Nagpur during the next two days. The indraught to this storm gave general rain to the whole province. East Bengal received its share chiefly on the 12th, 13th, and 14th, and South-West Bengal, Chota Nagpur and Orissa on the 14th, 15th and 16th. The rainfall during this period was comparatively small in North Bengal and Bihar, as those divisions were well outside of the storm area in the northern quadrant. They received light to moderate rain from local storms during the period. The following gives the average daily rainfall during this period in the six divisions of Bengal:—

Division.	Average actual rainfall during 24 hours preceding 8 A. M. of date.						Total of period.
	11th.	12th.	13th.	14th.	15th.	16th.	
	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.
South-West Bengal	0·66	0·11	0·10	0·95	1·31	0·38	3·51
North Bengal . .	0·40	0·11	0·18	0·33	0·27	0·44	1·73
East Bengal . .	0·45	0·65	0·73	1·31	0·30	0·13	3·57
Bihar . . .	0·39	0·06	0·29	0·46	0·40	0·20	1·80
Orissa . . .	0·32	0·34	0·50	0·55	0·64	0·14	2·49
Chota Nagpur . .	0·19	0·15	0·43	1·02	1·19	0·56	3·54

During the interval between the passage of the first storm of the month out of Bengal and the formation of the second storm at the head of the Bay, showers occurred daily in all parts of Bengal. The second storm formed on the 20th and 21st in the north-west angle of the Bay, and advanced slowly through Orissa and Chota Nagpur on the 22nd, 23rd and 24th. This disturbance gave more prolonged and general rainfall than the previous. Orissa had heavy rain from the 20th to the 22nd, the whole of Bengal and Chota Nagpur from the 22nd to the 28th or 29th and Bihar from the 24th to the 29th. The heaviest falls were received in the Darjeeling and Kuch Bihar districts. Mungpoo in the Darjeeling district had a fall of 8·25 inches on the 25th. The following gives the local distribution of rainfall in different divisions :—

DIVISION.	AVERAGE ACTUAL RAINFALL DURING 24 HOURS PRECEDING 8 A.M. OF DATE.									Total of period.
	20th.	21st.	22nd.	23rd.	24th.	25th.	26th.	27th.	28th.	
	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.
South-West Bengal.	0·18	0·13	0·31	0·76	0·72	0·79	0·17	0·37	0·45	3·88
North Bengal .	0·09	0·44	0·35	0·34	0·70	1·44	2·13	1·58	1·29	8·36
East Bengal .	0·23	0·30	0·58	0·68	1·01	1·20	0·96	1·06	0·47	6·49
Bihar . .	0·27	0·18	0·17	0·24	0·56	0·83	0·97	0·88	0·64	4·74
Orissa . .	0·73	0·76	0·80	0·24	0·42	0·04	0·10	0·25	0·77	4·11
Chota Nagpur .	0·45	0·32	0·49	0·87	0·42	0·22	0·33	0·26	0·78	4·14

The data illustrate a feature of the rainfall in North-Eastern India. The storm, when it reached the North-Western Provinces, was chiefly maintained by the Bombay current, and the Bengal current fell off in Bihar. This weakening of the current was followed by its partial or complete retreat to Bengal and the head of Bay, and as usually happens, by the formation of a cyclonic storm at the head of the Bay. During the intervals when the Bengal current is weakening, it is frequently, if not invariably, directed to North Bengal, which hence occasionally receives under these circumstances a heavy downpour for a short period. In the present case North Bengal obtained very little rain during the advance of the second storm through Orissa and Chota Nagpur. It, however, received very heavy rain from the 25th to the 28th, immediately antecedent to the third storm of the present south-west monsoon in North-Eastern India.

A depression formed in the north-west angle of the Bay on the 29th and 30th, and Orissa obtained moderately heavy rain on these days, and the remainder of the province received only very light showers.

The following is a comparative statement of the rainfall of the month based on the whole of the data as given in the *Calcutta Gazette* :—

DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Mean actual, June 1894.	Variation from normal.	Actual, June 1894.	Variation of actual from normal.	Percentage variation from normal.
			Inches.	Inches.	
Bengal, East . . .	17·8	+0·9	16·69	−2·24	−12
,, North . . .	16·2	−1·1	19·51	−4·11	−17
,, Deltaic . .	14·6	+1·8	10·86	+0·20	+ 2
Central Bengal . .	12·9	+0·9	10·05	−0·17	− 2
Orissa	12·4	+2·5	11·31	+2·38	+27
Chota Nagpur . . .	13·6	+2·9	11·11	+3·28	+42
North Bihar . . .	11·0	+2·0	8·48	−0·13	− 2
South Bihar . . .	10·4	+3·2	7·70	+1·91	+33

The data in the table show that the districts immediately affected by the cyclonic storms of the month, *viz.*, Deltaic Bengal, Orissa, Chota Nagpur and South Bihar received more than the normal fall and the districts outside of and to the north and north-east of the storm obtained less than their mean or normal amount. The excess averaged 42 per cent. in Chota Nagpur, 33 per cent in South Bihar and 27 per cent. in Orissa. The rainfall was practically normal in Deltaic Bengal (2 per cent. in excess) and in North Bihar and Central Bengal (2 per cent. in defect.) It was 17 per cent. in defect in North Bengal, and 12 per cent. in East Bengal. The deficiency was large locally in the following districts, for which data are given :—

DIVISION.	District.	RAINFALL.			
		Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.
		Inches.	Inches.	Inches.	
NORTH BENGAL .	Rajshahi .	6·35	10·26	−3·91	−38
	Rangpur .	14·27	21·49	−7·22	−34
	Pabna . .	7·57	11·32	−3·75	−33
	Jalpaiguri .	19·92	29·12	−9·20	−32
BIHAR . . .	Darbhanga .	5·58	8·00	−2·42	−30

The North-Western Provinces began to receive monsoon showers on the 11th. The first storm of the month gave moderate, but somewhat irregular, rain from the 14th to

the 17th or 18th, which was on the whole heaviest in the southern and eastern districts and was very light in Oudh. Light local showers were received from the 18th to the 21st or 22nd. The second storm of the month entered the eastern districts on the 23rd, and the eastern, central and hill districts obtained moderate to heavy rain during the next four days. The rainfall was light and scattered in the western districts during this period. It was on the other hand very heavy in the districts, for which average data are given below:—

District.	Average actual rainfall of 24 hours preceding 8 A.M. of date.						
	23rd.	24th.	25th.	26th.	27th.	28th.	Total of period.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Allahabad	0·38	1·04	1·06	2·22	5·93	0·50	11·13
Banda	1·25	2·21	2·65	0·95	3·31	3·57	13·94
Fatehpur	1·17	2·60	0·29	2·19	3·20	1·25	10·70
Hamirpur	1·45	2·31	2·13	1·05	3·40	2·32	12·66
Jhansi	0·14	1·09	0·96	2·46	1·94	2·63	9·22
Sultanpur	0·01	2·08	0·83	2·13	6·19	0·12	11·36
Partabgarh	0·03	1·92	0·52	2·81	5·08	0·28	10·64
Fyzabad	0·21	0·67	1·52	3·43	2·30	0·38	8·51
Bara Banki	1·30	0·76	0·81	1·13	0·46	0·26	4·72

The rainfall was exceptionally heavy in the Sultanpur, Allahabad and neighbouring districts on the 27th, and in the Banda, Jhansi and Hamirpur districts on the 28th, through which districts the storm passed on that day. The following gives comparative data of the rainfall of the month:—

Division.	Number of rainy days.		Rainfall.		
	Actual, June 1894.	Variation.	Actual, June 1894.	Normal, June.	Percentage variation.
			Inches.	Inches.	
Oudh, North	8·9	+3·3	9·18	+4·25	+ 86
Do., South	7·4	+2·8	9·17	+4·79	+109
North-Western Provinces (East)	10·0	+4·9	9·43	+5·15	+120
North-Western Provinces, Central	8·2	+4·0	9·73	+6·26	+180
North-Western Provinces, Submontane	9·7	+3·8	9·64	+4·09	+ 74
North-Western Provinces (West)	5·8	+2·1	5·19	+2·47	+ 91

The rainfall of the month was in excess in all districts, except Agra, Aligarh and Bulandshahr, for which data are given below:—

District.	Rainfall.			
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Agra	1·67	2·26	−0·59	−26
Aligarh	2·17	2·51	−0·34	−14
Bulandshahr	1·20	2·57	−1·37	−53

The rainfall was most largely in excess in those districts which received heavy cyclonic downpours during the second storm of the month. The following gives comparative data of the rainfall of the month for these districts:—

District.	Rainfall.			
	Average actual, June 1894	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Allahabad	12·82	3·95	+8·87	+2·25
Banda	17·02	4·19	+12·83	+3·06
Fatehpur	12·77	3·70	+9·07	+2·45
Hamirpur	14·97	4·20	+10·77	+2·56
Jhansi	13·32	3·82	+9·50	+2·49
Sultanpur	14·88	4·54	+10·34	+2·28
Partabgarh	13·41	4·35	+9·06	+2·08

The average rainfall in these districts was hence from three to four times its normal amount.

The first advance of humid winds extended unusually rapidly across Rajputana on the 9th and 10th, and gave moderately heavy rain to the south-eastern districts of the Punjab on the 11th and 12th. The Gurgaon, Rohtak, Delhi, Karnal, Umballa, Kangra and Simla districts obtained general rain during this period. Little or no rain fell between the 12th and 18th. The first cyclonic storm of the month advanced to East and Central Rajputana on the 18th. It was either transferred to the foot of the Punjab Himalayas on the 19th or was absorbed on that date into a depression and disturbance which had formed in the submontane and hill districts of the Punjab on the 17th and 18th. This disturbance gave a remarkably heavy burst of rain to the submontane districts of the East

Punjab, falls of upwards of 10 inches being reported by many stations. The following gives these falls :—

Date.	District.	Station.	Heaviest rainfall in 24 hours.
			Inches.
18th.	Jullundur	Jullundur	11·20
"	Gurdaspur	Dalhousie	10·47
"	Ferozepore	Phidda	10·40
19th.	Gurdaspur	Pathankot	11·58
		Gurdaspur	11·00
"	Jullundur	Nakodar	11·19
"	Kangra	Nurpur	11·12
"	Hoshiarpur	Dasuya	10·97
"	Amritsar	Tarn Taran	10·17
"	Ferozepore	Zira	10·73
		Moga	10·05

The following gives the average rainfall of these two days in the districts chiefly affected by the storm :—

District.	Average actual rainfall in 24 hours preceding 8 A. M. of date.		Total.
	18th.	19th.	
	Inches.	Inches.	Inches.
Hoshiarpur	4·36	4·20	8·56
Gurdaspur	2·85	7·45	10·30
Amritsar	0·98	6·69	7·67
Ferozepore	3·32	3·94	7·26
Jullundur	4·87	3·84	8·71
Kangra	1·47	3·39	4·86
Ludhiana	2·60	3·04	5·64
Sialkot	0·65	4·30	4·95

It is an interesting example of the heavy rainfall that frequently occurs during the monsoon, when a cyclonic storm is approaching or forms near the hills in North-Western India.

Local showers, generally of little importance, occurred during the next week. The breaking up of the second storm of the month in Rajputana was accompanied and followed on the 29th and 30th by an advance of humid winds into the eastern districts, which received moderate but fairly general rain. This burst of rain was heaviest and most general in the submontane districts of Ludhiana, Hoshiarpur, Gurdaspur and Amritsar and the hill districts.

The following gives comparative rainfall data for the six meteorological divisions of the province:—

Division.	Rainy days.			Rainfall.		
	Actual, June 1894.	Normal, June.	Variation from normal.	Actual, June 1894.	Normal, June.	Percentage variation.
				Inches.	Inches.	
Punjab, South	4·1	2·0	+2·1	6·27	1·40	+348
" Central	5·3	2·7	+2·6	4·29	2·18	+ 97
" Submontane.	6·4	3·2	+3·2	10·85	2·84	+282
" Hills	10·7	6·9	+3·8	13·88	4·78	+190
" North-West.	3·7	1·9	+1·8	3·16	1·34	+136
" West	1·7	1·2	+0·5	1·06	0·65	+ 63

The Peshawar, Muzaffargarh and Mooltan districts received practically no rain during the month. The rainfall was in excess in all other districts, the amount of the excess increasing, both absolutely and relatively to the normal southwards and eastwards to the foot of the hills in the East Punjab and to the South-East Punjab. Punjab South and Submontane received four times their average amounts. The following gives data for those districts, which received heavy downpours on the 18th and 19th :—

District.	Rainfall.			
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Hoshiarpur	13·33	2·76	+10·57	+383
Gurdaspur	14·35	3·32	+11·03	+332
Amritsar	10·09	2·24	+7·85	+350
Ferozepore	11·43	1·45	+9·98	+688
Jullundur	15·38	2·33	+13·05	+560
Kangra	15·73	4·62	+11·11	+240
Ludhiana	13·65	2·20	+11·45	+520
Sialkot	6·88	2·43	+4·45	+183

British Baluchistan received a few light local showers on the 10th and 11th and again on the 29th; but the total amounts were very small.

Kashmir had very heavy rain on the 18th and 19th and moderate rain on the 10th and 11th and again on the 28th, 29th and 30th. The rainfall of the month was very largely in excess in consequence of the exceptional downpours of the 18th and 19th.

Rajputana received moderate rain from the 9th to the 12th and more or less general and heavy rain from the 16th to the 18th during the passage of the first cyclonic storm of the month through it. Some very heavy

falls were received in the driest districts of the country, among which the following were noteworthy :—

DATE.	STATE.	STATION.	Rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
16th.	Kotah . . .	Baran . . .	6·42
		Khanpur . . .	5·38
17th.	Ajmere . . .	Beawar . . .	5·35
,,	Jhallawar . . .	Jhalrapatan . .	5·37
,,	Jodhpore . . .	Pali	5·55
18th.	Ajmere . .	Daweir . . .	6·22
		Todgarh . . .	6·09

The eastern and central districts received moderate to heavy rain during the last week of the month from the second storm of the month, which advanced from Bundelkhand into Rajputana on the 28th. It gave excessive rain to the Kotah and Jhallawar states on that and the following day. Amongst the more noteworthy falls were :—

DATE.	STATE.	STATION.	Rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
28th . . .	Kotah . .	Mandana . .	8·40
		Khanpur . .	5·56
		Atroo . .	5·49
29th . . .	Jhallawar . .	Jhalrapatan .	6·99

The following gives a comparative statement of the rainfall data for the larger states :—

STATE.	RAINFALL.			
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Jodhpore. . . .	3·91	1·63	+ 2·28	+ 140
Jeypore	4·55	2·54	+ 2·01	+ 79
Ulwur	3·28	3·36	− 0·08	− 2
Bhartpore . . .	3·88	1·83	+ 2·05	+ 112
Dholpur	3·74	?	?	?
Kerowlee . . .	5·14	2·91	+ 2·23	+ 77
Kotah	14·05	3·34	+ 10·71	+ 321
Ajmere	7·74	2·18	+ 5·56	+ 255
Oodeypore . . .	11·79	3·49	+ 8·30	+ 238

The western states of Central India began to receive fairly general rain on the 8th and had moderate rain daily until the 18th and again from the 24th to the 30th. The rainfall in the western states was somewhat larger than usual and in moderate excess. In Bundelkhand and Baghelkhand the first general rain occurred on the 15th some days later than in the western states. These divisions obtained moderate rain on the 15th and 16th and light showers until the 22nd and heavy rain from the 23rd to the 28th. The rainfall was excessive in Bundelkhand during this period.

The following gives the more remarkable rainfalls:—

DATE.	AREA.	STATION.	Rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
25th . . .	Bundelkhand .	Orchha . .	6·81
27th . . .		Bijawar . .	4·80
,, . . .		Ajaigarh . .	5·90
28th . . .		Nowgong . .	9·29
,, . . .		Chhattarpur .	8·40
,, . . .		Orchha . .	6·00
,, . . .		Charkhari . .	5·17

The following gives comparative data for the larger states or divisions :—

STATE.	RAINFALL.			
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Rewah	9·59	7·13	+ 2·86	+ 40
Bundelkhand . . .	14·30	4·84	+ 9·46	+ 195
Gwalior	7·06	4·59	+ 2·47	+ 54
Bhopal	10·69	6·62	+ 4·07	+ 61
Indore	3·71	6·79	− 3·08	− 45

In the Central Provinces, the rains commenced feebly. Showers began generally to fall on the 6th and 7th; but it was not until the 16th that general and moderately heavy rain was received daily. This burst of rain continued steadily until the 27th or 28th; but from that date to the end of the month light local showers were received. The rainfall of the month was generally in slight to moderate excess. The excess averaged 12 per cent. in the western division, 31 per cent. in the central division and 20 per cent. in the eastern division.

The following gives a summary of the data published in the *Central Provinces Gazette* :—

DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Actual, June 1894.	Variation from normal.	Actual, June 1894.	Variation from normal.	Percentage variation.
			Inches.	Inches.	
Central Provinces (East)	11·1	+2·1	9·86	+1·67	+20
Ditto (Central)	13·2	+4·1	10·76	+2·54	+31
Ditto (West)	12·2	+3·4	8·41	+0·92	+12

The rainfall was on the whole even more regularly distributed than usual. Saugor was a centre of heavy and excessive total rainfall. Thus the town of Saugor received on three days during the month falls exceeding 4 inches, and its total rainfall for the month was 25·16 inches or 18·51 inches above the normal. The following gives comparative data for the Saugor district :—

DISTRICT.	RAINY DAYS.		RAINFALL.			
	Actual, June 1894.	Normal, June.	Actual, June 1894.	Normal, June.	Variation from normal.	Percentage variation.
			Inches.	Inches.	Inches.	
Saugor . .	13·8	8·2	17·58	6·69	+10·89	+163

Berar had light local showers on the 5th, 6th and 7th, due chiefly to thunderstorms. The monsoon rains commenced lightly on the 10th. General and heavy rain fell on the 11th and continued steadily until the 25th. A break in the rains set in on the 20th for a short period and lasted until the beginning of July. The average total rainfall of the month of the province was 7·22 inches, very slightly (8 per cent.) below the normal average in June.

The Konkan coast districts received light showers between the 3rd and the 7th. General heavy rain commenced on the 8th; but the falls were by no means so heavy as frequently accompany the permanent advance of the monsoon current. The first strong burst held steadily until the 19th or 20th, and during this period heavy rain fell daily in the Konkan coast districts. During the remainder of the month light to moderate showers fell daily; but the total fall during the period was less than one-fifth of that during the preceding ten or eleven days.

The Deccan districts had general rain from the 5th or 6th to the 19th. The Belgaum, Dharwar and Satara districts received daily rain during this period; but in Bijapur and Sholapur the falls were light and local. Little or no rain fell in the Bombay Deccan during the last eleven days of the month. The rainfall of the month was in moderate excess in the Belgaum, Poona and Satara districts, normal in Dharwar and below the moderate normal amount of the month in Bijapur and Sholapur. The following gives data for these two districts :—

DISTRICT.	RAINY DAYS.			RAINFALL.			
	Average actual, June 1894.	Average normal, June.	Variation from normal.	Average actual, June 1894.	Average normal, June.	Variation from normal.	Percentage variation.
				Inches.	Inches.	Inches.	
Bijapur . .	4·3	6·3	—2·0	1·47	3·59	—2·12	—59
Sholapur	4·4	7·5	—3·1	2·84	4·64	—1·80	—39

There were two periods of rainfall in Khandesh, Gujarat and Kathiawar. The first period commenced with that of the strong burst of winds in the Konkan coast districts and lasted from the 8th to the 18th. Some heavy falls were received in the Surat district on the 12th; but they were very local and confined to the coast districts, as the neighbouring hilly districts of Rewa Kantha, Mahi Kantha had only light showers. Khandesh had general rain on the 24th and 25th and again on the 30th, and Gujarat on the 29th and 30th. The rainfall of the 30th was heavy in the Broach and Kaira districts.

Practically no rain fell in Sind during the month.

The following gives a comparative statement of the rainfall of the month in the Bombay Presidency :—

DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Actual, June 1894.	Variation.	Actual, June 1894.	Variation.	Percentage variation.
			Inches.	Inches.	
Konkan	19·8	+0·6	25·29	−1·86	−7
Bombay Deccan . .	8·7	+0·5	5·38	−0·37	−6
Khandesh . . .	8·3	+0·7	5·23	−0·46	−8
Gujarat . . .	9·7	+3·0	10·74	+4·48	+72
Kathiawar . . .	8·1	+4·5	9·68	+6·42	+197
Sind	0·7	?	0·24	+0·04	+20

In the Madras Presidency the rainfall of the month was even more irregularly distributed than usual. Malabar received its first heavy rainfall on the 6th, and large amounts were received on that day and the 7th at all the Malabar coast stations. The average fall in the Malabar

district on these two days was 7·86 inches, and in South Canara on the 7th and 8th 5·73 inches. During the remainder of the month rain fell daily in the Malabar coast districts, but the falls were on the whole not quite so heavy as usual, and the total rainfall of the month was hence below the normal.

Light occasional local showers were received at intervals during the month in the southern districts, including Tinneelly Madura, Trichinopoly and Tanjore, but the total rainfall of the month was small and considerably below the moderate normal fall of the month.

The rainfall of the month in the Coromandel coast districts and in Salem and Coimbatore was somewhat heavier than in the southern districts, but was also light and sporadic and was largely in defect. Fairly general rain was received in these districts on two days only, *viz.*, the 4th and the 20th.

The Deccan or central districts of Kurnool, Bellary, Anantapur and Cuddapah had showers between the 4th and 8th and again from the 17th to the 22nd. The total amounts for the month were small and the rainfall was in defect in these districts almost as largely as in the southern districts.

The northern coast districts, including Ganjam and the Circars, received occasional general rain during the month which gave them average amounts in moderate excess. The chief periods of rainfall in this area were the 10th to the 12th, the 15th to the 17th and the 20th to the 22nd. The rainfall of the month averaged 49 per cent. in excess in the Godavari district and 21 per cent. in the Vizagapatam district, and was normal in Ganjam.

The following table gives a comparative statement of the rainfall in each collectorate of the Presidency:—

District.	No. of rainy days.		Rainfall.			Percentage variation.
	Actual, June 1894.	Normal, June.	Actual, June 1894.	Normal, June.	Variation from normal.	
			Inches.	Inches.	Inches.	
Ganjam . .	8·4	6·8	5·25	5·08	+0·17	+ 3
Vizagapatam .	11·1	8·1	7·15	5·91	+1·24	+21
Godavari . .	8·0	5·9	6·76	4·54	+2·22	+49
Kistna . .	6·1	5·9	2·97	4·23	−1·26	−30
Nellore . .	2·5	3·1	1·05	1·65	−0·60	−36
Chingleput .	2·2	4·8	0·88	3·10	−2·22	−72
Madras . .	2·0	4·7	1·54	2·07	−0·53	−26
North Arcot .	2·9	4·5	1·41	2·86	−1·45	−51
South Arcot .	2·0	4·0	1·03	2·16	−1·13	−52
Tanjore . .	1·1	3·2	0·40	1·97	−1·57	−80
Trichinopoly .	1·3	2·1	0·77	1·21	−0·44	−36
Madura . .	1·2	2·3	0·59	1·21	−0·62	−51
Tinnevelly .	0·7	2·0	0·18	0·87	−0·69	−79
Malabar . .	25·0	23·9	31·16	32·01	−0·85	− 3
South Canara .	27·0	26·2	35·68	44·96	−9·28	−21
Salem . .	2·0	4·4	1·37	2·54	−1·17	−46
Coimbatore .	1·6	3·0	0·90	1·42	−0·52	−37
Nilgiri . .	12·0	13·8	8·42	10·64	−2·22	−21
Cuddapah .	2·7	4·4	1·19	2·30	−1·11	−48
Anantapur .	1·5	4·4	0·89	2·32	−1·43	−62
Bellary . .	2·2	5·2	0·81	2·89	−2·08	−72
Kurnool . .	2·6	5·5	1·26	3·08	−1·82	−59

Table

Abstract of Observations taken at 8 A.M. at 203

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.		...	...	−·017	...	...	...	...	...	...	...	85·0	−0·5	75·9	+0·2	80·5	−0·2	9·2	...	...	...	...	15·9
Bay Islands	Port Blair	61	29·739	?	29·731	29·823	11th	29·660	19th	·163	80·9	85·0	?	78·0	?	81·5	?	7·0	88·5	27th	74·0	16th	14·5
Tenasserim	Mergui	96	29·767	?	29·755	29·836	10th	29·687	19th	·149	77·8	84·0	?	73·9	?	79·0	?	10·1	90·1	5th	72·4	13th	17·7
	Tavoy	26	29·833	?	29·791	29·900	12th	29·757	19th	·143	76·9	82·5	?	73·7	?	78·1	?	8·8	87·2	6th	72·2	4 days	15·0
	Moulmein	94	29·729	?	29·761	29·815	11th	29·622	19th	·193	77·0	83·7	−0·6	74·7	+0·2	79·2	−0·2	9·0	90·0	1st	72·7	12th	17·3
	Toungoo	181	29·578	−·016	29·702	29·655	10th	29·451	19th	·204	79·1	88·0	−0·4	75·6	+0·4	81·8	0	12·4	91·7	4 days	74·2	5 days	17·5
Lower Burma	Rangoon	41	29·742	−·018	29·720	29·828	11th	29·626	19th	·202	78·4	85·9	−0·3	76·1	−0·3	81·0	−0·3	9·8	90·2	1st	73·4	30th	16·8
	Bassein	27	29·741	−·011	29·704	29·812	11th	29·625	19th	·187	79·1	86·4	+0·3	75·9	−0·3	81·2	0	10·5	90·2	25th	74·3	12 h	15·9
	Diamond Island.	41	29·730	−·016	29·706	29·785	12th	29·633	19th	·152	80·2	84·7	−0·8	77·6	+1·8	81·2	+0·5	7·1	87·1	2nd & 25th,	72·4	12th	14·7
Arakan	Akyab	20	29·676	−·025	29·639	29·747	6th	29·550	20th	·197	80·1	84·7	−1·2	77·2	−0·7	81·0	−1·0	7·5	88·7	5th	75·2	6 days	13·5
II.—Burma Inland		...	...	−·016	...	...	...	...	...	...	...	90·0	−1·3	74·7	−0·2	82·4	−0·8	15·3	...	...	...	...	24·3
Central Burma	Thayetmyo	134	29·595	−·016	29·671	29·665	11th	29·487	19th	·178	80·2	90·3	−0·7	77·0	+0·6	83·7	−0·1	13·3	94·1	2 days	75·1	2 days	19·0
	Minbu	?	29·544	?	?	29·605	11th	29·451	20th	·154	81·2	93·0	?	76·9	?	85·0	?	16·1	97·6	28th	75·1	2 days	22·5
	Yamethin	?	29·067	?	?	29·137	30th	28·963	19th	·174	80·7	92·9	?	75·2	?	84·1	?	17·7	96·1	4 days	73·0	4th	23·1
	Fort Stedman,	?	26·838	?	?	26·897	26th	26·747	28th	·150	74·9	85·9	?	70·1	?	78·0	?	15·8	100·1	1st	68·0	1st	32·1
Upper Burma	Mandalay	?	29·451	?	?	29·541	11th	29·364	20th	·177	85·1	94·5	?	79·0	?	86·8	?	15·5	98·5	2 days	76·6	4th	21·9
	Kindat	?	29·316	?	?	29·398	11th	29·210	13th	·188	79·4	88·7	−1·9	75·3	−0·9	82·0	−1·4	13·4	94·8	2 days	70·5	1st	24·3
	Lashio	?	26·934	?	?	27·004	10th	26·862	14th	·142	74·1	84·3	?	68·7	?	76·5	?	15·6	91·0	11th	64·0	9th	27·0
	Bhamo	?	29·318	?	?	29·405	11th	29·222	19th	·183	78·6	90·2	?	75·2	?	82·7	?	15·0	96·6	11th	71·8	3rd	24·8
III.—Assam		...	...	−·013	...	...	...	...	...	...	...	89·0	+0·8	76·6	+0·3	82·8	+0·6	12·3	...	...	...	...	22·9
Assam (Surma)	Silchar	104	29·566	−·018	29·621	29·654	10th	29·408	13th	·246	80·2	90·5	+1·8	76·4	+0·3	83·4	+1·1	14·1	96·6	16th	71·8	7th	24·8
Brahmaputra	Sibsagar	333	29·337	−·019	29·624	29·428	10th	29·224	14th	·204	79·1	88·6	−1·3	76·3	−0·3	82·4	−0·8	12·3	96·2	21st	70·5	2nd	25·7
	Dhubri	115	29·527	−·002	29·595	29·635	11th	29·411	13th	·224	79·3	87·7	+2·1	77·2	+0·8	82·5	+1·5	10·5	91·2	3 days	73·1	1st	18·1
IV.—Bengal and Orissa		...	...	−·018	...	...	...	...	...	...	...	89·8	−0·6	77·7	−0·2	83·8	−0·4	12·1	...	...	...	...	23·5
East Bengal	Chittagong	87	29·576	−·022	29·610	29·665	9th	29·319	13th	·346	80·5	86·6	+0·4	76·1	−0·4	81·3	0	10·5	89·7	17th	72·1	8th	17·6
	Lungleh	?	?	?	?	?	...	?	...	?	71·5	77·3	?	65·9	?	71·6	?	11·4	81·8	18th	53·2	18th	28·6
	Noakhali	43	29·593	?	29·583	29·697	9th	29·407	13th	·290	81·0	86·0	?	76·9	?	81·5	?	9·1	89·0	20th	71·8	9th	17·2
	Comilla	36	29·603	?	29·587	29·702	11th	29·444	13th	·258	80·9	88·5	?	76·3	?	82·4	?	12·2	92·3	20th & 29th.	71·8	5th	20·5
	Sirajganj	49	29·570	?	29·569	29·689	11th	29·430	14th	·259	81·0	88·5	?	77·2	?	82·9	?	11·3	93·3	20th	72·7	2nd & 8th.	20·6
	Narayanganj	26	29·598	−·021	29·568	29·706	11th	29·439	14th	·267	81·2	87·9	−1·1	78·4	+0·1	83·2	−0·5	9·5	91·7	20th	73·2	2 days	18·5
	Barisal	13	29·599	?	29·557	29·707	10th	29·428	13th	·279	82·2	88·0	−1·0	77·7	−0·1	82·8	−0·6	10·3	92·3	3rd	74·9	4 days	17·4
	Mymensingh	59	29·578	−·019	29·588	29·683	11th	29·451	14th	·232	80·0	87·2	0	77·0	+0·5	82·1	+0·3	10·2	90·7	4 days	71·6	8th	19·1
Details Bengal	Faridpur	46	29·586	?	29·580	29·683	9th	29·367	14th	·316	81·8	88·0	?	77·8	?	82·9	?	10·2	92·5	7th	72·4	8th	20·1
	Jessore	33	29·568	−·023	29·548	29·687	11th	29·394	14th	·293	82·4	90·4	−1·2	77·6?	−1·3?	84·0?	−1·3	12·8	95·0	4th	71·9	8th	23·1
	Calcutta	21	29·569	−·015	29·536	29·693	9th	29·434	22nd	·259	83·3	90·1	−1·2	78·3	−0·5	84·2	−0·9	11·8	97·1	3rd	72·2	8th	24·9
	Saugor Island	25	29·566	−·016	29·535	29·690	9th	29·429	22nd	·261	84·2	89·2	−1·5	80·9	−1·0	85·0	−1·3	8·3	94·2	5th	75·5	2 days	18·7
	Krishnagar	47	29·545	?	29·540	29·667	11th	29·412	14th	·255	83·0	91·9	?	78·0	?	85·0	?	13·9	97·2	3 days	69·2	8th	28·0
	Midnapore	149	29·445?	?	29·539?	29·584?	9th	29·301	15th	·283	83·8	93·4	?	78·4	?	85·9	?	15·0	106·4	3rd	72·2	5th & 8th.	34·2

I.

Stations in India, Burma, etc., in June 1894.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 30th June 1894.	Normal rainfall for period, 1st June to 30th June.	Variation from normal of period, 1st June to 30th June.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30·67	25·98	+3·25	...	...	...	...	**I.—Burma Coast and Bay Islands.**	
1	1	...	...	...	3	16	9	...	10·1	10·0	+10	88	·931	8·6	19	?	?	19·68	18·79	+ 0·89	19·68	18·79	+ 0·89	2·98	Port Blair .	Bay Islands.
...	2	...	...	2	7	7	6	6	1·4	1·9	−26	93	·886	7·3	28	?	?	36·19	31·44	+ 4·75	36·19	31·44	+ 4·75	4·15	Mergui .	Tenasserim.
28	...	...	...	...	...	2	...	...	8·0	?	?	93	·863	9·1	28	?	?	42·25	?	?	42·25	?	?	5·10	Tavoy.	
...	1	1	1	8	9	4	6	...	4·3	3·4	+26	94	·870	8·5	26	27·00	−1·00	50·62	35·72	+14·90	50·62	35·72	+14·90	6·88	Moulmein.	
1	...	...	...	23	6	...	...	...	3·1	4·8	−35	91	·928	9·8	22	20·91	+1·09	14·41	14·61	− 0·20	14·41	14·61	− 0·20	2·55	Toungoo.	
...	1	...	...	...	6	14	8	1	4·4	5·3	−17	95	·928	9·1	23	23·27	−0·27	18·29	17·51	+ 0·78	18·29	17·51	+ 0·78	2·87	Rangoon .	Lower Burma.
8	...	...	...	5	6	10	...	1	4·2	4·0	+ 5	92	·924	7·0	25	24·82	+0·18	16·04	22·56	− 6·52	16·04	22·56	− 6·52	1·97	Bassein.	
3	...	...	1	...	2	21	2	1	5·5	8·5	−35	86	·883	9·5	23	21·73	+1·27	29·94	23·20	+ 6·74	29·94	23·20	+ 6·74	6·71	Diamond Island.	
...	2	2	4	6	14	1	1	...	4·6	3·9	+18	94	·966	9·1	27	23·09	+3·91	48·61	43·99	+ 4·62	48·61	43·99	+ 4·62	7·01	Akyab .	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·50	0·20	+1·03	...	...	...	...	**II.—Burma Inland.**	
...	...	...	...	10	18	2	...	...	5·5	8·2	−33	84	·863	9·5	11	15·00	−4·00	3·54	6·94	− 3·40	3·54	6·94	−3·40	0·60	Thayetmyo .	Central Burma.
...	...	...	1	26	3	...	..	...	6·8	?	?	81	·872	3·0	8	?	?	4·11	?	?	4·11	?	?	1·24	Minbu.	
1	...	...	...	25	4	...	...	...	13·2	?	?	81	·847	4·2	8	?	?	2·06	?	?	2·06	?	?	0·46	Yamethin.	
14	...	...	...	...	...	16	...	...	?	?	?	83	·724	8·0	15	?	?	5·15	?	?	5·15	?	?	1·40	Fort Stedman	
2	1	...	...	9	12	6	...	...	8·1	?	?	72	·861	5·5	9	?	?	3·16	?	?	3·16	?	?	0·76	Mandalay .	Upper Burma.
14	3	1	2	2	2	...	4	2	1·2	?	?	92	·916	7·3	22	?	?	18·92	13·46	+ 5·46	18·92	13·46	+ 5·46	3·75	Kindat.	
...	8	10	...	4	...	4	...	4	?	?	?	87	·738	6·6	18	?	?	13·51	?	?	13·51	?	?	1·41	Lashio.	
15	4	5	...	1	..	4	...	1	2·1	?	?	90	·875	8·2	22	?	?	17·58	?	?	17·58	?	?	1·67	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22·15	20·50	+1·64	...	...	...	...	**III.—Assam.**	
25	...	...	1	1	...	...	2	1	3·5	3·1	+13	90	·923	9·0	21	19·91	+1·09	31·51	21·67	+ 9·84	31·51	21·67	+ 9·84	4·57	Silchar .	Assam (Surma).
15	...	11	1	...	1	2	...	...	2·3	2·6	−12	92	·923	8·8	16	16·27	−0·27	15·78	13·40	+ 2·38	15·78	13·40	+ 2·38	4·02	Sibsagar .	Brahmaputra.
9	3	9	7	1	...	...	...	1	5·3	4·9	+9	91	·918	8·5	17	17·25	−0·25	19·15	26·44	− 7·29	19·15	26·44	− 7·29	5·10	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12·87	13·07	−0·48	...	...	...	...	**IV.—Bengal and Orissa.**	
...	...	3	6	14	7	...	...	...	7·5	6·9	+9	89	·896	8·3	18	16·18	+1·82	19·09	22·14	− 3·05	19·09	22·14	− 3·05	4·00	Chittagong .	East Bengal.
			Not	reco	rded				?	?	?	87	·671	?	24	?	?	19·63	?	?	19·63	?	?	2·81	Lungleh.	
...	...	1	6	17	4	2	...	...	7·8	?	?	90	·951	5·4	19	18·15	+0·85	22·03	26·07	− 4·04	22·03	26·07	− 4·04	3·15	Noakhali.	
...	...	...	18	6	6	...	...	...	7·0	?	?	94	·990	7·2	20	17·35	+2·65	18·87	19·13	− 0·26	18·87	19·13	− 0·26	5·52	Comilla.	
9	...	1	7	10	3	...	...	...	3·3	?	?	90	·953	9·6	13	12·55	+0·45	6·58	11·40	− 4·82	6·58	11·40	− 4·82	2·58	Sirajganj.	
...	...	1	4	19	6	...	...	...	9·4	7·2	+31	90	·964	8·9	17	13·64	+3·36	10·01	13·22	− 3·21	10·01	13·22	− 3·21	1·82	Narayanganj.	
19	...	...	1	4	5	1	...	...	4·1	?	?	89	·981	9·5	20	17·15	+2·85	21·71	15·74	+ 5·97	21·71	15·74	+ 5·97	4·43	Barisal.	
...	1	2	11	14	1	...	1	...	5·0	?	?	90	·923	8·3	21	18·25	+2·75	15·87	18·52	− 2·65	15·87	18·52	− 2·65	5·25	Mymensingh.	
5	...	1	3	14	6	1	...	...	3·6	?	?	88	·967	7·0	13	14·40	−1·40	13·69	12·49	+ 1·20	13·69	12·49	+ 1·20	5·57	Faridpur .	Deltaic Bengal.
2	1	...	5	11	9	...	2	...	4·1	4·9	−16	90	1·002	7·0	15	14·55	+0·45	8·57	12·72	− 4·15	8·57	12·72	− 4·15	1·57	Jessore.	
7	...	...	4	7	4	7	1	...	4·7	6·2	−24	86	·977	7·6	18	12·00	+6·00	10·23	10·91	− 0·68	10·23	10·91	− 0·68	1·90	Calcutta.	
...	1	2	1	3	11	9	2	1	16·0	14·6	+9	86	1·012	9·0	18	11·64	+6·36	11·02	9·92	+ 1·10	11·02	9·92	+ 1·10	1·91	Saugor Island.	
...	...	...	10	8	9	1	1	1	6·0	?	?	83	·937	7·3	15	11·95	+3·05	14·33	8·81	+ 5·52	14·33	8·81	+ 5·52	3·68	Krishnagar.	
...	2	7	...	8	10	2	...	1	5·7	?	?	83	·962	4·5	12	10·80	+1·20	10·88	8·82	+ 2·06	10·88	8·82	+ 2·06	2·12	Midnapore.	

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Central Bengal.	Bankura	298	29·253	?	29·498	29·370	9th	29·110	15th	·260	83·3	94·5	?	78·5	?	86·5	?	16·0	106·5	4th	74·6	5th	31·9
	Raniganj	334	29·246?	?	29·527?	29·379?	11th	29·115	15th	·264	81·7	94·0	?	78·4	?	86·2	?	15·6	105·2	4th	72·9	5th	32·3
	Burdwan	99	29·487	−·012	29·532	29·608	9th	29·376	22nd	·232	82·9	92·8	−1·3	78·9	−0·6	85·9	−1·0	13·9	99·7	2 days	72·7	5th	27·0
	Naya Dumka	489	29·083	?	29·523	29·200	9th	28·986	15th	·214	82·3	92·1	?	77·6	?	84·8	?	14·5	100·7	4th & 5th.	69·8	6th	30·9
	Berhampore	67	29·531	−·010	29·546	29·653	11th	29·416	14th	·237	81·7	91·9	−0·7	78·1	−0·4	85·0	−0·6	13·8	97·2	3rd	72·3	7th	24·9
	Rampur Boalia.	70	29·524	?	29·543	29·646	11th	29·406	11th	·240	83·3	90·6	?	78·2	?	84·4	?	12·4	95·1	3rd	72·6	8th	22·5
	Malda	72	29·517	?	29·541	29·637	11th	29·415	13th	·222	83·4	93·3	?	78·6	?	86·0	?	14·7	99·6	1st	74·5	5th & 6th.	25·1
	Bogra	61	29·553	?	29·566	29·671	11th	29·443	14th	·228	81·9	89·5	+0·2	77·5	+0·5	83·5	+0·4	12·0	94·7	6th	73·7	2 days	21·0
North Bengal	Dinajpur	123	29·496	−·007	29·572	29·611	11th	29·392	13th	·219	80·6	90·1	+0·9	77·3	+0·8	84·0	+0·9	12·3	95·6	2 days	73·7	9th	21·9
	Rangpur	123	29·505	?	29·581	29·613	11th	29·383	13th	·225	81·5	89·1*	?	77·3	?	83·2*	?	11·8	93·3	14th	72·2	5th	21·1
	Jalpaiguri	284	29·364	?	29·604	29·455	11th	29·259	13th	·196	80·6	89·2	+1·7	76·2	+1·4	82·7	+1·6	13·0	93·9	2nd	71·6	6th	22·3
Orissa	Balasore	56	29·520	−·029	29·522	29·644	9th	29·387	22nd	·257	83·6	92·3	−0·3	78·8	+0·2	85·6	−0·1	13·5	101·5	8th	73·8	14th	27·7
	False Point	21	29·583	−·014	29·547	29·700	9th	29·439	21st	·261	83·6	88·9	−1·9	79·4	−0·8	84·2	−1·4	9·5	95·5	20th	67·0	1st	28·5
	Cuttack	80	29·510	−·022	29·532	29·628	9th	29·374	21st	·254	84·5	93·9	−2·0	79·3	−0·9	86·6	−1·5	14·6	105·3	5th	74·8	2 days	30·5
	Shortt's Island	?	29·570	?	?	29·693	10th	29·434	21st	·259	83·7	89·4	?	79·5	?	84·5	?	9·9	95·6	14th	74·6	14th	21·0
	Puri	15	29·580?	?	29·535?	29·698	9th	29·450	21st	·248	83·3	88·8	?	80·3	?	84·6	?	8·5	92·2	4th	74·6	29th	17·6
V.—Gangetic Plain and Chota Nagpur.		...	...	−·019	...	...	...	...	...	...	...	95·6	−1·7	79·2	−0·5	87·4	−1·1	16·4	...	...	...	...	32·6
Chota Nagpur	Hazaribagh	2,007	27·581	−·029	29·499	27·692	9th	27·482	15th	·210	80·5	91·6	−0·9	75·6	−0·3	83·6	−0·6	16·0	105·1	4th & 5th.	73·3	5 days	31·8
	Ranchi	2,128	27·471	?	29·504	27·566	10th	27·361	15th	·205	79·8	90·3	?	74·4	?	82·4	?	15·9	105·0	4th	69·9	13th	35·1
	Daltonganj	730?	?	?	?	?	?	?	?	?	84·4	98·0	?	80·7	?	89·4	?	17·3	114·2	2nd & 5th.	75·0	20th	39·2
	Chaibassa	760	28·803	−·026	29·500	28·932	9th	28·655	15th	·277	83·1	95·2	−1·8	78·8	−0·7	87·0	−1·3	16·4	107·5	6th	73·7	2nd	33·8
Bihar (South)	Gaya	375	29·174	−·027	29·496	29·303	10th	29·089	23rd	·214	86·0	98·5	−1·4	80·2	+0·7	89·4	−0·4	18·3	109·6	2 days	76·3	12th	33·3
	Dehri*.	351	29·214	?	29·512	29·390	10th	29·160	23rd	·230	87·4	97·2	?	80·4	?	88·8	?	16·8	111·4	3rd & 12th.	76·0	19th	35·4
	Patna	183	29·384	−·020	29·517	29·503	10th	29·297	13th	·206	84·8	95·6	−1·0	80·1	0	87·9	−0·5	15·5	105·0	3rd	76·2	29th	28·8
	Arrah	190	29·366	?	29·504	29·508	10th	29·278	13th	·230	84·6	96·3	?	80·5?	?	88·4?	?	15·8	106·4	3rd & 8th.	75·5	11th	30·9
	Buxar	239	29·320	?	29·511	29·483	10th	29·236	25th	·247	84·1	95·9	?	79·2	?	87·6	?	16·7	106·0	5th	74·8	11th	31·2
Bihar (North)	Purnea	125	29·482	+·001	29·560	29·591	11th	29·390	13th	·201	81·7	91·1	−1·2	78·1	+1·2	84·6	0	13·0	98·7	5th	70·2	2nd	28·5
	Bhagalpur	160	29·417	?	29·529	29·534	11th	29·315	13th	·219	83·3	93·2	?	78·5	?	85·9	?	14·7	100·8	3rd & 4th.	76·0	4 days	24·8
	Darbhanga	166	29·418	−·015	29·536	29·534	11th	29·320	13th	·214	82·7	91·4	−0·9	78·7	−0·3	85·0	−0·6	12·7	99·0	2nd	74·2	4th	24·8
	Muzaffarpur	178	29·408	?	29·538	29·516	11th	29·312	13th	·204	82·1	92·8	?	78·8	?	85·8	?	14·0	100·7	3rd	74·2	6th	26·5
	Motihari	224	29·363	?	29·542	29·489	10th	29·266	13th	·223	82·3	90·6	?	77·1	?	83·9	?	13·5	99·0	3rd	69·8	6th	29·2
	Chapra	181	29·396	?	29·527	29·529	10th	29·298	23rd	·231	84·3	94·8	?	79·3*	?	87·1*	?	15·5	105·3	3rd	72·6	10th	32·7
N.-W. P. (Eastern Districts).	Benares	267	29·275	−·021	29·494	29·410	10th	29·183	26th	·227	85·1	98·7	−2·3	80·9	−1·4	89·8	−1·9	17·8	111·3	3 days	76·5	27th	34·8
	Allahabad	309	29·219	−·036	29·478	29·348	10th	29·095	27th	·253	87·3	100·1	−2·3	81·7	−1·2	90·9	−1·8	18·4	113·7	5th	76·3	27th	37·4
N.-W. P. (East Submontane).	Gorakhpur	256	29·304	−·010	29·516	29·427	11th	29·203	25th	·224	82·5	94·0†	−3·4	78·1*	−1·7	85·3†	−2·6	15·9	102·3	4th & 5th.	70·2	6th	32·1
Oudh (South)	Lucknow	370	29·183	−·010	29·507	29·331	10th	29·081	24th	·250	86·3	99·8	−1·7	80·2	−1·3	90·0	−1·5	19·6	111·8	1st & 2nd.	75·0	25th	36·8
Oudh (North)	Bahraich	403	29·153	?	29·513	29·294	10th	29·053	13th	·241	83·7	96·8	?	78·6	?	87·7	?	18·2	107·5	3rd	72·0	1st & 17th.	35·5
N.-W. Provinces (Central).	Cawnpore	416	29·115	?	29·481	29·228	10th	29·016	24th	·212	87·7	99·6	?	81·5	?	90·6	?	18·1	111·9	3rd	76·0	23rd & 28th.	35·9
	Mainpuri	516	29·023	?	29·487	29·152	10th	28·952	13th	·200	88·0	101·5	?	81·6	?	91·5	?	19·9	114·2	4th & 5th.	74·5	26th	39·7

* Mean of 29 days.

† Mean of 27 days.

I—*continued.*

in India, Burma, etc., in June 1894—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.										Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	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 June 1894.	Normal rainfall for period, 1st June to 30th June.	Variation from normal of period, 1st June to 30th June.	Heaviest rainfall during month.		
15	...	...	4	7	3	...	1	...	4·9	?	?	83	·941	6·6	12	12·40	−0·40	12·30	9·35	+ 2·95	12·30	9·35	+ 2·95	3·05	Bankura .	Central Bengal
10	...	5	3	8	1	2	...	1	3·3	?	?	88	·957	4·7	17	11·30	+5·70	8·38	8·38	0	8·38	8·38	0	1·71	Raniganj.	
4	2	3	4	7	6	4	...	...	3·4	4·9	−31	83	·929	7·1	13	11·27	+1·73	8·80	8·73	+ 0·07	8·80	8·73	+ 0·07	1·90	Burdwan.	
...	...	2	7	11	5	2	3	...	6·7	?	?	83	·918	4·5	16	11·89	+4·11	13·69	8·86	+ 4·83	13·69	8·86	+ 4·83	1·92	Naya Dumka.	
2	...	2	11	5	7	3	...	...	3·8	5·5	−31	90	·975	8·8	14	10·64	+3·36	7·77	9·22	− 1·45	7·77	9·22	− 1·45	1·52	Berhampore.	
10	...	3	1	11	4	1	...	...	5·3	?	?	93	1·062	6·3	15	12·10	+2·90	7·96	9·65	− 1·69	7·96	9·65	− 1·69	2·37	Rampur Boalia.	
1	1	3	...	22	3	...	...	...	3·3	?	?	86	·987	7·5	14	11·80	+2·20	12·14	11·14	+ 1·00	12·14	11·14	+ 1·00	3·38	Malda.	
5	...	1	11	13	...	...	...	...	2·8	?	?	87	·957	3·7	10	14·53	−4·53	10·03	13·86	− 3·83	10·03	3·86	− 3·83	2·33	Bogra.	
1	1	2	19	5	2	...	...	...	1·7	?	?	89	·931	8·0	16	14·00	+2·00	13·33	15·80	− 2·47	13·33	15·80	− 2·47	2·37	Dinajpur .	North Bengal.
6	...	2	9	13	...	...	...	...	2·6	?	?	88	·948	7·7	15	15·35	−0·35	12·66	19·51	− 6·85	12·66	19·51	− 6·85	3·50	Rangpur.	
...	2	9	9	8	1	1	...	...	3·9	?	?	87	·916	7·3	17	19·40	−2·40	19·98	28·00	− 8·02	19·98	28·00	− 8·02	4·70	Jalpaiguri.	
1	1	2	2	...	7	13	4	...	7·0	?	?	87	1·001	4·9	12	10·35	+1·65	9·29	8·34	+ 0·95	9·29	8·34	+ 0·95	2·57	Balasore .	Orissa.
...	...	1	...	1	4	12	9	3	11·8	11·5	+ 3	84	·976	8·7	13	8·60	+4·40	8·94	7·96	+ 0·98	8·94	7·96	+ 0·98	1·92	False Point.	
6	...	...	...	...	6	12	4	2	3·7	4·0	− 8	76	·898	7·0	15	11·00	+4·00	19·45	9·30	+10·15	19·45	9·30	+10·15	3·13	Cuttack.	
...	...	1	1	...	9	17	2	...	18·5	?	?	84	·970	6·7	11	?	?	14·06	?	?	14·06	?	?	4·70	Shortt's Island	
8	2	...	...	...	3	13	3	1	13·1	?	?	86	·990	7·8	9	·25	+0·75	4·93	7·98	− 3·05	4·93	7·98	− 3·05	1·62	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·37	6·76	+1·63	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**	
1	2	3	3	4	6	7	1	3	9·6	8·9	+ 8	75	·767	7·9	17	10·09	+6·91	11·63	8·01	+ 3·62	11·63	8·01	+ 3·62	2·29	Hazaribagh.	Chota Nagpur.
5	2	3	1	1	2	11	3	2	7·3	?	?	79	·789	6·0	13	12·40	+0·60	8·51	8·65	− 0·14	8·51	8·65	− 0·14	2·60	Ranchi.	
1	2	4	2	4	3	11	2	1	7·5	?	?	77	·901	7·1	17	?	?	8·06	?	?	8·06	?	?	1·88	Daltonganj.	
...	2	1	1	...	4	10	11	1	2·6	?	?	79	·888	8·1	14	11·55	+2·45	8·61	8·15	+ 0·46	11·63	8·15	+ 0·46	1·79	Chaibassa.	
...	1	1	17	3	1	1	5	1	6·3	3·4	+85	76	·934	6·3	11	6·82	+4·18	7·91	7·10	+ 0·81	7·91	7·10	+ 0·81	1·66	Gaya . .	Bihar (South).
...	...	2	9	8	4	2	3	1	12·1	?	?	69	·858	4·8	15	6·71	+8·29	14·48	4·65	+ 9·83	14·48	4·65	+ 9·83	4·22	Dehri.*	
1	...	5	16	4	1	2	1	...	7·4	4·2	+76	77	·905	6·7	10	7·09	+2·91	6·94	7·54	− 0·60	6·94	7·54	− 0·60	1·55	Patna.	
...	3	11	6	5	1	1	1	2	3·6	?	?	81	·956	5·5	11	7·35	+3·65	4·50	5·95	− 1·45	4·50	5·95	−1·45	0·85	Arrah.	
...	...	8	15	2	3	1	...	1	7·6	?	?	77	·893	5·2	9	7·55	+1·45	7·39	4·96	+ 2·43	7·39	4·96	+2·43	1·58	Buxar.	
...	...	7	19	3	...	...	1	...	5·7	3·3	+73	86	·930	3·4	20	11·00	+9·00	12·47	11·07	+ 1·40	12·47	11·07	+1·40	1·79	Purnea .	Bihar (North).
10	...	4	6	10	...	...	...	...	3·3	?	?	82	·929	7·6	11	9·30	+1·70	7·26	7·71	− 0·45	7·26	7·71	−0·45	1·73	Bhagalpur.	
...	...	2	15	13	...	...	...	...	7·4	5·7	+30	82	·911	6·7	11	9·45	+1·55	3·19	9·02	− 5·83	3·19	9·02	−5·83	0·47	Darbhanga.	
...	...	4	15	11	...	...	...	...	7·0	?	?	87	·957	6·4	11	8·15	+2·85	6·98	7·53	− 0·55	6·98	7·53	−0·55	1·97	Muzaffarpur.	
2	...	13	14	1	...	...	...	...	7·5	?	?	83	·921	6·2	16	8·94	+7·06	7·96	7·89	+ 0·07	7·96	7·89	+0·07	1·22	Motihari.	
1	1	3	15	7	...	1	2	...	6·2	?	?	79	·922	7·3	10	6·90	+3·10	10·77	6·02	+ 4·75	10·77	6·02	+4·75	2·48	Chapra.	
6	1	8	7	4	2	...	2	...	5·1	5·1	0	78	·932	6·2	12	4·64	+7·36	6·97	5·13	+ 1·84	6·97	5·13	+1·84	1·82	Benares .	N.-W. P. (Eastern Districts).
...	1	5	9	2	1	4	4	4	6·9	3·8	+ 82	68	·848	6·6	11	4·73	+6·27	17·36	5·69	+11·67	17·36	5·69	+11·67	6·87	Allahabad.	
1	2	3	14	6	4	...	...	...	3·2	3·6	− 11	81	·900	4·9	12	7·00	+5·00	11·44	9·68	+ 1·76	11·44	9·68	+1·76	4·26	Gorakhpur .	N.-W. P. (East Submontane).
2	2	1	20	1	3	1	...	...	?	4·2	?	70	·860	5·5	7	5·64	+1·36	5·99	5·43	+ 0·56	5·99	5·43	+0·56	3·37	Lucknow .	Oudh (South).
1	1	4	4	19	...	...	...	1	5·0	?	?	76	·881	3·9	9	?	?	7·14	5·64	+ 1·50	7·14	5·64	+1·50	1·63	Bahraich .	Oudh (North).
...	2	8	4	7	3	2	2	2	4·5	?	?	70	·900	3·8	10	4·3	+5·7	4·90	3·09	+ 1·81	4·90	3·09	+1·81	1·20	Cawnpore .	N.-W. Provinces (Central).
18	...	2	3	3	1	...	...	3	2·0	?	?	64	·818	6·6	6	?	?	3·76	3·00	+ 0·76	3·76	3·00	+0·76	1·50	Mainpuri.	

* Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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		...	...	−·022	...	...	...	...	...	...	...	99·7	−2·9	79·0	−0·1	89·4	−1·5	20·7	...	...	...	...	40·7
N.-W. Provinces (Submontane).	Bareilly	568	28·983	−·005	29·506	29·115	10th	28·883	14th	·232	85·1	99·3	−1·4	80·4	+0·5	89·8	−0·5	18·9	110·9	4th & 5th.	74·6	22nd	34·3
	Dehra Dun	2,233	27·379	−·023	29·523	27·503	11th	27·293	14th	·210	79·2	91·0	−2·4	74·9	+0·3	83·0	−1·1	16·1	103·5	4th	69·5	1st	34·0
	Roorkee	887	28·658	−·016	29·496	28·789	11th	28·583	25th	·206	85·0	98·0	−3·4	78·4	−0·5	88·2	−2·0	19·6	111·7	4th	69·2	11th	42·5
	Meerut	738	28·797	−·019	29·486	28·940	11th	28·725	25th	·215	85·7	99·2	−2·2	79·1	−1·7	89·2	−2·0	20·1	111·4	3 days	71·5	25th	39·9
Punjab (Central)	Delhi	718	28·820	−·014	29·485	28·952	11th	28·735	18th	·217	88·2	101·8	−2·4	83·7	+0·3	92·8	−1·1	18·1	113·5	5th	76·0	11th & 12th.	37·5
	Lahore	702	28·788	−·032	29·442	28·942	29th	28·615	19th	·327	88·6	102·7	−2·9	80·9	+1·1	91·8	−0·9	21·8	115·3	6th	73·6	20th	41·7
Punjab (Submontane).	Umballa	962?	28·637?	?	29·489?	28·762	11th	28·541	14th	·221	84·4	102·0*	?	79·5	?	90·6*	?	22·5	115·8	4th	71·0	25th	44·8
	Ludhiana	812	28·700	−·029	29·462	28·848	29th	28·577	14th	·271	87·3	101·5	−4·3	79·5	−0·6	90·5	−2·5	22·0	114·4	9th	71·5	29th	42·9
Punjab (North)	Sialkot	830	28·673	−·025	29·453	28·825	29th	28·482	19th	·343	88·6	102·9	−2·7	79·8	−0·3	91·4	−1·5	23·1	114·9	3th & 9th.	68·8	19th	46·1
	Rawalpindi	1,652	27·880	−·038	29·429	27·993	30th	27·717	19th	·276	84·2	98·7	−4·0	74·3	−0·4	86·5	−2·2	24·4	108·5	8th	65·7	5th	42·8
VII.—Indus Valley and N.-W. Rajputana.		...	...	−·033	...	...	...	...	...	...	...	105·6	+0·8	81·9	+0·7	93·8	+0·8	23·7	...	...	...	...	39·1
Punjab (West)	Peshawar	1,110	28·412	−·031	29·420	28·540	30th	28·294	19th	·246	90·3	106·6	+1·1	78·6	+2·0	92·6	+1·6	28·0	114·0	8th	68·9	1st	45·1
	Mardan	?				Not recorded.					91·6	110·0	?	79·3	?	94·7	?	30·7	115·4	9th	67·8	5th	47·6
	Khushab	612	28·857	?	29·419	28·991	12th	28·749	14th	·242	90·8	105·9	?	81·4	?	93·7	?	24·5	117·1	8th & 9th.	71·0	11th	46·1
	Montgomery	558	28·918	?	29·424	29·049	11th	28·811	14th	·238	94·1	109·7	?	83·4	?	96·6	?	26·3	118·9	6th	75·5	19th	43·4
	D. I. Khan	573	28·891	?	29·421	29·037	30th	28·787	28th	·250	89·0	107·8	+0·1	80·3	−0·3	94·1	−0·1	27·5	117·1	6th & 7th.	73·8	20th	43·3
	Mooltan	420	29·048	−·037	29·425	29·196	11th	28·935	14th	·261	92·1	108·7	+2·0	84·6	+2·3	96·7	+2·2	24·1	115·5	4th & 6th.	79·1	13th	36·4
	Sirsa	662	28·839	−·038	29·446	28·961	10th	28·739	18th	·222	91·1	107·6	+1·1	83·1	+0·2	95·4	+0·7	24·5	117·4	5th	75·3	18th & 19th.	42·1
Sind and Cutch	Jacobabad	186	29·285	−·033	29·427	29·376	1st	29·153	14th	·223	91·7	113·3	+1·3	85·2	+1·7	99·2	+1·5	28·1	121·0	5th	77·6	1st	43·4
	Hyderabad	117	29·399	−·025	29·466	29·522	1st	29·283	14th	·239	87·4	104·4	+1·2	82·0	+0·5	93·2	+0·9	22·4	110·7	18th	74·5	13th	36·2
	Kurrachee	49	29·513	−·035	29·512	29·656	2nd	29·388	18th	·268	87·3	94·5	+1·1	82·4	+0·4	88·5	+0·8	12·1	98·0	17th	77·8	30th	20·2
	Bhuj	395	29·204	−·032	29·546	29·343	1st	29·069	14th	·274	84·9	96·1	−1·1	79·6	−0·3	87·8	−0·7	16·5	102·0	1st	73·9	14th	28·1
Rajputana (West)	Bickaneer	753	28·762	?	29·454	28·839	11th	28·611	18th	·228	89·8	105·9	+0·1	84·8	−0·1	95·3	0	21·1	114·4	5th	74·5	19th	39·9
	Pachpadra	380	29·158	?	29·486	29·295	2nd	28·931	27th	·364	86·2	102·3	?	80·1	?	91·2	?	22·2	110·5	5th	74·6	18th	35·9
VIII.—East Rajputana, Central India and Gujarat.		...	...	−·031	...	...	...	...	...	...	...	96·0	−3·5	79·6	−0·7	87·7	−2·1	16·3	...	...	...	...	32·6
Rajputana (East)	Jeypore	1,431	28·146	−·036	29·508	28·239	10th	27·997	18th	·242	85·2	99·7	−3·2	79·4	−0·7	89·6	−2·0	20·3	112·3	4th	73·0	19th	39·3
	Sambhar	1,254	28·304	−·035	29·495	28·398	10th	28·141	18th	·257	85·2	98·2	−3·5	81·0	−0·7	89·6	−2·1	17·2	108·5	4th	72·4	19th	36·1
	Ajmere	1,611	27·979	−·039	29·522	28·068	1st	27·774	18th	·294	83·7	95·6	−4·7	80·3	+0·3	88·0	−2·2	15·3	105·4	4th	73·1	19th	32·3
	Deesa	466	29·146	−·031	29·592	29·277	1st	29·029	14th & 18th.	·248	83·6	98·5	−3·0	78·8	−1·6	88·7	−2·3	19·7	108·4	8th	73·0	18th	35·4
Kathiawar	Rajkot	429	29·205	−·028	29·582	29·340	1st	29·078	13th	·262	83·4	95·5	−4·5	77·0	−0·3	86·3	−2·4	18·5	103·9	6th & 7th.	70·8	12th	33·1
	Veraval	?	29·638	?	29·598	29·777	1st	29·502	14th	·275	82·5	85·4	?	80·2	?	82·8	?	5·2	89·1	3 days	73·8	15th	15·3
	Bhavnagar	?	29·615	?	29·599	29·756	1st	29·453	13th	·303	85·9	95·6	?	81·2	?	88·4	?	14·4	103·4	4th	75·0	18th	28·4
Central India	Nowgong	757	28·799	−·034	29·496	28·897	10th	28·700	28th	·197	86·6	98·5	−4·0	?	?	?	?	?	112·1	3 days	?	?	?
	Indore	1,823	27·826	−·026	29·576	27·916	1st	27·686	17th	·230	79·0	91·5	−2·7	74·7	−0·1	83·1	−1·4	16·8	102·1	2nd	71·1	6th & 9th	31·0
	Neemuch	1,630	27·991	−·020	29·556	28·093	1st	27·830	17th	·263	80·6	93·4	−5·0	75·8	−1·4	84·6	−3·2	17·6	105·9	2nd	70·6	19th	35·3
Gujarat	Surat	36	29·624	?	29·603	29·767	1st	29·463	17th	·304	82·9	92·1	−1·7	79·2	+0·1	85·7	−0·8	12·9	100·7	1st & 2nd.	75·5	4 days	25·2
	Ahmedabad	176	29·467	?	29·591	29·610	1st	29·329	14th	·281	84·5	97·2	?	79·9	?	88·6	?	17·3	105·8	6th & 7th.	73·1	18th	32·7
N.-W. P. (West)	Agra	555	28·979	?	29·479	29·077	10th	28·906	13th	·171	89·5	102·6	−2·2	83·4	−1·4	93·1	−1·8	19·2	116·0	4th	77·7	26th & 29th.	38·3
	Jhansi	858	28·708	−·030	29·502	28·828	10th	28·613	28th	·215	88·1	99·7	−3·5	82·5	−1·4	91·1	−2·5	17·2	113·7	6th	72·9	27th	40·8

* Mean of 29 days.

I—*continued.*

in India, Burma, etc., in June 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 30th June 1894.	Normal rainfall for period, 1st June to 30th June.	Variation from normal of period, 1st June to 30th June.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·60	3·83	+ 3·77	...	...	...	...	VI.—Upper Sub-Himalayas.	
5	...	...	1	22	1	1	...	...	4·4	4·9	— 10	68	·815	5·1	7	4·91	+2·09	4·82	5·67	— 0·85	4·82	5·67	— 0·85	1·36	Bareilly	N.-W. Provinces (Submontane).
13	...	...	2	7	5	2	1	...	*1·5	1·6	— 6	77	·743	5·9	15	8·91	+6·09	17·82	9·25	+ 8·57	17·82	9·25	+ 8·57	2·49	Dehra Dun.	
10	1	1	...	14	4	...	...	...	5·1	3·9	+ 31	71	·822	4·9	9	5·64	+3·36	8·51	4·71	+ 3·80	8·51	4·71	+ 3·80	2·87	Roorkee.	
4	1	1	15	6	...	2	1	...	2·5	2·6	— 4	66	·794	4·9	6	3·64	+2·36	4·93	2·44	+ 2·49	4·93	2·44	+ 2·49	1·70	Meerut.	
7	...	1	4	11	...	...	7	...	1·9	4·9	— 61	60	·765	4·8	6	4·00	+2·00	4·41	3·35	+ 1·06	4·41	3·35	+ 1·06	3·12	Delhi	Punjab (Central).
3	2	3	9	8	1	...	4	...	4·0	3·5	+ 14	57	·741	3·7	5	2·73	+2·27	7·54	1·84	+ 5·70	7·54	1·84	+ 5·70	4·94	Lahore.	
3	...	...	1	24	...	...	...	2	2·6	?	?	78	·920	2·9	9	?	?	9·60	3·83	+ 5·77	9·60	3·83	+ 5·77	2·13	Umballa	Punjab (Submontane).
12	...	2	...	11	2	2	1	...	2·6	2·4	+ 8	65	·811	4·2	7	3·64	+3·36	10·15	2·41	+ 7·74	10·15	2·41	+ 7·74	4·28	Ludhiana.	
11	6	1	9	1	...	1	...	1	2·7	2·4	+ 13	56	·714	3·0	5	3·73	+1·27	5·25	3·08	+ 2·17	5·25	3·08	+ 2·17	2·80	Sialkot	Punjab (North).
21	...	2	1	5	1	...	...	...	2·0	2·6	— 23	64	·754	2·6	6	3·55	+2·45	2·99	1·71	+ 1·28	2·99	1·71	+ 1·28	1·40	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·65	0·89	+ 0·90	...	...	...	...	VII.—Indus Valley and N.-W. Rajputana.	
9	4	3	2	...	2	2	2	6	4·7	4·3	+ 9	45	·632	1·9	0	0·73	—0·73	0	0·35	— 0·35	0	0·35	— 0·35	0	Peshawar	Punjab (West).
Not recorded.									?	?	?	?	?	?	0	?	?	0	?	?	0	?	?	0	Mardan.	
1	...	20	1	3	...	5	...	...	7·7	?	?	50	·683	2·2	2	1·2	+ 0·8	1·41	0·70	+ 0·71	1·41	0·70	+ 0·71	1·05	Khushab.	
1	1	2	2	4	3	9	7	1	9·0	?	?	49	·738	2·3	2	2·0	0	1·16	1·29	— 0·13	1·16	1·29	— 0·13	0·74	Montgomery.	
6	1	4	10	1	2	2	2	2	3·0	2·4	+ 25	71	·961	1·7	4	0·91	+3·09	1·96	0·54	+ 1·42	1·96	0·54	+ 1·42	1·00	D. I. Khan.	
7	...	4	...	7	...	12	...	...	2·0	3·8	— 47	46	·682	1·3	2	1·45	+0·55	0·48	0·59	— 0·11	0·48	0·59	— 0·11	0·25	Mooltan.	
2	...	...	3	5	...	3	15	2	6·2	5·2	+ 19	54	·740	3·5	4	3·18	+0·82	3·91	1·91	+ 2·00	3·91	1·91	+ 2·00	1·65	Sirsa.	
7	...	...	8	5	9	...	...	1	6·9	4·7	+ 47	55	·815	0·8	0	0·09	—0·09	0	0·12	— 0·12	0	0·12	— 0·12	0	Jacobabad	Sind and Cutch.
1	...	...	1	...	7	15	6	...	34·2	15·2	+125	64	·814	3·7	2	0·45	+1·55	0·62	0·33	+ 0·29	0·62	0·33	+ 0·29	0·50	Hyderabad.	
...	...	...	...	...	...	15	15	...	15·4†	18·5	— 17	81	1·045	7·6	0	0·18	—0·18	0	0·52	— 0·52	0	0·52	— 0·52	0	Kurrachee.	
2	...	...	...	...	1	18	5	4	20·2	16·1	+ 25	73	·890	7·9	3	?	?	1·31	1·94	— 0·63	1·31	1·94	— 0·63	0·49	Bhuj.	
...	1	2	...	...	5	18	2	2	8·3	7·8	+ 6	59	·812	3·8	6	?	?	5·81	1·66	+ 4·15	5·81	1·66	+ 4·15	4·36	Bickaneer	Rajputana (West).
4	...	1	...	8	8	6	1	2	11·9	12·0	— 1	75	·932	9·4	5	?	?	4·83	0·69	+ 4·14	4·83	0·69	+ 4·14	1·98	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·08	4·32	+ 3·83	...	...	...	...	VIII.—East Rajputana, Central India and Gujarat.	
1	2	3	2	2	1	9	9	1	5·3	7·3	— 27	67	·804	6·2	8	3·70	+4·30	6·01	2·49	+ 3·52	6·01	2·49	+ 3·52	1·85	Jeypore	Rajputana (East).
1	3	2	1	...	1	1	19	2	10·7	11·2	— 4	66	·783	6·0	7	3·10	+3·90	3·63	1·40	+ 2·23	3·63	1·40	+ 2·23	1·01	Sambhar.	
2	2	1	...	...	1	4	17	3	9·3‡	8·3	+ 12	70	·792	4·7	6	3·73	+2·27	7·27	2·28	+ 4·99	7·27	2·28	+ 4·99	2·60	Ajmere.	
...	...	...	1	2	4	13	10	...	13·2	16·8	— 21	74	·850	7·3	6	2·18	+3·82	4·48	2·16	+ 2·32	4·48	2·16	+ 2·32	1·64	Deesa.	
...	...	1	...	...	1	5	21	2	14·3	15·6	— 8	75	·850	7·7	7	5·27	+1·73	13·26	4·73	+ 8·53	13·26	4·73	+ 8·53	4·57	Rajkot	Kathiawar.
1	1	...	...	1	2	8	16	1	10·0	?	?	89	·988	7·5	7	?	?	10·56	?	?	10·56	?	?	2·76	Veraval.	
...	1	1	...	...	1	23	3	1	18·5	?	?	89	1·092	7·7	11	?	?	6·17	?	?	6·17	?	?	1·55	Bhavnagar.	
1	1	...	...	1	3	5	17	2	6·5	4·4	+ 48	63	·762	5·8	10	5·91	+4·09	15·43	5·83	+ 9·60	15·43	5·83	+ 9·60	9·29	Nowgong	Central India
...	...	...	...	...	4	11	14	1	6·8	7·0	— 3	82	·811	7·6	8	8·27	—0·27	3·71	6·79	— 3·08	3·71	6·79	— 3·08	0·98	Indore.	
...	1	1	...	...	...	10	17	1	12·6	14·2	— 11	79	·822	6·0	8	5·09	+2·91	10·89	4·27	+ 6·62	10·89	4·27	+ 6·62	4·86	Neemuch.	
...	...	...	...	1	2	10	12	5	?	15·6	?	82	·919	7·4	11	8·18	+2·82	7·62	10·12	— 2·50	7·62	10·12	— 2·50	2·50	Surat	Gujarat.
2	1	1	...	...	2	14	5	5	8·2	?	?	76	·903	9·0	6	?	?	6·78	?	?	6·78	?	?	2·75	Ahmedabad.	
...	...	3	...	12	...	9	...	6	6·0	5·7	+ 5	60	·790	5·2	7	3·64	+3·36	2·65	2·54	+ 0·11	2·65	2·54	+0·11	0·95	Agra	N.-W. P. (West).
...	1	3	...	2	2	10	2	10	4·6	5·8	— 21	62	·761	5·0	12	6·09	+5·91	14·74	4·89	+ 9·85	14·74	4·89	+9·85	4·04	Jhansi.	

* Mean of 27 days.
† „ of 26 „
‡ „ of 25 „

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
IX.—Deccan	...	...	...	−·025	...	...	...	...	...	...	...	93·4	−1·8	75·7	−0·1	84·6	−1·0	17·8	...	...	...	...	36·6
Bombay (Deccan)	Belgaum	2,524	27·256	−·012	29·695	27·321	2nd	27·176	16th & 17th.	·145	72·8	80·6	0	68·2	+0·4	74·5	+0·2	12·4	96·8	1st	63·3	12th	33·5
	Sholapur	1,590	28·138	−·029	29·656	28·206	30th	28·046	16th	·160	80·9	96·1	+1·7	74·2	+1·6	85·2	+1·7	21·9	106·7	1st	71·5	23rd	35·2
	Poona	1,840	27·885	−·026	29·652	27·977	1st	27·763	16th	·214	78·3	89·4	+0·9	72·5	−0·1	81·0	+0·4	16·9	100·0	1st	68·9	12th	31·1
	Bijapur	1,946	27·805	?	29·675	27·880	4th	27·715	16th	·165	77·0	91·5	?	71·4§	?	81·5§	?	20·1	103·8	1st	66·0	14th	37·8
Khandesh	Malegaon	1,430	28·246	−·035	29·609	28·340	1st	28·113	17th	·227	81·6	93·6	−1·0	75·5	+0·8	84·6	−0·1	18·1	105·8	1st	72·6	12th & 18th.	33·2
	Ahmednagar	2,152	27·572	?	29·640	27·653	2nd	27·451	16th	·202	77·5	90·2	?	71·9	?	81·0	?	18·3	102·7	1st	66·9	27th	35·8
Berar	Akola	930	28·718	−·031	29·584	28·796	10th	28·615	17th	·181	82·1	95·7	−1·9	76·7	−0·6	86·2	−1·3	19·0	107·7	1st & 2nd	71·7	24th	36·0
	Amraoti	1,215	28·420	−·033	29·579	28·496	10th	28·335	16th	·161	79·7	93·6	−3·2	76·0	−0·3	84·8	−1·8	17·6	107·8	2nd	70·8	3 days	37·0
Central Provinces (West).	Khandwa	1,044	28·590	−·036	29·583	28·663	1st & 10th.	28·473	17th	·190	80·1	93·6	−3·7	77·4	−0·8	85·5	−2·3	16·2	106·2	2nd	73·6	7th & 24th.	32·6
	Hoshangabad*	1,020	28·589	?	29·556	28·677	10th	28·482	17th	·195	81·7	93·6	−4·9	77·3	−1·9	85·5	−3·4	16·3	108·0	4th	71·2	23rd	36·8
	Nagpur	1,025	28·594	−·026	29·558	28·689	10th	28·496	16th	·193	83·6	95·4	−2·4	77·7	−0·4	86·6	−1·4	17·7	111·8	3 days	71·6	23rd	40·2
Central Provinces (Central).	Chanda	634	29·003	−·021	29·575	29·104	9th	28·901	16th	·203	83·9	96·6	−1·1	78·7	−0·6	87·7	−0·9	17·9	113·4	2nd	72·0	23rd	41·4
	Seoni	2,033	27·607	−·020	29·548	27·710	9th	27·498	16th	·212	80·2	90·1	−3·6	74·2	−1·1	82·2	−2·4	15·9	105·2	3 days	70·1	26th & 30th.	35·1
	Jubbulpore	1,327	28·272	−·022	29·534	28·364	10th	28·138	16th	·226	82·7	93·7	−3·0	77·8	−0·4	85·8	−1·7	15·9	109·5	2nd	71·6	26th	37·9
	Saugor	1,762	27·840	−·024	29·524	27·932	10th	27·746	16th	·186	81·1	92·8	−5·8	77·8	+0·8	85·3	−2·5	15·0	108·6	5th	71·6	26th	37·0
Central Provinces (East).	Raipur§	970	28·634	−·017	29·540	28·750	9th	28·521	16th	·229	83·3	95·7	−0·7	78·2	+0·2	87·0	−0·3	17·5	112·5	3rd	72·1	29th	40·4
	Sutna	1,040	28·507	−·031	29·487	28·648	10th	28·405	25th	·243	85·5	96·1	−2·7	80·7	−0·3	88·4	−1·5	15·4	110·1	4th & 6th.	74·6	23rd	35·5
	Sambalpur	463	29·109	−·019	29·513	29·235	9th	29·014	21st	·221	85·5	96·7	−0·6	80·8	−0·1	88·8	−0·4	15·9	111·5	5th	74·2	9th	37·3
Hyderabad (North).	Aurangabad	?	27·841	?	?	27·929	1st	27·728	17th	·201	80·9	94·3	?	73·1	?	83·7	?	21·2	105·1	1st	68·4	29th	36·7
	Indur	?			Not	recorded.					80·6	93·3	?	76·4	?	84·8	?	16·9	108·7	1st	70·1	22nd & 23rd.	38·6
	Bidar	?	27·560	?	?	27·633	9th	27·427	16th	·211	77·4	91·4	?	72·4	?	81·9	?	19·0	99·7	2nd	68·0	22nd	31·7
Hyderabad (South).	Gulbarga	1,502	28·217	?	29·655	28·267	9th	28·145	16th	·142	79·3	95·2	?	73·8	?	84·5	?	21·4	107·0	1st	70·1	23rd	36·9
	Raichur	1,378	28·367	?	29·680	28·443	4th	28·289	16th	·154	79·6	94·6	?	75·2	?	84·9	?	19·4	109·0	1st	71·1	4th	37·9
	Hyderabad (Deccan).	1,690	28·031	−·010	29·648	28·117	10th	27·957	16th	·160	79·6	93·7	+0·4	75·6	+1·6	84·7	+1·0	18·1	106·4	1st	70·2	23rd	36·2
	Secunderabad	1,787	27·952	?	29·665	28·037	10th	27·877	16th	·160	79·1	94·7	?	74·9	?	84·8	?	19·8	107·8	2nd	69·9	22nd	37·9
	Khamamet	373	29·313	?	29·616	29·406	10th	29·246	20th	·160	84·3	96·7	?	79·7	?	88·1	?	17·0	114·2	1st	71·8	22nd	42·4
X.—West Coast	...	...	...	−·020	...	...	...	...	...	...	...	85·7	+0·7	76·8	+0·5	81·3	+0·6	8·8	...	...	...	...	19·5
Konkan	Bombay	37	29·679	−·034	29·657	29·789	2nd	29·533	16th	·256	82·4	87·5	+0·2	79·9	+0·6	83·7	+0·4	7·6	93·0	2nd	74·5	11th	18·5
	Ratnagiri‡	110	29·634	−·023	29·681	29·721	3rd	29·529	16th & 17th.	·212	81·5	86·8	+0·1	77·5	+0·4	82·2	+0·3	9·3	92·9	3rd	72·9	18th	20·0
	Mormugao	60	29·720	?	29·715	29·787	30th	29·626	17th	·161	82·0	87·4	?	78·5	?	83·0	?	8·9	92·0	3rd & 8th.	72·4	13th	19·6
	Goa	23	29·776	−·012	29·713	29·846	30th	29·689	16th & 17th.	·157	81·2	84·7‖	?	78·1‖	?	81·5¶	?	6·6	89·0	3 days	72·0	12th	17·0
	Karwar	44	29·752	−·018	29·728	29·815	30th	29·677	16th	·138	81·5	86·5	+1·7	77·2	+1·5	81·9	+1·6	9·3	92·3	4th	71·6	12th	20·7
Malabar	Cochin	10	29·858	−·019	29·796	29·903	11th	29·821	29th	·082	79·3	85·3	+0·8	74·9	+0·5	80·2	+0·7	10·4	91·3	1st	71·7	1st & 7th	19·6
	Calicut	27	29·826	−·016	29·783	29·874	30th	29·772	1st	·102	78·1	84·3	+0·4	74·8	+0·5	79·6	+0·5	9·5	91·8	1st	72·1	8th & 10th	19·7
	Mangalore	65	29·767	−·021	29·764	29·826	30th	29·711	18th	·115	78·3	85·6	+1·1	74·4	−0·3	80·1	+0·4	11·2	92·3	29th	69·5	8th	22·8
	Trivandrum	198	29·676	?	29·805	29·724	11th & 12th.	29·612	1st	·112	78·3	82·9	?	76·2	?	79·6	?	6·7	90·0	1st	72·0	6th & 7th	18·0
XI.—South India	...	...	...	−·018	...	...	...	...	...	...	...	93·3	+0·9	76·4	+0·2	84·9	+0·6	16·8	...	...	...	...	30·3
Madras (South)	Pamban	37	29·769	?	29·732	29·822	9th	29·717	1st	·105	84·2	90·0	?	80·8	?	85·4	?	9·2	92·3	4 days	69·2	18th	23·1
	Tinnevelly	168	29·646	?	29·741	29·705	12th	29·564	1st	·141	86·4	98·2	?	80·9	?	89·6	?	17·3	105·0	1st	76·9	14th	28·1
	Madura	447	29·341	−·023	29·719	29·393	12th	29·282	1st	·111	85·1	99·3	+0·7	78·3‖	+1·6	89·1‖	+1·2	21·0	104·5	1st	73·5	16th	31·0

* Observations of 28 days.
‡ „ „ 21 „

§ Mean of 29 days.
‖ „ „ 27 „
¶ „ „ 26 „

I—*continued.*

in India, Burma, etc., in June 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 30th June 1894.	Normal rainfall for period from 1st June to 30th June.	Variation from normal of period 1st June to 30th June.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6·53	·	+0·47	...	...	...	...	**IX.—Deccan.**	
1	1	...	...	...	...	10	13	5	?	24·3	?	87	·695	7·7	17	12·27	+4·73	11·02	6·59	+ 4·43	11·02	6·59	+ 4·43	2·13	Belgaum .	Bombay (Deccan).
...	...	...	...	...	...	14	10	6	19·7	12·2	+ 61	64	·675	6·8	1	7·82	−6·82	0·77	5·01	− 4·24	0·77	5·01	− 4·24	0·73	Sholapur.	
...	...	1	...	...	1	14	12	2	15·1	16·0	− 6	73	·706	7·9	5	7·18	−2·18	1·67	4·73	− 3·06	1·67	4·73	− 3·06	0·28	Poona.	
...	...	...	...	...	...	14	10	6	11·7	?	?	79	·738	8·5	4	6·30	−2·30	2·34	?	?	2·34	?	?	1·61	Bijapur.	
...	...	...	...	1	1	13	14	1	20·3	11·9	+ 71	75	·798	6·7	7	7·82	−0·82	2·64	4·72	− 2·08	2·64	4·72	− 2·08	1·32	Malegaon .	Khandesh.
...	1	1	...	1	1	10	11	5	23·7	?	?	86	·810	7·2	2	?	?	2·07	?	?	2·07	?	?	1·11	Ahmednagar.	
...	...	...	...	...	1	8	20	1	10·4	8·9	+ 17	71	·767	5·6	9	8·55	+0·45	4·77	5·47	− 0·70	4·77	5·47	− 0·70	1·32	Akola . .	Berar.
...	...	...	...	...	...	7	18	5	9·3	7·4	+ 26	77	·762	6·4	13	10·36	+2·64	7·44	6·84	+ 0·60	7·44	6·84	+ 0·60	2·15	Amraoti.	
...	...	...	...	...	4	4	16	6	10·2	9·2	+ 11	77	·781	6·3	12	7·91	+4·09	8·83	6·05	+ 2·78	8·83	6·05	+ 2·78	3·72	Khandwa .	Central Provinces (West).
3	...	...	...	...	2	14	9	...	3·7	4·6	− 20	77	·820	7·6	15	10·09	+4·91	12·31	8·20	+ 4·11	12·31	8·20	+ 4·11	2·03	Hoshangabad.*	
...	1	...	...	...	1	11	11	6	9·6	7·6	+ 26	79	·769	7·5	10	12·73	−2·73	7·95	8·74	− 0·79	7·95	8·74	− 0·79	2·85	Nagpur.	
...	1	...	...	...	1	18	9	1	6·4	6·3	+ 2	65	·722	7·1	6	?	?	9·27	7·85	+ 1·42	9·27	7·85	+ 1·42	3·56	Chanda .	Central Provinces (Central).
			Not recorded.						?	5·7	?	77	·761	6·4	17	13·00	+4·00	5·94	10·57	− 4·63	5·94	10·57	− 4·63	1·32	Seoni.	
1	...	1	...	...	4	6	15	3	4·7	5·3	− 11	72	·772	7·0	14	11·18	+2·82	12·81	9·10	+ 3·71	12·81	9·10	+ 3·71	2·46	Jubbulpore.	
1	...	1	...	...	3	11	11	3	7·4	5·2	+ 42	73	·743	6·3	14	9·73	+4·27	25·16	7·40	+17·76	25·16	7·40	+17·76	4·36	Saugor.	
...	1	...	...	...	2	12	11	3	10·2	8·7	+ 17	78	·856	8·4	10	11·55	−1·55	7·96	8·92	− 0·96	7·96	8·92	− 0·96	2·21	Raipur† .	Central Provinces (East).
1	...	1	2	1	3	2	19	1	10·0	9·6	+ 4	66	·759	5·6	14	5·91	+8·09	11·15	6·54	+ 4·61	11·15	6·54	+ 4·61	2·95	Sutna.	
...	...	...	1	2	8	15	2	2	6·1	3·4	+ 79	73	·864	7·2	10	?	?	8·44	11·13	− 2·69	8·44	11·13	− 2·69	1·67	Sambalpur.	
1	1	1	...	...	4	9	8	6	9·7	?	?	68	·718	7·2	4	?	?	2·62	6·34	− 3·72	2·62	6·34	− 3·72	1·24	Aurangabad.	Hyderabad (North).
1	...	...	...	...	...	6	18	5	13·7	?	?	79	·818	6·1	13	?	?	8·36	4·60	+ 3·76	8·36	4·60	+ 3·76	2·18	Indur.	
...	2	1	...	...	...	10	12	5	13·8	?	?	77	·720	5·2	5	?	?	2·27	6·30	− 4·03	2·27	6·30	− 4·03	0·91	Bidar.	
1	1	...	...	...	1	10	13	4	15·9	?	?	79	·790	7·5	5	?	?	1·89	4·82	− 2·93	1·89	4·82	− 2·93	0·48	Gulbarga .	Hyderabad (South).
...	...	...	...	...	4	10	12	4	14·6	?	?	68	·691	4·2	2	?	?	2·45	?	?	2·45	?	?	1·80	Raichur.	
...	..	1	...	...	...	...	24	5	10·4	?	?	69	·689	6·8	7	?	?	1·35	4·85	− 3·50	1·35	4·85	− 3·50	0·39	Hyderabad (Deccan).	
...	...	...	...	...	...	12	13	5	13·1	12·3	+ 7	66	·653	5·7	5	?	?	1·64	?	?	1·64	?	?	0·49	Secunderabad	
8	2	...	...	..	...	3	14	3	8·7	?	?	69	·802	4·7	10	?	?	6·69	?	?	6·69	?	?	2·62	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	24·46	28·45	−3·61	...	...	...	...	**X.—West Coast.**	
...	...	1	...	1	3	8	12	5	14·2	16·2	− 12	84	·939	8·4	15	14·82	+0·18	16·75	19·37	− 2·62	16·75	19·37	− 2·62	4·18	Bombay .	Konkan
...	2	...	...	4	3	8	1	3	7·7	12·0	− 36	87	·926	7·6	21	21·45	−0·45	36·76	31·26	+ 5·50	36·76	31·26	+ 5·50	6·52	Ratnagiri.‡	
...	1	...	...	...	2	1	15	11	12·6	?	?	85	·934	6·8	18	?	?	21·45	?	?	21·45	?	?	3·79	Mormugao.	
2	...	1	...	1	3	16	2	5	13·2	?	?	84	·891	7·0	18	?	?	20·78	30·09	− 9·31	20·78	30·09	− 9·31	3·70	Goa.	
1	2	...	...	2	14	4	3	4	5·4	?	?	83	·880	6·3	22	24·36	−2·36	22·06	37·24	−15·18	22·06	37·24	−15·18	3·93	Karwar.	
9	3	6	...	...	...	...	10	2	6·9	2·1	+229	86	·870	7·9	24	24·80	−0·80	24·30	28·41	− 4·11	24·30	28·41	− 4·11	4·21	Cochin .	Malabar.
10	2	4	4	1	...	1	4	4	12·9	?	?	90	·854	9·0	27	25·00	+2·00	39·34	33·22	+ 6·12	39·34	33·22	+ 6·12	7·50	Calicut.	
5	1	3	5	2	1	3	6	4	2·9	3·7	− 22	89	·866	8·1	27	25·60	+1·40	31·03	35·03	− 4·00	31·03	35·03	− 4·00	3·56	Mangalore.	
4	10	7	...	...	...	...	2	7	7·3	?	?	87	·843	7·3	19	?	?	7·68	12·95	− 5·27	7·68	12·95	− 5·27	1·14	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·97	4·56	−0·94	...	...	...	...	**XI.—South India.**	
...	..	...	...	...	5	16	8	1	16·1	?	?	82	·963	3·6	0	0·30	−0·30	0	0·04	− 0·04	0	0·04	− 0·04	0	Pamban. .	Madras (South).
...	2	...	...	...	...	4	12	12	9·1	?	?	58	·740	7·6	0	1·6	− 1·6	0	?	?	0	?	?	0	Tinnevelly	
1	2	...	...	...	1	7	6	13	2·5	4·8	− 48	59	·715	4·4	2	2·00	0	1·20	1·50	− 0·30	1·20	1·50	− 0·30	0·98	Madura.	

* Observation of 28 days.
† „ „ 29 „
‡ „ „ 21 „

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

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.
Madras (South Central).	Salem	940	28·883	—·020	29·755	28·941	30th	28·825	1st	·116	81·1	97·6	+3·3	75·5	+2·0	86·5	+2·7	22·1	104·4	2nd	72·0	2nd	32·4
	Coimbatore	1,348	28·466	—·013	29·755	28·517	30th	28·433	25th	·084	77·1	90·1	+0·2	70·8	—0·7	80·5	—0·3	19·3	95·9	1st	67·6	2nd	28·3
Coorg	Mercara	3,781	26·155	?	?	26·209	30th	26·110	18th	·099	65·8	72·0	−0·2	64·0	+0·8	68·0	+0·3	8·0	79·5	1st	61·2	3 days	18·3
Mysore	Chitaldroog	2,405	27·401	?	29·720	27·466	30th	27·330	16th	·136	74·8	86·8	?	70·0	?	78·4	?	16·8	96·7	1st	66·9	8th	29·8
	Bangalore	3,019	26·836	−·025	29·748	26·884	9th & 30th.	26·802	16th	·082	71·3	84·2	−0·3	66·5	—0·1	75·4	—0·2	17·7	90·3	1st	64·3	8th	26·0
	Hassan	3,091	26·787	?	29·770	26·839	30th	26·748	7th	·091	71·0	78·9	?	64·9	?	72·0	?	14·0	89·4	1st	61·9	8th	27·5
	Mysore	2,518	27·338	?	29·776	27·401	30th	27·298	7th	·103	72·8	84·6	?	67·4	?	76·0	?	17·2	93·9	1st	64·0	2nd	29·9
Madras (East Coast, South).	Negapatam	31	29·752	—·017	29·711	29·803	30th	29·691	1st	·112	86·3	99·6	+3·0	79·5	+0·6	89·6	+1·8	20·1	106·3	1st	76·7	13th	29·6
	Cuddalore	12	29·752	?	29·693	29·807	9th & 30th.	29·668	1st	·139	87·5	100·0	?	80·2	?	90·2	?	19·8	106·3	2nd	76·2	5th	30·1
	Trichinopoly	255	29·533	—·022	29·719	29·582	30th	29·467	1st	·115	84·6	100·5	+1·9	78·5	+0·5	89·5	+1·2	22·0	104·6	2nd	72·4	6th	32·2
	Madras	22	29·727	—·023	29·679	29·793	9th	29·626	1st	·167	88·1	101·5	+3·4	81·6	+1·4	91·5	+2·4	19·9	110·0	2nd	78·5	7th & 11th.	31·5
Madras (East Coast, Central).	Nellore	71	29·645	?	29·649	29·719	9th	29·574	1st	·145	89·1	103·0	?	83·2	?	93·1	?	19·8	116·2	1st	75·1	4th	41·1
	Masulipatam	15	29·671	—·012	29·624	29·756	9th	29·607	20th	·149	86·3	98·7	+1·2	79·9	—0·2	89·4	+0·5	18·8	114·7	1st	73·1	21st	41·6
Madras (Central)	Cuddapah	433	29·322	?	29·690	29·395	30th	29·272	16th	·123	86·4	101·1	+2·4	80·6	+0·6	90·9	+1·5	20·5	111·3	1st & 2nd.	73·2	20th	38·1
	Kurnool	923	28·822	—·020	29·678	28·896	30th	28·759	16th	·137	82·4	97·9	+2·3	77·2	+0·8	87·6	+1·6	20·7	110·3	2nd	71·9	4th	38·4
	Bellary	1,475	28·293	—·010	29·699	28·362	30th	28·224	16th	·138	80·8	94·4	−0·3	76·2	+0·7	85·3	+0·2	18·2	105·0	1st	71·9	12th	33·1
Madras (East Coast, North).	Rajahmundry	112	29·559	—·016	29·606	29·634	9th	29·479	20th	·155	84·0	95·5	—1·8	79·5	—0·6	87·5	—1·2	16·0	113·1	1st	73·1	21st & 22nd.	40·0
	Cocanada	26	29·636	—·012	29·597	29·720	9th	29·552	20th	·168	82·9	92·9	—1·3	79·4	—1·5	86·2	—1·4	13·5	106·3	5th	73·1	22nd	33·2
	Vizagapatam	31	29·613	?	29·581	29·704	9th	29·510	20th	·194	85·7	88·8	—1·2	82·6	—2·3	85·7	—1·8	6·2	92·8	4th	78·9	21st & 22nd.	13·9
	Gopalpur	21	29·587	?	29·548	29·697	9th	29·481	21st	·216	83·2	89·1	?	80·0	?	84·6	?	9·1	93·7	14th	74·1	29th	19·6
XII.—Hill Stations.																							
Baluchistan	Kachh Fort	?	23·785	?	?	23·860	2nd & 4th.	23·650	19th	·210	80·4	90·1*	?	55·7	?	73·0*	?	34·4	97·0	24th	46·0	1st	51·0
	Pishin	?	?	?	?	?	...	?	...	?	?	100·5	?	51·8	?	76·2	?	48·7	107·1	23rd	44·9	1st	62·2
	Quetta	5,502	24·456	—·021	?	24·535	4th	24·340	19th	·195	76·1	90·6	0	58·2	—1·0	74·4	—0·5	32·4	95·1	23rd & 24th.	48·9	1st	46·2
	Shirino	?	?	?	?	?	...	?	...	?	79·3	97·0	?	54·7	?	75·9	?	42·3	102·4	23rd & 24th.	48·1	1st	54·3
	Kalat	?	?	?	?	?	...	?	...	?	74·1	91·7	?	44·6	?	68·2	?	47·1	99·7	30th	37·4	1st	62·3
	Chaman	4,311	25·449	?	?	25·540	4th	25·332	19th	·208	87·6	100·3	?	71·2	?	85·8	?	29·1	106·0	23rd	64·6	12th	41·4
Northern India	Srinagar	5,204	24·696	?	?	24·797	1st	24·594	28th	·203	68·2†	81·6†	?	58·7†	?	70·2†	?	22·9	89·3	8th	52·7	1st	36·6
	Gilghit	?	25·227	?	?	25·680	2nd	24·980	24th	·700	79·8	94·7	?	70·9	?	82·8	?	23·8	107·6	28th	57·9	2nd	49·7
	Cherat	?	25·477	?	?	25·568	30th	25·338	19th	·230	80·2	95·8	?	73·2	?	84·6	?	22·6	105·5	9th	66·1	1st & 11th.	39·4
	Murree	6,344	23·695	—·025	?	23·757	10th	23·528	19th	·229	71·0	80·4	—1·6	65·3	+0·9	72·9	—0·4	15·1	92·2	9th	54·9	12th	37·3
	Poo	?	?	?	?	?	...	?	...	?	?	76·2	?	56·0	?	66·1	?	20·2	87·8	28th	45·4	12th	42·4
	Simla	7,224	22·989	—·018	?	23·068	9th & 10th.	22·870	19th	·198	65·9	73·8	—4·0	62·1	+1·5	68·0	—1·3	11·7	83·4	10th	55·7	29th	27·7
	Chakrata	6,977	23·202	—·010	?	23·272	11th	23·112	25th	·160	64·8	72·7	—2·2	60·6*	+0·6	66·6*	—0·8	12·1	82·3	4th	54·8	2nd	27·5
	Mussooree	?	23·424	?	?	23·518	11th	23·334	25th	·184	66·7	74·5	—1·5	62·4	+1·9	68·5	+0·2	12·1	85·3	4th & 9th.	57·9	12th	27·4
	Ranikhet	6,069	23·956	0	?	24·030	10th	23·868	25th	·162	68·6	77·9	—0·1	63·2	+0·1	70·6	0	14·7	86·6	5th	58·5	6th	28·1
	Gnatong	?	?	?	?	?	...	?	...	?	48·9	55·7	?	42·8	?	49·3	?	12·9	63·8	10th	37·1	2nd	26·7
	Darjeeling	7,421	22·875	—·011	?	22·953	11th	22·783	13th	·170	60·7	65·4	+0·2	57·1	+1·8	61·3	+1·0	8·3	70·6	21st	53·7	2nd	16·9
	Gantak	?	24·339	?	?	24·420	11th	24·245	13th	·175	64·6	74·1	?	60·6	?	67·4	?	13·5	79·2	28th	56·4	2nd	22·8

* Mean of 29 days.
† " of 22 "

I—*continued.*

in India, Burma, etc., in June 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 30th June 1894.	Normal rainfall for period, 1st June to 30th June.	Variation from normal of period, 1st June to 30th June.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	2	12	14	1	1	5·8	4·9	+ 18	69	·739	4·7	1	6·00	−5·00	0·53	3·68	− 3·15	0·53	3·68	− 3·15	0·37	Salem	Madras (South Central).
...	...	...	...	1	12	12	5	...	6·5	7·7	− 16	77	·722	4·3	3	4·55	−1·55	0·50	1·43	− 0·93	0·50	1·43	− 0·93	0·28	Coimbatore.	
...	1	...	...	1	...	3	16	9	9·2	9·0	+ 2	95	·613	9·4	27	25·00	+2·00	21·63	25·71	− 4·08	21·63	25·71	− 4·08	2·33	Mercara	Coorg.
...	...	...	...	...	...	16	12	2	14·0	?	?	75	·656	9·1	3	?	?	0·72	?	?	0·72	?	?	0·37	Chitaldroog	Mysore.
...	...	...	...	...	...	12	18	...	9·0	8·4	+ 7	83	·638	6·6	5	5·91	−0·91	3·40	3·45	− 0·05	3·40	3·45	− 0·05	1·37	Bangalore.	
...	...	1	...	...	...	9	17	3	5·1	?	?	84	·639	9·0	5	?	?	2·74	?	?	2·74	?	?	1·04	Hassan.	
1	...	...	...	...	1	17	11	...	16·2	?	?	83	·661	7·3	5	?	?	1·88	?	?	1·88	?	?	0·84	Mysore.	
...	...	...	...	...	1	12	14	3	10·1	8·3	+ 22	60	·757	4·4	1	3·09	−2·09	0·43	1·74	− 1·31	0·43	1·74	− 1·31	0·20	Negapatam.	Madras (East Coast, South).
...	...	...	...	...	4	10	7	9	2·6	?	?	70	·914	4·7	2	3·3	−1·3	0·33	?	?	0·33	?	?	0·18	Cuddalore.	
...	...	...	...	...	...	9	18	3	8·6	9·2	− 7	59	·700	4·8	2	2·00	0	3·11	1·62	+ 1·49	3·11	1·62	+ 1·49	2·89	Trichinopoly.	
...	2	...	...	...	1	7	15	5	9·1	9·0	+ 1	57	·758	6·4	2	4·18	−2·18	1·54	2·11	− 0·57	1·54	2·11	− 0·57	1·19	Madras.	
1	...	...	...	...	...	...	14	15	9·5	?	?	60	·828	7·5	2	3·1	−1·1	1·27	?	?	1·27	?	?	1·14	Nellore	Madras (East Coast, Central).
3	1	...	...	...	...	1	9	16	6·0	9·4	− 36	76	·934	7·5	5	7·00	−2·00	2·14	5·52	− 3·38	2·14	5·52	− 3·38	0·80	Masulipatam	
...	...	...	...	...	...	3	16	11	?	?	?	58	·722	7·0	4	5·50	−1·50	2·20	4·11	− 1·91	2·20	4·11	− 1·91	1·43	Cuddapah	Madras (Central).
9	...	3	2	...	1	4	9	2	?	?	?	65	·722	7·8	4	5·50	−1·50	1·64	3·95	− 2·31	1·64	3·95	− 2·31	0·65	Kurnool.	
1	...	...	...	...	...	10	17	2	11·9	10·5	+ 13	60	·629	8·0	2	3·64	−1·64	0·81	1·85	− 1·04	0·81	1·85	− 1·04	0·63	Bellary.	
5	...	...	...	1	...	1	11	12	?	?	?	73	·861	7·7	8	6·60	+1·40	7·69	5·79	+ 1·90	7·69	5·79	+ 1·90	2·75	Rajahmundry	Madras (East Coast, North).
1	1	1	1	1	...	13	10	2	8·2	?	?	80	·899	6·4	12	6·00	+6·00	7·41	5·37	+ 2·04	7·41	5·37	+ 2·04	2·36	Cocanada.	
...	...	...	...	...	1	8	20	1	1·7	3·8	− 55	71	·872	7·8	10	6·64	+3·36	3·56	3·49	+ 0·07	3·56	3·49	+ 0·07	0·74	Vizagapatam.	
1	1	...	1	1	9	16	1	...	15·4	11·6	+ 33	84	·936	3·5	8	7·44	+0·56	3·69	6·09	− 2·40	3·69	6·09	− 2·40	1·35	Gopalpur.	
XII.—Hill Stations.																										
3	1	...	6	1	1	1	5	12	?	?	?	32	·324	0·6	0	?	?	0·02	?	?	0·02	?	?	0·02	Kachh Fort	Baluchistan.
			Not	rec	orde	d.			?	?	?	?	?	?	0	?	?	0	?	?	0	?	?	0	Pishin.	
29	...	...	...	1	...	...	...	...	1·6	4·7	− 66	52	·483	0·7	0	0·36	− 0·36	0	0·12	− 0·12	0	0·12	− 0·12	0	Quetta.	
			Not	rec	orde	d.			2·1	?	?	60*	·589*	?	0	?	?	0	?	?	0	?	?	0	Shirino.	
...	11	...	1	...	17	...	...	1	?	?	?	?	?	?	0	?	?	0·01	?	?	0·01	?	?	0·01	Kalat.	
7	...	...	...	1	2	14	5	1	8·3	?	?	24	·310	0·5	0	?	?	0	?	?	0	?	?	0	Chaman.	
17	1	2	...	3	4	1	1	1	2·9	?	?	78†	·548†	4·2	5	?	?	2·76	?	?	2·76	?	?	1·35	Srinagar	Northern India.
			Not	rec	orde	d.			?	?	?	37	·364	2·8	0	?	?	0·03	?	?	0·03	?	?	0·03	Gilghit.	
8	9	...	...	11	...	...	...	2	13·5	?	?	50	·494	2·7	3	?	?	1·05	?	?	1·05	?	?	0·43	Cherat.	
7	1	3	1	6	...	1	2	9	7·8	6·6	+ 18	58	·415	3·9	8	4·55	+3·45	7·24	2·87	+ 4·37	7·24	2·87	+ 4·37	2·45	Murree.	
25	1	...	1	...	...	1	2	...	?	?	?	?	?	4·9	1	?	?	0·59	?	?	0·59	?	?	0·45	Poo.	
8	3	8	2	...	4	5	...	...	4·9‡	2·3	+113	69	·425	5·7	12	10·00	+2·00	15·53	6·79	+ 8·74	15·53	6·79	+ 8·74	3·11	Simla.	
7	5	2	3	2	...	3	4	4	7·8	5·7	+ 37	80	·481	6·3	16	?	?	21·97	6·91	+15·06	21·97	6·91	+15·06	4·54	Chakrata.	
...	2	6	10	3	2	1	2	4	?	10·9	?	82	·517	6·1	16	10·20	+5·80	17·30	8·70	+ 8·60	17·30	8·70	+ 8·60	3·52	Mussooree.	
25	...	2	...	1	...	2	...	...	2·9	3·2	− 9	81	·555	6·6	15	9·12	+5·88	8·61	5·94	+ 2·67	8·61	5·94	+ 2·67	1·48	Ranikhet.	
...	...	3	2	10	1	...	3	11	4·5	?	?	79	·299	6·4	28	?	?	19·47	?	?	19·47	?	?	3·00	Gnatong.	
6	1	7	5	5	2	1	3	...	3·7	4·7	− 21	95	·500	9·2	25	19·71	+5·29	22·67	24·58	− 1·91	22·67	24·58	− 1·91	2·84	Darjeeling.	
...	2	2	...	...	5	10	10	1	1·8	?	?	95	·581	7·0	23	?	?	29·07	?	?	29·07	?	?	3·41	Gantak.	

* Mean of 19 days.
† „ of 22 „
‡ „ of 29 „

Abstract of Observations taken at 8 A.M. at 203 Stations

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.
Central India	Mount Abu	3,945	25·823	−·044	?	25·948	1st	25·699	18th	·249	70·3	79·3	−3·9	66·8	−1·2	73·1	−2·6	12·5	87·2	5th & 9th, 4 days	63·8	18th & 21st	23·4
	Pachmarhi	3,528	26·236	−·015	?	26·313	1st	26·132	16th	·181	73·6	82·4	−3·1	70·7	−1·0	76·6	−2·1	11·7	96·7		66·2	23rd	30·5
South India	Wellington	6,200	24·174	−·019	?	24·216	30th	24·144	7th	·072	65·4	72·6	+0·8	56·4	−1·8	64·5	−0·5	16·2	77·2	2nd	52·2	8th	25·0
XIII.—Extra India.																							
Ceylon	Trincomalee	75	29·792	?	29·793	29·846	11th	29·690	27th	·156	84·9	95·3	?	78·8	?	87·1	?	16·5	101·0	1st	76·5	28th	24·5
	Colombo	40	29·851	−·014	29·817	29·890	17th	29·788	1st	·102	82·0	85·0	?	77·2	?	81·1	?	7·8	88·0	1st	74·0	3 days	14·0
	Galle	48	29·853	?	29·827	29·910	5th	29·782	28th	·128	80·8	83·1	?	78·1	?	80·6	?	5·0	86·0	1st	75·0	15th	11·0
Persia	Meshed	?			Not	recorded.					78·3	87·2	?	63·2	?	75·2	?	24·0	94·5	6th & 7th	54·8	2nd	39·7
	Teheran*	?	25·846	?	?	26·005	10th	25·700	19th	·305	81·3	94·7	?	66·4†	?	80·6†	?	28·3	103·2	30th	49·6	2nd	53·6
	Ispahan	?	?	?	?	?	?	?	?	?	78·5	94·0	?	61·7	?	77·9	?	32·3	101·0	30th	56·5	7th	44·5
	Bushire*	14	29·555	?	29·525	29·699	6th	29·454	19th	·245	86·6	91·1	?	81·4	?	86·3	?	9·7	100·0	21st	76·0	11th	24·0
	Jask‡	?	29·547	?	?	29·694	1st	29·349	18th	·345	95·5	98·4	?	83·6	?	91·0	?	14·8	105·2	20th	78·2	1st to 3rd	27·0
Arabia	Muscat	?	29·524	?	?	29·673	1st	29·416	14th	·257	92·6	95·3	?	90·1	?	92·8	?	5·2	102·3	25th	86·5	1st	15·8
	Baghdad	?	29·249	?	?	29·425	6th	29·152	27th	·273	82·9	100·3	?	76·9	?	88·6	?	23·4	110·5	18th	69·8	3rd	30·7
	Aden	94	29·656	−·005	29·680	29·710	21st	29·591	6th	·119	88·4	94·6	+0·6	84·0	+1·0	89·3	+0·8	10·6	98·8	2nd	79·8	4th	19·0
	Perim	?	29·462	?	?	29·520	25th	29·402	6th	·118	88·3	95·7	?	84·6*	?	90·1*	?	11·1	99·3	14th	82·9	6th	16·4
Afghanistan	Kabul	?	?	?	?	?	...	?	...	?	74·7	88·0	?	59·4	?	73·7	?	28·6	93·4	23rd & 28th	54·6	17th	38·8
	Kashgar	?	25·494	?	?	25·580	26th & 29th.	25·380	3 days	·200	?	91·4	?	65·9	?	78·7	?	25·5	99·2	22nd	56·9	3rd	42·3
Africa	Zanzibar	73	30·077	?	30·078	30·140	30th	30·001	1st	·139	74·7	80·4	?	73·3	?	76·9	?	7·1	82·0	3rd	70·9	22nd	11·1

* Mean of 29 days.
† ,, of 28 ,,
‡ ,, of 26 ,,

I—*concluded.*

in India, Burma, etc., in June 1894—concluded.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.										Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	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 June 1894.	Normal rainfall for period, 1st June to 30th June.	Variation from normal of period 1st June to 30th June.	Heaviest rainfall during month.		
1	1	1	...	1	2	21	1	2	12·4	10·1	+ 23	84	·611	6·3	9	6·70	+2·30	11·16	6·13	+5·03	11·16	6·13	+ 5·03	3·52	Mount Abu.	CENTRAL INDIA.
...	...	...	...	...	...	10	19	1	11·7	7·7	+ 52	77	·617	7·4	17	11·64	+5·36	14·65	9·80	+4·85	14·65	9·80	+ 4·85	2·40	Pachmarhi.	
11	1	...	...	...	1	10	5	2	3·9	5·1	− 24	70	·445	7·2	8	7·22	+0·78	3·39	3·73	−0·34	3·39	3·73	−0·34	0·72	Wellington .	SOUTH INDIA.
																									XIII.—Extra India.	
...	...	...	...	...	..	30	...	...	5·8	?	?	68	·815	4·8	4	?	?	2·05	1·75	+0·30	2·05	1·75	+ 0·30	0·64	Trincomalee.	CEYLON.
...	...	...	...	...	2	14	13	1	11·9	10·2	+ 17	79	·865	7·5	17	?	?	11·66	7·24	+4·42	11·66	7·24	+ 4·42	1·21	Colombo .	
2	...	...	...	...	...	1	4	23	12·0	?	?	89	·941	5·7	17	?	?	11·21	8·02	+3·19	11·21	8·02	+3·19	1·70	Galle .	
15	...	...	...	...	1	6	7	1	?	?	?	?	?	0·5	0	?	?	0·09	?	?	0·09	?	?	0·08	Meshed .	PERSIA.
17	...	1	1	2	6	2	...	...	3·0§	?	?	36	·379	0·2	0	?	?	0·03	?	?	0·03	?	?	0·03	Teheran*.	
...	7	7	...	...	...	2	5	9	4·6	?	?	43	·413	0·1	0	?	?	0	?	?	0	?	?	0	Ispahan.	
...	1	1	1	4	...	...	...	22	7·9	10·8	− 26	64	·815	0	0	?	?	0	0	0	0	0	0	0	Bushire.*	
...	...	...	1	7	7	10	1	...	16·5‖	?	?	53	·881	0	0	?	?	0	?	?	0	?	?	0	Jask.‡	
...	2	3	7	...	...	1	6	11	4·5	?	?	58	·858	0	0	?	?	0	?	?	0	?	?	0	Muscat .	ARABIA.
1	20	4	1	...	...	...	...	4	5·7†	?	?	48	·542	0	0	?	?	0·01	?	?	0·01	?	?	0·01	Baghdad.	
9	...	3	5	4	3	4	1	...	8·6	7·6	+ 13	70	·928	1·1	0	?	?	0	0·01	−0·01	0	0·01	− 0·01	0	Aden.	
3	3	6	1	...	...	...	9	8	11·4	?	?	68	·897	2·6	0	?	?	0	?	?	0	?	?	0	Perim.	
...	...	...	15	...	...	8	2	5	?	?	?	?	?	?	1	?	?	0·10	?	?	0·10	?	?	0·10	Kabul .	AFGHANISTAN.
1	6	1	4	...	1	1	9	3	4·8	?	?	?	?	1·9	1	?	?	1·00	?	?	1·00	?	?	1·00	Kashgar.¶	
...	...	...	...	2	16	12	...	...	10·9‡	?	?	84	·732	4·5	2	?	?	0·40	?	?	0·40	?	?	0·19	Zanzibar .	AFRICA.

* Mean of 29 days.
† " of 21 "
‡ " of 26 "

§ Mean of 28 days
‖ " of 24 "
¶ Wind directions for 26 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88

Meteorological Province.	Station.	Height of the 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 to 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	...	29·749	29·666	·083	29·704	—·021	29·694	84·9	78·0	6·9	88·5	74·0	14·5	82·7	83·3	80·6	— 0·2	75·7	79·1	79·1	78·0
	Rangoon	...	·749	·662	·087	·716	—·022	·691	85·7	76·1	9·6	89·1	73·6	15·5	81·3	80·5	78·8	— 0·5	74·5	78·8	78·0	77·1
	Diamond Island	...	·743	·662	·081	·699	—·025	·674	84·4	77·7	6·7	87·2	74·9	12·3	81·7	81·9	79·9	+ 0·7	75·0	77·7	78·1	76·9
	Cocos Island	111	·721	·648	·073	·681	?	·724	85·7	76·9	8·8	89·8	74·3	15·5	82·6	83·1	80·1	?	74·7	79·3	79·3	77·8
	Akyab	...	·696	·607	·089	·655	—·022	·620	84·7	77·3	7·4	88·8	75·1	13·7	81·4	82·2	80·1	— 1·2	75·2	79·7	79·9	78·2
Assam.	Silchar	...	·564	·442	·122	·513	—·026	·567	90·1	76·4	13·7	96·8	71·8	25·0	83·7	86·2	81·9	+ 0·3	75·4	79·2	80·0	78·2
	Sibsagar	...	·346	·209	·137	·280	—·027	·561	88·4	76·2	12·2	96·3	70·5	25·8	82·2	87·3	81·3	— 0·2	75·3	78·9	81·4	78·5
	Dhubri	...	·533	·415	·118	·483	—·017	·551	87·5	76·9	10·6	91·2	72·8	18·4	81·6	84·4	80·6	+ 1·3	75·7	78·4	79·6	77·9
Bengal and Orissa.	Chittagong	...	·586	·497	·089	·548	—·019	·581	86·6	76·1	10·5	89·5	72·2	17·3	83·6	82·9	80·1	— 0·4	75·0	79·5	79·8	78·1
	Naryangunge	...	·610	·501	·109	·563	—·010	·530	87·9	78·4	9·5	91·4	73·1	18·3	83·0	85·1	82·7	— 0·4	76·1	79·7	80·0	78·6
	Calcutta (Alipore)	...	·578	·472	·106	·531	—·015	·498	90·1	78·2	11·9	96·9	72·4	24·5	85·8	86·8	83·9	— 0·8	76·6	80·1	80·3	79·0
	Do. (Chowringhee).	...	·583	?	?	?	?	?	92·0	78·4	13·6	98·0	72·8	25·2	87·2	?	?	?	77·1	81·7	?	?
	Saugor Island	...	·573	·477	·096	·531	—·017	·500	89·1	80·9	8·2	94·1	75·6	18·5	86·3	86·6	83·9	— 0·9	78·1	81·9	81·8	80·6
	Burdwan	...	·495	·381	·114	·445	—·017	·490	92·6	78·9	13·7	100·0	72·7	27·3	86·3	88·4	84·0	— 1·3	77·0	80·1	80·2	79·1
	Berhampore	...	·534	·424	·110	·486	0	·501	91·7	78·1	13·6	97·7	72·5	25·2	85·6	87·5	83·2	— 1·6	76·1	80·9	81·1	79·4
	False Point	...	·593	·497	·096	·549	—·026	·511	88·6	79·4	9·2	95·4	67·0	28·4	85·5	85·4	82·7	— 1·3	77·4	80·8	80·7	79·6
	Cuttack	...	·513	·415	·098	·473	—·028	·491	93·1	79·3	13·8	105·3	74·8	30·5	88·0	89·1	84·4	— 1·4	76·3	79·8	79·5	78·5
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·592	27·500	·092	27·555	—·022	·455	91·2	75·6	15·6	105·3	73·1	32·2	84·8	85·1	81·5	— 0·7	69·9	75·0	74·8	73·2
	Patna	...	29·387	29·271	·116	29·335	—·014	·467	95·4	80·1	15·3	105·2	76·0	29·2	89·0	90·9	85·6	— 1·6	76·3	79·8	80·1	78·7
	Darbhanga	...	·433	·307	·126	·376	—·007	·493	91·1	78·7	12·4	98·8	74·2	24·6	85·6	89·4	83·5	— 1·1	77·0	79·3	80·3	78·9
	Allahabad	...	·229	·114	·115	·174	—·028	·432	99·4	81·7	17·7	113·9	76·5	37·4	92·4	96·7	89·3	— 1·6	75·7	79·2	79·3	78·1
	Ghazipur	220	·327	·203	·124	·269	—·025	·437	97·1	83·9	13·2	108·4	78·8	29·6	89·8	94·8	89·3	+ 1·7	79·3	79·7	80·4	79·8
	Lucknow	...	·191	·066	·125	·130	—·020	·445	99·2	80·1	19·1	111·8	75·1	36·7	90·9	96·4	89·4	— 2·2	75·4	79·6	79·4	78·1
Upper Sub-Himalayas.	Dehra Dun	...	27·385	27·297	·088	27·331	—·021	·456	90·2	74·9	15·3	103·8	69·5	34·3	83·7	86·7	81·9	— 2·0	69·6	75·1	75·8	73·5
	Roorkee	...	28·669	28·551	·118	28·605	—·008	·428	97·5	78·3	19·2	112·0	69·2	42·8	89·0	95·7	87·6	— 2·8	72·9	78·7	79·4	77·0
	Meerut	...	·806	·688	·118	·738	—·021	·414	98·8	79·2	19·6	111·6	71·5	40·1	90·5	97·0	88·8	— 2·3	74·6	77·8	78·1	76·8
	Lahore	...	·799	·710	·089	·719	—·021	·398	102·1	80·9	21·2	115·5	73·7	41·8	93·7	100·4	90·7	— 0·3	72·6	78·1	79·6	76·8
	Ludhiana	...	·706	·605	·101	·650	—·030	·398	100·7	79·6	21·1	114·5	71·9	42·6	92·2	98·8	89·5	— 1·9	73·4	78·4	79·7	77·2
Indus Valley and N.-W. Rajputana.	Peshawar	...	·409	·308	·101	·353	—·028	·390	106·5	78·7	27·8	114·0	69·0	45·0	97·3	103·7	91·5	+ 1·9	67·8	74·8	74·9	72·5
	Mooltan	...	29·058	·971	·087	29·008	—·029	·377	108·1	84·6	23·5	115·7	79·1	36·6	97·1	106·3	95·5	+ 2·1	73·0	77·9	79·6	76·9
	Jacobabad	...	·295	29·168	·127	·226	—·031	·359	113·0	85·1	27·9	120·9	77·5	43·4	99·4	111·7	98·3	+ 1·5	73·6	80·4	79·8	77·9
	Kurrachee	...	·517	·444	·073	·482	—·031	·481	94·5	82·4	12·1	98·0	77·7	20·3	90·5	91·1	87·2	+ 0·3	77·7	83·9	84·3	81·9
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·158	28·056	·102	28·107	—·024	·457	98·9	79·4	19·5	112·1	72·9	39·2	89·6	95·1	88·1	— 2·6	73·2	77·4	77·7	76·1
	Ajmere	...	27·991	27·897	·094	27·950	—·032	·473	95·9	80·3	14·7	105·4	73·1	32·3	87·3	92·7	86·3	— 2·0	73·7	77·1	78·7	76·5
	Deesa	...	29·145	29·028	·117	29·092	—·031	·500	97·9	78·8	19·1	108·2	73·0	35·2	88·4	94·9	87·0	— 3·0	74·8	77·6	77·5	76·6
	Nowgong	...	28·803	28·699	·104	28·755	—·027	·441	97·8	?	?	112·1	?	?	91·4	93·3	?	?	74·2	76·8	77·1	76·1
	Agra	...	·989	·870	·119	28·923	—·031	·415	102·1	83·4	18·7	116·2	77·7	38·5	94·9	98·0	91·9	— 2·7	74·8	78·9	79·2	77·6
Deccan.	Belgaum	...	27·265	27·195	·070	27·234	—·015	·656	80·0	68·3	11·7	94·5	63·4	31·1	75·7	75·4	72·6	+ 0·2	67·1	70·7	70·9	69·6
	Sholapur	...	28·136	28·017	·119	28·087	—·030	·578	95·6	74·4	21·2	105·9	71·8	34·1	85·7	92·2	83·2	+ 1·6	69·9	72·6	72·9	71·8
	Poona	...	27·889	27·807	·082	27·855	—·021	·602	88·9	72·5	16·4	99·5	69·1	30·4	82·0	84·2	79·3	0	69·2	72·5	72·6	71·5
	Akola	...	28·726	28·597	·129	28·667	—·023	·525	95·4	76·7	18·7	107·9	71·7	36·2	86·6	92·5	84·4	— 1·1	72·3	75·9	77·2	75·4
	Buldana	2,132	27·552	27·452	·100	27·507	—·033	·525	89·7	72·6	17·1	100·4	69·3	31·1	82·6	86·4	79·4	— 1·2	68·9	72·9	72·8	71·5
	Khandwa	...	28·596	28·479	·117	28·543	—·025	·519	93·1	77·4	15·7	106·4	73·6	32·8	84·8	90·0	84·3	— 2·6	72·2	75·8	76·5	74·8

II.

Station in India, Burma, etc., in June 1894.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Rainfall.			
														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 direction of wind of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·863	·948	·943	·918	+·005	90	85	83	86	0	9·1	9·2	9·2	+2·0	1	0	0	0	1	4	29	24	1	S. 61° W.	S. 38° W.	85	82	245	227	...	...	Port Blair	Burma Coast and Bay Islands.
·836	·952	·931	·906	+·004	93	89	89	90	+1	8·6	9·2	8·9	+0·2	0	1	0	0	2	17	26	12	2	S. 42° W.	S. 19° W.	77	71	110	130	...	...	Rangoon	
·837	·900	·915	·884	−·006	88	83	84	85	−2	9·5	9·4	9·5	+1·7	2	2	0	0	0	8	41	5	2	S. 46° W.	S. 32° W.	82	75	136*	207	...	...	Diamond Island.	
·834	·963	·951	·917	?	90	86	84	87	?	8·7	8·2	8·5	?	0	0	0	0	0	1	55	0	0	S. 46° W.	?	94	?	?	?	...	...	Cocos Island.	
·848	·989	·991	·942	+·026	90	92	90	91	+5	8·5	9·0	8·8	+1·5	0	4	3	5	9	29	3	7	0	S. 8° E.	S. 2° E.	53	58	109	96	...	...	Akyab	
·870	·938	·946	·918	+·011	95	81	76	84	−1	8·4	8·0	8·2	+0·4	35	3	2	3	2	2	2	7	4	N. 65° W.	N. 58° E.	10	9	83*	72	...	...	Silchar	Assam.
·868	·950	·996	·938	+·021	96	87	77	86	+2	8·5	6·6	7·6	−0·8	21	0	23	4	1	0	10	0	1	N. 55° E.	S. 77° E.	27	11	70*	62	...	...	Sibsagar	
·877	·933	·948	·920	+·024	94	86	80	87	−1	7·7	6·7	7·2	−0·1	15	1	11	14	2	0	12	4	1	S. 88° E.	S. 84° E.	17	23	128	116	...	...	Dhubri	
·857	·953	·977	·929	+·081	95	83	86	88	+2	7·8	9·1	8·5	+1·0	0	0	2	2	18	26	8	3	1	S. 9° E.	S. 31° E.	72	56	182*	166	...	...	Chittagong	Bengal and Orissa.
·873	·974	·961	·936	−·035	90	86	80	85	−2	8·9	8·1	8·5	+0·9	0	1	3	6	34	14	2	0	0	S. 50° E.	S. 16° E.	80	75	232	172	...	...	Naryangunge	
·896	·953	·947	·932	−·039	93	78	75	82	−1	7·9	7·7	7·8	+0·7	2	1	2	3	11	13	21	6	1	S. 16° W.	S. 4° E.	57	59	113	146	...	...	Calcutta (Alipore).	
·927	1·008	?	?	?	94	79	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	9·04	1·62	Do. (Chowringhee.)	
·928	1·033	1·023	·994	−·032	88	83	81	84	+1	8·5	8·6	8·6	+1·1	0	2	1	5	6	30	13	3	0	S. 3° W.	S. 15° W.	68	69	388	350	...	...	Saugor Island.	
·908	·944	·929	·927	−·002	91	76	70	79	+2	7·6	7·7	7·7	+0·4	3	4	3	8	16	14	7	2	3	S. 29° E.	S. 20° E.	42	58	83*	118	...	...	Burdwan	
·877	·992	·976	·948	+·012	91	81	76	82	−1	7·2	8·1	7·7	−0·5	4	0	1	28	11	9	6	1	0	S. 57° E.	S. 33° E.	62	48	92	133	...	...	Berhampore	
·921	·991	·987	·966	−·004	92	81	81	84	+1	8·4	8·3	8·4	+1·5	0	1	1	1	5	17	23	10	1	S. 32° W.	S. 45° W.	69	63	282*	288	...	...	False Point	
·868	·909	·882	·886	−·004	87	69	66	74	+1	6·7	7·5	7·1	+0·4	4	1	3	2	4	13	23	9	1	S. 34° W.	S. 31° W.	57	53	88	96	...	...	Cuttack	
·662	·748	·738	·716	+·031	75	66	65	69	+4	8·2	9·7	9·0	+1·7	2	9	9	8	9	7	7	6	3	S. 84° E.	S. 36° W.	12	19	230	213	...	...	Hazaribagh.	Gangetic Plain and Chota Nagpur.
·860	·897	·884	·881	+·007	84	67	64	71	+2	6·1	6·6	6·4	+0·3	1	2	11	29	8	2	1	3	3	N. 85° E.	N. 73° E.	62	45	176	106	...	...	Patna	
·907	·920	·913	·915	+·002	92	75	67	78	+1	6·5	5·2	5·9	+1·2	1	0	4	27	24	1	1	0	0	S. 72° E.	S. 89° E.	85	71	173	139	...	...	Darbhanga	
·810	·822	·770	·801	+·038	76	58	50	61	+6	5·9	6·2	6·1	+1·5	2	3	10	12	5	3	5	8	12	N. 17° E.	N. 2° E.	15	12	163	102	...	...	Allahabad.	
·939	·879	·847	·888	+·110	80	65	54	66	+8	4·7	4·8	4·8	+0·5	19	0	3	20	3	4	6	3	2	S. 67° E.	N. 74° E.	28	12	62	73	4·93	1·25	Ghazipur.	
·822	·860	·770	·817	+·057	80	61	49	64	+9	5·8	5·6	5·7	+1·0	2	3	2	33	1	6	1	1	1	S. 86° E.	N. 51° E.	67	17	?	102	...	...	Lucknow.	
·664	·766	·758	·729	?	77	69	64	70	?	6·0	5·4	5·7	+1·5	2	1	2	2	16	15	8	9	2	S. 3° W.	S. 66° W.	51	12	34	39	...	...	Dehra Dun	Upper Sub-Himalayas.
·748	·846	·788	·794	+·157	77	64	51	64	+13	4·7	3·3	4·0	+0·9	23	0	2	10	9	0	7	5	4	S. 36° E.	S. 4° E.	16	11	120	94	...	...	Roorkee	
·805	·786	·712	·768	+·083	81	58	45	61	+11	5·1	3·4	4·3	+1·1	14	2	5	14	11	1	3	5	5	S. 83° E.	N. 26° W.	25	22	60	64	...	...	Meerut	
·691	·757	·734	·727	+·119	67	51	42	53	+15	3·2	2·3	2·8	−0·4	6	6	5	13	11	3	1	8	7	N. 74° E.	N. 19° W.	18	11	95	85	...	...	Lahore	
·747	·790	·762	·767	+·134	74	57	46	59	+12	5·0	4·7	4·9	+1·8	11	3	4	2	7	5	11	12	5	S. 58° W.	N. 74° W.	27	10	67	60	...	...	Ludhiana	
·559	·592	·510	·554	+·045	56	35	25	39	+2	1·5	4·0	2·8	+0·8	7	7	18	9	1	2	4	4	8	N. 27° E.	N. 44° E.	37	32	111*	112	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·662	·697	·653	·671	−·073	56	40	29	41	−7	1·3	1·8	1·6	+0·7	2	0	7	0	12	0	3	0	6	S. 32° W.	S. 25° W.	45	33	54*	87	...	...	Mooltan	
·680	·783	·592	·685	+·017	56	42	22	40	0	1·0	0·8	0·9	+0·1	24	0	1	7	11	13	1	0	3	S. 34° E.	S. 31° E.	38	46	165*	117	...	...	Jacobabad.	
·887	1·075	1·088	1·017	+·068	80	75	75	77	+3	5·5	5·0	5·3	+1·0	0	1	0	0	0	0	28	31	0	S. 70° W.	S. 58° W.	90	85	374	447	...	...	Kurrachee	
·739	·793	·734	·755	+·085	74	59	49	61	+11	6·1	7·1	6·6	+2·3	1	4	6	2	3	2	22	18	2	S. 70° W.	N. 60° W.	47	47	125	178	...	...	Jeypore	E. Rajputana, Central India, and Gujarat.
·752	·807	·809	·789	+·107	74	64	56	65	+14	4·8	5·0	4·9	+1·5	4	5	5	2	1	1	7	34	1	N. 86° W.	S. 61° W.	56	68	222	208	...	...	Ajmere	
·812	·801	·710	·774	+·043	83	61	47	64	+12	5·8	5·1	5·5	+0·5	0	0	0	1	6	8	26	18	1	S. 47° W.	S. 36° W.	72	72	314	403	...	...	Deesa	
·775	·729	·717	·740	+·023	79	55	52	62	+10	6·0	8·0	7·0	+1·1	0	3	2	4	1	4	5	34	7	N. 88° W.	N. 72° W.	60	43	155*	107	...	...	Nowgong	
·754	·772	·744	·757	+·087	68	51	45	55	+10	5·3	6·8	6·1	+2·6	0	0	10	0	16	0	10	0	24	N. 45° W.	N. 60° W.	13	28	143	138	...	...	Agra	
·659	·692	·704	·682	+·018	94	79	81	85	+3	8·0	8·0	8·0	+0·1	0	2	0	0	1	1	20	27	9	S. 81° W.	S. 73° W.	78	86	621	583	...	...	Belgaum	Deccan.
·678	·637	·570	·628	+·004	79	52	39	57	−3	7·4	8·3	7·9	+0·7	0	2	0	0	0	0	27	19	12	S. 80° W.	N. 86° W.	78	56	481*	293	...	...	Sholapur	
·676	·681	·659	·672	−·013	85	63	59	69	−1	8·1	8·2	8·2	+0·7	0	0	1	0	1	0	30	24	4	S. 68° W.	S. 79° W.	84	73	360	375	...	..	Poona	
·736	·752	·731	·739	+·054	82	61	51	64	+6	6·2	7·4	6·8	+0·3	1	2	0	1	1	0	11	34	10	N. 89° W.	N. 71° W.	78	71	250	215	...	...	Akola	
·660	·688	·640	·662	−·013	83	63	54	66	0	5·9	7·0	6·5	+0·2	0	3	0	0	1	1	13	14	28	N. 74° W.	N. 75° W.	73	65	?	253	7·56	3·50	Buldana	
·729	·782	·743	·751	+·034	78	67	56	67	+7	6·4	7·3	6·9	+0·8	0	1	1	0	1	1	8	41	7	S. 89° W.	N. 77° W.	84	71	246	228	...	...	Khandwa	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88

Meteorological Province.	Station.	Height of the 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 to 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.
Deccan—*concld.*	Hoshangabad	...	28·595	28·477	·118	28·541	−·045	29·489	92·7	77·3	15·4	107·8	71·3	36·5	85·7	90·9	84·4	−3·3	72·9	76·9	77·6	75·8
	Nagpur	...	·601	·480	·121	·546	−·017	·499	94·8	77·6	17·2	111·8	71·6	40·2	87·2	90·6	84·3	−1·5	72·1	76·5	77·2	75·3
	Jubbulpore	...	·283	·173	·110	·233	−·011	·484	92·8	77·8	15·0	109·4	71·6	37·8	85·2	87·4	83·8	−2·3	72·8	76·0	75·9	74·9
	Saugor	...	27·848	27·751	·097	27·805	−·018	·470	92·1	77·8	14·3	108·6	71·6	37·0	85·3	87·5	83·6	−2·1	71·1	75·3	75·5	73·9
	Raipur	...	28·636	28·517	·119	28·582	−·021	·464	95·0	78·2	16·8	112·5	71·9	40·6	87·3	91·0	84·7	−1·0	73·2	78·1	78·6	76·7
	Sutna	...	·515	·407	·108	·465	−·025	·434	95·4	80·7	14·7	110·1	74·6	35·5	89·5	91·5	86·7	−2·7	72·2	76·6	76·6	75·1
	Hyderabad (Deccan).	...	·032	27·912	·120	27·979	P	·568	93·3	75·6	17·7	105·8	70·2	35·6	84·3	90·9	83·8	P	69·7	73·2	73·9	72·3
West Coast.	Bombay	...	29·687	29·611	·076	29·648	−·021	·626	87·4	79·7	7·7	93·0	74·5	18·5	84·0	84·3	83·0	−0·2	76·0	79·2	79·4	78·2
	Ratnagiri	...	·647	·566	·081	·606	−·026	·651	86·3	77·2	9·1	92·7	72·9	19·8	83·2	83·2	81·1	+0·2	74·8	79·2	79·1	77·6
	Karwar	...	·766	·696	·070	·730	−·017	·706	86·4	77·1	9·3	92·3	71·6	20·7	83·4	83·6	81·3	+1·6	74·8	78·2	78·2	77·1
	Cochin	...	·878	·811	·067	·844	−·011	·781	85·2	75·0	10·2	88·4	71·3	17·1	81·5	82·4	79·6	+0·3	73·3	77·2	77·7	76·1
South India.	Salem	...	28·880	28·754	·126	28·830	−·040	·683	97·3	75·5	21·8	104·3	71·8	32·5	87·6	94·0	85·0	+2·6	72·1	75·1	76·1	74·4
	Mysore	...	27·350	27·267	·083	27·309	P	·712	84·5	67·4	17·1	93·9	64·5	29·4	77·8	80·2	74·9	P	66·2	70·0	70·2	68·8
	Mercara	...	26·170	26·107	·063	26·152	−·006	·791	71·7	64·0	7·7	77·8	61·1	16·7	67·8	67·7	66·9	+0·3	63·0	66·0	66·0	65·0
	Bangalore (Fort)	...	·840	·753	·087	·808	−·027	·668	84·2	66·4	17·8	90·1	64·3	25·8	77·0	82·0	74·8	+0·1	65·0	69·8	70·3	68·4
	Hassan	...	·794	·723	·071	·770	P	·728	78·7	64·9	13·8	86·1	61·9	24·2	74·5	74·6	70·8	P	61·0	68·7	68·8	66·2
	Chitaldroog	...	27·408	27·316	·092	27·371	P	·656	86·7	70·0	16·7	93·6	67·1	26·5	79·4	83·4	77·5	P	65·2	70·6	70·8	68·9
	Trichinopoly	...	29·541	29·412	·129	29·489	−·027	·669	100·4	78·6	21·8	104·8	72·6	32·2	90·8	97·0	88·0	+1·4	71·8	75·0	75·8	74·2
	Madras	...	·728	·613	·115	·681	−·020	·630	101·2	81·4	19·8	109·7	78·3	31·4	92·7	91·0	88·3	+1·1	P	78·5	80·4	78·6
	Bellary	...	28·302	28·183	·119	28·252	−·014	·634	94·1	76·2	17·9	103·3	71·9	31·4	85·8	91·1	83·5	+0·7	68·8	71·4	71·8	70·7
	Vizagapatam	...	29·618	29·508	·110	29·567	−·025	·535	88·5	82·6	5·9	92·6	78·9	13·7	87·1	88·5	86·7	−0·9	73·5	79·3	80·2	77·7
	Cocanada	...	·640	·528	·112	·584	P	·546	92·8	79·4	13·4	106·3	73·1	33·2	86·5	90·8	85·6	P	76·3	78·7	79·5	78·1
Hill Station, Baluchistan.	Quetta	—	24·459	24·385	·074	24·415	−·017	P	90·9	58·2	32·7	95·3	49·1	46·2	83·2	87·7	73·8	−0·6	50·2	63·1	62·7	58·6
Hill Stations, Northern India.	Leh	11,503	19·667	19·592	·075	19·636	−·003	P	71·5	45·8	25·7	81·9	35·7	46·2	61·2	67·6	57·3	+1·9	39·5	47·2	50·8	45·8
	Srinagar	...	24·706	24·621	·085	24·657	P	P	81·9	58·5	23·4	89·3	52·7	36·6	72·6	80·7	69·7	P	56·4	68·5	70·1	64·2
	Murree	...	23·712	23·677	·035	23·687	−·029	P	79·9	65·2	14·7	92·0	54·8	37·2	74·0	76·6	72·2	−0·6	55·8	62·0	62·9	60·2
	Chamba	3,005	26·640	26·566	·074	26·615	−·027	P	90·2	70·0	20·2	104·6	62·5	42·1	81·4	86·9	78·7	−1·4	64·9	69·3	71·1	68·4
	Kailang	10,087	20·732	20·666	·066	20·711	+·001	P	69·6	45·1	24·5	81·2	36·0	45·2	64·1	66·7	56·0	+1·0	42·7	50·9	52·1	48·6
	Simla (Ridge)	...	22·994	22·944	·050	22·962	−·028	P	73·6	61·9	11·7	83·4	55·7	27·7	68·8	71·0	67·6	−0·5	55·7	60·4	62·3	59·5
	Simla (Chapslee)	...	P	P	P	P	P	P	77·4	62·4	15·0	89·8	56·4	33·4	70·3	P	P	P	55·9	60·7	P	P
	Chakrata	...	23·210	23·149	·061	23·173	−·017	P	72·2	60·6	11·6	82·5	54·9	27·6	67·3	69·9	66·2	−1·1	57·5	61·3	63·4	60·7
	Ranikhet	...	·967	·892	·075	·917	−·019	P	77·4	63·5	13·9	86·5	58·3	28·2	71·9	73·0	69·9	−0·9	60·4	65·6	66·4	64·1
	Katmandu	4,388	25·441	25·360	·081	25·399	−·001	P	84·1	67·3	16·8	88·2	61·5	26·7	77·3	78·9	74·3	−0·8	65·7	70·5	71·2	69·2
	Darjeeling	...	22·884	22·815	·069	22·847	−·012	P	65·3	57·1	8·2	70·6	53·8	16·8	62·2	62·6	60·4	+0·6	56·1	61·1	61·1	59·3
	Demagiri	P	P	P	P	P	P	P	87·9	76·0	11·9	91·9	66·8	25·1	84·1	84·6	81·2	+1·1	P	P	P	P
	Tura	3,943	P	P	P	P	P	P	84·4	73·8	10·6	88·5	69·8	18·7	79·9	81·4	78·4	P	P	76·1	76·6	P
Hill Stations, Central India.	Mount Abu	...	25·837	25·767	·070	25·807	−·050	P	79·0	66·7	12·3	87·0	63·8	23·2	73·3	76·7	72·3	−3·3	63·8	68·7	69·9	67·5
	Pachmarhi	...	26·248	26·162	·086	26·210	−·020	P	81·7	70·7	11·0	96·7	66·2	30·5	76·0	78·7	75·2	−3·0	65·6	68·8	69·7	68·0
	Chikalda	3,642	·130	·051	·079	·096	−·032	P	80·6	67·6	13·0	94·5	62·8	31·7	74·0	77·9	73·2	−2·2	65·3	69·0	69·9	68·1

II—*continued.*

Stations in India, Burma, etc., in June 1894—continued.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Rainfall.			
														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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
																									%	%						
·755	·814	·782	·783	+·039	82	70	57	70	+10	8·1	8·4	8·3	+2·3	4	1	1	0	1	7	22	16	4	S. 61° W.	S. 88° W.	68	71	90	114	...	...	Hoshangabad.	Deccan—*concld.*
·723	·783	·770	·758	+·045	78	64	58	67	+ 6	7·7	8·6	8·2	+1·0	0	1	1	0	0	4	16	26	12	S. 83° W.	N. 76° W.	75	52	229	183	...	...	Nagpur	
·747	·785	·751	·761	+·074	80	69	63	71	+12	7·1	8·1	7·6	+1·2	3	2	1	1	1	6	13	21	12	S. 83° W.	N. 80° W.	62	54	114	126	...	...	Jubbulpore.	
·680	·753	·736	·723	+·111	74	66	62	67	+15	6·4	7·3	6·9	+2·7	0	4	2	0	2	3	29	14	6	S. 67° W.	S. 82° W.	65	63	183	126	...	...	Saugor	
·754	·842	·814	·803	+·076	80	68	60	69	+ 7	8·0	8·6	8·3	+1·8	1	1	1	0	0	1	27	20	7	S. 73° W.	S. 74° W.	77	66	249*	220	...	...	Raipur	
·687	·757	·729	·724	+·088	68	60	54	61	+12	5·2	6·8	6·0	+1·3	2	4	1	2	2	10	5	22	12	S. 86° W.	N. 59° W.	50	50	237*	241	...	...	Sutna	
·655	·678	·626	·653	?	75	58	45	59	?	6·7	6·4	6·6	?	0	0	0	0	2	1	10	34	13	S. 89° W.	?	82	?	254*	?	...	...	Hyderabad (Deccan).	
·849	·935	·937	·907	—·020	84	80	80	81	− 1	7·7	8·5	8·1	+0·2	0	0	1	0	1	6	17	28	7	S. 73° W.	S. 63° W.	77	66	345	389	...	...	Bombay	West Coast.
·832	·946	·942	·906	+·059	89	83	83	85	+ 5	7·8	7·9	7·9	+1·3	0	1	0	0	3	4	17	8	7	S. 62° W.	S. 53° W	57	66	279*	278	...	...	Ratnagiri	
·834	·896	·896	·875	+·033	90	78	78	82	− 2	6·0	6·9	6·5	−0·7	1	0	1	0	0	1	45	5	7	S. 57° W.	S. 76° W.	82	76	127	?	...	...	Karwar	
·801	·880	·887	·856	+·002	92	82	80	85	− 3	7·9	7·8	7·9	+0·3	8	5	1	0	0	1	2	32	11	N. 75° W.	S. 75° W.	70	42	165	?	...	...	Cochin	
·743	·704	·660	·702	−·062	84	54	42	60	−10	5·6	7·8	6·7	+0·9	3	0	0	1	1	13	29	9	4	S. 44° W.	S. 58° W.	73	82	139	113	...	...	Salem	South India.
·631	·638	·616	·628	?	94	67	61	74	?	8·0	6·5	7·3	?	0	0	1	0	0	0	15	41	3	S. 82° W.	?	90	?	394*	?	...	...	Mysore	
·566	·619	·621	·602	+·001	94	91	91	92	− 1	9·0	9·1	9·1	−0·3	0	2	0	0	0	0	8	32	18	N. 80° W.	N. 81° W.	85	86	229	196	...	...	Mercara	
·599	·648	·606	·618	+·001	92	70	56	73	− 1	7·6	6·7	7·2	+1·4	0	0	0	0	0	0	24	32	4	S. 75° W.	S. 71° W.	90	90	218*	202	...	...	Bangalore (Fort).	
·493	·636	·639	·589	?	80	75	75	76	?	8·3	8·4	8·4	?	1	0	0	0	0	0	18	34	7	S. 81° W.	?	87	?	122*	?	...	...	Hassan	
·564	·640	·597	·600	?	77	64	53	64	?	8·2	8·5	8·4	?	0	1	0	0	0	1	20	28	10	S. 82° W.	?	84	?	294*	?	...	...	Chitaldroog.	
·688	·655	·609	·651	−·061	70	45	35	50	− 7	3·9	4·8	4·4	−2·8	0	0	0	0	0	0	21	36	3	S. 77° W.	N. 87° W.	92	84	213	228	...	...	Trichinopoly.	
?	·786	·903	·852	+·053	?	51	63	64	0	5·7	6·5	6·1	−0·3	0	0	0	6	10	6	14	19	5	S. 45° W.	S. 36° W.	46	58	217	213	...	...	Madras	
·614	·591	·538	·581	−·077	68	48	38	51	− 7	7·9	8·4	8·2	+0·7	0	0	0	0	1	2	24	26	7	S. 73° W.	S. 86° W.	82	80	285	256	...	...	Bellary	
·698	·907	·924	·843	−·039	62	70	68	67	− 1	7·8	8·1	8·0	+2·0	0	0	2	0	1	13	25	18	1	S. 49° W.	S. 58° W.	75	63	42	87	...	...	Vizagapatam.	
·867	·879	·867	·871	?	86	70	62	73	?	6·1	6·0	6·1	?	0	0	3	1	5	1	20	25	5	S. 70° W.	?	63	?	200*	?	...	...	Cocanada	
·286	·370	·310	·322	−·053	57	31	17	35	− 7	0·6	1·9	1·3	+0·3	34	1	1	0	1	2	2	9	10	N. 74° W.	N. 69° W.	28	43	39*	101	...	...	Quetta	Hill Station, Baluchistan.
·193	·205	·230	·209	+·046	62	39	36	46	+ 8	5·2	5·5	5·4	+0·4	0	5	11	4	2	7	13	13	5	S. 84° W.	S. 84° W.	22	26	56	57	1·13	0·63	Leh	Hill Stations, Northern India.
·436	·583	·617	·543	?	88	73	60	74	?	3·4	3·4	3·4	?	36	3	3	1	5	7	1	1	3	S. 36° E.	?	8	?	62*	?	...	...	Srinagar	
·353	·437	·438	·410	+·049	59	56	51	55	+ 9	5·0	5·6	5·3	+1·5	3	3	1	1	15	13	12	5	7	S. 14° W.	S. 2° W.	40	12	184*	158	...	...	Murree	
·564	·582	·585	·577	+·112	77	57	51	61	+14	4·6	6·8	5·7	+1·4	13	4	1	0	1	0	0	5	36	N. 44° W.	N. 27° W.	69	25	115*	123	15·77	5·22	Chamba	
·257	·291	·268	·272	+·036	84	56	44	61	+ 8	3·5	5·6	4·6	−1·0	0	0	0	1	3	6	27	14	9	S. 60° W.	S. 66° W.	70	67	38	47	5·88	2·79	Kailang	
·384	·442	·473	·433	+·020	71	66	66	68	+ 5	6·1	6·5	6·3	+0·4	12	10	17	3	1	4	5	2	5	N. 21° E.	S. 76° W.	32	40	112	?	...	...	Simla (Ridge).	
·384	·435	?	?	?	70	63	?	?	?	6·2	?	6·2	?	Not recorded.						...	...	...	?	?	?	?	?	?	15·24	2·92	Simla (Chapslee).	
·452	·481	·518	·489	+·083	85	75	73	79	+14	6·2	7·2	6·7	+1·6	3	0	2	4	2	0	14	24	11	S. 86° W.	S. 73° W.	59	50	185	140	...	...	Chakrata	
·498	·568	·582	·549	+·089	85	75	73	78	+14	6·5	6·8	6·7	+1·3	39	0	1	1	0	0	11	6	2	S. 67° W.	S. 65° W.	25	49	72	83	...	...	Ranikhet	
·618	·671	·678	·655	+·029	92	72	69	77	+ 2	7·6	7·4	7·5	+1·8	0	4	0	24	4	2	1	22	3	N. 78° E.	S. 87° W.	3	53	33	?	10·98	1·29	Katmandu	
·441	·529	·525	·497	+·006	94	94	92	93	− 2	9·4	9·1	9·3	+0·6	7	1	12	13	8	1	5	8	2	N. 87° E.	S. 88° E.	25	5	93	113	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	0	0	1	58	0	1	0	0	0	S. 89° E.	S. 29° E.	99	29	?	?	22·54	3·68	Demagiri	
?	·861	·861	?	?	?	84	81	?	?	8·9	7·4	8·2	+1·4	0	5	1	1	1	21	27	2	2	S. 41° W.	S. 3° W.	52	57	?	?	22·59	5·85	Tura	
·562	·650	·655	·623	+·055	86	80	73	80	+13	6·7	5·3	6·0	+0·7	0	4	9	1	2	3	36	5	0	S. 48° W.	S. 42° W.	45	74	295*	242	...	...	Mount Abu	Hill Stations, Central India.
·575	·623	·623	·607	+·010	77	73	68	73	+ 7	7·5	8·0	7·8	+1·2	1	0	0	1	1	3	18	30	6	S. 75° W.	N. 71° W.	78	63	282*	185	...	...	Pachmarhi.	
·598	·653	·640	·630	+·033	89	80	70	80	+ 8	8·3	8·1	8·2	+1·4	20	8	0	0	0	2	1	10	19	N. 52° W.	N. 45° W.	52	62	230	233	11·59	1·85	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and at 4 P.M. at 88

Meteorological Province.	Station.	Height of the barometer 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 to gravity 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Hill Station, S. India.	Wellington	...	24·182	24·118	·064	24·150	−·015	P	72·3	56·5	15·8	77·1	52·4	24·7	68·3	67·5	63·2	−0·6	53·8	60·8	60·1	58·3
Extra India.	Muscat	...	29·529	29·460	·069	29·495	P	P	95·4	90·1	5·3	102·3	86·5	15·8	93·9	93·3	92·3	P	74·8	81·0	82·3	79·4
	Aden	...	·661	·534	·127	·594	−·008	29·617	95·1	84·1	11·0	99·1	81·4	17·7	92·3	92·8	89·0	+1·4	74·9	81·4	80·4	79·0
	Perim	...	·473	·366	·107	·416	P	P	95·9	84·6	11·3	99·5	82·9	16·6	91·1	92·2	89·3	P	78·5	80·2	79·8	79·5
	Minicoy	...								Not received.												
	Zanzibar	...	30·090	30·013	·077	30·052	P	30·052	80·5	73·3	7·2	82·3	70·9	11·4	76·1	79·6	76·7	P	69·7	71·9	71·9	71·2
	Port Victoria (Seychelles).	15	29·992	29·921	·071	29·957	P	29·916	80·3	76·2	4·1	82·8	74·2	8·6	78·8	79·4	78·0	P	70·9	73·1	73·1	72·4

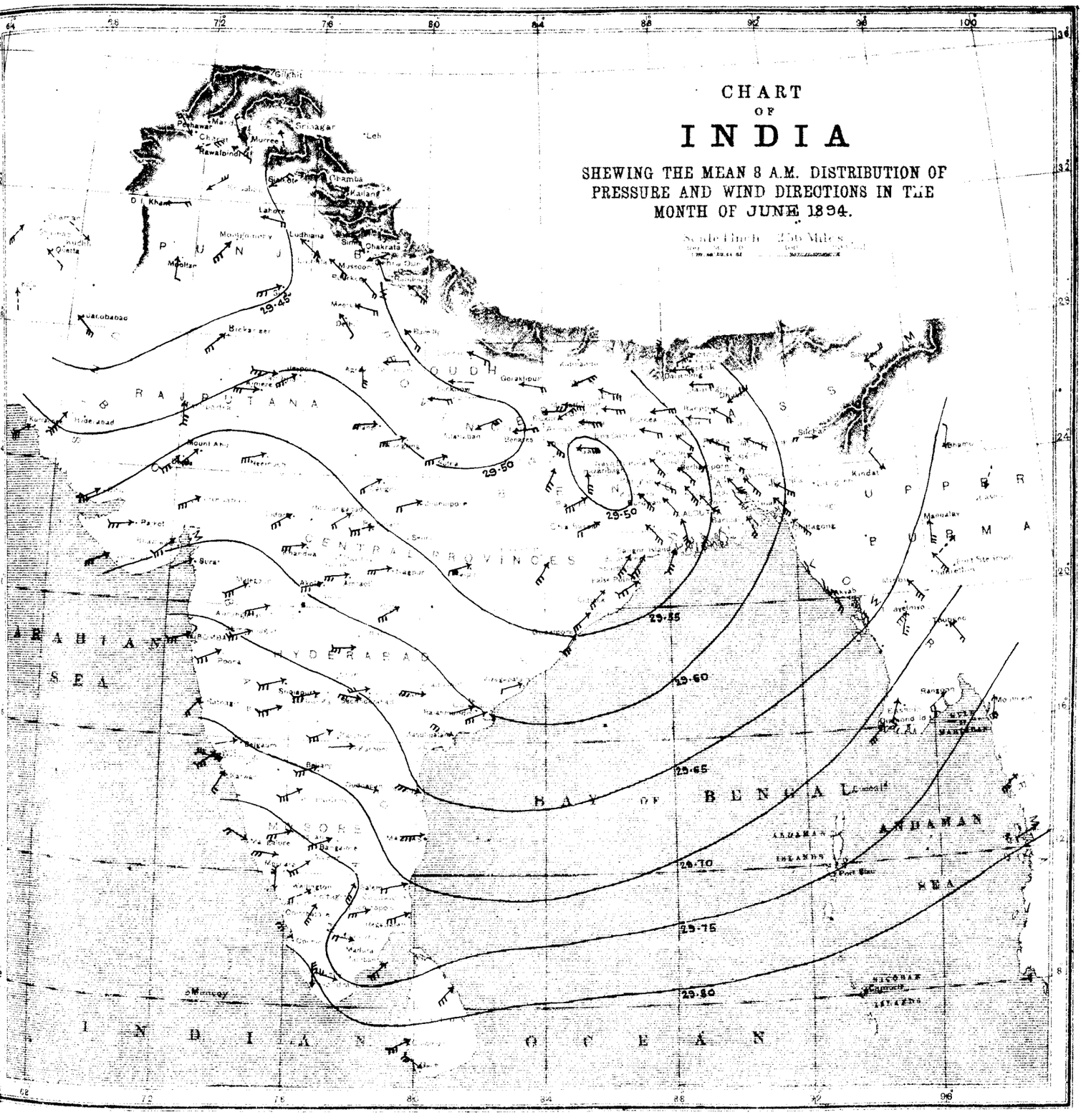
II—*concluded.*

Stations in India, Burma, etc., in June 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.						
														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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
																									%	%						
·390	·456	·445	·430	—·010	85	66	66	72	— 3	6·8	7·7	7·3	—0·2	0	2	1	1	4	8	25	14	5	S. 54° W.	N. 83° W.	63	52	94	123	...	...	Wellington.	Hill Station, S. India.
·663	·893	·962	·839	?	49	58	62	56	?	0·3	1·4	0·9	?	0	0	5	18	1	0	0	5	31	N. 10° W.	?	42	?	109	?	...	...	Muscat .	Extra India.
·743	·930	·873	·851	—·010	64	62	57	61	+ 3	0·1	1·3	0·7	—0·5	6	0	0	3	14	25	9	1	0	S. 7° E.	S. 2° E.	73	68	200	209	...	...	Aden .	
·894	·884	·854	·876	?	75	61	57	64	?	0·5	2·0	1·3	?	0	4	6	8	4	0	1	7	30	N. 28° W.	?	48	?	273	?	...	...	Perim .	
											Not	received.																			Minicoy .	
·679	·727	·683	·697	?	83	81	68	77	?	4·4	5·2	4·8	?	0	0	0	0	18	30	12	0	0	S. 5° E.	S. 10° W.	87	73	263*	198	...	...	Zanzibar .	
·687	·738	·734	·720	?	76	75	77	74	?	7·8	8·2	8·0	?	0	0	0	0	29	27	4	0	0	S. 19° E.	?	89	?	301	?	...	...	Port Victoria (Seychelles)	

* Corrected.

G. I. C. P. O.—No. 47 Meteor.—28-9-94.—400.



N N P.

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 shown 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	,,	,,	,,	,,	,,

Reg. No. 155, Wr., I.—June 94—6,000.

Zinco., S. G. O., Calcutta.

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.

Reg. No. 15, Wr., I.—June 94.—5,000.

Zinco, Calcutta.

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

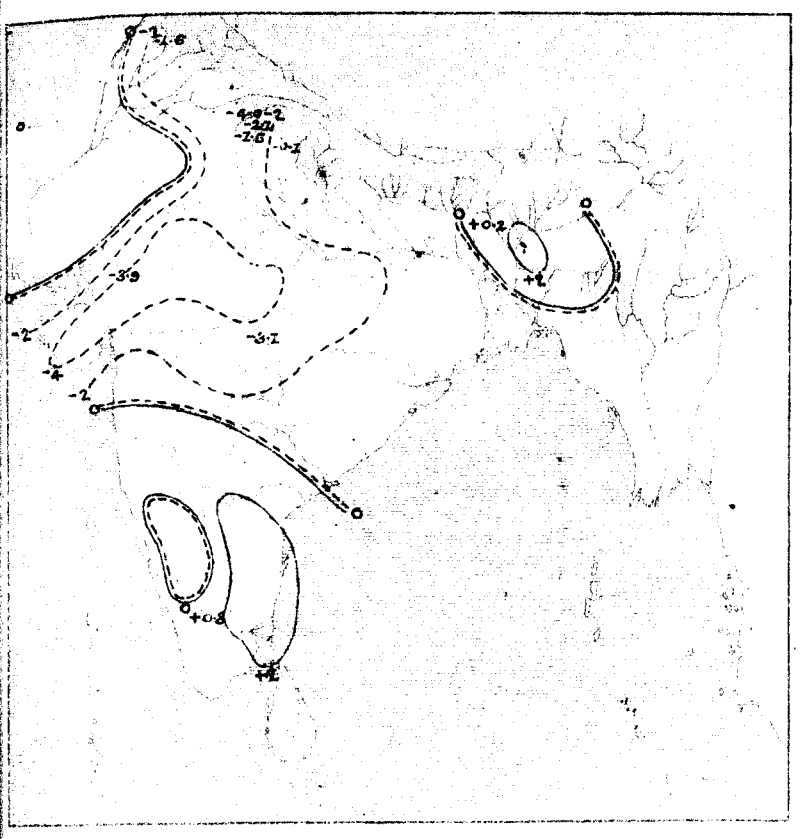
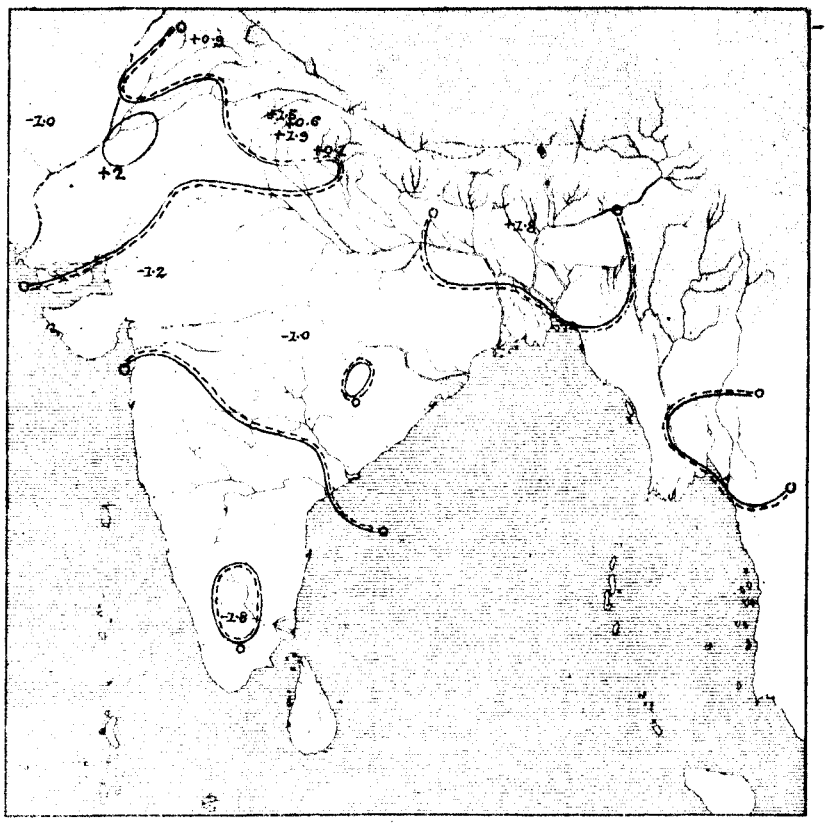


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

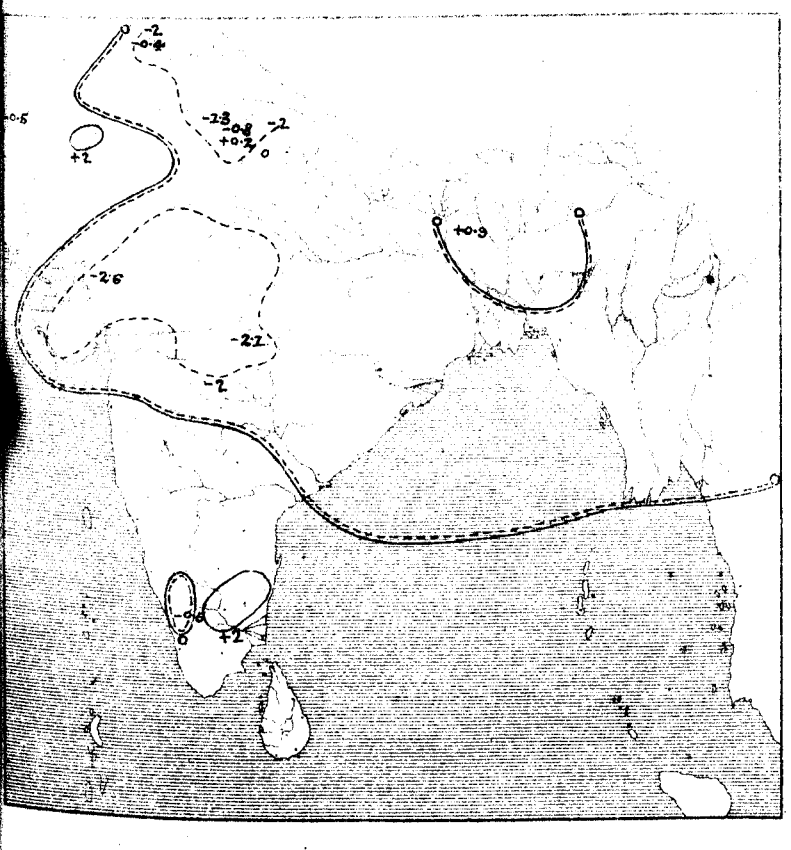
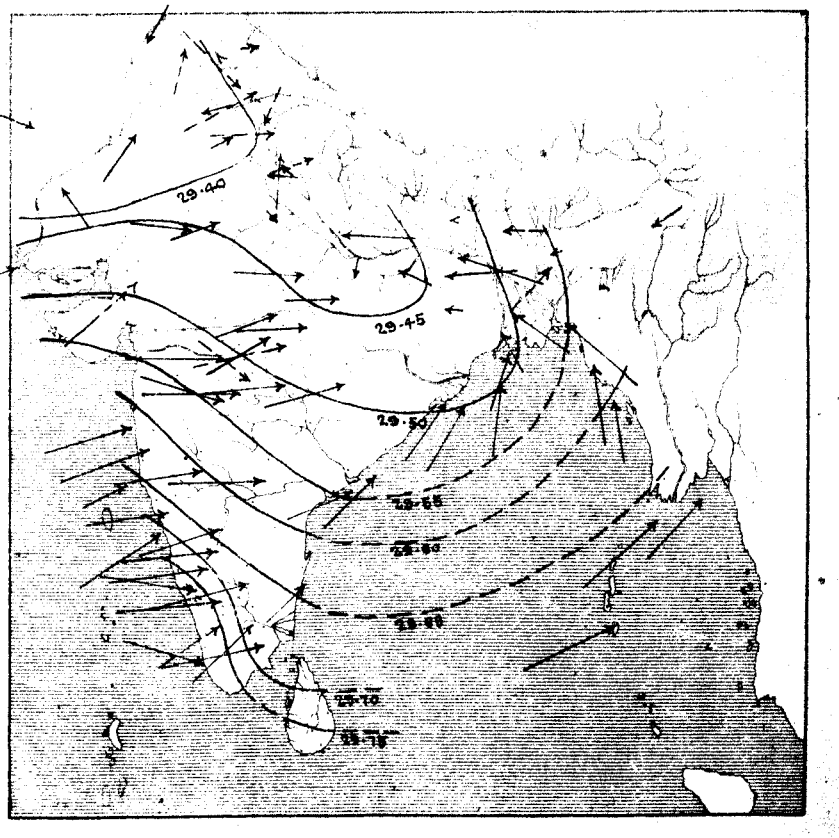


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF JUNE 1894.



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 of the resultant; a length of ⅝th of an inch being equal to 100 per cent.

N N P.

Reg. No. 155, Wr., I.—June 94.—5,000.

Zinco., S. I. O., Calcutta.

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. 165, Wr., I.—June 94.—6,000. Zinco., S. I. O., Calcutta.

N. N. P.

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 51 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 name of the districts 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 figures.

1. Tenasserim
2. Lower Burma
3. Central do.
4. Upper do.
5. Arakan
6. Eastern Bengal
7. Assam (Surma)
8. Do. (Brahmaputra)
9. Deltaic Bengal
10. Central do.
11. North do.
12. Orissa
13. Chota Nagpore
14. Behar (South)
15. Behar (North)
16. North Western Provinces (East)
17. Oudh (South)
18. Do. (North)
19. North Western Provinces (Central)
20. Do. do. (West)
21. Do. do (Submontane)
22. Punjab (South)
23. Do (Central)
24. Do. (Submontane)
25. Do (Hill Districts)
26. Do. (North West)
27. Do. (West)
28. Malabar
29. Madras (South Central)
30. Coorg
31. Mysore
32. Konkan
33. Bombay Deccan
34. Hyderabad (North)
35. Khandeish
36. Berar
37. Central Provinces (West)
38. Do. (Central)
39. Do. (East)
40. Gujarat
41. Kathiawar
42. Sind
43. Central India (East)
43(a). Do. do. (a)
44. Rajputana (East) Central India (West)
45. Rajputana (West))
46. East Coast (North)
46(a). Do. do. (a)
47. Hyderabad (South)
48. Madras (Central)
49. East Coast (Central)
50. East Coast (South)
51. Madras (South)

Litho. S. I. O., Calcutta.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JULY, 1894.

INTRODUCTION.

THIS Review of the weather in India during the month of July 1894 is based on observations taken daily at 8 A.M, at 203 stations and on additional observations taken at 10 A.M. and 4 P.M. at 89 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 July, 1894.

The south-west monsoon circulation is usually fully established over nearly the whole of India before the end of June, and prevails with great steadiness during the whole of July. If the monsoon currents are feebler than usual, the rains may be considerably delayed in North-Western and Central India, and not be fully established until the middle or end of July.

The month is hence usually a period of frequent, and in some districts, of almost constant, rainfall, and of comparative uniformity of temperature and of high humidity over the greater part of the country. The only areas in which the rainfall is small in amount, and in which hot weather conditions continue in a somewhat mitigated form, are Sind, North-West Rajputana and the West Punjab.

The distribution of rainfall during the month depends largely upon the relative strength of the two branches of the monsoon current. The Bombay branch advances usually in an easterly direction across the Peninsula, and in a north-easterly direction across Central India and Rajputana towards the East Punjab. The Bay of Bengal branch of the current in part advances over Burma and in part crosses the Bengal coast, and is deflected westwards up the Gangetic valley towards the Punjab. The goal of both branches of the monsoon current would hence appear to be the Punjab. But the greater part of the ascensional motion, which is the continuation of the horizontal movements, takes place in the Deccan, Central India and the Gangetic plain, as well as in the coast districts, all of which receive more or less general and heavy rain during the month. It is only when at least one branch of the monsoon current is blowing strongly that humid winds advance into the Punjab and give fairly general rain, chiefly in the eastern districts.

Between the two areas in which the two branches of the monsoon circulation exclusively prevail, is a long narrow belt of country which forms a kind of debatable ground between the two currents and in which there is much interaction. In this belt pressure is somewhat lower than it is either further to the north or to the south, and hence it forms a trough of low pressure. The trough in July usually stretches from Orissa through Chota Nagpur to Upper Sind or the South-West Punjab.

An important feature of the meteorology of the month is the occasional formation of shallow cyclonic storms in the north of the Bay of Bengal or South Bengal. They usually advance in a west to west-north-west direction along the trough of low pressure. These cyclonic whirls draw into them the humid winds advancing across the coasts of India, and discharge their moisture as more or less heavy cyclonic rainfall over the areas they traverse. They hence tend to make the rainfall distribution of the month more irregular in Northern and Central India than it would otherwise be. On the other hand, their advance westwards is always accompanied with and followed by a strong influx of humid winds across the Bengal coast. Hence they give rise at the same time to more or less general rain over Northern India.

The chief feature of the meteorology of July 1894 was a series of four cyclonic storms which advanced across Northern India from east to west. They determined very largely the distribution of the rainfall of the month. They differed very considerably in their features, but were all alike remarkable for their extent and intensity.

A small cyclonic storm which had formed in the north-west angle of the Bay on the 28th and 29th of June, passed across the Orissa coast on the 30th, into Chota Nagpur on the 1st. It filled up on that day, but the monsoon winds in its rear continued to give heavy rain. The winds and rain were chiefly determined to Central Bengal which hence received excessive rain on the 2nd. A depression formed in this area of heavy local rainfall on the 3rd. It was of slight intensity, the depression at the centre not exceeding an eighth of an inch. It commenced to march westwards on the 3rd and was in Bihar on the 4th, the centre at 8 A.M. being midway between Patna and Gaya, and in the central districts of the North-Western Provinces on the 5th when the centre at 8 A M. was near Cawnpore. During this period the indraught to it gave moderately heavy rain to Bengal, Chota Nagpur, Bihar and the North-Western Provinces. It advanced slowly during the next 24 hours and also filled up to some extent, and was on the morning of the 6th shown as a very feeble cyclonic circulation lying between Agra, Lucknow and Nowgong. It was unchanged in position on the 6th and 7th, but was so shallow as to be apparently of little importance and the Bengal current in the Gangetic plain which had maintained it hitherto began to fall off. On the 7th, the Bombay monsoon current which had been strengthening in Central India and Rajputana during the previous 48 hours, gave increasing rainfall to the storm area and the districts to the west of it, more especially to Bundelkhand, where large amounts were registered at 8 A M. of the 8th, as, for example, 10·53 inches at Indergarh in the Kotah State. Pressure gave way rapidly in the storm area and a well marked depression, with its centre midway between Agra and Jhansi, was in existence on the morning of the 8th. It resumed its westerly march and the centre was a little to the east of Ajmere in Central Rajputana on the morning of the 9th and crossed the Sind Frontier on the morning of the 10th. It continued to move with a nearly uniform velocity of about 12 miles per hour and was to the north-west of Kurrachee on the morning of the 11th, but broke up during the day under the obstructive action of the Hala mountains and the hills of Southern and Central Baluchistan. The storm during the later stages gave a moderately heavy burst of rain to Rajputana and Sind and thundershowers in the Bolan Pass and British Baluchistan generally. Kurrachee received the large fall of 3·48 inches on the 11th.

Temperature at the commencement of the month was in slight to large excess in the peninsula and in general defect in Northern India. The excess was largest in the Coromandel coast districts, more especially at Madras where the mean temperature of the 24 hours preceding 8 A M. of the 1st was 7° above the normal. The rainfall due to the storm in the drier parts of North-Western India cooled the air considerably, and temperature was very largely in defect on the 9th and following days in North-Western India. Thus on the 10th, the mean temperature averaged nearly 6° in defect in the Punjab and Central India and 5° in Sind and Rajputana. Temperature had also fallen in the peninsula and was below the normal on that date over the whole of India except North Bengal where it was in slight excess due to less rainfall than usual.

The Bengal current, as has been stated above, began to slacken in the Gangetic plain on the 7th and 8th and was very feeble on the 10th. Light variable airs and calms obtained in the north-west angle of the Bay on the 9th and 10th whilst moderate to strong monsoon winds continued in the centre and south. A whirl formed rapidly in the north-west of the Bay off the Orissa coast and was of moderate intensity on the morning of the 11th. The pressure conditions were very abnormal at this time. Pressure was largely in excess in North-Eastern India and Burma and was increasing rapidly in Burma. The high pressure to the east of the storm area gave very steep gradients and hence strong cyclonic winds prevailed over a large area. The storm began to move during the night of the 11th and the centre crossed the Orissa Coast at Puri about 3 A.M of the 12th. It thence advanced in a straight west-north-west course at a uniform rate of nearly 25 miles per hour across the head of the peninsula. The centre was near Sambalpur at 8 A.M. of the 12th and near Indore at the same hour of the 13th and passed through Lower Sind on the morning of the 14th, breaking up on that day amongst the hills of Southern and Central Baluchistan, to which it gave numerous heavy thundershowers. The storm advanced too rapidly to give large total quantities of rain to the areas over which it passed.

Orissa, the Central Provinces, Central India, South-West Rajputana and Lower Sind received moderate to heavy rain. Kurrachee obtained a total of 4·20 inches during the 48 hours preceding 8 A.M of the 15th.

The preceding storm during its later stages had been maintained by the Bombay current, and the Bengal current had fallen off rapidly in strength on the 13th in North-Eastern India and the north of the Bay. Strong monsoon winds continued in the centre of the Bay and another cyclonic whirl hence commenced to form in the north-west of the Bay. It formed on the 15th and 16th, more slowly than the previous two storms, and began to move slowly towards the North Orissa coast. It was a large and well-developed depression on the morning of the 17th, when pressure was at least a third of an inch below the normal near the centre. The storm consisted of a large central area of nearly uniform pressure with the steepest gradients in the eastern quadrant. The centre crossed the Orissa coast near Balasore about noon of the 17th and then advanced in a nearly due westerly direction at a rate slightly varying from day to day, but averaging 9 miles per hour. The centre was near Sambalpur at 8 A.M. of the 18th, a little to the east of Nagpur at the same hour on the 19th, near Pachmarhi on the 20th, and between Indore and Neemuch at 8 A.M of the 21st. The storm had to some extent changed its character during this period, due to the fact that the Bengal current had gradually ceased to maintain it whilst the Bombay current poured into it humid winds in increasing volume and intensity. Thus the wind at Bombay which was blowing with a velocity of 20 miles per hour on the morning of the 19th had increased to 42 miles per hour on the 21st. The central area of nearly uniform pressure had increased considerably in extent, and the steepest gradients were in the southern quadrant of the storm area and were unusually large. The storm had advanced slowly through the Central Provinces and had hence given prolonged heavy downpours which had flooded the rivers.

The storm continued to advance in a west-north-westerly direction during the next 24 hours, and the centre was near Mount Abu on the morning of the 22nd. The indraught to it had caused a large increase in the strength of the winds on the Cutch and Kathiawar coasts and strong stormy winds were now blowing, which gave an excessive cyclonic and torrential downpour in Cutch and Kathiawar. The result of this excessive rainfall was to originate a small secondary stationary depression in Cutch, whilst the primary depression continued to advance in the same direction as before. The action of the secondary depression in Cutch diminished the indraught to the primary travelling cyclonic storm and it hence passed into Lower Sind on the 23rd as a moderate depression. The secondary depression in Cutch was also feebler than on the 22nd and both depressions filled up and disappeared during the next 24 hours. A noteworthy feature of the storm was the excessively strong winds (intensified monsoon winds) which it occasioned on the Bombay, Kathiawar, Cutch and Sind coasts. These gave stormy weather and a very high sea off these coasts for a period of about three days. Another important feature was the excessively heavy and prolonged rain it gave during its slow progress to the Central Provinces, South-West Rajputana, Gujarat, Khandesh, Kathiawar, Cutch and Sind. The rivers were hence all very heavily flooded and breaches were made on many of the railways, which caused a partial suspension of traffic for a short period.

Temperature was generally below the normal during the passage of the second cyclonic storm of the month and at the commencement of the third cyclonic storm. As the latter advanced across Northern India, temperature increased in its rear and was on the 23rd in slight to moderate excess over the whole of India, except Gujarat, Central India and Lower Sind and also in Burma.

The Bengal current fell off steadily in North-Eastern India, and at the head of the Bay on the 20th and 21st, and was very feeble in that area on the 22nd when the mean velocity of the winds in Bengal barely averaged 3 miles per hour. Strong monsoon winds continued in the centre and north of the Bay, and Burma was receiving general and moderate to heavy rain A depression began to form on the 23rd in South Bengal, and heavy local rain fell in that area on the 23rd and following days. No rain was falling at this time in North Bengal, Bihar and Chota Nagpur. The disturbance intensified rapidly on the 23rd and was on the morning of the 24th a deep depression with very steep gradients in the southern quadrant. Stormy weather with winds of force 9 to 12 prevailed in the north-west angle of the Bay. The centre at 8 A.M. was nearly midway between Saugor Island and Calcutta. The wind velocity at Saugor Island at that hour was 64 miles per hour, whilst at Calcutta it was only 8 miles, a striking example of the great difference of the air movement in the north and south quadrants of these storms. The storm centre marched at first very slowly west north-westwards and was between Bankura and Midnapore at 8 A.M. of the 25th. It passed through Chota Nagpur on the 26th and Baghelkhand on the 27th. The storm had, however, filled up very rapidly during its march across Chota Nagpur and was a very shallow depression on the 27th. It filled up during the next 24 hours. The storm was hence remarkable for its great intensity in South-West Bengal and for the unusual rapidity with which it filled up, as soon as it began to advance into the interior. Strongish monsoon winds continued to blow at the head of the Bay during the remainder of the month and were on the 29th chiefly directed to Central and East Bengal. They gave rise to heavy rainfall in

that area on the 29th and a shallow depression hence formed in that area on the 30th. It however disappeared during the next 24 hours and ordinary monsoon conditions of temperature and humidity prevailed at the end of the month over nearly the whole of India.

Pressure at the end of the month was considerably in excess in the peninsula and in defect in the submontane districts of Northern India, and the trough of low pressure was displaced to the foot of the hills. Westerly winds hence prevailed in the Gangetic plain, and a partial break in the rains which had commenced in the Punjab and Rajputana and the western districts of the North-Western Provinces in the third week of the month continued until the first week of August.

Pressure.—Although the meteorology of the month was characterised by the occurrence of an abnormally large number of severe cyclonic storms and hence by large and frequent local changes of pressure, the mean pressure conditions of the month agreed very closely with the normal. The mean pressure of the whole Indian area was only ·006″ in excess of the normal. Pressure was in slight defect relatively to the general condition in the peninsula, Central India and Burma, and in slight excess in Northern India. The pressure anomalies exceeded ·02″ in two areas. The first included the North, Central and West Punjab in which they averaged ·026″, and the second, North Bengal where they averaged ·024″. Pressure was slightly in excess at the hill stations in Northern India, but by amounts somewhat smaller than at the neighbouring plain stations, thus indicating that the vertical distribution of pressure was also approximately normal.

The following table gives pressure variation data for eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	"	"
Burma Coast and Bay Islands	−·004	−·010
Burma Inland	−·016	−·022
Assam	+·007	+·001
Bengal and Orissa	+·007	+·001
Gangetic Plain and Chota Nagpur	+·014	+·008
Upper Sub-Himalayas	+·026	+·020
Indus Valley and North-West Rajputana	+·021	+·015
East Rajputana, Central India and Gujarat.	+·005	−·001
Deccan	+·002	−·004
West Coast	−·005	−·011
South India	−·003	−·009

Temperature.—The mean temperature conditions of the month were determined by the rainfall distribution. The rainfall of the month was in considerable defect in Southern India and Central Madras and also in Assam, North Bengal and North Bihar, and was more or less in excess in the remainder of India; the excess relatively to the normal being greatest in the dry districts of Sind, Rajputana, Central India and the Punjab. The mean day temperature was above the normal in North Bengal and North Bihar and in the peninsula south of the 20th parallel of latitude. The excess was greatest in the Madras coast districts south of Cocanada, ranging in amount from 2°·3 at Masulipatam to 3°·3 at Negapatam. The mean day temperature was considerably in defect in North-Western India, and largely in defect in Lower Sind, Cutch, Kathiawar, South-West Rajputana and the greater part of the Punjab. The deficiency exceeded 5° at the following stations: Rawalpindi (−7°·6), Ludhiana (−7°·2), Rajkot (−6°·2), Dera Ismail Khan (−6°·0), Sialkot (−5°·8) and Lahore (−5°·6).

The mean minimum or night temperature of the month was slightly above the normal in the peninsula to the south of the parallel of 19° N. Lat. and was below it elsewhere. The variations were small and less than 2° in amount, except at Bhuj (−2°·6), Kurrachee (−2°·6) and Deesa (−2°·0).

The mean temperature was in slight excess in the peninsula south of Lat. 19° N. and in Assam and North Bengal. It was in defect, generally, by small amounts over the remainder of India, but the deficiency was moderate to considerable in amount, ranging between 2° and 4°, in the Punjab, Rajputana, Kathiawar, Cutch and Sind. The deficiency exceeded 3° in the case of the following stations:—Ludhiana (−4°·2), Rajkot (−4°·0), Dera Ismail Khan (−3°·9), Sialkot (−3°·7) and Deesa (−3°·4).

The following table gives temperature variation data of the month for the eleven meteorological provinces of India.

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.
	°	°	°
Burma Coast and Bay Islands	−0·7	0	−0·4
Burma Inland	−1·9	−0·5	−1·2
Assam	+0·3	−0·2	+0·1
Bengal and Orissa	−0·6	−0·6	−0·6
Gangetic Plain and Chota Nagpur	−0·4	−0·6	−0·5
Upper Sub-Himalayas	−3·7	−0·9	−2·3

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.
	°	°	°
Indus Valley and North-West Rajputana.	−3·4	−0·9	−2·2
East Rajputana, Central India and Gujarat.	−3·0	−1·2	−2·1
Deccan	−0·7	−0·4	−0·6
West Coast	+0·5	+0·2	+0·4
South India	+1·5	+0·6	+1·1

Winds.—Were slightly stronger and more westerly than usual at Port Blair and the Burma coast stations, thus indicating probably a greater diversion of the Bay current than usual to Burma. Winds were stronger than the normal in Bengal and the Gangetic Plain, and were more easterly than usual in Assam and Bengal, more especially the eastern districts. The current was hence diverted to a larger extent than usual from Assam and North Bengal and directed to the Gangetic plain and Central India.

The Bombay current, as judged by the strength of the winds at the west coast stations, was on the average of the month of normal strength. Winds were normal in strength and direction in the Deccan, Central Provinces and Central India. The mean position of the trough of low pressure and of very variable winds which separated the areas in which the two branches of the monsoon current prevailed during the month, ran from Burdwan through Hazaribagh, Allahabad, and Agra to Mooltan.

Humidity and cloud.—The mean humidity conditions of the month were practically normal in Burma and North-Eastern India. Humidity was slightly below the normal in Assam but the variations were small. Humidity was considerably or largely in excess in North-Western and Central India and the Western Himalayas. The excess was greatest at Murree (+15), Lahore (+16), Ludhiana, and Peshawar (+13) and Leh, Ajmere, and Deesa (+11). Humidity was in slight to moderate excess in the Central Provinces, the west coast districts, and the West Deccan. It was below the normal in the South and East Deccan and Southern India. The deficiency was most marked in Southern India at Trichinopoly (—7), and Salem and Bellary (—5).

There was more cloud than usual over the whole of Burma and Northern and Central India, except in Assam and North Bengal. The deficiency was greatest in Upper Assam at Sibsagar (—1 6). The increased cloud was most marked in Upper India, including the Punjab, Sind and the greater part of Rajputana, where the mean cloud amount of the month averaged nearly 2·0 above the normal. It was also in excess, but to a smaller degree, in the west coast districts, Mysore, the Central Provinces, and North Madras. There was a considerable deficiency in Southern India, more especially at Trichinopoly (—2·0).

The following table gives variation data of the mean aqueous vapour pressure, mean humidity, and mean cloud amount of ten meteorological provinces for the month of July 1894:—

METEOROLOGICAL PROVINCE.	VARIATION OF		
	Mean aqueous vapour pressure from normal.	Mean humidity from normal.	Mean cloud amount from normal.
	"		
Burma Coast and Bay Islands .	+·007	+ 1	+1·2
Assam	−·004	− 1	−0·3
Bengal and Orissa . . .	−·032	0	+0·4
Gangetic Plain and Chota Nagpur.	−·034	− 2	−0·2
Upper Sub-Himalayas . .	+·050	+10	+1·2
Indus Valley and North-West Rajputana.	+·044	+ 6	+1·6
East Rajputana, Central India and Gujarat.	+·018	+ 6	+0·6
Deccan	+·002	+ 2	+0·5
West Coast	+·002	0	+0·2
South India	−·029	− 5	+0·2

Rainfall.—The distribution of the rainfall of the month was in part determined by the general set of the monsoon currents and in part by the tracks of the numerous and unusually vigorous cyclonic storms of the month. Burma received heavier rainfall than usual due to the Bay current being diverted more largely towards that area than usual, whereas Assam, North Bengal and North Bihar obtained less than the normal in consequence of the frequent deflection of the currents westwards from these areas by the action of the cyclonic storms of the month. The rainfall was below the normal in Southern India for a similar reason. It was above the normal over the greater part of the remainder of India, where, however, it was more irregularly distributed than usual. It was more or less considerably in excess in Orissa, the Central Provinces, Central India and Berar, and very largely in excess in Sind, Rajputana, Kathiawar, Cutch and British Baluchistan, all of which districts obtained heavy cyclonic downpours during the first, second and third storms of the month. The following

table gives comparative rainfall data of the eleven meteorological provinces of the Empire :—

Meteorological Province.	Rainfall.		
	Mean actual for July 1894.	Mean normal for July.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	36·46	29·51	+4·95
Burma Inland	13·47	9·46	+3·59
Assam	8·53	16·54	−8·01
Bengal and Orissa	15·71	14·15	+1·50
Gangetic Plain and Chota Nagpur.	12·90	12·16	+0·60
Upper Sub-Himalayas	13·21	12·18	+1·03
Indus Valley and North-West Rajputana.	7·43	3·23	+4·25
East Rajputana, Central India and Gujarat.	13·92	11·28	+1·00
Deccan	11·50	12·37	+1·01
West Coast	26·46	28·67	−3·26
South India	4·28	6·23	−1·30

Atmospheric Pressure.

The mean distribution of pressure differed very slightly from the normal and gave little indication of the large pressure changes which occurred during the month, due to the passage of a series of cyclonic storms unique in the meteorology of India in the month of July.

The mean pressure of the whole area was very slightly (+·006″) above the normal. Pressure was in slight relative defect in the peninsula and Central India, South Bengal and Burma, and was in slight relative excess over the remainder of India comprising the greater part of Northern India.

The local variations from the general condition as measured by the pressure anomalies were small in amount, and less than ·02″ over the whole of India, with the exception of the North and West Punjab and North Bengal for which data are given below:—

Area.	Station.	Variation from normal of 8 A.M. pressure.	Anomaly.
		″	″
Punjab	Mooltan	+·037	+·031
	Peshawar	+·034	+·028
	Rawalpindi	+·031	+·025
	Sialkot	+·027	+·021
	Delhi	+·029	+·023
North Bengal	Jalpaiguri	+·6	+·030
	Dinajpur	+·026	+·020
	Bogra	+·027	+·021

The mean pressure of the month was also in excess at the hill stations in Northern and Central India (with the exception of Mount Abu), but to a smaller extent than at the plain stations. The differences Hill—Plain, or the vertical pressure anomalies, were however in almost all cases small, thus showing that there was no persistent abnormal feature in the vertical distribution of pressure during the month. The following gives comparative data for six pairs of stations:—

Hill Station.	Variation from normal pressure.	Plain Station.	Variation from normal pressure.	Vertical pressure anomaly (Hill-Plain).
	″		″	″
Leh	+·009	Lahore	+·039	−·030
Murree	+·006	Rawalpindi	+·031	−·025
Simla	+·009	Ludhiana	+·023	−·014
Chakrata	+·019	Roorkee	+·019	0
Ranikhet	+·027	Bareilly	+·032	−·005
Quetta	+·005	Jacobabad	+·021	−·016

Barometric Depressions and Cyclonic Storms of the Month.

Cyclonic storm of the 28th June to the 2nd July.—As has been already stated this month was remarkable for a series of unusually large and severe cyclonic storms. The first of the series was a feeble storm which began to form on the 28th of the previous month. The following gives a short account of this cyclonic storm of the 28th June to the 2nd July. As stated in the June monthly weather review, the preceding storm, which was the chief feature of the weather of the fourth week of that month, filled up on the 27th or 28th after having given very heavy rain in the eastern and southern districts of the North-Western Provinces and Bundelkhand. Whilst the storm was breaking up on the 27th, winds fell off rapidly in strength in South Bengal and the north-west of the Bay of Bengal, and on the morning of the 28th they were shifting round to northerly directions at the coast stations of Orissa and Bengal, the usual antecedent to the formation of a cyclonic storm in the north-west angle of the Bay. A very shallow depression covered the north-west angle on the morning of the 29th. Winds were moderate in the centre and squally in the north of the Bay. Skies were clouded and winds light and irregular in Bengal, and light showers had fallen over the greater part of the province.

30th June.—The depression was unchanged in position, covering the north-west angle of the Bay as on the previous day. The following gives 8 A.M. observations for coast stations and ships in the north-west angle :—

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 .	29·533	+·014	—·023	SE	17	8	0·28	Sea slight.
Balasore . .	29·520	—·004	—·024	NNW	7	8	0·51	...
False Point .	29·571	+·032	+·014	W	14	10	1·35	...
Puri . .	29·576	+·034	?	N	17	10	0·12	Sea smooth.
Eastern Channel	29·603	+·013	?	W	5	10	...	Passing rain squalls.

The disturbance, as shown by the observations, was hence very feeble. Winds were cyclonic in direction, but of slight intensity, and the rainfall in Orissa and South Bengal was by no means heavy.

1st July.—The depression had advanced slowly to the north-west during the previous 24 hours, and now lay over the south-east districts of Chota Nagpur and the adjacent districts of South-West Bengal. The barometric changes accompanying its advance were very small, thus indicating that the storm was of very slight intensity. The following gives 8 A M. observations in the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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 . . .	29·530	+·010	—·026	WSW	6	2	2·03
Saugor Island . .	29·537	+·004	—·023	WSW	23	10	0·22
Calcutta . . .	29·518	—·030	—·048	S	6	10	0·08
Burdwan . . .	29·526	—·028	—·036	ENE	3	10	0·03
Chaibassa . .	29·529	—·011	—·016	NW	4	8	0·20

The centre of the depression was in about Lat. 22°N. and Long. 87°E. Winds had strengthened considerably on the Bengal coast, and moderate monsoon winds of force 4 to 5 now obtained over the north and centre of the Bay. The rainfall was light in the storm area but was increasing in amount in East Bengal.

2nd July.—Large pressure changes were now in progress in Assam and North Bengal which immediately preceded the formation of the second storm of the month. The depression in South-West Bengal and Chota Nagpur on the previous day had filled up and disappeared. Strong winds were blowing on the Bombay coast, and westerly winds were extending their influence eastwards across Chota Nagpur into West Bengal, whilst moderate to fresh monsoon winds prevailed at the head of the Bay.

The storm under discussion was hence of feeble intensity throughout. It formed in the north-west angle of the Bay on the 28th and 29th and crossed the Balasore coast on the 30th and advanced into Chota Nagpur on the 1st, where it filled up during that day. The following gives rainfall data for the storm period :—

Division.	Average actual rainfall of 24 hours preceding 8 A.M. of date.					Total of Period.
	June.			July.		
	28th.	29th.	30th.	1st.	2nd.	
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Orissa . .	0·67	1·27	0·96	0·29	0·37	3·56
South-West Bengal.	0·45	0·26	0·11	0·20	0·76	1·78
Chota Nagpur	0·77	0·43	0·46	0·39	0·22	2·27
South Bihar .	0·53	0·64	0·28	0·47	0·34	2·26

The second storm of the month, which began to form on the 2nd in Central Bengal, crossed from Bengal to Sind and gave a heavy downpour of rain to nearly the whole belt of country over which it advanced. The following gives an account of that storm :—

Cyclonic (land-formed) storm of the 3rd to the 11th July.—It has been stated above that pressure gave way rapidly in Assam and North-East Bengal during the 24 hours preceding 8 A.M. of the 2nd and was upwards of an eighth of an inch below the normal in that area. At that hour strong westerly winds were blowing across Chota Nagpur, and moderate to fresh south-west monsoon winds across the Bengal coast. Heavy rain fell during the day locally in Central Bengal, and a depression formed rapidly in that area.

3rd July.—Pressure had fallen over the whole of India. A small but fairly well marked depression and cyclonic circulation was shown in Central Bengal. The following data indicate its position and character at 8 A.M. :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Mymensingh	29·465	—·004	—·137	SSE	7	10	2·74
Dhubri . .	29·483	—·007	—·125	NE	5	10	0·22
Dinajpur .	29·445	—·035	—·140	ENE	2	10	1·10
Bogra . .	29·438	—·013	—·130	WNW	3	9	2·20
Berhampore .	29·463	—·008	—·106	Calm	4	10	0·69
Calcutta .	29·480	—·006	—·089	W	5	10	0·15

The centre of the depression was near Bogra in about Lat. 25¼° N. and Long. 89° E., where pressure was about an eighth of an inch below the normal. The following gives the heaviest rainfalls recorded in Bengal during the previous 24 hours :—

District.	Station.	Heaviest rainfall in past 24 hours.
		Inches.
Pabna	Pabna	12·22
Rajshahi	Nator	5·55
Dinajpur	Mahadebpur . . .	4·98
Jessore	Jessore	4·35
Nadia	Chuadanga . . .	4·46
Faridpur	Goalundo . . .	4·35

The rainfall was hence heavy in the area in which the depression was forming, and the fall at Pabna indicates that in a portion of the area it was torrential in character. The weather, as experienced at the entrance to the Hooghly, is described as follows. "Weather unsettled and threatening to the eastward, and fresh south-west breezes during the day."

Pressure, it may be noted, had decreased briskly in Upper India, and steep gradients obtained in North-Western India and the Peninsula. Winds were very strong on the west coast and their velocity hence very considerably above the normal of the month.

4th July.—Pressure had increased slightly to briskly over the whole of Northern and Central India with the exception of Bihar and Chota Nagpur, where it had fallen slightly. The depression had advanced from Central Bengal to Bihar during the previous 24 hours, and the centre was in Lat. 25¼° N., and Long. 85¼° E. at 8 A.M. The following gives data for stations in the low pressure area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Hazaribagh .	29·456	—·004	—·093	Calm.	10	10	0·61
Gaya . .	29·450	—·021	—·094	WNW	6	8	1·02
Naya Dumka .	29·489	+·032	—·056	SSW	4	3	0·01
Bhagalpur .	29·473	+·024	—·065	SE	0	8	0·10
Patna . .	29·445	—·040	—·107	E	2	10	2·95
Arrah . .	29·436	—·020	—·081	NE	1	10	0·64

Winds were hence feeble in the depression area. They were unchanged in strength in the north of the Bay and South Bengal. Moderately heavy rain had fallen in Bihar and Chota Nagpur and moderate rain in Bengal. Falls exceeding 4 inches were recorded at the following stations :—

District.	Station.	Heaviest rainfall in past 24 hours.
		Inches.
Muzaffarpur . . .	Hajipur . . .	4·50
Sonthal Parganas .	Madhupur . . .	4·30
Lohardaga . . .	Ranchi . . .	4·34

The rainfall in the storm area was hence less in amount than on the preceding day.

The chief feature in the weather at this time was the strength of the Bombay current. Winds were very strong on the Sind, Kathiawar and Konkan coasts and in the Deccan, Central Provinces and West Rajputana. The following gives comparative data for six stations:—

STATION.	HOURLY VELOCITY, IN MILES.		
	Actual.	Normal.	Per centage variati on.
Bombay	17	19	−11
Sholapur	16	13	+23
Rajkot	15	15	0
Bhuj	24	17	+41
Mount Abu	16	11	+45
Pachmarhi	15	10	+50

5th July.—Pressure had increased briskly to rapidly in Upper India and briskly in North-Eastern India and Burma and was unchanged in amount in the North-Western Provinces, to which the cyclonic storm was now transferred. The following gives 8 A.M. data of stations in the depression area:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.
	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	29·528	+·032	+·002	W	10	10	0·06
Allahabad	29·518	+·038	−·002	WSW	6	10	0·09
Lucknow	29·506	+·024	−·009	E	...	8	0·16
Cawnpore	29·484	+·006	?	ESE	5	9	1·58
Agra	29·522	+·018	+·003	NW	3	10	1·51
Nowgong	29·518	−·004	−·016	SW	4	10	0·59

The depression was now feeble, pressure being very slightly below the normal in the central area. The centre of the depression at 8 A.M. was near Cawnpore, in about Lat. 26°N. and Lat. 79½°E. and had hence advanced about 390 miles during the previous 24 hours. The Bombay current was now beginning to feed into the storm and had strengthened slightly on the Konkan coast. The Bengal current had strengthened at the head of the Bay, where weather was squally with fresh to strong south-west winds, and winds were more westerly than during the previous 48 hours. Moderate general rain had fallen in Bengal, Bihar and Chota Nagpur, and also in the east and central districts of the North-Western Provinces. Falls slightly exceeding 2 inches were recorded at several stations in the Cawnpore, Jalaun and Etawah districts.

6th July—Pressure had increased generally, but the changes were small, except in the North-West Frontier districts, where pressure had increased briskly. The depression had nearly filled up, but a fairly well marked cyclonic circulation was shown in the area defined by the stations of Agra and Jhansi, which was the continuation of the depression and disturbance of the previous day. The following gives data of five stations in the area of slight disturbance:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.
	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 per hour during past 24 hours.		
	"	"	"				Inches.
Cawnpore	29·516	+·032	?	S	3	10	0·14
Mainpuri	29·502	+·001	?	Calm.	1	10	0·03
Agra	29·518	−·004	+·004	NE	3	9	0·76
Jhansi	29·540	−·002	+·001	SW	3	8	0·15
Nowgong	29·543	+·025	+·011	SW	5	10	0·48

Pressure was normal in amount in the area defined by these stations and winds were light, considerably lighter than the normal winds of the season.

The centre of the residual depression was probably midway between Cawnpore and Agra. Moderate rain had fallen over the whole of the North-Western Provinces. The rainfall showed little or no tendency on this day towards concentration in the area of disturbance.

Strong winds continued at the head of the Bay, and Bengal and Bihar had received general moderate to heavy rain. Winds were slightly weaker on the Bombay coast. The Bombay monsoon current had given general rain to the west coast districts, Southern India, the Central Provinces, Rajputana and the East Punjab during the previous 24 hours.

7th July.—Pressure had decreased except in Assam and Bengal where it had risen slightly. It had fallen rapidly in the West Punjab and Upper Sind and briskly in the remainder of North-Western India and in Central India. A residual depression and cyclonic circulation was shown on this day over the same area in the North-Western

Provinces as on the previous two days. This is indicated by the following observations :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Cawnpore . .	29·491	−·025	?	ESE	3	5	*Nil*
Mainpuri . .	29·482	−·020	?	ESE	1	10	0·08
Agra . . .	29·466	−·052	−·046	SE	3	10	0·03
Jhansi . . .	29·463	−·077	−·068	NNE	5	6	1·38
Nowgong . .	29·474	−·069	−·057	S (?)	6	10	3·42

Winds were very light in this area, and the rainfall was smaller in amount over the North-Western Provinces than on the previous day, but heavy rain had commenced to fall to the west of the residual depression in Bundelkhand and the neighbouring districts, due to the increasing indraught of the Bombay current to the area of disturbance. The following gives the more noteworthy rainfalls of the previous 24 hours :—

District.	Station.	Heaviest rainfall in 24 hours.
		Inches.
Nagode	Nagode	9·45
Rewah	Sutna	8·25
Bundelkhand . . .	Chatturpur . . .	6·12
Kotah	Orchha	6·10
	Panna	4·09
	Mangrol	10·02
	Sultanpur . . .	7·00
Jhansi	Mahroni	8·55
	Lalitpur	6·50

This heavy rainfall due to the Bombay current caused a re-development of the depression during the day.

Winds were lighter in South Bengal and on the Sind and Kathiawar coasts.

8th July.—The pressure changes were large. Pressure had given way very briskly in Burma and in the western districts of the North-Western Provinces and Central India, and had increased briskly in the Punjab. A well-marked low-pressure area was shown over the area covered by the residual cyclonic circulation during the previous two days. The following gives data :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Jhansi . . .	29·398	−·065	−·127	SSW	5	6	0·50
Nowgong . .	29·423	−·051	−·101	SW	10	10	0·14
Cawnpore . .	29·440	−·051	?	SSE	5	10	0·48
Mainpuri . .	29·419	−·063	?	ESE	2	10	0·05
Agra . . .	29·400	−·066	−·115	NE	6	10	0·16
Jeypore . . .	29·457	−·038	−·072	WNW	3	10	1·11

Pressure was an eighth of an inch below the normal in the central depression, the centre of which was nearly midway between Agra and Jhansi in Lat. 26°N., and Long. 79° E. Winds were increasing in the storm area and were now strong in the south and east quadrants. Moderate rain had fallen in the Gangetic Plain and heavy rain in the western quadrant of the depression, as is shown by the following data :—

District.	Station.	Heaviest rainfall in past 24 hours.
		Inches.
Jhansi	Lalitpur	6·17
Kerowlee	Sapotra	4·56
Deoli	Deoli	5·01
Kotah	Indergarh	10·53
Ajmere	Pisangan	5·18
Jeypore	Malpura	6·00
Gwalior	Goona	5·33

Winds were now falling off rapidly in strength at the head of the Bay and in South Bengal, the usual antecedent to the formation of a cyclonic whirl at the head of the Bay during the rains. Winds were, on the other hand, increasing rapidly in strength on the Konkan, Kathiawar and Sind coasts, probably due to the increasing indraught to the depression.

9th July.—Pressure had fallen rapidly in Central Rajputana and had risen in Bundelkhand and the North-Western Provinces. The storm after redeveloping had

commenced to move in a westerly direction, and was now in East Rajputana, the centre being probably in about Lat. 26¼° N. and Long. 74¾° E. The following data show its position and character at 8 A.M. :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Neemuch	29·396	−·124	−·146	SW	16	10	0·07
Jhansi	29·446	+·048	−·081	SW	6	7	0·41
Agra	29·394	−·006	−·122	SE	11	10	0·30
Jeypore	29·370	−·087	−·147	N	3	10	0·07
Ajmere	29·372	−·108	−·152	NE	5	8	1·55

Winds were cyclonic in direction in the area of depression. They had increased on the Konkan and Kathiawar coasts and were considerably above their normal strength. The following gives data for six stations :—

Station.	Hourly Velocity in Miles.	
	Actual.	Normal.
Bombay	24	19
Sholapur	20	13
Rajkot	10	15
Bhuj	22	17
Mount Abu	12	11
Pachmarhi	17	10

Rainfall was increasing in the west coast districts, and heavy rain had occurred in the Central Provinces, Central India and Rajputana. The most noteworthy falls were :—

District.	Station.	Heaviest rainfall in past 24 hours.
		Inches.
Sirohee	Sirohee	5·00
Shahpura	Shahpura	5·18
Ajmere	Bhinai	5·77

The rainfall was more general than on the previous day, but, as hitherto, the heaviest rainfall was received in front of the advancing storm.

Winds had fallen off very rapidly in South Bengal during the previous 24 hours and were now very light. Thus the wind velocity at Saugor Island at 8 A.M. was only 2 miles per hour. The F. L. V. *Hesperus* at the Pilot's Ridge had calms and light variable airs during the day. Conditions at the head of the Bay were hence becoming favourable to the formation of a cyclonic storm in the north of the Bay.

10th July.—Pressure had risen rapidly in East Rajputana and the western districts of the North-Western Provinces, and had fallen slightly in Sind and Kathiawar. The cyclonic storm hence continued to advance westwards and was now entering Lower Sind. The following 8 A.M. observations define its position at that hour :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Bhuj	29·385	−·073	−·154	SW	28	10	4·35
Deesa	29·395	−·037	−·146	SW	13	10	1·02
Mount Abu	...	−·023	−·156	S	11	10	4·29
Pachpadra	29·332	−·048	?	SSE	6	10	5·62
Hyderabad	29·366	−·021	−·073	NNW	8	10	0·24
Kurrachee	29·408	−·021	−·096	WSW	13	10	0·79

If the Pachpadra barometric observations be correct (they are unfortunately doubtful), the centre of the storm was at this time in about Lat. 26° N. and Long. 71° E., and the depression at the centre was nearly two-tenths of an inch in amount.

Winds were cyclonic in direction in the depression, and were very strong on the Sind, Cutch and Kathiawar coasts. The following gives data showing the strength of the winds in the North Bombay coast districts and South West Rajputana :—

Station.	Mean velocity, previous 24 hours.	Velocity at 8 A.M.	Mean wind velocity, July.
	Miles.	Miles.	Miles.
Bombay	24	18	19
Veraval	25	?	11
Rajkot	21	28	15
Bhuj	28	44	17
Deesa	13	18	14
Mount Abu	11	8	11

The indraught to the storm area had hence intensified very considerably the winds on the Bombay coast, and the rainfall was increasing in amount, more specially at the land stations in the Western Ghats. For example, 11·8 inches had fallen at Matheran during the previous 24 hours.

The rainfall was heavy in the storm area, and general rain had been received in the East Punjab, the North-Western Provinces, Rajputana and Central India. British Baluchistan received showers during the day. The following gives the heaviest falls in the storm area :—

District.	Station.	Heaviest rainfall in past 24 hours.
		Inches.
Kathiawar . . .	Manikvada . . .	10·06
" . . .	Navanagar . . .	9·49
Cutch	Mandvi . . .	8·05

Very light winds obtained in South Bengal, and weather was fine with occasional local showers. The wind directions indicated that a cyclonic storm was now in process of formation in the Bay.

11th July.—The cyclonic disturbance had continued to advance in a westerly direction during the previous 24 hours. Pressure had increased very rapidly in Rajputana and briskly in British Baluchistan. The depression was still clearly marked and lay to the north-west of Kurrachee. The following data show its position at 8 A.M. :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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 . .	29·421	+·013	—·080	SW	27	10	3·48
Bhuj . . .	29·567	+·182	+·037	SSW	24	7	1·12
Hyderabad . .	29·539	+·173	+·101	ESE	14	10	1·01
Jacobabad . .	29·563	+·118	+·140	Calm	12	9	0
Kalat . . .	?	?	?	S	?	?	0
Quetta . . .		+·052	+·033	Calm	1	9	0·01

The depression had filled up very considerably during the previous 24 hours. The centre was probably a little to the north-west of Kurrachee in Lat. 25½° N. or 26° N. and Long. 66° E. Weather was very squally off the Mekran coast. Thus the S. S. *Thibet* in about Lat. 23° N. and Long. 66¼° E. at 8 A.M. had winds force 8 to 6 during the day, and in the early morning had frequent squalls of hurricane force. Weather was squally with heavy rain off the Mekran coast during the day, but improved rapidly during the night, and ordinary monsoon weather was re-established on the morning of the 12th. Strong winds continued on the Sind and Kathiawar coasts during the next 48 hours, and Baluchistan, Sind and Cutch, and West Rajputana received more or less general rain from the 11th to the 13th.

The storm appears to have been broken up on the afternoon of the 11th by the disintegrating action of the Baluchistan mountain ranges.

The storm under discussion formed in Central Bengal on the 3rd and was of moderate importance only during the next three days, when it drifted almost due westwards through Bihar and the eastern districts of the North-Western Provinces to the southern districts of that province between Agra and Jhansi, which it reached on the 5th. During this period it was chiefly maintained by the Bengal current and the indraught to it gave moderately heavy rain to Bengal and the Gangetic plain. The Bengal current gradually slackened from the 6th; but the Bombay current gave rain in increasing amounts during the next two days, more especially in Bundelkhand, and the depression, which had almost filled up on the 7th, re-developed on the 8th, and after being nearly stationary for three days, again began to advance westwards. It marched through Rajputana and Lower Sind at the rate of about 12 miles an hour and broke up on the afternoon and evening of the 11th under the obstructive action of the Baluchistan mountains. During this period the winds off the North Bombay coast increased rapidly in intensity and blew very strongly on the 10th and two following days. The west coast districts and West-Ghats hence received a very heavy downpour of rain from the 9th to 13th, and Rajputana, Central India and North Bombay obtained more or less heavy rain from the storm. The storm is interesting from the light it throws upon the separate action of the two currents in maintaining the cyclonic storms of the rains. The following gives data of the track and rate of motion of the centre of the storm :—

Date.	Hour.	Position.				Distance travelled during interval.	Average hourly velocity in miles during previous 24 hours.
		Lat. N.		Long. E.			
		°	′	°	′	Miles.	
3rd .	8 A.M. .	25	15	89	10	...	...
4th .	" .	25	15	85	30	230	10
5th .	" .	25	50	79	30	390	16
5th to 8th	" .	Stationary					
9th .	" .	26	15	74	45	260	11
10th .	" .	26	0	70	45	250	10
11th .	" .	26	0	66	0	310	13

It has been pointed out above that the Bengal current which had chiefly maintained the preceding storm from the 3rd to the 6th began to fall off in strength on that day and decreased very rapidly on the 8th; so that on the morning of the 9th, light variable airs and calms obtained in the north-west angle of the Bay. Moderate to strong monsoon winds (force 4 to 6) continued in the centre and south of the Bay. As almost invariably happens under these conditions in the rains, weather became squally in the north of the Bay. Winds shifted to north in that area and on the Orissa and Bengal coasts and a depression and cyclonic storm began to form in the north-west of the Bay on the 10th. The following gives a history of the storm, the most remarkable of the series.

Cyclonic storm of the 10th to the 14th July.—The circumstances attending the decrease of strength of the monsoon current in Bengal have been briefly stated in the preceding remarks. The most important feature in connection with this change was the steady increase of pressure which occurred in North-Eastern India on the 7th and following days. On the morning of the 8th, pressure was upwards of a tenth of an inch above the normal in Orissa, Bengal and Bihar and was fairly uniform over North-Eastern India. The weather on this day in South Bengal and the north-west angle of the Bay is clearly indicated by the following extracts from storm reports received.

Saugor Island, 4 P.M. Weather fine. Distant objects clearly visible. Light airs from south but wind variable. Looks ugly towards south-east and south. Thunder occasionally to north-east. Sea smooth.

F. L. V. *Torch*, Eastern Channel, 10 A.M., wind south-south-east, force 1·4 P.M. Wind south-south-east, force 2. Light breezes and fine throughout the day, slight southerly swell.

Shortt's Island—Light variable airs and calms, and very clear weather prevailed throughout the day, with distant thunder and vivid lightning to west and south-west until midnight.

Weather was hence fine and clear with light variable airs from southerly directions in the north-west angle of the Bay.

10th July.—On the morning of the 10th, pressure was uniform over the whole of Bengal and the north-west of the Bay. Winds were very light and somewhat unsteady in Bengal, but had shifted generally to easterly directions. Light local showers had fallen during the previous 24 hours. Moderately steep gradients obtained over the centre and south of the Bay, and monsoon winds, force 4 to 6, prevailed over the whole area. One vessel, the S.S. *Beswada*, reported westerly winds of force 9 in Lat. 14°N. and Long. 85½°E., but this estimate is probably exaggerated. The following extracts from storm reports indicate the character of the weather in the north-west angle of the Bay and the changes now in progress:—

Saugor Island 4 P.M. Wind direction east-north-east, but variable. Sky clear from north-east to south-south-east. Threatening from west to north-north-west. Frequent thunder and lightning. Sea smooth.

F.L.V. *Hesperus.*, Pilot's Ridge, 2 A.M., calm. 6 A.M., waterspout passed close to ship, water being sucked up and sea steaming and boiling. 10 A.M., wind north. Noon, wind hauled to north-west. Midnight, force of wind 3 to 4 in squalls at long intervals. Sea slight.

Shortt's Island.—Early morning, lightning to north-north-west and fine clear weather which continued all day with the exception of a sharp squall from north-east with hard rain from 2 P.M. to 3 P.M. Fine, 3 P.M. to midnight. Wind from east and light and steady.

The conbination of strong south-west winds in the centre of the Bay, south-east winds on the Arakan coast, and light variable and easterly winds at the head of the Bay tended to form a cyclonic circulation. This is indicated clearly by the following marine data:—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer.	Wind. Direction.	Force.	Weather.
		° ′	° ′	″			
8 A.M. .	Barque *Gartmore.*	20 32	87 55	29 604	N	2	Fine, 4 P.M. heavy rain.
" .	S.S. *Chindwara.*	20 05	86 50 Noon.	...	WNW	4	Long S. swell.
" .	S. *Cypromene*	19 36	86 18	...	NNW	5	Fine. Noon, squally.
" .	S.S. *Beswada*	14 02	85 36	29 585	W	9	Rainy. 4 P.M. passing rain squalls.
" .	S.S. *Kistna* .	16 03	94 12	29 643	SSW	5	South-west swell, cloudy. Noon, heavy rain at times.

11th July.—Pressure had increased briskly in Burma and fallen slightly in South Bengal. The wind and pressure data of the coast stations in the north-west of the Bay indicated that there was now a moderate and fairly well-marked depression and cyclonic storm approaching the Orissa coast. The following gives 8 A.M. data 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.	Remarks.
	″	″	″				Inches	
Saugor Island	29·544	—·026	+·014	NE	9	10	0·91	Sea smooth and distant lightning.
Balasore . .	29·544	—·036	+·023	NE	5	4	0·26	
False Point .	29·507	—·060	—·035	N	14	10	0·80	Distant lightning and squally.
Puri . .	29·512	—·046	?	N	13	8	0·34	

Pressure was normal in amount at these coast stations, but was largely in excess in the Punjab and the Gangetic plain. The observations at the coast stations indicate that the storm was as yet of slight intensity. This is confirmed by the following observations taken on board ships :—

Hour.	Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
10 A.M.	F. L. V. *Torch*	Eastern Channel		29·556	E	7	High choppy sea, unsettled cyclonic appearance.
8 A.M.	Barque *Gartmore*	20 52	87 55	·510	Var.	6	Fine, 4 A.M. squally with rain.
,,	S. *Cypromene*	19 43	86 41	·660	SW		Heavy rain.
,,	S.S. *Bezwada*	17 10	87 16	·421	SW	4	Moderate sea, squally; 4 A.M. thick dirty rain.
,,	S S. *Fultala*	14 50	85 43	·516	W	8	Heavy sea; 4 A.M., continuous heavy squalls of wind and rain.
,,	S.S. *Nadir*	15 02	81 51	·600	W	6	Rough sea, overcast; midnight, drizzling rain.

The preceding data show that weather was squally with much rain in the north of the Bay, and that the monsoon winds were intensifying in the centre of the Bay.

The disturbance increased rapidly during the day. This is shown by the following extracts from storm reports :—

Saugor Island.—2 P.M. Wind N.E. Drizzling rain, overcast and rainy all round. Sea slight; wind steady, but blowing in hard puffs occasionally and coming in hard squalls at intervals; clouds moving rapidly from N.E. 8 P.M., wind E.N.E., wind less strong and squally. Sea slight. No rain, thunder or lightning since 2 P.M.

F. L. V. *Torch.*—10 A.M., wind E., force 7. 4 P.M., wind E.S.E., force 7. Passing squalls during day. Weather unsettled with cyclonic appearance.

F. L. V. *Hesperus.*—10 A.M., overcast. Frequent squalls from N., sea slight. Noon, wind E., force 6. Skies clearer. 4 P.M., ugly looking and showery. 10 P.M., frequent easterly squalls, force 6 to 7. Midnight, frequent hard squalls; sea moderate.

Shortt's Island.—Early morning, heavy clouds rising to N.N.E. and E. Winds freshening and hauling to N.N.E., and lightning very vivid. Mild squalls with light driving rain commenced at 2 A.M. and continued with fine intervals. Sky partially clouded; but from 7 A.M. became entirely overcast and weather began to look rather ugly to the N.E., though fine to the S.S.W., between the squalls.

8-30 A.M. to 4-30 P.M., weather very squally from N.E., the wind not strong, and rain light with fine intervals. At times blue sky overhead, clouds remaining dense all round the horizon low down, except from S. to S.W. From 4-30 P.M. to 6-30 P.M. clouds broke generally; the lower portion of a rainbow visible to the east, and weather having a fine appearance, but at 7 P.M. light squalls again began and continued with rather long intervals. Wind shifted from E. to N.E. during squalls. 8 P.M., wind increasing in force and weather looking dirtier; between squalls a thick halo observed round the moon. 9 P.M. squalls stronger. Weather looking very ugly to the S.E.; but stars visible overhead. 9 to 11-45 P.M., no squalls. Weather looking finer, but wind increasing in force. Midnight, weather looking worse; squally again. Wind E.S.E., moderate gale; barometer steady. No pumping. Neither thunder nor lightning prevailed at any time during this day.

Puri.—Weather stormy with strong gale and rain at short intervals. The storm began with a light shower of rain at 2 P.M. The wind was blowing at that time in puffs from N.N.E., with a velocity of 26 miles per hour. Between 6 P.M. and 8 P.M., there was another shower of rain. The wind continued from N.N.E. up to this time, but its velocity had decreased to 15 miles per hour. The sky was clearing towards east and south over the horizon; between west and south-west it was heavily clouded and threatening.

The storm centre passed over Puri on the 12th early in the morning. The following gives observations for the 11th and 12th :—

Date.	Time.	Barometer reduced to sea-level and Lat. 45°	Wind direction.	Wind velocity in miles.	Remarks.
		″			
11th July	8 A.M.	29·512	N.	13	Sea smooth.
,,	noon	·440	NNE	27	Sea smooth.
,,	2 P.M.	·407	NNE	17	Showery and sea smooth.
,,	4 ,,	·372	NNE	6	Rainy.
,,	6 ,,	·386	NNE		Horizon cloudy.
,,	8 ,,	·411	NNE	17	Sea smooth.
12th July	2 A.M.	·354	Calm	9	Lightning to north, clouds moving slowly from south to north.
,,	4 ,,	·476	SW	29	Heavy wind. Sea very rough.
,,	8 ,,	·440	SW	13	Sea boisterous.

These observations indicate that the storm developed considerably during the day and was of moderate intensity in the evening and night of the 11th. It may be noted that all these observations were taken in the north and west quadrants of the storm and appear to indicate that the development took place in an irregular and fitful manner.

12th July.—The centre of the storm crossed the South Orissa coast at Puri about 3 A.M. The observer states that "previous to 2 A.M. winds were moderate from N.N.E., but at 2 A.M. it fell to a calm, which lasted until 3-45 A.M., when there was a sudden burst of strong wind from south-west accompanied with rain. The rain ceased after fifteen minutes, but the wind increased and continued to blow very strongly up to 10 A.M., when the wind slowly shifted to S.S.W. and the velocity fell steadily and slowly till 10 P.M., when the weather looked settled."

It is very probable that in many of the cyclonic storms

of the rains which form in the north-west of the Bay, if not in all, there is a central area of light and variable winds due to the peculiar manner of their formation. Whether this should be considered as a central calm identical in its origin and characteristic features with the central calm or bull's eye of tropical cyclones is doubtful, and it appears to be on the whole most probable that there are characteristic features which differentiate the area of light variable winds and calms near the centre in these storms from the central calm area of intense and extensive tropical cyclones.

Weather was stormy in the north of the Bay during the morning, but gradually improved during the day, as is shown by the following data :—

Shortt's Island.—At 0-45 wind shifted to S. E. moderating considerably and weather clearing, only two squalls occurring, one at 2 hours and another at 2-45, but the wind again freshened at 5-15, and at 6 hours there was a sharp squall, after which the clouds broke up and disappeared, except near the horizon, where they still hung, and fine weather prevailed, though wind remained steady at S. E. blowing fresh.

F. L. V. *Hesperus.*—2 A.M., high S. E. sea, cyclonic squalls, force 8 to 10, from south-east. Blinding rain. 8 A.M., sky clear, except to north-east and south-west; squalls ceased and steady S. S. E. gale, force 8. Noon. Weather moderating fast, sea and swell going down. Sunset. Light S. S. E. wind, fine weather, sea smooth, no swell.

As already stated, the storm centre crossed the Orissa coast at Puri. It advanced rapidly in a west-north-west direction, and was at 8 A M. in the eastern districts of the Central Provinces, where pressure had fallen rapidly. The following 8 A.M. observations show its position and character at that hour :—

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.	
Gopalpur . .	29·429	—·102	?	WSW	12	7	1·56	
Puri . . .	·446	—·072	?	SW	16	9	0·70	
Cuttack . .	·438	—·097	—·091	S	5	8	1·18	
Chaibassa .	·493	—·077	—·014	ESE	7	10	0·35	
Sambalpur .	·396	—·167	—·107	N	5	10	1·03	Distant lightning.
Raipur . .	·475	—·141	—·057	NNW	5	10	1·15	

The storm was, as on the previous day, a moderately deep depression with a well-marked cyclonic circulation. The observations indicate that the centre of the depression at 8 A.M. was a little to the south-east of Sambalpur in Lat. 21¼° N. and Long. 84½ E.° and had hence advanced about 150 miles during the preceding six hours. The cyclonic circulation at 8 A.M. extended over an unusually large area including the whole of North-Eastern India, the Central Provinces, the North Deccan, and Central India. Pressure was largely in excess in North-Eastern India and Burma, and the steep gradients in the storm area were in part due to the excessive pressure conditions to the east of the storm. Winds were strengthening rapidly in the Gangetic plain and strong monsoon winds obtained in the Arabian Sea and on the west coast. The storm was advancing too rapidly to give prolonged and heavy rain in the areas affected by it. South-West Bengal, Orissa, Chota Nagpur and South Bihar had received moderately heavy rain during the previous 24 hours. Rain was falling in increased amounts in the Deccan, Berar and the Central Provinces, chiefly due to the extending influence of the cyclonic storm.

13th July.—The pressure changes were again large and noteworthy. Pressure had given way slightly to briskly in Burma and the north-east of the Bay, and there was already a slight tendency to the initiation of a fresh disturbance in the north of the Bay. Pressure had increased very rapidly in Orissa and the eastern districts of the Central Provinces, and had fallen very rapidly in the western states of Central India to which the storm had advanced at 8 A.M.

The following data define its position at that hour. :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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
Khandwa . . .	29·462	—·171	—·113	WSW	15	10	2·13
Hoshangabad . .	·494	—·086	—·074	S	1	10	3·00
Indore . . .	·405	—·246	—·138	SSE	7	8	2·19
Neemuch . . .	·482	—·182	—·040	NNW	12	6	0·76
Mount Abu . .	...	—·139	—·030	N	12	10	2·10
Ahmedabad . .	·510	—·197	?	N	4	10	1·65
Malegaon . .	·573	—·096	—·052	WSW	15	10	0·74

The centre at 8 A.M. was a little to the west of Indore in about Lat. 22½° N. and Long. 75¼° E. and had hence advanced nearly 600 miles during the previous 24 hours, or at the average rate of 25 miles per hour and hence approximately the same as during the six hours in its advance from Puri to Sambalpur on the early morning of the 12th. Pressure in the central area of the storm was a seventh of an inch below the normal. It was, on the other hand, very largely in excess over the whole of Northern India. Thus it was nearly a fifth of an inch ('200″) above the normal over the whole of Bengal and a quarter of an inch ('250″) in the West Punjab. The pressure conditions obtaining at this time were hence very remarkable, and the steep gradients in the storm area were due rather to the high pressure conditions obtaining outside immediately beyond it than to the low pressure conditions within it. It is possible the high velocity of the storm may have been due in some way to those remarkable abnormal conditions.

The cyclonic circulation accompanying the storm was unusually vigorous and extensive, and covered an unusually large area, stretching from Bengal to Sind in an easterly and westerly direction, and from the South Punjab to the Deccan in a northerly and southerly direction. The storm had given moderate to heavy rain during the previous 24 hours to the West Deccan, Berar, the Central Provinces, Central India and Rajputana. The rainfall was, however, smaller than might have been expected considering only the intensity of the storm, but this was evidently due to the rapidity of its march. The following gives the heaviest rainfalls during the preceding 24 hours in the areas passed over by the storm:—

District.	Station.	Heaviest rainfall in 24 hours preceding 8 A.M.
		Inches.
Nagpur	Ramtek	3·80
Betul	Multai	3·80
Bhopal	Ashta	3·74
Gwalior	Ali Rajpur	3·69
Chanda	Armori	3·20

14th July.—Pressure had fallen rapidly in Lower Sind and risen very rapidly in Central India and the north-western districts of the Central Provinces. The depression, which was central near Indore at 8 A.M. of the previous day, had advanced about 500 miles in a west-north-westerly direction and was now in Lower Sind. The centre at 8 A.M. was a little to the south-east of Hyderabad and probably in about Lat. 25° N. and Long. 68½° E. Pressure was now normal in amount in the central area, but was, as on the previous two days, largely in excess in the Punjab and the Gangetic plain. The storm had hence filled up considerably, but was now giving strong cyclonic winds to the Sind and Kathiawar coasts. Thus the wind velocity at Bhuj at 8 A.M. was 46 miles per hour.

The following gives 8 A.M. data of 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.			
	″	″	″				Ins.	
Bhuj	29·542	—·067	+·014	NW	34	10	3·59	Continuous rain.
Rajkot	·617	—·011	+·062	W	1	8	4·13	Ditto.
Deesa	·579	+·046	+·040	SSW	19	10	1·03	
Mount Abu	...	+·006	—·026	S	19	10	1·54	Severe gale of wind.
Pachpadra	29·537	—·034	...	SE	10	10	...	
Jacobabad	·547	—·076	+·111	E	9	3	0·03	
Hyderabad	·481	—·128	+·034	N	9	10	0·46	
Kurrachee	·525	—·115	+·025	SW	14	10	2·10	

Moderate to heavy rain had fallen in Central India, Gujarat, Kathiawar, Cutch and Lower Sind. The following gives the more noteworthy falls:—

District.	Station.	Heaviest rainfall in 24 hours preceding 8 A.M.
		Inches.
Kaira	Kapadvanj	5·66
"	Kaira	5·33
Ahmedabad	Dhandhuna	5·48
"	Sanand	4·72
Baroda	Baroda	4·85
Kathiawar	Vankaner	4·78
Cutch	Rahpur	5·73

It may be noted that the winds at Kurrachee were hardly as yet affected by the advancing storm. This is evidently due to the fact that the weak cyclonic circulation in the advancing or westerly quadrant in the storm was not powerful enough to modify the direction of the strong sea winds blowing at that time at that station until the storm was in its immediate neighbourhood.

The following extracts from the logs of vessels show the character of the weather at the head of the Arabian Sea :—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer.	Wind. Direction.	Force.	Weather.
		° ′	° ′	″			
8 A.M.	S.S. *Pachumba*	Kurrachee		29·471	NW	6	Showery.
Noon	...	Do.		...	WSW	6 to 7	Occasional showers of rain.
Mid-night	...	Do.		...	W by S	6	A dark bank in the north.
8 A.M.	S.S. *Simla*	24·15	63·33	·530	SW	5	Rainy with moderate sea.
Noon	...	24·18	64·09	...	SW	2	Sea moderate; cloudy.
Mid-night	...	...	...	...	SW	5	Overcast with S.W. swell.
8 A.M.	S.S. *Assyria*	22·1	68·4[illegible]	·590	W	6	Overcast with heavy west swell.
Noon	...	22·17	68·22	...	W	7	Ditto.
Mid-night.	...	...	...	...	WSW	5	Wind and sea moderating; overcast.

Pressure was now falling briskly to rapidly in North-East India and the north of the Bay, and another storm was in process of formation. It was the chief feature of the meteorology of the third week of the month. The history of this storm is given in pages 300 to 310.

15th July.—Pressure had increased briskly to rapidly in Sind, Cutch, Kathiawar and South-West Rajputana, and the depression in that area had disappeared. It had apparently broken up under the obstructive action of the Baluchistan hills, as the marine data indicate clearly that no storm passed westwards at this time along the Mekran coast. The following gives data :—

Hour.	Name of Vessel.	8 A.M Position. Lat. N.	Long. E.	Barometer.	Wind. Direction.	Force.	Weather.
		° ′	° ′	″			
8 A.M.	S.S. *Pachumba*	Kurrachee		...	SW	6	4 A.M., constant heavy rain.
,,	S.S. *Simla*	Near Kurrachee.		29·530	W	4	4 A.M., heavy rain.
,,	S.S. *La Seyne*	20·28	57·55	29·648	SW	4	

The marine data, although limited, indicate that winds were unchanged in direction, but were feebler than on the 14th at the head of the Arabian Sea. This is in strict accordance with the wind observations taken in Sind and Cutch given below :—

Station.	Wind direction at 8 A.M. of 15th.	Wind velocity in miles per hour during 24 hours preceding 8 A.M. of date. 14th.	15th.
Kurrachee	SW	14	8
Hyderabad	SW	9	12
Bhuj	WSW	34	21
Rajkot	WSW	21?	12

The strong monsoon winds drawn into Sind by the advancing whirl during the previous 24 hours gave heavy showers in the Bolan and the Baluchistan plateau during the day. Thus, according to a report received from the Engineer-in-Chief, Mushkaf-Bolan Railway, a storm struck Kach at 4 P.M. and the Khojak at 5-30 P.M. At the latter place it gave an unprecedentedly heavy flood at both ends of the Khojak tunnel, though the rain lasted only 30 or 40 minutes. Unfortunately the rain-gauge at Shelabagh (the station on the south side of the tunnel) was blown away and hence no record of the rain is available. This is an illustration of the absolute necessity of fixing rain-gauges in India rigidly on masonry pillars, which the Meteorological Department has endeavoured to impress upon the local authorities controlling rainfall measurement. An opportunity of obtaining a measurement of an unprecedented fall was lost on this occasion, probably from the precautions urged by the Department not being fully carried out. The heavy showers gave rise to floods in the Bolan, which suspended traffic.

The storm was in many respects the most remarkable cyclonic storm of the rains which has occurred during the past ten years at least. It formed in the north-west angle of the Bay, whilst the previous storm was breaking up in Sind and Baluchistan. The conditions of its formation in the Bay were apparently normal. Winds slackened off rapidly in Bengal on the 9th and 10th immediately before its formation, and light variable winds obtained at the head of the Bay on the 10th. Moderate to strong monsoon winds held steadily in the centre and south of the Bay. Weather became squally and rainy in the north-west of the Bay and a whirl was generated during the next 24 hours. It was on the morning of the 11th a cyclonic storm of moderate extent and intensity, lying off the Orissa coast. The very rapid increase of pressure following the westward advance and breaking up of the previous storm had given rise to a large and remarkable excess of pressure over Northern India and

Burma. The following gives pressure variation data from the 10th to the 14th for that area :—

Province.	Variation from normal of 8 A.M. pressure.				
	10th.	11th.	12th.	13th.	14th.
	"	"	"	"	"
Burma	−·033	+·032	+·113	+·069	−·017
Assam	+·023	+·070	+·172	+·165	+·066
Bengal	+·026	+·040	+·115	+·182	+·097
Bihar	+·060	+·069	+·121	+·182	+·113
North-Western Provinces.	+·073	+·125	+·146	+·129	+·154
Punjab	+·092	+·152	+·174	+·183	+·140

The storm developed rapidly during the afternoon and evening of the 11th, and was on the morning of the 12th a large and extensive cyclonic circulation. The development of the storm was due rather to the continued increase of pressure in the north and east quadrants of the cyclone than to the fall of pressure in the interior. There are unfortunately no observations which throw any light on the circumstances which determined the early movement of the storm. The centre crossed the coast at Puri about 3 A.M. of the 12th, and advanced with an almost uniform velocity of approximately 25 miles per hour through the Central Provinces, Central India, Rajputana and Sind, and broke up on the evening of the 14th against the mountain ranges of Baluchistan. The circumstances of its motion are far more suggestive of an accumulation of energy, and an explosive outburst, ending in the discharge of the storm, and its advance in a straight course until it was arrested and broken up by the Baluchistan mountains. In the uniformity of its movement and its high velocity it is alike unique. The following statement gives the position and rate of motion of the storm from the 11th to the 14th :—

Date.	Hour.	Position.		Distance passed over during interval.	Average rate of motion per hour, during past 24 hours.
		Lat. N.	Long. E.		
		° ′	° ′	Miles.	Miles.
11th . .	8 A.M.	19 50	87 15	...	...
12th . .	"	21 15	84 30	210	9
13th . .	"	22 30	75 15	610	25
14th . .	"	24 50	68 30	480	20

As already stated, in consequence of the rapid movement of the storm, the total rainfall due to it in the districts over which it passed was not large in amount. The following gives an analysis of the rainfall accompanying the storm :—

Division.	Rainfall during 24 hours preceding 8 A.M. of date				
	11th.	12th.	13th.	14th.	Total of period.
	Inches.	Inches.	Inches.	Inches.	Inches.
Bengal	0·40	0·21	0·26	0·13	1·00
Orissa	0·53	1·32	0·06	0·11	2·02
Chota Nagpur . .	0·34	0·59	0·13	0·07	1·13
Bihar	0·09	0·14	0·03	0·02	0·28
Central Provinces . .	0·34	0·62	1·03	0·20	2·19
Central India . .	0·31	0·55	0·58	0·15	1·59
Berar	1·12	0·61	0·80	0·10	2·63
Rajputana . . .	0·27	0·25	0·17	0·07	0·76
Cutch	0·93	0·26	0	4·32	5·51
Sind	1·30	0·07	0·33	0·49	2·19
Baluchistan . . .	0·42	0·37	0·27	0·07	1·13

Cyclonic storm of the 14th to the 24th July.—This storm commenced to form on the 13th and 14th when the preceding storm was in its final stages in Rajputana, Sind and Baluchistan. Ordinary showery weather with moderately strong monsoon winds obtained at the head of the Bay and in Bengal on the 13th. Pressure had however increased with unusual rapidity in the Circars, Orissa and South-West Bengal, and the eastern districts of the Central Provinces, and was largely in excess in North-Eastern India. The excess was greatest at Jalpaiguri (+·22″) and Purnea (+·21″). The changes of the next 24 hours established approximately uniform pressure conditions in Burma and North-East India, whilst moderate gradients continued in the south and centre of the Bay. Fine dry weather with decreasing cloud set in over Bengal. South-west winds continued for a short time longer at the coast stations, but they were feeble. In the north of the Bay light variable winds were blowing, whilst in the centre moderate to strong monsoon winds held

steadily. The following gives data showing the contrast of conditions obtaining in the north and centre of the Bay :—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer.	Wind. Direction.	Force.	Weather.
		° ′	° ′	″			
10 A.M.	F. L. V. *Torch* .	Eas	tern Cha	29·718	SSW	1	Sea smooth, light air and fine weather.
4 P.M.	*Ditto* .	...	...	·586	S	1	.....
10 A.M.	F. L. V. *Hesperus*	20 47	87 40	·707	Calm	0	Morning, suspiciously clear; noon, light north-east wind.
4 P.M.	*Ditto*	...	...	·592	Calm	0	Evening cloudless with slight southerly swell.
8 A.M.	S.S. *Maharani* .	21 44	91 11	·650	Var.	2	Clear and fine.
"	S.S. *Mombassa* .	19 31	86 47	·618	Var.	2	Light rain at times.
"	Barque *Grecian* .	11 55	86 33	·655	WSW	5	Passing clouds; 4 P.M. heavy squalls with thunder and lightning.
"	Barque *Belle of Arvon.*	9 38	85 11	·682	WSW	6	Clear, noon overcast.
"	S.S. *Africa* .	16 15	93 24	·660	WSW	4	Overcast; 4 A.M. rainy.

The Captain of the *Hesperus* notes: "On the 14th at sunrise, the weather was fine looking, but suspiciously clear, visibility being very marked. At sunset the sky was almost cloudless, but hard looking generally."

The data hence establish that unusually fine clear and bright weather, with light variable airs and calms, obtained in the north-west angle of the Bay, and that monsoon winds, force 4 to 6, prevailed in the south and centre of the Bay. These conditions are the invariable antecedents of the formation of cyclonic storms in the Bay during the rains.

15th July.—Pressure had decreased briskly in Bengal, Orissa, Ganjam, the Circars and the north-west of the Bay, and risen briskly in Burma. Winds had shifted to easterly or north-easterly directions in South Bengal. The pressure and wind conditions indicated that a depression was in existence, and developing rapidly in the north-west of the Bay. The following gives 8 A.M. data for the nearest 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.	Remarks.
	″	″	″				Inches	
Saugor Island	29·583	—·050	+·059	ENE	5	7	0·71	Sea smooth.
False Point .	29·574	—·056	+·034	NE	5	5	0·04	Wind variable.
Pur	29·544	—·067	?	N	9	3	1·41	
Gopalpur .	29·557	—·070	?	NNW	5	1	3·30	

The position and character of the depression are more fully indicated by the following observations taken on board ships :—

Hour.	Name of Vessel.	Position. Lat. N.	Long. E.	Barometer. Pressure	Change in past 24 hours.	Wind. Direction.	Force.	Weather.
		° ′	° ′	″	″			
10 A.M.	F.L.V. *Hesperus*	20 47	87 40	29·648	—·059	NE	3	Heavy clouds.
"	F.L.V. *Torch* .	Eas	tern Cha	·639	—·079	ESE	4	Light breeze and fine weather.
8 A.M.	S.S. *Rheinfels*.	20 55	87 47	·481	...	NE	2	.....
"	S.S. *Carradale*	14 28	81 53	·671	...	WSW	6	Overcast; noon, squally.
"	Barque *Grecian*	14 34	86 48	·575	...	WNW	5	Heavy squalls and continuous downpour of rain.
"	S.S. *Kohinur* .	13 43	84 55	·656	...	SW	6	Overcast; noon, squally with heavy rain.
"	S.S. *Canara* .	19 18	90 14	·514	...	SE	2	Cloudy; 8P.M., heavy squalls at times.
"	S.S. *Purnea* .	16 25	93 34	·612	...	SW	4	Fine; 4 P.M., hard squalls.

These observations show that a depression and cyclonic circulation was in process of formation in the north-west angle of the Bay, but it was as yet in the initial stage. Winds were slightly stronger and weather more squally in the centre of the Bay; but fine clear weather with light winds continued over the greater part of the area in which the depression was forming.

The following extracts from special reports indicate clearly the continued development of the disturbance during the next 24 hours :—

Saugor Island.—15th July, 4 P.M., fine weather with passing clouds. Rather ugly to west. Thunder and lightning occasionally to west. Passing showers, wind variable and light. 16th July, 4 A.M., threatening weather. Passing rain squalls. Winds steady in direction, but coming in rather hard puffs. Sea slight. Lower clouds moving in scuds.

F. L. V. *Hesperus.*—Noon, cumulus all round horizon. Sky very blue. 2 P.M., heavy arched masses of cloud coming up from east, giving rain. 3 P.M., rain squalls ceased. 4 P.M., heavy cumulus clouds to north-west. Sunset, heavy shower from east, ugly and threatening weather. Midnight, squalls and showers, moderate lightning to north-west.

The observations, although brief, show clearly the increasing intensity of the disturbance during the evening of the 15th.

Heavy rain had been received in Arakan and Lower Burma. A few showres had fallen in Northern India, but

a break in the rains obtained generally in that area, and fine weather with slight cloud held n Bengal.

16th July.—Pressure had increased briskly in Burma, and fallen briskly to rapidly in the north-west angle of the Bay, Orissa and Ganjam. Gradients were hence much steeper in the eastern and southern quadrants of the depression in the Bay, which thus developed rapidly during the day. The following gives 8 A.M. observations at the Bengal and Orissa 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	
Chittagong .	29·661	+·030	+·054	ESE	5	10	0·35	Distant lightning.
Saugor Island	29·489	—·094	—·030	NE	11	9	0·35	Sea slight.
Balasore .	29·513	—·062	+·006	NNE	6	7	0·10	
False Point .	29·475	—·099	—·063	NNE	11	9	1·80	
Puri . .	29·482	—·062	?	N	13	10	0·70	
Gopalpur .	29·499	—·058	?	NNW	10	8	0·22	

The following observations, taken on board ships, indicate more clearly than the previous data the position and character of the storm :—

Hour.	Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	"			
10 A.M. .	F. L. V. *Torch.*	E. Ch	annel	29·531	E	5	Squally with rain.
8 A.M. .	S.S. *Bancoora*	20 04	86 46	·438	NE	4	Noon, very heavy rain squalls.
" .	S.S. *Carradale*	17 08	84 21	·541	WSW	6	Squally.
" .	S.S. *Kohinur.*	16 13	86 13	·526	W	8	Sea rising; continuous heavy squalls and much rain.
" .	S.S. *Purnea.*	19 41	89 45	·462	SW	4	Heavy rain.
" .	S.S. *Canara.*	16 50	93 05	·616	SSW	7	High sea; fierce squalls and heavy rain.

The whole of the observations indicate that a well-defined depression now lay over the north-west of the Bay. The centre of the depression was probably in Lat. 20°N. and Long. 88½° E. Winds had increased very considerably in the centre of the Bay, and weather was squally and stormy over the greater part of the centre and north of the Bay. The following extracts from the special storm reports received indicate the progress and development of the storm during the afternoon and night of the 16th :—

Saugor Island—16th, 2 P.M., threatening weather, passing rain-squalls, wind steady in direction, but coming in rather hard puffs; sea slight. Lower clouds moving in scuds. 8 P.M., threatening weather with dark masses of clouds passing over to west. Weather disturbed and ugly.

17th, 2 A.M., overcast with rain. Light breeze from ENE; velocity of wind since 8 P.M. 12 miles per hour. Weather threatening. No lightning or thunder.

F. L. V. Hesperus—16th, 10 A.M., moderate squalls and rain. 4 P.M., heavy showers at intervals, wind moderate, force 4. 9 P.M., wind backed to E.

Puri—16th, 2 P.M. to midnight, weather squally with almost continuous rain.

Midnight, strong winds set in, wind from NNW.

17th July.—Pressure had fallen rapidly in Orissa and South-West Bengal, and slightly over the remainder of India. The depression had intensified during the preceding 24 hours, and commenced to move in a direction between west-north-west and north-west towards the North Orissa coast. The following gives 8 A.M. observations at the nearest coast stations, which indicate that the centre of the storm was in about Lat 21¼°N. and Long. 87½°E. at that hour :—

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 .	29·339	—·150	—·177	E	15	10	1·55	Sea very rough.
Balasore . .	·308	—·205	—·188	NNE	9	10	1·21	
False Point .	·330	—·145	—·209	NW	17	10	4·59	
Puri . .	·401	—·081	...	WNW	12	10	2·52	

A well-defined cyclonic circulation now obtained in the area of depression, and moderate to strong north-east winds had set in at the Bengal coast stations.

The following observations taken on board ships in the

Bay indicate clearly the stormy character of the weather in the centre and north :—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer.	Wind. Direction.	Force.	Weather.
		° ′	° ′	″			
10 A.M. .	F. L. V. *Torch.*	E.Cha	nnel.	29·408	SE	9	Hard squalls with rain.
,, .	F. L. V. *Hesperus.*	Pilot's	Ridge.	·380	S	8	Slight squalls. High SE swell.
8 A.M. .	S.S. *Carradale*	19 37	86 46	29·361	W	9	Rainy with strong sea.
,, .	S.S. *Maharani*	20 2	90 6	29·500	S	8	Very heavy squalls.
,, .	S.S. *Kohinur*	18 24	87 25	29·476	WSW	5 to 6	4 A.M.; squally with light rain.
,, .	S.S. *Belle of Arvon.*	16 17	86 13	29·404	W	6	Squalls less violent.

Winds of force 8 to 9 were hence actually experienced by vessels in the north-west angle of the Bay with very heavy and violent squalls.

The observations taken at Balasore indicate that the storm centre crossed the coast near that station shortly afternoon. The lowest pressure recorded by the observer during the storm was 29·169 (corrected) at 1 P.M. The storm centre appears to have passed to the north of Balasore, as the Port Officer reports that the wind, which was north-west in the morning, shifted to west at noon, and that hard to fierce rain squalls passed over the station during the next four hours.

South-West Bengal and Orissa had received moderate to heavy rain during the previous 24 hours. Falls, exceeding four inches, were registered at 8 A.M. at several stations in Orissa.

18th July.—Pressure had given way generally. It had increased locally in Orissa and fallen very rapidly at Sambalpur. The storm had advanced almost due westwards during the previous 24 hours, and the central area now lay over the eastern districts of the Central Provinces. The centre was a little to the south of Sambalpur at 8 A.M. in about Lat. 21½° N. and Long. 84°E., and had hence advanced about 240 miles during the previous 24 hours. Pressure, as is shown by the following data, was upwards of three-tenths of an inch below the normal, and the disturbance was hence a deepish as well as a moderately extensive depression :—

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	
Calcutta . .	29·498	+·072	—·025	SE	9	10	0·83	
Balasore . .	·431	+·123	—·059	SSE	15	5	0·23	
Chaibassa .	·386	—·024	—·094	ESE	7	10	0·32	
Raipur . .	·405	—·123	—·140	WSW	5	10	2·90	
Sambalpur .	·228	—·234	—·265	NE	9	10	1·18	Wind variable.
Gopalpur .	·412	—·042	?	SW	13	6	0·25	Sea rough.

Moderate to heavy rain had fallen in the districts covered by the storm. The following gives the largest amounts recorded at 8 A.M :—

Province.	District.	Station.	Rainfall in past 24 hours.
			Inches.
Orissa . .	Balasore . .	Chandbali . .	7·80
		Bhadrak . .	5·74
Central Provinces.	Raipur . .	Dhamtari . .	8·98

The rainfall was, as on the previous day, so far as can be judged from the data, somewhat less heavy than might have been anticipated from the intensity and extent of the storm.

Weather had improved rapidly in the north-west of the Bay, and south-east winds of force 4 to 6 with cloudy weather and occasional light rain-squalls now obtained.

19th July.—Pressure had risen rapidly in the eastern districts of the Central Provinces, and fallen rapidly in the central districts. It had also fallen briskly in North-Western and Central India and the greater part of the Peninsula. The storm had continued to advance westwards and had increased in extent, and now covered the whole of the Central Provinces. The centre at 8 A.M. was a little to the south-east of Seoni in Lat. 22°N. and Long. 80½°E. and had hence advanced about 240 miles during

the previous 24 hours. The storm covered a larger area than on the previous day; but the gradients were not so steep as on the 17th and 18th. Pressure was about a quarter of an inch below the normal at the centre. The following gives 8 A.M. observations at certain stations nearest to the centre at that time:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Nagpur	29·321	−·196	−·247	NW	13	10	1·97
Raipur	29·323	−·082	−·222	SSW	7	10	2·86
Jubbulpore	29·349	−·147	−·178	NE	8	8	0·62
Seoni	29·318	−·188	−·221	...	...	8	1·58
Pachmarhi	...	−·154	−·162	N	10	10	1·27

Winds had decreased slightly on the Bengal coast, and were increasing on the Konkan and Kathiawar coasts. The 8 A.M. wind velocity at Bombay was 20 miles per hour. Cyclonic winds of moderate intensity prevailed in the storm area. Moderately heavy rain had fallen in the Central Provinces and Berar.

The following gives the heaviest falls during the preceding 24 hours:—

District.	Station.	Rainfall in past 24 hours.
		Inches.
Chanda	Armori	10·50
	Brahmapuri	6·60
Wardha	Hinganghat	4·85

The Bay current was now being deflected very largely to Burma, which was receiving heavy rain. The rainfall was, however, light and sporadic in Bengal, and the Bay current was now probably contributing only slightly to the maintenance of the storm, whilst the Bombay current was increasing rapidly in strength on the west coast, and was feeding in increasing measure into the storm.

20th July.—The only important pressure changes were those due to the advance of the storm. Pressure had risen briskly to rapidly in the eastern districts of the Central Provinces, and fallen rapidly at Neemuch, Indore and Khandwa. The storm had advanced only about 130 miles during the previous 24 hours, and was now central near Pachmarhi. The depression was unchanged in character, consisting of a largish central area of nearly uniform pressure, with very steep gradients in the southern quadrant only. The following gives 8 A.M. observations at stations in the central area:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Khandwa	29·320	−·115	−·271	NW	15	10	3·54
Amraoti	29·380	−·019	−·224	W	21	10	6·62
Nagpur	29·369	+·048	−·210	SW	11	10	3·32
Seoni	29·311	−·007	−·246	...	...	10	0·55
Jubbulpore	29·315	−·034	−·221	SE	8	8	0·03
Saugor	29·326	−·071	−·202	E	5	10	0·26
Hoshangabad	29·293	−·099	−·280	NE	3	10	1·66
Pachmarhi	...	−·081	−·244	NW	8	10	1·36

It may be noted that the area including these stations was an oval, the longest diameter of which was about 400 miles and the shortest 300 miles, and hence nearly twice the extent of England. The total range of pressure in this area, so far as is indicated by the data of the observing stations, was only ·087 inch or less than a tenth of an inch. The gradients in this large central area were hence almost *nil*.

Winds had increased rapidly on the west coast, and were now blowing with a velocity of 36 miles per hour at Bombay, nearly double their velocity at 8 A.M. of the 19th, and the Bombay current was now chiefly, if not entirely, maintaining the storm.

Very heavy rain had fallen in the storm area during the previous 24 hours, the most notable falls being, Chikalda 7·72 inches, Amraoti 6·62 inches, Khandwa 3·54 inches, Nagpur 3·32 inches and Akola 7·42 inches. The Chikalda observer states that rain fell in torrents from midnight to 3 A.M. of the 19th, and in light showers from 8 A.M. to 1 P.M. and then in torrents again from 7 P.M. to 9 P.M. The total rainfall during this period was 7·72 inches, of which 4·5 inches fell in two hours.

The excessive downpour in the storm area at this stage gave rise to severe floods in the Nerbudda and Tapti and their tributaries, and caused much damage.

Fine weather, with no rain or light local showers, continued over the whole of Northern India and heavy rain in Burma.

21st July.—Pressure had increased slightly to briskly in the central districts of the Central Provinces, and fallen briskly in the western districts of Central India, to which the storm had now advanced. The centre was at 8 A.M. a little to the north-west of Indore in about Lat. 23°N. and Long. 75½°E. and had hence advanced 200 miles in a west-north-west direction during the previous 24 hours. The disturbance was unchanged in character, and was a well defined storm with a vigorous, cyclonic circulation, more especially in its southern and eastern quadrants. The character of the air movement in the north-western quadrant, and near the centre, is clearly shown by the fact that the average wind velocity at Indore during the previous 24 hours was only 6 miles per hour, and hence less than the ordinary air movement in July (*viz.*, 7 miles per hour). The following gives 8 A.M. observations at stations nearest to the centre :—

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	
Mount Abu .	...	—·035	—·176	N	13	10	1·29	
Ahmedabad .	29·408	+·004	?	WNW	6	10	3·30	
Khandwa . .	·346	+·026	—·245	W	9	10	3·98	
Indore . .	·302	—·040	—·267	SSW	6	10	3·60	Distant lightning.
Hoshangabad .	·339	+·046	—·236	S	6	10	2·15	
Neemuch . .	·326	—·052	—·211	N	11	10	0·05	Drizzling.

The storm (as defined by the isobar of 29·35) consisted of a large central area of nearly uniform pressure nearly 300 miles in length with slight gradients in the outside area to the north and west and steep gradients to the south and east. Moderate to heavy rain had fallen in the districts chiefly affected by the storm, *viz.*, the Central Provinces, Berar, the western districts of Central India and Gujarat. The following largish amounts were registered at 8 A.M. in these areas: Khandwa 3·98 inches and Indore 3·6 inches.

Very strong westerly gales were blowing off the Bombay and Kathiawar coasts, and the wind velocity at Bombay had increased to 42 miles per hour. The character of the weather at sea off these coasts is indicated by the following extracts from the logs of vessels :—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	"			
4 A.M. .	S. S. *Kapurthala.*				W by S	7	Occasional showers. High sea.
8 " .	...	22·11	68·10	29·486	W	8t 7	Heavy sea.
Noon .	...	22·32	67·44	...	W by N	7	High sea.
4 P.M. .	...	...	...	...	WSW	7	Weather looking very squally to W. with lightning and rain.
8 " .	...	...	...	...	WSW	7	Heavy sea.
Midnight.	...	...	...	...	WSW	6	High sea.
8 A.M. .	S. S. *Assam*	18·49	70·1	·507	WSW	7	Squally.

22nd July.—Pressure had risen rapidly in Central India and the western districts of the Central Provinces, and had fallen briskly in South-West Rajputana and Lower Sind. The storm at 8 A.M. was central near Mount Abu where pressure was a quarter of an inch below the normal. It had hence advanced nearly 170 miles during the previous 24 hours in a west-north-westerly direction. The storm was unchanged in character, the chief feature being a large central area of nearly uniform pressure with steep gradients to the south, the steep gradients in the southern quadrant contrasting strikingly with the feeble gradients in the northern quadrant.

The following gives 8 A.M. data of stations in the storm area on this day :—

Station.	Pressure. 8 A.M. reduced to sea-level and 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 8 A.M.	Rainfall in past 24 hours.	Remarks.
	"	"	"				Inches	
Ahmedabad .	29·360	—·048	?	WNW	8	10	6·51	
Neemuch .	·355	+·029	—·195	SSE	13	10	0·43	
Ajmere . .	·390	+·004	—·142	E	11	9	0·10	
Pachpadra .	·373	+·050	?	NW	3	10	0·20	
Mount Abu .	...	—·080	—·253	NE	15	10	2·72	
Deesa . .	29·300	—·090	—·254	NW	17	10	2·56	
Jacobabad .	·399	—·022	—·019	E	4	2	*Nil.*	
Hyderabad .	·362	—·066	—·089	Calm	10	9	0·07	Thunderstorm.
Kurrachee .	·414	—·053	—·096	WSW	16	5	*Nil.*	

The direction and character of the winds it may be noted il'ustrate clearly the weakness of the cyclonic circulation and action in the north-western quadrant of the storm area.

Winds were slightly weaker at Bombay (blowing with a velocity of 32 miles per hour at 8 A.M.), but were increasing rapidly on the Cutch and Kathiawar coasts. The wind velocity at Bhuj at 8 A.M. was 50 miles per hour. The following extracts from the logs of three vessels near these coasts illustrate the strength of the winds.

Hour.	Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
Noon .	S.S. *Horatio*.	Left Kurrachee for Bombay.					
8 P.M. .					WSW	7 to 8	Heavy rain and sea.
Midnight.					WSW	8	High sea.
8 A.M. .	S.S. *Karagola*	19·35	71·51	29·490	SW by S	6	Heavy sea.
Do	S.S. *Naderi*.	18·38	71·30		W	6	Overcast. Noon, squally.

The indraught to the storm on this, as on the previous two days, had given clear or very lightly clouded skies with fine weather to Bihar, the North-Western Provinces and the Punjab.

Light showers had fallen in the west coast districts south of Bombay, the Central Provinces and Central India and more or less heavy rain in the inner area and the south quadrant of the storm. Hitherto the heaviest rain had fallen in the western or advancing quadrant, but the largest falls during the previous 24 hours were received in the southern quadrant in Gujarat. The following gives the more noteworthy falls of the previous 24 hours :— Ahmedabad 6·51 inches, Bhuj 3·55 inches, Mount Abu 2·72 inches and Deesa 2·56 inches. This change in the distribution of rainfall introduced or accompanied an important modification of the storm during the next 24 hours. It may be further noted that the indraught in the southern quadrant was much interfered with by the hill ranges of Gujarat, which caused the distribution of the rainfall to be considerably modified. The heaviest rain was now falling in the southern quadrant of the storm in Gujarat, Rewa Kantha, Mahi Kantha, the Panch Mahals, Cutch and Kathiawar. The following gives the heaviest rainfalls in the storm area during the previous 24 hours :—

District.	Station.	Rainfall in past 24 hours.
		Inches.
Gujarat	Ahmedabad . . .	6·51
"	Idar.	9·93
"	Mehmadabad . . .	8·33
"	Kapadvanj . . .	7·55
"	Sanand	7·35
Khandesh . . .	Trimbak	10·68
	Igatpuri	9·40

The heavy rain in these districts gave rise to severe floods in the Mahi, Sabarmati and other rivers, which caused much destruction of property.

23rd July.—The meteorology of the storm on this date is complicated, and its statement and explanation depend largely upon whether the 8 A.M. observations recorded by the Bhuj observer are correct or not. As he is a careful observer and the observations are to a certain extent confirmed by those of Rajkot and Deesa, it is almost certain they are correct and they are hence accepted in the following discussion. The Bhuj and Rajkot observations of the 23rd and 24th indicate that a deep stationary depression formed on the evening of the 22nd over Cutch and Kathiawar, the cause of its origin being almost certainly the excessive and abnormal rainfall due to local conditions in the southern quadrant of the depression. The following gives 8 A.M. data of stations in this secondary depression :—

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	
Veraval . .	29·454	—·015	?	WSW	30	10	0·34	Severe gale of wind and sea very rough.
Rajkot . .	·384	—·038	—·210	W	11	10	7·70	
Bhuj . .	·238	—·181	—·305	NW	42	10	4·70	

Winds were now abnormally strong off the Cutch and Kathiawar coasts. The wind velocity at Bhuj at 8 A.M. was 58 miles per hour, an indication of the strength of the winds feeding into the depression at this stage. The following gives meteorological data taken from the logs of three vessels, which were off the Kathiawar and Sind coasts, and experienced the full strength of the cyclonic winds feeding into the depression, and of a fourth vessel (the S.S. *Fremantle*, approaching Kurrachee from the west) showing that the strong winds extended to no great distance from the coast.

Hour.	Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′				
5 A.M.	SS *Kola*	Left Bombay for Kurrachee.		...	...	...	...
8 A.M.	...	...	...	29·512	SW by W	6	Squally with heavy sea and swell.
Noon	...	19 29	71 41	...	Do	6	Do. do.
4 P.M.	...	...	...	...	SW	6	Heavy sea and swell.
8 P.M.	...	...	...	...	SW by W	7	Do. do.
Midnight	...	...	...	...	Do	7	Rainy.
4 A.M.	SS *Rohilla*	...	...	...	NW	4	Confused north-west swell.
8 A.M.	...	18 3	72 54	·646	W	4	Passing rain squalls with high west swell.
Noon	...	18 46	72 42	...	W	4	High north-west swell.
4 P.M.	...	Bombay.		...	W	5	Passing showers.
4 A.M.	SS *Horatio*	...	...	...	W by S	8	Heavy rain. High sea.
8 A.M.	...	...	...	...	W by S	8	...
Noon	...	21 33	69 46	...	WSW	8	...
4 P.M.	...	...	...	...	WSW	8	High sea.
8 P.M. and midnight.	...	...	...	..	WSW	8	...
4 A.M.	SS *Fremantle.*	...	...	...	SSW	1	Overcast.
8 A.M.	...	24 32	66 06	...	SSW	2	Ditto.
Noon	...	24 34	66 32	...	SSW	1	Passing showers.
4 P.M.	...	...	...	...	SSW	2	Heavy rain.
8 P.M.	...	...	...	...	SSW	2	...
Midnight.	...	...	...	...	SSW	2	Heavy rain.

The original or primary depression had almost certainly continued to advance in the same general west-north-westerly direction during the previous 24 hours and was probably now passing into Central Sind. It was however obscured to a large extent by the deep secondary depression in Cutch and Kathiawar. The following gives data for stations where the winds were chiefly determined by the primary depression :—

Station.	Pressure.			Wind.			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.	Cloud.		
	″	″	″				Inches	
Mount Abu	...	+·077	−·173	SE	24	10	2·28	...
Deesa	29·397	+·097	−·161	SSE	26	10	0·97	Severe gale of wind.
Pachpadra	·382	+·009	?	NE	10	10	...	...
Hyderabad	·334	−·028	−·117	NNE	8	10	0·16	Thunder and lightning.
Kurrachee	·338	−·076	−·172	WNW	19	10	0·01	...

The barometric and wind observations at Deesa, Mount Abu and Pachmarhi point clearly to the existence of a storm centre in about Lat. 25°N. and Long. 70½°E. or in the direct continuation of the track of the storm.

The formation of a stationary depression in Gujarat, Kathiawar and Cutch due to excessively heavy rainfall, resulting from an advance of very strong monsoon winds against the hills in that area, is not an unfrequent circumstance. One of the most remarkable examples was the storm of the 11th to the 13th July 1881 in Gujarat, described in the second volume of the Indian Meteorological Memoirs under the title: "Note on the foregoing list of cyclones and on the Gujarat land cyclone of July 11th to 13th, 1881."

The following explanation of the disturbance or storm at this stage appears to be most in accordance with all the facts. It consisted of two depressions, a travelling primary whirl, the continuation of a storm which had advanced at a nearly uniform rate across the head of the Peninsula during the previous four days, and a secondary stationary depression, which formed in an area, the local conditions of which are peculiarly favourable to the development of such depressions, when strong monsoon winds are blowing in the most northerly part of the Arabian Sea. The double disturbance gave exceptionally stormy weather and severe floods in Cutch and Kathiawar, which caused much destruction of property.

24th July.—The observations indicate that both the primary and secondary whirls of the double disturbance had partially and rapidly filled up during the previous 24 hours. Pressure had increased very rapidly at Bhuj and

rapidly in Lower Sind, Kathiawar and Gujarat. A feeble residual depression lay over Lower Sind and Cutch, but pressure was less than a tenth of an inch below the normal in that area. The following gives 8 A.M. data of stations in the low pressure 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	
Bhuj	29·434	+·196	—·108	SW	29	10	2·98	
Deesa	·488	+·091	—·069	SSW	31	10	0·55	
Mount Abu	...	+·091	—·079	SW	22	10	5·30	
Pachpadra	·440	+·058	?	SE	14	10	...	Strong wind.
Jacobabad	·417	+·023	—·0.9	NNE	11	4	0·12	
Hyderabad	·414	+·080	—·040	NNE	9	10	0·20	
Kurrachee	·485	+·147	—·026	NE	12	10	4·62	

South-westerly and westerly winds had prevailed steadily on the Cutch and Kathiawar coasts during the preceding 24 hours, and the secondary depression in Cutch had hence not advanced sea-wards across the Cutch coast. Winds were still very strong on the Cutch and Kathiawar coasts, but were decreasing in intensity. The following extracts from the logs of two vessels near the Sind coast show the character of the weather during the day .—

Hour.	Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′				
4 A.M.	SS *Kola*	...	...	...	SWbyW	7	Overcast. High sea.
8 ,,	...	23 35	68 40	29·514	Do.	7	High sea.
Noon	...	24 25	68 4	..	Do.	6	Cloudy High sea.
4 P.M.	...	...	...	...	Do.	5	High sea.
8 ,,	...	...	...	...	Do.	5	High sea and swell.
Midnight	...	...	...	...	WNW	4	Cloudy. Sea going down.
4 A.M.	SS *Pemba*	Kurrachee		...	W	9	...
8 ,,	...	Do.		29·369	W	9	Heavy rain.
Noon	...	Do.		...	WSW	10	Incessant heavy rain.
4 P.M.	...	Do.		...	WSW	12	Frequent squalls of hurricane force and incessant heavy rain.
8 ,,		Do.		...	WSW	12	Do do.

The observations on board the S.S. *Pemba*, more especially the strength and direction of the winds and the character of the weather during the day—"frequent squalls of hurricane force"—is a strong proof that a cyclonic storm of considerable intensity passed through Lower Sind during the day.

The whole of the observations hence indicate clearly, if they do not completely establish, that the depression in Cutch and Kathiawar had remained unchanged in position during the previous 24 hours, but had almost completely filled up, whilst the original or primary depression had continued to advance westwards and was now passing through Lower Sind, the centre probably marching along a westerly track a little to the south of Hyderabad. The winds at Kurrachee shifted from N.E. at 8 A.M. to NNE at 10 A.M. and WSW at 4 P.M. The Jask, Muscat and Kalat observations indicate that the storm broke up during the day. Very strong monsoon winds blew for sometime afterwards, and Kurrachee, and probably the whole of Lower Sind, received exceptionally heavy rain from the 23rd to the 28th. Thus Kurrachee received 4·62 inches on the 24th and 4·78 inches on the 25th, making a total of 9·40 inches in 48 hours at that station, the normal annual fall of which is less than 8 inches.

The humid winds gave general, and in some places heavy, rain in the Bolan Pass and Baluchistan, according to the reports received from the Engineer-in-chief, Mushkaf-Bolan State Railway. The rain caused rather heavy floods down the Dherok, Bolan and Hannar nullahs, which breached the line in several places.

The following gives accounts of the rainfall and floods due to the storm that were received from the observers at Chikalda (a hill station in Berar) and Aurangabad (in the Nizam's dominions)

The Aurangabad observer writes:—"An extraordinary flood occurred on the river Godavary situated about 28 miles from here, and which forms the boundary between His Highness the Nizam's dominions and the Bombay Presidency. The river began to rise at 11 A.M. on Saturday the 21st, and by 3 P.M. on Sunday the 22nd, had reached the wire of the ferry boat which is stretched from one high bank to the other. The flood gained in volume hourly till in the afternoon it attained the highest level which was 28 feet above the river bed. Such an extensive flood has not been witnessed or heard of by the oldest inhabitants of either of the villages of Kaigaom, Toka or Prirasangam which were mostly affected. The posts to which the ferry wire is attached are fixed on the highest spots on the banks, but these were almost half submerged in water. The villages of Kaigaom and Toka are also situated on high ground, but more than half of the houses were flooded, and several were swept away. The inhabitants had no time to remove their goods and chattels, but securing whatever came first to hand, they made good their retreat to places where the water was not so destructive, and sought shelter with their more fortunate neighbours, who gave them what assistance was needed. The flood lasted till Tuesday morning when it commenced to subside. On the north bank of the river His Highness the Nizam's Public Works Department had erected a resting-house of solid masonry on high ground, but this was also swamped, so that only a little of the roof remained visible, but the building received no damage. As was to be expected the villagers of Kaigaom who lived on lower ground

suffered most, in that most of their houses with their goods were washed away and they were thus left homeless.

The sowcars and traders have suffered greatly. As an instance it may be mentioned that a *Teli* (oilman) had a very large stock of oil in store, but the water having had access to it almost half the village was flooded with oil, and he lost his entire supply. The Government building for the men working the ferry boat which was a substantial one was entirely swept away, and no vestige of it now remains.

It is a matter for congratulation that no human lives were lost owing to the flood having occurred during the day, otherwise, there is no doubt that many persons would have inevitably perished. Many cattle were however lost."

The Chikalda observer's report is as follows :—

On the night of the 18th, rain fell in torrents continuously from midnight to 3 A.M., when it ceased for a short time. On the 19th, it rained from 8 A.M. to 1 P.M., but the fall was moderate. It recommenced at 7 P.M., and fell in torrents continuously for two hours, during which period 4·5 inches were received.

During my residence here, I have never seen such heavy rainfall. All the streams were flooded and much damage was done. In the nullah near the village Salona, two carts were carried away by the flood, and three men were drowned. The telegraphic line was interrupted for three days.

I have been informed that much damage was done to the Akot and Seloo road, which was completed only in 1891, at an estimated cost of two lakhs of rupees. The Gugamal Forests reserve has been greatly damaged, and large parts of it, including many bridges, washed away. Heavy floods were experienced in this district in the years 1883, 1884, and 1886, when even greater destruction was caused than in the present rains. In these storms the heaviest rainfalls within 24 hours were registered on the following dates :—

1883	1st July	12·62 inches.
1884	7th September	12·30 „
1886	19th August	16·97 „

The storm was generated in the north-west angle of the Bay, whilst the previous storm was breaking up in Sind and Baluchistan. It advanced across the North Orissa coast on the 17th, and marched in a westerly direction across Orissa and the Central Provinces on the 18th, 19th and 20th, on which last day it recurved slightly to north. It gave heavy and prolonged rain to the Central Provinces and excessive rain in Berar. It marched during the next 48 hours (*i.e.*, on the 21st and 22nd) in a west-north-westerly direction to South-West Rajputana, the centre being near Mount Abu at 8 A.M., of the 22nd. During this stage, winds had increased very rapidly on the Bombay and Kathiawar coasts, and were blowing with the force of a strong gale on the 21st and 22nd. Excessively heavy rain fell in Gujarat, Kathiawar and Cutch, which led to the rapid formation of a deep, but small, secondary depression central near Bhuj. This, however, filled up on the 24th as rapidly as it had formed. The primary depression continued to advance in the same direction as hitherto, but somewhat more slowly, and passed through Lower Sind on the 24th, and gave winds of almost hurricane force to Kurrachee on the morning of the 24th. It finally broke up on that day against the Baluchistan hills.

The following table gives the position and rate of motion of the storm centre from the 16th to the 24th :—

Date.	Hour.	Position. Lat. N.	Position. Long. E.	Distance travelled during interval.	Average hourly velocity in miles during past 24 hours.
		° ′	° ′		
16th . .	8 A.M.	20 0	88 25	...	...
17th . .	„	21 15	87 30	100	4
18th . .	„	21 40	84 0	240	10
19th . .	„	22 0	80 25	240	10
20th . .	„	22 25	78 30	130	5
21st . .	„	23 10	75 20	200	8
22nd . .	„	24 0	73 10	170	7
23rd . .	„	24 45	70 30	180	8
24th . .	„	25 30	68 30	130	5

One of the chief features of the storm was the excessive rainfall, which accompanied it, more especially during its later stages, when it was maintained chiefly by a strong and powerful humid indraught from the Arabian Sea.

The following gives rainfall data for the storm :—

Division.	Average actual rainfall in 24 hours preceding 8 A.M. of date. 17th.	18th.	19th.	20th.	21st.	22nd.	23rd.	24th.	Total of period.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
Orissa . .	1·47	1·10	0·05	0·04	0·09	0·30	1·69	2·32	7·06
Central Provinces (East) . .	1·06	1·78	1·11	0·39	0·15	0·37	0·58	1·08	6·52
Central Provinces (Central) .	0·49	0·33	1·66	0·90	0·27	0·26	0·21	0·23	4·35
Berar . .	0·06	0·08	1·38	5·39	1·04	0·27	0·19	0·15	8·56
Sirohi State .	0·02	0	0·02	0·55	2·13	1·30	0·76	1·77	6·55
Oodeypore State	0	0·02	0	0·90	0·53	1·48	0·35	0·33	3·61
Kathiawar .	0·27	0·27	0·16	0·73	2·77	2·90	3·01	0·48	10·59
Gujarat . .	0·15	0·17	0·08	1·09	3·62	3·12	1·75	0·44	10·42
Cutch . .	0·01	0·07	0·01	0·03	0·19	3·67	6·87	1·58	12·43
Lower Sind .	0·03	0·07	0·01	0·12	0·27	0·30	0·25	2·23	3·28

When the previous storm had advanced as far westwards as the central districts of the Central Provinces, the Bengal current ceased to contribute humid winds to it and the winds in the Gangetic plain hence fell off rapidly in strength on the 20th and following days. The follow-

ing gives mean wind data for the 19th and the following days for Northern India :—

Division.	Average hourly air movement in miles.				
	19th.	20th.	21st.	22nd.	23rd.
North-Western Provinces	3	4	5	4	3
Bihar	9	7	5	5	3
Chota Nagpur . .	10	6	6	4	5
Bengal	6	5	4	2	4
Orissa	11	11	9	5	9

The preceding data establish that the winds fell off steadily from the 19th to the 21st, and that the decrease was greatest in the districts nearest the Bengal coast. The winds were, on the morning of the 22nd, very considerably below their normal strength. Rain also decreased steadily and was small in amount during the same period in North-Eastern India, as is shown by the following returns :—

Division.	Rainfall during 24 hours preceding 8 A.M. of date.				
	19th.	20th.	21st.	22nd.	Total.
	Inch.	Inch.	Inch.	Inch.	Inch.
North-Western Provinces	0·05	0·03	0·04	0·05	0·17
Bihar	0·11	0·07	0·03	0·11	0·32
Chota Nagpur . .	0·21	0·10	0·18	0·15	0·64
Bengal	0·22	0·27	0·15	0·30	0·94

The rainfall on the 22nd was small in amount, and a partial break in the rains obtained over nearly the whole of North-Eastern India. The monsoon current was stronger than usual in the south and centre of the Bay; and, as had already occurred on three occasions during the month when similar meteorological conditions obtained over the Bay area and Bengal, a storm and cyclonic whirl was generated which formed the chief feature of the weather of the next week. The following gives a history of this storm :—

Storm of the 23rd to the 28th July.—The changes tending to the formation of this storm have been stated above. On the morning of the 22nd light variable airs and calms and fine weather prevailed generally in Bengal. The following data extracted from the logs of vessels show that the monsoon current was unusually strong over the whole of the Bay to the south of Lat. 21 N.°

Hour.	Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
8 A.M. .	SS *Bentala* .	15 38	91 06	...	SW	8	Overcast.
,, .	SS *Ethiopia* .	19 09	90 15	29·447	W	6	Squally with rain.
,, .	SS *Kangra* .	14 49	85 45	·624	SW	6	Overcast.
,, .	SS *Philomene* .	18 52	86 42	...	SW	6	Very dirty; noon, drizzling.
,, .	SS *Catherine Apcar* . .	20 10	88 32	·470	SSW	10	Heavy squalls.
,, .	SS *Commilla* .	21 50	91 30	·465	Var.	2	Fine ; 4 P.M., heavy rain.
10 A.M.	F L V *Torch* .	Eastern Channel		·546	W	4	Passing showers during day.
,, .	F L V *Hesperus*	Pilots' Ridge		·599	NW	4	Noon, squally.

The preceding data establish that the monsoon winds in the south and centre of the Bay were very strong, ranging from 6 to 8 in force. They were moderate to strong in force in the north-west angle of the Bay, as the F. L. V. *Torch*, which had winds force 4 at 8 A.M., had west-south-west winds of force 6 at 4 P.M., and the F. L. V. *Hesperus* had winds of force 4 at the same hour.

The meteorological conditions, immediately preceding the formation of the storm or cyclonic whirl were—

(1) Uniform pressure over the whole of Bengal, Bihar, and Chota Nagpur. Pressure over the whole of that area ranged between 29·475 inches at Hazaribagh, and 29·504 inches at Chittagong.

(2) Light, unsteady, and variable airs and calms over the whole of North-Eastern India.

(3) The prevalence of fine weather, with little or no rain, over nearly the whole of North-Eastern India.

(4) The presence of a strong humid current immediately to the south, which was being pressed northwards, probably by its own momentum.

The following extracts from storm reports show clearly that weather was in strict conformity with these conditions at the head of the Bay :—

F. L. V. *Torch*.—Squally unsettled weather, passing showers during the day. Moderate southerly sea.

F. L. V. *Hesperus*.—Sunrise—very ugly looking. 8 A.M.—Moderate north-west squalls. Noon.—Distant thunder to west, slight south-west

swell and continuous slight rain. 3 P.M.—Rain ceased. Sunset—Moderate lightning to east. 11 P.M.—Moderate squalls with light continuous rain, slight sea and south-west swell.

23rd July.—Pressure had decreased briskly in South Bengal and a shallow depression had formed in the area defined by the stations for which observations are given in the following table :—

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.
	"	"	"				Ins.	
Saugor Island	29·453	—·042	—·063	WSW	17	10	1·51	
Narayanganj	·431	—·054	—·128	E	5	8	0·68	
Berhampore	·451	—·048	—·070	ENE	1	8	0·11	
Jessore	·421	—·065	—·115	ENE	2	5	0·80	
Burdwan	·453	—·045	—·059	Calm	2	10	1·31	Thunder-storm.
Calcutta	·432	—·059	—·085	WNW	5	10	0·34	

A fairly well-defined cyclonic circulation was now established, but winds were light and below the normal at all stations, except Saugor Island, where they had increased very considerably. General and moderately heavy rain had fallen in the low pressure area in South Bengal, and practically none in Assam, North and Central Bengal, and Bihar. The following gives rainfall data for the districts in which the storm formed for the three days, the 22nd to the 24th, and shows the intensification and concentration of the rainfall which accompanied the formation of the storm :—

District.	Rainfall during 24 hours preceding 8 A.M. of date. 22nd.	23rd.	24th.
	Inches.	Inches.	Inches.
Burdwan	Nil.	0·61	1·18
Midnapore	0·68	2·22	6·67
Howrah	0·31	0·88	3·03
24-Parganas	0·44	0·87	3·24
Nadia	0·13	0·39	0·27
Murshidabad	0·08	0·14	0·37
Jessore	0·08	0·54	0·32
Khulna	0·04	1·27	0·84

The rainfall was moderate in amount on the 22nd and 23rd, and was apparently heaviest in the south-western quadrant.

The weather in the Bay was practically unchanged, strong monsoon winds with squally weather prevailing over the north and centre.

The following gives data showing these facts :—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	"			
8 A.M.	SS *Brindisi*	13 12	85 11	29·695	SSW	5	
"	SS *Catherine Apcar*	17 32	89 56	·550	SSW	6	Very heavy squalls.
"	SS *Philomene*	19 34	87 09	...	SW	6	Midnight, terrific squalls.
"	SS *Africa*	19 18	89 50	29·425	SW	7	Violent squalls.
"	SS *Maharani*	17 46	93 21	·630	WSW	6	Squally.
10 "	F L V *Torch*	Eastern Channel		·529	SW	6	Squally with rain.
"	F L V *Hesperus*	Pilot's Ridge		·554	W	6	Morning, frequent moderate squalls. 8 P.M., squalls force 6 to 7.

The following extracts from storm reports indicate the character of the weather and the changes in progress at the head of the Bay :—

Shortt's Island.—23rd July. 8 A.M.—Aneroid 29·62, 8 P.M.—28·33(?) Weather was throughout the day very unsettled with light drizzling rain, very variable winds and occasional distant thunder.

F. L. V. *Hesperus.* 10 A.M.—Wind west. Force 6. Rainfall preceding 24 hours 1·06 inches. Sunrise.—Frequent moderate squalls. 10 A.M.—Squalls ceased. 11 A.M.—Wind force 7. 1 P.M.—Wind became puffy. 4 P.M.—High south-west swell. 8 P.M.—Squalls force 6 to 7. Midnight.—Barometer began to fall rapidly.

Saugor Island.—10 A.M.—Overcast, strong wind. 2 P.M.—Drizzling, overcast with rain all round. Thunder and lightning to south-east. Sea slight. Wind gentle and direction variable. 4 P.M.—Sea slight. Dark gloomy weather. Overcast with rain.

The preceding data establish that the storm developed very slowly during the day. Heavy rain was falling and increasing in intensity, and pressure at length began to fall very rapidly late in the evening, and very stormy weather set in at the head of the Bay.

24th July—Pressure had given way very rapidly in South-West Bengal, and a deep depression and moderately severe cyclonic storm now lay over that area.

The following gives 8 A.M. observations 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.
	"	"	"				In.	
Balasore	29·364	—·095	—·135	WSW	9	9	7·00	Sea very rough.
Saugor Island	·247	—·206	—·273	SW	38	10	7·69	
Calcutta	·203	—·229	—·318	ENE	8	10	2·36	
Berhampore	·390	—·061	—·134	ENE	5	10	0·57	
Burdwan	·304	—·149	—·213	NNW	7	10	1·11	
Midnapore	·310	—·177	—·195	N	7	10	2·25	

The centre of the depression was a little to the south of Calcutta, where pressure was nearly a third of an inch below the normal. Gradients were very steep in the southern quadrant. Excessively strong westerly winds were now blowing in that quadrant. The velocity at 8 A.M. at Saugor Island was 64 miles per hour. The gale at that station set in about midnight. Stormy cyclonic winds were blowing over the whole of South-West Bengal, but outside the storm area in North Bengal and Bihar, winds were as yet light. Very heavy rain had fallen in the storm area.

The following gives data:—

District.	Average actual rainfall 24 hours preceding 8 A.M. of date.	Heaviest rainfall in district.	Station at which heaviest rainfall was recorded.
	Inches.	Inches.	
Bankura	1·67	3·50	Raipur.
Midnapore	6·77	15·29	Contai.
24-Parganas	3·24	9·90	Diamond Harbour.
		7·69	Saugor Island.
Hooghly	2·61	4·86	Jahanabad.
Jessore	0·32	0·85	Bangaon.
Balasore	4·25	5·65	Balasore.
Hazaribagh	1·18	2·50	Ramgarh.
Sonthal Parganas	0·85	4·53	Jamtara.

The rainfall during the previous 24 hours had hence been excessive to the west and south-west of the depression, and light in the eastern half of the depression, which had already begun to move to the westwards.

The following observations taken on board ships in the north-west of the Bay show the character of the weather:—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Baro. meter.	Wind. Direction.	Wind. Force.	Weather.
		° ′	°	"			
10 A.M.	F L V *Torch*	Eastern	Channel	29·403	SW	11	Squally, wind blowing with hurricane force at times.
,,	F L V *Hesperus.*	Pilots'	Ridge	·445	WSW	11	5 A.M., whole gale squalls, heavy rain.
8 A.M.	SS *Kangra*	19 10	87 17	·373	WSW	10	Very heavy squalls of wind and rain.
,,	SS *Philomene*	19 36	88 15	...	SW	9	Terrific squalls.
,,	SS *Africa*	20 27	88 45	·338	SW	8	Violent squalls of rain.
,,	SS *Dundonald*	20 50	88 21	·456	WSW	7	Heavy squalls.

The data show that the storm had developed with great rapidity, and winds of almost hurricane force and very violent squalls were now experienced in the north-west angle of the Bay at the mouth of the Hooghly.

The following extracts from special reports show the character of the weather more fully:—

Shortt's Island.—Between 2 A.M. and 4 A.M. thunder and lightning to the south-south-west. The weather now began to be squally with heavy rain from west. It continued without intermission during the next 24 hours without a break; at times the squalls were rather violent, but the force of the wind did not exceed 7 or 8 at this station.

F. L. V. *Hesperus.*—1 A.M. Wind freshening fast. Sea rising. 5 A.M., whole gale, squalls, heavy rain, high sea. 1 P.M.—Full cyclonic squalls till dusk. Sea blown down by wind. Rain in solid sheets. Sea risen like magic. Every thing unvisible beyond a few yards from ship, and afternoon more like night than day so that the midship part of ship could not be seen standing from aft. After sunset rain fell off in quantity and squalls less fierce, although they were yet of violent cyclonic force. 9 P.M.—Rain ceased, squalls at longer intervals. 11 P.M.—Squalls decreasing fast. Midnight.—Squalls still decreasing. Sea high.

Saugor Island.—Noon.—Severe gale blowing, overcast with continuous rain. Sea very rough. 4 P.M.—Strong wind blowing in hard squalls. Gale moderate since 2 P.M. Slight drizzling rain, but at 3·30 P.M. wind began again to increase rapidly in force. 8 P.M.—Blowing a

whole gale. Amount of wind registered by anemograph since 4 P.M. 237·9 miles. Hard squalls with drizzling rain. Sea very rough."

These accounts are very interesting, as they show the very rapid development of the storm from a comparatively feeble depression with winds of force not exceeding 6 in the central area in the early morning to a severe cyclonic storm with hurricane winds force 12 in barely twelve hours. The character of the weather in the storm area is most graphically described by the captain of the F. L. V. *Hesperus*, Captain Beahan, a most careful and accurate observer who has had many years' experience of cyclonic storms at the head of the Bay.

25th July.—Pressure had increased briskly to rapidly in South Bengal and fallen rapidly in the eastern districts of the Central Provinces and Chota Nagpur. The storm had drifted in a west-north-west direction through a distance of about 100 miles during the previous 24 hours and was at 8 A.M. central between Midnapore and Bankura.

The following gives 8 A.M. observations 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.	
Balasore .	29·318	—·046	—·187	WSW	15	6	5·62	Gale of wind.
Saugor Island.	·332	+·085	—·189	SSW	36	10	2·22	Sea rough.
Burdwan .	·300	—·004	—·217	ENE	13	10	0·53	Gale of wind.
Bankura .	·274	—·081	—·211	NE	7	10	1·28	
Midnapore .	·292	—·018	—·220	S	12	10	0·66	
Chaibassa .	·307	—·093	—·188	WNW	3	10	2·15	

The centre of the storm was between Bankura and Midnapore. Pressure was over slightly more than two-tenths of an inch below the normal at Bankura, Burdwan, and Midnapore. The storm was hence already commencing to fill up, and the gradients were not so steep as on the morning of the 24th. Strong cyclonic winds continued to blow in the storm area, but the cyclonic circulation was much less vigorous than on the previous day. Winds at Saugor Island were blowing at 8 A.M. with a velocity of 36 miles per hour and at False Point of 26 miles per hour. Heavy rain had fallen in the storm area, more especially in the south-west quadrant of the storm area. The following gives data:—

District.	Average actual rainfall of 24 hours preceding 8 A.M. of 25th.	Heaviest rainfall in district.	Station at which the heaviest rainfall was recorded.
	Inches.	Inches.	
Burdwan . . .	0·30	0·53	Burdwan.
Midnapore . . .	1·03	3·10	Contai.
24-Parganas . . .	0·86	2·22	Saugor Island.
Howrah . . .	0·20	0·27	Mohesreka.
Hooghly . . .	0·26	0·40	Jahanabad.
Cuttack . . .	2·75	5·14	Kendrapara.
Balasore . . .	2·89	5·79	Balasore.
Hazaribagh . . .	0·96	3·15	Chatra.
Sonthal Parganas . .	0·25	0·67	Jamtara.
Bankura . . .	1·03	2·08	Vishnupur.
Singhbhoom . . .	1·75	3·07	Chakradharpur.
Palamau . . .	4·00	5·62	Husainabad.

The contrast between the rainfall in the south-west quadrant and that in the east is hence very marked, and shows that heavy rainfall continued to be received chiefly in the front of the advancing storm. Weather had considerably improved in the north-west angle of the Bay, but was still stormy. The following gives data:—

Hour.	Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	"			
10 A.M.	F L V *Torch*	Eastern	Channel	29·502	SW	9	Squalls taking off.
,,	F L V *Hesperus.*	Pilots'	Ridge	·492	SW	9	Whole gale with occasional hard squalls and heavy rain.
8 A.M.	SS *Africa* .	21 10	88 17	·340	WSW	7	Occasional rain.
,,	SS *Philomene*	19 12	88 35	...	SSW	...	4 P.M. Overcast.
,,	SS *Kangra* .	19 45	87 40	29·467	SW	6	Occasional squalls.
,,	SS *Loodiana*	19 20	87 19	·451	SW	5	Cloudy.

The preceding data show that at 8 A.M. south-west winds of force 7 to 9 were blowing in the north-west angle of the Bay, and weather was very squally. The weather moderated rapidly and at 4 P.M. was fine, whilst at 8 A.M. on the next morning it was generally fine and clear with moderate winds (force 4). The improvement of the weather on this day is thus described in the meteorological log of the F. L. V. *Hesperus*:—"1 A.M.—Squalls lessening in force

and frequency. 6 A.M. to 9 A.M.—Whole gale with occasional hard squalls and heavy rain. 10 A.M.—Moderating fast, sky clearing, rain ceased. Noon.—Fine weather. Sunset—overcast. 8 P.M.—Almost cloudless."

It may be noted that the break in the rains continued in North-Western India and the Deccan, and that light showers were falling in the west coast districts and the Central Provinces. Winds were normal in strength on the west coast, but were giving little rain.

26th July.—Pressure had increased rapidly in South-West Bengal and Orissa, and had fallen slightly in Baghelkhand and the northern districts of the Central Provinces. The storm had advanced across Chota Nagpur during the previous 24 hours at an average rate of about 11 miles per hour, and the centre was in about Lat. 23½° N. and Long. 84° E. at 8 A.M and was hence entering Baghelkhand. The depression at the centre was much less than on the 25th and probably did not exceed a sixth of an inch. The storm was hence filling up rapidly and now consisted of a large area of nearly uniform pressure, the longest diameter of which was nearly 250 miles and of an outer area of moderately steep gradients, steepest to the west and south. Strongish easterly cyclonic winds were blowing in Bihar and strong westerly winds at Raipur and Sambalpur in the southern quadrant. The following gives 8 A.M. data of 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.			
	"	"	"					
Sambalpur . .	29·474	+·058	—·063	SW	16	10	2·61	Wind variable.
Raipur . .	·504	—·023	—·058	WSW	17	10	3·54	Strong wind.
Chaibassa . .	·466	+·160	—·040	SW	4	10	1·18	
Hazaribagh . .	·455	+·074	—·079	SE	16	10	0·77	
Benares . .	·453	—·014	—·046	E	7	10	0·12	
Allahabad . .	·462	+·003	—·037	ENE	7	10	1·23	Thunder-storm.
Sutna . . .	·454	—·025	—·055	NE	9	8	1·04	
Daltonganj . .	·429	—·014	?	E	5	8	0·18	

Moderate rain had fallen in the western and southern quadrants of the storm, but the falls were now much lighter than hitherto, as is shown by the following :—

Province.	District.	Station.	Fall during preceding 24 hours.
			Inches.
Central Provinces .	Mandla .	Dindori .	6·00
	Balaghat .	Behir .	5·09
Central India .	Rewah .	Chandia .	3·11
		Ramnagar .	2·66
Chota Nagpur .	Lohardaga .	Palkot .	4·00

27th July.—Pressure had increased over the whole of India. The cyclonic storm had advanced slowly westwards during the previous 24 hours and was now central in Baghelkhand, the centre being a little to the west of Sutna in Lat. 24° N. and Long. 81½° E. The storm on the 27th was a very shallow, but somewhat extensive depression with very slight gradients except in the south-west quadrant where they were moderately steep. Winds were variable in Bihar and the northern quadrant of the storm area and the cyclonic circulation was hence now feeble. The following gives 8 A.M. observations at stations in the low-pressure 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.			
	"	"	"				Inch.	
Raipur . . .	29·570	+·066	+·005	WSW	12	10	Nil.	
Hazaribagh . .	·560	+·105	+·015	SSE	11	10	0·15	Raining.
Benares . . .	·546	+·093	+·041	E	10	7	Nil.	
Allahabad . .	·532	+·070	+·028	ENE	12	9	0·08	Drizzling.
Sutna . . .	·508	+·054	—·009	NNE	8	10	0·38	
Jubbulpore . .	·567	+·058	+·010	W	9	10	0·83	

The rainfall in the storm area during the previous 24 hours was small in amount. The following gives average data :—

District.	Average actual rainfall preceding 8 A.M. of 27th.	Heaviest fall in district.
	Inches.	Inches.
Central Provinces { East . .	0·25	0·97
Central Provinces { Central . .	1·04	3·90
Baghelkhand	0·60	2·08
Bandelkhand	2·19	5·80
North-Western Provinces, East .	0·03	0·34
Chota Nagpur	0·16	2·00
Bihar { North	0·04	0·37
Bihar { South	0·01	0·12

Winds had fallen off very rapidly in Bengal. and light airs and calms were experienced in the north-west angle of the Bay during the day.

The depression continued to fill up during the day and the very shallow residual depression which was in existence in Baghelkhand on this day completely disappeared before the evening of the 28th.

The preceding storm was a most interesting example of its class. It formed in such a position as to show the whole circumstances and conditions of its origin in the clearest manner, and it may be noted that these conditions and circumstances were such as previous experience has indicated to be invariable antecedents of all the larger cyclonic storms of the rains in the Bay of Bengal. It originated in an area of uniform pressure, light variable airs and calms, and from which the strong monsoon current that had prevailed some days previously had retreated. The factor which determined its origin was the presence of a strong humid current to the south, which was at the time increasing in strength (as shown by the Port Blair and other wind data) and was impelled northwards again to the area of light winds. Rain began to fall in a portion of this area and increased in intensity. Pressure began to give way locally over the area of rainfall and a cyclonic circulation was initiated. The depression and cyclonic circulation increased *pari passu* with the rainfall until at length a violent cyclonic storm (with winds of hurricane force 11 to 12) was formed. It is possible the westerly monsoon current across the North Deccan and Orissa may have contributed to some extent in forming and maintaining the storm, but the data establish clearly that the Bengal current was the primary and important factor.

The storm in several of its features closely resembled the storm of August 21st to 28th, 1888, an account of which will be found in the second volume of the Cyclone Memoirs. The present storm commenced to form in South-West Bengal on the 22nd, and was a deep depression with very steep gradients in the southern quadrant on the morning of the 24th. It increased very slowly until the early morning (*i.e.*, 1 A.M.) of the 24th when its intensification proceeded with unusual rapidity and in less than twelve hours the winds at the entrance to the Hooghly had increased from force 8 to force 12. It is doubtful whether the slight apparent change of position on the 23rd whilst it was forming can be regarded as indicating a real change of position of the storm as a whole and it is probable that it did not begin to advance until the morning of the 24th. It marched very slowly during the next 24 hours at an average rate of about 5 miles per hour, and the centre was between Bankura and Midnapore on the morning of the 25th. It continued to advance in a west-north-west direction with increasing velocity through Chota Nagpur on the 26th and was in Baghelkhand on the 27th. The rainfall in the storm area had steadily decreased in amount, and the storm had diminished equally steadily in intensity and was feeble on the morning of the 27th. It gradually filled up on the 27th. The heaviest rainfall in the storm area occurred throughout in the western quadrant and during the greater part of its existence the contrast between the rainfall in the east and west quadrants was as striking as between the air movement in the north and south quadrants when it was in South-West Bengal.

The following table gives the position and rate of motion of the storm centre :—

Date.	Hour.	Position.		Distance travelled during interval.	Average hourly velocity in miles per hour during previous 24 hours.
		Lat. N.	Long. E.		
		° ′	° ′	Miles.	
24th . . .	8 A.M.	22 15	88 30	...	
25th . . .	,,	22 30	86 50	110	5
26th . . .	,,	23 30	84 0	210	9
27th . . .	,,	24 15	81 40	160	7

The storm gave excessive rain whilst it was forming in and passing through South-West Bengal, and moderate to heavy rain during its passage through Chota Nagpur to Baghelkhand, where it was gradually filling up, as is shown by the following data :—

District.	Average actual Rainfall in 24 hours preceding 8 A.M. of date.					Total of Period.
	23rd.	24th.	25th.	26th.	27th.	
	Inch.	Inch.	Inch.	Inch.	Inch.	
Orissa	1·69	2·32	2·06	0·04	0·15	6·26
South-West Bengal . .	0·87	2·02	0·58	0·22	0·03	3·72
Chota Nagpur . . .	0·46	1·78	1·45	0·58	0·18	4·45
South Bihar . . .	0·17	0·91	1·09	0·10	0·01	2·28
Baghelkhand . . .	0·08	0	1·08	1·78	0·60	3·54

In the rear of the storm also, a heavy wave of monsoon winds flowed over Bengal, but it was determined mainly to the western and south-western districts, and the remainder of the province received comparatively little rain. On the 29th, however, pressure fell moderately to briskly over the whole of Bengal, and at the same time westerly winds, apparently forming part of the Bombay branch of the monsoon current, began to set in over the west of the Province. Very heavy rain began to fall in the northern districts of Bengal and in Bihar, and on the

29th, many of the stations in this district reported heavy rain, Bettiah receiving 8·50 inches, Buxar 6·14 inches, Siwan 5·7 inches and many other stations rather heavy falls.

These conditions gave rise to a barometric depression, but which on this occasion was of a feeble nature. On the 30th pressure had fallen over the eastern half of the province, the fall being largest at Dinajpur, while it had risen over the west and south-west of Bengal, and a feeble barometric depression had formed with a centre near that station, round which winds were circulating cyclonically. Hence conditions were very favourable for rainfall over practically the whole of Bengal, and falls exceeding 5 inches were recorded at Atia, Fenny, Harishpur, Cox's Bazar and Siwan, and a large number of stations reported amounts of more than three inches. On the 31st the feeble depression had moved in a westerly direction, and was lying along the foot of the hills between Purnea and Bahraich, and on the 1st of August it had almost disappeared or had merged into the monsoon trough of low pressure which at this time was lying along the foot of the hills in Northern India.

Summary of the reports of the weather and snowfall in the mountain districts to the north and north-west of India.

Only one snowfall report was received during the month *viz.*, for the Almora district. According to the report no snow fell in the Malla Danpur or the Mallas Byans, Chandans and Darma, and a light fall of snow occurred on the 27th July on the higher passes of Malla Johar. The weather during the month was of the usual character, but the snowfall of the 27th was somewhat exceptional.

Summary of special storm reports.

The following gives a statement of the chief local storms of which reports were received during the month :—

5th—Violent duststorm at Jacobabad from 8 P.M. to 9 P.M. Storm came from the north-east direction.

9th.—Thunderstorm at Pachpadra with heavy rain, 1 P.M. to 3 P.M. 4·27 inches fell during this period of two hours.

14th.—Thunderstorm at Allahabad at 7-15 P.M.

15th.—Thunderstorm at Allahabad at 11 A.M.

16th.—Severe thunderstorm at Delhi at 0-30 A.M. One of the minarets of the Jamma Masjid was struck by lightning and slightly damaged. Thunderstorm with hail at Tanjore in the evening. The storm was a local one and passed from south-west to north-east.

20th—Thunderstorm at Pachpadra from 11 A.M. to 0-30 P.M., 113 miles of wind being recorded by anemometer during this period. The amount of wind from 11·30 A.M., to 11·40 A.M. is given as 51·5 miles (?), but the wind observations are almost certainly erroneous.

Duststorm at Hyderabad (Sind) at 6-40 P.M. It was followed by a thunderstorm which gave heavy rain.

22nd.—Thunderstorm at Bhuj at 6 P.M. Winds of force 41 miles per hour were recorded during the storm.

23rd.—Severe thunderstorm at Allahabad lasting from 4 P.M. to 8 P.M. Total rainfall during storm 1·89 inches of which 1·09 inches fell between 5 and 5-30 P.M.

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

Arabian Sea.—At the commencement of the month ordinary south-west monsoon winds, force 4 to 6, obtained in the north, centre, and east of the Arabian Sea, and weather was squally and showery over the whole of that area. In the west of the sea, winds, although of normal strength, were more southerly than usual and weather was hazy. In the south of the sea normal westerly winds and showery weather prevailed. The wind force for the whole sea area averaged 4·4. Normal winds and weather set in over the west of the sea during the next 24 hours, so that on the morning of the 2nd ordinary monsoon conditions prevailed generally. No change of importance occurred until the 8th, when the air movement began to increase generally over the sea and more especially along the Konkan, Kathiawar and Sind coasts, due apparently to the conditions over the land. The S.S.

Mobile less than 100 miles off the Kathiawar coast at 8 A.M. of the 8th experienced a west-south-west gale, force 8, and heavy showers of rain, and the S.S. *Banda* in Lat. 17°N. and Long 62½° E. at the same hour had south-west-by-south gales, force 9. The mean air movement for the whole sea area was 5·0 or 0·6 greater than on the 1st. With the continuance and development of the disturbed conditions over the land, the winds increased further in strength during the next two days, and on the morning of the 10th winds of force 8 to 11 were experienced by six vessels out of the fourteen to the north of Lat. 11°N. The winds were on the whole strongest in the north of the sea, more especially along the Kathiawar coast, where weather also was very unsettled. The S S. *Mobile* in Lat. 22¾° N. and Long. 64° E. at 8 A.M. of the 10th had stormy west-south-west winds (force 10 to 11) and a heavy sea, and the S.S. *Kola* in Lat. 23¼° N. and Long. 67½° E. had thick weather with heavy rain. In the south and south-east, winds were light to moderate in strength and weather practically fine. The mean intensity of the winds on the 9th and 10th averaged 5·7 or 1·0 greater than the normal velocity of the winds in the Arabian Sea in the month of July. Winds decreased rather rapidly in force, more especially in the west of the sea, and the mean wind force on the morning of the 11th was 5·0. The strongest winds reported on this day, were of force 7 only as compared with 11 on the previous day. The storm existing over the land and affecting the weather in the Arabian Sea during the previous three days, lay over Lower Sind at 8 A.M. of the 11th, and hence weather was very disturbed with heavy squalls and rain along the Sind coast. The influence of the storm, however, was not very extensive as the winds in the Gulf of Oman were unaffected.

Weather improved rapidly during the day off the Sind coast, so much so that on the morning of the 12th it was fine and clear. The air movement also had decreased rapidly and the strongest winds experienced in that area, were only of force 4. Very strong south-south-east winds (average velocity 25 miles per hour) and slightly disturbed weather had prevailed at Jask during the previous day; but these winds were in no way connected with the storm in Lower Sind as easterly winds prevailed at Jask and Muscat from the 10th to the 12th. The mean wind force in the Arabian Sea at 8 A.M. of the 12th was only 4·2 or 1·5 less than on the 9th and 10th. Winds increased during the next three days, more especially in the neighbourhood of the Kathiawar and Sind coasts; but the increase was not large and the wind force for the whole sea area on the morning of the 15th averaged 5·0. Conditions remained unchanged during the next three days, except that the air movement decreased to an average of 4·0 on the 18th.

The third cyclonic storm of the month which had formed in the Bay on the 16th, entered the eastern districts of the Central Provinces during the day and marched across the head of the Peninsula to Lower Sind during the next six days. Winds increased in force during this period, more especially along the Kathiawar and Sind coasts, and on the 24th averaged 4·8 in force. Winds were strongest off these coasts on the 23rd and 24th. The S.S. *Pemba* at anchor at Kurrachee at 8 A.M. of the 24th experienced frequent squalls of hurricane force and incessant heavy rain on the afternoon of the 24th. Weather was unaffected during this period over the centre, west, and south of the sea, where ordinary monsoon conditions continued to prevail. This storm like the first two storms of the month did not pass out over the sea and its influence over the weather in the Arabian Sea was confined chiefly to the neighbourhood of the coasts. Hence winds and weather remained unaffected in the Gulf of Oman. No change of importance occurred in the general conditions during the remainder of the month beyond a steady decrease in the wind force, which averaged 3·0 on the 29th and 3·6 on the 31st.

Bay of Bengal.—At the beginning of the month normal south-west monsoon winds of force 3 to 4 and squally showery weather prevailed generally in the Bay, except in the south-west, where winds were westerly in direction and weather fine and clear. In the neighbourhood of the Ceylon coast winds were rather variable both in direction and force; but here also the weather was fine. The mean air movement was 3·8. A moderate monsoon continued to prevail generally until the 7th, when the air movement began to take off in the north of the Bay. Very variable airs, force 1 to 2, and fine weather were experienced by vessels in the north of the Bay (to the north of Lat. 19° N) on the morning of the 8th. In the centre and south of the Bay the air movement had on the other hand increased in intensity, and several vessels in that area experienced winds of force 5 to 6 with heavy squalls of wind and rain and a high sea. The air movement for the whole Bay area averaged only 2·5 at 8 A. M. of the 8th.

As usually happens under this combination of conditions in the south-west monsoon period, a storm was generated in the area of light variable airs in the north of the Bay during the next 24 hours. It developed slowly during the next two days, and the winds increased rapidly in strength, more especially in the centre of the Bay. This intensification of the air movement is clearly shown by the wind data of Port Blair, where the hourly velocity increased from an average of 9 miles on the 8th to 15 miles on the 10th. The wind force for the whole Bay on the morning of the 10th was 1·5 greater than on the 8th and 0·8 than on the 9th. On the morning of the 11th winds were cyclonic in direction in the north-west angle of the Bay, Weather was very squally in the storm area and at considerable distances to the south and east. Winds and weather were

unchanged in the neighbourhood of the Coromandel and Ceylon coasts. The storm passed inland during the day, and winds shifted round to southerly directions in the north-west of the Bay. On the morning of the 12th the influence of the storm over the weather was confined mainly to the north-west of the Bay, where fresh to strong winds with heavy squalls prevailed. Over the remainder of the Bay winds were light to moderate in force and the weather was practically fine.

Conditions improved very rapidly in the north-west of the Bay during the next 24 hours, and on the morning of the 13th winds had fallen light at the head of the Bay. Thus the Barque *Gartmore*, in about Lat. 21¼° N. and Long. 88° E, experienced variable airs, force 1. The decrease in the strength of the winds is strikingly shown by the data of the F. L. V. *Hesperus*, which had winds of force 7 on the preceding day and a calm and fine weather at 10 A.M. of the 13th. On the other hand moderate to fresh monsoon winds and squally rainy weather obtained in the centre of the Bay. In the south weather remained fine. The average wind force for the Bay was 3·8 on the morning of the 13th or 0·5 less than on the preceding day. During the next 48 hours a storm formed in the area of light variable winds in the north of the Bay, winds shifted round to north-east in the north-west of the Bay, and on the morning of the 15th formed part of a cyclonic circulation around a centre in about Lat. 20 N. and Long. 89° E. Strong south-west winds and heavy weather prevailed to the south of the storm area as far south at least as Lat. 12° N. In the south of the Bay also winds had strengthened and were of force 6. The average wind force had increased to 4·3. The storm developed rather rapidly during the next 24 hours and its influence on the weather and winds increased considerably. The S.S. *Kohinur*, more than 300 miles to the south-west of the centre on the morning of the 16th, experienced fresh gales, force 8, constant heavy squalls, much rain and a rising sea, and the S.S. *Canara* at about the same distance to the south-east, had a moderate gale, force 7, fierce squalls, heavy rain and a high sea. Conditions were unchanged in the south of the Bay. The mean wind force on the morning of the 16th was 0·6 greater than on the previous day. Very unsettled squally weather and westerly gales were experienced during the next 24 hours in the north and centre of the Bay, several vessels reporting winds of force 8 to 9. The influence of the storm on the morning of the 17th extended to the south of the Bay, where also weather had become squally. The storm passed inland about noon of the 17th, and the winds and weather moderated rapidly in the north of the Bay during the next 24 hours. Thus, at the Eastern Channel station, winds decreased from force 9 on the 17th to force 4 on the morning of the 18th. The S.S. *Nairung* in Lat. 21¼° N. and Long 88° E. had cloudy weather at 8 A.M. of the 18th.

An important change occurred in the centre and south of the Bay during the next 24 hours, where winds began to increase rapidly in strength. This is shown clearly by the wind data of Port Blair, where the average hourly velocity increased from 13 on the 18th to 19 on the 19th. This rise in the air movement was independent of the storm, which was now in the eastern districts of the Central Provinces, as is shown by the facts that winds were decreasing in force in the north of the Bay and were also becoming more westerly. The increase in the strength of the current in the southern half of the Bay continued during the next 24 hours, and the wind force for the whole of the Bay increased to an average of 5·5 on the morning of the 20th. Weather was fine in the north of the Bay, but squally over the greater part of the remainder of the Bay. No change occurred during the next 24 hours, except in the north of the Bay, where weather was now disturbed and squally. The squalls increased in intensity, and were severe on the morning of the 22nd. Thus the S.S. *Catherine Apcar* in Lat. 20°N. and Long. 88½°E. at 8 A.M. of the 22nd had south-south-west winds of force 10, a heavy cross sea and heavy squalls. Weather was also very squally in the Andaman Sea and the neighbourhood of the Pegu coast, where winds of force 6 to 8, with violent squalls and a heavy sea prevailed. In the south of the Bay winds were moderate in force and weather was cloudy. A storm was generated in South Bengal during the next day the 23rd instant. It intensified rapidly during the next 24 hours, and weather became cyclonic in the north of the Bay. The lightships at the entrance to the Hooghly experienced stormy winds, force 11, and terrific squalls of rain on the morning of the 24th. Winds of force 5 to 6 were also experienced in the centre, west, and east of the Bay. In the south a moderate monsoon continued. The average wind force at 8 A.M. of the 24th was 6·1 or 2·1 greater than the normal force of winds in July in the Bay. With the westward advance of the storm, weather improved during the next 48 hours, and on the morning of the 26th, was fine with moderate south-west winds in the north of the Bay. Ordinary monsoon conditions with decreasing winds prevailed until the 29th, on the morning of which day the wind force was 3·6 or almost the same as on the 27th. Winds increased rapidly on the morning of the 29th, more especially in the east of the Bay and averaged 5·0 on the 30th. The increase was however only temporary, as on the 31st the wind force had decreased again to an average of 3·3.

Temperature of the air.

The temperature conditions of the month were determined solely by the rainfall distribution of the month, temperature being in excess in the areas of deficient rainfall and in defect in the areas of increased rainfall. The

departures from the normal were, almost without exception, greater in the day than the night temperature.

The mean day or maximum temperature was in excess in the Peninsula to the south of the 20th parallel of latitude. The excess was small over the greater part of the area, but exceeded 2° in the Coromandel coast districts and East Hyderabad, for which data are given below :—

Station.	Mean maximum Temperature.		
	Actual, July 1894.	Normal, July.	Variation of actual from normal.
	°	°	°
Secunderabad	88·3	86·2	+2·1
Cocanada	90·9	88·2	+2·7
Masulipatam	94·4	92·1	+2·3
Madras	97·5	95·1	+2·4
Trichinopoly	99·4	97·0	+2·4
Negapatam	98·2	94·9	+3·3

It was also in excess in Cachar, East and North Bengal, and North Bihar, but the variations nowhere exceeded 2° except at Jalpaiguri (+2·1°).

The mean maximum temperature of the month was in defect over the remainder of India. The deficiency was less than 2° over the greater part of the area, including Burma, South Bengal, South Bihar, Chota Nagpur and the North-Western Provinces, the greater part of Central India, Baghelkhand, Bundelkhand, the Central Provinces and Khandesh. It exceeded 4° in two areas for which data are given below :—

Province.	Station.	Mean maximum Temperature.		
		Actual, July 1894.	Normal, July.	Variation of actual from normal.
		°	°	°
Punjab	Ludhiana	90·7	97·9	−7·2
	Sialkot	91·8	97·6	−5·8
	Lahore	93·0	98·6	−5·6
	D. I. Khan	97·6	103·6	−6·0
	Rawalpindi	89·8	97·4	−7·6
	Peshawar	98·1	102·7	−4·6
Cutch and Kathiawar.	Rajkot	83·9	90·1	−6·2
	Bhuj	85·6	90·0	−4·4
South-West Rajputana.	Deesa	86·5	91·3	−4·8
	Ajmere	86·1	91·0	−4·9

The mean night or minimum temperature was normal or above it over the Peninsula to the south of Lat. 19°N. and also locally at Jacobabad, Mooltan, and Lahore, and was in defect over the remainder of India. The deficiency was less than 2° except in a small area including Lower Sind, Cutch and South-West Rajputana for which data are given below :—

Province or Area.	Station.	Mean minimum Temperature.		
		Actual, July 1894	Normal, July.	Variation of actual from normal.
		°	°	°
Cutch	Bhuj	75·4	78·0	−2·6
Lower Sind	Kurrachee	77·9	80·5	−2·6
South-West Rajputana.	Deesa	75·5	77·5	−2·0

The mean temperature of the month was in slight to moderate excess over the Peninsula to the south of latitude 19° N., and in North Bihar, North Bengal and East Assam.

The excess was over 1° in amount at the following stations :—

Station.	Mean daily Temperature.		
	Actual, July 1894.	Normal, July.	Variation of actual from normal.
	°	°	°
Salem	84·1	82·4	+1·7
Trichinopoly	88·8	87·1	+1·7
Negapatam	88·7	86·4	+2·3
Madras	88·5	86·7	+1·8
Masulipatam	86·5	85·0	+1·5
Cocanada	85·0	83·1	+1·9
Rajahmundry	84·6	83·1	+1·5
Secunderabad	80·6	78·7	+1·9
Jalpaiguri	83·9	82·4	+1·5

The excess was hence most marked in the Coromandel coast districts, where however it was moderate in amount and exceeded 2° at only one station, *viz.*, Negapatam.

The mean temperature of the month was below the normal over the remainder of India. The deficiency was more than 2° in amount over the greater part of the Punjab, Sind, Rajputana, Cutch and Kathiawar.

The following gives data for these areas of diminished temperature :—

Province or Area.	Station.	Mean daily Temperature. Actual, July 1894.	Normal, July.	Variation of actual from normal.
		°	°	°
Punjab	Rawalpindi	82·9	87·2	−4·3
	Ludhiana	84·8	89·0	−4·2
	Sialkot	84·8	88·5	−3·7
	Lahore	86·8	89·6	−2·8
	D. I. Khan	89·0	92·9	−3·9
	Peshawar	89·0	91·0	−2·0
Lower Sind	Hyderabad	87·0	89·7	−2·7
	Kurrachee	82·7	85·4	−2·7
Cutch	Bhuj	80·6	84·1	−3·5
Kathiawar	Rajkot	78·9	82·9	−4·0
Rajputana	Deesa	81·0	84·4	−3·4
	Ajmere	81·0	83·9	−2·9
	Bickaneer	89·1	91·4	−2·3
	Sambhar	82·8	85·0	−2·2
	Jeypore	82·3	84·3	−2·0

The variations of the temperature conditions of the hill stations in Northern India were similar in character to those of the neighbouring plain stations, but generally somewhat smaller in amount. The mean daily temperature of the month was more or less in defect at all stations as is shown by the following data for six stations :—

Station.	Variation from normal of Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Murree	−3·9	−0·5	−2·2
Simla	−4·7	−0·9	−2·8
Ranikhet	−0·5	−0·1	−0·3
Darjeeling	−0·9	+0·5	−0·2
Mount Abu	−4·1	−0·7	−2·4
Pachmarhi	−0·8	−0·7	−0·8

The following table gives comparative data for 51 meteorological areas or districts into which India is divided :—

Province.	Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean daily.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	83·4	73·7	78·6	9·7	16·9	−0·9	−0·3	−0·6
	Lower Burma	84·3	76·0	80·1	8·3	15·9	−0·5	+0·5	−1·0
	Central do.	86·9	73·6	80·3	13·3	20·7	−1·3	+0·1	−1·4
	Upper do.	88·5	75·9	82·2	12·7	22·2	−2·5	−1·0	−1·5
	Arakan	83·7	76·6	80·2	7·1	12·5	−0·9	−0·8	−0·1
Bengal and Assam	Eastern Bengal	86·8	77·3	82·1	9·5	17·5	−0·3	−0·4	+0·1
	Assam (Surma)	91·3	76·9	84·1	14·4	22·8	+1·3	−0·2	+1·5
	Do. (Brahmaputra)	89·0	78·1	83·6	10·9	19·7	−0·2	−0·3	+0·1
	Deltaic Bengal	87·5	77·9	82·7	9·6	17·4	−1·5	−1·2	−0·3
	Central do.	88·6	77·9	83·3	10·7	19·4	−0·4	−0·4	0
	North do.	90·5	78·0	84·3	12·6	21·4	+1·8	+0·1	+1·7
	Orissa	86·6	78·0	82·3	8·7	17·9	−1·9	−0·8	−1·1
	Chota Nagpur	85·5	74·7	80·1	10·8	18·6	−1·0	−0·7	−0·3
	Bihar (South)	90·0	78·7	84·3	11·4	20·5	−0·4	−0·4	0
	Do. (North)	91·1	78·9	85·0	12·2	21·2	+1·4	+0·1	+1·3
North-Western Provinces and Oudh.	North-Western Provinces (East)	90·3	78·5	84·4	11·8	20·9	−0·9	−1·0	+0·1
	Oudh (South)	91·7	78·6	85·1	13·1	24·2	−0·4	−0·7	+0·3
	Do. (North)	91·5	78·5	85·0	13·0	24·4	?	?	?
	North-Western Provinces (Central)	91·3	79·1	85·2	12·2	21·1	?	?	?
	Do. do. (West)	90·4	78·3	84·3	12·1	20·5	−1·5	−1·1	−0·4
	Do. do. (Submontane)	89·2	76·7	82·9	12·5	21·4	−1·3	−0·9	−0·4
Punjab	Punjab (South)	94·8	80·4	87·6	14·5	25·6	−2·2	−0·6	−1·6
	Do. (Central)	93·0	80·5	86·8	12·5	23·2	−5·6	+0·1	−5·7
	Do. (Submontane)	91·2	78·4	84·8	12·8	25·2	−7·2	−1·1	−6·1
	Do. (Hill Districts)	76·4	64·7	70·7	11·5	22·6	−4·3	−0·7	−3·6
	Do. (North-West)	93·2	77·8	85·6	15·5	29·1	−6·0	−0·6	−5·4
	Do. (West)	99·2	81·8	90·5	17·4	34·8	−2·3	−0·1	−2·2

Province.	Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean daily.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Range.
		°	°	°	°	°	°	°	°
Bombay and Malabar Coast Districts (Madras).	Malabar	83·0	74·3	78·6	8·7	15·0	+0·8	+0·1	+0·7
	Madras (South Central)	91·4	72·0	81·7	19·4	27·6	+1·2	+0·5	+0·7
	Coorg	69·7	62·7	66·2	7·0	12·3	+1·0	+0·5	+0·5
	Mysore	81·5	66·1	73·8	15·4	22·2	+0·9	0	+0·9
	Konkan	83·3	76·0	79·7	7·3	13·3	+0·1	+0·3	−0·2
	Bombay Deccan	83·2	69·3	76·3	14·0	21·4	−0·1	−0·3	+0·2
	Hyderabad (North)	86·8	71·2	79·0	15·6	26·1	?	?	?
	Khandesh	85·2	70·9	78·1	14·3	24·0	−0·5	−1·0	+0·5
Central Provinces and Berar.	Berar	86·7	73·3	80·0	13·4	24·4	−0·8	−0·3	−0·5
	Central Provinces (West)	85·4	74·2	79·8	11·2	20·5	−1·4	−0·6	−0·8
	Do. (Central)	84·3	73·4	78·8	10·9	19·8	−1·2	−0·6	−0·6
	Do. (East)	85·4	75·1	80·3	10·3	20·5	−1·3	−0·9	−0·4
Bombay (North)	Gujarat	85·4	76·1	80·8	9·3	19·9	−2·0	−1·2	−0·8
	Kathiawar	82·9	75·9	70·5	7·0	15·7	−6·2	−1·7	−4·5
	Sind and Cutch	93·2	79·3	86·3	13·9	27·7	−3·4	−1·5	−1·9
Rajputana and Central India.	Central India (East)	86·8	75·9	81·4	10·9	19·2	−1·7	−1·4	−0·3
	Rajputana (East), Central India (West)	86·2	74·7	80·5	11·5	22·6	−3·3	−1·2	−2·1
	Do. (West)	94·0	79·2	86·6	14·8	28·8	−2·8	−1·7	−1·1
Madras	East Coast (North)	89·0	79·6	84·3	9·4	18·1	+1·8	+1·0	+0·8
	Hyderabad (South)	89·6	73·2	81·4	16·4	26·0	+2·1	+1·7	+0·4
	Madras (Central)	92·6	75·3	83·9	17·3	29·1	+0·8	−0·1	+0·9
	East Coast (Central)	96·2	79·5	87·9	16·7	30·4	+2·3	+0·6	+1·7
	Do. (South)	97·6	78·4	88·0	19·2	29·0	+2·7	+1·1	+1·6
	Madras (South)	94·1	78·6	86·4	15·5	25·5	0	+0·8	−0·8

In consequence of the general rain which had fallen over the whole of Northern India and more especially in Upper India, temperature was in the beginning of July below the normal over the whole of Northern and Central India, and was above it in the Deccan and Madras. The excess was large on the 1st at the Madras coast stations, more especially Madras (+6°·8) and Masulipatam (+6°·6). The following gives temperature variation data for the 1st :—

Meteorological Province.	Variation from normal of Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	−0·7	+0·7	0
Bengal and Assam	−1·1	−0·1	−0·6
N.-W. Provinces and Oudh	−1·2	−0·6	−0·9
Punjab	−7·3	+0·1	−3·6
Sind and Rajputana	−6·2	−0·9	−3·6
Central India and Gujarat	−4·6	−1·9	−3·3
Central Provinces and Berar	+1·1	+1·0	+1·1
Bombay	+1·6	+1·6	+1·6
Madras	+4·6	+2·5	+3·6

The passage of the first cyclonic storm of the month across Northern India reduced temperature considerably, more especially in Central India, Rajputana and Sind. The following data for the 10th show the considerable reduction of temperature due to the heavy rainfall of that storm :—

Meteorological Province.	Variation from normal of Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	−1·7	−1·0	−1·4
Bengal and Assam	+1·1	+0·1	+0·6
N.-W. Provinces and Oudh	−3·8	−1·4	−2·6
Punjab	−10·1	−1·7	−5·9
Sind and Rajputana	−6·8	−2·0	−4·4
Central India and Gujarat	−8·0	−2·7	−5·4
Central Provinces and Berar	−2·4	−0·6	−1·5
Bombay	−1·4	−1·0	−1·2
Madras	−2·1	−0·9	−1·5

The second cyclonic storm advanced too rapidly across Northern India to give heavy prolonged rainfall, and hence temperature increased and was on the 14th and following days, during which period the third storm of the month was forming, normal or in slight excess except in Rajputana

Sind, and Central India, where the heavy rainfall, large amount of cloud and excessive humidity combined to give persistent lower temperature than usual at this period. The following data for the 15th illustrate these remarks:—

Meteorological Province.	Variation from normal of		
	Mean maximum temperature	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·7	−0·8	−0·1
Bengal and Assam	+2·2	+0·9	+1·6
N.-W. Provinces and Oudh	+0·5	+0·2	+0·4
Punjab	−1·8	+0·2	−0·8
Sind and Rajputana	−6·1	−3·2	−4·7
Central India and Gujarat	−3·7	−3·5	−3·6
Central Provinces and Berar	−0·2	−1·0	−0·6
Bombay	+0·1	−0·7	−0·3
Madras	+2·0	+0·4	+1·2

The third cyclonic storm of the month, like the first, passed slowly across the Peninsula and gave an excessive downpour of rain, more especially in North Bombay, South-West Rajputana, Khandesh, Berar and the Central Provinces. The reduction of temperature due to the rainfall was confined to the belt of country covered by the storm in its passage, and temperature increased in Northern India and was more or less in excess over nearly the whole of Northern India as in the southern half of the Peninsula during the later stages of the existence of the storm. The following gives mean temperature variation data for the 21st, 22nd, 23rd and 24th:—

Meteorological Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	21st.	22nd.	23rd.	24th.
		°	°	°
Burma	−1·4	−1·5	−1·2	−0·6
Bengal and Assam	+0·9	+1·4	+1·5	−0·7
N.-W. Provinces and Oudh	+0·5	+1·6	+2·6	+1·1
Punjab	−2·9	−0·9	+0·8	+0·7
Sind and Rajputana	+1·2	+1·0	+0·7	−2·5
Central India and Gujarat	−0·3	−2·4	−3·0	−3·5
Central Provinces and Berar	−2·1	−0·5	+0·4	+0·4
Bombay	−1·2	−0·5	0	+0·3
Madras	+1·3	+2·1	+2·7	+2·5

The fourth cyclonic storm of the month began to form in South-West Bengal on the 22nd and 23rd. It gave rainfall chiefly to Bengal, the eastern districts of the Central Provinces and Baghelkhand, where temperature was reduced more or less considerably below the normal. During the last week of the month temperature was hence in general defect in Burma and the whole of Northern and Central India, and in slight to moderate excess in the Peninsula south of lat. 20°N., as is shown by the following mean temperature variation data for the 27th, 29th, and 31st:—

Meteorological Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M.		
	27th.	29th.	31st.
	°	°	°
Burma	−0·1	−1·4	−2·0
Bengal and Assam	−0·7	+0·4	−2·6
N.-W. Provinces and Oudh	−2·8	−1·1	−3·8
Punjab	−1·2	−1·2	−1·3
Sind and Rajputana	−0·9	−0·8	−2·6
Central India and Gujarat	−3·3	−1·2	−2·4
Central Provinces and Berar	−3·9	−0·3	−0·6
Bombay	−0·2	+1·0	+0·8
Madras	+1·8	+2·0	+2·4

The following table gives the variations of the mean temperature week by week during the month. The data are taken from the weekly weather reviews published in the *Gazette of India*:—

Division.	Variation from normal of mean temperature for week ending				
	7th.	14th.	21st.	28th.	For whole month.
	°	°	°	°	°
Burma	+0·2	−0·5	−1·1	−0·3	−0·6
Bengal and Assam	−1·1	−0·5	−0·3	−0·3	−0·4
North-Western Provinces and Oudh	−1·9	−1·3	−0·5	+0·3	−1·1
Punjab	−1·9	−4·8	−3·9	−0·1	−2·5
Sind and Rajputana	−2·4	−3·7	−1·4	−1·4	−2·2
Central India and Gujarat	−3·0	−3·5	−0·6	−2·8	−2·4
Central Provinces and Berar	−0·9	−1·3	−0·5	−1·3	−0·9
Bombay	+1·2	−1·4	−0·7	+0·3	−0·1
Madras	+3·2	−0·9	−0·1	+1·9	+1·1

Winds.

The Bay current in the centre and north of the Bay was stronger than usual, as is evident from the following data:—

Station.	Velocity in miles per diem.		
	Mean actual, July 1894.	Normal, July.	Percentage variation.
Port Blair	286	254	+13
Diamond Island	298	210	+42
Akyab	114	96	+19
Saugor Island	397	341	+16
False Point	315	268	+18

Winds were also on the average of the whole month stronger in the Gangetic plain as appears from the following data, but were feebler in the Punjab:—

Province.	Velocity in miles per diem.		
	Mean actual, July 1894.	Normal, July.	Percentage variation.
Bihar	145	107	+36
North-Western Provinces	80	74	+8
Punjab	57	79	−28

Winds were more westerly and less southerly at Port Blair and at the Burma coast stations, thus indicating a slightly stronger tendency of the monsoon current from the south and centre of the Bay towards Burma than usual.

In Bengal the mean air movement of the month was largely determined by the numerous storms which advanced westwards from Bengal and the head of the Bay. As might be inferred from these conditions, although the winds were stronger than usual, they were abnormally unsteady in West Bengal, and were more easterly than usual in Assam and East Bengal. The following gives data showing the unsteadiness of the winds in West Bengal and also in Assam:—

Station.	Steadiness.			Velocity in miles per diem.		
	Actual percentage, July 1894.	Normal percentage, July.	Variation.	Mean actual, July 1894.	Normal, July.	Percentage variation.
Calcutta	42	65	−23	132	123	+7
Burdwan	16	47	−31	96	100	−4
Cuttack	43	52	−9	96	79	+22
Silchar	10	3	+7	71	72	−1
Sibsagar	5	15	−10	56	65	−14

The mean winds of the month differed little in direction from the normal in the greater part of the Gangetic plain. They were stronger and steadier than usual. The trough of low pressure and very variable winds separating the areas under the influence of one or other of the two branches of the monsoon currents was very plainly indicated by the wind data of the month. The following gives the stations which define its mean position during the month:—

Station.	Steadiness.		Actual percentage of steadiness.	
	Actual percentage, July 1894.	Normal, July.	Nearest station to south.	Nearest station to north.
Burdwan	16	47	42	47
Hazaribagh	11	19	72	50
Allahabad	11	7	34	72
Agra	19	13	28	22
Mooltan	14	33	47	45

The unsteadiness and variability of the winds in the monsoon low pressure trough in Northern India is shown equally by the large departures of the mean air movement of the month from the normal at all the stations in it except Burdwan, *e.g.*:—

Station.	Wind direction.	
	Mean, July 1894.	Normal, July.
Burdwan	S 30° E	S 26° E
Hazaribagh	S 38° E	S 16° E
Allahabad	N 31° W	N 84° E
Agra	S 1° W	N 63° E
Mooltan	S 24° E	S 25° W

A reference to the fourth Chart, Plate III, will show that the line of stations given above practically coincided with the axis of the trough of low pressure.

The Bombay current was very slightly weaker on the average of the month than usual, as follows from the following comparison:—

Station.	Velocity in miles per diem.		
	Mean actual, July 1894.	Normal, July.	Percentage variation.
Ratnagiri	310	313	−1
Bombay	420	456	−8
Kurrachee	347	436	−20

The mean air movement of the month was also slightly below the normal of the month in Rajputana and above it in the Central Provinces, Berar and Deccan.

Province.	Velocity in miles per diem.		
	Mean actual, July 1894.	Normal, July.	Percentage variation.
Rajputana	198	220	−10
Deccan	477	456	+ 5
Central Provinces . . .	178	172	+ 3
Berar	219	211	+ 4

A noteworthy feature of the month was the unusual velocity at the hill stations of Mount Abu, Pachmarhi and Chikalda, due to the influence of the cyclonic storms. The following gives data for these three stations :—

Station.	Velocity in miles per diem.		
	Mean actual, July 1894.	Normal, July.	Percentage variation.
Mount Abu	363	265	+37
Pachmarhi	277	227	+22
Chikalda	257	230	+12

The mean directions of the air movement in the Deccan and Central Provinces differed very little from the normal. Winds were slightly more southerly than usual. Winds were also on the average of the month practically normal in direction in the west coast districts. They were more westerly and less southerly in Rajputana and Central India and much more easterly than usual in Upper Sind and the South Punjab, the deviations from the normal in both cases being clearly an effect of the passage of the storms of the month. The following gives data :—

Station.	Wind direction.		
	Mean, July 1894.	Normal, July.	Westerly deflection.
Ajmere	S 78° W	S 62° W	+16°
Deesa	S 63° W	S 40° W	+23°
Jacobabad	S 72° E	S 45° E	−27°

Winds were on the whole stronger and steadier at the hill stations in Northern India and were more westerly than usual. The Simla wind data show the same preponderance of northerly winds as in the preceding month, and as stated in last month's review, they are almost certainly due mainly to the removal of the wind recording instruments to the ridge.

The following summarizes the chief features of the air movement of the month over India :—

(1) Winds were slightly stronger and more westerly than usual at Port Blair and the Burma coast stations.

(2) Winds were stronger than usual in Bengal and the Gangetic plain. The Bay current was directed more strongly to the Gangetic plain than usual, and diverted from Assam and North Bengal.

(3) The Bombay current was of normal strength on the average of the month.

(4) Winds were normal in direction in the Deccan, but differed to some extent in Sind, Rajputana and the Punjab, chiefly in consequence of the influence of the numerous cyclonic storms of the month.

(5) Winds were stronger at the hill stations than usual, more especially at Mount Abu and Pachmarhi.

(6) The axis of the trough of low pressure and of very variable and unsteady winds stretched from Burdwan through Hazaribagh, Allahabad and Agra to Mooltan.

Humidity and Cloud.

The air contained slightly less aqueous vapour than usual, and humidity was generally below the average by small amounts in Burma, Assam, Bengal, Chota Nagpur and the eastern districts of the North-Western Provinces. Humidity was most largely in defect at Darbhanga (5 below the normal) and Hazaribagh (4 below the normal). The variations in these areas were hence small and of little importance. Humidity was considerably to largely above the normal in North-Western and Central India. Thus the relative humidity was upwards of 10 in excess at Lahore (+16), Ludhiana and Peshawar (+13) and Ajmere and Deesa (+11).

The following gives comparative data for the areas of excessive humidity:—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Mean actual, July 1894.	Normal, July.	Variation from normal.	Mean actual, July 1894.	Normal, July.	Variation from normal.
	"	"	"	%	%	
North-Western Provinces.	·904	·911	−·007	79	77	+2
Bengal . .	·908	·943	−·035	84	85	−1
Sind . .	·893	·866	+·027	70	65	+5
Rjaputana .	·852	·823	+·029	82	74	+8
Central India .	·835	·834	+·001	80	79	+1

The increased humidity of the air, which was a marked feature of the meteorology of the plains of Upper India was exhibited as strongly at the hill stations as in the preceding month. The increased humidity affected the interior and elevated stations of Leh and Kailang to nearly as large an extent as the lower hill stations. The following data illustrate this:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Mean Actual, July 1894.	Normal, July.	Variation, from normal.	Mean Actual, July 1894.	Normal, July.	Variation from normal.
	"	"	"	%	%	
Leh . . .	·313	·249	+·064	55	44	+11
Kailang . .	·406	·365	+·041	71	65	+6
Murree . .	·596	·535	+·061	90	75	+15
Simla . .	·533	·545	−·012	93	89	+4

Relative humidity was also considerably above the normal of the month at Mount Abu (+9), and Quetta (+7).

The variations in the humidity conditions from the normal varied somewhat irregularly in the west coast districts, Berar and the Central Provinces. On the whole, the air contained slightly more vapour than usual, and humidity was above the normal. The increased humidity was most marked at Saugor (+6), a centre of local heavy rainfall, and Hoshangabad (+5). The air was considerably drier than usual in the South Deccan, and South and Central Madras. The mean relative humidity of the month was 9 below the normal in the case of Trichinopoly, 7 at Bellary, and 5 at Salem.

The following gives comparative data for the preceding areas:—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Mean Actual, July 1894.	Normal, July.	Variation from normal.	Mean Actual, July 1894.	Normal, July.	Variation from normal.
	"	"	"	%	%	
Berar . .	·724	·741	−·017	76	78	−2
Central Provinces	·817	·807	+·010	84	80	+4
Mysore . .	·596	.607	−·011	74	77	−3
Madras Deccan.	·650	·709	−·059	61	67	−6
Southern India .	·716	·742	−·026	57	63	−6

The following summarizes briefly the chief features of the humidity conditions of the month:—

(1) The humidity conditions differed little from the normal in Burma and North-Eastern India. The air was slightly drier than usual, more especially in Assam and probably North Bengal.

(2) The absolute humidity was in moderate excess, and the relative humidity (in consequence of decreased temperature) was largely in excess in North-Western and Central India, and in the Western-Himalayas.

(3) Humidity was in slight to moderate excess in the west coast districts and the Central Provinces.

(4) The air was drier than usual in the South and Central Deccan and Southern India. The humidity was most largely below the normal at Trichinopoly, Bellary and Salem.

There was more cloud than usual during the month over nearly the whole of India. The mean cloud amount of the month was in moderate to largish excess at Port Blair and in Burma, and was in excess over the whole of Northern India, except the Assam Valley, North Bihar and probably North Bengal. The following gives data for stations representative of the areas of less cloud than usual and deficient rainfall:—

DIVISION.	STATION.	MEAN CLOUD AMOUNT.		
		Mean actual, July 1894.	Normal, July 1894.	Variation from normal.
Assam . . .	Sibsagar . .	6·9	8·5	−1·6
North Bihar . .	Patna . . .	6·9	8·1	−1·2
	Darbhanga . .	5·9	6·3	−0·4

Comparative data are given in the following table for the larger divisions of Northern India, and for Burma and Port Blair :—

Division.	Mean cloud amount.		
	Mean Actual, July 1894.	Normal, July.	Variation from normal.
Andamans (Port Blair)	9·0	7·2	+1·8
Burma	9·5	8·5	+1·0
Bengal	8·5	8·1	+0·4
Assam	7·4	7·7	−0·3
Orissa	8·4	7·9	+0·5
Chota Nagpur	9·4	9·1	+0·3
Bihar	6·4	7·2	−0·8
North-Western Provinces	7·6	7·2	+0·4
Punjab	5·9	3·9	+2·0
Rajputana	8·0	7·3	+0·7
Sind	5·8	4·7	+1·1

The excess was largest, not only relatively to the normal, but absolutely, in Upper India, *i.e.*, Sind, Rajputana and the Punjab.

The mean cloud amount of the month was in slight excess in Central India and the Central Provinces, and also in the west coast districts, the West Deccan and Mysore. The following gives comparative data :—

Division.	Mean cloud amount.		
	Mean Actual, July 1894.	Normal, July.	Variation from normal.
West Coast	8·1	7·9	+0·2
Berar	7·6	8·4	−0·8
Central Provinces	8·8	8·0	+0·8
Bombay Deccan	9·2	8·8	+0·4

The cloud amount was in considerable excess in the North Madras coast districts, and in moderate to large defect in South Madras. The following data for three stations illustrate this contrast of conditions between North and South Madras :—

Division.	Station.	Mean cloud amount.		
		Mean actual, July 1894.	Normal, July.	Variation from normal.
North Madras	Vizagapatam	8·7	6·9	+1·8
Central ,,	Madras	6·5	7·1	−0·6
South ,,	Trichinopoly	5·6	7·6	−2·0

There was more cloud than usual in Baluchistan and at the hill stations, more especially those in the Western Himalayas. The excess was absolutely greatest at Murree (+2·6) and Quetta (+1·6). It was also nearly as marked at Leh in the Upper Indus Valley in Thibet, where the mean cloud estimate of the month was 6·0 or 0·9 above the normal, and at Kailang in Lahoul. According to a note attached to the Leh meteorological register for the month thunder clouds were a conspicuous feature of the weather of the month, and thunder and lightning occurred at that station during the month to a most unusual extent.

The following gives a summary of the cloud data of the month :—

(1) Cloud was in moderate excess in Burma and North Eastern India, except in the area of deficient rainfall in Assam, North Bengal and Bihar where it was below the average. The deficiency was most marked at Sibsagar in Upper Assam.

(2) Cloud was in considerable excess in North Western and Central India.

(3) Cloud was in slight to moderate excess in the west coast districts, Mysore, the West Deccan and the Central Provinces.

(4) Cloud was in large excess in North Madras, normal in Central Madras and very deficient in South Madras.

(5) Cloud was more or less considerably in excess in Baluchistan and the Himalayas. The excess extended across the Himalayas northwards to the Karakoram range.

Rainfall.

The distribution of rainfall of the month is clearly shown in Plate IV. It should be noted that the distribution there given is derived from the rainfall data of the meteorological stations in Table I, excluding those classified in that table as hill stations. It hence represents the distribution at the ordinary level of the plains or plateaus of India and not of any of the hill districts, which it would not be possible to represent in such a chart. Plate V gives the variations of the rainfall of each of the 52 meteorological divisions from the normal.

Both branches of the monsoon blew fairly steadily during the month, and there was no general break in the

rains. The distribution of rainfall was in part determined by the greater tendency of the currents to North-Western and Central India and Burma than usual, and by the track and strength of the four cyclonic whirls of the month, which, as already stated, followed each other rapidly across Northern India, and were unusually severe and extensive storms. The rainfall of the month was more or less in excess, except in the following areas :—

(1) Assam, North Bengal and North Bihar. The deficiency was greatest in Assam where it averaged nearly 30 per cent. of the normal.

(2) The central and western districts of the North-Western Provinces and South Oudh. The deficiency was moderate and was greatest in the western districts of the North-Western Provinces, in which it averaged 25 per cent.

(3) The greater part of Southern India and the Deccan, including Malabar, Mysore, Hyderabad, Madras Central (East Coast) and South, and Central India. The deficiency was considerable in this area, ranging from 44 per cent. in South Madras to 15 per cent. in Malabar.

(4) East Rajputana and the Central Punjab.

The rainfall was excessive in the following districts:—

(1) Tenasserim, where excess averaged 56 per cent., and Lower Burma (+36 per cent.), due to heavier and more frequent rainfall than usual.

(2) The hill districts of the North-Western Provinces and the Punjab due to heavier and more frequent rainfall than usual.

(3) Gujarat (+41 per cent.), Kathiawar (+171 per cent.), and Sind (+284 per cent.), due to heavy cyclonic rainfall from three of the four cyclonic storms of the month.

The most remarkable feature of the cyclonic storms of the month was, that during their formation and earlier stages of their advance they were maintained chiefly by the Bengal current, and in the latter stages by the Bombay current. Also in each case when the storm passed beyond the influence of the Bengal current, that current weakened rapidly and withdrew to Bengal or the head of the Bay, and another storm was initiated before the preceding storm had broken up. Hence the month was abnormally unsettled and stormy, and the rainfall, due to the strong monsoon currents of the month, was concentrated and occurred most largely in those areas directly affected by the storms, whilst those completely outside of the storm area and more especially Southern India and Assam, North Bengal and North Bihar received lighter and less frequent showers than usual, and had hence more or less scanty rain.

The following table gives mean actual, mean normal, and variation rainfall data for the 52 meteorological divisions or districts into which India is divided, in the same form as in the previous months, and has been prepared in exactly the same manner as hitherto:—

Province.	Division.	Rainy Days.		Rainfall.		
		Actual, July 1894.	Normal, July.	Actual, July 1894.	Normal, July.	Variation. from normal.
				Inches	Inches.	Inches.
Burma	Tenasserim*	?	?	73·94	47·33	+26·61
	Lower Burma*	?	?	31·23	23·03	+8·20
	Central do.*	?	?	18·30	18·15	+0·15
	Upper do.*	?	?	9·61	?	?
	Arakan*	?	?	53·18	48·28	+4·90
Bengal and Assam	Eastern Bengal	19·4	18·8	20·61	16·60	+4·01
	Assam (Surma)*	?	?	22·54	31·31	—8·77
	Do. (Brahmaputra)*	?	?	9·11	15·45	—6·34
	Deltaic Bengal	17·0	16·7	15·08	12·06	+3·02
	Central do.	15·4	16·2	13·52	12·18	+1·34
	North do.	13·6	17·6	12·76	20·03	—7·27
	Orissa	16·0	14·9	17·33	12·41	+4·92
	Chota Nagpur	18·9	18·5	17·17	13·15	+4·02
	Bihar (South)	14·0	14·5	14·61	11·87	+2·74
	Do. (North)	11·3	14·0	10·65	12·22	—1·57
North-Western Provinces and Oudh.	North-Western Provinces (East)	14·7	13·3	13·46	11·83	+1·63
	Do. do (Sub-montane)	14·3	13·4	16·67	14·65	+2·02
	Oudh (South)	11·8	12·3	10·39	10·75	—0·36
	Do. (North)	11·9	12·1	12·99	11·69	+1·30
	North-Western Provinces (Central)	10·5	12·0	8·95	11·54	—2·59
	Do. do. (West)	10·7	10·7	7·47	9·94	—2·47
Punjab	Punjab (South)	6·0	4·7	5·84	4·27	+1·57
	Do. (Central)	8·1	6·7	5·86	6·62	—0·76
	Do. (Sub-montane)	12·3	8·5	12·41	9·35	+3·06
	Do. (Hill Districts)	19·3	15·1	27·13	16·68	+10·45
	Do. (North-West)	9·1	5·8	8·96	5·31	+3·65
	Do. (West)	5·5	3·0	4·55	2·45	+2·10

Province.	Division.	Rainy Days. Actual, July 1894.	Rainy Days. Normal, July.	Rainfall. Actual, July 1894.	Rainfall. Normal, July.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Bombay and Malabar Coast Districts (Madras).	Malabar	27·2	26·8	29·30	34·42	—5·12
	Madras (South Central)	4·4	3·9	2·39	2·36	+0·03
	Coorg	24·2	?	22·37	?	?
	Mysore*	?	?	5·17	7·47	—2·30
	Konkan	28·5	26·9	48·82	40·04	+8·78
	Bombay Deccan	11·7	12·2	12·53	9·29	+3·24
	Hyderabad (North)	9·5	?	5·57	7·70	—2·13
	Khandesh*	?	?	8·84	5·06	+3·78
Central Provinces and Berar.	Berar*	?	?	13·04	9·13	+3·91
	Central Provinces (West)	17·2	15·4	14·90	13·81	+1·09
	Do. (Central)	20·0	17·1	17·33	18·02	—0·69
	Do. (East)	21·3	15·0	22·53	16·07	+6·46
Bombay (North)	Gujarat*	?	?	26·36	18·72	+7·64
	Kathiawar*	?	?	24·00	8·87	+15·13
	Sind	6·0	?	7·15	1·86	+5·29
Rajputana and Central India.	Central India (East)	15·2	?	12·59	15·32	—2·73
	Rajputana (East) and Central India (West)	10·4	?	8·80	9·77	—0·97
	Rajputana (West)	5·7	?	5·21	3·33	+1·88
Madras	East Coast (North)	11·1	9·8	7·85	6·71	+1·14
	Do. (do) (a)	22·0	19·7	17·50	15·38	+2·12
	Hyderabad (South)*	7·9	?	4·64	6·66	—2·02
	Madras (Central)	5·5	6·2	3·56	3·17	+0·39
	East Coast (Central)	3·1	4·9	1·83	2·45	—0·62
	East Coast (South)	4·5	4·7	2·18	3·00	—0·82
	Madras (South)	1·3	2·1	0·60	1·08	—0·48

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

Burma received steady, and in the coast districts daily rain throughout the month. The total rainfall of the month was in excess over the whole area. The excess was very large in Tenasserim, averaging over 56 per cent. It was considerable in amount in Lower Burma (36 per cent.), and was practically normal in Central Burma and Arakan. It was probably in excess in Upper Burma, but reliable normal data for that province are wanting.

The following gives comparative data for the five divisions of the province:—

Division.	Rainy days. Actual, July 1894.	Rainy days. Normal, July.	Rainfall. Average actual, July 1894.	Rainfall. Average normal, July.	Rainfall. Percentage variation from normal.
			Inches.	Inches.	
Tenasserim	25·5	?	48·31	?	?
Lower Burma	26·4	?	27·82	?	?
Central do.	24·2	?	19·54	?	?
Upper do.	14·0	?	10·48	?	?
Arakan	28·0	?	49·56	?	?

Bengal received fairly steady rain throughout the whole month. The distribution of the rainfall was determined chiefly by the tracks of the depressions of the month. The general tendency of the storms was to draw the monsoon currents and accompanying rainfall away from North Bengal and North Bihar, and to give moderate to heavy cyclonic rain to the southern districts of Bengal, Orissa, Chota-Nagpur and South Bihar. The periods of most general rainfall were as follows:—

1st.—From the 1st to the 9th, during which the first considerable storm of the month formed in Central Bengal on the 3rd and drifted westwards and gave a heavy burst of rain to Bengal on the 6th and 7th, and to Bihar and Chota Nagpur on the 6th, 7th and 8th. This was, on the whole, the most general and prolonged burst of rainfall during the month.

2nd.—From the 11th to the 13th, when the second cyclonic storm of the month was forming and advancing across Orissa and the eastern districts of the Central Provinces. Orissa obtained moderate general rain from the 11th to the 13th, and Chota Nagpur on the 12th.

3rd.—From the 16th to the 19th. Orissa, South-West Bengal, and Chota Nagpur obtained moderate rain during this period, and the remainder of the province showers more or less local in character.

4th.—From the 23rd to the 26th. The rainfall during this period accompanied the formation and march of the fourth cyclonic storm of the month which formed in South-West Bengal on the 23rd and 24th. Excessive downpours

were received in parts of that area during the development of the storm. The following gives some of the more remarkable rainfalls :—

Date.	District.	Station.	Heaviest rainfall in past 24 hours.
23rd . .	Balasore . .	Jellasore . .	15·50
24th . .	Midnapore . .	Contai . . .	15·29
" . .	" . . .	Dantoon . .	10·31
" . .	" . . .	Tamluk . .	7·90
" . .	" . . .	Ghatal . . .	7·11
" . .	24-Parganas . .	Diamond Harbour .	9·90
" . .	" . . .	Saugor Island .	7·69

The whole of the province received general rain during this period. It was heaviest in South-West Bengal, Orissa and the Sonthal Parganas, and was light to moderate in North Bihar and North Bengal.

5th.—From the 29th to the 31st during which the whole province obtained more or less heavy rain. The Chittagong district and Noakhali had heavy rain throughout the whole period. Central and North Bihar and North Bengal also received heavy rain. The rainfall was moderate in South Bengal and light in Chota Nagpur. The following large falls, exceeding 6 inches in 24 hours, were recorded during this period :—

Date.	District.	Station.	Heaviest rainfall in past 24 hours.
29th . .	Darjeeling . .	Buxa . . .	10·41
" . .	Champaran . .	Bettiah . . .	8·50
" . .	Shahabad . .	Buxar . . .	6·14
30th . .	Noakhali . .	Harishpur . .	7·44
" . .	" . . .	Fenny . . .	6·30
" . .	Chittagong . .	Cox's Bazar . .	6·01
31st . .	" . .	Chittagong . .	6·15

The following gives a summary of the rainfall data of the province for the month published in the *Calcutta Gazette* :—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, July 1894.	Variation from normal.	Average actual, July 1894.	Variation of actual from normal.	Percentage variation from normal.
			Inches.	Inches.	
Bengal, East .	19·4	+0·6	20·61	+4·01	+24
" North .	13·6	−4·0	12·76	−7·27	−36
" Deltaic .	17·0	+0·3	15·08	+3·02	+25
Orissa . .	16·0	+1·1	17·33	+4·92	+40
Chota Nagpur .	18·9	+0·4	17·17	+4·02	+31
North Bihar .	11·3	−2·7	10·65	−1·57	−13
South Bihar .	14·0	−0·5	14·61	+2·74	+23
Bengal, Central	15·4	−0·8	13·52	+1·34	+11

According to this statement, the rainfall was 20 to 30 per cent. in excess in East Bengal, Deltaic Bengal, Chota Nagpur and South Bihar, or in four out of the eight divisions. It was 11 per cent. in excess in Central Bengal and 40 per cent. in Orissa. It was in slight defect in North Bihar and in considerable defect (averaging 36 per cent.) in North Bengal.

The following gives data for all districts or collectorates in which the rainfall was more than 33 per cent. in defect :—

District or Collectorate.	Average actual rainfall, July 1894.	Average normal rainfall, July.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Kuch Bihar . . .	6·49	20·09	−13·60	−68
Rangpur . . .	5·26	13·90	− 8·64	−62
Darbhanga . . .	6·05	11·60	− 5·55	−48
Muzaffurpur . . .	6·82	11·26	− 4·44	−39

This statement and the Assam data show that the area including the Kuch Bihar and Rangpur districts of North Bengal and the adjacent district of Goalpara in Assam, received very scanty rain during the month; the total fall in these districts being barely a third of the normal fall of the month.

A noteworthy feature of the rainfall in this province was the irregularity of its distribution in North Bihar and Bengal. For example, in the Saran district, Siwan received 9 inches more than its normal fall of 11·7 inches, whereas the neighbouring station of Gopalganj, only a few miles to the north, obtained only 9·5 inches, or three inches less

than its monthly average of 12·5 inches. Similarly, in the Champaran district Bettiah received an excess fall of three inches, and Motiharia defective fall of four inches; and in the Bhagalpur district, Banka received an excess fall of thirteen inches, and Bhagalpur itself an excess of seven inches, while Supaul received a defective fall of 5 inches.

The rainfall of the month was very irregularly distributed in the North-Western Provinces. The following gives the chief periods of rainfall:—

1st.—From the 1st to the 9th. The eastern, southern and central districts had moderate to heavy rain during this period, more especially from the 6th to the 8th during which the first storm of the month was stationary between Agra and Jhansi. The falls were by no means so heavy as occasionally occur in these cyclonic storms. The following falls exceeding 6 inches were recorded:—

Date.	District.	Station.	Heaviest rainfall in past 24 hours.
			Inches.
4th . .	Mirzapur . .	Robertsganj . .	6·04
" . .	Etawah . . .	Auraiya . . .	6·90
7th . .	Jhansi . . .	Lalitpur . .	6·50
" . .	" . . .	Mahroni . .	8·55
8th . .	" . . .	Lalitpur . . .	6·17

2nd.—From the 16th to the 18th. Light to moderate showers were received during this period.

3rd.—From the 26th to the 31st. The western and southern districts obtained moderate rain during the first half of this period from the 26th to the 29th, and the eastern and central districts during the latter period from the 29th to the 31st. The hill districts obtained heavy downpours during this period. The more remarkable falls were the following:—

Date.	District.	Station.	Heaviest rainfall in past 24 hours.
			Inches.
29th . .	Saharanpur . .	Hardwar . .	12·50
" . .	Garhwal . .	Kotdwara . .	10·98
" . .	Dehra Dun . .	Bhogpur . .	10·00

The following gives a comparative statement of the rainfall of the month:—

Division.	Number of rainy days.		Rainfall.		
	Average actual, July 1894.	Variation.	Average actual, July 1894.	Average normal, July.	Percentage variation from normal.
			Inches.	Inches.	
Oudh (North) . . .	11·9	−0·2	12·99	11·69	+11
Do. (South) . .	11·8	−0·5	10·39	10·75	−3
N.-W. P. (East) . .	14·7	+1·4	13·46	11·83	+14
Do. (Central) .	10·5	−1·5	8·95	11·54	−22
Do. (Submontane)	14·3	+0·9	16·67	14·65	+14
Do. (West) . .	10·7	0	7·47	9·94	−25

The preceding data show that the rainfall was in moderate excess (14 per cent.) in the eastern districts and in slight excess in North Oudh. It was normal in amount in the sub-montane districts and South Oudh, and was in moderate to considerable defect in the central and western districts (slightly more than 20 per cent.). The rainfall was extremely irregularly distributed in some of the districts in the western half of the North Western Provinces. The following gives some of the more striking examples:—

District.	Rainfall.		Station in district which received least rain during month.	Rainfall.	
	Average actual, July 1894.	Average normal, July.		Average actual, July 1894.	Average normal, July.
	Inches.	Inches.		Inches.	Inches.
Bareilly .	7·86	15·05	Aonla . .	1·15	12·99
Shahjahanpur .	9·30	12·41	Jalalabad .	3·10	12·81
Muttra . .	5·96	9·08	Màt . .	2·40	8·37
Mainpuri . .	6·59	10·79	Dandhaus .	2·40	12·57
Jhansi . .	11·32	12·99	Moth .	4·50	12·26

The rainfall was most deficient in the districts of Muttra, Bulandshahr, Aligarh, Agra, Etawah, Bareilly and Mainpuri, for which data are given below:—

District.	Number of rainy days.			Rainfall.		
	Average actual, July 1894.	Average normal, July.	Variation from normal.	Average actual, July 1894.	Average normal, July.	Variation from normal.
				Inches.	Inches.	Inches.
Muttra . .	9·2	9·7	−0·5	5·96	9·08	−3·12
Bulandshahr .	9·6	9·0	+0·6	3·47	8·45	−4·98
Aligarh . .	9·7	9·0	+0·7	5·73	8·25	−2·52
Agra . .	9·3	10·7	−1·4	6·80	9·74	−2·94
Etawah . .	8·8	12·1	−3·3	8·21	10·55	−2·34
Bareilly . .	8·9	12·6	−3·7	7·86	15·05	−7·19
Mainpuri . .	9·0	10·9	−1·9	6·59	10·79	−4·20

A noteworthy feature of the rainfall of the month was its excessive amount in the Siwalik ranges, the Dehra Dun and the first ranges of the Himalayas. The following gives a few examples :—

Station.	Rainfall.		
	Actual mean, July 1894.	Normal mean, July.	Percentage variation from normal.
	Inches.	Inches.	Inches.
Hardwar	30·74	12·35	+149
Dehra	46·35	25·57	+81
Rajpur	73·62	?	?
Mussooree	39·12	29·93	+31

The rainfall of the month was very irregularly distributed in the Punjab. Rain fell almost daily in the hill districts. One of the more noteworthy features of the month was the excessive rainfall in the outer ranges of the Himalayas. The following heavy falls in 24 hours (exceeding 6 inches) were recorded during the month in the hill districts :—

Date.	District.	Station.	Heaviest rainfall in past 24 hours.
			Inches.
7th	Kangra	Dharmsala	10·22
8th	"	Palampur	7·18
15th	Simla	Kasauli	6·15
27th	Kangra	Kangra	9·80
"	"	Palampur	6·65
29th	Simla	Simla	6·01

The heavy rainfall was due to the prevalence of stronger monsoon winds (the continuation of the Bombay current) than usual, and hence occurred chiefly in the lower and outer ranges. The total rainfall of the month was hence largely in excess at the hill stations in the outer ranges, but diminished very rapidly in amount into the interior, and was more or less in defect in the Upper Sutlej Valley. The following gives data illustrating this feature :—

Station.	Rainfall.			
	Actual, July 1894.	Normal, July.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Kasauli	36·05	16·43	+19·62	+119
Simla	29·84	17·59	+12·25	+70
Mattiana	13·81	12·60	+1·21	+10
Kotgarh	2·58	4·58	−2·00	−44
Kilba	31·37	?	?	?
Poo	2·45	?	?	?

The absence of any precipitation in the higher ranges suggested by the preceding data is confirmed by the snowfall reports received for the month.

The chief periods of rainfall in the Punjab plains were as follow :—

1st.—The 5th to the 9th. The whole province received light to moderate rain during this period.

2nd.—The 11th to the 13th. The submontane districts of Hoshiarpur, Gurdaspur, Amritsar, Gujrat, Kohat and Hazara received heavy rain during the period, and the remainder of the province light to moderate showers.

3rd.—The 16th and 17th, during which the submontane districts and Shahpur received heavy rain, the southern districts light rain, and the south-western districts little or no rain. Shakargarh in the Gurdaspur district had 6·66 inches, and Madhopur in the same district had 6·38 inches on the 17th.

4th.—The 26th to the 30th. The submontane districts including Umballa, Gurdaspur and Amritsar received moderate rain during this period and the northern districts light to moderate rain. Little or no rain fell during this period in the central or southern districts.

The following table gives a summary of the rainfall data published in the *Punjab Gazette* :—

Division.	Rainy days.			Rainfall.		
	Average actual, July 1894.	Average normal, July.	Variation from normal.	Mean actual, July 1894.	Normal, July.	Percentage variation from normal.
				Inches.	Inches.	Inches.
Punjab, South	6·0	4·7	+1·3	5·84	4·27	+37
" Central	8·1	6·7	+1·4	5·86	6·62	—11
" Submontane.	12·3	8·5	+3·8	12·41	9·35	+33
" Hills	19·3	15·1	+4·2	27·13	16·68	+63
" North-West.	9·1	5·8	+3·3	8·96	5·31	+69
" West	5·5	3·0	+2·5	4·55	2·45	+86

The rainfall of the month was hence considerably to largely in excess over the whole of the Punjab, except the central division, where it was in slight defect.

Kashmir received frequent rain during the month. The chief periods were from the 4th to the 8th, the 11th to the 13th and the 25th to the 30th. The rainfall was almost certainly excessive but, except for the station of Leh, there are no rainfall normal data with which to compare the actual. 1·59 inches fell at Leh, nearly four times the rainfall of the month, *viz.* 0·4 inch. The total fall during the month

at Gilgit was 1·17 inches, at Dras 0·44 inch, and at Iskardo 0·03 inch, whilst at Jummoo it was 28·52 inches. It is an interesting example of the rapid decrease of rainfall from the outer to the interior ranges of the Western Himalayas. British Baluchistan received unusually frequent and heavy rain during the month. The rainfall occurred during the approach and breaking up of the three storms which passed from Rajputana into Sind during the month. The periods of rainfall were from the 10th to the 13th when the heaviest falls were recorded, the 16th and 17th, and the 23rd to the 25th. Falls exceeding 2 inches in 24 hours were received at several stations, the heaviest being 3·02 inches at Kuchali on the 17th and 2·86 inches at Hirok on the 12th. The average total fall of the month at the stations on the Bolan Railway was 3·16 inches. Shahrig received a total of 8·09 inches, Spintangi of 7·83 inches, and Kuchali of 7·87 inches. The following gives comparative data for three stations in the Baluchistan plateau, for which mean or normal data are available :—

Station.	Rainfall.		
	Actual July 1894.	Normal, July.	Variation from normal.
	Inches.	Inches.	Inches.
Quetta	1·09	0·67	+0·42
Pishin	0·79	0·35	+0·44
Kalat	2·64	0·56	+2·08

Rajputana obtained general rain during the first fortnight of the month. The rainfall was especially large on the 7th, 8th and 9th, and accompanied the advance of the first cyclonic storm of the month through that area. The following rainfalls in 24 hours exceeding 5 inches were recorded during this period :—

Date.	District.	Station.	Heaviest rainfall in past 24 hours.
			Inches.
7th	Jodhpore	Sojat	7·50
"	Kotah	Mangrol	10·02
"	"	Sultanpur	7·00
8th	Jodhpore	Sojat	5·25
"	Jeypore	Malpura	6·00
"	Deoli	Deoli	5·01
"	Kotah	Indergarh	10·53
"	Ajmere	Pisangan	5·18
10th	Jodhpore	Pachpadra	5·62

The rainfall during this period was hence exceptionally heavy in the Kotah State.

Showers were received during the remainder of the month, but no general rain. The showers were most numerous and heaviest on the 19th and 20th and from the 27th to the end of the month.

The following gives a comparative statement of the rainfall in the larger states :—

State.	Rainfall.			
	Average actual, July 1894.	Average normal, July.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jodhpore	5·67	3·46	+2·21	+64
Jeypore	7·79	9·13	−1·34	−15
Ulwar	5·31	10·26	−4·95	−48
Bhurtpore	5·92	8·88	−2·96	−33
Dholpur	7·94	?	?	?
Kotah	12·31	9·88	+2·43	+25
Ajmere-Merwara	7·35	7·17	+0·18	+3
Oodeypore	9·01	9·74	−0·73	−7
Sirohee	22·88	11·52	+11·36	+99

Central India received more frequent rain than Rajputana, as three of the four cyclonic storms of the month passed through it. The periods of general rainfall were from the 3rd to the 13th, the 19th to the 23rd and the 26th to the end of the month. The following gives the more noteworthy falls of the month :—

Date.	District.	Station.	Heaviest rainfall in past 24 hours.
			Inches.
7th	Bundelkhand	Chatturpur	6·12
"	"	Orchha	6·10
"	Rewah	Sutna	8·25
"	Nagode	Nagode Hospital	9·45
8th	Gwalior	Goona	5·33
9th	Bundelkhand	Kadaura	6·43
21st	Gwalior	Jhabua	7·50
"	"	Ali Rajpur	6·69
29th	Bundelkhand	Kadaura	8·21

The heaviest falls were hence received in Bundelkhand and Rewah on the 6th to the 8th during the interval when the first cyclonic storm of the month was re-deve-

loping. The following gives comparative falls for the larger States or Divisions :—

State or Division.	Rainfall.			
	Average actual, July 1894.	Average normal, July.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Indore . . .	11·70	10·23	+1 47	+14
Rutlam . . .	14·87	11·30	+3·57	+32
Bhopal Agency . .	8·13	18·12	−9·99	−55
Gwalior . . .	11·80	11·08	+0·72	+ 6
Nagode . . .	20·23	17·16	+3·07	+18
Maihar . . .	17·33	16·46	+0·87	+ 5
Rewah . . .	15·82	18·37	−2·55	−14
Bundelkhand . .	14·75	15·70	−0·95	− 6

The Central Provinces received daily rain from the 1st to the 26th, after which a break in the rains set in for a short period. The rainfall was generally moderate in amount, but large amounts were received during the passage of the second and third storms of the month, or from the 18th to the 20th and on the 25th and 26th.

The following gives the heaviest falls :—

Date.	District.	Station.	Heaviest rainfall in past 24 hours.
			Inches.
18th .	Raipur . . .	Dhamtari . .	8·98
19th .	Chanda . . .	Armori . . .	10·50
" .	" . . .	Brahmapuri . .	6·60
" .	" . . .	Mul . . .	5·45
20th .	Wardha . . .	Wardha . . .	6·88
" .	" . . .	Hinganghat . .	5·58
25th .	Sambalpur . .	Sambalpur . .	5·25
" .	" . . .	Raigarh . .	5·08
26th .	Balaghat . . .	Behir . . .	5·09

The rainfall was on the whole more regularly distributed than usual, and was in excess in 41 out of the 65 rainfall-reporting stations and was in slight defect at the remaining 24 stations.

The following gives comparative data for the three divisions of the province :—

Division.	Number of rainy days.		Rainfall.		
	Average actual, July 1894.	Variation from normal.	Mean actual, July 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Central Provinces (East) .	21 3	+ 6·3	22·53	+6·46	+40
Ditto (Central)	20·0	+ 2·9	17·33	—0·69	— 4
Ditto (West) .	17·3	+ 1·9	14·90	+1·09	+ 8

The rainfall of the month was hence in considerable to large excess (averaging 40 per cent.) in the eastern districts. It was normal in the central districts and in slight excess in the western districts.

The rains held steadily in the Bombay coast districts during the month and general and more or less heavy rain was received daily. There were two periods during the month when the Bombay monsoon current, under the influence of the storms which advanced westwards across the head of the Peninsula, was intensified and gave excessive rain in the coast districts and the West Ghats. The following givesthe most noteworthy falls during these two periods, *viz.*, from the 10th to the 13th and the 21st to the 23rd :—

Date.	District.	Station.	Heaviest rainfall in past 24 hours.
			Inches.
10th . .	Kolaba . . .	Matheran . .	11·80
11th . .	Ratnagiri . .	Mandangad . .	12·10
" . .	Poona . . .	Lanoli . . .	13·97
12th . .	Ratnagiri . .	Khed . . .	14·50
" . .	" . . .	Sangameshvar .	13·10
" . .	" . . .	Chiplun . . .	11·81
" . .	Kolaba . .	Mangaon . .	13·15
" . .		Mahad . . .	12·93
" . .		Matheran . .	12·60
" . .		Karjat . . .	11·83
" . .		Khalapur . .	11·13
" . .	Satara . . .	Malcolmpeth . .	14·14
13th . .	Kolaba . . .	Khalapur . .	10·23
" . .	Satara . . .	Malcolmpeth . .	10·02
20th . .	Kolaba . . .	Matheran . .	11·90
" . .	Satara . . .	Malcolmpeth . .	17·82
" . .	Poona . . .	Lanoli . . .	11·22
21st . .	Kolaba . . .	Matheran . .	12·30
" . .	Thana . . .	Shahapur . .	12·59
" . .	" . . .	Mokhada . .	11·50
" . .	Satara . . .	Malcolmpeth . .	14·92
" . .	Poona . . .	Lanoli . . .	10·49
22nd . .	Kolaba . . .	Matheran . .	12·06
" . .	Satara . . .	Malcolmpeth . .	13·44

These excessive rainfalls are examples of the heavy downpours received at the foot and on the summit of the West Ghats during the prevalence of stronger humid winds than usual in the height of the monsoon.

The rainfall of the month was in moderate excess in the Konkan districts by amounts averaging 8·78 inches or 22 per cent. for the whole area.

The districts of Dharwar, Belgaum, Bijapur, and Sholapur had light to moderate daily showers from the 11th to the 23rd or during the period when the current was strongest and the rainfall heaviest in the coast districts. The rainfall of the month was moderate in amount in these four districts, and was normal or in slight defect, as is shown by the following data :—

District.	Rainfall.		
	Mean actual, July 1894.	Normal, July.	Variation from normal.
	Inches.	Inches.	Inches.
Dharwar	4·95	4·80	+0·15
Belgaum	14·23	15·53	—1·30
Bijapur	2·40	3·16	—0·76
Sholapur	2·86	3·67	—0·81

The districts of Satara, Poona, Ahmednagar and Khandesh obtained light showers from the 1st to the 10th and moderate rain from the 11th to the 23rd or 24th. The rainfall in these districts was irregularly distributed, but was in excess in all these districts by moderate to large amounts. The following gives data :—

District.	Rainfall.		
	Average actual, July 1894.	Average normal, July.	Variation from normal.
	Inches.	Inches.	Inches.
Satara	23·28	12·92	+ 10·36
Poona	19·22	15·38	+ 3·84
Ahmednagar	5·62	3·60	+ 2·02
Khandesh	11·76	5·05	+ 6·71

Kathiawar and Sind received excessive rain during July, and also in Khandesh and Gujarat large excess falls were received. In the Konkan and Bombay Deccan the falls were also above the normal, but the excess was not so large as in the other divisions. Excessive rain fell in Gujarat, Kathiawar, Cutch and Sind during the three periods when they were affected by the cyclonic storms which marched westwards across Rajputana and Sind.

Division.	Number of rainy days.		Rainfall.		
	Actual, July 1894.	Variation from normal.	Actual, July 1894.	Variation from normal.	Percentage variation.
			Inches.	Inches.	
Konkan	28·5	+1·6	48·82	+ 8·78	+21
Bombay Deccan	11·7	—0·5	12·53	+ 3·24	+35
Khandesh	14·9	+3·8	13·62	+ 5·95	+78
Gujarat	23·1	+6·0	29·63	+11·17	+61
Kathiawar	19·4	+7·9	24·99	+12·60	+102
Sind	6·0	?	7·15	+ 5·29	+284

The rainfall in the Madras Presidency varied to a larger extent from the normal than in any other province. The Malabar districts received steady daily rain throughout the month. The daily rainfalls were generally moderate in amount. The 18th and 19th were the only days of heavy rain. The Malabar district obtained an average of 6·08 inches and South Canara of 4·80 inches on these two days. South Canara also received an average of 5·59 inches on the 13th and 14th. The heaviest rainfall in 24 hours during these periods was 9·61 inches on the 19th at the coast station of Manantoddy.

The southern districts of Tinnevelly, Madura and Trichinopoly received a few local showers, but the month was even drier than usual in these districts.

Occasional rain fell in the central and Coromandel coast districts, chiefly on the 7th, 8th and 9th, the 16th and 17th and the 26th and 27th, but the rainfall was scanty in these districts and considerably below the normal of the month. The Deccan districts received rain, chiefly during the same periods. The rainfall of the month was irregularly distributed but was on the whole in slight excess, more especially in the Cuddapah district.

The Ganjam and Circars coast districts obtained general rain during the earlier stages of the formation of the cyclonic storms of the month. The chief periods of rain were hence the 7th to the 12th, the 15th to the 19th, the 24th to the 26th and the 31st. The rainfall of the month was excessive in Ganjam which obtained an average of 13·41 inches or 6·37 inches above the normal, in slight excess in Vizagapatam and in considerable defect in Godavari and Kistna.

The following gives a summary of the rainfall data for each district or collectorate. The data for the divisions of the presidency will be found in the table, page 328.

District.	No. of rainy days.		Rainfall.		Variation from normal.	Percentage variation from normal.
	Average actual, July 1894.	Average normal, July.	Average actual, July 1894.	Average normal, July.		
			Inches.	Inches.	Inches.	
Ganjam	16·3	10·0	13·41	7·04	+6·37	+90
Vizagapatam	14·4	12·3	10·16	8·58	+1·58	+18
Godavari	7·4	8·8	3·82	6·09	—2·27	—37
Kistna	5·5	8·3	3·59	5·30	—1·71	—32
Nellore	3·1	4·9	1·83	2·45	—0·62	—25
Chingleput	5·6	6·3	2·76	3·70	—0·94	—25
Madras	4·0	6·9	1·89	3·78	—1·89	—50
North Arcot	5·9	5·1	2·54	3·06	—0·52	—17
South Arcot	6·3	5·0	3·55	3·37	+0·18	+5
Tanjore	2·5	3·9	0·95	2·53	—1·58	—62
Trichinopoly	2·0	2·9	1·19	2·35	—1·16	—49
Madura	1·7	2·4	0·93	1·37	—0·44	—32
Tinnevelly	0·8	1·6	0·24	0·69	—0·45	—65
Malabar	26·4	25·6	25·78	29·02	—3·24	—11
South Canara	28·7	28·4	35·55	42·23	—6·68	—16
Salem	5·8	4·5	3·46	2·97	+0·49	+16
Coimbatore	2·4	3·3	0·91	1·64	—0·73	—45
Nilgiris	12·5	16·1	10·53	13·56	—3·03	—22
Cuddapah	5·8	5·6	3·79	2·95	+0·84	+28
Anantapur	3·5	4·9	2·17	2·32	—0·15	—6
Bellary	4·9	6·4	3·03	2·62	+0·41	+16
Kurnool	7·4	7·9	5·06	4·85	+0·21	+4

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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. Burma Coast and Bay Islands.		...	...	−·004	...	...	...	...	...	...	...	84·0	−0·7	75·2	0	79·6	−0·4	8·7	...	...	...	...	16·0
Bay Islands	Port Blair	61	29·754	?	29·746	29·820	12th	29·690	3rd	·130	80·9	85·6	?	77·8	?	81·7	?	7·8	89·5	4th	73·8	17th	15·7
	Camorta	?								Not	recei	ved.											
Tenasserim	Mergui	96	29·781	?	29·810	29·857	7th	29·709	21st	·148	77·6	83·5	?	73·3	?	78·4	?	10·2	88·5	4th	71·1	2 days	17·4
	Tavoy	26	29·853	?	29·810	29·943	7th	29·785	2 days	·158	76·7	82·7	?	73·2	?	78·0	?	9·5	87·2	2 days	71·2	2 days	16·0
	Moulmein	94	29·753?	?	29·785?	29·841	6th	29·660	21st	·181	76·0	82·3	−0·4	73·6	−0·3	78·0	−0·4	8·7	87·5	13th	71·8	9th	15·7
	Toungoo	181	29·589	−·005	29·713	29·708	12th	29·498	2 days	·210	77·6	85·0	−1·4	74·7	−0·2	79·9	−0·8	10·3	90·7	15th	72·2	26th	18·5
Lower Burma	Rangoon	41	29·758	−·002	29·736	29·862	12th	29·667	21st	·195	77·9	85·4	+0·4	75·4	−0·3	80·4	+0·1	10·0	89·7	4th	73·4	3rd	16·3
	Bassein	27	29·751	0	29·713	29·845	12th	29·669	21st	·176	78·1	84·2	−0·6	75·4	−0·3	79·8	−0·5	8·8	90·2	2 days	72·9	27th	17·3
	Diamond Island	41	29·744	−·007	29·720	29·826	12th	29·671	2 days	·155	79·6	83·2	−1·3	77·1	+2·1	80·2	+0·4	6·1	86·6	3rd	72·4	9th	14·2
Arakan	Akyab	20	29·685	−·008	29·648	29·817	12th	29·599	23rd	·218	79·3	83·7	−0·9	76·6	−0·8	80·2	−0·9	7·1	87·7	1st	75·2	3 days	12·5
2. Burma Inland		...	...	−·016	...	...	...	...	...	...	...	86·9	−1·9	73·7	−0·5	80·3	−1·2	13·2	...	...	...	...	22·0
Central Burma	Thayetmyo	134	29·597	−·016	29·673	29·752	12th	29·499	22nd	·253	79·7	87·5	−1·3	76·2	+0·1	81·9	−0·6	11·3	92·1	2 days	74·6	2 days	17·5
	Minbu	?	29·555	?	?	29·739	12th	29·459	22nd	·280	79·6	89·2	?	76·0	?	82·6	?	13·2	96·1	2nd	74·1	2 days	22·0
	Yamethin	?	29·090	?	?	29·238	12th	29·000	21st	·238	77·6	88·2	?	73·6	?	80·9	?	14·6	93·1	1st	70·0	2 days	23·1
	Fort Stedman	?	26·833	?	?	26·947	12th	26·738	21st	·209	72·9	82·8	?	68·7	?	75·8	?	14·1	86·2	1st	66·0	2 days	20·2
Upper Burma	Mandalay	?	29·469	?	?	29·624	12th	29·384	21st	·240	81·0	90·0	?	77·2	?	83·6	?	12·8	96·5	4th	74·1	7th	22·4
	Kindat	?	29·334	?	?	29·520	12th	29·226	23rd	·294	78·7	86·7	−2·5	75·5	−1·0	81·1	−1·8	11·2	91·8	2 days	72·5	16th	19·3
	Lashio	?	26·978	?	?	27·094	13th	26·873	20th	·221	72·3	82·1	?	67·7	?	74·9	?	14·4	88·5	2 days	62·0	18th	26·5
	Bhamo	?	29·335	?	?	29·503	12th	29·247	21st	·256	78·3	88·9	?	74·9	?	81·9	?	14·0	96·6	15th	71·8	2 days	24·8
3. Assam		...	...	+·007	...	...	...	...	...	...	...	89·7	+0·3	77·7	−0·2	83·7	+0·1	12·0	...	...	...	...	20·7
Assam (Surma)	Silchar	104	29·566	−·001	29·620	29·753	13th	29·430	23rd	·323	81·6	91·3	+1·3	76·9	−0·2	84·1	+0·6	14·4	97·1	17th	74·3	7th	22·8
Brahmaputra	Sibsagar	333	29·339	−·002	29·625	29·519	12th	29·227	2nd	·292	80·4	89·9	−0·9	77·5	−0·6	83·7	−0·8	12·4	96·2	24th	74·0	2 days	22·2
	Dhubri	115	29·530	+·023	29·598	29·716	13th	29·413	23rd	·303	81·3	88·0	+0·6	78·7	+0·1	83·4	+0·4	9·3	93·2	23rd	76·1	8th	17·1
4. Bengal and Orissa		...	...	+·007	...	...	...	...	...	...	...	87·3	−0·6	77·4	−0·6	82·4	−0·6	10·0	...	...	...	...	18·3
East Bengal	Chittagong	87	29·588	+·006	29·623	29·750	12th	29·432	23rd	·318	79·1	85·4	−0·1	76·3	−0·1	80·9	−0·1	9·1	89·7	2 days	74·1	3 days	15·6
	Lungleh	?			Not	recorded.					70·3	75·4	?	67·1	?	71·3	?	8·3	80·8	3 days	65·1	7th & 8th	15·7
	Noakhali	43	29·603	?	29·593	29·764	13th	29·435	23rd	·329	80·1	85·7	?	76·7	?	81·2	?	9·0	90·5	22nd	74·3	20th & 21st.	16·2
	Comilla	36	29·612	?	29·595	29·789	13th	29·467	23rd	·322	80·2	87·4	?	76·3	?	81·9	?	11·1	93·3	16th	74·8	9 days	18·5
	Sirajganj	49	29·571	?	29·570	29·762	13th	29·451	3rd	·311	81·1	87·9	?	77·6*	?	82·8*	?	10·3	93·3	16th & 23rd.	74·7	8th & 9th	18·6
	Narayanganj	26	29·604	+·002	29·578	29·791	13th	29·456	23rd	·335	80·7	87·3	−1·0	78·3	−0·9	82·8	−1·0	9·0	92·1	16th	74·2	8th	17·9
	Barisal	13	29·607	+·011	29·565	29·777	13th	29·427	23rd	·350	81·2	86·4	−0·2	77·9	−0·2	82·2	−0·2	8·5	91·3	15th	74·4	7th	16·9
	Mymensingh	59	29·577	+·014	29·587	29·764	13th	29·453	23rd	·311	81·0	87·6	+0·1	77·8	−0·2	82·7	−0·1	9·8	92·7	16th	74·1	8th	18·6
Deltaic Bengal	Faridpur	46	29·592?	?	29·586?	29·774	13th	29·439	24th	·335	81·4	86·9	?	78·0	?	82·4	?	8·9	91·5	11th	73·9	8th	17·6
	Jessore	33	29·565	−·011	29·545	29·751	13th	29·357	24th	·394	81·9	87·7	−·7	77·1	−2·0	82·5	−1·9	10·6	93·0	16th	74·9	2 days	18·1
	Calcutta	21	29·565	−·006	29·532	29·764	13th	29·237	24th	·527	81·1	87·0	−1·0	78·0	−0·4	82·5	−0·7	9·0	90·6	2 days	75·7	11th	14·9
	Saugor Island	25	29·562	−·003	29·531	29·741	13th	29·278	24th	·463	81·8	86·1	−1·7	79·2	−1·2	82·7	−1·5	6·9	90·2	16th	74·0	24th	16·2
	Krishnagar	47	29·546	?	29·541	29·739	13th	29·326	24th	·413	81·5	88·5	?	77·7	?	83·1	?	10·8	92·8	11th	75·2	9th	17·6
	Midnapore	149	29·450	?	29·544	29·620	13th	29·198	25th	·422	81·7	88·5	?	77·3	?	82·9	?	11·2	94·3	2nd	74·1	8 days	20·2

* Mean of 30 days.

I.

in India, Burma, etc., in July 1894.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	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.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36·46	29·51	+4·95	...	...	...	...	**1. Burma Coast and Bay Islands.**	
2	...	...	...	1	1	16	10	1	11·9	11·0	+ 9	88	·933	9·0	22	?	?	13·62	15·98	− 2·36	33·30	34·77	− 1·47	2·54	Port Blair	Bay Islands.
											Not	recei	ved.												Camorta.	
...	3	...	...	...	4	7	8	9	1·7	1·8	− 6	92	·876	6·2	20	?	?	24·94	31·99	− 7·05	61·13	63·43	− 2·30	3·33	Mergui	Tenasserim.
27	...	1	...	...	...	2	1	...	1·5	?	?	93	·858	8·2	27	?	?	52·49	?	?	94·74	?	?	8·07	Tavoy.	
...	1	2	2	7	7	10	2	...	5·1	3.8	+34	95	·857	9·0	27	27·75	−0·75	67·57	45·82	+21·75	118·19	81·54	+36·65	10·78	Moulmein.	
1	...	...	...	24	6	...	...	...	3·3	4·8	−31	92	·882	9·7	27	25·09	+1·91	19·94	17·91	+ 2·03	34·35	32·52	+ 1·83	3·28	Toungoo.	
...	2	1	...	...	4	12	8	4	5·1	5·5	− 7	95	·912	9·4	27	25·36	+1·64	22 96	21·68	+ 1·28	41·25	39·19	+ 2·06	2·32	Rangoon	Lower Burma.
4	...	...	...	3	11	9	4	...	5·2	4·0	+30	94	·909	7·8	27	27·00	0	41·33	24·88	+16·45	57·37	47·44	+ 9·93	4·60	Bassein.	
1	2	...	...	...	2	20	5	1	11·0	8·9	+24	88	·884	9·6	25	24·00	+1·00	35·10	26·28	+ 8·82	65·04	49·48	+15·56	5·99	Diamond Island.	
...	2	5	5	2	13	1	2	1	4·7	3·8	+24	95	·950	9·0	28	27·55	+0·45	50·22	51·54	− 1·32	98·83	95·53	+ 3·30	4·16	Akyab	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13·47	9·46	+3·59	...	...	...	...	**2. Burma Inland.**	
...	...	...	2	10	17	1	1	...	4·8	6·7	−28	85	·857	9·4	15	15·91	−0·91	8·57	6·83	+ 1·74	12·11	13·77	− 1·66	1·73	Thayetmyo	Central Burma.
...	...	...	2	27	2	...	...	...	12·2	?	?	85	·868	3·7	17	?	?	7·07	?	?	11·18	?	?	2·01	Minbu.	
2	...	...	...	27	2	...	...	...	10·7	?	?	90	·816	6·7	21	?	?	9·28	?	?	11·34	?	?	1·35	Yamethin.	
21	...	...	...	...	...	10	...	...	?	?	?	87	·710	9·1	17	?	?	9·86	?	?	15·01	?	?	1·90	Fort Stedman.	
3	1	...	...	9	13	4	...	1	7·6	?	?	82	·868	8·4	13	?	?	9·18	?	?	12·34	?	?	2·20	Mandalay	Upper Burma.
13	2	...	1	6	4	4	1	...	1·0	?	?	93	·917	7·5	20	?	?	17·51	12·08	+5·43	36·43	25·54	+10·89	4·55	Kindat.	
...	6	12	...	1	1	7	...	4	?	?	?	90	·715	7·1	22	?	?	16·22	?	?	29·73	?	?	4·14	Lashio.	
24	...	2	...	...	...	3	...	2	2·0	?	?	91	·877	7·8	24	?	?	30·07	?	?	47·65	?	?	3·93	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·53	16·54	−8·01	...	...	...	...	**3. Assam.**	
24	...	2	3	1	...	...	...	1	3·0	3·1	− 3	87	·941	8·5	17	21·45	−4·45	14·83	19·12	− 4·29	46·34	40·79	+ 5·55	2·90	Silchar	Assam (Surma).
15	...	5	1	1	2	7	...	...	2·1	2·8	−25	93	·962	8·0	12	18·73	−6·73	6·06	16·18	−10·12	21·84	29·58	− 7·74	1·76	Sibsagar	Brahmaputra.
6	2	7	11	2	...	2	1	...	4·8	3·9	+23	89	·948	6·8	15	13·75	+1·25	4·71	14·33	− 9·62	24·13	40·77	−16·64	0·73	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15·71	14·15	+1·50	...	...	...	...	**4. Bengal and Orissa.**	
...	1	2	7	13	6	1	...	1	6·8	7·2	− 6	91	·907	9·0	20	19·64	+0·36	27·13	19·17	+ 7·94	46·20	41·31	+ 4·89	4·32	Chittagong	East Bengal.
		Not	reco	rded					?	?	?	91	·677	?	24	?	?	17·41	?	?	37·04	?	?	1·57	Lungleh.	
...	2	1	9	14	4	...	1	...	6·8	?	?	90	·930	6·9	22	22·60	−0·60	22·12	23·97	− 1·85	44·15	50·04	− 5·89	3·68	Noakhali.	
...	...	...	19	18	4	...	...	...	6·3	?	?	94	·974	8·1	18	18·65	−0·65	21·92	16·98	+ 4·94	40·79	36·11	+ 4·68	4·41	Comilla.	
10	1	1	5	6	6	2	...	...	3·7	?	?	89	·945	8·0	12	13·50	−1·50	10·38	10·97	− 0·59	16·96	22·37	− 5·41	3·02	Sirajganj.	
...	...	1	6	14	5	3	1	1	9·0	7·3	+23	91	·954	8·9	20	15·73	+4·27	18·75	12·33	+ 6·42	28·76	25·55	+ 3·21	3·70	Narayanganj	
	1	1	3	3	7	1	...	...	4·5	?	?	89	·957	9·3	20	21·00	−1·00	18·93	15·98	+ 2·95	40·64	31·72	+ 8·92	5·90	Barisal.	
2	...	3	8	14	2	1	...	1	5·1	?	?	89	·937	7·3	21	18·20	+2·80	20·51	14·49	+ 6·02	36·44	33·01	+ 3·43	4·55	Mymensingh.	
11	...	...	7	6	7	...	...	...	4·7	?	?	89	·969	7·1	20	16·75	+3·25	15·78	11·85	+ 3·93	29·47	24·34	+ 5·13	2·25	Faridpur	Deltaic Bengal.
7	...	...	6	9	6	2	1	...	4·8	4·6	+ 4	91	·987	7·7	18	18·18	−0·18	15·32	11·58	+ 3·74	23·89	24·30	− 0·41	4·35	Jessore.	
7	...	...	5	4	3	5	6	1	5·6	5·3	+ 6	88	·942	8·4	18	20·00	−2·00	11·34	12·14	− 0·80	21·57	23·05	− 1·48	2·36	Calcutta.	
...	1	3	2	3	5	13	2	2	17·8	14·2	+25	89	·965	9·3	20	17·36	+2·64	24·64	15·45	+ 9·19	35·66	25·57	+10·09	7·69	Saugor Island.	
	...	1	10	4	7	3	5	...	6·6	?	?	86	·923	8·0	21	15·75	+5·25	15·39	10·14	+ 5·25	29·72	18·95	+10·77	3·71	Krishnagar.	
2	4	7	1	3	7	7	...	...	5·4	?	?	85	·920	4·7	18	16·20	+1·80	9·29	12·54	− 3·25	20·17	21·36	− 1·19	2·25	Midnapore.	

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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.
Central Bengal	Bankura	298	29·272*	?	29·520*	29·428	13th	29·027	25th	·401	80·4	88·6	?	77·5	?	82·9	?	11·1	94·1	16th	74·6	26th	19·5
	Raniganj	334	*29·256?	?	*29·537?	29·445	13th	29·075	25th	·370	80·1	88·7	?	77·4	?	83·1	?	11·3	94·2	16th	74·4	21st	19·8
	Burdwan	99	29·491	+·001	29·536	29·677	13th	29·256	25th	·421	80·9	88·2	−2·0	78·5	−0·9	83·4	−1·5	9·7	93·7	16th	75·2	27th	18·5
	Naya Dumka	489	29·090	?	29·533	29·278	13th	28·910	25th	·368	80·9	88·2	?	77·3	?	82·8	?	10·9	93·1	3 days	73·3	16th	19·8
	Berhampore	67	29·534	+·005	29·549	29·728	13th	29·356	25th	·372	80·6	88·7	−0·7	78·3	−0·4	83·5	−0·6	10·4	94·7	16th	75·3	2 days	19·4
	Rampur Boalia.	70	29·531	?	29·550	29·725	13th	29·382	25th	·343	82·6	88·1	?	78·3	?	83·2	?	9·8	93·1	16th	75·1	9th	18·0
	Malda	72									Observations incomplete.												
	Bogra	61	29·553	+·027	29·566	29·741	13th	29·425	3rd	·316	82·4	90·0	+1·5	78·2	0	84·2	+0·8	11·8	95·7	23rd	75·2	7th	20·5
North Bengal	Dinajpur	123	29·498	+·026	29·573	29·692	13th	29·369	3rd	·323	81·7	90·5	+1·4	78·4	−0·5	84·5	+0·5	12·1	96·6	16th	73·3	7th	23·3
	Rangpur	123	29·508	?	29·584	29·694	13th	29·384	3rd	·310	83·2	90·7	?	78·2	?	84·5	?	12·5	96·3	16th	75·7	8th	20·6
	Jalpaiguri	284	29·361	+·036	29·601	29·556	13th	29·224	2nd	·332	81·7	90·4	+2·1	77·3	+0·7	83·9	+1·4	13·1	95·4	23rd	75·1	2 days	20·3
Orissa	Balasore	56	29·521	−·001	29·523	29·685	13th	29·306	17th	·379	80·9	87·0	−1·4	77·1	−1·2	82·1	−1·3	9·9	92·9	11th	73·8	2 days	19·1
	False Point	21	29·588	−·001	29·551	29·731	13th	29·368	17th	·363	81·6	85·8	−1·8	77·9	−0·5	81·9	−1·2	7·9	89·5	2 days	73·1	2 days	16·4
	Cuttack	80	29·518	−·003	29·540	29·648	13th	29·347	17th	·301	82·1	87·2	−2·6	77·9	−0·6	82·6	−1·6	9·3	93·2	21st	74·3	25th	18·9
	Shortt's Island	?	29·569	?	?	29·739	13th	29·128	17th	·611	82·3	86·4*	?	78·7	?	82·6*	?	7·7	91·4	16th	73·4	13th	18·0
	Puri	15	29·589	?	29·544	29·700	13th	29·443	18th	·257	81·5	86·8	?	78·2	?	82·5	?	8·6	90·7	10th & 11th.	73·6	18th	17·1
5. Gangetic Plain and Chota Nagpur.		...	...	+·014	...	...	...	...	...	...	...	89·8	−0·4	78·0	−0·6	83·9	−0·5	11·8	...	...	...	...	20·8
Chota Nagpur	Hazaribagh	2,007	27·589	?	29·526	27·728	13th	27·441	25th	·287	75·7	83·6	−0·9	73·1	−0·4	78·4	−0·7	10·5	88·7	16th	69·3	31st	19·4
	Ranchi	2,128	27·475	?	29·529	27·611	13th	27·306	25th	·305	74·4	82·0	?	72·3	?	77·2	?	9·7	86·5	22nd	69·9	26th & 27th.	16·6
	Daltonganj	730?			Not	recorded.					81·8	88·1	?	76·9	?	82·6	?	11·2	93·3	3 days	73·0	28th & 31st.	20·3
	Chaibassa	760	28·809	0	29·511	28·914	13th & 14th.	28·607	25th	·307	80·0	88·1	−1·1	76·3	−1·0	82·3	−1·1	11·8	92·4	16th	74·2	8th & 30th	18·2
Bihar, South	Gaya	375	29·204	+·004	29·530	29·354	13th	29·109	25th	·245	81·8	90·5	−0·9	78·0	−0·6	84·3	−0·8	12·5	96·0	22nd	73·8	31st	22·2
	Dehri	351	29·231	?	29·532	29·365	13th	29·145	19th	·220	82·6†	89·0	?	78·4?	?	83·7?	?	10·6	96·3	17th	75·0	12th	21·3
	Patna	183	29·404	+·007	29·538	29·570	13th	29·309	4th	·261	83·2	90·4	+0·1	79·5‡	−0·2	84·8‡	−0·1	10·9	95·5	23rd	74·7	8th	20·3
	Arrah	190	29·383	?	29·523	29·539	13th	29·296	4th	·243	83·1	91·4	?	79·4	?	85·4	?	12·0	95·4	13th & 22nd.	75·5	8th & 31st	19·9
	Buxar	239	29·345	?	29·537	29·489	13th	29·274	20th	·215	81·9	88·8	?	78·0	?	83·4	?	10·8	93·5	22nd	75·3	8th	18·2
Bihar, North	Purnea	125	29·487	+·020	29·564	29·689	13th	29·374	3rd	·315	83·4	90·9	+0·7	79·6	+1·1	85·2	+0·9	11·3	96·7	16th	75·2	8th	21·5
	Bhagalpur	160	29·427	?	29·539	29·620	13th	29·306	25th	·314	82·8	90·1	?	78·2	?	84·2	?	11·9	95·2	16th	75·0	8th & 31st	20·2
	Darbhanga	166	29·432	+·013	29·549	29·608	13th	29·346	4th	·262	83·0	91·3	+2·0	78·9	−0·9	85·1	+0·6	12·4	97·0	23rd	75·2	8th	21·8
	Muzaffarpur*	178	29·423	?	29·553	29·595	13th	29·337	4th	·258	82·7	91·7	?	79·3	?	85·6	?	12·4	97·2	23rd	76·2	8th	21·0
	Motihari	224	29·378	?	29·557	29·535	13th	29·297	3rd	·238	83·3	91·6	?	78·3	?	85·0	?	13·3	97·0	23rd	74·9	8th	22·1
	Chapra	181	29·414	?	29·547	29·583	13th	29·328	4th	·255	83·2	90·8	?	79·1*	?	85·0*	?	11·7	96·3	23rd	75·6	8th	20·7
N.-W. Provinces (Eastern Districts).	Benares	267	29·303	+·022	29·530	29·432	13th	29·220	20th	·212	82·1	89·7	−1·7	78·3	−1·3	84·0	−1·5	11·4	95·3	22nd	74·5	24th	20·3
	Allahabad	309	29·216	+·016	29·523	29·379	14th	29·161	20th	·218	82·7	90·2	−1·2	78·6	−0·7	84·4	−1·0	11·6	96·1	23rd	75·3	9th, 30th & 31st	20·8
N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·323	+·021	29·535	29·467	13th	29·244	3rd	·223	83·1	91·0	+0·2	78·6	−0·9	84·8	−0·4	12·4	96·4	17th	75·2	9th	21·2
Oudh, South	Lucknow	370	29·208	+·024	29·533	29·339	14th	29·111	20th	·228	83·2	91·7	−0·4	78·6	−0·7	85·1	−0·6	13·1	98·3	2nd	74·1	4th	24·2
Oudh, North	Bahraich	403	29·175	?	29·536	29·302	13th & 14th.	29·076	3rd	·226	82·9	91·5	?	78·5	?	85·0	?	13·0	98·4	24th	74·0	2nd	24·4
N.-W. Provinces (Central).	Cawnpore	416	29·151	?	29·525	29·272	14th	29·038	20th	·234	82·9	90·8	?	78·9	?	84·8	?	11·9	97·4	29th	75·5	9th	21·9
	Mainpuri	516	29·051	?	29·519	29·197	12th	28·944	3rd	·253	83·3	91·7	?	79·2	?	85·5	?	12·5	95·3	5 days	75·0	16th	20·3

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

I—*continued.*

in India, Burma, etc., in July 1894—continued.

Wind Direction. Number of Winds from: Calm	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour	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 1894	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
17	1	2	5	3	...	1	2	...	4·2	?	?	88	·912	7·3	17	17·45	− 0·45	13·36	12·47	+ 0·89	25·66	21·82	+ 3·84	2·05	Bankura	Central Bengal.
3	1	5	6	7	3	2	2	2	3·1*	?	?	90	·930	5·9	19	16·85	+ 2·15	16·32	13·72	+ 2·60	24·70	22·10	+ 2·60	2·49	Raniganj.	
4	1	4	6	4	3	4	3	2	4·0	4·3	− 7	88	·923	8·4	19	16·82	+ 2·18	13·49	12·65	+ 0·84	22·29	21·38	+ 0·91	1·71	Burdwan.	
...	...	2	10	8	6	3	1	1	6·7	?	?	88	·925	5·3	18	18·50	− 0·50	13·54	13·44	+ 0·10	27·23	22·30	+ 4·93	3·28	Naya Dumka	
5	...	1	9	6	4	4	1	1	4·2	5·0	−16	92	·963	8·3	14	16·27	− 2·27	12·44	11·06	+ 1·38	20·19	20·28	− 0·09	5·68	Berhampore.	
9	...	2	4	9	3	3	1	...	5·5	?	?	88	·978	5·9	14	14·85	− 0·85	10·55	11·67	− 1·12	18·51	21·32	− 2·81	4·91	Rampur Boalia. Malda.	
													Observations incomplete.													
10	...	...	8	10	...	...	1	2	3·1	?	?	86	·956	5·9	11	15·25	− 4·25	10·34	13·63	− 3·29	20·37	27·49	− 7·12	2·52	Bogra.	
2	...	1	14	11	3	...	...	...	1·7	?	?	87	·946	6·3	13	15·70	− 2·70	7·50	14·41	− 6·91	20·83	30·21	− 9·38	1·40	Dinajpur	North Bengal.
6	...	2	16	5	1	1	...	...	3·3	?	?	86	·969	7·0	9	14·75	− 5·75	4·60	16·48	−11·88	17·26	35·99	−18·73	1·20	Rangpur.	
...	2	10	7	7	3	1	...	1	3·4	?	?	86	·928	6·4	18	19·35	− 1·35	23·49	28·22	− 4·73	43·47	56·22	−12·75	3·61	Jalpaiguri.	
2	1	2	2	1	5	13	5	...	8·1	?	?	91	·966	5·2	18	15·55	+ 2·45	23·46	12·60	+10·86	32·75	20·94	+11·81	7·00	Balasore	Orissa.
...	2	2	...	...	1	16	9	1	13·2	10·5	+26	87	·944	8·9	16	15·20	+ 0·80	19·50	11·79	+ 7·71	28·44	19·75	+ 8·69	4·59	False Point.	
7	1	1	...	...	3	12	6	1	4·0	3·2	+25	78	·855	7·2	15	16·09	− 1·09	10·40	11·98	− 1·58	29·85	21·28	+ 8·57	2·50	Cuttack.	
...	1	3	...	1	3	17	5	1	16·6	?	?	86	·952	4·0	19	?	?	15·67	?	?	29·73	?	?	3·60	Shortt's Island.	
2	4	...	...	...	...	11	12	2	15·1	?	?	87	·939	7·5	17	13·45	+ 3·55	12·10	10·39	+ 1·71	17·03	18·37	− 1·34	2·52	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12·90	12·16	+ 0·60	...	...	...	...	**5. Gangetic Plain and Chota Nagpur.**	
2	2	2	3	5	5	3	7	2	10·8	8·4	+ 29	89	·764	9·1	19	18·64	+0·36	17·68	14·12	+ 3·56	29·31	22·13	+ 7·18	3·40	Hazaribagh.	Chota Nagpur.
6	4	2	1	1	5	8	2	2	7·9	?	?	91	·779	8·7	24	19·45	+4·55	17·25	13·72	+ 3·53	25·76	22·37	+ 3·39	3·96	Ranchi.	
...	1	4	2	3	3	13	3	2	6·0	?	?	83	·902	7·1	18	?	?	15·85	?	?	23·91	?	?	4·85	Daltonganj.	
...	...	3	2	2	1	10	8	5	3·0	?	?	86	·882	9·0	18	17·15	+ 0·85	13·46	13·63	− 0·17	22·07	21·78	+ 0·29	2·70	Chaibassa.	
...	...	3	13	4	...	2	8	1	6·6	2·9	+128	85	·924	6·4	18	16·00	+ 2·00	21·14	13·26	+ 7·88	29·05	20·36	+ 8·69	2·48	Gaya	Bihar, South.
...	1	3	8	5	3	3	6	2	12·3	?	?	85‡	·941‡	7·2	15	15·38	− 0·38	16·08	11·25	+ 4·83	30·56	15·90	+14·66	3·23	Dehri.	
2	...	2	13	7	2	...	4	1	6·4	3·6	+ 78	84	·922	7·3	12	15·00	− 3·00	11·14	12·66	− 1·52	18·08	20·20	− 2·12	2·95	Patna	
...	...	7	7	9	1	2	3	2	3·5	?	?	87	·985	5·2	14	14·94	− 0·94	12·41	11·03	+ 1·38	16·91	16·98	− 0·07	3·31	Arrah.	
...	2	3	15	2	...	1	6	2	5·7	?	?	86	·932	6·9	17	14·50	+ 2·50	20·36	11·07	+ 9·29	27·75	16·03	+11·72	6·14	Buxar.	
1	...	10	15	4	...	1	...	...	6·3	2·9	+117	84	·965	2·2	11	17·09	− 6·09	9·24	15·01	− 5·77	21·71	26·08	− 4·37	3·56	Purnea	Bihar, North.
11	...	1	7	10	1	...	1	...	2·3	?	?	85	·950	7·4	13	15·40	− 2·40	17·70	11·16	+ 6·54	24·96	18·87	+ 6·09	5·45	Bhagalpur.	
2	1	1	13	12	1	...	1	...	5·8	5·0	+ 16	83	·928	6·3	7	13·55	− 6·55	5·41	12·40	− 6·99	8·49	21·42	−12·93	2·47	Darbhanga.	
2	...	3	13	10	...	1	1	...	5·3†	?	?	88	·982	5·6	8	14·00	− 6·00	6·51	11·81	− 5·30	13·49	19·34	− 5·85	3·01	Muzaffarpur*	
2	...	11	15	2	...	...	...	1	5·4	?	?	82	·942	5·4	12	11·29	+ 0·71	6·30	10·45	− 4·15	14·26	18·34	− 4·08	2·13	Motihari.	
4	...	3	12	7	...	1	3	1	5·1	?	?	84	·956	8·5	13	14·15	− 1·15	13·04	12·30	+ 0·74	23·81	18·32	+ 5·49	2·93	Chapra.	
9	...	2	10	1	2	3	3	1	4·8	4·8	0	88	·964	7·0	15	14·27	+ 0·73	14·99	10·74	+ 4·25	21·96	15·87	+ 6·09	3·90	Benares	N.-W. Provinces (Eastern Districts).
...	...	6	7	4	1	3	6	4	6·6	4·0	+ 65	85	·940	7·6	15	14·18	+0·82	12·49	12·33	+ 0·16	29·85	18·02	+11·83	3·11	Allahabad	
1	4	4	9	4	6	1	1	1	1·8	2·8	− 36	82	·930	5·3	15	13·91	+1·09	8·40	13·67	− 5·27	19·80	23·35	− 3·65	2·65	Gorakhpur	N.-W. Provinces (East Sub-montane).
15	1	...	15	...	...	...	...	...	?	3·9	?	83	·935	8·1	12	13·64	− 1·64	12·49	11·25	+ 1·24	18·48	16·68	+ 1·80	3·51	Lucknow	Oudh, South.
3	...	3	4	18	...	...	...	3	3·5	?	?	84	·946	4·5	12	?	?	12·53	12·49	+ 0·04	19·67	18·13	+ 1·54	7·35	Bahraich	Oudh, North.
6	...	2	6	5	3	5	4	...	4·0	?	?	84	·941	6·0	9	12·1	− 3·1	10·87	9·99	+ 0·88	15·77	13·08	+ 2·69	3·48	Cawnpore	N.-W. Provinces (Central).
14	1	1	8	2	1	...	3	1	1·2	?	?	82	·945	7·0	8	?	?	8·43	11·07	− 2·64	12·19	14·07	− 1·88	1·65	Mainpuri.	

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

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
6. Upper—Sub-Himalayas		...	...	+·026	...	...	...	...	...	...	...	90·6	−3·7	77·7	−0·9	84·2	−2·3	12·8	...	...	...	...	23·5
N.-W. Provinces (Sub-montane).	Bareilly	568	29·010	+·032	29·537	29·164	12th	28·896	3rd	·268	82·4	92·1	+0·4	78·7	0	83·9	+0·2	13·4	96·8	24th	75·6	2nd & 3rd.	21·2
	Dehra Dun	2,233	27·405	+·021	29·567	27·588	12th	27·288	29th	·300	75·1	83·4	−2·0	72·9	−1·3	78·2	−1·7	10·5	90·0	24th	70·5	17th & 18th.	19·5
	Roorkee	887	28·691	+·019	29·537	28·869	12th	28·573	3rd	·296	80·7	90·0	−2·0	77·2	−0·8	83·9	−1·4	12·8	97·2	24th	74·6	17th & 17th.	22·6
	Meerut	738	28·830	+·025	29·525	28·989	12th	28·712	3rd	·277	82·2	91·2	−1·7	78·0	−1·6	84·6	−1·7	13·2	96·5	24th	74·4	16th	22·1
Punjab, Central.	Delhi	718	28·852	+·029	29·524	29·010	12th	28·740	3rd	·270	83·6	92·0	−2·0	79·7	−0·8	85·8	−1·4	12·3	98·0	1st	75·4	8th	22·6
	Lahore	702	28·835	+·024	29·495	29·009	12th	28·688	29th	·321	84·8	93·0	−5·6	80·5	+0·1	86·8	−2·8	12·5	98·3	30th	75·1	8th	23·2
Punjab (Sub-montane).	Umballa	962?	28·671	?	29·532	28·847	12th	28·545	3rd	·302	80·9	91·6	?	77·9	?	84·8	?	13·7	100·0	24th	72·5	16th	27·5
	Ludhiana	812	28·747	+·023	29·517	28·920	12th	28·616	29th	·304	83·3	90·7	−7·2	78·9	−1·1	84·8	−4·2	11·8	97·5	24th	74·6	17th	22·9
Punjab, North	Sialkot	830	28·717	+·027	29·507	28·894	12th	28·575	29th	·319	83·1	91·8	−5·8	77·7	−1·5	84·8	−3·7	14·1	100·7	5th	72·3	30th	28·4
	Rawalpindi	1,652	27·923	+·031	29·485	28·110	13th	27·765	29th	·345	80·0	89·8	−7·6	75·8	−0·9	82·9	−4·3	14·0	96·5	25th	71·2	18th	25·3
7. Indus Valley and North-West Rajputana.		...	...	+·021	...	...	...	...	...	...	...	96·5	−3·4	80·4	−0·9	88·5	−2·2	16·1	...	...	...	...	31·1
Punjab, West	Peshawar	1,110	28·449	+·034	29·439	28·677	13th	28·266	29th	·411	85·1	98·1	−4·6	79·8	+0·6	89·0	−2·0	18·3	107·5	4th & 5th	73·9	17th	33·6
	Mardan	?		Not	recorded.						85·3	101·9	?	81·6*	?	92·1*	?	20·3	109·8	1st	75·0	17th	34·8
	Khushab	612	28·907	?	29·478	29·112	13th	28·746	29th	·366	85·5	95·8	?	80·8	?	88·3	?	15·0	105·0	5th	70·0	20th	35·0
	Montgomery	558	28·967	?	29·480	29·155	13th	28·824	29th	·331	88·4	101·5	?	82·1	?	91·8	?	19·4	107·9	5th	70·5	17th	37·4
	D. I. Khan	573	28·939	?	29·473	29·168	13th	28·769	29th	·399	85·7	97·6	−6·0	80·4	−1·8	89·0	−3·9	17·2	109·1	5th	72·8	8th	36·3
	Mooltan	420	29·101	+·037	29·482	29·255	13th	28·946	3rd	·309	88·1	101·8	−1·4	83·9	+0·9	92·9	−0·3	17·9	106·4	2nd	76·1	8th & 9th.	30·3
	Sirsa	662	28·880	+·022	29·495	29·043	12th	28·769	3rd	·274	85·3	97·6	−2·4	81·0	−0·3	89·3	−1·4	16·6	103·9	29th	75·3	8th	28·6
Sind and Cutch.	Jacobabad	186	29·306	+·021	29·449	29·479	13th	29·184	3rd	·295	89·7	105·0	−2·4	84·7	+0·7	94·9	−0·9	20·3	111·8	4th & 21st.	77·1	24th	34·7
	Hyderabad	117	29·401	+·016	29·470	29·611	12th	29·267	23rd	·344	83·0	94·8	−4·0	79·2	−1·3	87·0	−2·7	15·6	105·2	2nd	73·0	21st	32·2
	Kurrachee	49	29·504	−·006	29·504	29·699	12th	29·338	23rd	·361	81·3	87·5	−2·7	77·9	−2·6	82·7	−2·7	9·6	94·0	2nd & 3rd.	72·8	26th	21·2
	Bhuj	395	29·181	?	29·528	29·342	12th	28·892	23rd	·450	78·7	85·6	−4·4	75·4	−2·6	80·6	−3·5	10·2	93·0	6th	70·4	14th	22·6
Rajputana, West	Bickaneer	753	28·787	?	29·486	28·931	11th	28·674	20th	·257	85·5	97·3	−2·8	80·8	−1·7	89·1	−2·3	16·5	105·1	20th	75·5	26th & 29th	29·6
	Pachpadra	380	29·153	?	29·485	29·350	12th	28·995	21t	·355	81·1	90·6	?	77·6	?	84·1	?	13·0	100·5	20th	72·6	26th	27·9
8. East Rajputana, Central India and Gujarat.		...	...	+·005	...	...	...	...	...	...	...	86·3	−3·0	75·8	−1·2	81·1	−2·1	10·5	...	...	...	...	20·3
Rajputana, East	Jeypore	1,431	28·161	+·012	29·539	28·288	12th	27·999	9th	·289	79·6	88·6	−3·1	76·0	−0·9	82·3	−2·0	12·6	95·5	19th & 20th.	72·5	14th	23·0
	Sambhar	1,254	28·320	+·015	29·523	28·451	12th	28·160	9th	·291	80·5	89·4	−2·5	76·1	−1·9	82·8	−2·2	13·3	95·5	20th	70·9	14th	24·6
	Ajmere	1,611	27·985	+·004	29·545	28·108	12th	27·824	9th	·284	78·4	86·1	−4·9	75·8	−0·9	81·0	−2·9	10·3	92·4	20th	72·1	14th	20·3
	Deesa	466	29·124	−·009	29·545	29·282	12th	28·883	22nd	·399	78·0	86·5	−4·8	75·5	−2·0	81·0	−3·4	11·0	94·8	20th	72·0	14th & 15th	22·8
Kathiawar	Rajkot	429	29·195	−·001	29·577	29·332	12th	29·000	23rd	·332	78·3	83·9‡	−6·2	73·8	−1·7	78·9‡	−4·0	10·1	90·9	20th	69·8	23rd	21·1
	Veraval	?	29·638	?	29·598	29·748	15th	29·494	23rd	·254	79·7	81·9‡	?	78·0‡	?	80·0‡	?	3·9	84·1	1st & 7th	73·8	23rd	10·3
Central India	Nowgong	757	28·824	+·010	29·534	28·974	15th	28·668	20th	·306	79·6	87·7	−2·3	77·1	−0·9	82·4	−1·6	10·6	92·0	17th & 18th.	75·0	9th & 30th.	17·0
	Indore	1,823	27·816	−·002	29·581	27·928	15th	27·551	21st	·377	74·5	82·3	−1·7	71·7	−0·6	77·0	−1·2	10·6	89·5	20th	68·1	14th	21·4
	Neemuch	1,630	27·986	+·012	29·563	28·106	15th	27·767	21st	·339	76·4	84·2	−2·7	72·9	−0·9	78·6	−1·8	11·3	91·8	20th	68·6	14th	23·2
Gujarat	Surat	36	29·632	−·006	29·611	29·748	15th	29·445	22nd	·303	79·1	85·1	−2·0	76·0	−1·2	80·6	−1·6	9·1	90·6	20th	73·0	14th	17·6
	Ahmedabad	176	29·455	?	29·580	29·591	15th	29·235	22nd	·356	79·3	85·6	?	76·2	?	80·9	?	9·4	94·2	20th	72·1	14th	22·1
N.-W. P., West	Agra	555	29·008	+·003	29·517	29·150	12th	28·883	9th	·267	83·0	92·0	−0·9	79·4	−0·8	85·7	−0·9	12·6	97·5	3 days	74·8	3rd	22·7
	Jhansi	858	28·730	+·015	29·537	28·874	14th	28·580	20th	·294	81·0	88·7	−2·0	77·1	−1·3	82·9	−1·7	11·6	93·1	23rd	74·9	16th	18·2

* Mean 21 days.

‡ Mean of 30 days.

I—*continued.*

in India, Burma, etc., in July 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	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.
...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13·21	12·18	+1·03	...	...	...	...	**6. Upper—Sub-Himalayas.**	
12	...	1	...	16	...	...	2	...	2·7	4·1	−34	83	·916	6·2	7	13·45	−6·45	8·66	16·18	− 7·52	13·48	21·85	−8·37	4·12	Bareilly	N.-W. Provinces (Sub-montane).
17	...	2	1	5	3	1	2	...	0·8	1·2	− 33	92	·810	8·7	27	21·27	+5·73	44·79	29·25	+15·54	62·61	38·50	+24·11	7·54	Dehra Dun.	
14	1	...	...	11	4	1	...	...	3·0	2·9	+ 3	86	·892	7·6	17	11·82	+5·18	17·60	12·45	+ 5·15	26·11	17·16	+8·95	2·90	Roorkee.	
14	1	1	9	2	...	2	2	...	1·6	2·3	−30	82	·902	7·1	11	10·18	+0·82	6·59	9·54	−2·95	11·52	11·98	−0·46	2·05	Meerut.	
14	1	...	8	3	...	2	2	1	1·7	4·5	−62	78	·898	7·4	10	8·64	+1·36	7·54	9·22	−1·68	11·95	12·57	−0·62	1·90	Delhi	Punjab, Central.
5	...	2	7	11	2	3	1	...	2·7	3·3	−18	81	·961	5·6	7	6·45	+0·55	3·54	6·67	−3·13	11·08	8·51	+2·57	1·09	Lahore.	
17	...	...	...	14	...	...	...	...	1·2	?	?	93	·974	7·0	15	?	?	9·15	10·86	−1·71	18·75	14·69	+4·06	2·05	Umballa	Punjab (Sub-montane).
17	...	...	...	9	2	1	1	1	2·0	2·0	0	85	·969	8·4	12	9·36	+2·64	8·98	10·33	−1·35	19·13	12·74	+6·39	2·03	Ludhiana.	
22	1	...	6	...	...	...	1	1	1·2	2·5	−52	83	·937	5·0	13	8·45	+4·55	10·84	8·52	+2·32	16·09	11·60	+4·49	1·64	Sialkot	Punjab, North.
8	1	2	3	10	3	...	1	3	1·7	2·1	−19	88	·911	6·9	16	8·64	+7·36	14·38	8·75	+5·63	17·37	10·46	+6·91	2·48	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·43	3·23	+4·25	...	...	...	...	**7. Indus Valley and North-West Rajputana.**	
12	6	1	2	...	...	...	2	8	3·8	4·4	−14	75	·905	5·0	2	1·91	+0·09	1·74	1·79	−0·05	1·74	2·14	−0·40	0·81	Peshawar	Punjab, West.
			Not recorded.						?	?	?	?	?	?	8	?	?	6·86	?	?	6·86	?	?	1·96	Mardan.	
...	...	25	...	3	...	...	2	1	7·6	?	?	77	·945	4·7	9	3·2	+5·8	10·48	2·86	+7·62	11·89	3·56	+8·33	2·90	Khushab.	
2	1	3	5	7	7	6	...	...	9·6	?	?	70	·925	4·3	6	3·6	+2·4	2·60	3·06	−0·46	3·76	4·35	−0·59	1·73	Montgomery	
11	1	8	7	1	2	...	...	1	2·0	2·4	−17	82	1·007	3·5	4	3·64	+0·36	4·19	2·87	+1·32	6·15	3·41	+2·74	2·84	D. I. Khan.	
6	...	7	2	8	...	6	...	2	1·5	3·4	−56	68	·881	4·1	1	2·82	−1·82	1·10	2·94	−1·84	1·58	3·53	−1·95	0·94	Mooltan.	
5	...	...	8	3	...	5	10	...	6·9	4·8	+44	74	·899	5·6	4	5·55	−1·55	4·90	4·58	+0·32	8·81	6·49	+2·32	3·64	Sirsa.	
6	...	3	11	8	3	...	...	...	6·6	5·3	+25	65	·897	3·8	1	1·45	−0·45	0·22	1·28	−1·06	0·22	1·40	−1·18	0·12	Jacobabad	Sind and Cutch.
3	3	1	...	1	2	14	7	...	27·5	13·9	+98	75	·838	6·8	11	3·18	+7·82	8·90	2·67	+6·23	9·52	3·00	+6·52	5·30	Hyderabad.	
...	...	1	...	...	...	13	16	1	14·4	17·8	−19	87	·947	8·6	9	3·64	+5·36	18·63	3·47	+15·16	18·63	3·99	+14·64	4·78	Kurrachee.	
...	...	...	...	...	1	14	10	6	20·8	16·6	+25	87	·867	8·7	15	?	?	24·87	6·94	+17·93	26·18	8·88	+17·30	4·70	Bhuj.	
...	...	5	1	5	12	7	1	...	8·4	6·7	+25	70	·856	6·2	2	?	?	1·77	3·67	−1·90	7·58	5·33	+2·25	1·28	Bickaneer	Rajputana, West.
...	...	1	1	11	8	5	...	4	9·9	9·8	+10	89	·943	10·0	11	?	?	10·30	2·64	+7·66	15·13	3·33	+11·80	5·62	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13·92	11·28	+1·00	...	...	...	...	**8. East Rajputana, Central India and Gujarat.**	
...	2	3	2	3	3	9	7	2	3·6	6·2	−42	82	·855	8·5	11	12·90	−1·90	6·08	9·37	−3·29	12·09	11·86	+0·23	1·11	Jeypore	Rajputana, East.
...	1	2	3	3	2	...	16	4	8·8	9·1	− 3	80	·842	7·6	9	10·20	−1·20	8·02	7·83	+0·19	11·65	9·23	+2·42	2·21	Sambhar.	
1	...	3	2	2	3	3	16	1	6·9	6·9	0	86	·839	7·3	12	10·27	+1·73	6·66	7·29	−0·63	13·93	9·57	+4·36	1·55	Ajmere.	
...	...	...	...	...	2	19	7	3	13·8	14·5	− 5	90	·861	9·2	18	10·73	+7·27	11·48	10·99	+0·49	15·96	13·15	+2·81	2·56	Deesa.	
...	1	...	...	...	...	12	15	3	11·0	14·5	−24	86	·829	8·8	24	12·91	+11·09	31·24	13·46	+17·78	44·50	18·19	+26·31	7·70	Rajkot	Kathiawar.
2	...	...	...	...	...	7	21	1	13·0	?	?	91	·926	9·1	16	?	?	13·80	?	?	24·36	?	?	4·86	Veraval.	
4	3	2	2	...	4	4	12	...	5·7	4·2	+31	84	·848	8·4	15	15·73	−0·73	13·78	14·41	−0·63	29·21	20·24	+8·97	3·45	Nowgong	Central India.
...	2	...	...	1	5	11	8	4	6·9	6·8	+ 1	91	·784	9·3	14	13·73	+0·27	11·70	8·51	+3·19	15·41	15·30	−0·11	3·60	Indore.	
...	2	...	1	...	2	20	3	3	14·0	12·2	+15	87	·792	8·1	7	11·73	−4·73	3·92	9·89	−5·97	14·81	14·16	+0·65	0·76	Neemuch.	
...	1	...	...	2	...	14	13	1	?	15·7	?	92	·916	8·5	24	16·45	+7·55	28·75	18·28	+10·47	36·37	28·40	+7·97	5·10	Surat	Gujarat.
...	1	...	...	...	1	13	12	4	8·2	?	?	90	·903	9·4	22	?	?	32·05	?	?	38·83	?	?	6·51	Ahmedabad	
2	...	4	1	9	...	12	...	3	5·4	5·0	+ 8	81	·913	7·7	9	13·00	−4·00	5·44	11·50	−6·06	8·09	14·04	−5·95	1·51	Agra	N.-W. P., West.
1	2	3	...	3	2	15	2	3	4·6	4·1	+12	82	·868	5·8	15	14·36	+0·64	8·03	12·60	−4·57	22·72	17·49	+5·23	1·38	Jhansi.	

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

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.
9. Deccan		...	...	+·002	...	...	...	...	...	...	...	86·0	−0·7	72·6	−0·4	79·3	−0·6	13·3	...	...	...	...	22·7
Bombay, Deccan	Belgaum	2,524	27·270	+·006	29·725	27·329	31st	27·146	19th	·183	69·9	74·8	−0·8	66·3	−0·5	70·6	−0·7	8·5	77·3	5 days	64·8	4 days	12·5
	Sholapur ‡	1,590	28·149	?	29·678	28·214	15th	27·996	20th	·218	77·2	89·0	+0·3	71·4	0	80·2	+0·2	17·6	94·7	8th	69·5	18th	25·2
	Poona	1,840	27·895	−·002	29·676	27·975	31st	27·737	20th	·238	74·1	82·0	+0·2	70·3	−0·3	76·2	−0·1	11·7	88·0	2nd	68·4	13th	19·6
	Bijapur	1,946	27·821	?	29·702	27·888	31st	27·693	20th	·195	74·6	87·1	?	69·1*	?	78·3*	?	18·0	92·2	8th	65·0	23rd	27·2
Khandesh	Malegaon	1,430	28·245	−·007	29·619	28·347	15th	28·056	20th & 21st.	·291	77·4	86·3	−0·5	72·0	−1·0	79·2	−0·8	14·3	91·9	3rd & 8th,	67·3	15th	24·6
	Ahmednagar	2,152	27·577	?	29·659	27·656	15th	27·410	20th	·246	74·3	84·0	?	69·8	?	76·9	?	14·2	89·8	2nd & 7th,	66·4	14th	23·4
Berar	Akola	930	28·725	−·009	29·600	28·307	15th	28·480	20th	·327	78·0	88·0	−0·1	73·5	−0·5	80·8	−0·3	14·5	96·4	2nd	69·7	14th & 20th,	26·7
	Amraoti	1,215	28·437	−·001	29·606	28·525	31st	28·210	20th	·315	75·6	85·3	−1·4	73·1	−0·1	79·2	−0·8	12·2	91·9	1st & 2nd,	69·8	14th	22·1
Central Provinces, West.	Khandwa	1,044	28·590	−·010	29·590	28·691	15th	28·329	20th	·362	76·6	84·8	−2·1	74·1	−0·7	79·5	−1·4	10·7	90·2	1st	68·6	14th	21·6
	Hoshangabad	1,020	28·597	?	29·574	28·719	15th	28·328	20th	·391	76·8	84·8	−1·4	74·1	−0·9	79·4	−1·2	10·7	89·3	20th	70·7	14th	18·6
	Nagpur	1,025	28·608	0	29·584	28·713	14th	28·356	19th	·357	78·3	86·5	−0·6	74·4	−0·3	80·5	−0·5	12·1	93·3	1st	72·1	21st	21·2
Central Provinces, Central.	Chanda	634	29·027	+·005	29·606	29·128	14th	28·794	19th	·334	78·5	87·9	+0·3	75·3	−0·2	81·6	+0·1	12·6	95·9	1st	73·0	19th	22·9
	Seoni	2,033	27·608	0	29·572	27·727	14th	27·355	20th	·372	74·0	82·1†	−1·4	71·1†	−1·4	76·6†	−1·4	11·0	86·1	1st	68·6	26th	17·5
	Jubbulpore	1,327	28·281	+·008	29·559	28·415	14th	28·046	20th	·369	76·5	84·0	−1·7	73·4	−1·1	78·7	−1·4	10·6	89·4	17th & 18th,	70·1	15th	19·3
	Saugor	1,762	27·850	+·014	29·556	27·976	14th	27·631	20th	·345	74·9	83·0	−1·9	73·7	+0·2	78·4	−0·9	9·3	88·8	17th	71·2	15th & 31st,	17·6
Central Provinces, East.	Raipur	970	28·646	+·007	29·563	28·734	14th	28·408	19th	·326	77·7	85·3	−0·8	74·4	−0·2	79·9	−0·5	10·9	92·3	17th	70·1	26th	22·2
	Sutna	1,040	28·535	+·013	29·528	28·666	14th	28·380	20th	·286	79·4	85·9	−1·0	76·7	+0·1	81·3	−0·5	9·2	89·5	18th	70·1	15th	19·4
	Sambalpur	463	29·122	+·004	29·533	29·218	13th	28·823	18th	·395	78·4	85·5	−1·8	75·8	−1·6	80·7	−1·7	9·7	91·0	17th	72·2	26th	18·8
Hyderabad, North.	Aurangabad	?	27·855	?	?	27·940	31st	27·658	20th	·282	77·0	86·9	?	70·0	?	78·5	?	16·9	95·2	4th	65·6	14th	29·6
	Indur	?		Not	recorded.		...	...	...	...	77·2	87·3	?	73·9	?	80·6	?	13·4	94·3	8th	70·2	12th	24·1
	Bidar	?	27·574	?	?	27·649	30th	27·407	20th	·242	73·3	86·1	?	69·7	?	77·9	?	16·4	91·7	1st	67·2	13th	24·5
Hyderabad, South.	Gulbarga	1,502	28·237	?	29·685	28·309	30th	28·081	20th	·228	76·1	89·6	?	71·0	?	80·3	?	18·6	95·9	8th	68·5	14th	27·4
	Raichur	1,378	28·391	?	29·713	28·459	31st	28·260	19th	·199	77·4	89·9	?	72·9	?	81·4	?	17·0	96·6	1st	70·1	14th & 17th,	26·5
	Hyderabad (Deccan).	1,690	28·049	?	29·678	28·121	31st	27·905	19th	·216	76·2	88·3	+2·1	72·9†	+1·7	80·6†	+1·9	15·4	95·4	6th	70·2	3 days	25·2
	Secunderabad.	1,787	27·972	?	29·697	28·041	31st	27·827	19th	·214	75·6	89·4†	?	72·1	?	80·6†	?	17·3	96·7	1st & 4th,	69·4	12th & 17th,	27·3
	Khamamet	373	29·335	?	29·641	29·397	1st	29·187	19th	·210	81·2	91·0	?	77·2	?	84·1	?	13·8	96·9	2nd	73·3	12th	23·6
10. West Coast		...	...	−·005	...	...	...	...	...	...	...	83·2	+0·5	75·3	+0·2	79·2	+0·4	7·9	...	...	...	...	14·1
Konkan	Bombay.	37	29·693	−·009	29·670	29·775	31st	29·528	19th	·247	80·4	84·3	+0·1	77·2	−0·2	80·8	−0·1	7·1	87·5	3rd	74·0	17th	13·5
	Ratnagiri*	110	29·766	+·003	29·714	29·741	31st	29·525	19th	·216	79·7	83·7	0	76·2	+0·9	80·0	+0·5	7·5	85·9	31st	73·4	16th	12·5
	Mormugao	60	29·744	?	29·739	29·815	31st	29·618	19th	·197	79·8	83·9	?	75·7	?	79·8	?	8·2	88·0	1st	72·4	11th & 13th,	15·6
	Goa	23	29·804	+·003	29·741	29·870	31st	29·666	19th	·204	78·9	81·4	?	76·2	?	78·8	?	5·2	84·5	1st	73·5	9th	11·0
	Karwar	44	29·786	+·001	29·762	29·841	31st	29·702	19th	·139	78·8	83·3	+0·3	74·9	+0·2	79·1	+0·3	8·4	86·2	3rd & 7th,	72·1	9th	14·1
Malabar	Cochin	10	29·892	−·006	29·830	29·933	1st	29·833	19th	·100	77·0	83·9	+0·7	73·8	−0·1	78·8	+0·3	10·1	88·2	3rd	71·7	12th	16·5
	Calicut	27	29·858	−·011	29·815	29·905	1st	29·800	19th	·105	76·8	82·6	+0·5	73·7	+0·1	78·2	+0·3	8·9	87·8	2nd	71·6	12th & 13th,	16·2
	Mangalore	65	29·793	−·014	29·796	29·842	1st	29·718	19th	·124	77·6	83·9	+1·2	74·5	+0·4	79·2	+0·8	9·4	87·8	2nd & 3rd,	70·9	9th & 13th,	16·9
	Trivandrum	198	29·707	?	29·837	29·740	1st	29·671	19th	·069	76·6	81·4	?	75·1	?	78·3	?	6·3	83·5	13th	73·0	27th	10·5
11. South India		...	...	−·003	...	...	...	...	...	...	...	90·3	+1·5	74·9	+0·6	82·7	+1·1	15·4	...	...	...	...	24·7
Madras, South.	Pamban	37	29·797	?	29·761	29·831	30th & 31st,	29·747	4th	·084	83·1	88·7	?	79·6	?	84·2	?	9·1	93·3	4th	75·2	17th	18·1
	Tinnevelly	168	29·677	?	29·773	29·708	13th	29·640	4th & 5th	·068	85·0	96·4	?	79·6	?	88·0	?	16·8	100·3	6th	76·9	10th & 30th.	23·4
	Madura	447	29·372	−·009	29·752	29·408	13th	29·321	19th	·087	82·9	97·3	0	76·6*	+0·8	87·0	+0·4	20·7	102·0	6th	67·1	4th	34·9

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

I—*continued.*

in India, Burma, etc., in July 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st June to 31st July.	Variation from normal of period, 1st June to 31st July 1894.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11·50	12·37	+1·01	...	...	...	..	9. Deccan.	
...	...	...	...	...	...	9	21	1	26·6*	27·9	− 5	92	·668	9·1	22	22·91	−0·91	20·49	15·37	+5·12	31·51	21·96	+ 9·55	3·00	Belgaum .	Bombay, Deccan.
...	...	...	...	...	...	14	11	1	20·8	12·3	+ 69	72	·672	7·8	6	9·45	−3·45	2·73	4·29	−1·56	3·50	9·30	− 5·80	1·25	Sholapur.†	
2	...	...	...	...	...	12	17	...	13·2	16·9	− 22	84	·711	8·5	15	12·73	+2·27	13·25	6·87	+6·38	14·92	11·60	+ 3·32	1·93	Poona.	
...	...	...	...	...	...	8	22	1	12·8	?	?	81	·702	9·0	3	6·40	−3·40	1·42	?	?	3·76	?	?	0·62	Bijapur.	
...	...	...	...	...	...	14	16	1	19·2	11·8	+ 63	85	·795	7·4	9	8·55	+0·45	6·19	4·75	+1·44	8·83	9·47	− 0·64	1·63	Malegaon .	Khandesh.
1	...	...	...	1	1	10	15	3	23·9	?	?	87	·741	8·2	8	?	?	4·26	?	?	6·33	?	?	1·21	Ahmednagar.	
...	...	...	...	...	...	8	22	1	10·2	8·4	+ 21	81	·770	5·8	12	13·18	−1·18	14·60	10·81	+ 3·79	19·37	16·28	+ 3·09	7·42	Akola .	Berar.
...	...	...	...	...	...	8	21	2	9·9	7·6	+ 30	87	·775	8·1	14	12·73	+1·27	17·56	10·62	+ 6·94	25·00	17·46	+ 7·54	6·62	Amraoti.	
...	...	...	...	...	1	5	19	6	10·3	8·4	+ 23	86	·786	8·0	11	11·91	−0·91	14·33	8·82	+ 5·51	23·16	14·87	+ 8·29	3·98	Khandwa .	Central Provinces, West.
1	...	1	1	...	4	17	7	...	4·3	4·5	− 4	92	·853	9·5	20	17·27	+2·73	16·31	17·59	− 1·28	28·62	25·79	+ 2·83	3·00	Hoshangabad.	
...	1	...	...	...	3	7	12	8	8·6	7·9	+ 9	85	·823	9·2	18	17·64	+0·36	13·56	14·73	− 1·17	21·51	23·47	− 1·96	3·32	Nagpur.	
1	...	...	...	...	...	18	12	...	5·7	6·2	− 8	79	·777	8·5	18	?	?	17·28	18·88	− 1·60	26·55	26·73	− 0·18	4·15	Chanda .	Central Provinces, Central.
...	...	...	...	...	...	...	...	...	?	6·2	?	95	·802	7·4	20	18·64	+1·36	12·54	18·15	− 5·61	18·18	28·72	−10·24	3·00	Seoni.	
2	1	2	1	3	2	8	11	1	5·0	5·0	0	89	·812	9·0	16	19·27	−3·27	19·65	20·80	− 1·15	32·46	29·90	+ 2·56	3·15	Jubbulpore.	
2	...	2	1	2	1	13	9	1	6·3	5·1	+ 23	93	·803	8·3	23	15·64	+7·36	18·23	15·10	+ 3·13	43·39	22·50	+20·89	3·80	Saugor.	
1	1	1	...	...	3	14	11	...	9·3	11·6	− 20	88	·831	9·1	18	16·36	+1·64	21·98	16·47	+ 5·51	29·94	25·39	+ 4·55	3·54	Raipur .	Central Provinces, East.
1	3	3	2	3	2	3	13	1	9·5	9·4	+ 1	84	·841	8·3	14	15·73	−1·73	15·12	15·17	− 0·05	26·27	22·71	+ 4·56	8·25	Sutna.	
...	1	1	1	3	5	16	...	4	6·4	3·6	+ 78	91	·880	9·1	26	?	?	30·88	22·16	+ 8·72	39·32	33·29	+ 6·03	5·25	Sambalpur.	
1	...	...	...	...	2	17	10	1	9·0	?	?	77	·712	8·4	11	?	?	5·16	7·37	− 2·21	7·78	13·71	− 5·93	1·06	Aurangabad	Hyderabad, North.
...	...	...	...	...	...	5	22	4	14·4	?	?	83	·770	7·5	15	?	?	10·41	10·64	− 0·23	18·77	15·24	+ 3·53	3·73	Indur.	
...	...	...	...	...	...	10	17	4	15·5	?	?	86	·707	6·2	8	?	?	3·98	9·29	− 5·31	6·34	15·59	− 9·25	1·82	Bidar.	
...	...	..	...	...	...	13	16	2	17·6	?	?	82	·740	8·5	8	?	?	3·86	4·89	− 1·03	5·75	9·71	− 3·96	1·33	Gulbarga.	Hyderabad, South.
...	...	...	...	...	3	10	15	3	14·0	?	?	71	·672	4·7	6	?	?	4·98	?	?	7·43	?	?	1·93	Raichur.	
...	...	...	...	..	...	...	24	7	11·2	?	?	76	·683	8·2	7	?	?	2·70	6·90	− 4·20	4·05	11·75	− 7·70	0·60	Hyderabad (Deccan).	
...	...	...	...	...	...	11	18	2	11·7	13·3	− 12	73	·649	7·5	6	?	?	3·08	?	?	4·72	?	?	0·82	Secunderabad.	
5	1	...	...	...	1	4	17	3	8·6	?	?	74	·794	5·1	10	?	?	4·48	?	?	11·17	?	?	1·10	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26·46	28·67	−3·26	...	...	...	...	10. West Coast.	
...	...	...	..	...	...	13	17	1	17·5	19·1	− 8	87	·907	8·4	22	21·91	+0·09	26·13	27·17	− 1·04	42·88	46·54	− 3·66	4·21	Bombay.	Konkan.
...	1	...	...	1	1	16	4	6	8·8	13·7	− 36	90	·907	8·3	27	26·36	+0·64	31·82	35·51	− 3·69	68·58	66·77	+ 1·81	3·66	Ratnagiri.‡	
...	1	...	...	...	...	...	14	16	13·6	?	?	89	·906	7·3	25	?	?	34·87	?	?	56·32	?	?	5·17	Mormugao.	
...	...	...	...	...	...	19	11	1	13·4	?	?	89	·885	9·2	25	?	?	33·03	33·70	− 0·67	53·81	63·79	− 9·98	6·10	Goa.	
2	1	...	...	...	...	16	10	2	4·5	?	?	86	·841	7·6	29	27·45	+1·55	32·23	38·97	− 6·74	54·29	76·21	−21·92	5·26	Karwar.	
12	3	6	2	...	...	1	4	3	4·8	2·0	+140	89	·829	8·2	26	23·91	+2·09	17·57	21·51	− 3·94	41·87	49·92	− 8·05	1·75	Cochin .	Malabar.
16	1	2	3	2	1	1	2	3	8·3	?	?	91	·830	8·0	29	26·63	+2·37	25·87	29·35	− 3·48	65·21	62·57	+ 2·64	3·27	Calicut.	
6	...	1	7	2	...	1	7	7	2·8	3·2	−13	91	·856	6·8	25	28·10	−3·10	31·71	36·09	− 4·38	62·74	71·12	− 8·38	3·58	Mangalore.	
3	10	5	1	..	...	...	5	7	7·5	?	?	88	·810	7·8	9	?	?	4·91	7·08	− 2·17	12·59	20·03	− 7·44	1·04	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4·28	6·23	−1·30	...	...	...	...	11. South India.	
...	...	...	1	1	6	14	8	1	14·1	?	?	76	·859	3·5	1	1·30	−0·30	0·12	0·71	− 0·59	0·12	0·75	− 0·63	0·12	Pamban .	Madras, South.
...	2	...	...	...	...	5	14	10	9·8	?	?	57	·695	7·1	0	0·90	−0·90	0	?	?	0	?	?	0	Tinnevelly.	
2	3	1	...	...	...	3	4	18	1·9	4·6	− 59	65	·739	4·0	3	1·45	+1·55	3·42	2·28	+ 1·14	4·62	3·78	+ 0·84	2·74	Madura .	

* Mean of 23 days. † Mean of 26 days' observations. ‡ Mean of 29 days' observations.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Madras, South Central.	Salem	940	28·910	−·007	29·787	28·949	3 days	28·840	19th	·109	78·8	94·4	+1·9	73·8	+1·4	84·1	+1·7	20·6	100·4	6th	71·0	11th	29·4
	Coimbatore	1,348	28·491	−·002	29·783	28·535	1st	28·431	19th	·104	76·3	88·4	+0·4	70·2	−0·5	79·3	−0·1	18·2	93·9	2nd	68·1	10th	25·8
Coorg	Mercara	3,781	26·170	−·001	?	26·224	1st	26·102	19th	·122	64·2	69·7	+1·0	62·7	+0·5	66·2	+0·8	7·0	72·5	2nd	60·2	13th	12·3
Mysore	Chitaldroog	2,405	27·418	?	29·750	27·479	31st	27·305	19th	·174	72·4	82·0	?	68·2	?	75·1	?	13·8	88·1	7th	65·9	13th	22·2
	Bangalore	3,019	26·855	−·011	29·777	26·907	1st	26·770	19th	·137	69·8	82·7	+0·9	65·6	0	74·2	+0·5	17·1	87·8	2nd	64·3	25th & 30th.	23·5
	Hassan	3,091	26·806	?	29·796	26·859	1st	26·723	19th	·136	70·1	77·2	?	64·0	?	70·6	?	13·2	81·8	7th	62·2	3rd	19·6
	Mysore	2,518	27·364	?	29·810	27·396	24th & 30th.	27·292	19th	·104	71·6	84·0	?	66·6	?	75·3	?	17·4	87·9	7th & 29th.	64·5	3 days	23·4
Madras, East Coast, South.	Negapatam	31	29·784	−·003	29·743	29·823	31st	29·728	19th	·095	84·9	98·2	+3·3	79·0	+1·2	88·7	+2·3	19·2	103·2	2nd	76·7	13th	26·5
	Cuddalore	12	29·786	?	29·726	29·845	24th	29·711	19th	·134	83·2	95·2	?	76·9	?	86·1	?	18·3	102·3	4th	71·7	16th	30·6
	Trichinopoly	255	29·563	−·010	29·749	29·597	13th	29·502	19th	·095	83·3	99·4	+2·4	78·2	+0·9	88·8	+1·7	21·2	102·6	6th	74·9	6th	27·7
	Madras	22	29·758	−·011	29·710	29·808	31st	29·667	19th	·141	85·3	97·5	+2·4	79·5	+1·1	88·5	+1·8	18·0	104·5	2nd	73·5	17th	31·0
Madras, East Coast, Central.	Nellore	71	29·684	?	29·688	29·741	31st	29·583	19th	·158	85·2	97·9	?	80·4	?	89·2	?	17·5	105·3	6th	74·1	17th	31·2
	Masulipatam	15	29·703	0	29·652	29·760	31st	29·578	19th	·182	83·5	94·4	+2·3	78·6	+0·6	86·5	+1·5	15·8	101·7	1st&2nd	72·1	10th	29·6
Madras, Central	Cuddapah	433	29·352	?	29·724	29·412	31st	29·243	19th	·169	82·9	95·0	+1·1	77·4	−0·1	86·2	+0·5	17·6	103·2	6th	71·7	17th	31·5
	Kurnool	923	28·844	0	29·707	28·901	31st	28·718	20th	·183	79·2	91·8	+1·3	74·2	0	83·0	+0·7	17·6	99·2	1st	69·4	17th	29·8
	Bellary	1,475	28·316	+·008	29·729	28·378	1st	28·195	20th	·183	78·6	90·9	0	74·2	−0·1	82·6	−0·1	16·7	97·4	7th	71·5	12th	25·9
Madras, East Coast, North.	Rajahmundry	112	29·579	−·001	29·628	29·639	31st	29·463	19th	·176	82·3	90·8	+2·0	78·3	+1·0	84·6	+1·5	12·5	97·0	2nd & 6th	72·1	8th	24·9
	Cocanada	26	29·655	+·003	29·616	29·723	31st	29·546	19th	·177	82·4	90·9	+2·7	79·1	+1·1	85·0	+1·9	11·8	97·2	2nd & 7th.	74·6	10th	22·6
	Vizagapatam	31	29·624	−.002	29·593	29·698	31st	29·508	18th	·190	84·6	88·1	+0·6	83·4	+1·0	85·8	+0·8	4·7	90·8	5 days	81·0	13th	9·8
	Gopalpur	21	29·599	?	29·560	29·692	13th	29·451	18th	·241	80·5	86·3	?	77·7	?	82·0	?	8·6	90·7	11th	75·6	4 days	15·1
12. Hill Stations																							
Baluchistan	Kachh Fort	?	23·761a	?	?	23·890	13th	23·660	29th	·230	77·5	87·5	?	62·5	?	75·0	?	25·0	96·0	6th	56·0	3rd	40·0
	Pishin	?	?	?	?	?	...	?	...	?	?	99·0	?	57·5	?	78·2	?	41·5	107·1	6th	50·9	3rd & 20th	56·2
	Kumedon Karez Tirwah.	?	23·352†	?	?	23·500	13th	23·270	29th	·230	83·8‡	98·0†	?	61·0†	?	79·4‖	?	37·0	108·0	28th	52·0	1st & 3rd	56·0
	Quetta	5,502	24·430	+·005	?	24·565	13th	24·327	29th	·238	75·1	89·1	−3·5	64·4	−0·9	76·8	−2·2	24·7	97·1	6th	57·4	20th	39·7
	Shirino	?							Observations suspended.														
	Kalat	?			Not recorded.						71·3	88·5	?	52·7	?	70·6	?	35·8	97·3	2nd	44·6	20th	52·7
	Chaman	4,311	25·422	?	?	25·595	13th	25·329	29th	·266	86·0	99·2	?	74·6	?	86·9	?	24·6	106·5	6th	68·1	3 days	38·4
Northern India	Srinagar	5,204	24·661	?	?	24·844	13th	24·510	29th	·334	72·3	82·0	?	68·0¶	?	75·0¶	?	14·0	86·8	7th & 24th.	63·2	18th	23·6
	Gilghit	?	25·045	?	?	25·240	20th	24·800	29th	·440	84·1	100·5	?	77·0	?	88·7	?	23·5	109·8	5th	67·6	31st	42·2
	Cherat	?	25·493	?	?	25·680	13th	25·344	29th	·336	73·5	83·1	?	69·7	?	76·4	?	13·4	93·9	5th	62·2	17th	31·7
	Murree	6,344	23·702	+·006	?	23·864	13th	23·570	29th	·294	65·3	73·3	−3·9	62·2	−0·5	67·8	−2·2	11·1	80·1	23rd	58·9	2nd & 18th.	21·2
	Poo	?			Not recorded						?	78·5	?	59·5	?	69·0	?	19·0	83·2	7th & 26th	56·3	30th	26·9
	Simla	7,224	22·981	+·009	?	23·127	13th	22·870	29th	·257	62·3	67·1	−4·7	59·7	−0·9	63·4	−2·8	7·4	71·0	14th	57·1	17th	13·9
	Chakrata	6,977	23·203	+·019	?	23·334	13th	23·088	29th	·246	62·9	68·9	−1·0	60·3	+0·2	64·6	−0·4	8·6	74·8	11th	57·8	12th & 17th.	17·0
	Mussooree	6,705	23·428	?	?	23·589	12th	23·311	29th	·278	63·6	69·1	−0·8	60·6	+0·2	64·9	−0·3	8·5	72·8	25th	57·4	17th	15·4
	Ranikhet	6,069	23·966	+·027	?	24·122	12th	23·860	3rd	·262	65·9	73·2	−0·5	62·7	−0·1	68·0	−0·3	10·5	76·5	9th	60·5	12th & 17th.	16·0
	Yatung	?	20·522b	?	?	20·840	9th	20·300	21st	·540	?	63·5	?	47·9	?	55·7	?	15·6	67·0	4th	41·0	10th	26·0
	Gnatong	?			Not recorded.						50·3	56·3	?	43·7	?	50·0	?	12·6	59·9	26th	39·6	9th	20·3
	Darjeeling	7,421	22·883	+·006	?	23·033	12th	22·803	2nd	·230	61·5	65·9	−0·9	57·9	+0·5	61·9	−0·2	8·0	69·6	3 days	56·2	2 days	13·4
	Gantak	?	24·347	?	?	24·508	12th	24·248	2nd	·260	65·2	73·5	?	61·1	?	67·3	?	12·4	79·4	15th	57·9	17th	21·5
Central India	Mount Abu	3,945	25·787	−·035	?	25·924	12th	25·576	22nd	·348	66·7	70·6	−4·1	64·8	−0·7	67·7	−2·4	5·8	77·1	20th	61·9	15th & 30th.	15·2
	Pachmarhi	3,528	26·224	+·004	?	26·328	14th	25·973	20th	·355	68·4	74·6	−0·8	67·0	−0·7	70·8	−0·8	7·6	79·7	18th	64·2	14th	15·5
South India	Wellington	6,200	24·182	−·014	?	24·235	1st	24·123	19th	·112	64·8	71·8	+1·1	56·5	−1·7	64·2	−0·3	15·3	76·7	16th	48·2	29th	28·5

¶ Mean of 26 days. † Mean of 30 days. ‡ Mean of 27 days. ‖ Mean of 29 days.

(a) Uncorrected. (b) Uncorrected and unreduced to 32°.

I —*continued.*

in India, Burma, etc., in July 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	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.
5	...	...	1	1	11	11	2	...	4·7	4·7	0	75	·748	5·1	7	6·91	+0·09	2·.7	3·96	− 1·59	2·90	7·64	− 4·74	0·76	Salem	Madras, South Central.
...	...	...	...	...	6	22	3	...	6·5	8·2	−21	79	·717	5·1	4	4·36	−0·36	0·94	1·23	− 0·29	1·44	2·66	− 1·22	0·29	Coimbatore.	
...	1	...	...	...	...	2	18	10	11·7	11·3	+ 4	96	·587	9·9	30	29·30	+0·70	27·13	42·50	−15·37	48·76	68·21	−19·45	4·67	Mercara	Coorg.
...	...	...	...	...		14	16	1	14·1	?	?	80	·645	9·0	9	?	?	2·97	?	?	3·69	?	?	0·95	Chitaldroog.	
...	...	...	...	...		16	15	...	9·1	8·6	+ 6	84	·616	7·0	6	9·00	−3·00	3·47	4·59	− 1·12	6·87	8·04	− 1·17	1·22	Bangalore	Mysore.
...	...	...	...	...	...	3	25	3	5·2	?	?	84	·615	4·1	9	?	?	2·81	?	?	5·55	?	?	0·64	Hassan.	
...	...	...	...	...	...	14	17	...	16·9	?	?	87	·622	6·2	3	?	?	0·69	?	?	2·57	?	?	0·12	Mysore.	
1	...	...	...	...	...	8	19	3	9·5	7·1	+34	62	·751	5·8	0	3·64	−3·64	0·08	2·27	− 2·19	0·51	4·01	− 3·50	0·08	Negapatam	Madras, East Coast, South.
...	1	...	...	..	2	8	10	10	1·8	?	?	83	·946	5·2	7	5·6	+1·4	5·85	?	?	6·18	?	?	1·67	Cuddalore.	
...	...	...	...	...	...	8	19	4	9·6	9·9	− 3	61	·693	6·6	1	2·18	−1·18	0·40	1·50	− 1·10	3·51	3·12	+ 0·39	0·40	Trichinopoly.	
...	1	...	...	...	...	14	14	2	8·5	8·3	+ 2	64	·771	6·5	4	7·00	−3·00	1·89	3·87	− 1·98	3·43	5·98	− 2·55	0·66	Madras.	
2	...	...	...	...	2	4	11	12	10·0	?	?	67	·800	7·5	4	4·7	−0·7	2·23	?	?	3·50	?	?	1·47	Nellore	Madras, East Coast, Central.
...	...	...	...	...	...	2	13	16	7·2	9·7	−26	73	·833	7·3	7	9·36	−2·36	4·78	5·69	− 0·91	6·92	11·21	− 4·29	1·34	Masulipatam.	
1	...	...	...	...	...	16	9	5	?	?	?	67	·751	7·5	9	6·00	+ 3·00	7·87	3·90	+ 3·97	10·07	8·01	+ 2·06	4·09	Cuddapah.	Madras, Central.
6	...	...	...	...	...	5	13	7	?	?	?	70	·703	7·7	8	9·83	− 1·83	7·11	4·91	+ 2·20	8·75	8·86	− 0·11	2·53	Kurnool.	
1	...	...	...	...	...	6	24	...	12·2	11·6	+ 5	64	·629	8·4	2	3·91	− 1·91	1·09	1·98	− 0·89	1·90	3·83	− 1·93	0·72	Bellary.	
1	...	...	...	...	...	3	13	14	?	?	?	75	·834	7·7	9	10·10	− 1·10	4·44	7·22	− 2·78	12·13	13·01	− 0·88	1·40	Rajahmundry	Madras, East Coast, North.
...	...	...	...	...	...	16	13	2	8·6	?	?	78	·868	6·7	7	10·00	− 3·00	3·25	6·67	− 3·42	10·66	12·04	− 1·38	0·90	Cocanada.	
...	...	...	...	...	1	4	25	1	1·3	4·0	−68	72	·856	8·5	6	10·18	− 4·18	2·31	5·09	− 2·78	5·87	8·58	− 2·71	0·90	Vizagapatam.	
3	3	...	...	...	1	17	4	3	13·2	11·3	+17	87	·895	4·8	17	11·33	+ 5·67	13·13	7·59	+ 5·54	16·82	13·68	+ 3·14	3·30	Gopalpur.	
...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12. Hill Stations.	
5	1	...	5	1	2	1	15	1	?	?	?	50	·451	3·1	5	?	?	2·18	?	?	2·20	?	?	0·74	Kachh Fort	Baluchistan.
					Not	recorded.			?	?	?	?	?	?	1	?	?	0·59	?	?	0·59	?	?	0·43	Pishin.	
...	3	4	1	4	5	1	5	...	?	?	?	?	?	1·7‡	?	?	?	?	?	?	?	?	?	...	Kumedon Karez Tirwah (c)	
28	...	...	...	1	2	...	...	...	1·3	5·1	−75	66	·582	2·9	4	1·36	+ 2·64	1·09	1·21	− 0·12	1·09	1·33	− 0·24	0·54	Quetta.	
													Observations suspended.												Shirino.	
...	13	...	3	...	14	1	...	...	?	?	?	?	?	?	6	?	?	2·64	?	?	2·65	?	?	0·75	Kalat.	
8	3	...	1	1	4	11	3	...	7·6	?	?	35	·426	2·5	2	?	?	1·02	?	?	1·02	?	?	0·70	Chaman.	
3	3	3	1	9	7	2	1	2	5·9	?	?	87†	·699†	6·1	10	?	?	3·67	?	?	6·43	?	?	0·74	Srinagar.	Northern India.
		Not	recorded						?	?	?	46	·518	3·9	2	?	?	1·17	?	?	1·20	?	?	0·94	Gilghit.	
10	...	...	1	15	2	1	...	2	10·7	?	?	88	·723	6·9	8	?	?	7·30	?	?	8·35	?	?	2·93	Cherat.	
2	...	1	...	13	...	5	...	10	6·6	5·7	+16	92	·581	7·4	20	12·00	+ 8·00	25·75	11·25	+14·50	32·99	14·12	+18·87	5·53	Murree.	
26	...	2	...	...	1	2	...	...	?	?	?	?	?	5·6	8	?	?	2·45	?	?	3·04	?	?	0·56	Poo.	
11	2	5	1	1	5	5	1	...	3·9	1·6	+144	92	·517	8·8	23	19·27	+ 3·73	29·84	17·55	+12·29	45·37	24·34	+21·03	6·01	Simla.	
7	...	1	2	1	...	4	11	5	5·6	4·6	+22	95	·545	8·8	24	?	?	23·00	19·42	+ 3·58	44·97	26·33	+18·64	3·46	Chakrata.	
...	7	6	8	...	1	3	4	2	?	8·7	?	97	·570	8·3	26	21·91	+ 4·09	32·18	29·49	+ 2·69	49·48	38·19	+11·29	3·39	Mussooree.	
19	...	2	1	1	...	6	2	...	2·3	2·1	+10	92	·584	9·5	23	19·18	+3·82	22·99	13·28	+ 9·71	31·60	19·22	+12·38	4·60	Ranikhet.	
		Not	recorded.						?	?	?	?	?	?	22	?	?	7·65	?	?	7·65*	?	?	0·79	Yatung.	
...	1	...	2	15	1	2	1	9	4·5	?	?	89	·326	5·4	29	?	?	21·10	?	?	43·58	?	?	3·85	Gnatong.	
2	...	8	14	...	2	2	2	1	3·3	2·6	+ 27	95§	·520§	8·6	22	24·43	− 2·43	23·33	35·16	−11·83	45·96	59·74	−13·78	3·56	Darjeeling.	
...	2	...	1	...	4	9	12	3	1·4	?	?	95	·591	5·9	27	?	?	17·10	?	?	46·17	?	?	2·42	Gantak.	
...	2	1	...	3	3	18	2	2	15·2	10·5	+ 45	99	·648	9·5	27	16·73	+10·27	49·20	24·42	+ 4·78	60·36	30·55	+29·81	6·19	Mount Abu	Central India.
...	2	...	...	...	2	8	17	2	15·1	9·5	+ 59	93	·651	9·4	27	23·09	+ 3·91	20·57	26·69	− 6·12	35·22	36·49	− 1·27	3·09	Pachmarhi.	
10	...	3	...	...	2	6	9	1	4·3	5·8	− 26	68	·416	6·5	8	6·75	+ 1·25	2·01	3·75	− 1·74	5·40	7·48	− 2·08	0·46	Wellington.	South India.

* Rainfall from 1st July 1894. § Mean of 29 days. † Mean of 26 days. ‡ Mean of 27 days. (c) Wind observations for 23 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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. Extra India ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ceylon	Trincomalee	75	29·814	?	29·816	29·862	30th	29·759	11th & 17th	·103	83·9	94·4	?	77·6	?	86·0	?	16·8	98·0	2nd & 3rd	73·0	7th	25·0
	Colombo	40	29·876	−·004	29·842	29·910	30th	29·830	4th & 5th	·080	81·7	84·3	?	77·2	?	80·8	?	7·1	86·5	2nd	73·5	9th & 20th	13·0
	Galle	48	29·868	?	29·842	29·913	16th	29·782	3rd	·131	80·7	82·7	?	78·0	?	80·4	?	4·7	84·0	1st & 27th	75·0	19th	9·0
Persia	Meshed	?					Not	record	ed.		80·4	87·4	?	64·7	?	76·1	?	22·7	94·5	3rd	56·8	21st	37·7
	Teheran†	?	25·809	?	?	26·005	23rd & 24th	25·500	11th	·505	82·5	97·3	?	71·5	?	84·4	?	25·8	105·4	4th	65·1	19th	40·3
	Ispahan	?	?	?	?	?	...	?	...	?	80·2†	96·1	?	64·7	?	80·4	?	31·4	102·0	3rd	58·3	25th	43·8
	Bushire†	14	29·495	?	29·464	29·628	14th	29·370	9th	·258	90·5	95·1	?	85·4	?	90·2	?	9·7	104·5	26th	81·4	31st	23·1
	Jask*	?	29·555	?	?	29·691	4th	29·449	6th	·242	92·5	97·5	?	84·1	?	90·8	?	13·4	105·2	23rd	76·2	13th	29·0
Arabia	Muscat	?	29·507	?	?	29·672	15th	29·400	9th	·272	88·8	91·7	?	86·9	?	89·3	?	4·8	101·7	31st	77·3	12th	24·4
	Baghdad	?	29·140	?	?	29·254	28th	29·020	21st	·234	86·3	105·3	?	78·5	?	91·9	?	26·8	113·2	30th	71·5	1st	41·7
	Aden	94	29·622	−·004	29·647	29·699	18th	29·559	10th	·140	85·3	93·9	+ 1·4	81·7	+0·4	87·8	+0·9	12·2	100·8	8th	74·9	21st	25·9
	Perim	?	29·467	?	?	29·572	16th	29·392	9th	·180	87·4	94·8	?	83·6	?	89·2	?	11·2	99·4	24th	76·7	21st	22·7
Afghanistan	Kabul	?					Not	record	ed.		76·9	90·8	?	64·1	?	77·5	?	26·7	98·4	6th	55·4	21st	43·0
Central Asia	Kashgar*	?	25·446	?	?	25·580	1	25·280	7th	·300	81·5	95·1	?	72·9	?	84·0	?	23·2	104·2	7th & 14th.	62·2	22nd	42·0
Arabian Sea Islands.	Minicoy	10	29·808	?	29·843	29·953	1st	29·865	19th	·088	80·5	85·5	?	79·4‡	?	82·5	?	6·1	88·3	31st	75·4	8th	12·9
Africa	Zanzibar	73	30·082	?	30·083	30·168	20th	30·011	27th	·157	73·5	80·1	?	71·9	?	76·0	?	8·2	83·5	4th	68·5	18th	15·0

* Mean of 29 days. † Mean of 30 days. ‡ Mean of 25 days.

I—*concluded.*

in India, Burma, etc., in July 1894—concluded.

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.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st June to 31st July.	Variation from normal of period, 1st June to 31st July.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13. Extra India.	
...	...	...	...	...	...	31	...	...	8·9	?	?	72	·836	4·3	3	?	?	2·76	1·93	+0·78	4·81	3·73	+ 1·08	1·61	Trincomalee	CEYLON.
...	...	...	...	...	...	19	10	2	10·0	9·0	+ 1	77	·833	5·7	4	?	?	1·71	5·55	−3·84	13·37	12·79	+ 0·58	0·49	Colombo.	
3	...	...	...	...	...	...	1	27	8·6	?	?	90	·917	3·2	3	?	?	1·17	5·46	−4·29	12·39	13·48	− 1·09	0·42	Galle.	
18	...	...	...	2	1	2	7	1	?	?	?	?	?	0·1	0	?	?	0	?	?	0·09	?	?	0	Meshed .	PERSIA.
23	2	...	...	..	1	3	1	...	2·3*	?	?	48‡	·5001	1·8	3	?	?	0·65	?	?	0·68	?	?	0·35	Teheran†	
...	5	6	...	1	1	1	6	11	4·3	?	?	41†	·427†	0·6	1	?	?	0·41	?	?	0·41	?	?	0·41	Ispahan.	
...	1	4	4	2	1	4	...	14	7·4*	9·2	− 20	62	·891	?	0	?	?	0	0	0	0	0	0	0	Bushire.†	
...	...	1	1	8	8	7	2	1	17·5¶	?	?	66*	·996*	?	0	?	?	0·12	?	?	0·12	?	?	0·06	Jask.‖	
...	1	6	11	9	...	...	2	7	?	?	?	72	·937	2·7	2	?	?	0·32	?	?	0·32	?	?	0·22	Muscat .	ARABIA.
7	13	6	1	...	...	...	1	3	?	?	?	48	·601	0	0	?	?	0	?	?	0·01	?	?	0	Baghdad.	
5	...	1	11	1	2	11	...	...	12·2	9·4	+30	73	·875	2·2	0	?	?	0·07	0	+ 0·07	0·07	0·01	+ 0·06	0·07	Aden.	
3	3	2	2	...	...	8	10	3	15·6	?	?	67	·862	3·5	1	?	?	0·14	?	?	0·14	?	?	0·12	Perim.	
...	...	...	1	...	...	6	5	4	?	?	?	?	?	?	2	?	?	0·66	?	?	0·76	?	?	0·51	Kabul .	AFGHANISTAN.
8	4	...	1	..	2	2	4	2	4·8	?	?	47h	·497h	3·2	1	?	?	0·11	?	?	1·11	?	?	0·11	Kashgar (a)	CENTRAL ASIA.
...	...	...	..	...	...	5	23	1	21·0*	?	?	84	·868	6·5	10	?	?	4·12	?	?	9·62	?	?	0·99	Minicoy .	ARABIAN SEA ISLANDS.
...	...	...	...	...	16	14	1	...	10·9	?	?	87	·714	5·6	7	?	?	3·38	?	?	3·78	?	?	1·11	Zanzibar .	AFRICA.

‖ Wind observations for 28 days.
(a) Ditto „ 23 „
* Mean of 29 days.
(h) Do. „ 25 „
† Mean of 30 days.
¶ Mean of 27 days.
‡ Mean of 26 days.

Table

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

Meteorological Province.	Station.	Height of the barometer 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.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·765	29·689	·076	29·734	−·012	29·726	85·4	77·8	7·6	89·5	73·8	15·7	83·0	83·0	80·5	+0·3	75·3	79·2	78·8	77·8
	Rangoon	...	·769	·686	·083	·731	−·003	·712	85·3	75·4	9·9	89·9	73·5	16·4	80·4	79·6	78·2	+0·1	73·9	78·3	77·5	76·6
	Diamond Island	...	·757	·682	·075	·727	−·011	·703	82·8	77·1	5·7	86·6	72·6	14·0	80·6	80·6	78·9	+0·6	74·9	77·0	77·2	76·4
	Cocos Island	111	·736	·667	·069	·709	?	·752	85·2	76·8	8·4	90·9	72·3	18·6	82·4	82·2	79·7	?	74·4	79·3	78·6	77·4
	Akyab	...	·706	·620	·086	·666	−·006	·629	83·6	76·5	7·1	87·4	75·1	12·3	80·8	81·2	79·1	−0·9	74·6	78·9	79·3	77·6
Assam.	Silchar	...	·566	·450	·116	·518	−·008	·571	91·6	76·9	14·7	97·4	74·5	22·9	85·8	87·3	82·9	+0·7	75·6	80·0	80·2	78·6
	Sibsagar	...	·353	·210	·143	·284	−·002	·567	90·0	77·5	12·5	96·2	74·0	22·2	83·9	89·3	83·0	−0·2	76·4	80·0	82·1	79·5
	Dhubri	...	·532	·421	·111	·485	+·016	·552	87·7	78·4	9·3	93·2	75·8	17·4	83·1	84·4	81·6	0	76·6	79·4	80·0	78·7
Bengal and Orissa.	Chittagong	...	·603	·510	·093	·564	+·005	·598	85·1	76·3	8·8	89·7	73·8	15·9	81·7	82·0	79·5	−0·5	75·2	78·5	78·9	77·5
	Narayanganj	...	·613	·513	·100	·572	+·007	·539	87·2	78·3	8·9	92·1	74·2	17·9	82·5	84·6	82·3	−0·9	76·0	79·5	80·0	78·5
	Calcutta (Alipore)	...	·575	·491	·084	·539	+·001	·506	86·9	78·0	8·9	90·8	75·7	15·1	83·2	83·1	82·1	−0·9	76·5	78·8	79·1	78·1
	Ditto (Chowringhee).	...	·577	?	?	?	?	?	88·5	77·3	10·7	92·0	75·3	16·7	84·5	?	?	?	76·9	80·4	?	?
	Saugor Island	...	·572	·490	·082	·537	0	·506	86·0	79·1	6·9	89·9	74·0	15·9	83·5	83·3	81·4	−1·4	76·8	80·1	80·1	79·0
	Burdwan	...	·500	·400	·100	·450	−·005	·501	88·0	78·4	9·6	93·9	75·2	18·7	83·3	85·2	82·0	−1·9	77·1	78·8	79·5	78·5
	Berhampore	...	·541	·441	·100	·498	+·010	·512	88·4	78·3	10·1	94·9	75·4	19·5	83·2	85·8	82·2	−1·2	76·4	79·7	80·3	78·8
	False Point	...	·597	·518	·079	·563	−·004	·525	86·0	77·6	8·2	90·0	73·1	16·9	83·3	83·2	80·6	−1·2	76·1	79·0	79·1	78·0
	Cuttack	...	·526	·439	·087	·492	−·008	·514	87·2	77·9	9·3	93·0	74·2	18·8	84·5	84·9	81·5	−1·0	75·5	77·6	78·0	77·1
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·600	27·515	·085	27·566	−·003	·487	83·2	73·2	10·0	88·7	69·3	19·4	78·5	79·9	77·1	−1·1	69·8	74·3	74·7	72·9
	Patna	...	29·409	29·307	·102	29·364	+·009	·497	90·0	79·8	10·2	95·7	74·6	21·1	85·9	87·8	83·7	−0·5	77·1	80·3	80·4	79·3
	Darbhanga	...	·438	·328	·110	·389	+·009	·506	91·1	78·9	12·2	97·0	75·4	21·6	86·7	89·7	83·9	0	77·7	80·0	80·3	79·3
	Allahabad	...	·270	·172	·098	·223	+·014	·482	90·0	78·6	11·4	96·0	75·3	20·7	85·2	87·8	83·5	−1·0	76·4	79·8	80·5	78·9
	Ghazipur	220	·352	·251	·101	·306	+·010	·477	90·1?	85·8?	4·3?	96·0?	79·5?	16·5?	86·1	87·0	86·9?	+3·1?	80·0	80·4	80·2	80·2
	Lucknow	...	·217	·112	·105	·168	+·013	·489	91·4	78·7	12·7	98·3	75·1	23·2	85·5	88·1	83·9	−1·0	76·3	79·6	80·1	78·7
Upper Sub-Himalayas.	Dehra Dun	...	27·422	27·345	·077	27·377	+·027	·533	83·0	72·8	10·2	90·2	70·3	19·9	77·9	78·6	76·5	−2·6	71·5	74·4	75·2	73·7
	Roorkee	...	28·703	28·609	·094	28·653	+·031	·489	90·1	77·3	12·8	97·3	74·6	22·7	83·6	87·8	82·8	−1·8	75·3	78·2	79·7	77·7
	Meerut	...	·844	·748	·096	·793	+·026	·481	90·9	78·1	12·8	96·7	74·6	22·1	84·6	88·4	83·9	−1·5	77·2	78·3	79·8	78·4
	Lahore	...	·849	·776	·073	·812	+·039	·464	93·2	80·5	12·7	98·3	75·1	23·2	87·5	90·5	85·8	−2·2	78·0	81·0	81·7	80·2
	Ludhiana	...	·755	·678	·077	·715	+·031	·478	90·8	79·0	11·8	97·6	74·6	23·0	85·4	87·5	83·7	−3·6	77·5	80·1	81·1	79·6
Indus Valley and N.-W. Rajputana.	Peshawar	...	·448	·354	·094	·400	+·041	·454	98·0	79·9	18·1	107·5	74·1	33·4	89·2	96·0	88·0	−1·6	75·8	79·6	79·6	78·3
	Mooltan	...	29·113	29·025	·088	29·068	+·046	·442	101·5	84·0	17·5	106·4	76·1	30·3	92·6	99·0	91·7	−0·2	77·4	81·0	82·5	80·3
	Jacobabad	...	·315	·212	·103	·263	+·030	·399	104·9	84·7	20·2	112·0	77·1	34·9	96·2	101·7	93·6	−0·9	77·6	82·0	82·7	80·8
	Kurrachee	...	·509	·438	·071	·479	−·004	·478	87·2	78·1	9·1	93·9	72·9	21·0	84·1	84·4	81·4	−2·5	75·3	79·5	79·6	78·1
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·174	28·092	·082	28·134	+·016	·495	88·9	76·0	12·9	95·5	72·4	23·1	82·7	86·5	81·3	−2·5	74·2	76·7	78·2	76·4
	Ajmere	...	·001	27·914	·087	27·953	+·002	·497	86·1	75·8	10·3	92·4	72·0	20·4	80·7	84·9	79·6	−2·3	73·3	76·4	78·7	76·1
	Deesa	...	29·132	29·046	·086	29·091	−·006	·508	86·3	75·5	10·8	94·6	72·0	22·6	80·5	84·1	80·3	−3·5	74·5	76·6	77·8	76·3
	Nowgong	...	28·827	28·741	·086	28·785	+·009	·487	87·7	?	?	92·0	?	?	82·0	84·9	?	?	75·2	77·0	78·1	76·8
	Agra	...	29·020	·921	·099	·969	+·011	·471	91·9	79·3	12·6	97·5	74·8	22·7	86·6	88·9	85·5	−1·4	76·7	79·5	79·6	78·6
Deccan.	Belgaum	...	27·278	27·217	·061	27·248	−·003	·690	74·9	66·4	8·5	77·4	64·8	12·6	71·8	71·4	69·5	−0·6	65·6	69·4	69·0	68·0
	Sholapur	...	28·150	28·051	·099	28·110	−·011	·617	88·8	71·4	17·4	94·8	69·5	25·3	81·7	85·0	78·2	+0·3	68·9	71·8	72·4	71·1
	Poona	...	27·901	27·838	·063	27·872	−·002	·640	81·9	70·3	11·6	87·9	68·4	19·5	77·1	77·5	74·8	−0·2	68·4	71·7	71·4	70·5
	Akola	...	28·736	28·627	·109	28·682	−·009	·550	87·7	73·6	14·1	96·4	69·9	26·5	82·2	86·1	80·2	0	72·0	75·0	75·8	74·2
	Buldana	2,132	27·560	27·477	·083	27·519	−·010	·558	83·7	70·0	13·7	90·3	66·7	23·6	77·5	81·1	76·2	0	68·1	71·5	72·4	70·7

II.

at 89 Stations in India, Burma, etc., for the month of July 1894.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from											Wind Steadiness.		Wind Velocity.					
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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·847	·948	·930	·909	+·013	89	84	82	85	0	9·1	8·8	9·0	+1·8	1	...	...	...	...	5	33	23	...	S 59° W	S 44° W	87	89	286	254	...	...	Port Blair	Burma Coast and Bay Islands.
·820	·945	·914	·894	+·009	93	91	90	91	+ 1	9·5	9·4	9·5	+0·6	...	4	2	...	...	10	21	16	7	S 67° W	S 31° W	62	73	120	131	...	...	Rangoon	
·839	·885	·892	·872	—·005	90	85	85	87	− 1	9·7	9·8	9·8	+2·0	1	...	...	1	3	6	41	6	4	S 45° W	S 41° W	79	80	298*	210	...	...	Diamond Island	
·821	·961	·930	·902	?	89	87	84	87	?	7·5	7·9	7·7	?	...	...	...	...	...	4	48	4	...	S 45° W	?	96	?	?	?	0·37	0·13	Cocos Island.	
·833	·964	·976	·924	+·011	91	92	92	91	+ 2	9·2	8·9	9·1	+0·5	...	...	5	7	5	37	3	5	...	S 10° E	S 4° E	64	68	114	96	...	...	Akyab	
·871	·951	·936	·919	—·013	94	77	73	82	− 3	8·1	7·8	8·0	+0·1	34	1	3	19	2	1	1	5	5	N 51° E	N 6° W	10	3	71*	72	...	...	Silchar	Assam.
·897	·975	1·003	·958	+·009	95	84	73	84	0	8·0	5·8	6·9	−1·6	24	...	18	1	2	...	17	...	...	S 80° E	S 18° W	5	15	56*	65	...	...	Sibsagar	
·893	·956	·963	·938	—·007	92	84	82	86	0	6·9	7·9	7·4	+0·5	13	1	12	16	7	...	10	3	...	S 82° E	S 70° E	32	22	110	94	...	...	Dhubri	
·856	·931	·918	·912	0	95	86	87	90	+ 3	8·3	8·6	8·5	+0·9	...	1	2	3	22	20	7	3	4	S 15° E	S 40° E	60	63	162*	172	...	...	Chittagong	Bengal and Orissa.
·869	·962	·966	·933	−·047	90	87	82	85	− 1	8·3	7·7	8·0	+0·1	...	1	3	6	26	20	5	...	1	S 30° E	S 19° E	71	80	217	173	...	...	Naryanganj	
·897	·929	·941	·922	—·051	93	82	83	86	− 1	8·3	8·8	8·6	+0·4	2	2	2	8	12	9	17	9	1	S 8° W	S 11° E	42	65	132	123	...	...	Calcutta (Alipore).	
·913	·987	?	?	?	96	83	?	?	?	?	?	?	?				Not	rec	orde	d.			?	?	?	?	?	?	13·23	2·22	,, (Chowringhee).	
·891	·985	·984	·954	—·048	90	86	86	87	+ 1	9·3	9·5	9·4	+1·4	...	1	5	5	7	18	21	4	1	S 11° W	S 24° W	53	59	397	341	...	...	Saugor Island.	
·927	·929	·933	·930	—·025	94	81	77	84	+ 1	8·5	8·6	8·6	+0·3	1	6	7	9	11	7	11	6	4	S 30° E	S 26° E	16	47	96*	100	...	...	Burdwan	
·885	·957	·960	·937	−·025	91	85	78	85	− 2	7·8	8·1	8·0	−0·8	7	1	1	20	12	10	7	2	2	S 46° E	S 41° E	47	51	101	121	...	...	Berhampore	
·879	·934	·941	·918	−·019	92	82	83	86	+ 1	8·7	9·0	8·9	+0·8	1	2	4	3	...	11	21	19	1	S 55° W	S 59° W	56	64	315*	268	...	...	False Point	
·852	·858	·868	·859	−·041	89	73	72	78	− 2	7·4	8·2	7·8	+0·1	5	1	8	1	3	9	24	9	2	S 43° W	S 44° W	43	52	96	79	...	...	Cuttack	
·687	·798	·797	·761	−·057	84	82	78	81	− 4	9·5	9·2	9·4	+0·3	1	4	7	12	7	10	5	10	6	S 38° E	S 16° E	11	19	260	203	...	...	Hazaribagh	
·898	·959	·942	·933	−·027	88	77	72	79	− 3	7·3	6·5	6·9	−1·2	8	...	9	24	10	3	2	5	1	S 81° E	N 65° E	50	41	151	91	...	...	Patna	Gangetic Plain and Chota Nagpur.
·935	·934	·909	·926	−·043	95	74	66	78	− 5	6·3	5·4	5·9	−0·4	3	...	5	24	24	3	1	1	1	S 69° E	S 82° E	72	58	139	123	...	...	Darbhanga	
·884	·946	·944	·925	−·033	90	78	72	80	− 2	8·0	7·7	7·9	+0·1	2	3	10	12	3	2	9	12	9	N 31° W	N 84° E	11	7	163	103	...	...	Allahabad	
·951?	·963	·944	·952?	+·024?	77?	77	74	76?	− 3?	6·3	6·8	6·6	−0·4	19	...	...	19	8	1	13	2	...	S 41° E	S 63° E	34	22	61	65	12·11	3·65	Ghazipur	
·877	·934	·923	·911	−·011	89	77	70	79	+ 2	7·8	8·0	7·9	+0·2	13	9	5	31	2	2	...	...	...	N 76° E	N 85° E	60	18	?	94	...	...	Lucknow	
·757	·810	·836	·801	?	93	85	86	88	?	8·7	8·4	8·6	+0·8	16	1	3	4	10	9	9	9	1	S 9° W	S 37° W	30	10	18	29	...	...	Dehra Dun	
·851	·895	·908	·885	+·011	91	78	70	80	+ 3	7·9	6·8	7·4	+0·9	34	1	...	7	10	2	7	...	1	S 34° E	S 39° E	24	33	70	71	...	...	Roorkee	Upper Sub-Himalayas.
·925	·884	·904	·904	+·015	96	75	68	80	+ 6	7·5	6·9	7·2	+0·4	29	1	4	11	8	1	3	4	1	S 72° E	S 86° E	22	23	38	57	...	...	Meerut	
·927	·973	·957	·956	+·091	89	75	68	77	+16	6·9	5·3	6·1	+1·7	10	2	5	11	17	10	1	6	...	S 49° E	S 84° E	42	34	63	80	...	...	Lahore	
·927	·959	·978	·955	+·083	93	79	76	83	+13	8·5	8·0	8·3	+2·2	27	...	14	...	11	4	5	1	...	S 68° E	S 46° E	23	25	38	49	...	...	Ludhiana	
·842	·888	·808	·846	+·116	83	65	49	66	+13	4·7	5·1	4·9	+2·2	11	10	18	7	5	...	3	1	7	N 38° E	N 50° E	45	50	89*	111	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·853	·904	·888	·882	+·005	74	59	48	60	+ 1	3·7	4·4	4·1	+1·9	10	...	12	4	12	...	18	...	6	S 24° E	S 25° W	14	33	39*	75	...	...	Mooltan	
·851	·902	·863	·872	+·058	72	53	43	56	+ 4	3·6	4·1	3·9	+1·6	23	1	3	16	16	1	1	...	1	S 72° E	S 45° E	47	56	166*	125	...	...	Jacobabad	
·844	·949	·949	·914	−·004	88	81	81	83	+ 5	7·9	7·5	7·7	+0·5	...	...	1	...	...	...	22	39	...	S 75° W	S 62° W	90	83	347	436	...	...	Kurrachee	
·827	·844	·862	·844	−·007	92	75	68	78	+ 2	8·4	8·2	8·3	+0·8	1	2	7	7	6	3	18	15	3	S 51° W	N 58° W	28	27	85	141	...	...	Jeypore	E. Rajputana, C. India and Gujarat.
·793	·856	·904	·851	+·063	89	82	76	82	+11	7·1	6·4	6·8	+0·6	3	2	6	2	4	3	12	27	3	S 78° W	S 62° W	47	64	172	173	...	...	Ajmere	
·843	·865	·872	·860	+·032	95	83	75	85	+11	9·0	8·6	8·8	+0·7	...	3	1	...	1	5	31	16	5	S 63° W	S 40° W	72	75	337	347	...	...	Deesa	
?	·863	·873	?	?	?	79	73	?	?	8·3	8·8	8·6	0	...	5	6	7	1	5	7	30	1	S 88° W	S 78° W	37	40	139*	99	...	...	Nowgong	
·887	·915	·889	·897	−·018	88	73	66	76	+ 1	7·4	7·4	7·4	+0·8	...	...	9	...	22	...	17	1	13	S 1° W	N 63° E	19	13	130	119	...	...	Agra	
·622	·691	·680	·664	−·005	96	89	88	91	+ 2	9·6	9·7	9·7	+0·7	...	1	...	1	2	2	24	25	5	S 70° W	S 70° W	77	90	618	669	...	...	Belgaum	Deccan.
·677	·657	·641	·659	0	88	61	55	68	0	8·9	9·1	9·0	+0·7	...	1	...	...	...	...	24	21	5	S 74° W	S 80° W	85	81	502*	300	...	...	Sholapur	
·672	·711	·694	·692	−·005	91	77	74	81	+ 1	8·9	8·7	8·8	−0·2	1	...	...	...	...	...	20	41	...	S 76° W	S 79° W	92	85	312	400	...	...	Poona	
·764	·772	·753	·763	−·003	92	71	62	75	− 1	6·8	7·2	7·0	−1·6	...	1	...	...	..	...	13	31	17	N 86° W	N 74° W	84	77	243	200	...	...	Akola	
·665	·698	·691	·685	−·030	91	74	66	77	− 3	9·0	7·4	8·2	+0·1	...	2	...	...	...	1	22	13	24	N 87° W	N 82° W	74	73	194*	221	8·73	5·01	Buldana	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89 Stations

Meteorological Province.	Station.	Height of barometer 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.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Deccan—*continued.*	Khandwa	...	28·595	28·506	·089	28·550	−·010	29·540	84·5	74·2	10·3	89·4	68·6	20·8	79·3	82·8	78·4	−1·3	71·8	74·6	75·6	74·0
	Hoshangabad	...	·600	·511	·089	·556	−·022	·524	84·6	74·1	10·5	89·3	70·7	18·6	79·8	81·6	78·2	−1·3	73·1	76·6	77·7	75·8
	Nagpur	...	·620	·519	·101	·570	+·009	·537	86·3	74·4	11·9	91·8	72·3	19·5	80·8	82·9	79·5	−0·5	72·2	76·2	77·2	75·2
	Jubbulpore	...	·290	·188	·102	·239	+·006	·506	83·7	73·5	10·2	89·4	70·2	19·2	78·6	80·9	77·5	−1·6	72·1	74·8	76·0	74·3
	Saugor	...	27·857	27·775	·082	27·816	+·015	·506	83·0	73·8	9·2	88·9	71·6	17·3	77·7	80·9	77·5	−0·1	71·5	74·8	76·0	74·1
	Raipur	...	28·658	28·555	·103	28·607	+·008	·504	85·0	74·2	10·8	92·2	70·3	21·9	80·0	82·3	78·9	−0·7	72·4	75·8	76·4	74·8
	Sutna	...	·545	·449	·096	·498	+·012	·484	85·6	76·7	8·9	89·7	70·1	19·6	81·5	83·5	80·4	−1·0	73·4	76·8	77·2	75·8
	Hyderabad (Deccan.)	...	·051	27·941	·110	·001	?	·604	88·2	72·9	15·3	95·4	70·3	25·1	80·6	86·7	80·1	?	69·2	71·9	73·4	71·5
West Coast.	Bombay	...	29·704	29·640	·064	29·670	−·006	·647	84·2	77·0	7·2	87·5	74·1	13·4	81·5	81·7	80·5	−0·4	74·4	77·9	77·9	76·7
	Ratnagiri	...	·679	·615	·064	·645	+·001	·692	83·7	75·8	7·9	85·8	73·2	12·6	80·5	81·2	79·6	0	73·8	78·0	78·2	76·7
	Karwar	...	·799	·736	·063	·766	+·002	·741	83·3	74·7	8·6	86·2	72·0	14·2	80·6	80·8	78·9	+0·4	73·2	76·8	76·8	75·6
	Cochin	...	·906	·846	·060	·874	+·003	·812	83·9	73·8	10·1	88·4	71·8	16·6	79·4	80·9	78·7	+0·2	72·7	75·6	76·5	74·9
South India.	Salem	...	28·909	28·785	·124	28·859	−·023	·719	94·5	73·7	20·8	100·3	70·8	29·5	84·6	90·3	82·3	+1·7	71·1	74·6	75·5	73·7
	Mysore	...	27·371	27·290	·081	27·331	?	·741	84·0	66·4	17·6	87·9	64·3	23·6	77·3	78·5	73·8	?	65·4	68·8	69·6	67·9
	Mercara	...	26·185	26·123	·062	26·166	+·002	·820	69·7	62·7	7·0	72·5	60·2	12·3	66·2	65·9	65·3	+0·4	61·7	64·8	64·6	63·7
	Bangalore (Fort)	...	·859	·776	·083	·829	−·013	·704	82·5	65·6	16·9	87·7	64·4	23·3	75·3	79·3	73·3	+0·6	64·5	68·3	68·8	67·2
	Hassan	...	·812	·748	·064	·791	?	·760	77·1	64·0	13·1	81·8	62·2	19·6	73·5	72·7	69·5	?	60·0	67·4	67·6	65·0
	Chitaldroog	...	27·426	27·350	·076	27·397	?	·704	82·0	68·2	13·8	88·1	65·9	22·2	76·2	78·1	74·2	?	64·4	69·3	69·5	67·8
	Trichinopoly	...	29·567	29·440	·127	29·516	−·014	·696	99·4	78·3	21·1	102·8	75·1	27·7	90·9	95·6	87·1	+1·7	70·9	74·3	75·2	73·5
	Madras	...	·762	·654	·108	·719	−·003	·668	97·3	79·3	18·0	104·2	73·3	30·9	89·7	91·1	86·2	+0·9	?	76·8	78·5	76·9
	Bellary	...	28·323	28·220	·103	28·281	0	·673	90·8	74·2	16·6	97·4	71·5	25·9	83·7	87·2	80·6	0	67·8	70·7	71·1	69·9
	Vizagapatam	...	29·635	29·537	·098	29·592	−·001	·560	88·0	83·3	4·7	90·9	81·2	9·7	86·6	87·4	85·7	+0·6	73·6	78·6	78·9	77·0
	Cocanada	...	·662	·567	·095	·615	?	·576	90·9	79·1	11·8	97·2	74·4	22·8	85·6	89·7	84·7	?	75·7	77·9	79·3	77·6
Hill Station, Baluchistan.	Quetta	...	24·435	24·358	·077	24·396	+·013	?	89·2	64·4	24·8	97·3	57·5	39·8	81·1	84·7	75·5	−2·7	59·2	66·8	66·7	64·2
Hill Stations, Northern India.	Leh	11,503	19·650	19·541	·109	19·605	+·009	?	78·6	52·4	26·2	85·4	47·2	38·2	66·6	72·5	62·8	+1·4	47·5	54·8	56·7	53·0
	Srinagar	...	24·675	24·597	·078	24·634	?	?	82·1	68·2	13·9	86·8	63·2	23·6	75·5	81·1	74·9	?	66·2	71·1	73·8	70·4
	Murree	...	23·718	23·685	·033	23·699	+·006	?	73·2	62·2	11·0	80·2	58·8	21·4	68·2	70·0	67·1	−1·9	60·8	65·9	67·5	64·8
	Chamba	3,005	26·655	26·590	·065	26·626	+·021	?	83·0	71·3	11·7	87·5	67·7	19·8	78·4	80·1	76·0	−2·1	70·2	73·6	74·5	72·8
	Kailang	10,087	20·695	20·617	·078	20·660	+·009	?	75·2	53·4	21·8	80·2	49·6	30·6	66·1	71·3	62·9	+1·4	51·7	59·2	59·4	56·8
	Simla (Ridge)	...	22·994	22·959	·035	22·975	+·009	?	67·1	59·7	7·4	71·0	57·1	13·9	64·0	64·4	62·9	−2·1	58·4	62·4	63·3	61·4
	Simla (Chapslee)	?	?	?	?	?	?	?	69·3	60·3	9·0	74·9	57·3	17·6	64·9	?	?	?	58·5	62·9	?	?
	Chakrata	...	23·215	23·162	·053	23·186	+·022	?	68·7	60·3	8·4	74·6	57·2	17·4	65·4	65·6	63·9	−0·6	59·6	63·8	64·4	62·6
	Ranikhet	...	·975	·910	·065	·935	+·017	?	73·1	62·7	10·4	76·7	60·4	16·3	68·1	69·3	67·1	−1·0	61·9	65·3	66·6	64·6
	Katmandu	4,388	25·451	25·380	·071	25·418	+·026	?	83·5	68·3	15·2	87·0	65·3	21·7	77·6	77·1	74·4	−1·6	66·6	71·3	71·6	69·8
	Darjeeling	...	22·895	22·829	·066	22·862	+·001	?	65·8	57·9	7·9	69·7	56·1	13·6	63·3	63·0	61·1	+0·1	57·0	61·9	62·0	60·3
	Demagiri	?	?	?	?	?	?	?	86·3	76·1	10·2	91·1	71·5	19·6	83·7	82·9	80·4	+0·8	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	84·7	74·2	10·5	89·1	71·5	17·6	81·0	80·7	78·4	?	?	77·1	76·7	?
Hill Stations, Central India.	Mount Abu	...	25·801	25·741	·060	25·773	−·038	?	70·1	64·6	5·5	77·1	61·9	15·2	67·5	68·7	67·0	−2·6	64·4	66·9	67·6	66·3
	Pachmarhi	...	26·239	26·166	·073	26·202	+·010	?	74·4	67·0	7·4	79·8	64·2	15·6	69·8	71·9	70·6	−0·9	65·3	67·8	69·1	67·4
	Chikalda	3,642	·126	·058	·068	·092	−·010	?	73·3	65·2	8·1	78·8	62·2	16·6	68·6	71·0	69·2	−0·6	64·7	67·0	68·7	66·8

II—*continued.*

in India, Burma, etc., for the month of July 1894—continued.

Vapour tension.					Humidity.					Cloud.				Wind direction. Number of winds from										Wind steadiness.		Wind velocity.					
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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·754	·799	·804	·786	+·005	89	80	73	81	+4	8·7	8·2	8·5	+0·6	...	...	...	...	...	1	3	48	10	N. 86° W.	N. 83° W.	92	80	248	210	...	...	Khandwa	Deccan—*continued.*
·805	·878	·902	·862	+·030	96	86	84	88	+5	9·2	9·2	9·2	+1·0	5	1	3	...	...	7	28	16	2	S. 58° W.	S. 76° W.	68	77	105	110	...	...	Hoshangabad	
·765	·849	·866	·827	+·015	90	81	78	83	+3	9·2	9·0	9·1	+0·4	...	4	...	...	...	2	15	27	14	N. 88° W.	N. 88° W.	77	69	213	189	...	...	Nagpur	
·773	·816	·836	·808	−·009	94	84	80	86	+4	8·8	8·9	8·9	+0·2	3	2	4	1	4	8	12	20	8	S. 72° W.	N. 87° W.	47	65	121	117	...	...	Jubbulpore	
·743	·828	·838	·803	+·032	89	88	80	85	+6	8·2	7·6	7·9	+1·5	...	2	6	1	4	1	26	20	2	S. 65° W.	S. 72° W.	56	70	149	123	...	...	Saugor	
·771	·838	·832	·814	−·013	91	82	76	83	+1	9·4	9·2	9·3	+0·9	1	3	2	...	1	3	27	23	2	S. 68° W.	S. 68° W.	72	77	230*	280	...	...	Raipur	
·785	·865	·856	·835	+·001	85	80	75	80	+1	7·9	7·6	7·8	+0·7	5	5	4	4	5	4	5	21	9	N. 81° W.	N. 81° W.	34	45	223*	232	...	...	Sutna	
·669	·675	·658	·668	?	83	65	53	67	?	8·3	7·1	7·7	?	...	1	...	...	...	...	...	50	11	N. 82° W.	?	93	?	272*	?	...	...	Hyderabad (Deccan)	
·818	·910	·906	·878	−·033	88	85	84	86	−1	8·6	8·6	8·6	−0·5	...	...	...	...	...	...	22	36	4	S. 77° W.	S. 75° W.	90	84	420	456	...	...	Bombay	
·811	·926	·928	·889	+·031	91	89	87	89	+4	8·1	8·3	8·2	+0·6	1	1	...	...	...	1	32	21	3	S. 66° W.	S. 55° W.	84	77	310*	313	...	...	Ratnagiri	West Coast.
·801	·871	·869	·847	+·017	93	84	82	86	−1	7·2	8·6	7·9	+0·2	2	1	...	...	...	1	34	20	4	S. 66° W.	S. 74° W.	82	80	102	?	...	...	Karwar	
·790	·836	·854	·827	−·009	95	83	81	86	−2	7·2	8·3	7·8	+0·5	9	4	2	1	...	2	4	28	12	N. 76° W.	S. 88° W.	61	51	117	?	...	...	Cochin	
·728	·724	·686	·713	−·041	88	61	48	66	−5	5·6	8·4	7·0	+0·9	6	...	...	...	2	18	24	8	4	S. 38° W.	S. 59° W.	69	82	108	106	...	....	Salem	
·616	·594	·612	·607	?	95	64	63	74	?	8·0	8·0	8·0	?	...	...	...	...	...	...	17	44	1	S. 79° W.	?	93	?	401*	?	...	...	Mysore	South India.
·540	·600	·594	·578	−·001	95	93	93	93	−3	9·3	9·5	9·4	−0·4	...	2	...	...	...	...	5	41	14	N. 81° W.	N. 79° W.	89	91	281	247	...	...	Mercara	
·595	·609	·583	·596	−·011	94	70	59	74	−3	8·5	6·8	7·7	+1·3	...	...	...	...	...	1	24	36	1	S. 72° W.	S. 71° W.	90	91	233*	206	...	...	Bangalore (Fort)	
·473	·603	·618	·564	?	73	73	77	76	?	8·5	8·7	8·6	?	...	...	...	...	...	..	9	47	6	S. 86° W.	?	93	?	123*	?	...	...	Hassan	
·560	·631	·617	·602	?	81	70	65	72	?	8·8	9·0	8·9	?	...	...	...	...	...	...	20	34	8	S. 81° W.	?	87	?	297*	?	...	...	Chitaldroug	
·669	·626	·598	·628	−·070	68	43	36	49	−9	5·2	6·0	5·6	−2·0	...	...	...	...	...	1	16	41	4	S. 80° W.	N. 87° W.	90	81	230	239	...	...	Trichinopoly	
?	·750	·808	·803	+·019	?	54	56	65	−2	5·9	7·1	6·5	−0·6	...	1	...	5	8	6	15	22	5	S. 55° W.	S. 46° W.	50	65	202	195	...	...	Madras	
·602	·592	·563	·586	−·076	71	51	45	56	−7	8·7	8·6	8·7	+0·5	...	...	...	...	...	...	16	44	2	S. 80° W.	S. 88° W.	92	89	291	281	...	...	Bellary	
·714	·880	·888	·827	−·025	65	69	68	67	−4	8·1	9·2	8·7	+1·8	...	...	...	...	1	4	22	34	1	S. 68° W.	S. 74° W.	85	74	30	94	...	...	Vizagapatam	
·845	·854	·863	·854	?	85	70	62	72	?	6·7	7·5	7·1	?	...	...	...	...	1	2	21	28	10	S. 78° W.	?	81	?	209*	?	...	...	Cocanada	
·456	·509	·469	·478	+·017	75	48	42	55	+7	2·2	3·9	3·1	+1·6	42	1	...	...	2	6	2	4	5	S. 59° W.	W.	14	34	34*	107	...	...	Quetta	Hill Station, Baluchistan.
·288	·328	·323	·313	+·064	73	52	41	55	+11	5·1	6·8	6·0	+0·9	7	...	9	2	1	10	21	8	4	S. 46° W.	S. 80° W.	38	36	40	48	1·91	0·30	Leh	Hill Stations, Northern India.
·625	·719	·755	·700	?	91	81	71	81	?	5·2	3·8	4·5	?	15	9	6	...	6	7	4	4	11	N. 42° W.	?	14	?	107*	?	...	...	Srinagar	
·522	·615	·650	·596	+·061	93	89	89	90	+15	8·9	9·0	9·0	+2·6	2	...	1	3	23	5	11	5	12	S. 4° W.	S. 15° E.	32	14	162*	137	...	...	Murree	
·728	·779	·794	·767	+·029	95	81	78	85	+7	8·5	7·9	8·2	+1·3	17	2	...	...	...	...	...	9	34	N. 52° W.	N. 39° W.	68	35	90*	97	10·32	1·48	Chamba	
·372	·444	·403	·406	+·041	90	69	53	71	+6	6·1	7·4	6·8	+0·4	...	4	1	2	1	13	16	17	8	S. 64° W.	S. 83° W.	55	63	45	44	1·92	0·47	Kailang	
·479	·549	·571	·533	−·012	93	92	94	93	+4	9·5	10·0	9·8	+0·9	22	7	10	2	...	5	11	3	2	N. 50° W.	S. 63° W.	6	25	97	?	...	...	Simla (Ridge)	
·473	·555	?	?	?	90	90	?	?	?	9·7	?	?	?				Not	rec	orde	d.				?	?	?	?	?	28·75	5·00	Simla (Chapslee)	
·506	·577	·593	·559	+·049	96	92	94	94	+2	9·0	9·5	9·3	+0·5	3	...	1	4	2	...	10	28	14	N. 87° W.	S. 71° W.	63	42	149	118	...	...	Chakrata	
·548	·598	·627	·591	+·010	96	86	88	90	+4	9·5	9·1	9·3	+0·6	35	...	...	1	4	1	15	4	2	S. 42° W.	S. 65° W.	29	25	54	51	...	...	Ranikhet	
·633	·694	·711	·679	−·008	91	73	76	80	+1	6·7	8·3	7·5	+1·1	...	2	1	35	4	1	1	6	12	N. 74° E.	S. 75° W.	39	38	27	?	10·63	1·10	Katmandu	
·457	·543	·548	·516	−·003	95	93	95	95	0	9·4	9·4	9·4	+0·6	...	2	16	12	14	6	4	4	2	S. 81° E.	N. 88° E.	40	43	81	63	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	...	...	49	13	...	...	...	...	S. 81° E.	S. 33° E.	95	30	?	?	22·83	3·36	Demagiri	
?	·888	·872	?	?	?	84	84	?	?	8·2	8·8	8·5	+1·6	...	6	...	...	...	27	25	3	1	S. 29° W.	S. 7° W.	71	64	?	?	16·32	3·64	Tura	
·605	·657	·665	·642	+·014	99	97	95	97	+9	9·9	9·5	9·7	+0·9	..	3	5	...	3	7	34	6	4	S. 49° W.	S. 49° W.	58	66	363*	265	...	...	Mount Abu	Hill Stations, Central India.
·608	·659	·680	·649	−·023	89	87	84	87	−3	9·3	8·8	9·1	+0·3	...	2	1	1	...	1	15	37	5	S. 84° W.	N. 80° W.	81	75	277*	227	...	...	Pachmarhi	
·608	·645	·676	·643	−·011	97	92	89	93	+1	9·3	8·7	9·0	−0·1	7	5	...	...	...	4	4	14	28	N. 64° W.	N. 57° W.	66	68	257	230	28·27	5·38	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89 Stations

Meteorological Province.	Station.	Height of the barometer 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.	Temperature of air. Mean minimum.	Temperature of air. Mean daily range.	Temperature of air. Highest maximum.	Temperature of air. Lowest minimum.	Temperature of air. Absolute range.	Temperature of air. Mean 10 hours.	Temperature of air. Mean 16 hours.	Temperature of air. Mean daily.	Temperature of air. Variation from normal.	Temperature, wet-bulb. Mean minimum.	Temperature, wet-bulb. Mean 10 hours.	Temperature, wet-bulb. Mean 16 hours.	Temperature, wet-bulb. Mean daily.
Hill Station, South India.	Wellington	...	24·193	24·133	·060	24·163	—·005	?	71·8	56·5	15·3	76·7	48·2	28·5	67·8	66·5	62·8	—0·4	53·4	59·7	59·7	57·6
Extra India.	Muscat	...	29·506	29·442	·064	29·474	?	?	91·1	86·9	4·2	101·7	77·3	24·4	89·8	89·7	88·7	?	78·0	82·0	83·0	81·0
	Aden	...	·629	·486	·143	1·555	—·003	29·578	93·3	81·7	11·6	99·5	74·9	24·6	88·4	90·9	86·9	+1·0	75·0	79·6	78·1	77·6
	Perim	...	·477	·366	·111	·419	?	?	94·7	83·6	11·1	99·4	76·7	22·7	90·6	92·0	88·5	?	74·4	79·1	79·1	77·5
	Minicoy	...	·922	·847	·075	·892	?	·827	85·5	79·4	6·1	88·5	75·4	13·1	82·5	83·2	82·3	?	74·8	77·7	77·7	76·7
	Zanzibar	...	30·091	30·003	·088	30·047	?	30·046	80·2	71·9	8·3	83·5	68·5	15·0	75·0	79·5	75·9	?	69·6	71·4	72·2	71·0
	Port Victoria (Seychelles)	15	29·994	29·925	·069	29·960	?	29·920	80·4	75·7	4·7	81·4	70·7	10·7	78·5	79·2	77·8	?	70·7	72·7	73·1	72·2

II—*concluded.*

in India, Burma, etc., for the month of July 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from											Wind Steadiness.		Wind Velocity.					
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 of the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·380	·427	·450	·419	—·004	83	63	69	71	—2	7·7	8·9	8·3	+0·6	1	1	1	...	1	6	32	15	5	S. 59° W.	N. 82° W.	74	69	102	127	...	...	Wellington	Hill Station, South India.
·846	·993	1·040	·960	?	67	72	75	71	?	2·5	2·2	2·4	?	...	...	10	28	6	...	...	4	14	N. 64° E.	?	45	?	?	?	...	...	Muscat	Extra India.
·780	·896	·794	·823	+·015	72	67	55	65	—1	1·6	1·0	1·3	—1·0	12	...	...	7	6	18	19	...	...	S. 4° W.	S. 11° E.	58	73	305	250	...	...	Aden	
·738	·842	·821	·800	?	64	59	55	59	?	2·2	2·3	2·3	?	1	1	3	1	...	1	1	21	33	N. 60° W.	?	77	?	374	?	...	...	Perim	
·804	·888	·879	·856	?	80	80	77	79	?	6·3	7·2	6·8	?	...	...	...	...	...	...	8	49	5	S. 88° W.		93	?	502	?	...	...	Minicoy	
·693	·722	·693	·702	?	89	83	69	80	?	3·7	3·2	3·5	?	...	...	...	...	16	31	13	...	1	S. 2° E.	S. 2° W.	82	64	262*	191	...	...	Zanzibar	
·684	·728	·736	·716	?	77	74	74	75	?	6·6	6·9	6·3	?	...	...	2	...	32	21	7	...	...	S. 22° E.		82	?	290	?	2·33	1·01	Port Victoria (Seychelles).	

G. I. C. P. O.—No. 61 Meteor.—28-11-94.—400.

* Corrected.

LITHO. BY J. N. MUNDLE

Explanation.

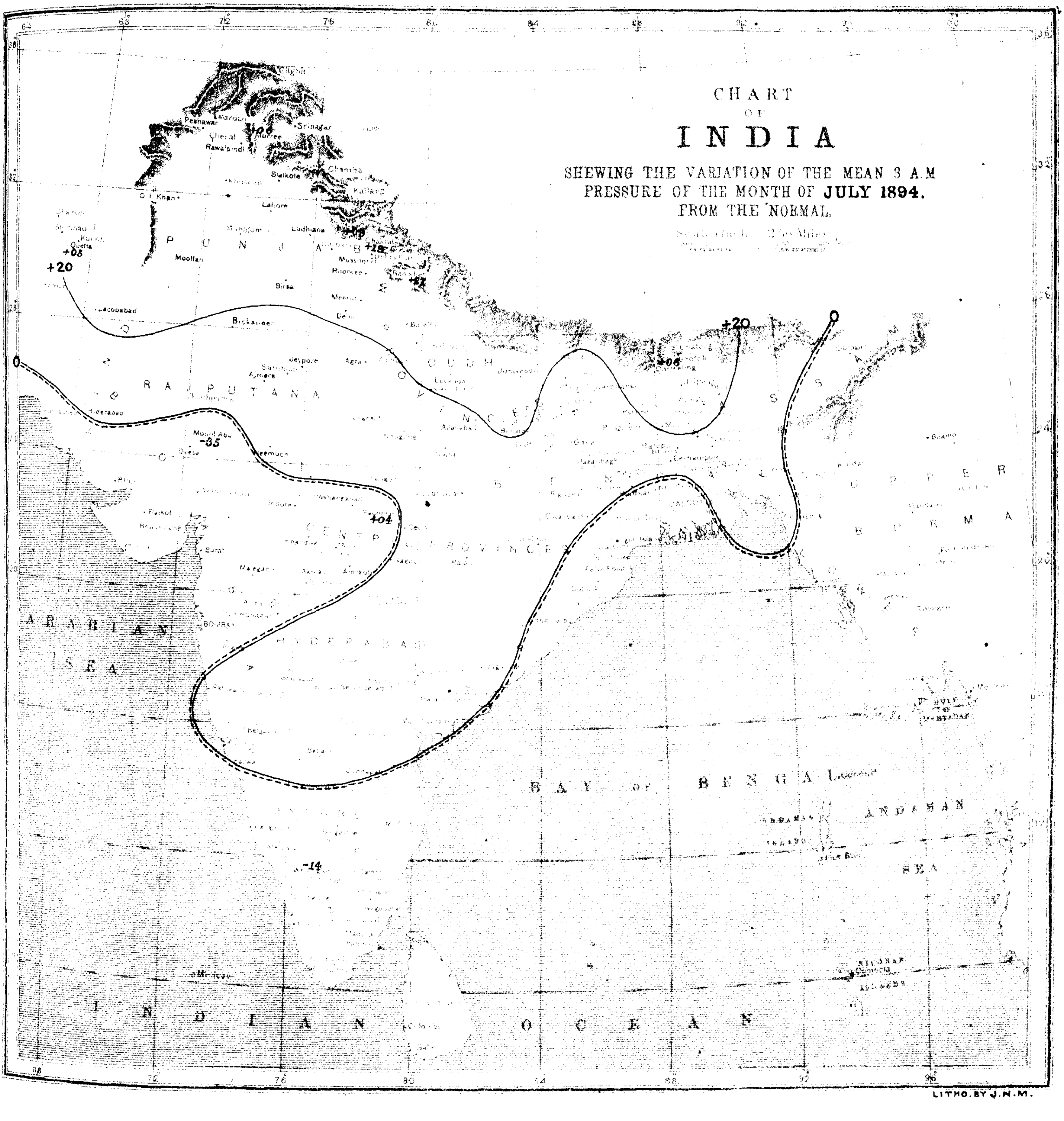
The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison 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 shown 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	" " " " "

Reg. No. 155, Wr., I.—June 94.—5,000.

Zinco., S. P. O., Calcutta.



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.

Reg. No. 15, Wr. I—June 94—5,000. [illegible] Calcutta.

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

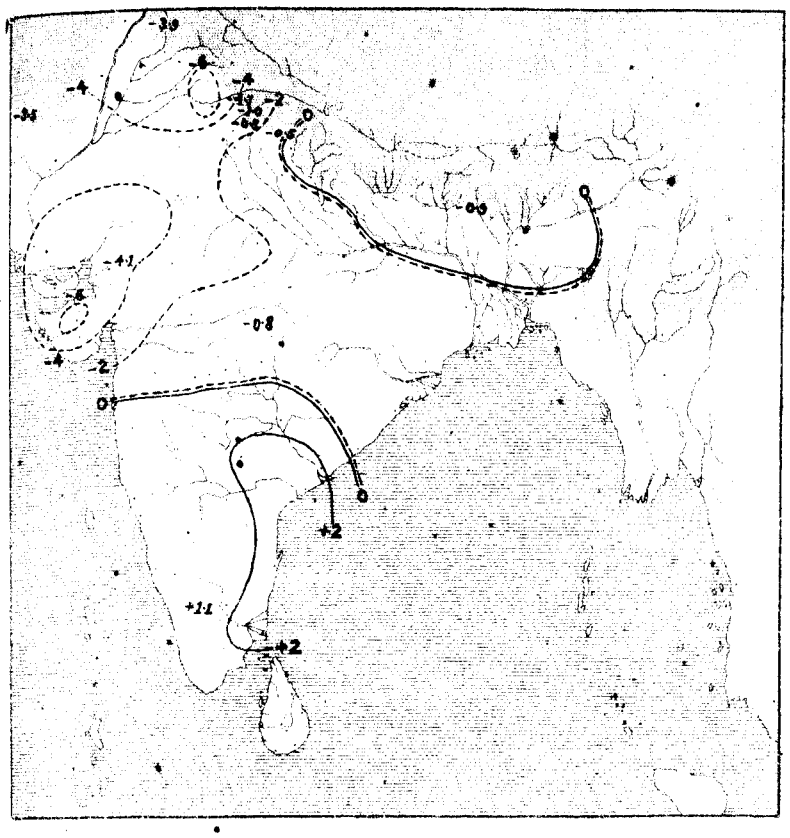
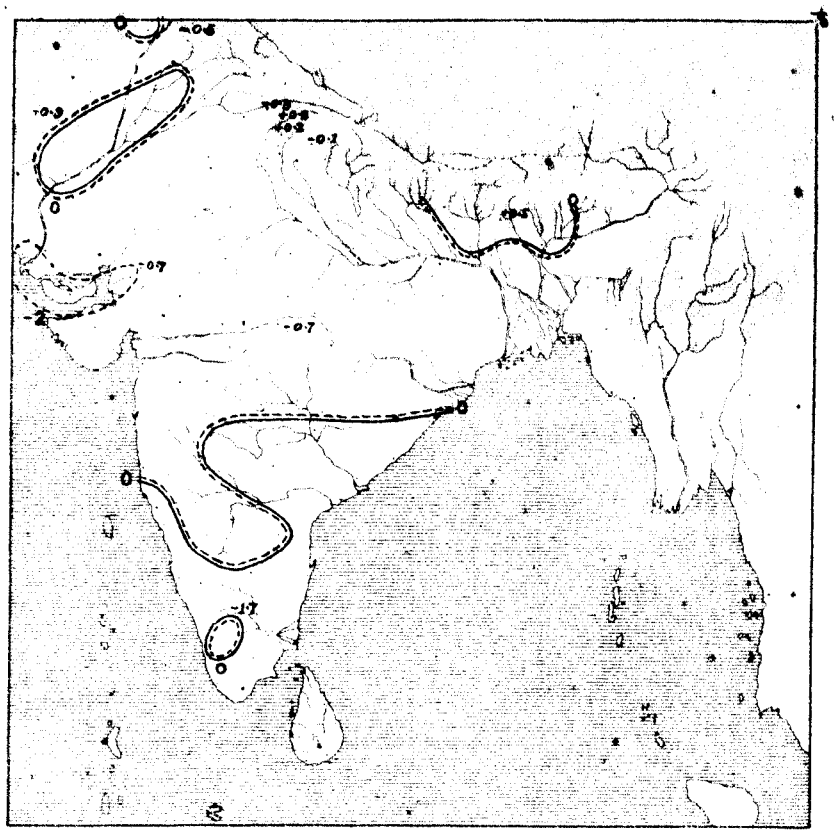


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

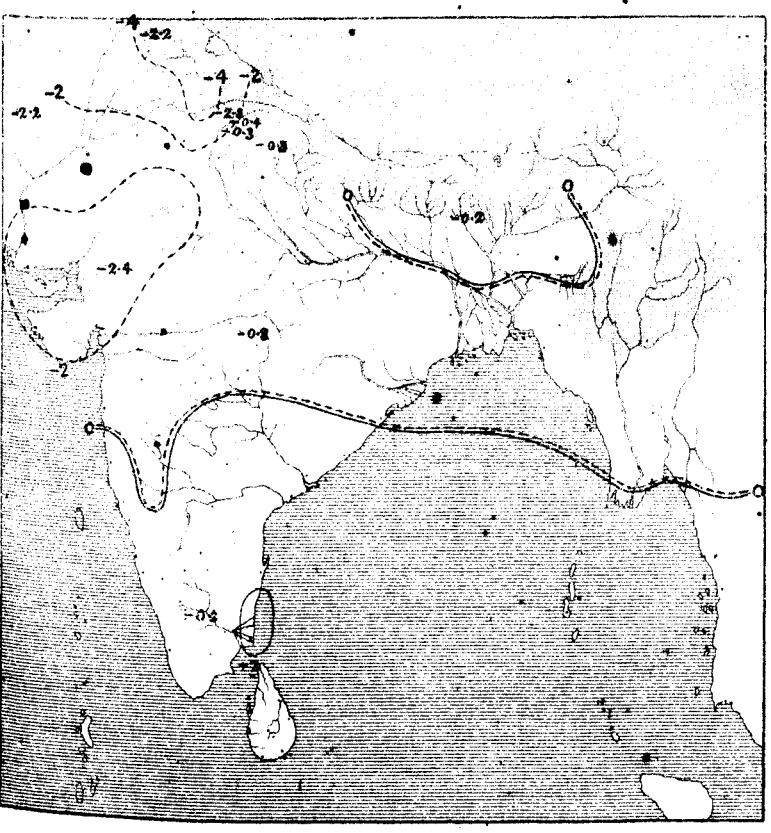
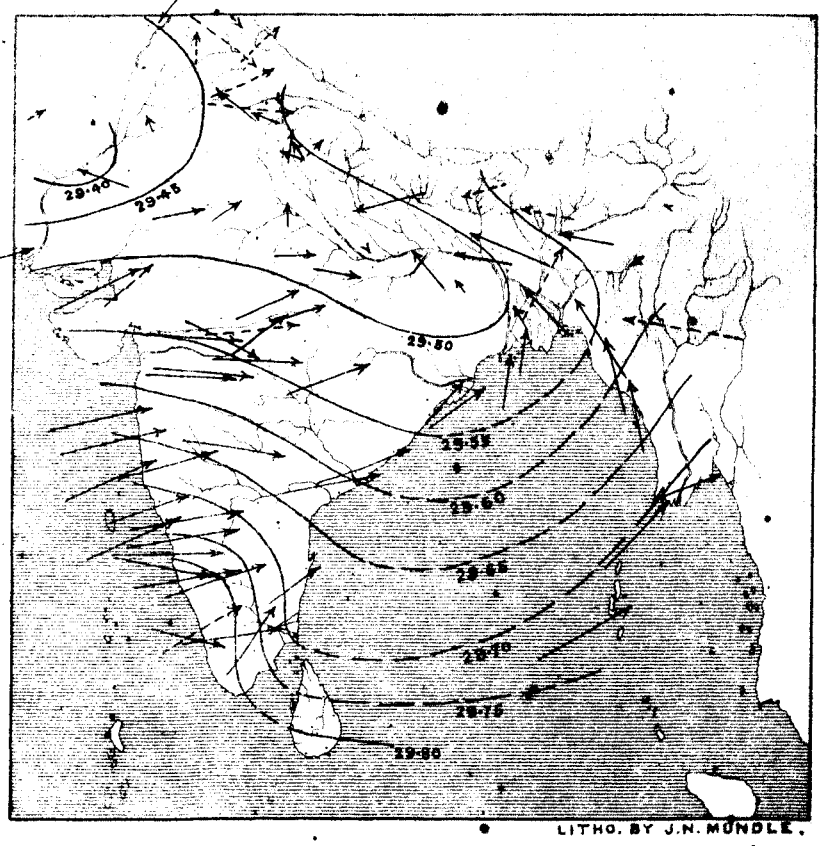


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF JULY 1894.



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 of the resultant; a length of ⅝th of an inch being equal to 100 per cent.

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

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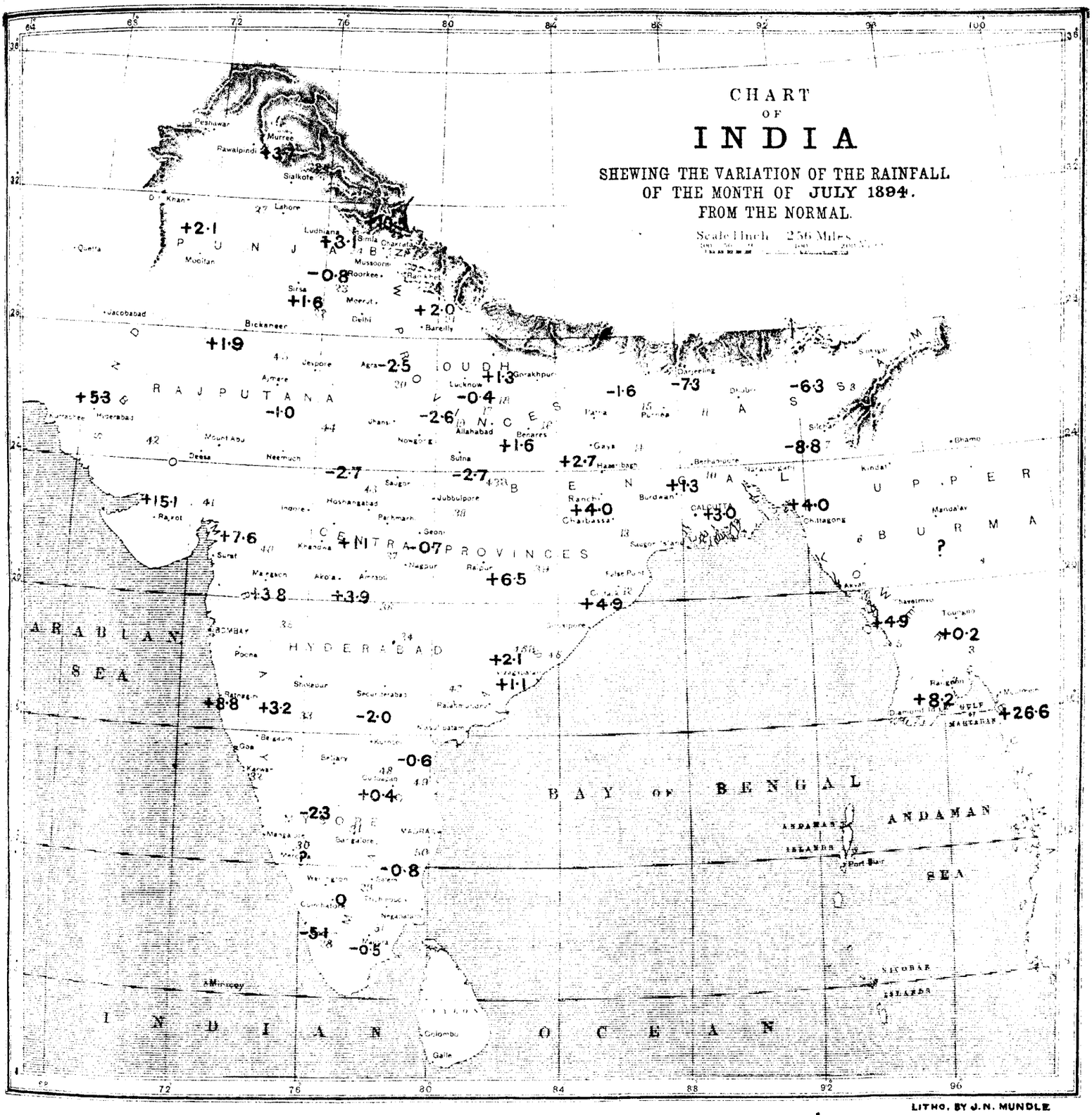
Zinco., S. I. O., Calcutta.



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 51 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 name of the districts 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 figures.

1. Tenasserim
2. Lower Burma
3. Central do.
4. Upper do.
5. Arakan
6. Eastern Bengal
7. Assam (Surma)
8. Do. (Brahmaputra)
9. Deltaic Bengal
10. Central do.
11. North do.
12. Orissa
13. Chota Nagpore
14. Behar (South)
15. Behar (North)
16. North Western Provinces (East)
17. Oudh (South)
18. Do. (North)
19. North Western Provinces (Central)
20. Do. do. (West)
21. Do. do (Submontane)
22. Punjab (South)
23. Do (Central)
24. Do. (Submontane)
25. Do (Hill Districts)
26. Do. (North West)
27. Do. (West)
28. Malabar
29 Madras (South Central)
30. Coorg
31. Mysore
32. Konkan
33. Bombay Deccan
34. Hyderabad (North)
35. Khandeish
36. Berar
37. Central Provinces (West)
38. Do. (Central)
39. Do. (East)
40. Gujarat
41. Kathiawar
42. Sind
43. Central India (East)
43(a). Do. do. (a)
44. Rajputana (East) Central India (West)
45. Rajputana (West))
46. East Coast (North)
46(a). Do. do. (a)
47. Hyderabad (South)
48. Madras (Central)
49. East Coast (Central)
50. East Coast (South)
51. Madras (South)

Reg. No. 146, Wr., I—June 94—5 00.

Litho. S. I. O., Calcutta.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, AUGUST, 1894.

INTRODUCTION.

THIS Review of the weather in India during the month of August 1894 is based on observations taken daily at 8 A.M. at 206 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 89 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 August, 1894.

The meteorological conditions of the month of August are very similar to those of July. The monsoon currents usually prevail with considerable steadiness throughout the month, and give good general rain in practically all districts. Indeed, it sometimes happens that August is the month of the greatest extension of the monsoon currents, and that some parts of Upper India obtain more rain in August than in July. On the whole, the monsoon current blowing in August is usually not so strong as in July, and there are also more frequent breaks in the rains in August than in July. Hence the general rainfall in India is usually smaller in August than in July.

The variations in the rainfall of August in different years are not only due to variations in the strength of the current from year to year, but also depend on the occurrence and line of advance of small cyclonic storms which generally form in the Bay of Bengal, and then advance west-north-westwards towards Central and Upper India. These small storms usually advance along the trough of low pressure, which is an important feature in the meteorology of August. This trough of low pressure generally runs in August from Orissa in a west-north-westerly direction towards the south of the Punjab or Sind, but the position varies from year to year, and hence the direction of advance of the small storms also varies.

August 1894, unlike its predecessor July, but like the corresponding month of 1893, was very free from cyclonic storms. Both monsoon currents were of at least normal

strength and were very steady throughout the whole month, and hence the weather during the month was of the normal south-west monsoon type.

At the commencement of the month the trough of low pressure lay along the foot of the hills from Lahore to Gorakhpur, and hence westerly winds prevailed generally in the Gangetic plain. The Bombay current was hence diverted across the head of the Peninsula into the eastern districts of the North-Western Provinces, Bihar and Chota Nagpur, and these areas with Bengal and Burma were receiving general rain. A break in the rains prevailed in the Punjab, Rajputana and Kathiawar. Temperature was in moderate excess in the Deccan and Madras, where the rainfall at this time was very light and was in defect in Northern and Central India and Burma. The deficiency was greatest in Bihar, averaging 5°·7 in the preceding 24 hours. A shallow depression formed during the next 24 hours at the eastern extremity of the trough of low pressure, that is, in the eastern districts of the North-Western Provinces where moderately heavy rain was falling. It filled up during the next 24 hours. The trough of low pressure continued to occupy the same position on the 3rd, 4th and 5th, and westerly winds prevailed to an unusual extent in the Gangetic plain. Pressure gave way rapidly on the 4th and 5th in Upper India and the Bombay current increased and gave more general rain in the Deccan and the Central Provinces, whilst steady rain continued in Burma, Bengal and the Gangetic plain. A very shallow depression formed in the eastern districts of the North-Western Provinces during the next 24 hours and advanced slightly westwards on the 6th and filled up on the 7th. This gave increased rainfall for a short period to the eastern districts of the North-Western Provinces. A very shallow depression had also formed on the 6th off the coasts of Orissa and Ganjam. It advanced into the eastern districts of the Central Provinces on the 8th and filled up there during the next 36 hours. Although very shallow, it was of some importance, as the westerly winds in the southern quadrant gave moderate general rain from the 6th to the 9th to the whole of the Deccan, more especially to the Hyderabad State, an area in which it had hitherto been scanty.

In consequence of unfavourable pressure conditions, the break in the rains held steadily over nearly the whole of the Punjab (except the hill districts), Rajputana, Sind and Kathiawar, and temperature had increased and was now considerably above the normal. The mean temperature of the Punjab, for example, on the 9th averaged 2°·4 in excess and on the 10th 3°·9 in excess.

Pressure decreased rapidly in Upper India and briskly in Northern India on the 9th and was in considerable to large defect on the 10th and following days over the whole of Northern India. Winds increased steadily on the 11th and 12th on the Bombay coast and blew strongly on the 12th, 13th and 14th, and the eastern districts of Rajputana, and the South-East Punjab began again to receive general rain. The trough of low pressure ran at this period from the North Punjab through the centre of the Gangetic plain to West Bengal. A depression began to form in that area (or West Bengal) on the 13th. It drifted slowly westwards with a slight northing at a daily rate averaging about 100 miles through Chota Nagpur into Bundelkhand and the southern districts of the North-Western Provinces into which it passed on the 18th. It continued to advance westwards and was absorbed in the permanent low pressure area of the rains in Upper India on the 20th. The area of disturbance consisted of a large inner area of nearly uniform pressure, about twice the extent of England, with moderate gradients to the south and east. The westerly winds to the south of the depression gave general and moderately heavy rain to the Deccan and the Central Provinces, and its absorption into the low pressure area in Upper Sind and the South-West Punjab was followed by an advance of monsoon winds across Rajputana into the East Punjab, which gave moderate to heavy rain to the whole of that area during the next week. Temperature was hence below the normal over nearly the whole of India during this period. Pressure, however, increased and was considerably above the normal on the 26th and 27th, and winds had fallen off in Northern India and the Bombay coast districts. A shallow depression began to form on the 29th in the north-west of the Bay which, however, did not cross the coast until the 1st of September.

Pressure.—The mean pressure of the whole of India was ·022″ below the normal. Relatively to the general state, pressure was in slight defect in the Punjab and the southern half of the Peninsula and Burma, and in slight excess in the intermediate belt. The local pressure variations or anomalies were in all cases small, not exceeding ·02″, except at Bangalore (—·021″) and perhaps Dera Ismail Khan (—·029″).

Temperature.—The mean maximum temperature was below the normal over nearly the whole of Northern and Central India and the Central Provinces. The deficiency was greatest in the North-Western Provinces and Upper Assam, where it was more than 2°. It exceeded 3° at Bareilly (—4°·1), Gorakhpur (—3°·6) and Lucknow (—3°·5).

The mean day temperature was in excess over the greater part of the Peninsula. The excess was more than 1° in Khandesh, West Berar, the Circars and South Madras, and was greatest at Cocanada (+2°·5), Masulipatam (+2°·1) and Negapatam (+2° 0).

The mean night or minimum temperature of the month was below the normal over nearly the whole of Northern and Central India (except the Punjab) and in excess in

the Peninsula. The variations were smaller than in the case of the maximum temperature and were less than 1°·5 in amount, except at Sirsa (+1°·8), Lahore (+1°·5), Salem (+1°·5) and Cuddapah (—1°·6).

The mean temperature of the month was in slight excess in the West and Central Punjab, Upper Sind and the greater part of the Peninsula (excepting the area represented by the stations of Madras and Cuddapah, where the mean temperature of the month was 1° below the normal) and Lower Burma. It was in defect over the remainder of India. The departures from the normal were small, except in the North-Western Provinces, the area of greatest excess of rainfall. The area of greatest deficiency of temperature was defined by the following stations:—Gorakhpur (—2°·6), Bareilly (—2°·5), Lucknow (—2°·5) and Benares (—2°·3).

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

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

Winds.—The Bombay current was stronger and steadier in the Arabian Sea than the normal during the first three weeks of the month, but was weak and unsteady during the last week. Winds on the average of the month were slightly weaker than the normal at the west coast stations, but stronger in Central India and the Deccan, and the westerly winds advanced further eastwards into the southern districts of the North-Western Provinces and South Bihar than usual during the month. The monsoon current in the Bay was of normal strength. Winds were slightly stronger at the Bengal coast stations and in Bihar, but were weaker in the North-Western Provinces, the area of greatest excess of rainfall. Winds were on the average of the month slightly stronger at the hill stations in the Upper India hill districts and were considerably stronger at Mount Abu, Pachmarhi and Chikalda.

Humidity.—The humidity conditions of the month were practically normal in Burma, Bengal, Assam, Bihar, Chota Nagpur and Orissa, and the air was somewhat damper than usual in the North-Western Provinces, the Punjab, and Central India. The increased humidity in these areas was chiefly due to lower temperature than usual during the month, and was most marked at the stations of Meerut Lucknow and Lahore, where the mean humidity of the month was 7 in excess. Humidity conditions were practically identical with the normal in Sind and Rajputana and over the greater part of the Peninsula. The air contained slightly less vapour than usual and humidity was in moderate defect in Berar and South India, in both of which areas the rainfall of the month was considerably below the normal. The humidity of the air was also greater than usual in the Upper India hill districts and at Mount Abu, but was considerably below the normal at Quetta, probably indicating increased dryness of the air in Baluchistan generally.

Cloud.—One of the more important features of the month was the excess of cloud over by far the greater part of India. The excess was considerable in amount in Northern and Central India. It was large and ranged in amount between 1 and 2 at Port Blair and Diamond Island and in the North-Western Provinces and was least in Orissa and Rajputana, where it averaged only 0·2. The cloud amount was also above the normal over the greater part of the Peninsula, but was in large defect (averaging 2·2) in Berar and in slight defect in South Madras. Skies were clear in Baluchistan during the month, but were heavily clouded in the Himalayan hill districts, and the amount of cloud was from 1 to 2 in excess at the hill stations.

The following table gives variation data of the mean aqueous vapour pressure, mean humidity and mean cloud amount of ten meteorological provinces for the month of August 1894:—

Meteorological Province.	Variation of		
	Mean aqueous vapour pressure from normal.	Mean humidity from normal.	Mean cloud amount from normal.
	"		
Burma Coast and Bay Islands	+·009	+1	+0·9
Assam	−·007	+1	+0·6
Bengal and Orissa	−·022	0	+0·6

METEOROLOGICAL PROVINCE.	VARIATION OF		
	Mean aqueous vapour pressure from normal.	Mean humidity from normal.	Mean cloud amount from normal.
	"		
Gangetic Plain and Chota Nagpur	−·009	+3	+1·2
Upper Sub-Himalayas	+·029	+6	+1·2
Indus Valley and North-West Rajputana.	+·009	0	+0·1
East Rajputana, Central India and Gujarat.	+·001	+2	+0·7
Deccan	+·001	+1	−0·1
West Coast	−·001	−1	+0·6
South India	0	0	+0·6

Rainfall.—Burma, Assam and Bengal received steady and well distributed rain during the month, and hence these areas obtained total rainfall for the month in slight to moderate excess. It was most largely in excess in North Bihar, where the rainfall had hitherto been more or less in defect. It was in moderate local defect in Hooghly, Howrah, Midnapore, the 24-Parganas, Orissa and North Madras. One of the more important features of the month was the excessive rainfall in the Upper India hill districts. The rainfall in the area represented by the hill stations of Simla, Mussooree and Dehra was especially heavy and continuous throughout the month. It was also in excess in the submontane districts of the North-Western Provinces and in North Oudh which received in several districts more than double the normal fall of the month. The rainfall of the month was more or less largely in excess over the whole of the North-Western Provinces and Oudh. North Oudh obtained an average of 20·8 inches or double its normal fall of 10·4 inches. It was also in excess in the eastern and south-eastern districts of the Punjab. The Bombay monsoon current was diverted eastwards across the Peninsula and Central India much more largely than usual, and hence the rainfall in Sind, Cutch, Kathiawar and West and Central Rajputana during the month was scanty and in considerable to large defect.

It was also more or less below the normal in Berar and Khandesh and the western districts of the Central Provinces. The greater part of the Deccan and Madras in which the rainfall was very deficient in June and July received moderate showers falling at frequent intervals during the month. The rainfall was hence in moderate to considerable excess over the whole of that area. The following table gives comparative rainfall data of the eleven meteorological provinces of the Empire :—

METEOROLOGICAL PROVINCE.	RAINFALL.		
	Mean actual for August 1894.	Mean normal for August.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	26·97	25·86	+0·64
Burma Inland	11·43	9·78	+1·17
Assam	18·98	16·48	+2·50
Bengal and Orissa	14·75	13·58	+1·23
Gangetic Plain and Chota Nagpur	16·03	11·73	+4·06
Upper Sub-Himalayas	12·86	11·86	+1·00
Indus Valley and North-West Rajputana.	1·26	2·43	−1·45
East Rajputana, Central India and Gujarat.	6·68	8·98	+1·50
Deccan	7·67	9·90	−1·90
West Coast	17·05	17·00	−0·25
South India	6·01	6·33	+0·37

Atmospheric Pressure.

The mean pressure of the whole of India for the month was ·022″ below the normal. Relatively to this general state pressure was in slight relative defect in the submontane districts of Northern India from Peshawar to Darbhanga and also in the southern half of the Peninsula and in Burma, and was in slight relative excess in the intermediate region. The following table gives variation data for the eleven meteorological provinces and shows approximately the distribution of the pressure in different parts of India relatively to the normal of the month :—

METEOROLOGICAL PROVINCE.	Barometric variation.	Anomaly.
	"	"
Burma Coast and Bay Islands	−·025	−·003
Burma Inland	−·035	−·013

METEOROLOGICAL PROVINCE.	Barometric variation.	Anomaly.
	"	"
Assam	−·016	+·006
Bengal and Orissa	−·015	+·007
Gangetic Plain and Chota Nagpur	−·021	+·001
Upper Sub-Himalayas	−·033	−·011
Indus Valley and North-West Rajputana	−·027	−·005
East Rajputana, Central India and Gujarat	−·016	+·006
Deccan	−·015	+·007
West Coast	−·024	−·002
South India	−·032	−·010

The pressure anomalies were less than ·020″ at all stations, with the exception of Bangalore (—·021″) and Lahore (—·020″), and perhaps Dera Ismail Khan (—·029″). The observations of the latter station have never been satisfactory in consequence of occasional fits of carelessness on the part of the observer. His observations for August appear to be doubtful. The only important effect of the local or relative variations of pressure was to displace the mean position of the trough of low pressure further north than usual, and the axis of the trough ran from Gaya through Benares, Cawnpore, Mainpuri, Delhi and Montgomery to Dera Ismail Khan.

The variations of the mean pressure of the month at the hill stations were almost identical in every case with those of the neighbouring plain stations. The following gives data in illustration :—

HILL STATION.	Variation from normal pressure.	Plain station.	Variation from normal pressure.	Vertical pressure anomaly (Hill-Plain).
	"		"	"
Leh	−·053	Lahore	−·042	−·011
Murree	−·036	Rawalpindi	−·040	+·004
Simla	−·027	Ludhiana	−·036	+·009
Chakrata	−·027	Roorkee	−·035	+·008
Ranikhet	−·019	Bareilly	−·021	+·002
Darjeeling	−·028	Dhubri	−·012	−·016
Quetta	−·014	Jacobabad	−·016	+·002
Mount Abu	−·027	Deesa	−·015	−·012
Wellington	−·032	Coimbatore	−·034	+·002

The mean distribution of pressure hence differed slightly from the normal. The most important feature was a general deficiency which was as marked at the hill stations as at the plain stations and common to the whole area, and hence probably indicated a larger air movement into India than usual, and a greater ascensional movement over India and outflow in the middle or higher regions. The only other feature of importance was the northerly displacement of the trough of low pressure which ran through Central and South Bihar and the central and southern districts of the North-Western Provinces. With this was connected the tendency for shallow depressions to form in the North-Western Provinces and for the depressions of the month to advance to and fill up in that area. It may also be noted that this feature was not a product o the special pressure and weather conditions, but was the continuation of a feature which was very prominent in May and June.

Barometric depressions and cyclonic storms of the month.

August, 1894, was free from cyclonic storms, and hence contrasted strikingly with the preceding month.

At the commencement of the month, the trough of low pressure had been displaced northwards to the foot of the hills between Lahore and Gorakhpur, and hence westerly winds prevailed generally in the Gangetic plain. The Bombay current was giving moderate rain to the west coast districts and little or no rain to North-Western India. Burma and North-Eastern India were, on the other hand, receiving steady general rain.

A shallow depression formed at the eastern extremity of the trough in the eastern districts of the North-Western Provinces on the 1st.

The following gives 8 A.M. data for stations in the low pressure area on the 2nd :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.
	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.
Benares	29·549	+·020	+·031	WSW	6	10	0·28
Gorakhpur	·548	+·071	+·027	E	1	6	0·15
Bahraich	·538	+·055	?	NE	4	7	0·23
Lucknow	·540	+·017	+·020	Calm	...	10	20.0
Allahabad	·544	+·011	+·027	WSW	7	10	0 66

The data show that pressure was actually above the normal in this area. It was only a depression relative to neighbouring areas. Rainfalls ranging from two to three inches had been received by several stations in the area. The precipitation was heavier in this area than elsewhere, but was nowhere excessive.

The low pressure area filled up during the next 24 hours. Pressure gave way briskly to rapidly during the next 48 hours and was on the morning of the 5th in considerable to large defect in Northern India, and in slight defect in the Peninsula. Rain fell in increasing amounts in the Peninsula, and general moderate rain continued to fall in the Gangetic plain, Bengal and Burma. The trough of low pressure was, as on the 1st, further north than usual. During the next 24 hours a shallow depression again formed in the eastern districts of the North-Western Provinces, and feeble indications were shown of a tendency to the formation of a low pressure area in the north-west of the Bay. The following table gives 8 A.M. data of stations in the low pressure area in the North-Western Provinces :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Benares .	29·440	+·001	−·091	SSW	6	10	1·39
Patna . .	·480	+·028	−·063	SE	3	10	0·08
Gorakhpur .	·423	−·010	−·111	E	2	10	1·30
Lucknow .	·459	+·020	−·073	Calm	...	10	0·31
Allahabad .	·448	+·016	−·086	WNW	7	10	0·76

Heavy rain had fallen in a part of this area during the previous 48 hours, as is shown by the following data :—

District.	Average actual rainfall of 24 hours preceding 8 A.M. of date.			Total of period.
	5th.	6th.	7th.	
	Inches.	Inches.	Inches.	Inches.
Gorakhpur . . .	2·87	1·30	0·36	4·53
Basti	2·07	1·11	0·57	3·75
Azamgarh . . .	1·28	2·16	0·17	3·61
Bahraich	1·27	2·87	1·67	5·81
Sitapur	2·12	0·40	2·14	4·66
Hardoi	1·72	2·43	0·48	4·63
Ghazipur . . .	1·47	1·20	0·14	2·81
Jaunpur	1·79	0·50	0·12	2·41
Mirzapur . . .	0·14	1·09	0·28	1·51

The shallow depression shifted slightly westwards during the next 24 hours and was central between Lucknow and Cawnpore on the morning of the 7th. The rainfall was much smaller in amount than hitherto, and the depression consequently filled up during the day. The following gives a summary of the rainfall of the North-Western Provinces from the 4th to the 8th during the origin and existence of this shallow depression :—

Division.	Average actual rainfall during 24 hours preceding 8 A.M. of date.					Total of period.
	4th.	5th.	6th.	7th.	8th.	
	Inch.	Inches.	Inches.	Inches.	Inch.	Inches.
Oudh (North) . . .	0·53	1·38	1·18	1·27	0·36	4·72
" (South) . . .	0·82	1·12	1·11	1·19	0	4·24
N.-W. P. (East) . . .	0·38	0·83	0·77	0·16	0·14	2·28
" (Central) . .	0·39	0·68	0·40	0·88	0·24	2·59
" (West) . . .	0·18	0·10	0·04	0·28	0·63	1·23
" (Sub-montane) .	0·73	1·50	1·52	0·57	0·48	4·80

It may be noted that in consequence of the peculiar pressure conditions at this time, little or no rain was falling in the greater part of the Punjab and Rajputana, and the partial break in the rains, which had been established in that area about the middle of July, held more or less steadily during the first three weeks of the present month. Another feature, probably due to the same conditions, was the excessive rainfall in the hill districts of the Punjab and the North-Western Provinces, more especially in the latter, due to persistent daily heavy rain.

A very shallow depression covered Orissa and Ganjam and the north-west of the Bay on the 7th, where pressure was in considerable defect. This depression was transferred to the eastern districts of the Central Provinces on the 8th and practically filled up during the next 24 hours. The indraught of westerly winds from the Bombay coast towards it gave moderate and fairly general rain on the 8th and 9th to the Deccan area and the Central Provinces.

Pressure gave way briskly to rapidly during the next 48 hours in Northern India, and on the 11th the pressure conditions were similar to those obtaining at the beginning of the month. Moderately steep gradients obtained and the trough of low pressure stretched across the centre of the Gangetic plain into West Bengal. Moderate rain fell in the Central Provinces and the Gangetic plain during the next two days; but rainfall was most general and on the whole heaviest in Bengal at the eastern extremity of the low pressure trough. A depression formed in that area on the 13th, which formed the chief feature of the meteorology of the next five days. It was a shallow depression

throughout and of little importance, except for its influence in modifying the distribution of the rainfall at this period.

Depression and feeble cyclonic storm of the 13th to the 19th August.—This depression formed on the 12th in Bengal at the eastern extremity of the low pressure trough at this time. The following observations indicate the position of the depression on the morning of the 13th:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.
	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.
Burdwan . .	29·479	+·006	—·121	WSW	2	10	1·55
Berhampore .	·484	+·020	—·122	S	3	10	1·80
Purnea . .	·496	+·038	—·104	E	2	9	0·05
Darbhanga . .	·495	+·035	—·100	ENE	4	7	0·29
Gaya . . .	·498	—·016	—·080	NW	5	10	0·04
Ranchi . .	·487	—·026	—·094	W	5	10	0·07

Pressure was hence from a tenth to an eighth of an inch below the normal in the area of disturbance. Moderately strong monsoon winds were blowing at the head of the Bay.

14th August.—The pressure changes were generally small, except in Chota Nagpur, where pressure had given way briskly. The depression had moved slightly westwards and was now central between Hazaribagh and Ranchi. The following gives data:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.
	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.
Chaibassa . .	29·421	—·050	—·141	WSW	3	10	1·61
Balasore . .	·431	—·053	—·164	WSW	8	4	0·11
Burdwan . .	·455	—·024	—·146	E\E	3	10	0·15
Ranchi . .	·427	—·060	—·143	Calm	6	9	0·09
Hazaribagh . .	·424	—·057	—·157	Calm	6	10	0·14
Gaya . . .	·434	—·064	—·144	E	5	6	1·18
Patna . . .	449	—·034	—·133	E	7	10	0·41
Benares . .	·439	—·060	—·130	NNE	4	10	1·03

The disturbance consisted of a central area of nearly uniform pressure (defined by the isobar of 29·45″) about 400 miles in its longest diameter and 200 miles in its shortest. In that area the range of pressure was less than 04″. Gradients were steep to the south, moderate to the east and very slight to the north-west. Moderate general rain had fallen over the area of depression and in Bengal.

15th August.—The pressure changes were again small in amount. The depression had shifted very slightly towards the west; but was otherwise unchanged. The central area of nearly uniform pressure (defined by the isobar of 29·45″) was slightly larger than on the previous day.

The following gives 8 A.M. data of stations in the central 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	
Sambalpur .	29·456	—·021	—·126	SW	7	10	0·77	
Chaibassa .	·434	+·013	—·126	WSW	3	10	0·01	
Ranchi . .	·436	+·009	—·134	SSW	3	10	0·74	
Hazaribagh .	·419	—·005	—·158	SE	7	10	0·20	
Gaya . .	·451	+·017	—·127	ENE	6	7	0·47	
Benares . .	·442	+·003	—·126	ENE	5	10	0·93	
Allahabad .	·438	—·037	—·131	ENE	4	10	1·38	Thunder-storm.
Sutna . .	·451	—·035	—·135	NW	6	10	0·58	

The centre of the depression was in about Lat. 24°N. and Long. 84°E. The air movement in the central area was cyclonic in direction, but very feeble. Strong humid winds continued to blow across the Bengal coast. Moderate rain had again fallen in Bengal and the central area of the disturbance. Winds were increasing slightly in the Central Provinces and rain falling in larger amounts.

16th August.—The pressure changes were everywhere small. The depression had again moved slightly westwards. The central area (defined by the isobar of 29·45″) was, as on the preceding two days, oval in shape, the largest diameter running from west-north-west to east-south-east direction between Cawnpore and Ranchi, a distance of over 400 miles.

Pressure was very uniform over the whole central area (nearly twice the extent of England) and was about a seventh of an inch below the normal. The depression was hence shallow, but of considerable extent, and continued to determine moderate rain to a large area. The

following gives 8 A.M. data of stations in the central 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.	
Sambalpur .	29·454	—·002	—·140	S	6	10	0·09	
Ranchi . .	·451	+·015	—·122	ESE	3	10	1·21	
Hazaribagh .	·449	+·030	—·134	ESE	5	10	1·04	
Benares . .	·440	—·002	—·128	ENE	5	10	3·06	
Allahabad .	·432	—·006	—·140	ENE	8	10	0·98	Thunder-storm.
Cawnpore .	·442	—·025	?	ENE	3	5	0·08	
Sutna . .	·445	—·006	—·140	NW	7	10	2·52	

The centre of the depression was in about Lat. 24½° N. and Long. 82½° E. and had hence advanced about 100 miles during the previous 24 hours.

17th August.—Pressure had fallen slightly in the eastern districts of the North-Western Provinces and had risen slightly in Chota Nagpur. The depression had advanced about 120 miles in a westerly direction and was now central near Sutna in about Lat. 24¾° N. and Long. 80½° E. It was unchanged in character and extent. The following gives data of the central area of nearly uniform pressure and light cyclonic winds, defined by the isobar of 29·45″ :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.
	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.
Benares . .	29·433	—·007	—·138	NE	8	10	0·59
Allahabad . .	·425	—·007	—·149	ENE	13	10	0·06
Cawnpore . .	·442	0	?	E	4	7	2·37
Nowgong . .	·431	—·057	—·155	N	4	10	1·03
Sutna . . .	·404	—·041	—·183	SE	3	10	0·62
Jubbulpore . .	·443	—·075	—·170	WSW	9	10	0·70

The average velocity of the winds during the previous 24 hours at Sutna was only 3 miles per hour, only one-third of the normal velocity of the winds at that station in August. Moderately heavy rain had fallen in the northern districts of the Central Provinces and the western half of the central depression. Light general rain continued to be received in Bengal.

18th August.—Pressure had risen slightly to rapidly in Northern and Central India, and the depression was now very feebly marked. A residual depression and cyclonic circulation was shown in the area represented by the stations, for which data are given below :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.
	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 . .	29·492	+·039	—·103	WSW	5	10	0·99
Nowgong . .	·457	+·026	—·131	ENE	3	7	1·25
Jhansi . . .	·467	+·012	—·112	SE	3	8	2·56
Agra . . .	·483	+·021	—·108	SE	4	10	1·15
Jeypore . .	·506	+·005	—·098	N	3	10	0·19

The air movement was now irregular in the shallow depression. The storm continued to advance westwards and was absorbed in the area of permanent low pressure in Sind and the South-West Punjab during the next 48 hours.

The depression and cyclonic storm was, although shallow and feeble, remarkably persistent. It formed in West Bengal on the 12th and 13th at the eastern extremity of the trough of low pressure and advanced slowly westwards (with a slight northing) during the next six days until the 19th, when it merged into the permanent low pressure area in Sind.

As pointed out, the disturbance during the greater part of its existence consisted of a large central area of nearly uniform pressure (defined by the isobar of 29·45″) with steepish gradients to the east and south. In this feature and its remarkable persistence it was a typical storm of the rains. The following data gives the track and rate of motion of the centre :—

DATE.	Hour.	POSITION.				Distance travelled in interval.	Average hourly rate of motion.
		Lat. N.		Long. E.			
		°	′	°	′	Miles.	Miles.
13th	8 A.M.	23	0	87	30	...	...
14th	...	23	30	85	45	110	4½
15th	...	24	0	84	0	120	5
16th	...	24	10	82	45	85	3½
17th	...	24	45	80	30	145	6
18th	...	25	0	79	15	80	3

The rainfall accompanying the storm was throughout moderate in amount. The following gives data :—

DISTRICT.	AVERAGE ACTUAL RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF								Total of period
	12th.	13th.	14th.	15th.	16th.	17th.	18th.	19th.	
	Inch.	Inches.	Inches.	Inch.	Inches.	Inches.	Inches.	Inch.	Inches.
South-West Bengal.	0·60	0·83	0·38	0·50	0·39	0·34	0·54	0·32	3·90
Chota Nagpur .	0·79	0·96	0·62	0·58	0·85	0·82	0·76	0·26	5·64
South Bihar .	0·99	0·76	1·26	0·18	0·21	0·41	0·39	0·27	4·47
North Bihar .	0·57	0·53	0·20	0·10	0·14	0·17	0·19	0·13	2 03
North-Western Provinces (East).	0·44	0·51	0·81	0·90	0·73	0·70	0·58	0·69	5·36
North-Western, Provinces(Sub-montane).	0·72	0·52	0·50	0·24	0·66	0·94	0·49	0·21	4·28
North-Western Provinces (Central).	0·19	0·02	0 07	0·35	0·67	1·11	0·38	0·16	2·95
North-Western Provinces (West).	0·02	0·04	0·01	0·15	0·33	1·02	1·09	0·26	2·92
Oudh (North) .	0·94	1·30	0·25	0·10	0·10	0·36	0·10	0·02	3·17
„ (South) .	0·42	0·71	0·16	0·19	0·26	0·29	0·10	0·38	2·51
Baghelkhand .	0·68	0·87	0·96	0·73	1·27	0·90	0·10	0·10	5·61

DISTRICT.	AVERAGE ACTUAL RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF								Total of period
	12th.	13th.	14th.	15th.	16th.	17th.	18th.	19th.	
	Inch.	Inch.	Inch.	Inches.	Inches.	Inches.	Inch.	Inch	Inches.
Bundelkhand .	0·14	0·08	0·36	0·76	1·10	1·45	0·47	0·07	4·43
Central Provinces (North.)	0·12	0·14	0·09	1·03	0·83	1·82	0·54	0·05	4·62

Pressure was in general defect on the 20th, but increased briskly to rapidly during the next two days, more especially in North-Eastern India, and on the 23rd and following days, pressure was considerably in excess in that area and the distribution of pressure favoured the full extension of the monsoon current to the East and North Punjab. Hence nearly the whole of Northern and Central India (with the exception of the West Punjab and West Rajputana) received moderate but fairly general rain from the 23rd to the 28th. There was a slight tendency shown on the 29th and following days to the establishment of a low pressure area in the west of the Bay, which developed into a feeble cyclonic storm on the 31st. Its history will be given in the September Monthly Review.

Summary of the Reports of the weather and snowfall in the Mountain Districts to the north and north-west of India.

No information has been received and hence, almost certainly, no snow fell during the month in the higher ranges of the Western Himalayas.

Summary of Special Storm Reports.

3rd August.—Hailstorm at Pudukota in Southern India. The storm lasted about 20 minutes and was accompanied by a very heavy fall of hailstones of unusual size. Many of the stones were stated to be as large as limes and broke into pieces when they struck the ground. Hailstorms are of rather rare occurrence in Pudukota. The precipitation during the storm as given by the rain-gauge was very nearly an inch in amount.

29th.—Severe thunderstorm at Hyderabad (Deccan) lasting from 9 P.M. to 11 P.M. Total rainfall during storm 2·05 inches.

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

Arabian Sea.—At the commencement of the month ordinary monsoon conditions prevailed over the Arabian Sea. The winds were strongest in force in the centre of the sea, where they ranged in force between 5 and 7. From this region they decreased in all directions, and were of force 4 to 5 in the neighbourhood of the Indian coast and of 2 to 4 in the south. Light airs and calms obtained in the Gulf of Aden and moderate south-east winds in the Persian Gulf. The mean intensity of the winds as recorded on board 16 vessels was 3·6 at 8 A.M. of the 1st. Winds increased in strength during the day, and on the morning of the 2nd averaged 4·0 in force. The changes were unimportant during the next 24 hours; but the air movement began to fall off rather rapidly in the centre and east of the sea on the 3rd, and on the morning of the 4th winds of force 2 to 4 were blwoing in that area. The

wind force for the whole area had decreased to 3·2. Weather was cloudy over the whole area and in the neighbourhood of the west coast light rain squalls were of frequent occurrence. Winds increased again slightly during the day, and on the morning of the 5th averaged 3·7 in force. The increase was most rapid in the centre of the sea, where winds of force 4 to 7 were experienced by several vessels. Light to moderate south-west winds were blowing in the Gulf of Aden on this day. Winds intensified rapidly during the next 48 hours, and on the morning of the 7th were 1·0 stronger than on the 5th. The rise was most rapid in the neighbourhood of Socotra, where the S.S. *Brinkburn* experienced south-west gales, force 8, and a heavy sea at 8 A.M. of the 7th. Weather was very squally on this and the following day in almost all parts of the sea, more especially off the Malabar and South Konkan coasts, where "heavy rain" and "repeated hard squalls" were experienced by a large number of vessels. A moderate monsoon prevailed during the next 13 days, and on the morning of the 20th, the mean intensity of the winds was 4·1 or the same as on the 8th. On this day there was, however, a tendency for the winds to decrease and to become unsteady which became more marked during the next three or four days, and on the 24th very unsteady and feeble winds prevailed over nearly the whole area. Thus the S.S. *Clan Murray* in Lat. 12° 8′ N. and Long. 74° 45′ E. experienced variable winds of force 1, and the S.S. *Hazara* in Lat. 17° 48′ N. and Long. 72° 48′ E. south-west winds of force 2 and dull cloudy weather. During the remainder of the month feeble and very unsteady winds and fine cloudy weather continued to prevail over the whole area. It may be interesting to note that during this period the south-east trades in the western half of the equatorial region were as feeble and unsteady as the current in the Arabian Sea. For example, the S.S. *Pongola* in Lat. 5°S. and Long. 53° E. at 8 A.M. of the 27th, and proceeding north-eastwards had light south-east winds of force 2 and clear weather, light easterly airs of force 1 on the 30th, and light variable airs on the 31st, when she had advanced to Lat. 0°11′ S. and Long. 65° 28′ E. The S.S. *Fazilka* in Lat. 1° 31′ S. and Long. 71° 41′ E. at 8 A.M. of the 31st had west-north-west winds.

The mean strength of the air movement during the period 24th to 31st ranged between 3·8 and 2·5.

Bay of Bengal.—At the beginning of the month a moderate monsoon was blowing generally over the Bay. The mean strength of the winds was 3·8 at 8 A.M. of the 1st. An increasing monsoon and squally rainy weather prevailed during the next five days in almost all parts of the Bay. On the morning of the 6th, however, an important change took place in the north of the Bay, where winds shifted round to northerly directions and weather became fine. In the centre and south of the Bay moderate to strong monsoon winds and squally weather continued. The S. *Vimeira* in Lat. 15¾°N. and Long 87°E. at 8 A.M. of the 6th experienced violent squalls and heavy rain with thunder and lightning. Light winds and fine weather prevailed at the head of the Bay, where winds had decreased in force. On the morning of the 7th, the mean intensity of the air movement over the whole of the Bay was 3·1 or 1·1 less than on the 4th. The depression in the north of the Bay passed inland during the day, and the winds shifted round to their normal monsoon directions in that area and on the morning of the 8th normal monsoon winds and weather again prevailed over the whole of the Bay. The air movement for the whole area averaged 4·6 on the 8th, 9th and 10th. Winds fell off rapidly in strength during the next 24 hours, particularly in the north of the Bay, where the S S. *Ethiopia* at 8 A.M. of the 11th experienced light variable airs of force 2. The mean strength of the winds at 8 A.M. of the 11th had decreased to 3·2 or 1·4 less than on the previous day. A depression began to form in South-West Bengal during the day, and the winds rose again in force, and on the morning of the 12th averaged 4·1 in force. On the 13th moderate to strong winds and squally rainy weather prevailed at the head of the Bay, and the mean intensity of the winds had increased to 4·7. A moderate monsoon obtained until the 20th, when winds began to fall off rapidly in strength all over the Bay. The current was very feeble and unsteady during the next five days and the intensity of the winds decreased from an average of 4·0 on the 20th to 1·8 on the 23rd and 1·5 on the 25th. These features of the air movement were clearly shown by the data of Port Blair, where the average hourly velocity had decreased from an average of 11 miles per hour on the 20th to 3 miles per hour on the 23rd. The monsoon current continued feeble and unsteady during the remainder of the month, the mean intensity of the winds fluctuating very considerably from day to day. The average strength of the winds on the 31st was only 2·3.

It is noteworthy that the south-east trades in the eastern half of the equatorial belt decreased rapidly in strength on the 28th, and were on the morning of the 29th replaced by light and variable airs at least as far south as Lat. 5° S. The S. L. *Saratoga* in Lat. 5° S. and Long. 81° 24′ E. at 8 A.M. of the 29th, and proceeding north-eastwards had light variable airs force 2°, north-west winds force 1 at the same hour of the 30th, and south-south-east winds force 2 at 8 A.M. of the 31st.

Temperature of the Air.

The mean maximum or day temperature of the month was more or less below the normal over nearly the whole of India to the north of the 20th parallel of latitude, and in slight excess over the greater part of the Peninsula. The variations were small except locally at Sirsa, where the mean of the month was 3°·4 above the normal, and in the North-Western Provinces and Upper Assam, where it was more than 2° in defect. The following gives data for the stations in the North-Western Provinces, where the deficiency was large and general and was due to more frequent and heavier rainfall than usual:—

Province.	Station.	Mean maximum temperature. Actual, August 1894.	Normal, August.	Variation of actual from normal.
		°	°	°
North-Western Provinces.	Bareilly	85·9	90·0	−4·1
	Gorakhpur	86·5	90·1	−3·6
	Lucknow	87·1	90·6	−3·5
	Benares	86·9	89·7	−2·8
	Allahabad	87·5	89·8	−2·3
	Dehra Dun	81·9	83·9	−2·0
Bihar	Patna	87·0	89·3	−2·3
Punjab	Ludhiana	92·4	95·3	−2·9

The variations of the mean minimum or night temperature from the normal were small. The night temperature was in slight excess in the Punjab and the Peninsula to the south of Lat. 20° N. and in defect over the remainder of India. The departures from the normal were less than 1°·5 in amount, except in the case of the following stations:—Sirsa (+1°·8), Lahore (+1°·5), Lucknow (−1°·5), Gorakhpur (−1°·5), (Benares −1°·7), Cuddapah (−1°·6) and Salem (+1°·5).

The mean temperature of the month was normal or in slight excess over Lower Burma and the Peninsula to the south of Lat. 20° N., with the exception of an area represented by the stations of Madras (−1°·1) and Cuddapah (−1°·1). The excess was more than 1° at Cocanada (+1°·3), Masulipatam (+1°·2), Negapatam (+1°·3), Madura (+1°·4) and perhaps Ratnagiri (+1°·3). Temperature was also in slight excess in the West and South Punjab, and North-West Rajputana.

The mean temperature of August was below the normal over the remainder of India. The deficiency exceeded 2° at the following stations in the North-Western Provinces, which was the only area in which the rainfall of the month caused a considerable reduction of temperature:—

Province.	Station.	Mean daily temperature. Actual, August 1894.	Normal, August.	Variation of actual from normal.
		°	°	°
North-Western Provinces	Gorakhpur	82·0	84·6	−2·6
	Bareilly	81·5	84·0	−2·5
	Lucknow	82·1	84·6	−2·5
	Benares	82·0	84·3	−2·3

Temperature at the Himalayan hill stations differed to a smaller extent from the normal than at the neighbouring plains stations—the usual rule in the rainy season. The following gives variation data for seven hill stations and the neighbouring plain stations:—

Hill Station.	Variation of mean daily temperature from normal.	Nearest Plain Station.	Variation of mean daily temperature from normal.
	°		°
Leh	+1·5	Lahore	+0·4
Murree	+0·1	Rawalpindi	−1·3
Chakrata	−0·4	Roorkee	−1·1
Darjeeling	−0·6	Dhubri	−0·9
Mount Abu	−1·8	Deesa	−1·0
Quetta	−2·4	Jacobabad	+0·2
Wellington	+1·4	Coimbatore	+0·1

The following table gives temperature data for each of the 51 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 Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	84·2	74·0	79·1	10·2	17·8	+0·1	+0·1	0
	Lower Burma	84·5	76·3	80·4	8·3	15·6	0	+0·8	−0·8
	Central do.	86·8	71·7	80·3	13·1	23·3	−0·7	+0·4	−1·1
	Upper do.	85·7	73·7	79·8	12·0	23·0	−2·5	−0·8	−1·7
	Arakan	83·6	76·3	80·0	7·3	17·0	−0·8	−0·9	+0·1

Province.	Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bengal and Assam	Eastern Bengal	85·5	76·9	81·2	8·6	16·8	−1·0	−0·6	−0·4
	Assam (Surma)	88·7	76·3	82·5	12·4	19·2	−0·5	−0·4	−0·1
	Do. (Brahmaputra)	86·4	77·3	81·9	9·1	15·7	−1·8	−0·7	−1·1
	Deltaic Bengal	86·9	78·0	82·4	8·9	15·8	−1·2	−0·7	−0·5
	Central do.	87·2	77·9	82·6	9·3	16·0	−1·3	−0·2	−1·1
	North do.	87·3	77·3	82·3	10·0	17·6	−1·3	−0·1	−1·2
	Orissa	87·6	78·1	82·8	9·5	16·4	−0·3	−0·3	0
	Chota Nagpur	85·0	74·2	79·7	10·8	19·3	−0·6	−0·5	−0·1
	Bihar (South)	87·6	77·9	82·8	9·7	18·3	−2·1	−1·0	−1·1
	Do. (North)	87·6	78·0	82·8	9·6	16·9	−1·5	−0·2	−1·3
North-Western Provinces and Oudh.	North-Western Provinces (East)	87·0	77·4	82·2	9·6	16·3	−2·9	−1·3	−1·6
	Oudh (South)	87·1	77·0	82·1	10·1	16·2	−3·5	−1·5	−2·0
	Do. (North)	86·9	76·3	81·6	10·6	25·4	?	?	?
	North-Western Provinces (Central)	87·2	77·4	82·4	9·8	17·6	?	?	?
	Do. do. (West)	88·3	77·6	82·9	10·7	21·0	−1·2	−0·1	−1·1
	Do. do. (Submontane)	86·5	75·9	81·2	10·6	15·5	−2·3	−0·7	−1·6
Punjab	Punjab (South)	95·2	80·0	87·6	15·2	26·1	+0·6	+0·7	−0·1
	Do. (Central)	95·4	80·4	87·9	15·0	26·2	−0·6	+1·5	−2·1
	Do. (Submontane)	92·5	77·4	85·0	15·1	27·3	−1·5	−0·4	−1·1
	Do. (Hill Districts)	77·4	63·3	70·3	14·1	23·9	−0·8	−0·3	−0·5
	Do. (North-West)	95·6	77·3	86·5	18·4	30·0	−1·0	+0·2	−1·2
	Do. (West)	101·2	82·4	91·8	18·8	29·5	−0·4	+0·7	−1·1
Bombay and Malabar Coast Districts (Madras).	Malabar	82·1	74·1	78·2	8·0	13·4	−0·4	0	−0·4
	Madras (South Central)	90·2	71·9	81·1	18·3	25·4	+0·2	+0·7	−0·5
	Coorg	76·1	65·6	70·9	10·6	16·5	−0·9	+0·7	−1·6
	Mysore	81·1	65·8	73·4	15·3	21·5	−0·5	+0·6	−1·1
	Konkan	83·4	76·0	79·7	7·4	12·3	+1·1	+1·0	+0·1
	Bombay Deccan	83·6	69·0	76·3	14·6	20·9	+0·8	+0·2	+0·6
	Hyderabad (North)	86·0	70·7	78·3	15·3	23·6	?	?	?
	Khandesh	86·8	70·5	78·7	16·3	25·8	+1·4	+0·8	+0·6
	Berar	87·2	73·4	80·4	13·9	22·7	+0·5	+0·6	−0·1
Central Provinces and Berar.	Central Provinces (West)	84·8	73·8	79·3	11·0	21·3	−1·3	−0·3	−1·0
	Do. (Central)	83·8	72·8	78·4	11·0	19·6	−1·0	−0·5	−0·5
	Do. (East)	85·9	75·4	80·7	10·6	20·2	−1·0	−0·7	−0·3
Bombay (North)	Gujarat	88·0	76·6	82·4	11·5	19·4	+0·6	+0·5	+0·1
	Kathiawar	85·7	75·9	80·8	9·8	16·0	−0·2	−0·5	+0·3
	Sind and Cutch	93·2	78·5	85·9	14·7	21·7	−0·6	−0·1	−0·5
Rajputana and Central India.	Central India (East)	85·6	76·3	81·0	9·3	17·0	−1·5	+0·1	−1·6
	Rajputana (East), Central India (West)	86·6	73·7	80·2	12·9	21·6	−0·4	−0·3	−0·1
	Do (West)	94·9	77·3	86·1	17·6	26·0	+1·3	−1·1	+2·4
Madras	East Coast (North)	89·3	79·5	84·4	9·8	16·7	+1·3	+0·4	+0·9
	Hyderabad (South)	87·9	72·6	80·2	15·3	23·9	?	?	?
	Madras (Central)	90·5	73·9	82·3	16·6	24·3	−0·3	−0·5	+0·2
	East Coast (Central)	94·7	78·0	86·4	16·8	24·9	+2·1	+0·3	+1·8
	Do. (South)	93·9	76·6	85·3	17·3	27·0	+0·7	+0·1	+0·6
	Madras (South)	94·1	78·3	86·2	15·8	23·8	+1·3	+1·4	−0·1

The following describes briefly the chief features of the temperature changes during the month. At the commencement of the month temperature was in general defect in Northern and Central India and Burma. The deficiency was greatest in Bihar for which it averaged 6°. Temperature was, on the other hand, in slight to moderate excess in the Peninsula. The following table gives variation data for the 1st :—

Province.	Variation from normal of Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Burma	−2·3	−1·5	−1·9
Bengal and Assam	−4·6	+2·1	−1·3

Province.	Variation from normal of Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
North-Western Provinces	−2·0	−1·1	−1·6
Punjab	−1·9	−0·6	−1·3
Sind and Rajputana	−3·0	−1·3	−2·2
Gujarat and Central India	−2·4	−0·6	−1·5
Central Provinces and Berar	+0·4	+0·2	+0·3
Bombay	+1·9	+1·1	+1·5
Madras	+3·0	+1·6	+2·3

The departures from the normal were much larger in the day than the night temperature. No large change occurred until the 7th and following days, when temperature began to increase in Northern India and to fall considerably in the Deccan, due to general rain in that area. Temperature was more or less above the normal on the 8th and 9th over the whole of India, except the Deccan. The following gives variation data for the 8th :—

Province.	Variation from normal of		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·2	+0·3	+0·3
Bengal and Assam	+0·5	+0·5	+0·5
North-Western Provinces	−1·1	+0·2	−0·5
Punjab	−1·0	+1·3	+0·2
Sind and Rajputana	+1·7	−0·7	+0·5
Gujarat and Central India	+0·9	+0·7	+0·8
Central Provinces and Berar	+0·4	+1·2	+0·8
Bombay	0	+0·4	+0·2
Madras	−1·7	−0·5	−1·1

Temperature averaged 4° in excess in the Punjab on the 10th. General rain caused a moderate reduction of temperature in Northern India on the 11th and 12th, when it again increased considerably in Upper India. The following gives mean variation data of that area for the next three days :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	13th.	14th.	15th.
	°	°	°
Punjab	+1·6	+3·3	+3·3
Rajputana	+1·9	+2·7	+3·6
Sind	+0·5	+2·1	+2·0

Temperature was reduced considerably below the normal in the Central Provinces and Central India during the next four days. The following gives variation data for that area of diminished temperature from the 16th to the 21st :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	16th.	17th.	18th.	19th.	20th.	21st.
	°	°	°	°	°	°
Central Provinces and Berar.	−3·6	−5·9	−6·3	−4·2	−0·7	+1·1
Central India and Gujarat.	−0·9	−1·5	−1·8	−1·0	−0·8	+0·5
North-Western Provinces.	−1·1	−1·5	−3·2	−1·2	−0·3	−0·6

Temperature was below the normal over nearly the whole of India on the 18th and 19th. It increased rapidly in the Central Provinces and Central India on the 20th and 21st, and was in slight excess in these areas on the 21st, but fell considerably below the normal in Northern India. Rain was more general during the next week in Northern and Central India, and hence temperature was below the normal from the 22nd to the 26th over the whole of that area. It increased during the remainder of the month in Northern and Central India, and fell in Southern India which was receiving local showers at this time. The following gives mean temperature variation data for the 20th, 22nd, 26th and 31st, illustrating the larger changes during the period :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M.			
	20th.	22nd.	26th.	31st.
	°	°	°	°
Burma	−1·2	−0·7	+0·9	−0·6
Bengal and Assam	−1·1	−1·4	−3·0	−0·6
North-Western Provinces	−0·3	−1·5	−2·7	−1·4
Punjab	−2·2	−2·4	−2·0	+0·5
Sind and Rajputana	+0·2	−1·0	−3·5	−0·9
Gujarat and Central India	−0·8	−0·1	−0·9	−0·3
Central Provinces and Berar	−0·7	−1·6	−0·8	+1·7
Bombay	+0·1	+0·5	+1·2	−0·3
Madras	+1·6	−0·2	+0·2	−1·3

The following table gives the variations of the mean temperature week by week during the month. The data

are taken from the weekly weather reviews published in the *Gazette of India*:—

Division.	Variation from normal of mean temperature of week ending				
	11th August.	18th August.	25th August.	1st September	For whole month.
	°	°	°	°	°
Burma	0	−1·0	−0·1	+0·8	−0·2
Bengal and Assam . .	−0·2	−0·7	−1·4	−0·4	−0·8
North-Western Provinces and Oudh.	−1·6	−1·4	−1·6	−2·4	−1·7
Punjab	+0·9	+1·4	−2·3	−0·7	−0·1
Sind and Rajputana .	+0·4	+1·6	−1·4	−1·6	−0·2
Central India and Gujarat	+0·3	−0·6	−1·1	−0·7	−0·5
Central Provinces and Berar.	+0·8	−3·0	−1·1	+0·7	−0·6
Bombay	+0·4	+0·7	+0·4	+0·4	+0·5
Madras	+0·6	+0·9	+0·8	−0·8	+0·4

Winds.

Winds were of normal strength, but on the average of the month more westerly than usual at Port Blair. They were also more westerly at Rangoon, but normal in mean direction at Diamond Island.

The mean velocity of the monsoon current in the Bay was probably normal as indicated by the wind observations at Port Blair. The current was more variable in strength than usual in Bengal and the Gangetic plain, but on the mean of all the stations was approximately normal. The following gives mean data:—

Area.	Mean daily wind velocity in miles per diem.			
	Actual, August 1894.	Normal, August.	Variation.	Percentage variation.
Bengal Coast . . .	291	269	+22	+8
—— Interior . .	72	102	−30	−29
Bihar	136	97	+39	+40
Chota Nagpur . . .	175	180	−5	−3
North-Western Provinces and Oudh.	83	89	−6	−7

The mean wind directions of the month were less easterly or more westerly at stations in the interior of Bengal, and as is almost invariably the case opposite deflections obtained at the coast stations. The following data for five stations illustrate this contrast:—

Area.	Station.	Wind direction.		
		Mean, August 1894.	Normal, August.	Increased westing or decreased easting.
Bengal Coast. .	Saugor Island .	S 14° W	S 17° W	−3°
	False Point .	S 27 W	S 57 W	−30
—— Interior .	Calcutta . .	S 23 W	S 17 E	+40
	Burdwan . .	S 2 E	S 27 E	+25
	Berhampore .	S 31 E	S 40 E	+9

In consequence of the unusually small number of cyclonic storms or depressions winds were much steadier than usual in Bengal and the Gangetic plain. It has been pointed out in a previous section that the mean position of the trough of low pressure during the month was further north than usual, and that its axis approximately coincided with a line running through the stations of Hazaribagh, Benares, Allahabad, Agra, Meerut, Lahore and Dera Ismail Khan. The following gives data showing the unsteadiness and variability of the winds at these stations:—

Station.	Wind direction.		Steadiness.		
	Mean, August 1894.	Normal, August.	Actual percentage, August 1894.	Normal percentage, August.	Variation.
	°	°			
Hazaribagh .	S 7 W	S 50 W	21	7	+14
Allahabad .	N 38 W	N 40 E	26	4	+22
Agra . .	W	S 22 E	42	10	+32
Meerut . ,	S 82 E	N 80 E	18	5	+13
Lahore . .	S 49 E	S 83 E	24	27	−3
Mooltan. .	S 15 E	S 19 W	58	22	+36

The mean directions of Agra and Allahabad indicate very clearly the northward displacement of the trough, and the extension of the westerly winds of the Bombay current further north into the Gangetic plain than usual. The increased steadiness of the winds in the trough of low pressure was very marked, and was due in part to the absence of cyclonic storms, and in part to the persistence or steadiness of the general meteorological conditions during the month.

The Bombay branch of the monsoon current, like the Bay current, was very approximately normal in its mean

intensity throughout the month, but was unusually steady during the first three weeks of the month. The following gives data showing the velocity of the current and its variations from the normal in the coast and inland districts :—

	Mean daily wind velocity in miles per diem.			
	Actual, August 1894.	Normal, August.	Variation.	Percentage variation.
Coast—				
Kurrachee	383	409	−26	− 6
Bombay	334	384	−50	−13
Ratnagiri	260	242	+18	+ 7
Interior—				
Deesa	274	288	−14	− 5
Sholapur	316	279	+37	+13
Belgaum	495	497	− 2	0
Akola	227	194	+33	+17
Khandwa	195	192	+ 3	+ 2
Nagpur	129	144	−15	−10
Bellary	260	262	− 2	− 1

The preceding table gives data for all the stations under the direct and sole influence of the Bombay current during the month. The data, although giving conflicting evidence, indicate, if they do not establish, that the current was slightly weaker at the coast stations, and slightly stronger at the interior stations. The data for all the hill stations in Central India show that the winds at those stations were considerably above their normal strength during the month, *e. g.* :—

Hill Station.	Mean daily wind velocity in miles per diem.			
	Actual, August 1894.	Normal, August.	Variation.	Percentage variation.
Mount Abu	334	254	+80	+31
Pachmarhi	269	179	+90	+50
Chikalda	274	256	+18	+7
Mercara	264	199	+65	+33
Wellington	76	87	−11	−13

The mean wind directions at the West coast stations and in the Deccan and the Central Provinces differed little from the normal. They were, as might be expceted from the pressure conditions of the month, slightly more westerly and less southerly than usual. The following data for four stations illustrate this feature :—

Station.	Wind direction.		
	Mean, August 1894.	Normal, August.	Increased westing.
	°	°	°
Bombay	S 89 W	S 81 W	+8
Ratnagiri	S 85 W	S 63 W	+22
Kurrachee	S 67 W	S 63 W	+4
Deesa	S 74 W	S 47 W	+27

Winds were steadier than usual in South and Central Madras, and differed little from the normal in direction, except at Madras, where the mean wind direction of the month was S 88°E., the normal being S 40° W.

The chief features of the air movement of the month in India were :—

(1) The Bay current was steadier than usual and of very approximately normal strength.

(2) Winds were stronger in Bihar, but weaker in the North-Western Provinces.

(3) The trough of low pressure and of variable winds lay further north than usual, and hence winds due to the Bombay current prevailed to a greater extent than usual in the southern districts of the North-Western Provinces.

(4) The Arabian Sea branch of the current was steady and strong during the first three weeks of the month, but was weak and unsteady during the last week.

(5) Winds were somewhat weaker in the west coast districts, but were slightly stronger in the Deccan and Central India. They were normal in direction in the Deccan, but were more southerly and less westerly in Gujarat and West Rajputana.

(6) Winds were much stronger than usual at the hill stations in Central India and Coorg and slightly stronger in the hill districts of North-Western India.

Humidity and Cloud.

The mean humidity conditions of the month in Burma were almost identical with the normal. The air contained slightly more aqueous vapour than usual at Akyab, where the relative humidity was 5 in excess. In Assam, Bengal, Bihar and Chota Nagpur the mean absolute humidity was in small defect by amounts averaging barely 2 per cent. of the normal. The variations of the relative humidity were less than 2, except at Sibsagar (3 in excess), Cuttack (3 in defect) and Calcutta and Hazaribagh (2 in defect). The mean humidity conditions of the month were normal

in Sind and the West Punjab; but in the East Punjab, the North-Western Provinces, and Central India both the relative and absolute humidities were in moderate excess. The relative humidity was upwards of 5 in excess at the following stations, for which data are given:—

Station.	Absolute Humidity.			Relative Humidity.		
	Actual.	Normal.	Variation	Actual.	Normal.	Variation.
	"	"	"	°	°	
Lucknow . .	·911	·912	−·001	86	79	+7
Meerut . .	·903	·874	+·029	83	76	+7
ahore . .	·902	·867	+·035	71	64	+7
Ludhiana . .	·907	·872	+·035	78	72	+6
Agra . .	·898	896	+·002	82	76	+6

The excessive humidity in the North-Western Provinces and Punjab was in part due to the decreased temperature of the month.

The following gives comparative data for the whole of Northern and Central India:—

Division.	Absolute Humidity.			Relative Humidity.		
	Actual.	Normal.	Variation.	Actual.	Normal.	Variation.
	"	"	"	%	%	
Burma . .	·896	·891	+·005	90	89	+1
Assam . .	·923	·930	−·007	86	85	+1
Bengal . .	·932	·956	−·024	87	87	0
Orissa . .	·903	·920	−·017	82	83	−1
Chota Nagpur .	·765	·802	−·037	83	85	−2
Bihar . .	·939	·958	−·019	86	84	+2
North-Western Provinces.	·913	·901	+·012	84	79	+5
Punjab . .	·874	·850	+·024	68	65	+3
Sind . .	·840	·834	+·006	68	68	0
Rajputana .	·792	·797	−·005	77	76	+1
Central India .	·858	·843	+·015	83	79	+4

The mean humidity conditions of the month varied slightly, but somewhat irregularly, from the ordinary conditions of the period in Berar, the Central Provinces and the Deccan. On the whole the air was slightly drier than usual in Berar and damper in the Central Provinces and the Deccan. The variations were also small and irregular in the West Coast. Thus the mean relative humidity of the month was 4 in defect at Bombay, 1 in excess at Ratnagiri and 2 in defect at Karwar. Humidity was also lower than usual over Southern India and the Madras Deccan with some remarkable exceptions. Thus at Madras the mean humidity of the month was 81 per cent. or 10 higher than usual and at Bangalore 3 in excess. The deficiency was greatest at Bellary and Trichinopoly.

The driest stations in India, as measured by the mean relative humidity, were Jacobabad (57 per cent.), Trichinopoly (58 per cent.), and Bellary (61 per cent.).

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

Division.	Absolute Humidity.			Relative Humidity.		
	Actual.	Normal.	Variation.	Actual.	Normal.	Variation.
	"	"	"	%	%	
Central Provinces	·800	·798	+·002	83	81	+2
Berar . .	·712	·724	−·012	75	78	−3
Bombay Deccan .	·671	·665	+·006	79	79	0
Madras Deccan .	·628	·638	−·010	71	71	0
West Coast .	·847	·848	−·001	86	87	−1
Madras Coast .	·866	·840	+·026	76	72	+4
South Madras .	·725	·740	−·015	65	68	−3

The air was slightly damper at all the Himalayan stations including Leh and Kailang. The excess was most marked at Ranikhet (+5). The mean absolute and relative humidities of Quetta were below the normal and indicated greater dryness than usual over the Baluchistan plateau. The mean humidity of the month at that station was only 42 per cent., 4 below the normal. The air was slightly drier at the hill stations of Pachmarhi and Chikalda, but damper at Mount Abu (+4).

Cloud.—There was more cloud than usual over nearly the whole of Northern and Central India. The excess was large in amount (ranging between 1 and 2) at Port Blair and Diamond Island and in the North-Western Provinces. It was apparently greatest in amount at Agra; but it is more probable that the observer was less careful in his estimate of this feature than hitherto. The following gives comparative data for the different divisions of Northern and Central India:—

Division.	Mean cloud amount.		
	Actual.	Normal.	Variation from normal.
Burma	8·8	8·2	+0·6
Assam	8·6	8·0	+0·6
Bengal	8·7	8·0	+0·7
Orissa	7·7	7·5	+0·2
Chota Nagpur	9·8	8·8	+1·0
Bihar	8·2	7·1	+1·1
North-Western Provinces . .	8·4	6·8	+1·6
Punjab	3·8	3·5	+0·3
Sind	4·8	4·5	+0·3
Rajputana	7·3	7·1	+0·2
Central India	8·3	7·6	+0·7

The cloud amount was also in excess over the greater part of the Peninsula, but by somewhat smaller amounts than in Northern India. The excess was on the whole most marked at Bangalore (representing Mysore). The mean cloud amount was below the normal in Berar and South Madras, for which data are given below:—

District.	Station.	Mean cloud amount.		
		Actual.	Normal.	Variation from normal.
Berar	Akola	5·9	8·2	−2·3
	Buldana	5·6	7·6	−2·0
South Madras	Trichinopoly	5·7	7·6	−1·9

The following gives comparative data for the chief divisions of the Peninsula:—

Division.	Mean cloud amount.		
	Actual.	Normal.	Variation from normal.
Central Provinces	8·3	7·7	+0·6
Berar	5·8	8·0	−2·2
Bombay Deccan	8·8	8·5	+0·3
Madras Deccan	8·4	6·9	+1·5
West Coast	8·0	7·4	+0·6
Madras Coast	7·3	6·5	+0·8
South Madras	6·7	6·9	−0·2

The mean amount of cloud during the month at Quetta was only 1·0 or skies were practically clear throughout the month over the Baluchistan plateau. There was also slightly less cloud than usual at Leh, but at all the remaining hill stations, the mean of the month was more or less above the normal. The following gives data for six stations, at which the excess was large and above 1·0:—

Station.	Mean cloud amount.		
	Actual.	Normal.	Variation from norma.
Murree	8·1	6·5	+1·6
Ranikhet	9·9	8·6	+1·3
Katmandu	8·4	6·8	+1·6
Darjeeling	9·9		+1·2
Tura	8·8	7·0	+1·8
Wellington	8·8	7·6	+1·2

Rainfall.

The rainfall in August is generally heavy over the greater part of India, for the rain-bearing current which is fully established in July, is maintained throughout the whole of August, though the strength in August is usually not so great as in July. In August also there is a much greater probability of the occurrence of more or less prolonged breaks in the rains, so that on the whole the rainfall in August is usually lighter than in July. The average distribution of the falls in August is however very similar to that in July. The areas of heaviest rainfall are the districts on the west coast of the Peninsula and the Western Ghats, which receive moderate to heavy rain almost daily in August. Another area of heavy rainfall is in Arakan, Lower Pegu and Tenasserim, another in Assam and the Lower Himalayas, another in South and parts of Central Bengal and parts of the Central Provinces. On the other hand, there are areas of comparatively light rainfall in Central Burma, the southern districts of Madras including Tinnevelly, Madura, and parts of Coimbatore and Salem, and Upper Sind and the West Punjab. The normal rainfall in August varies from nearly thirty-eight inches in Tenasserim and thirty-two inches in Arakan to about two inches in Sind, the West Punjab and the South Madras District.

During the first fortnight of the month, the Bombay current was determined more directly eastwards than usual across the Deccan and the north of the Peninsula, in consequence of the abnormal pressure conditions of the period and the greater part of the Punjab, Sind, Rajputana, Cutch, Kathiawar, Gujarat and the Western States of Central India received little or no rain. Burma, Bengal, the greater part of the North-Western Provinces and the

Central Provinces obtained steady daily rain during this period and the Deccan area frequent showers. During the third week of the month a depression and feeble cyclonic storm drifted slowly westwards from West Bengal to Upper India, where its absorption into the Upper India permanent low pressure area was followed by a considerable fall of pressure in Upper India and the determination of the Bombay current in part to the Punjab. The rainfall hence gradually extended northwards and westwards over Rajputana and the Punjab during the latter part of the third week of the month and was general in Northern and Central India for some days afterwards. Both currents fell off in strength from the 23rd or 24th, and rainfall decreased in amount in Northern India and the west coast districts. But, as frequently happens during a period of weakness of the monsoon currents, the greater part of Madras received a favourable burst of rain during this period.

The preceding remarks have stated the chief conditions under which the rainfall of the month occurred. Its actual distribution and variation from the normal are fully exhibited in Plates IV and V. The following gives a summary of the most important features of the rainfall of the month :—

(1) Rainfall was in slight to moderately large excess over nearly the whole of Burma, Bengal, Bihar and Chota Nagpur. It was on the whole most largely in excess in certain districts of North Bihar, where it had hitherto been very considerably in defect. It was in moderate defect in an area including Orissa and the Midnapore, Hooghly and Howrah districts and the 24-Parganas in South-West Bengal, and also in Ganjam and the Circars.

(2) It was in large excess over the North-Western Provinces, more especially in Bareilly, North Oudh and the hill districts.

(3) It was in large excess in the Punjab hill districts, in slight excess in the eastern plain districts and in slight defect in the western districts of the Punjab.

(4) It was largely in defect in the area including Sind, the west and central districts of Rajputana, Cutch, Kathiawar, Gujarat, Khandesh, Berar, and the greater part of Central India.

(5) It was in largish excess in Malabar, and in moderate defect in the Konkan, and in moderate excess over the whole of Madras except the North Coast districts.

(6) It was on the whole normal in the Central Provinces and Bombay Deccan, and in moderate excess in Hyderabad, where the precipitation had been very deficient during the preceding two months.

The following table gives comparative rainfall data of the month for the 51 meteorological divisions of India. In the majority of these divisions the data are based on the rainfall statements of the month published by the Provincial Governments; but in the case of Burma, Assam, Berar, Mysore, Hyderabad and the Central Provinces for which the statements were not received in time, the data are derived from the weekly telegrams received from District Officers in those provinces.

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, August 1894.	Average normal, August.	Average actual, August 1894.	Average normal, August.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	42·94	37·52	+5·42
	Lower Burma*	?	?	20·30	20·75	−0·45
	Central do.*	?	?	18·63	17·01	+1·62
	Upper do.*	?	?	8·28	?	?
	Arakan*	?	?	40·32	32·00	+8·32
Bengal and Assam	Eastern Bengal	19·4	18·4	19·03	16·67	+2·36
	Assam (Surma)*	?	?	24·77	31·48	−6·71
	Do. (Brahmaputra)*	?	?	15·51	13·82	+1·69
	Deltaic Bengal	16·2	16·3	11·27	12·69	−1·42
	Central do.	17·9	15·8	13·28	12·17	+1·11
	North do.	21·1	17·4	21·97	19·39	+2·58
	Orissa	14·7	15·5	9·99	11·48	−1·49
	Chota Nagpur	21·0	17·6	18·09	14·77	+3·32
	Bihar (South)	17·8	13·1	13·96	11·28	+2·68
	Do. (North)	17·5	13·7	15·23	11·50	+3·73
North-Western Provinces and Oudh.	North-Western Provinces (East)	20·2	12·6	15·51	10·79	+4·72
	Oudh (South)	18·5	11·9	16·44	10·47	+5·97
	Do. (North)	20·5	11·7	20·81	10·44	+10·37
	North-Western Provinces (Central)	17·2	11·5	14·44	10·32	+4·12
	Do. do. (West)	13·7	10·4	11·81	8·69	+3·12
	Do. do. (Submontane)	19·6	12·5	21·53	12·93	+8·60

Province.	Division.	Rainy Days. Actual, August 1894.	Rainy Days. Average normal, August.	Rainfall. Actual, August 1894.	Rainfall. Average normal, August.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Punjab	Punjab (South)	5·4	4·3	3·40	3·52	−0·12
	Do. (Central)	9·1	6·2	6·67	5·27	+1·40
	Do. (Submontane)	11·2	8·1	9·03	8·33	+0·70
	Do. (Hill Districts)	19·5	15·3	23·11	16·67	+6·44
	Do. (North-West)	6·4	6·0	5·36	5·61	−0·25
	Do. (West)	1·9	2·7	1·14	2·10	−0·96
Bombay and Malabar Coast Districts (Madras).	Malabar	24·5	21·8	28·26	20·13	+8·13
	Madras (South Central)	8·1	5·6	4·93	3·49	+1·44
	Coorg	21·8	?	15·45	?	?
	Mysore*	?	?	4·67	5·31	−0·64
	Konkan	24·1	23·8	19·10	24·15	−5·05
	Bombay Deccan	9·0	9·9	5·24	6·01	−0·77
	Khandesh	6·8	8·6	2·68	5·99	−3·31
Central Provinces and Berar.	Berar*	?	?	3·24	7·70	−4·46
	Central Provinces (West)*	?	?	7·33	9·05	−1·72
	Do. (Central)*	?	?	13·86	13·23	+0·63
	Do. (East)*	?	?	15·10	12·16	+2·94
Bombay (North)	Gujarat	9·6	13·6	4·32	9·28	−4·96
	Kathiawar	4·3	7·4	2·01	6·28	−4·27
	Sind	0·5	?	0·19	1·94	−1·75
Rajputana and Central India.	Central India (East)	12·7	?	9·80	12·64	−2·84
	Rajputana (East), Central India (West)	6·9	?	8·72	9·68	−0·96
	Rajputana (West)	3·7	?	2·68	4·48	−1·80
Madras	East Coast (North)	9·8	10·1	5·76	6·86	−1·10
	Do. (do). (a)	19·5	17·7	9·07	12·75	−3·68
	Hyderabad (South)*	?	?	5·95	5·81	+0·14
	Madras (Central)	11·0	6·0	7·19	4·35	+2·84
	East Coast (Central)	9·9	5·2	5·09	3·06	+2·03
	Do. (South)	10·9	7·4	7·37	5·16	+2·21
	Madras (South)	4·5	3·3	2·69	2·02	+0·67

* NOTE.—The figures entered against divisions marked with an asterisk have been obtained from the weekly telegraphic reports.

In Assam rain fell daily in all districts from the 1st to the 26th or 27th. A short break of three days followed and rain recommenced on the 30th. The daily falls were generally very moderate, and the largest amount in 24 hours in the plain districts was 8·94 inches at Sunamganj in Sylhet. The following gives a summary of the data of the rainfall statement of the month published in the *Assam Gazette*, and indicates that the rainfall of the month was in slight excess in the Brahmaputra Division and in slight defect in the Surma Division.

The following gives a summary of the rainfall data for the month published in the *Assam Gazette*:—

Division.	Number of rainy days. Mean actual, August 1894.	Number of rainy days. Variation from normal.	Rainfall. Mean actual, August 1894.	Rainfall. Variation from normal.	Rainfall. Percentage variation from normal.
			Inches.	Inches.	
Surma	23·0	+1·9	18·07	−2·66	−13
Brahmaputra	19·1	+3·7	16·32	+2·46	+18

The rainfall of the month in the Assam Hill districts was very much below the normal. Jowai and Shillong received barely half their normal amount. The fall at Cherra Poonjee amounted to 68·88 inches or 11·16 nches below the normal (80·04 inches). The heaviest fall in 24 hours at that station during the month was 8·64 inches recorded at 8 A.M. on the 24th.

In the province of Bengal the month was one of steady and almost daily rainfall. The periods of most general and heaviest rainfall are given below:—

1st.—From the 1st to the 6th. During this period the whole province received moderate to heavy rain. The falls were largest in amount in North Bengal and lightest in Orissa. The following rainfalls exceeding 6 inches in 24 hours were recorded during this

period. They indicate where the precipitation was greatest:—

Date.	District.	Station.	Heaviest rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
3rd . .	Darjeeling .	Buxa	6·26
4th . .	Do.	Do.	6·93
5th . .	Do.	Siliguri . . .	6·47
5th . .	Dinajpur . .	Thakurgaon . . .	9·99

2nd.—From the 10th to the 18th. East Bengal received heavy rain from the 10th to the 14th and moderate rain during the remainder of the period. South-West and North Bengal, Chota Nagpur, and Orissa obtained moderate daily rain during the whole period, Bihar moderate to heavy rain from the 11th to the 14th and light local rain from the 15th to the 18th.

3rd.—From the 21st to the 27th. The whole of Bengal and Bihar had heavy rain during this period, Chota Nagpur moderate rain and Orissa light rain. The precipitation was most general and abundant on the 24th and 25th. The following rainfalls in 24 hours exceeding 6 inches were recorded during this period:—

Date.	District.	Station.	Heaviest rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
24th . .	Darjeeling .	Siliguri	6·50
24th . .	Tippera . .	Brahmanbaria . .	7·93
25th . .	Do. . .	Chandpur . . .	6·10
25th . .	Do. . .	Nasirnagar . . .	6·10
25th . .	Noakhali . .	Ramganj . . .	6·44
27th . .	Darjeeling .	Mungpoo . . .	7·36

The following gives comparative data for the eight divisions of the province:—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, August 1894.	Variation from normal.	Mean actual, August 1894.	Variation of actual from normal.	Percentage variation from normal.
			Inches.	Inches.	
Bengal, East .	19·4	+ 1·0	19·03	+ 2·36	+ 14
„ North .	21·1	+ 3·7	21·97	+ 2·58	+ 13
„ Deltaic .	16·2	− 0·1	11·27	− 1·42	− 11
„ Central .	17·9	+ 2·1	13·28	+ 1·11	+ 9
Orissa . .	14·7	− 0·8	9·99	− 1·49	− 13
Chota Nagpur .	21·0	+ 3·4	18·09	+ 3·32	+ 22
North Bihar .	17·5	+ 3·8	15·23	+ 3·73	+ 32
South Bihar .	17·8	+ 4·7	13·96	+ 2·68	+ 24

The preceding data indicate that rainfall was in excess in six out of the eight divisions, and was in slight defect in Deltaic Bengal and Orissa by amounts averaging about 11 per cent. of the normal. The rainfall was most considerably in excess in North Bihar (32 per cent.), over a considerable portion of which it was in marked defect in June and July. It was nearly 25 per cent. on the average in excess in South Bihar and Chota Nagpur, and between 10 and 20 per cent. in excess in East, Central and North Bengal.

The rainfall of the month was more than 23 per cent. in defect in the districts for which data are given below:—

District.	Rainfall.		
	Mean actual, August 1894.	Average normal, August.	Percentage variation from normal.
	Inches.	Inches.	
Midnapore	9·62	13·25	−27
Hooghly	8·24	14·21	−42
Howrah	7·65	14·28	−46
24-Parganas	7·93	13·02	−39
Cuttack	9·23	12·20	−24
Balasore	8·03	11·77	−32
Puri	8·28	11·46	−28

The rainfall was characterized also by very great irregularity in these districts, being in slight excess at some stations, and in very large defect at other (and sometimes neighbouring) stations.

The following gives examples:—

District.	Station.	Rainfall.		
		Mean actual, August 1894.	Average normal, August.	Variation from normal.
		Inches.	Inches.	Inches.
Cuttack . .	False Point .	14·39	13·72	+ 0·67
	Banki . .	3·94	10·71	− 6·77
Balasore . .	Chandbali . .	15·17	11·06	+ 4·11
	Soro . . .	4·06	11·03	− 6·97
	Balasore . .	6·74	12·42	− 5·68
24-Parganas .	Saugor Island .	17·20	15·06	+ 2·14
	Calcutta . .	4·82	13·51	− 8·69
Midnapore .	Contai . .	8·07	13·69	− 5·62
	Tamluk . .	17·99	13·80	+ 4·19
	Midnapore .	7·49	12·53	− 5·04
	Ghatal . .	19·71	15·46	+ 4·25

The rainfall of the month was more than 50 per cent. in excess in the districts for which data are given in the following table:—

Division.	District.	Rainfall. Mean actual, August 1894.	Average normal, August.	Variation from normal.	Percentage variation from normal.
		Inches.	Inches.	Inches.	
North Bihar.	Champaran	19·08	12·18	+6·90	+57
	Darbhanga	18·49	10·71	+7·78	+73
Chota Nagpur.	Palamau	21·19	11·56	+9·63	+83
	Manbhum	22·28	12·87	+9·41	+73

The month was one of steady and more or less heavy and general rain in the North-Western Provinces. Heavy rain was received in the eastern and central districts on the 1st and 2nd and on the 4th and 5th and also on the 10th and 11th. The rainfall during the interval from the beginning of the month to the 15th was light and sporadic in the south-western districts, more especially Jhansi, Etah, Agra, Muttra and Aligarh. The passage of the cyclonic storm of the third week of the month through the southern districts of the North-Western Provinces accompanied and was followed by steady general rain over the whole province which continued to the end of the month. The chief feature of the rainfall of the month, but more especially of the first half, was the steady downpour in the hill districts of Dehra Dun, Almora, Garhwal, Naini Tal and the submontane district of Bareilly. Falls in 24 hours of 8 inches and upwards in amount were recorded at the following raingauge stations in these districts:—

Date.	Station.	Heaviest rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
6th	Rajpur	8·00
16th	Mussooree	9·83
16th	Ambari	10·00

The following gives a summary of the complete rainfall data of the month as published in the *North-Western Provinces Gazette*:—

Divisions.	Number of rainy days. Mean actual, August 1894.	Variation from normal.	Rainfall. Mean actual, August 1894.	Average normal, August.	Percentage variation from normal.
			Inches.	Inches.	
Oudh, (North)	20·5	+8·8	20·81	10·44	+99
Do. (South)	18·5	+6·6	16·44	10·47	+57
N.-W.-P. (East)	20·2	+7·6	15·51	10·79	+44
Do. (Central)	17·2	+5·7	14·44	10·32	+40
Do. (Submontane)	19·6	+7·1	21·53	12·93	+67
Do. (West)	13·7	+3·3	11·81	8·69	+36

The rainfall of the month was most excessive in the districts for which data are given below:—

District.	Rainfall. Mean actual, August 1894.	Mean normal, August	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Gonda	21·71	11·42	+10·29	+90
Bahraich	22·13	10·52	+11·61	+110
Bara Banki	20·13	9·97	+10·16	+102
Sitapur	25·81	9·62	+16·19	+168
Kheri	21·93	11·48	+10·45	+91
Lucknow	19·27	10·68	+8·59	+80
Hardoi	19·31	10·06	+9·25	+92
Agra	14·70	8·28	+6·42	+78
Muttra	14·97	7·19	+7·78	+108
Aligarh	12·34	7·36	+4·98	+68
Pilibhit	28·38	13·72	+14·66	+107
Shahjahanpur	21·66	9·88	+11·78	+119
Bareilly	29·69	11·01	+18·68	+170
Moradabad	20·62	10·85	+9·77	+90
Dehra Dun	40·01	26·97	+13·04	+48
Almora	21·75	15·64	+6·11	+39
Gorakhpur	18·85	10·70	+8·15	+76

The preceding data indicate that over a considerable part of the province the rainfall of the month ranged from two to three times its normal amount, and was most excessive in the plain districts of Bareilly and Sitapur.

The following gives data for the hill stations of the

North-Western Provinces at which the precipitation was most excessive :—

District.	Station.	Rainfall.			
		Mean actual, August 1894.	Average normal, August.	Variation from normal.	Percentage variation, from normal.
		Inches.	Inches.	Inches.	
Dehra Dun	Mussooree	54·76	30·01	+24·75	+82
	Dehra Dun	31·95	24·73	+ 7·22	+29
	Ambari	40·00	22·62	+17·38	+77
	Rajpur	67·30	?	?	?
	Chakrata	27·43	17·34	+10·09	+58
Naini Tal	Rudarpur	23·89	12·63	+11·26	+89
	Naini Tal	27·82	23·96	+ 3·86	+16
	Haldwani	31·63	21·45	+10·18	+47
	Satarganj	28·80	18·41	+10·39	+56

The rainfall of the month was on the average of all the rainfall stations in each district above the normal in all districts. There were, however, some striking cases of large deficiency and of large excess occurring at neighbouring stations in the same district which form one of the more noteworthy occasional features of Indian Meteorology. The following gives the two most remarkable cases :—

District.	Station.	Rainfall.		
		Mean Actual, August 1894.	Average normal, August.	Variation from normal.
		Inches.	Inches.	Inches.
Bijnor	Bijnor	5·74	10·93	− 5·19
	Nagina	25·33	12·48	+12·85
Bulandshahr	Sikandarabad	4·23	7·42	− 3·19
	Bulandshahr	12·76	8·14	+ 4·62
	Anupshahr	4·45	8·78	− 4·33
	Khurja	7·27	7·21	+ 0·06
	Dayanatpur	13·40	6·69	+ 6·71

The mean rainfall in these two districts was in slight excess. In the Bijnor district, the rainfall was at one station only half its normal amount, and at another upwards of double the normal. In the case of the five raingauge stations in the Bulandshahr district one received its normal amount, two obtained only about half their normal fall, and of the remaining two, one 57 per cent. and the other 100 per cent. more than the normal.

More frequent showers were received in the Punjab than usual during the month; but the only period of fairly general rainfall was the 19th to the 22nd. The rainfall was exceptionally heavy and continuous in the hill d tricts, more especially in the first or outer ranges. During the first fortnight of the month light occasional showers were received in the plains in the south-eastern and sub-montane districts. Moderate to heavy rain fell from the 18th to the 23rd in the eastern districts, more especially in Umballa, Amritsar, Lahore, Gurdaspur and Hoshiarpur.

The following falls exceeding 3 inches in 24 hours were received in these districts during this period :—

Date.	District.	Station.	Heaviest rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
18th	Gurgaon	Hodal	4·30
19th	Gurdaspur	Pathankot	9·88
19th	Ditto	Gurdaspur	4·37
20th	Ditto	Ditto	3·07
20th	Ditto	Pathankot	3·11
21st	Ditto	Gurdaspur	5·88
21st	Ferozepore	Gobindgarh	3·10
22nd	Lahore	Van	3·08
22nd	Ditto	Chunian	3·55
22nd	Ludhiana	Samrala	4·48
22nd	Ditto	Ludhiana	6·25
23rd	Sialkot	Zafarwal	5·43

A few showers of little importance were received in the western and central districts during this period. During the last week of the month, moderate rain was received in the sub-montane and south-east districts, more especially in Hoshiarpur, Gurdaspur, Umballa, Sialkot, Amritsar, Jullundur, Gurgaon, Delhi, Rohtak and Rawalpindi districts.

The following table gives comparative data for the divisions of the province :—

Division.	Rainy days.			Rainfall.		
	Mean actual, August 1894.	Average normal, August.	Variation from normal.	Mean actual, August 1894.	Average normal, August.	Percentage variation from normal.
				Inches.	Inches.	
Punjab (South) .	5·4	4·3	+1·1	3·40	3·52	− 4
„ (Central) .	9·1	6·2	+2·9	6·67	5·27	+27
„ (Submontane)	11·2	8·1	+3·1	9·03	8·33	+ 8
„ (Hills) .	19·5	15·3	+4·2	23·11	16·67	+39
„ (North-West)	6·4	6·0	+0·4	5·36	5·61	− 4
„ (West) .	1·9	2·7	−0·8	1·14	2·10	−46

As already pointed out conditions were unfavourable to the occurrence of rainfall in the western and southern districts and the rainfall in these two divisions was small in amount and more or less considerably in defect.

No rain with the exception of one or two showers of no importance fell in British Baluchistan during the month.

A general break in the rains obtained over the whole of Rajputana during the first fortnight of the month. The eastern states of Jeypore, Dholpur, Ulwar, Bhurtpore and Kotah received moderate daily rain from the 17th to the end of the month. The heaviest falls in 24 hours occurred on the 17th and 18th, and hence during the advance of the only important depression of the month. The following falls exceeding 5 inches were received at raingauge stations in that area :—

Date.	State.	Station.	Heaviest rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
17th .	Bhurtpore . .	Kaman . . .	8·27
17th .		Bhusawar . . .	5·65
22nd .		Biana . . .	5·14
22nd .	Kerowlee . .	Kerowlee . . .	5·15

In the western and central states, including Jeysulmere, Bickaneer, Jodhpur and Ajmere, moderate to general rain was received from the 19th to the 24th, after which the break in the rains again set in. The rainfall of the month in the eastern states was more or less considerably above the normal, whilst it was in general defect in the western states, the deficiency being on the whole greatest in the divisions of Oodeypore, Bickaneer and Ajmere-Merwara. The following gives comparative data for the larger states :—

State.	Rainfall.			
	Mean actual, August 1894.	Average normal, August.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jeysulmere . . .	3·87	2·39	+1·48	+62
Jodhpur	2·59	4·87	−2·28	−47
Bickaneer . . .	1·48	3·47	−1·99	−57
Ajmere	3·30	6·75	−3·45	−51
Oodeypur . . .	3·33	8·68	−5·35	−62
Jeypore	9·56	9·44	+0·12	+ 1
Ulwar	7·32	10·57	−3·25	−31
Bhurtpore . . .	16·30	8·29	+8·01	+97
Dholpur	12·48	?	?	?
Kerowlee . . .	16·16	11·06	+5·10	+46
Kotah	6·79	10·49	−3·70	−35

In Central India light to moderate showers were received almost daily from the 1st to the 11th. General moderate rain fell during the next fortnight until the 25th and moderate local showers during the remainder of the month. The rainfall of the month was more irregularly distributed than usual, but was on the whole slightly less than the normal. The deficiency in the eastern states averaged 2·84 inches or 22 per cent. The following gives comparative data for the larger states, or agencies :—

State.	Rainfall.			
	Mean actual, August 1894.	Average normal, August.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Bhopal	8·17	12·85	−4·68	−36
Gwalior	8·85	10·38	−1·53	−15
Rewah	12·43	14·93	−2·50	−16
Bundelkhand . . .	12·79	13·70	−0·91	− 7

In the Central Provinces light to moderate showers were received daily from the 1st to the 10th. General and moderately heavy rain fell from the 11th to the 23rd. A

partial break in the rains set in on the 24th and continued until the end of the month.

The following gives a summary of the rainfall data for the month published in the *Central Provinces Gazette*:—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, August 1894.	Variation from normal.	Mean actual, August 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Central Provinces (East)	17·0	+3·7	15·72	+3·19	+25
Ditto (Central)	15·7	+1·6	13·32	+0·46	+ 4
Ditto (West) .	11·7	−1·1	7·98	−1·89	−19
Berar . . .	5·9	?	2·81	?	?

The previous table shews that the rainfall of the month was in moderate excess in the eastern division, normal in the central and in moderate defect in the western division of the Central Provinces. Berar obtained an average of only 2·81 inches, an amount very largely below the normal of the month.

General rain fell daily in the Konkan districts of the Bombay Presidency from the 1st to the 24th and light showers during the remainder of the month. Heavy rain was received in the North Kanara district in the 24 hours preceding 8 A.M. of the 9th, the following falls being registered at that hour :—

Station.	Heaviest rainfall in 24 hours preceding 8 A.M. of date.
	Inches.
Bhatkal	9·80
Honavar	9·53
Karwar	7·48
Kumta	7·33

With this one exception the rainfall of the coast districts was moderate throughout the whole period and the average total rainfall for the Konkan division was only 19·10 inches or 21 per cent. below the normal fall of that division for the month.

The Deccan districts of Dharwar, Bijapur, Belgaum, Satara and Poona received frequent daily showers from the 1st to the 22nd, but the daily amounts were small. Little or no rain fell between the 23rd and 30th. Light to moderate rain was received on the 31st. The rainfall of the month was somewhat irregularly distributed but was in slight defect in each district by amounts averaging 13 per cent. for the whole Deccan division. The division of Khandesh, including the districts of Khandesh, Nasik and Ahmednagar, received light occasional showers which gave much less rain than usual and the rainfall was very irregularly distributed as is shown by the following :—

District.	Rainfall.			Station in district which received least rainfall during month.	Rainfall.		
	Average actual, August 1894.	Average normal, August.	Variation from normal.		Actual August at station of least rainfall.	Average normal, August.	Variation from normal.
	Ins.	Ins.	Ins.		Inch.	Ins.	Ins.
Ahmednagar	1·28	3·78	−2·50	Nevasa .	0·19	4·31	−4·12
Nasik . .	4·70	7·97	−3·27	Nandgaon .	0·23	5·27	−5·04
Khandesh .	2·10	3·88	−1·78	Dhulia .	0·74	3·88	−3·14

Occasional light showers were received in Gujarat and Kathiawar during the first fortnight and light to moderate daily rain from the 18th to the 27th. A few showers fell in Sind on the 23rd and 24th.

The following gives comparative data for the six divisions of the presidency :—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, August 1894.	Variation from normal.	Mean actual, August 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Konkan	24·1	+0·3	19·10	−5·05	−21
Bombay Deccan . .	9·0	−0·9	5·24	−0·77	−13
Khandesh . . .	6·8	−1·8	2·68	−3·31	−55
Gujarat . . .	9·6	−4·0	4·32	−4·96	−53
Kathiawar . . .	4·3	−3·1	2·01	−4·27	−68
Sind	0·5	?	0·19	−1·75	−90

The preceding data indicate that the rainfall of the month was more or less in defect over the whole of the Bombay Presidency. The deficiency was moderate in amount in the Konkan and Deccan districts, but was large in Khandesh, Gujarat, Kathiawar and Sind, increasing in

percentage amount northwards. It may be noted that the Konkan and Deccan districts received rain chiefly during the first three weeks of the month when the Bombay current was determined more directly eastwards and across the Peninsula than usual, and that Gujarat and Kathiawar received rain chiefly during the remaining ten days when the current was by a change in the pressure conditions partly determined north-westwards across Rajputana to the Punjab.

The rainfall over the greater part of the Madras Presidency and in Mysore was more favourable than usual. Mysore received an average of 5·68 inches, 12 per cent. above the normal.

The Northern coast districts of Madras received occasional moderate rain, chiefly in the same periods as Orissa, or from the 1st to the 8th, the 15th to the 18th and the 20th to the 27th. The rainfall of the month was in slight to moderate defect in the East Coast North division, by amounts averaging 22 per cent. This was the only division in which rainfall was below the normal.

The Malabar Coast districts, as the Konkan, received general daily rain from the 1st to the 23rd, and showers during the remainder of the month. The South Canara district received an average of 5·20 inches on the 7th, 4·23 inches on the 8th, 4·63 inches on the 9th and 4·28 inches on the 10th, giving a total average of 18·34 inches for the district on four days. A large number of falls in 24 hours exceeding 5 inches were registered during this period in that area, the heaviest fall being 11·55 inches at Beltangadi. The rainfall of the month in the Malabar division averaged 28·26 inches or 40 per cent. above the normal.

The Southern and Coromandel coast districts obtained occasional local showers during the first three weeks of the month and moderate and general rain from the 24th to the end of the month. The southern districts of Salem and Coimbatore had a well-marked burst of rain from the 21st to the 28th.

The Central or Deccan districts had unusually frequent rain, the number of rainy days being nearly double the normal. The last week of the month was the period of most general rainfall in this area.

The following gives a summary of the rainfall data for the eight divisions of the Presidency:—

Division.	Rainfall.			
	Mean actual, August 1894.	Average normal, August.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madras, East Cast, North	5·76	6·86	−1·10	−16
Ditto ditto (a) .	9·07	12·75	−3·68	−29
Madras, Central . .	7·19	4·35	+2·84	+65
Madras, East Coast Central	5·09	3·06	+2·03	+66
Ditto, South .	7·37	5·16	+2·21	+43
Madras, South . .	2·69	2·02	+0·67	+33
Madras, South Central .	4·93	3·49	+1·44	+41
Malabar	28·26	20·13	+8·13	+40

The following table gives a comparative statement of the rainfall in each collectorate of the Presidency, and shows more fully than the previous table the distribution of the rainfall of the month:—

District.	No. of rainy days.		Rainfall.			Percentage variation from normal.
	Mean actual, August 1894.	Average normal, August.	Mean actual, August 1894.	Average normal, August.	Variation from normal.	
			Inches.	Inches.	Inches.	
Ganjam . .	9·5	11·0	5·42	7·66	−2·24	− 29
Vizagapatam .	12·3	12·5	7·15	9·05	−1·90	− 21
Godavari . .	8·5	8·2	5·16	5·79	−0·63	− 11
Kistna . .	9·1	8·6	5·03	5·84	−0·81	− 14
Nellore . .	9·9	5·2	5·09	3·06	+2·03	+ 66
Chingleput .	13·9	8·3	10·48	5·12	+5·36	+105
Madras . .	14·0	8·2	13·24	4·48	+8·76	+196
North Arcot .	10·8	7·6	6·28	5·43	+0·85	+ 16
South Arcot .	12·3	8·2	9·14	6·04	+3·10	+ 51
Tanjore . .	9·1	6·6	5·54	4·61	+0·93	+ 20
Trichinopoly .	7·8	5·9	4·87	4·34	+0·53	+ 12
Madura . .	6·3	4·3	3·64	2·75	+0·89	+ 32
Tinnevelly .	2·1	2·0	1·38	1·02	+0·36	+ 35
Malabar . .	23·6	19·6	19·33	16·45	+2·88	+ 18
South Canara .	26·0	24·8	44·12	25·43	+18·69	+ 73
Salem . .	9·6	6·9	6·21	4·58	+1·63	+ 36
Coimbatore .	6·0	4·0	3·09	2·19	+0·90	+ 41
Nilgiris . .	16·4	14·5	9·86	9·10	+0·76	+ 8
Cuddapah .	12·1	6·2	8·68	4·37	+4·31	+ 99
Anantapur .	9·5	5·7	6·39	3·98	+2·41	+ 61
Bellary . .	9·2	6·4	4·82	3·67	+1·15	+ 31
Kurnool . .	12·7	4·9	8·37	5·38	+2·99	+ 56

Table

Abstract of Observations taken at 8 A.M. at 206

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.		...	...	−·025	...	...	...	...	...	...	...	84·4	−0·1	75·4	+0·3	79·9	+0·1	9·0	...	...	...	...	16·3
Bay Islands	Port Blair	61	29·743	?	29·735	29·820	3rd	29·665	6th	·155	80·1	84·6	?	77·1	?	80·9	?	7·5	88·5	2nd & 27th, 6 days	74·7	17th	13·8
	Camorta†	?	29·846	?	?	29·910	3rd	29·800	28th	·110	79·7	85·1	?	75·7	?	80·4	?	9·4	87·5		72·8	13th	14·7
Tenasserim	Mergui	96	29·768	?	29·756	29·832	3rd	29·701	5th	·131	77·3	84·4	?	73·4	?	78·9	?	11·0	89·1	31st	72·0	30th	17·1
	Tavoy	26	29·844	?	29·801	29·904	3rd	29·771	5th	·133	76·6	82·6	?	73·5	?	78·1	?	9·1	88·7	26th	71·2	13th	17·5
	Moulmein	94	29·742	−·014	29·774	29·865	22nd	29·659	6th	·206	77·0	83·8	+0·6	74·3	+0·4	79·1	+0·5	9·5	89·5	25th	72·3	4 days	17·2
	Toungoo	181	29·594	−·024	29·718	29·702	22nd	29·501	6th	·201	77·7	85·9	−0·4	74·6	−0·3	80·3	−0·4	11·3	92·7	25th	73·2	4 days	19·5
Lower Burma	Rangoon	41	29·760	−·028	29·738	29·892	22nd	29·648	6th	·244	77·9	84·9	0	76·0	+0·3	80·5	+0·2	8·9	90·2	24th	73·9	3 days	16·3
	Bassein	27	29·759	−·025	29·721	29·875	22nd	29·642	6th	·233	79·0	85·3	+0·9	75·8	+0·2	80·6	+0·6	9·5	90·7	28th	73·3	19th	17·4
	Diamond Island.	41	29·744	−·035	29·720	29·853	22nd	29·622	6th	·231	80·3	83·4	−1·0	77·0	+1·3	80·2	+0·4	6·4	86·6	28th	73·4	21st	13·2
Arakan	Akyab	20	29·717	−·023	29·680	29·852	22nd	29·606	6th	·246	79·0	83·6	−0·8	76·5	−0·7	80·1	−0·8	7·1	89·2	27th	73·2	1st	16·0
II.—Burma Inland		...	...	−·035	...	...	...	...	...	...	...	86·3	−1·6	73·7	−0·2	80·0	−1·0	12·6	...	...	...	...	23·2
Central Burma	Thayetmyo	134	29·614	−·035	29·690	29·728	22nd	29·508	6th	·220	79·8	88·1	−0·7	76·4	+0·4	82·3	−0·2	11·7	92·6	29th	73·1	30th	19·5
	Minbu	?	29·569	?	?	29·691	31st	29·469	2 days	·222	79·2	89·4	?	76·1	?	82·8	?	13·3	96·6	29th	74·1	2 days	22·5
	Yamethin	?	29·099	?	?	29·210	22nd	29·002	6th	·208	77·6	87·7	?	74·3	?	81·0	?	13·4	96·1	29th	71·0	26th	25·1
	Fort Stedman,	?	26·834	?	?	26·934	22nd	26·704	11th	·230	72·3	82·1	?	68·0	?	75·1	?	14·1	90·1	22nd	64·0	26th	26·1
Upper Burma	Mandalay	?	29·475	?	?	29·615	31st	29·376	6th	·239	81·1	89·0	?	76·7	?	82·9	?	12·3	94·5	8th	73·6	2 days	20·9
	Kindat	?	29·347	?	?	29·494	22nd	29·216	11th	·278	78·8	86·3	−2·5	75·3	−0·8	80·9	−1·7	11·0	93·8	12th	72·5	3 days	21·3
	Lashio	?	26·964*	?	?	27·115	25th	26·876	14th	·239	71·4	80·8	?	67·9	?	74·4	?	12·9	90·0	29th	62·0	25th	28·0
	Bhamo	?	29·332*	?	?	29·472	22nd	29·204	2 days	·268	78·1	86·8	?	75·0	?	80·9	?	11·8	94·6	28th	72·8	10th	21·8
III.—Assam		...	...	−·016	...	...	...	...	...	...	...	87·2	−1·3	77·0	−0·6	82·1	−1·0	10·3	...	...	...	...	16·8
Assam (Surma)	Silchar	104	29·603	−·013	29·658	29·734	26th	29·471	11th	·263	79·7	88·9	−0·3	76·3	−0·4	82·6	−0·4	12·6	93·5	30th	74·3	24th	19·2
Brahmaputra	Sibsagar	333	29·362	−·022	29·649	29·492	31st	29·217	11th	·275	79·3	87·3	−2·5	77·1*	−0·7	82·2*	−1·6	10·2	93·2	30th	75·0	4th	18·2
	Dhubri	115	29·556	−·012	29·625	29·698	27th	29·410	12th	·288	79·0	85·5	−1·0	77·5	−0·7	81·5	−0·9	8·0	89·2	2 days	76·1	2nd	13·1
IV.—Bengal and Orissa		...	...	−·015	...	...	...	...	...	...	...	86·4	−1·0	77·2	−0·4	81·8	−0·7	9·2	...	...	...	...	16·7
East Bengal	Chittagong	87	29·624	−·015	29·659	29·758	23rd	29·504	12th	·254	79·2	85·1	−0·1	75·6	−0·4	80·3	−0·3	9·5	89·7	2 days	73·1	25th	16·6
	Lungleh	?	?	?	?	?	...	?	...	?	69·4	75·1	?	66·1	?	70·6	?	9·0	82·8	28th	58·2	8th	24·6
	Noakhali	43	29·638	?	29·628	29·774	27th	29·498	12th	·276	79·5	84·6	?	76·2	?	80·4	?	8·4	89·5	30th	71·8	25th	17·7
	Comilla	36	29·646	?	29·630	29·789	27th	29·504	12th	·285	79·2	85·7	?	75·9	?	80·8	?	9·8	91·3	29th & 30th,	72·8	25th	18·5
	Sirajganj	49	29·603	?	29·602	29·749	27th	29·467	12th	·282	80·4	85·7	?	78·0	?	81·9	?	7·7	89·3	5th	74·2	24th	15·1
	Narayanganj	26	29·639	−·015	29·613	29·789	27th	29·493	12th	·296	80·0	86·1	−1·6	78·0	−0·9	82·1	−1·3	8·1	90·6	30th	75·7	25th	14·9
	Barisal	13	29·645	−·012	29·603	29·797	27th	29·506	12th	·291	80·7	85·4	−0·9	77·0	−0·9	81·2	−0·9	8·4	92·3	30th	74·4	25th	17·9
	Mymensingh	59	29·608	−·018	29·618	29·750	27th	29·465	12th	·285	79·7	85·7	−1·5	77·3	−0·3	81·6	−0·9	8·4	91·2	30th	74·1	25th	17·1
Deltaic Bengal	Faridpur	46	29·623	?	29·617	29·775	26th	29·479	12th	·296	80·6	85·0	?	78·1	?	81·6	?	6·9	88·5	5th	74·9	25th	13·6
	Jessore	33	29·610	−·021	29·590	29·749	27th	29·480	2 days	·269	81·6	87·4	−1·3	77·3	−1·4	82·3	−1·4	10·1	92·0	30th	74·9	3 days	17·1
	Calcutta	21	29·615	−·014	29·582	29·772	26th	29·481	11th	·291	80·9	86·1	−1·0	77·9	−0·2	82·0	−0·6	8·2	90·6	30th	75·2	20th	15·4
	Saugor Island	25	29·613	−·016	29·582	29·766	26th	29·485	14th	·281	81·2	85·8	−1·4	79·1	−0·5	82·4	−1·0	6·7	89·2	2 days	75·0	26th	14·2
	Krishnagar	47	29·588	?	29·583	29·743	26th	29·457	11th	·286	81·6	87·8	?	78·0	?	83·0	?	9·8	90·8	30th	75·2	25th	15·6
	Midnapore	149	29·492	?	29·586	29·649	26th	29·360	14th	·289	81·4	83·0	?	77·3	?	83·1	?	11·7	92·8	30th	74·1	25th	18·7

* Mean of 30 days.
† " " 22 "

I.

Stations in India, Burma, etc., in August 1894.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26·97	25·86	+0·64	...	...	...	...	I.—Burma Coast and Bay Islands.	
3	...	...	...	...	3	13	11	1	9·8	9·6	+ 2	91	·934	8·5	19	P	P	14·50	15·20	− 0·70	47·80	49·97	− 2·17	2·65	Port Blair	Bay Islands.
1	...	...	...	...	12	9	...	...	7·9†	P	P	87	·877	7·2	12	P	P	10·79	P	P	...	?	?	1·947	Camorta*	
...	1	1	...	...	7	10	7	5	1·5	1·6	− 4	92	·866	6·4	26	P	P	32·47	28·85	+ 3·62	93·60	92·28	+ 1·32	3·45	Mergui	Tenasserim.
23	...	...	1	...	3	2	...	2	1·7	P	P	93	·856	9·0	30	P	P	46·97	P	P	141·71	P	P	4·35	Tavoy.	
...	...	...	2	7	10	6	4	2	9·5	3·2	+197	94	·870	8·5	27	26·18	+0·82	34·10	38·96	− 4·86	152·29	120·50	+31·79	3·32	Moulmein.	
2	1	...	...	21	7	...	...	...	2·8	3·9	−28	93	·892	9·3	24	23·91	+0·09	20·82	18·50	+ 2·32	55·17	51·02	+ 4·15	3·13	Toungoo.	
...	4	3	...	2	6	9	5	2	3·2	4·7	−32	95	·916	9·4	23	22·73	+0·27	18·95	18·19	+ 0·76	60·20	57·38	+ 2·82	2·34	Rangoon	Lower Burma.
5	...	...	...	3	16	3	1	3	3·9	3·4	+15	93	·920	7·0	22	25·27	−3·27	16·22	23·25	− 7·03	73·59	70·69	+ 2·90	1·69	Bassein.	
...	1	1	...	2	2	21	1	3	10·5	6·7	+57	87	·893	9·2	22	22·10	−0·10	26·26	22·69	+ 3·57	91·30	72·17	+19·13	5·65	Diamond Island.	
2	1	6	7	1	11	2	1	...	3·4	3·2	+ 6	94	·935	9·0	24	26·09	−2·09	48·68	41·26	+ 7·42	147·51	136·79	+10·72	7·29	Akyab	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11·43	9·78	+1·17	...	...	...	...	II.—Burma Inland.	
...	...	1	1	10	17	1	1	...	3·6	5·9	−39	86	·875	9·0	12	12·36	−0·36	6·97	6·57	+ 0·40	19·08	20·34	−1·26	2·44	Thayetmyo	Central Burma.
1	...	...	1	25	4	...	...	...	8·4	P	P	87	·877	3·6	8	P	P	4·86	P	P	16·04	P	?	1·93	Minbu.	
1	...	...	1	23	6	...	...	...	9·7	P	P	90	·853	7·1	18	P	P	7·56	P	P	18·90	P	?	1·27	Yamethin.	
20	...	1	...	...	...	7	2	1	P	P	P	89	·712	8·8	17	P	P	10·28	P	P	25·29	P	?	2·90	Fort Stedman	
6	...	...	1	9	12	3	...	...	7·0	P	P	85	·895	8·3	11	P	P	6·60	P	P	18·94	P	?	2·05	Mandalay	Upper Burma
18	1	1	1	5	2	2	1	...	0·8	P	P	93	·908	7·9	17	P	P	14·92	12·98	+ 1·94	51·35	38·52	+12·83	2·92	Kindat.	
...	8	11	...	...	...	8	...	4	P	P	P	92	·745	8·6	23	P	P	15·38	P	P	45·11	P	P	2·91	Lashio.	
25	...	1	...	1	..	1	...	3	1·3	P	P	92	·878	7·1	23	P	P	24·88	P	P	72·53	P	P	3·44	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18·98	16·48	+2·50	...	...	...	...	III.—Assam.	
29	...	...	...	1	...	...	...	1	2·5	3·0	−17	91	·926	9·4	28	22·00	+6·00	20·50	20·56	− 0·06	66·84	61·35	+ 5·49	2·46	Silchar	Assam (Surma)
14	...	3	2	1	1	9	...	1	2·5	2·7	− 7	95	·946	9·3	22	16·91	+5·09	24·05	14·93	+ 9·12	45·89	44·51	+ 1·38	4·85	Sibsagar	Brahmaputra
7	...	6	12	3	1	1	...	1	3·5	3·2	+9	92	·916	9·2	20	13·50	+6·50	12·39	13·95	− 1·56	36·52	54·72	−18·20	2·64	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14·75	13·58	+1·23	...	...	...	...	IV.—Bengal and Orissa.	
1	1	1	5	14	7	1	...	1	6·3	6·1	+3	91	·904	8·9	17	17·27	−0·27	15·93	16·76	− 0·83	62·13	58·07	+ 4·06	2·72	Chittagong	East Bengal.
			Not	reco	rded.				P	P	P	93	·669	P	25	P	P	21·29	P	P	58·33	P	P	2·78	Lungleh.	
...	...	1	8	12	6	3	1	...	6·3	P	P	91	·917	5·4	24	22·15	+1·85	36·36	25·33	+11·03	80·51	75·37	+ 5·14	4·85	Noakhali.	
2	...	...	12	10	7	...	...	...	5·6	P	P	95	·946	7·9	21	18·06	+2·94	15·52	17·65	− 2·13	56·31	53·76	+ 2·55	2·12	Comilla.	
10	...	...	3	13	4	1	...	...	2·8	P	P	92	·950	9·7	20	13·20	+6·80	12·41	11·23	+ 1·18	29·37	33·60	− 4·23	5·03	Sirajganj.	
...	...	...	4	15	8	2	2	...	8·5	6·0	+42	92	·947	9·0	19	17·36	+1·64	15·06	11·57	+ 3·49	43·82	37·12	+ 6·70	2·89	Narayanganj.	
19	...	...	...	5	5	2	...	...	3·6	P	P	90	·944	9·0	23	19·15	+3·85	16·64	12·48	+ 4·16	57·28	44·20	+13·08	2·01	Barisal.	
4	...	1	7	16	2	1	...	...	4·1	P	*P	92	·932	8·3	24	19·20	+4·80	23·86	13·96	+ 9·90	56·30	46·97	+ 9·33	4·40	Mymensingh.	
4	...	...	2	14	10	...	1	...	5·2	P	P	93	·969	7·8	22	15·95	+6·05	13·95	12·57	+ 1·38	43·42	36·91	+ 6·51	3·60	Faridpur	Deltaic Bengal.
3	...	...	1	10	11	2	2	2	3·3	4·1	−20	92	·988	8·8	13	18·18	−5·18	8·18	10·38	− 2·20	32·07	34·68	− 2·61	2·09	Jessore.	
7	...	...	...	2	9	9	2	2	3·7	5·3	−30	90	·945	8·9	16	18·91	−2·91	4·82	12·90	− 8·08	26·24	35·95	− 9·71	0·77	Calcutta.	
...	...	1	...	3	8	13	5	1	14·6	12·4	+18	90	·961	9·3	18	17·82	+0·18	17·20	16·55	+ 0·65	52·86	42·12	+10·74	3·90	Saugor Island.	
...	...	...	4	7	13	2	4	1	5·1	P	P	87	·937	7·2	22	14·40	+7·60	10·04	11·23	− 1·19	39·76	30·18	+ 9·58	1·05	Krishnagar.	
2	1	1	1	5	13	8	...	...	3·5	P	P	88	·939	4·7	17	16·35	+0·65	7·25	12·53	− 5·28	27·42	33·89	− 6·47	0·86	Midnapore.	

* Mean of 22 days.
† „ „ 21 „

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

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.
Central Bengal.	Bankura	298	29·313	?	29·561	29·464	26th	29·198	14th	·266	80·5	87·8	?	77·6	?	82·7	?	10·2	91·1	3 days	75·6	13th	15·5
	Raniganj	334	29·294	?	29·576	29·449	26th	29·169	11th	·280	80·2	87·7	?	77·3	?	82·5	?	10·4	91·2	3 days	74·4	25th	16·8
	Burdwan	99	29·529	−·025	29·574	29·680	26th	29·402	11th	·278	81·0	87·8	−1·4	78·9	0	83·3	−0·7	8·9	91·7	30th	76·7	2 days	15·0
	Naya Dumka	489	29·125	?	29·569	29·278	31st	29·009	15th	·269	79·8	86·4	?	76·6	?	81·5	?	9·8	91·1	30th	73·9	26th	17·2
	Berhampore	67	29·568	−·021	29·583	29·718	26th	29·443	11th	·275	80·4	86·5	−2·0	78·3	−0·2	82·5	−1·1	8·2	90·1	2 days	75·8	22nd	14·3
	Rampur Boalia.	70	29·564	?	29·583	29·704	26th	29·427	12th	·277	81·5	86·1	?	78·3	?	82·2	?	7·8	90·1	30th	75·6	24th	14·5
	Malda	72	29·551	?	29·575	29·706	31st	29·425	12th	·281	81·6	88·0	?	78·6	?	83·3	?	9·4	92·1	11th & 30th.	76·0	24th	16·1
	Bogra	61	29·587	−·004	29·600	29·730	2 days	29·457	12th	·273	80·9	87·5	−0·4	77·7	−0·3	82·6	−0·4	9·8	92·2	30th	73·7	24th	18·5
North Bengal	Dinajpur	123	25·533	−·005	29·610	29·687	31st	29·398	12th	·289	80·2	87·3	−1·4	77·8	−0·6	82·6	−1·0	9·5	90·6	3 days	74·7	25th	15·9
	Rangpur	123	29·535	?	29·611	29·672	27th	29·397	12th	·275	80·7	87·8	?	77·4	?	82·6	?	10·4	92·3	30th	73·7	25th	18·6
	Jalpaiguri	284	29·385	−·006	29·626	29·535	31st	29·243	12th	·292	79·5	86·7	−1·1	76·6	+0·5	81·7	−0·3	10·1	91·4	19th	73·1	23rd	18·3
Orissa	Balasore	56	29·573	−·015	29·575	29·741	26th	29·459	14th	·282	81·1	87·2	−0·1	77·7	−0·1	82·4	−0·1	9·5	90·4	2 days	75·3	22nd	15·1
	False Point	21	29·633	?	29·596	29·783	23rd	29·509	6th	·274	81·1	86·4	−0·6	77·5	−0·7	82·0	−0·7	8·9	89·0	30th	75·1	2 days	13·9
	Cuttack	80	29·557	−·022	29·579	29·714	26th	29·435	7th	·279	82·3	89·0	−0·3	78·0	−0·2	83·5	−0·3	11·0	93·2	2 days	73·8	1st	19·4
	Shortt's Island	?	29·623	?	?	29·778	26th	29·438	17th	·340	82·2	87·3	?	78·2	?	82·7	?	9·1	91·2	30th	75·4	1st	15·8
	Puri	15	29·629	?	29·584	29·773	26th	29·498	7th	·275	82·6	88·0	?	79·2	?	83·6	?	8·8	91·7	7th	74·1	2nd	17·6
V.—Gangetic Plain and Chota Nagpur.		...	...	−·021	...	...	...	...	...	...	...	86·9	−2·0	77·0	−0·9	82·0	−1·5	9·9	...	...	...	...	17·8
Chota Nagpur	Hazaribagh	2,007	27·621	−·028	29·563	27·765	26th	27·489	15th	·276	75·0	83·1	−0·5	72·8	−0·1	78·0	−0·3	10·3	87·7	10th	67·8	26th	19·9
	Daltonganj	730?	28·881	?	29·562	29·064	26th	28·746	14th	·318	79·1	86·8*	?	76·3	?	81·6*	?	10·5	91·3	10th & 31st	72·0	26th	19·3
	Ranchi	2,128	27·509	?	29·565	27·656	26th	27·383	14th	·273	74·9	82·2	?	72·0	?	77·1	?	10·2	86·5	30th	69·4	12th	17·1
	Chaibassa	760	28·853	−·014	29·557	29·018	26th	28·722	14th	·296	79·1	88·0	−0·6	75·7	−0·9	81·9	−0·8	12·3	91·9	29th & 30th.	71·2	26th & 27th.	20·7
Bihar (South)	Gaya	375	29·238	−·016	29·565	29·390	31st	29·123	15th	·267	80·1	88·3	−1·8	77·3	−1·2	82·8	−1·5	11·0	92·9	9th	73·3	24th	19·6
	Dehri	351	29·260	?	29·562	29·402	26th	29·136	14th	·266	81·7	87·4*	?	78·0	?	82·7*	?	9·4	93·3	4th	74·0	28th	19·3
	Patna	183	29·432	−·021	29·566	29·595	31st	29·315	14th	·280	82·0	87·0	−2·3	78·7	−0·8	82·9	−1·6	8·3	91·5	9th	75·7	26th	15·8
	Arrah	190	29·412	?	29·552	29·564	25th	29·290	14th	·274	81·5	88·5	?	78·5	?	83·5	?	10·0	92·9	31st	75·5	25th & 26th.	17·4
	Buxar	239	29·365	?	29·558	29·520	26th	29·245	5th & 14th.	·275	80·5	86·8	?	77·1	?	82·0	?	9·7	92·0	10th	72·8	31st	19·2
Bihar (North)	Purnea	125	29·511	−·012	29·589	29·681	31st	29·380	12th	·301	81·5	88·0	−1·2	78·5	+0·6?	83·2	−0·3?	9·5	91·2	31st	75·7	24th	15·5
	Bhagalpur	160	29·455	?	29·567	29·608	31st	29·334	12th	·274	82·0	88·1	?	77·4	?	82·8	?	10·7	91·7	9th	73·5	31st	18·2
	Darbhanga	166	29·455	−·027	29·574	29·619	31st	29·339	5th	·280	81·3	86·6	−1·8	78·1	−1·0	82·4	−1·4	8·5	92·0	31st	75·7	24th	16·3
	Muzaffarpur	178	29·439	?	29·569	29·608	31st	29·324	5th	·284	80·7	87·6	?	78·2	?	82·9	?	9·4	92·2	31st	74·2	25th	18·0
	Motihari	224	29·403	?	29·583	29·561	31st	29·281	5th	·280	81·1	87·2	?	77·2	?	82·2	?	10·0	92·0	9th & 31st.	74·9	25th	17·1
	Chapra	181	29·429	?	29·562	29·584	31st	29·315	5th	·269	81·0	87·8	?	78·3	?	83·1	?	9·5	91·8	31st	75·6	25th	16·2
N.-W. P. (Eastern Districts).	Benares	267	29·330	−·021	29·552	29·474	26th & 31st.	29·213	17th	·261	80·4	86·9	−2·8	77·1	−1·7	82·0	−2·3	9·8	90·3	9th & 30th.	74·5	1st	15·8
	Allahabad	309	29·284	−·026	29·547	29·435	26th	29·162	17th	·273	81·0	87·5	−2·3	77·7	−0·8	82·6	−1·6	9·8	91·6	9th	74·3	1st	17·3
N.-W. P. (East Submontane).	Gorakhpur	256	29·347	−·019	29·563	29·517	31st	29·209	6th	·308	80·2	86·5	−3·6	77·4	−1·5	82·0	−2·6	9·1	90·4	9th & 31st.	74·7	25th	15·7
Oudh (South)	Lucknow	370	29·221	−·027	29·549	29·384	31st	29·111	5th	·273	80·0	87·1	−3·5	77·0	−1·5	82·1	−2·5	10·1	91·3	27th	75·1	4 days	16·2
Oudh (North)	Bahraich	403	29·184	?	29·547	29·364	31st	29·051	5th	·313	80·4	86·9	?	76·7*	?	81·8*	?	10·2	91·4	16th	70·0	3rd	21·4
N.-W. Provinces (Central).	Cawnpore	416	29·165	?	29·539	29·317	31st	29·051	5th	·266	80·3	86·8	?	77·4	?	82·1	?	9·4	91·3	3 days	74·0	2nd	17·3
	Mainpuri	516	29·059	?	29·533	29·189	31st	28·906	5th	·283	80·4	87·6	?	77·4	?	82·6	?	10·2	92·8	13th	75·0	30th	17·8

* Mean of 30 days.

I—*continued.*

in India, Burma, etc., in August 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
20	...	...	2	4	...	2	2	1	2·9	?	?	90	·932	7·9	22	17·70	+4·30	12·41	14·35	− 1·94	38·07	36·17	+ 1·90	2·10	Bankura .	Central Bengal.
9	1	...	3	7	5	1	4	1	1·4	?	?	92	·952	6·6	23	16·85	+6·15	18·93	13·60	+ 5·33	43·63	35·70	+ 7·93	4·89	Raniganj.	
3	...	1	4	7	6	6	3	1	2·8	3·6	−22	88	·930	9·3	18	18·09	−0·09	10·52	11·26	− 0·74	32·81	32·64	+ 0·17	3·04	Burdwan.	
3	...	...	8	8	4	3	2	3	4·1	?	?	90	·916	8·1	24	18·63	+5·37	15·66	13·35	+ 2·31	42·89	35·65	+ 7·24	2·45	Naya Dumka.	
5	...	...	3	9	9	2	2	1	2·7	4·2	−36	94	·977	9·5	22	16·73	+5·27	16·10	11·43	+ 4·67	36·29	31·71	+ 4·58	1·92	Berhampore.	
9	...	1	5	7	6	3	...	...	4·9	?	?	91	·981	6·7	21	15·45	+5·55	13·67	12·05	+ 1·62	32·18	33·37	− 1·19	2·37	Rampur Boalia.	
4	2		1	16	2	5	...	...	2·6	?	?	91	·978	7·6	18	14·35	+3·65	12·69	9·95	+ 2·74	24·83	32·50	− 7·67	2·51	Malda.	
7	...	...	6	18	...	...	...	...	2·8	?	?	90	·947	6·8	19	15·85	+3·15	15·34	11·80	+ 3·54	35·71	39·29	− 3·58	4·96	Bogra.	
4	...	...	12	8	6	1	...	...	?	?	?	92	·951	8·6	15	16·25	−1·25	17·30	12·48	+ 4·82	38·13	42·69	− 4·56	5·00	Dinajpur .	North Bengal.
4	...	...	14	10	3	...	...	...	2·9	?	?	90	·946	7·5	19	13·10	+5·90	15·10	12·06	+ 3·04	32·36	48·05	−15·69	3·77	Rangpur.	
...	2	4	12	11	...	1	...	1	3·1	?	?	92	·927	8·0	20	18·80	+1·20	37·19	24·94	+12·25	80·66	81·16	− 0·50	4·40	Jalpaiguri.	
3	1	...	1	...	7	17	2	...	5·3	?	?	93	·991	5·1	12	16·70	−4·70	6·59	12·38	− 5·79	39·34	33·32	+ 6·02	2·61	Balasore .	Orissa.
1	...	...	1	...	5	14	8	2	9·6	9·5	+ 1	89	·942	8·1	20	16·09	+3·91	14·39	12·77	+ 1·62	42·84	32·52	+10·32	1·73	False Point.	
8	...	...	1	...	1	14	7	...	3·0	2·6	+15	79	·872	7·3	11	16·18	−5·18	6·55	13·50	− 6·95	36·40	34·78	+ 1·62	1·34	Cuttack.	
1	...	1	...	...	5	20	3	1	19·0	?	?	84	·923	7·2	10	?	?	6·32	?	?	36·05	?	?	2·67	Shortt's Island	
10	2	...	...	...	1	8	8	2	10·7*	?	?	84	·945	6·7	13	13·25	−0·25	5·16	9·24	− 4·08	22·19	27·61	− 5·42	0·76	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16·03	11·73	+4·06	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**	
3	1	...	3	5	9	3	5	2	7·4	7·5	− 1	91	·797	10·0	23	18·27	+4·73	15·07	12·94	+ 2·13	44·38	35·07	+ 9·31	3·82	Hazaribagh.	Chota Nagpur.
...	3	1	1	3	2	12	7	2	1·5	?	?	90	·902	7·3	22	?	?	21·19	?	?	46·95	?	?	3·58	Daltonganj.	
7	2	1	2	2	5	8	3	1	4·2	?	?	91	·789	8·8	21	17·85	+3·15	22·29	13·88	+ 8·41	48·05	36·04	+12·01	2·96	Ranchi.	
1	1	1	1	...	...	11	12	4	1·8	?	?	88	·880	9·5	17	17·20	−0·20	14·98	13·25	+ 1·73	37·05	35·03	+ 2·02	2·53	Chaibassa.	
...	...	3	13	4	3	3	3	2	5·6	2·6	+115	89	·914	6·6	24	13·73	+10·27	15·58	13·54	+ 2·04	44·63	33·90	+10·73	1·95	Gaya . .	Bihar (South).
4	...	...	8	4	4	6	3	2	13·2	?	?	87	·944	8·7	14	13·14	+0·86	20·21	12·78	+ 7·43	50·77	28·68	+22·09	3·46	Dehri.	
6	...	...	15	5	...	1	3	1	4·9	3·2	+53	87	·950	9·6	15	13·73	+1·27	8·66	12·65	− 3·99	26·74	32·85	− 6·11	1·14	Patna.	
1	5	5	2	5	4	3	4	2	2·2	?	?	91	·978	8·2	19	12·55	+6·45	12·66	10·93	+ 1·73	40·41	27·91	+12·50	3·58	Arrah.	
...	1	4	14	1	4	3	3	1	4·2	?	?	91	·949	8·5	19	12·60	+6·40	16·52	10·22	+ 6·30	33·43	26·25	+7·18	2·84	Buxar.	
3	1	3	15	7	...	1	...	1	4·0	2·3	+74	90	·963	7·9	20	17·64	+2·36	11·70	14·44	− 2·74	33·41	40·52	−7·11	1·86	Purnea .	Bihar (North).
3	...	1	7	13	3	2	2	...	3·8	?	?	88	·960	8·9	14	13·70	+0·30	12·77	10·15	+ 2·62	37·73	29·02	+8·71	2·41	Bhagalpur.	
2	...	1	12	11	1	2	1	1	4·4	4·4	0	89	·947	7·7	22	14·27	+7·73	20·02	13·54	+ 6·48	28·51	34·96	−6·45	6·04	Darbhanga.	
3	...	1	12	11	...	...	2	2	4·8	?	?	92	·962	6·9	13	13·25	−0·25	9·61	10·34	− 0·73	23·10	29·68	−6·58	2·09	Muzaffarpur.	
4	...	13	14	...	...	...	...	...	5·7	?	?	89	·949	7·3	21	12·22	+8·78	17·89	11·53	+ 6·36	32·15	29·87	+2·28	2·16	Motihari.	
6	...	1	11	9	1	...	2	1	5·4	?	?	91	·959	9·6	18	12·25	+5·75	12·03	9·91	+ 2·12	35·84	28·23	+7·61	2·22	Chapra.	
12	...	4	3	...	2	8	2	...	4·1	4·2	− 2	92	·962	9·0	19	14·27	+4·73	16·51	11·83	+ 4·68	38·47	27·70	+10·77	3·06	Benares .	N.-W. P. (Eastern Districts).
1	2	4	5	1	1	4	8	5	5·5	3·5	+ 57	89	·943	9·7	17	13·91	+3·09	13·14	11·10	+ 2·04	42·99	29·12	+13·87	1·64	Allahabad.	
...	1	1	9	5	9	1	4	1	1·6	2·3	− 30	89	·924	7·5	19	13·55	+5·45	14·40	11·93	+ 2·47	34·20	35·28	−1·08	2·06	Gorakhpur .	N.-W. P. (East Submontane).
14	...	...	15	...	1	1	...	...	?	3·0	?	91	·926	9·1	19	12·36	+6·64	26·10	11·78	+14·32	44·58	28·46	+16·12	5·16	Lucknow .	Oudh (South).
1	...	2	6	17	...	3	...	2	3·6	?	?	90	·940	6·2	19	?	?	19·44	9·50	+ 9·94	39·11	27·63	+11·48	4·05	Bahraich .	Oudh (North).
4	...	1	5	3	1	7	8	2	3·6	?	?	90	·940	8·2	21	11·7	+9·3	19·71	10·21	+ 9·50	35·48	23·29	+12·19	2·58	Cawnpore .	N.-W. Provinces (Central).
23	...	1	1	2	1	2	...	1	0·7	?	?	90	940	9·4	9	?	?	12·21	9·84	+ 2·37	21·40	23·91	+0·49	1·80	Mainpuri.	

* Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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		...	...	−·033	...	...	...	...	...	...	...	90·0	−2·1	77·0	−0·3	83·5	−1·2	13·0	...	...	...	...	22·6
N.-W. Provinces (Submontane).	Bareilly	568	29·016	−·021	29·546	29·162	31st	28·894	5th	·268	79·0	85·9†	−4·1	77·1	−0·9	81·5†	−2·5	8·8	89·8	1st	74·6	3 days	15·2
	Dehra Dun	2,233	27·399	−·035	29·564	27·539	31st	27·275	5th	·264	74·5	81·9	−2·0	72·3	−0·9	77·1	−1·5	9·6	86·5	20th	70·0	16th	16·9
	Roorkee	887	28·093	−·035	29·540	28·836	31st	28·558	10th	·278	79·6	89·0	−1·7	76·6	−0·4	82·8	−1·1	12·4	93·2	9th & 13th.	72·6	14th	20·6
	Meerut	738	28·837	−·030	29·534	28·969	27th & 31st.	28·722	5th & 12th.	·247	80·9	89·1	−1·5	77·6	−0·7	83·4	−1·1	11·5	94·5	13th	74·9	16th & 18th.	19·6
Punjab (Central)	Delhi	718	28·859	−·026	29·535	28·996	31st	28·730	5th	·268	81·5	89·4	−2·2	78·6	−0·5	84·0	−1·4	10·8	97·0	13th	74·9	18th	22·1
	Lahore	702	28·837	−·042	29·495	28·980	31st	28·690	10th	·290	86·1	95·4	−0·6	80·4	+1·5	87·9	+0·5	15·0	102·8	10th	76·6	26th	26·2
Punjab (Submontane).	Umballa	962?	28·677?	?	29·537?	28·817	27th	28·534	5th	·283	80·1	92·5	?	76·8	?	84·7	?	15·7	99·0	14th	71·0	5th	28·0
	Ludhiana	812	28·751	−·036	29·523	28·892	31st	28·608	10th	·284	82·1	92·4	−2·9	78·2	−0·5	85·3	−1·7	14·2	98·5	14th & 16th.	74·6	27th	23·9
Punjab (North)	Sialkot	830	28·721	−·036	29·513	28·871	31st	28·568	5th	·303	82·1	93·0	−1·0	77·3	0	85·2	−0·5	15·7	99·7	2 days	71·3	22nd	28·4
	Rawalpindi	1,652	27·916	−·040	29·480	28·044	31st	27·745	5th	·299	79·7	91·0	−2·5	75·0	−0·1	83·0	−1·3	16·0	95·5	16th	69·7	18th	25·8
VII.—Indus Valley and N.-W. Rajputana.		...	...	−·027	...	...	...	...	...	...	...	97·4	+0·2	79·7	+0·3	88·6	+0·3	17·7	...	...	...	...	27·1
Punjab (West)	Peshawar	1,110	28·456	−·025	29·478	28·571	31st	28·275	5th	·296	84·4	99·4	+0·4	78·5	+0·7	89·0	+0·6	20·9	105·0	6th	72·4	20th	32·6
	Mardan	?				Not recorded.					85·4	99·1	?	78·3	?	88·7	?	20·8	103·2	16th	70·0	7th	32·2
	Khushab	612	28·899	?	29·468	29·027	31st	28·741	5th & 10th.	·286	86·8	100·3	?	82·1	?	91·2	?	18·2	106·0	10th	77·0	12th & 18th.	29·0
	Montgomery	558	28·967	?	29·480	29·107	31st	28·827	5th & 10th.	·280	89·1	103·3	?	82·9	?	93·1	?	20·4	109·4	10th	77·5	22nd	31·9
	D. I. Khan	573	28·935	−·051	29·468	29·074	22nd	28·759	10th	·315	86·4	101·1	−0·4	81·8	+0·7	91·5	+0·2	19·3	106·1	16th	76·9	12th	29·2
	Mooltan	420	29·105	−·035	29·488	29·233	31st	28·963	5th	·270	86·0	99·9	−0·4	82·7	+0·7	91·3	+0·2	17·2	104·9	19th	77·1	19th	27·8
	Sirsa	662	28·891	−·035	29·507	29·017	27th	28·767	10th	·250	85·3	100·9	+3·4	81·3	+1·8	91·1	+2·6	19·6	108·4	15th	78·4	18th & 28th.	30·0
Sind and Cutch	Jacobabad	186	29·346	−·016	29·490	29·496	31st	29·196	5th	·300	85·2	103·9	+0·4	81·4	0	92·7	+0·2	22·5	107·4	16th	77·1	23rd	30·3
	Hyderabad	117	29·451	−·008	29·520	29·590	31st	29·333	5th	·257	81·4	94·2	−1·1	78·4	−0·1	86·3	−0·6	15·8	98·7	22nd	76·0	31st	22·7
	Kurrachee	49	29·564	−·025	29·564	29·692	31st	29·445	6th	·247	81·2	87·2	−0·5	78·4	0	82·8	−0·3	8·8	90·0	3 days	76·8	31st	13·2
	Bhuj	395	29·249	−·017	29·597	29·380	26th	29·131	11th	·249	79·2	87·4	−1·0	75·9	−0·3	81·7	−0·7	11·5	92·4	19th	71·9	30th	20·5
Rajputana (West)	Bickaneer	753	28·818	?	29·520	28·961	31st	28·721	6th	·240	84·0	97·6	+1·3	79·3	−1·1	88·5	+0·1	18·3	104·1	10th	76·0	29th	28·1
	Pachpadra	380	29·194	?	29·528	29·353	26th	29·055	1st	·298	81·0	92·1	?	75·2	?	83·7	?	16·8	96·5	10th & 22nd.	72·6	4th	23·9
VIII.—East Rajputana, Central India and Gujarat.		...	...	−·016	...	...	...	...	...	...	...	86·9	−0·6	75·3	−0·2	81·2	−0·4	11·6	...	...	...	...	19·8
Rajputana (East)	Jeypore	1,431	28·196	−·017	29·578	28·327	31st	28·112	6th	·215	78·5	89·5	−0·4	75·0	0	82·3	−0·2	14·5	98·5	15th	72·0	28th	26·5
	Sambhar	1,254	28·355	−·016	29·562	28·486	31st	28·274	6th	·212	79·3	89·9	+0·7	75·2	−0·7	82·6	0	14·7	97·5	15th	72·9	31st	24·6
	Ajmere	1,611	28·027	−·016	29·592	28·151	27th	27·936	5th	·215	77·7	86·3	−1·2	74·6	+0·1	80·5	−0·6	11·7	91·9	3 days	72·6	3 days	19·3
	Deesa	466	29·193	−·015	29·618	29·327	26th	29·097	11th	·230	78·1	87·2	−1·1	74·5	−0·8	80·9	−1·0	12·7	91·8	10th	71·0	29th	20·8
Kathiawar	Rajkot	429	29·253	−·017	29·636	29·376	26th	29·156	11th	·220	79·0	88·5	−0·2	74·0	−0·5	81·3	−0·4	14·5	91·4	21st	69·8	3 days	21·6
	Veraval	?	29·699	?	29·659	29·843	26th	29·597	11th	·246	79·3	82·8	?	77·8	?	80·3	?	5·0	85·1	31st	74·8	31st	10·3
Central India	Nowgong	757	28·849	−·027	29·560	28·989	27th	28·725	17th	·264	78·8	86·5	−1·8	76·6	−0·1	81·6	−1·0	9·9	89·5	13th	74·9	11th	15·5
	Indore	1,823	27·870	−·009	29·641	28·005	26th	27·773	17th	·232	73·8	82·4	−0·2	71·1	−0·1	76·8	−0·3	11·3	87·5	31st	68·6	18th	18·9
	Neemuch	1,630	28·041	?	29·623	28·165	26th	27·954	17th	·211	76·0	84·4	−0·1	71·9	−0·4	78·2	−0·3	12·5	89·8	10th	70·1	6th & 28th.	19·7
Gujarat	Surat	36	29·690	−·011	29·669	29·822	26th	29·606	19th	·216	80·1	87·5	+0·6	76·7	+0·5	82·2	+0·6	10·8	92·1	9th	74·0	19th	18·1
	Ahmedabad	176	29·528*	?	29·654*	29·664	26th	29·439	17th	·225	79·7*	88·5‡	?	76·4*	?	82·5‡	?	12·1	92·7	10th	72·1	19th	20·6
N.-W. P. (West)	Agra	555	29·024	?	29·535	29·136	27th	28·912	5th	·224	80·8	88·7	−1·7	77·9	−0·7	83·3	−1·2	10·8	96·5	6th & 10th.	74·8	26th & 30th.	21·7
	Jhansi	858	28·754	−·020	29·564	28·893	31st	28·645	17th	·248	80·2	87·8	−0·7	77·2	+0·5?	82·5	−0·1?	10·6	94·1	9th	73·9	27th	20·2

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

I—*continued.*

in India, Burma, etc., in August 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	..	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	12·86	11·86	+1·00	...	...	...	...	VI.—Upper Sub-Himalayas.	
11	1	...	...	18	...	...	...	1	1·7	3·6	− 53	91	·900	9·1	21	12·18	+8·82	30·37	14·51	+15·86	50·05	36·36	+13·69	5·11	Bareilly .	N.-W. Provinces (Submontane).
24	...	...	...	2	3	1	1	...	5·9*	1·1	+436	94	·809	9·3	30	21·30	+8·70	32·74	30·00	+ 2·74	95·35	68·50	+26·85	4·05	Dehra Dun.	
17	...	...	1	8	5	...	...	...	2·8*	2·5	+ 12	88	·880	8·5	15	11·64	+3·36	13·50	13·59	− 0·09	39·61	30·75	+ 8·86	3·21	Roorkee.	
15	...	...	8	3	...	2	3	...	1·4	2·1	− 33	85	·884	8·7	12	11·36	+0·64	6·34	10·59	− 4·25	17·86	22·57	− 4·71	1·47	Meerut.	
12	...	1	6	2	...	...	9	1	2·3	4·1	− 44	82	·875	8·1	18	9·82	+8·18	11·58	9·35	+ 2·23	23·53	21·92	+ 1·61	2·40	Delhi . .	Punjab (Central).
4	1	1	8	11	3	1	2	...	2·6	2·9	− 10	74	·916	2·7	4	6·45	−2·45	3·60	5·83	− 2·23	14·68	14·34	+ 0·34	1·64	Lahore.	
17	...	...	1	12	...	1	...	...	1·2	?	?	95	·976	7·5	10	?	?	10·91	7·75	+ 3·16	29·66	22·44	+ 7·22	3·08	Umballa .	Punjab (Submontane).
5	...	3	...	14	5	3	1	...	2·6	1·4	+ 86	84	·917	7·7	6	7·82	−1·82	6·00	6·94	− 0·94	25·13	19·68	+ 5·45	1·99	Ludhiana.	
18	...	...	13	...	...	...	...	...	1·5	2·3	− 35	82	·897	4·6	8	9·27	−1·27	7·64	10·87	− 3·83	23·13	22·47	+ 0·66	2·19	Sialkot .	Punjab (North).
11	3	3	6	4	1	...	...	3	0·7	1·6	− 56	86	·885	4·9	9	9·91	−0·91	6·49	9·16	− 2·67	23·86	19·62	+ 4·24	2·81	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·26	2·43	−1·45	...	...	...	...	VII.—Indus Valley N.-W. Rajputana.	
9	14	3	1	...	...	...	...	4	3·6	4·0	− 10	72	·838	2·7	1	1·82	−0·82	0·41	2·70	− 2·29	2·15	4·84	− 2·69	0·36	Peshawar	Punjab (West).
			Not recorded.						?	?	?	?	?	?	8	?	?	4·64	?	?	11·50	?	?	1·50	Mardan.	
...	...	29	...	2	...	...	...	...	6·8	?	?	70	·869	2·3	2	2·7	−0·7	0·28	2·01	− 1·73	12·17	5·57	+ 6·60	0·14	Khushab.	
...	...	1	4	3	2	17	4	...	9·4	?	?	65	·876	2·4	2	3·2	−1·2	1·02	2·34	− 1·32	4·78	6·69	− 1·91	0·50	Montgomery.	
20	...	5	5	1	...	...	...	...	1·9	2·1	− 10	79	·997	1·6	1	2·27	−1·27	0·15	1·43	− 1·28	6·30	4·84	+ 1·46	0·15	D. I. Khan.	
5	...	1	1	14	...	9	...	1	1·6	3·2	− 50	73	·898	2·6	3	2·00	+1·00	2·91	1·58	+ 1·33	4·49	5·11	− 0·62	1·33	Mooltan.	
3	1	...	4	2	...	6	14	1	7·6	4·6	+ 65	68	·820	5·3	8	5·55	+2·45	2·50	4·11	− 1·61	11·31	10·60	+ 0·71	0·98	Sirsa.	
3	...	...	3	20	5	...	...	...	5·3	4·0	+ 33	71	·868	2·2	0	1·64	−1·64	0·05	1·27	− 1·22	0·27	2·67	− 2·40	0·05	Jacobabad .	Sind and Cutch.
...	...	...	...	...	4	18	9	...	31·6	13·8	+129	72	·761	2·8	0	3·36	−3·36	0·05	2·51	− 2·46	9·57	5·51	+ 4·06	0·05	Hyderabad.	
...	...	...	...	...	...	15	16	...	15·8	17·2	− 8	80	·848	9·1	0	2·36	− 2·36	0	1·55	− 1·55	18·63	5·54	+13·09	0	Kurrachee.	
...	...	...	...	...	...	22	9	...	18·3	14·9	+ 23	79	·803	8·0	0	?	?	0·14	2·70	− 2·56	26·32	11·58	+14·74	0·06	Bhuj.	
...	...	...	...	...	9	19	2	1	8·5	6·2	+ 37	67	·781	4·7	4	?	?	1·48	3·12	− 1·64	9·06	8·45	+ 0·61	0·60	Bickaneer .	Rajputana (West).
2	...	...	...	8	12	9	...	...	10·6	9·7	+ 9	83	·870	10·0*	5	?	?	2·70	3·78	− 1·08	17·83	7·11	+10·72	1·35	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6·68	8·98	+1·50	...	...	...	...	VIII.—East Rajputana, Central India and Gujarat.	
2	1	1	...	...	1	9	12	5	4·7	5·5	− 15	80	·786	7·6	15	11·50	+3·50	10·95	10·07	+ 0·88	23·04	21·93	+ 1·11	2·05	Jeypore .	Rajputana (East).
...	...	...	...	...	...	...	27	4	8·8	8·1	+ 9	78	·782	7·3	9	10·50	−1·50	6·13	7·88	− 1·75	17·78	17·11	+ 0·67	2·87	Sambhar.	
1	...	...	...	1	...	7	21	1	9·2	5·5	+ 67	83	·787	6·0	7	9·82	−2·82	3·72	7·63	− 3·91	17·65	17·20	+ 0·45	1·30	Ajmere.	
...	...	...	...	...	...	14	15	2	11·5	12·0	− 4	85	·821	8·3	6	10·09	−4·09	1·87	7·60	− 5·73	17·83	20·75	− 2·92	0·45	Deesa.	
...	...	...	...	...	...	13	18	...	12·8	11·6	+ 10	82	·813	7·5	2	7·82	−5·82	0·38	4·98	− 4·60	44·88	23·17	+21·71	0·12	Rajkot .	Kathiawar.
5	...	...	...	...	...	10	16	...	9·2	?	?	90	·899	8·8	0	?	?	0·42	?	?	24·78	?	?	0·08	Veraval.	
1	1	...	1	...	...	9	18	1	4·1	3·4	+ 21	87	·865	8·4	13	14·09	−1·09	11·86	14·23	− 2·37	41·07	34·47	+ 6·60	1·58	Nowgong .	Central India.
...	...	...	...	...	1	9	18	3	5·7	6·1	− 7	91	·764	8·6	9	10·45	−1·45	3·44	7·83	− 4·39	18·85	23·13	− 4·28	0·85	Indore.	
...	...	...	...	...	...	16	15	...	12·2	11·9	+ 3	85	·770	6·8	6	11·00	−5·00	4·10	10·55	− 6·45	18·91	24·71	− 5·80	1·27	Neemuch.	
...	...	...	...	...	...	8	20	3	?	13·6	?	86	·890	7·0	7	12·82	−5·82	4·65	7·89	− 3·24	41·02	36·29	+ 4·73	2·42	Surat . .	Gujarat.
7	...	...	...	...	..	10	12	1	3·4†	?	?	86*	·872*	9·1*	8	?	?	4·12	?	?	42·95	?	?	1·06	Ahmedabad.	
...	...	2	..	9	...	15	...	5	4·7	4·4	+ 7	86	·899	9·0	14	10·73	+3·27	19·18	7·67	+11·51	27·27	21·71	+5·56	5·00	Agra . .	N.-W. P. (West).
2	2	2	...	1	4	11	7	2	3·2	3·9	− 15	82	·851	6·2	15	14·45	+0·55	16·05	12·50	+ 3·55	38·87	29·99	+8·88	3·30	Jhansi .	

* Mean of 30 days.
† „ of 29 „

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

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.
IX.—Deccan	...	...	...	−·015	...	...	...	...	...	...	...	85·6	−0·4	72·2	0	78·9	−0·2	13·4	...	...	...	...	22·0
Bombay (Deccan)	Belgaum	2,524	27·280	−·018	29·735	27·372	26th	27·191	7th	·181	70·1	76·3	+0·2	66·5	+0·3	71·4	+0·3	9·8	79·8	26th	64·4	23rd & 25th.	15·4
	Sholapur	1,590	28·178*	−·018	29·714	28·290	26th	28·086	7th	·204	75·8	88·8	+0·5	70·4	0	79·7	+0·3	18·4	93·7	28th	68·5	31st	25·2
	Poona	1,840	27·926	−·018	29·709	28·040	26th	27·843	6th	·197	74·2	83·3	+1·6	69·8	+0·3	76·6	+1·0	13·5	87·0	27th	67·4	26th	19·6
	Bijapur	1,946	27·834	?	29·718	27·943	27th	27·746	7th	·197	73·9	85·9	?	69·1	?	77·5	?	16·8	90·3	27th	67·0	20th	23·3
Khandesh	Malegaon	1,430	28·286	−·020	29·662	28·429	26th	28·186	7th	·243	77·5	87·5	+1·4	72·2	+0·8	79·9	+1·1	15·3	90·9	10th	68·7	28th	22·2
	Ahmednagar	2,152	27·614	?	29·699	27·737	26th	27·533	6th	·204	74·3	86·0	?	68·8	?	77·4	?	17·2	90·8	9th	61·5	26th	29·3
Berar	Akola	930	28·760	−·024	29·635	28·902	26th	28·665	17th	·237	78·7	88·3	+1·2	73·7	+0·6	81·1	+0·9	14·6	92·9	30th	69·7	19th	23·2
	Amraoti	1,215	28·468	−·018	29·637	28·592	26th	28·363	17th	·229	76·2	86·1	−0·3	73·0	+0·5	79·6	+0·1	13·1	91·9	31st	69·8	19th	22·1
Central Provinces (West).	Khandwa	1,044	28·645	−·011	29·647	28·780	26th	28·544	17th	·236	76·2	84·5	−1·2	73·9	+0·2	79·2	−0·5	10·6	89·2	10th	70·1	25th	19·1
	Hoshangabad	1,020	28·645	−·022	29·625	28·789	26th	28·523	17th	·266	76·3	84·0	−1·2	73·4	−0·4	78·8	−0·8	10·6	90·3	9th	68·8	18th	21·5
	Nagpur	1,025	28·644	−·013	29·622	28·779	26th	28·546	17th	·233	78·0	85·9	−1·5	74·0	−0·6	79·9	−1·1	11·9	92·8	31st	69·6	18th	23·2
Central Provinces (Central).	Chanda	634	29·054	−·016	29·634	29·191	26th	28·953	7th	·238	78·3	87·4	−0·4	74·9	−0·2	81·2	−0·3	12·5	92·9	5th	72·5	3 days	20·4
	Seoni	2,033	27·648	−·005	29·616	27·792	26th	27·512	17th	·280	73·7	81·6	−1·7	70·4	−1·3	76·0	−1·5	11·2	85·1	3 days	66·1	17th & 18th.	19·0
	Jubbulpore	1,327	28·320	−·008	29·600	28·467	26th	28·158	17th	·309	76·4	83·5	−1·3	73·2	−0·7	78·4	−1·0	10·3	89·4	31st	68·6	17th & 18th.	20·8
	Saugor	1,762	27·886	−·005	29·594	28·016	26th	27·745	17th	·271	74·9	82·8	−0·7	72·7	+0·2	77·8	−0·3	10·1	87·8	8th	69·8	18th	18·0
Central Provinces (East).	Raipur	970	28·682	−·009	29·601	28·825	26th	28·569	16th	·256	77·4	85·4	−0·8	74·5	−0·3	80·0	−0·6	10·9	91·3	29th	69·2	18th	22·1
	Sutna	1,040	28·562	−·025	29·557	28·706	26th	28·407	17th	·299	78·8	84·6	−1·1	76·0	−0·3	80·3	−0·7	8·6	89·5	9th & 31st.	73·1	12th	18·4
	Sambalpur	463	29·163	−·023	29·574	29·315	26th	29·043	16th	·272	79·2	86·4	−1·1	76·2	−1·1	81·3	−1·1	10·2	91·5	29th	73·2	26th & 27th.	18·3
Hyderabad (North).	Aurangabad	?	27·891	?	?	28·023	27th	27·801	7th	·222	77·2	88·0	?	69·3	?	78·6	?	18·7	92·6	28th & 29th.	65·6	25th	27·0
	Indur	?	?	?	?	?	?	?	?	?	77·1	86·2	?	73·4	?	79·8	?	12·8	90·8	2nd	67·1	20th	23·7
	Bidar	?	27·593	?	?	27·702	26th	27·497	16th	·205	72·7	83·7	?	69·3	?	76·5	?	14·4	87·5	2nd	67·4	20th & 29th.	20·1
Hyderabad (South).	Gulbarga	1,502	28·254	?	29·703	28·353	27th	28·165	7th	·188	75·6	88·4	?	71·2	?	79·8	?	17·2	94·2	27th	68·1	19th	26·1
	Raichur	1,378	28·401	?	29·726	28·498	27th	28·310	7th	·188	76·1	87·5	?	72·2	?	79·9	?	15·3	93·6	2nd	70·1	2nd	23·5
	Hyderabad (Deccan).	1,690	28·062?	−·007?	29·694?	28·165	27th	27·977	7th	·188	75·3	86·1	0	72·1	+1·4	79·1	+0·7	14·0	91·9	1st	70·2	30th	21·7
	Secunderabad	1,787	27·982?	?	29·712?	28·084	27th	27·889	7th	·195	74·6	87·0	?	71·4	?	79·2	?	15·6	94·6	1st	69·4	30th	25·2
	Khamamet	373	29·348	?	29·655	29·456	27th	29·243	7th	·213	80·0	90·3	?	75·9	?	83·2	?	14·4	95·9	4th	72·8	30th	23·1
X.—West Coast	...	...	...	−·024	...	...	...	...	...	...	...	82·8	+0·4	75·2	+0·5	79·0	+0·4	7·6	...	...	...	...	12·8
Konkan	Bombay	37	29·734	−·018	29·711	29·867	26th	29·649	7th	·218	79·9	84·8	+1·0	77·3	+0·6	81·1	+0·8	7·5	87·0	10th & 28th.	74·0	30th	13·0
	Ratnagiri	110	29·685	−·016	29·733	29·791	26th & 27th.	29·592	7th	·199	79·8	84·7	+1·3	76·1	+1·3	80·4	+1·3	8·6	85·9	3 days	72·9	31st	13·0
	Mormugao	60	29·752	?	29·747	29·848	26th	29·646	7th	·202	79·0	83·6	?	75·8	?	79·7	?	7·8	85·0	10 days	73·4	2nd & 31st.	11·6
	Goa	23	29·821*	−·012	29·758	29·914	27th	29·719	7th	·195	78·5	80·8	?	75·8	?	78·3	?	5·0	83·0	22nd	73·0	1st	10·0
	Karwar	44	29·789	−·022	29·765	29·875	27th	29·680	7th	·195	78·2	83·1	+1·0	75·2	+1·0	79·1	+1·0	7·9	85·2	7th & 12th.	71·1	3rd	14·1
Malabar	Cochin	10	29·876	−·030	29·814	29·932	25th	29·822	21st	·110	77·0	83·6	+0·3	74·1	0	78·9	+0·2	9·5	86·7	2nd	71·7	6th	15·0
	Calicut	27	29·845	−·033	29·802	29·893	25th	29·784	21st	·109	76·2	81·5	−1·2	73·8	+0·1	77·7	−0·6	7·7	85·8	2nd	71·6	7th	14·2
	Mangalore	65	29·795	−·035	29·793	29·853	25th	29·725	6th	·128	76·9	82·3	−0·3	73·8	0	78·1	−0·2	8·5	85·3	18th	70·9	8th	14·4
	Trivandrum	198	29·684	?	29·813	29·728	3rd	29·628	7th	·100	76·5	81·0	?	74·8	?	77·9	?	6·2	83·0	19th	73·0	6th & 30th	10·0
XI.—South India	...	...	...	−·032	...	...	...	...	...	...	...	89·2	+0·5	74·3	+0·3	81·7	+0·4	14·9	...	...	...	...	22·5
Madras (South)	Pamban	37	29·782	?	29·745	29·839	26th	29·719	30th	·120	83·2	88·4	?	78·8	?	83·6	?	9·6	90·3	5 days	73·7	25th	16·6
	Tinnevelly	168	29·656	?	29·752	29·705	3rd	29·597	30th	·108	84·4	96·1	?	79·1	?	87·6	?	17·0	99·8	24th	74·9	27th	24·9
	Madura	447	29·356	−·041	29·736	29·431	28th	29·286	7th	·145	82·6	97·8	+1·3	76·9	+1·4	87·4	+1·4	20·9	103·0	20th	73·0	28th	30·0

* Mean of 29 days.

I—*continued.*

in India, Burma, etc., in August 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period from 1st June to 31st August.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·67	9·90	−1·90	...	...	...	...	**IX.—Deccan.**	
...	...	...	...	...	...	5	22	4	21·0‡	20·7	+ 1	92	·676	8·9	16	17·64	−1·64	6·92	8·74	− 1·82	38·43	30·70	+ 7·73	1·46	Belgaum	Bombay (Deccan).
...	...	...	...	...	...	8	13	8	13·0	11·0	+ 18	76	·682	8·4	10	11·27	−1·27	4·92	7·39	− 2·47	8·42	16·69	− 8·27	0·79	Sholapur.	
...	...	...	...	...	...	7	21	3	12·3	14·0	− 12	82	·701	8·6	7	7·82	−0·82	2·27	3·22	− 0·95	17·19	14·82	+ 2·37	0·85	Poona.	
...	...	...	...	...	...	7	19	5	9·6	?	?	85	·720	7·6	6	7·00	−1·00	5·70	?	?	9·46	?	?	2·73	Bijapur.	
...	...	...	...	...	...	8	21	2	17·6	10·0	+ 76	76	·715	7·4	1	6·91	−5·91	0·32	4·07	− 3·75	9·15	13·54	− 4·39	0·11	Malegaon	Khandesh.
3	1	...	...	...	...	6	12	9	17·5	?	?	89	·756	7·5	5	?	?	2·17	?	?	8·50	?	?	1·37	Ahmednagar.	
...	...	...	...	...	...	1	25	5	9·5	7·9	+ 20	78	·761	4·3	1	9·73	− 8·73	0·43	7·44	− 7·01	19·80	23·72	− 3·92	0·14	Akola	Berar.
1	...	...	...	...	...	3	21	6	6·5	6·1	+ 7	84	·762	7·2	6	9·73	−3·73	2·06	6·80	− 4·74	27·06	24·26	+ 2·80	0·50	Amraoti.	
...	...	...	...	...	...	2	22	7	8·2	7·6	+ 8	86	·776	7·5	9	9·91	−0·91	2·98	7·14	− 4·16	26·14	22·01	+ 4·13	0·85	Khandwa	Central Provinces (West).
...	...	1	...	...	2	22	6	...	3·5	3·4	+ 3	92	·846	9·3	10	15·09	−5·09	11·69	14·52	− 2·83	40·31	40·31	0	4·23	Hoshangabad.	
5	2	...	...	...	1	4	12	7	5·8*	6·0	− 3	83	·800	8·4	15	12·82	+2·18	13·50	10·25	+ 3·25	35·01	33·72	+ 1·29	2·48	Nagpur.	
5	...	...	...	...	2	12	11	1	5·1	5·4	− 6	81	·791	7·7	20	?	?	13·52	13·87	− 0·35	40·07	40·60	− 0·53	2·45	Chanda	Central Provinces (Central).
...	...	...	Not	recorded.			...	...	?	4·8	?	94	·793	6·9	17	17·73	−0·73	16·54	12·90	+ 3·64	35·02	41·62	− 6·60	2·95	Seoni.	
5	...	...	...	...	3	8	13	2	2·9	4·6	− 37	89	·810	8·1	12	16·00	−4·00	9·60	16·12	− 6·52	42·06	46·02	− 3·96	3·55	Jubbulpore.	
3	...	...	...	...	...	12	13	3	5·2	4·3	+ 21	91	·789	7·3	12	14·55	−2·55	9·32	13·53	− 4·21	52·71	36·03	+16·68	3·87	Saugor.	
4	...	1	...	...	...	14	12	...	8·3	7·3	+ 14	90	·839	8·6	14	14·45	−0·45	10·78	12·66	− 1·88	40·72	38·05	+ 2·67	1·80	Raipur	Central Provinces (East).
3	1	1	1	1	2	1	18	3	7·4	7·9	− 6	87	·854	7·9	14	13·45	+0·55	9·98	12·07	− 2·09	36·25	33·78	+ 2·47	2·52	Sutna.	
...	1	1	2	1	8	16	2	...	4·6	3·0	+ 53	89	·692	8·7	19	?	?	20·89	17·09	+ 3·80	60·21	50·38	+ 9·83	4·29	Sambalpur.	
1	...	...	...	...	...	11	16	3	6·0	?	?	75	·694	8·1	7	?	?	1·48	5·56	− 4·08	9·26	19·27	−10·01	0·29	Aurangabad.	Hyderabad (North).
...	2	...	...	...	...	...	16	13	10·8	?	?	87	·801	9·3	17	?	?	12·02	10·19	+ 1·83	30·79	25·43	+ 5·36	2·07	Indur.	
...	5	...	...	...	...	5	14	7	13·0	?	?	89	·717	7·2	11	?	?	7·31	9·85	− 2·54	13·65	25·44	−11·79	1·20	Bidar.	
1	2	...	...	...	...	6	13	9	11·5	?	?	81	·717	9·1	12	?	?	4·35	6·43	− 2·08	10·10	16·14	− 6·04	1·01	Gulbarga	Hyderabad (South).
...	1	...	...	...	...	6	17	7	10·0	?	?	78	·701	5·2	12	?	?	11·26	?	?	18·69	?	?	3·10	Raichur.	
...	1	...	...	...	...	...	21	9	7·9	?	?	83	·729	8·5	12	?	?	7·19	8·17	− 0·98	11·24	19·92	− 8·68	2·20	Hyderabad (Deccan).	
...	...	...	...	...	...	3	17	11	8·6	10·0	− 14	79	·688	7·9	12	?	?	6·21	?	?	10·93	?	?	1·57	Secunderabad	
12	1	...	...	...	...	...	13	5	6·4	?	?	84	·861	4·5	12	?	?	5·89	?	?	17·06	?	?	2·31	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17·05	17·00	−0·25	...	...	...	...	**X.—West Coast.**	
...	...	...	1	1	...	4	23	2	14·2	15·8	− 10	86	·885	9·4	21	19·64	+1·36	8·55	11·43	− 2·88	51·43	57·97	− 6·54	2·13	Bombay	Konkan.
2	1	...	...	1	2	7	7	11	7·5	10·3	− 27	88	·889	7·7	24	24·36	−0·36	14·33	24·65	−10·32	82·91	91·42	− 8·51	2·57	Ratnagiri.	
2	3	...	...	...	...	...	6	20	11·6	?	?	91	·908	7·1	18	?	?	19·42	?	?	75·74	?	?	3·07	Mormugao.	
10	..	1	...	...	...	8	8	2	10·3	?	?	90	·881	9·1	20	?	?	18·13	20·32	− 2·19	71·94	84·11	−12·17	4·64	Goa.†	
2	3	3	1	1	...	11	6	4	3·3	?	?	87	·834	7·7	23	23·36	−0·36	24·50	24·45	+ 0·05	78·79	100·66	−21·87	6·28	Karwar.	
10	1	6	1	1	...	...	5	7	5·9	?	?	89	·835	6·7	23	17·91	+5·09	12·61	13·31	− 0·70	54·48	63·23	− 8·75	1·84	Cochin	Malabar.
18	3	1	...	1	...	...	4	4	9·6	?	?	92	·823	7·4	22	17·88	+4·12	16·59	15·82	+ 0·77	81·80	78·39	+ 3·41	3·21	Calicut.	
11	1	...	2	2	...	1	6	8	2·1	2·9	− 28	91	·844	8·2	25	23·90	+1·10	35·52	21·13	+14·39	98·26	92·25	+ 6·01	4·66	Mangalore.	
...	13	4	...	...	...	...	5	9	8·8	?	?	89	·814	9·1	14	?	?	3·78	4·91	− 1·13	16·37	24·94	− 8·55	0·53	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6·01	6·33	+0·37	...	...	...	...	**XI.—South India.**	
1	2	...	...	...	6	12	10	...	11·3	?	?	78	·887	4·0	2	0·30	+1·70	2·63	0·23	+ 2·40	3·38	0·98	+ 2·40	2·36	Pamban.	Madras (South).
...	..	...	...	...	...	4	15	12	9·6	?	?	59	·702	6·8	2	1·0	+1·0	1·06	?	?	1·06	?	?	0·59	Tinnevelly.	
3	6	2	...	...	...	...	1	19	1·6	3·7	− 57	67	·754	5·1	6	5·36	+0·64	2·27	4·00	− 1·73	6·89	7·78	− 0·89	0·81	Madura.	

* Mean of 30 days.
† „ „ 29 „
‡ „ „ 27 „

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

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 during recorded month.	Date.	Lowest pressure during 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.
Madras (South Central).	Salem	940	28·896	−·037	29·776	28·968	26th	28·813	7th	·155	77·8	91·6	+0·1	73·4	+1·5	82·5	+0·8	18·2	97·4	2nd	71·0	12th	26·4
	Coimbatore	1,348	28·474	−·034	29·769	28·533	25th	28·390	7th	·143	75·2	88·7	+0·3	70·4	+0·4	79·6	+0·4	18·3	92·9	11th	68·6	31st	24·3
Coorg	Mercara	3,781	26·157	?	?	26·212	25th	26·095	7th	·117	64·2	69·7	−0·9	62·7	+0·7	66·2	−0·1	7·0	74·0	27th	60·7	29th	13·3
	Chitaldroog	2,405	27·422	?	29·753	27·515	27th	27·331	7th	·184	72·5	82·5	?	68·4	?	75·5	?	14·1	86·1	25th	66·4	16th	19·7
Mysore	Bangalore Fort.	3,021 (a)	26·838	−·043	29·763	26·917	25th	26·753	7th	·164	69·4	81·2	−0·5	66·1	+0·6	73·7	+0·1	15·1	84·8	21st	64·3	7th	20·5
	Hassan	3,091	26·799	?	29·788	26·871	27th	26·729	7th	·142	70·1	78·3	?	64·2	?	71·2	?	14·1	84·1	26th	62·0	26th	22·1
	Mysore	2,518	27·352	?	29·797	27·421	25th	27·280	7th	·141	71·6	83·8	?	67·0	?	75·4	?	16·8	86·9	3 days	65·0	31st	21·9
Madras (East Coast, South).	Negapatam	31	29·772	−·034	29·732	29·832	26th	29·691	7th	·141	82·7	94·8	+2·0	77·5	+0·5	86·2	+1·3	17·3	100·2	11th	73·7	26th & 29th.	26·5
	Cuddalore	12	29·774	?	29·716	29·843	26th	29·695	7th	·148	80·6	90·8	?	75·6	?	83·2	?	15·2	95·3	2nd & 11th.	70·2	14th	25·1
	Trichinopoly	255	29·553	−·038	29·740	29·637	26th	29·484	7th	·153	81·8	97·2	+1·2	77·1	+0·8	87·2	+1·0	20·1	102·1	21st	72·9	22nd	29·2
	Madras	22	29·754	−·038	29·707	29·837	27th	29·656	7th	·181	81·3	92·7	−1·0	76·2	−1·1	84·5	−1·1	16·5	98·0	1st	71·0	28th	27·0
Madras (East Coast, Central).	Nellore	71	29·683	?	29·687	29·761	27th	29·588	7th	·173	83·2	95·9	?	78·1	?	87·0	?	17·8	100·3	26th	74·6	8th	25·7
	Masulipatam	15	29·714	−·025	29·664	29·816	24th	29·623	7th	·193	82·6	93·5	+2·1	77·8	+0·3	85·7	+1·2	15·7	98·2	13th	74·1	14th	24·1
Madras (Central)	Cuddapah	433	29·354	?	29·728	29·459	27th	29·253	7th	·206	79·7	92·1	−0·6	74·9	−1·6	83·5	−1·1	17·2	97·1	1st & 20th.	70·6	27th	26·5
	Kurnool	923	28·850	−·032	29·716	28·949	23rd	28·755	7th	·194	77·6	89·1	0	73·2	−0·3	81·2	−0·2	15·9	93·2	1st	68·9	7th	24·3
	Bellary	1,475	28·323	?	29·739	28·422	27th	28·224	7th	·198	77·5	90·4	−0·4	73·7	+0·3	82·1	−0·1	16·7	93·9	21st	71·9	29th	22·0
Madras (East Coast, North).	Rajahmundry	112	29·593	−·024	29·642	29·702	23rd	29·500	6th & 7th.	·202	81·4	90·9	+1·4	77·5	+0·2	84·2	+0·7	13·4	95·0	4th	74·1	13th & 14th.	20·9
	Cocanada	26	29·672	−·017	29·633	29·790	23rd & 24th.	29·563	6th	·227	81·3	90·8	+2·5	78·6	+0·1	84·7	+1·3	12·2	94·7	3 days	73·6	21st	21·1
	Vizagapatam	31	29·647	−·019	29·616	29·778	24th	29·522	6th	·256	84·7	87·5	0	83·6	+1·0	85·6	+0·5	3·9	90·8	13th	81·0	1st	9·8
	Gopalpur	21	29·631	?	29·592	29·773	26th	29·503	7th	·270	82·3	88·0	?	78·3	?	83·2	?	9·7	90·7	3 days	75·6	1st	15·1
XII.—Hill Stations.																							
Baluchistan	Kachh Fort	?							Observations		incomplete.												
	Kamardin	?	23·366	?	?	23·480	31st	23·250	5th	·230	91·8*	102·4*	?	55·3*	?	78·8*	?	47·1	109·0	6th	49·0	18th	60·0
	Karez Tirwah Pishin	?				Not	recorded				?	98·5	?	50·2	?	74·3	?	48·3	104·1	6th	41·9	15th & 19th.	62·2
	Quetta	5,502	24·461	−·014	?	24·576	31st	24·339	5th	·237	72·7	89·9	−0·7	57·8	−4·1	73·9	−2·4	32·1	94·1	8th	51·4	15th & 27th.	42·7
	Shirino	?	?	?	?	?	...	?	...			Observations suspended.								...	?	...	?
	Kalat	?	?	?	?	?	...	?	...	?	69·5	90·3	?	44·5	?	67·4	?	45·8	98·1	7th	38·2	28th	59·9
	Chaman	4,311	25·467	?	?	25·595	26th & 31st.	25·366	11th	·229	82·6	97·0	?	70·0	?	83·5	?	27·0	104·0	8th	61·1	31st	42·9
Northern India	Leh	11,503	19·617	?	?	19·728	31st	19·495	11th	·233	57·3	77·1	?	50·6	?	63·9	?	26·5	82·2	9th & 10th.	46·3	26th	35·9
	Srinagar	5,204	24·666	?	?	24·772	31st	24·539	5th	·233	69·9	83·7	?	63·5	?	73·6	?	20·2	88·3	8th	58·2	18th	30·1
	Gilghit	?	25·134	?	?	25·320	26th	24·960	10th	·360	80·3	97·7	?	73·2	?	85·5	?	24·5	104·8	9th & 11th.	62·7	1st	42·1
	Cherat	?	25·496	?	?	25·605	31st	25·357	5th	·248	74·0	85·8	?	69·4	?	77·6	?	16·4	92·4	15th	65·1	19th & 24th.	27·3
	Murree	6,344	23·698	−·036	?	23·794	31st	23·585	5th	·209	64·8	73·8	−0·3	61·5	+0·5	67·7	+0·1	12·3	79·6	10th	55·9	3 days	23·7
	Poo	?	?	?	?	?	...	?	...	?	?	78·1	?	58·9	?	68·5	?	19·2	81·0	10th	57·4	26th	23·6
	Simla	7,224	22·988	−·027	?	23·098	31st	22·888	5th	·210	61·1	66·1	−1·3	58·7	−1·0	62·4	−1·2	7·4	71·4	8th	56·9	11th	14·5
	Chakrata	6,977	23·198	−·027	?	23·308	31st	23·088	5th	·220	62·7	68·1	−1·1	59·8	+0·4	63·9	−0·4	8·3	73·3	15th	57·3	23rd	16·0
	Mussooree	6,705	23·429	?	?	23·532	31st	23·317	5th	·215	62·8	67·0	−1·8	60·0	+0·3	63·5	−0·8	7·0	69·3	8th & 24th.	57·9	23rd	11·4
	Ranikhet	6,069	23·958	−·019	?	24·084	31st	23·830	5th	·254	65·2	71·0	−1·4	61·8	−0·2	66·4	−0·8	9·2	77·5	9th	59·5	23rd	18·0
	Yatung	10,480?	?	?	?	?	...	?	...	?	?	59·7	?	48·8	?	54·3	?	10·9	64·0	12th & 17th.	44·9	19th	19·1
	Gnatong	?	19·232	?	?	19·327	31st	19·149	11th	·178	49·2	54·5	?	44·2	?	49·4	?	10·3	58·9	9th	41·1	19th	17·8
	Darjeeling	7,421	22·885	−·028	?	23·019	31st	22·789	11th	·230	60·1	64·3	−1·7	57·3*	+0·6	60·8*	−0·6	7·0	68·1	19th	55·7	2 days	12·4
	Gantak	?	24·367	?	?	24·615	30th	24·248	11th	·367	64·8*	72·0*	?	60·7*	?	66·4*	?	11·3	77·4	29th	58·8	22nd	18·6

(a) 3,021 feet from 2nd August 1894, previously 3,019 feet.
* Mean of 30 days.

I—*continued.*

in India, Burma, etc., in August 1894—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.										Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	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 August 1894.	Normal rainfall for period 1st June to 31st August.	Variation from normal of period.	Heaviest rainfall during month.		
7	...	...	...	2	11	10	1	...	2·8	4·2	− 33	80	·777	7·2	14	11·78	+2·22	7·87	7·66	+ 0·21	10·77	15·30	− 4·53	1·49	Salem	Madras (South Central).
...	...	...	...	...	16	15	...	...	4·9	7·4	− 34	83	·732	6·0	5	2·91	+2·09	1·39	1·19	+ 0·20	2·83	3·85	− 1·02	0·63	Coimbatore.	
...	...	...	...	...	...	1	14	16	11·0	8·9	+ 24	96	·583	9·6	28	26·30	+1·70	25·80	26·25	− 0·45	74·56	94·46	−19·90	3·01	Mercara	Coorg.
...	...	...	...	...	...	10	18	3	13·1	?	?	81	·649	9·4	4	?	?	2·05	?	?	5·74	?	?	1·05	Chitaldroog	Mysore.
...	...	...	...	...	...	8	17	6	8·0	7·6	+ 5	87	·634	8·1	14	10·73	+3·27	6·24	5·80	+ 0·44	13·11	13·84	− 0·73	1·65	Bangalore Fort.	
2	...	...	...	...	...	3	19	7	3·8	?	?	85	·624	8·7	6	?	?	2·23	?	?	7·78	?	?	0·43	Hassan.	
...	2	...	...	...	...	16	12	1	14·5	?	?	85	·651	7·2	7	?	?	3·85	?	?	6·42	?	?	1·80	Mysore.	
1	...	...	...	...	...	12	17	1	9·1	5·7	+ 60	71	·795	6·4	4	5·91	−1·91	2·19	3·84	− 1·65	2·70	7·85	− 5·15	0·89	Negapatam.	Madras (East Coast, South).
...	...	...	...	...	3	6	17	5	1·3	?	?	92	·959	6·3	11	8·0	+3·0	11·27	?	?	17·45	?	?	3·48	Cuddalore.	
...	...	...	...	...	...	6	21	4	7·8	8·2	− 5	68	·739	6·8	8	5·36	+2·64	4·45	4·67	− 0·22	7·96	7·79	+ 0·17	1·78	Trichinopoly.	
...	...	...	...	...	8	13	9	1	6·2	7·3	− 15	79	·848	6·8	14	8·27	+5·73	13·24	4·56	+ 8·68	16·67	10·54	+ 6·13	2·68	Madras.	
4	...	...	...	...	...	2	13	12	7·8	?	?	78	·880	8·8	13	5·5	+7·5	3·93	?	?	7·43	?	?	1·10	Nellore	Madras (East Coast, Central).
2	2	...	...	...	2	2	6	17	5·6	7·8	− 28	78	·864	7·4	13	9·00	+4·00	6·56	7·04	− 0·48	13·48	18·25	− 4·77	1·08	Masulipatam	
...	2	...	...	...	...	7	14	8	?	?	?	80	·805	8·4	18	7·90	+10·10	10·81	6·38	+ 4·43	20·88	14·39	+ 6·49	2·38	Cuddapah	Madras (Central).
12	1	...	...	...	...	6	11	1	?	?	?	79	·744	8·4	16	9·33	+6·67	11·70	5·85	+ 5·85	20·45	14·71	+ 5·74	2·32	Kurnool.	
1	...	...	...	...	...	4	21	5	11·0	10·7	+ 3	69	·658	8·6	5	4·55	+0·45	3·74	2·58	+1·16	5·64	6·41	− 0·77	1·47	Bellary.	
4	2	...	...	...	...	1	16	8	?	?	?	79	·861	7·8	10	9·10	+0·90	4·01	7·35	− 3·34	16·14	20·36	− 4·22	1·15	Rajahmundry	Madras (East Coast, North).
...	2	2	...	...	...	13	11	3	6·7	?	?	82	·886	6·5	10	9·1	+0·9	4·87	5·71	− 0·84	15·53	17·75	− 2·22	0·94	Cocanada.	
...	...	...	1	...	1	2	26	1	0·7	2·9	− 76	75	·893	7·2	8	10·64	−2·64	2·69	5·89	− 3·20	8·56	14·47	− 5·91	0·78	Vizagapatam.	
5	1	...	...	...	1	18	4	2	11·7	9·1	+ 29	83	·916	3·1	9	11·44	−2·44	3·42	8·56	− 5·14	20·24	22·24	− 2·00	0·83	Gopalpur.	
																									XII.—Hill Stations.	
		Observations incomplete.							...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Kachh Fort	Baluchistan.
...	3	1	3	...	1	4	7	10	?	?	?	?	?	0·3	?	?	?	?	?	?	?	?	?	?	Kamardin	
			Not recorded.						?	?	?	?	?	?	0	?	?	0	?	?	0·59	?	?	0	Karez Tirwah† Pishin.	
31	...	...	...	...	...	...	...	...	0·3	4·5	− 93	56	·459	0·6	0	0·91	−0·91	0	0·70	− 0·70	1·09	2·03	− 0·94	0	Quetta.	
													Observations suspended.												Shirinо.	
...	17	...	...	...	14	...	...	...	?	?	?	?	?	?	0	?	?	0	?	?	2·65	?	?	0	Kalat.	
6	...	...	...	1	3	14	6	1	6·6	?	?	24	·271	0·6	0	?	?	0	?	?	1·02	?	?	0	Chaman.	
...	6	6	...	...	6	4	5	4	2·1	1·6	+ 31	60	·282	4·1	0	?	?	0·07	?	?	3·11	?	?	0·06	Leh.	Northern India.
4	5	3	3	7	5	...	2	2	5·3	?	?	85	·633	5·1	1	?	?	0·37	?	?	6·80	?	?	0·23	Srinagar	
			Not recorded.						?	?	?	46	·477	4·2	1	?	?	0·23	?	?	1·43	?	?	0·11	Gilghit.	
15	...	...	...	12	3	1	...	...	10·9	?	?	83	·694	5·7	3	?	?	1·88	?	?	10·23	?	?	0·96	Cherat.	
5	...	3	1	2	1	3	3	13	5·9	4·8	+ 23	89	·552	6·9	15	15·64	−0·64	10·40	14·28	− 3·88	43·39	28·40	+14·99	1·63	Murree.	
21	...	2	...	2	2	2	1	1	?	?	?	?	?	7·1	0	?	?	0·04	?	?	3·08	?	?	0·04	Poo.	
7	5	11	3	...	4	1	...	...	4·2*	1·6	+162	95	·512	9·2	24	19·45	+4·55	19·30	17·98	+ 1·32	64·67	42·32	+22·35	2·83	Simla.	
18	1	2	5	2	...	1	1	1	4·6	4·3	+ 7	95	·543	9·2	29	?	?	27·43	18·59	+ 8·84	72·40	44·92	+27·48	2·77	Chakrata.	
2	2	7	3	2	2	3	6	4	?	8·1	?	99	·565	8·7	31	22·18	+8·82	40·92	13·90	+27·02	90·40	69·09	+21·31	4·20	Mussooree.	
17	...	6	1	1	...	3	3	...	2·0	1·9	+ 5	92	·568	9·2	26	17·82	+8·18	16·28	13·91	+ 2·37	47·88	33·13	+14·75	2·64	Ranikhet.	
...	...	...	Not recorded			...	...	...	?	?	?	?	?	?	30	?	?	13·78	?	?	21·43	?	?	0·85	Yatung.	
1	...	...	1	16	1	1	3	8	4·9	?	?	92	·322	7·7	31	?	?	31·70	?	?	75·28	?	?	2·52	Gnatong.	
7	1	4	7	3	2	3	3	1	3·3	3·4	− 3	94	·509	9·8	29	24·43	+4·57	28·61	27·58	+ 1·03	74·57	87·32	−12·75	3·15	Darjeeling.	
...	3	...	1	...	4	7	14	2	1·0	?	?	96†	·591†	9·0	30	?	?	30·34	?	?	76·51	?	?	4·09	Gantak.	

* Mean of 26 days.
† „ „ 30 „

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

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.
Central India	Mount Abu	3,945	25·841	−·027	?	25·957	26th	25·755	11th	·202	64·2	69·7	−2·1	62·9	−1·5	66·3	−1·8	6·8	73·1	3 days	60·9	16th	12·2
	Pachmarhi	3,528	26·270	−·005	?	26·410	27th	26·145	17th	·265	68·5	74·1	−0·6	66.3	−0·6	70·2	−0·6	7·8	79·7	31st	62·2	17th & 18th	17·5
South India	Wellington	6,200	24·172	−·032	?	24·234	26th	24·087	7th	·147	65·2	73·4	+2·6	57·5	+0·2	65·5	+1·4	15·9	78·2	20th	54·1	5th	24·1
XIII.—Extra India.																							
Ceylon	Trincomalee	75	29·797	?	29·799	29·852	14th	29·721	20th	·131	82·6	93·3	?	76·8	?	85·1	?	16·5	97·0	1st	72·5	29th	24·5
	Colombo	40	29·854	−·032	29·820	29·896	3rd	29·804	30th	·092	81·0	84·2	?	77·2	?	80·7	?	7·0	85·5	19th & 20th.	70·0	29th	15·5
	Galle	48	29·853	?	29·827	29·911	15th	29·799	7th	·112	80·8	82·9	?	78·3	?	80·6	?	4·6	85·0	27th	76·0	5th & 6th	9·0
Persia	Meshed	?	?	?	?	?	...	?	...	?	76·5	84·7	?	59·3	?	72·0	?	25·4	92·5	5th	53·3	25th	39·2
	Teheran	?	25·847*	?	?	26·005	28th	25·650	6th	·355	82·5	96·0	?	67·7	?	81·9	?	28·3	103·7	5th	52·8	24th	50·9
	Ispahan†	?	?	?	?	?	...	?	...	?	76·4	93·8	?	59·6	?	76·7	?	34·2	103·5	4th	52·1	30th	51·4
	Bushire	14	29·529	?	29·498	29·700	27th	29·345	6th	·355	91·3	96·3	?	84·5	?	90·4	?	11·8	99·7	31st	86·2	31st	19·5
	Jask*	?	29·608	?	?	29·823	27th	29·395	6th	·428	90·8	95·7	?	83·3	?	89·5	?	12·4	102·2	30th & 31st	79·2	24th & 31st.	23·0
Arabia	Muscat	?	29·560	?	?	29·709	27th	29·373	6th	·336	86·3	88·9	?	85·3	?	87·1	?	3·6	98·9	1st	81·6	13th	17·3
	Baghdad	?	29·178	?	?	29·350	27th	28·978	7th	·372	86·5	106·7	?	79·3	?	93·0	?	27·4	112·1	24th	72·0	14th	40·1
	Aden	94	29·644	−·006	29·669	29·760	28th	29·555	7th	·205	82·8	92·2	+0·3	77·9	−2·6	85·1	−1·2	14·3	96·8	31st	72·4	21st	24·4
	Perim	?	29·488	?	?	29·585	27th	29·439	3 days	·146	87·9	95·5	?	84·2	?	89·9	?	11·3	99·1	13th	79·6	27th	19·5
Afghanistan	Kabul	?	?	?	?	?	...	?	...	?	74·2	91·7	?	58·8	?	75·2	?	32·9	94·9	8th	53·2	11th	41·7
Central Asia	Kashgar	?	25·520	?	?	25·740	31st	25·370	17th	·370	75·1	89·1	?	65·3†	?	77·3†	?	23·8	95·3	15th	57·1	12th	38·2
Arabian Sea Island.	Amini Divi	15	29·871	?	29·814	29·935	27th	2·814	6th	·121	80·4	85·1	?	77·0	?	81·1	?	8·1	88·2	3rd	74·3	9th&16th	13·9
	Minicoy	10	29·903	?	29·838	29·957	27th	29·831	7th	·126	80·5	84·8	?	79·1‡	?	81·0‡	?	5·8	88·5	1st	75·0	6th	13·5
Africa	Zanzibar	73	30·062	?	30·063	30·104	10th	30·021	26th	·083	74·9	81·0	?	72·9	?	77·0	?	8·1	82·9	27th	71·6	16th	11·3

* Mean of 29 days.
† ,, of 30
‡ ,, of 23

I—*concluded.*

in India, Burma, etc., in August 1894—concluded.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8A.M.		Mean cloud amount.	Rainfall.										Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	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 August 1894.	Normal rainfall for period, 1st June to 31st August.	Variation from normal of period.	Heaviest rainfall during month.		
...	...	...	...	...	...	27	2	2	14·1	10·8	+ 31	99	·590	9·5	18	18·50	−0·50	8·67	22·39	−13·72	69·03	52·94	+16·09	1·61	Mount Abu.	Central India.
...	...	...	...	...	...	5	25	1	11·4	7·5	+ 52	92	·641	9·3	20	21·18	−1·18	17·95	19·74	−1·79	53·17	56·23	− 3·06	3·79	Pachmarhi.	
11	...	...	2	1	1	11	2	3	3·2	3·8	− 16	70	·441	7·3	10	10·89	−0·89	4·32	4·19	+0·13	9·72	11·67	−1·95	0·92	Wellington.	South India.
																									XIII.—Extra India.	
...	...	...	...	...	..	31	...	...	9·5	?	?	78	·874	4·7	6	?	?	2·50	?	?	7·31	?	?	0·64	Trincomalee.	Ceylon.
...	...	...	...	...	1	16	12	2	11·0	8·7	+ 27	76	·812	6·6	4	?	?	0·73	4·19	−3·46	14·10	16·98	− 2·88	0·20	Colombo.	
2	...	...	...	...	...	...	3	26	11·5	?	?	91	·956	4·4	9	?	?	3·83	?	?	16·21	?	?	0·74	Galle.	
25	...	...	1	3	1	...	1	...	?	?	?	?	?	0	0	?	?	0	?	?	0·09	?	?	0	Meshed	Persia.
21	2	...	...	...	6	1	...	...	2·5	?	?	34	·379	0·4	0	?	?	0	?	?	0·68	?	?	0	Teheran.	
...	4	7	2	...	1	4	4	8	3·5	?	?	42	·380	0·8	0	?	?	0	?	?	0·41	?	?	0	Ispahan.*	
...	2	6	2	10	...	1	...	10	6·0†	7·8	− 23	67	·979	?	0	?	?	0	0	0	0	0	0	0	Bushire.	
...	3	1	5	10	9	1	1	...	12·6†	?	?	70	1·004	0·1	0	?	?	0	?	?	0·12	?	?	0	Jask.*	
...	...	3	20	4	2	...	...	2	?	?	?	82	1·029	1·3	0	?	?	0	?	?	0·32	?	?	0	Muscat.	Arabia.
12	9	3	1	...	...	...	...	6	1·5	?	?	44	·553	0	0	?	?	0	?	?	0·01	?	?	0	Baghdad.	
8	...	...	4	4	7	8	...	...	10·6	10·8	− 2	74	·823	2·6	0	?	?	0	0·21	−0·21	0·07	0·22	− 0·15	0	Aden.	
2	...	6	...	...	...	9	12	2	14·9	?	?	66	·873	4·7	0	?	?	0	?	?	0·14	?	?	0	Perim.	
...	...	...	18	6	...	3	3	1	?	?	?	?	?	?	0	?	?	0	?	?	0·76	?	?	0	Kabul.	Afghanistan.
19	3	1	2	2	...	...	1	2	4·0	?	?	51†	·448†	5·7	1	?	?	0·10	?	?	1·21	?	?	0·10	Kashgar ‡.	Central Asia.
...	2	...	...	...	...	1	23	5	?	?	?	86*	·896*	6·8	14	?	?	8·07	?	?	30·15	?	?	1·60	Amini Divi.	Arabian Sea Islands.
...	...	...	...	...	...	...	23	6	20·5†	?	?	84	·871	6·5	8	?	?	6·98	?	?	16·60	?	?	2·15	Minicoy.§	
...	...	...	...	4	14	9	3	1	8·9	?	?	88	·761	5·5	4	?	?	1·19	?	?	4·97	?	?	0·45	Zanzibar.	Africa.

* Mean of 3 days.
† „ of 29 „

‡ Wind observations for 30 days.
§ „ „ „ 29 „

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89

Meteorological Province.	Station.	Height of the barometer 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 to gravity 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·752	29·669	·083	29·707	—·041	29·698	84·6	77·1	7·5	88·5	74·7	13·8	82·3	82·2	79·9	0	75·3	79·0	78·7	77·6
	Rangoon	...	·769	·671	·098	·726	—·031	·704	84·8	76·0	8·8	90·1	73·7	16·4	80·2	80·0	78·6	+ 0·3	74·4	78·2	77·2	76·6
	Diamond Island	...	·760	·674	·086	·713	—·036	·689	83·2	77·0	6·2	86·6	73·6	13·0	81·1	81·2	79·1	+ 0·6	74·9	77·4	77·2	76·5
	Cocos Island	111	·729	·650	·079	·685	?	·729	85·5	76·5	9·0	89·0	73·9	15·1	82·2	82·1	79·7	?	74·7	78·9	78·4	77·3
	Akyab	...	·734	·641	·093	·692	—·016	·655	83·7	76·5	7·2	89·2	73·2	16·0	80·3	81·7	79·2	— 1·1	74·7	78·6	79·3	77·5
Assam.	Silchar	...	·611	·487	·124	·558	—·017	·613	89·0	76·2	12·8	94·1	74·3	19·8	83·1	86·2	82·2	— 0·2	75·3	78·9	79·7	77·9
	Sibsagar	...	·372	·240	·132	·306	—·026	·592	87·3	77·1	10·2	93·3	75·2	18·1	81·8	86·5	81·1	— 1·4	76·0	79·1	81·1	78·7
	Dhubri	...	·572	·453	·119	·518	—·015	·585	85·4	77·2	8·2	89·2	75·9	13·3	81·3	82·5	79·7	— 0·9	75·9	78·2	78·9	77·7
Bengal and Orissa.	Chittagong	...	·638	·541	·097	·596	—·009	·622	85·4	75·6	9·8	89·7	73·2	16·5	82·2	82·1	79·3	— 0·4	74·7	78·5	78·7	77·3
	Naryangunge	...	·656	·548	·108	·608	—·008	·576	86·1	78·0	8·1	90·8	75·9	14·9	81·9	83·5	81·6	— 1·1	76·0	78·9	79·2	78·0
	Calcutta (Alipore)	...	·627	·529	·098	·583	—·013	·550	88·2	77·9	8·3	90·6	75·2	15·4	82·3	83·8	82·1	— 0·3	76·7	78·9	79·3	78·3
	Do. (Chowringhee).	...	·631	?	?	?	?	?	88·0	77·9	10·1	92·0	75·3	16·7	84·2	?	?	?	77·0	80·6	?	?
	Saugor Island	...	·628	·532	·096	·585	—·016	·554	85·8	79·0	6·8	89·1	75·2	13·9	82·8	84·3	81·6	— 0·8	76·7	79·9	80·4	79·0
	Burdwan	...	·539	·437	·102	·495	—·020	·540	87·8	78·9	8·9	91·7	76·7	15·0	83·5	84·6	82·1	— 1·3	77·4	79·1	79·6	78·7
	Berhampore	...	·578	·474	·104	·533	—·017	·548	86·7	78·3	8·4	90·1	75·6	14·5	82·4	84·3	81·5	— 1·7	76·5	79·7	80·3	78·8
	False Point	...	·645	·551	·094	·603	—·010	·565	86·2	77·6	8·6	88·8	75·1	13·7	83·7	84·0	81·0	— 0·5	76·1	79·4	79·5	78·4
	Cuttack	...	·566	·464	·102	·522	—·029	·544	89·1	78·1	11·0	93·4	74·0	19·4	85·5	86·1	82·4	— 0·2	75·8	78·4	78·8	77·7
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·636	27·540	·096	27·590	—·030	·516	83·4	72·7	10·7	87·8	67·8	20·0	78·3	79·5	76·7	— 0·5	69·4	74·5	74·9	72·9
	Patna	...	29·443	29·333	·110	29·393	—·024	·527	87·2	78·8	8·4	91·5	75·8	15·7	83·9	85·0	81·9	— 1·7	76·6	79·6	79·7	78·6
	Darbhanga	...	·472	·360	·112	·421	—·016	·539	86·7	78·0	8·7	92·1	75·7	16·4	83·3	85·0	81·5	— 1·3	77·4	79·2	80·1	78·9
	Allahabad	...	·302	·193	·104	·254	—·021	·515	87·3	77·7	9·6	91·8	74·4	17·4	82·9	85·2	81·4	— 1·9	76·1	79·2	79·8	78·4
	Ghazipur	220	·382	·282	·100	·336	—·018	·508	87·7?	81·2?	6·5	93·3?	74·3?	19·0	84·3	83·8	83·0?	+ 0·4	78·2	80·2	79·7	79·4
	Lucknow	...	·239	·139	·100	·190	—·033	·513	87·1	77·0	10·1	91·3	75·1	16·2	82·4	83·9	81·2	— 2·8	75·5	78·7	79·2	77·8
Indus Valley and Upper Sub-Himalayas.	Dehra Dun	...	27·417	27·344	·073	27·374	—·032	·533	81·6	72·2	9·4	86·1	69·8	16·3	76·8	77·7	75·3	— 2·3	71·2	74·0	75·0	73·4
	Roorkee	...	28·711	28·615	·096	28·659	—·029	·497	88·9	76·5	12·4	93·2	72·4	20·8	82·6	85·7	81·3	— 1·3	74·5	78·0	79·1	77·2
	Meerut	...	·852	·760	·092	·799	—·034	·491	89·0	77·8	11·2	94·5	74·9	19·6	83·3	85·8	82·4	— 1·6	76·5	78·1	79·4	78·0
	Lahore	...	·853	·768	·085	·804	—·042	·454	95·3	80·4	14·9	102·8	76·6	26·2	89·6	92·1	86·8	+ 0·4	76·8	80·6	80·9	79·4
	Ludhiana	...	·769	·666	·103	·712	—·036	·474	92·3	78·3	14·0	98·6	74·4	24·2	85·7	89·6	84·2	— 1·9	76·4	79·5	80·3	78·7
Indus Valley and N.-W. Rajputana	Peshawar	...	·462	·345	·117	·397	—·033	·448	99·5	78·7	20·8	105·0	72·7	32·3	89·4	97·6	88·3	+ 1·0	73·9	78·5	79·2	77·2
	Mooltan	...	29·117	29·039	·078	29·071	—·026	·444	99·9	82·7	17·2	104·9	76·9	28·0	91·0	97·9	90·5	+ 0·8	77·1	80·6	82·4	80·0
	Jacobabad	...	·353	·245	·108	·292	—·030	·430	103·9	81·4	22·5	107·6	77·2	30·4	93·2	101·7	91·8	+ 0·4	75·6	80·5	81·4	79·2
	Kurrachee	...	·572	·503	·069	·541	—·030	·541	87·2	78·5	8·7	90·2	76·7	13·5	83·6	83·9	81·7	— 0·2	75·2	77·4	77·7	76·8
E. Rajputana, C. India, and Gujarat.	Jeypore	...	28·211	28·115	·096	28·162	—·018	·523	89·4	74·9	14·5	98·7	71·9	26·8	82·5	86·8	80·8	— 0·5	72·7	75·0	77·2	75·0
	Ajmere	...	·040	27·955	·085	27·995	—·025	·541	86·3	74·6	11·7	92·0	72·4	19·6	80·7	85·0	79·7	0	71·6	75·4	77·5	74·8
	Deesa	...	29·206	29·113	·093	29·158	—·015	·574	87·4	74·5	12·9	92·0	70·9	21·1	81·6	85·9	80·4	— 1·1	73·3	75·3	75·8	74·8
	Nowgong	...	28·860	28·773	·087	28·818	—·022	·521	86·5	76·6	9·9	89·5	74·0	15·5	81·9	83·9	80·6	— 1·2	75·3	77·3	78·1	76·9
	Agra	...	29·039	·943	·096	·988	—·039	·495	88·4	78·0	10·4	96·7	74·8	21·9	83·5	85·7	83·0	— 2·0	75·9	78·5	79·3	77·9
Deccan.	Belgaum	...	27·290	27·211	·079	27·251	—·024	·689	76·3	66·4	9·9	80·0	64·2	15·8	72·7	72·5	69·8	+ 0·2	65·9	69·5	69·6	68·3
	Sholapur	...	28·182	28·053	·129	28·125	—·027	·635	88·7	70·4	18·3	93·6	68·0	25·6	80·0	85·6	78·3	+ 0·1	68·6	71·7	72·7	71·0
	Poona	...	27·931	27·855	·076	27·894	—·021	·661	83·4	69·7	13·7	87·0	66·9	20·1	77·9	78·3	74·3	+ 0·7	68·0	71·5	71·4	70·3
	Akola	...	28·771	28·656	·115	28·712	—·030	·580	88·6	73·8	14·8	95·1	69·7	25·4	82·5	87·4	81·2	+ 1·6	71·3	74·4	75·5	73·8
	Buldana	2,132	27·602	27·516	·086	27·557	—·017	·603	82·6	69·2	13·4	86·0	66·5	19·5	77·0	79·9	75·5	+ 0·1	67·6	71·4	72·5	70·5
	Khandwa	...	28·653	28·548	·105	28·599	—·017	·590	84·6	74·0	10·6	89·2	70·1	19·1	79·2	82·3	78·1	— 0·3	71·5	74·0	75·1	73·6

II.

Stations in India, Burma, etc., in August 1894.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Stradiness.		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 of the month.	Heaviest rainfall during the month.		
																									%	%						
·853	·949	·934	·912	+·018	91	86	85	88	+2	8·8	9·0	8·9	+1·8	1	1	...	...	1	6	29	21	3	S. 61° W.	S. 43° W.	79	82	236	228	...	...	Port Blair	Burma Coast and Bay Islands.
·833	·939	·899	890	+·001	93	91	88	91	0	8·9	8·7	8·8	−0·1	...	9	4	1	4	11	16	11	5	S. 63° W.	S. 34° W.	36	66	85	113	...	...	Rangoon	
·841	·895	·889	·875	−·001	91	84	84	86	−2	8·9	9·2	9·1	+1·6	1	...	...	1	3	8	42	4	3	S. 41° W.	S. 44° W.	87	78	275*	164	...	...	Diamond Island.	
·836	·943	·922	·902	?	91	86	84	87	?	7·9	8·0	8·0	?	...	...	...	...	...	19	39	1	1	S. 33° W.	?	90	?	713*	?	10·96	2·55	Cocos Island.	
·834	·960	·973	·922	+·016	92	93	90	93	+5	8·7	8·2	8·5	+0·4	...	2	2	11	5	33	2	4	3	S. 15° E.	S. 1° E.	55	62	81	81	...	...	Akyab	
·864	·932	·929	·908	−·013	95	83	75	84	−1	8·9	8·6	8·8	+0·9	46	...	...	3	2	1	1	5	4	S. 86° W.	S. 63° W.	6	7	60*	69	...	...	Silchar	Assam.
·887	·958	·990	·945	+·002	95	88	79	87	+3	9·0	7·4	8·2	−0·3	24	...	13	2	2	1	18	1	1	S. 20° W.	S. 30° W.	9	12	63*	63	...	...	Sibsagar	
·879	·927	·940	·915	−·011	94	87	85	88	+1	8·8	8·6	8·7	+1·3	18	3	8	11	3	2	10	7	...	S. 63° E.	S. 57° E.	8	20	85	78	...	...	Dhubri	
·848	·928	·939	·906	+·002	96	84	86	88	0	8·8	7·9	8·4	+1·0	2	1	1	2	22	19	8	4	3	S. 10° E.	S. 32° E.	60	55	151*	146	...	...	Chittagong	Bengal and Orissa.
·873	·949	941	·921	−·050	91	87	82	87	0	8·6	8·2	8·4	+0·6	...	...	1	...	31	19	9	1	1	S. 18° E.	S. 14° E.	77	72	203	151	...	...	Naryangunge	
·905	·939	·941	·928	−·040	94	84	81	86	−2	8·9	8·6	8·8	+0·6	...	...	...	1	7	23	22	7	2	S. 23° W.	S. 17° E.	74	57	87	122	...	...	Calcutta (Alipore).	
·919	·998	?	?	?	96	85	?	?	?	?	?	?	?										Not recorded.						5·98	0·80	Do. (Chowringhee.)	
·893	·984	·987	·955	−·038	89	88	84	87	0	9·0	8·9	9·0	+1·4	1	1	1	...	8	27	21	3	...	S. 14° W.	S. 17° W.	76	54	350	299	...	...	Saugor Island.	
·921	·934	·944	·933	−·014	93	81	79	84	0	8·9	9·2	9·1	+0·8	3	...	5	5	12	17	12	7	1	S. 2° E.	S. 27° E.	48	48	67*	84	...	...	Burdwan	
·889	·979	·982	·950	−·002	92	88	83	88	+1	8·6	8·5	8·6	−0·2	11	1	...	14	14	12	8	2	...	S. 31° E.	S. 40° E.	50	45	62	101	...	...	Berhampore	
·883	·950	·952	·929	−·003	93	82	81	86	+1	8·1	8·0	8·1	+0·3	...	...	1	1	6	21	23	9	1	S. 27° W.	S. 57° W.	72	53	231*	238	...	...	False Point	
·863	·879	·890	·877	−·050	90	72	72	78	−3	6·9	7·7	7·3	0	11	1	1	2	3	10	22	10	2	S. 43° W.	S. 44° W.	53	45	73	62	...	...	Cuttack	
·679	·808	·809	·765	−·037	84	84	81	83	−2	9·9	9·6	9·8	+1·0	4	5	1	8	9	14	6	6	9	S. 7° W.	S. 50° W.	21	7	175	180	...	...	Hazaribagh.	
·891	·956	·941	·929	−·026	91	82	79	84	+1	9·3	8·8	9·1	+1·0	9	1	2	29	6	4	3	5	3	S. 77° E.	S. 19° E.	42	34	116	83	...	...	Patna	Gangetic Plain and Chota Nagpur.
·939	·948	·962	·949	−·012	97	83	80	87	+3	7·7	6·7	7·2	+1·1	7	1	3	21	21	4	1	2	2	S. 66° E.	S. 82° E.	58	60	106	110	...	...	Darbhanga	
·882	·948	·950	·927	−·020	93	84	79	85	+2	9·3	8·7	9·0	+1·5	4	5	9	7	4	2	5	13	13	N. 38° W.	N. 40° E.	26	4	130	93	...	...	Allahabad.	
·932?	·978	·966	·958	+·042	87?	83	83	84	+5	7·5	8·4	8·0	+1·3	14	1	3	10	8	3	15	4	4	S. 1° E.	S. 50° E.	23	19	54	57	24·21	3·28	Ghazipur.	
·865	·935	·934	·911	−·001	93	85	81	86	+7	8·5	8·5	8·5	+1·0	20	...	...	35	2	3	2	...	...	S. 81° E.	S. 77° E.	58	12	?	72	...	...	Lucknow.	
·752	·806	·836	·798	?	95	87	88	90	?	8·9	9·0	9·0	+1·5	29	2	1	2	6	7	7	6	1	S. 19° W.	S. 43° W.	23	10	14	26	...	...	Dehra Dun	Upper Sub-Himalayas.
·828	·897	·909	·878	+·017	91	81	74	82	+5	8·5	7·5	8·0	+1·8	24	3	6	7	14	1	3	1	3	S. 77° E.	S. 36° E.	26	27	70	60	...	...	Roorkee	
·896	·896	·917	·903	+·029	94	79	75	83	+7	8·5	7·3	7·9	+1·5	25	1	2	18	3	1	2	9	1	S. 82° E.	N. 80° E.	18	5	34	50	...	...	Meerut	
·875	·923	·909	·902	+·035	84	67	62	71	+7	2·6	4·0	3·3	−0·4	12	...	4	14	11	6	3	8	4	S. 49° E.	S. 83° E.	24	27	63	69	...	...	Lahore	
·889	·922	·911	·907	+·035	92	76	65	78	+6	7·3	6·7	7·0	+1·4	11	3	10	1	22	7	4	...	3	S. 55° E.	S. 66° E.	37	10	64	34	...	...	Ludhiana	
·779	·843	·772	·798	+·022	79	60	42	61	0	2·1	3·7	2·9	+0·1	8	8	28	8	...	4	1	2	3	N. 39° E.	N. 40° E.	60	55	87*	94	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·858	·906	·897	·887	+·004	77	63	50	63	0	2·3	1·9	2·1	−0·1	4	...	3	1	33	...	20	...	1	S. 15° E.	S. 19° W.	58	22	42*	70	...	...	Mooltan	
·810	·873	·799	·827	+·012	76	56	40	57	0	2·0	1·9	2·0	−0·3	7	...	1	4	43	7	...	...	...	S. 44° E.	S. 50° E.	82	54	127*	94	...	...	Jacobabad.	
·831	·857	·867	·852	−·001	85	75	75	78	0	8·3	6·9	7·6	+0·8	...	...	...	...	...	...	31	31	..	S. 67° W.	S. 63° W.	93	84	383	409	...	...	Kurrachee	
·777	·778	·816	·790	−·024	89	70	66	75	−3	8·3	8·7	8·5	+1·3	1	2	2	1	3	2	16	28	7	S. 80° W.	N. 58° W.	64	40	112	127	...	...	Jeypore	E. Rajputana, Central India, and Gujarat.
·737	·816	·850	·801	+·022	86	78	72	79	+3	5·6	5·1	5·4	−0·8	...	...	1	...	...	...	10	47	4	S. 87° W.	S. 70° W.	92	56	221	138	...	...	Ajmere	
·806	·792	·758	·785	−·012	94	74	62	77	+2	8·6	7·5	8·1	+0·1	...	...	...	...	...	...	26	31	5	S. 74° W.	S. 47° W.	89	72	274	288	...	...	Deesa	
·861	·878	·885	·875	+·018	94	81	76	84	+4	8·7	8·9	8·8	+0·4	1	3	...	4	...	...	9	38	7	N. 88° W.	S. 82° W.	72	38	100*	81	...	...	Nowgong	
·867	·912	·915	·898	+·002	90	80	75	82	+6	8·9	8·9	8·9	+2·5	...	...	6	...	12	...	19	...	25	W	S. 22° E.	42	10	113	157	...	...	Agra	
·632	·683	·687	·667	+·012	97	85	86	90	+1	9·1	9·0	9·1	+0·6	...	...	...	...	...	1	25	29	3	S. 71° W.	S. 79° W.	90	89	495	497	...	...	Belgaum	Deccan.
·679	·675	·644	·664	+·008	91	66	54	70	+1	8·6	8·9	8·8	+0·5	1	1	...	...	...	1	11	23	21	N. 81° W.	N. 89° W.	80	79	316*	279	...	...	Sholapur	
·665	·694	·685	·681	−·001	91	73	71	78	−1	8·5	8·4	8·5	−0·2	...	...	...	...	...	...	13	44	5	S. 84° W.	S. 84° W.	92	82	292	340	...	...	Poona	
·735	·745	·725	·735	−·012	88	67	56	71	−4	5·3	6·5	5·9	−2·3	...	3	...	...	..	...	3	33	23	N. 72° W.	N. 71° W.	87	80	227	194	...	...	Akola	
·658	·701	·707	·689	−·012	92	76	70	79	−2	5·6	5·6	5·6	−2·0	...	3	...	...	...	...	9	7	43	N. 58° W.	N. 65° W.	82	72	174*	199	3·35	1·22	Buldana	
·743	·776	·785	·768	+·005	89	77	71	79	+1	8·2	7·9	8·1	+0·7	...	...	...	...	...	1	2	45	14	N. 82° W.	N. 80° W.	91	80	195	192	...	...	Khandwa	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89

Meteorological Province.	Station.	Height of the barometer 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 to gravity 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Deccan—*concld.*	Hoshangabad	...	28·656	28·551	·105	28·602	−·024	29·571	84·3	73·4	10·9	90·3	68·6	21·7	79·1	83·0	77·9	−0·5	72·3	75·7	77·4	75·2
	Nagpur	...	·651	·543	·108	·595	−·017	·563	85·9	74·0	11·9	93·0	69·8	23·2	81·1	83·2	79·6	−0·7	71·4	75·6	76·1	74·3
	Jubbulpore	...	·331	·226	·105	·277	−·009	·545	83·8	73·3	10·5	89·4	68·6	20·8	78·6	81·2	77·3	−0·7	72·0	74·6	75·4	74·0
	Saugor	...	27·898	27·804	·094	27·849	−·011	·539	82·9	72·7	10·2	87·3	69·8	17·5	78·1	81·1	76·8	+0·3	71·0	74·4	76·0	73·8
	Raipur	...	28·693	28·583	·110	28·636	−·016	·536	85·4	74·5	10·9	91·1	69·2	21·9	80·2	82·1	79·5	−0·5	72·5	76·0	76·3	74·9
	Sutna	...	·576	·478	·098	·528	−·022	·516	84·7	76·0	8·7	89·5	73·1	16·4	81·5	82·7	79·4	−1·2	73·4	76·9	77·1	75·8
	Hyderabad (Deccan).	...	·067	27·953	·114	·014	?	·625	85·8	72·2	13·6	89·7	70·2	19·5	79·5	83·0	78·3	?	70·0	73·0	74·3	72·4
West Coast.	Bombay	...	29·744	29·673	·071	29·706	−·021	·683	84·7	77·3	7·4	87·2	74·0	13·2	81·5	81·7	80·4	+0·5	74·1	77·6	77·0	76·2
	Ratnagiri	...	·700	·624	·076	·659	−·021	·706	84·7	76·0	8·7	85·8	73·0	12·8	81·5	81·3	79·6	+0·8	73·9	77·7	77·5	75·4
	Karwar	...	·804	·726	·078	·762	−·022	·738	82·8	74·9	7·9	85·0	71·1	13·9	80·4	80·5	78·4	+0·6	73·4	76·3	76·2	75·3
	Cochin	...	·888	·823	·065	·853	−·023	·790	83·5	74·1	9·4	86·9	71·7	15·2	79·7	80·1	78·1	−0·6	73·0	75·9	76·1	75·0
South India.	Salem	...	28·899	28·765	·134	28·846	−·042	·710	91·3	73·4	17·9	97·5	70·9	26·6	82·5	87·2	80·1	+0·5	71·3	74·7	75·6	73·9
	Mysore	...	27·359	27·260	·099	27·310	?	·717	83·7	67·0	16·7	86·9	65·2	21·7	77·3	78·8	74·1	?	66·2	69·9	71·5	69·2
	Mercara	...	26·171	26·096	·075	26·148	−·024	·300	69·6	62·8	6·8	73·8	60·5	13·3	66·2	65·3	65·2	−0·3	61·9	64·6	64·5	63·7
	Bangalore	...	·845	·743	·102	·806	−·050	·686	81·2	66·0	15·2	84·9	64·3	20·6	74·3	77·8	72·8	−0·1	65·1	68·9	70·3	68·1
	Hassan	...	·803	·719	·084	·773	?	·733	78·3	64·2	14·1	84·1	62·0	22·1	73·7	74·7	70·3	?	60·6	68·2	68·8	65·9
	Chitaldroog	...	27·428	27·327	·101	27·387	?	·690	82·4	68·4	14·0	86·3	66·6	19·7	76·3	79·3	74·7	?	65·0	69·4	70·1	68·2
	Trichinopoly	...	29·555	29·417	·138	29·500	−·044	·682	96·9	77·1	19·8	102·3	72·9	29·4	88·7	93·7	85·0	+1·2	71·9	75·4	76·9	74·8
	Madras	...	·757	·651	·106	·713	−·034	·663	92·3	75·7	16·6	97·1	70·8	26·3	86·1	85·6	82·0	−1·2	?	77·4	78·6	77·4
	Bellary	...	28·328	28·202	·126	28·274	−·021	·669	90·2	73·7	16·5	93·9	71·8	22·1	82·2	86·8	80·6	−0·4	68·6	71·1	71·8	70·5
	Vizagapatam	...	29·659	29·551	·108	29·610	−·024	·578	87·4	83·6	3·8	90·8	81·0	9·8	86·3	87·5	85·9	+0·5	74·3	78·9	79·6	77·6
	Cocanada	...	·680	·569	·111	·625	?	·587	90·6	78·5	12·1	94·6	73·6	21·0	84·7	88·5	84·0	?	75·8	78·2	79·4	77·8
Hill Station, Baluchistan.	Quetta	...	24·467	24·387	·080	24·425	−·012	?	89·8	57·9	31·9	94·3	51·4	42·9	80·7	87·4	73·3	−2·2	51·6	62·1	62·8	58·8
Hill Stations, Northern India.	Leh	...	19·613	19·511	·102	19·572	−·053	?	77·1	50·6	26·5	82·2	46·3	35·9	66·0	72·8	62·5	+1·6	45·4	53·2	55·5	51·4
	Srinagar	...	24·679	24·594	·085	24·634	?	?	83·8	63·3	20·5	88·3	58·2	30·1	74·9	83·4	73·5	?	62·0	70·3	73·5	68·6
	Murree	...	23·718	23·681	·037	23·697	−·044	?	73·8	61·5	12·3	79·8	55·8	24·0	69·3	70·8	67·0	+0·1	59·5	65·8	67·8	64·3
	Chamba	3,005	26·668	26·589	·079	26·630	−·030	?	82·9	70·4	12·5	87·5	67·2	20·3	76·7	80·1	75·4	−0·6	69·2	72·6	74·0	71·9
	Kailang	10,087	20·678	20·605	·073	20·644	−·021	?	73·3	50·2	23·1	78·7	46·6	32·1	65·1	69·2	60·2	−0·4	48·5	57·5	57·2	54·4
	Simla (Ridge)	...	22·993	22·942	·051	22·966	−·041	?	66·0	58·7	7·3	71·4	56·9	14·5	62·9	63·9	61·9	−1·8	57·8	61·4	62·4	60·5
	Simla (Chapslee)	?	?	?	?	?	?	?	68·8	59·2	9·6	74·4	57·7	16·7	63·9	?	?	?	57·9	62·0	?	?
	Chakrata	...	23·216	23·157	·059	23·185	−·024	?	67·8	59·7	8·1	73·3	57·1	16·2	65·4	64·9	63·2	−0·2	59·1	63·7	63·5	62·1
	Ranikhet	...	·974	·907	·067	·925	−·023	?	71·0	61·8	9·2	77·7	59·4	18·3	67·1	67·9	65·8	−1·1	61·5	64·7	65·6	64·0
	Katmandu	4,388	25·436	25·378	·058	25·410	−·028	?	80·5	68·3	12·2	85·0	66·6	18·4	75·5	75·5	73·2	−2·3	66·6	70·3	70·9	69·2
	Darjeeling	...	22·903	22·828	·075	22·867	−·032	?	64·2	57·3	6·9	67·9	55·7	12·2	61·7	62·0	60·3	−0·3	56·8	61·2	61·5	59·9
	Demagiri	?	?	?	?	?	?	?	86·5	75·8	10·7	90·3	73·6	16·7	83·2	83·0	80·3	+0·9	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	82·7	73·5	9·2	87·1	71·5	15·6	78·8	79·6	77·3	?	?	75·3	75·8	?
Hill Stations, Central India.	Mount Abu	...	25·858	25·799	·059	25·827	−·037	?	69·9	62·8	7·1	73·3	61·1	12·2	65·9	68·5	66·0	−2·0	62·4	64·9	66·6	64·6
	Pachmarhi	...	26·287	26·204	·083	26·243	−·001	?	74·3	66·3	8·0	79·5	62·2	17·3	69·8	71·6	68·9	−0·7	64·5	67·4	68·4	66·8
	Chikalda	3,642	·162	·083	·079	·121	−·020	?	72·1	64·8	7·3	77·4	62·7	14·7	68·1	70·6	67·4	−0·3	64·4	66·5	68·0	66·3

II—*continued.*

Stations in India, Burma, etc., for August 1894—continued.

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 of the month.	Heaviest rainfall during the month.		
																									%	%						
·781	·849	·875	·835	+·025	95	85	78	86	+ 2	8·8	8·0	8·4	+0·8	4	...	...	...	...	2	26	27	3	S. 69° W.	S. 79° W.	82	73	81	85	...	...	Hoshangabad.	Deccan—*concld.*
·734	·818	·812	·788	—·007	88	77	72	79	0	8·7	8·9	8·8	+0·3	2	7	...	...	...	3	10	24	16	N. 79° W.	N. 76° W.	69	62	129	144	...	...	Nagpur	
·771	·809	·811	·797	—·011	94	83	77	85	+ 3	8·4	8·2	8·3	0	14	1	1	...	...	2	10	28	6	S. 85° W.	N. 84° W.	63	64	70	107	...	...	Jubbulpore.	
·739	·807	·834	·793	+·008	92	84	79	85	+ 2	7·6	6·9	7·3	+1·2	...	2	...	...	...	1	28	23	8	S. 75° W.	S. 78° W.	81	66	121	104	...	...	Saugor	
·773	·844	·832	·816	—·010	92	82	77	83	+ 1	8·5	8·6	8·6	+0·7	5	1	...	3	1	...	24	27	1	S. 69° W.	S. 76° W.	71	64	195*	187	...	...	Raipur	
·790	·869	·862	·840	+·011	88	81	77	82	+ 3	7·5	8·0	7·8	+0·9	...	6	2	2	2	7	3	31	9	N. 85° W.	N. 70° W.	56	39	163*	191	...	...	Sutna	
·709	·733	·740	·728	?	89	73	66	76	?	8·1	8·0	8·1	?	5	...	...	...	...	...	1	38	18	N. 77° W.	?	85	?	192*	?	...	...	Hyderabad (Deccan).	
·801	·895	·868	·855	—·026	85	83	80	83	− 4	8·9	9·0	9·0	+0·2	...	2	...	1	1	...	7	46	5	S. 89° W.	S. 81° W.	85	81	334	384	...	...	Bombay	West Coast.
·809	·901	·892	·867	+·020	90	84	84	86	+ 1	7·6	8·0	7·8	+0·8	...	3	...	...	...	...	21	28	10	S. 85° W.	S. 63° W.	81	61	260*	242	...	...	Ratnagiri	
·806	·851	·848	·835	+·002	93	82	82	86	− 2	7·0	7·8	7·4	+0·3	6	4	...	...	...	...	21	9	22	N. 83° W.	W.	64	79	81	?	...	...	Karwar	
·800	·846	·847	·831	0	95	85	82	87	0	6·7	8·4	7·6	+1·2	6	1	2	...	...	...	1	36	16	N. 74° W.	N. 85° W.	77	59	146	?	...	...	Cochin	
·743	·755	·732	·743	−·019	90	68	58	72	− 2	6·9	8·2	7·6	+1·6	18	1	1	...	3	13	17	7	2	S. 36° W.	S. 60° W.	48	80	67	94	...	...	Salem	South India.
·635	·638	·682	·652	?	96	68	71	78	?	8·8	8·6	8·7	?	...	2	3	...	1	...	12	10	4	S. 87° W.	?	79	?	345*	?	...	...	Mysore	
·545	·591	·597	·578	—·002	95	92	94	94	0	9·6	9·7	9·7	+0·3	...	2	...	...	...	...	...	30	30	N. 66° W.	N. 73° W.	90	88	264	199	...	...	Mercara	
·610	·643	·657	·637	+·029	95	76	70	80	+ 3	8·7	7·5	8·1	+1·8	...	2	...	1	...	1	18	28	12	S. 86° W.	S. 78° W.	77	91	193*	181	...	...	Bangalore	
·490	·628	·638	·585	?	81	76	74	77	?	8·8	8·8	8·8	?	2	...	...	...	...	...	4	41	15	N. 82° W.	?	89	?	91*	?	...	...	Hassan	
·576	·634	·623	·611	?	83	70	63	72	?	8·6	8·7	8·7	?	...	...	...	...	...	...	19	32	11	S. 84° W.	?	85	?	271*	?	...	...	Chitaldroog.	
·714	·704	·699	·706	−·010	77	52	45	58	− 3	5·5	5·8	5·7	−1·9	3	...	...	...	...	...	3	47	9	N. 86° W.	N. 80° W.	89	82	186	198	...	...	Trichinopoly.	
?	·828	·884	·881	+·075	?	66	73	81	+10	6·0	8·1	7·1	+0·6	...	1	1	3	7	8	18	19	5	S. 52° W.	S. 40° W.	55	58	146	172	...	...	Madras	
·638	·624	·590	·618	−·049	77	57	49	61	− 3	8·7	8·7	8·7	+1·1	1	...	...	1	...	...	7	40	13	N. 86° W.	N. 86° W.	85	87	260	262	...	...	Bellary	
·736	·901	·913	·850	−·024	67	72	70	70	− 2	7·4	7·6	7·5	+1·0	...	...	1	1	2	8	27	22	1	S. 55° W.	S. 74° W.	76	64	16	70	...	...	Vizagapatam.	
·857	·881	·879	·873	?	88	74	66	76	?	5·7	6·4	6·1	?	...	2	1	1	4	1	25	23	5	S. 69° W.	?	69	?	164*	?	...	...	Cocanada	
·327	·371	·318	·339	−·055	66	35	25	42	− 4	0·6	1·3	1·0	−0·4	50	1	...	...	1	...	1	4	5	N. 69° W.	N. 78° W.	14	42	13*	97	...	...	Quetta	Hill Stations, Baluchistan.
·260	·296	·291	·283	+·019	71	47	37	51	+ 2	4·4	5·2	4·8	−0·3	2	2	1	1	...	5	26	15	9	S. 69° W.	S. 72° W.	67	31	51	38	...	...	Leh	Hill Stations, Northern India.
·546	·692	·714	·650	?	93	80	63	79	?	3·9	2·4	3·2	?	17	5	4	1	12	11	3	3	6	S. 16° E.	?	16	?	96*	?	...	...	Srinagar	
·489	·601	·652	·580	+·025	89	84	86	86	+ 4	7·9	8·2	8·1	+1·6	5	1	2	...	14	6	14	8	11	S. 43° W.	S. 4° E.	35	12	142*	119	...	...	Murree	
·702	·756	·772	·743	+·001	94	82	75	84	+ 1	7·8	7·6	7·7	+0·7	23	6	...	...	...	...	...	3	30	N. 42° W.	N. 33° W.	59	33	84*	81	10·24	2·60	Chamba	
·327	·408	·365	·367	+·005	90	66	52	70	+ 2	6·4	6·3	6·4	0	...	1	...	...	...	13	16	16	16	S. 73° W.	S. 80° W.	64	61	45	35	0·61	0·22	Kailang	
·472	·529	·550	·517	—·018	95	92	92	93	+ 2	9·3	9·4	9·4	+0·7	20	9	18	2	1	5	4	2	1	N. 34° E.	S. 77° W.	27	28	102	?	...	...	Simla (Ridge).	
·469	·538	?	?	?	93	90	?	?	?	9·4	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	19·29	3·02	Simla (Chapslee).	
·496	·576	·573	·549	+·008	96	91	93	93	+ 1	9·5	9·3	9·4	+0·6	17	...	...	3	2	...	11	20	9	S. 85° W.	S. 73° W.	48	43	111	103	...	...	Chakrata	
·544	·588	·609	·580	+·010	98	88	89	92	+ 5	9·9	9·9	9·9	+1·3	37	1	2	2	1	1	11	5	2	S. 61° W.	S. 59° W.	19	33	49	51	...	...	Ranikhet	
·632	·681	·705	·673	−·001	91	77	80	83	+ 3	8·1	8·6	8·4	+1·6	...	...	1	38	4	1	...	8	10	N. 83° E.	S. 79° W.	43	26	19	?	13·32	1·84	Katmandu	
·463	·537	·543	·516	+·011	97	97	97	97	+ 3	10·0	9·8	9·9	+1·2	3	6	13	14	7	3	2	5	6	S. 60° E.	N. 84° E.	34	32	86	81	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	...	...	48	7	...	...	7	...	S. 84° E.	S. 23° E.	74	30	?	?	19·08	2·48	Demagiri	
?	·839	·850	?	?	?	85	84	?	?	8·9	8·7	8·8	+1·8	...	2	...	...	3	29	24	3	1	S. 22° W.	S. 3° W.	79	59	?	?	12·79	1·32	Tura	
·561	·605	·632	·599	—·004	98	95	91	94	+ 4	9·2	8·4	8·8	+0·2	...	2	...	...	...	3	49	7	1	S. 51° W.	S. 58° W.	89	72	334*	254	...	...	Mount Abu	Hill Stations, Central India.
·589	·647	·660	·632	—·030	91	89	85	88	− 2	9·1	8·5	8·8	+0·3	...	...	...	...	...	1	8	48	5	S. 87° W.	N. 80° W.	92	72	269*	179	...	...	Pachmarhi	
·603	·633	·658	·631	—·012	97	92	88	93	− 1	9·0	8·7	8·9	0	10	6	...	...	...	...	...	10	36	N. 48° W.	N. 41° W.	76	72½	274	256	10·74	1·90	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and at 4 P.M. at 89

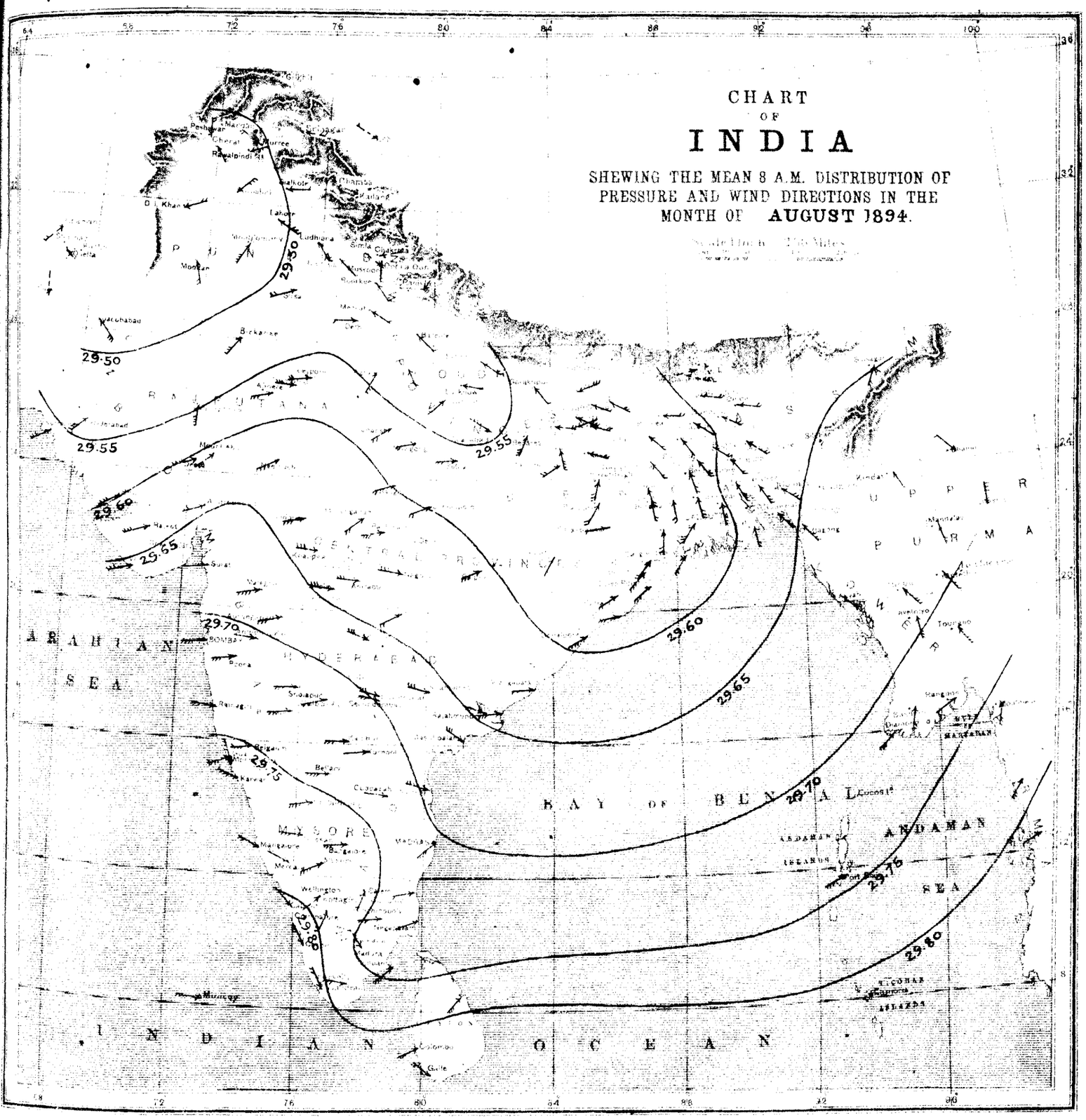
Meteorological Province.	Station.	Height of the barometer cistern above sea-level in feet.	Pressure. Mean of 10 hours.	Pressure. Mean of 16 hours.	Pressure. Mean daily range.	Pressure. Mean daily pressure.	Pressure. Variation from normal.	Pressure. Mean reduced to S.L. and to gravity 45° Lat.	Temperature of Air. Mean maximum.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Hill Station, S. India.	Wellington	...	24·182	24·110	·072	24·146	—·029	?	73·1	57·5	15·6	78·4	54·3	24·1	68·8	66·4	63·7	+1·1	55·2	61·1	60·9	59·1
Extra India.	Muscat	...	29·565	29·504	·061	29·535	?	?	88·3	85·3	3·0	91·7	81·6	10·1	87·4	87·6	86·7	?	78·7	82·2	82·6	81·2
	Aden	...	·648	·501	·147	·572	—·017	29·596	91·8	77·9	13·9	96·8	72·5	24·3	83·6	89·0	84·1	—0·9	72·4	77·5	76·5	75·5
	Perim	...	·495	·375	·120	·432	?	?	95·6	84·2	11·4	99·2	79·6	19·6	91·9	91·6	88·9	?	68·6	79·6	79·9	76·0
	Minicoy	...	·914	·832	·082	.868	?	·803	84·7	79·0	5·7	88·1	75·0	13·1	82·0	82·3	81·4	?	74·9	77·4	77·4	76·6
	Zanzibar	...	30·070	·982	·088	30·026	?	30·026	81·1	72·9	8·2	83·2	71·6	11·6	76·6	80·1	76·8	?	71·0	73·1	73·5	72·5
	Port Victoria (Seychelles).	15	29·992	·919	·073	29·956	?	29·916	80·7	76·1	4·6	82·3	73·8	8·5	79·1	79·8	78·2	?	71·9	73·6	74·0	73·1

II—*concluded.*

Stations in India, Burma, etc., for August 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Total rainfall of the month.	Heaviest rainfall during the month.	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.				
																									%	%						
·416	·455	·481	·451	+·012	87	65	74	76	− 1	8·1	9·4	8·8	+1·2	5	3	...	...	1	4	25	11	13	S. 74° W.	S. 81° W.	63	46	76	87	...	...	Wellington.	Hill Station, S. India.
·897	1·031	1·051	·993	?	74	79	80	78	?	0·9	1·1	1·0	?	...	1	11	36	8	...	...	...	6	N. 81° E.	?	74	?	?	?	...	...	Muscat .	Extra India.
·727	·822	·749	·763	−·031	76	65	55	65	− 1	0·6	1·3	1·0	−0·7	10	...	1	3	4	22	21	1	...	S. 13° W.	S. 12° E.	64	69	252	268	...	...	Aden .	
·492	·848	·865	·735	?	42	57	59	53	?	3·5	3·5	3·5	?	1	1	8	1	1	...	1	18	31	N. 51° W.	?	69	?	357	?	...	...	Perim .	
·819	·879	·875	·864	?	83	81	79	81	?	6·4	6·6	6·5	?	1	...	...	...	...	...	...	49	12	N. 82° W.	?	93	?	497	?	...	...	Minicoy .	
·734	·769	·738	·747	?	91	84	72	82	?	3·9	4·2	4·1	?	...	1	2	...	17	24	16	1	1	S. 1° E.	S. 6° W.	71	59	184	153	...	...	Zanzibar .	
·725	·756	·763	·748	?	80	76	75	77	?	6·3	6·7	6·5	?	...	...	...	2	35	2	3	...	...	S. 27° E.	?	88	?	284	?	4·59	2·34	Port Victoria (Seychelles)	

G. I. C. P. O.—No. 72 Meteor.—12·12·94.—400.



Explanation.

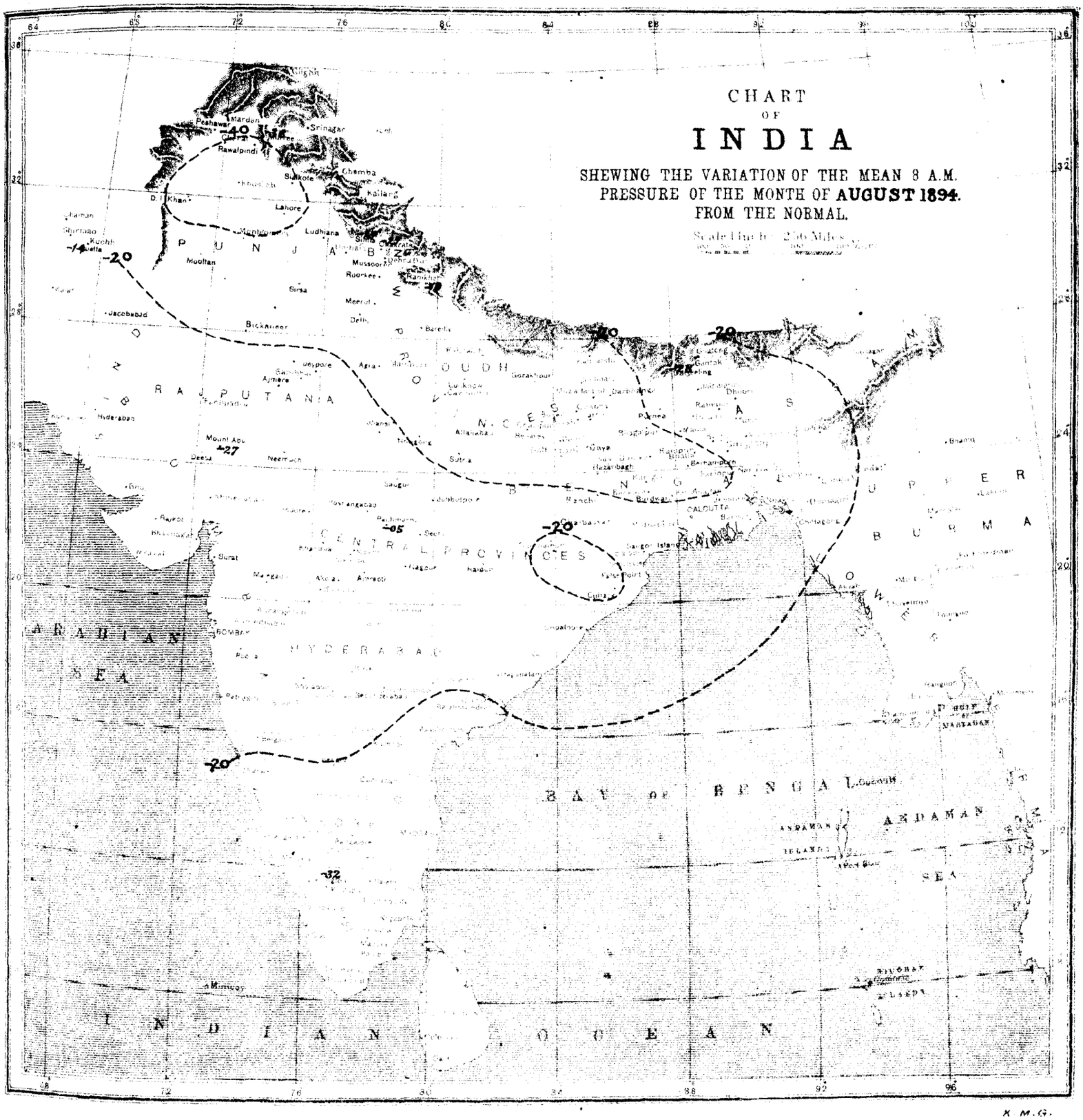
The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison 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 shown 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	,,	,,	,,	,,	,,

Reg. No. 155, Wr., I.—June 94.—6,000

Zinco., S. & O., Calcutta.



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.

Reg. No. 15[illegible], Wr. I.—June 94.—5,000.

Calcutta.

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

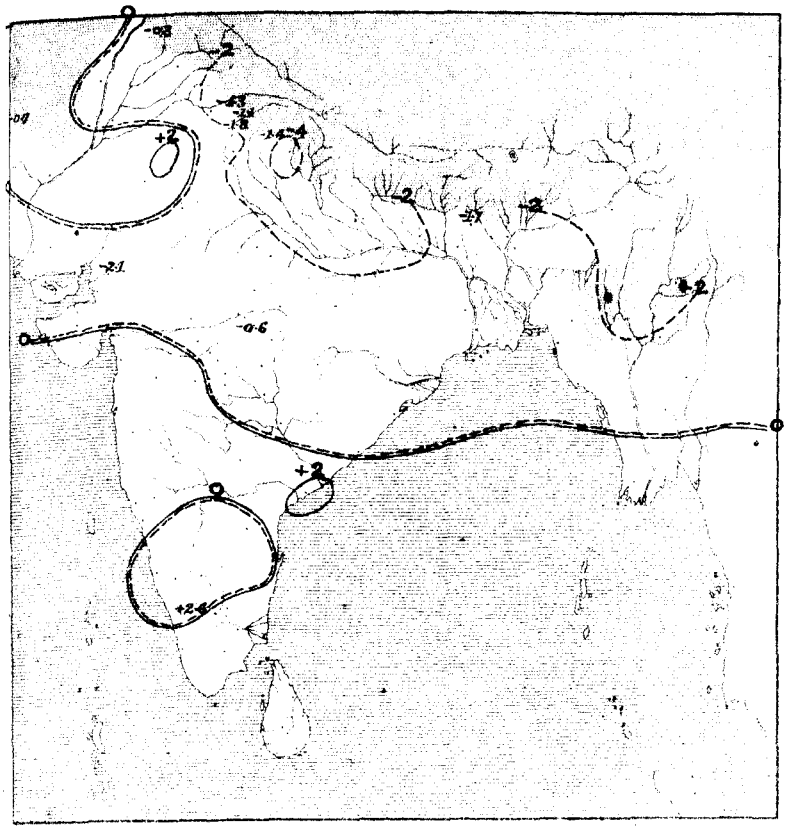
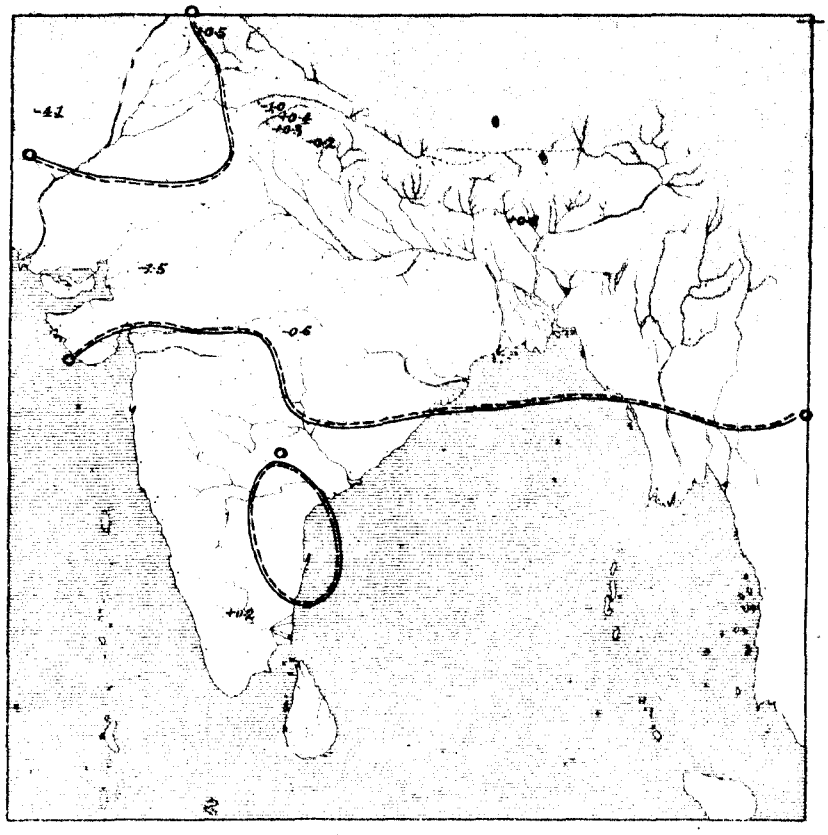


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

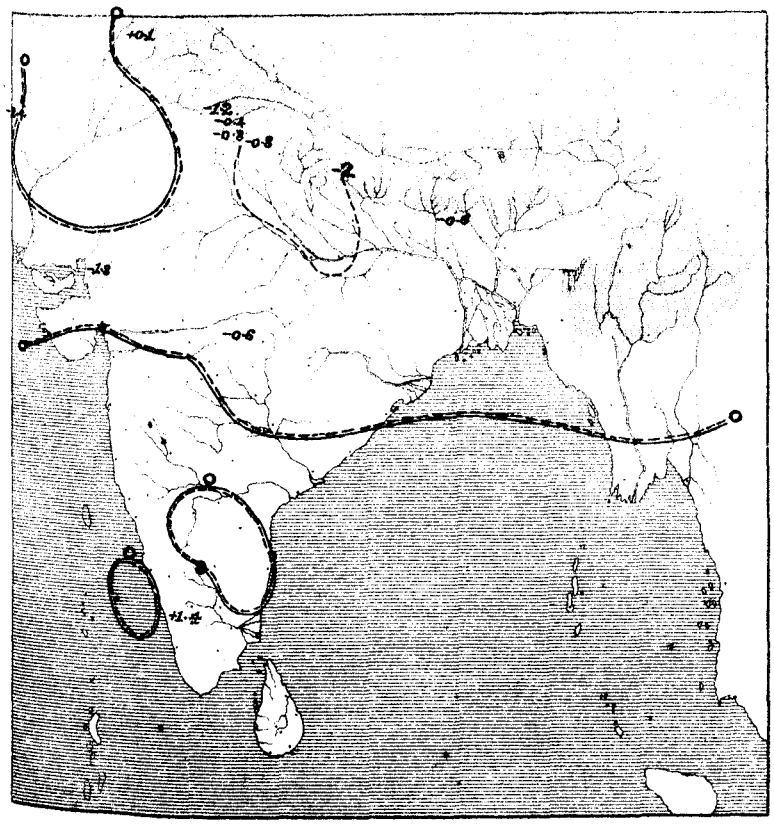
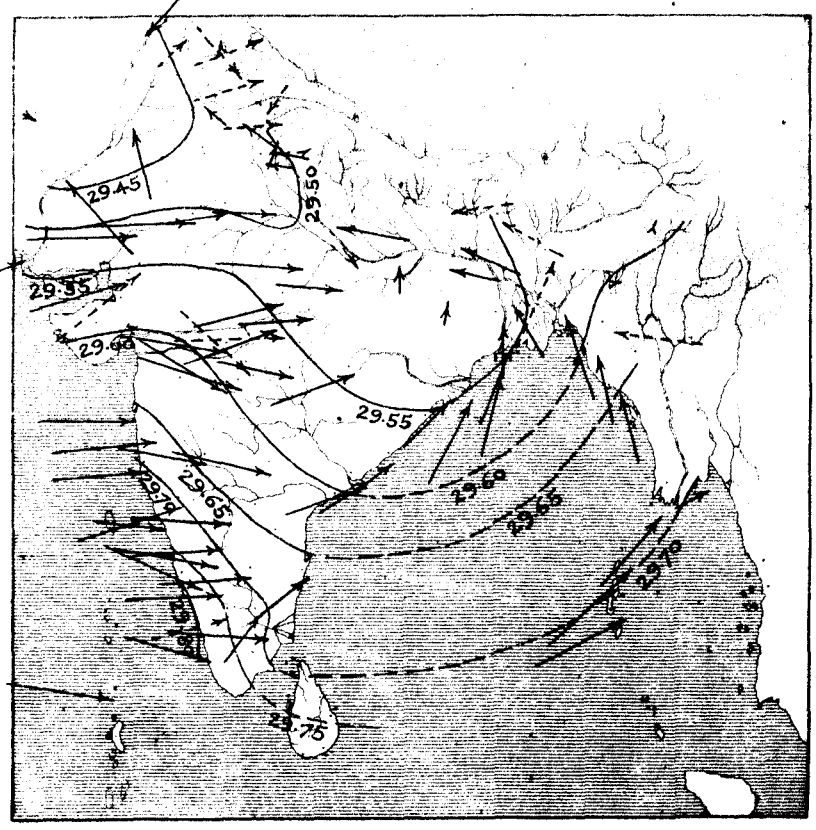


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF AUGUST 1894.



K.M.G.

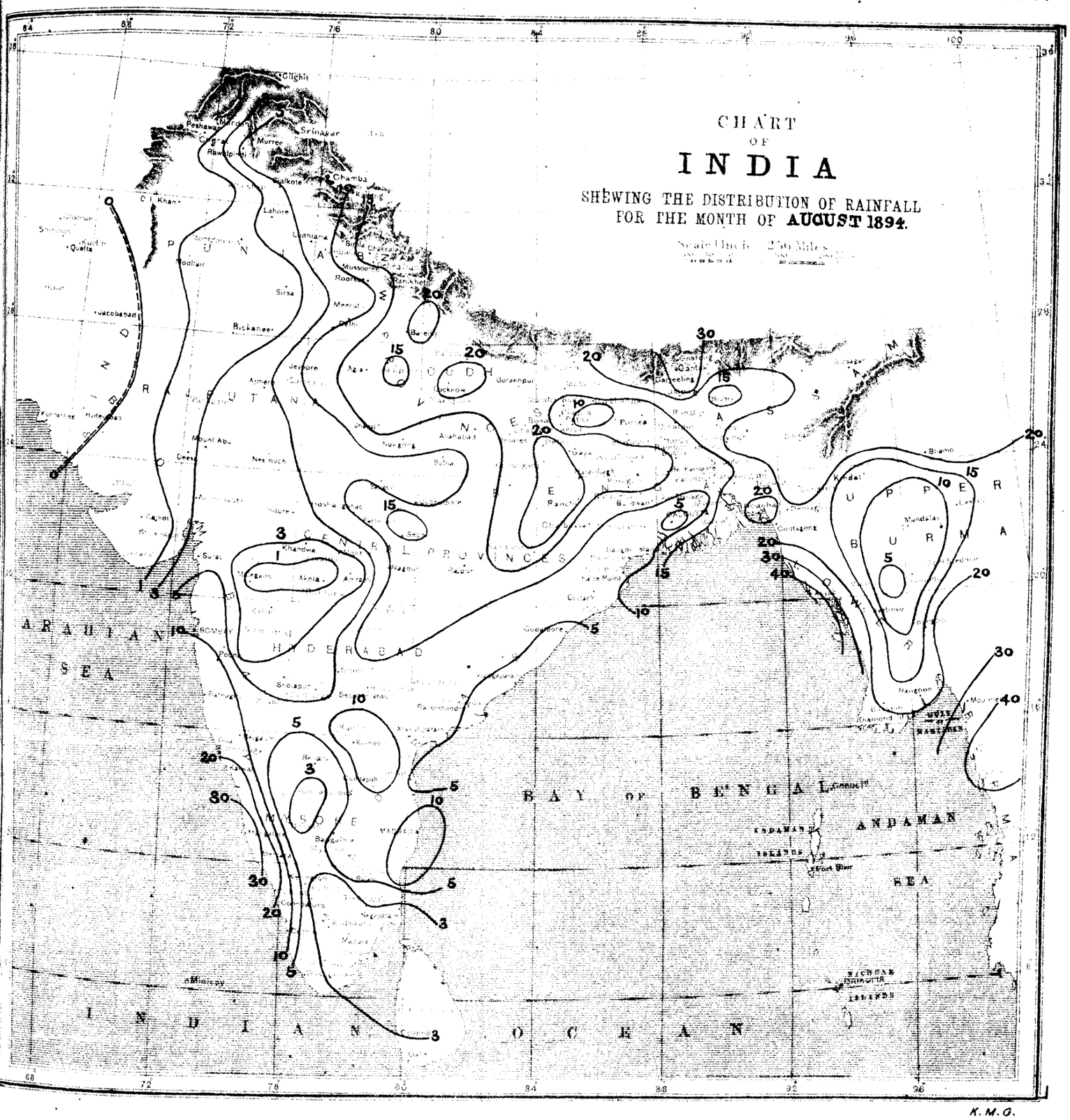
Explanation.

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 of the resultant; a length of ⅛th of an inch being equal to 100 per cent.

Reg. No. 155, Wr., I.—June 94.—5,000.

Zinco., S. I. O., Calcutta.



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

Zinco ... 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 51 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 name of the districts 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 figures.

1. Tenasserim
2. Lower Burma
3. Central do.
4. Upper do.
5. Arakan
6. Eastern Bengal
7. Assam (Surma)
8. Do. (Brahmaputra)
9. Deltaic Bengal
10. Central do.
11. North do.
12. Orissa
13. Chota Nagpore
14. Behar (South)
15. Behar (North)
16. North Western Provinces (East)
17. Oudh (South)
18. Do. (North)
19. North Western Provinces (Central)
20. Do. do. (West)
21. Do. do (Submontane)
22. Punjab (South)
23. Do (Central)
24. Do. (Submontane)
25. Do (Hill Districts)
26. Do. (North West)
27. Do. (West)
28. Malabar
29. Madras (South Central)
30. Coorg
31. Mysore
32. Konkan
33. Bombay Deccan
34. Hyderabad (North)
35. Khandeish
36. Berar
37. Central Provinces (West)
38. Do. (Central)
39. Do. (East)
40. Gujarat
41. Kathiawar
42. Sind
43. Central India (East)
43(a). Do. do. (a)
44. Rajputana (East) Central India (West)
45. Rajputana (West))
46. East Coast (North)
46(a). Do. do. (a)
47. Hyderabad (South)
48. Madras (Central)
49. East Coast (Central)
50. East Coast (South)
51. Madras (South)

Reg. No. 185, Wr. — 1894 — 5 00.

Litho. S. I. O., Calcutta.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, SEPTEMBER, 1894.

INTRODUCTION.

THIS Review of the weather in India during the month of September, 1894, is based on observations taken daily at 8 A.M. at 206 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 89 stations. The rainfall summary is based on the rainfall data of the meteorological observatories and on 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 September, 1894.

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 appearance of more or less severe cyclonic storms over the Bay of Bengal. The date of the occurrence of the former phenomenon 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 frequently 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 into the central parts of the country, and they are frequently remarkable for their vitality, and for their tendency to recurve in the Central Provinces or Central India from west to north.

The weather in India during the month of September, 1894, was less disturbed than usual. Three depressions or cyclonic storms advanced from the Bay into the interior of India. The first two of these depressions were very feeble disturbances and were only important for their influence on the distribution of the rainfall. The third storm formed very slowly during the fourth week of the month and was of slight intensity, although of considerable extent, when it crossed the coast on the 27th. These

depressions formed, as usual in September, in the north of the Bay at the extremity of the trough of low pressure, which is one of the more prominent and important features of the pressure distribution in India during the south-west monsoon period.

The first depression began to form on the 31st of August. It was, on the morning of the 1st, a shallow and diffused disturbance of considerable extent in the north-west of the Bay off the Orissa and Ganjam coasts. It crossed the coast during the day and advanced in a north-west direction. It passed through the Central Provinces on the 2nd and Central India on the 3rd, and was absorbed in the Upper India permanent low pressure area of the rains on the 4th. Winds were throughout the whole period of its existence light and also somewhat irregular in the large central area of the storm. A strong wave of humid wind advanced up the Gangetic plain on the 3rd and 4th with the north-westward progress of the depression and the whole of Northern and Central India received general rain for some days. The rainfall in the coast districts of Orissa and in the Central Provinces and Central India was, as might be expected from the diffused character of the disturbance, moderate in amount.

Temperature was normal or in slight to moderate defect at the beginning of the month. The extension of rainfall to the Punjab caused a considerable reduction of temperature in Northern India, more especially in the Punjab and the North-Western Provinces, where temperature on the 5th and 6th was 5° on the average of the whole area below the normal.

The second disturbance and depression of the month began to form on the 6th off the Ganjam and Circars coasts. It crossed the coast on the 7th and advanced through the southern districts of the Central Provinces on the 8th, into Berar on the 9th and then filled up. It was an unusually feeble and diffused disturbance but gave moderate rain to the Deccan, more especially to the Hyderabad State and the Bijapur and Sholapur districts of Bombay. The depression filled up on the 10th. The trough of low pressure was represented for some days by a broad band of uniform pressure lying over the whole of Northern and Central India, the Central Provinces and North Madras. The Bombay current, although by no means strong, was very steady, and was determined chiefly to the Peninsula and the Central Provinces. The Deccan and Southern India received frequent showers during this period. Fine weather set in over the Punjab and Rajputana on the 11th and little or no rain fell in these areas during the remainder of the month. The North-Western Provinces received occasional showers between the 12th and 20th, but the Bay current was during this period determined chiefly to Burma and North-Eastern India. Bengal had moderately heavy general rain from the 15th to the 19th and large amounts were registered at several stations in the northern districts in North Bengal. The heaviest fall in 24 hours was 7·45 inches on the 17th at Raiganj in the Dinajpur district.

Temperature was hence more or less below the normal in North-Eastern India during this period from the 11th to the 20th, but increased in North-Western India and was during the second half of the period above the normal to a moderate extent.

An important change of the pressure conditions occurred between the 18th and the 23rd. Pressure decreased on the whole in Northern India and increased in the Peninsula. The low pressure belt or trough was displaced northwards and lay along the foot of the hills in the Punjab and the North-Western Provinces. The eastern extremity on the 22nd was in South-West Bengal and the north-west angle of the Bay. A depression developed during the next four days in that area, and the centre crossed the Orissa coast near Puri about noon of the 27th. The disturbance was the most important and considerable of the month, but it was somewhat diffused and irregular in character throughout. The central area advanced through the eastern districts of the Central Provinces on the 28th and the central districts on the 29th, and covered the northern districts and Baghelkhand on the morning of the 30th. The Bombay current was now feeble and the rainfall was hence moderate in amount during the passage of the storm through the Central Provinces. A wave of humid winds advanced from the Bay into Bengal and the Gangetic plain after the storm crossed the Orissa coast and gave a general and moderately heavy burst of rain to that area.

Temperature increased in North-Eastern India, whilst the storm was forming in the Bay and was normal in the Peninsula and Burma and in slight excess over the whole of Northern and Central India. The storm caused a moderate reduction of temperature in the Central Provinces on the 29th and 30th. With this exception the temperature conditions differed very little from the normal over the whole of India and Burma at the end of the month.

Pressure.—The mean pressure of the month for the whole of India was ·018″ below the normal. Relatively to the general condition pressure was in slight local excess in Burma and North-Eastern India, and in slight defect in Central India and the Peninsula. The local variations were, however, small in amount, and the only important modification in the pressure distribution which they indicated was the southerly displacement of the position of the eastern half of the trough of low pressure into the south-eastern districts of the Central Provinces and Ganjam. This displacement was directly related to the place of origin of the depressions of the month and to their tracks.

Pressure was in defect to a slightly less extent at the hill stations in Northern India than at the neighbouring plain stations—the usual, but not the invariable, rule. The pressure conditions hence departed much less from the normal than is generally the case, and the only

important feature was the general deficiency of pressure, undoubtedly related, as in September 1893, to a steadier monsoon than usual.

The following statement gives the mean pressure variations and anomalies of the eleven meteorological provinces :—

METEOROLOGICAL PROVINCE.	Variation from normal of 8 A.M. pressure.	Anomaly.
	"	"
Burma Coast and Bay Islands	−·015	+·003
Burma Inland	−·016	+·002
Assam	+·001	+·019
Bengal and Orissa	−·005	+·013
Gangetic Plain and Chota Nagpur	−·013	+·005
Upper Sub-Himalayas	−·020	−·002
Indus Valley and North-West Rajputana	−·017	+·001
East Rajputana, Central India and Gujarat	−·022	−·004
Deccan	−·026	−·008
West Coast	−·018	0
South India	−·027	−·009

Temperature.—The temperature conditions differed from the normal to a comparatively small degree, and were directly related to the distribution of rainfall. The mean maximum or day temperature was above the normal to a slight extent in the north and east coast districts of the Bay, Sind and West Rajputana and a small part of Southern India (represented by the stations of Trichinopoly and Coimbatore). The deficiency over the remainder was small in amount, except in Assam, North Bengal, the Central Deccan and the Coromandel coast districts in all of which areas it was slightly greater than 2° on the average of the month.

The mean minimum temperature was above the normal over the greater part of India, but the variations were in almost all cases small, and only exceeded 1°·5 locally at four stations. The variations of the mean temperature from the normal were also small and in the great majority of cases small in amount. The largest variations were Dhubri (−2°·0) and Sibsagar (−2°·4). The mean temperature of the month was in slight defect in the Peninsula and in the submontane districts of Northern India and in slight excess in the intermediate belt.

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

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.
	°	°	°
Burma Coast and Bay Islands	+0·5	+0·6	+0·5
Burma Inland	−0·2	+0·9	+0·4
Assam	−2·5	−0·7	−1·6
Bengal and Orissa	−0·4	+0·3	0
Gangetic Plain and Chota Nagpur	−0·8	+0·2	−0·3
Upper Sub-Himalayas	−1·7	+0·2	−0·8
Indus Valley and North-West Rajputana.	+0·2	0	+0·1
East Rajputana, Central India and Gujarat.	−0·4	+0·7	+0·1
Deccan	−0·7	+0·6	−0·1
West Coast	−0·3	+0·1	−0·1
South India	−0·9	+0·1	−0·4

Winds.—The Bay current was stronger and considerably steadier than usual. Winds were more westerly than usual at Port Blair and the Burma coast stations. They were unusually steady in Bengal and the Gangetic plain, but were less easterly than usual in Central Bengal. The Bombay current was slightly below its normal average strength during the month, but was very steady. Winds were more northerly than usual at the Bombay coast stations and at the majority of stations in the Peninsula. Winds were variable and more irregular and unsteady in Upper India, and northerly winds prevailed to an abnormal extent at the hill stations in Northern India, more especially at Simla and Darjeeling.

Humidity and Cloud.—Humidity was on the average of the month in slight excess at Port Blair and in Burma and the Circars, and was in slight defect in Bengal. The air was considerably damper than usual over nearly the whole of the Punjab, Rajputana, the North-Western Provinces, Central India, the Central Provinces and the North Deccan. The increased humidity was most strongly shown at the hill stations in Northern India, at Agra and Lucknow in the North-Western Provinces (centres of heavy rainfall in the previous month) and in the Central Provinces, Hyderabad and Berar, more especially at Akola.

The humidity conditions were normal in the west coast districts and Mysore. Humidity was above the normal to a slight extent in the Madras coast districts, but was

considerably below it in the areas represented by Bellary (—7) and Trichinopoly (—5).

The mean cloud amount was above the normal over nearly the whole of Burma and India. The increase was most marked at Port Blair and in Burma, the Central Provinces and the North Deccan. The mean cloud amount was less than 1 at Jacobabad, Quetta and Muscat, and skies were practically clear during the whole month over the whole of Upper Sind, Baluchistan, the plateau of Iran and South-East Arabia. The largest mean cloud amounts were recorded at Darjeeling (9·8), Hazaribagh (9·5) and Port Blair (9·1).

The following table gives variation data of the mean aqueous vapour pressure, mean humidity and mean cloud amount of ten meteorological provinces for the month of September 1894:—

Meteorological Province.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
	n		
Burma Coast and Bay Islands	+·014	+1	+1·2
Assam	—·005	+3	+1·0
Bengal and Orissa	—·001	—2	+0·9
Gangetic Plain and Chota Nagpur	+·027	+3	+0·7
Upper Sub-Himalayas	+·019	+5	+0·3
Indus Valley and North-West Rajputana.	+·020	+1	—0·1
East Rajputana, Central India and Gujarat.	+·065	+6	+0·5
Deccan	+·037	+5	+0·9
West Coast	—·003	0	+0·4
South India	—·015	—2	+0·5

Rainfall.—The monsoon currents were much steadier than they usually are in September, and hence the rainfall of the month was above the average over nearly the whole of India. Three disturbances or cyclonic storms modified to some extent the rainfall distribution of the month, but they were very feeble and diffused disturbances, and the rainfall accompanying them was not of the concentrated and local character which frequently occurs during these storms. Rain fell much more frequently than usual, and it was well distributed over by far the greater part of the monsoon area.

The Bay current was determined more largely than usual to Burma and to Assam and North Bengal, and the rainfall was in considerable to large excess in Tenasserim, the Assam Valley, North Bengal and Bihar. It was, on the other hand, in moderate defect in the coast districts of the Bay, including Arakan, South Bengal and Orissa. It was in slight to moderate excess in the North-Western Provinces, the Punjab and Rajputana. The Bombay current was determined most largely to the Central Provinces, Berar, Khandesh and Hyderabad, and the whole of that area received favourable and abundant rainfall. The excess averaged 5·24 inches or 118 per cent. in Hyderabad, 2·78 inches or 34 per cent. in the Central Provinces, and 3·40 inches or 50 per cent. in Berar. This excess in the interior accompanied, as is very frequently the case, diminished rain in the west coast districts and also in Mysore and South Madras. The deficiency was greatest in Mysore (3·39 inches or 69 per cent.), and the Deccan districts of Madras and Madras.

The following table gives comparative rainfall data of the eleven meteorological provinces of the Empire:—

Meteorological Province.	Rainfall.		
	Mean actual for September 1894.	Mean normal for September.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	22·00	20·02	+0·51
Burma Inland	8·39	9·48	—0·59
Assam	19·59	12·42	+7·17
Bengal and Orissa	9·98	11·08	—1·51
Gangetic Plain and Chota Nagpur	8·93	7·75	+1·35
Upper Sub-Himalayas	5·80	5·39	+0·40
Indus Valley and North-West Rajputana.	1·04	0·96	+0·02
East Rajputana, Central India and Gujarat.	5·27	5·39	+0·27
Deccan	10·32	7·99	+2·55
West Coast	8·03	9·64	—1·75
South India	4·05	5·29	—0·61

Atmospheric Pressure.

The mean pressure of the whole of India for the month of September, 1894, was ·018″ below the normal. Pressure was relatively to general condition in slight defect over the greater part of the Peninsula, Central India and Rajputana and in excess over the remainder of India and in Burma. The local pressure

variations were, however, less than ·02″ over the whole of India, with the exception of two small areas in North-Eastern India, for which data are given below :—

District.	Station.	Anomaly.
		″
North Bengal	Jalpaiguri	+·028
	Dinajpur	+·029
	Bogra	+.021
Cachar	Silchar	+·025

The barometric means and data of these stations are, however, not altogether satisfactory, and it is hence doubtful whether the apparent excess of pressure was a real feature in the meteorology of the month.

The most important features of the pressure distribution of the month were hence—

1st.—General deficiency over the whole Indian area averaging ·018″ at the level of the plains.

2nd.—The relative distribution of pressure was approximately normal, *i.e.*, the local variations were very slight.

An important effect of the slight deficiency of pressure in the north of the Peninsula and of the slight excess in North-Eastern India was the displacement of the eastern half of the monsoon trough of low pressure further south than usual. The mean position of the axis of the trough during the month was defined by the following stations :— Dera Ismail Khan, Sirsa, Cawnpore, Allahabad, Chaibassa and Cuttack. This change was of considerable imporance, as it was associated with an important modification in the distribution of the rainfall of the month.

The variations of the mean pressure of the month at the hill stations from the normal were much more irregular than usual. Pressure was in defect at these stations, and, with the exception of Mount Abu and perhaps Darjeeling and Simla, the deficiency was less at these stations than at the neighbouring plain stations, the usual rule during periods of general deficiency of pressure in the plains of India.

The following table gives data shewing the oscillations in the range of pressure over the Indian land area during the month :—

Date.	Station.	Lowest pressure.	Station.	Highest pressure.	Range.
		″		″	″
1st	D. I. Khan	29·663	Moulmein	29·890	·227
4th	Bickaneer	·601	Mysore	·879	·278
7th	Cocanada	·654	Trivandrum	·860	·206
23rd	D. I. Khan	·550	Cochin	·863	·313
25th	Do.	·586	Colombo	·847	·261
29th	Seoni	·576	Do.	·901	·325
30th	Jubbulpore	·571	Do.	·892	·321

The data indicate clearly the dates on which the indraught across the coasts into India during the three cyclonic storms of the month was greatest in amount.

Barometric Depressions and Cyclonic Storms of the month.

Depression and feeble cyclonic storm of the 1st to the 4th September.—It was stated in the last Monthly Review that a depression was forming in the north-west of the Bay at the end of the month. It lay over Orissa, the Circars and adjacent parts of the Bay on the morning of the 1st, and was a shallow diffused disturbance. Weather was squally off the coast of the Circars, but winds were only light to moderate in force (2 to 4). Moderate to strong south-west winds prevailed in the south and centre of the Bay. The disturbance was transferred north-westward and lay over the eastern districts of the Central Provinces on the morning of the 2nd, and over the western districts on the morning of the 3rd. The disturbance was unchanged in character during the 2nd and 3rd. Winds were cyclonic in direction in the central area, but were unusually light. The following gives data for four stations :—

Station.	Mean wind velocity in miles per hour during 24 hours preceding 8 A.M. of				Normal of month in miles per hour.
	1st.	2nd	3rd.	4th.	
Raipur	2	3	4	6	5·9
Nagpur	2	2	7	10	4·9
Jubbulpore	1	0	0	2	3·4
Saugor	4	3	4	6	3·3

The feeble indraught towards the depression centre gave moderate rain on the 3rd and following day to Bengal and the Gangetic plain, as well as to the Central Provinces and the North Deccan.

The disturbance continued to advance in a north-west direction during the day, but began to fill up and it was no longer shown by the isobars as a closed area on the 4th. It was apparently absorbed into the Upper India low pressure area on that day, and hence determined an influx of humid winds to North-West India during the next two days, and the Punjab and Rajputana hence shared in the rainfall accompanying the disturbance.

The depression formed in the north-west of the Bay, and was throughout a very shallow depression, but was of considerable extent. As usually happens, its advance across the coast into the interior of India was followed by a moderate influx of humid winds, which gave a general burst of rain to the greater part of Northern and Central India. The following gives mean rainfall data for the storm period in the areas chiefly affected:—

Division.	Average actual rainfall in 24 hours preceding 8 A.M. of						Total of period.
	1st.	2nd.	3rd.	4th.	5th.	6th.	
	Inch.	Inch.	Inches.	Inch.	Inches.	Inches.	Inches.
Bengal . . .	0·27	0·36	0·44	0·32	0·33	0·28	2·00
Bihar . . .	0·34	0·52	0·33	0·17	0·48	0·75	2·59
Chota Nagpur . .	0·42	0·36	0·29	0·12	0·10	0·44	1·73
Orissa . . .	0·60	0·49	0·33	0·29	0·11	0·19	2·01
Central Provinces .	0·43	0·69	1·10	0·54	0·21	0·09	3·06
North-Western Provinces.	0·41	0·33	0·47	0·69	1·41	1·23	4·54
Punjab . . .	0·26	0·16	0·42	0·77	0·80	0·48	2·89

Shallow depression of the 7th to the 10th September.—The distribution of pressure on the 6th was very similar to that which prevailed on the 29th and 30th of August. Moderate gradients obtained in the south and centre of the Bay and in the Peninsula. The western half of the trough of low pressure lay slightly further north than usual, and the eastern half was represented by a large area of very uniform pressure covering the Central Provinces, Chota Nagpur, Orissa, Ganjam and the north-west of the Bay. A very shallow depression formed in this area on the 7th. It advanced during the next 24 hours in a west-north-west direction across the Central Provinces into Berar, and there filled up on the 9th.

It was shallow and more diffused than its predecessor, and the influx of monsoon winds following its advance gave light to moderate rain to the greater part of the Peninsula and Northern India. The chief feature of the storm was the moderately heavy rainfall it gave to the Deccan and more especially the Bombay Deccan districts of Sholapur, Bijapur, Poona and Ahmednagar.

With the advance of this depression, a break in the rains set in over North-Western India, which continued during the remainder of the month in the Punjab and the greater part of Rajputana. The depression disappeared on the 10th, and on the morning of the 11th the trough of low pressure was represented by a broad belt of uniform pressure stretching from the Punjab to Orissa and the Circars. No important change in the pressure conditions occurred for some days, and light to moderate rain fell steadily in the west coast districts, the Deccan, the Central Provinces, Bengal and Burma. North Bengal received a moderately heavy burst of rain on the 16th, 17th and 18th. The influx of humid winds across both the Bengal and Bombay coasts, then decreased in intensity and rainfall hence decreased rapidly in amount. These changes preceded the formation of the third depression and cyclonic storm of the month of which the following is a description.

Cyclonic storm of the 23rd to the 30th of September.—The distribution of pressure on the morning of the 18th was similar to that which had obtained from the 1st of the month. Pressure gave way on the 19th and following days in Northern India (most rapidly near the hills) and increased in the Peninsula. In consequence of these changes the western half of the trough of low pressure lay along the foot of the hills from Lahore to Gorakhpur, and the eastern half ran from North Bihar to the north-west angle of the Bay. Gradients had increased in amount in the south and centre of the Bay and also in the Peninsula. Winds, which were feeble in the south of the Bay and the equatorial belt on the 19th and 20th, increased in intensity, and on the morning of the 23rd, winds of force 4 to 7 were experienced by vessels in the south of the Bay. The following data for four insular stations show most clearly the increasing strength of the current in the south of the Bay and the Arabian Sea during this period:—

Station.	Amount of wind velocity during 24 hours preceding 8 A.M. of					Normal daily velocity of wind in miles, in September.
	20th.	21st.	22nd.	23rd.	24th.	
	Miles.	Miles.	Miles.	Miles.	Miles.	
Pamban . .	131	204	270	315	330	?
Port Blair .	174	238	261	433	409	214
Minicoy . .	392	362	316	321	510	?
Zanzibar . .	102	107	272	310	272	118

The data for Pamban and Minicoy hence confirm fully the observations recorded on board vessels in the south of the Bay.

Whilst these important changes indicating an increase in the monsoon current in the southern portion of its area of extension were in progress, winds had fallen off in strength in Northern India, rainfall had decreased in amount and become partial in its distribution, temperature was increasing and weather was fine with light to moderate cloud.

The following data illustrate the decrease in the intensity of the monsoon current in North-Eastern India:—

STATION.	MEAN HOURLY WIND VELOCITY DURING 24 HOURS PRECEDING 8 A.M. OF					Normal hourly velocity of wind in miles, in September.
	20th.	21st.	22nd.	23rd.	24th.	
	Miles.	Miles.	Miles.	Miles.	Miles.	
False Point . .	12	10	7	6	6	8
Saugor Island . .	19	16	9	5	6	10
Calcutta . . .	5	2	2	2	1	4
Burdwan . . .	3	2	1	1	1	3
Patna . . .	0	2	1	2	2	3

Hence during this interval whilst the winds in the south of the Bay had increased more than two-fold in strength, winds in Bengal had fallen off to little more than a third of their strength at the commencement of this period (on the 19th).

Winds had also shifted round to northerly directions in the north-west angle of the Bay, generally the first and most significant indication of the establishment of a depression area, and the formation of a cyclonic storm. Winds were light and variable in the north-west angle of the Bay, and weather was squally in the centre and south of the Bay.

The chief conditions preceding and accompanying the formation of the present depression in the north-west angle of the Bay have been stated above. The most important and noteworthy were the prevalence of strong and increasing monsoon humid winds in the south and centre of the Bay, and the decrease in the strength of the monsoon current in Bengal and the north-west of the Bay, where uniform pressure conditions and light unsteady winds were now established. The following gives a brief history of the storm:—

23rd September.—Pressure had given way slightly in India and increased slightly in Burma. Pressure was in general defect, the deficiency increasing in amount eastwards from the west coast to Bengal, Bihar and the north of the Bay, in which area it ranged between ·10″ and ·16″ and was largest in amount in Assam. Pressure was very uniform in the north-west of the Bay, winds light and variable, and weather fine. The following gives observations taken on board ships at 8 A.M.:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Karagola*.	22 4	91 36	29·627	SW	2	Overcast. 8 P.M., squally.
S.S. *Lalpoora*.	20 32	87 58	·570	NNW	2	Passing clouds.
S. *Thirlmere* .	17 54	88 12	·581	NW	0	Heavy rain.
S.S. *Landaura*	19 21	89 48	·526	S	2	Fine. Noon, squally.
S. *Eulomene* .	14 26	89 49	?	W	2	Fine. 4 P.M. cloudy.

24th September.—The pressure changes during the previous 24 hours were very small in amount. Northerly to easterly winds prevailed at the coast stations in Orissa and South Bengal, indicating the continued existence of the depression in the north-west of the Bay. They were however, very light. Winds had increased considerably at Diamond Island and Port Blair. The following gives observations taken on board ships at 8 A.M.:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S. *Thirlmere* .	18 38	88 29	29·602	E	2	Fine. 4 A.M. passing showers.
S. *Fulwood* .	18 40 (Noon.)	87 5	?	Calm	0	Heavy rain.
S.S. *Loodiana*	18 25	87 14	·591	NE	2	Passing clouds.
S.S. *Landaura*	16 43	92 49	·554	Variable	1	Fine. 4 A.M. Passing squalls.
S. *Scottish Lochs.*	15 33	90 7	·602	Variable	2	4 P.M. Frequent showers.
S. *Waterloo* .	7 57	87 39	·754	WSW	6	Hazy horizon. Hard squalls at midnight.
S S. *Rewa* .	Madras.		·634	...	...	Overcast at midnight.

The preceding data indicate that a strong monsoon was blowing over the southern half of the Bay, but that to the north of Lat. 15°N winds were very light and irregular. The whole of that area was in fact one of nearly uniform pressure. Weather was squally to the south of Lat. 16° N. Heavy rain was also falling in some parts of the north of the Bay, but weather was fine near the Bengal and Orissa coasts.

25th September.—Pressure had risen slightly in Northern India and was unchanged in the Feninsula. Winds continued to increase on the Burma coast, but were very light in Bengal. The average velocity of the winds during the previous 24 hours at Saugor Island was 5 miles and at False Point 4 miles per hour. Winds were unchanged

in direction. A large area of nearly uniform pressure covered the greater part of the north of the Bay. The following gives observations taken on board ships in this area :—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Loch Tay* .	15 22	86 12	?	W	6	Rainy.
S. *Fulwood* .	18 57	87 14	?	SW	...	Heavy rain.
S.S. *Ellora* .	19 40	87 29	29·600	Variable.	1	Cloudy at noon,
S.S. *Karagola* .	Noon. 20 2	92 56	·617	SW	2	Noon, heavy squalls with rain.
S.S. *Katoria* .	Saugor.		·550	Calm.	0	Fine.

Weather was squally with moderate to strong winds in the south and centre of the Bay. Winds were, on the other hand, light over the north of the Bay and calms were reported by vessels near the Bengal coast. Several vessels had heavy rain in this area during the day. Winds were hence light and irregular over the whole area of uniform pressure and very slight depression in the north of the Bay, but rainfall was increasing in amount and weather becoming more squally.

26th September.—Pressure had increased slightly in Burma and fallen slightly in South-West Bengal, Orissa and Ganjam, and was unchanged in the remainder of the Bay. The depression in the Bay had developed slightly but was of little importance, as winds were still very light on the Bengal and Orissa coasts. Moderate general rain had fallen in Burma, and rain was commencing to fall in the Bengal and Orissa coast districts where skies were now heavily clouded. The following is a summary of the 8 A.M. observations taken on board ships in the Bay :—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Kasara* .	16 3	93 59	29·683	S	4	Continuous rain.
S. *Scottish Lochs* .	18 18	89 56	29·562	S	2	Overcast, Midnight rain squalls.
S. *Fulwood* .	19 2	87 16	?	Calm	0	4 P.M. showery.
S.S. *Loch Tay*	(Noon.) 19 2	87 52	?	NE	2	Rain clouds. 8 P.M., squally with heavy rain.
S.S. *Blue Cross*	18 7	86 11	?	N	4	Thick with heavy rain squalls.
S.S. *Ellora* .	17 26	86 30	29·551	NW	4	Heavy rain.

Moderate to strong monsoon winds continued in the south and centre of the Bay. Weather was more squally in the north of the Bay and rainfall heavier, more especially in the central area of the depression. Winds were light but cyclonic in direction in the depression area. There was, however, so far as can be judged, much irregularity in the air movement, and the disturbance was apparently diffused and showed as yet no signs of concentration.

27th September.—Pressure had increased briskly in Burma and East Bengal, and fallen very slightly in Orissa and the Central Provinces. The depression in the Bay was hence slightly more pronounced than on the previous day, but the disturbance was as hitherto feeble, and lacked concentration. Moderately strong monsoon winds continued at Colombo, Port Blair and Diamond Island. Winds were increasing on the Bengal coast, but were still below their normal strength. Rainfall, due to the monsoon humid winds in the eastern quadrant of the depression had extended over the whole of Bengal, Chota Nagpur and Bihar, and was generally moderate in amount. The following gives 8 A.M. observations taken on boardships in the Bay :—

NAME OF VESSEL	8 A.M. POSITION.		Barometer.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S. *Thirlmene* .	21 15	88 10	29·586	SE	5	Showery. 4 P.M., rain squalls.
S. *Eulomene* .	20 30	88 48	?	S	5	Squally with rain.
S. *Fulwood* .	19 58	87 52	?	SE	3	Showery.
S. *Waterloo* .	18 28	87 38	29·524	S	4	Clear 8 P.M., passing showers.
S. S. *Blue Cross*	19 25	86 28	?	NW	...	Heavy squalls and showers.
S. S. *Wing Sang* .	17 33	90 59	29·566	S	4	Moderate sea, rainy and squally.

The data show that weather was more squally than on the previous day, but that the cyclonic movement had not increased in intensity. The depression was, as hitherto, ill-defined and the winds somewhat irregular in the central area; but the observations indicate clearly that the centre of the depression was now approaching the South Orissa coast. It was probably in about Lat. 19¼° N. and Long. 86½° E. at 8 A.M. The storm observations taken at Puri and False Point show that the centre crossed the coast about noon near Puri. These observations are interesting as they show that the storm was feeble and diffused. The Puri observer describes the weather during the storm as follows :—

"The weather from noon of the 24th up to 5-30 A.M. of the 28th was of ordinary monsoon character with occasional showers of rain

and thick heavy overcast sky. The wind was light throughout except between 5-30 A. M. and 2 P.M. of the 28th, when it looked somewhat stormy with a strong gale of wind from south-west. The total amount of rainfall registered was 2·20 inches. The storm lasted nearly 8½ hours.

The following observations were taken at this station during the storm :—"

MONTH.	Date.	Hour.	Barometer uncorrected.	Wind direction	Amount of wind velocity.	Cloud.	Rainfall.
			"				Inch.
September	24th	4-30 P.M.	29·718	SSE	...	4	0·7
"	25th	4 "	29·704	ESE	...	8	0·15
"	26th	4 "	29·666	Calm	...	10	0·60
"	27th	4 "	29·632	Calm	...	10	0·30
"	28th	6 A.M.	29·784	SW	15 miles an hour	10	0·33
"	"	8 "	29·850	SW		8	*Nil*
"	"	2 P.M.	29·788	SW	30·3 miles an hour.	7	0·06

Special observations received from the Collector of Customs indicate that the calm at Puri prevailed from 4 P.M. on the 26th to 4 P.M. on the 27th; and that the winds throughout were very moderate in character.

The following gives the observations taken on the 26th and 27th, forwarded by the Port Officer, False Point :—

DAY AND DATE.	Hour.	Barometer (Aneroid).	Thermometer.	Wind direction	State of the weather.
		"	°		
Wednesday, 26th Sept.	4 A.M.	29·45	88	N	Moderate breeze, banks of clouds from north to east, cloudy and gloomy.
	8 "	29·48	86	NNW	Moderate breeze, passing clouds and clear weather.
	Noon	29·47	86	N	Moderate breeze with fresh squalls of rain and wind, distant thunder; overcast sky and gloomy weather.
	4 P.M.	29·40	84	ENE	Light winds, continuous rain, overcast sky and dark gloomy weather.
	8 "	29·44	85	ENE	Moderate breeze; cloudy and gloomy weather, lightning from north to east.
	Mid-night	29·46	86	NE	Light winds, passing clouds and clear.
Thursday, 27th Sept.	4 A.M,	29·40	86	NE	Moderate breeze light passing squalls of rain and wind; overcast and gloomy.
	8 A.M.	29·47	86	E	Light winds, overcast and gloomy weather.
	9 "	...	...	...	Wind veered to south-east.
	Noon	29·46	87	SE	Moderate breeze, passing clouds with passing showers of rain and hazy weather.
		"	°		
Thursday, 27th Sept.	4 P. M.	29·39	86	SE	Light winds, cloudy and hazy weather.
	8 "	29·46	86	S	Fresh breeze, passing clouds and hazy.
	Mid-night	29·50	86	SSW	Strong breeze, passing clouds and fine.

These observations hence establish fully that the storm was feeble and diffused, and that the air motion was feeble and the storm of little importance, except for the rainfall which accompanied it.

28th September.—The storm which crossed the South Orissa coast about noon of the previous day had advanced in a west-north-westerly direction, and was now in the south-eastern districts of the Central Provinces. The following observations define its position and character at that hour :—

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	
Gopalpur .	29·638	+·071	?	SSW	8	4	0·29	Sea slight.
Sambalpur .	29·602	+·018	—·157	SE	5	9	1·14	
Chaibassa .	29·658	+·045	—·093	SE	3	10	0·35	
Jubbulpore .	29·648	—·033	—·122	N	5	10	0·17	
Raipur . .	29·	—·041	—·166	Calm.	6	10	3·82	
Nagpur .	29·649	—·012	—·125	SW	5	10	0·40	

Strong easterly winds now prevailed in Chota Nagpur and Bihar, indicating the extension of a strong monsoon current up the Gangetic plain. Winds were light in the Central Provinces and Orissa, especially in the central area of the depression. Thus Raipur reported a calm at 8 A.M., and the average velocity of the winds at Sambalpur during the previous 24 hours was only five miles per hour. North Madras, Orissa, Bengal, Burma, Assam, Chota Nagpur, Bihar and the eastern districts of the North-Western Provinces had received light to moderate rain during the previous day. In the eastern districts of the Central Provinces, the rainfall was moderately heavy. Weather was squally with moderate to fresh monsoon winds in the north of the Bay, but was improving.

29th September.—The depression had advanced westwards about 240 miles into the central districts of the Central Provinces. The centre at 8 A.M. was nearly midway between Seoni and Jubbulpore in Lat. 22¾° N. and Long. 79½° E. The following gives observations at 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	
Nagpur .	29·609	—·040	—·175	SSW	10	10	0·86	
Sutna . .	29·613	—·055	—·151	NE	8	10	2·68	
Jubbulpore .	29·587	—·061	—·181	E	6	9	1·65	Thunderstorm and wind variable.
Seoni . .	29·576	—·054	—·196	?	?	8	1·53	
Saugor . .	29·617	—·069	—·174	Calm	4	10	1·25	
Hoshangabad	29·624	—·065	—·175	NE	1	10	3·19	
Raipur . .	29·625	+·026	—·147	SSW	4	7	0·01	

The depression had changed slightly in character, and now consisted of a large central area of nearly uniform pressure, about 400 miles in diameter, with moderate gradients to the south and east. Strong easterly winds had extended over the eastern districts of the North-Western Provinces. Winds were cyclonic in direction in the central area, but were very light, more especially at Saugor, Hoshangabad and Jubbulpore, and were moderate in force in the southern quadrant. General rain had fallen in the Central Provinces, the eastern states of Central India, Bengal, Bihar and Chota Nagpur. The rainfall was heavy in the districts to the west and north-west of the storm, and light to moderate elsewhere.

30th September.—As frequently occurs in September, the storm, which had marched into the central districts of the Central Provinces, recurved there, and had moved northwards during the previous 24 hours. The centre at 8 A.M. was between Saugor and Sutna, and in Lat. 23½° N. and Long 80° E., about 100 miles north of its position on the previous day at the same hour. The depression in the central area slightly exceeded two-tenths of an inch. Winds had fallen off considerably in Bengal and were extremely light in the central area of depression, every station reporting calms. The following gives 8 A.M observations :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.
	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
Jubbulpore . . .	29·571	—·016	—·210	Calm	2	10	0·10
Sutna	29·585	—·028	—·189	S	5	10	3·50
Allahabad . . .	29·601	—·043	—·168	E	8	10	*Nil*
Cawnpore . . .	29·615	—·041	?	Calm	2	10	1·91
Nowgong . . .	29·600	—·026	—·186	Calm	3	10	3·57
Jhansi	29·646	—·019	—·141	NNW	3	8	2·45
Saugor	29·594	—·023	—·206	Calm	2	10	1·62
Pachmarhi . . .	?	+·018	—·148	WNW	5	10	2·48

Moderate to heavy rain had fallen in the area covered by the central depression during the previous 24 hours. The rainfall had decreased considerably in Bengal, and the storm was hence commencing to fill up in consequence of the decreasing indraught.

It continued to advance northwards into the eastern districts of the North-Western Provinces, and filled up in the afternoon of the 1st of October.

Summary of the Reports of the weather and snowfall in the Mountain Districts to the north and north-west of India.

No information has been received and hence, almost certainly, no snow fell during the month in the higher ranges of the Western Himalayas.

Summary of special Storm Reports.

The number of local storms during the month was exceptionally small. This was chiefly due to the prevalence throughout the month of strongly marked south-west monsoon conditions over the whole of India. Duststorms are of occasional occurrence in September in Sind and the South-West Punjab, and thunderstorms in

Upper India, when the monsoon current is withdrawing from that area.

The only local storms of importance reported in September, 1894, were the following:—

3rd.—Violent duststorm at Jacobabad from 4-55 P.M. to 5-25 P.M. The storm came down from north-east. The greatest wind velocity was 47 miles per hour.

4th.—Thunderstorm at Allahabad. The storm began at 4-35 P.M., with heavy showers of rain, and lasted until midnight. The chief feature was continuous low thunder for a long time, and vivid lightning at short intervals.

20th.—Thunderstorm at Barisal with heavy rain.

26th.—Duststorm at Baghdad at 1 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 ordinary monsoon winds, force 4 to 5, prevailed in the centre and east of the Arabian Sea, and feeble unsteady winds in the remainder of that area. Weather was generally cloudy or showery. The mean wind force for the whole area was 3·0 at 8 A.M. of the 1st. No change occurred during the next five days except that winds strengthened rapidly in the neighbourhood of Socotra, and on the morning of the 6th ranged from 6 to 9 in force. Thus the S.S. *Clan Sinclair* in Lat. 12° 35′N., and Long. 54° 25′E. at 8 A.M of that day experienced south-south-west gales, force 9. This increase of the air movement was not accompanied by any change in the weather in that area. Weather was as hitherto showery in the neighbourhood of the Bombay coast, and fine, with some cloud, over the remainder of the sea. The mean intensity of the winds had increased to 3·6 at 8 A.M. of the 6th. No change occurred during the next 24 hours. During the next week there was, however, a steady decrease in the air movement, which averaged 2·8 at 8 A.M. of the 13th or 0·9 less than on the 7th. Winds were very unsteady all over the sea throughout this period, and weather showery or cloudy. The strongest winds during the period were of force 4, and were confined to the neighbourhood of Socotra. The air movement increased during the next three days, more especially along the Sind and Kathiawar coasts, where winds of force 5 to 6 were experienced on the 15th and 16th. The mean intensity of winds had increased to 3·8 at 8 A.M. of the 16th, the highest recorded during the month.

As usually happens in the second half of September, winds were very unsteady in direction throughout the remainder of the month, but of fairly normal strength up till the 27th, when the current in the Arabian Sea fell off rapidly in strength, and was at least 30 per cent. weaker than the normal during the last three days of the month. The mean strength of the winds on the 29th and 30th was only 2·1 or 0·9 below the normal intensity in September, and 1·7 less than on the 16th, when the current was strongest.

Bay of Bengal.—At the commencement of the month a moderate monsoon was blowing in the south and centre of the Bay. In the north and west of the Bay winds were light, and formed part of an irregular cyclonic circulation around a feeble depression in the west of the Bay. Weather was generally cloudy and showery. The mean intensity of the air movement was 3·2. Winds decreased in the Andaman Sea during the day, and on the morning of the 2nd very feeble and unsteady winds prevailed in that region. Over the remainder of the Bay, on the other hand, the air movement had increased. Winds were strongest in the south of the Bay and more especially at some distance to the south-west of the Nicobars where the S.S. *Lindisfarne* (in Lat. 6°N. and Long. 90¾°E.) experienced west-south-west gales, force 8. Winds increased again in the same area as on the preceding day and averaged 3·5 in force at 8 A.M. of the 3rd. The depression in the west of the Bay had passed inland, and winds in the north and west of the Bay had shifted back to their normal directions. The air movement decreased rather rapidly during the next three days, more especially in the north of the Bay, and on the 6th, the mean wind force, as recorded on board 15 vessels, was 0·9 less than on the 3rd. No change of importance occurred until the 15th, ordinary monsoon conditions prevailing generally. The current was fairly steady during the period, and the mean wind intensity for the whole period was 3·3 or only 0·2 below the normal strength of the winds in the Bay in September. Winds decreased rather rapidly in strength in the centre and south-east of the Bay on the 15th, and very light variable airs (force 1 to 2) were experienced in that region from the 16th to the 19th. These features are clearly shown by the wind data of Port Blair where the winds varied in direction between west-north-west on the 15th, and south-south-east on the 18th and where the average hourly velocity for the period, 15th to 18th, was only 5 miles. Notwithstanding the irregularity and feebleness of the air movement, weather was cloudy and showery in that region during the period. The strength of the air movement for all parts of the Bay averaged 2·6 on the 17th and 18th, and 2·9 on the 19th.

It is noteworthy that the air movement was unusually light and irregular at this period in the eastern half of the equatorial belt in the Indian ocean. Thus the S. *Scottish Lochs* in Lat. 5¼° S. and Long. 91¼° E. had variable airs, force 1 at 8 A.M. of the 15th, and S. *Eulomene* in Lat. 4½° S. and Long. 81½° E. easterly airs force 1, at the same hour Winds strengthened considerably in force in that area

on the 17th, and at 8 A.M. of the 18th the Ship *Eulomene* which had advanced to the neighbourhood of the Equator in Long. 86° E., had winds of force 6. Simultaneously with this rise of the air movement in the equatorial region winds strengthened in the south of the Bay, and on the morning of the 20th winds of force 5 to 6 were experienced by several vessels in that area. The increase continued and extended rapidly northwards up the centre of the Bay, and on the 21st the majority of vessels in the centre and south of the Bay reported winds of force 5 to 7, squally showery weather and a "rough" or "high confused sea." The mean intensity of the winds at 8 A.M. of the 21st was 3·7 or 0·8 greater than on the 19th. Winds increased again during the day, except in the north, where they fell off and began to shift round to northerly directions.

Squally rainy weather prevailed generally to the south of Lat. 16° N. and fine cloudy weather to the north of that parallel. Several vessels in the south and centre of the Bay reported "heavy to fierce squalls," much rain and a heavy sea. On the 23rd, winds were light and irregular in the north of the Bay and weather dull and cloudy. In the east, south and centre (as far north as Lat. 18° N.) fresh to strong monsoon winds and squally rainy weather prevailed.

As is usually the case under such combination of conditions, a storm was generated off the Orissa coast during the day. It developed slowly during the next three days and passed inland about noon of the 27th. Winds were cyclonic in direction from the 24th to the 27th in the northern half of the Bay, and feeble in intensity at the head and north-west of the Bay. Heavy weather and strong south-west winds were experienced over the south, centre, and east of the Bay during that period. The mean force at 8 A.M. of the 27th was 4·1. A moderate to strong monsoon (slightly above the average) prevailed during the remainder of the month over nearly the whole of the Bay. The mean air movement on the 30th was 3·9 or 0·4 above the normal.

It may be noted that Port Blair in the Andamans reported the occurrence of thunder and lightning on no less than 12 occasions during the month — an unusual circumstance.

Temperature of the air.

The mean maximum or day temperature of the month was below the normal over by far the greater part of the Indian area. It was in slight excess in Sind, the South-West Punjab, North-West Rajputana and Cutch, and also in Lower and Central Burma, Orissa and the eastern districts of the Central Provinces, and in a small portion of South India defined by the stations of Trichinopoly, Coimbatore and Cochin. The excess in these areas was in most cases small in amount, and was more than 1° in amount at three stations only, *viz.*, Toungoo, Moulmein and Bickaneer. The Moulmein observations have been for some time very unsatisfactory, and the excess at that station is probably not real. The deficiency over the remainder of India was below 2° in amount, except in three areas, for which data are given below :—

Province.	Station.	Mean Maximum temperature.		
		Actual, September 1894.	Normal, September.	Variation of actual from normal.
		°	°	°
Assam and North Bengal.	Sibsagar	84·9	88·6	−3·7
	Dhubri	82·9	85·8	−2·9
	Dinajpur	86·0	88·5	−2·5
Central Deccan.	Sholapur	85·3	88·0	−2·7
	Hyderabad (Deccan)	83·8	86·3	−2·5
Coromandel Coast	Madras	90·4	93·2	−2·8
	Masulipatam	88·5	91·4	−2·9

The mean minimum or night temperature of the month was in slight excess over nearly the whole of India. It was below the normal to a small extent in Sind, Assam and some parts of the Deccan and Madras, and in the western districts of the North-Western Provinces. The variations were less than 2° in amount at all stations, except Nowgong (+2·°3) and Saugor (+2·°2).

The variations of the mean temperature from the normal were very small in amount for nearly the whole Indian area. Temperature was generally below the normal in the Peninsula and in the sub-montane districts of Northern India, and in excess in the intermediate belt. The variations were generally less than 1° in amount, and exceeded 2° at only one station, *viz.* Sibsagar (−2·°4).

The temperature conditions also differed little from the normal at the hill stations, where the mean temperature of the month was slightly lower than usual.

The chief features of the temperature conditions of the month were as follows:—

(1) Slightly lower day temperature and higher night temperature than usual over nearly the whole of India, due chiefly to increased cloud and more general rainfall.

(2) The mean temperature conditions of the month differed little from the normal. Temperature was in slight defect in the Peninsula and the greater part of Northern India, and was most deficient in the Assam Valley, where the departure from the normal averaged −2·°2.

The temperature conditions were chiefly related to the character and distribution of the rainfall of the month in India.

The following table gives complete mean temperature data of the month for the 51 meteorological areas into which India is divided:—

Province.	Division.	Actual Temperature.					Variation from normal of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	85·9	74·3	80·2	11·6	18·8	+1·2	+0·6	+0·6
	Lower Burma	85·3	76·4	80·8	8·9	14·6	+0·1	+0·8	−0·7
	Central do.	91·3	75·9	83·6	15·5	22·9	+0·5	+0·9	−0·4
	Upper do.	88·3	73·8	81·1	14·6	22·9	−0·8	+0·8	−1·6
	Arakan	86·7	77·8	82·3	8·9	13·0	+0·1	−0·2	+0·3
Bengal and Assam	Eastern Bengal	87·1	77·8	82·5	9·4	15·5	−0·2	+0·6	−0·8
	Assam (Surma)	88·9	76·3	82·6	12·6	20·2	−0·8	0	−0·8
	Do. (Brahmaputra)	83·9	75·7	79·8	8·2	16·4	−3·3	−1·1	−2·2
	Deltaic Bengal	88·3	78·4	83·4	9·9	15·4	+0·2	−0·1	+0·3
	Central do.	88·2	78·1	83·2	10·1	16·3	−0·5	+0·4	−0·9
	North do.	86·0	76·2	81·1	9·8	18·8	−2·1	−0·3	−1·8
	Orissa	88·8	79·0	83·9	9·7	17·6	+0·3	+0·6	−0·3
	Chota Nagpur	86·6	74·5	80·6	12·2	18·4	+0·5	+0·8	−0·3
	Bihar (South)	89·1	78·5	83·8	10·6	18·1	−1·5	+0·2	−1·7
	Do. (North)	87·9	77·3	82·6	10·5	18·9	−1·4	−0·3	−1·1
North-Western Provinces and Oudh.	North-Western Provinces (East)	89·8	77·5	83·7	12·3	19·8	−0·8	+0·1	−0·9
	Oudh (South)	90·6	77·1	83·9	13·5	21·2	−1·1	+0·8	−1·9
	Do. (North)	89·4	76·6	83·0	12·8	20·4	?	?	?
	North-Western Provinces (Central)	91·0	76·5	83·8	14·6	22·8	?	?	?
	Do. do. (West)	90·6	76·1	83·4	14·6	23·5	−1·0	+0·3	−1·3
	Do. do. (Submontane)	88·0	73·5	80·8	14·5	24·3	−1·4	−0·1	−1·3
Punjab	Punjab (South)	93·5	75·6	84·6	17·9	28·1	−1·9	−0·2	−1·7
	Do. (Central)	95·4	74·3	84·8	21·1	32·7	−1·3	+1·3	−2·6
	Do. (Submontane)	91·6	73·7	82·7	18·0	28·8	−3·1	−0·9	−2·2
	Do. (Hill Districts)	76·1	59·2	67·7	17·0	26·6	−1·0	+0·7	−1·7
	Do. (North-West)	94·5	72·0	83·3	22·5	34·1	−1·2	+1·2	−2·4
	Do. (West)	100·4	75·5	87·9	24·9	37·5	+0·1	−0·1	+0·2
Bombay and Malabar Coast Districts (Madras).	Malabar	83·3	74·5	78·9	8·7	13·4	−0·3	+0·4	−0·7
	Madras (South Central)	90·3	71·4	80·9	18·9	23·6	−0·1	+0·5	−0·6
	Coorg	70·8	62·3	66·6	8·5	14·3	−1·7	+0·6	−2·3
	Mysore	82·9	65·3	74·1	17·6	25·3	+0·3	+0·1	+0·2
	Konkan	82·8	74·8	78·8	8·0	12·8	−0·4	−0·1	−0·3
	Bombay Deccan	82·7	68·0	75·4	14·8	23·0	−1·2	−0·3	−0·9
	Hyderabad (North)	83·6	70·4	77·0	13·2	20·0	?	?	?
	Khandesh	84·0	69·8	76·9	14·2	22·3	−1·2	+1·0	−2·2
Central Provinces and Berar.	Berar	86·5	72·6	79·6	13·9	22·4	−1·5	+0·6	−2·1
	Central Provinces (West)	86·9	73·6	80·3	13·3	20·8	−1·2	+0·4	−1·6
	Do. (Central)	86·4	73·1	79·8	13·3	20·0	−0·4	+1·0	−1·4
	Do. (East)	89·1	76·6	82·9	12·5	18·8	+0·9	+0·7	+0·2
Bombay (North)	Gujarat	89·0	75·8	82·4	13·3	21·1	−0·4	+0·1	−0·5
	Kathiawar	87·1	74·8	81·0	12·3	17·5	−0·5	+0·1	−0·6
	Sind and Cutch	95·2	75·9	85·6	19·3	28·6	+0·2	−0·2	+0·4
Rajputana and Central India.	Central India (East)	89·3	76·5	82·9	12·8	19·7	+0·4	+1·9	−1·5
	Rajputana (East) Central India (West)	89·6	73·0	81·3	16·6	25·4	−0·3	+0·7	−1·0
	Do. (West)	98·3	76·9	87·6	21·4	33·5	+2·3	−0·1	+2·4
Madras	East Coast (North)	88·1	79·0	83·6	9·1	17·0	−0·6	0	−0·6
	Hyderabad (South)	85·8	71·8	78·8	14·0	20·7	−2·5	+1·0	−3·5
	Madras (Central)	89·5	73·8	81·7	15·7	23·4	−1·2	−0·1	−1·1
	East Coast (Central)	90·4	77·8	84·1	12·7	23·1	−2·9	−0·1	−2·8
	Do. (South)	92·0	76·2	84·1	15·8	23·8	−0·8	−0·1	−0·7
	Madras (South)	93·1	77·4	85·2	15·7	24·0	−1·7	+0·1	−1·8

The following gives a brief summary of the larger changes of the temperature conditions in India during the month. As usual in the rains they were determined by the occurrence and distribution of the rainfall during the month.

At the commencement of the month temperature was

in slight excess in the Central Provinces, Berar, Bengal and the West Punjab and below the normal elsewhere, the deficiency being moderately large in amount in the North-Western Provinces and East Rajputana, where it averaged 3°. The rainfall accompanying the first depression of the month caused a considerable reduction of temperature in the Punjab and the North-Western Provinces on the 4th, 5th, 6th and 7th, and at the same time temperature increased slightly in the Peninsula. The following gives the most prominent local examples of the reduction of temperature due to rainfall at this period :—

Date.	Station.	Variation from normal of mean		
		Maximum temperature.	Minimum temperature.	Daily temperature.
		°	°	°
4th	Dera Ismail Khan	−15·4	−4·1	− 9·8
,,	Roorkee	−14·5	−2·6	− 8·6
5th	Ludhiana	−14·9	−2·8	− 8·9
,,	Sirsa	−13·9	−3·2	− 8·6
6th	Sirsa	−17·2	−4·9	−11·1
,,	Roorkee	−14·7	−4·9	− 9·8
7th	Ludhiana	−15·3	−5·7	−10·5
,,	Sirsa	−15·5	−4·0	− 9·8

Temperature fell considerably in the Peninsula on the 8th and 9th, and was below the normal by moderate amounts over nearly the whole of India on the 9th. It increased on the whole during the next five days, and was in excess on the 13th, 14th and 15th. The following gives mean temperature variation data for the 6th, 9th and 14th in illustration of the preceding remarks :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	6th.	9th.	14th.
	°	°	°
Burma	−1·0	+0·6	+0·3
Bengal and Assam	−0·2	−0·2	+0·4
North-Western Provinces and Oudh.	−4·8	−1·5	+0·7
Punjab	−5·1	−2·5	+0·4
Sind and Rajputana	−1·1	−0·3	+2·9
Central India and Gujarat	−0·5	+1·0	+0·1
Berar and Central Provinces	−0·3	+0·3	+0·1
Bombay	+0·7	−0·9	+0·3
Madras	+0·7	−1·7	+0·7

A partial break in the rains obtained in North-Western and Western India during the next week. North-Eastern India and Burma, on the other hand, received steady moderate rain. Temperature was hence more or less in defect in North-Eastern India, and was above the normal in North-Western and Western India. The following variation data for the 18th illustrate the temperature conditions of this period :—

Province.	Variation from normal of mean		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	+2·6	+1·5	+2·1
Bengal and Assam	−4·0	−1·2	−2·6
North-Western Provinces and Oudh.	−1·9	+0·2	−0·9
Punjab	+2·3	+2·4	+2·4
Sind and Rajputana	+2·3	+0·7	+1·5
Central India and Gujarat	+0·4	+0·7	+0·6
Central Provinces and Berar	−1·8	+1·3	−0·3
Bombay	−1·2	−0·2	−0·7
Madras	−1·5	+0·2	−0·7

A depression began to form in the north-west of the Bay on the 22nd, and developed very slowly during the next four days. The rainfall decreased rapidly in amount in North-Eastern India, and fine weather with lightly clouded skies and occasional showers prevailed over the whole of Northern and Central India. Temperature hence increased and was more or less above the normal during this period in Northern India, but was in slight defect in Western India, where rain was falling in increasing amounts. The following gives variation data for the 27th shortly before the passage of the storm across the coast:—

Province.	Variation from normal of mean		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	−1·4	+0·4	−0·5
Bengal and Assam	−0·2	+0·3	+0·1
North-Western Provinces and Oudh.	+1·9	+1·3	+1·6
Punjab	+1·0	−0·5	+0·3
Sind and Rajputana	+0·4	−0·5	−0·1
Central India and Gujarat	+1·4	+1·0	+1·2
Central Provinces and Berar	+0·9	+0·4	+0·7
Bombay	+0·2	+0·2	+0·2
Madras	−0·8	+0·4	−0·2

The passage of the storm caused a considerable to large local reduction of temperature in the areas which received heavy rainfall. The reduction of temperature was, however, by no means so large as frequently occurs during the advance of these storms into the interior of India. The following gives mean variation data for the areas affected between the 28th and 30th.

Division.	Variation from normal of mean temperature of 24 hours preceding 8 a. m. of		
	28th	29th	30th
	°	°	°
Orissa	−1·0	−0·3	+0·4
North Madras (East Coast)	−4·2	−0·9	+0·9
Central Provinces	+1·2	−2·4	−3·3
Central India	+1·1	+0·1	−1·4

The following average data for each week of the month are taken from the weekly weather reports published in the *Gazette of India*.

Province.	Variation from normal of mean temperature for week ending September				
	8th	15th	22nd	29th	Whole month.
	°	°	°	°	°
Burma	+0·4	+0·8	+1·5	−0·5	+0·5
Bengal and Assam	−0·5	+0·2	−1·1	+0·3	−0·3
North-Western Provinces and Oudh.	−3·1	+0·5	−0·1	+1·0	−0·5
Punjab	−4·2	−1·1	+2·2	+1·2	−0·5
Sind and Rajputana	−1·4	+1·4	+0·7	0	+0·1
Central India and Gujarat.	−0·1	+0·9	+0·8	+0·6	+0·5
Central Provinces and Berar.	−0·3	+0·5	+0·4	+0·1	0
Bombay	+0·2	−0·4	−0·4	−0·5	−0·3
Madras	−0·6	−0·4	−0·1	−0·6	−0·5
Mean for whole of India	−1·1	+0·3	+0·4	+0·2	−0·1

Winds.

The discussion of the marine data indicates that the lower air movement was on the whole more vigorous and steadier than usual in the Bay of Bengal. The following gives comparative data for stations on the coast of the Bay of Bengal and in the interior of Bengal, at which the exposure of the wind recording instruments is most satisfactory.

Station.	Mean daily air movement in miles.			Steadiness.	
	Actual September 1894.	Variation from normal.	Percentage variation.	Actual percentage September 1894.	Variation from normal.
Port Blair	219	+ 5	+ 2	80	+ 7
Diamond Island	257	+102	+66	60	+ 2
Saugor Island	295	+ 54	+22	63	+15
False Point	218	+ 20	+10	59	+23
Calcutta	69	− 32	−32	63	+20
Narayanganj	136	+ 24	+21	60	+ 3
Patna	119	+ 45	+61	57	+15

The velocity data shew a considerable range of variation, but establish clearly that the Bay current was stronger and steadier than usual, and that the increase in the air movement probably averaged about 25 per cent.

The following gives corresponding data from which t estimate the character of the Bombay current:—

Station.	Mean daily air movement in miles.			Steadiness.	
	Actual September 1894.	Variation from normal.	Percentage variation.	Actual percentage September 1894.	Variation from normal.
Ratnagiri	144	−44	−23	73	+18
Bombay	227	−46	−17	52	− 3
Kurrachee	324	−36	−10	94	+11
Belgaum	382	+ 8	+ 2	90	+ 8
Deesa	163	−40	−20	75	+25
Akola	178	+34	+24	78	+12
Nagpur	110	− 8	− 7	37	0

The data establish that the Bombay current was steadier than usual, but that it was somewhat weaker, probably from 10 to 20 per cent.

Winds were on the average of the month considerably more westerly than usual in Burma and at Port Blair, a condition in the monsoon usually associated with heavier rain than usual in that area. Winds were slightly stronger

and steadier than usual. The following data illustrate the westerly deflection of the mean winds :—

STATION.	WIND DIRECTION.		
	Mean, September 1894.	Normal September.	Westerly deflection.
Port Blair	S 67° W	S 43° W	+24
Diamond Island	S 49° W	S 39° W	+10
Rangoon	S 39° W	S 18° W	+21

Winds were less easterly than usual in East and Central Bengal, but as almost invariably happens the deflections of the mean winds of the month from the normal were in the opposite direction at the coast stations of False Point and Saugor Island. No satisfactory explanation of this contrast between the variations of the mean monthly wind directions at the coast and interior stations of Bengal has yet been suggested. The following data illustrate this contrast in September :—

	STATION.	WIND DIRECTION.		
		Mean, September 1894.	Normal, September.	Easterly deflection.
COAST . .	False Point .	S12°E	S25°W	+37
	Saugor Island .	S15°E	S 4°W	+19
INTERIOR .	Calcutta . . .	S12°E	S27°E	—15
	Burdwan . .	S18°E	S31°E	—13

Winds were on the whole slightly stronger in the Gangetic Plain The position of the axis of the trough of low pressure is very clearly indicated by the variability of the wind at the stations nearest to it. The following gives data :—

Stations in or near axis of trough of low pressure.	Actual steadiness, September 1894.	Neighbouring station to south or east.	Actual steadiness, September 1894.	Neighbouring station to north or west.	Actual steadiness, September 1894.
	%		%		%
Cuttack . .	20	Vizagapatam .	68	Saguor Island	63
Hazaribagh .	25	Raipur . .	23	Patna . .	57
Allahabad .	20	Nagpur . .	37	Lucknow .	30
Meerut . .	15	Sutna . .	50	... .	...
Ludhiana . .	8	Agra . .	28	.....	...
Lahore . .	5	Mooltan . .	50	Peshawar .	59

The western half of the trough lay along the foot of the hills in Upper India, and winds were exceptionally light and unsteady in that area.

Winds were of normal strength, but on the whole somewhat more westerly than usual in Rajputana. They were unusually steady in the Central Provinces, Berar, the Deccan, and the west coast districts, and also more northerly than usual at the stations on the west coast, where the deflection, although small, is shewn at every station :—

STATION.	WIND DIRECTION.		
	Mean, September 1894.	Normal, September.	Northerly deflection.
			°
Bombay	S89°W	S89°W	0
Ratnagiri	N77°W	S88°W	+15
Karwar	N79°W	N86°W	+ 7
Cochin	N76°W	N82°W	+ 6

This deflection was related to the position of the eastern half of the trough of low pressure during the greater part of the month.

Winds were slightly stronger than the normal at the Himalayan hill stations, and were steadier than usual at those in Upper India, but were remarkably unsteady at Darjeeling. Northerly winds occurred to an unusual extent at these stations, and the mean wind directions varied to a large extent from the normal. The largest variations or deflections from the mean wind directions occurred at the stations for which data are given below :—

STATION.	WIND DIRECTION.		STEADINESS.	
	Mean, September 1894.	Normal, September.	Mean, September 1894.	Normal, September.
			%	%
Murree	S57°W	S52°E	37	8
Simla	N33°E	S78°W	43	30
Darjeeling . . .	N43°W	S72°E	9	12
Mount Abu . . .	N87°W	S67°W	37	27

Humidity and Cloud.

The mean humidity conditions of the month differed little from the normal in Burma, Assam and Bengal. The air was slightly damper in Burma and Assam and very slightly drier in Bengal. The following gives comparative data :—

Division.	Absolute Humidity.		Relative Humidity.	
	Average actual, September 1894.	Variation from normal.	Average actual, September 1894.	Variation from normal.
	"	"	%	
Burma	·904	+·015	88	+1
Assam	·899	−·005	88	+3
Bengal	·943	−·003	85	−2
Orissa	·917	+·004	81	−2
Chota Nagpur	·745	−·015	79	−2
Bihar	·942	+·017	85	+3

The air contained on the mean of the month considerably more vapour than usual in the North-Western Provinces, the Punjab, Upper Sind, Rajputana, Central India, the Central Provinces and Berar, and the mean humidity was 5 and upwards above the normal at the majority of stations in these areas. The excess was most marked at Ajmere (+8), Akola (+8), Lahore (+7), Agra (+7) and Jubbulpore (+7). The following gives comparative data for the area of increased humidity of the air in September 1894.

Division.	Absolute humidity.				Relative humidity.		
	Average actual, September 1894.	Average normal, September.	Variation from normal.	Percentage variation from normal.	Average actual, September 1894.	Average normal September.	Variation from normal.
	"	"	"		%	%	
North-Western Provinces.	·835	·795	+·040	+5	77	73	+4
Punjab	·736	·713	+·023	+3	63	59	+4
Central India	·837	·778	+·059	+8	78	73	+5
Rajputana	·768	·682	+·086	+13	72	65	+7
Upper Sind	·731	·694	+·037	+5	54	53	+1
Central Provinces	·815	·766	+·049	+6	81	76	+5
Hyderabad (Deccan	·745	?	?	?	80	?	?

Humidity was also excessive at the hill stations in North-Western and Central India, and was considerably in excess at Mount Abu (+8) and Chamba (+8). The increased humidity was almost as marked at the elevated stations of Leh and Kailang as at Murree and Simla. Conditions were, on the other hand, normal in the Baluchistan plateau (as represented by Quetta).

The mean humidity of the month was below the normal to a moderate extent in the Madras Deccan and South Madras, but was in slight excess in the Coromandel Coast districts. The conditions were practically normal in the Konkan, Malabar and Mysore.

The chief features of the hygrometric conditions in India during the month were :—

(1) Slightly increased humidity in Burma and Assam and very slight deficiency in Bengal.

(2) Considerable excess both in the absolute and relative humidity in the North-Western Provinces, the Punjab, Rajputana, Central India, the Central Provinces, Berar and Hyderabad. The excess was greatest in the North-Western Provinces, Rajputana, Central India and the Central Provinces and at the hill stations in Upper India.

(3) Normal humidity conditions in the West Coast districts and Mysore.

(4) Increased humidity to a moderate extent in the Coromandel Coast districts and decreased humidity in the Madras Deccan and South Madras.

Cloud.—The amount of cloud was, in this as in the three previous months, more or less in excess over the whole of India, almost without exception. The excess was considerable in Burma, Assam and East Bengal, but was generally small in amount in Northern and Central India. The following gives data for these areas :—

Division.	Mean cloud amount.		
	Average actual, September 1894.	Average normal, September.	Variation from normal.
Burma	8·3	7·4	+0·9
Assam	8·2	7·2	+1·0
Bengal	8·2	7·1	+1·1
Bihar	6·7	6·2	+0·5
Chota-Nagpur	9·5	7·9	+1·6
Orissa	7·2	6·7	+0·5
North-Western Provinces	4·9	4·5	+0·4
Punjab	1·9	1·7	+0·2
Rajputana	4·0	3·4	+0·6
Central India	5·9	5·3	+0·6

The increased amount of cloud was even more marked at the Central Provinces stations than in Burma. The

variations were somewhat irregular in the Deccan and Southern India, but cloud was in excess at the great majority of stations. It was in marked defect at Trichinopoly (—1·6). The following gives comparative data for this area:—

Division.	Mean cloud amount.		
	Average actual, September 1894.	Average normal, September.	Variation from normal.
Central Provinces	7·0	5·9	+1·1
Berar	7·5	6·4	+1·1
Deccan	8·4	7·8	+0·6
Madras	6·9	6·3	+0·6
West Coast	6·5	6·1	+0·4

There was more cloud than usual at all the hill stations with the exception of Leh, where the average amount of the month was only 2·8 or 1·1 below the normal.

An important feature of the meteorology of the month was hence the increased amount of cloud over practically the whole area. The increase was most marked in Burma, Bengal, the Central Provinces and Berar. The mean cloud amount of the month was less than 1·0 at Jacobabad (0·3), Muscat (0·3) and Quetta (0·5), and hence, probably, skies were practically cloudless in the Baluchistan plateau, the plateau of Iran and South-East Arabia. The cloud amount was, on the other hand, greatest at Darjeeling (9·8), Hazaribagh (9·5) and Port Blair (9·1).

Rainfall.

The monsoon current was steadier than usual during the month. The Bay of Bengal branch was above its normal strength. Rain hence fell more frequently and generally than usual over by far the greater part of India, and the total rainfall of the month was in excess by amounts averaging 1·16 inches or 15 per cent. of the normal for the whole of India.

The Bengal current was strongest and gave most general rain during three periods stated below:—

1st.—From the 1st to the 9th, when the influx of humid winds was determined by two shallow depressions which advanced from the Bay across the coast of Orissa and the Circars. Bengal, the North-Western Provinces and the South and East Punjab received moderate general rain during this period.

2nd.—From the 15th to the 21st. Bengal, Chota Nagpur, Bihar and the eastern districts of the North-Western Provinces obtained light to heavy rain during this period. The rainfall was especially heavy in the northern districts of Bengal and Jalpaiguri, Darjeeling, Dinajpur and Kuch Bihar received large amounts on the 16th, 17th and 18th.

3rd.—From the 27th to the 30th. After the third depression and storm of the month crossed the coast, Bengal had moderately heavy rain, and the Gangetic plain light to moderate rain.

The Bombay current gave steady moderate daily rain in the west coast districts from the 2nd to the 17th. This was followed by a short break until the 22nd, when rainy weather again set in and continued until the end of the month.

The rainfall of the month exceeded 20 inches in Tenasserim and some parts of Arakan, the Assam Hills, the northern districts of North Bengal and at the hill stations in the West Ghats. It ranged between three inches and *nil* in the West and South Punjab, Sind, Cutch and West Rajputana, and in a considerable portion of the West Deccan area and South India.

The rainfall of the month was normal or in excess over the whole of India, with the exception of the following areas:—

1st—Arakan, East Bengal, Deltaic Bengal, Orissa and Chota Nagpur. The deficiency was small to moderate in amount, and was above 30 per cent. in Orissa and over 20 per cent. in Chota Nagpur.

2nd.—Mysore, Malabar, Konkan, Sind, the Bombay Deccan, Madras (Central), Madras (South Central) and Madras (South). The deficiency was largest in Mysore, where it averaged 3·39 inches in amount or 69 per cent. of the ordinary fall of the month, and was moderate in the remaining districts.

The excess was large in the following districts:—

(1) Tenasserim.
(2) North Bengal.
(3) Central Provinces (West).
(4) Hyderabad (South).

The following table gives mean actual, mean normal and variation rainfall data for the 51 meteorological divisions or districts into which India is divided, in the same form as in the previous months, and has been prepared in exactly the same manner as hitherto:—

Province.	Division.	Rainy days. Actual, September 1894.	Rainy days. Normal, September.	Rainfall. Actual, September 1894.	Rainfall. Normal, September	Rainfall. Variation from normal.
				Inches	Inches.	Inches.
Burma	Tenasserim*	?	?	42·97	23·57	+19·40
	Lower Burma*	?	?	14·28	13·28	+1·00
	Central do.*	?	?	10·55	10·17	+0·38
	Upper do.*	?	?	7·53	?	?
	Arakan*	?	?	14·74	20·03	−5·29
Bengal and Assam	Eastern Bengal	12·7	13·8	9·50	12·48	−2·98
	Assam (Surma)	18·7	16·0	18·50	16·54	+1·96
	Do. (Brahmaputra)	17·6	12·6	16·96	10·78	+6·18
	Deltaic Bengal	11·8	11·8	6·53	8·92	−2·39
	Central do.	13·1	12·2	10·52	9·95	+0·57
	North do.	19·3	13·5	23·87	16·07	+7·80
	Orissa	12·2	12·5	7·00	10·19	−3·19
	Chota Nagpur	10·8	12·7	6·81	8·61	−1·80
	Bihar (South)	10·8	9·4	9·41	7·14	+2·27
	Do. (North)	12·7	9·8	12·40	9·79	+2·61
North-Western Provinces and Oudh.	North-Western Provinces (East)	9·3	8·1	5·88	6·89	−1·01
	Oudh (South)	8·9	7·4	7·00	6·52	+0·48
	Do. (North)	8·5	7·2	10·40	7·22	+3·18
	North-Western Provinces (Central)	8·4	6·5	7·32	5·55	+1·77
	Do. do. (West)	7·7	5·3	7·35	4·80	+2·55
	Do. do. (Sub-montane)	8·5	6·8	9·51	7·40	+2·11
Punjab	Punjab (South)	3·0	2·5	2·58	1·99	+0·59
	Do. (Central)	5·4	3·3	6·85	3·54	+3·31
	Do. (Sub-montane)	4·8	3·8	4·37	3·93	+0·44
	Do. (Hill Districts)	8·0	7·4	6·39	6·40	−0·01
	Do. (North-West)	2·9	3·0	2·20	2·27	−0·07
	Do. (West)	1·5	1·1	0·86	0·79	+0·07
Bombay and Malabar Coast Districts (Madras).	Malabar	13·8	14·4	8·35	10·20	−1·85
	Madras (South Central)	5·2	6·3	3·17	4·32	−1·15
	Coorg	12·6	?	5·36	?	?
	Mysore*	?	?	1·55	4·94	−3·39
	Konkan	18·7	16·8	13·32	14·97	−1·65
	Bombay, Deccan	6·9	8·4	4·37	5·54	−1·17
	Hyderabad (North)	...	...	...	...	...
	Khandesh	12·5	9·2	10·11	7·07	+3·04
Central Provinces and Berar.	Berar	15·2	?	10·22	6·82	+3·40
	Central Provinces (West)	14·8	9·5	14·28	8·80	+5·48
	Do. (Central)	13·8	9·7	9·99	7·95	+2·04
	Do. (East)	10·5	9·5	8·45	7·62	+0·83
Bombay (North)	Gujarat	10·3	8·3	10·65	8·03	+2·62
	Kathiawar	5·8	4·4	5·34	4·70	+0·64
	Sind	0·2	?	0·05	0·49	−0·44
Rajputana and Central India.	Central India (East)	10·4	?	8·38	6·69	+1·69
	Rajputana (East) and Central India (West)	5·5	?	4·76	3·65	+1·11
	Rajputana (West)	2·9	?	2·09	1·35	+0·74
Madras	East Coast (North)	11·7	9·1	7·33	6·94	+0·39
	Do. (do.) (a)	14·0	12·4	9·59	8·63	+0·96
	Hyderabad (South)*	?	?	9·69	4·45	+5·24
	Madras (Central)	5·4	7·2	3·38	5·40	−2·02
	East Coast (Central)	5·8	5·5	3·53	3·61	−0·08
	East Coast (South)	7·5	6·4	5·76	4·86	+0·90
	Madras (South)	3·1	3·8	1·86	2·23	−0·37

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

The total rainfall of the month was largely in excess in Tenasserim, which obtained an average of 42·97 inches or 19·4 inches or 82 per cent. in excess of the normal of the month. Lower, Central, and probably Upper Burma, received total amounts slightly larger than usual.

Rain fell steadily throughout the month in Assam, but the falls were generally light to moderate in amount. The rainfall of the month was in moderate excess in the Brahmaputra Division, and it was 12 per cent. in excess in the Surma Division. A noteworthy feature was the unusually light rainfall at Cherra Poonjee. It received a total of only 30·16 inches, or 24·8 inches less than the normal amount. The rainfall from the 1st of June to end of September amounted to only 218·3 inches or 148·64 inches

less than the normal fall of 366·94 inches during that period. The season was in fact one of the driest on record in the Assam hills.

The following gives a summary of the complete rainfall data for the month published in the *Assam Gazette*:—

Division.	Number of rainy days.		Rainfall.		
	Average actual, September 1894.	Variation from normal, September.	Average actual, September 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Assam (Surma) .	18·7	+2·7	18·50	+1·96	+12
,, (Brahmaputra) .	17·6	+5·0	16·96	+6·18	+57
Khasi and Jaintia Hills .	17·0	−1·7	18·42	−17·17	−48

The chief periods of rainfall during the month in Bengal were as follows:—

1st.—From the 1st to the 8th. Orissa, South and North Bengal obtained moderately heavy rain, and East Bengal, Bihar and Chota Nagpur light to moderate rain.

2nd.—From the 15th to the 21st. The whole of the province, with the exception of Chota Nagpur and Orissa, where the rainfall was light, obtained moderate to heavy rain. It was heaviest in the northern districts of North Bengal and Sikkim, and falls exceeding 7 inches in 24 hours were recorded at several stations.

3rd.—From the 27th to the 30th. South Bengal and Orissa had a moderately heavy burst of rain and the remainder of the province moderate rain during this period.

The total rainfall of the month was in excess in North Bengal and Bihar, normal in Central Bengal, and in defect in the remaining divisions. The following gives comparative data for the eight divisions of the province:—

Division.	Number of rainy days.		Rainfall.		
	Average actual, September 1894.	Variation from normal.	Average actual, September 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Bengal, East . .	12·7	−1·1	9·50	−2·98	−24
,, North . .	19·3	+5·8	23·87	+7·80	+49
,, Deltaic . .	11·8	0	6·53	−2·39	−27
Central Bengal . .	13·1	+0·9	10·52	+0·57	+6
Orissa . . .	12·2	−0·3	7·00	−3·19	−31
Chota Nagpur . .	10·8	−1·9	6·81	−1·80	−21
North Bihar . . .	12·7	+2·9	12·40	+2·61	+27
South Bihar . .	10·8	+1·4	9·41	+2·27	+32

The most noteworthy feature of the rainfall of the province was its unusually large irregularity. Neighbouring districts and even neighbouring stations show large variations of opposite kind.

The following gives a few examples:—

District.	Actual rainfall, September 1894.	Variation from normal.	Percentage variation from normal.	District.	Actual rainfall, September 1894.	Variation from normal, September.	Percentage variation from normal.
	Inches.	Inches.			Inches.	Inches.	
Muzaffarpore .	10·97	+2·70	+33	Champaran	6·25	−2·80	−31
Kuch Bihar .	38·20	+16·25	+74	Darjeeling	15·38	−2·28	−13
Bankura .	10·33	+1·80	+21	Midnapore	6·77	−2·08	−24
Patna . .	13·30	+6·10	+85	Gaya .	6·34	−0·56	−8

The North-Western Provinces received general rain during three periods, namely:—

1st.—From the 1st to the 8th. The rainfall during this period was generally moderate in amount, but heavy falls were recorded in the Kheri, Bahraich, Meerut, Pilibhit, Shahjahanpur, Bareilly, Moradabad and Naini Tal districts. The following gives the largest falls in 24 hours during this period:—

Date.	District.	Station.	Haviest rainfall in 24 hours.
			Inches.
5th . . .	Meerut . .	Sardhana . .	7·70
5th . . .	Bareilly . .	Pandhera . .	7·50
5th . . .	,, . .	Oganpur . .	7·00
5th . . .	,, . .	Choreli . .	8·00
5th . . .	Naini Tal . .	Satina . .	7·80
5th . . .	,, .	Nagla . .	7·00
5th . . .	,, .	Satarganj . .	6·50
5th . . .	Bahraich . .	Nanpara . .	7·50
6th . . .	Pilibhit . .	Puranpur . .	6·59
6th . . .	,, . .	Amaria . .	6·20
6th . . .	Naini Tal . .	Naini Tal . .	8·35

2nd.—From the 16th to the 20th. Moderate rain fell in the eastern districts and light rain in the central and sub-montane districts during this period.

3rd.—From the 28th to the 30th. The rainfall during this period was also restricted to the

eastern and central districts, where it was however general and moderately heavy.

The rainfall of the month was in slight to moderate excess over the greater part of the province. It was in slight defect in the eastern districts. The following gives comparative data of the rainfall of the month :—

Division.	No. of rainy days.		Rainfall.		
	Average actual, September 1894.	Variation from normal.	Average actual, September 1894.	Variation from normal, September	Percentage variation from normal.
			Inches.	Inches.	
Oudh (North) . .	8·5	+1·3	10·40	+3·18	+44
Do. (South) . .	8·9	+1·5	7·00	+0·48	+ 7
N.-W. P. (East) . .	9·3	+1·2	5·88	—1·01	—15
Do. (Central) . .	8·4	+1·9	7·32	+1·77	+32
Do. (Submontane) .	8·5	+1·7	9·51	+2·11	+29
Do. (West) . .	7·7	+2·4	7·35	+2·55	+53

The rainfall was very irregularly distributed in some parts of the province, large deficiency occurring at some of the rain gauge stations, and large excess at other stations in the same district or collectorate. This was especially the case in the districts of Sultanpur, Banda, Sitapur, Agra, Dehra Dun, Saharanpur and Gorakhpur.

The Punjab received fairly general rain during the period from the 1st to the 9th. The rainfall was unusually heavy in the Gurgaon, Rohtak, Delhi and Karnal districts and was light to moderate in the remainder of the province. Practically no rain fell after the 10th, and the rains hence ceased somewhat earlier than usual. The following gives comparative rainfall data for the month:—

The following table gives a summary of the rainfall data published in the *Punjab Gazette* :—

Division.	Rainy days.		Rainfall.		
	Average actual September, 1894.	Variation from normal.	Average actual, Sep. 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Punjab, South	3·0	+0·5	2·58	+0·59	+30
" Central	5·4	+2·1	6·85	+3·31	+94
" Sub-montane	4·8	+1·0	4·37	+0·44	+11
" Hills	8·0	+0·6	6·39	−0·01	0
" North-West.	2·9	−0·1	2·20	−0·07	−3
" West .	1·5	+0·4	0·86	+0·07	+9

The rainfall was hence normal or in slight excess, except in the Central division, which received an average of 6·85 inches, nearly double the normal average (3·54 inches). The following gives comparative data for each of the districts in that division :—

District.	Rainfall.			
	Average actual, September 1894.	Normal, September.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Gurgaon . . .	8·52	4·38	+4·14	+95
Rohtak	9·40	3·36	+6·04	+180
Delhi	8·43	5·21	+3·22	+62
Karnal	10·84	4·05	+6·79	+168
Lahore	1·58	2·43	−0·85	−35

A few light showers fell in Baluchistan on the 6th and 7th, but the month was practically rainless. Kashmir received light showers during the first period of rain from the 1st to the 9th, but the amounts were below the normal.

The whole of Rajputana received a moderately heavy burst of rain between the 1st and 6th and light local showers during the second week of the month, more especially on the 12th and 13th. The rainfall of the month was hence in general moderate excess. The following gives comparative data for the large states :—

State.	Rainfall.			
	Average actual, September 1894.	Average normal, September.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Ulwur	6·26	4·94	+1·32	+27
Bhurtpore . . .	5·94	4·25	+1·69	+40
Dholpur	2·97	?	?	?
Kerowlee . . .	4·64	4·52	+0·12	+3
Tonk	4·21	2·71	+1·50	+55
Deoli	7·19	4·53	+2·66	+59
Kotah	3·30	4·77	−1·47	−31
Ajmere-Merwara . .	4·65	2·88	+1·77	+61
Oodeypore . . .	7·16	5·16	+2·00	+39
Sirohee	4·19	4·23	−0·04	−1

There were two periods of rainfall in Central India. The first was from the 1st to the 17th, during which light to moderate rain fell daily. The second was from the 28th

to the 30th. Bhopal and Bundelkhand received moderately heavy rain during this period, and several falls slightly exceeding 5 inches were reported during this period in those areas. The rainfall of the month was in moderate excess over the whole area. The following gives comparative data for the larger states or divisions :—

STATE.	RAINFALL.			
	Average actual, September 1894.	Average normal, September.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Bundelkhand . . .	8·34	6·39	+1·95	+31
Rewah	8·69	6·32	+2·37	+38
Gwalior	6·63	6·19	+0·44	+ 7
Bhopal	10·84	8·79	+2·05	+23

The Central Provinces and Berar received more frequent rain than usual. The number of rainy days in the western division of the Central Provinces averaged 14·8 or 5·3 above the normal. The chief periods of general rain were from the 1st to the 8th, the 15th to the 19th, and the 27th to the end of the month. The falls were generally moderate in amount. The following large local falls were recorded :—Burhanpur 10·20 inches on the 12th and Pachmarhi 7·68 inches on the 29th. The rainfall of the month was above the normal in all districts. The excess increased from east to west. It was small in amount in the eastern division, averaging 11 per cent., and large in the western division, in which it averaged 5·48 inches or 62 per cent. above the normal fall of the month. The average total rainfall for the month in Berar was 10·22 inches, 3·40 inches or 50 per cent. above the normal fall of the month. The following gives a summary of the data published in the *Central Provinces Gazette* :—

DIVISION.	RAINY DAYS.		RAINFALL.		
	Average actual, September 1894.	Variation from normal, September.	Average actual, September 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Central Provinces, West .	14·8	+5·3	14·28	+5·48	+62
Do, Central .	13·7	+4·1	9·99	+2·04	+26
Do, East .	10·5	+1·0	8·45	+0·83	+11

The Bombay Coast districts received steady moderate rain from the 2nd to the 17th, and light showers during the interval until the 28th, when rainfall increased in amount and became more general. The Deccan districts had a moderate burst of rain from the 8th to the 11th, due to the second disturbance of the month, and occasional local showers, generally of little importance, during the remainder of the month. The 20th and 28th were, however, days of fairly general and light to moderate rain in that area.

Khandesh and Gujarat shared in the general bursts of rain that extended over Berar and the Central Provinces. Daily rain was received between the 3rd and 18th, and occasional showers during the remainder of the month. The 12th, 16th and 17th were the days of most general rain in North Bombay. Kathiawar shared to a moderate extent in the same burst of rainfall during the first fortnight of the month. The rainfall in that area occurred chiefly on the 4th and 5th and between the 12th and 16th. Cutch and Sind were practically rainless during the month.

The following gives a summary of the rainfall data for the month published in the *Bombay Government Gazette* :—

DIVISION.	NO. OF RAINY DAYS.		RAINFALL.		
	Average actual, September 1894.	Variation from normal, September.	Average actual, September 1894.	Variation from normal, September.	Percentage variation from normal.
			Inches.	Inches.	
Konkan . . .	18·7	+1·9	13·32	−1·65	−11
Bombay Deccan . .	6·9	−1·5	4·37	−1·17	−21
Khandesh . . .	12·5	+3·3	10·11	+3·04	+43
Gujarat	10·3	+2·0	10·65	+2·62	+33
Kathiawar . . .	5·8	+1·4	5·34	+0·64	+14
Sind	0·2	?	0·05	−0·44	−90

The preceding table shews that the rainfall of the month was in slight to moderate defect in the Konkan and Deccan districts. It was largely in excess in Khandesh (3·04 inches or 43 per cent.) and considerably in excess in Gujarat (2·62 inches or 33 per cent.) and in slight excess in Kathiawar.

The northern coast districts of Madras obtained moderate rain during the advance of the three depressions of the month across the Orissa coast into the interior. The largest amounts were received between the 26th and 28th. Central and South Madras received occasional rain. The chief periods of fairly general rain were the 5th to the 7th and the 17th to the 22nd. The rainfall, although generally less than the normal, did not differ largely from it except in Madras Central. The following

gives comparative data for the six divisions of the Madras Presidency.

Division.	Number of rainy days.		Rainfall.		
	Average actual, September 1894.	Variation from normal.	Average actual, September 1894.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Madras, Central	5·4	−1·8	3·38	−2·02	−37
Madras, East Coast, Central	5·8	+0·3	3·53	−0·08	− 2
Madras, East Coast, South	7·5	+1·1	5·76	+0·90	+19
Madras, South	3·1	−0·7	1·86	−0·37	−17
Madras, South, Central	5·2	−1·1	3·17	−1·15	−27
Malabar	13·8	−0·6	8·35	−1·85	−18

The rainfall was on the whole most scanty and deficient in the districts for which data are given below:—

District.	Number of rainy days.		Rainfall.		
	Average actual, September 1894.	Variation from normal.	Average actual, September 1894.	Variation from normal	Percentage variation from normal.
			Inches.	Inches.	
Tinnevelly	1·1	−1·3	0·42	−0·87	−67
Anantapur	3·5	−3·7	2·38	−3·08	−56
Bellary	6·7	−1·0	3·58	−1·55	−30
Kurnool	6·1	−1·3	3·60	−2·30	−39
Malabar	10·8	−2·8	5·91	−3·24	−35
Salem	6·2	−1·4	4·15	−1·35	−25
Nilgiris	9·5	−4·2	4·38	−4·13	−49
Cuddapah	5·2	−1·5	3·82	−1·32	−26

The rainfall of the month was very considerably in defect in the eight districts, for which data are given above; but in the remainder of the presidency it was fairly well distributed and practically normal in amount.

The following gives comparative data of the rainfall of the month for each collectorate of the Presidency:—

District.	Number of rainy days.		Rainfall.		
	Average actual, Septembe 1894.	Variation from normal.	Average actual, September 1894.	Variation from normal September.	Percentage variation; from normal.
			Inches.	Inches.	
Ganjam	13·1	+3·2	7·63	+0·35	+ 5
Vizagapatam	13·7	+3·8	8·77	+1·37	+19
Godavari	9·8	+1·6	6·87	−0·10	− 1
Kistna	9·5	+1·5	5·21	−0·58	−10
Nellore	5·8	+0·3	3·53	−0·08	− 2
Chingleput	9·0	+2·6	6·50	+1·57	+32
Madras	10·0	+2·9	6·41	+1·66	+35
North Arcot	7·1	+0·3	5·68	+0·23	+ 4
South Arcot	7·5	+0·8	5·63	+0·40	+ 8
Tanjore	7·3	+1·5	5·93	+1·66	+39
Trichinopoly	5·5	−0·4	4·57	+0·37	+ 9
Madura	4·8	0	3·04	+0·12	+ 4
Malabar	10·8	−2·8	5·91	−3·24	−35
South Canara	19·4	+3·8	12·70	+0·98	+ 8
Salem	6·2	−1·4	4·15	−1·35	−25
Coimbatore	3·8	−1·0	1·77	−0·25	−12
Nilgiris	9·5	−4·2	4·38	−4·13	−49
Cuddapah	5·2	−1·5	3·82	−1·32	−26

Table

Abstract of Observations taken at 8 A.M. at 206

Meteorological Province or District.	Station.	Elevation of bar cistern above sea level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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.		...	...	−·015	...	...	...	...	...	...	...	85·5	+0·5	75·6	+0·6	80·6	+0·5	9·9	...	...	...	...	16·3
Bay Island	Port Blair	61	...	?			Not recorded.				79·2	83·9	?	76·3	?	80·1	?	7·6	87·5	6th & 7th	72·2	10th	15·3
	Camorta*	?	29·882	?	?	29·919	12th	29·819	24th	·130	79·3	84·9	?	75·3	?	80·1	?	9·6	88·5	12th	72·7	26th	15·3
Tenasserim	Mergui	96	29·787	?	29·816	29·860	12th	29·715	30th	·145	76·7	84·6	?	73·3	?	79·0	?	11·3	89·0	16th	72·1	26th	16·9
	Tavoy	26	29·872	?	29·829	29·933	12th	29·786	18th	·147	77·1	83·7	?	73·3	?	78·5	?	10·4	89·2	17th	72·2	4 days	17·0
	Moulmein	94	29·770	−·012	29·802	29·860	1st	29·666	20th	·194	77·8	85·5	+1·1	75·0	+0·9	80·3	+1·0	10·5	89·5	17th	70·8	19th	18·7
	Toungoo	181	29·641	−·018	29·765	29·728	1st	29·548	21st	·180	80·1	89·9	+1·3	75·7	+0·3	82·8	+0·8	14·2	93·7	2 days	71·2	13th	22·5
Lower Burma	Rangoon	41	29·804	−·016	29·782	29·876	1st	29·717	2 days	·159	78·1	86·5	+1·0	76·3	+0·4	81·4	+0·7	10·2	90·7	2 days	74·4	2 days	16·3
	Bassein	27	29·807	−·016	29·769	29·889	1st	29·708	24th	·181	79·2	85·8	+0·5	75·6	+0·1	80·7	+0·3	10·2	90·7	19th	74·3	2 days	16·4
	Diamond Island,	41	29·792	−·016	29·768	29·866	12th	29·673	24th	·193	80·1	83·5	−1·3	77·2	+1·9	80·4	+0·3	6·3	85·6	3 days	74·4	20th	11·2
Arakan	Akyab	20	29·784	−·014	29·747	29·871	2nd	29·685	24th	·186	80·7	86·7	+0·1	77·8	−0·2	82·3	−0·1	8·9	89·2	26th	76·2	5 days	13·0
II.—Burma Inland.		...	...	−·016	...	...	...	...	...	...	...	89·0	−0·2	73·9	+0·9	81·4	+0·4	15·1	...	...	...	...	23·0
Central Burma	Thayetmyo	134	29·675	−·016	29·750	29·773	28th	29·574	22nd	·199	81·2	90·2	+0·5	76·6	+0·9	83·4	+0·7	13·6	93·1	3 days	74·1	30th	19·0
	Minbu	?	29·646	?	?	29·763	1st	29·533	22nd	·230	80·3	92·0	?	76·3	?	84·2	?	15·7	97·6	4th	74·1	28th	23·5
	Yamethin	?	29·157	?	?	29·248	1st	29·049	22nd	·199	78·5	91·8	?	74·7	?	83·3	?	17·1	93·1	19th	72·0	3rd	26·1
	Fort Stedman.	?	26·892	?	?	26·959	2nd	26·801	21st	·158	73·1	84·6	?	68·2	?	76·4	?	16·4	89·6	18th	66·0	26th	23·6
Upper Burma	Mandalay	?	29·555	?	?	29·656	1st	29·434	22nd	·222	81·8	90·1	?	77·5	?	83·8	?	12·6	95·0	22nd	75·6	14th	19·4
	Kindat	?	29·441	?	?	29·546	2nd	29·323	22nd	·223	78·6	88·4	−0·8	75·6	+0·8	82·0	0	12·8	92·3	20th	73·5	1st	18·8
	Lashio	?	27·067	?	?	27·178	4th	26·935	22nd	·244	73·1	84·8	?	67·3	?	76·1	?	17·5	92·5	27th	63·5	9th	29·0
	Bhamo	?	29·421	?	?	29·514	2nd	29·307	21st	·207	78·1	90·0	?	74·6	?	82·3	?	15·4	97·1	6th	72·8	2 days	24·3
III.—Assam.		...	...	+·001	...	...	...	...	...	...	...	85·6	−2·5	75·9	−0·7	80·7	−1·6	9·7	...	...	...	...	17·7
Assam (Surma)	Silchar	104	29·701	+·007	29·757	29·815	3rd	29·590	22nd	·225	78·9	88·9	−0·8	76·3	0	82·6	−0·4	12·6	93·5	7th	73·3	2nd	20·2
Brahmaputra	Sibsagar	333	29·473	−·003	29·762	29·610	3rd	29·353	23rd	·257	77·4	84·9	−3·7	75·5	−1·0	80·2	−2·4	9·4	89·7	1st	73·0	2 days	16·7
	Dhubri	115	29·671	−·001	29·740	29·789	3rd	29·555	23rd	·234	77·5	82·9	−2·9	75·9	−1·1	79·4	−2·0	7·0	88·2	9th	72·1	21st	16·1
IV.—Bengal and Orissa.		...	..	−·005	...	...	...	...	...	...	...	87·4	−0·4	77·7	+0·3	82·6	0	9·8	...	...	...	...	16·3
East Bengal	Chittagong	87	29·715	+·001	29·749	29·803	3rd	29·615	23rd	·188	81·4	87·5	+0·9	76·6	+0·4	82·0	+0·7	10·9	89·7	8th	75·1	17th & 28th.	14·6
	Lungleh	?				Not recorded.					69·9	76·1	?	67·2	?	71·6	?	8·9	78·9	10th & 12th.	65·1	3rd & 8th.	13·8
	Noakhali	43	29·737	?	29·727	29·829	3rd	29·635	23rd	·194	81·0	86·1	?	77·5	?	81·8	?	8·6	88·5	7th & 20th.	74·8	25th	13·7
	Comilla	36	29·750	?	29·734	29·851	3rd	29·638	23rd	·213	80·7	88·3	?	76·8	?	82·6	?	11·5	91·3	23rd	74·8	16th	16·5
	Sirajganj	49	29·717	?	29·716	29·814	3rd	29·609	23rd	·205	81·0	86·3	?	78·3	?	82·3	?	8·0	89·8	12th	74·7	20th & 21st.	15·1
	Narayanganj	26	29·747	+·002	29·721	29·851	3rd	29·632	23rd	·219	82·0	87·5	−1·0	79·4	+0·7	83·5	−0·2	8·1	90·6	2 days	75·7	7th	14·9
	Barisal	13	29·751	−·006	29·709	29·840	3rd	29·642	23rd	·198	82·7	87·8	+0·3	78·4	+0·7	83·1	+0·5	9·4	93·3	5th	74·9	21st	18·4
	Mymensingh	59	29·715	−·008	29·726	29·822	3rd	29·609	23rd	·213	80·6	86·5	−1·1	77·5	+0·4	82·0	−0·4	9·0	89·7	2 days	74·1	20th	15·6
Deltaic Bengal	Faridpur	46	29·732	?	29·726	29·827	3rd	29·622	23rd	·205	82·1	86·1	?	9·2	?	82·7	?	6·9	88·3	13th & 14th.	75·9	3rd	12·4
	Jessore	33	29·714	−·021	29·694	29·798	4th	29·608	23rd	·190	82·4	89·1	0	77·5	−0·9	83·3	−0·5	11·6	92·5	15th	74·9	25th	17·6
	Calcutta	21	29·725	−·006	29·692	29·810	3rd	29·619	23rd	·191	81·6	87·5	+0·1	77·8	0	82·7	+0·1	9·7	90·6	23rd	75·7	21st	14·9
	Saugor Island	25	29·714	−·010	29·683	29·817	3rd	29·621	23rd	·196	82·8	88·2	+0·4	80·1	+0·7	84·2	+0·6	8·1	90·2	4 days	77·0	27th	13·2
	Krishnagar	47	29·703	?	29·698	29·795	3rd	29·598	23rd	·197	82·7	89·1	?	78·1	?	83·7	?	11·0	92·3	13th & 14th.	76·2	25th	16·1
	Midnapore	149	29·598	?	29·693	29·688	3rd	29·496	23rd	·192	81·9	90·0	?	77·7	?	83·9	?	12·3	93·3	3 days	75·1	21st	18·2

* Mean of 29 days.

I—*continued.*

in India, Burma, etc., in September 1894.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 30th September 1894.	Normal rainfall for period 1st June to 30th September.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	22·00	20·02	+0·51	...	...	...	...	**I.—Burma Coast and Bay Islands.**	
...	...	...	...	...	4	14	10	2	9·1	9·3	− 2	92	·923	8·7	22	?	?	23·57	19·56	+4·01	71·37	69·53	+1·84	3·25	Port Blair .	Bay Islands.
3	...	...	...	...	15	11	...	...	8·1†	?	?	87	·867	7·2	19	?	?	17·61	?	?	...	?	?	2·60	Camosta* .	Tenasserim.
...	5	...	...	...	3	5	7	10	1·5	1·5	0	93	·854	6·2	25	?	?	34·82	26·24	+8·58	128·42	118·52	+9·90	3·61	Mergui. .	
25	1	...	...	...	...	3	...	1	1·4	?	?	92	·865	7·9	25	?	?	38·14	?	?	179·85	?	?	4·93	Tavoy.	
...	...	2	3	7	7	6	3	2	10·0	2·8	+257	92	·880	8·3	22	22·36	−0·36	27·16	28·85	−1·69	179·45	149·35	+30·10	4·80	Moulmein.	
10	...	...	...	12	8	...	...	...	2·1	2·8	− 25	90	·949	7·7	17	17·55	−0·55	11·45	12·21	−0·76	66·62	63·23	+ 3·39	2·63	Toungoo.	Lower Burma.
...	...	...	1	2	6	11	9	1	3·8	3·8	0	95	·920	8·5	19	19·55	−0·55	13·34	16·04	−2·70	73·54	73·42	+ 0·12	1·91	Rangoon .	
4	...	...	1	7	8	6	1	3	4·2	3·4	+ 24	93	·927	6·0	24	21·27	+2·73	15·85	16·00	−0·15	89·44	86·69	+ 2·75	2·00	Bassein.	
...	1	...	1	5	6	8	3	6	9·2	6·8	+ 35	85	·887	5·2	19	18·90	+0·10	17·51	19·19	−1·68	108·81	91·36	+17·45	5·35	Diamond Island.	Arakan.
...	11	6	8	2	3	...	...	...	3·6	3·0	+ 20	92	·957	7·1	21	17·73	+3·27	20·50	22·04	−1·54	168·01	158·83	+ 9·18	4·62	Akyab. .	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·39	9·48	−0·59	...	...	...	...	**III.—Burma Inland.**	
...	...	1	2	11	14	2	...	...	2·6	4·7	− 45	84	·886	7·0	14	13·36	+0·64	5·86	6·23	−0·37	24·94	26·57	− 1·63	0·79	Thayetmyo .	Central Burma.
5	...	...	3	18	4	...	...	...	6·3	?	?	86	·895	2·2	11	?	?	6·38	?	?	22·42	?	?	1·45	Minbu.	
2	...	...	...	22	4	2	...	...	4·9	?	?	89	·879	4·4	16	?	?	12·85	?	?	31·75	?	?	3·50	Yamethin.	
17	2	2	...	...	...	7	...	2	?	?	?	90	·737	7·3	16	?	?	10·99	?	?	36·28	?	?	2·20	Fort Stedman.	
8	1	...	...	10	6	5	...	...	2·3	?	?	83	·867	6·4	11	?	?	6·70	?	?	25·64	?	?	2·81	Mandalay .	Upper Burma.
24	1	1	...	...	2	...	1	1	0·5	?	?	93	·916	7·7	13	?	?	11·91	12·72	−0·81	63·26	51·24	+12·02	2·90	Kindat.	
...	13	13	...	1	...	1	...	2	?	?	?	91	·768	5·6	13	?	?	6·32	?	?	51·43	?	?	1·61	Lashio.	
25	...	3	...	...	...	...	...	2	1·4	?	?	91	·871	6·9	9	?	?	6·14	?	?	78·67	?	?	2·00	a m o.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19·57	12·42	+7·17	...	...	...	...	**III – Assam.**	
28	...	1	...	...	...	1	...	...	0·9	2·7	− 67	93	·919	9·5	17	15·40	+ 1·60	21·27	13·13	+8·14	88·11	74·48	+13·63	3·50	Silchar .	Assam (Surma .
5	4	12	1	2	...	5	...	1	2·3	2·5	− 8	95	·902	9·2	16	15·09	+ 0·91	17·43	12·31	+5·12	63·32	56·82	+ 6·50	3·75	Sibsagar .	Brahmaputra.
7	5	10	3	2	...	1	1	1	4·6	3·2	+ 44	95	·893	9·2	20	12·75	+ 7·25	20·08	11·82	+8·26	56·60	66·54	− 9·94	3·63	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9·98	11·08	−1·51	...	...	...	...	**IV.—Bengal and Orissa.**	
1	...	6	6	12	4	1	...	...	4·0	4·5	− 11	87	·941	7·2	9	12·73	−3·73	4·95	11·39	−6·44	67·08	69·46	−2·38	1·87	Chittagong .	East Bengal.
Not recorded.									?	?	?	94	·689	?	28	?	?	25·84	?	?	84·17	?	?	4·90	Lungleh.	
...	...	2	8	12	1	5	1	1	4·9	?	?	91	·960	4·9	16	15·85	+0·15	12·01	17·80	−5·79	92·52	93·17	−0·65	3·14	Noakhali.	
3	...	...	8	7	12	...	...	...	3·2	?	?	93	·978	6·9	12	13·50	−1·50	12·80	11·40	+1·40	69·11	65·16	+3·95	3·22	Comilla.	
15	...	...	3	4	7	1	...	...	0·7	?	?	91	·961	9·6	11	11·70	−0·70	5·84	9·87	−4·03	35·21	43·47	−8·26	1·41	Sirajganj.	
...	...	...	9	11	4	4	2	...	5·7	4·6	+ 24	89	·972	8·4	13	12·09	+0·91	6·80	8·18	−1·38	50·62	45·30	+5·32	0·98	Narayanganj.	
18	...	1	3	3	3	2	...	...	2·6	?	?	88	·986	9·0	13	14·85	−1·85	9·39	11·01	−1·62	66·67	55·21	+11·46	2·52	Barisal.	
2	...	1	12	12	2	1	...	...	2·7	?	?	92	·962	7·2	16	15·35	+0·65	9·76	13·26	−3·50	66·06	60·23	+ 5·83	3·50	Mymensingh.	
10	...	...	3	6	10	1	...	...	4·0	?	?	89	·980	6·3	15	11·75	+3·25	6·67	10·04	−3·37	50·09	46·95	+ 3·14	1·27	Faridpur .	Deltaic Bengal.
...	...	...	2	19	8	...	...	1	3·2	3·4	− 6	92	1·021	7·5	12	9·50	+2·50	3·96	8·84	−4·88	36·03	43·52	−7·49	0·92	Jessore.	
5	...	...	4	9	8	4	...	...	2·9	4·5	− 36	89	·961	6·7	15	14·18	+0·82	6·52	9·60	−3·08	32·76	45·55	−12·79	1·19	Calcutta.	
...	1	2	4	4	12	6	1	...	12·4	10·1	+ 23	88	·984	8·8	11	14·45	−3·45	3·16	12·83	−9·67	56·02	54·95	+ 1·07	0·71	Saugor Island.	
...	...	...	5	10	9	3	2	1	4·8	?	?	84	·936	7·0	7	10·25	−3·25	4·11	7·90	−3·79	43·87	38·08	+ 5·79	1·09	Krishnagar.	
7	1	3	1	7	10	..	...	1	3·3	?	?	89	·963	3·4	13	12·05	+0·95	7·04	7·17	−0·13	34·46	41·06	− 6·60	1·58	Midnapore.	

* Mean of 29 days.

† Mean of 27 days.

Table

Abstract of Observations taken at 8 A M at 206 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M. in inches. 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.	Temperature of Air. 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.
Central Bengal.	Bankura	298	29·420	?	29·669	29·489	4th	29·343	23rd	·146	80·7	88·3	?	77·2	?	82·8	?	11·1	92·1	19th	74·6	20th	17·5
	Raniganj	334	29·406	?	29·690	29·503	3rd	29·306	23rd	·197	80·2	88·3	?	77·4	?	82·9	?	10·9	92·2	13th & 21st	75·8	28th	16·4
	Burdwan	99	29·643	−·016	29·689	29·727	3rd	29·542	23rd	·185	81·6	89·0	−0·5	78·9	+0·2	84·0	−0·2	10·1	91·7	23rd	76·7	20th	15·0
	Naya Dumka	489	29·247	?	29·693	29·334	3rd	29·168	23rd	·166	81·0	87·6	?	76·9	?	82·3	?	10·7	91·6	13th	75·3	23rd	16·3
	Berhampore.	67	29·684	−·007	29·700	29·784	3rd	29·579	23rd	·205	82·2	87·9	−0·9	79·2	+0·8	83·5	−0·1	8·7	90·6	2 days	75·3	18th	15·3
	Rampore Boalia.	70	29·680	?	29·700	29·777	3rd	29·575	23rd	·202	83·3	87·4	?	79·0	?	83·2	?	8·4	89·6	14th & 23rd	74·6	18th	15·0
	Malda	72	29·671	?	29·694	29·775	3rd	29·571	23rd	·204	81·7	89·0	?	78·7	?	83·9	?	10·3	92·1	8th	75·0	18th	17·1
	Bogra	61	29·699	+·003	29·713	29·796	3rd	29·593	23rd	·203	81·3	87·8	−0·2	77·4	+0·2	82·6	0	10·4	91·7	13th	74·2	18th	17·5
North Bengal	Dinajpur	123	29·651	+·011	29·728	29·757	3rd	29·554	23rd	·203	79·6	86·0	−2·5	77·3	−0·2	81·7	−1·4	8·7	90·6	8th	72·7	18th	17·9
	Rangpur	123	29·650	?	29·727	29·764	3rd	29·543	23rd	·221	79·6	86·3	?	76·4	?	81·4	?	9·9	91·3	23rd	72·7	18th	18·6
	Jalpaiguri	284	29·497	+·010	29·741	29·614	3rd	29·381	23rd	·233	77·8	85·7	−1·6	74·9	−0·4	80·3*	−1·0	10·8	90·9	9th	71·1	13th	19·8
Orissa	Balasore	56	29·676	−·008	29·678	29·764	3rd	29·574	27th	·190	81·8	88·2	+0·6	77·8	+0·3	83·0	+0·5	10·4	92·4	24th	75·7	3 days	16·7
	False Point.	21	29·716	−·007	29·679	29·804	4th	29·596	27th	·208	83·0	87·8	0	78·9	+0·9	83·4	+0·5	8·9	93·5	22nd	76·6	3 days	16·9
	Cuttack	80	29·643	−·017	29·666	29·725	4th	29·543	27th	·182	83·4	90·1	+0·3	78·6	+0·7	84·4	+0·5	11·5	94·7	23rd	76·8	2 days	17·9
	Shortt's Island.	?	29·709	?	?	29·799	4th	29·605	27th	·194	83·9	89·0	?	79·9	?	84·4	?	9·1	92·6	24th	75·8	1st	16·8
	Puri	15	29·707	?	29·662	29·796	4th	29·585	27th	·211	83·4	88·7	?	79·9	?	84·3	?	8·8	94·7	23rd & 24th	75·1	15th	19·6
V.—Gangetic Plain and Chota Nagpur.		...	...	−·013	...	...	...	...	...	...	...	88·7	−0·8	77·0	+0·2	82·8	−0·3	11·7	...	...	...	...	19·3
Chota Nagpur	Hazaribagh	2,007	27·726	−·019	29·671	27·802	12th	27·671	24th	·131	76·1	84·3	−0·1	72·6	+0·5	78·5	+0·2	11·7	89·2	13th	71·3	23rd	17·9
	Ranchi	2,128	27·611	?	29·672	27·682	12th	27·562	24th	·120	75·7	83·1	?	72·1	?	77·6	?	11·0	87·0	14th	70·4	23rd	16·6
	Daltonganj	730?	28·988†	?	29·673	29·048	4th & 8th	28·920	24th	·128	79·9	89·3	?	76·4	?	82·9	?	12·9	94·3	13th	75·0	8 days	19·3
	Chaibassa	760	28·959	?	29·663	29·032	12th	28·894	24th	·138	81·1	89·7	+1·0	76·7	+1·0	83·2	+1·0	13·0	92·9	3 days	73·2	9th	19·7
Bihar, South	Gaya	375	29·349	−·009	29·676	29·410	3rd	29·290	23rd	·120	81·1	89·9	−0·9	78·3	+0·4	84·1	−0·3	11·6	95·5	13th	75·8	28th	19·7
	Dehri	351	29·357	?	29·659	29·430	1st	29·298	24th	·132	83·5	88·8	?	78·1	?	83·5	?	10·7	93·3	3 days	76·0	4 days	17·3
	Patna	183	29·550	−·010	29·685	29·637	3rd	29·461	23rd	·176	82·3	88·2	−2·0	79·0	−0·1	83·6	−1·1	9·2	93·5	11th	75·2	2 days	18·3
	Arrah	190	29·525	?	29·666	29·593	3rd	29·454	24th	·139	82·9	89·6	?	78·9	?	84·3	?	10·7	93·4	10th	76·0	18th	17·4
	Buxar	239	29·480	?	29·673	29·553	3rd	29·415	24th	·138	82·5	89·0	?	78·3	?	83·7	?	10·7	93·5	11th	75·8	5th & 17th	17·7
Bihar, North	Purnea	125	29·623	−·005	29·702	29·746	3rd	29·516	23rd	·230	79·8	87·1	−1·8	77·6	+0·3	82·4	−0·8	9·5	90·7	3 days	74·7	18th	16·0
	Bhagalpur	160	29·572	?	29·685	29·667	3rd	29·475	23rd	·192	82·1	87·9	?	75·7	?	81·8	?	12·2	91·7	11th	73·1	18th	18·6
	Darbhanga	166	29·574	−·011	29·694	29·679	3rd	29·472	23rd	·207	80·9	87·3	−0·9	77·9	−0·9	82·6	−0·9	9·4	92·0	14th	72·2	18th	19·8
	Muzaffarpur.	178	29·556	?	29·687	29·656	3rd	29·468	23rd	·188	80·8	87·8	?	77·7	?	82·8	?	10·1	92·7	14th & 23rd	73·7	18th	19·0
	Motihari	224	29·515	?	29·697	29·602	3rd	29·420	23rd	·182	80·9	88·2	?	76·6	?	82·5	?	11·6	92·5	10th	71·8	18th	20·7
	Chapra	181	29·542	?	29·676	29·620	3rd	29·463	24th	·157	81·4	88·8	?	78·4*	?	83·7*	?	10·4	93·8	11th	74·6	18th	19·2
N.-W. Provinces (Eastern Districts).	Benares	267	29·443	−·015	29·665	29·509	12th	29·384	14th	·125	81·7	89·5	−1·4	77·7	+0·2	83·6	−0·6	11·8	93·8	11th	74·5	1st	19·3
	Allahabad	309	29·400	−·019	29·664	29·460	12th	29·337	30th	·123	82·5	90·7	−0·1	77·8	+1·1	84·3	+0·5	12·9	95·1	12th	74·8	20th	20·3
N.-W. Provinces (East Sub-Montane).	Gorakhpur	256	29·461	−·012	29·676	29·525	3rd	29·382	23rd	·143	80·7	89·2*	−0·9	76·9	−1·0	83·1*	−1·0	12·3	92·9	11th	73·2	18th	19·7
Oudh, South	Lucknow	370	29·342	−·016	29·670	29·417	28th	29·275	14th	·142	82·6	90·6	−1·1	77·1	+0·8	83·9	−0·2	13·5	96·3	27th	75·1	4 days	21·2
Oudh, North	Bahraich	403	29·305	?	29·670	29·385	1st	29·223	23rd	·162	81·0	89·4	?	76·6	?	83·0	?	12·8	93·4	12th & 26th	73·0	5th	20·4
N.-W. Provinces (Central).	Cawnpore	416	29·292	?	29·665	29·358	28th	29·223	6th	·135	82·0	90·6	?	76·8	?	83·7	?	13·8	94·3	3 days	73·0	7th	21·3
	Mainpuri	516	29·189	?	29·665	29·284	28th	29·093	6th	·191	81·1	91·4	?	76·1	?	83·8	?	15·3	96·8	28th	72·5	27th	24·3

* Mean of 29 days. † Mean of 23 days.

I—*continued.*

in India, Burma, etc, in September, 1894.—continued.

Wind Direction. Number of Winds from: Calm.	N.	NE.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 30th September 1894.	Normal rainfall for period 1st June to 30th September.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
12	...	2	3	7	4	...	1	1	3·0	?	?	89	·832	7·3	15	12·55	+2·45	10·92	7·98	+2·94	48·99	44·15	+4·84	1·72	Bankura	Central Bengal.
6	3	1	3	5	7	5	...	...	1·3	?	?	93	·959	5·2	15	11·40	+3·60	7·30	7·26	+0·04	50·93	42·96	+7·97	1·80	Raniganj.	
2	1	2	6	7	9	3	...	...	3·1	3·1	0	88	·851	8·0	14	12·09	+1·91	5·14	8·51	−3·37	37·97	41·15	−3·18	1·01	Burdwan.	
...	..	1	5	11	8	2	1	2	4·4	?	?	87	·912	6·9	13	13·00	0	6·52	10·63	−4·11	49·41	46·28	+3·13	1·15	Naya Dumka.	
7	...	...	9	3	7	4	...	...	2·8	3·7	−24	90	·986	8·4	12	12·55	−0·55	9·24	9·74	−0·50	45·35	41·45	+3·90	2·31	Berhampore.	
7	...	...	4	5	7	7	...	...	5·0	?	?	87	·995	4·9	15	12·15	+2·85	10·81	11·27	−0·46	42·99	44·64	−1·65	3·16	Rampore Boalia.	
2	...	2	3	11	4	6	...	2	3·0	?	?	91	·978	6·6	12	11·80	+0·20	8·85	11·50	−2·65	33·68	44·00	−10·32	2·24	Malda.	
7	...	...	11	10	1	...	...	...	2·3*	?	?	90	·962	6·5	16	12·05	+3·95	14·31	10·80	+3·51	50·02	50·09	−0·07	4·84	Bogra.	
1	...	9	12	3	4	1	...	...	2·2	?	?	92	·934	8·1	17	12·40	+4·60	17·07	10·54	+6·53	55·20	53·23	+1·97	3·47	Dinajpur	North Bengal.
2	3	6	13	2	3	1	...	...	1·9	?	?	92	·928	7·8	17	13·05	+3·95	16·08	13·61	+2·47	48·44	61·66	−13·22	4·56	Rangpur.	
...	4	10	6	7	2	...	...	1	2·2	?	?	92	·873	7·9	22	15·35	+6·65	34·49	22·21	+12·28	115·15	103·37	+11·78	5·25	Jalpaiguri.	
11	2	3	1	...	3	2	7	1	4·0	?	?	92	1·006	4·8	19	13·70	+5·30	14·37	12·58	+1·79	53·71	45·90	+7·81	2·55	Balasore	Orissa.
...	5	1	1	3	9	7	3	1	9·4	7·9	+19	85	·950	7·3	13	12·82	+0·18	7·28	13·06	−5·78	50·12	45·58	+4·54	2·89	False Point.	
9	1	4	2	...	3	6	3	2	2·3	2·4	− 4	78	·891	4·9	13	11·73	+1·27	5·13	11·20	−6·07	41·53	45·98	−4·45	0·87	Cuttack.	
...	2	1	4	2	10	8	2	1	15·2	?	?	82	·957	6·3	7	?	?	5·67	?	?	41·72	?	?	1·82	Shortt's Island.	
10	3	2	1	1	2	8	3	...	7·8	?	?	84	·958	5·4	11	13·35	−2·35	7·27	10·02	−2·75	29·46	37·63	−8·17	1·64	Puri.	
...	...	..	...	...	...	...	...	...	...	...	...	...	...	...		...	...	8·93	7·75	+1·35	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**	
1	1	...	6	4	10	3	2	3	7·5	7·0	+ 7	88	·792	8·7	12	12·55	−0·55	8·77	9·03	−0·26	53·15	44·10	+9·05	1·64	Hazaribagh.	Chota Nagpur.
6	2	1	4	3	2	7	1	4	5·8	?	?	89	·751	6·3	17	14·50	+2·50	11·66	9·25	+2·41	59·71	45·29	+14·42	2·94	Ranchi.	
...	1	2	11	5	...	7	3	1	1·7	?	?	88	·895	5·7	10	?	?	5·29	?	?	52·24	?	?	1·21	Daltonganj.	
2	3	...	1	2	4	10	6	2	1·5	?	?	85	·900	7·5	12	12·25	−0·25	5·60	8·24	−2·64	42·65	43·27	−0·62	0·89	Chaibassa.	
...	1	1	13	4	4	4	2	1	5·7	2·3	+148	88	·929	5·4	11	9·82	+1·18	5·59	7·37	−1·78	50·22	41·27	+8·95	0·94	Gaya.	Bihar, South.
2	...	...	9	4	4	5	4	2	12·9	?	?	82	·931	6·3	10	10·38	−0·38	8·53	7·67	+0·86	59·30	36·35	+22·95	3·85	Dehri.	
4	...	2	17	2	1	1	1	2	4·2	2·9	+45	87	·962	7·6	15	9·18	+5·82	18·30	6·14	+12·16	45·04	38·99	+6·05	6·04	Fatna.	
1	3	4	4	8	3	1	3	3	2·0	?	?	89	·991	5·0	12	9·80	+2·20	15·06	6·87	+8·19	55·47	34·78	+20·69	4·54	Arrah.	
1	1	4	15	1	...	1	4	3	4·2	?	?	86	·961	5·9	10	9·20	+0·80	5·26	7·19	−1·93	38·69	33·44	+5·25	1·89	Buxar.	
3	2	4	15	3	2	1	...	...	2·5	2·0	+25	92	·930	7·7	13	11·00	+3·00	17·01	14·12	+2·89	51·02	54·64	−3·62	3·18	Purnea	Bihar, North.
1	2	1	5	16	2	2	...	1	3·5	?	?	88	·961	7·7	12	9·65	+2·35	7·21	7·60	−0·39	44·94	36·62	+8·32	2·11	Bhagalpur.	
2	...	1	14	11	2	...	...	...	4·2	3·6	+17	88	·929	6·3	11	9·73	+1·27	15·10	7·76	+7·34	43·57	42·72	+0·85	4·06	Darbhanga.	
3	...	...	14	13	...	...	...	...	5·4	?	?	90	·965	5·9	14	9·20	+4·80	8·78	9·97	−1·19	31·88	39·65	−7·77	2·09	Muzaffarpur.	
5	...	10	12	3	...	...	...	...	4·6	?	?	89	·943	6·1	10	8·67	+1·33	5·06	9·16	−4·10	37·21	39·03	−1·82	1·56	Motihari.	
7	...	1	15	2	1	...	2	2	4·3	?	?	90	·968	8·0	13	8·30	+4·70	10·13	6·90	+3·23	40·54	35·13	+5·41	2·86	Chapra.	
12	...	1	8	3	1	...	4	1	3·6	3·9	− 8	88	·967	6·2	9	8·91	+0·09	9·38	6·59	+2·79	47·85	34·29	+13·56	3·74	Benares	N.-W. Provinces (Eastern Districts).
3	2	5	8	2	1	1	4	4	4·9	2·9	+69	85	·946	9·8	9	7·73	+1·27	3·90	6·05	−2·15	46·89	35·17	+11·72	0·92	Allahabad.	
3	4	4	9	3	2	1	3	1	1·5†	2·1	−29	86	·908	5·4	9	8·55	+0·45	3·76	8·56	−4·80	37·96	43·84	−5·88	0·79	Gorakhpur	N.-W. Provinces (East Submontane).
9	1	2	8	3	2	1	2	2	?	2·8	?	83	·917	5·7	9	7·55	+1·45	4·49	6·27	−1·78	50·07	34·73	+15·34	1·38	Lucknow	Oudh, South.
3	...	3	3	13	2	3	1	2	3·3	?	?	85	·915	3·2	8	?	?	12·93	7·45	+5·48	52·02	35·08	+16·94	4·10	Bahraich	Oudh, North.
5	...	1	8	4	1	2	6	3	2·8	?	?	84	·918	4·4	10	6·8	+3·2	8·22	4·57	+3·65	43·70	27·86	+15·84	1·91	Cawnpore	N.-W. Provinces (Central).
13	1	...	5	2	...	2	6	1	0·6	?	?	83	·890	4·3	7	?	?	6·48	6·09	+0·39	30·88	30·00	+0·88	1·85	Mainpuri.	

* Mean of 22 days. † Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Meteorological Province or District.	Station.	Elevation of barometer cistern above sea-level.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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		...	...	−·020	...	...	...	...	...	...	...	90·6	−1·7	73·6	+0·2	82·1	−0·8	17·0	...	...	...	...	27·5
N.-W. Provinces (Submontane).	Bareilly	568	29·133	−·014	29·665	29·243	28th	29·027	6th	·216	79·9	89·0*	−1·3	76·3	+0·4	82·6*	−0·5	12·7	94·3	11th	72·6	6th & 7th	21·7
	Dehra Dun	2,233	27·518	−·015	29·696	27·619	28th	27·419	5th	·200	73·4	83·5	−0·8	70·1	−0·2	76·8	−0·5	13·4	88·0	13th & 28th	66·5	16th	21·5
	Roorkee	887	28·817	−·022	29·672	28·922	28th	28·710	5th	·212	77·7	89·6	−1·6	73·1	−0·5	81·4	−1·1	16·5	94·7	16th	65·7	16th	29·0
	Meerut	733	28·958	−·022	29·660	29·052	28th	28·807	5th	·245	79·5	89·9	−1·7	74·5	−0·2	82·2	−1·0	15·4	95·0	16th & 27th	69·9	27th	25·1
Punjab, Central.	Delhi	718	28·981	−·024	29·661	29·075	28th	28·834	5th	·241	80·7	90·3	−2·3	76·2	−0·4	83·3	−1·4	14·1	96·0	28th	73·4	6th & 7th	22·6
	Lahore	702	28·984	−·021	29·652	29·100	8th	28·879	th	·221	81·7	95·4	−1·3	74·3	+1·3	84·8	0	21·1	100·8	19th & 30th	68·1	27th & 30th	32·7
Punjab (Submontane).	Umballa	9627	28·803	?	29·673	28·909	28th	28·683	5th	·226	78·5	91·5	?	73·3	?	82·4	?	18·2	97·0	27th & 28th	67·0	27th	30·0
	Ludhiana	812	28·891	−·020	29·669	28·999	8th	28·756	5th	·233	80·2	91·7	−3·1	74·0	−0·9	82·9	−2·0	17·7	97·5	28th	70·0	27th	27·5
Punjab, North	Sialkot	830	28·863	−·012	29·662	28·965	8th	28·744	5th	·221	80·6	94·3	−1·0	74·6	+1·3	84·5	+0·2	19·7	99·7	26th	68·8	12th	30·9
	Rawalpindi	1,652	28·062	−·030	29·649	28·168	8th	27·966	5th	·202	74·9	90·9	−2·5	69·4	+0·7	80·2	−0·9	21·5	95·5	22nd	61·1	30th	34·4
VII.—Indus Valley and North-West Rajputana.		...	...	−·017	...	...	...	...	...	...	...	97·5	+0·2	75 2	0	86·4	+0·1	22·3	...	...	...	...	33·5
Punjab, West	Peshawar	1,110	28·617	−·014	29·656	28·766	28th	28·519	23rd	·247	79·5	95·7	0	71·6	+1·6	83·7	+0·8	24·1	100·5	1st	65·5	29th & 30th	35·0
	Mardan	?			not	recor-	ded.				81·4	97·1	?	72·3	?	84·7	?	24·8	101·2	10th	65·0	30th	36·2
	Khushab	612	29·057	?	29·634	29·170	12th	28·975	5th & 23rd.	·195	82·3	99·1	?	75·1	?	87·1	?	24·0	104·0	1st	69·0	4 days	35·0
	Montgomery	558	29·122	?	29·641	29·229	8th	29·039	5th	·190	86·3	101·8	?	74·6	?	88·2	?	27·2	107·9	18th	67·5	29th	40·4
	D. I. Khan	573	29·090	−·033	29·634	29·220	12th	29·007	15th	·213	79·2	100·4	−0·2	74·2	−0·9	87·3	−0·6	26·2	104·1	4 days	64·8	29th	39·3
	Mooltan	420	29·251	−·028	29·637	29·364	12th	29·169	15th	·195	83·9	100·1	+0·4	78·1	+0·7	89·1	+0·6	22·0	105·9	14th	70·6	30th	35·3
	Sirsa	662	29·028	−·023	29·653	29·122	12th	28·895	5th	·227	81·0	96·7	−1·5	75·0	0	85·9	−0·8	21·7	103·9	19th	70·3	30th	33·6
Sind and Cutch	Jacobabad	186	29·504	−·003	29·650	29·594	28th	29·397	6th	·197	84·2	104·0	+1·0	76·6	0	90·3	+0·5	27·4	108·9	15th	69·1	30th	39·8
	Hyderabad	117	29·617	?	29·686	29·696	28th	29·506	6th	·190	80·3	96·0	−1·2	75·7	−0·6	85·9	−0·9	20·3	103·7	14th & 16th	69·5	4th	34·2
	Kurrachee	49	29·714	−·009	29·715	29·801	12th	29·646	6th	·155	80·2	88·2	0	76·8	−0·1	82·5	−0·1	11·4	90·0	28th	73·8	19th	16·2
	Bhuj	395	29·380	−·012	29·728	29·466	12th	29·311	4th	·155	80·5	92·5	+0·8	74·5	−0·2	83·5	+0·3	18·0	96·5	30th	72·4	9th	24·1
Rajputana, West	Bickaneer	753	28·942†	?	29·646	29·015	28th	28·809	10th	·206	85·3	100·2	+2·3	79·1	−0·1	89·7	+1·1	21·1	106·1	14th	73·0	22nd	33·1
	Pachpadra	380	29·341	?	29·676	29·448	22nd	29·146	14th	·302	81·4	96·3	?	74·6	?	85·4	?	21·7	104·5	30th	70·7	22nd	33·8
VIII.—East Rajputana, Central India and Gujarat.		...	...	−·022	...	...	...	...	...	...	...	89·3	−0·4	74·5	+0·7	81·9	+0·1	14·9	...	...	...	...	22·8
Rajputana East	Jeypore	1,431	28·311	−·030	29·695	28·382	12th	28·181	5th	·201	79·6	92·4	−0·4	73·4	+0·8	82·9	+0·2	19·0	98·5	28th	70·0	24th	28·5
	Sambhar	1,254	28·467	−·028	29·677	28·534	28th	28·331	5th	·203	80·3	91·8	+0·2	73·9	0	82·9	+0·1	17·9	97·5	29th	69·9	28th	27·6
	Ajmere	1,611	28·142	−·019	29·709	28·206	12th	28·024	5th	·182	78·6	88·9	−1·5	74·2	+1·4	81·6	−0·1	14·7	94·9	29th	68·1	27th	26·8
	Deesa	466	29·312	−·012	29·735	29·390	12th	29·229	4th	·151	79·9	92·1	−0·2	74·5	+0·8	83·3	+0·3	17·6	99·3	29th	72·5	4 days	26·8
Kathiawar	Rajkot	429	29·370	−·009	29·753	29·453	12th	29·307	10th	·146	79·4	90·5	−0·5	72·6	+0·1	81·6	−0·2	17·9	93·9	20th	69·8	22nd & 23rd	24·1
	Veraval	?	29·801	?	29·761	29·878	12th	29·729	10th	·149	79·4	83·6	?	76·9	?	80·3	?	6·7	85·6	8th & 28th	74·8	3 days	10·8
Central India	Nowgong	757	28·957	−·027	29·669	29·032	12th	28·882	30th	·150	80·0	90·3	−0·1	77·1	+2·3	83·7	+1·1	13·2	95·0	27th	74·5	3 days	20·5
	Indore	1,823	27·918	−·019	29·723	28·016	21st	27·895	10th	·121	74·3	85·3	+0·5	70·8	+0·6	78·1	+0·6	14·5	89·0	28th	68·6	23rd & 24th	20·4
	Neemuch	1,630	28·144	?	29·729	28·224	12th	28·062	5th	·162	76·8	87·2	−0·1	71·2	+0·6	79·2	+0·3	16·0	91·8	4 days	69·6	4 days	22·2
Gujarat	Surat	36	29·783	−·017	29·762	29·859	12th	29·716	15th	·143	79·5	87·9	−0·4	75·5	+0·1	81·7	−0.2	12·4	90·6	11th & 28th	72·0	5th	18·6
	Ahmedabad	176	29·625	?	29·751	29·699	12th	29·555	4th	·144	80·4	90·1	?	76·0	?	83·1	?	14·1	96·2	29th	72·6	14th	23·6
N.-W. P., West	Agra	555	29·151	−·038	29·664	29·237	28th	29·031	5th	·206	81·2	90·6	−1·6	75·9	−0·5	83·3	−1·1	14·7	94·5	28th	71·8	27th	22·7
	Jhansi	858	28·870	−·019	29·680	28·949	12th	28·795	5th	·154	81·1	90·6	−0·3	76·2	+1·1	83.4	+0·4	14·4	96.1	27th	71·9	30th	24·2

*Mean of 28 days.

† Mean of 29 days.

I.—*continued.*

in India, Burma, etc., in September 1894.—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 30th September 1894.	Normal rainfall for period, 1st June to 30th September.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...		...	...	...	..	...	...	...	...	...	...	...	...	5·80	5·39	+0·40	...	...	...	...	**VI.—Upper Sub-Himalayas.**	
15	2	...	1	8	1	...	1	2	1·4*	3·0	− 53	84	·861	4·4	6	6·73	− 0·73	8·13	8·00	+ 0·13	58·18	44·36	+13·82	3·36	Bareilly .	N.-W. Provinces (Submontane).
26	1	...	...	...	...	...	1	2	0·7	1·1	− 36	88	·729	5·6	12	10·30	+ 1·70	8·03	10·38	− 2·35	103·38	78·88	+24·50	2·14	Dehra Dun.	
22	...	...	6	2	...	...	...	...	2·2	2·0	+ 10	86	·815	4·6	7	5·55	+ 1·45	7·71	7·17	+ 0·54	47·32	37·92	+ 9·40	2·57	Roorkee.	
14	...	1	4	4	...	2	5	...	1·6	2·1	− 24	80	·804	3·6	10	4·55	+ 5·45	11·16	5·74	+ 5·42	28·22	28·31	− 0·09	4·62	Meerut.	
8	...	2	5	3	...	...	11	1	3·0	3·8	− 21	76	·797	3·2	7	4·09	+ 2·91	4·88	4·23	+ 0·65	28·41	26·15	+ 2·26	1·81	Delhi .	Punjab (Central).
	2	...	4	6	3	...	6	1	1·9	2·0	− 5	71	·766	1·0	1	2·55	− 1·55	2·10	2·49	− 0·39	16·78	16·83	− 0·05	1·97	Lahore.	
19	...	...	1	7	...	...	...	3	1·4	?	?	91	·886	3·0	7	?	?	4·71	5·31	− 0·60	34·37	27·75	+ 6·62	1·24	Umballa .	Punjab (Submontane).
4	2	3	2	10	2	2	..	5	2·3	1·1	+109	77	·798	3·2	4	3·36	+ 0·64	3·43	4·38	− 0·95	28·56	24·06	+ 4·50	1·46	Ludhiana.	
19	...	...	10	...	...	...	1	...	0·6	1·6	− 63	77	·802	1·7	5	2·82	+ 2·18	4·69	2·11	+ 1·58	27·82	25·58	+ 2·24	2·38	Sialkot .	Punjab (North).
23	1	2	...	2	...	1	...	1	0·4	1·3	− 69	82	·719	1·4	4	4·27	− 0·27	3·14	3·13	+ 0·01	27·00	22·75	+ 4·25	2·40	Rawalpindi.	
...	...	...	...	...	..	...	..	...	...	...	...	...	...	...	...	...	...	1·04	0·96	+0·02	...	...	...	...	**VII.—Indus Valley and N.-W. Rajputana.**	
17	6	1	...	...	2	...	2	2	2·5	3·1	− 19	67	·684	1·3	0	1·82	− 1·82	0	0·64	− 0·64	2·15	5·48	− 3·33	0	Peshawar .	Punjab (West).
			Not recorded.						?	?	?	?	?	?	3	?	?	1·69	?	?	13·19	?	?	0·90	Mardan.	
...	...	24	...	6	...	...	...	...	4·2	?	?	65	·715	1·6	4	1·6	+ 2·4	1·37	1·41	− 0·04	13·54	6·98	+ 6·56	0·82	Khushab.	
2	...	2	1	9	5	10	1	...	6·7	?	?	58	·721	0·9	2	1·4	+ 0·6	0·62	1·03	− 0·41	5·40	7·72	− 2·32	0·52	Montgomery.	
18	...	6	4	...	1	...	1	...	1·4	1·7	− 18	81	·815	1·2	0	0·73	− 0·73	0·14	0·23	− 0·09	6·44	5·07	+ 1·37	0·09	D. I. Khan.	
5	1	...	1	11	2	8	...	2	2·0	2·8	− 39	71	·810	0·8	0	0·55	− 0·55	0·09	0·42	− 0·33	4·58	5·53	− 0·95	0·09	Mooltan.	
6	1	1	6	3	2	4	7	...	5·8	3·6	+ 61	72	·761	2·4	6	2·73	+ 3·27	5·47	1·79	+ 3·68	16·78	12·39	+ 4·39	3·90	Sirsa.	
24	...	...	...	3	3	...	...	...	3·0	3·1	− 3	69	·808	0·2	0	0·18	− 0·18	0	0·06	− 0·06	0·27	2·73	− 2·46	0	Jacobabad .	Sind and Cutch.
...	...	...	...	...	9	18	3	...	22·5	12·5	+ 80	72	·739	1·2	1	0·80	+ 0·20	0·29	0·52	− 0·23	9·86	6·03	+ 3·83	0·29	Hyderabad.	
...	...	...	...	...	...	13	17	...	13·3	14·9	− 11	80	·831	6·4	0	0·82	− 0·82	0	0·54	− 0·54	18·63	6·08	+12·55	0	Kurrachee.	
...	...	...	...	...	2	6	14	8	12·2	11·3	+ 8	72	·765	3·9	1	?	?	1·12	1·96	− 0·84	27·44	13·54	+13·90	1·12	Bhuj.	
...	2	1	2	1	2	17	5	...	6·4	5·6	+ 14	61	·731	2·6	1	?	?	0·20	1·19	− 0·99	9·26	9·64	− 0·38	0·20	Bickaneer .	Rajputana (West).
17	...	...	...	...	2	7	1	3	7·0	6·1	+ 12	80	·859	4·8	6	?	?	2·47	1·72	+ 0·75	20·30	8·83	+11·47	0·92	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5·27	5·39	+0·27	...	...	...	...	**VIII.—East Rajputana, Central India and Gujarat.**	
5	...	1	2	2	...	1	11	8	3·3	5·2	− 36	78	·793	3·4	6	5·00	+ 1·00	3·39	4·40	− 1·01	26·43	26·33	+ 0·10	1·67	Jeypore .	Rajputana (East).
...	1	2	3	...	2	1	17	4	6·6	7·2	− 8	74	·774	2·9	5	3·50	+ 1·50	2·97	3·33	− 0·36	20·75	20·44	+ 0·31	1·17	Sambhar.	
2	...	1	...	...	...	2	23	2	5·3	5·0	+ 6	80	·781	2·4	5	3·18	+ 1·82	5·79	2·53	+ 3·26	23·44	19·73	+ 3·71	2·45	Ajmere.	
...	1	...	...	...	3	7	12	7	6·7	8·5	− 21	81	·825	5·6	3	3·73	− 0·73	3·83	4·83	− 1·00	21·66	25·58	− 3·92	2·49	Deesa.	
...	...	...	...	...	1	3	22	4	8·1	8·5	− 5	81	·817	5·0	7	5·73	+ 1·27	2·22	4·25	− 2·03	47·10	27·42	+19·68	0·72	Rajkot. .	Kathiawar.
4	1	...	...	3	2	4	13	3	5·7	?	?	87	·875	6·3	0	?	?	0·11	?	?	24·89	?	?	0·06	Veraval.	
4	4	3	4	...	...	6	8	1	2·9	2·4	+ 21	83	·856	6·0	6	6·91	− 0·91	7·60	6·32	+ 1·28	48·67	40·79	+ 7·88	3·57	Nowgong .	Central India.
2	11	...	...	...	...	3	4	10	4·0	4·8	− 17	92	·785	7·5	13	8·91	+ 4·09	8·22	8·48	− 0·26	27·07	31·61	− 4·54	2·20	Indore.	
4	1	1	1	...	...	6	15	2	6·3	10·2	− 38	83	·777	4·0	10	6·91	+ 3·09	6·89	5·35	+ 1·54	25·80	30·06	− 4·26	1·59	Neemuch.	
...	3	...	...	...	...	4	15	8	?	9·2	?	87	·876	6·1	10	7·55	+ 2·45	6·87	8·07	− 1·20	47·89	44·36	+ 3·53	1·45	Surat . .	Gujarat.
4	4	2	...	...	...	3	2	11	2·3	?	?	83	·859	7·0	6	?	?	6·23	?	?	49·18	?	?	2·46	Ahmedabad.†	
...	...	2	...	11	...	10	...	7	4·3	4·1	+ 5	82	·867	3·7	8	5·45	+ 2·55	2·27	4·91	− 2·64	29·54	26·62	+ 2·92	0·70	Agra . .	N.-W. P. (West).
2	6	3	1	2	1	7	2	6	3·0	3·2	− 6	79	·846	3·4	11	7·00	+ 4·00	12·18	6·80	+ 5·38	51·00	36·79	+14·21	3·75	Jhansi.	

* Mean of 28 days.

† Wind directions of 26 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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.
IX. Deccan		...	...	−·026	...	...	...	...	...	...	...	85·5	−0·7	71·9	+0·6	78·7	−0·1	13·7	...	...	...	...	20·9
Bombay, Deccan	Belgaum	2,524	27·331	−·015	29·794	27·402	12th	27·246	10th	·156	69·8	77·6	−0·9	64·9	−0·3	71·3	−0·6	12·7	81·8	20th	61·9	18th	19·9
	Sholapur	1,590	28·235	−·018	29·779	28·298	12th	28·159	10th	·139	74·1	85·3	−2·7	69·6	−0·6	77·5	−1·7	15·7	93·2	7th	67·1	5th & 30th	26·1
	Poona	1,840	27·993	−·022	29·783	28·058	12th	27·929	10th	·129	73·6	83·9	+0·1	68·8	+0·1	76·4	+0·1	15·1	87·5	22nd	65·4	24th & 25th	22·1
	Bijapur	1,946	27·883	?	29·776	27·966	12th	27·808	10th	·158	72·5	84·1	?	68·5	?	76·3	?	15·6	89·3	6th & 7th	65·5	18th	23·8
Khandesh	Malegaon	1,430	28·363	−·025	29·745	28·439	21st	28·298	10th	·141	76·4	85·9	−1·2	71·0	+1·0	78·5	−0·1	14·9	89·9	29th	68·2	21st & 24th	21·7
	Ahmednagar	2,152	27·670	?	29·767	27·732	12th	27·602	17th	·130	72·4	82·0	?	68·6	?	75·3	?	13·4	87·3	8th	64·5	13th	22·8
Berar	Akola	930	28·823	−·035	29·704	28·882	21st	28·753	10th	·129	76·5	87·4	−0·8	73·0	+0·6	80·2	−0·1	14·4	94·4	1st	71·7	6 days	22·7
	Amraoti	1,215	28·521	−·038	29·696	28·596	21st	28·459	9th	·137	74·7	85·5	−2·2	72·2	+0·5	78·9	−0·9	13·3	92·4	1st	70·3	3rd	22·1
Central Provinces, West.	Khandwa	1,044	28·712	−·024	29·718	28·776	21st	28·650	15th	·126	75·4	86·2	−1·2	73·4	+0·5	79·8	−0·4	12·8	90·2	28th	68·1	29th	22·1
	Hoshangabad	1,020	28·722	−·030	29·703	28·795	21st	28·644	3 days	·151	77·1	87·1	−0·9	73·9	+0·7	80·5	−0·1	13·2	91·4	27th & 28th	72·7	4 days	18·7
	Nagpur	1,025	28·700	−·034	29·679	28·764	12th	28·625	29th	·139	78·5	87·4	−1·4	73·6	+0·1	80·5	−0·7	13·8	92·3	22nd	70·6	3rd & 29th	21·7
Central Provinces, Central.	Chanda	634	29·107	−·034	29·689	29·157	4th	29·053	9th	·104	78·2	88·0	−0·8	74·7	+0·5	81·4	−0·2	13·3	93·4	28th	72.0	29th	21·4
	Seoni	2,033	27·716	−·019	29·683	27·778	12th	27·609	29th	·169	75·4	83·6	−1·7	71·1	+0·4	77·4	−0·7	12·5	88·1	22nd & 28th	69.1	27th	19·0
	Jubbulpore	1,327	28·339	−·024	29·680	28·466	12th	28·292	30th	·174	77·8	87·0	0	73·5	+0·7	80·3	+0·4	13·5	89·9	11th	70·6	24th	19·3
	Saugor	1,762	27·977	−·024	29·687	28·050	12th	27·884	30th	·166	76·1	86·9	+0·9	73·2	+2·2	80·1	+1·6	13·7	90·3	21st	69·9	27th	20·4
Central Provinces, East.	Raipur	970	28·755	−·018	29·671	28·809	12th	28·678	28th	·131	79·7	88·6	+1·1	75·6	+1·0	82·1	+1·1	13·0	92·3	22nd & 27th	72·6	28th	19·7
	Sutna	1,040	28·662	−·029	29·658	28·725	12th	28·587	30th	·138	80·6	88·2	+0·9	75·8	+1·4	82·0	+1·2	12·4	92·5	12th	73·6	23rd & 27th	18·9
	Sambalpur	463	29·246	?	29·655	29·312	4th	29·176	27th	·136	82·4	89·5	+0·6	77·5	+0·4	83·6	+0·5	12·0	93·0	24th	75·2	1st	17·8
Hyderabad, North.	Aurangabad	?	27·952	?	?	28·008	12th	27·869	10th	·139	74·7	84·3	?	69·6	?	76·9	?	14·7	89·6	1st	67·1	5th	22·5
	Indur	?			Not	recorded.					76·2	84·9	?	72·7	?	78·8	?	12·2	88·7	6th	70·5	1st	18·2
	Bidar	?	27·634	?	?	27·702	12th	27·541	10th	·161	72·2	81·5	?	68·8	?	75·2	?	12·7	86·4	6th	67·0	21st	19·4
Hyderabad, South.	Gulbarga	1,502	28·299	?	29·755	28·367	12th	28·225	10th	·142	74·0	84·8	?	70·1	?	77·5	?	14·7	92·1	6th	66·4	29th	25·7
	Raichur	1,378	28·444	?	29·774	28·526	12th	28·363	10th	·163	75·0	85·2	?	71·6	?	78·4	?	13·6	89·6	5th & 7th	69·6	29th	20·0
	Hyderabad (Deccan), Secunderabad	1,690	28·105	?	29·743	28·177	12th	28·020	10th	·157	74·5	83·8	−2·5	71·4	+1·0	77·6	−0·8	12·4	87·4	6th	70·2	7 days	17·2
		1,787	28·024	?	28·758	28·098	12th	27·935	10th	·163	74·1	85·5	?	70·7	?	78·1	?	14·8	88·6	3 days	69·4	4 days	19·2
	Khamamet	373	29·397	?	29·705	29·481	12th	29·303	10th	·178	79·5	89·8	?	75·3	?	82·5	?	14·5	93·5	6th	72·3	10th	21·2
X. West Coast		...	...	−·018	...	...	...	...	...	...	...	83·0	−0·3	74·7	+0·1	78·8	−0·1	8·3	...	...	...	...	13·1
Konkan	Bombay	37	29·811	−·019	29·788	29·889	12th	29·746	9th	·143	78·6	83·2	−1·2	75·8	−0·5	79·5	−0·9	7·4	86·0	5th	73·5	18th & 22nd	12·5
	Ratnagiri	110	29·751	−·005	29·800	29·825	12th	29·677	10th	·148	78·2	83·9	0	74·4	+0·3	79·2	+0·2	9·5	85·4	3 days	71·9	11th	13·5
	Mormugao	60	29·819	?	29·814	29·890	12th	29·741	10th	·149	77·9	83·4	?	74·9	?	79·1	?	8·5	85·0	3 days	71·4	29th	13·6
	Goa	23	29·875	−·015	29·813	29·956	12th	29·792	10th	·164	77·5	81·0*?	?	75·4*?	?	78·2*?	?	5·6	84·5	11th	72·0	29th	12·5
	Karwar	44	29·841	−·017	29·817	29·912	12th	29·758	10th	·154	76·4	82·5	0	73·5	−0·1	78·0	−0·1	9·0	84·2	5 days	72·1	4 days	12·1
Malabar	Cochin	10	29·910	−·026	29·848	29·971	12th & 13th.	29·835	10th	·136	78·2	85·0	+0·8	75·0	+0·7	80·0	+0·8	10·0	87·2	13th	72·7	16th	14·5
	Calicut	27	29·888	−·025	29·845	29·951	12th & 13th.	29·810	10th	·141	77·5	83·0	−1·2	74·2	+0·4	78·6	−0·4	8·8	85·8	14th	71·1	30th	14·7
	Mangalore	65	29·847	−·022	29·844	29·912	12th	29·767	10th	·145	76·6	82·8	−0·4	73·9	0	78·4	−0·2	8·9	85·3	14th & 30th	72·4	23rd & 26th	12·9
	Trivandrum	198	29·720	−?	29·849	29·783	12th	29·649	10th	·134	77·5	82·2	0	75·0	?	78·6	?	7·2	85·5	16th	74·0	9 days	11·5
XI. South India		...	...	−·027	...	...	...	...	...	...	...	88·3	−0·9	73·8	+0·1	81·1	−0·4	14·6	...	...	...	...	22·4
Madras, South	Pamban	37	29·826	?	29·790	29·886	12th	29·770	10th	·116	82·1	87·9	?	78·2	?	83·0	?	9·7	89·8	27th	74·2	8th	15·6
	Tinnevelly	168	29·695	?	29·791	29·753	12th	29·634	10th	·119	85·3	97·3	?	78·7	?	88·0	?	18·6	101·4	29th	71·4	23rd	30·0
	Madura	447	29·403	−·025	29·785	29·455	5th	29·338	10th	·117	80·8	94·1	−1·7	75·2	+0·1	84·7	−0·8	18·9	98·0	15th	71·5	20th	26·5

* Mean of 29 days.

I—*continued.*

in India, Burma, etc., in September 1894.—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 30th September 1894.	Normal rainfall for period, 1st June to 30th September.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10·32	7·99	+2·55	...	...	...	...	**IX.—Deccan.**	
1	...	...	...	...	...	4	21	4	15·9	16·7	− 5	89	·645	8·3	2	10·18	− 8·18	1·69	4·64	− 2·95	40·12	35·34	+ 4·78	0·75	Belgaum .	Bombay (Deccan.)
...	...	...	...	...	...	4	10	16	11·9	9·9	+ 20	81	·682	8·1	15	9·73	+ 5·27	10·83	8·16	+ 2·67	19·25	24·85	− 5·60	3·11	Sholapur.	
...	...	...	...	...	...	7	20	3	10·2	11·4	− 11	83	·685	8·4	8	8·18	− 0·18	2·10	5·21	− 3·11	19·29	20·03	− 0·74	0·52	Poona.	
...	...	...	...	...	...	6	19	5	8·0	?	?	87	·694	7·9	9	8·60	+ 0·40	9·82	?	?	19·28	?	?	3·47	Bijapur.	
2	..	...	...	...	...	4	19	5	11·3	7·6	+ 49	85	·772	6·5	13	8·64	+ 4·36	15·86	6·92	+ 8·94	25·01	20·46	+ 4·55	5·20	Malegaon .	Khandesh.
6	3	1	...	1	...	2	10	7	9·9	?	?	89	·713	7·6	14	?	?	10·19	?	?	18·69	?	?	2·90	Ahmednagar.	
...	...	...	...	...	...	2	17	11	7·3	5·8	+ 26	88	·795	6·1	14	10·18	+ 3·82	9·62	7·22	+ 2·40	29·42	30·94	− 1·52	1·83	Akola .	Berar.
4	...	...	...	1	...	7	16	2	3·7	4·4	− 16	93	·806	7·1	12	8·27	+ 3·73	8·63	6·94	+ 1·69	35·69	31·20	+ 4·49	1·70	Amraoti.	
2	...	...	...	...	...	2	18	8	6·4	6·2	+ 3	91	·798	7·4	11	7·55	+ 3·45	10·52	7·56	+ 2·96	36·66	29·57	+ 7·09	2·68	Khandwa .	Central Provinces (West).
4	2	3	1	...	3	9	7	1	1·9	2·5	− 24	89	·840	7·9	15	10·18	+ 4·82	10·58	11·61	− 1·03	50·89	51·92	− 1·03	3·19	Hoshangabad.	
7	2	...	..	...	2	5	2	12	4·4*	4·9	− 10	84	·816	7·5	17	10·64	+ 6·36	14·12	10·13	+ 3·99	49·13	43·85	+ 5·28	4·00	Nagpur.	
9	...	...	1	...	...	5	12	3	4·1	4·1	0	83	·806	7·6	13	?	?	10·27	10·75	− 0·48	50·34	51·35	− 1·01	2·41	Chanda .	Central Provinces (Central).
		Not	reco	rded					?	3·9	?	93	·829	5·3	15	11·73	+ 3·27	10·20	10·45	− 0·25	45·22	52·07	− 6·85	2·18	Seoni .	
12	2	...	1	1	2	2	7	3	1·6	3·4	− 53	88	·834	6·8	16	9·36	+ 6·64	7·49	8·77	− 1·28	49·55	54·79	− 5·24	1·65	Jubbulpore.	
9	...	2	...	1	1	10	5	2	3·4	3·3	+ 3	91	·816	5·0	14	8·64	+ 5·36	13·13	8·19	+ 4·94	65·84	44·22	+21·62	2·16	Saugor.	
10	...	...	2	...	3	6	7	2	4·8	5·9	− 19	87	·869	5·9	9	10·45	− 1·45	8·92	8·46	+ 0·46	49·64	46·51	+ 3·13	3·82	Raipur .	Central Provinces (East).
1	4	4	3	...	3	1	10	4	5·2	6·5	− 20	82	·852	4·3	12	8·36	+ 3·84	8·49	6·96	+ 1·53	44·74	40·74	+ 4·00	3·50	Sutna.	
...	1	4	6	2	9	4	2	2	3·6	2·2	+ 64	82	·900	5·1	13	?	?	5·81	10·07	− 4·26	66·02	60·45	+ 5·57	1·26	Sambalpur.	
11	...	...	...	...	...	7	9	3	3·5	?	?	85	·731	8·3	18	?	?	14·98	7·44	+ 7·54	24·24	26·71	− 2·47	3·12	Aurangabad	Hyderabad (North).
...	5	...	...	...	...	2	8	15	9·4	?	?	90	·811	8·9	16	?	?	16·99	6·91	+10·08	47·78	32·34	+15·44	4·35	Indur.	
...	4	...	...	...	...	2	12	12	7·4	?	?	90	·711	6·5	14	?	?	14·25	8·94	+ 5·31	27·90	34·38	− 6·48	3·07	Bidar.	
1	1	...	...	...	...	3	11	14	9·0	?	?	85	·716	7·6	18	?	?	13·68	6·44	+ 7·24	23·78	22·58	+ 1·20	2·48	Gulbarga .	Hyderabad (South).
...	...	...	...	...	...	3	20	7	7·9	?	?	79	·687	5·7	12	?	?	8·62	?	?	27·31	?	?	1·45	Raichur.	
...	...	...	...	...	...	...	23	7	6·1	?	?	86	·733	7·4	13	?	?	13·15	5·99	+ 7·16	24·39	25·91	− 1·52	2·21	Hyderabad (Deccan).	
...	...	...	...	...	4	...	13	13	7·7	7·0	+ 10	82	·702	7·3	16	?	?	10·73	?	?	21·66	?	?	2·08	Secunderabad	
14	2	...	...	1	3	3	4	3	5·3	?	?	87	·880	3·7	12	?	?	7·50	?	?	24·56	?	?	2·14	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·03	9·64	−1·75	...	...	...	...	**X.—West Coast.**	
...	2	1	4	4	5	2	8	4	9·4	11·7	− 20	89	·876	8·5	16	14·18	+ 1·82	12·04	11·81	+ 0·23	63·47	69·78	− 6·31	3·03	Bombay .	Konkan.
7	2	4	2	3	3	4	2	3	4·0	8·2	− 51	90	·862	6·3	16	16·09	− 0·09	10·98	13·18	− 2·20	93·89	104·60	−10·71	2·96	Ratnagiri.	
2	3	...	1	...	1	1	4	18	5·5	?	?	91	·874	4·6	16	?	?	8·13	?	?	83·87	?	?	1·59	Mormugao.	
15	1	3	1	...	4	3	2	1	3·7	?	?	89	·850	7·6	17	?	?	6·19	8·57	− 2·38	78·13	92·68	−14·55	1·19	Goa.	
12	2	4	...	...	...	6	3	3	1·7	?	?	92	·829	6·2	19	16·09	+ 2·91	10·32	13·75	− 3·43	89·11	114·41	−25·30	1·40	Karwar.	
9	2	5	1	1	...	1	6	5	5·8	?	?	86	·840	5·6	10	13·73	− 3·73	5·15	9·38	− 4·23	59·63	72·61	−12·98	1·70	Cochin .	Malabar.
20	1	1	...	...	...	...	...	8	7·0	?	?	90	·839	5·7	12	10·13	+ 1·87	5·61	6·16	− 1·55	87·41	84·55	+ 2·86	0·84	Calicut.	
16	...	3	6	2	...	1	...	2	1·5	2·4	− 38	90	·834	7·0	20	16·60	+ 3·40	13·04	10·14	+ 2·90	111·30	102·39	+ 8·91	1·69	Mangalore.	
1	14	2	...	...	...	...	1	12	7·9	?	?	88	·831	7·8	3	?	?	0·81	4·13	− 3·32	17·18	29·07	−11·89	0·32	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	4·05	5·29	−0·61	...	...	...	...	**XI.—South India.**	
...	1	1	3	3	4	13	4	...	1·5	?	?	80	·882	4·2	4	1·80	+ 2·20	1·11	1·44	− 0·33	4·49	2·42	+ 2·07	0·52	Pamban .	Madras (South).
...	3	...	...	...	...	5	11	11	9·7	?	?	57	·700	6·1	0	1·9	− 1·9	0·09	?	?	1·15	?	?	0·07	Tinnevelly.	
3	7	1	...	1	...	...	...	18	1·8	3·4	− 47	69	·730	5·3	9	6·09	+ 2·91	5·23	4·23	+ 1·00	12·12	12·01	+ 0·11	1·50	Madura.	

* Mean of 29 days.

Table

Abstract of observations taken at 8 A.M. at 206 stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure 8 A.M. in inches. 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.	Temperature of air. 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.
Madras, South Central.	Salem	940	28·942	−·030	29·823	29·006	12th	28·870	10th	·136	78·4	90·6	−0·7	72·8	+1·5	81·7	+0·4	17·8	93·4	3 days	71·5	12th & 29th	21·9
	Coimbatore	1,348	28·515	−·029	29·811	28·574	12th	28·442	10th	·132	75·3	90·0	+0·5	70·0	−0·5	80·0	0	20·0	93·4	3 days	68·1	30th	25·3
Coorg	Mercara	3,781	26·197	−·016	?	26·268	12th	26·118	10th	·150	64·3	70·8	−1·7	62·3	+0·6	66·6	−0·6	8·5	74·5	21st	60·2	30th	14·3
	Chitaldroog	2,405	27·468	?	29·805	27·544	12th	27·399	10th	·145	72·0	83·7	?	67·4	?	75·6	?	16·3	88·1	20th	64·9	30th	23·2
Mysore	Bangalore	3,021	26·887	−·031	29·817	26·970	12th	26·805	10th	·165	69·5	82·2	+0.3	65·1	+0·1	73·6	+0·2	17·1	85·8	30th	61·4	29th	24·4
	Hassan	3,091	26·840	?	29·828	26·916	12th	26·774	10th	·142	71·0	80·4	?	62·9	?	71·6	?	17·5	85·2	20th	58·7	19 h	26·5
	Mysore	2,518	27·394	?	29·844	27·468	12th	27·318	10th	·150	71·2	85·2	?	65·9	?	75·6	?	19·3	89·9	21st	63·0	30th	26·9
Madras, East-Coast, South.	Negapatam	31	29·815	−·032	29·774	29·882	12th	29·754	10th	·128	81·4	92·2	0	76·3	0	84·2	0	15·9	96·7	12th	72·2	22nd	24·5
	Cuddalore	12	29·829	?	29·770	29·891	12th	29·749	10th	·142	80·7	89·4	?	76·1	?	82·8	?	13·3	93·3	14th&15th	73·2	3 days	20·1
	Trichinopoly	255	29·597	−·028	29·785	29·652	12th & 13th.	29·541	10th	·111	80·9	95·8	+0·5	76·3	+0·8	86·1	+0·7	19.5	100·1	29th	71·9	7th	28·2
	Madras	22	29·798	−·035	29·751	29·887	12th	29·716	10th	·171	81·0	90·4	−2·8	76·1	−1·0	83·2	−1·9	14·3	94·5	29th & 30th	72·0	4th	22·5
Madras, East-Coast, Central.	Nellore	71	29·724	?	29·729	29·805	12th	29·651	10th	·154	82·5	92·3	?	78·2	?	85·2	?	14·1	98·8	21st	73·6	7th	25·2
	Masulipatam	15	29·757	−·024	29·707	29·833	12th	29·696	10th	·137	81·4	88·5	−2·9	77·3	−0·1	82·9	−1·5	11·2	94·6	6th & 17th	73·6	2nd	21·0
Madras, Central	Cuddapah	433	29·398	?	29·772	29·479	12th	29·309	10th	·170	81·2	91·0	−1·4	75·7	−0·2	83·4	−0·8	15·3	96·6	20th	71·7	8th	24·9
	Kurnool	923	28·893	−·034	29·761	28·972	12th	28·809	10th	·163	77·3	87·9	−1·4	72·9	−0·3	80·4	−0·9	15·0	92·2	6th & 20th	70·4	29th	21·8
	Bellary	1,475	28·365	−·021	29·784	28·447	12th	28·289	10th	·158	76·9	89·7	−0·9	72·9	+0·1	81·3	−0·4	16·8	94·4	20th	71·0	3 days	23·4
Madras, East-Coast, North	Rajahmundry	112	29·641	−·026	29·690	29·710	4th & 12th.	29·573	10th	·137	81·7	89·4	−1·0	77·2	−0·2	83·3	−0·6	12·2	93·0	3 days	73·1	28th	19·9
	Cocanada	26	29·721	−·021	29·682	29·800	4th	29·652	26th	·148	85·1	89·0	+0·5	78·2	+0·1	83·6	+0·3	10·8	94·7	24th	74·1	1st & 28th	20·6
	Vizagapatam	31	29·708	−·022	29·677	29·786	12th	29·617	26th	·169	83·3	86·1	−1·3	82·6	+0·1	84·4	−0·6	3·5	89·3	22nd	80·5	26th & 28th	8·8
	Gopalpur	21	29·708	?	29·669	29·798	4th	29·606	27th	·192	81·2	87·9	?	78·1	?	83·0	?	9·8	94·2	24th	75·6	16th	18·6
XII—Hill Stations.																							
Baluchistan	Shirino							Observ	ations	suspe	nded												
	Kachhi	?	23·896	?	...	24·000	12th	23·800	5th & 6th.	·200	67·3	81·4	?	38·7	?	60·0	?	42·7	83·0	9th & 10th	32·0	27th & 29th	51·0
	Pishin	?	...	...	Not	recorde	d	...	...	...	...	91·9	?	45·8	?	68·8	?	46·1	98·1	2nd & 3rd	34·9	3 days	63·2
	Quetta	5,502	24·591	−·002	?	24·692	12th	24·492	6th	·200	66·0	85·6	+0·4	48·8	−1·6	67·2	−0·6	36·8	90·1	3rd & 4th	37·8	27th	52·3
	Kalat	?	...	Not	recorded		...	...	...	...	65·0	84·8	?	36·6	?	60·7	?	48·2	90·5	1st	22·4	26th	68·1
	Chaman	4,311	25·602	?	?	25·710	12th	25·496	6th	·214	78·4	92·2	?	63·0	?	77·6	?	29·2	98·0	3rd & 4th	54·1	26th	43·9
Northern India.	Leh	11,503	19·700	?	...	19·786	28th	19·592	6th	·194	54·4	73·5	?	44·8	?	59·2	?	28·7	78·5	1st	38·7	15th	39·8
	Srinagar	5,204	24·808	?	?	24·910	28th	24·708	5th	·202	62·3	81·0	?	53·6	?	67·3	?	27·4	85·3	1st	45·7	30th	39·6
	Gilghit	?	25·413	?	?	25·620	7th	25 220	3 days	·400	73·2	91·7	?	66·6	?	79·2	?	25·1	102·3	3rd	59·9	14th	42·4
	Cherat	?	25·623	?	?	25·720	28th	25·540	5th	·180	72·8	84·0	?	65·8	?	74·9	?	18·2	88·9	3 days	60·7	6 h	28·2
	Murree	6,344	23·806	−·013	?	23·896	28th	23·704	6th	·192	63·2	74·3	+0·5	60·5	+1·7	67·4	+1·1	13·8	78·6	25th & 29th	53·6	6th	25·0
	Poo	?	...	...	Not	recorde	d	...	...	...	?	75·5	?	54·1	?	64·8	?	21·4	78·2	1st & 3rd	50·9	15th	27·3
	Simla	7,224	23·070	−·027	?	23·153	12th	22·956	5th	·197	59·5	65·2	−2·5	56·7	−0·4	61·0	−1·5	8·5	68·4	13th	55·0	29th	13·4
	Chakrata	6,977	23·293	+·006	?	23·383	1st	23·196	5th	·187	61·4	67·9	−1·1	57·6	+0·5	62·7	−0·3	10·3	72·3	12th	54 3	6th	18·0
	Mussooree	6,765	23·516	?	?	23·600	12th	23·429	5th	·171	61·1	66·5	−1·5	57·8	+0·3	62·2	−0·6	8·7	70·3	28th	55·4	6th	14·9
	Ranikhet	6,069	24·054	−·003	?	24·134	12th	23·967	5th	·167	63·6	71·4	−0·9	59·6	−0·4	65·5	−0·7	11·8	76·0	25th	56·0	6th	20·0
	Yatung	10,480?	...	...	Not	recorde	d	...	...	...	?	56·3	?	47·0	?	51·6	?	9·3	61·0	23rd	42·4	21st	18·6
	Gnatong	?	19·28	?	?	19·346	1st	19·225	23rd	·121	46·3	52·5	?	41·7	?	47·1	?	10·8	56·4	7th	31·6	7th	24·8
	Darjeeling	7,421	22·965	−·035	?	23·039	3rd	22·973	29th	·066	58·8	62·4	−2·4	56·0	+0·9	59·2	−0·8	6·4	65·6	10th	53·7	18th	11·9
	Gantak	?	24·437	?	?	24·518	3rd	24·362	23rd	·156	63·4	72·4*	?	59·0	?	65·6*	?	13·4	77·1	9th	55·8	6th	21·3

* Mean of 28 days. † Mean of 26 days.

I—*continued.*

in India, Burma, etc., in September 1894.—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 30th September 1894.	Normal rainfall for period, 1st June to 30th September 1894.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
8	...	...	..	1	7	13	1	...	2·6	3·7	−30	77	·754	6·4	8	6·91	+1·09	4·45	5·63	−1·18	15·22	20·93	−5·71	1·24	Salem . .	Madras, South Central.
...	1	..	1	4	24	...	...	...	3·9	6·6	−41	80	·702	5·8	2	2·18	−0·18	0·66	1·13	−0·47	3·49	4·98	−1·49	0·41	Coimbatore.	
...	1	...	...	...	...	1	13	15	9·2	7·9	+16	93	·571	9·1	20	17·10	+2·90	8·46	10·98	−2·52	83·02	105·44	−22·42	1·29	Mercara .	Coorg.
...	...	...	...	...	..	8	20	2	12·3	?	?	79	·623	7·6	6	?	?	1·59	?	?	7·33	?	?	0·70	Chitaldroog.	
...	...	...	...	...	...	9	19	2	8·4	6·7	+25	86	·625	7·1	6	8·36	−2·36	1·67	4·72	−3·05	14·78	18·56	−3·78	0·43	Bangalore .	Mysore.
1	...	...	...	...	...	...	20	9	3·2	?	?	78	·591	7·6	2	?	?	0·78	?	?	8·56	?	?	0·30	Hassan.	
...	...	...	...	...	...	13	16	1	13·2	?	?	83	·629	5·2	2	?	?	0·68	?	?	7·10	?	?	0·37	Mysore.	
4	...	...	...	...	...	9	14	3	7·2	5·2	+38	75	·799	6·3	8	6·36	+1·64	5·05	3·04	+2·01	7·75	10·89	−3·14	1·92	Negapatam .	Madras, East-Coast South.
...	1	...	...	...	3	8	11	7	1·3	?	?	91	·955	5·4	7	6·4	+0·6	4·96	?	?	22·41	?	?	1·75	Cuddalore.	
1	...	...	...	...	...	8	17	4	4·7	7·1	−34	72	·753	6·3	4	4·91	−0·91	1·83	3·21	−1·38	9·79	11·00	−1·21	0·81	Trichinopoly.	
...	...	...	...	...	4	12	13	1	5·7	6·5	−12	81	·855	6·5	10	6·45	+3·55	6·41	4·69	+1·72	23·08	15·23	+7·85	2·82	Madras.	
5	...	...	...	...	...	3	11	11	6·8	?	?	75	·832	8·7	4	5·3	−1·3	5·42	?	?	12·85	?	?	3·21	Nellore .	Madras, East Coast, Central.
3	...	...	...	...	2	4	7	14	3·9	6·4	−39	84	·897	7·5	12	8·80	+3·20	5·84	5·70	+0·14	19·32	23·95	−4·63	1·42	Masulipatam.	
...	1	...	...	...	...	7	13	9	?	?	?	71	·751	6·9	6	6·70	−0·70	5·10	5·48	−0·38	25·98	19·87	+6·11	1·98	Cuddapah .	Madras Central.
4	1	...	...	...	...	5	13	7	?	?	?	76	·711	7·2	8	7·83	+0·17	2·49	6·54	−4·05	22·94	21·25	+1·69	0·50	Kurnool.	
...	...	...	...	...	...	3	20	7	10·5	9·3	+13	65	·635	7·4	3	6·27	−3·27	1·40	4·09	−2·69	7·04	10·50	−3·46	0·72	Bellary.	
6	1	...	...	...	...	...	15	8	?	?	?	80	·889	7·3	10	8·60	+1·40	10·13	7·61	+2·52	26·27	27·94	−1·67	3·05	Rajahmundry	Madras, East Coast North.
1	1	...	...	...	...	12	12	4	5·6	?	?	82	·897	6·3	6	9·1	−3·1	5·03	5·73	−0·70	20·56	23·48	−2·92	2·04	Cocanada.	
...	...	...	...	...	...	4	25	1	0·8	2·2	−64	81	·921	7·9	11	10·91	+0·09	8·85	8·27	+0·58	17·41	22·74	−5·33	2·68	Vizagapatam.	
4	8	...	...	...	1	6	2	9	9·5	7·2	+32	89	·939	2·9	13	9·33	+3·67	5·91	7·51	−1·60	26·15	29·75	−3·60	1·15	Gopalpur.	
																									XII.—Hill Stations.	
		Observations suspended.												...	...	...	...	...	...	...	...	...	...	...	Shirino.	
2	...	...	1	...	...	3	4	16	?	?	?	35	·249	0·3	0	?	?	0	?	?	2·20	?	?	0	Kachh† .	Baluchistan.
...	...	Not recorded.				...	...	...	?	?	?	?	?	?	0	?	?	0	?	?	0·59	?	?	0	Pishin.	
30	...	...	...	...	...	...	...	...	0·3	3·5	−91	55	·363	0·9	0	0·55	−0·55	0	0·16	−0·16	1·09	2·19	−1·10	0	Quetta.	
...	9	...	...	...	21	...	...	...	?	?	?	?	?	?	0	?	?	0	?	?	2·65	?	?	0	Kalat.	
19	1	...	...	2	2	3	2	1	6·2	?	?	27	·269	0·3	0	?	?	0	?	?	1·02	?	?	0	Chaman.	
...	2	13	3	...	7	2	1	2	1·6	1·7	−6	48	·204	2·8	0	?	?	0·03	?	?	3·14	?	?	0·02	Leh . .	Northern India.
8	3	1	2	6	7	...	1	2	5·2	?	?	86	·489	2·0	2	?	?	0·38	?	?	7·18	?	?	0·15	Srinagar.	
...	...	...	Not recorded				...	...	?	?	?	48	·390	2·9	1	?	?	0·23	?	?	1·66	?	?	0·20	Gilghit.	
16	5	...	...	5	3	1	...	...	7·6	?	?	66	·520	2·2	4	?	?	5·28	?	?	15·51	?	?	2·49	Cherat.	
3	1	1	2	3	1	3	4	12	6·6	5·4	+22	72	·422	2·1	6	6·55	−0·55	4·03	6·16	−2·13	47·42	34·56	+12·86	2·00	Murree.	
8	1	2	...	6	...	3	7	3	?	?	?	?	?	3·3	0	?	?	0·13	?	?	3·21	?	?	0·07	Poo.	
8	4	12	5	...	...	1	...	...	4·8*	1·7	+182	84	·427	4·3	8	8·36	−0·36	8·23	6·56	+1·67	72·90	48·88	+24·02	2·71	Simla.	
10	1	4	6	2	1	1	2	3	5·4§	4·7	+15	88	·483	5·3	9	?	?	6·41	6·92	−0·51	78·81	51·84	+26·97	1·40	Chakrata.	
5	4	7	4	1	...	2	5	2	?	8·1	?	93	·502	5·4	13	10·09	+2·91	11·31	10·34	+0·97	101·71	79·43	+22·28	2·25	Mussooree.	
16	2	3	...	2	...	5	1	1	2·5	1·9	+32	88	·513	5·9	10	7·73	+2·27	9·49	8·02	+1·47	57·37	41·15	+16·22	3·04	Ranikhet.	
...	...	...	Not recorded				...	...	?	?	?	?	?	?	23	?	?	7·11	?	?	28·54	?	?	0·57	Yatung.	
3	1	...	1	8	1	2	3	11	3·1	?	?	93	·294	8·5	28	?	?	24·11	?	?	99·39	?	?	2·81	Gnatong.	
6	...	1	10	...	1	3	8	1	4·0	3·0	+33	97	·483	9·6	25	16·00	+9·00	15·38	15·85	−0·47	89·95	103·17	−13·22	2·27	Darjeeling.	
...	5	1	1	...	3	5	9	6	0·9	?	?	95	·555	8·8‡	27	?	?	29·52	?	?	106·03	?	?	4·28	Gantak.	

* Mean of 25 days. † Mean of 26 days. ‡ Mean of 24 days. § Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Meteorological Province or District.	Stations.	Elevation of barometer above sea-level in feet.	Pressure 8 A.M. in inches. Mean actual pressure (reduced to 32°)	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity of 45° lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Temperature of air. 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.
Central India.	Mount Abu.	3,945	25·959	−·023	?	26·030	12th	25·880	4th	·150	69·2	74·4	−1·0	64·7	−0·1	69·6	−0·6	9·7	79·7	28th	60·4	8th	19·3
	Pachmarhi .	3,528	26·345	−·009	?	26·433	21st	26·263	29th	·172	71·4	77·2	+0·2	67·4	+1·1	72·3	+0·7	9·8	80·7	21st & 28th	65·2	17th	15·5
South India .	Wellington .	6,200	24·208	−·021	?	24·262	12th & 13th	24·135	10th	·127	64·5	71·5	+0·5	54·8	−0·9	63·2	−0·2	16·7	76·2	13th	48·7	11th	27·5
XIII.—Extra India.																							
Ceylon . .	Trincomalee	75	29·821	?	29·823	29·877	12th	29·764	10th	·113	83·0	93·1	?	76·8	?	84·9	?	16·3	95·0	28th & 29th	73·0	20th	22·0
	Colombo .	40	29·893	−·023	29·859	29·942	12th	29·831	10th	·111	82·5	85·5	?	76·8	?	81·2	?	8·7	87·5	22nd	69·5	6th	18·0
	Galle . .	48	29·882	?	29·856	29·931	12th	29·825	10th	·106	81·2	83·1	?	78·4	?	80·7	?	4·7	84·0	6 days	76·0	12th	8·0
Persia . .	Meshed* .	?	...	...	Not	recorde	d	...	...	...	66·8	79·5	?	54·2	?	66·9	?	25·3	89·5	16th	45·4	22nd	44·1
	Teheran‡ .	?	25·985	?	?	26·350	2nd	25·725	16th	·625	77·5	90·0	?	64·8	?	77·4	?	25·2	98·6	2nd	51·9	20th	46·7
	Ispahan .	?	?	?	?	?	?	?	?	?	70·0	88·1	?	52·2	?	70·1	?	35·9	93·1	2nd	46·0	19th	47·1
	Bushire* .	14	29·728	?	29·698	29·857	29th	29·596	6th	·261	85·7	92·6	?	78·3	?	85·4	?	14·3	102·0	17th	69·1	29th	32·9
	Jask* . .	?	?	?	Not	recorde	d	...	...	...	88·9	94·8	?	81·0	?	87·9	?	13·8	102·2	25th	76·2	10th	26·0
Arabia . .	Muscat .	?	29·720	?	?	29·838	12th	29·627	6th	·211	85·3	87·5	?	83·2	?	85·3	?	14·3	94·3	26th	79·3	10th	15·0
	Baghdad .	?	29·358	?	?	29·504	20th	29·228	7th	·276	77·5	100·3	?	70·5	?	85·4	?	29·9	113·9	4th	58·4	19th	55·5
	Aden† . .	94	29·723	−·027	29·717	29·791	13th	29·662	3rd	·129	87·1	95·8	+2·3	83·5	+1·4	89·6	+1·9	12·3	98·8	16th & 17th	79·3	30th	19·5
	Perim . .	?	29·549	?	?	29·617	24th	29·497	6th	·120	88·4	96·0	?	85·6	?	90·8	?	10·4	98·8	3rd	83·1	2nd & 20th	15·7
Afghanistan .	Kabul . .	?	?	...	Not	record	ed	...	...	...	63·1	87·5	?	52·0	?	69·8	?	35·5	92·9	2nd	44·9	26th	48·0
Central Asia .	Kashgar .	?	25·650	?	?	25·910	12th	25·510	17th & 19th.	·400	66·4	83·5	?	57·0	?	70·2	?	26·5	94·3	3rd	50·3	29th & 30th.	44·0
Arabian Sea Islands.	Amini Devi.	15?	29·935	?	29·878	30·031	12th	29·831	10th	·200	79·8	83·5	?	76·1	?	76·8	?	7·4	88·5	11th & 14th.	73·2	16th	15·3
	Minicoy	10	29·943	?	29·878	30·016	13th	29·868	10th	·148	80·1	84·9	?	78·8*	?	81·8*	?	6·1	88·5	29th & 30th.	75·3	11th	13·2
Africa . .	Zanzibar .	73	30·043	?	30·043	30·100	9th	29·988	18th	·112	76·1	82·6	?	73·8	?	78·2	?	8·8	85·1	26th	72·4	9th	12·7

* Mean of 28 days. † Mean of 27 days. ‡ Mean of 29 days.

I.—*concluded.*

in India, Burma, etc., in September 1894.—concluded.

Wind direction: Number of winds from									Wind velocity.			Hygrometry, 8 A. M.		Mean cloud amount.	Rainfall.										Station.	Meteorological Province or District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour.	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 1894.	Normal rainfall for period 1st June to 30th September.	Variation from normal of period.	Heaviest rainfall during month.		
...	3	4	...	5	1	10	4	3	7·0	7·3	− 4	83	·582	4·6	9	7·40	+1·60	8·25	10·71	−2·46	77·28	63·65	+13·63	3·71	Mount Abu.	Central India.
4	1	1	2	1	...	2	10	9	5·3	5·6	− 5	85	·656	7·2	18	12·55	+5·45	23·74	15·97	+7·77	76·91	72·20	+ 4·71	7·68	Pachmarhi.	
19	...	1	...	1	2	4	2	1	2·4	3·5	−31	66	·401	4·6	7	9·22	−2·22	4·06	4·49	−0·43	13·78	16·16	− 2·38	1·61	Wellington.	South India.
																									XIII.—Extra India.	
...	...	...	...	...	...	30	...	...	9·0	?	?	74	·833	4·7	11	?	?	6·11	4·39	+1·72	13·42	12·73	+0·69	2·26	Trincomalee	Ceylon.
...	...	...	...	...	...	13	17	...	11·6	8·7	+33	75	·842	6·5	3	?	?	0·72	5·29	−4·57	14·82	22·27	−7·45	0·20	Colombo.	
...	...	...	...	...	...	...	17	13	10·3	?	?	89	·957	3·7	12	?	?	9·34	7·67	+1·67	25·55	26·40	−0·85	4·63	Galle.	
17	...	...	...	...	...	5	5	1	?	?	?	?	?	0·5	0	?	?	0	?	?	0·09	?	?	0	Meshed*.	Persia.
19	6	...	1	...	2	1	...	...	3·8*	?	?	28	·264	0	0	?	?	0	?	?	0·68	?	?	0	Teheran,§	
...	2	2	2	2	1	5	10	6	3·6	?	?	42	·313	0·3	0	?	?	0	?	?	0·41	?	?	0	Ispahan.	
...	7	10	3	2	...	...	...	6	6·2†	7·7	−19	57	·706	?	0	?	?	0	?	?	0	0	0	0	Bushire.*	
2	...	1	9	9	2	1	2	2	15·3‡	?	?	70	·943	0·4	0	?	?	0	?	?	0·12	?	?	0	Jask.*	
...	1	4	16	2	1	...	3	3	4·0	?	?	74	·895	0·6	0	?	?	0	?	?	0·32	?	?	0	Muscat.	Arabia.
16	7	3	1	...	...	...	...	3	0·5	?	?	45	·433	0·5	0	?	?	0	?	?	0·01	?	?	0	Baghdad.	
9	...	2	5	1	2	6	1	1	8·7	8·5	+ 2	77	·978	4·1	0	?	?	0·02	0·21	−0·19	0·09	0·43	−0·34	0·02	Aden.‡	
4	2	6	2	2	...	2	4	8	9·8	?	7	72	·963	4·8	0	?	?	0	?	?	0·14	?	?	0	Perim.	
...	...	1	8	10	...	9	2	...	?	?	?	?	?	?	0	?	?	0	?	?	0·76	?	?	0	Kabul.	Afghanistan.
23	2	1	...	1	...	...	3	...	2·3	?	?	58§	·375§	1·8	1	?	?	0·75?	?	?	1·96?	?	?	0·75?	Kashgar.	Central Asia.
...	5	...	...	...	...	...	2	23	?	?	?	88	·892	6·7	14	?	?	6·42	?	?	36·57	?	?	1·62	Amini Devi.	Arabian Sea Islands.
...	...	...	...	...	...	1	19	10	17·2	?	?	85	·874	5·8	12	?	?	7·06	?	?	23·66	?	?	2·96	Minicoy.	
...	...	1	1	10	14	4	...	...	7·8	?	?	84	·758	5·1	3	?	?	0·66	?	?	5·63	?	?	0·30	Zanzibar.	Africa.

* Mean of 28 days. † Mean of 26 days. ‡ Mean of 27 days. § Mean of 29 days.

Table

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

Meteorological Province.	Station.	Height of the barometer 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.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·808	29·766	·042	29·789	+·008	29·768	83·5	76·3	7·2	87·5	72·2	15·3	81·4	80·4	78·7	−0·8	74·7	78·7	77·8	77·1
	Rangoon	...	·815	·691	·124	·754	−·032	·732	86·4	76·3	10·1	90·7	74·4	16·3	80·3	81·7	79·5	+0·8	74·9	78·1	78·3	77·1
	Diamond Island	...	·807	·705	·102	·758	−·029	·734	83·4	77·2	6·2	85·7	74·6	11·1	82·0	80·7	79·3	+0·6	74·7	77·8	76·7	76·4
	Cocos Island	111	·776	·686	·090	·733	?	·776	86·1	76·5	9·6	89·2	73·3	15·9	82·1	81·7	79·8	?	74·5	78·7	78·2	77·1
	Akyab	...	·796	·687	·109	·746	−·018	·708	86·7	77·9	8·8	89·0	76·1	12·9	83·3	83·9	81·4	−0·1	75·8	80·6	80·4	78·9
Assam.	Silchar	...	·707	·573	·134	·645	−·001	·699	88·9	76·3	12·6	93·6	73·3	20·3	82·4	86·7	81·7	+0·2	75·4	78·8	79·7	77·9
	Sibsagar	...	·479	·350	·129	·416	−·013	·704	84·6	75·5	9·1	89·3	73·0	16·3	79·8	83·7	78·7	−2·1	74·7	77·5	79·4	77·2
	Dhubri	...	·686	·550	·136	·624	−·009	·693	82·7	75·6	7·1	87·2	71·8	15·4	78·9	81·2	77·6	−1·5	74·7	76·8	77·8	76·4
Bengal and Orissa.	Chittagong	...	·729	·610	·119	·674	−·008	·707	87·6	76·6	11·0	89·5	75·1	14·4	84·2	84·4	81·1	+0·6	75·8	79·8	79·9	78·5
	Narayanganj	...	·758	·639	·119	·704	−·002	·672	87·5	79·3	8·2	90·7	75·6	15·1	84·0	84·5	83·0	+0·1	76·9	80·0	79·8	78·9
	Calcutta (Alipore)	...	·736	·624	·112	·682	−·004	·649	87·6	77·8	9·8	90·6	75·8	14·8	84·3	83·3	82·1	−0·2	76·7	79·8	79·2	78·6
	Do. (Chowringhee)	...	·742	?	?	?	?	?	89·4	77·9	11·5	92·0	75·8	16·2	85·8	?	?	?	77·2	81·5	?	?
	Saugor Island	...	·728	·617	·111	·675	−·008	·644	88·2	80·1	8·1	90·4	77·0	13·4	85·5	85·3	83·1	+0·5	77·4	81·2	80·8	79·8
	Burdwan	...	·655	·538	·117	·600	−·015	·645	89·0	78·9	10·1	91·9	76·9	15·0	84·6	85·4	82·8	−0·7	77·6	79·5	79·6	78·9
	Berhampore	..	·695	·578	·117	·640	−·006	·654	87·9	79·1	8·8	90·6	75·3	15·3	84·5	84·9	82·5	−0·5	77·1	80·3	79·9	79·1
	False Point	...	·729	·621	·108	·677	−·023	·639	87·9	78·9	9·0	93·5	76·5	17·0	85·6	85·4	82·4	+0·6	77·3	80·3	79·9	79·2
	Cuttack	...	·654	·541	·113	·602	−·033	·623	90·1	78·6	11·5	94·7	76·8	17·9	86·6	86·2	83·1	+0·6	76·6	79·1	78·8	78·2
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·743	27·634	·109	27·693	−·018	·620	84·3	72·6	11·7	89·0	71·3	17·7	79·8	80·4	77·2	+0·3	69·0	74·5	74·5	72·7
	Patna	...	29·557	29·437	·120	29·502	−·015	·637	88·0	79·0	9·0	93·4	75·4	18·0	84·3	86·2	82·6	−0·9	77·2	80·1	80·3	79·2
	Darbhanga	...	·590	·460	·130	·530	−·013	·650	87·3	77·9	9·4	91·8	72·2	19·6	83·4	85·3	81·6	−1·1	76·9	79·1	79·8	78·6
	Allahabad	...	·411	·287	·124	·352	−·029	·615	90·9	77·8	13·1	95·2	74·9	20·3	86·7	87·9	83·1	0	76·0	80·2	79·4	78·5
	Ghazipur	220	·490	·371	·119	·435	−·029	·606	90·0	79·6	10·4	95·1	76·2	18·9	86·7	86·8	83·6	+0·7	77·3	80·9	80·0	79·4
	Lucknow	...	·358	·239	·119	·302	−·023	·624	90·4	77·1	13·3	96·3	75·1	21·2	85·1	87·3	83·0	−0·9	75·0	79·2	79·1	77·8
Upper Sub Himalayas.	Dehra Dun	...	27·534	27·439	·095	27·479	−·028	·639	83·8	69·9	13·9	88·1	66·3	21·8	78·3	79·8	75·6	−1·5	67·7	73·0	73·6	71·4
	Roorkee	...	28·828	28·718	·110	28·766	−·031	·606	89·6	73·1	16·5	94·7	65·8	28·9	82·7	88·0	80·7	−1·3	71·3	76·5	76·7	74·8
	Meerut	...	·973	·866	·107	·911	−·029	·604	90·0	74·5	15·5	94·9	70·0	24·9	84·1	86·9	81·4	−1·5	72·8	75·9	76·3	75·0
	Lahore	...	·997	·903	·094	·944	−·025	·607	95·5	74·2	21·3	101·0	67·9	33·1	87·8	93·8	84·2	+0·7	70·7	76·2	77·4	74·8
	Ludhiana	...	·908	·800	·108	·848	−·027	·614	92·0	74·1	17·9	97·3	69·9	27·4	85·6	90·7	82·5	−1·1	72·0	76·3	76·5	75·0
Indus Valley and N.-W. Rajputana.	Peshawar	...	·625	·502	·123	·558	−·025	·623	95·6	71·7	23·9	99·0	65·6	33·4	85·7	93·8	83·0	+1·2	67·0	73·8	74·8	71·9
	Mooltan	...	29·263	29·185	·078	29·218	−·014	·595	100·2	78·2	22·0	105·8	70·5	35·3	89·7	98·5	88·6	+1·6	72·4	79·0	81·4	77·6
	Jacobabad	...	·514	·396	·118	·449	−·018	·588	104·1	76·7	27·4	109·0	69·1	39·9	93·8	101·4	89·5	+1·2	71·8	79·1	78·6	76·5
	Kurrachee	...	·723	·632	·091	·680	−·020	·680	88·3	76·7	11·6	89·8	74·2	15·6	85·4	85·8	81·7	+0·3	73·7	76·9	77·2	75·9
E. Rajputana, Central India and Gujarat.	Jeypore	...	28·326	28·216	·110	28·267	−·028	·625	93·0	73·3	19·7	98·6	69·9	28·7	85·2	90·0	81·8	−0·2	71·0	75·7	76·1	74·3
	Ajmere	...	·155	·051	·104	·097	−·028	·643	89·4	74·2	15·2	94·9	68·2	26·7	83·2	87·6	81·0	−0·6	70·6	76·4	77·8	75·0
	Deesa	...	29·320	29·201	·119	29·260	−·023	·674	92·3	74·5	17·8	99·2	72·3	26·9	84·8	90·6	82·5	+0·7	72·8	76·3	76·9	75·3
	Nowgong	...	28·963	28·850	·113	28·909	−·035	·610	90·0	77·0	13·0	95·2	74·3	20·9	84·3	86·3	82·1	+0·2	74·6	78·0	77·5	76·7
	Agra	...	29·168	29·048	·120	29·102	−·039	·608	90·7	75·9	14·8	94·5	71·8	22·7	86·4	88·8	83·1	−0·3	73·8	78·3	78·7	76·9
Deccan.	Belgaum	...	27·338	27·244	·094	27·293	−·022	·731	77·5	64·8	12·7	81·6	61·8	19·8	73·4	73·3	69·7	−0·7	64·4	68·8	68·7	67·3
	Sholapur	...	28·240	28·108	·132	28·185	−·022	·706	85·4	69·6	15·8	93·4	67·2	26·2	77·7	82·7	76·1	−1·5	68·5	71·4	72·5	70·8
	Poona	...	27·995	27·899	·096	27·952	−·022	·723	83·8	68·8	15·0	87·5	65·3	22·2	78·0	78·0	73·9	−0·5	67·2	71·1	71·1	69·8
	Akola	...	28·836	28·709	·127	28·774	−·038	·649	87·1	73·0	14·1	93·9	71·5	22·4	80·6	83·6	79·2	−0·6	71·8	75·4	76·0	74·4
	Buldana	2,132	27·656	27·551	·105	27·605	−·039	·659	81·1	69·4	11·7	85·4	67·4	18·0	75·7	78·6	74·6	−1·1	68·2	71·9	72·7	70·9
	Khandwa	...	28·720	28·594	·126	28·658	−·036	·650	86·2	73·4	12·8	90·2	68·1	22·1	79·4	84·3	78·6	−0·5	71·5	74·9	76·3	74·2

II.

89 Stations in India, Burma, etc., in September 1894.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from											Wind Steadiness.		Wind Velocity.		Rainfall.			
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.	Station.	Meteorological Province.
·841	·946	·921	·903	+·011	93	88	89	90	+2	8·8	9·4	9·1	+2·1	1	1	..	..	1	4	25	24	4	S. 67° W.	S. 43° W.	80	73	219	214	...	...	Port Blair	Burma Coast and Bay Island.
·849	·934	·924	·902	+·007	94	90	86	90	+1	8·5	7·9	8·2	+0·1		...	...	1	4	18	19	14	3	S. 39° W.	S. 18° W.	70	49	89	91	...	...	Rangoon	
·829	·898	·866	·864	−·010	89	83	83	85	−2	8·3	8·8	8·6	+1·7	...	...	...	...	9	13	19	11	8	S. 49° W.	S. 38° W.	60	58	257*	155	...	...	Diamond Island,	
·827	·937	·919	·894	?	91	85	85	87	?	6·2	7·4	6·8	?	...	...	...	...	...	27	22	11	...	S. 58° W.	?	84	?	493*	?	13·09	1·84	Cocos Island	
·867	1·009	·992	·956	+·048	91	88	85	88	+3	7·8	8·2	8·0	+1·0	...	1	8	8	3	23	3	10	4	S. 3° E.	S. 9° E.	30	41	87	72	...	...	Akyab	
·868	·937	·920	·908	+·005	95	85	73	84	0	8·8	7·7	8·3	+1·2	45	...	...	1	...	...	2	9	3	N. 86° W.	S. 89° W.	20	2	36*	61	...	...	Silchar	Assam.
·851	·918	·950	·906	−·011	96	90	82	90	+4	9·2	7·6	8·4	+0·4	11	2	31	...	1	...	15	...	...	N. 44° E.	N. 73° E.	30	18	68*	58	...	...	Sibsagar	
·850	·895	·908	·884	−·009	96	91	85	91	+4	8·6	6·9	7·8	+1·3	7	6	18	6	5	9	...	6	3	N. 60° E.	S. 66° E.	27	28	107	77	...	...	Dhubri	
·883	·960	·959	·934	+·020	96	82	81	86	−5	7·6	8·0	7·8	+1·2	...	3	5	6	16	9	10	6	5	S. 14° E.	S. 29° E.	30	31	96*	109	...	...	Chittagong	Bengal and Orissa.
·893	·972	·954	·940	−·024	89	84	81	85	−1	8·5	8·0	8·3	+1·5	...	...	3	6	30	7	9	3	2	S. 31° E.	S. 11° E.	60	57	136	112	...	...	Narayanganj	
·904	·956	·946	·935	−·021	95	81	83	86	−1	7·2	8·7	8·0	+0·8	3	1	...	6	17	20	10	2	1	S. 12° E.	S. 27° E.	63	43	69	101	...	...	Calcutta (Alipore),	
·926	1·019	?	?	?	96	83	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	7·61	1·50	Do, (Chowringhee,)	
·905	1·009	·991	·968	−·011	88	82	81	84	−2	8·6	8·9	8·8	+2·0	...	2	3	5	15	24	9	1	1	S. 15° E.	S. 4° W.	63	48	295	241	...	...	Saugor Island	
·933	·939	·936	·936	+·006	94	79	77	83	+1	7·9	8·5	8·2	+0·8	6	5	3	5	13	17	10	1	...	S. 18° E.	S. 31° E.	47	38	74*	72	...	...	Burdwan	
·903	·980	·958	·947	+·012	90	82	80	84	−2	8·0	8·4	8·2	+0·1	8	3	1	16	10	12	7	2	1	S. 40° E.	S. 41° E.	42	36	69	88	...	...	Berhampore	
·917	·963	·947	·942	+·015	93	78	78	83	−1	7·9	7·5	7·7	+0·9	...	3	3	5	12	26	8	2	1	S. 12° E.	S. 25° W.	59	36	218*	198	...	...	False Point	
·892	·895	·887	·891	−·008	91	71	72	78	−3	5·4	7·7	6·6	+0·1	11	2	9	6	7	9	10	4	2	S. 23° E.	S. 10° W.	20	20	53	56	...	...	Cuttack	
·665	·788	·782	·745	−·015	83	77	76	79	−2	9·3	9·6	9·5	+1·6	3	7	3	14	11	9	3	2	8	S. 74° E.	S. 64° E.	25	21	179	169	...	...	Hazaribagh	Gangetic Plain and Chota Nagpur.
·914	·976	·956	·949	+·035	92	83	77	84	+4	7·4	7·2	7·3	+0·3	5	...	3	35	6	2	2	4	3	S. 84° E.	S. 77° E.	57	42	119*	74	...	...	Patna	
·915	·911	·947	·934	−·002	96	82	78	85	+2	6·5	5·6	6·1	+0·7	3	...	2	26	23	3	1	1	1	S. 67° E.	S. 86° E.	75	54	119	93	...	...	Darbhanga	
·877	·946	·889	·904	+·012	92	75	69	79	−1	6·1	6·4	6·3	+1·1	5	4	10	14	3	3	2	10	9	N. 26° E.	N. 42° E.	20	11	120	79	...	...	Allahabad	
·907	·976	·936	·939	+·082	90	77	74	80	+6	5·4	6·0	5·7	+0·6	8	1	2	26	7	2	5	7	2	S. 72° E.	S. 28° E.	35	7	59	58	7·14	1·34	Ghazipur	
·842	·920	·885	·882	+·047	90	76	69	79	+6	5·9	4·9	5·4	0	3	5	6	20	7	5	4	4	6	N. 88° E.	N. 1° E.	30	14	?	68	...	...	Lucknow	
·654	·747	·753	·717	?	89	78	75	80	?	5·0	5·8	5·4	+0·7	18	8	2	4	5	4	5	8	4	S. 63° W.	N. 80° W.	10	18	15	27	...	...	Dehra Dun	Upper Sub-Himalayas.
·743	·833	·769	·782	+·016	91	75	59	75	+3	4·1	3·2	3·7	−0·1	26	2	3	11	3	1	4	1	9	N. 49° E.	S. 6° E.	12	9	52	49	...	...	Roorkee	
·789	·791	·772	·784	+·028	92	68	62	74	+5	3·8	3·5	3·7	0	26	1	2	5	6	...	3	14	3	N. 63° W.	N. 34° W.	15	17	39	49	...	...	Meerut	
·711	·752	·726	·730	+·016	83	58	48	63	+7	1·9	1·4	1·7	+0·3	15	3	5	9	6	2	2	12	6	N. 15° W.	N. 60° E.	5	13	45	50	...	...	Lahore	
·765	·799	·739	·768	+·014	90	66	53	69	+4	3·4	3·0	3·2	+0·4	3	2	12	3	13	4	4	5	14	N. 33° E.	N. 40° W.	8	13	53	29	...	...	Ludhiana	
·610	·687	·621	·639	+·050	78	57	40	58	+4	1·2	2·1	1·7	+0·1	11	7	26	8	2	1	1	...	4	N. 44° E.	N. 39° E.	59	55	61*	75	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·726	·850	·844	·807	+·012	75	61	46	61	0	1·1	0·9	1·0	+0·1	4	1	2	1	29	3	15	...	5	S. 18° E.	S. 32° W.	50	33	50*	61	...	...	Mooltan	
·722	·799	·672	·731	+·037	78	50	34	54	+1	0·2	0·3	0·3	−0·3	13	...	1	2	21	21	2	...	...	S. 24° E.	S. 36° E.	67	41	72*	69	...	...	Jacobabad	
·793	·812	·819	·808	−·019	86	66	66	73	−3	4·7	2·5	3·6	−0·3	...	...	...	...	...	...	28	32	..	S. 69° W.	S. 62° W.	94	83	324	360	...	...	Kurrachee	
·734	·775	·733	·747	+·072	89	65	53	69	+5	3·2	5·1	4·2	+0·7	4	5	3	3	2	...	3	24	16	N. 64° W.	N. 31° W.	57	45	79	118	...	...	Jeypore	E. Rajputana, Central India, and Gujarat.
·708	·829	·830	·789	+·100	84	74	65	74	+8	2·5	4·8	3·7	+0·5	1	1	6	2	...	...	3	37	10	N. 76° W.	S. 80° W.	68	44	128	120	...	...	Ajmere	
·786	·794	·741	·774	+·048	92	67	52	70	+4	5·4	3·9	4·7	0	...	1	1	...	...	4	11	23	20	N. 85° W.	S. 65° W.	75	50	163	203	...	...	Deesa	
·823	·876	·830	·813	+·052	88	75	68	77	+4	5·6	7·3	6·5	+0·9	4	8	4	11	1	...	2	24	6	N. 50° W.	N. 67° W.	33	28	68*	57	...	...	Nowgong	
·812	·861	·849	·838	+·053	90	69	64	74	+7	3·7	4·2	4·0	+0·3	...	...	9	...	15	...	5	...	31	N. 31° W.	N. 26° W.	28	13	103	99	..	...	Agra	
·601	·646	·647	·631	−·015	98	79	79	85	0	8·2	8·1	8·2	+0·7	...	...	...	...	...	...	26	31	3	S. 72° W.	N. 84° W.	90	82	382	374	...	...	Belgaum	Deccan.
·684	·690	·671	·681	+·018	94	73	61	76	+6	8·3	8·6	8·5	+0·4	...	1	2	1	...	...	8	16	32	N. 65° W.	N. 73° W.	77	68	285*	238	...	...	Sholapur	
·649	·677	·678	·668	−·004	92	71	71	78	+1	8·6	8·4	8·5	+0·8	...	...	...	...	...	...	14	41	5	S. 83° W.	N. 89° W.	92	70	245	260	...	...	Poona	
·767	·811	·798	·792	+·057	95	78	71	81	+8	5·9	7·1	6·5	0	...	7	4	...	...	...	3	14	32	N. 50° W.	N. 66° W.	78	66	178	144	...	...	Akola	
·678	·735	·731	·715	+·032	94	83	75	84	+6	8·1	8·7	8·4	+2·1	...	6	...	...	...	...	6	10	38	N. 55° W.	N. 48° W.	84	64	220*	195	13·67	3·56	Buldana	
·752	·867	·814	·791	+·053	91	80	69	80	+6	6·9	7·6	7·3	+2·0	3	3	...	...	...	...	2	30	22	N. 70° W.	N. 69° W.	84	66	153	148	...	...	Khandwa	

* Corrected.

Table

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

Meteorological Province.	Station.	Height of barometer 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.	Temperature of air. Mean minimum.	Temperature of air. Mean daily range.	Temperature of air. Highest maximum.	Temperature of air. Lowest minimum.	Temperature of air. Absolute range.	Temperature of air. Mean 10 hours.	Temperature of air. Mean 16 hours.	Temperature of air. Mean daily.	Temperature of air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Deccan—*concld.*	Hosangabad	...	28·729	28·606	·123	28·669	−·045	29·637	86·8	73·9	12·9	91·4	72·7	18·7	81·2	83·7	78·9	−0·7	72·7	76·9	77·3	75·6
	Nagpur	...	·707	·588	·119	·649	−·029	·617	87·2	73·6	13·6	92·3	70·5	21·8	82·1	83·1	79·4	−1·0	71·3	76·4	76·3	74·7
	Jubbulpore	...	·409	·290	·119	·351	−·028	·619	86·9	73·5	13·4	89·7	70·8	18·9	81·2	82·0	78·2	−0·4	72·6	76·3	76·1	75·0
	Saugor	...	27·985	27·873	·112	27·930	−·020	·617	86·8	73·2	13·6	90·3	69·9	20·4	81·2	83·3	78·4	+1·2	71·2	76·3	76·0	74·5
	Raipur	...	28·764	28·636	·128	28·701	−·031	·596	88·5	75·6	12·9	92·3	72·8	19·5	83·2	85·8	81·4	+0·9	73·9	77·3	77·2	76·1
	Sutna	...	·675	·559	·116	·619	−·036	·606	88·1	75·7	12·4	92·5	73·6	18·9	84·1	84·3	80·3	0	73·0	77·8	77·0	75·9
	Hyderabad (Deccan.)	...	·109	27·989	·120	·054	?	·672	83·8	71·3	12·5	87·4	70·1	17·3	78·5	81·2	76·9	?	69·7	73·1	74·5	72·4
West Coast.	Bombay	...	29·819	29·724	·095	29·769	−·016	·746	83·1	75·7	7·4	86·2	73·3	12·9	79·7	80·3	78·7	−1·0	73·4	76·7	76·3	75·5
	Ratnagiri	...	·763	·668	·095	·713	−·011	·760	83·8	74·5	9·3	85·3	72·1	13·2	81·0	80·8	78·3	−0·3	72·9	76·8	76·8	75·5
	Karwar	...	·857	·758	·099	·805	−·013	·780	82·6	73·4	9·2	84·4	72·0	12·4	79·8	80·5	77·5	−0·2	72·7	75·7	75·5	74·7
	Cochin	...	·922	·844	·078	·880	−·014	·817	85·2	75·0	10·2	87·9	72·7	15·2	81·3	82·0	79·4	+0·5	73·9	76·7	76·8	75·8
South India.	Salem	...	28·942	28.794	·148	28·881	−·041	·744	90·8	72·8	18·0	93·5	71·3	22·2	82·8	89·2	83·0	+0·9	70·7	74·0	75·3	73·3
	Mysore	...	27·395	27·279	·116	27·337	?	·741	85·4	65·9	19·5	89·9	63·0	26·9	77·7	80·9	74·5	?	65·0	69·3	70·3	68·2
	Mercara	...	26·207	26·119	·088	26·176	−·017	·826	70·8	62·3	8·5	74·3	60·0	14·3	67·0	66·5	65·5	−0·5	61·3	64·4	64·3	63·4
	Bangalore	...	·887	·773	·114	·841	−·050	·719	82·4	65·1	17·3	85·7	61·6	24·1	75·1	79·4	73·0	+0·3	64·2	68·9	70·1	67·7
	Hassan	...	·841	·745	·096	·804	?	·761	80·4	62·9	17·5	85·2	58·7	26·5	75·8	75·0	70·3	?	60·5	67·6	68·1	65·4
	Chitaldroog	...	27·471	27·353	·118	27·421	?	·723	83·8	67·4	16·4	88·2	64·9	23·3	76·9	80·7	74·8	?	64·0	69·0	69·4	67·4
	Trichinopoly	...	29·598	29·445	·153	29·535	−·032	·717	96·1	76·3	19·8	100·1	72·1	28·0	88·2	93·5	84·2	+1·3	71·4	75·7	77·1	74·7
	Madras	...	·805	·687	·118	·754	−·020	·704	90·8	76·1	14·7	96·0	72·2	23·8	84·8	87·1	82·5	−1·3	?	77·1	78·4	77·1
	Bellary	...	28·370	28·231	·139	28·310	−·024	·704	89·9	72·8	17·1	94·4	71·0	23·4	82·3	87·8	80·1	0	67·7	70·4	71·4	69·8
	Vizagapatam	...	29·723	29·611	·112	29·669	−·028	·638	86·0	82·8	3·2	89·3	80·7	8·6	84·7	85·7	84·3	−0·7	74·0	79·0	79·5	77·5
	Cocanada	...	·731	·614	·117	·673	?	·635	88·9	78·2	10·7	94·5	74·1	20·4	85·2	86·7	83·0	?	76·3	78·6	79·1	78·0
Hill Stations, Baluchistan.	Quetta	...	24·595	24·512	·083	24·545	−·008	?	85·5	49·0	36·5	90·3	37·8	52·5	76·6	82·6	66·5	−0·4	43·2	57·4	59·6	53·4
Hill Stations, Northern India.	Leh	...	19·702	19·598	·104	19·658	−·028	?	73·2	44·8	28·4	76·2	38·7	37·5	62·0	69·6	58·6	+5·4	40·0	47·4	49·8	45·7
	Srinagar	...	24·822	24·705	·117	24·755	?	?	80·8	53·4	27·4	84·8	45·7	39·1	67·7	80·1	66·9	?	52·7	62·3	71·8	62·3
	Murree	...	23·829	23·781	·048	23·797	−·029	?	74·4	60·5	13·9	78·4	53·5	24·9	69·1	70·9	66·4	+0·9	54·5	61·9	63·3	59·9
	Chamba	3,005	26·795	26·704	·091	26·757	−·043	?	83·0	65·6	17·4	86·2	61·9	24·3	75·9	79·6	72·5	−0·5	63·6	68·6	71·7	68·0
	Kailang	10,087	20·762	20·678	·084	20·728	−·020	?	71·3	44·4	26·9	76·8	40·6	36·2	62·8	66·9	55·9	+2·0	42·0	52·5	51·4	48·6
	Simla (Ridge)	...	23·086	23·037	·049	23·054	−·031	?	65·3	56·6	8·7	68·4	55·0	13·4	61·7	62·8	60·2	−1·6	54·2	58·3	59·3	57·2
	" (Chapslee)	?	?	?	?	?	?	?	69·2	56·7	12·5	74·9	55·3	19·6	63·7	?	?	?	54·1	59·5	?	?
	Chakrata	...	·307	·237	·070	·264	−·010	?	68·0	57·6	10·4	72·5	54·4	18·1	64·6	64·6	61·8	+0·1	56·1	61·5	62·3	59·9
	Ranikhet	...	24·069	·987	·082	24·014	−·016	?	71·4	59·5	11·9	75·9	56·2	19·7	67·1	68·4	64·5	−1·1	58·5	63·3	64·0	61·9
	Katmandu	4,388	25·527	25·446	·081	25·490	−·051	?	81·6	66·0	15·6	85·4	63·3	22·1	75·3	75·6	72·3	−1·6	64·7	69·2	70·2	68·0
	Darjeeling	...	22·977	22·891	·086	22·937	−·022	?	62·5	56·0	6·5	67·1	53·7	13·4	60·1	60·4	58·7	+0·2	55·6	59·5	59·6	58·1
	Demagri	?	?	?	?	?	?	?	87·6	76·7	10·9	89·4	74·4	15·0	84·2	85·3	81·6	+1·9	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	82·7	72·8	9·9	86·1	70·1	16·0	77·9	79·3	76·9	?	?	75·0	75·8	?
Hill Stations, Central India.	Mount Abu	...	25·973	25·898	·075	25·935	−·035	?	74·6	64·7	9·9	79·6	60·5	19·1	71·8	71·8	68·9	−0·5	62·8	66·4	67·8	65·6
	Pachmarhi	...	26·359	26·264	·095	26·312	−·008	?	76·9	67·3	9·6	80·5	65·0	15·5	72·9	74·4	71·0	+0·5	64·9	69·2	69·7	67·9
	Chikalda	3,642	·224	·129	·095	·178	−·041	?	74·0	65·4	8·6	77·2	62·5	14·7	69·3	71·5	68·6	−0·4	64·6	67·8	68·9	67·1
	Makhla	?	...	...	...	...	...	...	...	Temporarily closed.			...	...	...	...	...	...	...	...	...	...

II—*continued.*

at 89 Stations in India, Burma, etc., for September 1894.—continued.

Vapour tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Rainfall.		Stations.	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.		
·791	·875	·857	·841	+·055	94	82	75	84	+ 6	7·5	8·1	7·8	+2·0	16	4	6	...	...	8	11	12	3	S. 73° W.	N. 86° W.	30	50	44	59	...	...	Hoshangabad	Deccan—*concld.*
·740	·839	·823	·801	+·033	89	77	74	80	+ 5	7·2	8·4	7·8	+0·6	7	7	3	1	2	6	10	4	20	N. 67° W.	N. 54° W.	37	37	110	118	...	...	Nagpur	
·793	·846	·828	·823	+·052	96	80	77	84	+ 7	6·6	7·6	7·1	+1·0	20	3	9	...	2	4	2	13	7	N. 57° W.	N. 69° W.	23	34	37	78	...	...	Jubbulpore	
·743	·847	·809	·799	+·074	91	79	72	81	+ 5	5·3	5·7	5·5	+1·1	...	8	10	1	7	1	20	10	3	S. 77° W	N. 77° W.	23	43	77	80	...	...	Saugor	
·816	·860	·819	·832	+·028	92	76	67	78	0	6·2	6·7	6·5	−0·2	14	6	5	4	...	4	14	8	5	S. 86° W.	S. 69° W.	23	29	120*	141	...	...	Raipur	
·781	·872	·839	·831	+·065	88	75	72	78	+ 5	4·7	5·7	5·2	+0·2	4	18	3	5	...	3	2	11	14	N. 31° W.	N. 55° W.	50	31	122*	155	...	...	Sutna	
·707	·748	·769	·745	?	92	77	73	80	?	7·5	7·7	7·6	?	8	2	1	...	1	...	1	36	11	N. 78° W.	?	73	?	150*	?	...	...	Hyderabad (Deccan.)	
·792	·881	·855	·843	−·025	89	87	83	86	0	8·9	8·1	8·5	+1·1	...	2	1	3	3	8	5	23	15	S. 89° W	S. 89° W.	52	55	227	273	...	...	Bombay	West Coast.
·789	·870	·871	·843	+·008	93	82	83	86	+ 2	6·3	6·9	6·6	+0·9	1	6	...	..	...	1	12	21	19	N. 77° W.	S. 88° W.	73	55	144*	188	...	...	Ratnagiri	
·795	·836	·818	·817	−·004	97	82	79	86	0	5·0	6·0	5·5	−0·4	3	...	...	...	...	...	10	24	23	N. 79° W.	N. 86° W.	80	78	42	?	...	...	Karwar	
·823	·856	·850	·843	+·011	95	80	78	84	− 1	4·5	5·8	5·2	−0·1	4	1	...	...	...	...	..	39	16	N. 76° W.	N. 82° W.	87	61	141	?	...	...	Cochin	
·726	·723	·689	·713	−·045	90	65	50	68	− 5	5·8	6·6	6·2	+0·8	19	...	...	...	1	8	22	8	2	S. 47° W.	S. 68° W.	55	77	62	84	...	...	Salem	South India.
·606	·611	·607	·608	?	95	64	58	73	?	7·2	7·8	7·5	?	...	1	...	...	...	...	8	48	3	S. 87° W.	?	94	?	319*	?	...	...	Mysore	
·534	·575	·580	·563	−·011	95	87	89	90	− 1	8·5	8·4	8·5	−0·1	...	2	...	...	...	...	1	34	23	N. 71° W.	N. 72° W.	90	84	221	173	...	...	Mercara	
·590	·626	·628	·618	+·019	95	73	63	77	+ 1	7·9	6·2	7·1	+1·1	...	1	...	...	...	...	13	33	13	N. 89° W.	S. 82° W	85	88	203*	161	...	...	Bangalore	
·502	·582	·610	·565	?	87	65	70	74	?	7·5	7·9	7·7	?	2	...	...	...	...	...	1	40	17	N. 78° W.	?	90	?	77*	?	...	...	Hassan	
·554	·611	·581	·582	?	82	66	56	68	?	7·4	8·3	7·9	?	...	...	...	...	...	...	14	32	14	W	?	86	?	258*	?	...	...	Chitaldroog	
·706	·720	·711	·712	−·014	78	54	46	59	− 5	5·0	5·8	5·4	−1·6	6	...	...	...	1	...	5	38	10	N. 87° W.	N. 78° W.	80	77	114	168	...	...	Trichinopoly	
?	·827	·855	·859	+·047	?	70	67	77	+ 4	6·3	6·4	6·4	+0·3	...	...	1	2	5	6	15	22	9	S. 68° W.	S. 36° W	59	53	138	154	...	...	Madras	
·616	·595	·563	·591	−·078	76	54	43	58	− 7	7·7	8·4	8·1	+0·7	...	...	...	...	...	...	7	36	17	N. 82° W.	N. 78° W.	90	74	254	219	...	...	Bellary	
·737	·893	·937	·856	−·026	69	77	75	74	+ 1	8·0	7·9	8·0	+2·3	...	2	2	...	1	7	17	25	6	S. 73° W.	S. 60° W.	68	48	21	50	...	..	Vizagapatam	
·884	·886	·893	·888	?	91	74	71	79	?	6·5	6·6	6·6	?	...	...	2	2	4	2	28	18	4	S. 59° W.	?	67	?	133*	?	...	...	Cocanada	
·236	·279	·269	·262	+·008	65	29	24	39	0	0·2	0·8	0·5	+0·1	51	1	...	...	...	...	...	5	3	N. 66° W.	N. 56° W.	13	50	12*	76	...	...	Quetta	Hill Station, Baluchistan.
·208	·202	·188	·201	+·036	71	37	27	45	+4	2·5	3·0	2·8	−1·1	10	1	2	1	...	7	21	15	3	S. 60° W.	S. 59° W.	57	32	38	40	...	...	Leh	Hill Stations, Northern India.
·394	·506	·685	·528	?	95	74	67	79	?	1·5	2·3	1·9	?	19	7	1	3	9	7	...	2	12	N. 8° W.	?	5	?	96*	?	...	...	Srinagar	
·366	·482	·506	·451	+·036	69	68	67	68	+4	3·3	3·6	3·5	+0·2	3	1	1	3	7	10	13	7	15	S. 57° W	S. 52° E.	37	8	157*	130	...	...	Murree	
·568	·618	·686	·624	+·073	90	69	69	76	+8	3·8	5·4	4·6	+1·5	32	1	...	...	...	...	...	8	19	N. 56° W.	N. 11° W.	43	13	92*	105	2·81	1·04	Chamba	
·248	·308	·258	·271	+·055	88	54	38	59	+5	4·1	5·0	4·6	+0·2	...	...	...	1	1	20	17	10	11	S. 49° W.	S. 57° W.	62	63	37	36	0·57	0·33	Kailang	
·397	·455	·470	·441	−·005	86	83	82	84	+6	6·1	7·1	6·6	+1·2	16	11	20	5	...	1	5	...	2	N. 33° E.	S. 78° W.	43	30	117	?	...	...	Simla (Ridge)	
·396	·467	?	?	?	85	79	?	?	?	6·3	?	6·3	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	7·61	2·47	Simla (Chapslee)	
·437	·517	·539	·497	+·029	92	85	88	88	+5	6·2	8·1	7·2	+0·8	5	...	4	6	2	...	4	22	17	N. 68° W.	S. 74° W.	48	36	128	113	...	...	Chakrata	
·482	·544	·552	·526	+·018	94	82	80	85	+5	6·8	6·2	6·5	+0·6	28	1	5	1	...	2	11	10	2	S. 76° W.	S. 52° W.	25	39	61	51	...	...	Ranikhet	
·596	·643	·677	·640	+·015	93	74	76	81	+3	6·8	7·3	7·1	+1·0	...	2	2	34	...	2	2	12	6	N. 77° E.	S. 88° W.	30	32	17	?	6·42	1·01	Katmandu	
·439	·504	·503	·481	+·004	97	96	95	92	−2	9·9	9·7	9·8	+1·6	3	4	8	9	4	3	7	11	7	N. 43° W	S. 72° E.	9	12	80	73	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	...	1	19	2	...	7	31	...	S. 69° W.	N. 83° W.	27	5	?	?	26·98	3·95	Demagri	
?	·836	·850	?	?	?	88	85	?	?	8·1	8·4	8·3	+2·0	...	4	1	4	6	27	12	2	4	S. 8° W.	S. 4° W.	55	56	?	?	24·06	2·52	Tura	
·552	·588	·635	·592	+·053	90	76	82	83	+8	5·3	6·3	5·8	+0·4	2	9	...	3	4	5	15	7	15	N. 87° W.	S. 67° W	37	27	170*	173	...	...	Mount Abu	Hill Stations, Central India.
·590	·671	·673	·644	+·016	88	84	79	84	+2	7·6	7·6	7·6	+0·4	3	4	4	5	1	...	1	23	19	N. 57° W.	N. 58° W.	57	45	102*	134	...	...	Pachmarhi	
·603	·667	·678	·649	+·019	96	93	88	92	+4	8·6	8·4	8·5	+1·2	8	24	1	...	...	...	1	1	25	N. 24° W.	N. 22° W.	77	65	246	230	14·81	1·93	Chikalda	
...	...	...	...	...	...	Temporarily closed.				...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	Makhla	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and at 4 P.M. at 89

Meteorological Province.	Station.	Height of the barometer 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.	Temperature of air. Mean minimum.	Temperature of air. Mean daily range.	Temperature of air. Highest maximum.	Temperature of air. Lowest minimum.	Temperature of air. Absolute range.	Temperature of air. Mean 10 hours.	Temperature of air. Mean 16 hours.	Temperature of air. Mean daily.	Temperature of air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Hill Station, S. India.	Wellington	...	24·208	24·132	·076	24·170	−·025	?	71·6	54·9	16·7	76·2	48·9	27·3	68·4	65·8	61·8	−0·3	52·3	60·4	60·1	57·6
Extra India.	Muscat	...	29·726	29·654	·072	29·690	?	?	87·3	83·2	4·1	94·3	79·3	15·0	86·3	86·3	85·1	?	76·1	79·9	80·4	78·8
	Aden	...	·729*	·595†	·134	·655	−·027	·682†	95·3†	83·4*	11·9	98·7	79·2	19·5	90·3*	91·8*	88·5†	+1·5	74·5‡	81·6*	80·6†	78·9†
	Perim	...	·552	·427	·125	·482	?	?	96·0	85·6	10·4	99·1	83·1	16·0	91·7	92·5	89·9	?	68·8	82·1	80·3	77·1
	Minicoy	...	·853	·856	·097	·907	?	·841	84·9	78·9	6·0	88·5	75·3	13·2	82·1	82·5	81·2	?	75·2	77·5	77·8	76·8
	Zanzibar	...	30·050	·946	·104	·998	?	·998	82·6	73·8	8·8	85·1	72·4	12·7	77·9	82·0	78·1	?	71·1	73·4	73·8	72·7
	Port Victoria (Seychelles).	15	·011	·929	·082	·970	?	·930	81·7	77·0	4·7	82·7	73·9	8·8	80·4	80·5	79·1	?	72·6	74·4	74·6	73·9

* Mean of 26 days.
† " " 24 "
‡ " " 27 "

II.—*continued.*

Stations in India, Burma, etc., for September 1894.—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.		
·368	·446	·461	·425	−·003	85	64	73	74	−3	5·8	8·3	7·1	+0·2	4	5	1	...	14	10	14	7	5	S.64°W.	S.79°W.	38	33	58	72	...	...	Wellington.	Hill Station, S. India.
·810	·941	·957	·903	?	71	75	76	74	?	0	0·6	0·3	?	...	3	10	34	1	...	...	1	11	N.63°E.	?	62	?	95	?	...	...	Muscat.	Extra India.
·739	·968	·899	·866	+·012	65	68	60	64	−3	2·3	1·5	1·9	−0·4	9	1	2	5	3	18	11	1	...	S.89°W.	S.31°E.	43	51	172	214	...	...	Aden.	
·481	·970	·875	·775	?	39	65	58	54	?	2·5	5·2	3·9	?	...	8	14	8	3	...	2	6	19	N.2°W.	?	40	?	234	?	...	...	Perim.	
·826	·885	·890	·867	?	84	81	80	82	?	5·6	5·4	5·5		...	...	...	...	...	...	1	41	18	N. 77° W.	?	92	?	412	?	...	...	Minicoy.	
·726	·764	·729	·739	?	87	80	66	78	?	3·4	2·1	2·8	?	...	1	3	2	13	24	13	3	...	S.89°E.	S.12°W.	66	46	184*	118	...	...	Zanzibar.	
·741	·773	·780	·765	?	80	74	75	76	?	5·1	5·8	5·5	?	...	...	...	...	52	7	...	...	1	S.40°E.	?	94	?	277	?	2·40	0·92	Port Victoria (Seychelles).	

* Corrected.

G. I. C. P. O. No. 83 Meteor.—17-1-95.—400.

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 shown 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	,, ,, ,, ,, ,,

Reg. No. 15[illegible], Wr., I.—June 94.—[illegible]

Zinco [illegible] Calcutta.

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.

Reg. No. 155, Wr. I—June 94—5000. Zinco., [illegible], Calcutta.

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

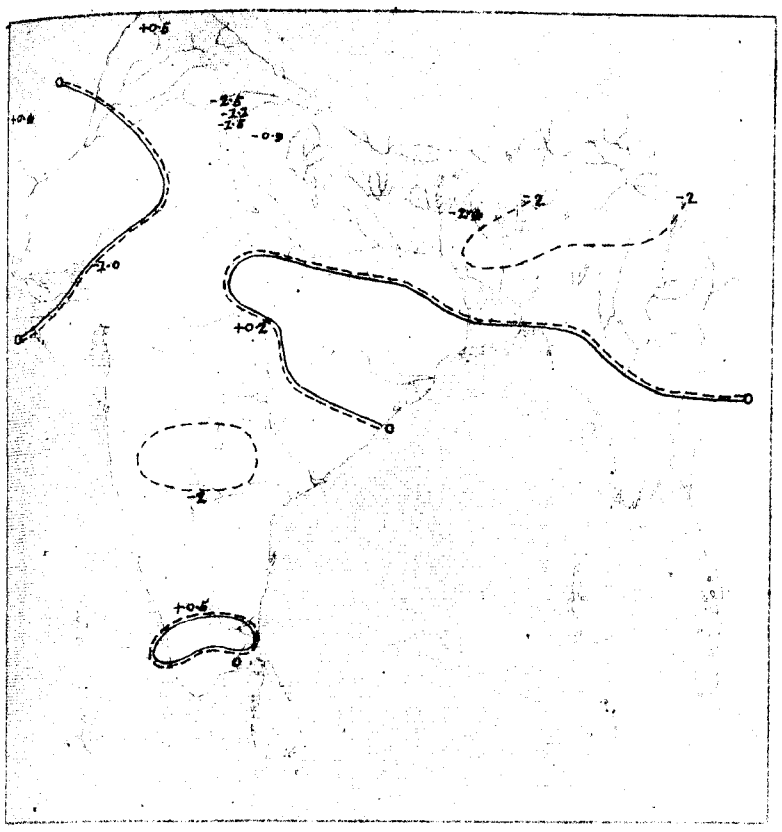
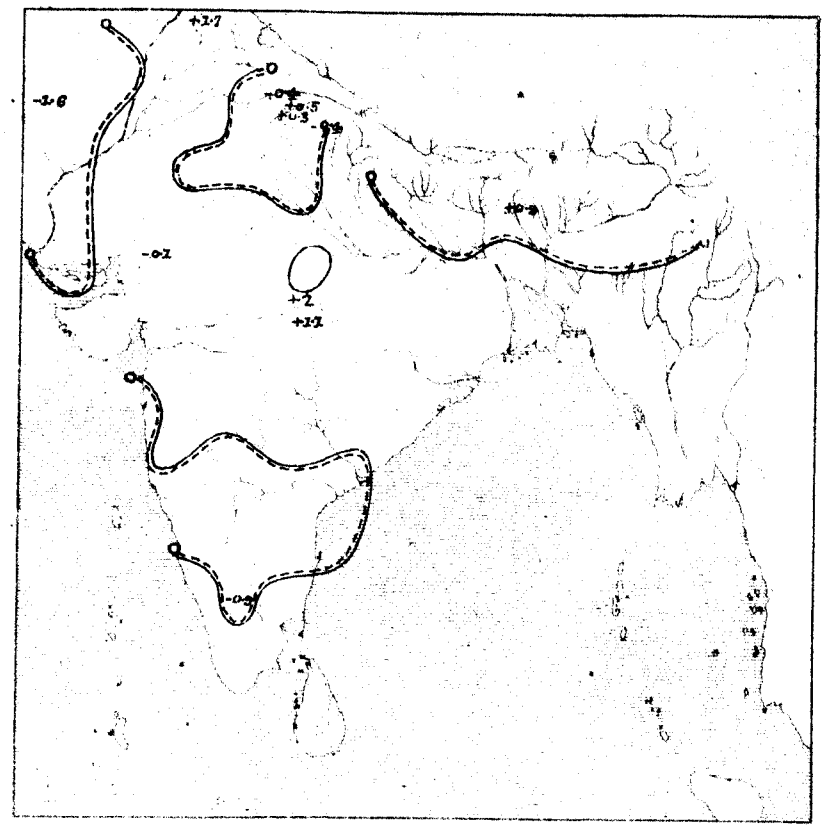


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

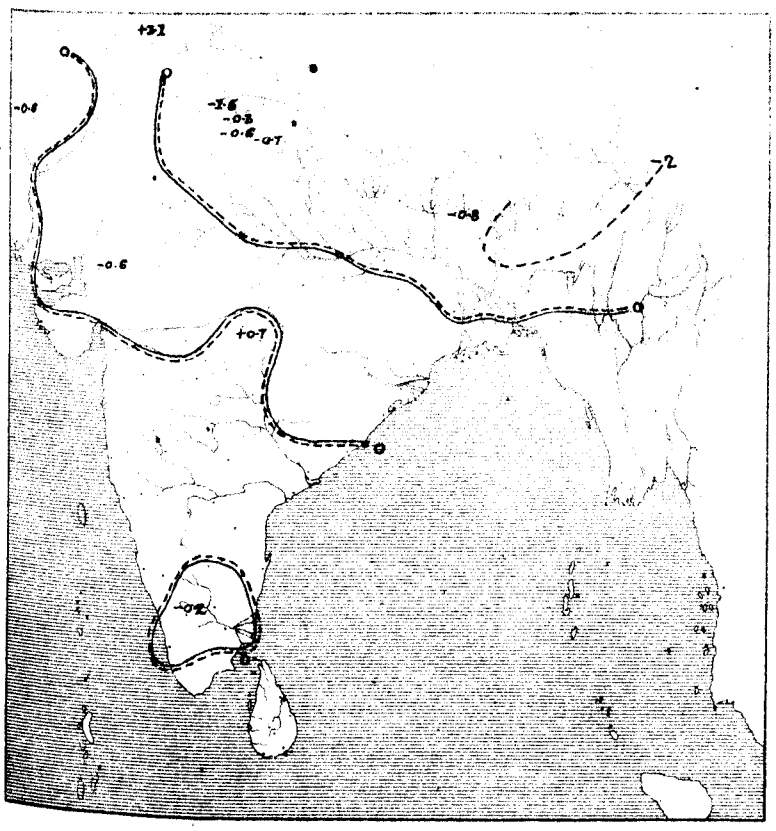
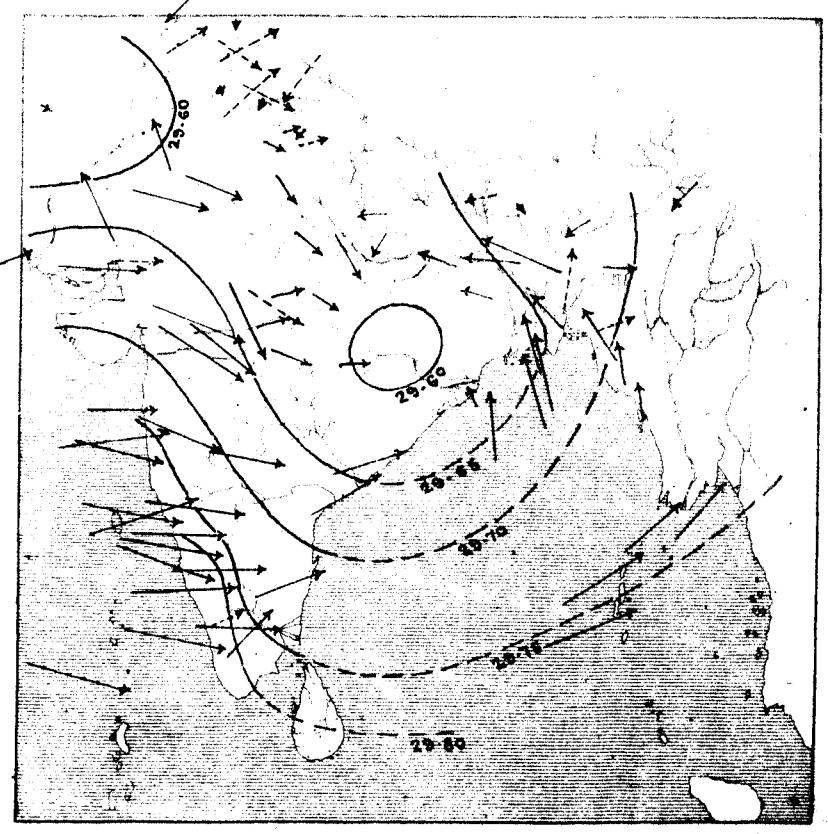


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF SEPTEMBER 1894



H.N.P.

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 of the resultant; a length of ⅛th of an inch being equal to 100 per cent.

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 155, Wr. 1.—June 94.—5,000.

Zinco., 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 51 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 name of the districts 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 figures.

1. Tenasserim
2. Lower Burma
3. Central do.
4. Upper do.
5. Arakan
6. Eastern Bengal
7. Assam (Surma)
8. Do. (Brahmaputra)
9. Deltaic Bengal
10. Central do.
11. North do.
12. Orissa
13. Chota Nagpore
14. Behar (South)
15. Behar (North)
16. North Western Provinces (East)
17. Oudh (South)
18. Do. (North)
19. North Western Provinces (Central)
20. Do. do. (West)
21. Do. do (Submontane)
22. Punjab (South)
23. Do (Central)
24. Do. (Submontane)
25. Do (Hill Districts)
26. Do. (North West)
27. Do. (West)
28. Malabar
29. Madras (South Central)
30. Coorg
31. Mysore
32. Konkan
33. Bombay Deccan
34. Hyderabad (North)
35. Khandeish
36. Berar
37. Central Provinces (West)
38. Do. (Central)
39. Do. (East)
40. Gujarat
41. Kathiawar
42. Sind
43. Central India (East)
43(a). Do. do. (a)
44. Rajputana (East) Central India (West)
45. Rajputana (West))
46. East Coast (North)
46(a). Do. do. (a)
47. Hyderabad (South)
48. Madras (Central)
49. East Coast (Central)
50. East Coast (South)
51. Madras (South)

Litho. S. I. O., Calcutta.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, OCTOBER, 1894.

INTRODUCTION.

THIS Review of the weather in India during the month of October 1894 is based on observations taken daily at 8 A.M. at 205 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 89 stations. The rainfall summary is based on the rainfall data of the meteorological observatories and on 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 have 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 1894.

October is pre-eminently a month of transition. The south-west monsoon winds usually begin to retreat from North-Western India before the end of September and withdraw from Northern India, the north of the Bay and the north and centre of the Arabian Sea before the end of the month of October. South-west humid winds continue to blow with more or less steadiness in the south of the Arabian Sea and the south and centre of the Bay. These south-west winds in the Bay are deflected through south-south-east and east and blow as north-east winds on the Coromandel Coast. As long as south-west winds continue to prevail in the south of the Bay (which is usually until the middle or end of December) the north-east winds blowing across the Coromandel Coast give more or less frequent rain to Southern India which is heaviest in the coast districts. In Northern India light variable winds or calms generally prevail. The mean air movement is, however, from the west down the Gangetic Plain. In the Peninsula winds range between east and north-east. The mean air motion over the whole of the Indian area except the southern portion of the Bay of Bengal and Arabian Sea, although generally feeble, is opposite in direction to that which obtains in September. These changes in the mean wind directions accompany corresponding changes of pressure. Pressure rises rapidly in North-Western India, Assam, and Upper Burma, and moderately in Central India and the north of the Peninsula. Before the end of the month pressure is usually highest in Upper India, and is lowest in the centre or south of the Bay. The range of pressure is, however, small and baric gradients very slight. The most important feature of the pressure distribution during the month is its approximate uniformity. Pressure is slightly higher in the interior than in the coast districts and is lowest in the Bay and the south of the Peninsula. Temperature begins to fall rather rapidly in Sind, West Rajputana and the South-West Punjab, which are dry hot areas during

the rains. The mean temperature conditions of the month, like the mean pressure conditions, are more uniform in October than in any other month of the year. The mean temperature of the month ranges between 75° (in the North Punjab) and 85° (in Central Rajputana), and the daily range of temperature varies from 28° in Upper Sind and West Rajputana to 10° in the coast districts of Bengal and Madras. The amount of aqueous vapour in the air diminishes rather rapidly in North-Western and Central India during the month. The decrease in humidity is usually greater in the North-Western Provinces, East Rajputana and Central India than in the Punjab, in consequence of the greater fall of temperature in the latter area. Rain is chiefly received in Bengal, Burma, Madras and the Deccan. In Bengal and Burma it occurs usually during the first-half of the month and in the Peninsula during the second-half of the month. One of the most important meteorological features of the month is the tendency to the formation of extensive and intense cyclones in the Bay. These appear to require a considerable period for their development, and the uniform conditions of temperature and pressure of the month are especially favourable to their growth, provided the humid south-west current in the south of the Bay be strong enough to ensure abundant supplies of aqueous vapour, the condensation of which undoubtedly supplies the motive power of these storms.

The following is a brief account of the chief features of the meteorology of India during the month of October, 1894:—

The monsoon currents had withdrawn from Upper India (*i.e.*, Sind, Rajputana, and the Punjab) much earlier than usual in the second week of the previous month, and fine dry clear weather obtained steadily during the month of October in these areas.

A depression which had formed in the north-west angle of the Bay in the fourth week of September had advanced to the eastern districts of the North-Western Provinces on the 30th of that month, and was giving heavy rain in that area. It filled up on the 1st and another depression began to form on the same day in the north-west angle of the Bay. It developed slightly on the 2nd and the centre crossed the coast near Balasore on the evening of that day. It advanced through Chota Nagpur on the 3rd and 4th, giving moderate rain to the whole of Bengal on these days, and passed into the eastern districts of the North-Western Provinces on the evening of the 4th. A heavy downpour occurred in that area on that and the following day and the depression developed considerably and was a cyclonic storm of moderate intensity on the morning of the 5th. It filled up during the next 24 hours. The most noteworthy feature of the storm was the abnormally heavy rain and severe thunderstorms which occurred during its existence in the eastern and central districts of the North-Western Provinces. The following gives the largest total rainfalls during the period from the 1st to the 5th October in that area:—

District.	Station.	Total rainfall, 1st to 5th October 1894.
		Inches.
Allahabad	Sirathu	23·89
	Manjhanpur	23·57
	Phulpur	16·42
	Allahabad	16·32
	Handia	16·26

The heavy rainfall inflicted great damage upon the standing crops in the Allahabad and neighbouring districts.

The storm reduced temperature largely below the normal in the North-Western Provinces and Baghelkhand, but it increased quickly on the 6th and 7th, and on the morning of the 8th was in slight excess over the whole of India except the west coast districts, where it was in slight defect at this time.

Pressure changed rapidly and irregularly during the next week. Fine weather prevailed steadily in North Western and Western India. Burma and Bengal, on the other hand, received frequent showers. Moderately heavy rain fell in Bengal on the 12th and 13th. Showers were also received on these days in the Deccan and Madras coast districts. Temperature increased during this period from the 7th to the 14th and was in general excess (except in Bengal) by moderate amounts.

Important pressure changes commenced on the 14th which initiated the first heavy burst of rain in the Peninsula due to the retreating south-west monsoon current. A very shallow depression lay over Bengal, the north of the Bay and Lower Burma on the 14th. It was transferred southwards on the 15th and 16th and lay over the centre and south of the Bay on the 17th. Weather had become squally in that area and was also slightly unsettled off the Malabar Coast in the Arabian Sea. Light rain continued to be received in Burma and Bengal, but in decreasing amounts, whilst moderate rain commenced in the Peninsula south of Lat. 16° N.

A slight disturbance had given showers of rain and snow on the 13th and 14th in Kashmir and Afghanistan, and a cool wave crossed the north-west frontier on the 15th which reduced temperature considerably below the normal in North-Western India during the next four days.

The depression in the Bay intensified slightly on the 1 th and 19th. At the same time a shallow depression formed in the Arabian Sea off the Malabar Coast due to the action of the humid south west winds in the south-east of that sea. The double disturbance gave increasing rainfall to the greater part of the Peninsula on these

days, and the Central Provinces began to share in the rainfall. Rain had almost ceased in Burma and Bengal.

The depression in the Bay, although slightly more pronounced on the 19th and 20th, was, as hitherto, a shallow diffused disturbance with moderate winds, irregularly cyclonic in direction. It was now giving very heavy rain in the coast districts from Vizagapatam to Nellore. The depression off the Malabar Coast was extending northwards and weather was squally with moderate rain along the whole of the west coast south of Bombay. The Bay depression covered the Coromandel Coast districts on the morning of the 21st, and the whole of the Deccan, the Madras coast districts and Southern India received moderate to heavy rain on that day and during the next two days. The depression itself apparently filled up before the morning of the 22nd, as there was no trace of its existence in the Peninsula on that day. The heavy rainfall in the greater part of the Peninsula had reduced temperature very considerably in that area, and temperature on the 22nd and following days was in moderate to considerable defect over the whole of the Peninsula to the south of Lat. 20° N.

The depression in the south-east of the Arabian Sea was very feebly marked on the 21st, although squally disturbed weather continued in that area. It is possible, if not probable, that the residual depression of the Bay storm advanced westwards and merged in the Arabian Sea depression, as weather became more disturbed in that area on the 22nd and 23rd. This disturbance advanced northwards along the west coast and hence drew the humid winds from the Bay further northwards into Central and North-Eastern India which hence received general rain on the 24th and four following days. The depression on the 24th lay off the Bombay and Kathiawar coasts. It continued to intensify slowly on the 25th and advanced towards the Gulf of Cambay over which it lay on the morning of the 26th. Gujarat, Kathiawar and the Konkan districts received an abnormal burst of rain during this period, and the eastern districts of the North-Western Provinces had an excessive downpour on the 24th and 25th which inflicted excessive damage upon the crops that had already suffered severely from the rainfall of the first storm of the month.

The depression advanced north-eastwards across the Gulf of Cambay on the 26th, but filled up rapidly on that day, and a very shallow residual depression was shown in the chart of the 27th lying over Central India and the Central Provinces, which areas received light to moderate rain on that day. It completely filled up during the next 24 hours. Fine weather prevailed over India generally during the remainder of the month during which period another depression and storm was forming in the Bay.

The disturbance of the last fortnight of the month was chiefly remarkable for the heavy and prolonged rainfall it gave to Kathiawar, Gujarat, North Bombay, Central India and the eastern districts of the North-Western Provinces, districts which usually have no rain after the first or second week of October. The damage it inflicted upon the crops in those areas was hence very great. It also gave a period of damp cloudy weather at a time when dry cool weather is the rule.

Pressure.—The mean pressure of India was on the average of all stations ·033″ below the normal of the month and was hence in considerable defect. Pressure was relatively to this condition in slight defect in Northern and Central India. The deficiency was greatest at the foot of the hills and slightly exceeded ·02″ at Rawalpindi, Lahore and Darbhanga. Pressure was in local excess in the Peninsula and Burma. The excess was moderate in amount in Burma, ranging between ·03″ and ·04″ and also in the Konkan. Pressure was in slight excess at the hill stations as compared with the neighbouring plains. The following gives the mean pressure variations and anomalies of the month for the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Burma Coast and Bay Islands	0	+·033
Burma Inland	−·012	+·021
Assam	−·046	−·013
Bengal and Orissa	−·037	−·004
Gangetic Plain and Chota Nagpur	−·049	−·016
Upper Sub-Himalayas	−·049	−·016
Indus Valley and North-West Rajputana	−·041	−·008
East Rajputana, Central India and Gujarat	−·039	−·006
Deccan	−·037	−·004
West Coast	−·013	+·020
South India	−·023	+·010

Temperature.—The maximum and minimum temperatures varied inversely to each other over the greater part of India. The day temperature was in slight excess in Upper India, Madras and Mysore, and was in moderate to large defect in the areas of heavy rainfall during the last disturbance of the month, *i.e.*, Kathiawar, Gujarat, Central India and the North-Western Provinces. The deficiency was more than 4° at Nowgong (−5°·0), Lucknow (−4°·9), Allahabad (−4°·7), Benares (−4°·5) and Jhansi (−4°·3).

The night temperature was in defect in Lower Burma and Upper India; but the variations were small, except at Quetta (−3°·7), Dera Ismail Khan (−3°·3), Kurrachee (−2°·3) and Rawalpindi (−2°·2). It was in moderate excess in the Gangetic Plain, Central India, Gujarat, the Central Provinces and the North Deccan, more especially at

Lucknow (+4°.3) and Allahabad (+4°.1), where the excess was greatest.

The mean temperature conditions differed very slightly from the normal. Temperature was in slight defect in Burma, the North-Western Provinces, the north-west frontier districts and Baluchistan, and was in excess over the remainder of India; but the variations were less than 1°.5 at all stations except Quetta (—1°.8), Murree (+3°.1), Agra (—1°.8), Salem (+1°.6), Negapatam (+1°.6), Trichinopoly (+1°.7) and, perhaps, Chaibassa (+1°.8). The following table gives comparative temperature data for the eleven meteorological provinces:—

Meteorological Province.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.
	°	°	°
Burma Coast and Bay Islands	−0.4	−0.1	−0.3
Burma Inland	−1.0	+1.1	+0.1
Assam	−1.5	+1.3	−0.1
Bengal and Orissa	−0.7	+1.7	+0.5
Gangetic Plain and Chota Nagpur	−2.5	+3.0	+0.2
Upper Sub-Himalayas	+0.1	+0.9	+0.5
Indus Valley and North-West Rajputana	+0.5	−1.6	−0.5
East Rajputana, Central India and Gujarat	−1.6	+1.3	−0.2
Deccan	−1.5	+2.4	+0.4
West Coast	−0.8	+0.3	−0.2
South India	+0.8	+0.5	+0.6

Winds were on the average of the month stronger than usual at Port Blair and in Burma and Bengal. There was an abnormal preponderance of southerly winds in Bengal, and the mean wind direction was from south instead of from north. Winds were very light in Upper India, ranging between a mean velocity of one mile per hour and of two miles per hour in the Punjab and Upper Sind. The mean direction of the air movement in the Central Provinces and Deccan was from north-west instead of from north-east, due to the very abnormal conditions of the month. Winds were on the whole normal in the Bombay and Madras Coast districts, but were weaker than usual in Southern India.

Humidity and cloud.—The air was slightly drier than usual in Burma and somewhat damper in Bengal and Upper Assam. Humidity was largely in excess in Chota Nagpur, Bihar, the North-Western Provinces, Central India, the Central Provinces and the Deccan. It was more than 10 above the normal at several stations, the excess being absolutely greatest at Ghazipur (+20), Sutna (+18), Khandwa (+14), Lucknow (+14), Nowgong (+14), Poona (+13) and Jubbulpore, Saugor and Allahabad (each +12) and at the hill stations of Darjeeling, Ranikhet and Chakrata. The air was, on the other hand, slightly drier in East Rajputana, the Punjab, Sind and Baluchistan. Conditions were approximately normal in the Bombay and Madras Coast districts. Humidity was in moderate defect in Southern India as represented by Trichinopoly (6 in defect).

Cloud was in excess over by far the greater part of India, and more especially in the area of increased humidity in the Gangetic Plain, Central India and the North Deccan. There was even less cloud than usual in Upper India and Baluchistan, and skies were free from cloud at Mooltan and Jacobabad where the mean cloud amount was *nil*, and at Lahore, Kurrachee, Quetta and Murree, where it was less than 0.5.

The following table gives variation data of the mean aqueous vapour pressure, mean humidity and mean cloud amount of ten meteorological provinces for the month of October:—

Meteorological Province.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
	"		
Burma Coast and Bay Islands	−.003	0	+0.7
Assam	+.047	+5	+1.4
Bengal and Orissa	+.033	+1	+1.8
Gangetic Plain and Chota Nagpur	+.110	+12	+3.0
Upper Sub-Himalayas	+.008	+1	+0.1
Indus Valley and North-West Rajputana	−.049	−6	−0.5
East Rajputana, Central India and Gujarat	+.042	+5	+0.7
Deccan	+.087	+10	+1.2
West Coast	+.016	+2	+1.0
South India	−.003	−1	+0.4

Rainfall.—The rainfall of the month occurred chiefly in connection with the two disturbances of the month. They were both abnormal in character. The first gave moderate rain to Bengal, Chota Nagpur and Bihar, and an excessive burst of rain to the eastern and central districts of the North-Western Provinces, probably the heaviest downpour in that area during the month of October in the past fifty years. The second disturbance initiated the retreating south-west monsoon rains in the Peninsula. It gave very heavy rain to the northern and central coast districts of Madras and moderate to heavy rain in the Deccan and Southern India. The most re-

markable feature of this disturbance was the depression which formed in the east of the Arabian Sea off the Malabar and Konkan Coasts and which advanced very slowly towards the Gulf of Cambay. It gave prolonged and heavy rainfall during the last week of the month to Kathiawar, Gujarat, North Bombay, Central India and the North-Western Provinces, areas which usually receive little or no rain in October. Bengal and Burma received frequent rain during the month.

The rainfall of the month was hence very exceptional in character. It was practically *nil* in the Punjab, Sind, Baluchistan and the greater part of Rajputana. It was in very large excess in the North-Western Provinces, Central India, Gujarat and Kathiawar, the greater part of which areas received from five to ten times the normal fall of the month. The eastern districts of the North-Western Provinces, including Allahabad and the neighbouring districts, had more than ten times the normal fall of the period. The rainfall of the month was in moderately large excess in the Central Provinces and North Madras. It was in slight excess in Bengal and in large excess in Assam. Burma received somewhat less rainfall than usual. The Bombay Deccan obtained its normal amount, and the Madras Deccan and Hyderabad a moderate excess. The rainfall was more or less in excess in the Coromandel and also in the Konkan Coast districts, but was below the normal to a moderate extent in the South Arcot, Chingleput, Tinnevelly, Malabar, South Canara and Tanjore districts of Southern India.

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

METEOROLOGICAL PROVINCE.	RAINFALL.		
	Mean actual for October 1894.	Mean normal for October.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands .	10·36	9·40	−0·80
Burma Inland . . .	5·30	5·57	−2·07
Assam	10·98	4·61	+6·36
Bengal and Orissa . . .	6·37	4·91	+1·07
Gangetic Plain and Chota Nagpur.	9·27	2·63	+6·83
Upper Sub-Himalayas . .	0·94	0·40	+0·54
Indus Valley and North-West Rajputana.	0·08	0·08	−0·06
East Rajputana, Central India and Gujarat.	3·17	0·67	+2·60
Deccan	4·23	2·96	+1·37
West Coast	7·60	7·90	−0·48
South India	8·70	7·96	+1·06

Atmospheric Pressure.

The mean pressure of the whole of India was ·033″ lower than the normal pressure of the month. Relatively to this general condition pressure was in slight defect in Northern and Central India and the North Deccan. The deficiency was on the whole greatest at the submontane stations in Northern India and exceeded ·020″ at the following stations:—Rawalpindi (—·026″), Lahore(—·021″), Durbhanga (—·022″), and, perhaps, Nowgong (—·022″). Pressure was locally in excess in Burma and the Peninsula to the south of Lat. 19°N. The excess was more than ·02″ in two areas, *viz.*, the west coast districts and Burma. The following table gives data for these two areas :—

AREA.	STATION.	Variation from normal of 8 A.M. pressure.	Anomaly.
		″	″
WEST COAST .	Ratnagiri . . .	−·003 ?	+·030
	Goa	−·003	+·030
	Karwar . . .	−·009	+·024
	Colombo . . .	−·005	+·028
BURMA . .	Akyab . . .	−·003	+·030
	Thayetmyo . .	−·012	+·021
	Toungoo . . .	−·004	+·029
	Rangoon . . .	−·001	+·032
	Bassein . . .	+·001	+·034
	Diamond Island .	−·001	+·032
BAY ISLANDS .	Port Blair . . .	+·023	+·056

Pressure was in defect to a somewhat less extent at the hill stations than at the neighbouring plain stations or the vertical anomalies were positive. They were generally small in amount and of little significance.

The mean pressure of the month was very uniform over nearly the whole of India. It was slightly higher in Central Rajputana than elsewhere and was lowest in the north and centre of the Bay and the Madras coast districts.

Barometric depressions and cyclonic storms of the month.

It was stated in last month's review that a small cyclonic storm formed in the north-west angle of the Bay in the fourth week of September and advanced north-westward to the eastern districts of the North-Western Provinces, to which it gave very heavy rain on the 30th September and 1st October. It filled up during the next 24 hours, and the weather again became disturbed at the head of the Bay. A feeble cyclonic storm formed in that area during the day. The following gives a history of this storm :—

Cyclonic storm of the 2nd to the 6th October:—Weather on the 1st was squally with light to moderate winds, force 2 to 4, in the north of the Bay. Strong south-westerly to westerly winds, force 5 to 6, held steadily in the east, south and centre of the Bay and in the Andaman Sea. A shallow depression was forming in the north-west angle and winds were shifting round to northerly directions on the Orissa and South Bengal coasts. The following gives 8 A.M. data of four vessels near the head of the Bay at that hour of the 1st :—

Hour.	Name of Vessel.	8 A.M. Position.		Barometer (uncorrected.)	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
8 A.M.	S. S. *Clan Sinclair.*	20 57	89 22	29·647	WSW	...	Showery.
,,	S. *Holkar*	19 27	89 27	29·691	SSW	2	Squally. 4 P.M., heavy rain.
,,	S. S. *City of Khios*	19 41	87 34	29·668	Var.	2 to 4	Overcast. 4 P.M., squally.
10 A.M.	F. L. V. *Torch*	Eastern Channel.		29·718	Var.	2	Passing showers.

2nd October.—Pressure had given way slightly to briskly in Bengal and a shallow depression now lay over the north-west angle of the Bay. Pressure was in considerable to large defect in Northern and Central India, the deficiency being slightly over ·2″ in the area of depression. Strong winds had advanced northwards from the centre to the north of the Bay and heavy rain was falling in the depression area. The following gives meteorological data of vessels in that area :—

Hour.	Name of Vessel.	8 A.M. Position.		Barometer (uncorrected).	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
10 A.M.	F. L. V. *Torch.*	Eastern channel		29·634	Var.	3	Showery.
8 A.M.	S.S. *Osborne*	21 00	88 40	?	SW	5	4 A.M., fierce rain squall.
,,	S.S. *Kasara*	21 14	88 52	29·567	W	4 to 5	Morning, occasional squalls and rain.
,,	S.S. *Shahzada*	21 16	91 50	29·621	W	6	Squally and blinding rain.
,,	S.S. *Kistna*	20 2	93 2	29·722	SE	...	Noon, occasional heavy rain squalls.
,,	S.S. *Palamcotta*	19 20	89 51	29·617	SW by S	6	Noon, occasional rain squalls.
,,	S.S. *Pundua*	19 2	8 9 41	29·536	SW by S	6	Squalls of wind and rain.

South-westerly or westerly winds of force 5 to 6 now prevailed over nearly the whole of the north-west of the Bay, except in the immediate neighbourhood of the coast, and weather was very squally with much rain. The centre of the disturbance was near the North Orissa coast.

3rd October.—Pressure had given way briskly in South-West Bengal and slightly in Chota Nagpur. The centre of the feeble cyclonic storm had crossed the coast between Saugor Island and Balasore on the evening of the previous day and was now in about Lat. 22½° N. and Long. 86° E., or nearly midway between Sambalpur and Burdwan. The following gives 8 A.M. data of stations in the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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	29·530	−·044	−·279	S	4	7	...
Calcutta	·557	−·037	−·238	SE	4	7	1·04
Hazaribagh	·562	−·045	−·229	ENE	8	10	1·89
Ranchi	·547	−·060	−·253	NNW	7	10	0·64
Chaibassa	·507	−·067	−·286	Calm	1	9	0·93

The depression was of moderate intensity, but the winds were somewhat irregular in direction and moderate in force. Moderate rain had fallen in Orissa, Chota Nagpur and South Bengal. Winds had decreased slightly in force at the head of the Bay, and now averaged 5 in force; but weather was still squally.

4th October.—Pressure had increased generally in Northern India. It had fallen locally in Baghelkhand and was unchanged in Chota Nagpur. The depression had advanced in a north-westerly direction through Chota Nagpur during the previous 24 hours. The following gives 8 A.M. data of stations in the storm area:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.
Ranchi	29·574	+ 027	−·235	SSE	10	10	1·74
Hazaribagh	·570	+·008	−·222	SE	11	10	2·40
Benares	·587	−·020	−·200	E	6	10	2·18
Allahabad	·611	−·009	−·181	NNW	6	10	6·43
Sutna	·625	−·020	−·189	NW	8	10	1·06
Raipur	·665	+·013	−·150	WSW	10	10	0·05

The disturbance now consisted of a large inner area of nearly uniform pressure defined by the isobar of 29·65″, with moderate gradients in the east and south quadrants. The position of the centre is somewhat doubtful, but was probably in Lat. 24°N. and Long. 83° 45′ E. Winds were, as on the previous day, light and somewhat irregular in direction over the area of disturbance. Light to moderate rain had fallen in Burma and Bengal and moderate to heavy rain in Bihar, Chota Nagpur and the eastern districts of the North-Western Provinces.

The following falls exceeding 5 inches were reported:—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of 4th.
		Inches.
Mirzapur	Mirzapur	10·87
	Chunar	6·64
	Korh	5·31
Allahabad	Meja	7·85
	Phulpur	6·83
	Allahabad	6·75
	Handia	6·30
	Karchana	6·03
Basti	Harraiya	5·96
Unao	Unao	5·10

5th October.—Pressure had increased rapidly in Chota Nagpur and fallen rapidly in the central districts of the North Western Provinces, to which the storm was now transferred. The following gives data of the stations in the storm area:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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	29·638	−·056	−·182	W	3	9	0·02
Allahabad	·664	+·053	− 132	SSE	7	9	1·50
Benares	·692	+·105	−·103	S	7	10	0·86
Bahraich	·621	−·062	?	SSE	6	10	3·80
Lucknow	·565	−·131	−·237	SSW	...	10	3·52
Bareilly	·633	−·061	−·164	NE	0	10	0·77
Mainpuri	554	−·145	?	NE	2	10	4·02
Cawnpore	·555	−·138	?	S	6	10	5·36

The depression had intensified to some extent during the previous 24 hours and was now central near Lucknow in Lat. 26¾°N. and Lat. 80°E, having advanced about 310 miles in a north-westerly direction during the previous 24 hours. Winds were of moderate strength and cyclonic in direction in the storm area; but were now falling off rapidly in South Bengal. Very heavy rain had fallen in the eastern and central districts of the North-Western Provinces. The following gives the more noteworthy falls during the previous 24 hours:—

District.	Station.	Rainfall in 24 hours preceding 8 A.M.
		Inches.
Almora	Champawat	10·00
Cawnpore	Derapur	8·30
Hamirpur	Mandha	7·80
Ditto	Hamirpur	7·51
Banda	Banda	7·62
Naini Tal	Ramnagar	7·55
Lucknow	Malihabad	7·45

The most noteworthy feature during the previous 24 hours was the heavy rainfall which had occurred in the storm area. The depression had, in fact, now reached the sink to which somany of the storms of the south-west monsoon of 1894 had drifted and in which several had intensified, the increase of intensity in every case accompanying a heavy downpour of rain in that area.

The disturbance filled up during the next 24 hours, pressure increasing very rapidly in the central districts of the North-Western Provinces. Light to moderate rain had fallen in the western and central districts of the North-Western Provinces during the previous 24 hours.

The storm was similar in character to the ordinary cyclonic disturbances of the rains proper. It formed very rapidly in the north-west angle of the Bay on the 1st and 2nd whilst a previous disturbance was breaking up, and advanced in a direction between west-north-west and north-west to the North-Western Provinces, where it gave a very heavy burst of rain that caused a slight intensification of the storm for a brief period on the 5th. It filled up rapidly on the night of the 5th and morning of the 6th. The following gives a statement of the track and rate of movement of the storm centre :—

Date.	Position of the centre.				Distance travelled during interval.	Average hourly velocity in miles during preceding 24 hours.
	Lat. N.		Long. E.			
	°	′	°	′	miles.	
2nd	20	40	88	20	...	...
3rd	22	30	86	0	200	8
4th	24	0	83	45	190	8
5th	26	45	80	0	310	13

The storm was chiefly remarkable for the heavy rain it gave during the latter part of its existence. The following gives a summary of the rainfall data of the storm :—

Division.	Average actual rainfall in 24 hours preceding 8 A.M. of					
	2nd.	3rd.	4th.	5th.	6th.	Total of period.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Orissa	0·63	0·90	0·18	0·01	0·01	1·73
Bengal	0·17	0·37	0·32	0·10	0·02	0·98
Bihar	0·16	0·53	0·39	0·25	0·07	1·40
Chota Nagpur	0·47	0·89	0·98	0·21	0·08	2·63
N.-W. P. (East)	2·70	1·72	3·74	1·11	0·02	9·29
Do. (Sub-montane)	0·07	0·35	0·35	1·49	1·30	3·56
Oudh (South)	2·07	2·01	2·45	2·32	0·05	8·90
Do. (North)	2·27	0·89	1·06	2·92	0·42	7·56
N.-W. P. (Central)	1·13	0·78	1·02	3·52	0·19	6·64
Do. (West)	0·02	0	0·03	0·30	0·10	0·45

Pressure on the morning of the 7th was in slight defect in North-Eastern India and in slight to moderate excess in North-Western India and the Peninsula. Very shallow depressions were shown in Bengal and Burma on the 7th and 8th. Showery weather continued in these two areas, whilst fine dry weather prevailed over the remainder of India.

Pressure decreased considerably on the 10th and 11th in Upper India and the showery weather in North-Eastern India extended westwards into Bihar and the eastern districts of the North-Western Provinces. Moderate rain also fell in the Peninsula, due chiefly to increasing westerly winds on the Malabar coast. Feebly unsettled and showery weather continued in Bengal and Burma and the west coast districts until the 14th, when pressure began to give way in the Bay and a shallow depression to form in that area. The following gives a history of the disturbance initiated by these changes.

Feeble cyclonic disturbance of the 15th to the 21st October in the Bay of Bengal.—On the 14th a hallow depression lay over Bengal and the north and centre of the Bay. It was transferred southwards on the 15th and 16th and covered the centre and south-west of the Bay on the morning of the 16th. Light north-east winds now prevailed at the head of the Bay and moderate to fresh south-west winds in the south. Weather was squally with heavy rain off the coast of the Circars. The depression on the morning of the 17th was off the Coromandel coast. Pressure had fallen on the Malabar coast and a shallow depression was also shown in the Arabian Sea off that coast. Weather was hence disturbed over the greater part of the Peninsula and moderate to heavy rain was falling in the coast districts, heaviest during the previous 24 hours in the Circars. The pressure changes were small during the next 48 hours, and both depressions were unchanged in position on the 19th. Weather was now squally with frequent showers off the Malabar coast and squally with more or less heavy rain over the centre and south-west of the Bay. Winds in the Bay area ranged from 2 to 6 in force.

The rainfall was now very heavy in the Vizagapatam, Godavari and Nellore districts. Light to moderate rain was falling over the whole of the Deccan and light showers in the Central Provinces. The disturbance was a large shallow and diffused depression and such as almost invariably initiates the first burst of heavy rain in the Peninsula due to the retreating south-west monsoon. The depression in the Arabian Sea had extended northwards and now affected the whole of the west coast to the south of Bombay.

Pressure gave way generally on the 20th and showery weather extended to the eastern districts of the North-Western Provinces and Bihar. The depression in the Bay intensified very slightly on this day and crossed the Coromandel coast on the 21st. Winds were feebly cyclonic in the area of depression on the morning of the 21st, when it lay over the Coromandel districts. Very heavy rain had fallen during the previous 24 hours over the greater part of the Madras Presidency. The depression

off the Malabar and Konkan coasts was less marked than on the previous day; but squally showery weather continued along these coasts. The depression in Southern India filled up during the next 24 hours; but the indraught of humid winds continued to give general but moderate rain over the Deccan and Southern India until the 25th.

Cyclonic storm of the 20th to the 26th in the Arabian Sea.—The depression in the Arabian Sea meanwhile was unchanged in position and character. Light to moderate north-east winds obtained on the 20th, 21st and 22nd over the north and centre of the Arabian Sea and moderate to fresh westerly winds in the south-east. Weather was squally with frequent rain; but the strongest winds recorded by any vessel within the depression area were only of force 5 and 6. The shallow depression was transferred northwards on the 23rd and lay off the Bombay and Kathiawar coasts on the 24th. In consequence of the northward advance of the depression area, showery weather had extended northwards to the Central Provinces, Central India, and Bengal.

The depression was unchanged in position during the next 24 hours; but winds were steadily increasing and weather becoming stormy in the area of disturbance. The following gives 8 A.M. data of vessels in the depression area on the 25th :—

Hour.	Name of Vessel.	8 A.M. Position.		Barometer (uncorrected).	Wind. 8 A.M.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
8 A.M.	S.S. *Emir* .	17 3	64 48	?	NNE	6	Overcast. 4 A.M., hard squalls with heavy rain.
"	S.S. *Naseri* .	18 32	68 51	29·701	E by S	6	4 A.M., squally with rain.
"	S.S. *Caledonia*	17 52	67 16	29·451	N	5	Furious squalls and torrents of rain.
"	S.S. *Alboin* .	16 2	73 22	29·701	SSE	5	4 A.M., overcast.
"	S.S. *Columbus*	16 2	71 15	?	SSE	6	Heavy squall with rain.
"	S. *Milverton* .	18 50	72 10	?	S	6	4 A.M., very hard squall and lightning with rain.

Winds were now blowing strongly at Bombay and the Konkan coast stations and sea was very rough. Rain had almost ceased in the Deccan and Madras. The Central Provinces, Central India, Bengal, Bihar, and the eastern districts of the North-Western Provinces had however obtained general moderate to heavy rain during the previous 24 hours and the Bombay coast districts heavy rain.

The disturbance intensified to some extent during the next 24 hours and advanced north-eastwards and lay over the Gulf of Cambay, Kathiawar and Gujarat at 8 A.M. of the 26th. The following gives meteorological data of vessels within the depression area at that hour :—

Hour.	Name of Vessel.	8 A.M. Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
8 A.M.	S.S. *Khandalla*	15 6	73 45	29·752	S	4	Overcast, 3-15 P.M., strong squall of wind and rain.
"	R.I M.S. *Mayo*	17 55	74 54	29·705	S	4	Squally with rain.
"	S.S. *Columbus*	17 51	72 32	?	SSE	6 to 7	Rainy. 2 P.M., heavy rain.
"	S.S. *Jubeda* .	16 32	73 15	29·736	S by E	4	Fine. 4 A.M., heavy squalls and rain.
"	S.S. *Naseri* .	19 14	70 20	?	SSW	6	Squally with rain.

The cyclonic disturbance was now of moderate intensity and weather was stormy off the Bombay and Kathiawar coasts. It had given very heavy rain to Kathiawar and Gujarat during the previous 24 hours.

The depression advanced north-eastwards during the day and broke up in Gujarat during the next 24 hours; but the residual disturbance gave very showery weather to the Central Provinces on the 27th, and 28th, after whichw eather cleared up in Northern and Central India.

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.

Hills west of Dera Ismail Khan.—The report received from the Deputy Commissioner shows that no snow fell on the hills to the west of that district in October.

II.—KASHMIR HIMALAYAS.

Kashmir.—According to a telegraphic report received from the Superintendent of the Srinagar Observatory, snow is stated to have fallen at Dras and Kargil on the posta

route from Srinagar to Leh during the second week of the month, and hence much earlier than usual. Also according to a note in a letter from the Superintendent of the Leh Observatory, written on the 1st November, snow began to fall on the Zoji Pass in the second week of October and was deep enough to cause a considerable delay in the delivery of letters.

III.—SIKKIM HIMALAYAS.

Yatung.—Heavy snow fell on the mountains near this place down to about 11,500 feet on the night of the 24th. Snow was lying at the end of the month above 13,000 feet.

The following is an extract from a letter received from a traveller in Sikkim:—

"On the morning of the 13th October the snow was about 4 inches deep at Momay Samdong (15,400 feet), but the greater part melted during the next two days. The snow up the Donkia La Pass was also about 4 inches deep on the 13th October; but except in the sheltered places it had almost entirely disappeared by midday, 14th October. On the Thibetan side of the Donkia La there was snow only on the higher peaks of the Donkia range and the mountains of Thibet in the far distance. The Cholomo lakes were not frozen.

"Heavy snow was falling between Momay Samdong and Yeumtong, at an elevation of 13,000 feet at noon of the 15th October.

"On the 26th and 27th October the snow at the top of the Jalap La Pass was two feet deep."

Resume of the snowfall information.—The reports, although very few in number, indicate that snow had commenced to fall on the higher elevations in the Kashmir Himalayas much earlier in the season than usual. It is also probable that the snowfall in Sikkim was abnormal.

Summary of special storm reports.

Cyclonic storms are of occasional occurrence in October and are sometimes of exceptional intensity. Two were generated in the Bay during the month, but were of moderate intensity. Several reports of these storms were received, and the information they contained is incorporated in the pressure section. Thunderstorms are of occasional occurrence in October. The following gives a statement of those for which special reports were received:—

13th October.—Thunderstorm at Poona from 11-40 P.M. to 0·10 A.M. Rainfall during storm 2·01 inches.

26th October.—Thunderstorm at Khandwa at 7-30 P.M.

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

Arabian Sea.—At the commencement of the month light to moderate south-westerly winds prevailed in the centre, light north-westerly to westerly winds in the north, east and south and southerly winds in the west. In the Gulf of Aden winds were unusually light and unsteady. Weather was showery in the centre and along the Konkan and Malabar coasts, and fine over the remainder of the sea area. The mean wind force as recorded on board 26 vessels was 2·4. During the next five days winds increased slightly in force and on the morning of the 6th averaged 2·8. The air movement, however, decreased rather rapidly in strength during the day, and on the morning of the 7th was 2·1 or 0·7 less than on the previous day. Winds were in fact remarkably light on this day over the whole area, so much so that 32 out of 36 vessels experienced winds of force 1 to 2. Showers had ceased to fall in the centre and the west coast districts and hence fine clear weather prevailed in all parts of the Arabian Sea. No change of importance occurred during the next week, light unsteady winds and fine weather with occasional showers prevailing generally. On the 14th, however, winds began to increase in the south of the sea and the weather to become squally. Thus the S. *Milverton* in Lat. 0°·21′N. and Long. 67°E. experienced winds of force 5 at 8 A.M., and had heavy squalls in the afternoon. Winds increased further in strength during the next two days and on the morning of the 16th the strong winds had advanced northwards to the latitude of Cochin. Fresh to strong westerly winds and rainy squally weather now prevailed in the south-east of the Arabian sea as far north as Lat. 10°N. Thus the S.S. *Kohinur* at anchor at Cochin experienced heavy rain squalls, thunder and lightning in the early morning. The mean wind force was 2·3 at 8. A.M. of the 16th. During the next 24 hours a low pressure area formed in the south-east of the sea area off the Malabar Coast. Normal north-easterly winds set in over the north and centre of the sea during the next 24 hours. The low pressure area remained practically unchanged in position during the next six days, and hence disturbed weather was confined to the neighbourhood of the Malabar and South Konkan coasts during this period. The strongest winds reported in the depression area during the period were of force 6 and the greatest mean wind force was 3·5 on the 22nd.

The area of depression and squally weather was transferred northwards on the 23rd and on the 24th heavy weather was experienced over the whole of the eastern half of the sea as far north as Lat. 22°N. Moderate gales and stormy weather prevailed during the next 48 hours along the Konkan and Kathiawar coasts, several vessels reporting "fierce to hard squalls," "torrential rain" and a "high cross sea." The influence of the storm was not, however, very extensive as only light winds prevailed in the west quadrant at distances less than 250 miles from the centre. The storm passed inland during the next 24 hours, and weather improved rapidly on the Konkan and Kathiawar coasts on the 27th, and was generally fine on the 28th with light irregular winds, except in the extreme south-east. The storm was of moderate intensity throughout, and the strongest winds reported during its existence were of force 7. The mean wind force had decreased to 2·0 at 8 A.M. of the 28th. Normal northerly winds set in again on the 29th over the north and centre of the sea, and at the end of the month prevailed generally, except in the extreme south-east, where moderate westerly winds and showery weather still continued.

Bay of Bengal.—At the beginning of the month strong south-westerly to westerly winds prevailed in the south, centre, and east of the Bay, and light to moderate winds in the north of the Bay. Weather was generally showery and squally, more especially in the north of the Bay, where the S. *Holkar* experienced squally weather in the morning and heavy rain in the afternoon. The mean intensity of the air movement, as determined from the data of 16 vessels, was 4·7 or 1·7 above the normal of the month. An important change occurred during the day in the north-west of the Bay, where winds strengthened and became cyclonic in direction. Weather also became more unsettled, and on the morning of the 2nd the vessels in that area experienced winds of force 5 to 6, fierce rain squalls, blinding rain and a confused sea. Strong monsoon winds and squally weather now prevailed over nearly the whole of the Bay. The depression in the north-west of the Bay passed inland in the evening, and the winds shifted back to southerly directions, at the same time decreasing in force. Weather, however, continued squally until the morning of the 4th, when the monsoon current began to take off in strength, and the weather to improve generally over the Bay. On the morning of the 5th the monsoon current was feeble in the south of the Bay, and light to moderate unsteady winds and fine weather obtained over the remainder of the Bay. The air movement averaged 3·4, or 1·3 less than on the 1st. Winds continued to decrease in strength during the next 48 hours, and on the morning of the 7th averaged only 1·8, or 1·6 less than on the 5th and were 1·2 below their normal intensity in October.

During the next week very uniform pressure conditions and light variable winds prevailed generally over the Bay. It is noteworthy that the south-east trade winds in the Equatorial region to the south of the Bay were also very unsteady and light at this period. This is shown clearly by the observations recorded in that region on the 10th, a day typical of the period. Thus, the S.S. *Barque Doon* in Lat. 2°S and Long. 89¾°E. had variable airs, force 0 to 1, and the S. *Mersey* in Lat. 2°23′S and Long. 83°35′E. north-west winds, while the S. *Cressington* in Lat. 8° 28′S, and Long. 88°5′E. east-north-east winds. These conditions continued until the 13th, when strong south-east trade winds appeared in the Equatorial region. Thus, the S. *Cressington* in Lat. 3°35′S and Long 88°56′E. at 8 A.M. of the 14th experienced south-east winds of force 6. Contemporaneously with the increase in the south-east trade winds, south-west winds and squally weather set in over the south of the Bay. A large but shallow low-pressure area covered the north, centre, and east of the Bay at 8 A.M. of the 14th. It was transferred southwards during the next 48 hours, and on the morning of the 17th lay off the Circars and Coromandel coasts. Light to moderate north-easterly winds had hence set in over the northern half of the Bay and easterly winds in the east of the Bay, while in the south, the prevailing south-westerly winds had strengthened considerably, and were now blowing freshly to strongly. Weather was fine in the region of northerly winds, and squally and showery in the southern half of the Bay. The squalls were severe in the neighbourhood of the Andamans, where the S.S. *Arratoon Apcar* experienced hard squalls and heavy rain at 8 A. M. of the 17th. The mean air movement was 3·4 or 1·6 greater than on the 14th. No change occurred in the position of the low pressure area during the next three days. Winds, however, increased further in strength, and weather became more squally during this period in the southern half of the Bay, more especially off the Circars coast, where winds of force 6 to 7, continuous heavy rain and a confused sea, were experienced on the 19th and 20th. Weather continued fine in the northern half of the Bay. The mean intensity of the air movement on the 20th was 3·5. With the transfer of the depression westwards across the Madras coast on the early morning of the 21st, winds fell off rapidly in strength near the Coromandel and Circars coasts, and on the morning of the 22nd did not exceed force 4 in that area. Weather also had improved very considerably, and was now merely showery. The mean air movement decreased to 2·5 at 8 A. M. of the 22nd. Winds continued to decrease in strength in the south, centre and east of the Bay until the 28th, at 8 A.M. of which day the mean intensity of the air movement was only 1·9. As is usually the case in October winds were very unsteady during this period over the whole of that region. In the north of the Bay, on the other hand, abnormal south-westerly winds and showery squally weather were experienced from the 22nd to 27th. During the next

24 hours moderate to fresh northerly winds obtained over nearly the whole of the Bay, but on the 30th winds began to shift round to south-easterly directions in the south-east of the Bay, thus showing a tendency to the formation of a low pressure area in the centre of the Bay. This change in the direction of the wind is indicated clearly by the data of Port Blair, where the wind shifted from west-north-west on the 29th to south on the 30th. Weather was rainy and squally over the whole of the Bay, except in the extreme north, where it was fine. The mean wind force had increased to 4·2 at 8 A.M. of the 30th. The low pressure area in the centre of the Bay developed to some extent on the 30th, and began to influence the winds and weather over the whole of the Bay. Winds of force 4 to 7, heavy squalls and thick rainy weather prevailed at 8 A.M. of the 31st over nearly the whole of the Bay area, and the mean wind force was 4·5.

Temperature of the air.

The mean temperature conditions did not differ largely from the normal over by far the greater part of the country, but were large and marked in the North-Western Provinces. They were in part determined by the distribution of the rainfall of the preceding month, and in part by the character and tracks of the storms of the month and the distribution of the accompanying rainfall.

The mean maximum temperature of the month was below the normal over the whole of India, except Upper Sind, Rajputana, the Punjab, Baluchistan, and the greater part of Madras and Mysore. The excess in these areas was small, nowhere exceeding 2°, except locally at Trichinopoly (+2°·7), Negapatam (+2°·6), Bangalore (+2°·1), and perhaps Sirsa (+3°·0); but the maximum temperature observations at that station for the month are very doubtful. The deficiency was less than 2° in amount over the remainder of India except in a belt of country stretching from Kathiawar and Gujarat to the foot of the hills in the North-Western Provinces, including the greater part of the North-Western Provinces, Central India, Gujarat, Kathiawar and the northern districts of the Central Provinces.

Over a portion of that area, including the greater part of the North-Western Provinces and Bundelkhand, the deficiency was large, exceeding 4° in amount. The following gives data for that area of considerable deficiency :—

Province.	Station.	Mean maximum temperature.		
		Actual October 1894.	Normal. October.	Variation of actual from normal.
		°	°	°
Bundelkhand	Nowgong	85·3	90·3	−5·0
North-Western Provinces	Lucknow	86·0	90·9	−4·9
	Allahabad	85·2	89·9	−4·7
	Benares	85·4	89·9	−4·5
	Jhansi	88·1	92·4	−4·3
	Agra	90·1	92·9	−2·8

The deficiency in the temperature in the North-Western Provinces was due to excessive rainfall of the month.

The mean minimum or night temperature of the month was below the normal in Baluchistan, Sind, Rajputana and the greater part of the Punjab and also in Lower Burma. The variations from the normal were in almost all cases small, but were greater than 2° at the following stations :—

Province.	Station.	Mean minimum temperature.		
		Actual October 1894.	Normal October.	Variation of actual from normal.
		°	°	°
Baluchistan	Quetta	35·4	39·1	−3·7
Sind	Kurrachee	69·0	71·3	−2·3
Punjab	D. I. Khan	58·1	61·4	−3·3
	Rawalpindi	53·7	55·9	−2·2
Rajputana	Bickaneer	69·6	72·5	−2·9

The data for Bickaneer and Rawalpindi are very doubtful ; in the latter case owing to change in the conditions of exposure of the observatory arising from the growth of trees in the neighbourhood of the shed.

The minimum temperature was in excess over the remainder of India. The excess was more than 2° in North Bengal, Bihar, Chota Nagpur, the eastern and central districts of the North-Western Provinces, Central India, Gujarat, the Central Provinces, Khandesh and the North Deccan. The following gives data for the stations in these areas of

excess night temperature at which the departure from the normal was 3° or more :—

PROVINCE.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual October 1894.	Normal October.	Variation of actual from normal.
		°	°	°
North-Western Provinces.	Lucknow	69·9	65·6	+4·3
	Allahabad	71·7	67·6	+4·1
	Benares	71·9	68·7	+3·2
Bihar	Gaya	74·5	70·9	+3·6
	Purnea	74·4	71·2	+3·2
Central India	Nowgong	69·2	65·1	+4·1
	Sutna	69·2	65·6	+3·6
Central Provinces	Jubbulpore	67·4	64·1	+3·3
	Khandwa	69·6	66·2	+3·4
Berar	Akola	69·1	66·1	+3·0
Khandesh	Malegaon	69·0	65·2	+3·8

The preceding statement has indicated that the day and night temperatures varied inversely from the normal, over by far the greater part of India, excess in one element at any station accompanying deficiency in the other element. The mean temperature of the month hence varied slightly from the normal. It was in slight defect in Baluchistan, the Indus Valley districts, Cutch, Kathiawar, the North-Western Provinces and Burma, and was in excess over the remainder of India. The variations were, in the great majority of cases, less than 1°, and exceeded 1°·5 only at the following stations :—

PROVINCE.	STATION.	MEAN DAILY TEMPERATURE.		
		Actual October. 1894.	Normal October.	Variation of actual from normal.
		°	°	°
Baluchistan	Quetta	55·1	56·9	−1·8
North-Western Provinces.	Agra	78·6	80·4	−1·8
Madras	Salem	81·5	79·9	+1·6
	Trichinopoly	84·1	82·4	+1·7
	Negapatam	83·4	81·8	+1·6

and perhaps Chaibassa (+1°·8).

The variations at the hill stations were also generally small in amount. The departures of the mean temperature of the month exceeded 1° at four stations, for which data are given below.—

STATION.	VARIATION FROM NORMAL OF MEAN.		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Murree	+2·7	+3·4	+3·1
Darjeeling	−0·2	+3·2	+1·5
Mount Abu	−1·4	−1·0	−1·2
Quetta	+0·1	−3·7	−1·8

The chief features of the mean temperature conditions of the month may hence be summed up as follows :—

1st.—Decreased day and increased night temperature, and hence decreased diurnal range of temperature over the whole of the Gangetic Plain, North Bombay, Central India, and the northern half of the peninsula. These features were most strongly exhibited in the area of abnormal and excessive rainfall, including the North-Western Provinces, Bihar and Central India. The mean daily temperature was hence in slight defect in that part of the area, due to the very low day temperature, but was in slight excess over the remainder of the area.

2nd.—Increased day temperature and decreased night temperature (and hence increased diurnal range) in Baluchistan, the Punjab, Upper Sind and the greater part of Rajputana. The mean temperature was in slight defect in the West Punjab, Baluchistan, Sind, Cutch and Gujarat, and in slight excess over the remainder of that area.

3rd.—Both day and night temperatures, and hence also the mean temperature of the month, were in slight excess in Madras (except the north coast districts) and Mysore.

4th.—The day and night temparatures, and hence also the mean temperatures, were in slight defect in Burma, but the variations were very small and of no importance.

5th.—The temperature conditions of the hill stations were approximately normal, except at Quetta (Baluchistan) and Murree, where the variations from the normal exceeded 1°·5 in amount.

The following table gives temperature data for 51 meteorological divisions of the empire:—

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean daily.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	87·8	73·3	80·5	14·5	21·6	−0·3	−0·1	−0·2
	Lower Burma	86·6	75·8	81·2	10·8	16·9	−0·3	+0·2	−0·5
	Central do.	91·5	73·7	82·6	17·8	24·5	−0·5	−0·1	−0·4
	Upper do.	86·4	71·2	78·8	15·2	24·7	−1·4	+2·3	−3·7
	Arakan	86·7	76·1	81·4	10·6	15·5	−1·2	−0·7	−0·5
Bengal and Assam	Eastern Bengal	84·8	73·8	79·3	11·0	22·5	−0·8	+1·2	−2·0
	Assam (Surma)	86·4	73·3	79·9	13·1	27·7	−2·4	+0·9	−3·3
	Do. (Brahmaputra)	84·0	73·5	78·8	10·5	25·2	−1·1	+1·6	−2·7
	Deltaic Bengal	87·3	75·6	81·5	11·8	24·5	−0·3	+0·8	−1·1
	Central do.	87·2	75·1	81·2	12·1	25·5	−0·6	+1·9	−2·5
	North do.	85·9	74·1	80·1	11·8	27·6	−1·3	+3·2	−4·5
	Orissa	87·5	76·6	82·1	10·8	19·9	−0·8	+2·0	−2·8
	Chota Nagpur	84·4	70·6	77·5	13·9	29·7	−0·5	+2·6	−3·1
	Bihar (South)	86·2	74·1	80·2	12·1	27·8	−2·5	+3·0	−5·5
	Do. (North)	86·3	73·7	80·0	12·7	29·6	−0·8	+2·4	−3·2
North-Western Provinces and Oudh.	North-Western Provinces (East)	85·1	72·0	78·6	13·1	30·8	−4·4	+3·2	−7·6
	Oudh (South)	86·0	69·9	78·0	16·1	37·8	−4·9	+4·3	−9·2
	Do. (North)	85·9	70·8	78·4	15·1	32·4	?	?	?
	North-Western Provinces (Central)	86·3	68·7	77·6	17·6	37·0	?	?	?
	Do. do. (West)	89·1	68·7	78·9	20·4	36·7	−3·0	+0·6	−4·2
	Do. do. (Submontane)	87·0	64·7	75·9	22·3	38·9	−0·5	+2·1	−2·6
Punjab	Punjab (South)	95·2	65·1	80·2	30·2	45·4	+1·4	−0·2	+1·6
	Do. (Central)	94·4	61·2	77·8	33·2	49·1	+1·2	+1·3	−0·1
	Do. (Submontane)	93·1	62·1	77·6	31·0	46·9	+0·3	−1·0	+1·3
	Do. (Hill Districts)	71·8	51·2	61·6	20·6	36·5	+1·7	+2·2	−0·5
	Do. (North-West)	91·0	57·0	74·0	34·0	49·9	+1·1	−0·7	+1·8
	Do. (West)	96·2	61·5	78·9	34·7	51·7	+1·2	−1·6	+2·8
Bombay and Malabar Coast Districts (Madras).	Malabar	84·8	74·4	79·6	10·4	16·0	−0·1	0	−0·1
	Madras (South Central)	90·2	70·9	80·6	19·3	28·1	+1·5	+0·4	+1·1
	Coorg	74·2	62·2	68·2	12·0	21·3	−1·2	0	−1·2
	Mysore	83·1	65·5	74·3	17·6	28·6	+2·1	+0·1	+2·0
	Konkan	84·7	75·1	79·9	9·6	19·5	−1·4	+0·7	−2·1
	Bombay Deccan	85·7	67·2	76·5	18·5	31·2	−0·8	+0·6	−1·4
	Hyderabad (North)	86·8	69·4	78·1	17·4	32·0	?	?	?
	Khandesh	86·7	67·8	77·3	18·9	36·4	−0·9	+3·8	−4·7
Central Provinces and Berar.	Berar	88·9	69·5	79·2	19·4	36·5	−1·0	+2·7	−3·7
	Central Provinces (West)	87·5	69·7	78·6	17·8	34·4	−1·9	+2·5	−4·4
	Do. (Central)	85·8	68·4	77·1	17·5	35·0	−1·5	+2·9	−4·4
	Do. (East)	87·0	73·2	80·1	13·9	27·2	−1·3	+2·2	−3·5
Bombay (North)	Gujarat	91·3	73·1	82·3	18·2	32·4	−2·5	+2·7	−5·2
	Kathiawar	89·9	71·6	80·8	18·4	33·7	−2·4	+0·5	−2·9
	Sind and Cutch	94·9	67·6	81·3	27·3	41·9	−0·8	−1·7	+0·9
Rajputana and Central India.	Central India (East)	84·4	69·2	76·9	15·2	33·7	−4·5	+3·9	−8·4
	Rajputana (East), Central India (West)	91·4	65·6	78·5	25·8	42·6	−0·1	+1·0	−1·1
	Do. (West)	97·6	67·2	82·4	30·4	47·1	+1·2	−2·9	+4·1
Madras	East Coast (North)	86·9	77·3	82·1	9·6	19·1	−0·2	+0·7	−0·9
	Hyderabad (South)	87·1	71·0	79·1	16·1	28·2	−1·9	+2·3	−4·2
	Madras (Central)	90·1	72·9	81·5	17·2	28·6	+0·5	+0·8	−0·3
	East Coast (Central)	90·3	76·8	83·6	13·5	24·4	−0·9	+0·7	−1·6
	Do. (South)	90·9	75·4	83·2	15·5	26·2	+2·3	+0·5	+1·8
	Madras (South)	91·8	76·2	84·0	15·5	23·9	+0·5	−0·2	+0·7

The following is a brief sketch of the more important features of the changes of the temperature conditions throughout the month.

At the commencement of the month temperature was in slight to moderate excess in the Punjab, Sind and Rajputana, and in slight to moderate defect in the North-

Western Provinces, Baghelkhand and Bundelkhand, and was normal over the remainder of India. The following table gives variation data for the 24 hours preceding 8 A.M. of the 1st :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN.		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	−0·2	+0·9	+0·4
Bengal and Assam	−1·0	+1·7	+0·4
North-Western Provinces and Oudh.	−4·9	+0·6	−2·2
Punjab	+2·9	−0·3	+1·3
Sind and Rajputana	+1·8	+2·2	+2·0
Central India and Gujarat	−3·5	+0·3	−1·6
Central Provinces and Berar	−6·4	+0·8	−2·8
Bombay	−0·8	−0·8	−0·8
Madras	+1·5	−0·6	+0·5

The rainfall accompanying the first cyclonic storm of the month caused a considerable reduction of temperature in the North-Western Provinces on the 5th and 6th. The following gives variation data for that province from the 3rd to the 8th :—

DATE.	VARIATION FROM NORMAL OF MEAN.		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
3rd	−3·7	+0·6	−1·6
4th	−3·7	+2·5	−0·6
5th	−6·1	+3·0	−1·6
6th	−9·2	+0·9	−4·2
7th	−4·9	+2·3	−1·3
8th	−1·6	+3·6	+1·0

At the end of this period temperature was in slight to moderate excess over the whole of India except locally in Cutch, Kathiawar and the Konkan, where it was in moderate defect. The following gives variation data for the 8th :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN.		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	−3·6	0	−1·8
Bengal and Assam	+0·2	+2·6	+1·4
North-Western Provinces and Oudh.	−1·6	+3·6	+1·0
Punjab	+1·4	+1·3	+1·4
Sind and Rajputana	−0·7	+3·3	+1·3
Central India and Gujarat	−3·4	+1·4	−1·0
Central Provinces and Berar	−0·2	+1·6	+0·7
Bombay	+0·1	−0·9	−0·4
Madras	+4·2	+0·6	+2·4

During the next seven days, *i.e.*, from the 9th to the 15th, ordinary fine and settled weather prevailed over the whole of India. Weather was, as usual, showery in Bengal, Burma and the southern half of the peninsula. Temperature was hence, during this period, above the normal over the whole of India, and was in slight defect in Burma. The excess was greatest in North-Western and Central India. The following gives variation data for the 12th, a day fairly typical of the period :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN.		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	−1·7	+0·3	−0·7
Bengal and Assam	−1·0	+2·0	+0·5
North-Western Provinces and Oudh.	−2·8	+4·1	+0·7
Punjab	+3·8	0	+1·9
Sind and Rajputana	+2·3	+0·1	+1·2
Central India and Gujarat	+0·2	+2·6	+1·4
Central Provinces and Berar	+1·3	+3·7	+2·5
Bombay	+1·3	+2·5	+1·9
Madras	+2·2	+1·0	+1·6

Weather was showery in Kashmir and on the higher elevations of Afghanistan and Baluchistan on the 14th and following days. Snow fell at this time on the highest elevations, and a cool wave hence advanced and extended very slowly across North-Western India during the next six days. As usual, there was a moderate rise of temperature immediately in front of the cool wave. The following variation data for six stations illustrate the progress of the cool wave :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	14th.	15th.	16th.	17th.	18th.	19th.	20th.
	°	°	°	°	°	°	°
Quetta	−6·2	−8·1	−7·9	−5·2	−3·3	−2·6	−1·3
Jacobabad	+2·9	−0·9	−4·0	−4·2	−2·2	−2·7	−3·4
Jeypore	+4·7	+1·4	+3·3	+5·3	+2·5	−0·3	+0·8
Agra	+2·1	+0·3	+0·7	+0·5	−0·5	−1·1	−2·7
Allahabad	+1·3	+1·8	+2·2	+2·4	+3·0	+2·6	+2·0
Patna	+0·4	+0·7	+2·0	+2·9	+2·6	+3·9	+0·9

The wave was of feeble intensity, and did not advance further east than Central India and the central districts of the North-Western Provinces.

The following gives variation data for the 17th, when the effect of this cool wave was on the whole most marked in Upper India :—

Province.	Variation from normal of mean.		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	−0·1	−0·3	−0·2
Bengal and Assam	−0·8	+1·7	+0·5
North-Western Provinces and Oudh.	+0·4	+2·1	+1·3
Punjab	−1·2	−0·9	−1·1
Sind and Rajputana	−1·2	−1·4	−1·3
Central India and Gujarat	+0·6	+2·7	+1·7
Central Provinces and Berar	+0·8	−0·1	+0·4
Bombay	+0·3	+1·2	+0·8
Madras	+1·5	−0·8	+0·4

During the latter part of this period, *i.e.*, on the 17th and following days, a depression formed in the Bay, which intensified slightly and marched westwards, crossing the coast on the early morning of the 21st. It gave moderate rain to the greater part of the peninsula from the 18th to the 25th. Owing to the peculiar character of the disturbance, rainfall extended northwards on the 19th and following days into Kathiawar, the Central Provinces, Central India, and the North-Western Provinces, as well as Bengal; and the whole of India with the exception of the Punjab, Rajputana, and Sind, received more or less general rain during the interval between the 18th and 26th. In the areas where the rainfall was light the increased cloud caused a large increase of the night temperature, while the day temperature was very slightly reduced; but in the areas of moderate to heavy rainfall, the reduction of the day temperature was very large, whilst the night temperature was only slightly above the normal. Hence, in some parts affected by this disturbance, temperature was reduced considerably below the normal, whilst in others it was in slight to moderate excess throughout. The following gives variation data of the mean temperature in India and Burma from the 22nd to the 28th :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	22nd.	23rd.	24th.	25th.	26th.	27th.	28th.
	°	°	°	°	°	°	°
Burma	−0·4	+0·7	+1·1	+1·4	+1·5	+0·9	+0·6
Bengal and Assam	+1·1	+1·7	+2·0	+0·4	−1·0	−0·2	−0·5
North-Western Provinces and Oudh.	+1·1	+1·7	+1·6	−3·8	−1·8	−1·7	−1·9
Punjab	−1·3	−0·5	−0·6	−0·1	−0·9	−0·3	−1·1
Sind and Rajputana	−2·6	−1·7	−0·1	−1·2	−2·5	−1·6	−2·0
Central India and Gujarat.	+0·7	+2·6	+1·9	−2·0	−3·5	−5·5	−2·1
Central Provinces and Berar.	+1·2	+3·0	+1·8	+0·3	+1·1	+2·4	+2·7
Bombay	−0·4	+1·1	−1·3	−1·1	−0·9	−0·9	−0·8
Madras	−2·7	−1·7	−0·7	0	+1·4	+1·8	+2·9

This period of disturbance terminated on the 28th, and from that date to the end of the month fine weather prevailed over the whole of India. A disturbance began to form in the Bay on the 29th and 30th. Moderate rain fell in the Deccan and Madras on the 29th, 30th and 31st, whilst it was forming. This reduced temperature considerably in those areas, whilst it continued in slight to

moderate defect in Northern and Central India. Temperature was hence in defect over nearly the whole of India at end of the month, and was in slight excess in Burma. The following gives variation data for the 30th :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN.		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	+0·7	+1·3	+1·0
Bengal and Assam . . .	−0·6	−0·4	−0·5
North-Western Provinces and Oudh.	−2·2	−1·6	−1·9
Punjab	+0·7	−1·8	−0·6
Sind and Rajputana . .	−0·2	−2·6	−1·4
Central India and Gujarat .	−2·5	−1·6	−2·1
Central Provinces and Berar .	−2·8	+0·5	−1·2
Bombay	−1·8	+2·2	+0·2
Madras	+1·0	+1·7	+1·4

The following table giving the variations of the mean temperature, week by week, in nine large divisions of India, and illustrates the larger changes described above in the temperature conditions of India during the month :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF WEEK EN :NG OCTOBER				
	6th.	13th.	20th.	27th.	For whole month.
	°	°	°	°	°
Burma	−0·8	−0·8	−0·2	+0·7	−0·2
Bengal and Assam . .	−0·2	+0·8	+1·2	+0·7	+0·5
North-Western Provinces and Oudh.	−1·7	+1·3	+1·4	−0·5	−0·2
Punjab	+1·2	+1·5	−0·2	−0·8	+0·3
Sind and Rajputana .	+1·1	+1·2	−0·3	−1·7	−0·3
Central India and Gujarat	−1·8	+1·0	+1·6	−0·9	−0·3
Central Provinces and Berar.	−2·0	+1·4	+1·5	+1·4	+0·6
Bombay . . .	−1·3	+0·6	+1·4	−0·5	0
Madras	+0·9	+2·0	+0·3	−0·7	+0·7

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 characterised by marked uniformity of pressure and temperature conditions, the air movement of the period is feeble and more irregular than in any other month of the year.

Winds were considerably stronger than usual in October 1894 at Port Blair and Diamond Island, the increase averaging nearly 50 per cent. at both stations. Winds were more southerly and less easterly in Lower Burma, but were more easterly on the average of the month at Port Blair.

Winds were more steady and also generally stronger than usual in Bengal, but the chief feature of the month was the marked preponderance of southerly winds during the month, in consequence of which the mean wind direction was from south instead of from north, as is usual in October in that area. The following gives data for five typical stations :—

STATION.	WIND DIRECTION.		VELOCITY IN MILES PER DIEM.		
	Mean, October 1894.	Normal, October.	Mean actual, October 1894.	Normal, October.	Percentage variation.
	°	°			
False Point . .	S 9 E	N 40 E	169	142	+19
Chittagong . .	S 1 W	N 10 W	81	71	+14
Saugor Island .	S 6 E	N 10 E	242	156	+55
Calcutta . .	S 23 W	N 48 W	51	70	−27
Berhampore . .	S 38 W	N 12 W	77	51	+51

Winds were remarkably unsteady in Chota Nagpur, Bihar and the eastern districts of the North-Western Provinces, and the mean wind directions varied very irregularly from the normal in that area. They were however considerably above their normal strength. The following gives data illustrating the strength and unsteadiness of the winds in that area :—

STATION.	STEADINESS.			VELOCITY IN MILES PER DIEM.		
	Actual percentage, October 1894.	Normal percentage, October.	Variation.	Mean actual, October 1894.	Normal, October.	Percentage variation.
Hazaribagh	10	34	−24	150	119	+26
Patna .	5	4	+ 1	78	46	+70
Allahabad .	15	13	+ 2	83	43	+93
Lucknow .	8	39	−31	?	47	?

Winds were very light in the Punjab and Upper Sind throughout the whole month, and the average wind velocity ranged from 1 mile per hour at Mooltan to 2 miles per hour at Lahore, Peshawar and Jacobabad. The air movement was slightly less unsteady than usual, but the variation of its direction differed considerably at different stations. The variations were, however, of no significance.

Winds were normal in strength and steadiness in Rajputana and Central India, and were from north-westerly directions. The northerly element was somewhat more pronounced than usual.

A noteworthy feature of the month was the increased strength and the abnormal direction of the air movement in the Central Provinces and Deccan. Winds were less steady than usual and were from north-westerly instead of from north-easterly directions. This was in part due to the influence of the first and second cyclonic storms of the month. The following gives data for five stations illustrating the large westerly deflection of the winds in these areas :—

Province.	Station.	Wind direction.		
		Mean, October 1894.	Normal, October.	Westerly deflection.
		°	°	°
Berar . . .	Akola . .	N 23 W	N 20 E	+43
Central Provinces	Khandwa .	N 30 W	N 24 E	+54
	Nagpur . .	N 1 E	N 37 E	+36
Bombay Deccan .	Sholapur . .	N	N 50 E	+50
Madras Deccan .	Bellary . .	N 1 W	N 24 E	+25

Winds were very unsteady, but of normal strength at Bombay. They were steadier, and probably slightly stronger on the mean of the month, at the Konkan and Malabar coast stations.

Winds were weaker in the Coromandel and Circars coast districts, but were on the whole somewhat steadier than usual. The mean wind directions were very abnormal, as is shown by the following data :—

Station.	Wind direction.		Steadiness.		
	Mean, October 1894.	Normal, October.	Actual percentage, October 1894.	Normal percentage, October.	Variation.
	°	°			
Vizagapatam .	N 76 W	S 65 E	35	18	+17
Madras . .	S 4 E	N 35 E	14	10	+4
Trichinopoly .	N 76 W	N 44 W	40	33	+7
Bangalore .	N 78 W	N 16 W	24	9	+15

The chief features of the air movement may hence be summed up as follows :—

(1) Winds were stronger and more southerly in the south-east of the Bay, and were weaker than usual and abnormal in direction in the Coromande coast districts.

(2) Southerly winds prevailed to an unusual extent in Bengal, and very unsteady winds in the Gangetic Plain and light north-westerly airs in the Punjab and Rajputana.

(3) In Central India, the Central Provinces, and the Deccan, north-westerly winds prevailed to an unusual extent, and the mean direction of the air movement was from north-west instead of from north-east.

Humidity and Cloud.

The air was slightly drier than usual in Burma, but was somewhat damper in Arakan, Bengal, and Assam. The following gives mean variation data for these areas :—

Province.	Absolute Humidity.			Relative Humidity.		
	Average actual, October 1894.	Average normal, October.	Variation from normal.	Average actual, October 1894.	Average normal, October.	Variation from normal.
	"	"	"	%	%	
Burma . .	·850	·881	−·031	82	85	−3
Arakan . .	·921	·878	+·043	87	82	+5
Bengal . .	·862	·832	+·030	82	81	+1
Assam . .	·841	·794	+·047	87	82	+5

The mean absolute and relative humidities were considerably to largely above the normal in the Gangetic plain, Central India, the Central Provinces, Berar and the Deccan generally. The mean relative humidity was 10 or upwards in excess at the following stations: Ghazipur (+20), Sutna (+18), Lucknow (+14), Nowgong (+14), Khandwa (+14), Poona (+13), Jubbulpore, Allahabad and Saugor (each +12), Hoshangabad (+11), and Patna (+10). The whole of the area, including Bihar, the eastern and central districts of the North-Western Provinces, Central India and the Central Provinces, was hence characterised by excessive humidity during the

month. The following gives comparative data for the whole of that area :—

Province.	Absolute Humidity.			Relative Humidity.		
	Average actual, October 1894	Average normal, October.	Variation from normal.	Average actual, October 1894.	Average normal, October.	Variation from normal.
	"	"	"	%	%	
Chota Nagpur .	·643	·545	+ ·098	74	65	+ 9
Bihar . .	·830	·782	+ ·048	81	73	+ 8
North-Western Provinces.	·656	·551	+ ·105	69	59	+ 10
Central India .	·675	·525	+ ·150	74	58	+ 16
Central Provinces	·674	·573	+ ·101	72	61	+ 11
Berar . .	·631	·556	+ ·075	68	60	+ 8
Deccan . .	·617	·573	+ 044	72	64	+ 8

The air was on the other hand less charged with aqueous vapour and drier than usual in Upper India, *i.e.*, in Sind, the Punjab and East Rajputana and also in Baluchistan. The mean humidity of the month was more than 5 in defect at Kurrachee (—10) and at Peshawar and Ludhiana (each—6).

The following gives comparative data for this area of decreased humidity :—

Province.	Absolute Humidity.			Relative Humidity.		
	Average actual, October 1894.	Average normal, October.	Variation from normal.	Average actual, October 1894.	Average normal, October.	Variation from normal.
	"	"	"	%	%	
Rajputana (East)	·444	·442	+ ·002	45	47	—2
Punjab . .	·416	·457	—·041	46	51	—5
Sind . .	·477	·539	—·062	48	54	—6
Baluchistan (Quetta).	·150	·193	—·043	39	42	—3

The variations of the mean humidity conditions of the month from the normal were small in the Bombay or west coast districts and in Mysore, South India and the Madras coast districts. The air was on the whole somewhat drier, but the departures from the normal were slight and irregular, and of no significance.

Humidity was largely below the normal at Murree (—12), and slightly in defect at Quetta and Kailang (each —3), and also at Wellington in Southern India (—3). It was, on the other hand, in considerable to large excess at the Himalayan stations from Simla to Darjeeling, and in moderate excess at Mount Abu and Pachmarhi. The mean humidity of the month was more than 10 in excess at Ranikhet (+15), Chakrata (+14), Chikalda (+12) and Darjeeling (+11).

The chief features of the humidity conditions of the month in India were :—

(1) Slightly decreased humidity in Burma and increased humidity in Bengal and Assam.

(2) Humidity in considerable to large excess in the area including Bihar, Chota Nagpur, the North-Western Provinces, Central India, the Central Provinces and the Deccan.

(3) Decreased humidity in East Rajputana, the Punjab and Sind—the deficiency being most marked in Sind.

(4) Normal conditions in the Bombay and Madras Coast districts.

There was somewhat more cloud than usual at Port Blair and in Lower Burma. The mean cloud amount of the month was slightly less than usual at Sibsagar in the Upper Assam Valley, but was considerably greater at Dhubri and Silchar. The amount of cloud was more or less considerably in excess over the whole of Bengal, Orissa, Bihar, Chota Nagpur, the North-Western Provinces, Central India, Berar, the Central Provinces, and probably also in Gujarat, Kathiawar and the greater part of the Deccan. The following gives comparative data for the area of increased cloud during the month of October :—

Province.	Mean cloud amount.		
	Average actual, October 1894.	Average normal, October.	Variation from normal.
Orissa	6·3	4·5	+ 1·8
Bengal	6·1	4·3	+ 1·8
Chota Nagpur	8·1	4·3	+ 3·8
Bihar	5·4	3·2	+ 2·2
North-Western Provinces . .	3·1	1·3	+ 1·8
Central India	4·2	2·4	+ 1·8
Central Provinces	4·1	2·8	+ 1·3
Berar	3·9	3·5	+ 0·4
Bombay-Deccan	6·6	5·5	+ 1·1

Skies were even more free from cloud than usual in October over the Punjab, Sind and Baluchistan, and the

mean cloud amount of the month ranged between *nil* and 0·5. The following gives data for that area :—

Station.	Mean cloud amount.		
	Average actual, October 1894.	Average normal, October.	Variation from normal.
Quetta	0·1	0·4	− 0·3
Kurrachee	0·4	0·9	− 0·5
Jacobabad	0	0·4	− 0·4
Mooltan	0	0·3	− 0·3
Peshawar	0·5	1·4	− 0·9
Lahore	0·1	0·7	− 0·6
Murree	0·4	2·1	− 1·7

There was slightly more cloud in Rajputana than usual.

The mean amount of cloud was in marked defect at Quetta and the Punjab and Kashmir hill stations, as is shown by the following data :—

Station.	Mean cloud amount.		
	Average actual, October 1894.	Average normal, October.	Variation from normal.
Leh	1·7	3·8	− 2·1
Kailang	2·9	3·4	− 0·5
Murree	0·4	2·1	− 1·7

It was on the other hand considerably in excess at the hill stations in the North-Western Provinces and Sikkim. Thus at Darjeeling the mean cloud estimate of the month was 9·1, 3·6 above the normal of the month.

Skies were also clouded to a somewhat greater extent than usual in the west coast districts and North and Central Madras. Cloud was in defect in Southern India, as indicated by the returns for the stations given below :—

Station.	Mean cloud amount.		
	Average actual, October 1894.	Average normal, October.	Variation from normal.
Madras	5·4	6·1	− 0·7
Trichinopoly	5·7	7·5	− 1·8
Wellington	7·3	7·3	0

The chief features of the distribution of cloud during the month were as follows :—

(1) Slight excess of cloud in Burma and Assam.

(2) Large excess in Bengal, the Gangetic Plain, Central India, Chota Nagpur, the Central Provinces and the Deccan, the excess being greatest and most marked in the North-Western Provinces, Chota Nagpur and Bihar.

(3) Moderate deficiency in the Punjab, Sind and Baluchistan, where skies were remarkably serene and free from cloud.

(4) Slight excess in the Bombay and Madras Coast districts.

(5) Slight deficiency in the southern districts of Madras.

Rainfall.

The rainfall of October is due to the retreating south-west monsoon current. Over the whole of North-Western and Central India, the average rainfall of the month is less than 2 inches, and diminishes westwards to the Indus Valley, for which it is less than two-tenths of an inch. In the North and Central Deccan, Central Provinces, Bengal and the greater part of Burma the average rainfall ranges between 2 and 5 inches, whilst in Lower Burma and the Peninsula south of Lat. 13° N. it ranges between 5 and 13 inches, and is greatest in amount in the Madras coast districts from Vizagapatam to Cuddalore.

The rainfall of the month of October, 1894, occurred chiefly during the following periods :—

1st.—From the 1st to the 6th.—The rainfall during this period was due to the first cyclonic storm of the month, which advanced from the north-west angle of the Bay to the North-Western Provinces. Burma, Bengal, Orissa and Chota Nagpur received moderately heavy rain; but the chief feature of the storm was the excessive downpour it gave to the eastern and central districts of the North-Western Provinces on the 4th and 5th.

2nd.—The 11th to the 15th.—During this period Burma, Bengal, Malabar and Southern India received frequent showers.

3rd.—The 17th to the 26th.—During the first half of this period a diffused storm formed in the Bay which gave more or less general rain in the Peninsula. A second disturbance

which developed in the Arabian Sea on the 20th and following two days gave a remarkably heavy and abnormal downpour of rain to Gujarat, Kathiawar, Khandesh, Central India, the Central Provinces and the greater part of the Gangetic Plain. Hence the whole of India with the exception of Upper India received more or less general rain during this period.

The chief features of the rainfall distribution of the month were as follows :—

(1) No rain fell over nearly the whole of the Punjab, Sind and Rajputana.

(2) The rainfall of the month was in slight defect in Burma and in large excess in Tenasserim.

(3) It was in moderate excess in Bengal and Orissa and in large excess (relative to the normal of the period) in Assam, Chota Nagpur and Bihar.

(4) The rainfall of the month was in very large excess in the eastern and central divisions of the North-Western Provinces, Oudh, Central India, Gujarat and Kathiawar. The greater part of the North-Western Provinces received from five to ten times the normal fall of the period.

(5) The rainfall of the month was in large excess in the Central Provinces, Berar, Hyderabad and Madras East Coast (north), in which the excess ranged from 50 to 150 per cent. in amount.

(6) The rainfall was in moderate defect in the South Madras coast districts and in South Madras.

(7) The rainfall was in defect over the remainder of India, including the Punjab, Rajputana and Sind, but the deficiency was small and of little importance.

The following table gives a summary of the rainfall data of the month for the 51 meteorological divisions of India, based so far as possible on the rainfall statements of the month published by the Provincial Governments and other authorities :—

Province.	Division.	Rainy days.		Rainfall.		
		Actual, October 1894.	Normal, October.	Actual, October 1894.	Normal, October.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	16·03	10·29	+5·74
	Lower Burma*	?	?	7·02	8·74	−1·72
	Central do.*	?	?	5·28	6·65	−1·37
	Upper do.*	?	?	5·60	?	?
	Arakan*	?	?	8·76	9·53	−0·77
Bengal and Assam	Eastern Bengal	8·1	6·1	5·94	5·48	+0·46
	Assam (Surma)*	?	?	19·03	7·00	+12·03
	Do. (Brahmaputra)*	?	?	8·08	3·78	+4·30
	Deltaic Bengal	8·3	5·5	4·61	4·58	+0·03
	Central do.	7·1	4·7	5·30	3·90	+1·40
	North do.	10·2	4·5	9·69	4·94	+4·75
	Orissa	11·1	6·9	7·05	6·25	+0·80
	Chota Nagpur	8·9	4·2	6·73	2·85	+3·88
	Bihar (South)	8·5	3·0	7·59	3·13	+4·46
	Do. (North)	7·1	2·9	6·69	3·58	+3·11
North-Western Provinces and Oudh.	North-Western Provinces (East)	9·6	2·0	16·61	2·18	+14·43
	Oudh (South)	8·0	1·6	15·76	1·60	+14·16
	Do. (North)	7·5	1·5	11·26	1·61	+9·65
	North-Western Provinces (Central)	6·6	1·1	11·25	1·10	+10·15
	Do. do. (West)	1·8	0·8	1·57	0·61	+0·96
	Do. do. (Submontane)	4·1	1·2	5·90	1·40	+4·50
Punjab	Punjab (South)	0	0·4	0	0·15	−0·15
	Do. (Central)	0	0·5	0	0·34	−0·34
	Do. (Submontane)	0·1	0·6	0·02	0·38	−0·36
	Do. (Hill Districts)	1·3	1·3	0·52	0·90	−0·38
	Do. (North-West)	0·1	0·8	0·04	0·47	−0·43
	Do. (West)	0	0·2	0	0·10	−0·10
Bombay and Malabar Coast Districts (Madras).	Malabar	10·8	12·0	7·14	10·04	−2·90
	Madras (South Central)	10·2	8·2	7·05	5·92	+1·13
	Coorg	14·2	?	7·97	?	?
	Mysore*	?	?	5·96	5·75	+0·21
	Konkan	11·5	7·6	6·69	5·55	+1·14
	Bombay Deccan	8·3	7·5	4·90	5·02	−0·12
	Khandesh	6·8	5·6	4·48	3·61	+0·87

Province.	Division.	Rainy days. Actual, October 1894.	Rainy days. Normal, October.	Rainfall. Actual, October 1894.	Rainfall. Normal, October.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Central Provinces and Berar.	Berar*	?	?	4·11	2·69	+1·42
	Central Provinces (West)	6·5	2·6	5·09	2·08	+3·01
	Do. (Central)	6·8	2·4	4·79	1·85	+2·94
	Do. (East)	7·0	2·6	4·47	2·02	+2·45
Bombay (North)	Gujarat	4·8	2·3	6·54	1·36	+5·18
	Kathiawar	2·3	0·8	2·98	0·69	+2·29
	Sind	0	?	0	0·03	−0·03
Rajputana and Central India.	Central India (East)	5·5	?	5·61	1·58	+4·03
	Rajputana (East), Central India (West)	0·3	?	0·14	0·50	−0·36
	Rajputana (West)	0·1	?	0·03	0·08	−0·05
Madras	East Coast (North)	12·3	7·5	11·18	7·17	+4·01
	Do. (do). (a)	14·5	6·7	12·92	4·76	+8·16
	Hyderabad (South)*	?	?	4·44	2·36	+2·08
	Madras (Central)	8·4	6·6	6·16	5·55	+0·61
	East Coast (Central)	8·9	8·4	11·30	9·75	+1·55
	Do. (South)	9·3	9·2	6·72	8·34	−1·62
	Madras (South)	7·9	8·0	5·89	6·04	−0·15

* NOTE.—The figures entered against divisions marked with asterisk have been obtained from the weekly telegraphic reports.

Assam received abundant rain during the month. The chief periods of rainfall were the 1st to the 5th, the 9th to the 15th, and the 21st to the 27th. The heaviest falls were received during the last period. Cherra Punji recorded 12·36 inches on the 23rd and Langla in Sylhet 11·21 inches on the 25th. The total rainfall of the month was largely in excess over the whole province. The following gives comparative data for the two divisions of the province, based on the complete rainfall returns published in the *Assam Gazette*, and which differ to a slight extent from those given in the preceding rainfall table :—

Division.	Number of rainy days. Mean actual, October 1894.	Number of rainy days. Variation from normal.	Rainfall. Mean actual, October 1894.	Rainfall. Variation from normal.	Rainfall. Percentage variation from normal.
			Inches.	Inches.	
Surma	13·3	+7·1	20·46	+14·60	+249
Brahmaputra	12·4	+6·9	10·72	+6·97	+186

Rain fell more frequently than usual in Bengal, and the weather was more or less showery during nearly the whole month. The following gives a statement of the periods of more general rainfall :—

1st.—From the 2nd to the 6th.—East Bengal received light rain from the 2nd to the 5th, Bihar and Chota Nagpur moderately heavy rain from the 3rd to the 5th, South-West Bengal from the 3rd to the 6th and North Bengal on the 3rd and 4th. The rainfall during this period was lightest in the Bogra and Pabna districts of North Bengal. Light local showers also fell during the period from the 6th to the 12th, in Bengal except Sikkim and the northern districts which received a moderately heavy downpour on the 10th, 11th and 12th.

2nd.—From the 12th to the 17th.—The rainfall during this period was more scattered than in the previous period. Bihar received a general fall on the 12th and 13th, South-West Bengal on the 13th and 17th, North Bengal daily, and East Bengal light local showers throughout the period.

3rd.—From the 21st to the 26th.—North Bengal obtained moderately heavy rain during the whole period, more especially on the 25th and 26th, South-West and East Bengal, Chota Nagpur and Orissa moderate rain, chiefly on the 25th and 26th, and Bihar on the 24th and 25th.

The following gives a comparative statement of the rainfall data for each of the divisions of the province :—

Division.	Number of rainy days. Average actual, October 1894.	Number of rainy days. Variation from normal.	Rainfall. Average actual, October 1894.	Rainfall. Variation of actual from normal.	Rainfall. Percentage variation from normal.
			Inches.	Inches.	
Bengal (East)	8·1	+2·0	5·94	+0·46	+ 8
„ (North)	10·2	+5·7	9·69	+4·75	+ 96
„ (Deltaic)	8·3	+2·8	4·61	+0·03	+ 1
„ (Central)	7·1	+2·4	5·30	+1·40	+ 36
Orissa	11·1	+4·2	7·05	+0·80	+ 13
Chota Nagpur	8·9	+4·7	6·73	+3·88	+ 136
North Bihar	7·1	+4·2	6·69	+3·11	+ 87
South Bihar	8·5	+5·5	7·59	+4·46	+ 142

The preceding statement indicates that the number of rainy days during the month was nearly three times the normal number in Bihar and about twice the normal in Chota Nagpur, North Bengal and Orissa, and was slightly greater than usual in East, Central and Deltaic Bengal. The rainfall of the month was practically normal in East and Deltaic Bengal and Orissa and was more or less considerably in excess over the remainder of the province. The excess was large in amount in South Bihar, Chota Nagpur and North Bengal, which divisions received about twice the normal rainfall of the month The excess was relatively to the normal greatest in the districts for which data are given below:—

District.	Rainfall.			
	Average actual, October 1894.	Average normal, October.	Vartation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Hazaribagh . .	10·56	3·26	+7·30	+224
Gaya . . .	7·71	2·58	+5·13	+199
Patna . . .	8·46	2·97	+5·49	+185
Kuch Bihar . .	13·87	4·99	+8·88	+178
Shahabad . .	8·18	3·19	+4·99	+156
Malda . . .	9·24	3·62	+5·62	+155
Muzaffarpur . .	7·68	3·03	+4·65	+153
Purnea . . .	8·47	3·43	+5·04	+147
Darbhanga . .	6·51	2·72	+3·79	+139
Dinajpur . .	7·57	3·44	+4·13	+120

The rainfall of the month of October in the North-Western Provinces was remarkable for its intensity over the whole of the eastern, central and submontane districts. It occurred during the periods described below:—

1st:—From the 1st to the 6th.—The rainfall during this period was exceptionally heavy in the eastern and centra districts, and more especially in the following, for which daily averages are given:—

District.	Average actual rainfall in 24 hours preceding 8 A M of						Total of period.
	1st.	2nd.	3rd.	4th.	5th.	6th.	
	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inches.
Fyzabad . . .	1·92	7·85	2·37	1·39	1·56	0·02	15·11
Sultanpur . .	3·28	5·00	4·91	2·39	1·88	0·20	17·66
Partabgarh . .	3·88	3·18	3·63	4·45	1·56	0·02	16·72
Jaunpur . . .	4·23	4·30	2·45	1·74	0·18	0	12·90
Mirzapur . .	0·50	1·24	1·54	4·49	1·26	0·07	9·10
Azamgarh . .	1·01	5·92	1·70	1·02	1·19	0	10·84
Allahabad . .	3·93	3·38	1·51	5·66	1·76	0·01	16·25
Banda . . .	5·30	2·66	2·66	2·05	4·68	0·01	17·36
Fatehpur . .	3·57	4·70	2·31	2·52	3·76	0·08	16·94
Cawnpore . .	2·19	0·74	0·28	0·58	6·40	0·12	10·31

Falls of 10 inches or upwards in 24 hours were recorded at the following stations during this period:—

Date.	District.	Station.	Fall in 24 hours preceding 8 A.M. of date.
			Inches.
1st	Banda . . .	Karwi	12·62
2nd	Fyzabad . . .	Tanda . . .	16·67
"	Ditto . . .	Akbarpur . . .	11·64
"	Azamgarh .	Mahul . . .	10·28
4th	Mirzapur . . .	Mirzapur . . .	10·87
5th	Almora . . .	Champawat . .	10·00
6th	Naini Tal . . .	Naini Tal . . .	11·70

The districts of Jhansi, Agra, Muttra, Bulandshahr, Meerut, Muzaffarnagar and Saharanpur received light local showers of little importance during this period.

2nd.—From the 10th to the 12th, during which the eastern districts (including Jaunpur, Mirzapur, Allahabad, Ghazipur, Sultanpur and Fyzabad) received moderate rain.

3rd.—From the 19th to the 21st, when the eastern districts of the North-Western Provinces and Oudh obtained light to moderate rain.

4th.—The 24th and 25th, during which the eastern and central districts of the North-Western Provinces and Oudh received a heavy downpour. Falls of 5 inches in 24 hours were registered at several stations, including the following:—

Date.	District.	Station.	Fall in 24 hours preceding 8 A.M. of date.
			Inches.
24th . .	Fatehpur . .	Kalianpur . . .	6·00
" . .	Hamirpur .	Mandha . . .	5·36
" . .	Jhansi . .	Mahroni . . .	5·10

The total rainfall of the month was in excess over the whole province. The excess was moderate in amount in the western division, but was very large over the

remainder of the province. The following gives a summary of the data published in the Provincial Gazette :—

Division.	Number of rainy days.		Rainfall.		
	Actual, October 1894.	Variation.	Actual, October 1894.	Normal, October.	Percentage variation.
			Inches.	Inches.	
Oudh North	7·5	+6·0	11·26	+9·65	+599
Do. South	8·0	+6·4	15·76	+14·16	+885
N.-W. P. East	9·6	+7·6	16·61	+14·43	+662
Do. Central	6·6	+5·5	11·25	+10·15	+923
Do. Submontane	4·1	+2·9	5·90	+4·50	+321
Do. West	1·8	+1·0	1·57	+0·96	+157

The table indicates that the eastern and central divisions of the North-Western Provinces and Oudh received average total amounts ranging from seven to ten times the normal falls of the month.

The rainfall in the North-Western Provinces was in fact the heaviest on record in the month of October, and, as might be expected, inflicted enormous injury upon the crops. The following gives data for the districts in which the rainfall was most excessive :—

District.	Rainfall.		
	Average actual, October 1894.	Average normal, October.	Percentage variation.
	Inches.	Inches.	
Allahabad	20·04	1·96	+922
Banda	23·11	1·70	+1,259
Fatehpur	23·61	1·28	+1,745
Fyzabad	21·14	1·92	+1,001
Sultanpur	27·46	2·09	+1,214
Partabgarh	24·29	1·77	+1,272
Jaunpur	21·97	2·81	+682
Azamgarh	18·19	2·34	+677

These districts define the area of most excessive rainfall. A noteworthy feature of the precipitation, it may be pointed out, was the local torrential downpours in the area of excessive rainfall. The most remarkable were the following cases in which the rainfall of the month was nearly as large as the normal rainfall of the year :—

District.	Station.	Rainfall.			Average annual rainfall.
		Actual, October 1894.	Normal, October	Percentage variation.	
		Inches.	Inches.		Inches.
Sultanpur	Kadipur	40·10	2·58	+1,454	37·23
Fatehpur	Khakreru	33·04	1·44	+2,194	35·29
Banda	Kamasin	32·73	1·71	+1,814	37·22
Fyzabad	Tanda	31·34	2·06	+1,421	35·78

No rain fell during the month over the whole of the Punjab plains. Showers were received in the Simla and Kangra hill districts on the 5th, 6th and 7th. The normal rainfall of the month ranges from a tenth of an inch in the western districts to an inch in the hill division. The rainfall of the month was hence in defect by small amounts, the deficiency ranging from a tenth of an inch in the western division to four-tenths in the north-west, submontane and hill divisions.

Light showers fell in Kashmir during the period from the 13th to the 16th.

No rain was received over by far the greater part of Rajputana during the month. The Kotah State obtained light showers on the 23rd and 24th, during the third disturbance of the month.

Central India obtained unusually heavy rain. The eastern states, including Rewah and Bundelkhand, had a moderately heavy burst of rain during the first five days of the month. The whole area received heavy rain between the 20th and the 27th from the third disturbance of the month. The total rainfall of the month was hence largely in excess, as is shown by the following comparative statement giving data for the larger states or divisions of that area :—

State.	Number of rainy days.		Rainfall.			
	Actual, October 1894.	Normal, October.	Actual, October 1894.	Normal, October.	Variation from normal.	Percentage variation.
			Inches.	Inches.	Inches.	
Bhopal	4·9	?	4·54	1·33	+3·21	+241
Gwalior	3·7	?	3·16	0·74	+2·42	+327
Indore	9·0	?	5·23	1·24	+3·99	+322
Rewah	9·6	?	11·82	2·46	+9·36	+380
Budelkhand	6·0	?	7·51	1·05	+6·46	+615

The data show that the rainfall was almost as largely in excess in Rewah and Bundelkhand as in the eastern districts of the North Western Provinces.

The Central Provinces and Berar received rain during each of the three periods of disturbance of the month. The heaviest and most general fall occurred during the third disturbance, between the 23rd and 26th. The total rainfall of the month was in considerable to large excess over the whole area as indicated by the following data :—

Division.	Number of rainy days.		Rainfall.		
	Actual, October 1894.	Variation from normal.	Actual, October 1894.	Variation from normal.	Percentage variation.
			Inches.	Inches.	
Central Provinces (East) .	7 0	+4·4	4·47	+2·45	+121
Ditto (Central)	6·8	+4·4	4·79	+2·94	+159
Ditto (West) .	6·5	+3·9	5·09	+3·01	+145
Berar	5 4	?	4·09	?	?

The following is a statement of the chief periods of rainfall in the Bombay Presidency during the month of October :—

1st.—From the 1st to the 6th.—The Konkan districts received moderate daily rain during this period and the Deccan districts occasional local showers.

2nd.—From the 10th to the 16th, during which the Deccan and Konkan coast districts received frequent showers. The 14th was the day of most general rainfall during this period.

3rd.—The 20th to the 26th.—General rain occurred during this period over the whole Presidency with the exception of Sind. The rainfall was due to the double disturbance of the third and fourth weeks of the month, and was abundant over the whole area. It was excessive in the districts directly affected by the cyclonic storm on the 25th and 26th, *viz.*, Kathiawar and Gujarat. The following large falls in 24 hours were registered in that area during this period :—

Date.	District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
25th .	Surat	Surat	10·12
		Rander	6·07
		Jalalpore . . .	5·06
		Sachin	6·99
26th .	Kaira	Cambay . . .	6·90
	Ahmedabad . . .	Gogha	5·15
	Kathiawar . . .	Palitana . . .	10·00
		Songad . . .	8·10
		Mahua	6·75

The following is a summary of the rainfall data for the month published in the *Bombay Gazette* :—

Division.	No. of rainy days.		Rainfall.		
	Actual, October 1894.	Variation from normal.	Actual October 1894.	Variation from normal.	Percentage variation.
			Inches.	Inches.	
Konkan . . .	11·5	+3·9	6·69	+1·14	+21
Bombay Deccan . .	8·3	+0·8	4·90	−0·12	−2
Khandesh . . .	6·8	+1·2	4·48	+0·87	+24
Gujarat	4·8	+2·5	6·54	+5·18	+381
Kathiawar . . .	2·3	+1·5	2·98	+2·29	+332
Sind	0	?	0	−0·03	−100

The rainfall of the Madras Presidency occurred chiefly in connection with the double disturbance of the third and fourth weeks of the month. The Ganjam, Vizagapatam, Godavari and Kistna districts received light to moderate showers on the 1st and 2nd of the month. Light to moderate rain fell between the 9th and 13th, during the interval between the disappearance of the first cyclonic storm of the month and the formation of the second depression and storm of the month in the Bay. The heaviest rainfall during this period was received in the Anantapur, Bellary, and Karnool districts on the 12th and 13th. General rain was received from the 16th to the 24th, during the second disturbance or cyclonic storm and for two or three days after it broke up in the Carnatic. The rainfall was light in the southern districts and was heaviest in the coast districts from Vizagapatam to Nellore. The following gives mean rainfall data for the districts of heaviest rainfall from the 19th to the 24th :—

District.	Average actual rainfall in inches during the 24 hours preceding 8 A.M. of the						Average rainfall during storm.
	19th.	20th.	21st.	22nd.	23rd.	24th.	
							Inches.
Vizagapatam	1·83	0·56	0·13	1·74	2·52	0·70	7·48
Godavari . .	1·48	1·37	1·06	1·94	1·72	1·77	9·34
Kistna . . .	1·01	1·53	1·73	1·05	0·89	0·49	6·70
Nellore . . .	0·66	2·50	4·11	0·69	0·75	0·27	8·98

The rainfall was more uniformly distributed than usual in these cyclonic downpours. Falls of 6 inches or over in 24 hours were reported at two stations in these districts during this period :—

DATE.	DISTRICT.	Station.	Rainfall 24 hours preceding 8 A.M. of date.
			Inches.
19th .	Vizagapatam . .	Waltair . .	7·71
20th .	Nellore . . .	Ongole . .	7·52
21st .	Ditto . . .	Ongole . .	7·06

This heavy rainfall gave rise to severe floods, which breached the East Coast Railway in some places.

Light to moderate rain was received during the last three days of the month over the Presidency generally. The falls were light in the northern coast districts and the Deccan districts and also in the southern districts including Tinnevelly, Madura and Trichinopoly. The central and southern coast districts on the other hand received moderately heavy and general rain, giving average amounts ranging between 1 and 2 inches.

The total rainfall of the month was in moderate to large excess in the coast districts, which received heavy rain during the second disturbance of the month. It was normal or in slight to moderate excess in the North Coromandel coast districts, the Deccan districts and in Salem and Coimbatore. It was in moderate to largish defect in Tanjore (46 per cent.), Tinnevelly (39 per cent.), Malabar (31 per cent), South Canara 24 per cent, and South Arcot 21 per cent.

The following table gives comparative data for each of the 22 collectorates of the Presidency, based on the complete rainfall data published in the *Madras Gazette* :—

DISTRICT.	No. of rainy days.		Rainfall.			Percentage variation.
	Actual, October 1894.	Normal, October.	Actual, October 1894.	Normal, October.	Variation from normal.	
			Inches.	Inches.	Inches.	
Ganjam . .	11·9	7·5	7·68	7·82	−0·14	−2
Vizagapatam .	13·8	7·4	13·02	6·47	+6·55	+101
Godavari . .	12·3	7·8	13·31	7·71	+5·60	+ 73
Kistna .	10·1	7·5	9·14	6·21	+2·93	+ 47
Nellore . .	8·9	8·4	11·30	9·75	+1·55	+ 16
Chingleput .	9·8	9·3	8·22	9·89	−1·67	− 17
Madras . .	11·0	10·0	11·02	10·99	+0·03	0
North Arcot .	11·0	8·3	7·36	7·23	+0·13	+ 2
South Arcot .	8·8	9·4	6·93	8·79	−1·86	− 21
Tanjore . .	7·5	10·1	4·81	8·92	−4·11	− 46
Trichinopoly .	10·5	9·3	6·63	6·91	−0·28	− 4
Madura . .	9·9	8·0	7·97	6·34	+1·63	+ 26
Tinnevelly .	5·3	6·8	3·41	5·63	−2·22	− 39
Malabar . .	10·2	12·1	6·51	9·48	−2·97	− 31
South Canara .	11·9	11·8	8·25	10·84	−2·59	− 24
Salem . .	10·4	8·6	6·97	6·26	+0·71	+ 11
Coimbatore .	9·8	7·8	7·16	5·50	+1·66	+ 30
Nilgiris . .	14·8	12·1	8·92	9·24	−0·32	− 3
Cuddapah .	9·1	7·0	7·31	6·53	+0·78	+ 12
Anantapur .	8·6	6·3	6·53	5·46	+1·07	+ 20
Bellary . .	8·2	6·3	4·48	4·76	−0·28	− 6
Kurnool . .	7·6	6·0	6·01	5·26	+0·75	+ 14

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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. Burma Coast and Bay Islands.		...	...	0	...	...	...	...	...	...	...	86·8	−0·4	74·9	−0·1	80·9	−0·3	11·9	...	...	...	...	18·4
Bay Islands	Port Blair	61	29·864	?	29·837	29·957	10th	29·749	30th	·208	80·3	86·0	?	77·3	?	81·6	?	8·7	89·7	28th	73·7	4th	16·0
	Camorta*	?	29·902	?	?	29·968	10th	29·818	16th	·150	79·0	84·5	?	75·0	?	79·8	?	9·5	88·3	3rd	72·7	22nd & 31st,	15·6
Tenasserim	Mergui	96	29·836	?	29·864	29·923	31st	29·738	3rd	·185	78·9	86·7	?	72·6	?	79·6	?	14·1	90·9	20th & 24th,	69·6	19th	21·3
	Tavoy	26	29·912	?	29·869	29·973	9th	29·843	16th	·130	79·2	86·9	?	71·8	?	79·4	?	15·1	91·2	23rd	68·2	18th	23·0
	Moulmein	94	29·852	+·006	29·884	29·910	9th	29·777	1st	·133	78·1	87·8	−0·4	74·4	0	81·1	−0·2	13·4	91·5	2 days	71·8	22nd	19·7
	Toungoo	181	29·740	−·004	29·864	29·823	21st	29·624	1st	·199	78·6	89·6	−0·1	74·3	−0·2	82·0	−0·2	15·3	92·7	26th	70·2	20th	22·5
Lower Burma	Rangoon	41	29·892	−·001	29·870	29·969	9th	29·794	1st	·175	78·1	87·7	+0·5	75·0	−0·6	81·4	−0·1	2·7	91·7	2 days	72·9	2 days	18·8
	Bassein	27	29·901	+·001	29·863	29·973	21st	29·799	1st	·174	78·7	87·1	+0·1	74·4	−0·6	80·8	−0·3	12·7	90·7	2 days	72·9	20th	17·8
	Diamond Island	41	29·877	−·001	29·853	29·941	22nd	29·796	1st	·145	81·1	85·0	−1·4	77·9	+1·7	81·5	+0·2	7·1	88·6	2 days	74·4	12th	14·2
Arakan	Akyab	20	29·894	−·003	29·857	29·996	21st	29·724	2nd	·272	79·6	86·7	−1·2	76·1	−0·7	81·4	−1·0	10·6	89·7	17th	74·2	3 days	15·5
2. Burma Inland		...	...	−·012	...	...	...	...	...	...	...	88·0	−1·0	71·4	+1·1	79·7	+0·1	16·6	...	...	...	...	25·1
Central Burma	Thayetmyo	134	29·780	−·012	29·856	29·871	21st	29·629	1st	·242	79·2	89·6	−0·5	73·9	−0·1	81·8	−0·3	15·7	91·1	6 days	69·1	20th	22·0
	Minbu	?	29·749	?	?	29·842	2 days	29·611	1st	·231	78·2	91·9	?	74·0	?	83·0	?	17·9	95·6	3 days	71·1	2 days	24·5
	Yamethin	?	29·257	?	?	29·341	21st	29·127	1st	·214	78·9	93·0	?	73·2	?	83·1	?	19·8	96·1	23rd	69·0	20th	27·1
	Fort Stedman	?	27·003	?	?	27·114	18th	26·852	1st	·262	71·1	84·0	?	65·1	?	74·6	?	18·9	86·7	1st	58·0	20th	28·7
Upper Burma	Mandalay	?	29·653	?	?	29·745	21st	29·529	1st	·216	79·9	89·5	?	74·9	?	82·2	?	14·6	93·0	2 days	70·6	21st	22·4
	Kindat	?	29·546	?	?	29·657	18th	29·420	1st	·237	76·0	86·0	−1·4	73·5	+2·3	79·8	+0·5	12·5	89·8	3rd	69·5	10th	20·3
	Lashio	?	27·153	?	?	27·269	21st	27·027	5th	·242	69·5	81·4	?	64·1	?	72·8	?	17·3	87·6	6th	57·0	21st	30·6
	Bhamo	?	29·531	?	?	29·629	21st	29·402	26th	·227	75·9	88·5	?	72·3	?	80·4	?	16·2	93·1	4th	67·8	2 days	25·3
3. Assam		...	...	−·046	...	...	...	...	...	...	...	84·8	−1·5	73·4	+1·3	79·1	−0·1	11·3	...	...	...	...	26·0
Assam (Surma)	Silchar	104	29·807	?	29·863	29·904	22nd	29·631	3rd	·273	76·5	86·4	−2·4	73·3	+0·9	79·9	−0·8	13·1	94·0	4th	66·3	30th	27·7
Brahmaputra	Sibsagar	333	29·570	−·048	29·862	29·684	31st	29·425	3rd	·259	75·5	83·4	−1·7	72·6	+1·7	78·0	0	10·8	91·7	9th	64·0	31st	27·7
	Dhubri	115	29·771	−·044	29·841	29·884	18th	29·603	2nd	·281	76·3	84·5	−0·5	74·4	+1·4	79·5	+0·5	10·1	89·2	9th	66·6	30th	22·6
4 Bengal and Orissa		...	...	−·037	...	...	...	...	...	...	...	86·5	−0·7	75·0	+1·7	80·8	+0·5	11·5	...	...	...	...	23·8
East Bengal	Chittagong	87	29·813	−·016	29·848	29·917	21st	29·629	3rd	·288	78·5	86·0	−0·4	74·0	+0·3	80·0	−0·1	12·0	89·2	2 days	68·1	31st	21·1
	Lungleh	?			Not r	ecorded.					67·6	73·7	?	64·7	?	69·2	?	9·0	77·9	2nd	60·2	2nd	17·7
	Noakhali	43	29·849	?	29·839	29·981	19th	29·657	3rd	·324	79·6	85·3	?	74·7	?	80·0	?	10·6	87·5	4 days	65·9	31st	21·6
	Comilla	36	29·858	?	29·842	29·961	21st	29·672	3rd	·289	79·5	87·6	?	74·6	?	81·1	?	13·0	91·8	1st	65·8	31st	26·0
	Sirajganj	49	29·830	?	29·829	29·946	18th	29·639	2nd	·307	78·5	86·1	?	75·2	?	80·7	?	10·9	90·3	9th	65·8	31st	24·5
	Narayanganj	26	29·862	−·018	29·836	29·961	21st	29·657	3rd	·304	80·5	87·1	−0·9	76·7	+1·6	81·9	+0·4	10·4	89·6	19th	67·7	31st	21·9
	Barisal	13	29·871	−·028	29·829	29·979	19th	29·651	3rd	·328	80·5	86·7	−0·8	75·7	+1·3	81·2	+0·3	11·0	89·8	3 days	67·9	31st	21·9
	Mymensingh	59	29·821	−·043	29·832	29·920	18th	29·647	3rd	·273	78·6	85·6	−1·2	74·7	+1·6	80·2	+0·2	10·9	50·7	9th	65·1	31st	25·6
Deltaic Bengal	Faridpur	46	29·848?	?	29·842	29·955	18th	29·625	3rd	·330	80·3	86·2	?	76·2	?	81·2	?	10·0	89·3	9th	67·4	31st	21·9
	Jessore	33	29·839	−·041	29·819	29·958	18th	29·592	3rd	·366	80·2	88·0	−0·6	74·8	−0·1	81·4	−0·4	13·2	90·5	2 days	65·4	30th	25·1
	Calcutta	21	29·853	−·037	29·820	29·971	18th	29·590	3rd	·381	79·5	86·0	−0·6	75·4	+1·0	80·7	+0·2	10·6	88·6	2 days	65·7	31st	22·9
	Saugor Island	25	29·846	−·036	29·815	29·963	18th	29·577	3rd	·386	81·2	87·0	+0·2	77·7	+1·6	82·4	+0·9	9·3	89·2	5 days	67·9	31st	21·3
	Krishnagar	47	29·826	?	29·822	29·938	18th	29·575	3rd	·363	80·6	87·8	?	74·8	?	81·4	?	13·0	90·8	5th	62·7	31st	28·1
	Midnapore	149	29·730	?	29·827	29·846	18th & 19th	29·455	3rd	·391	80·0	89·0	?	74·6	?	81·8	?	14·4	91·8	8th	64·2	31st	27·6

* Mean of 30 days.

I.

in India, Burma, etc., in October 1894.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st October to 31st October.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10·36	9·40	−0·80	...	...	...	...	**1. Burma Coast and Bay Islands.**	
1	2	2	3	7	3	5	6	2	8·8	6·4	+ 38	89	·921	7·0	17	?	?	15·20	12·17	+3·03	15·20	12·17	+ 3·03	4·43	Port Blair	Bay Islands.
9	...	1	4	4	6	5	1	...	4·5†	?	?	89	·884	7·3	18	?	?	20·10	?	?	20·10	?	?	3·21	Camorta.*	
...	6	4	6	3	...	1	3	8	1·0	1·5	− 33	84	·824	4·3	11	?	?	5·73	13·54	− 7·81	5·73	13·54	− 7·81	1·65	Mergui	Tenasserim.
21	1	5	1	...	1	1	...	1	1·5	?	?	81	·798	2·8	11	?	?	14·70	?	?	14·70	?	?	6·66	Tavoy.	
...	1		7	9	1	4	2	1	3·6	1·7	+112	87	·838	6·2	11	11·55	−0·55	12·37	8·10	+ 4·27	12·37	8·10	+ 4·27	4·00	Moulmein.	
11	7	...	...	10	3	...	...	...	1·7	1·8	− 5	88	·877	4·7	13	10·55	+2·45	6·14	6·76	− 0·62	6·14	6·76	− 0·62	1·18	Toungoo.	
...	...	6	8	3	3	7	3	1	3·0‡	3·2	− 6	91	·881	5·2	9	9·09	−0·09	4·25	6·74	− 2·49	4·25	6·74	− 2·49	1·04	Rangoon	Lower Burma.
3	...	4	8	...	2	8	4	2	3·3	2·5	+ 32	90	·890	4·8	12	12·18	−0·18	10·13	8·21	+ 1·92	10·13	8·21	+ 1·92	2·39	Bassein.	
1	3	10	6	3	...	4	3	1	9·4	6·4	+ 47	83	·874	6·1	10	11·60	−1·60	6·58	9·22	− 2·64	6·58	9·22	− 2·64	1·82	Diamond Island.	
...	7	17	6	...	1	...	...	...	2·5	2·3	+ 9	92	·926	6·2	9	8·64	+0·36	8·42	10·44	− 2·02	8·42	10·44	− 2·02	1·86	Akyab	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5·30	5·57	−2·07	...	...	...	...	**2. Burma Inland.**	
...	2	2	3	8	10	2	1	3	3·2	3·1	+ 3	85	·838	6·4	5	7·91	−2·91	2·11	4·24	− 2·13	2·11	4·24	− 2·13	0·87	Thayetmyo	Central Burma.
7	1	...	2	16	2	...	2	1	3·8	?	?	86	·838	1·8	3	?	?	1·62	?	?	1·62	?	?	0·79	Minbu.	
5	1	1	...	22	2	...	...	...	4·4	?	?	85	·837	2·3	8	?	?	5·82	?	?	5·82	?	?	2·80	Yamethin.	
18	1	2	...	...	...	10	...	...	?	?	?	89	·688	5·3	12	?	?	6·66	?	?	6·66	?	?	2·60	Fort Stedman.	
6	2	...	...	6	11	6	...	...	2·9	?	?	83	·839	4·4	11	?	?	14·21	?	?	14·21	?	?	4·36	Mandalay	Upper Burma.
25	2	...	1	1	...	1	...	1	0·9	?	?	98	·884	7·8	8	?	?	4·90	6·90	− 2·00	4·90	6·90	− 2·00	1·22	Kindat.	
...	14	16	...	1	...	...	...	...	?	?	?	92	·658	6·2	6	?	?	3·44	?	?	3·44	?	?	1·00	Lashio.	
24	3	2	...	1	...	1	...	...	1·6	?	?	92	·818	5·1	7	?	?	3·67	?	?	3·67	?	?	1·07	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10·98	4·61	+6·36	...	...	...	...	**3. Assam.**	
29	...	...	1	...	1	...	...	...	1·5	2·1	− 29	92	·843	8·1	17	6·30	+10·70	20·14	5·28	+14·86	20·14	5·28	+14·86	5·10	Silchar	Assam (Surma).
7	...	3	2	6	3	10	...	...	2·4	2·0	+ 20	96	·854	7·0	11	7·45	+3·55	6·20	5·07	+ 1·13	6·20	5·07	+ 1·13	1·21	Sibsagar	Brahmaputra.
4	2	8	7	3	...	6	1	...	3·5	2·9	+ 21	92	·840	6·4	12	3·50	+8·50	6·59	3·49	+ 3·10	6·59	3·49	+ 3·10	3·15	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6·37	4·91	+1·07	...	...	...	...	**4. Bengal and Orissa.**	
...	...	10	7	9	2	2	1	...	3·4	3·0	+ 13	90	·876	6·3	7	6·64	+0·36	7·71	5·23	+ 2·48	7·71	5·23	+ 2·48	3·01	Chittagong	East Bengal.
...	...	...		Not	recorded.			...	?	?	?	94	·640	?	17	?	?	17·96	?	?	17·96	?	?	3·40	Lungleh.	
...	1	7	11	5	2	4	1	...	3·1	?	?	91	·923	3·0	14	6·95	+7·05	6·89	6·86	+ 0·03	6·89	6·86	+ 0·03	0·90	Noakhali.	
2	3	1	7	4	13	1	...	...	3·5*	?	?	91	·921	4·0	5	5·72	−0·72	4·21	4·23	− 0·02	4·21	4·23	− 0·02	2·40	Comilla.	
11	2	...	3	3	6	4	1	1	2·0	?	?	89	·871	5·9	4	5·05	−1·05	2·99	4·38	− 1·39	2·99	4·38	− 1·39	1·26	Sirajganj.	
2	3	3	3	9	4	5	1	1	4·8	2·3	+109	87	·903	5·6	8	5·27	+2·73	4·43	4·52	− 0·09	4·43	4·52	− 0·09	1·30	Narayanganj	
20	3	2	...	2	1	3	...	...	2·5	?	?	86	·903	6·1	5	5·90	−0·90	4·42	5·26	− 0·84	4·42	5·26	− 0·84	1·84	Barisal.	
2	4	5	6	5	3	2	3	1	2·8	?	?	90	·881	4·6	10	5·50	+4·50	7·31	5·62	+ 1·69	7·31	5·62	+ 1·69	1·45	Mymensingh.	
10	3	...	1	6	8	3	...	...	2·6	?	?	87	·903	3·8	8	5·30	+2·70	3·45	4·30	− 0·85	3·45	4·30	− 0·85	0·92	Faridpur	Deltaic Bengal.
4	...	1	1	14	5	3	1	2	2·5	2·1	+ 19	90	·933	4·7	7	5·73	+1·27	2·76	4·42	− 1·66	2·76	4·42	− 1·66	0·97	Jessore.	
15	...	2	1	3	4	4	1	1	2·2	3·2	− 31	88	·887	4·4	12	5·45	+6·55	4·41	4·08	+ 0·33	4·41	4·08	+ 0·33	1·14	Calcutta.	
...	3	9	2	2	8	6	1	...	10·3	6·5	+ 58	88	·950	7·1	14	7·82	+6·18	11·59	8·14	+ 3·45	11·59	8·14	+ 3·45	2·16	Saugor Island.	
...	1	1	5	6	6	6		1	3·8	?	?	82	·862	5·5	7	5·30	+1·70	2·90	4·19	− 1·29	2·90	4·19	− 1·29	1·54	Krishnagar.	
6	6	4	...	5	8	2	...	...	2·6	?	?	85	·875	3·2	9	5·25	+3·75	3·96	4·78	− 0·82	3·96	4·78	− 0·82	1·07	Midnapore.	

* Mean of 30 days. † Mean of 29 days. ‡ Mean of 23 days.

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

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.
Central Bengal	Bankura*	298	29·548?	?	29·800?	29·660	18th	29·291	3rd	·369	78·7	87·4	?	74·5	?	81·0	?	12·9	90·1	4 days	64·7	31st	25·4
	Raniganj	334	29·540	?	29·827	29·660	18th	29·269	3rd	·391	78·1	87·7	?	74·3	?	80·9	?	13·4	90·7	6th	64·0	31st	26·7
	Burdwan	99	29·771	−·044	29·818	29·893	18th	29·500	3rd	·393	79·2	87·9	−0·8	76·1	+1·4	82·0	+0·3	11·8	91·2	2 days	67·2	31st	24·0
	Naya Dumka	489	29·375	?	29·826	29·496	29th	29·142	3rd	·354	78·5	86·6	?	73·9	?	80·3	?	12·7	90·1	8th & 9th	63·0	31st	27·1
	Berhampore	67	29·807	−·044	29·823	29·919	29th	29·573	3rd	·346	79·6	86·6	−1·1	76·1	+1·6	81·4	+0·3	10·5	90·6	8th	68·7	31st	21·9
	Rampur Boalia.	70	29·796	?	29·816	29·907	18th	29·589	3rd	·318	80·7	86·5	?	75·7	?	81·1	?	10·8	91·1	9th	66·1	31st	25·0
	Malda	72	29·789	?	29·814	29·932	29th	29·587	3rd	·345	79·2	87·8	?	75·1	?	81·5	?	12·7	93·1	8th	64·0	31st	29·1
	Bogra	61	29·909	−·0297	29·823	29·923	18th	29·633	2nd	·290	79·8	87·1	+0·2	74·9	+2·6	81·0	+1·4	12·2	91·7	9th	66·7	2 days	25·0
North Bengal	Dinajpur	123	29·762	−·037	29·840	29·884	29th	29·576	2nd	·308	78·6	86·2	−1·2	74·9	+2·8	80·6	+0·8	11·3	91·6	2 days	64·8	28th	26·8
	Rangpur	123	29·754	?	29·832	29·878	29th	29·581	2nd	·297	79·4	86·7	?	74·6	?	80·7	?	12·1	92·3	9th	66·7	3 days	25·6
	Jalpaiguri	284	29·600	−·044	29·846	29·721	18th	29·423	2nd	·298	77·0	84·9	−1·4	72·8	+3·6	78·9	+1·1	12·1	91·9	9th	61·6	31st	30·3
Orissa	Balasore	56	29·810	−·0567	29·813	29·923	19th	29·529	3rd	·394	79·4	87·4	−0·4	75·0	+1·9	81·2	+0·8	12·4	90·4	15th	65·8	31st	24·6
	False Point	21	29·849	−·037	29·812	29·954	19th	29·606	2nd	·348	81·0	86·7	−0·6	76·3	+1·6	81·5	+0·5	10·4	89·5	6th	70·4	31st	19·1
	Cuttack	80	29·783	−·045	29·807	29·888	19th	29·545	3rd	·343	80·8	88·4	−1·5	76·9	+2·4	82·7	+0·5	11·5	92·2	15th	71·3	31st	20·9
	Shortt's Island	?	29·848	?	?	29·976	19th	29·590	3rd	·386	82·7	88·0	?	78·1	?	83·1	?	9·9	91·2	9th	73·6	12th & 28th	17·6
	Puri	15	29·846	?	29·801	29·942	19th	29·611	3rd	·331	80·8	87·1	?	77·3	?	82·2	?	9·8	90·7	6th & 7th.	73·6	31st	17·1
5. Gangetic Plain and Chota Nagpur.		...	...	−·049	...	...	...	...	...	...	...	85·7	−2·5	72·2	+3·0	79·0	+0·2	13·5	...	...	...	...	30·5
Chota Nagpur	Hazaribagh	2,007	27·845	−·052	29·812	27·959	18th	27·608	3rd	·351	72·9	82·0	−1·1	68·6	+1·8	75·3	+0·4	13·4	87·2	10th	57·7	31st	29·5
	Ranchi	2,128	27·728	?	29·810	27·840	19th	27·482	3rd	·358	72·7	81·1	?	68·3	?	74·7	?	12·8	84·0	9th	56·0	31st	28·0
	Daltonganj	730?			Not	recorded.					75·4	86·3	?	71·6	?	79·0	?	14·7	90·3	1st & 10th.	56·0	31st	34·3
	Chaibassa	760	29·093	−·052	29·805	29·213	19th	28·799	3rd	·414	78·4	88·2	+0·1	73·7	+3·4	81·0	+1·8	14·5	90·4	4 days	63·4	31st	27·0
Bihar, South	Gaya	375	29·486	−·047	29·819	29·634	29th	29·260	4th	·374	77·9	87·3	−2·0	74·5	+3·6	80·9	+0·8	12·8	91·4	2 days	64·2	31st	27·2
	Dehri	351	29·501	?	29·809	29·636	29th	29·250	4th	·386	79·1	86·1	?	73·0	?	79·6	?	13·1	90·3	3 days	61·0	31st	29·3
	Patna	183	29·686	−·047	29·823	29·818	29th	29·474	3rd	·344	79·3	85·4	−2·9	74·8	+2·3	80·1	−0·3	10·6	90·5	11th	64·3	2 days	26·2
	Arrah	190	29·663	?	29·807	29·792	29th	29·448	3rd	·344	78·4	86·9	?	74·5	?	80·7	?	12·4	92·4	10th	64·0	28th & 31st,	28·4
	Buxar	239	29·617	?	29·814	29·746	29th	29·405	3rd & 4th	·341	78·4	85·4	?	73·6	?	79·5	?	11·8	90·5	10th	62·4	30th & 31st	28·1
Bihar, North	Purnea	125	29·742	−·044	29·821	29·882	29th	29·542	3rd	·340	78·4	86·5	−1·0	74·4	+3·2	80·5	+1·1	12·1	91·7	10th	63·3	30th	28·4
	Bhagalpur	160	29·696?	?	29·810?	29·833	29th	29·500	2nd	·333	79·9	87·4	?	73·0	?	80·2	?	14·4	92·2	10th	62·1	30th	30·1
	Darbhanga	166	29·687	−·055	29·819	29·829	29th	29·499	3rd	·330	78·5	85·8	−0·5	74·9	+1·5	80·4	+0·5	10·9	92·5	10th	65·2	3 days	27·3
	Muzaffarpur	178	29·687	?	29·820	29·814	29th	29·491	3rd	·323	77·8	85·9	?	73·8	?	79·8	?	12·1	92·7	10th	62·3	31st	30·4
	Motihari	224	29·638	?	29·822	29·768	29th	29·460	2nd	·308	77·6	86·1	?	71·6	?	78·9	?	14·5	92·5	10th	59·4	29th	33·1
	Chapra	181	29·677	?	29·814	29·810	29th	29·468	3rd	·342	78·4	86·1	?	74·2	?	80·2	?	11·9	91·8	10th	63·6	31st	28·2
N.-W. Provinces (Eastern Districts).	Benares	267	29·592	−·046	29·819	29·721	29th	29·363	4th	·358	76·3	85·4	−4·5	71·9	+3·2	78·7	−0·7	13·5	90·3	10th	59·3	30th & 31st	31·0
	Allahabad	309	29·550	−·048	29·819	29·686	29th	29·317	1st	·369	77·0	85·2	−4·7	71·7	+4·1	78·5	−0·3	13·5	91·6	11th	58·4	30th & 31st	33·2
N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·593	−·050	29·811	29·715	29th	29·412	2nd	·305	77·3	84·8	−3·9	72·5	+2·3	78·6	−0·8	12·3	90·4	10th & 11th.	62·3	31st	28·1
Oudh, South	Lucknow	370 / 368(a)	29·487	−·046	29·822	29·614	29th	29·233	5th	·381	76·5	86·0	−4·9	69·9	+4·3	78·0	−0·3	16·1	92·8	16th	55·0	31st	37·8
Oudh, North	Bahraich	403	29·445	?	29·816	29·566	18th	29·253	5th	·313	76·1	85·9	?	70·8	?	78·4	?	15·1	91·4	10th	59·0	31st	32·4
N.-W. Provinces (Central).	Cawnpore	416	29·442	?	29·823	29·563	29th	29·228	5th	·335	76·0	85·0	?	69·5	?	77·3	?	15·5	91·8	15th	56·0	31st	35·8
	Mainpuri	516	29·341	?	29·825	29·471	29th	28·076	5th	·395	74·1	87·6	?	67·9	?	77·8	?	19·7	92·8	10th & 15th.	54·6	31st	38·2

* Mean of 30 days.
(a) 368 feet from 6th October 1894.

I—*continued.*

in India, Burm a, etc., in October 194—continued.

Wind Direction. Number of Winds from: N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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. 1894.	Normal rainfall for period, 1st Oct. to 31st Oct.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
16	...	1	3	3	4	1	1	1	3·0	?	?	87	·850	5·0	7	5·50	+ 1·50	3·22	4·15	— 0·93	3·22	4·15	— 0·93	0·47	Bankura* .	CENTRAL BENGAL.
17	1	1	2	3	2	2	2	1	2·8	?	?	89	·866	4·1	8	4·00	+ 4·00	3·96	3·41	+ 0·55	3·96	3·41	+ 0·55	0·95	Raniganj.	
4	4	1	3	3	4	6	3	3	2·3	2·1	+10	85	·850	5·7	7	4·64	+ 2·36	3·89	3·15	+ 0·74	3·89	3·15	+ 0·74	1·18	Burdwan.	
1	3	1	3	6	4	5	2	6	3·5	?	?	83	·820	3·9	9	4·69	+ 4·11	7·83	4·08	+ 3·75	7·83	4·08	+ 3·75	1·92	Naya Dumka	
8	2	2	5	1	4	7	2	...	3·2	2·1	+52	87	·886	6·2	10	5·55	+ 4·45	4·31	3·90	+ 0·41	4·31	3·90	+ 0·41	1·03	Berhampore	
10	1	2	2	3	4	7	1	1	4·9	?	?	86	·905	3·0	8	5·30	+ 2·70	3·65	4·44	— 0·79	3·65	4·44	— 0·79	0·98	Rampur Boalia.	
...	3	...	...	8	6	10	1	3	2·4	?	?	88	·885	4·0	12	4·35	+ 7·65	13·21	4·38	+ 8·83	13·21	4·38	+ 8·83	6·84	Malda.	
13	4	1	...	8	...	5	...	...	?	?	?	87	·888	4·7	10	4·70	+ 5·30	4·54	3·27	+ 1·27	4·54	3·27	+ 1·27	0·90	Bogra.	
10	...	2	6	4	3	4	1	1	1·9	?	?	89	·879	5·3	12	3·20	+ 8·80	6·08	4·72	+ 1·36	6·08	4·72	+ 1·36	1·90	Dinajpur .	NORTH BENGAL.
4	3	3	8	3	6	2	2	...	1·8	?	?	88	·893	5·5	6	3·95	+ 2·05	7·30	5·32	+ 1·98	7·30	5·32	+ 1·98	2·79	Rangpur.	
...	2	13	7	2	2	2	2	1	1·8	?	?	90	·837	6·9	11	4·80	+ 6·20	10·78	5·42	+ 5·36	10·78	5·42	+ 5·36	2·72	Jalpaiguri.	
9	3	5	...	...	2	6	5	1	3·1	?	?	91	·911	2·6	10	6·75	+ 3·25	3·13	6·49	— 3·36	3·13	6·49	— 3·36	1·27	Balasore .	ORISSA.
...	7	4	1	1	4	7	5	2	6·9	6·1	+13	84	·895	6·8	13	7·36	+ 5·64	9·81	8·06	+ 1·75	9·81	8·06	+ 1·75	2·56	False Point.	
15	...	5	2	...	1	6	1	1	2·0	1·9	+ 5	78	·819	4·4	5	6·18	— 1·18	5·31	1·90	+ 3·41	5·31	1·90	+ 3·41	1·65	Cuttack.	
...	2	6	2	1	4	10	6	...	12·4	?	?	80	·888	4·8	11	?	?	5·91	?	?	5·91	?	?	1·58	Shortt's Island.	
19	1	4	...	...	2	3	2	...	6·8*	?	?	85	·899	4·7	18	8·55	+ 9·45	13·32	8·81	+ 4·51	13·32	8·81	+ 4·51	3·88	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9·27	2·63	+ 6·83	...	...	...	...	5. Gangetic Plain and Chota Nagpur.	
1	2	3	5	4	7	4	4	1	5·0	5·0	0	86	·699	5·7	11	4·55	+ 6·45	10·61	2·90	+ 7·71	10·61	2·90	+ 7·71	2·40	Hazaribagh.	CHOTA NAGPUR.
7	2	1	1	2	6	5	2	5	5·1	?	?	86	·695	4·7	10	4·55	+ 5·45	5·02	2·79	+ 2·23	5·02	2·79	+ 2·23	1·74	Ranchi.	
...	2	1	5	2	4	7	9	1	1·1	?	?	88	·776	5·3	11	?	?	4·88	?	?	4·88	?	?	1·64	Daltonganj.	
5	2	...	2	1	2	12	5	2	1·2	?	?	84	·825	6·7	6	4·60	+ 1·40	3·93	2·73	+ 1·20	3·93	2·73	+ 1·20	1·46	Chaibassa.	
...	1	...	7	2	3	6	7	5	5·2	1·5	+247	85	·818	5·3	8	2·91	+ 5·09	9·82	1·83	+ 7·99	9·82	1·83	+ 7·99	4·59	Gaya .	BIHAR, SOUTH.
1	...	1	5	6	6	7	2	3	5·5	?	?	83	·829	5·3	7	2·75	+ 4·25	7·08	2·89	+ 4·19	7·08	2·89	+ 4·19	2·14	Dehri.	
6	...	2	8	2	1	5	4	3	3·3	1·9	+ 74	84	·849	5·3	9	3·55	+ 5·45	14·62	2·77	+11·85	14·62	2·77	+11·85	6·23	Patna	
1	3	6	2	4	1	5	5	4	1·7	?	?	89	·867	3·7	9	3·70	+ 5·30	6·50	3·28	+ 3·22	6·50	3·28	+ 3·22	2·44	Arrah.	
4	2	2	6	1	4	4	5	3	3·0	?	?	85	·832	4·4	8	3·00	+ 5·00	10·80	3·35	+ 7·45	10·80	3·35	+ 7·45	4·94	Buxar.	
7	2	4	7	2	1	5	1	2	3·2	1·4	+125	89	·876	5·2	9	3·64	+ 5·36	8·10	3·46	+ 4·64	8·10	3·46	+ 4·64	4·05	Purnea .	BIHAR, NORTH.
4	1	1	1	10	3	6	3	2	3·3	?	?	85	·874	4·4	6	3·15	+ 2·85	4·06	3·20	+ 0·86	4·06	3·20	+ 0·86	1·44	Bhagalpur.	
4	1	1	7	8	1	3	3	3	3·0	2·2	+ 36	87	·853	4·7	7	2·91	+ 4·09	6·63	3·23	+ 3·40	6·63	3·23	+ 3·40	2·77	Darbhanga.	
7	...	3	7	5	...	1	5	3	3·4	?	?	90	·867	4·4	7	2·95	+ 4·05	5·87	3·47	+ 2·40	5·87	3·47	+ 2·40	2·24	Muzaffarpur	
9	...	5	7	3	...	3	3	1	4·2	?	?	88	·845	4·4	6	2·39	+ 3·61	5·91	3·49	+ 2·42	5·91	3·49	+ 2·42	2·64	Motihari.	
6	1	2	5	3	2	5	6	1	4·4	?	?	87	·854	5·6	8	2·90	+ 5·10	8·16	3·60	+ 4·56	8·16	3·60	+ 4·56	2·42	Chapra.	
15	...	3	3	1	2	5	2	...	2·9	2·6	+ 12	91	·835	5·8	13	2·45	+ 10·55	12·22	2·30	+ 9·92	12·22	2·30	+ 9·92	2·35	Benares .	N.-W. PROVINCES (EASTERN DISTRICTS).
5	4	2	5	2	2	3	5	3	3·5	1·6	+119	88	·821	5·5	13	1·64	+ 11·36	22·71	1·83	+20·88	22·71	1·83	+20·88	6·43	Allahabad .	
		2	4	1	5	2	9	2	1·5	1·3	+ 15	86	·813	3·9	12	2·64	+ 9·36	19·52	3·77	+15·75	19·52	3·77	+15·75	8·61	Gorakhpur	N.-W. PROVINCES (EAST SUB-MONTANE).
9	1	...	2	1	1	2	2	3	?	1·9	?	83	·764	4·3	10	1·36	+ 8·64	8·69	0·83	+ 7·86	8·69	0·83	+ 7·86	3·52	Lucknow† .	OUDH, SOUTH.
9	...	3	1	3	1	6	...	8	1·8	?	?	86	·794	2·9	7	?	?	8·49	1·69	+ 6·80	8·49	1·69	+ 6·80	3·80	Bahraich .	OUDH, NORTH.
17	...	2	1	...	2	4	4	1	1·8	?	?	84	·760	3·5	9	1·6	+ 7·4	13·20	1·08	+12·12	13·20	1·08	+12·12	5·36	Cawnpore .	N.-W. PROVINCES (CENTRAL).
13	1	2	1	1	2	5	4	2	0·2	?	?	82	·702	3·3	6	?	?	7·03	0·82	+ 6·21	7·03	0·82	+ 6·21	4·02	Mainpuri	

* Mean of 30 days. † Wind directions for 21 days.

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
6. Upper—Sub-Himalayas		...	...	−·049	...	...	...	...	...	...	...	90·2	+0·1	62·9	+0·9	76·6	+0·5	27·3	...	...	...	...	43·0
N.-W. Provinces (Sub-montane).	Bareilly	568	29·277	−·046	29·819	29·402	18th	29·093	5th	·309	73·7	86·2	−3·0	67·9	+2·7	77·1	−0·2	18·3	90·8	16th	53·2	30th	37·6
	Dehra Dun	2,233	27·643	−·044	29·852	27·763	18th	27·505	3rd	·258	69·0	82·4	+0·7	62·9	+2·1	72·7	+1·4	19·5	87·0	10th	54·5	30th & 31st.	32·5
	Roorkee	887	28·959	−·050	29·832	29·086	18th	28·808	3rd	·278	71·0	89·1	0	64·2	+2·7	76·7	+1·4	24·9	93·2	10th	51·3	30th	41·9
	Meerut	738	29·104	−·050	29·825	29·240	18th	28·951	3rd	·289	70·1	90·2	+0·2	63·8	+1·1	77·0	+0·7	26·4	94·5	4 days	51·0	31st	43·5
Punjab, Central.	Delhi	718	29·130	−·046	29·823	29·252	18th	28·978	1st & 3rd	·274	74·7	91·5	−0·3	67·9	−0·1	79·7	−0·2	23·6	96·5	10th & 12th	59·4	28th	37·1
	Lahore	702	29·130	−·054	29·819	29·281	19th	28·957	1st	·324	70·3	94·4	+1·2	61·2	+1·3	77·8	+1·3	33·2	100·8	11th	51·7	31st	49·1
Punjab (Sub-montane).	Umballa	962?	28·942	?	29·832	29·062	18th & 19th	28·794	1st	·268	70·2	94·0	?	61·7	?	77·9	?	32·3	99·0	11th	50·0	28th & 31st.	49·0
	Ludhiana	812	29·031	−·050	29·829	29·162	19th	28·872	3rd	·290	71·0	92·1	+0·2	62·5	−1·0	77·3	−0·4	29·6	97·0	3 days	52·3	31st	44·7
Punjab, North	Sialkot	830	29·011	−·040	29·829	29·158	19th	28·854	3rd	·304	71·9	93·6	+1·6	62·9	+1·1	78·3	+1·4	30·7	99·1	1st	53·2	29th	45·9
	Rawalpindi	1,652	28·207	−·059	29·846	28·348	19th	28·054	1st	·294	62·2	88·3	+0·3	53·7	−2·2	71·0	−1·0	34·6	93·5	3 days	44·5	29th & 30th	49·0
7. Indus Valley and North-West Rajputana.		...	...	−·041	...	...	...	...	...	...	...	95·4	+0·5	63·4	−1·6	79·4	−0·5	32·0	...	...	...	...	48·4
Punjab, West	Peshawar	1,110	28·779	−·043	29·852	28·914	19th	28·607	1st	·307	66·6	89·8	+1·4	56·5	−0·9	73·2	+0·3	33·3	97·5	1st	47·5	31st	50·0
	Mardan	?	...	Not	recorded.		...	...	...	...	66·1	92·2	?	54·8	?	73·5	?	37·4	99·5	1st	45·0	30th & 31st.	54·5
	Khushab	612	29·215	?	29·808	29·358	19th	29·037	1st	·321	72·7	94·9	?	61·7	?	78·3	?	33·2	102·0	6th	51·0	31st	51·0
	Montgomery	558	29·285	?	29·819	29·410	19th	29·097	1st	·343	76·8	98·3	?	61·2	?	79·8	?	37·1	107·4	1st	52·0	31st	55·4
	D. I. Khan	573	29·257	?	29·822	29·404	19th	29·064	1st	·340	65·6	95·2	+1·1	58·1	−3·3	76·7	−1·1	37·1	102·1	1st & 2nd.	47·8	31st	54·3
	Mooltan	420	29·426	−·050	29·825	29·579	19th	29·240	1st	·339	72·9	96·3	+1·3	64·6	0	80·5	+0·7	31·7	101·9	1st & 11th.	53·2	31st	48·7
	Sirsa	662	29·176	−·052	29·817	29·309	19th	29·005	1st	·304	71·9	98·9	+3·0	62·2	−0·3	80·6	+1·4	36·7	104·4	3 days	50·7	31st	53·7
Sind and Cutch.	Jacobabad	186	29·676	−·028	29·828	29·829	30th	29·504	1st	·325	73·8	98·9	+1·0	61·2	−1·9	80·1	−0·5	37·7	105·9	1st & 12th.	51·0	26th	54·9
	Hyderabad*	117	29·753	?	29·824	29·866	19th	29·621	2nd	·245	76·6	95·7	−2·3	69·8	−1·8	82·8	−2·2	25·9	101·2	14th	61·0	25th	40·2
	Kurrachee	49	29·848?	−·034?	29·850	29·908	30th	29·712	3rd	·286	76·4	91·1	−0·1	69·0	−2·3	80·1	−1·2	22·1	99·0	20th	61·0	16th	38·0
	Bhuj	395	29·493	−·038	29·843	29·633	30th	29·401	24th	·235	79·1	94·0	−1·7	70·4	−0·9	82·2	−1·3	23·6	98·5	15th & 20th.	63·9	29th	34·6
Rajputana, West	Bickaneer	753	29·108	?	29·831	29·226	30th	28·955	1st	·271	76·8	96·8	+1·2	69·6	−2·9	83·2	−0·9	27·2	102·6	2nd	58·1	28th	44·5
	Pachpadra	380	29·513	?	29·856	29·743	10th	29·398	11th	·345	76·5	98·3	?	64·8	?	81·5	?	33·5	103·5	10th & 11th.	53·8	31st	49·7
8. East Rajputana, Central India and Gujarat.		...	...	−·039	...	...	...	...	...	...	...	90·3	−1·6	68·4	+1·3	79·4	−0·2	21·9	...	...	...	...	38·2
Rajputana, East	Jeypore	1,431	28·456	−·046	29·858	28·566	30th	28·304	1st	·262	75·8	91·4	+1·3	65·8	+1·3	80·1	+1·3	28·6	100·0	10th	54·1	30th	45·9
	Sambhar	1,254	28·619	−·044	29·851	28·727	30th	28·466	1st	·261	74·1	92·9	+1·3	64·6	−0·1	78·3	+0·6	28·3	98·0	13th	54·4	31st	43·6
	Ajmere	1,611	28·290	−·036	29·884	28·398	30th	28·165	1st	·233	72·9	91·8	+0·4	64·6	+1·7	78·2	+1·1	27·2	95·9	13th	52·3	31st	43·6
	Deesa	466	29·433	−·030	29·862	29·555	30th	29·346	24th	·209	77·8	95·5	−0·5	67·0	−0·1	81·3	−0·3	28·5	102·4	11th	57·1	27th	45·3
Kathiawar	Rajkot	429	29·468	−·037	29·854	29·606	30th	29·341	26th	·265	79·4	92·8	−2·4	68·9	+0·5	80·9	−1·0	23·9	98·9	15th	60·9	30th & 31st.	38·0
	Veraval	?	29·874	?	29·834	30·003	30th	29·713	26th	·290	79·3	87·0	?	74·2	?	80·6	?	12·8	97·6	3 days	68·3	28th & 29th.	29·3
Central India	Nowgong	757	29·106	−·055	29·830	29·239	29th	28·921	1st & 5th	·318	74·5	85·3	−5·0	69·2	+4·1	77·3	−0·5	16·1	92·5	15th	57·5	31st	35·0
	Indore	1,823	28·072	−·037	29·859	28·179	30th	27·969	1st	·210	73·4	84·5	−2·6	65·9	+2·2	75·2	−0·2	18·6	92·0	13th	55·6	30th & 31st.	36·4
	Neemuch	1,630	28·278	−·022	29·875	28·380	30th	28·152	1st	·228	75·5	89·3	−0·7	65·7	+1·1	77·5	+0·2	23·6	95·8	12th & 13th.	54·8	31st	41·0
Gujarat	Surat	36	29·862	−·040	29·841	29·986	30th	29·705	26th	·281	78·6	89·8	−2·5	73·2	+2·7	81·6	+0·1	16·6	95·2	14th & 15th.	65·0	31st	30·2
	Ahmedabad	176	29·741†	?	29·867†	29·865	30th	29·644	24th	·221	79·7†	92·8‡	?	73·0‡	?	82·9‡	?	19·8	99·2	11th & 15th.	64·6	31st	34·6
N.-W. P., West	Agra	555	29·305	?	29·831	29·431	30th	29·109	5th	·322	73·9	90·1	−2·8	67·1	−0·7	78·6	−1·8	23·0	95·5	3 days	56·9	3 days	38·6
	Jhansi	858	29·021	?	29·845	29·136	29th & 30th.	28·819	5th	·317	76·6	88·1	−4·3	70·3	+1·8	79·2	−1·3	17·8	95·6	3 days	60·9	31st	34·7

* Mean 26 days. † Mean of 30 days. ‡ Mean of 29 days.

I—*continued.*

in India, Burma, etc., in October 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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. 1894.	Normal rainfall for period, 1st Oct. to 31st Oct.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·94	0·40	+ 0·54	...	...	...	...	6. Upper—Sub-Himalayas.	
27	...	1	1	1	...	...	1	...	0·1	1·9	−95	81	·690	2·8	4	0·91	+2·09	3·91	1·15	+ 2·76	3·91	1·15	+2·76	2·39	Bareilly .	N.-W. Provinces (Sub-montane).
31	...	...	...	...	...	...	...	...	0·8	1·7	− 53	73	·532	1·1	3	1·20	+1·80	4·19	0·09	+ 4·10	4·19	0·09	+4·10	2·25	Dehra Dun.	
27	...	...	3	1	...	...	...	...	1·6	1·4	+14	82	·632	0·9	2	0·55	+1·45	0·39	0·43	− 0·04	0·39	0·43	−0·04	0·25	Roorkee.	
27	...	...	...	...	...	...	4	...	0·7	1·4	−50	73	·555	1·6	2	0·45	+1·55	0·84	0·42	+0·42	0·84	0·42	+0·42	0·67	Meerut.	
12	...	1	2	2	...	...	11	3	2·3	2·4	− 4	50	·446	1·1	0	0·18	−0·18	0	0·08	−0·08	0	0·08	−0·08	0	Delhi .	Punjab, Central.
13	6	...	3	2	1	2	3	1	1·8	1·6	+13	60	·450	0·1	0	0·45	−0·45	0	0·26	−0·26	0	0·26	−0·26	0	Lahore.	
19	...	...	...	11	...	...	...	1	1·1	?	?	84	·637	0·9	0	?	?	0·04	0·31	−0·27	0·04	0·31	−0·27	0·04	Umballa .	Punjab (Sub-montane).
17	...	2	...	10	1	...	...	1	1·4	0·9	+56	63	·492	1·4	0	0·55	−0·55	0	0·40	− 0·40	0	0·40	−0·40	0	Ludhiana.	
28	...	...	3	...	...	...	...	...	0·5	1·4	−64	60	·473	0·5	0	0·82	−0·82	0	0·31	−0·31	0	0·31	−0·31	0	Sialkot .	Punjab, North.
29	...	...	...	...	...	...	...	2	0·3	1·2	−75	69	·395	0·2	0	1·45	−1·45	0·03	0·55	−0·52	0·03	0·55	−0·52	0·03	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·08	0·08	−0·06	...	...	...	...	7. Indus Valley and North-West Rajputana.	
23	1	...	...	1	4	...	...	2	2·1	2·5	−1	57	·377	0·2	1	0·27	+0·73	0·12	0·11	+0·01	0·12	0·11	+0·01	0·12	Peshawar .	Punjab, West.
...	...	...	Not	rec	orded.			...	?	?	?	?	?	?	1	?	?	0·80	?	?	0·80	?	?	0·80	Mardan.	
5	2	19	2	1	...	1	1	...	4·1	?	?	43	·357	0	0	0·2	− 0·2	0	0·07	−0·07	0	0·07	−0·07	0	Khushab.	
19	...	2	...	2	3	3	...	2	1·9	?	?	44	·411	0·2	0	0·1	−0·1	0	0·06	−0·06	0	0·06	−0·06	0	Montgomery	
26	2	2	1	...	...	...	...	...	1·3	1·2	+ 8	66	·428	0	0	0·09	−0·09	0	0·05	−0·05	0	0·05	−0·05	0	D. I. Khan.	
12	...	7	1	9	...	2	...	...	1·0	2·0	−50	62	·512	0	0	0	0	0	0	0	0	0	0	0	Mooltan.	
12	3	...	...	...	1	5	9	1	3·8	2·5	+52	44	·350	0·7	0	0·64	−0·64	0	0·14	−0·14	0	0·14	−0·14	0	Sirsa.	
28	1	...	...	2	...	...	...	...	1·7	2·2	−23	58	·499	0	0	0	0	0	0	0	0	0	0	0	Jacobabad .	Sind and Cutch.
8	4	1	...	...	7	5	1	...	15·6	7·8	+100	57	·528	0·1	0	0	0	0	0	0	0	0	0	0	Hyderabad.*	
...	5	9	5	...	...	5	6	1	8·8	9·7	− 9	64	·596	1·5	0	0	0	0	0	0	0	0	0	0	Kurrachee.	
16	1	2	...	1	...	3	5	2	6·1*	6·0	+ 2	59	·599	1·6	0	?	?	0·08	0·35	− 0·27	0·08	0·35	− 0·27	0·08	Bhuj.	
...	2	1	1	1	3	12	3	8	4·7	4·0	+18	36	·359	0	0	?	?	0	0·10	−0·10	0	0·10	−0·10	0	Bickaneer .	Rajputana, West.
24	...	...	...	...	2	4	1	...	3·3	3·7	−11	53	·505	1·9	0	?	?	0	0·05	−0·05	0	0·05	−0·05	0	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·17	0·67	+2·60	...	...	...	...	8. East Rajputana, Central India and Gujarat.	
13	1	2	...	...	...	...	6	9	2·7	3·7	−27	53	·455	2·4	0	0·90	−0·90	0	0·30	−0·30	0	0·30	−0·30	0	Jeypore .	Rajputana, East.
...	5	4	1	...	2	1	10	8	5·6	4·7	+19	52	·452	2·0	0	0·50	−0·50	0	0·17	−0·17	0	0·17	−0·17	0	Sambhar.	
15	...	2	...	...	1	3	10	...	3·2	2·6	+23	60	·499	1·7	0	0·64	−0·64	0	0·31	−0·31	0	0·31	−0·31	0	Ajmere.	
...	1	6	6	3	3	8	3	1	6·9†	6·7	+ 3	59	·562	2·0	0	0·45	−0·45	0	0·35	−0·35	0	0·35	−0·35	0	Deesa.	
1	6	6	5	...	...	2	6	5	5·7	5·6	+ 2	74	·744	1·3	4	1·27	+ 2·73	1·59	0·45	+ 1·14	1·59	0·45	+ 1·14	0·73	Rajkot .	Kathiawar.
6	9	6	1	2	...	...	2	5	4·4	?	?	80	·802	4·8	4	?	?	3·79	?	?	3·79	?	?	2·33	Veraval.	
8	3	...	2	...	...	10	7	1	2·1	1·5	+40	84	·718	4·3	5	1·82	+3·18	7·99	1·17	+6·82	7·99	1·17	+6·82	3·26	Nowgong .	Central India.
6	6	2	1	...	5	2	4	5	3·5	2·3	+52	79	·652	4·2	9	3·09	+5·91	5·23	1·45	+3·78	5·23	1·45	+3·78	1·76	Indore.	
8	1	3	7	2	...	3	6	1	4·7	7·9	−41	63	·564	2·4	1	1·09	−0·09	0·41	0·49	−0·08	0·41	0·49	−0·08	0·38	Neemuch.	
...	3	3	3	1	3	9	6	3	?	5·1	?	83	·817	4·0	7	3·00	+4·00	16·89	1·53	+15·36	16·89	1·53	+15·36	10·12	Surat .	Gujarat.
4	6	7	4	2	1	...	...	4	3·9‡	?	?	69†	·701†	3·6†	2	?	?	1·50	?	?	1·50	?	?	0·98	Ahmedabad‖	
5	...	2	...	3	...	6	...	15	2·8	3·0	− 7	70	·604	2·5	3	0·45	+2·55	0·92	0·47	+0·45	0·92	0·47	+0·45	0·61	Agra . .	N.-W. P., West.
11	1	2	...	1	2	9	3	2	2·4	2·6	− 8	69	·635	2·7	3	1·27	+1·73	2·91	0·70	+2·21	2·91	0·70	+2·21	1·85	Jhansi.	

* Mean of 26 days. † Mean of 30 days. ‡ Mean of 29 days. ‖ Wind directions of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
9. Deccan		...	...	−·037	...	...	...	...	...	...	...	86·7	−1·5	69·4	+2·4	78·1	+0·4	17·2	...	...	...	...	32·2
Bombay, Deccan	Belgaum	2,524	27·380	−·017	29·840	27·464	30th	27·273	22nd	·191	71·1	81·5	−1·0	64·9	−0·1	73·2	−0·6	16·6	89·3	12th	58·9	6th & 7th,	30·4
	Sholapur	1,590	28·313	−·021	29·857	28·399	30th	28·246	23rd	·153	75·3	88·9	−0·2	68·4	0·[illegible]	78·7	+0·2	20·5	93·7	11th	60·6	31st	33·1
	Poona	1,840	28·066	−·034	29·861	28·168	30th	27·973	23rd	·195	73·4	86·2	−1·2	67·7	+1·3	77·0	+0·1	18·5	92·5	14th	61·4	6th & 7th.	31·1
	Bijapur	1,946	27·954	?	29·848	28·035	30th	27·880	22nd	·155	73·7	86·0	?	67·8	?	76·9	?	18·2	91·2	11th	61·1	31st	30·1
Khandesh	Malegaon	1,430	28·482	−·044	29·849	28·561	30th	28·384	24th	·177	76·6	88·7	−0·9	69·0	+3·8	78·9	+1·0	19·7	95·4	11th	56·9	31st	38·5
	Ahmednagar	2,152	27·761	?	29·860	27·867	30th	27·689	24th	·178	73·7	84·6	?	66·6	?	75·6	?	18·0	90·3	14th	56·0	31st	34·3
Berar	Akola	930	28·955	−·038	29·840	29·069	30th	28·839	1st	·230	76·6	89·4	−0·7	69·1	+3·0	79·3	+1·2	20·3	94·9	3 days	56·0	31st	38·9
	Amraoti	1,215	28·649	−·053	29·830	28·777	30th	28·522	1st	·255	74·8	88·3	−1·2	69·9	+2·4	79·1	+0·6	18·4	94·9	13th	60·8	31st	34·1
Central Provinces, West.	Khandwa	1,044	28·835	−·038	29·850	28·955	29th	28·717	1st	·238	73·5	87·8	−2·0	69·6	+3·4	78·7	+0·7	18·2	93·7	15th	57·6	31st	36·1
	Hoshangabad	1,020	28·872	−·041	29·865	29·001	29th	28·694	1st	·307	73·7	86·2	−2·9	69·1	+2·1	77·7	−0·4	17·1	91·4	3 days	59·3	31st	32·1
	Nagpur	1,025	28·845	−·041	29·832	28·965	30th	28·670	1st	·295	76·8	88·5	−0·8	70·4	+2·0	79·5	+0·6	18·1	94·3	16th	59·2	31st	35·1
Central Provinces, Central.	Chanda	634	29·238	−·042	29·824	29·343	30th	29·080	1st	·263	77·1	89·3	−0·2	71·2	+2·8	80·2	+1·3	18·1	92·5	16th	57·6	31st	34·9
	Seoni*	2,033	27·849	−·040	29·836	27·958	30th	27·671	1st	·287	72·9	84·1	−1·8	66·8	+2·5	75·5	+0·4	17·3	89·2	3 days	54·9	31st	34·3
	Jubbulpore	1,327	28·546	−·044	29·844	28·659	29th	28·349	1st	·310	73·8	84·6	−2·2	67·4	+3·3	76·1	+0·6	17·2	89·4	13th	53·9	31st	35·5
	Saugor	1,762	28·112	−·047	29·841	28·228	29th	27·941	1st	·287	73·2	85·2	−1·6	68·0	+2·9	76·6	+0·7	17·2	91·3	15th	56·0	30th & 31st,	35·3
Central Provinces, East.	Raipur	970	28·899	−·041	29·826	29·025	30th	28·687	1st	·338	76·9	86·5	−1·3	71·8	+2·0	79·2	+0·4	14·7	90·3	4 days	59·7	31st	30·6
	Sutna	1,040	28·807	?	29·820	28·941	29th	28·564	1st	·377	74·2	83·5	−3·9	69·2	+3·6	76·4	−0·2	14·3	89·5	11th	57·2	31st	32·3
	Sambalpur	463	29·389	−·041	29·804	29·491	30th	29·156	3rd	·335	79·3	87·5	−1·3	74·5	+2·3	81·0	+0·5	13·0	89·5	5 days	65·7	31st	23·8
Hyderabad, North.	Aurangabad	?	28·050	?	?	28·156	30th	27·969	1st	·187	78·2	87·8	?	68·2	?	78·0	?	19·6	94·8	15th	57·2	31st	37·6
	Indur	?		Not	recorded.		...	...	...	...	77·9	87·9	?	71·2	?	79·6	?	16·7	90·8	11th	58·7	31st	32·1
	Bidar	?	27·737	?	?	27·811	29th	27·661	1st	·150	74·2	84·7	?	68·7	?	76·7	?	16·0	88·3	10th	62·1	31st	26·2
Hyderabad, South.	Gulbarga	1,502	28·385	?	29·841	28·458	28th	28·329	23rd	·129	76·0	88·5	?	69·9	?	79·2	?	18·6	93·0	11th	62·8	31st	30·2
	Raichur	1,378	28·513	?	29·842	28·587	28th	28·440	21st	·147	76·6	87·3	?	71·5	?	79·4	?	15·8	92·6	12th	66·1	31st	26·5
	Hyderabad* (Deccan).	1,690	28·202	−·017?	29·844	28·270	29th	28·123	1st	·147	75·0	85·0	−1·9	70·1	+2·3	77·5	+0·2	14·9	90·9	9th	64·2	31st	26·7
	Secunderabad.	1,787	28·123?	?	29·864?	28·191	29th	28·039	1st	·152	74·2	85·7	?	69·2	?	77·5	?	16·5	92·6	11th	61·0	31st	31·6
	Khamamet	373	29·506	?	29·815	29·565	28th	29·413	1st	·152	79·3	89·2	?	74·4	?	81·8	?	14·8	94·5	9th	68·3	31st	26·2
10. West Coast		...	...	−·013	...	...	...	...	...	...	...	84·7	−0·8	74·8	+0·3	79·8	−0·2	10·0	...	...	...	...	17·9
Konkan	Bombay.	37	29·868	−·027	29·845	29·980	29th	29·761	23rd	·219	79·0	85·6	−1·7	76·1	−0·1	80·9	−0·9	9·5	89·5	22nd	72·5	5th & 31st,	17·0
	Ratnagiri	110	29·791	−·003?	29·840	29·892	29th	29·676	22nd	·216	79·8	86·6	−1·7	74·8	+1·3	80·7	−0·2	11·8	94·9	18th	70·9	6th	24·0
	Mormugao	60	29·846	?	29·841	29·944	29th	29·716	22nd	·228	78·2	84·4	?	74·7	?	79·5	?	9·7	90·0	19th	69·4	5th	20·6
	Goa	23	29·910	−·003	29·848	30·009	29th	29·771	22nd	·238	78·4	82·6	?	76·2	?	79·4	?	6·4	88·5	19th	72·0	1st	16·5
	Karwar	44	29·870	−·009	29·846	29·958	29th	29·747	22nd	·211	76·7	84·4	−0·7	73·9	+0·9	79·2	+0·1	10·5	89·3	19th	70·1	7th & 8th.	19·2
Malabar	Cochin	10	29·918	−·017	29·856	29·979	28th	29·796	20th	·183	78·4	86·5	+0·7	74·5	+0·2	80·5	+0·5	12·0	89·2	13th	72·7	3 days	16·5
	Calicut	27	29·900	−·016	29·857	29·989	29th	29·767	20th	·222	78·6	85·5	−0·3	74·1	0	79·8	−0·2	11·4	87·8	7th & 14th.	70·6	6th	17·2
	Mangalore	65	29·863	−·014	29·861	29·934	29th	29·740	20th	·194	77·8	84·3	−0·8	73·8	−0·3	79·1	−0·6	10·5	87·8	21st	71·4	5th & 6th,	16·4
	Trivandrum	198	29·735	?	29·864	29·802	29th	29·633	20th	·169	78·1	82·8	?	75·0	?	78·9	?	7·8	86·0	14th & 15th.	72·0	20th	14·0
11. South India		...	...	−·023	...	...	...	...	...	...	...	88·0	+0·8	72·9	+0·5	80·5	+0·6	15·1	...	...	...	...	25·2
Madras, South.	Pamban	37	29·860	?	29·824	29·926	29th	29·755	20th	·171	81·3	87·0	?	77·7	?	82·4	?	9·3	89·3	3 days	73·2	31st	16·1
	Tinnevelly	168	29·731	?	29·828	29·807	29th	29·617	20th	·190	83·3	96·1	?	77·4	?	86·8	?	18·7	102·4	8th	74·4	3 days	28·0
	Madura	447	29·445	−·019	29·830	29·522	29th	29·336	20th	·186	79·7	92·2	+0·5	73·6	−0·2	82·9	+0·2	18·6	98·0	10th	70·5	16th & 29th.	27·5

* Mean of 30 days.

I—*continued.*

in India, Burma, etc., in October 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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. 1894.	Normal rainfall for period, 1st Oct. Oct.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4·23	2·96	+1·37	...	...	...	..	**9. Deccan.**	
4	2	2	5	4	2	1	8	3	13·6*	10·5	+ 29	84	·638	6·4	8	8·09	−0·09	3·98	6·39	−2·41	3·98	6·39	− 2·41	1·50	Belgaum	Bombay, Deccan.
...	4	3	4	2	3	3	5	7	10·6	7·4	+ 43	73	·637	5·3	2	5·91	−3·91	0·93	5·10	−4·17	0·93	5·10	− 4·17	0·39	Sholapur.	
10	...	...	6	3	...	1	7	4	6·2	5·8	+ 7	81	·671	6·1	10	6·18	+3·82	6·24	4·80	+1·44	6·24	4·80	+ 1·44	2·10	Poona.	
...	...	2	6	3	...	3	11	6	5·6	?	?	79	·665	5·9	7	7·70	−0·70	3·31	?	?	3·31	?	?	0·93	Bijapur.	
1	1	5	5	2	...	2	9	6	8·4	4·5	+ 87	78	·706	5·2	9	4·18	+4·82	2·89	2·84	+0·05	2·89	2·84	+ 0·05	0·80	Malegaon	Khandesh.
5	5	5	3	4	2	...	2	5	8·3	?	?	85	·707	4·4	6	?	?	2·96	?	?	2·96	?	?	1·22	Ahmednagar.	
9	...	...	6	1	...	1	10	4	4·9	3·3	+ 48	76	·692	2·2	4	4·09	−0·09	3·05	3·50	− 0·45	3·05	3·50	− 0·45	1·49	Akola	Berar.
...	3	9	3	4	...	3	7	2	4·8	2·9	+ 66	79	·682	2·5	3	4·09	−1·09	3·77	2·88	+ 0·89	3·77	2·88	+ 0·89	2·71	Amraoti.	
6	3	5	1	3	...	...	9	4	4·4	2·9	+ 52	85	·702	4·3	6	3·27	+2·73	2·94	1·73	+ 1·21	2·94	1·73	+ 1·21	0·92	Khandwa	Central Provinces, West.
9	3	4	3	1	...	7	3	1	2·2	1·5	+ 47	85	·714	4·2	9	3·18	+5·82	8·63	1·82	+ 6·81	8·63	1·82	+ 6·81	2·94	Hoshangabad.	
...	8	6	1	...	2	2	4	8	4·4†	3·7	+ 19	75	·700	3·1	7	3·55	+3·45	4·15	2·95	+ 1·20	4·15	2·95	+ 1·20	1·11	Nagpur.	
13	...	...	2	5	...	4	5	2	2·8	2·3	+ 22	78	·731	3·6	4	?	?	1·01	2·24	− 1·23	1·01	2·24	− 1·23	0·37	Chanda	Central Provinces, Central.
				Not	recor	ded.			?	3·1	?	83	·682	4·6	6	3·55	+2·45	5·04	2·36	+ 2·68	5·04	2·36	+ 2·68	1·67	Seoni,†	
7	...	2	1	7	3	3	5	3	2·6	2·1	+ 24	84	·709	3·9	9	2·45	+6·55	7·25	2·07	+ 5·18	7·25	2·07	+ 5·18	2·53	Jubbulpore.	
17	...	1	1	3	...	6	1	2	2·1	2·7	− 22	80	·660	3·0	7	2·91	+4·09	4·12	1·45	+ 2·67	4·12	1·45	+ 2·67	1·15	Saugor.	
10	3	2	5	1	...	4	6	...	5·3	3·8	+ 39	82	·758	4·7	8	3·82	+4·18	4·64	2·29	+ 2·35	4·64	2·29	+ 2·35	2·23	Raipur	Central Provinces, East.
5	9	...	2	...	3	2	3	7	4·3	4·3	0	88	·746	4·0	9	2·09	+6·91	13·18	2·37	+10·81	13·18	2·37	+10·81	3·67	Sutna.	
...	5	6	6	3	5	4	1	1	3·5	2·0	+ 75	82	·819	4·7	8	?	?	3·60	2·04	+ 1·56	3·60	2·04	+ 1·56	0·76	Sambalpur.	
8	2	5	3	3	2	3	3	2	3·4	?	?	68	·657	3·2	6	?	?	5·18	2·96	+ 2·22	5·18	2·96	+ 2·22	1·60	Aurangabad	Hyderabad, North.
5	4	1	5	1	2	3	3	7	6·8	?	?	83	·796	4·0	1	?	?	0·66	2·63	− 1·97	0·66	2·63	− 1·97	0·53	Indur.	
...	3	6	5	2	1	7	4	3	7·0	?	?	81†	·689†	3·3	4	?	?	1·87	3·65	− 1·78	1·87	3·65	− 1·78	0·80	Bidar.	
6	3	4	4	3	1	3	4	3	8·5	?	?	74	·666	5·0	5	?	?	2·28	3·06	− 0·78	2·28	3·06	− 0·78	0·97	Gulbarga.	Hyderabad, South.
...	2	4	4	2	1	4	9	5	6·2	?	?	72	·664	3·3	2	?	?	4·31	?	?	4·31	?	?	2·85	Raichur.	
9	1	2	3	3	1	...	8	3	5·0	?	?	82	·711	5·3	10	?	?	5·55	3·08	+ 2·47	5·55	3·08	+2·47	2·36	Hyderabad† (Deccan).	
2	3	5	6	2	1	2	5	5	5·9	3·8	+ 55	78	·665	5·0	8	?	?	5·12	?	?	5·12	?	?	2·92	Secunderabad.	
19	3	1	...	3	2	...	1	2	5·4	?	?	85	·856	2·8	8	?	?	3·29	?	?	3·29	?	?	0·82	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·60	7·	−0·48	...	...	...	...	**10. West Coast.**	
...	...	11	8	6	4	1	...	1	9·5	9·8	− 3	86	·863	6·0	7	3·45	+3·55	3·08	2·47	+ 0·61	3·08	2·47	+ 0·61	1·00	Bombay.	Konkan.
2	2	2	5	10	5	2	...	3	4·6	7·7	− 40	84	·855	5·6	9	5·91	+3·09	6·20	4·28	+ 1·92	6·20	4·28	+ 1·92	1·48	Ratnagiri.	
...	4	2	2	9	3	2	1	8	7·7	?	?	91	·887	4·9	13	?	?	9·05	?	?	9·05	?	?	2·59	Mormugao.	
9	...	7	8	4	1	...	1	1	4·9	?	?	87	·845	5·7	12	?	?	6·25	5·97	+ 0·28	6·25	5·97	+ 0·28	2·02	Goa.	
10	6	6	2	1	1	4	...	1	2·3	?	?	91	·832	5·8	12	9·09	+2·91	6·03	7·68	− 1·65	6·03	7·68	− 1·65	1·26	Karwar.	
4	7	13	4	1	...	...	1	1	4·3	?	?	86	·844	4·8	13	15·09	−2·09	11·99	14·01	− 2·02	11·99	14·01	− 2·02	2·67	Cochin	Malabar.
7	3	4	11	3	1	...	1	1	7·7	?	?	84	·818	4·6	9	10·44	−1·44	5·22	10·17	− 4·95	5·22	10·17	− 4·95	1·65	Calicut.	
8	...	2	11	5	2	1	1	1	1·8	2·7	−33	87	·830	6·9	10	9·90	+0·10	12·12	7·82	+ 4·30	12·12	7·82	+ 4·30	3·98	Mangalore.	
3	13	6	...	1	...	...	2	6	5·7	?	?	84	·809	6·3	10	?	?	8·43	10·76	− 2·33	8·43	10·76	− 2·33	1·79	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·70	7·96	+1·06	...	...	...	...	**11. South India.**	
...	1	1	1	3	8	10	4	3	10·8	?	?	82	·879	4·9	10	7·50	+2·50	4·20	6·86	− 2·66	4·20	6·86	− 2·66	1·10	Pamban	Madras, South.
2	2	3	2	1	...	5	5	11	5·8	?	?	64	·721	4·8	6	7·3	−1·3	3·18	?	?	3·18	?	?	1·58	Tinnevelly.	
9	8	2	...	2	...	1	...	9	1·8	2·9	− 38	73	·741	4·4	15	9·73	+5·27	13·90	8·21	+ 5·69	13·90	8·21	+5·69	4·22	Madura	

* Mean of 20 days. † Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Madras, South Central.	Salem	940	28·979	−·023	29·860	29·052	29th	28·867	20th	·185	78·7	91·0	+1·7	71·9	+1·4	81·5	+1·6	19·1	97·4	8th	69·0	28th	28·4
	Coimbatore	1,348	28·550	−·026	29·847	28·608	30th	28·455	21st	·153	75·8	89·3	+1·3	69·9	−0·7	79·6	+0·3	19·4	94·9	13th	67·1	6th	27·8
Coorg	Mercara	3,781	26·224	−·009	?	26·293	29th	26·120	20th	·173	65·9	74·2	−1·2	62·2	0	68·2	−0·6	12·0	79·5	13th	58·2	6th	21·3
Mysore	Chitaldroog	2,405	27·512	?	29·850	27·595	29th	27·412	21st	·183	72·8	83·4	?	67·2	?	75·3	?	16·2	90·1	9th	63·9	5th	26·2
	Bangalore	3,021	26·923	−·034	29·853	27·001	28th	26·818	21st	·183	70·3	83·0	+2·1	65·0	+0·1	74·0	+1·1	18·0	88·8	9th & 11th.	60·4	1st	28·4
	Hassan	3,091	26·873	?	29·869	26·947	29th	26·773	20th	·174	70·5	81·0	?	63·7	?	72·3	?	17·3	87·9	9th	57·5	6th	30·4
	Mysore	2,518	27·424	?	29·876	27·547	29th	27·313	21st	·234	71·4	84·9	?	66·2	?	75·6	?	18·7	89·9	8th	60·4	6th	29·5
Madras, East Coast, South.	Negapatam	31	29·861	−·020	29·821	29·935	29th	29·765	20th	·170	81·6	90·5	+2·6	76·2	+0·6	83·4	+1·6	14·3	96·7	3rd & 4th.	71·7	31st	25·0
	Cuddalore	12	29·885	?	29·826	29·978	28th	29·787	20th	·191	81·3	89·2	?	75·2	?	82·3	?	14·0	94·3	8th & 9th	72·2	31st	22·1
	Trichinopoly	255	29·639	−·023	29·828	29·710	29th	29·546	20th	·164	80·4	93·5	+2·7	74·7	+0·7	84·1	+1·7	18·8	101·1	9th & 10th.	69·9	16th	31·2
	Madras	22	29·865	−·026	29·818	29·936	29th	29·781	21st	·155	81·4	90·5	+1·5	75·5	+0·3	83·0	+0·9	15·0	97·0	8th	70·5	31st	26·5
Madras, East Coast, Central.	Nellore	71	29·806	?	29·811	29·883	29th	29·726	21st	·157	82·4	92·5	?	77·1	?	84·8	?	15·4	99·8	8th	73·6	19th & 21st.	26·2
	Masulipatam	15	29·868	−·016	29·818	29·935	29th	29·776	1st	·159	81·0	88·0	−0·9	76·4	+0·7	82·3	−0·1	11·6	95·6	6th	73·1	22nd & 29th.	22·5
Madras, Central	Cuddapah	433	29·461	?	29·836	29·534	28th	29·325	21st	·209	81·3	91·7	+1·8	75·3	+1·3	83·5	+1·6	16·4	99·2	9th	71·7	7th	27·5
	Kurnool	923	28·964	−·029	29·833	29·031	3 days	28·871	21st	·160	77·9	90·1	+0·8	71·8	+0·5	81·0	+0·7	18·3	96·7	9th	67·4	7th	29·3
	Bellary	1,475	28·423	−·020	29·849	28·497	28th & 29th.	28·318	21st	·179	76·0	88·4	−1·0	71·5	+0·7	80·0	−0·2	16·9	96·9	11th	68·0	21st & 31st.	28·9
Madras, East Coast, North.	Rajahmundry	112	29·756	−·030	29·806	29·813	29th	29·643	2nd	·170	79·6	88·3	−1·1	75·5	+0·7	82·0	−0·2	12·8	96·0	8th	73·1	20th & 22nd.	22·9
	Cocanada	26	29·846	−·017	29·807	29·921	24th	29·721	1st	·200	80·3	86·7	+0·7	76·8	+1·1	81·7	+0·9	9·9	95·7	7th	72·6	29th	23·1
	Vizagapatam	31	29·840	−·024	29·809	29·912	24th	29·683	1st & 2nd.	·229	81·2	85·5	−0·2	80·8	+0·4	83·2	+0·1	4·7	89·8	5th	77·4	23rd	12·4
	Gopalpur	21	29·849	?	29·799	29·947	19th	29·635	2nd	·312	79·3	86·9	?	76·0	?	81·5	?	10·9	91·2	7th	73·1	24th & 31st.	18·1
12. Hill Stations		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	Kachh Fort	?	23·986	?	?	24·090	9th	23·890	2nd & 4th.	·200	58·7	73·2	?	31·2	?	52·2	?	42·0	91·0	12th	26·0	16th	65·0
	Pishin	?			Not recorded						?	79·2	?	31·3	?	55·3	?	47·9	90·1	4th	23·9	16th & 17th.	66·2
	Quetta	5,502	24·704	−·019	?	24·799	19th	24·584	2nd	·215	54·1	74·9	+0·1	35·4*	−3·7	55·1*	−1·8	39·5	83·7	1st	28·8	16th	54·9
	Shirino	?							Observations suspended.														
	Kalat	?			Not recorded.						49·8	71·7	?	25·5	?	48·6	?	46·2	81·3	8th	17·2	16th	64·1
	Chaman	4,311							Observations imperfect.														
Northern India	Leh	11,503	19·757	?	?	19·860	18th	19·655	24th	·205	44·0	62·9	?	32·2	?	47·5	?	30·7	73·7	10th	23·5	31st	50·2
	Srinagar	5,204	24·934	?	?	25·056	18th	24·816	18th	·250	46·6	72·5	?	39·1	?	55·8	?	33·4	80·8	1st	29·6	31st	51·2
	Gilghit	?	25·775	?	?	26·060	30th	25·440	1st	·620	60·2	76·8	?	54·6	?	65·7	?	22·2	87·5	3 days	46·1	31st	41·4
	Cherat	?	25·679	?	?	25·781	9th	25·581	27th	·200	66·3	79·7	?	57·3	?	68·6	?	22·4	88·9	1st	49·2	23rd & 28th.	39·7
	Murree	6,344	23·878	−·030	?	23·964	19th	23·786	26th	·178	59·0	71·9	+2·7	56·5	+3·4	64·2	+3·1	15·4	78·6	9th & 10th	51·1	15th	27·5
	Poo	?			Not recorded.						?	68·7	?	44·7	?	56·7	?	24·0	76·4	10th	38·6	29th	37·8
	Simla	7,224	23·152	−·028	?	23·257	18th	23·034	26th	·223	55·6	63·2	+0·6	51·9	+1·0	57·6	+0·8	11·3	68·4	11th	44·3	30th	24·1
	Chakrata	6,977	23·364	−·001?	?	23·471	18th & 19th.	23·252	26th	·219	58·3	66·1	+0·1	52·1*	+1·3	59·2*	+0·7	14·0	72·8	10th	45·2	30th	27·6
	Mussooree	6,705	23·589	?	?	23·704	18th	23·430	1st	·274	57·8	64·8	+0·6	52·6	+1·0	58·7	+0·8	12·2	71·3	10th	46·5	25th & 30th.	24·8
	Ranikhet	6,069	24·135	−·014	?	24·245	18th	24·022	26th	·223	58·9	68·0	−1·2	54·9	+0·8	61·5	−0·2	13·1	73·5	10th	48·3	25th	25·2
	Yatung	10,430?			Not recorded.						?	56·0	?	40·2	?	48·1	?	15·8	63·0	9th	30·7	29th	32·3
	Gnatong	?	19·304	?	?	19·406	9th	19·151	26th	·255	42·7	49·6	?	36·6	?	43·2	?	13·0	57·4	7th	26·1	28th	31·3
	Darjeeling	7,421	23·014	−·040	?	23·105	18th	22·857	26th	·248	55·8	60·6	−0·2	52·2	+3·2	56·4	+1·5	8·4	66·1	2 days	44·7	30th	21·4
	Gantak	?	24·504	?	?	24·605	18th	24·350	26th	·255	60·1	72·3	?	55·8	?	64·0	?	16·5	83·3	8th	48·2	31st	35·1
	Kalimpong	?	26·004†	?	?	26·126	18th	25·831	26th	·295	65·7‡	71·3‖	?	?	?	?	?	?	75·5	3rd	?	...	?
Central India	Mount Abu	3,945	26·072	−·043	?	26·167	30th	25·983	3rd	·184	70·3	77·5	−1·4	63·2	−1·0	70·4	−1·2	14·3	82·2	3 days	58·9	27th & 30th.	23·3
	Pachmarhi	3,528	26·462	−·031	?	26·550	30th	26·306	1st	·244	70·5	77·1	−0·2	61·9	+2·1	69·5	+1·0	15·2	82·2	12th	50·2	30th & 31st.	32·0
South India	Wellington	6,200	24·241	−·021	?	24·301	29th	24·141	21st	·160	63·0	70·4	+1·8	54·0	−1·1	62·2	+0·4	16·4	75·2	2nd	47·2	6th	28·0

* Mean of 30 days. † Mean of 21 days. ‡ Mean of 24 days. ‖ Mean of 25 days.

I—*continued.*

in India, Burma, etc., in October 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st October to 31st October.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
17	...	...	...	...	4	6	3	1	1·8	2·8	−36	76	·753	5·1	14	11·36	+2·64	8·33	6·89	+ 1·44	8·33	6·89	+ 1·44	2·72	Salem	Madras, South Central.
...	2	...	6	10	9	4	...	...	1·9	3·5	−46	83	·742	5·4	8	8·91	−0·91	4·89	5·94	− 1·05	4·89	5·94	− 1·05	1·89	Coimbatore.	
...	5	3	1	3	4	4	1	10	5·0	3·6	+39	91	·587	6·6	16	13·50	+2·50	8·17	9·60	− 1·43	8·17	9·60	− 1·43	1·74	Mercara	Coorg.
...	...	1	4	4	2	7	10	3	8·1	?	?	78	·637	6·9	13	?	?	5·56	?	?	5·56	?	?	1·08	Chitaldroog.	
...	1	3	1	1	1	7	12	5	6·2	4·0	+55	86	·642	5·8	11	10·00	+1·00	4·53	7·15	− 2·62	4·53	7·15	− 2·62	1·02	Bangalore	Mysore.
9	1	2	1	1	2	4	9	2	2·6	?	?	83	·617	7·1	14	?	?	10·99	?	?	10·99	?	?	2·00	Hassan.	
5	1	1	3	...	2	8	10	1	8·9	?	?	86	·653	5·4	13	?	?	10·02	?	?	10·02	?	?	1·82	Mysore.	
9	2	...	...	...	1	9	8	2	7·5	3·7	+103	79	·844	5·7	6	10·82	−4·82	2·48	10·59	− 8·11	2·48	10·59	− 8·11	0·72	Negapatam	Madras, East Coast, South.
...	2	2	..	..	5	5	9	8	1·1	?	?	90	·969	4·5	8	9·4	−1·4	7·59	?	?	7·59	?	?	2·10	Cuddalore.	
10	..	...	...	1	..	4	13	3	3·8	3·8	0	76	·787	5·8	10	10·00	0	7·88	7·49*	+ 0·39	7·88	7·49	+ 0·39	3·51	Trichinopoly.	
1	3	1	...	1	7	9	5	4	4·6	5·0	− 8	80	·860	5·5	11	12·09	−1·09	11·02	11·00	+ 0·02	11·02	11·00	+ 0·02	2·74	Madras.	
5	2	...	...	2	7	1	6	8	5·6	?	?	79	·863	7·6	9	8·9	+0·1	9·51	?	?	9·51	?	?	3·36	Nellore	Madras, East Coast, Central.
1	4	4	...	5	3	4	3	7	4·6	4·4	+ 5	82	·856	6·4	12	9·91	+2·09	13·25	9·34	+ 3·91	13·25	9·34	+ 3·91	3·15	Masulipatam.	
...	2	2	4	5	1	7	6	4	?	?	?	75	·793	5·7	10	6·80	+3·20	9·50	6·33	+ 3·17	9·50	6·33	+ 3·17	3·06	Cuddapah.	Madras, Central.
19	1	...	...	...	...	...	7	4	?	?	?	75	·720	6·1	7	7·00	0	3·29	5·03	− 1·74	3·29	5·03	− 1·74	0·80	Kurnool.	
5	1	1	3	2	4	...	6	9	5·7	4·3	+33	71	·642	7·4	9	6·73	+2·27	6·58	4·29	+ 2·29	6·58	4·29	+ 2·29	2·02	Bellary.	
2	7	5	7	...	1	...	4	5	?	?	?	81	·839	6·4	10	7·80	+2·20	12·54	5·96	+ 6·58	12·54	5·96	+ 6·58	2·75	Rajahmundry	Madras, East Coast, North.
...	2	6	1	2	...	5	9	6	7·9	?	?	84	·875	4·8	14	10·6	+4·0	17·42	10·36	+ 7·06	17·42	10·36	+ 7·06	3·89	Cocanada.	
...	4	2	...	1	...	...	18	6	1·9	2·0	− 5	83	·875	6·7	13	10·36	+2·64	21·39	10·54	+10·85	21·39	10·54	+10·85	8·73	Vizagapatam.	
...	11	1	...	1	...	7	1	10	9·3	6·3	+48	88	871	2·4	12	9·44	+2·56	3·99	9·73	− 5·74	3·99	9·73	− 5·74	0·90	Gopalpur.	
..	...	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	**12. Hill Stations.**	
8	2	...	3	...	...	1	4	13	?	?	?	31	·157	0	0	?	?	0	?	?	0	?	?	0	Kachh Fort	Baluchistan.
				Not	recorded.				?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	Pishin.	
31	...	...	...	...	...	...	...	...	0·7	3·0	−77	44	·190	0	0	0·18	−0·18	0	0·07	− 0·07	0	0·07	− 0·07	0	Quetta.	
												Observations suspended.													Shirino.	
...	3	...	...	...	28	...	...	...	?	?	?	?	?	?	...	?	?	...	?	?	...	?	?	...	Kalat.	
												Observations imperfect.													Chaman.	
...	1	8	11	2	4	...	3	2	0·6	2·0	−70	47	·128	1·0	0	?	?	0	?	?	0	?	?	0	Leh.	Northern India.
7	3	2	3	9	6	...	...	1	5·0	?	?	89	·289	1·7	0	?	?	0·11	?	?	0·11	?	?	0·05	Srinagar.	
				Not	recorded.				?	?	?	42	·218	3·0	0	?	?	0·01	?	?	0·01	?	?	0·01	Gilghit.	
9	9	...	2	2	...	...	3	6	8·8	?	?	35	·225	0·2	1	?	?	0·20	?	?	0·20	?	?	0·20	Cherat.	
5	...	3	2	2	1	1	1	16	9·0	5·7	+58	36	·186	0·5	0	2·45	−2·45	0	16·5	− 1·65	0	1·65	− 1·65	0	Murree.	
13	...	...	1	12	1	1	2	1	?	?	?	?	?	1·5	1	?	?	0·30	?	?	0·30	?	?	0·22	Poo.	
6	6	10	1	...	3	5	...	...	5·0	2·5	+100	58	·263	1·0	2	1·27	+0·73	1·03	1·22	− 0·19	1·03	1·22	− 0·19	0·75	Simla.	
6	...	10	12	2	...	...	1	...	5·4	5·1	+ 6	74	·3.6	1·4	3	?	?	2·46	0·84	+ 1·62	2·46	0·84	+ 1·62	1·36	Chakrata.	
2	5	6	1	1	2	2	4	8	?	8·5	?	74	·363	1·5	4	1·4	+2·6	2·90	0·99	+ 1·91	2·90	0·99	+ 1·91	1·27	Mussoorec.	
21	1	5	...	2	...	...	1	1	2·1	1·7	+24	82	·410	2·6	5	1·09	+3·91	9·29	1·48	+ 7·81	9·29	1·48	+ 7·81	7·21	Ranikhet.	
				Not	recorded.				?	?	?	?	?	?	7	?	?	3·96	?	?	3·96	?	?	1·76	Yatung.	
7	1	5	2	5	1	5	1	4	4·1	?	?	85	·236	5·4	15	?	?	9·17	?	?	9·17	?	?	2·63	Gnatong.	
6	2	7	5	2	...	4	3	2	3·9	2·6	+50	92	·418	8·7	10	3·75	+6·25	5·47	4·64	+ 0·83	5·47	4·64	+ 0·83	1·91	Darjeeling.	
...	2	1	6	2	9	5	5	1	1·0	?	?	91	·479	7·7	16	?	?	7·78	?	?	7·78	?	?	1·49	Gantak.	
...	5	2	2	2	1	...	...	11	?	?	?	96*	·612*	7·0†	8	?	?	4·22	?	?	4·22	?	?	1·52	Kalimpong‡	
2	3	11	1	3	...	7	3	1	6·1	4·0	+53	52	·379	2·7	0	0·60	−0·60	0·11	0·71	− 0·60	0·11	0·71	− 0·60	0·07	Mount Abu	Central India.
8	1	2	6	3	...	4	6	1	4·8†	2·9	+66	70	·518	4·1	7	4·27	+2·73	4·63	2·63	+ 2·00	4·63	2·63	+ 2·00	1·79	Pachmarhi.	
27	1	...	...	...	...	2	1	...	2·0	2·6	−23	76	·439	4·9	16	15·89	+0·11	6·56	12·10	− 5·54	6·56	12·10	− 5·54	1·13	Wellington.	South India.

* Mean of 24 days. † Mean of 22 days. ‡ Wind directions for 23 days.

Table

Abstract of Observations taken at 8 A.M. at 205 Stations

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. Extra India ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ceylon	Trincomalee	75	29·862	?	29·864	29·930	29th	29·767	20th	·163	81·7	91·5	?	75·7	?	83·7	?	15·8	98·0	11th	73·0	31st	25·0
	Colombo	40	29·910	−·005	29·875	29·965	2nd	29·817	20th	·148	82·0	85·2	?	75·8	?	80·5	?	9·4	88·0	13th	73·0	19th & 29th	15·0
	Galle	48	29·893	?	29·867	29·956	28th	29·803	20th	·153	80·0	82·9	?	76·6	?	79·8	?	6·3	85·5	3 days	73·0	31st	12·5
Persia	Teheran*	?	25·114	?	?	26·300	11th & 19th	25·930	3rd	·370	66·8	78·7	?	55·5	?	67·1	?	23·2	88·9	1st	47·0	7th & 29th	41·9
	Ispahan*	?	?	?	?	?	?	?	?	?	57·8	76·8	?	43·2	?	60·0	?	33·6	86·3	3rd	35·3	31st	51·0
	Bushire	14	29·924*	?	29·895*	30·092	31st	29·771	2nd	·321	78·3†	84·9†	?	69·7†	?	77·3†	?	15·2	89·6	3rd	59·3	23rd	30·3
	Jask	?	29·918	?	?	30·070	31st	29·773	3rd	·297	84·8	92·3	?	75·3	?	83·8	?	17·0	99·7	6th	69·4	17th	30·3
Arabia	Muscat	?	29·905	?	?	30·064	31st	29·758	3rd	·306	84·5	86·6	?	82·1	?	84·3	?	4·5	92·5	3rd	78·1	19th	14·4
	Baghdad	?	29·542	?	?	29·688	31st	29·389	4th	·299	66·2	90·0	?	61·2	?	75·6	?	28·8	97·2	2nd	52·3	31st	44·9
	Aden	94	29·861	−·012	29·887	29·988	31st	29·761	4th	·227	81·4	92·3	+ 1·1	77·0	−0·1	84·7	+0·5	15·3	95·8	5th	72·9	28th	22·9
	Perim	?	29·681	?	?	29·737	22nd	29·619	5th	·118	85·8	91·6	?	81·5	?	86·6	?	10·1	95·3	2nd	79·1	23rd	16·2
Afghanistan	Kabul	?					Not	recorded.			48·6	79·1	?	41·0	?	60·1	?	38·1	88·9	1st	35·4	21st	53·5
Central Asia	Kashgar(a)	?	25·954	?	?	26·214	14th	25·632	11th	·582	48·4	68·9	?	41·8	?	55·4	?	27·1	83·4	1st	34·8	28th	48·6
Arabian Sea Islands.	Amini Devl	15	29·944	?	29·887	30·081	30th	29·752	23rd	·329	80·9	83·5	?	76·4	?	79·9	?	7·1	88·9	26th	73·3	16th & 18th.	15·6
	Minicoy	10	29·943	?	29·878	30·013	30th	29·813	20th	·200	80·5‡	86·3	?	78·6‡	?	82·3‡	?	7·7	90·5	29th	75·8	17th & 18th.	14·7
Africa	Zanzibar	73	29·982	?	29·982	30·028	7th	29·890	13th	·138	78·3	83·3	?	75·6	?	79·5	?	7·7	88·8	28th	73·8	9th	15·0

(a) Barometer uncorrected. * Mean o 29 days. † Mean of 30 days. ‡ Mean of 24 days.

I—*concluded.*

in India, Burma, etc., in October 1894—concluded.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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. 1894.	Normal rainfall for period, 1st Oct. to 31st Oct.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13. Extra	India.
3	...	...	...	...	...	28	...	...	5·4	?	?	83	·895	5·1	13	?	?	7·76	8·41	−0·65	7·76	8·41	− 0·65	1·72	Trincomalee	Ceylon.
...	1	2	...	1	1	13	10	2	8·6	7·3	+ 18	79	·863	6·6	17	?	?	19·92	13·51	+6·41	19·92	13·51	+ 6·41	6·73	Colombo.	
8	4	...	...	...	...	...	5	14	8·5	?	?	92	·944	5·8	14	?	?	16·36	13·35	+3·01	16·36	13·35	+ 3·01	2·91	Galle.	
22	3	...	1	...	1	1	1	...	3·8†	?	?	31	·191	0·6	0	?	?	0	?	?	0	?	?	0	Teheran*	Persia.
...	2	3	...	...	...	9	8	7	3·1†	?	?	45	·216	0·3	0	?	?	0	?	?	0	?	?	0	Ispahan.*	
...	3	15	4	7	...	1	...	...	6·1†	?	?	61	·596	?	1	?	?	0·52	?	?	0·52	?	?	0·52	Bushire.‡	
1	4	...	4	8	2	1	1	10	7·1	?	?	53	·627	0·1	0	?	?	0	?	?	0	?	?	0	Jask.	
...	1	...	3	...	2	2	12	11	4·1	?	?	68	·796	0·4	0	?	?	0	?	?	0	?	?	0	Muscat .	Arabia.
20	6	...	1	...	...	...	...	4	0·4	?	?	59	·381	0·3	1	?	?	0·12	?	?	0·12	?	?	0·12	Baghdad.	
3	2	8	17	...	...	...	1	...	11·1	12·2	− 9	70	·751	0·5	0	?	?	0	0·02	− 0·02	0	0·02	− 0·02	0	Aden.	
...	...	10	10	10	...	1	...	...	15·4	?	?	66	·811	1·8	0	?	?	0	?	?	0	?	?	0	Perim.	
...	...	...	9	10	...	9	3	...	?	?	?	?	?	?	0	?	?	0	?	?	0	?	?	0	Kabul .	Afghanistan.
24	1	1	...	...	1	...	3	1	1·3	?	?	62	·211	2·2	0	?	?	0	?	?	0	?	?	0	Kashgar .	Central Asia.
3	4	1	1	1	...	4	5	12	?	?	?	85	·899	6·5	12	?	?	7·44	?	?	7·44	?	?	2·23	Amini Devi	Arabian Sea Islands.
3	...	...	...	...	...	5	17	6	1·2	?	?	85	·881	5·7	11	?	?	8·58	?	?	8·58	?	?	2·45	Minicoy .	
...	...	...	4	11	8	7	1	...	6·2	?	?	86	·837	5·7	6	?	?	4·16	?	?	4·16	?	?	1·43	Zanzibar .	Africa.

* Mean of 29 days. † Mean of 26 days. ‡ Mean of 30 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.	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.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·879	29·787	·092	29·831	+·023	29·805	86·1	77·3	8·8	89·7	73·7	16·0	83·2	82·5	80·3	+0·2	75·3	79·5	78·6	77·8
	Rangoon	...	901	·784	·117	·848	+·001	·825	87·7	75·0	12·7	91·9	72·9	19·0	82·5	83·7	79·4	−0·3	73·3	77·7	77·3	76·1
	Diamond Island	...	·890	·785	·105	·836	−·008	·812	84·8	77·9	6·9	88·6	74·4	14·2	83·1	82·4	80·3	+0·6	75·2	77·7	76·6	76·5
	Cocos Island	111	·852	·753	·099	·801	?	·845	85·3	77·2	8·1	88·6	74·3	14·3	82·5	82·2	80·0	?	74·3	78·1	77·6	76·7
	Akyab	...	·908	·796	·112	·853	0	·816	86·7	76·1	10·6	89·6	74·2	15·4	83·1	83·9	80·7	−0·8	74·1	79·8	80·0	77·9
Assam.	Silchar	...	·815	·687	·128	·755	−·020	·810	86·3	73·1	13·2	93·8	66·2	27·6	81·4	83·6	78·6	−0·5	72·0	76·9	77·1	75·2
	Sibsagar	...	·582	·440	·142	·510	−·057	·800	83·4	72·6	10·8	91·6	64·2	27·4	78·5	82·5	77·1	+0·9	72·0	76·2	77·7	75·3
	Dhubri	...	·786	·657	·129	·718	−·049	·787	84·3	74·1	10·2	89·0	66·4	22·6	79·4	81·2	77·8	−0·1	73·0	76·2	76·3	75·3
Bengal and Orissa.	Chittagong	...	·824	·713	·111	·769	−·017	·804	85·9	74·0	11·9	89·2	68·1	21·1	82·0	83·0	79·3	+0·2	73·1	78·0	78·0	76·4
	Narayanganj	...	·873	·755	·118	·812	−·021	·780	86·9	76·7	10·2	89·5	67·7	21·8	83·5	85·7	81·3	+1·0	74·5	78·1	78·5	77·1
	Calcutta (Alipore)	...	·866	·753	·113	·805	−·030	·772	85·8	75·4	10·4	88·4	65·9	22·5	82·6	82·8	80·1	+0·2	74·2	77·1	76·8	76·0
	Ditto (Chowringhee).	...	·868	?	?	?	?	?	87·9	75·4	12·5	91·0	65·9	25·1	84·3	?	?	?	74·7	78·4	?	?
	Saugor Island	...	·861	·753	·108	·802	−·026	·771	87·0	77·6	9·4	89·1	68·1	21·0	83·6	83·7	80·9	+0·9	75·1	79·3	78·5	77·6
	Burdwan	...	·786	·657	·129	·717	−·048	·763	87·8	76·1	11·7	91·2	67·2	24·0	82·7	85·2	81·2	−0·1	74·8	76·6	77·2	76·2
	Berhampore	...	·818	·701	·117	·755	−·038	·770	86·5	76·0	10·5	90·6	68·7	21·9	82·8	85·0	80·8	+0·2	73·7	77·5	77·6	76·3
	False Point	...	·864	·760	·104	·810	−·035	·772	86·6	76·3	10·3	89·5	70·4	19·1	84·5	83·2	80·1	+0·3	75·0	78·7	77·3	77·0
	Cuttack	...	·795	·685	·110	·738	−·045	·760	88·2	76·8	11·4	92·0	71·4	20·6	84·7	85·1	81·5	+0·8	74·6	77·0	76·8	76·1
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·865	27·758	·107	27·814	−·053	·760	81·8	68·6	13·2	87·2	57·9	29·3	76·9	78·3	73·9	+0·6	64·5	70·9	71·2	68·8
	Patna	...	29·698	29·583	·115	29·636	−·048	·773	85·3	74·8	10·5	90·5	64·3	26·2	82·0	82·9	79·2	0	73·2	76·3	75·8	75·1
	Darbhanga	...	·717	·593	·124	·651	−·055	·772	85·6	74·9	10·7	92·8	65·2	27·6	81·7	83·6	79·5	+0·1	74·1	76·5	76·9	75·8
	Allahabad	...	·565	·453	·112	·503	−·055	·771	85·1	71·6	13·5	91·7	58·6	33·1	81·0	83·2	77·3	−1·4	70·2	75·4	75·2	73·6
	Ghazipur	220	·635	·528	·107	·577	−·058	·752	85·8?	73·6?	12·2?	91·8?	62·3?	29·5?	82·3	82·9	78·8?	+0·6	71·9	76·0	75·5	74·5
	Lucknow	...	·505	·402	·103	·448	−·052	·775	86·0	70·0	16·0	93·0	55·0	38·0	80·4	83·7	77·3	−0·5	68·3	73·9	74·4	72·1
Upper Sub-Himalayas.	Dehra Dun	...	27·657	27·569	·088	27·601	−·053	·782	82·2	62·9	19·3	87·1	54·5	32·6	75·7	78·0	71·1	+0·3	59·8	66·9	67·3	64·6
	Roorkee	...	28·975	28·864	·111	28·909	−·057	·757	88·9	64·2	24·7	93·1	51·5	41·6	80·2	85·6	75·3	+1·1	62·6	71·0	70·4	68·0
	Meerut	...	29·123	29·020	·103	29·065	−·053	·765	90·0	63·9	26·1	94·5	51·3	43·2	79·1	86·9	75·8	+0·1	61·6	68·3	69·6	66·5
	Lahore	...	·148	·057	·091	·096	−·056	·774	94·1	61·2	32·9	100·6	51·8	48·8	82·0	93·0	76·7	+2·5	55·9	66·6	69·8	64·1
	Ludhiana	...	·048	28·948	·100	28·990	−·054	·764	91·7	62·6	29·1	97·0	52·4	44·6	81·9	89·2	75·9	+0·7	58·5	66·7	65·9	63·7
Indus Valley and N.-W. Rajputana.	Peshawar	...	28·789	·685	·104	·730	−·050	·816	89·3	56·6	32·7	96·0	47·5	48·5	78·6	87·9	71·9	+1·0	50·0	62·1	65·3	59·1
	Mooltan	...	29·437	29·355	·082	29·389	−·046	·774	96·0	64·6	31·4	101·9	53·2	48·7	83·1	94·2	79·2	+2·0	58·6	68·8	73·1	66·9
	Jacobabad	...	·691	·578	·113	·628	−·038	·769	98·6	61·2	37·4	105·7	51·2	54·5	88·8	96·2	78·6	+0·4	55·5	69·1	70·9	65·2
	Kurrachee	...	·853	·760	·093	·809	−·044	·809	91·1	69·1	22·0	98·8	61·2	37·6	85·4	88·2	79·3	−0·2	63·5	69·1	71·3	68·0
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·473	28·368	·105	28·415	−·044	·805	94·1	65·5	28·6	99·8	53·9	45·9	86·3	91·8	78·2	+2·2	58·2	67·5	67·8	64·5
	Ajmere	...	·299	·198	·101	·245	−·047	·794	91·6	64·7	26·9	96·0	52·4	43·6	83·6	90·2	77·2	+2·2	58·4	68·3	70·0	65·6
	Deesa	...	29·439	29·321	·118	29·374	−·043	·788	95·5	66·9	28·6	102·3	56·9	45·4	87·7	93·1	80·8	+0·2	62·6	70·3	69·3	67·4
	Nowgong	...	·113	·017	·096	·060	−·048	·774	85·4	69·2	16·2	92·6	57·5	35·1	79·6	81·8	76·2	−0·7	68·1	72·6	72·1	70·9
	Agra	...	·319	·212	·107	·255	−·059	·766	90·2	67·1	23·1	95·8	56·9	38·9	83·2	88·7	78·0	+0·2	68·4	70·1	69·8	67·7
Deccan.	Belgaum	...	27·385	27·279	·106	27·331	−·025	·761	81·6	65·0	16·6	89·2	58·7	30·5	76·3	76·3	71·6	−0·6	64·4	68·9	69·0	67·4
	Sholapur	...	28·319	28·180	·139	28·253	−·026	·769	88·8	68·4	20·4	93·7	60·6	33·1	80·9	85·9	77·3	+0·3	66·3	70·9	70·7	69·3
	Poona	...	·068	27·954	·114	·015	−·030	·784	86·1	67·7	18·4	92·5	61·4	31·1	79·4	80·5	75·4	−0·4	66·2	70·6	70·2	69·0
	Akola	...	·961	28·824	·137	28·889	−·047	·762	89·7	69·1	20·6	95·5	56·0	39·5	82·6	87·7	79·7	+1·7	67·6	74·0	73·4	71·6
	Buldana	2,132	27·760	27·655	·105	27·704	−·052	·753	83·8	68·1	15·7	88·9	61·2	27·7	78·9	82·1	76·4	−0·1	64·7	69·8	69·5	68·0

II.

at 89 Stations in India, Burma, etc., for the month of October 1894.

Vapour Tension. From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Humidity. From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Cloud. Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Wind Direction. 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.	Wind Steadiness. Average percentage.	Normal percentage.	Wind Velocity. Mean velocity in miles per diem.	Normal.	Rainfall. Total rainfall for the month.	Heaviest rainfall during the month.	Station.	Meteorological Province.
·852	·961	·927	·914	+·006	91	84	83	86	0	7·5	7·6	7·6	+1·8	3	1	5	7	14	10	8	11	3	S 5° E	S 5° W	31	24	211	152	...	...	Port Blair	Burma Coast and Bay Islands.
·801	·885	·852	·846	−·045	92	80	74	82	− 3	5·3	4·9	5·1	−1·0	...	...	6	8	6	7	14	3	1	S 10° E	S 37° E	42	28	66	77	...	...	Rangoon	
·842	·880	·840	·854	−·017	88	78	76	81	− 3	6·1	7·1	6·6	+1·3	1	1	8	11	18	2	11	8	2	S 40° E	S 59° E	31	21	235*	159	...	...	Diamond Island	
·816	·900	·886	·866	?	87	81	81	83	?	4·7	4·7	4·7	?	...	...	23	5	4	8	17	3	1	S 55° E	?	16	?	?	?	4·42	1·30	Cocos Island.	
·818	·974	·973	·921	+·043	91	86	84	87	+ 5	5·5	5·8	5·7	+0·8	...	3	16	13	3	10	5	8	4	N 84° E	S 35° E	19	12	61	58	...	...	Akyab	
·773	·870	·858	·831	+·020	95	81	77	84	+ 4	6·4	6·4	6·4	+1·6	45	...	1	4	2	2	1	4	3	S 30° W	S 56° E	3	9	10*	47	...	...	Silchar	Assam.
·785	·877	·892	·851	+·059	98	90	81	89	+ 4	7·2	5·1	6·2	−0·3	22	...	9	2	10	...	19	...	...	S 8° E	N 66° E	23	53	56*	47	...	...	Sibsagar	
·804	·863	·846	·841	+·062	95	86	79	87	+ 7	5·6	5·6	5·6	+2·9	12	1	10	11	3	5	12	7	...	S 32° E	N 47° E	14	20	83	69	...	...	Dhubri	
·807	·906	·892	·868	+·014	96	83	79	86	+ 3	6·3	5·5	5·9	+1·6	...	2	10	3	12	11	13	6	5	S 1° W	N 10° W	26	14	81*	71	...	...	Chittagong	Bengal and Orissa.
·831	·894	·903	·876	+·026	90	78	78	82	+ 2	6·3	5·9	6·1	+2·0	...	6	5	2	15	10	16	5	3	S 6° W	S 55° E	32	4	114	58	...	...	Naryanganj	
·834	·862	·843	·846	+·004	95	77	75	82	− 2	5·6	6·0	5·8	+1·6	1	6	4	4	9	12	15	7	4	S 23° W	N 48° W	31	11	51	70	...	...	Calcutta (Alipore).	
·854	·899	?	?	?	97	76	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	6·02	1·53	Ditto (Chowringhee).	
·840	·945	·909	·898	+·036	88	82	78	83	+ 1	7·5	7·5	7·5	+2·9	2	7	6	2	10	21	7	4	3	S 6° E	N 10° E	32	13	242	156	...	...	Saugor Island.	
·848	·840	·829	·839	+·045	94	75	68	79	+ 4	6·1	5·7	5·9	+1·7	9	10	2	6	9	4	8	9	5	S 74° W	N 19° E	7	29	55*	47	...	...	Burdwan	
·806	·878	·854	·846	+·053	89	78	71	79	0	5·5	5·2	5·4	+0·7	10	5	...	5	6	9	15	6	6	S 38° W	N 12° W	30	16	77	51	...	...	Berhampore	
·854	·906	·861	·874	+·045	94	77	76	82	+ 2	6·9	6·9	6·9	+2·3	...	3	5	11	6	18	6	9	4	S 9° E	N 40° E	27	25	169*	142	...	...	False Point	
·831	·827	·812	·823	+·038	90	70	67	76	+ 1	5·0	6·2	5·6	+1·2	11	2	11	7	7	6	15	3	...	S 28° E	N 32° E	21	25	50	43	...	...	Cuttack	
·562	·686	·683	·643	+·098	79	74	70	74	+ 9	7·8	8·3	8·1	+3·8	4	13	4	9	6	9	3	7	7	N 20° E	N 42° W	10	34	150	119	...	...	Hazaribagh	
·808	·838	·804	·816	+·116	93	76	71	80	+10	6·1	5·7	5·9	+2·4	7	2	8	14	3	1	10	9	8	N 2° E	N 21° E	5	4	78*	46	...	...	Patna	Gangetic Plain and Chota Nagpur.
·840	·850	·842	·844	+·079	96	78	73	82	+ 6	5·4	4·2	4·8	+2·0	9	...	6	15	9	3	5	10	5	S 58° E	N 68° E	16	3	70	54	...	...	Darbhanga	
·731	·813	·776	·773	+·143	93	77	69	80	+12	5·7	5·1	5·4	+3·7	6	5	6	5	7	5	5	10	13	N 61° W	N 42° W	15	13	83	43	...	...	Allahabad	
·780	·821	·792	·798	+·178	92	74	70	79	+20	5·3	4·5	4·9	+2·7	20	1	5	7	7	4	10	5	3	S 8° E	S 71° W	14	23	40	33	11·56	2·77	Ghazipur	
·684	·756	·733	·719	+·145	93	73	64	75	+14	5·1	4·7	4·9	+3·2	21	6	...	2	1	5	2	...	5	N 43° W	N 30° W	8	39	?	47	...	...	Lucknow	
·484	·556	·544	·528	?	83	62	56	67	?	1·2	2·3	1·8	+0·7	27	6	...	...	...	3	1	5	19	N 51° W	N 38° W	41	19	14	40	...	...	Debra Dun	
·560	·643	·550	·584	+·091	91	62	45	66	+ 7	0·9	1·2	1·1	+0·3	37	2	2	10	4	2	2	...	3	S 85° E	S 27° E	18	11	35	34	...	...	Roorkee	Upper Sub-Himalayas.
·532	·557	·502	·530	+·032	86	55	39	60	+ 3	0·7	0·9	0·8	+0·1	36	3	...	3	...	...	...	18	2	N 75° W	N 48° W	27	40	17	34	...	...	Meerut	
·387	·453	·425	·422	−·029	71	41	27	46	− 1	0·0	0·2	0·1	−0·6	15	6	6	6	3	...	3	17	6	N 47° W	N 3° W	24	12	43	38	...	...	Lahore	
·447	·460	·333	·413	−·061	78	42	24	48	− 6	1·0	0·9	1·0	+0·1	15	1	4	2	11	4	1	8	16	N 70° W	N 40° W	13	24	32	25	...	...	Ludhiana	
·285	·357	·345	·329	−·039	61	37	26	41	− 6	0·2	0·7	0·5	−0·9	29	13	10	4	...	...	1	...	5	N 17° E	N 54° E	39	35	51*	59	...	...	Peshawar	
·425	·526	·541	·498	−·034	68	45	33	49	− 5	0	0	0	−0·3	7	...	27	2	22	1	2	...	1	N 87° E	S 70° W	55	21	25*	45	...	...	Mooltan	Indus Valley and N.-W. Rajputana.
·381	·458	·424	·421	−·017	68	34	25	42	− 1	0	0	0	−0·4	33	2	...	...	2	14	4	3	4	S 28° W	S 47° E	24	11	41*	52	...	...	Jacobabad	
·535	·513	·550	·533	−·107	72	43	43	53	−10	0·5	0·2	0·4	−0·5	...	2	12	3	...	...	20	24	1	S 84° W	S 67° W	45	64	232	235	...	...	Kurrachee	
·410	·445	·383	·413	−·009	63	35	25	41	− 4	1·9	2·8	2·4	+0·6	...	7	5	2	...	...	2	22	24	N 29° W	N 4° W	48	37	61	86	...	...	Jeypore	
·428	·506	·488	·474	+·012	68	44	34	49	0	1·1	2·2	1·7	+0·6	15	2	8	3	2	2	1	23	6	N 66° W	N 76° W	32	23	79	61	...	...	Ajmere	E. Rajputana, C. India and Gujarat.
·521	·515	·403	·479	+·035	77	40	26	48	+ 6	2·1	1·9	2·0	+0·1	...	5	10	10	5	4	12	7	7	N 90° E	N 62° W	2	16	166	161	...	...	Deesa	
·623	·713	·686	·670	+·134	92	70	63	75	+17	4·1	4·5	4·3	+1·6	5	19	1	11	1	2	2	14	7	N 21° W	N 42° W	35	35	48*	35	...	...	Nowgong	
·546	·567	·480	·511	+·039	80	50	36	55	+ 6	1·7	1·6	1·7	+0·8	...	...	4	...	5	...	...	19	44	N 48° W	N 78° W	72	40	66	72	...	...	Agra	
600	·618	·621	·613	+·024	97	68	69	78	+ 6	6·2	7·0	6·6	+1·0	...	3	5	7	3	3	13	15	7	S 80° W	N 88° E	30	72	319	251	...	...	Belgaum	Deccan.
·624	·634	·564	·608	+·033	90	60	47	65	+ 4	5·5	7·2	6·4	+0·4	1	3	15	5	7	4	9	5	13	N	N 50° E	12	30	240*	190	...	...	Sholapur	
·631	·644	·614	·629	+·076	93	65	60	72	+13	6·2	7·6	6·9	+2·0	8	2	4	9	4	1	8	14	8	N 84° W	N 38° E	19	17	148	139	...	...	Poona	
·661	·729	·634	·674	+·100	92	66	50	69	+ 8	2·6	5·0	3·8	+0·7	9	7	6	9	3	1	...	13	14	N 23° W	N 20° E	32	32	117	82	...	...	Akola	
·573	·621	·570	·588	+·049	83	63	53	67	+ 7	3·7	4·2	4·0	0	...	5	11	4	6	2	4	1	29	N 19° W	N 29° E	42	52	229*	117	4·32	1·92	Buldana	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89 Stations

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.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Deccan—*continued.*	Khandwa	...	28·843	28·720	·123	28·778	—·048	29·773	87·9	69·6	18·3	93·7	57·6	36·1	79·0	85·1	77·5	+0·8	67·1	72·3	73·1	70·8
	Hoshangabad	...	·881	·766	·115	·820	—·040	·794	86·2	69·2	17·0	91·1	59·2	31·9	79·7	84·4	76·7	—0·2	67·4	72·9	72·9	71·1
	Nagpur	...	·854	·738	·116	·792	—·029	·764	88·5	70·3	18·2	94·1	59·2	34·9	82·4	85·3	79·4	+0·7	67·4	73·5	72·5	71·0
	Jubbulpore	...	·553	·443	·110	·494	—·044	·772	84·6	67·4	17·2	89·6	53·8	35·8	79·1	81·6	74·7	+0·8	66·6	72·4	72·3	70·5
	Saugor	...	·124	·026	·098	·071	—·037	·771	85·3	68·0	17·3	91·8	55·9	35·9	79·7	82·3	75·3	+0·2	64·9	71·3	70·8	69·0
	Raipur	...	·905	·789	·116	·843	—·046	·746	86·3	71·8	14·5	90·3	59·5	30·8	81·5	84·2	79·4	+0·8	70·0	74·1	73·7	72·6
	Sutna	...	·820	·723	·097	·767	—·056	·768	83·5	69·2	14·3	89·5	57·2	32·3	79·2	80·6	75·0	—0·5	66·9	72·4	71·3	70·2
	Hyderabad (Deccan).	...	·211	·091	·120	·149	?	·771	84·8	70·2	14·6	91·0	64·1	26·9	79·8	81·5	76·7	?	68·2	72·5	72·5	71·1
West Coast.	Bombay	...	29·875	29·770	·105	29·819	—·023	·796	85·6	76·1	9·5	89·4	72·3	17·1	81·4	82·9	80·1	—1·0	73·0	76·9	77·2	75·8
	Ratnagiri	...	·798	·699	·108	·740	—·015	·787	86·8	74·7	12·1	95·0	70·9	24·1	83·8	83·1	79·7	—0·1	72·8	77·2	78·0	75·9
	Karwar	...	·883	·773	·110	·824	—·008	·800	84·5	73·9	10·6	89·5	69·9	19·6	80·8	82·5	78·6	+0·4	72·8	76·1	76·8	75·3
	Cochin	...	·929	·842	·087	·882	—·006	·819	86·3	74·5	11·8	89·3	72·5	16·8	82·1	82·9	79·5	0	73·2	76·7	76·8	75·6
South India.	Salem	...	28·982	28·839	·143	28·917	—·027	·782	90·4	71·9	18·5	97·2	69·2	28·0	83·2	86·7	79·2	+1·3	70·2	74·1	74·6	73·0
	Mysore	...	27·427	27·300	·127	27·364	?	·772	84·8	66·2	18·6	89·9	60·4	29·5	77·2	81·0	74·6	?	65·5	69·9	70·5	68·7
	Mercara	...	26·229	26·137	·092	26·189	—·014	·822	74·3	62·1	12·2	79·3	58·2	21·1	69·9	69·1	66·9	—0·7	60·9	65·4	66·0	64·1
	Bangalore	...	·928	·815	·113	·876	—·031	·760	82·6	65·0	17·6	88·6	60·6	28·0	76·0	78·2	72·7	+0·4	64·1	69·4	69·1	67·5
	Hassan	...	·874	·771	·103	·827	?	·784	80·8	63·7	17·1	87·9	57·5	30·4	75·8	75·7	71·0	?	62·3	68·0	68·3	66·2
	Chitaldroog	...	27·516	27·392	·124	27·456	?	·761	83·1	67·2	15·9	90·2	64·1	26·1	77·1	80·5	74·5	?	63·8	69·3	69·3	67·5
	Trichinopoly	...	29·642	29·498	·144	29·576	—·025	·760	92·9	74·7	18·2	101·1	69·9	31·2	86·8	89·5	81·9	+1·6	71·5	75·9	76·9	74·8
	Madras	...	·870	·759	·111	·818	—·021	·769	89·8	75·1	14·7	96·8	67·1	29·7	85·5	84·5	81·3	+0·2	?	77·4	77·7	76·8
	Bellary	...	28·432	28·295	·137	28·366	—·016	·769	87·8	71·3	16·5	96·9	67·8	29·1	81·5	84·8	78·2	—0·5	67·5	70·1	70·8	69·5
	Vizagapatam	...	29·855	29·742	·113	29·794	—·024	·763	85·3	81·2	4·3	89·7	77·7	12·0	82·8	83·5	82·0	—1·3	72·2	77·7	78·2	76·0
	Cocanada	...	·863	·741	·122	·802	?	·764	86·2	76·8	9·4	95·7	72·8	22·9	83·2	84·4	81·1	?	75·2	77·7	78·2	77·6
Hill Station, Baluchistan.	Quetta	...	24·707	24·629	·078	24·659	—·019	?	74·6	35·5	39·1	81·6	29·0	52·6	64·9	70·9	54·0	—1·9	32·3	47·9	49·5	43·4
Hill Stations, Northern India.	Leh	...	19·744	19·638	·106	19·700	—·032	?	62·5	32·2	30·3	73·7	23·5	50·2	52·7	57·4	47·1	+5·0	30·1	37·8	38·6	35·5
	Srinagar	...	24·944	24·831	·113	24·879	?	?	72·1	39·1	33·0	79·8	29·6	50·2	52·4	70·9	55·3	?	38·4	48·7	63·4	50·1
	Murree	...	23·907	23·868	·039	23·879	—·034	?	71·6	56·4	15·2	78·6	51·1	27·5	66·2	66·0	62·4	+3·1	43·2	51·3	50·8	48·4
	Chamba	3,005	26·925	26·830	·095	26·886	—·063	?	81·7	57·0	24·7	87·4	47·9	39·5	70·0	76·4	66·7	+1·5	53·5	59·5	63·2	58·7
	Kailang	10,087	20·816	20·741	·072	20·788	—·020	?	60·4	33·7	26·7	74·8	27·0	47·8	53·9	57·7	45·0	+2·6	30·5	40·5	41·0	37·3
	Simla (Ridge)	...	23·158	23·107	·051	23·124	—·038	?	62·8	51·8	11·0	68·4	44·3	24·1	58·0	59·9	56·4	+0·9	45·6	50·2	50·8	48·8
	Simla (Chapslee)	?	?	?	?	?	?	?	69·0	51·7	17·3	74·5	44·3	30·2	60·9	?	?	?	45·8	51·8	?	?
	Chakrata	...	·382	23·317	·065	·340	—·027	?	65·8	51·9	13·9	72·9	45·2	27·7	62·7	62·9	58·0	+1·2	48·5	55·7	56·3	53·4
	Ranikhet	...	24·152	24·076	·076	24·099	—·017	?	67·7	54·9	12·8	73·6	48·3	25·3	63·7	64·9	60·4	—0·5	52·4	57·8	59·0	56·4
	Katmandu	4,388	25·619	25·540	·079	25·579	—·071	?	77·5	60·6	16·9	85·4	51·5	33·9	70·7	71·4	67·4	—0·2	59·7	64·5	65·8	63·3
	Darjeeling	...	23·032	22·949	·083	22·987	—·032	?	60·3	52·2	8·1	66·2	44·8	21·4	57·5	58·0	55·7	+1·2	51·3	56·5	56·4	54·6
	Demagiri	?	?	?	?	?	?	?	86·9	74·3	12·6	89·4	70·2	19·2	82·9	84·1	79·9	+1·3	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	81·5	70·9	10·6	87·1	61·4	25·7	77·2	78·6	75·5	?	?	73·2	73·7	?
Hill Stations, Central India.	Mount Abu	...	26·086	26·009	·077	26·042	—·056	?	77·5	63·2	14·3	82·4	58·9	23·5	73·6	75·0	69·7	—1·1	55·6	60·3	60·9	58·9
	Pachmarhi	...	·479	·384	·095	·427	—·028	?	77·2	61·9	15·3	82·2	50·2	32·0	73·1	74·3	68·8	+1·3	58·8	64·8	65·6	63·1
	Chikalda	3,642	·346	·254	·092	·296	—·044	?	75·4	64·1	11·3	81·4	57·6	23·8	71·6	73·0	69·1	—0·7	60·8	65·7	65·7	64·0
	Makhia	?	...	...	...	..	...	...	Temporarily closed.			...	...	...	...	...	...	...	...	...	...	...

II—*continued.*

in India, Burma, etc., for the month of October 1894—continued.

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 of the month.	Heaviest rainfall during the month.		
·638	·714	·667	·673	+·130	87	72	57	72	+14	4·1	4·6	4·4	+2·1	2	9	13	4	4	...	...	23	7	N. 30° W.	N. 24° E.	37	28	102	68	...	...	Khandwa	Deccan—*continued.*
·655	·728	·669	·694	+·087	91	72	58	74	+11	3·9	4·7	4·3	+1·8	22	3	9	3	4	1	6	10	4	N. 51° W.	N. 12° E.	10	25	51	38	...	...	Hoshangabad	
·639	·718	·639	·664	+·082	86	65	53	68	+8	2·5	3·0	2·8	−1·2	5	14	9	7	3	5	6	6	7	N. 1° E.	N. 37° E.	24	51	106	89	...	...	Nagpur	
·651	·715	·684	·684	+·116	96	72	64	77	+12	3·8	5·0	4·4	+1·6	3	5	15	3	9	3	4	7	13	N. 4° E.	N. 3° E.	21	17	63	49	...	...	Jubbulpore	
·585	·669	·615	·622	+·115	84	67	57	69	+12	3·0	3·5	3·3	+1·6	...	8	7	2	19	4	18	6	7	S. 59° W.	N. 28° W.	18	45	39	64	...	...	Saugor	
·714	·746	·698	·719	+·078	91	69	60	74	+8	5·1	5·7	5·4	+1·9	18	5	7	9	1	...	8	11	3	N. 37° W.	N. 28° E.	11	37	126*	95	...	...	Raipur	
·641	·718	·658	·672	+·157	89	72	64	75	+18	3·9	4·3	4·1	+1·9	2	22	...	3	...	5	2	9	19	N. 36° W.	N. 34° W.	58	47	82*	103	...	...	Sutna	
·673	·711	·690	·691	?	90	70	65	75	?	5·1	6·3	5·7	?	15	2	8	3	11	4	3	11	5	S. 7° W.	?	5	?	115*	?	...	...	Hyderabad (Deccan)	
·774	·868	·867	·836	−·007	86	81	77	81	+1	5·4	5·5	5·5	+1·3	...	2	10	10	5	10	5	4	16	N. 30° E.	N. 15° E.	6	38	227	231	...	...	Bombay	West Coast.
·783	·854	·895	·844	+·053	91	75	79	82	+6	5·3	5·6	5·5	+2·4	2	7	2	4	6	5	8	13	15	N. 78° W.	S. 81° W.	32	17	183*	168	...	...	Ratnagiri	
·796	·839	·847	·827	+·009	95	80	76	84	0	5·3	5·3	5·3	+0·8	1	...	1	...	1	...	16	26	17	N. 89° W.	N. 82° W.	77	56	57	?	...	...	Karwar	
·803	·850	·841	·831	0	93	77	75	82	−1	4·2	6·0	5·1	−0·7	4	4	6	...	2	3	4	28	11	N. 75° W.	S. 76° W.	55	40	110	?	...	...	Cochin	
·716	·718	·697	·710	−·048	92	64	57	71	−6	4·9	7·4	6·2	+0·6	24	2	5	1	2	10	12	4	2	S. 32° W.	S. 52° W.	24	39	42	63	...	...	Salem	
·624	·643	·617	·628	?	96	69	60	75	?	5·6	6·6	6·1	?	2	5	9	9	2	1	9	19	6	N. 63° W.	?	23	?	208*	?	...	...	Mysore	South India.
·526	·577	·606	·570	−·012	93	79	85	86	0	7·5	8·3	7·9	+0·1	...	5	5	4	4	5	7	17	15	N. 74° W.	N. 36° W.	37	24	117	82	...	...	Mercara	
·589	·645	·608	·614	+·023	95	72	65	77	+1	6·6	5·9	6·3	+0·5	...	8	4	6	6	4	10	13	11	N. 78° W.	N. 16° W.	24	9	145	95	...	...	Bangalore (Fort)	
·550	·597	·610	·585	?	92	67	70	76	?	7·0	8·0	7·5	?	8	1	4	7	3	2	7	21	9	N. 87° W.	?	33	?	61*	?	...	...	Hassan	
·549	·622	·579	·583	?	82	67	57	69	?	6·2	7·3	6·8	?	1	5	3	8	7	4	6	14	14	N. 73° W.	?	23	?	165*	?	...	...	Chitaldroog	
·731	·750	·759	·747	−·017	85	60	57	67	−6	5·2	6·1	5·7	−1·8	24	3	...	2	1	1	3	18	10	N. 76° W.	N. 44° W.	40	33	89	93	...	...	Trichinopoly	
?	·837	·862	·866	+·046	?	69	73	81	+2	5·2	5·6	5·4	−0·7	...	4	6	8	12	7	10	8	7	S. 4° E.	N. 35° E.	14	10	110	121	...	...	Madras	
·629	·598	·581	·603	−·026	82	56	51	63	−1	7·2	8·2	7·7	+1·3	3	6	13	7	5	4	3	10	11	N. 1° W.	N. 24° E.	21	14	136	104	...	...	Bellary	
·685	·891	·904	·827	+·011	68	78	78	75	+3	6·8	7·6	7·2	+2·6	...	3	11	2	4	2	11	19	10	N. 76° W.	S. 65° E.	35	18	48	44	...	...	Vizagapatam	
·857	·877	·886	·873	?	93	78	76	82	?	5·7	6·1	5·9	?	1	1	18	5	8	2	13	10	4	S. 74° E.	?	3	?	190*	?	...	...	Cocanada	
·151	·160	·143	·150	−·043	72	26	20	39	−3	0	0·1	0·1	−0·3	37	1	...	...	...	...	...	10	14	N. 62° W.	N. 56° W.	35	50	21*	63	...	...	Quetta	Hill Station, Baluchistan.
·154	·102	·075	·111	+·012	83	27	16	42	+1	1·5	1·8	1·7	−2·1	16	...	...	...	...	5	27	8	6	S. 58° W.	S. 56° W.	60	34	14	45	...	...	Leh	Hill Stations, Northern India.
·231	·309	·509	·350	?	94	77	66	79	?	1·6	1·5	1·6	?	13	11	4	1	10	9	1	4	9	N. 3° W.	?	5	?	92*	?	...	...	Srinagar	
·144	·226	·220	·197	−·036	32	35	34	33	−12	0·3	0·4	0·4	−1·7	4	1	...	2	23	5	7	8	12	S. 11° W.	S. 30° E.	27	10	218*	145	...	...	Murree	
·376	·394	·435	·401	+·004	79	53	47	60	+6	2·3	2·4	2·4	+0·6	40	...	...	...	...	...	...	6	16	N. 57° W.	N. 11° E.	34	7	112*	107	0·20	0·16	Chamba	
·146	·141	·117	·135	+·009	75	33	24	44	−3	2·0	3·7	2·9	−0·5	...	...	1	5	5	23	19	6	3	S. 18° W.	S. 49° W.	63	68	24	37	0·05	0·05	Kailang	
·246	·288	·283	·272	+·016	63	58	54	59	+7	2·0	2·0	2·0	+0·6	9	12	13	2	1	2	21	2	...	S. 77° W.	N. 87° W.	24	35	120	?	...	...	Simla (Ridge)	
·253	·297	?	?	?	65	55	?	?	?	2·0	?	2·0	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	1·16	0·83	Simla (Chapslee)	
·320	·379	·391	·363	+·086	81	66	67	72	+14	1·8	2·5	2·2	+0·5	12	...	6	8	2	...	7	21	6	N. 83° W.	S. 64° W.	27	30	130	120	...	...	Chakrata	
·374	·423	·445	·414	+·086	85	71	72	76	+15	3·1	4·4	3·8	+2·2	23	1	4	2	...	1	18	10	3	S. 68° W.	S. 54° W.	35	55	52	42	...	...	Ranikhet	
·508	·548	·576	·543	+·066	94	74	75	81	+8	6·1	6·2	6·2	+2·4	...	...	6	32	2	1	...	21	...	N. 84° E.	W.	27	52	17	?	3·10	1·20	Katmandu	
·380	·450	·446	·423	+·053	94	94	92	93	+11	8·9	9·2	9·1	+3·6	5	2	11	3	...	5	5	21	8	N. 70° W.	S. 3° E.	35	5	89	62	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	1	3	7	6	4	8	22	11	S. 83° W.	N. 54° W.	35	15	?	?	10·09	2·74	Demagiri	
?	·774	·779	?	?	?	83	80	?	?	6·2	6·5	6·4	+2·0	...	3	5	...	5	31	15	2	1	S. 10° W.	S. 15° E.	61	43	?	?	14·99	4·85	Tura	
·361	·377	·379	·372	+·034	62	46	44	50	+6	2·7	3·0	2·9	+0·8	...	5	19	3	4	2	18	6	5	N. 33° W.	N. 14° E.	8	6	147*	98	...	...	Mount Abu	Hill Stations, Central India.
·468	·523	·536	·509	+·061	83	65	64	71	+8	4·3	5·2	4·8	+1·6	12	4	6	9	4	2	3	16	6	N. 49° W.	N. 17° E.	13	37	114*	70	...	...	Pachmarhi	
·500	·568	·552	·540	+·067	83	74	69	76	+12	5·6	5·7	5·7	+2·2	14	17	2	1	3	5	1	1	18	N. 23° W.	N. 3° E.	40	42	208	135	10·34	3·07	Chikalda	
...	...	...	...	...	...	...	...	...	Temporarily closed.					...	...	...	...	...	...	...	...	...	...	N. 67° W.	...	...	...	...	...	...	Makhla	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 89 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.
Hill Station, South India.	Wellington	...	24·246	24·161	·085	24·203	—·014	?	70·1	53·9	16·2	75·4	47·4	28·0	66·4	65·3	60·8	0	52·8	60·0	60·4	57·7
Extra India.	Muscat	...	29·916	29·836	·080	29·876	?	?	86·3	82·0	4·3	92·5	78·1	14·4	85·5	85·8	84·1	?	70·5	77·2	78·1	75·3
	Aden	...	·867	·742	·125	·805	—·028	29·829	92·1	76·9	15·2	95·9	73·1	22·8	86·5	87·9	83·5	+0·7	71·8	75·1	75·1	74·0
	Perim	...	·680	·572	·108	·626	?	?	91·5	81·5	10·0	95·5	79·4	16·1	88·8	87·7	85·6	?	66·7	77·9	77·3	74·0
	Minicoy	...	·947	·845	·102	·894	?	·829	86·2	78·6	7·6	90·5	75·8	14·7	82·9	83·0	81·4	?	75·8	77·9	78·0	77·1
	Zanzibar	...	·985	·877	·108	·931	?	·931	83·6	75·6	8·0	88·8	73·8	15·0	79·6	83·1	79·5	?	73·4	76·1	76·4	75·3
	Port Victoria (Seychelles)	15	·994	·901	·93	·948	?	·908	82·3	76·4	5·9	83·6	71·5	12·1	80·8	81·2	79·1	?	73·3	75·2	75·2	74·5

II—*concluded.*

in India, Burma, etc., for the month of October 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of Winds from											Wind Stradiness.		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.		
·392	·454	·478	·441	0	93	71	77	80	−3	6·3	8·3	7·3	0	2	5	7	1	22	17	6	...	2	S. 32° E.	S. 32° E.	48	27	48	56	—	...	Wellington	Hill Station, South India.
·597	·827	·859	·761	?	55	68	70	64	?	0·1	0·2	0·2	?	...	3	5	14	...	...	...	4	36	N. 20° W.	?	55	?	98	?	...	...	Muscat	Extra India.
·717	·724	·702	·714	−·009	77	57	53	62	−3	0·5	0·5	0·5	−1·2	6	1	11	18	3	16	6	...	1	S. 61° E.	S. 88° E.	42	55	268	307	...	...	Aden	
·461	·814	·801	·691	?	43	60	61	54	?	1·2	1·1	1·2	?	...	...	5	15	37	3	2	...	...	S. 58° E.	?	82	?	375	?	...	...	Perim	
·839	·888	·894	·872	?	86	79	79	82	?	5·5	6·0	5·8	?	2	1	1	...	...	...	14	26	18	N. 85° W.	?	77	?	292	?	...	...	Minicoy	
·795	·854	·822	·824	?	89	85	72	82	?	4·6	2·5	3·6	?	...	...	5	7	13	18	14	3	2	S. 9° E.	S. 9° W.	53	38	148*	109	...	...	Zanzibar	
·779	·799	·792	·790	?	85	76	71	79	?	5·9	6·3	6·1	?	...	4	4	10	23	10	1	1	9	S. 57° E.	?	40	?	156	?	3·97	1·85	Port Victoria (Seychelles).	

G. I. C. P. O.—No. 96 Meteor.—12-2-94.—400.

* Corrected.

LITHO. BY J. N. MUNOLE.

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 shown 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	,,	,,	,,	,,	,,

Reg. No. 159, Wr., I.—June 94.—5,000

Zinco., S. I. O., Calcutta.

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.

Reg. No. 15. Wr. I.—June 94.—5,000.

Zinco [illegible] Calcutta.

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

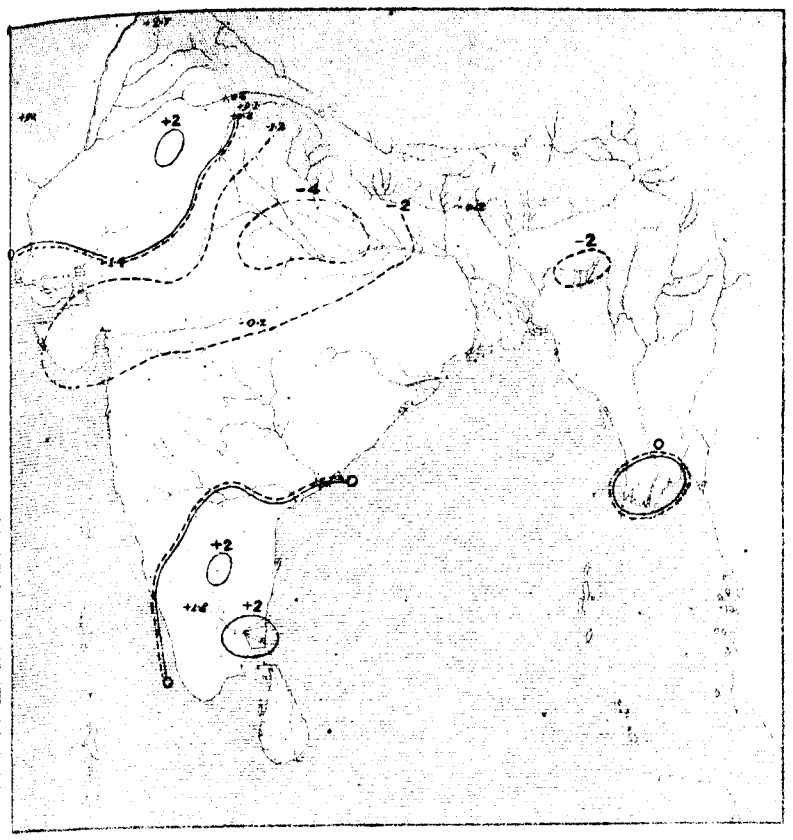
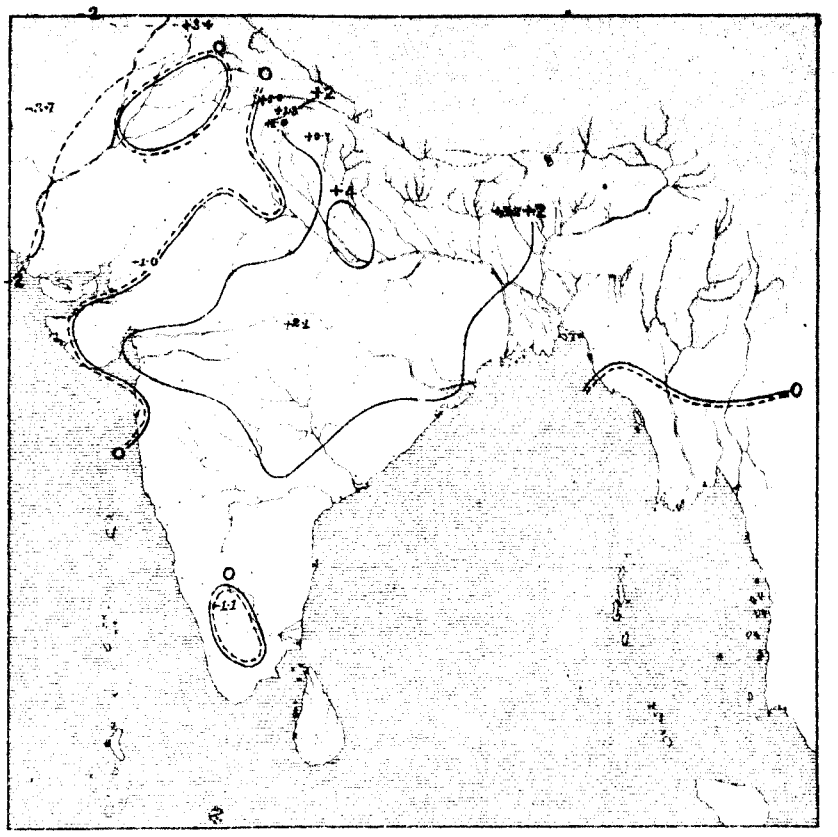


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

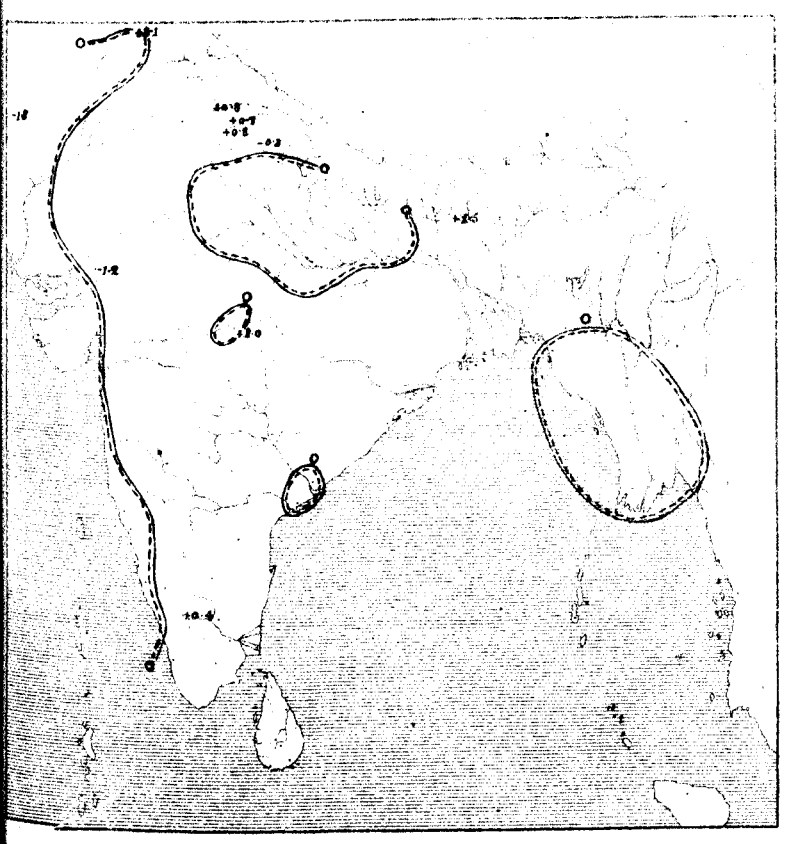
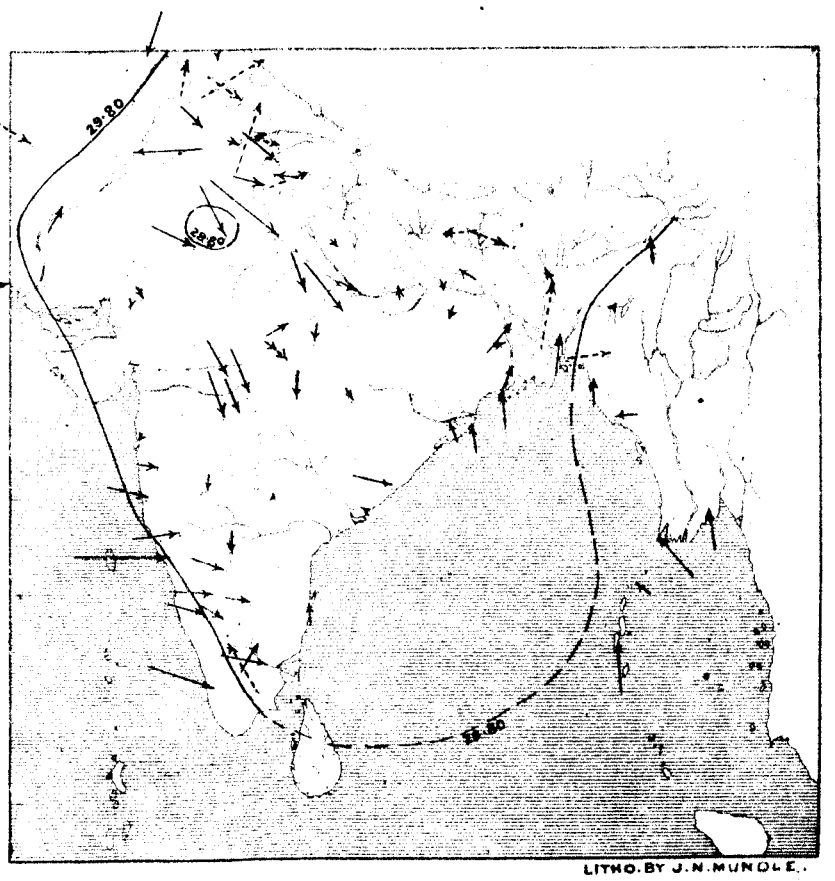


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF OCTOBER 1894.



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 of the resultant; a length of ⅝th of an inch being equal to 100 per cent.

Zinco., S. I. O., Calcutta.

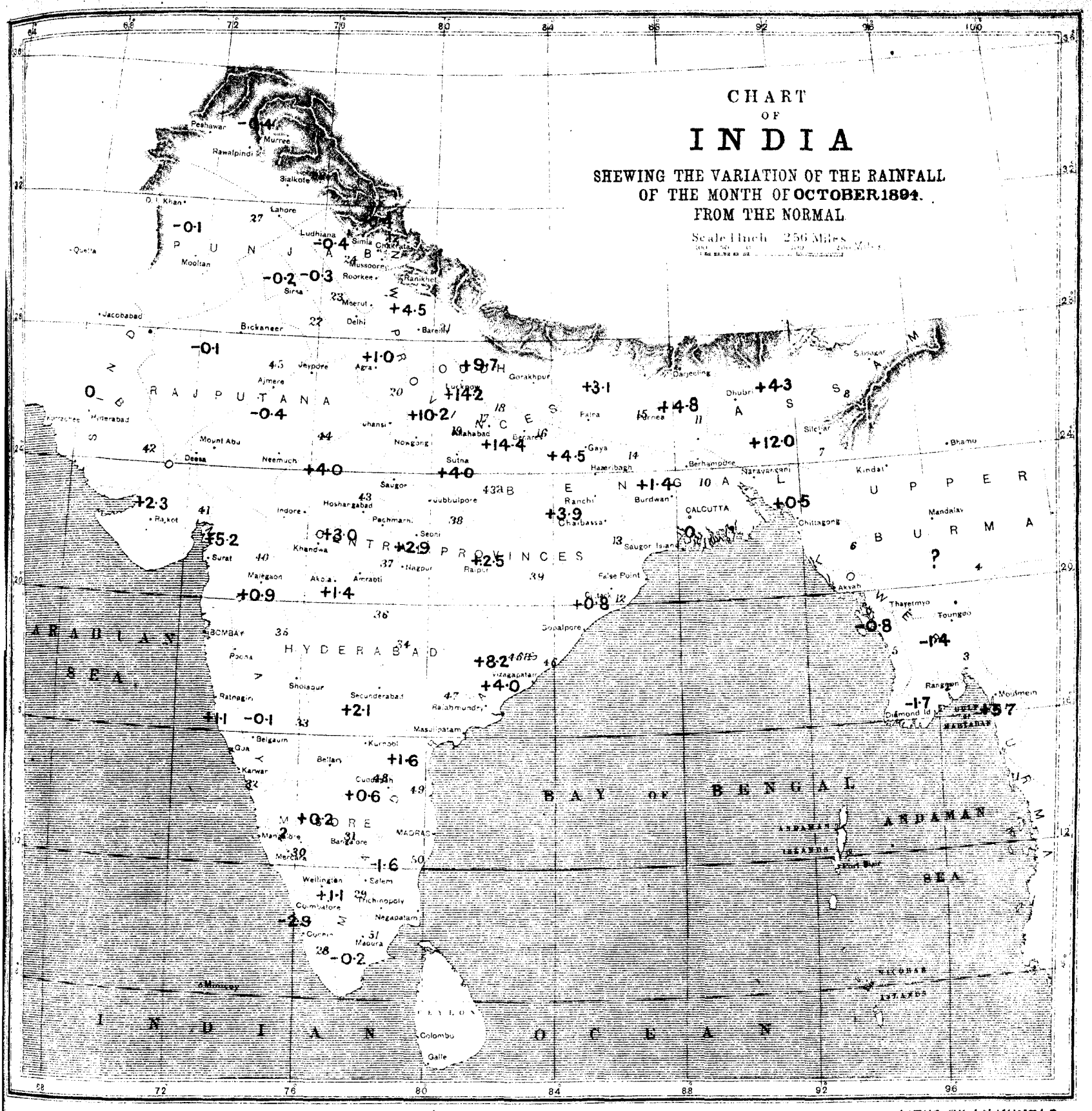
LITHO. BY J. N. MUNDLE.

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. 155, Wr., I.—June 94.—5,000.

Zinco., 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 51 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 name of the districts 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 figures.

1. Tenasserim
2. Lower Burma
3. Central do.
4. Upper do.
5. Arakan
6. Eastern Bengal
7. Assam (Surma)
8. Do. (Brahmaputra)
9. Deltaic Bengal
10. Central do.
11. North do.
12. Orissa
13. Chota Nagpore
14. Behar (South)
15. Behar (North)
16. North Western Provinces (East)
17. Oudh (South)
18. Do. (North)
19. North Western Provinces (Central)
20. Do. do. (West)
21. Do. do (Submontane)
22. Punjab (South)
23. Do (Central)
24. Do. (Submontane)
25. Do (Hill Districts)
26. Do. (North West)
27. Do. (West)
28. Malabar
29. Madras (South Central)
30. Coorg
31. Mysore
32. Konkan
33. Bombay Deccan
34. Hyderabad (North)
35. Khandeish
36. Berar
37. Central Provinces (West)
38. Do. (Central)
39. Do. (East)
40. Gujarat
41. Kathiawar
42. Sind
43. Central India (East)
43(a). Do. do. (a)
44. Rajputana (East) Central India (West)
45. Rajputana (West))
46. East Coast (North)
46(a). Do. do. (a)
47. Hyderabad (South)
48. Madras (Central)
49. East Coast (Central)
50. East Coast (South)
51. Madras (South)

Litho. S. I. O., Calcutta.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, NOVEMBER, 1894.

INTRODUCTION.

This Review of the weather in India during the month of November 1894 is based on observations taken daily at 8 A.M. at 204 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 88 stations. The rainfall summary is based on the rainfall data of the meteorological observatories and on 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 November 1894.

The normal meteorological conditions of the month of November are in many respects similar to those of October, as the month forms a part of the transition period during which the south-west monsoon current is retreating from the Indian land and sea area.

Pressure usually increases in Northern India, and hence the gradients favouring the extension and increasing intensity of the north-east winds in the Bay and Arabian Sea become steeper during the month. Pressure (8 A.M.) at the commencement of the month ranges normally between 29·90″ in the Punjab and 29·80″ in the centre and south of the Bay, and at the end of the month between 30·00″ in the Punjab and Central Rajputana and 29·80″ in the south of the Bay.

The total range of pressure hence usually increases from an average of one to an average of two-tenths of an inch during the month.

The most important feature in the distribution of pressure is the existence of a very shallow belt or trough of low pressure which stretches across the centre of the Bay from the Coromandel coast to the Andamans, and which defines the area over which the humid south-west winds across the entrance and south of the Bay recurve through south, south-east and east, and finally blow as north-east winds on the Coromandel coast, and usually give moderate to heavy rain in Central and South Madras and Mysore during the month.

Over the whole of Northern and Central India the weather is almost invariably fine, with clear skies and light winds.

North-westerly to westerly winds prevail in the Gangetic Plain, and northerly winds in Bengal. In Rajputana and Central India winds range between north and north-east and are light and somewhat unsteady. Easterly

winds obtain in the Peninsula, the air movement in that area forming part of the general drift from north-east to south-west across the north of the Bay and the north and centre of the Arabian Sea.

Temperature falls rapidly in North-Western India during the month, and the mean temperature of the month ranges from 62° in the North Punjab to 80° in the Andamans, the south of the Bay and West Ceylon. The daily range of temperature is always large in Northern India in November, in consequence of the clearness and dryness of the atmosphere, and exceeds 30° over a large part of the Punjab, Sind, Rajputana, Central India, Berar, the Central Provinces and the North-Western Provinces.

The month is almost invariably rainless over the whole of India to the north of Lat. 21° N., except in Assam and Bengal, which occasionally receive rain during the existence of the cyclonic storms of the month. These storms usually originate in the centre of the Bay and travel westward to the Coromandel or North Madras coast. 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 West Mysore and the Nilgherries, Palnis and other hills of Southern India.

The following gives a summary of the more important changes of meteorological conditions and the chief features of the weather in India during November 1894:—

The chief feature of the first week of the month was a feeble cyclonic storm which gave a remarkable and unseasonable burst of rain to the greater part of Northern and Central India.

As stated in last month's review, a double disturbance and cyclonic storm gave heavy rain to the greater part of the Peninsula, North Bombay, Central India and the Gangetic Plain during the period from the 19th to the 26th of that month. A rapid increase of pressure in North-Western and Central India established uniform pressure conditions in the Indian area, and more especially in the Bay, on the 27th and 28th. Heavy rain and squally weather prevailed in the Bay to the west of the Andamans on the 28th, and a depression formed in that area during the next 24 hours. It drifted west-north-westwards across the Bay towards the coast of the Circars at an average rate of about 8 miles per hour, and the centre crossed that coast between Masulipatam and Cocanada about 5 A. M. on the 2nd. The disturbance filled up partially during the day, but advanced as a residual depression into the Deccan (Hyderabad) on the 3rd and thence recurved, the central area marching northwards through the Central Provinces on the 4th into the North-Western Provinces on the 5th, and filled up in that area during the next 6 hours. The disturbance gave moderate to heavy rain to Central and North Madras on the 1st and 2nd. The indraught of humid winds in the northern quadrant of the depression on the 3rd and following three days gave an abnormal and unseasonable burst of rain to the Central Provinces, the eastern states of Central India, the North-Western Provinces and moderate and opportune rain to Bihar, Bengal and Assam.

The rainfall due to the disturbance varied from 2 to 10 inches over nearly the whole of the North-Western Provinces, Rewah, Bundelkhand and the northern districts of the Central Provinces, areas in which the normal rainfall of the month of November does not exceed half an inch.

One of the most remarkable features of the meteorology of the present year has been the excessive and unseasonable rainfall received in the North-Western Provinces (more especially the south-eastern districts) during the months of October and November. This was chiefly due to the peculiar conditions which obtained in that area during nearly the whole monsoon period, shown by the tendency of all the cyclonic storms to advance towards it and either to fill up there after giving heavy rain, or to increase in intensity after excessive and torrential rain, and receive a renewed lease of life and activity.

The following gives a statement of the mean actual rainfall during the period of the disturbance in Northern and Central India:—

Province or District.	Rainfall.	
	Total rainfall during period 1st to 7th November 1894.	Normal, November.
	Inches.	Inches.
Bengal	2·79	0·45
Bihar	1·18	0·15
Chota Nagpur	1·14	0·47
Orissa	2·59	1·38
North-Western Provinces	1·70	0·07
Rewah	1·40	0·54
Bundelkhand	1·07	0·13
Central Provinces	1·08	0·40

Temperature during the first week of the month was generally in moderate defect in the Peninsula and Central India and in excess in Burma and North-Eastern India. The variations were large and irregular during this period as they were determined by the distribution of the rainfall from day to day.

The remainder of the month was unusually free from disturbance. Fine settled weather prevailed over nearly the whole of Northern and Central India during the period.

Pressure increased rapidly on the 6th and 7th and anticyclonic conditions were established on the 8th. The chief feature during the next four days was an area of high pressure (and of large excess of pressure) in Khandesh, Berar and the Central Provinces. Fine clear weather with light airs and calms obtained in it, conditions favourable to increased terrestrial radiation. Hence the night temperature fell largely below the normal and the day temperature slightly below it for some days, *viz.*, from the 7th to the 16th, and unusually cool weather prevailed in that area during the period. The following data illustrate these conditions :—

Division.	Variation from normal of mean temperature of 24 hours preceding 8 a.m. of						
	7th.	8th.	9th.	10th.	11th.	12th.	13th.
	°	°	°	°	°	°	°
Central Provinces .	−2·9	−3·5	−4·1	−5·0	−4·9	−5·9	−5·3
Berar . . .	−1·7	−3·9	−4·2	−5·0	−4·1	−5·0	−6·6
Khandesh . . .	−2·3	−4·8	−5·5	−5·1	−4·5	−5·8	−5·6

Showery weather prevailed on the 7th and 8th in Southern India after which dry weather set in and continued steadily until the 14th or 15th. Meanwhile important changes were in progress in Burma and North-Eastern India. A local increase of pressure occurred in that area on the 13th and 14th. Pressure had been in general excess in the Indian area from the 8th, and during the interval from the 8th to the 13th the area of greatest excess of pressure lay over the Central Provinces, Berar and Central India. It was transferred by the pressure changes of the 13th and 14th to Burma, Assam and East Bengal. Pressure was more or less above the normal over nearly the whole of India until nearly the end of the month (*viz.*, the 27th), the excess being greatest in Burma and North-Eastern India and diminishing in amount westwards and southwards. The abnormal gradients due to these conditions favoured stronger land winds than usual in Burma and North-Eastern India and the early extension of north-east winds over the whole Bay area. The latter change occurred at the commencement of the third week of the month, and the south-west monsoon winds hence retreated southwards out of the Bay at least three weeks earlier than usual.

The pressure changes in Burma on the 13th and 14th accompanied a large and rapid decrease of temperature and humidity as is shown by the following :—

Station.	Aqueous vapour pressure 8 a.m.				Mean temperature of 24 hours preceding 8a.m. of			
	10th.	12th.	14th.	16th.	10th.	12th.	14th.	16th.
	"	"	"	"	°	°	°	°
Port Blair . . .	·862	·787	·839	·718	82·2	83·4	83·3	82·5
Rangoon . . .	·872	·787	·706	·653	80·8	79·6	77·3	77·8
Diamond Island . .	·852	·845	·739	·692	83·0	81·2	79·7	80·8

Drier and cooler weather than usual prevailed during the remainder of the month in Burma.

The following weekly data illustrate more fully the contrast between the conditions of the first and last fortnight in that area :—

	Province or Station.	Week ending				
		3rd Nov.	10th Nov.	17th Nov.	24th Nov.	1st Dec.
Variation of mean temperature from normal.	Burma . .	° +0·6	° +0·5	° −1·2	° −2·3	° −0·5
Mean aqueous vapour pressure.	Rangoon . .	" ·857	" ·824	" ·713	" ·623	" ·628
	Thayetmyo .	·826	·805	·696	·592	·575
	Mandalay .	·819	·816	·687	·528	·597

The strong north-east winds in the Bay due to the high pressure conditions in North-Eastern India and Burma gave two short periods of showery weather in the South Coromandel coast districts and in the Trichinopoly, Madura and Tinnevelly districts from the 15th to the 19th and again from the 24th to the end of the month, but it should be carefully noted that the rainfall was almost certainly due to intensified north-east monsoon winds and not to the retreating humid south-west monsoon current.

Hence during the last fortnight of the month fine clear and settled weather prevailed over nearly the whole of India. Burma was considerably cooler and drier than usual. Southern India received occasional showers, but the rainfall was much below the normal of the period, and temperature was hence in slight to moderate excess in that area at the beginning of the period. The cool wave which began to affect Burma on the 11th and 12th and the Andamans on the 14th and 15th, extended westwards across the Bay to the Madras coast districts and Deccan on the 20th and 21st, and temperature was below the normal during the remainder of the month in that area.

Weather was unusually cloudy with abnormally frequent and heavy rain in Persia during the last fortnight of the month. Baghdad received a total of 4·84 inches during this period, the normal rainfall of the month being only 0·32 inch. Similarly, Bushire obtained a total of 11·68

inches or 10·15 inches more than the normal of the month, *viz.*, 1·53 inches. The cloudy weather in Persia began to affect the temperature conditions of Baluchistan and Upper India on the 20th and 21st. During the preceding week temperature differed little from the normal in that area and was in slight defect. Skies clouded to some extent on the 20th and following days in Baluchistan and Upper India, and this caused a very large increase of the night temperature. The following gives data showing the mean temperature conditions in that area from the 21st to the 30th :—

Province.	Variation from normal during period 21st to 30th of		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Quetta (Baluchistan) . .	+3·3	+12·0	+7·7
Sind	+1·8	+ 3·7	+2·8
Punjab	−1·1	+ 4·9	+1·9
Rajputana	+2·6	+ 0·9	+1·8

These conditions were on the whole most pronounced on the 26th and 27th, when the mean temperature was upwards of 10° above the normal at Quetta and several of the Indus Valley stations.

During this period of cloudy weather occasional light showers of rain or snow were received in North Baluchistan, Afghanistan and the Punjab Himalayas.

Pressure.—The mean pressure of the Indian land area was ·038″ above the normal. Pressure was relatively to this general condition in slight defect in Northern India and South Madras and Ceylon, and in slight excess in the intermediate area. The pressure anomalies were less than ·020″ at all stations except Akyab, Chittagong, Cochin and Colombo, and hence the relative distribution differed to a very slight extent from the normal.

Pressure was in excess to a less extent at the hill stations than at the level of the plains or the vertical pressure anomalies were negative, an indication of at least normal cold weather rains in North-Western India during the next three months.

Temperature.—The mean maximum or day temperature of the month was considerably below the normal over the greater part of India. The deficiency ranged between 2° and 4° in the North-Western Provinces, Central and East Bengal, the Central Provinces, Hyderabad and the Madras Deccan. It was absolutely greatest at the following stations in the North-Western Provinces:—Bareilly (—3°·8), Gorakhpur (—3°·7), and Lucknow (—3°·3). The mean day temperature was in slight excess in Baluchistan, Sind and Rajputana, and normal in the west coast districts and Burma.

The variations of the mean night or minimum temperature were opposite in character to those of the day temperature over the greater part of India. The night temperature was above the normal in Northern India, Sind and Baluchistan. The excess ranged between 2° and 5° in North Bihar, the North-Western Provinces, East and North Punjab, Upper Sind and Baluchistan, and was absolutely greatest at Lahore and Roorkee (each +4°·6), Meerut (+4°·1 and Quetta (+4°·4).

The mean night temperature was below the normal over Burma and the Peninsula. The deficiency was considerable in Burma and in an area comprising Khandesh, Gujarat and the western stations of Central India, where it ranged between 2° and 3°·5. The deficiency was greatest in the former area at Rangoon (—3°·0) and in the latter at Malegaon (—3°·4). The low night temperature of the month in Burma was chiefly due to the unusual coolness and dryness of the last fortnight, and in Khandesh and Gujarat to a very dry cool period in the second week of the month.

The mean temperature conditions differed little from the normal. The mean temperature of the month was generally in defect, except in the Punjab, Sind and Baluchistan, where it was in slight to moderate excess. It varied more than 2° from the normal at only three stations, *viz.*, Quetta (+3°·2), Malegaon (—2°·4) and Khandwa (—2°·1). It may be noted that, in consequence of the opposite variations of the day and night temperatures, the diurnal range of temperature was much less than usual in the Gangetic Plain and Bengal, and was larger than the normal to a slight extent in Burma.

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

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

Winds.—The mean air movement over India differed very slightly from the normal. Winds were more easterly than usual in Burma and the east of the Bay and were somewhat steadier. They were less steady in Bengal and were more northerly and less westerly than usual, more especially in West Bengal. Light westerly airs and calms obtained during the last three weeks of the month in the Gangetic Plain and the air movement was even feebler and more unsteady than usual in that area and also in Upper India including the Punjab, Sind and Rajputana. In the west coast districts winds were more westerly than usual, and in the Central Provinces, Berar and the Decean the prevailing north-east winds of the month had a much weaker easterly element than usual. Winds were normal in direction and strength in the Coromandel coast districts and Southern India.

Humidity and Cloud.—The variations of the mean humidity conditions of the month from the normal were mainly determined by the distribution of the rainfall of the month. The air was considerably drier than usual in the Andaman Islands and Burma, due to the prevalence of very dry land winds in that area during the last half of the month. The humidity conditions were practically normal in Bengal. There was a large excess of aqueous vapour in the air on the mean of the month in the area including Bihar, Chota Nagpur, the Central Provinces, Central India, and the North Deccan, and humidity was hence largely in excess. The mean humidity of the month was more than 12 in excess at the following stations in that area:—Sutna (+16), Ghazipur, Lucknow and Roorkee (each +14). The air was, on the other hand, somewhat drier than usual in the Punjab, Baluchistan and Sind and was of normal humidity in Rajputana. The increased dryness of the air which characterized Upper India and Baluchistan extended along the whole west coast southwards as far as Cochin. Humidity was most largely in defect in the whole of that area at Peshawar (—9), Jacobabad (—6) and Karwar (—6).

The humidity conditions differed little from the normal in Madras, the South coast districts and the Deccan.

The mean humidity of the month was normal at Murree and Darjeeling, but was in considerable excess at Simla, Chakrata and Ranikhet. The humidity conditions at the hill stations hence agreed in character with those of the neighbouring plain stations.

There was much less cloud than usual in Burma and Upper Assam. Skies were unusually free from cloud during the latter half of the month in that area. In the Peninsula and Bengal the mean cloud amount differed little from the normal. The mean cloud amount at stations in Chota Nagpur, Bihar, the North-Western Provinces, Central India and the northern districts of the Central Provinces was largely above the normal of the period, due to the prevalence of overcast skies in the first week of the month at a time when skies are usually clear. The cloudy weather which prevailed in Baluchistan and Upper India during the last ten days of the month gave increased mean cloud amounts for the month to stations in those areas. In the intermediate area of Rajputana the mean cloud amount of the month was practically normal.

The following table gives variation data of the mean aqueous vapour pressure, mean humidity and mean cloud amount of ten meteorological provinces for the month of November 1894:—

Meteorological Province.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
Burma Coast and Bay Islands	—·077	—6	—0·4
Assam	+·009	+3	0
Bengal and Orissa	+·004	+1	+0·1
Gangetic Plain and Chota Nagpur	+·079	+9	+1·1
Upper Sub-Himalayas	+·055	+9	+1·6
Indus Valley and North-West Rajputana	0	—5	+0·7
East Rajputana, Central India and Gujarat	+·028	+4	+0·2
Deccan	+·026	+7	—0·1
West Coast	—·045	—5	—0·4
South India	—·003	+1	+0·6

Rainfall.—The cyclonic storm of the month gave a moderate burst of rain to Madras and the Deccan, and moderately heavy rain to Bengal and Assam. Its advance through the Central Provinces to the North-Western Provinces gave heavy rain to Bihar, the North-Western Provinces, Bundelkhand, Rewah and the northern districts of the Central Provinces, districts in which the average rainfall of the month is small, not exceeding two or three-tenths of an inch, and hence the disturbance gave a very large excess of rainfall in these areas.

Burma received occasional showers during the first ten days of the month after which unusually dry weather prevailed. The rainfall in that area was hence small in amount and considerably below the normal, more especially in Arakan and Lower Burma. The rainfall of the month was in moderate to largish excess in Assam, Bengal and Orissa.

The Coromandel coast districts and South Madras received occasional showers during the last fortnight of the month, but the weather was drier than usual, and hence the rainfall was in moderate defect in that area, as also in the Malabar and Konkan coast districts.

The character of the rainfall of the month was hence determined chiefly by the peculiar course of the storm of

the first week of the month, and by the early withdrawal of the south-west monsoon current from the Bay at least three weeks before its normal date. The following table gives comparative rainfall data for the eleven meteorological provinces of the Empire :—

Meteorological Province.	Rainfall.		
	Mean actual for November 1894.	Mean normal for November.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands .	0·94	4·20	−3·16
Burma Inland . . .	1·34	1·95	−0·82
Assam	3·17	0·76	+2·42
Bengal and Orissa . . .	2·96	0·90	+2·07
Gangetic Plain and Chota Nagpur.	1·67	0·19	+1·54
Upper Sub-Himalayas . .	1·12	0·16	+0·96
Indus Valley and North-West Rajputana.	0·05	0·15	−0·15
East Rajputana, Central India and Gujarat.	0·18	0·22	−0·01
Deccan	1·13	0·85	+0·34
West Coast	1·48	3·30	−1·68
South India	4·58	5·97	−1·81

Atmospheric Pressure.

The mean pressure of the Indian land area during the month of November was ·038″ above the normal and was hence in excess by almost exactly the same amount as in November 1893, when it was ·039″ higher than the normal.

Pressure was, relatively to this general condition, in slight defect in Northern India and in Mysore and South Madras, and was in excess in the remainder of India. The local anomalies were less than ·02″ in amount except in two small areas for which data are given below :—

Division.	Station.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
		″	″
Arakan and East Bengal	Akyab . . .	+·060	+·022
	Silchar . . .	+·058	+·020
Malabar and Ceylon	Cochin . . .	+·014	−·024
	Colombo . . .	+·007	−·031

Pressure was in excess at the hill stations in Northern India, but to a smaller extent than at the plains stations or the vertical pressure anomalies were negative. The following table gives data for six pairs of stations :—

Hill Station.	Variation from normal pressure.	Plain Station.	Variation from normal pressure.	Vertical pressure anomaly (Hill—Plain).
	″		″	″
Leh . . .	−·002	Lahore . .	+·006	−·008
Quetta . .	+·022	Jacobabad . .	+·033	−·011
Murree . .	+·016	Rawalpindi . .	+·019	−·003
Simla . .	+·003	Ludhiana . .	+·026	−·023
Darjeeling .	+·011	Dhubri . .	+·036	−·025
Mount Abu .	+·026	Deesa . .	+·040	−·014

Barometric depressions and cyclonic storms of the month.

Cyclonic storm of the 27th October to the 5th November.—This depression and storm formed in the Bay immediatelyafter the storm of the fourth week of October, which formed in the Arabian Sea off the Kathiawar and Bombay coasts, had broken up in Gujarat and South-West Rajputana on the 26th and 27th. Pressure increased rapidly in North-Western India and briskly in the Peninsula and North-Eastern India on the 27th, and was very uniform over the whole of the Bay area on the morning of the 28th. Light airs and calms obtained in Bengal and the north of the Bay and moderate south-west monsoon winds continued in the extreme south. Pressure increased

during the next 24 hours in Northern and Central India and fell in the centre and south of the Bay, and on the morning of the 29th moderate gradients and northerly winds obtained in North-East India and the north of the Bay. An area of nearly uniform pressure covered the centre and south of the Bay where weather was cloudy and unsettled with frequent heavy showers of rain in the morning, and became more disturbed and squally during the day. A depression and cyclonic circulation hence formed during the day, the central area of which was to the west of the Andamans. This storm formed the chief feature of the weather of the next week and is described below.

30th October.—Pressure was unchanged in North-Western India, but had fallen slightly to briskly in North-Eastern India and the Bay. Pressure was in slight to moderate excess in the western half of the Peninsula, normal in North-Eastern India and in moderate to considerable defect in the centre of the Bay where a shallow depression had formed. Winds had increased rapidly at Port Blair and were blowing strongly from south at 8 A.M. The following data extracted from the logs of ships indicate the position of the central depression and the weather in that area:—

Hour.	Name of Vessel or Station.	Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
8 A.M.	Port Blair .	...	...	29·741	S	Strong	Cloudy.
,,	Diamond Island	...	...	29·812	SE	,,	Sea rough.
,,	S. *Cressington*	11 18	89 39	29·617	WSW	9	5 A.M., steady heavy rain.
,,	S.S. *Karagola*.	15 44	93 36	29·888	SE	5	Fine. Noon, occasional rain squalls.
,,	S.S. *Husara* .	16 55	90 50	29·719	ENE	5	Noon, occasional squalls of wind and rain.
,,	S.S. *Darius* .	18 00	89 15	?	NE	?	Cloudy.
,,	S.S. *Clan Drummond.*	14 37	84 24	29·751	NNE	?	Heavy passing rain squalls.

The observations indicate that the storm had developed very rapidly during the previous 24 hours. A vigorous and well-defined cyclonic circulation was already established in the Bay. Very strong westerly gales were now experienced in the southern quadrant, and weather was more or less squally over the whole area of depression. The centre of the depression at 8 A.M. was probably a little to the north or north-east of the position of the S. *Cressington* in about Lat. 12½°N. and Long. 90°E. The storm centre advanced in a west-north-west direction during the day and the ship *Cressington* hence passed through the eastern quadrant. The following gives her meteorological log for the day:—

Hour.	Name of Vessel.	Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
4 A.M.	S. *Cressington*.	...	...	...	NW	8	Sharp confused sea.
5 to 6 A.M.		...	...	...	...	9	Steady heavy rain.
8 A.M.		11 18	89 39	29·617	WSW	9	Strong gale still prevailing.
Noon.		11 19	89 42	...	WSW	...	Wind and weather moderating.
4 P.M.		...	...	...	SW	...	Ditto.
8 P.M.		...	...	...	S	...	Passing showers.
Midnight.		...	...	...	S	4	Ditto.

Weather was fine with clear skies and light winds over the whole of Northern and Central India, but was cloudy with light local showers in the southern half of the Peninsula.

31st October.—Pressure had increased slightly in Burma and fallen slightly to briskly on the Madras coast. It had also fallen briskly on the Malabar coast, thus indicating a slight tendency to the formation of a depression off that coast. Weather conditions were unchanged in Northern and Central India where fine clear weather continued. Weather was cloudy and showery in South Madras and rainy on the Malabar coast. The land observations hence indicate that the depression in the Bay was more marked than on the 30th. The following data extracted from ships' logs indicate its position at 8 A.M.:—

Hour.	Name of Vessel or Station.	Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
8 A.M.	Port Blair .	...	...	29·797	SSE	Strong	Squally and cloudy.
,,	S. *Cressington*	13 22	90 16	·707	SE	2	Fine; 4 P.M., squally with passing showers.
,,	S.S. *Purnea* .	16 59	92 59	·801	SE	6	Squally and rainy.
,,	S.S. *Ailsacraig*.	18 25	86 38	·764	NE	...	
,,	S.S. *Clan Drummond.*	18 13	85 31	·751	NE	7	Dull and cloudy; 6 A.M., heavy passing rain squalls.
,,	S.S. *Jubeda* .	9 53	83 50	·681	W	5	Fine. Noon, squally with rain.

The pressure and wind observations when charted indicate that the centre of the storm was in about Lat. 14¼°E. and Long. 87¼° or 87°E., and it had hence advanced about 200 miles in a west-north-westerly direction during the previous 24 hours. Strong winds prevailed at a considerable distance from the centre in the northern and eastern quadrants, and weather was very squally with heavy rain in the depression area. Weather was fine and skies lightly clouded on the Bengal and Orissa coasts.

1st November.—The only important changes of pressure during the previous 24 hours were a brisk rise in the West Panjab and a brisk to rapid fall along the west or Madras coast of the Bay. The depression had hence intensified during the previous 24 hours and sea was now high and weather squally at the coast stations between Gopalpur and Cocanada. Winds were also increasing rapidly in strength in that area, and skies were overcast in South Bengal and Orissa. Fine clear weather with light airs and calms continued in North-West and Central India and showery weather in the Malabar coast districts.

The following table gives meteorological observations recorded at 8 A.M. on board ships in the storm area:—

8 Hour.	Name of Vessel or Station.	Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
8 A.M.	Port Blair .	...	...	29·829	SSW	strong.	Cloudy.
"	S. *Bangalore*	14 27	92 26	...	S	4	Squally with heavy rain.
"	S. *Cressington*	16 15	91 14	·767	SE by E	5	Squally with showers.
"	S.S. *Africa* .	19 13	90 14	29·789	SE by E	7	Cloudy; 2 A.M., frequent rain squalls.
"	S.S. *Kasara* .	Near Channel.*		·807	NE by E	5	Cloudy; midnight, heavy squalls at intervals.
"	S.S. *Jubeda* .	12 02	85 17	·655	W	6	4 A.M., clear.
"	S.S. *Culna* .	16 25	82 48*	·629	NE by E	8	4 P.M., high passing squalls.

* Noon position.

The centre at 8 A.M. was probably in Lat. 15½° N. and Long. 84½°E. and had marched 190 miles during the previous 24 hours. The nearest vessel to the centre at that hour was the S.S. *Culna*, about 120 miles to the west-north west. Squally weather now obtained over nearly the whole of the Bay. No vessel was near the centre during the day and hence the intensity of the storm near the centre can only be inferred from the observations. It appears to be most probable that the strongest winds in the storm area did not exceed 9 in force.

2nd November.—Pressure had given way briskly in Baluchistan and the North-West Punjab and briskly to rapidly in the Deccan and Central Provinces. The storm had advanced during the previous 24 hours in the same direction as hitherto, and the centre crossed the coast between Masulipatam and Cocanada during the early morning and was near Rajahmundry at 8 A.M. The following gives 8 A.M. observations at the stations nearest to the centre at that hour:—

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.			
	"	"	"				Inch.	
Nellore	29·753	−·016	?	WNW	13	10	...	
Masulpatam	·672	+·001	−·176	WNW	11	10	0·50	Distant lightning.
Cocanada .	·665	−·009	−·195	ESE	22	7	0·09	Severe gale of wind and sea rough.
Rajahmundry.	·647	−·059	−·225	E	...	8	0·46	
Vizagapatam	·670	−·009	−·201	S	4	8	0·82	
Khamamet .	·707	−·068	?	NNW	10	5	0·74	

The data show that the depression at the centre of the storm was less than a quarter of an inch, and that the cyclonic winds in the storm area were of moderate intensity. They also indicate that the depression was already beginning to fill up. Moderate rain had fallen in South Bengal, Orissa and the North Madras coast districts. Squally weather continued in the Bay, but winds were beginning to fall off in strength. The log of the S. *Cressington* notes that she experienced in Lat. 20° N. and Long. 90½°E. a heavy rain squall with "heavy bolts of thunder."

3rd November.—The storm under discussion was of moderate intensity when it struck the coast of the Circars on the morning of the 2nd. It filled up during the day rapidly and partially broke up under the obstructive action of the Eastern Ghâts. On the morning of the 3rd a very shallow residual depression covered nearly the whole of the Deccan and Central Provinces. Moderate humid winds were blowing across the North Madras and Orissa coasts and skies were now overcast in the Central Provinces and were clouding over in the Gangetic Plain. Light to moderate rain had fallen in Bengal and showers in the Deccan and Central Provinces.

4th November.—The residual disturbance had extended northwards into the central and eastern districts of the North-Western Provinces during the previous 24 hours

and now lay over that area, Central India and the Central Provinces. Winds were light and irregular over the whole of that area. Little or no rain had fallen in the Madras coast districts and the Deccan; but moderate to heavy rain had been received in Bengal, the Gangetic Plain and the eastern districts of Central India.

5th November.—Pressure had increased briskly to rapidly in Rajputana, Central India, the North-Western Provinces, the Central Provinces and the Deccan, and the residual depression had almost completely filled up, but was faintly traceable in the North-Western Provinces. Pressure was now very uniform over the whole land area of India. Moderate rain had fallen during the previous day in Bengal, the Gangetic Plain, Baghelkhand and showers in Bundelkhand.

Skies cleared during the next 24 hours, and fine weather with clear or lightly clouded skies obtained on the morning of the 7th over the whole of the Gangetic Plain and Central India.

The storm formed to the west of the Andamans on the 28th and 29th of October and then advanced in a west-north-west direction across the Bay to the Circars coast at a nearly uniform rate of 8 miles per hour. It was of moderate intensity when approaching the Circars coast, which it crossed on the morning of the 2nd. It filled up rapidly during that day; but the central area of the residual depression which was in the Deccan on the morning of the 3rd extended or advanced northwards through the Central Provinces on the 4th into the North-Western Provinces on the 5th, where it filled up on that and the following day. The storm gave moderate rain to the Madras coast districts and Deccan, and was chiefly remarkable for the unseasonable burst of rain it gave for 48 hours to the Gangetic Plain.

The following gives data of the track of the storm centre:—

Date.	Hour.	Position.		Distance travelled during interval.	Average hourly velocity during preceding 24 hours.
		Lat. N.	Long. E.		
		° ′	° ′	Miles.	Miles.
30th October . . .	8 A.M.	12 30	90 0	...	...
31st " . . .	"	14 15	87 15	220	9
1st November . .	"	15 30	84 30	200	8
2nd " . . .	"	16 45	81 45	200	8

The most remarkable feature of the storm was the determination of the residual depression to the North-Western Provinces which had formed a kind of sink during nearly the whole of the monsoon period, to which storms had almost invariably drifted and in which several of them were absorbed, as in the present case, and then filled up.

The following account of the weather in the outskirts of the storm in the north-east quadrant at Chittagong (sent by the Port Officer) is of interest:—"The 31st of October and 1st and 2nd of November were very peculiar and suspicious; there was little or no wind to speak of, but on the 31st of October the wind was constantly changing from 8 A.M. until 4 P.M., from east-north-east to west-south-west round by south; it also backed several times from south by west to south-east between these hours on the 1st and 2nd November. Although there was but little wind below, apparently there was a good deal of breeze above, as the face of the sky was constantly changing, sometimes it being quite overcast with cirro stratus and again becoming perfectly clear with a high blue sky and cirrus clouds. In the evenings also and during the nights we had a good deal of lightning and light showers of rain."

Pressure increased on the 7th and 8th in Northern India and was above the normal over the whole of India on the 8th and following days. The excess was greatest in the Central Provinces, Berar and Central India from the 8th to the 12th, after which a local increase of pressure transferred the area of greatest excess of pressure to Assam and Burma on the 13th. Fine clear weather held steadily during this period over Northern and Central India and the Deccan. Showers were received in the Coromandel coast districts; but the rainfall diminished in amount from the 10th and was light and confined to the most southern districts of Madras on the 13th and 14th. A further increase of pressure in Burma and North-Eastern India which occurred on the 13th, gave steepish gradients favouring north-east winds in the Bay, and rain fell in somewhat larger amounts in the Coromandel coast districts on the 15th, 16th, 17th and 18th.

The changes of pressure were large in amount from the 18th to the 22nd and were moderate but somewhat irregular during the remainder of the month; but the most important feature of the pressure conditions continued unchanged, *viz.*, the excess of pressure in Burma and Assam. The following gives pressure variation data for the 17th, 21st and 25th, illustrating the conditions which were initiated on the 13th and maintained until the end of the month:—

Province.	Variation from normal of mean 8 A.M. pressure on the		
	17th.	21st.	25th.
	"	"	"
Burma	+·138	+·079	+·048
Assam	+·105	+·070	+·044
Bengal	+·131	+·075	+·023
Bihar	+·129	+·041	+·035

Province.	Variation from normal of mean 8 A.M. pressure on the		
	17th.	21st.	25th.
	"	"	"
North-Western Provinces	+·113	+·028	+·019
Central Provinces	+·131	+·065	+·044
Madras	+·123	+·094	+·031
Central India	+·119	+·017	+·024
Rajputana	+·105	+·057	+·027
Punjab	+·137	+·065	+·014
Baluchistan	+·122	+·002	+·019
Malabar and Konkan coasts	+·096	+·075	+·035

North-east winds extended over the whole of the south of the Bay during the third week of the month, and the south-west monsoon winds hence retreated from the Bay at the beginning of the third week of the month, much earlier than usual. Strong north-east winds obtained during the remainder of the month. Light showers, due to the intensified north-east monsoon winds, were received in the Coromandel coast districts on the 24th and six following days, but the last twelve days of the month were unusually fine and free from rain over nearly the whole of Southern India. Cold weather pressure conditions were hence established earlier than usual in India generally and were very pronounced during the last week of the month.

Weather was very disturbed in Persia during the last fortnight of the month. Three depressions appeared or formed in that area during that period and gave remarkably heavy rain. The periods of disturbance were the 20th to the 22nd, the 24th to the 26th and the 29th and 30th. The abnormal character of the weather in that area is fully indicated by the excessive rainfall as shown below :—

Station.	Rainfall.	
	Actual, November 1894.	Normal, November.
	Inches.	Inches.
Baghdad	4·84	0·32
Bushire	11·68	1·53
Teheran	2·20	?
Jask	2·04	?

These disturbances slightly affected the weather in Baluchistan and Upper India, where they gave much cloud. Light showers fell in some parts of Baluchistan and Afghanistan and snow in the higher elevations of the Punjab Himalayas

Summary of the reports of the weather and snowfall in the mountain districts to the north and north-west of India.

The following gives a summary of the information relating to snowfall during the month of November in the mountain districts to the north and north-west of India.

I.—Afghan Mountain Area.

(1) *Hills west of Dera Ismail Khan.*—A feeble storm on the 30th gave a slight sprinkling of snow on the Pirghal (11,000 feet) and Merwatti mountains (10,500 feet). It melted entirely during the next 24 hours.

(2) *Kabul.*—Rain or snow fell on four occasions during the month at Kabul and on the surrounding hills. The following gives a brief statement of these falls :—

November 23rd.—Snow fell from 4 A.M. to 6 P.M. The fall was only 1¼ inches. The snowstorm is said to have extended as far as Ghazni where the fall measured 2 inches.

November 24th—0·50 inch of rain.

November 26th—0·10 inch of rain.

November 28th—0·52 inch of rain.

The depth of snow on the higher ranges in the neighbourhood of Kabul is stated to have varied between 1¾ inches and 2½ inches at the end of the month.

The snowfall up to date is reported to be above the average.

II.—Kashmir and Punjab Himalayas.

(1) *Gilgit.*—Snow fell on the neighbouring mountains on the 16th, 23rd and 24th and the 27th and 28th. The snowfall in the two latter periods descended to 8,000 feet.

(2) *Upper Sutlej Valley.*—Snow fell on the 4th and 5th which brought the snow line down to 12,000 feet and again on the 28th when the snow line descended to 10,000 feet. These two snowstorms extended over the whole of the Upper Sutlej Valley.

III.—North-Western Provinces Himalayas (Kumaun).

Almora District.

Malla Johar.—Snow fell on the 4th, 10th, 12th, 13th, 14th, 16th, 17th, 19th and 20th. The falls were moderate in amount except on the 19th and 20th when snow fell to the depth of 4 feet.

Malla Danpur.—There were three snowstorms during the month, *viz.*, on the 4th, 11th and 19th, but the total amount received was not large and did not exceed 2 feet.

Malla Byans Chaudans and Darma.—There was a moderate fall of snow on the 19th.

The snowfall is said to have commenced much earlier than usual and was considerably above the normal of the month. Weather was hence damper and colder than usual.

Summary of Special Storm Reports.

The following is a statement of the only local storm of importance during the month of which a report was received:—

12th.—Hailstorm at Gopalganj, North Sylhet, at 8 P.M. The storm was preceded by a strong gale from west. The stones were of small size and caused no damage to property.

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

Arabian Sea.—Very unsteady winds from northerly directions prevailed over the whole of the Arabian Sea, the Gulf of Aden, and the Persian Gulf during the first fortnight of the month. Weather was showery with occasional squalls throughout this period in the south-east, and fine with occasional light showers in the centre and west and clear over the remainder of the area. The mean wind force ranged from 2·1 on the 6th to 3·3 on the 13th, and averaged 2·8 for the whole period. During the next week conditions were favourable for the full extension of the north-east monsoon over the whole area, and hence by the 19th north-east winds had become established over the whole of the Arabian Sea. Weather was fine during this period in the north, centre and west, while occasional showers continued to be experienced in the centre and south-east accompanying north-east winds. The mean wind force on the 21st was 2·9. During the remainder of the month the north-east winds continued to extend and intensify steadily, and on the morning of the 30th averaged 4·0 in force. The strongest winds during this period were of force 7, and were recorded in the centre and south east of the sea.

This gradual intensification and southward extension of the north-east winds is shown clearly by the data of Zanzibar, where light northerly winds (average hourly velocity 1 mile) set in for the first time on the 28th and increased rapidly to 5 miles an hour on the 29th and to 16 miles on the 30th.

Weather was fine during the period, except in the south-east, where showers were of frequent occurrence, and in the Persian Gulf, where it was unsettled with heavy rain, hard squalls and a high sea, from the 20th to the 26th and again on the 29th and the 30th.

Bay of Bengal.—The storm, which had formed in the centre of the Bay on the last two days of the preceding month, lay off the Circars and Ganjam coasts on the morning of the 1st, and winds were hence cyclonic in direction over the whole of the Bay area. The air movement ranged in force from 4 to 9 and was strongest in the south-west of the Bay, where winds of force 6 to 9 were blowing. Weather was showery in the north, west and south of the Bay and rainy and squally in the centre and east. The mean intensity of the air movement was 4·9. Heavy weather and strong winds were experienced over the greater part of the Bay during the next 24 hours. The squalls were most severe to the south-east of Ceylon where the S. S. *Arroyo* reported very heavy squalls with rain. The storm crossed the coast on the morning of the 2nd and its influence on the winds and weather diminished rapidly. On the morning of the 3rd the strongest winds reported were of force 6 and the mean wind force as recorded on board 16 vessels was 0·7 less than on the 1st. A moderate monsoon prevailed in the south of the Bay. Over the remainder of the Bay weather had become practically fine. Winds continued to decrease in strength, more especially in the north and centre of the Bay during the next 48 hours, and on the morning of the 6th averaged only 2·0 in force or 2·9 less than on the 1st. Light unsteady winds and fine weather now prevailed generally, except in the south, where humid south-west monsoon winds and rainy squally weather continued.

An important change look place during the next two days. The humid monsoon winds withdrew from the south of the Bay and were replaced by light variable northerly airs, while north-east winds set in over the north of the Bay and began to work southwards and westwards, and on the morning of the 10th had spread as far south as Lat. 8° N. Weather continued fine generally except in the belt of light irregular airs in the extreme south of the Bay, where squalls were of occasional occurrence. The mean intensity of the air movement was 2·8 at 8 A. M. of the 10th. The north-east monsoon winds extended and intensified steadily during the next three days, and by the morning of the 13th had become established over the whole of the Bay. The south-west monsoon current of 1894 had now withdrawn completely from the Bay, upwards of three weeks earlier than the normal date.

Weather continued fine in the north of the Bay, but was showery in the south and south-west, due to the intensified north-east monsoon winds. The mean wind force on the 13th was 3·6 or 1·6 greater than on the 6th. Steady north-east monsoon winds, force 4 to 5, and showery squally weather obtained generally (except in the north) until the 19th, when winds fell off rather rapidly in strength and weather became fine over the whole of the Bay. The mean intensity of the winds on the 19th and 20th was only 2·6 as compared with 3·6 on the 13th. Winds however increased again in force, and on the morning of the 23rd were blowing with an average velocity of 3·8. With this intensification of the air movement weather became again showery and squally over the centre and west of the Bay. On the 24th the majority of vessels in the Bay reported winds of force 4 to 6, and the mean wind force as recorded on board 24 vessels was 4·0. Conditions remained unchanged until the 30th, when winds decreased slightly in strength and averaged 3·5.

It may be noted that the south-east trade winds continued to prevail more or less steadily in the eastern half of the equatorial belt until the 14th, when variable winds set in over that area. During the latter half of the month very unsteady winds obtained over that region, except on one or two occasions.

Temperature of the air.

The mean maximum or day temperature of the month was lower than usual over the whole of India with the exception of the Malabar coast districts, Sind, Cutch and Rajputana, and also Baluchistan. The excess was less than 2° at all the reporting stations in those areas, except Quetta, where the mean day temperature of the month was 2° above the normal.

The deficiency was less than 2° in amount except in three areas, *viz.*, Central and East Bengal, the North-Western Provinces, Central Bihar and the western half of the Central Provinces and East Deccan. Data for these areas are given below :—

Province.	Station.	Mean maximum temperature.		
		Actual, November 1894.	Normal, November.	Variation of actual from normal.
		°	°	°
Central and East Bengal.	Narayanganj	80·5	83·7	−3·2
	Mymensingh	79·3	82·3	−3·0
	Berhampore	79·3	81·8	−2·5
North-Western Provinces and Central Bihar.	Bareilly	77·1	80·9	−3·8
	Gorakhpur	77·9	81·6	−3·7
	Lucknow	79·6	82·9	−3·3
	Roorkee	77·6	80·4	−2·8
	Meerut	78·7	81·0	−2·3
	Allahabad	80·1	82·1	−2·0
	Benares	79·4	81·9	−2·5
	Gaya	79·8	82·4	−2·6
	Patna	79·2	81·4	−2·2
	Hoshangabad	80·4	83·4	−3·0
Central Provinces and East Deccan.	Amraoti	81·9	85·2	−3·3
	Nagpur	81·0	83·9	−2·9
	Chanda	82·3	84·4	−2·1
	Hyderabad (Deccan.(	80·2	82·9	−2·7
	Kurnool	84·0	86·6	−2·6

It may be noted that the rainfall of the month was very largely above the normal in those areas.

The minimum or night temperature was above the normal in Assam, North Bengal, the Gangetic Plain, Chota Nagpur, the Punjab, Sind, Baluchistan and the eastern districts of the Central Provinces, and in the most southerly districts of Madras. It was more than 2° above the normal over the greater part of Bihar, the North-Western Provinces, the Punjab, Baluchistan and Upper Sind, and was upwards of 3° in excess at the stations for which comparative data are given in the following table :—

Station.	Mean minimum temperature.		
	Actual, November 1894.	Normal November.	Variation of actual from normal.
	°	°	°
Patna	63·8	59·9	+3·9
Allahabad	58·0	54·4	+3·6
Sutna	56·2	52·8	+3·4
Lucknow	55·9	51·8	+4·1
Bareilly	55·3	52·2	+3·1
Roorkee	53·8	49·2	+4·6
Meerut	53·7	49·6	+4·1
Lahore	50·8	46·2	+4·6
Sirsa	51·1	48·0	+3·1
Sialkot	51·6	48·5	+3·1
Quetta	35·3	30·9	+4·4

The mean night temperature of the month was below the normal over the remainder of India. The deficiency was greater than 2° in two areas, *viz.*, Lower and Central

Burma, and Central India, Gujarat and Khandesh. Comparative data for these two areas are given below :—

PROVINCE.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, November 1894.	Normal, November.	Variation of actual from normal.
		°	°	°
BURMA	Rangoon	69·9	72·9	−3·0
	Bassein	69·6	71·8	−2·2
	Thayetmyo	65·8	68·0	−2·2
	Akyab	69·2	71·9	−2·7
CENTRAL INDIA, CENTRAL PROVINCES, WEST, KHANDESH AND GUJARAT.	Malegaon	53·4	56·8	−3·4
	Surat	59·4	62·3	−2·9
	Khandwa	53·4	55·7	−2·3
	Indore	51·7	53·8	−2·1
	Neemuch	51·7	54·2	−2·5
	Deesa	54·5	56·7	−2·2

The variations of the mean day and night temperature of the month were inverse in character over nearly the whole of India, and hence the variations of the mean temperature of the month were small in amount, exceeding 2° at only three stations, *viz.*, Quetta (+3°·2), Malegaon (−2°·4) and Khandwa (−2°·1). The mean temperature of the month was in slight to moderate excess in Upper India and Baluchistan. It was normal in the Bombay and Madras coast districts and the Gangetic Plain and was in slight defect in Burma, Central India, the Central Provinces and Deccan.

The following gives a brief summary of the chief features of the mean temperature conditions of the month:—

1st.—The day and night temperatures and hence also the mean temperature were below the normal to a moderate extent in Burma.

2nd.—The day temperature was in considerable defect in the Gangetic Plain and Bengal and the night temperature in slight to considerable excess. The mean temperature of the month hence differed little from the normal, but the diurnal range was much less than usual. Thus in the North-Western Provinces the mean diurnal range was only 23° or 5¼° less than the normal.

3rd.—Both the day and night temperatures were normal or in slight excess over the Punjab, Sind, Rajputana and Baluchistan, but the excess was slightly greater in the night than in the day temperature. The mean temperature was above the normal to a moderate extent in those areas, the excess being most marked at Quetta in Baluchistan.

4th.—Both the day and night temperatures were below the normal in Central India, Khandesh, the Central Provinces, Berar and the Deccan. The mean temperature of the month was hence in slight to moderate defect in that area, the defect being greatest in the area represented by the stations of Malegaon and Khandwa and perhaps Surat.

5th.—The mean temperature conditions of the month were approximately normal in the Bombay and Madras coast districts.

The following table gives comparative data for 51 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	87·6	67·4	77·5	20·2	31·5	−0·4	−1·4	+1·0
	Lower Burma	86·2	72·0	79·1	14·2	21·1	−0·1	−1·2	+1·1
	Central do.	88·9	66·1	77·6	22·8	34·8	+0·2	−2·2	+2·4
	Upper do.	80·8	61·8	71·3	19·0	32·5	−1·3	+0·6	−1·9
	Arakan	83·9	69·2	76·6	14·7	27·0	−1·6	−2·7	+1·1
BENGAL AND ASSAM	Eastern Bengal	79·2	63·2	71·3	16·0	27·1	−2·0	−0·6	−1·4
	Assam (Surma)	82·5	64·4	73·5	18·1	33·1	−2·2	+0·6	−2·8
	Do. (Brahmaputra)	77·8	62·4	70·2	15·4	28·6	−1·4	+0·7	−2·1
	Deltaic Bengal	80·4	64·1	72·2	16·3	28·5	−1·9	−0·7	−1·2
	Central do.	79·8	63·1	71·5	16·7	27·7	−2·3	+0·8	−3·1
	North do.	80·2	62·0	71·2	18·3	28·5	−1·8	+2·0	−3·8
	Orissa	82·2	67·5	74·9	14·7	26·0	−1·1	+0·6	−1·7
	Chota Nagpur	77·9	58·2	68·1	19·7	33·1	−1·1	+0·6	−1·7
	Bihar (South)	80·0	62·0	71·0	17·9	27·5	−2·4	+3·2	−5·6
	Do. (North)	80·0	61·0	70·5	18·9	29·7	−1·4	+2·0	−3·4
NORTH-WESTERN PROVINCES AND OUDH.	North-Western Provinces (East)	79·1	58·8	69·0	20·3	30·8	−2·7	+3·0	−5·7
	Oudh (South)	79·6	55·9	67·8	23·7	34·8	−3·3	+4·1	−7·4
	Do. (North)	79·1	58·0	68·6	21·1	35·9	?	?	?
	North-Western Provinces (Central)	79·7	55·7	67·7	24·0	38·0	?	?	?
	Do. do. (West)	82·4	57·0	69·7	25·4	37·0	−1·7	+1·2	−2·9
	Do. do. (Submontane)	76·7	54·0	65·4	22·6	37·2	−2·5	+3·4	−5·9

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.
		°	°	°	°	°	°	°	°
Punjab	Punjab (South)	83·0	53·8	68·4	29·3	43·7	−0·7	+2·1	−2·8
	Do. (Central)	80·2	50·8	65·5	29·4	46·1	−1·1	+4·6	−5·7
	Do. (Submontane)	78·3	52·1	65·2	26·2	41·8	−1·9	+2·0	−3·9
	Do. (Hill Districts)	59·0	42·3	50·7	16·7	34·4	−1·9	−0·2	−1·7
	Do. (North-West)	76·8	47·0	61·9	29·8	47·6	−1·2	+2·7	−3·9
	Do. (West)	82·6	50·5	66·6	32·2	47·9	−0·3	+1·5	−1·8
Bombay and Malabar Coast Districts (Madras).	Malabar	86·1	73·6	79·9	12·5	19·7	+0·4	0	+0·4
	Madras (South Central)	85·5	68·8	77·2	16·8	26·9	−0·9	+0·2	−1·1
	Coorg	73·0	60·5	66·8	12·5	21·3	−2·1	+0·2	−2·3
	Mysore	78·8	62·0	70·4	16·8	28·1	−0·5	−0·6	+0·1
	Konkan	87·2	71·8	79·5	15·4	23·3	0	−0·4	+0·4
	Bombay Deccan	83·5	60·0	71·8	23·5	34·3	−0·9	−1·0	+0·1
	Hyderabad (North)	81·3	59·0	70·2	22·3	31·3	?	?	?
	Khandesh	83·2	53·8	68·6	29·4	38·9	−1·3	−3·4	+2·1
Central Provinces and Berar.	Berar	83·0	58·3	70·7	24·7	34·5	−2·6	−0·6	−2·0
	Central Provinces (West)	81·6	56·5	69·1	25·1	34·6	−2·6	−0·8	−1·8
	Do. (Central)	79·4	55·4	67·4	24·1	33·7	−2·3	−0·3	−2·0
	Do. (East)	81·6	62·0	71·8	19·7	30·8	−1·1	+0·7	−1·8
Bombay (North)	Gujarat	88·2	61·0	74·6	27·2	32·6	−2·7	−2·9	+0·2
	Kathiawar	88·6	61·6	75·1	27·0	33·6	−0·8	−0·3	−0·5
	Sind	87·6	58·3	73·1	29·5	39·4	+0·8	+0·9	−0·1
Rajputana and Central India.	Central India (East)	78·8	56·6	67·7	22·2	31·7	−2·4	+4·2	−6·6
	Rajputana (East), Central India (West)	84·7	51·7	68·2	33·0	40·6	+0·4	−1·5	+1·9
	Do. (West)	88·1	54·4	71·3	33·7	43·9	+1·5	−1·9	+3·4
Madras	East Coast (North)	82·8	70·4	76·6	12·4	23·4	−0·2	+0·1	−0·3
	Hyderabad (South)	82·1	63·1	72·7	18·9	30·0	−2·7	0	−2·7
	Madras (Central)	84·9	65·5	75·2	19·4	32·3	−1·7	−0·8	−0·9
	East Coast (Central)	83·7	71·0	77·3	12·8	25·0	−1·3	−0·7	−0·6
	Do. (South)	84·8	72·5	78·7	12·3	21·6	−0·1	+0·1	−0·2
	Madras (South)	85·6	74·0	79·8	11·5	21·1	−1·7	+0·1	−1·8

The month was characterized by larger and more frequent changes of the temperature conditions than usual. At the commencement of the month temperature was more or less considerably in defect in the Peninsula and Central India, and was in slight excess in Burma, East Bengal and Upper India. The following variation data for the 1st illustrate the conditions prevailing on that day:—

Meteorological Province.	Variation from normal of mean Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	0	+1·4	+0·7
Bengal and Assam	−1·5	+1·1	−0·2
N.-W. Provinces and Oudh	−2·4	+0·1	−1·2
Punjab	+0·9	−0·8	+0·1
Sind and Rajputana	+0·6	−1·0	−0·2
Central India and Gujarat	−2·2	−1·1	−1·7
Central Provinces and Berar	−4·0	−3·9	−4·0
Bombay	−3·2	−2·6	−2·9
Madras	−7·2	−3·6	−5·4

The rainfall accompanying the cyclonic storm of the first week of the month gave unusually low temperature in the Coromandel coast districts and the Madras Deccan on the 1st, 2nd and 3rd, after which temperature increased very rapidly and was in slight excess in those areas on the 5th. The following gives the most striking examples of the great deficiency of temperature in those areas on the 1st, 2nd and 3rd:—

Date.	Station.	Mean daily temperature. Actual.	Normal.	Variation of actual from normal.
		°	°	°
1st	Cuddapah	71·0	79·7	−8·7
	Madras	71·5	80·0	−8·5
2nd	Cuddapah	65·2	79·8	−14·6
	Kurnool	64·3	78·3	−14·0
3rd	Kurnool	66·0	78·0	−12·0
	Cuddapah	67·7	79·6	−11·9

Temperature decreased in North-Western and Central India on the 4th and following days, whilst it increased and was considerably above the normal in the greater part of North-Eastern India and the Central Provinces. The chief feature from the 4th to the 7th was the increased temperature in Bengal and Assam and (to a less extent) in Burma. The following gives the departure of the mean temperature of those provinces from the normal from the 4th to the 8th :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	4th.	5th.	6th.	7th.	8th.
	°	°	°	°	°
Burma	−0·6	−0·4	−0·3	+0·9	+1·4
Assam	+1·7	−0·3	+1·5	+1·9	+2·2
Bengal	+1·2	+2·2	+3·7	+2·4	+0·5

The temperature conditions established on the 7th and 8th were similar in character to those at the commencement of the month. The temperature was more or less below the normal in North-West and Central India and the North Deccan, and above it in Burma, Southern India and the greater part of Bengal. The following temperature variation data for the 8th illustrate these conditions :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF MEAN		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	+0·7	+2·1	+1·4
Bengal and Assam . .	−0·9	+2·4	+0·8
North-Western Provinces and Oudh.	−3·9	+0·5	−1·7
Punjab	−1·7	−0·4	−1·1
Sind and Rajputana . .	−0·3	−5·0	−2·7
Central India and Gujarat .	−1·2	−2·8	−2·0
Central Provinces and Berar .	−3·0	−4·1	−3·6
Bombay	−0·5	−1·5	−1·0
Madras	+0·9	+1·3	+1·1

Temperature increased in Upper India and also in Madras during the next three or four days; but the only important feature of the temperature conditions from the 8th to the 16th was a large deficiency in Berar, the Central Provinces, Central India and Khandesh, of which comparative data are given below:—

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF										
	8th.	9th.	10th.	11th.	12th.	13th	14th.	15th.	16th.	17th.	18th.
	°	°	°	°	°	°	°	°	°	°	°
Central Provinces	−3·5	−4·1	−5·0	−4·9	−5·9	−5·3	−4·5	−2·8	−1·5	−0·5	0
Gujarat and Central India.	−2·0	−2·5	−3·0	−3·3	−3·0	−3·5	−2·9	−2·5	−2·2	−0·9	+0·5
Berar . .	−3·9	−4·2	−5·0	−4·1	−5·0	−6·6	−3·6	−5·6	−3·9	−0·8	−0·4
Khandesh . .	−4·8	−5·5	−5·1	−4·5	−5·8	−5·6	−6·7	−5·2	−5·4	+0·1	+1·0

This cool period in the Central Provinces, Berar, Khandesh and Central India hence extended from the 8th to the 16th and the conditions were on the whole most pronounced on the 12th and 13th, when the mean temperature of the whole area was 5° lower than the normal of the period. Skies were clear throughout the whole period in that area, and light airs and calms obtained, thus favouring rapid terrestrial radiation. Hence throughout the period the night temperature was largely below the normal and the day temperature moderately below it. The following gives temperature variation data of the 13th for the whole of India :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF MEAN		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	−0·8	−0·8	−0·8
Bengal and Assam . .	−3·1	−0·7	−1·9
North-Western Provinces and Oudh.	−3·6	+1·3	−1·2
Punjab	−1·7	+0·9	−0·4
Sind and Rajputana . .	−0·7	−0·9	−0·8
Central India and Gujarat	−3·5	−3·5	−3·5
Central Provinces and Berar .	−4·5	−6·6	−5·6
Bombay	−0·8	−2·7	−1·8
Madras	−1·3	−2·3	−1·8

During the whole of the period from the 1st to the 13th temperature was normal or in slight excess in Burma and Assam. It decreased on the 14th and 15th and was steadily in moderate defect during the remainder of the month. The following gives the mean variation data for every second day from the 14th to the end of the month for these two provinces :—

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF								
	14th.	16th.	18th.	20th.	22nd.	24th.	26th.	28th.	30th.
	°	°	°	°	°	°	°	°	°
Burma .	−1·8	−1·7	−1·9	−2·4	−2·7	−1·8	−0·3	−1·1	+0·4
Assam .	−1·1	−0·2	+0·4	−0·7	−1·6	−1·3	−1·9	−2·7	−1.8

The conditions of this cool period in Burma were similar to those which obtained in November 1892; but were less pronounced. They were most probably due to a strong drift of cool air down the Irrawaddy Valley.

Temperature was generally in slight to moderate excess in the Peninsula and North-Western India from the 16th to the 21st. The cool wave which affected Burma on the 13th and following days apparently advanced across the Bay and influenced the Madras coast districts on the 21st and following days. The reduction of temperature was less than in Burma, but was fairly well marked and was, as in Burma, associated with clear skies, decreased humidity and light winds and calms. The following gives temperature variation data of the 22nd for the whole of India:—

Meteorological Province.	Variation from normal of mean		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	−1·4	−4·0	−2·7
Bengal and Assam . .	−1·2	−0·7	−1·0
North-Western Provinces and Oudh.	−0·3	−0·6	−0·5
Punjab	−1·4	+0·3	−0·6
Sind and Rajputana . .	+0·1	−1·8	−0·9
Central India and Gujarat .	+3·0	+3·5	+3·3
Central Provinces and Berar .	+1·5	+3·0	+2·3
Bombay	+1·2	+1·2	+1·2
Madras	−0·5	−2·1	−1·3

The chief features of the temperature conditions on the 21st and 22nd were hence (1) moderate deficiency in Burma and slight deficiency in Madras, (2) moderate excess in the Central Provinces and Central India, and (3) normal temperature conditions in Upper India.

A slight disturbance that gave cloudy weather in Baluchistan and Upper India during the last week of the month was accompanied by a large increase of temperature in those areas and temperature was very largely in excess from the 23rd to the end of the month. The following data illustrate this effect of the cloudy weather in Upper India during this period:—

Province or Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of							
	22nd.	23rd.	24th.	25th.	26th.	27th.	28th.	29th.
	°	°	°	°	°	°		°
Quetta . .	+9·6	+10·9	+9·2	+7·1	+10·5	+11·4	+10·7	+2·0
Punjab . .	−0·6	+0·6	+0·5	+1·3	+4·2	+4·1	+5·3	+3·0
Sind . .	+0·3	+1·9	+2·7	+4·1	+3·6	+3·2	+3·5	+2·7
Rajputana .	−1·4	−1·0	−0·3	−0·1	+1·5	+2·6	+4·1	+5·6

Cloudy weather obtained steadily during this period in Baluchistan and Upper India, and a few light showers fell chiefly in the hill districts. The night temperature was hence very largely in excess throughout, whilst the day temperature was normal or in slight defect.

At the end of the month, temperature was normal or in slight defect in Burma and North-Eastern India and the eastern half of the Peninsula, and was in largish excess in North-Western and Central India. The following table gives variation data for the 24 hours period preceding 8 A.M. of the 30th:—

Meteorological Province.	Variation from normal of mean		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Burma	+0·1	−1·3	−0·6
Bengal and Assam . .	−0·7	+1·1	+0·2
North-Western Provinces and Oudh.	+1·3	+6·0	+3·7
Punjab	−0·5	+6·7	+3·1
Sindh and Rajputana . .	+4·9	+5·6	+5·3
Central India and Gujarat .	+2·2	+2·7	+2·5
Central Provinces and Berar .	+0·7	+1·1	+0·9
Bombay	+0·5	−0·4	+0·1
Madras	−1·1	0	−0·6

The following table gives the variations of the mean temperature week by week during the month. The data are taken from the weekly weather reviews published in the Gazette of India:—

Meteorological Province.	Variation from normal of mean temperature of week ending					
	3rd November.	10th November.	17th November.	24th November.	1st December.	For whole month.
	°	°	°	°	°	°
Burma . .	+0·6	+0·5	−1·2	−2·3	−0·5	−0·7
Bengal and Assam.	−0·4	+0·6	−1·2	−1·1	−0·4	−0·5
North-Western Provinces and Oudh.	−0·9	−0·6	−0·2	+0·2	+2·0	0
Punjab . .	−0·1	−0·1	+0·3	−0·3	+3·4	+0·8
Sind and Rajputana.	−1·0	−1·8	−0·2	+0·7	+3·5	+0·4
Central India and Gujarat.	−1·6	−1·4	−3·8	+1·9	+2·0	−0·3
Central Provinces and Berar.	−0·7	−1·5	−3·8	+0·8	−0·1	−1·2
Bombay . .	−1·7	−1·3	−1·2	+0·9	−0·1	−0·5
Madras . .	−1·5	+0·5	+0·1	−0·4	−0·6	−0·5

Winds.

Winds were on the average of the month more easterly than usual at Port Blair and the Burma and Arakan Coast stations. They were stonger at Diamond Island, but slightly weaker than usual at Port Blair. Winds were not so steady as usual in the Assam Valley and East Bengal. They were somewhat weaker than usual in West Bengal, and the northerly winds in that area contained a feebler westerly element than is generally the case in November.

Light unsteady westerly airs and calms obtained in the Gangetic Plain and South-East Punjab during nearly the whole month. Calms were reported in 44 out of 60 observations at Lucknow, and 43 at Roorkee. The unsteadiness and feebleness of the air movement in North-Western India is illustrated by the returns for the following four stations:—

Station.	Steadiness.		Velocity in miles per diem.	
	Actual percentage, November 1894.	Normal percentage, November.	Mean actual, November 1894.	Normal, November.
Roorkee	5	28	?	27
Peshawar	5	15	58	51
Jacobabad	8	16	26	38
Ajmere	15	10	32	35

The mean air movement, as recorded by the anemometers in use, ranged between one and two miles per hour over the whole of that area including the Punjab, North-Western Provinces, Upper Sind and East Rajputana.

In the Deccan and Central Provinces the air movement was from north-east, and was, on the whole, steadier than usual. Winds were, however, more directly from the north than usual, as is shown by the following data for three stations:—

Station.	Mean wind direction.	
	Actual, November 1894.	Normal November.
Akola	N 38° E	N 64° E
Nagpur	N 37° E	N 60° E
Pachmarhi	N 43° E	N 52° E

Winds were practically of normal strength in the Central Provinces and Deccan.

Winds were more westerly than usual at Karwar and Ratnagiri. They were less steady at Bombay and Ratnagiri, and more steady at Karwar and Cochin. In Southern India and the Coromandel Coast districts, the mean wind directions agreed closely with the normal. Winds were normal in force, and on the whole slightly steadier than usual.

The mean air movement over India during the month hence presented few abnormal features. The only important conditions were—

(1) Increased easting of the winds in Burma and the east of the Bay.

(2) Decreased easting or increased westing in the Central Provinces, Deccan and West Coast districts.

Humidity and cloud.

The air was unusally dry in Burma and at Port Blair during the last half of the month, and hence the mean absolute and relative humidities were both largely below the normal in those areas, as is shown by the following data:—

Station.	Absolute humidity.		Relative humidity	
	Average actual, November 1894.	Variation from normal.	Average actual, November 1894.	Variation from normal.
	"	"	%	
Port Blair	·828	—·119	76	—8
Rangoon	·688	—·110	71	—8
Diamond Island	·726	—·080	71	—9

The mean humidity conditions of the month differed little from the normal in Assam, Bengal and Orissa.

The air was on the mean of the month much damper, and contained a much larger amount of vapour than usual in Bihar, the North-Western Provinces, Central India, and the Central Provinces, or over the whole area which received unseasonable and heavy rain during the disturbance of the first week of the month. The following

gives comparative data for this area of increased humidity:—

Province.	Absolute Humidity.			Relative humidity.		
	Average actual, November 1894.	Average normal, November.	Varitalon from normal.	Average actual, November 1894.	Average normal, November.	Variation from normal.
	"	"	"	%	%	
Bihar	·567	·496	+·071	74	66	+ 8
Chota Nagpur	·398	·353	+·045	59	54	+ 5
North-Western Provinces.	·424	·340	+·084	65	54	+11
South-East Punjab	·328	·313	+·015	54	49	+ 5
Central India	·418	·313	+·105	62	49	+13
Berar	·397	·403	—·006	56	52	+ 4
Central Provinces	·431	·378	+.053	62	52	+10

The mean humidity of the month was most largely in excess at the stations of Sutna (+16), Lucknow and Roorkee (each+14), and Saugor and Jubbulpore (each +12).

Humidity was below the normal in the North and West Punjab, Upper Sind and Baluchistan, and was in slight excess in Rajputana. The mean relative humidity was most largely in defect in this area at Peshawar (—9), Jacobabad (—6), and Mooltan and Quetta (each—5).

The mean humidity conditions of the month were practically normal in the Madras Coast districts and the Deccan. There was a moderate deficiency of aqueous vapour in the West Coast districts, and the mean humidity of the stations from Bombay to Cochin was below the normal to a moderate extent.

Humidity was considerably above the normal at Chakrata (+11), Ranikhet (+10), and Simla (+8). The mean humidity conditions of the month were practically normal at the remaining hill stations in Northern and Central India.

The following summarizes the most important features of the mean humidity conditions of the month:—

1st.—Decreased humidity of the air in Burma and the Andamans.

2nd.—Increased humidity in the North-Western Provinces, Central India, Berar, and the Central Provinces.

3rd.—Decreased humidity in the North and West Punjab, Baluchistan, Sind, and the West Coast districts.

The variations in the humidity conditions were similar to those of the rainfall, and were mainly determined by the distribution of the rainfall of the month.

The mean cloud amount of the month was considerably below the normal at Sibsagar in Upper Assam and Rangoon in Lower Burma, and probably over the whole of Upper and Central Burma. The cloud amount at Sibsagar averaged 2·1 less than the normal (4·5), and at Rangoon 1·9 less than the normal (4·6).

The variations of the mean cloud amount of the second class stations in Bengal and Orissa differed very slightly from the normal.

The mean cloud amount of the month was largely in excess in the area of abnormal rainfall and increased humidity including Bihar, Chota Nagpur, the North-Western Provinces, Central India, and the northern districts of the Central Provinces.

There was also more cloud than usual in Sind, the Punjab, and Baluchistan, due chiefly to the increased cloud of the last ten days of the month. The following data for three typical stations illustrate this:—

Station.	Mean Cloud Amount.		
	Average actual, November 1894.	Average normal, November.	Variation from normal.
Lahore	2·6	1·2	+1·4
Jacobabad	2·2	1·1	+1·1
Quetta	2·7	1·2	+1·5

The hill stations in North-Western India had unusually cloudy weather during the first week and last ten days of the month, and the mean amount of the cloud was hence in excess, as is shown by the following examples:—

Station.	Mean Cloud Amount.		
	Average actual, November 1894.	Average normal, November.	Variation from normal.
Chakrata	3·6	1·6	+2·0
Simla	5·0	1·9	+3·1
Murree	4·2	2·9	+1·3

The variations of the mean cloud amount of the month were small and somewhat irregular in the Peninsula.

The chief features of the cloud distribution of the month were as follows:—

1st.—Decreased cloud amount in Burma and Upper Assam.

2nd.—Normal mean cloud conditions in Bengal, Rajputana and the Peninsula.

3rd.—Increased cloud in Bihar, Chota Nagpur, the North-Western Provinces, Central India, the Punjab, Sind and Baluchistan. The increased cloud was most strongly shown at the hill stations in North-Western India.

The only station at which the cloud amount was less than 0·5 and skies hence practically clear throughout the month, was Kurrachee, where it was only 0·4.

Rainfall.

Rainfall in November is generally due solely to the retreating south-west monsoon current in the Bay of Bengal. Under normal conditions the air current recurves in the Bay and advances as a current from the north-east to the Madras Coast districts, the Deccan, and Southern India, to which it usually gives frequent moderate rain. The retreating current is, however, necessarily weak and unsteady. Hence the rainfall due to it is subject to even greater irregularities than the ordinary south-west monsoon rainfall in Northern and Central India.

In consequence of the weakness and irregularity of the current and the conditions of the air movement in the Bay, there is a strong tendency to the formation of severe cyclonic storms. These storms in the majority of cases advance westwards to the Madras Coast, but occasionally march along a northerly track into Orissa, or a north-east track into Burma and Arakan. Hence Burma and Orissa, in addition to the light rainfall they almost invariably receive when cyclonic storms are forming in the Bay during the month, occasionally obtain heavy cyclonic falls. Bengal also usually receives light rain during the existence of these cyclonic storms in the Bay.

The average rainfall of the whole of North-Western and Central India, including the Punjab, Sind, Rajputana, North Bombay, Central India, the North-Western Provinces and Bihar, is small in amount, not exceeding two or three-tenths of an inch. Bengal, Assam, Berar and the Central Provinces, which receive rain in the outskirts of the cyclonic storms of the month, have slightly larger amounts. In Bengal the average rainfall decreases from an average of two inches in the coast districts of Orissa and East Bengal to two-tenths of an inch in North Bengal and Bihar. Similarly, in Burma the average rainfall of the month decreases from four inches in the coast districts to half an inch in the central districts of Upper Burma.

The rainfall in Madras and the Deccan is of great importance. In the South Coromandel districts the average rainfall of the month slightly exceeds 15 inches. The amount decreases rapidly into the interior to an inch in the South Deccan, and slowly northwards along the coast districts to Ganjam, where the average is nearly three inches.

The rainfall of the month of November 1894 was very abnormal in character over a large part of Northern and Central India. This was due to the unusual course of the only cyclonic storm of the month which advanced from the Bay to the Circars and Deccan and thence passed northwards into the North-Western Provinces. The storm gave a heavy burst of rain to the North-Western Provinces, Central India, Bihar and the northern districts of the Central Provinces at a period of the year when rain is of very rare occurrence in those areas. The disturbance gave also moderate to heavy rain in Burma, Bengal and Assam, and the Deccan and the Madras Coast districts. The remainder of the month was practically rainless except in Southern India, which received occasional feeble bursts of rain. The chief periods of rainfall in India during the month were :—

1st.—From the 1st to the 6th or 7th when the whole of India except Upper India received more or less general rain. The rain was exceptional in its occurrence in the North-Western Provinces, Baghelkhund, Bundelkhund, and the northern districts of the Central Provinces.

2nd.—From the 15th to the 19th, when the central and southern districts of Madras, Mysore and Travancore obtained moderate showers daily.

3rd.—From the 24th to the 30th, when the districts of Madras from Chingleput southwards obtained light to moderate daily showers. The rainfall was heaviest during this period in the Chingleput, South Arcot and Tanjore districts.

The chief features of the distribution of rainfall of the month were as follows :—

(1) No rain fell in Baluchistan, the West Punjab, Sind, Kathiawar, Khandesh and Rajputana.

(2) Exceptional rain in the East Punjab, North Western Provinces, Baghelkhund, Bundelkhund, and the northern districts of the Central Provinces in which districts it was hence in very large excess.

(3) Opportune and more abundant rain than usual in Bengal, Assam, Bihar, Chota Nagpur and Orissa. The rainfall of the month was in large excess in East and Deltaic Bengal, and in moderate excess in the remainder of the area.

(4) Rainfall in moderate excess in Berar, the Central Provinces and East Deccan.

(5) Rainfall in moderate defect in the Konkan and Malabar.

(6) Rainfall normal or in slight to moderate defect in Madras. The deficiency was largest in amount in the coast districts.

(7) Rainfall in moderate to largish defect in Burma and Arakan.

The following table gives comparative rainfall data of the month for the 51 meteorological districts or areas into which India is divided. In the majority of districts the data are based on the published monthly rainfall statements, but in the case of Madras, Burma and the Central Provinces, for which the monthly statements were not received in time, the data are derived from the weekly telegrams received from district officers in those provinces.

Province.	Division.	Number of rainy days. Average actual, November 1894.	Number of rainy days. Average normal, November.	Rainfall. Average actual, November 1894.	Rainfall. Average normal, November.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	0·30	1·20	—0·90
	Lower Burma*	?	?	0·93	3·37	—2·44
	Central do.*	?	?	1·12	1·84	—0·72
	Upper do.*	?	?	2·20	?	?
	Arakan*	?	?	0·88	3·53	—2·65
Bengal and Assam	Eastern Bengal	4·2	1·4	3·30	1·14	+2·16
	Assam (Surma)	?	?	5·53	0·73	+4·80
	Do. (Brahmaputra)	?	?	1·12	0·57	+0·55
	Deltaic Bengal	3·8	1·0	5·01	0·36	+4·65
	Central do.	2·8	0·7	2·22	0·25	+1·97
	North do.	0·8	0·4	0·42	0·14	+0·28
	Orissa	3·7	2·1	3·09	1·38	+1·71
	Chota Nagpur	1·9	0·9	1·14	0·47	+0·67
	Bihar (South)	1·5	0·4	1·47	0·22	+1·25
	Do. (North)	1·3	0·3	0·89	0·09	+0·80
North-Western Provinces and Oudh.	North-Western Provinces (East)	1·6	0·2	1·25	0·11	+1·14
	Oudh (South)	2·4	0·1	2·85	0·02	+2·83
	Do. (North)	2·4	0·1	2·15	0·04	+2·11
	North-Western Provinces (Central)	2·1	0·1	2·78	0·03	+2·75
	Do. do. (West)	0·9	0·1	0·50	0·04	+0·46
	Do. do. (Sub-montane)	1·9	0·2	1·41	0.11	+1·30
Punjab	Punjab (South)	0·3	0·1	0·16	0·07	+0·09
	Do. (Central)	1·0	0·1	0·54	0·06	+0·48
	Do. (Sub-montane)	0·8	0·3	0·82	0·15	+0·67
	Do. (Hill Districts)	3·1	0·9	2·21	0·72	+1·49
	Do. (North-West)	0·1	0·5	0·05	0·53	—0·48
	Do. (West)	0	0·3	0	0·16	—0·16
Bombay and Malabar Coast Districts (Madras).	Malabar*	?	?	2·32	3·57	—1·25
	Madras (South Central)*	?	?	2·69	4·17	—1·48
	Coorg	3·4	?	1·54	?	?
	Mysore*	?	?	1·55	2·31	—0·76
	Konkan	0·3	1·9	0·10	1·10	—1·00
	Bombay, Deccan	0·8	2·4	0·38	1·46	—1·08
	Khandesh	0	1·4	0	0·98	—0·98
Central Provinces and Berar.	Berar*	?	?	1·10	0·53	+0·57
	Central Provinces (West)*	?	?	1·21	0·38	+0·83
	Do. do. (Central)*	?	?	1·04	0·31	+0·73
	Do. do. (East)*	?	?	1·17	0·45	+0·72
Bombay (North)	Gujarat	0	0·4	0	0·18	—0·18
	Kathiawar	0	0·2	0	0·23	—0·23
	Sind	0	?	0	0·07	—0·07
Rajputana and Central India.	Central India (East)	0·6	?	0·53	0·53	0
	Rajputana (East) and Central India (West)	0	?	0	0·08	—0·08
	Rajputana (West)	0	?	0	0·02	—0·02
Madras	East Coast (North)*	?	?	2·07	3·31	—1·24
	Do. (do.) (a)*	?	?	2·31	2·46	—0·15
	Hyderabad (South)*	?	?	0·76	0·38	+0·38
	Madras (Central)*	?	?	1·63	2·12	—0·49
	East Coast (Central)*	?	?	3·93	5·83	—1·90
	East Coast (South)*	?	?	7·33	8·77	—1·44
	Madras (South)*	?	?	6·06	6·05	+0·01

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

Assam-Surma obtained moderately heavy daily rain during the first week of the month, and the Brahmaputra Valley light to moderate showers. Showers also fell in the Assam Valley between the 16th and 21st; but the amounts were small and the rainfall of little importance. The following gives a comparative statement of the rain-

fall in the two divisions of the province based on the complete data for the month published in the Assam Gazette :—

District.	Number of rainy days.		Rainfall.		
	Mean actual, November 1894.	Variation from normal.	Mean actual, November 1894.	Variation from normal	Percentage variation from normal.
			Inches.	Inches.	
Surma	6·0	+4·5	6·50	+5·64	+656
Brahmaputra . . .	2·3	+1·1	1·10	+0·58	+112

The disturbance of the first week of December gave a moderate burst of rain to the greater part of Bengal, Bihar, Chota Nagpur, and Orissa. The northern districts of Bengal, including Darjeeling, Dinajpur, Jalpaigori, Kuch Bihar, and Rangpur received little or no rain during this period. East and South-West Bengal had moderately heavy rain on the 2nd, 3rd, 4th and 5th; Bihar moderate rain on the 5th and 6th; and Chota Nagpur light irregular showers from the 2nd to the 6th.

The following table shows that the rainfall of the month was in moderate excess in actual amount in Bihar, Chota Nagpur, Orissa and North and Central Bengal, and in largish excess in East and South-West Bengal. As the normal rainfall of the month is small in amount the percentage excess is very large—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, November 1894.	Variation from normal.	Mean actual, November 1894.	Variation from actual from normal.	Percentage variation from normal.
			Inches	Inches.	
Bengal, East . . .	4·2	+2·8	3·30	+2·16	+189
" North. . .	0·8	+0·4	0·42	+0·28	+200
" Deltaic . .	3·8	+2·8	5·01	+4·65	+1292
" Central . .	2·8	+2·1	2·22	+1·97	+788
Orissa	3·7	+1·6	3·09	+1·71	+124
Chota Nagpur . .	1·9	+1·0	1·14	+0·67	+143
North Bihar . . .	1·3	+1·0	0·89	+0·80	+889
South Bihar . . .	1·5	+1·1	1·47	+1·25	

The North-Western Provinces obtained an unseasonable and general burst of rain on the 3rd, 4th and 5th from the disturbance of the first week of the month. The only district which received no rain during this period was Agra. Over the whole of Oudh and the central districts of the North-Western Provinces the rainfall of the period averaged over 2 inches in amount. As the normal rainfall of the month is less than a tenth of an inch in amount and hence practically *nil*, this very abnormal fall intensified the injury inflicted on the crops by the excessive rain of October. The rainfall was heaviest in the Banda district, where the following falls exceeding 5 inches in 24 hours were recorded during the storm :—

Date.	Station.	Heaviest rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
3rd . .	Girwan	5·92
4th . .	Banda	7·97
" . .	Karwi	5·83

The Banda district received an average of 4·63 inches during this rainy period, the normal for the month being only 0·06 inch.

The following table gives comparative data for the six divisions of the province, and shows the abnormal character of the rainfall :—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, November 1894.	Variation from normal.	Mean actual, November 1894.	Variation from normal.	Ratio of actual to normal.
			Inches.	Inches.	
Oudh North . . .	2·4	+2·3	2·15	+2·11	54
Do. South . . .	2·4	+2·3	2·85	+2·83	143
N.-W. P. (East) . .	1·6	+1·4	1·25	+1·14	11
Do. Central . .	2·1	+2·0	2·78	+2·75	93
Do. Submontane .	1·9	+1·7	1·41	+1·30	13
Do. (West) . .	0·9	+0·8	0·50	+0·46	13

The Gurgaon, Rohtak, Delhi, Karnal, Umballa, Hoshiarpur, Simla and Kangra districts of the Punjab received moderate rain on the 4th and 5th. Light showers also fell in the hill districts on the 28th and 29th. With these exceptions no rain fell in the Punjab during the month. The following gives comparative data for the dis-

tricts which received rain during the first week of the month :—

Station.	Rainfall.		
	Mean actual, November 1894.	Average normal, November.	Variation from normal.
	Inches.	Inch.	Inches.
Gurgaon	0·33	0·02	+0·31
Rohtak	0·94	0·02	+0·92
Delhi	1·02	0·01	+1·01
Karnal	1·56	0·06	+1·50
Umballa	3·22	0·14	+3·08
Hoshiarpur	0·71	0·12	+0·59
Simla	3·43	0·74	+2·69
Kangra	1·40	0·71	+0·69

No rain fell in Baluchistan until the 27th, on which and the following day light showers occurred on the higher elevations.

Light showers were received in Kashmir between the 19th and 29th, but the total rainfall was small in amount and of little importance.

Rajputana and the western states of Central India received no rain during the month. Rewah, Bundelkhand and Maihar shared in the rainfall due to the disturbance of the first week of the month. The following gives comparative data for these states or divisions :—

District or State.	Rainfall.		
	Mean actual, November 1894.	Average normal, November.	Variation from normal.
	Inches.	Inch.	Inches.
Maihar	1·96	0·48	+1·48
Rewah	1·40	0·54	+0·86
Bundelkhand	1·07	0·13	+0·94

The Central Provinces and Berar obtained moderately heavy rain during the first week of the month. The following gives mean data derived from the tabular statements published in the respective Gazettes of these provinces and which differ to some extent from the data in the rainfall table page 506 based on the weekly telegrams received from District Officers :—

Division.	Number of rainy days.		Rainfall.		
	Actual, November 1894.	Variation from normal.	Actual, November 1894.	Variation from normal.	Percentage variation.
			Inches.	Inch.	
Central Provinces (East)	1·8	+1·1	1·41	+0·93	+194
Ditto (Central)	1·8	+1·2	0·94	+0·57	+154
Ditto (West)	1·7	+1·0	1·05	+0·67	+176
Berar	1·6	?	1·13	?	?

The month was rainless over nearly the whole of the Bombay Presidency. Some light showers of no importance fell in North Canara on the 8th and 9th. The Dharwar and Bijapur districts received moderate showers during the first week of the month. The total fall of the month in the Bijapur district averaged 2·02 inches and in the Dharwar district 0·55 inch.

The following comparative data show the extent to which the rainfall of the month was in defect in the various divisions of the Presidency :—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, November 1894.	Variation from normal.	Mean actual, November 1894.	Variation from normal.	Percentage variation.
			Inch.	Inches.	
Konkan	0·3	—1·6	0·10	—1·00	—91
Bombay Deccan	0·8	—1·6	0·38	—1·08	—74
Khandesh	0	—1·4	0	—0·98	—100
Gujarat	0	—0·4	0	—0·18	—100
Kathiawar	0	—0·2	0	—0·23	—100
Sind	0	?	0	—0·07	—100

The chief periods of rainfall in the Madras Presidency were as follows :—

1st.—From the 1st to the 6th. The northern and central coast districts received moderate to heavy general rain during this period.

2nd—The 11th, 12th and 13th when the central and southern coast districts had light to moderate showers.

3rd.—The 14th to the 19th. No rain fell during this period in the north-east districts (*i.e.*, Ganjam and the Circars). Light showers fell in the Deccan districts, and moderate to heavy rain over the remainder of the Presidency. The Tanjore and Tinnevelly districts received the largest falls during this period.

4th.—From the 24th to the end of the month, when moderate daily showers were received in the coast districts south of Nellore, light showers in the central districts (*viz.*, Coimbatore and Salem), and southern districts (*viz.*, Tinnevelly and Madura). The Chingleput, South Arcot, and Tanjore districts obtained moderately heavy rain during this period.

The rainfall of the month was hence well distributed on the whole over the Madras Presidency. It was in slight excess in the districts of Kurnool, Bellary, Madura and Tinnevelly, and below the normal in other districts. The deficiency was nowhere very large. It was greatest, relatively to the normal, in the districts of Vizagapatam, Godavari, North Arcot, Trichinopoly, Malabar, South Canara, Salem, Coimbatore, Cuddapah and Anantapur, where it exceeded 33 per cent.

The following gives comparative rainfall data for each Collectorate, based on the rainfall data of the month published in the *Madras Gazette*:—

District.	Number of rainy days.		Rainfall.		
	Mean actual, November 1894.	Average normal November.	Mean actual, November 1894.	Average normal, Novembe	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam	3·6	3 3	2·70	3·37	−0·67
Vizagapatam	3·2	4·2	1·92	3·27	−1·35
Godavari	3·1	3·1	1·72	3·22	−1·50
Kistna	4·2	3·3	2·97	3·15	−0·18
Nellore	7·7	7·6	6·87	9·22	−2·35
Chingleput	11·2	9 9	9·68	11·46	−1·78
Madras	13·0	11·0	10·55	13·75	−3·20
North Arcot	6·1	7·3	2·97	7·64	−4·67
South Arcot	9·7	9·2	7·52	8·72	−1·20
Tanjore	14·0	10·2	8·94	10·42	−1·48
Trichinopoly	7·0	7·1	2·90	4·53	−1·63
Madura	9·9	7·7	6·03	5·53	+0·50
Tinnevelly	9·2	9·1	7·17	7·11	+0·06
Malabar	3·0	6·6	1·60	4·66	−3·06
South Canara	1·6	4·3	1·04	3·07	−2·03
Salem	5·3	5·9	2·26	3·80	−1·54
Coimbatore	4·2	5·9	1·89	3·64	−1·75
Nilgiris	8 6	8·6	3·11	5·62	−2·51
Cuddapah	4·1	4·8	1·43	3·85	−2·42
Anantapur	2.9	3·1	0·91	2·12	−1·21
Bellary	4·3	2·3	1·94	1.30	+0·64
Kurnool	4·8	2·9	2·44	1·50	+0·94

Table

Abstract of Observations taken at 8 A.M. at 204

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.		...	...	+·055	...	...	...	...	...	...	...	86·6	−0·4	70·2	−1·5	78·4	−1·0	16·4	...	...	...	...	25·7
Bay Islands	Port Blair	61	29·927	?	29·919	30·009	16th	29·815	29th	·194	80·6	86·7	?	77·2	?	82·0	?	9·5	88·7	25th	73·4	20th	15·3
	Camorta	?	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tenasserim	Mergui	96	29·924	?	29·953	30·007	16th	29·803	29th	·204	77·2	87·9	?	67·3	?	77·6	?	20·6	93·6	30th	61·9	15th	31·7
	Tavoy	26	30·007	?	29·964	30·093	16th	29·885	29th	·208	74·5	87·7	?	63·4	?	75·7	?	24·3	91·7	2 days	55·2	15th	36·5
	Moulmein	94	29·954	?	29·986	30·050	16th	29·837	29th	·213	74·8	88·2	−0·1	69·8	−1·3	79·0	−0·7	18·4	93·5	30th	64·4	2 days	29·1
	Toungoo	181	29·853	+·056	29·980	29·942	23rd	29·763	2nd	·179	73·5	86·4	−0·6	68·9	−1·4	77·6	−1·0	17·5	90·7	3 days	62·2	2 days	28·5
Lower Burma	Rangoon	41	29·986	+·046	29·964	30·072	17th	29·899	29th	·173	74·7	88·6	+1·3	69·9	−3·0	79·3	−0·9	18·7	91·2	8th	63·8	20th	27·4
	Bassein	27	30·014	?	29·976	30·107	16th	29·924	1st	·183	75·1	85·8	−0·1	69·6	−2·2	77·7	−1·2	16·2	88·7	2 days	65·0	25th	23·7
	Diamond Island.	41	29·984	+·057	29·960	30·078	16th	29·878	1st	·200	78·4	84·2	−1·5	76·5	+1·6?	80·4	+0·1?	7·7	86·6	10th	74·4	29th	12·2
Arakan	Akyab	20	30·022	+·060	29·985	30·126	23rd	29·908	2nd	·218	72·9	83·9	−1·6	69·2	−2·7	76·6	−2·2?	14·7	88·2	4th	61·2	30th	27·0
II.—Burma Inland		...	...	+·052	...	...	...	...	...	...	...	83·9	−0·6	63·4	−0·8	73·6	−0·7	20·5	...	...	...	...	33·4
Central Burma	Thayetmyo	134	29·913	+·052	29·992	30·014	23rd	29·820	2nd	·194	73·9	87·7	+0·2	65·8	−2·2	76·8	−1·0	21·9	90·1	6 days	58·2	2 days	31·9
	Minbu	?	29·890	?	?	30·006	23rd	29·776	7th	·230	74·3	90·6	?	67·2	?	78·9	?	23·4	94·6	2 days	60·0	30th	34·6
	Yamethin	?	29·374	?	?	29·475	23rd	29·240	7th	·235	71·7	88·5	?	65·4	?	77·0	?	23·1	95·1	9th	57·1	22nd	38·0
	Fort Stedman.†	?	27·117	?	?	27·201	16th	27·045	7th	·156	67·2	81·1	?	61·3	?	71·2	?	19·8	84·2	3 days	51·0	16th	33·2
Upper Burma	Mandalay	?	29·790	?	?	29·899	23rd	29·683	7th	·216	71·8	84·2	?	67·2	?	75·7	?	17·0	90·0	8th	59·7	20th	30·3
	Kindat	?	29·704	?	?	29·800	22nd	29·565	7th	·235	67·3	80·7	−1·3	65·2	+0·6	73·0	−0·4	15·5	85·3	9th	56·0	29th	29·3
	Lashio	?	27·257	?	?	27·348	22nd	27·134	7th	·214	60·0	76·6	?	54·7*	?	65·5*	?	21·9	82·1	8th	47·0	3 days	35·1
	Bhamo	?	29·687	?	?	29·800	23rd	29·570	7th	·230	66·0	81·6	?	60·1	?	70·9	?	21·5	87·0	2 days	51·9	22nd	35·1
III.—Assam		...	...	+·044	...	...	...	...	...	...	...	79·4	−1·7	63·1	+0·7	71·3	−0·5	16·3	...	...	...	...	30·1
Assam (Surma)	Silchar	104	29·964	+·058	30·023	30·070	22nd	29·859	7th	·211	68·1	82·5	−2·2	64·4	+0·6	73·5	−0·8	18·1	89·5	1st	56·4	29th	33·1
Brahmaputra	Sibsagar	333	29·759	+·039	30·061	29·877	22nd	29·590	7th	·287	64·4	77·2	−1·2	60·7	+0·9	69·0	−0·2	16·5	83·3	8th	50.9	29th	32·4
	Dhubri	115	29·955	+·036	30·029	30·084	22nd	29·828	7th	·256	66·7	78·4	−1·6	64·1	+0·5	71·3	−0·6	14·3	82·1	7th	57·3	28th	24·8
IV.—Bengal and Orissa		...	...	+·042	...	...	...	...	...	...	...	80·2	−1·8	64·0	+0·3	72·1	−0·8	16·3	...	...	...	...	27·5
East Bengal	Chittagong	87	29·957	+·050	29·993	30·053	23rd	29·819	2nd	·234	71·2	82·4	−0·4?	65·0	−1·3	73·7	−0·9?	17·6	87·2	2 days	59·1	29th	28·1
	Lungleh	?		Not	recorded	...	...	...	...	...	62·7	69·8	?	58·1	?	64·0	?	11·7	73·9	4 days	51·2	17th	22·7
	Noakhali	43	30·003	?	29·994	30·101	16th	29·864	2nd	·237	71·6	80·6	?	62·8	?	71·7	?	17·8	85·5	7th	56·0	24th	29·5
	Comilla	36	30·018	?	30·003	30·119	16th	29·875	2nd	·244	71·1	81·9	?	63·1	?	72·5	?	18·8	86·9	7th	57·0	23rd	29·9
	Sirajganj	49	30·008	?	30·009	30·123	22nd	29·886	1st	·237	67·9	78·7	?	63·2	?	71·0	?	15·5	84·8	7th	58·3	21st	26·5
	Narayanganj	26	30·029	+·054	30·004	30·132	22nd	29·905	2nd	·227	71·6	80·5	−3·2	65·8	−0·1	73·2	−1·7	14·7	86·6	7th	60·8	29th	25·8
	Barisal	13	30·034	+·040	29·992	30·133	22nd	29·882	2nd	·251	72·0	80·7	−1·5	64·9	−0·5	72·8	−1·0	15·8	84·8	7th	59·0	2 days	25·8
	Mymensingh	59	29·990	+·036	30·003	30·098	22nd	29·878	1st	·220	68·3	79·3	−3·0	63·0	−0·2	71·2	−1·6	16·3	86·7	8th	58·4	19th	28·3
Deltaic Bengal	Faridpur	46	30·017	?	30·012	30·124	22nd	29·887	2nd	·237	71·2	79·0	?	64·6	?	71·8	?	14·4	86·3	7th	59·0	30th	27·3
	Jessore	33	30·020	+·039	30·001	30·133	22nd	29·867	2nd	·266	69·4	80·4	−2·9	62·8	−1·4?	71·6	−2·2?	17·6	86·5	2nd	56·0	25th	30·5
	Calcutta	21	30·043	+·041	30·010	30·151	22nd	29·878	2nd	·273	69·5	79·8	−1·4	64·3	−0·3	72·1	−0·9	15·5	85·6	2nd	59·2	25th	26·4
	Saugor Island	25	30·039	+·046	30·009	30·145	23rd	29·850	1st	·295	71·4	80·0	−1·4	66·6	−0·4	73·3	−0·9	13·4	86·2	2nd	60·4	11th	25·8
	Krishnagar	47	30·015	?	30·012	30·123	22nd	29·860	2nd	·263	70·2	80·5	?	63·1	?	71·8	?	17·4	86·3	2nd	57·4	25th	23·9
	Midnapore	149	29·929	?	30·030	30·034	22nd	29·753	2nd	·281	69·6	82·5	?	63·0	?	72·8	?	19·5	89·3	6th	57·2	10th & 24th	32·1

* Mean of 29 days.
† „ „ 17 „

I.

Stations in India, Burma, etc., in November 1894.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st October to 30th November.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	0·94	4·20	−3·16	...	...	...	...	**I.—Burma Coast and Bay Islands.**	
2	3	4	7	7	3	1	1	2	5·9	7·1	−17	81	·838	5·6	7	?	?	1·34	8·97	− 7·63	16·54	21·14	− 4·60	0·42	Port Blair	Bay Islands.
...	...	...	...	...	...	...	...	...	...	?	...	...	...	...	...	?	?	...	...	...	...	...	...	...	Camorta	
...	10	5	6	1	1	2	..	5	1·2	1·6	−25	72	·678	3·5	0	?	?	0	3·63	− 3·63	5·73	17·17	−11·44	0	Mergui	Tenasserim.
22	2	2	2	1	...	...	...	1	1·6	?	?	75	·647	0	0	?	?	0·04	?	?	14·74	?	?	0·04	Tavoy.	
...	1	12	10	5	...	...	1	1	2·5	2·4	+ 4	83	·717	4·5	1	2·18	−1·18	0·26	2·32	− 2·06	12·63	10·42	+ 2·21	0·26	Moulmein.	
12	11	2	1	2	1	...	...	1	0·9	1·7	−47	88	·735	4·1	2	2·36	−0·36	0·32	1·37	− 1·05	6·46	8·13	− 1·67	0·17	Toungoo.	
...	4	9	7	7	3	...	...	...	3·7	4·4	−16	82	·710	2·2	1	3·18	−2·18	0·19	2·98	− 2·79	4·44	9·72	− 5·28	0·11	Rangoon	Lower Burma.
7	2	10	6	1	...	...	...	4	3·9	3·1	+26	84	·740	2·5	2	5·55	−3·55	3·58	4·21	− 0·63	13·71	12·42	+ 1·29	3·43	Bassein.	
3	1	14	8	3	...	...	...	1	12·8	8·6	+49	74	·740	3·4	3	7·10	−4·10	0·76	7·21	− 6·45	7·34	16·43	− 9·09	0·25	Diamond Island.	
...	18	7	3	1	...	...	...	1	2·6	2·2	+18	90	·739	3·5	2	3·09	−1·09	1·94	2·94	− 1·00	10·36	13·38	− 3·02	1·74	Akyab	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·34	1·95	−0·82	...	...	...	...	**II.—Burma Inland.**	
...	11	3	2	5	7	1	...	1	1·1	3·5	−69	81	·685	3·4	0	3·45	−3·45	0	2·16	− 2·16	2·11	6·40	−4·29	0	Thayetmyo	Central Burma.
5	1	1	3	1	1	...	4	14	4·3	?	?	78	·679	1·2	0	?	?	0	?	?	1·62	?	?	0	Minbu.	
5	12	1	...	4	3	...	...	5	3·3	?	?	89	·694	2·6	4	?	?	0·80	?	?	6·62	?	?	0·30	Yamethin.	
16	...	..	...	...	...	1	...	...	?	?	?	88	·600	5·1	4	?	?	0·95	?	?	7·61	?	?	0·32	Fort Stedman†	
22	...	...	...	2	3	3	...	...	1·4	?	?	86	·676	4·2	5	?	?	3·18	?	?	17·39	?	?	2·50	Mandalay	Upper Burma.
22	2	...	...	...	...	...	3	3	0·4	?	?	97	·663	5·3	4	?	?	2·25	1·73	+ 0·52	7·15	8·63	−1·48	1·27	Kindat.	
...	15	14	...	...	...	...	...	1	?	?	?	93	·494	4·9	5	?	?	2·27	?	?	5·71	?	?	0·82	Lashio.	
20	2	2	1	1	1	...	...	3	1·6	?	?	93	·598	5·7	3	?	?	1·29	?	?	4·96	?	?	0·73	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·17	0·76	+2·42	...	...	...	...	**III.—Assam.**	
24	2	...	3	...	...	1	...	...	1·0	2·1	−52	92	·640	6·8	4	2·18	+1·82	7·62	1·46	+ 6·16	27·76	6·74	+21·02	2·76	Silchar	Assam (Surma).
12	...	12	2	2	1	1	...	...	2·0	1·7	+18	99	·606	3·5	3	1·18	+1·82	1·13	0·60	+ 0·53	7·33	5·67	+ 1·66	0·48	Sibsagar	Brahmaputra.
1	4	12	9	1	...	3	...	...	4·6	4·9	−6	90	·596	2·4	1	0·38	+0·62	0·77	0·21	+ 0·56	7·36	3·70	+ 3·66	0·75	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·96	0·90	+2·07	...	...	...	...	**IV.—Bengal and Orissa.**	
...	8	15	4	2	1	...	...	...	2·5	3·0	−17	87	·672	2·6	4	1·73	+2·27	1·75	1·73	+ 0·02	9·46	6·96	+ 2·50	0·55	Chittagong	East Bengal.
...	...	...	...	...	...	...	...	...	?	?	?	88	·510	...	6	?	?	3·44	?	?	21·40	?	?	1·57	Lungleh.	
...	8	10	6	1	1	2	...	2	2·2	?	?	88	·689	1·5	5	1·55	+3·45	3·19	1·82	+ 1·37	10·08	8·68	+ 1·40	1·14	Noakhali.	
12	10	1	5	...	2	...	...	...	1·2	?	?	88	·677	2·2	7	1·89	+5·11	1·85	0·94	+ 0·91	6·06	5·17	+ 0·89	0·64	Comilla.	
19	2	2	1	...	1	...	2	3	0·5	?	?	90	·618	3·0	4	0·80	+3·20	3·49	0·38	+ 3·11	6·48	4·76	+ 1·72	2·10	Sirajganj.	
4	7	6	5	3	...	1	1	3	3·0	1·9	+58	86	·667	2·9	4	0·82	+3·18	4·54	1·18	+ 3·36	8·97	5·70	+ 3·27	2·00	Narayanganj.	
21	3	1	1	...	2	1	...	1	1·7	?	?	85	·672	2·4	5	1·45	+3·55	3·49	1·28	+ 2·21	7·91	6·54	+ 1·37	1·63	Barisal.	
11	1	10	4	...	1	...	1	2	1·9	?	?	89	·621	3·0	5	0·80	+4·20	4·86	0·45	+ 4·41	12·17	6·07	+ 6·10	2·48	Mymensingh.	
19	4	2	1	1	...	2	1	...	1·0	?	?	87	·667	1.8	5	1·10	+3·90	8·47	0·39	+ 8·08	11·92	4·69	+ 7·23	4·03	Faridpur	Deltaic Bengal.
9	6	1	3	2	...	2	1	6	1·7	1·8	− 5	91	·658	1·9	5	0·73	+4·2	6·79	1·42	+ 5·37	9·55	5·84	+ 3·71	1·63	Jessore.	
13	11	...	3	...	...	...	1	2	1·9	3·0	−37	84	·611	2·0	4	0·82	+3·18	3·04	0·73	+ 2·31	7·45	4·81	+ 2·64	1·67	Calcutta.	
...	11	12	2	...	2	2	...	1	8·3	6·4	+30	88	·681	3·2	4	1·55	+2·4	6·42	1·94	+ 4·48	18·01	10·08	+ 7·93	3·50	Saugor Island.	
2	3	2	4	3	1	...	6	9	2·8	?	?	81	·602	2·8	4	0·70	+3·30	3·73	0·34	+ 3·39	6·63	4·53	+ 2·10	2·23	Krishnagar.	
1	18	3	...	1	...	1	1	5	2·2	?	?	78	·577	2·1	4	0·90	+3·10	2·69	0·23	+ 2·46	6·65	5·01	+ 1·64	1·09	Midnapore.	

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Central Bengal.	Bankura	298	29·741	?	30·003	29·846	22nd	29·578	2nd	·268	68·5	80·8	?	62·9	?	71·9	?	17·9	87·1	6th	56·8	24th	30·3
	Raniganj	334	29·741	?	30·040	29·857	22nd	29·581	2nd	·276	66·7	80·6	?	62·1	?	71·4	?	18·5	85·7	6th	56·1	24th	29·6
	Burdwan	99	29·966	+·036	30·016	30·079	22nd	29·798	2nd	·281	68·2	80·8	−1·9	64·6	+0·5	72·7	−0·7	16·2	86·2	2 days	59·1	11th	27·1
	Naya Dumka	489	29·571	?	30·039	29·692	22nd	29·431	2nd	·261	67·3	78·7	?	61·3	?	70·0	?	17·4	83·6	7th	56·1	10th	27·5
	Berhampore	67	29·998	+·034	30·015	30·113	22nd	29·860	2nd	·253	69·2	79·3	−2·5	65·4	+1·3	72·3	−0·6	14·0	85·1	7th	60·5	21st	24·6
	Rampur Boalia.	70	29·983	?	30·004	30·105	22nd	29·852	2nd	·253	70·3	79·1	?	63·9	?	71·5	?	15·2	85·1	7th	59·1	28th	26·0
	Malda	72	29·993	?	30·019	30·110	22nd	29·876	2nd	·234	68·0	79·8	?	62·2	?	71·0	?	17·6	83·6	7th	55·8	22nd	27·8
	Bogra	61	29·988	+·047	30·003	30·100	22nd	29·876	1st	·124	68·6	79·5	−2·6	62·8	+0·6	71·2	−1·0	16·7	85·7	7th	57·2	21st	28·5
North Bengal	Dinajpur	123	29·945	+·047	30·027	30·057	22nd	29·835	2nd	·222	67·1	79·9*	−2·5	62·7	+2·4	71·4*	−0·1	17·2	83·1	1st	55·4	21st	27·7
	Rangpur	123	29·942	?	30·024	30·079	22nd	29·815	7th	·264	68·3	80·2	?	62·1	?	71·2	?	18·1	83·3	3 days	56·2	29th	27·1
	Jalpaiguri	284	29·787	+·036	30·040	29·922	22nd	29·638	7th	·284	66·7	80·6	−1·1	61·1	+1·5	70·9	+0·2	19·5	84·9	2nd	54·1	30th	30·8
Orissa	Balasore	56	30·010	+·036	30·014	30·114	16th	29·811	2nd	·303	69·0	81·7	−1·0	63·7	+1·3	72·7	+0·2	18·0	87·4	7th	57·6	2 days	29·8
	False Point	21	30·042	+·046	30·005	30·142	17th	29·815	2nd	·327	72·3	81·4	−0·5	65·3	−0·4	73·4?	−0·5	16·1	86·4	2 days	58·0	2 days	28·4
	Cuttack	80	29·981	+·041	30·006	30·085	23rd	29·758	2nd	·327	71·4	83·3	−1·7	67·1	+1·0	75·2	−0·4	16·2	89·2	7th	60·8	10th & 28th.	28·4
	Shortt's Island	?	30·044	?	...	30·148	22nd & 23rd.	29·828	2nd	·320	76·8	81·8	?	72·7	?	77·3	?	9·1	87·8	7th	68·4	25th & 28th.	19·4
	Puri	24	30·038	?	30·002	30·143	23rd	29·802	2nd	·341	72·8	82·9	?	68·8	?	75·9	?	14·1	87·2	6th & 8th.	63·1	10th & 28th.	24·1
V.—Gangetic Plain and Chota Nagpur.		...	...	+·033	...	...	...	...	...	...	...	79·4	−2·1	59·6	+2·5	69·5	+0·2	19·8	...	...	...	...	31·2
Chota Nagpur	Hazaribagh	2,007	28·010	+·032	30·033	28·120	16th	27·871	2nd	·249	64·3	75·2	−1·5	57·8	+0·1?	66·5	−0·7?	17·4	81·2	6th	52·8	23rd	28·4
	Ranchi	2,128	27·891	?	30·021	27·987	16th	27·747	2nd	·240	64·5	74·8	?	57·4	?	66·1	?	17·4	82·5	6th	51·0	9th	31·5
	Daltonganj	730?	29·343*	?	30·071*	29·418	22nd	29·220	1st	·198	61·9	79·6	?	56·5	?	68·1	?	23·1	87·4	5th	48·5	24th	38·9
	Chaibassa	760	29·285	+·042	30·020	29·388	22nd	29·095	2nd	·293	66·7	81·9	−0·6	61·1	+1·1	71·5	+0·3	20·8	88·9	6th	55·5	10th	33·4
Bihar (South)	Gaya	375	29·693	+·035	30·038	29·806	16th	29·534	2nd	·272	66·0	79·8	−2·6	61·5	+2·4	70·7	−0·1	18·3	82·9	5th	56·2	2 days	26·7
	Dehri	351	29·710	?	30·028	29·841	22nd	29·532	3rd	·309	69·5	80·0	?	61·1	?	70·6	?	18·9	84·8	5th	55·0	23rd	29·8
	Patna	183	29·897	+·034	30·039	30·011	22nd	29·761	2nd	·250	69·5	79·2	−2·2	63·8	+3·9	71·5	+0·9	15·4	83·0	3 days	57·3	20th	25·7
	Arrah	190	29·874	?	30·023	29·979	22nd	29·726	2nd	·253	67·2	80·7	?	61·8	?	71·3	?	18·9	83·8	1st & 2nd	56·1	20th	27·7
	Buxar	239?	29·825	?	30·028	29·937	22nd	29·672	4th	·265	68·3	80·1	?	62·0	?	71·1	?	18·1	83·6	1st	55·9	25th	27·7
Bihar (North)	Purnea	125	29·948	+·047	30·032	30·078	22nd	29·820	7th	·258	66·5	80·1	−1·8	61·7	+2·9	70·9	+0·6	18·4	84·7	2nd	54·3	21st	30·4
	Bhagalpur	160	29·901	?	30·019	30·024	22nd	29·766	2nd	·258	68·6	80·6	?	60·8	?	70·5	?	19·8	83·7	1st	54·2	21st	29·5
	Darbhanga	166	29·903	+·033	30·029	30·030	22nd	29·777	7th	·253	67·7	79·9	−0·9	63·1	+1·1?	71·5	+0·1?	16·8	83·4	2nd	57·0	2 days	26·4
	Muzaffarpur	178	29·892	?	30·031	30·011	22nd	29·774	2nd	·237	67·0	79·5	?	60·9	?	70·2	?	18·6	83·2	2nd	53·3	20th	29·9
	Motihari	224	29·848	?	30·038	29·980	22nd	29·722	7th	·258	66·2	79·9	?	57·3	?	68·6	?	22·6	84·0	2nd	48·9	20th	35·1
	Chapra	181	29·885	?	30·027	29·995	22nd	29·751	4th	·244	67·7	79·8	?	62·3	?	71·1	?	17·5	82·8	1st & 2nd	56·2	20th	26·6
N.-W. P. (Eastern Districts).	Benares	267	29·800	+·030	30·036	29·920	22nd	29·626	4th	·294	64·7	79·4	−2·5	58·3	+2·8	68·9	+0·2	21·1	82·1	3 days	51·0	22nd	31·1
	Allahabad	309	29·757	+·027	30·035	29·879	23rd	29·570	4th	·309	66·1	80·1	−2·0	58·0	+3·6	69·1	+0·8	22·1	83·6	1st	51·4	23rd	32·2
N.-W. P. (East Submontane).	Gorakhpur	256	29·794	+·025	30·020	29·908	23rd	29·664	4th	·244	67·1	77·9	−3·7	60·1	+2·6	69·0	−0·6	17·8	82·9	3rd	53·8	20th	29·1
Oudh (South)	Lucknow	368	29·692	+·027	30·039	29·823	23rd	29·505	4th	·318	65·1	79·6	−3·3	55·9	+4·1	67·8	+0·4	23·7	83·3	1st & 2nd	48·5	23rd	34·8
Oudh (North)	Bahraich	403	29·651	?	30·034	29·764	23rd	29·500	4th	·264	65·0	79·1	?	58·0	?	68·6	?	21·1	86·9	3rd	51·0	22nd & 23rd.	35·9
N.-W. Provinces (Central).	Cawnpore	416	29·640	?	30·035	29·768	23rd	29·443	4th	·325	64·8	79·4	?	56·4	?	67·9	?	23·0	84·3	1st	49·0	23rd	35·3
	Mainpuri	516	29·538	?	30·041	29·676	22nd	29·338	4th	·338	61·3	79·9	?	55·0	?	67·5	?	24·9	87·3	1st	46·6	22nd	40·7

* Mean of 23 days.

I—*continued.*

in India, Burma, etc., in November 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st October to 30th November	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
21	...	1	...	...	...	...	6	2	1·1	P	P	81	·573	2·8	2	0·75	+1·25	0·77	0·25	+ 0·52	3·99	4·40	− 0·41	0·38	Bankura .	Central Bengal.
14	8	2	1	...	...	...	...	5	...	P	P	85	·564	2·1	2	0·60	+1·40	1·02	0·20	+ 0·82	4·98	3·61	+ 1·37	0·73	Raniganj.	
10	9	1	1	1	...	1	1	6	1·3	1·9	−32	80	·562	2·9	3	0·82	+2·18	1·68	0·96	+ 0·72	5·57	4·11	+ 1·46	1·12	Burdwan.	
...	6	2	3	1	1	1	4	12	2·7	P	P	81	·551	2·3	3	0·42	+2·58	2·01	0·18	+ 1·83	9·84	4·26	+ 5·58	1·09	Naya Dumka.	
3	4	3	5	...	1	1	3	10	1·5	1·7	−12	86	·615	2·9	2	0·55	+1·45	2·30	0·69	+ 1·61	6·61	4·59	+ 2·02	1·74	Berhampore.	
8	10	4	1	1	...	...	4	2	3·3	P	P	83	·622	2·0	3	0·45	+2·55	1·47	0·14	+ 1·33	5·12	4·58	+ 0·54	0·65	Rampur Boalia.	
1	...	4	...	2	...	1	2	20	2·0	P	P	85	·583	1·7	3	0·35	+2·65	1·01	0·16	+ 0·85	14·22	4·54	+ 9·68	0·47	Malda.	
13	8	8	...	...	...	...	...	1	P	P	P	87	·615	2·1	4	0·50	+3·50	5·62	0·47	+ 5·15	10·16	3·74	+ 6·42	2·31	Bogra.	
4	6	7	5	1	...	2	4	1	1·4	P	P	87	·583	2·4	0	0·30	−0·30	0·03	0·08	− 0·05	6·11	4·80	+ 1·31	0·03	Dinajpur .	North Bengal.
7	7	12	1	...	...	2	1	...	1·5	P	P	89	·619	3·6	1	0·10	+0·90	0·46	0·10	+ 0·36	7·76	5·42	+ 2·34	0·44	Rangpur.	
...	8	6	4	1	1	1	...	9	1·8	P	P	86	·566	3·7	0	0·15	−0·15	0	0·15	− 0·15	10·78	5·57	+ 5·21	0	Jalpaiguri.	
3	11	3	3	...	...	2	1	5	2·3	P	P	89	·638	1·5	3	1·70	+1·30	5·38	1·25	+ 4·13	8·51	7·74	+ 0·77	3·60	Balasore .	Orissa.
...	18	4	...	1	2	1	...	4	6·2	6·5	− 5	85	·683	3·9	5	3·00	+2·00	2·26	3·57	− 1·31	12·07	11·63	+ 0·44	1·01	False Point.	
23	...	3	1	...	...	1	2	...	1·5	1·7	−12	75	·593	2·7	4	2·45	+1·55	2·63	1·90	+ 0·73	7·94	3·80	+ 4·14	1·65	Cuttack.	
...	16	2	...	1	...	1	3	7	10·5	P	P	71	·662	2·5	3	P	P	2·21	P	P	8·12	P	P	0·86	Shortt's Island	
4	17	2	1	...	...	1	...	5	7·7	P	P	80	·656	2·1	3	2·95	+0·05	2·22	2·30	− 0·08	15·54	11·11	+ 4·43	1·04	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·67	0·19	+1·54	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**	
6	4	1	2	2	4	2	4	5	6·0	4·3	+40	77	·471	2·4	3	1·09	+1·91	1·15	0·33	+ 0·82	11·76	3·23	+ 8·53	0·82	Hazaribagh.	Chota Nagpur.
12	1	1	2	1	...	4		4	5·2	P	P	72	·445	1·91	1	0·85	+0·15	0·69	0·45	+ 0·24	5·71	3·24	+ 2·47	0·54	Ranchi.	
...	17	...	2	1	...	1	5	4	1·2	P	P	82	·468	2·4	3	P	P	0·48	P	P	5·36	P	P	0·23	Daltonganj.	
8	1	2	...	...	1	9	7	2	1·1	P	P	82	·551	2·8	2	1·00	+1·00	0·68	0·48	+ 0·20	4·61	3·21	+ 1·40	0·49	Chaibassa.	
...	1	1	1	4	11	4	7	1	5·0	1·2	+317	79	·517	3·1	2	0·91	+1·09	2·88	0·43	+ 2·45	12·70	2·26	+10·44	2·32	Gaya . .	Bihar (South).
1	...	1	2	1	8	12	3	2	3·8	P	P	75	·549	2·1	1	0·57	+0·43	1·35	0·25	+ 1·10	8·43	3·14	+ 5·29	1·28	Dehri.	
8	...	...	3	1	1	8	8	1	2·4	1·5	+60	78	·568	2·2	2	0·45	+1·55	1·06	0·18	+ 0·88	15·68	2·95	+12·73	0·94	Patna.	
...	4	2	3	...	1	3	10	7	1·2	P	P	86	·581	1·7	2	0·40	+1·60	1·61	0·15	+ 1·46	8·11	3·43	+ 4·68	1·04	Arrah.	
3	...	1	2	1	4	10	7	2	2·0	P	P	80	·557	2·1	1	0·35	+0·65	5·26	0·17	+ 5·09	16·06	3·52	+12·54	5·17	Buxar.	
12	1	5	2	1	1	3	3	2	1·9	1·2	+58	89	·587	2·0	0	0·27	−0·27	0·08	0·10	− 0·02	8·18	3·56	+4·62	0·06	Purnea .	Bihar (North).
11	...	3	3	...	2	3	6	2	2·4	P	P	83	·588	3·3	2	0·30	+1·70	0·53	0·27	+ 0·26	4·59	3·47	+1·12	0·28	Bhagalpur.	
7	2	2	4	2	...	2	6	5	1·8	1·8	0	85	·586	1·9	2	0·27	+1·73	0·77	0·07	+ 0·70	7·40	3·30	+4·10	0·55	Darbhanga.	
11	...	1	3	2	...	2	7	4	2·1	P	P	89	·593	1·8	2	0·42	+1·58	1·87	0·09	+ 1·78	7·74	3·56	+4·18	1·40	Muzaffarpur.	
8	...	2	2	2	1	6	7	2	3·5	P	P	89	·581	1·3	2	0·17	+1·83	2·01	0·02	+ 1·99	7·92	3·51	+4·41	1·19	Motihari.	
5	1	1	2	1	...		8	5	?	P	P	87	·591	2·3	2	0·40	+1·60	2·75	0·29	+ 2·46	10·91	3·89	+7·02	2·60	Chapra.	
21	...	...	2	...	...	6	1	...	2·1	2·1	0	88	·545	2·1	2	0·82	+1·18	0·51	0·36	+ 0·15	12·73	2·66	+10·07	0·36	Benares .	N.-W. P. (Eastern Districts).
11	1	2	2	1	1	2	6	4	2·7	1·3	+108	83	·542	2·3	1	0·45	+0·55	2·92	0·17	+ 2·75	25·41	2·00	+23·41	2·87	Allahabad.	
1	3	1	3	...	1	1	16	4	?	0·9	?	81	·550	1·7	2	0·18	+1·82	1·64	0·10	+ 1·54	21·16	3·87	+17·29	1·53	Gorakhpur .	N.-W. P. (East Submontane).
22	...	...	...	...	...	1	...	...	P	1·4	P	84	·526	2·4	3	0·09	+2·91	1·52	0·05	+ 1·47	10·21	0·88	+9·33	0·67	Lucknow* .	Oudh (South).
9	...	4	2	3	...	2	2	8	1·9	P	P	83	·525	1·6	3	P	P	1·99	0	+ 1·99	10·48	1·69	+ 8·79	0·89	Bahraich .	Oudh (North).
13	3	...	...	1	1	4	7	1	1·8	P	P	80	·502	1·7	3	0	+3·0	3·63	0·02	+ 3·61	16·83	1·10	+15·73	1·84	Cawnpore .	N.-W. Provinces (Central).
12	2	1	2	...	...	3	8	2	0·2	P	P	78	·427	2·5	2	P	P	1·23	0	+ 1·33	8·36	0·82	+7·54	1·02	Mainpuri.	

* Winds for 22 days only.

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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		...	...	+·025	...	...	...	...	...	...	...	77·9	−2·0	52·4	+3·0	65·2	+0·5	25·5	...	...	...	...	40·5
N.-W. Provinces (Submontane).	Bareilly	568	29·476	+·033	30·038	29·616	23rd	29·331	4th	·285	60·9	77·1	−3·8	55·3	+3·1	66·2	−0·4	21·8	84·3	1st	47·7	22nd	36·6
	Dehra Dun	2,233	27·790	+·015	30·059	27·912	14th	27·672	4th	·240	58·0	73·2	−1·0	53·3	+1·9	63·3	+0·5	19·9	80·0	2nd	47·5	18th & 22nd.	32·5
	Roorkee	887	29·141	+·020	30·044	29·275	23rd	29·004	4th	·271	58·2	77·6	−2·8	53·8	+4·6	65·7	+0·9	23·8	86·8	2nd	45·6	25th	41·2
	Meerut	738	29·295	+·023	30·041	29·430	23rd	29·145	4th	·285	57·6	78·7	−2·3	53·7	+4·1	66·2	+0·9	25·0	85·1	1st & 2nd.	46·5	22nd	38·6
Punjab (Central)	Delhi	718	29·324	+·026	30·042	29·468	23rd	29·158	4th	·310	61·6	80·4	−2·6	56·4	+1·0	68·4	−0·8	24·0	87·5	1st	51·4	22nd & 27th.	36·1
	Lahore	702	29·338	+·022	30·053	29·459	17th & 23rd.	29·197	2nd	·262	56·8	80·2	−1·1	50·8	+4·6	65·5	+1·8	29·4	89·3	1st	43·2	13th	46·1
Punjab (Submontane).	Umballa	962?	29·126	?	30·047	29·263	23rd	29·000	4th	·263	57·3	78·0	?	52·2	?	65·1	?	25·8	88·0	2nd	47·0	3 days	41·0
	Ludhiana	812	29·222	+·026	30·049	29·353	23rd	29·091	2nd	·262	58·0	78·5	−1·9	52·6	+2·6	65·6	+0·4	25·9	85·6	3 days	43·6	21st	42·0
Punjab (North)	Sialkot	830	29·209	+·038	30·057	29·329	14th & 22nd.	29·074	2nd	·255	58·3	79·5	−1·1	51·6	+3·1	65·6	+1·0	27·9	88·1	3rd	44·7	18th	43·4
	Rawalpindi	1,652	28·381	+·019	30·074	28·507	17th	28·270	2nd	·237	50·3	75·5	−1·2	44·2	+2·1	59·9	+0·5	31·3	83·1	3 days	35·9?	17th & 18th.	47·2
VII.—Indus Valley and N.-W. Rajputana.		...	...	+·025	...	...	...	...	...	...	...	84·0	+0·4	52·4	+1·2	68·2	+0·8	31·6	...	...	...	...	45·7
Punjab (West)	Peshawar	1,110	28·972	+·029	30·084	29·135	17th	28·836	4th	·299	53·3	75·7	−1·3	47·1	+3·0	61·4	+0·9	28·6	84·6	2nd	38·4	21st	46·2
	Mardan	?				Not recorded.					52·1	76·5	?	45·1	?	60·8	?	31·4	85·6	2nd & 3rd.	32·0	21st	53·6
	Khushab	612	29·429	?	30·046	29·564	17th	29·295	2nd	·269	58·9	81·4	?	51·2	?	66·3	?	30·2	90·9	1st	44·0	18th.	46·9
	Montgomery	558	29·492	?	30·049	29·639	17th	29·318	19th	·321	60·4	83·6	?	50·0	?	66·8	?	33·6	92·8	1st	43·0	21st	49·8
	D. I. Khan	573	29·484	+·019	30·070	29·630	17th	29·339	4th	·291	52·5	81·9	0	47·9	+1·7	64·9	+0·9	34·0	90·1	1st	41·9	21st	48·2
	Mooltan	420	29·647	+·017	30·063	29·795	17th	29·494	4th	·301	59·1	83·6	−0·5	52·8	+1·2	68·2	+0·4	30·8	92·3	1st	45·7	21st	46·6
	Sirsa	662	29·374	+·019	30·040	29·502	22nd	29·222	4th	·280	58·0	85·6	+1·3	51·1	+3·1	68·4	+2·2?	34·5	92·4	1st & 2nd.	41·2	21st	51·2
Sind and Cutch	Jacobabad	186	29·894	+·033	30·050	30·053	17th	29·724	2nd	·329	63·3	87·2	+1·3	51·9	+2·5	69·6	+1·9	35·3	95·5	1st	45·0	22nd	50·5
	Hyderabad	117				Observation not recorded.																	
	Kurrachee	49	30·030	+·026	30·032	30·152	15th	29·888	3rd	·264	67·3	87·0	0	61·6	+0·6	74·3	+0·3	25·4	89·0	4 days	56·0	29th	33·0
	Bhuj	395	29·662	+·034	30·022	29·770	15th	29·524	4th	·246	71·8	89·2	+1·0	61·5	−0·5	75·4	+0·3	27·7	92·5	5th	57·9	29th	34·6
Rajputana (West)	Bickaneer	753	29·205	?	30·041	29·439	22nd & 23rd.	29·140	4th	·299	64·1	85·4	+1·5	57·7	−1·9?	71·6	−0·2?	27·7	91·2	1st	51·1	10th & 11th.	40·1
	Pachpadra	380	29·586	?	29·940	29·821	17th	29·089	5th	·732	64·9	90·7	?	51·0	?	70·9	?	39·7	95·5	3rd	47·9	9th & 24th.	47·6
VIII.—East Rajputana, Central India and Gujarat.		...	...	+·039	...	...	...	...	...	...	...	85·0	−0·7	55·7	−0·6	70·4	−0·7	29·3	...	...	...	...	37·1
Rajputana (East)	Jeypore	1,431	28·628	+·028	30·081	28·745	22nd	28·467	4th	·278	61·2	84·8	+0·2	52·4	−0·6	68·6	−0·2	32·4	89·5	1st	46·2	22nd	42·3
	Sambhar	1,254	28·796	+·026	30·070	28·924	23rd	28·626	4th	·298	60·5	83·5	+1·0	49·9	−2·0	66·7	−0.5	33·6	87·9	2nd	44·9	23rd	43·0
	Ajmere	1,611	28·447	+·021	30·101	28·556	15th	28·284	4th	·272	57·5	84·3	+1·3	49·8	+0·4	67·1	+0·9	34·5	87·4	3 days	45·8	24th & 25th.	41·6
	Deesa	466	29·600	+·040	30·041	29·710	15th	29·439	4th	·271	67·9	91·5	+1·1	54·5	−2·2	73·0	−0·6	37·0	93·8	4 days	51·1	3 days	42·7
Kathiawar	Rajkot	429	29·632	+·046	30·026	29·733	17th	29·494	4th	·239	72·8	89·1	−0·8	58·1	−0·3	73·6	−0·6	31·0	91·4	5th & 24th.	53·0	13th	38·4
	Veraval	?	30·030	?	29·990	30·121	15th	29·903	3rd	·218	73·5	88·0	?	65·1	?	76·6	?	22·9	91·1	23rd & 24th.	62·3	11th & 26th.	28·8
Central India	Nowgong	757	29·301	?	30·051	29·416	15th	29·105	4th	·311	61·9	78·9	−3·2	54·9	+3·0	66·9	−0·7	24·0	82·6	1st & 21st	49·5	3 days	33·1
	Indore	1,823	28·228	+·041	30·058	28·327	15th & 17th.	28·066	4th	·261	64·3	80·1	−1·7	51·7	−2·1	65·9	−1·9	28·4	82·5	28th	47·6	13th	34·9
	Neemuch	1,630	28·443	+·051	30·081	28·555	22nd	28·292	2nd	·263	66·0	83·9	+0·5	51·7	−2·5	67·8	−1·0	32·2	87·8	1st	49·9	5 days	37·9
Gujarat	Surat	36	30·031	+·055	30·011	30·130	15th	29·896	4th	·234	68·7	87·2	−2·7?	59·4	−2·9	73·3	−2·8?	27·8	89·1	23rd	55·5	26th & 28th.	33·6
	Ahmedabad	176	29·911*	?	30·042*	30·018	15th	29·754	4th	·264	70·5*	89·2‡	?	62·6‡	?	75·9‡	?	26·6	91·7	6th	60·2	13th	31·5
N.-W. P. (West)	Agra	555	29·508	?	30·051	29·643	23rd	29·306	4th	·337	63·2	82·3	−1·7	55·8	+0·9?	69·1	−0·4?	26·5	87·6	18th	47·9	22nd	39·7
	Jhansi	858	29·213	+·039	30·061	29·338	22nd	29·014	4th	·324	66·5	82·4	−1·7	58·2	+1·5	70·3	−0·1	24·2	88·6	18th	52·4	26th	34·2

* Mean of 29 days. ‡ Mean of 28 days

I—*continued.*

in India, Burma, etc., in November 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st October to 30th November.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	1·12	0·16	+0·96	...	...	...	...	**VI.—Upper Sub-Himalayas.**	
22	1	...	...	4	...	...	1	2	1·0	1·7	− 41	80	·435	1·5	2	0·27	+1·73	1·19	0·13	+1·06	5·10	1·28	+ 3·82	0·69	Bareilly .	N.-W. Provinces (Submontane).
30	...	...	...	...	...	...	...	...	0·5	1·7	− 71	77	·381	3·1	2	0·60	+1·40	1·26	0·37	+ 0·89	5·45	0·46	+ 4·99	0·90	Dehra Dun.	
29	...	...	...	1	...	...	...	...	1·4	1·1	+ 27	88	·435	2·0	3	0·64	+2·36	2·49	0·16	+ 2·33	2·88	0·59	+ 2·29	1·71	Roorkee.	
23	...	1	1	...	...	1	4	...	0·7	1·3	− 46	79	·380	1·5	2	0·36	+1·64	1·75	0·08	+ 1·67	2·59	0·50	+ 2·09	1·12	Meerut.	
15	1	...	...	2	...	...	12	...	2·0	2·3	− 13	61	·341	1·8	2	0·18	+1·82	0·81	0·07	+ 0·74	0·81	0·15	+ 0·66	0·50	Delhi . .	Punjab (Central).
18	1	1	1	4	...	...	3	2	1·5	1·4	+ 7	70	·329	2·1	0	0·27	−0·27	0	0·10	− 0·10	0	0·36	− 0·36	0	Lahore.	
23	...	...	...	2	...	...	...	5	1·2	?	?	89	·426	1·4	2	?	?	3·43	0·18	+ 3·25	3·47	0·49	+ 2·98	1·78	Umballa .	Punjab (Submontane).
17	...	...	...	3	1	3	2	4	1·5	0·8	+ 88	75	·351	3·3	1	0·36	+0·64	0·19	0·09	+ 0·10	0·19	0·49	− 0·30	0·18	Ludhiana.	
30	...	...	...	...	...	...	...	...	0·3	1·0	− 70	69	·335	1·8	0	0·18	−0·18	0·03	0·09	− 0·06	0·03	0·40	− 0·37	0·03	Sialkot .	Punjab (North).
27	...	...	1	...	1	...	...	1	0·5	1·1	− 55	74	·277	3·0	0	0·36	−0·36	0·09	0·35	− 0·26	0·12	0·90	− 0·78	0·06	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·05	0·15	−0·15	...	...	...	...	**VII.—Indus Valley and N.-W. Rajputana.**	
20	...	...	...	...	7	3	...	...	2·3	2·1	+ 10	62	·257	3·9	0	0·64	−0·64	0·03	0·57	− 0·54	0·15	0·68	− 0·53	0·03	Peshawar	Punjab (West).
			Not recorded.						?	?	?	?	?	?	1	?	?	0·60	?	?	1·40	?	?	0·60	Mardan.	
14	...	14	...	1	...	...	...	1	2·2	?	?	48	·246	1·6	0	0·4	− 0·4	0	0·33	− 0·33	0	0·40	− 0·40	0	Khushab.	
16	2	...	1	4	6	...	...	1	1·4	?	?	55	·291	2·4	0	0·2	−0·2	0	0·07	− 0·07	0	0·13	− 0·13	0	Montgomery.	
28	...	...	1	...	...	...	1	...	1·2	0·7	+ 71	63	·253	2·5	0	0·45	−0·45	0	0·21	− 0·21	0	0·26	− 0·26	0	D. I. Khan.	
9	...	15	2	1	...	...	...	3	1·1	1·5	− 27	64	·326	1·7	0	0·09	− 0·09	0	0·10	− 0·10	0	0·10	− 0·10	0	Mooltan.	
13	1	...	4	5	1	1	4	1	2·8	2·0	+ 40	57	·282	2·4	0	0·09	−0·09	0	0·01	− 0·01	0	0·15	− 0·15	0	Sirsa.	
22	3	...	2	2	...	...	...	1	1·2	1·6	− 25	55	·325	2·1	0	0	0	0	0·16	− 0·16	0	0·16	− 0·16	0	Jacobabad .	Sind and Cutch.
													Observations not recorded.											0	Hyderabad.	
...	6	18	5	...	...	...	1	...	7·4	7·9	− 6	69	·471	1·6	0	0·09	− 0·09	0	0·09	− 0·09	0	0·09	− 0·09	0	Kurrachee.	
17	3	...	...	...	...	1	3	6	5·2	4·7	+ 10	61	·470	1·4	0	?	?	0	0·02	− 0·02	0·08	0·37	− 0·29	0	Bhuj.	
4	2	1	...	...	2	6	5	10	2·9	2·4	+ 21	40	·242	1·6	0	?	?	0	0·08	− 0·08	0	0·18	− 0·18	0	Bickaneer .	Rajputana (West).
24	1	2	1	2	...	...	...	...	2·5	2·1	+ 19	57	·350	3·1	...	?	?	0	0	0	0	0·05	− 0·05	0	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·18	0·22	−0·01	...	...	...	...	**VIII.—East Rajputana, Central India and Gujarat.**	
22	...	...	1	...	...	2	3	2	1·6	3·0	− 47	62	·348	1·4	0	0·20	−0·20	0	0·24	− 0·24	0	0·54	− 0·54	0	Jeypore .	Rajputana (East).
11	6	4	...	1	1	1	3	3	3·5	3·4	+ 3	54	·288	1·0	0	0·30	−0·30	0	0·19	− 0·19	0	0·36	− 0·36	0	Sambhar.	
27	...	1	...	...	1	1	...	...	1·4	1·4	0	63	·305	0·6	0	0·27	−0·27	0	0·19	− 0·19	0	0·50	− 0·50	0	Ajmere.	
...	1	7	8	9	3	1	1	...	7·0	7·5	− 7	41	·276	0·7	0	0·18	−0·18	0	0·16	− 0·16	0	0·51	− 0·51	0	Deesa.	
7	4	6	13	...	...	...	...	...	4·3	4·9	− 12	51	·416	0·5	0	0·18	−0·18	0	0·36	− 0·36	1·59	0·81	+ 0·78	0	Rajkot .	Kathiawar.
14	4	9	2	...	...	...	...	1	3·6	?	?	57	·476	1·4	0	?	?	0	?	?	3·79	?	?	0	Veraval.	
10	5	...	...	...	1	7	6	1	1·4	1·0	+ 40	81	·456	1·5	2	0·55	+1·45	1·45	0·25	+ 1·20	9·44	1·42	+ 8·02	1·07	Nowgong .	Central India.
12	7	4	...	1	4	1	1	...	1·3	2·0	− 35	68	·412	0·5	0	0·73	−0·73	0	0·45	− 0·45	5·23	1·90	+ 3·33	0	Indore.	
14	...	4	7	2	2	...	...	1	4·1	7·5	− 45	47	·299	0·4	0	0·18	−0·18	0	0·21	− 0·21	0·41	0·70	− 0·29	0	Neemuch.	
...	5	11	11	...	1	...	...	2	?	5·9	?	70	·496	0·3	0	0·55	−0·55	0	0·17	− 0·17	16·89	1·70	+ 1·59	0	Surat . .	Gujarat.
8	1	10	7	3	...	...	...	...	2·3‡	?	?	50*	·375*	1·7*	0	?	?	0	?	?	1·50	?	?	0	Ahmedabad.†	
3	...	...	...	5	...	8	...	14	2·5	2·5	0	64	·375	1·5	1	0·18	+0·82	0·84	0·05	+ 0·79	1·76	0·52	+1·24	0·81	Agra . .	N.-W. P. (West).
7	2	1	...	...	1	13	2	4	1·8	1·8	0	57	·380	1·3	0	0·36	−0·36	0	0·12	− 0·12	2·91	0·82	+2·09	0	Jhansi.	

* Means of 29 days.
† Wind direction of 29 days.
‡ Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

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.
IX.—Deccan	...	...	...	+·041	...	...	...	...	...	...	...	81·7	−1·9	8·8	−0·4	70·3	−1·2	23·0	...	...	...	...	33·1
Bombay (Deccan)	Belgaum	2,524	27·478	+·039	29·960	27·555	17th	27·337	3rd	·218	68·7	80·4	−1·2	61·2	−0·4	70·8	−0·8	19·2	84·8	11th	53·9	14th	30·9
	Sholapur	1,590	28·444	+·047	30·005	28·530	22nd	28·259	3rd	·271	72·5	85·5	−1·4	61·6	−0·6	73·6	−1·0	23·9	88·7	6th	55·6	13th & 14th.	33·1
	Poona	1,840	28·201	+·042	30·027	28·286	17th	28·039	3rd	·247	67·6	85·1	−0·1	57·6	−2·1	71·4	−1·1	27·5	87·5	3 days.	50·9	15th	36·6
	Bijapur	1,946?	28·071	?	29·991	28·145	17th	27·900	3rd	·245	68·9	83·1	?	59·7	?	71·4	?	23·4	86·8	6th	50·1	14th	36·7
Khandesh	Malegaon	1,430	28·623	+·043	30·048	28·712	17th	28·455	3rd	·257	66·4	84·5	−1·3	53·4	−3·4	69·0	−2·4	31·1	88·4	21st	48·5	26th	39·9
	Ahmednagar	2,152	27·896	?	30·034	27·984	17th	27·728	3rd	·256	66·9	81·9	?	54·2	?	68·1	?	27·7	84·3	17th & 21st.	46·4	14th	37·9
Berar	Akola	930	29·131	+·049	30·049	29·229	15th	28·919	3rd	·310	63·7	84·0	−1·9	55·9	−1·0	70·0	−1·5	28·1	87·0	23rd	48·1	13th	38·9
	Amraoti	1,215	28·822	+·030	30·028	28·907	17th	28·604	3rd	·303	66·9	81·9	−3·3	60·6	−0·1	71·3	−1·7	21·3	84·9	3rd & 22nd	54·9	12th & 13th.	30·0
Central Provinces (West).	Khandwa	1,044	29·010	+·048	30·054	29·106	15th	28·821	4th	·285	62·7	83·4	−1·9	53·4	−2·3	68·4	−2·1	30·0	87·2	21st	47·1	26th	40·1
	Hoshangabad	1,020	29·052	+·035	30·076	29·159	15th	28·856	4th	·303	61·7	80·4	−3·0	56·9	+0·3	68·7	−1·4	23·5	83·3	6th	51·8	12th	31·5
	Nagpur	1,025	29·024	+·040	30·040	29·122	17th	28·802	3rd	·320	65·9	81·0	−2·9	59·3	−0·4	70·2	−1·7	21·7	84·8	3rd	52·7	12th	32·1
Central Provinces (Central).	Chanda	634	29·421	+·043	30·028	29·519	22nd	29·195	2nd	·324	65·0	82·3	−2·1	58·3	−0·9	70·3	−1·5	24·0	86·0	6th	50·6	13th	35·4
	Seoni	2,033	28·016	+·046	30·054	28·113	23rd	27·818	3rd	·295	63·2	76·8	−3·8?	54·1	−1·0	65·5	−2·4?	22·7	80·1	3 days	48·0	12th	32·1
	Jubbulpore	1,327	28·728	+·034	30·068	28·832	17th	28·541	4th	·291	61·4	78·8	−2·1	53·5	+1·1	66·1	−0·5	25·3	81·9	3 days	47·4	26th	34·5
	Saugor	1,762	28·284	+·036	30·059	28·393	17th	28·104	4th	·289	63·0	79·8	−1·0	56·4	+0·4	68·1	−0·3	23·4	82·8	1st & 22nd	50·9	25th	31·9
Central Provinces (East).	Raipur	970	29·081	+·039	30·035	29·187	17th	28·836	2nd	·351	66·8	80·9	−1·3	60·9	+0·7	70·9	−0·3	20·0	86·3	5th & 6th	55·0	14th	31·3
	Sutna	1,040	29·004	?	30·047	29·118	17th & 22nd.	28·799	4th	·319	63·4	78·6	−1·5	56·2	+3·4	67·5	+1·0	22·4	83·5	4th	51·3	25th	32·2
	Sambalpur	463	29·588	+·037	30·016	29·692	22nd	29·344	2nd	·348	69·7	82·3	−0·8	63·0	+0·6	72·7	−0·1	19·3	87·5	6th & 7th	57·2	10th	30·3
Hyderabad (North).	Aurangabad	?	28·189	?	?	28·279	23rd	28·017	3rd	·262	70·5	84·8	?	56·4	?	70·6	?	28·4	87·0	3 days	52·2	14th & 27th.	34·8
	Indur	?	...	No	t recorde	d.	...	...	...	...	69·6	80·6	?	59·0	?	69·8	?	21·6	83·4	18th	51·0	13th	32·4
	Bidar	?	27·860	?	?	27·950	17th	27·663	2nd	·287	67·4	78·5	?	61·5	?	70·0	?	17·0	83·5	5th	56·7	13th & 14th.	26·8
Hyderabad (South).	Gulbarga	1,502	28·519	?	30·001	28·611	17th	28·313	2nd	·298	69·3	83·2	?	61·8	?	72·5	?	21·4	85·9	18th	54·4	13th	31·5
	Raichur	1,378	28·644	?	29·993	28·734	23rd	28·450	3rd	·284	71·2	81·8	?	65·8	?	73·8	?	16·0	84·6	17th	60·2	13th	24·4
	Hyderabad (Deccan).	1,690	28·342	+·053	30·013	28·446	17th	28·114	2nd	·332	68·8	80·2	−2·7	62·0	0	71·2	−1·4	18·2	83·9	7th & 17th	52·8	13th	31·1
	Secunderabad	1,787	28·259	?	30·032	28·356	17th	28·035	2nd	·321	67·5	80·4	?	61·1	?	70·8	?	19·3	84·6	7th & 17th	53·1	14th	31·5
	Khamamet	373	29·665	?	29·982	29·773	23rd	29·391	2nd	·382	71·7	84·8	?	65·0	?	75·0	?	19·8	88·5	7th & 8th.	57·2	13th	31·3
X.—West Coast	...	...	...	+·038	...	...	...	...	...	...	...	86·7	+0·2	72·6	−0·2	79·6	0	14·1	...	...	...	...	21·7
Konkan	Bombay	37	30·004	+·051	29·981	30·093	15th	29·865	3rd	·228	75·2	86·3	−0·3	71·4	−1·7	78·9	−1·0	14·9	89·0	23rd	68·0	30th	21·0
	Ratnagiri	110	29·904	?	29·953	29·979	17th	29·768	3rd	·211	78·1	89·9	−0·4	70·3	+0·4	80·1	0	19·6	94·4	18th	65·9	30th	28·5
	Mormugao	60	29·946	?	29·942	30·016	22nd	29·826	3rd	·190	74·7	86·5	?	71·9	?	79·2	?	14·6	90·0	18th	68·3	14th & 15th.	21·7
	Goa	23	30·011	+·056	29·948	30·089	23rd	29·894	3rd	·195	77·2*	85·6*	?	75·5*	?	80·6*	?	10·1	89·0	9th & 18th	71·0	28th	18·0
	Karwar	44	29·964	+·050	29·940	30·038	17th	29·856	2nd	·182	73·2	87·5	+0·6	69·7	+0·2	78·6	+0·4	17·8	91·3	17th	64·1	14th	27·2
Malabar	Cochin	10	29·958	+·014	29·896	30·033	17th	29·851	30th	·182	77·7	88·1	+1·3	73·8	−0·4	81·0	+0·5	14·3	92·3	29th	69·7	2nd	22·6
	Calicut	27	29·950	+·022	29·907	30·015	17th	29·850	30th	·165	78·8	86·7	−0·4	73·5	+0·5	80·1	+0·1	13·2	88·8	16th	69·6	23rd	19·2
	Mangalore	65	29·925	+·033	29·923	29·984	17th	29·827	2nd	·157	77·8	87·5	+0·3	72·7	−0·1	80·1	+0·1	14·8	91·8	3 days	68·5	24th	23·3
	Trivandrum	198	29·768	?	29·898	29·851	17th	29·652	30th	·199	77·2	81·9	?	74·4	?	78·2	?	7·5	85·0	30th	71·5	7th	13·5
XI.—South India	...	...	...	+·039	...	...	...	...	...	...	...	82·9	−0·9	68·6	−0·2	75·9	−0·5	14·1	...	...	...	...	24·8
Madras (South)	Pamban	37	29·946	?	29·910	30·036	17th	29·803	2nd	·233	78·8	83·5	?	75·8	?	79·7	?	7·7	88·3	7th	72·2	7th	16·1
	Tinnevelly	168	29·829	?	29·928	29·925	17th	29·692	1st	·233	77·7	87·5	?	73·9	?	80·7	?	13·6	97·8	7th	71·4	20th	26·4
	Madura	447	29·542*	+·039*	29·931*	29·620	17th	29·407	1st	·213	77·0*	85·7	−1·7	72·4	+0·1	79·0	−0·8	13·3	89·9	5th	69·	2nd	20·[illegible]

* Mean of 29 days.

I—*continued.*

in India, Burma, etc., in November 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity. Mean velocity in miles per hour.	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 1894.	Normal rainfall for period from 1st October to 30th November.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·13	0·85	+0·34	...	...	...	...	**IX.—Deccan.**	
5	1	4	14	4	...	...	...	2	11·7*	11·7	0	68	·476	3·5	1	2·73	−1·73	1·11	2·11	− 1·00	5·09	8·50	− 3·41	1·11	Belgaum	Bombay (Deccan).
...	5	6	14	4	...	...	...	1	9·5	7·7	+ 23	58	·465	3·0	0	1·73	−1·73	0	1·15	− 1·15	0·93	6·25	− 5·32	0	Sholapur.	
9	...	2	13	5	...	...	1	...	5·1	5·8	− 12	62	·418	1·5	0	2·64	−2·64	0	1·31	− 1·31	6·24	6·11	+ 0·13	0	Poona.	
..	...	6	14	6	...	...	2	2	2·9	?	?	71	·502	4·3	1	2·20	−1·20	0·21	?	?	3·52	?	?	0·21	Bijapur.	
5	1	...	...	...	...	3	10	11	6·4	4·0	+ 60	66	·426	1·4	0	1·75	−1·75	0	0·64	− 0·64	2·89	3·48	− 0·59	0	Malegaon	Khandesh.
13	4	5	3	1	1	...	...	3	8·7	?	?	72	·481	1·3	0	?	?	0	?	?	2·96	?	?	0	Ahmednagar.	
20	1	2	2	1	1	...	3	...	2·6	3·4	− 24	73	·437	2·2	1	1·18	−0·18	0·39	0·75	− 0·36	3·44	4·25	− 0·81	0·29	Akola	Berar.
...	3	14	7	2	1	2	..	1	4·2	3·0	+ 40	64	·431	1·5	2	1·27	+0·73	1·11	0·62	+ 0·49	4·88	3·50	+ 1·38	0·99	Amraoti.	
18	2	1	1	...	2	4	1	1	2·5	2·6	− 4	73	·418	1·1	0	1·09	−1·09	0	0·31	− 0·31	2·94	2·04	+ 0·90	0	Khandwa	Central Provinces (West).
5	...	10	14	...	1	...	...	...	1·8	1·9	− 5	79	·442	1·5	0	0·91	−0·91	0·02	0·61	− 0·59	8·65	2·43	+ 6·22	0·02	Hoshangabad.	
25	3	1	...	...	...	...	...	1	3·1	3·0	+ 3	72†	·467†	3·0	4	1·09	+2·91	2·48	0·90	+ 1·58	6·63	3·85	+ 2·78	0·76	Nagpur.	
23	2	...	...	3	...	...	1	1	1·6	1·8	− 11	78	·493	2·7	3	?	?	0·63	1·12	− 0·49	1·64	3·36	− 1·72	0·30	Chanda	Central Provinces (Central).
...	...	...	...	...	...	...	...	...	?	2·6	?	77	·456	2·2	3	0·82	+2·18	2·56	0·60	+ 1·96	7·60	2·96	+ 4·64	1·70	Seoni.	
9	1	2	...	7	9	2	...	...	1·5	1·8	− 17	83	·459	1·6	2	1·27	+0·73	2·55	0·50	+ 2·05	9·80	2·57	+ 7·23	1·60	Jubbulpore.	
16	4	3	...	5	2	...	...	...	1·6	2·3	− 30	73	·425	1·0	1	0·55	+0·45	0·26	0·45	− 0·19	4·38	1·90	+ 2·48	0·12	Saugor.	
21	4	4	...	1	...	...	...	...	2·8	3·3	− 15	77	·513	2·9	0	1·82	−1·82	0·13	0·52	− 0·39	4·77	2·81	+ 1·96	0·07	Raipur	Central Provinces (East).
8	10	2	3	...	...	...	3	4	2·8	3·2	− 13	80	·476	1·5	2	0·73	+1·27	2·56	0·30	+ 2·26	15·74	2·67	+13·07	2·11	Sutna.	
...	19	8	1	1	...	1	...	...	3·3	1·4	+136	81	·593	2·3	3	?	?	1·74	0·65	+ 1·09	5·34	2·69	+ 2·65	1·14	Sambalpur.	
16	2	7	2	2	1	...	...	...	2·7	?	?	55	·409	1·5	0	?	?	0	0·61	− 0·61	5·18	3·57	+ 1·61	0	Aurangabad	Hyderabad (North).
7	8	1	6	5	2	...	1	...	4·3	?	?	79	·581	2·3	3	?	?	3·22	1·06	+ 2·16	3·88	3·69	+ 0·19	1·91	Indur.	
...	2	8	13	6	...	1	...	...	7·3	?	?	71	·481	3·1	4	?	?	3·08	1·15	+ 1·93	4·95	4·80	+ 0·15	1·35	Bidar.	
5	2	9	12	1	1	...	...	...	8·7	?	?	68	·495	3·3	3	?	?	2·32	0·64	+ 1·68	4·60	3·70	+ 0·90	1·37	Gulbarga	Hyderabad (South).
...	1	7	12	3	2	1	2	2	7·0	?	?	73	·567	3·1	5	?	?	2·87	?	?	7·18	?	?	1·65	Raichur.	
13	2	3	4	4	2	...	...	2	3·5	?	?	77	·550	3·3	5	?	?	0·71	1·76	− 1·05	6·26	4·84	+ 1·42	0·16	Hyderabad (Deccan).	
6	1	10	9	3	...	...	...	1	4·5	3·5	+ 29	73	·497	3·3	3	?	?	0·64	?	?	5·76	?	?	0·14	Secunderabad	
17	6	...	1	1	...	...	...	5	4·5	?	?	85	·669	1·2	2	?	?	0·86	?	?	4·15	?	?	0·74	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·48	3·30	−1·68	...	...	...	...	**X.—West Coast.**	
1	...	13	14	2	...	...	...	...	10·1	9·9	+ 2	71	·633	1·3	0	1·09	−1·09	0	0·66	− 0·66	3·08	3·13	− 0·05	0	Bombay	Konkan.
1	...	2	7	14	5	...	1	...	4·8	9·0	− 47	61	·563	2·5	0	1·18	−1·18	0	0·50	− 0·50	6·20	4·78	+ 1·42	0	Ratnagiri.	
1	...	5	16	4	...	...	1	3	6·9	?	?	80	·695	1·6	2	?	?	0·38	?	?	9·43	?	?	0·17	Mormugao.	
1	...	14	15	...	...	...	...	...	1·9	?	?	67‡	·635‡	2·6	0	?	?	0·10	1·45	− 1·35	6·35	7·42	− 1·07	0·06	Goa.	
6	2	11	9	1	...	...	...	1	2·2	?	?	79	·645	2·1	1	3·82	−2·82	0·33	2·63	− 2·30	6·36	10·31	− 3·95	0·28	Karwar.	
6	4	18	1	1	...	...	...	...	4·6	?	?	81	·772	3·1	10	10·09	−0·09	5·56	6·77	− 1·21	17·55	20·78	− 3·23	1·79	Cochin	Malabar.
2	...	9	13	5	1	...	...	...	9·6	?	?	82	·802	3·2	3	8·44	−5·44	2·42	5·06	− 2·64	7·64	15·23	− 7·59	1·77	Calicut.	
5	...	1	20	4	...	...	...	...	2·0	3·0	− 33	74	·704	4·2	2	5·10	−3·10	1·34	3·09	− 1·75	13·46	10·91	+ 2·55	0·75	Mangalore.	
13	1	7	2	...	...	...	1	6	3·8	?	?	86	·807	5·0	10	?	?	3·21	6·24	− 3·03	11·64	17·00	− 5·36	0·67	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4·58	5·97	−1·81	...	...	...	...	**XI.—South India.**	
...	10	11	3	1	...	5	...	...	12·6	?	?	85	·838	5·7	17	8·00	+9·00	14·94	9·55	+ 5·39	19·14	16·41	+ 2·73	3·88	Pamban	Madras (South).
...	10	4	...	...	...	2	3	11	5·7	?	?	78	·743	7·1	10	10·50	−0·50	8·46	?	?	11·64	?	?	3·24	Tinnevelly.	
...	13	10	1	...	...	...	...	6	3·4	3·8	− 11	76‡	711‡	5·1	5	7·09	−2·09	3·93	4·66	− 0·73	17·83	12·87	+ 4·96	1·98	Madura.	

* Mean of 22 days.

† Mean of 23 days.
‡ " " 29 "

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Madras (South Central).	Salem	940	29·078	+·038	29·968	29·168	17th	28·950	2nd	·218	75·5	86·0	−0·9	69·1	+1·1	77·6	+0·2	16·9	90·4	5th	62·4	2nd	28·0
	Coimbatore	1,348	28·644	+·036	29·952	28·721	22nd	28·506	2nd	·215	73·2	84·9	−1·0	68·4	−0·7	76·7	−0·9	16·5	88·9	12th	63·1	2nd	25·8
Coorg	Mercara	3,781	26·280	+·029	?	26·345	17th	26·159	2nd	·186	63·2	73·0	−2·1?	60·5	+0·2	66·8	−0·9	12·5	76·5	11th & 12th,	55·2	2nd	21·3
Mysore	Chitaldroog	2,405	27·609	?	29·974	27·688	17th	27·460	2nd	·228	68·6	79·0	?	62·0	?	70·6	?	17·0	83·6	6th	54·9	2nd	28·7
	Bangalore	3,021	27·011	+·026	29·971	27·081	17th & 22nd.	26·849	2nd	·232	66·7	78·0	−0·5	61·4	−0·6	69·7	−0·6	16·6	82·3	11th	53·9	2nd	28·4
	Hassan	3,091	26·949	?	29·971	27·024	17th	26·826	2nd	·198	67·7	77·3	?	60·7	?	69·0	?	16·6	81·1	12th	54·3	2nd	26·8
	Mysore	2,518	27·498	?	29·966	27·571	17th	27·352	2nd	·219	69·5	81·0	?	63·7	?	72·4	?	17·3	84·4	7th & 11th,	55·9	2nd	28·5
Madras (East Coast, South).	Negapatam	31	29·961	+·039	29·921	30·040	17th	29·824	2nd	·216	78·5	83·8	+0·1	74·2	+0·3	79·0	+0·2	9·6	88·2	4 days	69·7	3rd	18·5
	Cuddalore	12	29·995	?	29·936	30·082	17th	29·841		·241	76·8	84·1	?	71·8	?	78·0	?	12·3	87·8	11th.	66·2	2nd	21·6
	Trichinopoly	255	29·739	+·033	29·931	29·813	17th	29·602	2nd	·211	77·2	86·8	+0·1	72·1	+0·4	79·5	+0·3	14·7	92·0	5th	67·9	22nd	24·1
	Madras	22	29·995	+·045	29·948	30·108	17th	29·827	2nd	·281	77·2	84·3	−0·6	71·9	−0·4	78·1	−0·5	12·4	88·0	4 days	66·0	2nd	22·0
Madras (East Coast, Central).	Nellore	71	29·950	?	29·956	30·043	22nd	29·747	2nd	·296	75·8	84·1	?	71·1	?	77·6	?	13·0	90·2	8th	64·1	1st	26·1
	Masulipatam	15	30·020	+·050	29·970	30·126	22nd	29·721	1st	·405	75·6	83·3	−1·3	70·8	−0·7	77·0	−1·0	12·5	88·5	8th	64·7	1st	23·8
Madras (Central)	Cuddapah	433	29·595	?	29·977	29·692	22nd	29·426	2nd	·266	75·5	85·7	−0·8	68·7	−0·6	77·2	−0·7	17·0	91·5	10th.	61·9	2nd	29·6
	Kurnool	923	29·101	?	29·988	29·197	23rd	28·910	2nd	·287	71·6	84·0	−2·6	63·7	−0·4	73·9	−1·5	20·3	90·7	18th	55·7	30th	35·0
	Bellary	1,475	28·547	+·046	29·994	28·638	17th	28·368	2nd	·270	70·8	?	?	64·2	−1·5	?	?	?	?	?	57·1	30th	?
Madras (East Coast, North).	Rajahmundry	112	29·912	+·033	29·963	30·015	22nd	29·598	2nd	·417	75·2	85·7	−0·9	69·1	+0·1	77·4	−0·4	16·6	90·0	9th	63·5	29th	26·5
	Cocanada	26	30·004	+·050	29·966	30·115	22nd	29·674	1st	·441	75·7	82·0	+0·2	70·6	+0·5	76·3	+0·4	11·4	89·7	8th	65·6	28th & 29th,	24·1
	Vizagapatam	31	30·006	+·040	29·975	30·119	23rd	29·701	2nd	·418	76·2	81·4	0	75·5	−0·2	78·5	−0·1	5·9	87·3	7th	71·5	11th & 12th,	15·8
	Gopalpur	21	30·041	?	30·002	30·152	23rd	29·784	2nd	·368	71·0	82·1	?	66·4	?	74·3	?	15·7	86·2	7th & 8th	59·1	11th	27·1
XII.—Hill Stations.																							
Baluchistan	Kachh	?	24·058*	?	?	24·150	15th & 17th,	23·990	5 days	·160	50·7*	60·7†	?	31·9*	?	46·4†	?	28·8	68·0	10th & 11th,	21·0	8th	47·0
	Pishin	?	?	?	?	?	?	?	?	?	?	69·4	?	29·2	?	49·3	?	40·2	77·1	12th	19·9	20th	57·2
	Quetta	5,502	24·786	+·022	?	24·889	17th	24·706	2nd	·183	45·8	65·8	+2·0	35·3	+4·4	50·6	+3·2	30·5	71·2	12th	28·3	20th	42·9
	Shirino	?										Observations suspended.											
	Kalat	?				Not	recorded				41·1	65·9	?	22·8	?	44·4	?	43·1	73·5	12th	14·0	20th	59·5
	Chaman†	4,311	25·815?	?	?	25·918	15th	25·727?	21st	·191	55·0	67·6	?	45·0?	?	56·3?	?	22·6	74·6	12th	35·1	20th	39·5
Northern India	Leh	11,503	19·760	?	?	19·911	9th & 22nd	19·495	19th	·416	29·1	44·8	?	21·6	?	33·2	?	23·2	59·2	1st	8·5	21st	50·7
	Srinagar	5,204	25·036	?	?	25·182	22nd	24·860	19th	·322	37·3	58·6	?	33·1	?	45·9	?	25·5	70·8	2nd	24·1	18th	46·7
	Gilghit	?	26·166	?	?	26·420	21st	25·880	5th	·540	45·4	61·0	?	42·2	?	51·6	?	18·8	73·2	2nd	33·9	21st	39·3
	Cherat	?	25·781	?	?	25·918	14th	25·681	4th	·237	53·8	64·5	?	47·5	?	56·0	?	17·0	75·3	11th	41·1	19th	34·2
	Murree	6,344	23·938	+·016	?	24·027	14th	23·827	20th	·200	47·9	59·4	−1·6	45·2	+0·1	52·3	−0·8	14·2	68·6	2nd	34·0	20th.	34·6
	Poo	?					Not	recorde	d.		?	56·1	?	34·0	?	45·1	?	22·1	70·5	1st	28·0	21st & 22nd,	42·5
	Simla	7,224	23·186	+·003	?	23·274	14th	23·098	4th	·176	46·7	53·5	−2·1	43·5	−0·4	48·5	−1·3	10·0	61·4	3rd	39·3	21st	22·1
	Chakrata	6,977	23·417	?	?	23·518	14th	23·336	4th	·182	47·8	57·2*	−2·2*	43·0	−0·4	50·1*	−1·3	14·2	66·3	3rd	36·1	20th	30·2
	Mussooree	6,705	23·649	?	?	23·746	14th	23·565	7th	·181	48·3	55·2	−3·0	44·0	−0·8	49·6	−1·9	11·2	62·2	2nd & 3rd,	38·0	20th	24·2
	Ranikhet	6,069	24·210	?	?	24·306	14th	24·120	7th	·186	49·9	59·8	−2·6	46·4	−0·3	53·1	−1·5	13·4	66·6	4th	39·0	20th	27·6
	Yatung	10,480?					Not	recorde	d.		?	47·3	?	27·8	?	37·6	?	19·5	55·9	8th	22·9	25th	33·0
	Gnatong	?	19·275	?	?	19·347	15th	19·138	19th	·209	31·7	39·7	?	23·9	?	31·8	?	15·8	47·4	5th	17·9	25th	29·5
	Darjeeling	7,421	23·071	+·011	?	23·142	22nd	22·988	7th	·154	46·5	53·5	−0·5	42·3	+0·7	47·9	+0·1	11·2	59·1	7th	37·2	25th	21·9
	Gantok	?	24·592	?	?	24·673	22nd	24·480	7th	·193	50·4	62·5*	?	45·2*	?	53·8*	?	17·3	68·5	5th	40·7	26th	27·8
	Kalimpong	?	26·114	?	?	26·223	22nd	25·920	7th	·303	54·3‡	64·8‡	?	?	?	?	?	?	68·9	7th	?	?	?

* Mean of 29 days. † Mean of 28 days.
‡ " " 23 " § " of 22 "

I—*continued.*

in India, Burma, etc., in November 1894—continued.

Wind Direction. Number of winds from: Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Wind Velocity: Mean velocity in miles per hour.	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 1894.	Normal rainfall for period, 1st October to 30th November.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
20	2	3	1	...	...	2	1	1	2·5	3·3	− 24	75	·674	5·8	6	7·36	−1·36	2·01	3·96	− 1·95	10·34	10·85	− 0·51	1·08	Salem	Madras (South Central).
...	...	...	23	...	3	4	...	...	1·2	2·6	− 54	91	·748	5·1	5	8·09	−3·09	1·36	3·72	− 2·36	6·25	9·66	− 3·41	0·52	Coimbatore.	
...	1	11	13	...	...	...	...	5	7·8	3·7	+111	87	·508	7·5	2	7·20	−5·20	0·42	3·34	− 2·92	8·59	12·94	− 4·35	0·14	Mercara	Coorg.
1	...	3	16	4	...	3	2	1	8·5	?	?	79	·590	5·6	2	?	?	3·46	?	?	9·02	?	?	3·24	Chitaldroog	
...	1	13	10	2	...	2	1	1	7·7	3·7	+108	84	·556	4·8	3	6·09	−3·09	2·83	3·59	− 0·76	6·36	10·74	− 4·38	2·38	Bangalore	Mysore.
5	...	8	13	2	...	1	1	...	3·8	?	?	83	·564	6·7	3	?	?	2·18	?	?	13·17	?	?	1·61	Hassan.	
1	...	10	13	1	1	1	2	1	10·2	?	?	82	·588	5·5	2	?	?	1·34	?	?	11·36	?	?	1·19	Mysore.	
2	2	13	1	...	...	1	2	9	12·5	5·2	+140	83	·815	6·9	16	13·09	+2·91	15·30	15·95	− 0·65	17·78	26·54	− 8·76	3·60	Negapatam.	Madras (East Coast, South).
...	11	4	3	1	1	1	3	6	2·2	?	?	93	·869	2·9	14	11·8	+2·2	11·36	?	?	18·95	?	?	1·98	Cuddalore.	
11	4	12	...	...	...	1	1	1	3·2	4·2	− 24	78	·733	6·8	8	8·45	−0·45	2·23	5·37	− 3·14	10·11	12·86	− 2·75	0·42	Trichinopoly.	
4	16	7	1	...	...	2	2	4	6·7	6·8	− 1	83	788	6·0	13	13·00	0	10·55	13·21	− 2·66	21·57	24·21	− 2·64	3·70	Madras.	
6	4	...	...	1	1	...	2	16	4·8	?	?	88	·787	8·5	8	9·4	−1·4	7·85	?	?	17·36	?	?	3·50	Nellore	Madras (East Coast, Central).
...	15	10	...	2	...	...	1	2	6·3	5·5	+ 15	82	·728	2·7	2	5·91	−3·91	2·46	7·06	− 4·60	15·71	16·40	− 0·69	1·84	Masulipatam	
1	1	4	4	8	3	2	2	5	...	?	?	79	·700	5·2	5	7·00	−2·00	1·41	4·67	−3·26	10·91	11·00	− 0·09	0·39	Cuddapah	Madras (Central).
23	...	...	3	...	1	...	1	2	...	?	?	79	·617	3·8	8	3·17	+4·83	2·73	1·15	+ 1·58	6·02	6·18	− 0·16	0·70	Kurnool.	
4	1	5	13	2	...	...	2	3	3·3	3·3	0	77	·592	2·6	6	3·82	+2·18	2·12	2·13	−0·01	8·70	6·42	+ 2·28	0·59	Bellary.	
...	16	7	6	...	...	...	...	1	?	?	?	74	·664	3·3	4	2·80	+1·20	1·02	3·35	− 2·33	13·56	9·31	+ 4·25	0·46	Rajahmundry	Madras (East Coast, North).
...	12	12	1	1	...	1	1	2	10·0	?	?	78	·692	2·3	5	4·3	+0·?	1·95	7·41	− 5·46	19·37	17·77	+ 1·60	0·94	Cocanada.	
...	16	7	6	...	...	...	...	1	2·5	2·4	+ 4	74	·671	3·0	4	7·18	−3·18	3·16	6·90	− 3·74	24·55	17 44	+ 7·11	1·31	Vizagapatam.	
1	12	2	...	...	...	2	...	13	8·9	7·0	+ 27	84	·645	1·3	3	4·33	−1·33	2·27	5·48	− 3·21	6·26	15·21	− 8·95	1·68	Gopalpur.	
																									XII.—Hill Stations.	
6	1	...	3	4	...	3	...	12	?	?	?	45*	·164*	2·1	1	?	?	0·12	?	?	0·12	?	?	0·12	Kachh	Baluchistan.
Not	recorded.								?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	Pishin.	
25	1	...	...	2	1	...	...	1	2·7	2·7	0	50	·158	3·0	0	0·09	−0·09	0·11	0·27	−0·16	0·11	0·34	− 0·23	0·06	Quetta,*	
													Observations suspended.												Shirino.	
...	1	...	1	...	28	...	...	...	?	?	?	...	...	...	...	?	?	...	?	?	...	?	?	...	Kalat.	
...	2	2	7	11	2	2	1	1	3·6	?	?	49	·208	5·0	1	?	?	0·39	?	?	0·39	?	?	0·39	Chaman,‖	
4	1	10	8	1	2	4	...	...	0·9	1·9	...	73	·120	4·4	1	?	?	0·20	?	?	0·20	?		0·10	Leh.	
11	3	2	1	4	4	...	3	2	5·2	?	?	93	·209	5·2	4	?	?	0·79	?	?	0·90	?	?	0·22	Srinagar	Northern India.
			Not	recorded.					?	?	?	55	·166	4·8	0	?	?	0·10	?	?	0·11	?	?	0·07	Gilghit.	
5	14	1	2	0	1	...	1	6	8·8	?	?	43	·174	3·5	0	?	?	0·05	?	?	0·25	?	?	0·05	Cherat.	
7	2	3	4	5	1	...	...	8	7·9	5·1	+ 55	40	·135	4·2	1	0·73	+0·27	0·23	1·08	− 0·85	0·23	2·73	− 2·50	0·16	Murree.	
21	1	...	3	3	...	...	...	2	?	?	?	?	?	3·0	2	?	?	0·57	?	?	0·87	?	?	0·29	Poo.	
15	2	7	3	1	2	...	...	...	4·4‡	1·9	+132	52	·168	3·3	5	1·18	+3·82	3·61	0·54	+ 3·07	4·64	1·76	+ 2·88	2·71	Simla.	
7	...	10	12	...	...	...	...	1	5·2	4·5	+ 16	71	·235	2·7	2	?	?	1·68	0·59	+ 1·09	4·14	1·43	+ 2·71	1·18	Chakrata.	
...	3	9	7	1	...	...	4	6	?	?	?	69	·237	2·5	3	?	?	1·48	0·76	+ 0·72	4·38	1·75	+ 2·63	1·10	Mussooree.	
16	5	4	...	...	...	4	...	1	2·5	1·2	+108	72	·261	2·1	2	1·00	+1·00	0·55	0·33	+ 0·22	9·84	1·81	+ 8·03	0·45	Ranikhet.	
...	...	...	...	...	...	...	...	...	?	?	?	?	?	?	0	?	?	0·12	?	?	4·08	?	?	0·05	Yatung.	
1	1	...	7	12	2	1	2	4	5·0	?	?	76	·135	2·0	3	?	?	1·06	?	?	10·23	?	?	0·50	Gnatong.	
4	2	5	5	5	2	4	2	1	3·9	1·7	+129	79	·256	4·1	1	0·63	+0·37	0·25	0·30	− 0·05	5·72	4·94	+ 0·78	0·23	Darjeeling.	
...	4	1	17	2	...	3	1	2	1·0	?	?	84	·311	2·3	3	?	?	1·84	?	?	9·62	?	?	1·13	Gantak.	
...	7	1	1	...	...	1	1	12	?	?	?	41‡	·366†	2·1	...	?	?	0·12	?	?	4·66	?	?	0·08	Kalimpong. (a)	

* Mean of 25 days. † Mean of 27 days. ‡ Mean of 22 days.
‖ " " 28 " § " " 19 "
(a) Wind direction of 23 days.

Table

Abstract of Observations taken at 8 A.M. at 204 Stations

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.
Central India	Mount Abu	3,945	26·191	+·026	?	26·288	23rd	26·047	4th	·241	65·6	72·8	−0·5	56·9	−0·1	64·9	−0·3	15·9	75·1	1st & 2nd	53·9	14th	21·2
	Pachmarhi	3,528	26·591	+·042	?	26·686	17th	26·429	4th	·257	62·9	70·9	−1·1	49·6	−1·5	60·3	−1·3	21·3	73·8	21st	43·3	12th	30·5
South India	Wellington	6,200	24·296	+·021	?	24·373	17th	24·150	2nd	·223	59·2	65·4	−1·4	53·0	+0·6	59·2	−0·4	12·4	70·7	3rd	44·2	23rd	26·5
XIII.—Extra India.																							
Ceylon	Trincomalee	75	29·936	?	29·939	30·014	17th & 18th.	29·828	1st	·186	81·1	88·1	?	75·3	?	81·7	?	12·8	91·0	4th	72·0	1st	19·0
	Colombo	40	29·933	+·007	29·899	30·011	17th	29·790	30th	·221	82·4	85·7	?	74·0	?	79·9	?	11·7	90·5	27th & 28th.	70·5	5th	20·0
	Galle	48	29·944	?	29·918	29·993	17th	29·887	2nd	·106	79·9	82·5	?	75·2	?	78·9	?	7·3	84·5	25th	72·5	25th	12·0
Persia	Meshed	?																					
	Teheran (a)*	?	26·160	?	?	26·400	15th	26·000	21st	·400	50·4	60·3	?	44·1	?	52·2	?	16·2	75·7	10th	35·0	21st	40·7
	Isphahan†	?	?	?	?	?	?	?	?	?	45·4	59·6	?	37·6	?	48·6	?	22·0	74·6	8th	33·3	24th	41·3
	Bushire	14	30·058	?	30·029	30·166	16th	29·953	30th	·213	69·5	76·9	?	64·6	?	70·8	?	12·3	84·9	10th & 12th.	60·4	28th	24·5
	Jask	?	30·082	?	?	30·215	15th	29·988	2nd	·227	76·1	84·0	?	69·6	?	76·8	?	14·4	88·7	1st	64·2	9th	24·5
Arabia	Muscat	?	30·070	?	?	30·182	15th	29·974	2nd	·208	77·3	79·8	?	75·1	?	77·4	?	4·7	83·4	3rd & 5th	71·5	18th	11·9
	Baghdad	?	29·633	?	?	29·804	17th	29·479	30th	·325	58·0	72·1	?	55·1	?	63·6	?	17·0	84·0	6th	47·1	29th	36·9
	Aden	94	29·945	−·014	29·970	30·007	1st	29·839	29th	·168	77·8	83·7	−2·6	75·5	+2·3	79·7	−0·2	8·2	89·3	2nd & 7th	70·9	7th	18·4
	Perim	?	29·776	?	?	29·868	17th	29·673	29th	·195	80·9	86·7	?	76·3	?	81·5	?	10·4	88·77	13th	73·0	8th	15·77
Afghanistan	Kabul	?	...		Not	recorde	d.	...	...	...	37·4	63·4	?	32·5	?	47·9	?	30·9	78·5	1st	18·4	20th	60·1
Central Asia	Kashgar	?	25·813*	?	?	26·140	21st	25·620	18th	·520	31·3	51·3	?	29·3	?	40·3	?	22·0	70·4	1st	21·3	22nd	49·1
Arabian Sea Islands.	Amini Divi	?	30·028	?	29·971	30·087	21st	29·946	30th	·141	82·3	85·4	?	75·5	?	80·5	?	9·9	89·8	7th	73·2	23rd	166
	Minicoy	10	29·979	?	29·914	30·035	6th	29·871	29th	·164	80·1	87·0	?	...	?	...	?	...	90·0	4th	75·4	14th	14·6
Africa	Zanzibar	73	29·952	?	29·952	30·027	12th	29·813	29th	·214	78·8	82·4	?	76·4	?	79·4	?	6·0	86·4	30th	73·3	16th	13·1

(a) Barometer uncorrected.
* Mean of 29 days.
† „ „ 28 „

I—*concluded.*

in India, Burma, etc., in November 1894—concluded.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.										Station.	Meteorological Province or District.
Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean velocity in miles per hour.	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 October to 30th November 1894.	Normal rainfall for period, 1st October to 30th November	Variation from normal of period.	Heaviest rainfall during month.		
11	1	10	1	1	...	2	3	1	4·8	3·7	+ 30	39	·244	1·1	0	0·18	−0·18	0	0·27	−0·27	0·11	0·98	− 0·87	0	Mount Abu.	Central India.
12	2	6	6	1	1	1	...	1	2·4‡	2·5	− 4	59	·342	1·8	2	1·09	+0·91	0·67	0·71	−0·04	5·30	3·34	+ 1·96	0·38	Pachmarhi.	
21	1	2	3	1	1	...	...	1	2·3	2·7	− 15	83	·420	7·4	12	13·22	−1·22	4·24	8·45	−4·21	10·80	20·55	−9·75	0·88	Wellington.	South India.
																									XIII.—Extra India.	
10	2	11	...	...	...	7	...	...	2·3	?	?	82	·871	4·3	13	?	?	9·86	12·68	−2·82	17·62	21·09	−3·47	3·12	Trincomalee.	Ceylon.
1	6	3	3	4	2	7	3	1	7·5	5·8	+ 29	77	·856	5·3	16	?	?	15·55	13·25	+2·30	35·47	26·76	+ 8·71	3·30	Colombo.	
18	2	2	...	2	...	...	5	1	4·3	?	?	90	·920	3·9	17	?	?	15·91	11·72	+4·19	32·27	25·07	+ 7·20	3·68	Galle.	
28	1	...	...	...	...	...	...	...	2·7†	?	?	63	·217	2·3	10	?	?	2·20	?	?	2·20	?	?	0·42	Meshed.	Persia.
...	1	...	4	2	2	4	8	7	2·7§	?	?	75	·218	5·1	7	?	?	3·49	?	?	3·49	?	?	1·31	Teheran.*	
...	1	14	5	9	...	...	...	1	3·1	6·1	− 49	72	·509	?	9	?	?	11·68	1·53	+10·15	12·20	1·53	+10·67	2·89	Ispahan.†	
2	3	5	9	4	1	1	...	5	11·1	?	?	67	·597	2·4	2	?	?	2·04	?	?	2·04	?	?	1·64	Bushire.	
...	...	...	4	8	8	1	6	3	3·8	?	?	71	·666	0·6	0	?	?	0	?	?	0	?	?	0	Jask.	
15	4	3	2	2	4	...	...	...	0·4	?	?	81	·393	1·4	7	?	?	4·84	?	?	4·96	?	?	2·10	Muscat.	Arabia.
3	...	13	12	2	...	...	...	...	12·2	11·6	+ 5	75	·705	5·1	2	?	?	1·28	0·21	+1·07	1·28	0·23	+ 1·05	0·83	Baghdad.	
1	...	...	23	4	...	2	...	...	17·2	?	?	72	·755	5·1	1	?	?	0·27?	?	?	0·27?	?	?	0·24?	Aden.	
...	1	...	2	11	...	12	3	1	?	?	?	?	?	?	3	?	?	1·12	?	?	1·12	?	?	0·52	Perim.	
22	...	2	2	...	...	...	1	3	1·5	?	?	?	?	3·8	0	?	?	0·05	?	?	0·05	?	?	0·05	Kabul.	Afghanistan.
...	7	2	...	1	..	...	1	19	?	?	?	78	·456	5·3	2	?	?	0·51	?	?	7·95	?	?	0·26	Kashgar.	Central Asia.
3	5	7	4	4	...	...	4	2	8·9	?	?	84	·857	4·2	9	?	?	4·72	?	?	4·72	?	?	1·32	Amini Divi.	Arabian Sea Islands.
...	1	1	3	7	10	7	1	...	5·8		?	88	·870	6·2	21	?	?	17·18	?	?	21·34	?	?	2·73	Minicoy.	
																									Zanzibar.	Africa.

* Mean of 29 days. † Mean of 28 days. ‡ Mean of 23 days.
§ " " 26 "

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88

Meteorological Province.	Station.	Elevation of barometer cistern above sealevel 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	...	29·937	29·836	·101	29·886	+·043	29·878	86·8	77·3	9·5	88·7	73·4	15·3	84·0	84·0	80·9	+ 0·4	73·5	77·7	77·0	76·1
	Rangoon	...	·993	·873	·123	·934	+·038	·912	88·7	69·9	18·8	91·7	64·0	27·7	82·0	84·1	77·1	− 0·9	67·9	73·4	73·6	71·6
	Diamond Island	...	·992	·886	·106	·938	+ ·053	·914	84·2	76·6	7·6	86·4	74·5	11·9	81·5	82·3	79·5	+ 0·5	71·7	74·0	73·7	73·1
	Cocos Island	111	·938	·839	·099	·884	?	·927	84·1	76·5	7·6	86·0	73·9	12·1	81·9	80·7	79·1	?	71·3	75·3	74·6	73·7
	Akyab	...	30·035	·926	·109	·984	+·059	·946	83·8	69·2	14·6	88·2	61·2	27·0	78·6	81·3	76·3	− 1·8	67·2	74·4	75·7	72·4
Assam.	Silchar	...	29·975	·855	·120	·911	+·053	·968	82·2	64·4	17·8	88·3	56·4	31·9	73·8	79·3	71·9	− 0·7	63·5	69·5	71·2	68·0
	Sibsagar	...	·768	·632	·136	·699	+·023	·996	77·0	60·8	16·2	83·3	51·0	32·3	70·2	76·0	67·8	+ 0·2	60·7	67·3	69·5	65·8
	Dhubri	...	·976	·844	·132	·904	+ 043	·976	78·2	64·0	14·2	82·0	57·2	24·8	71·1	76·8	69·5	− 0·6	62·8	67·2	69·4	66·5
Bengal and Orissa.	Chittagong	...	·970	·866	·104	·916	+·041	·953	82·2	65·0	17·2	87·2	59·2	28·0	77·2	78·2	73·0	− 1·0	64·2	71·5	71·5	69·1
	Naryangunge	...	30·043	·938	·105	·987	+·045	·955	80·5	65·9	14·6	86·7	61·0	25·7	76·4	78·1	73·4	− 1·1	64·1	70·0	70·0	68·1
	Calcutta (Alipore)	...	·058	·948	·110	·995	+·034	·962	79·7	64·4	15·3	85·6	59·2	26·4	74·3	78·3	71·6	− 0·7	63·2	67·8	68·6	66·5
	Do. (Chowringhee).	...	·063	?	?	?	?	?	81·3	64·4	16·9	88·0	59·4	28·6	76·6	?	?	?	63·6	69·4	?	?
	Saugor Island	...	·051	·941	·110	·990	+·039	·960	79·9	66·6	13·3	86·1	60·4	25·7	76·3	77·9	72·4	− 1·0	64·7	70·3	69·9	68·4
	Burdwan	...	29·979	·862	·117	·914	+·031	·962	80·8	64·6	16·2	86·3	59·1	27·2	74·9	79·0	72·2	− 1·3	63·0	67·9	68·2	66·4
	Berhampore	...	30·011	·904	·107	·951	+·039	·967	79·2	65·4	13·8	85·1	60·5	24·6	74·6	77·8	72·0	− 1·2	62·7	68·3	69·2	66·7
	False Point	...	·053	·949	·104	30·000	+·043	·963	81·3	65·3	16·0	86·6	57·8	28·8	77·7	78·9	72·3	− 0·7	64·9	70·9	70·3	68·7
	Cuttack	...	29·991	·879	·112	29·934	+·042	·958	83·2	67·0	16·2	89·2	60·8	28·4	78·0	81·7	74·5	− 0·1	64·6	69·1	69·7	67·8
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	28·640	27·941	·099	27·987	+·022	·971	75·1	57·9	17·2	81·0	52·8	28·2	70·1	72·5	65·5	− 1·2	52·0	61·5	61·7	58·4
	Patna	...	29·903	29·801	·102	29·847	+·030	·987	79·1	63·7	15·4	83·0	57·3	25·7	74·6	77·3	70·6	+ 0·3	61·4	67·3	67·5	65·4
	Darbhanga	...	·921	·804	·117	·858	+·038	·982	79·7	63·1	16·6	83·4	57·0	26·4	74·6	77·4	70·5	− 0·7	62·3	68·2	68·7	66·4
	Allahabad	...	·776	·672	·104	·714	+·030	·991	80·0	58·2	21·8	82·1	51·5	30·6	74·1	78·6	67·9	+ 0·5	56·7	65·7	65·9	62·8
	Ghazipur	220	·847	·748	·099	·790	+·028	·969	80·4	61·3	19·1	84·4	55·4	29·0	75·4	77·3	70·0	+ 2·0	59·9	66·4	66·1	64·1
	Lucknow	...	·712	·611	·101	·654	+·022	·989	79·6	55·8	23·8	83·3	48·5	34·8	72·9	77·1	67·1	+ 0·2	54·7	64·4	65·3	61·4
Upper Sub-Himalayas.	Dehra Dun	...	27·807	27·735	·072	27·760	+·017	·995	73·2	53·4	19·8	79·9	47·5	32·4	66·7	68·0	61·3	− 0·4	50·9	58·9	59·5	56·4
	Roorkee	...	29·167	29·071	·096	29·107	+·024	·985	77·4	53·6	23·8	87·2	45·6	41·6	68·2	73·5	63·8	+ 0·6	52·6	61·8	62·6	59·0
	Meerut	...	·320	·225	·095	·264	+·018	·987	78·5	53·7	24·8	85·1	46·6	38·5	68·0	74·6	64·6	+ 0·9	52·2	59·5	61·7	57·8
	Lahore	...	·355	·272	·083	·304	+·019	30·006	79·8	50·7	29·1	87·9	43·4	44·5	68·3	78·4	63·5	+ 1·5	47·4	57·8	62·3	55·8
	Ludhiana	...	·245	·154	·091	·189	+·024	29·989	78·3	52·6	25·7	86·1	44·5	41·6	69·7	75·5	63·6	+ 1·0	49·7	58·7	61·6	56·7
Indus Valley and N.-W. Rajputana	Peshawar	...	28·987	28·884	·103	28·926	+·022	30·048	75·6	47·3	28·3	84·6	38·4	46·2	65·4	74·0	59·7	+ 1·7	42·3	53·5	56·4	50·7
	Mooltan	...	29·653	29·576	·077	29·605	+·017	·035	83·2	52·8	30·4	91·8	45·7	46·1	69·4	81·5	66·2	+ 1·1	48·3	57·7	62·5	56·2
	Jacobabad	...	·913	·793	·120	·843	+·028	29·991	86·8	52·1	31·7	94·3	45·2	49·1	77·6	83·0	67·1	+ 2·2	44·3	61·4	64·6	56·6
	Kurrachee	...	30·036	·955	·081	·902	+·031	·993	87·0	61·7	25·3	89·2	55·8	33·4	83·4	84·7	74·4	+ 0·6	55·6	70·4	70·9	65·6
E. Rajputana, C. India, and Gujarat.	Jevpore	...	28·649	28·547	·102	28·588	+·029	30·020	84·6	52·1	32·5	89·0	45·9	43·1	75·9	81·9	66·7	− 0·8	47·8	60·5	62·3	56·9
	Ajmere	...	·460	·367	·093	·411	+·016	29·935	84·2	49·8	34·4	87·5	45·8	41·7	74·1	82·8	65·6	+ 0·1	45·1	59·8	63·3	56·1
	Deesa	...	29·615	29·496	·119	29·549	+·040	·989	91·5	54·5	37·0	94·0	51·1	42·9	83·3	89·2	72·8	− 0·9	48·8	61·3	62·3	57·5
	Nowgong	...	·311	·209	·102	·253	+·024	·931	78·9	54·9	24·0	82·5	49·2	33·3	70·1	76·1	66·1	− 0·3	53·5	62·2	63·2	59·6
	Agra	...	·528	·422	·106	·464	+·022	·989	82·2	55·7	26·5	87·6	47·9	39·7	74·8	79·9	68·0	+ 0·3	52·2	62·0	63·8	58·3
Deccan.	Belgaum	...	27·483	27·374	·109	27·424	+·027	·859	80·5	61·1	19·4	85·2	53·9	31·3	74·3	79·0	70·3	− 0·4	58·6	63·2	63·7	61·8
	Sholapur	...	28·452	28·319	·133	28·384	+·041	·913	85·5	61·6	23·9	88·7	55·5	33·2	78·7	84·3	72·8	− 0·8	57·3	64·7	66·0	62·7
	Poona	...	·200	·075	·125	·140	+·030	·915	85·1	57·6	27·5	87·7	51·0	36·7	77·4	83·5	71·3	− 0·9	55·0	62·2	63·4	60·2
	Akola	...	29·150	29·017	·133	29·080	+·051	·970	84·3	55·9	28·4	87·0	48·1	38·9	75·2	82·9	70·6	− 1·4	54·7	64·1	65·5	61·5
	Buldana	2,132	27·902	27·808	·094	27·851	+·021	·931	78·4	59·3	19·1	82·2	54·1	28·1	74·3	77·2	69·4	− 2·6	53·9	61·2	61·4	58·9
	Khandwa	...	29·015	28·888	·127	28·948	+·036	·958	83·5	53·4	30·1	87·2	47·3	39·9	73·4	82·0	68·1	− 2·0	51·3	62·6	64·2	59·3

II.

Stations in India, Burma, etc., for November 1894.

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.		
																									%	%						
·779	·868	·838	·828	−·119	83	74	72.	76	−8	5·8	5·4	5·6	+0·6	2	5	14	16	16	5	1	1	...	S. 86° E.	N. 63° E.	60	53	137	165	...	...	Port Blair .	Burma Coast and Bay Islands.
·659	·713	·692	·688	−·110	90	65	59	71	−8	2·2	3·2	2·7	−1·9	...	5	15	19	12	6	1	...	1	N. 88° E.	N. 60° E.	60	57	95	102	...	...	Rangoon .	
·714	·744	·720	·726	−·080	78	69	65	71	−9	3·8	5·8	4·8	+0·4	...	...	23	12	14	1	1	4	5	N. 75° E.	N. 59° E.	52	64	348*	195	...	...	Diamond Island.	
·699	·792	·777	·756	?	76	73	74	74	?	3·0	4·0	3·5	?	...	4	37	8	6	1	...	...	2	N. 55° E.	?	78	?	?	?	2·40	0·65	Cocos Island.	
·650	·804	·819	·757	+·001	90	82	77	83	+3	3·3	2·2	2·8	−0·5	...	11	19	3	2	4	2	4	15	N. 3° E.	N. 6° W.	47	29	59	54	...	...	Akyab .	
·583	·670	·658	·637	+·018	95	80	66	81	+4	5·6	4·2	4·9	+1·5	47	...	3	4	2	1	1	1	1	S. 87° E.	S. 77° E.	9	30	24*	45	...	...	Silchar .	Assam.
·541	·637	·639	·606	+·018	99	86	70	85	+1	3·3	1·5	2·4	−2·1	21	...	29	1	3	...	5	...	1	N. 45° E.	N. 62° E.	47	69	49*	39	...	...	Sibsagar .	
·564	·620	·624	·603	−·009	94	81	67	81	+4	2·0	2·2	2·1	+0·7	10	1	15	17	4	1	9	3	...	N. 86° E.	N. 47° E.	35	46	109	118	...	...	Dhubri .	
·599	·703	·687	·663	−·026	95	75	70	80	+1	2·2	2·5	2·4	−0·4	..	7	11	7	6	1	4	6	18	N. 8° W.	N. 20° W.	33	53	61*	73	...	...	Chittagong	Bengal and Orissa.
·584	·655	·630	·624	−·001	91	72	65	76	+4	3·2	3·2	3·2	+1·0	...	8	10	4	4	5	4	7	18	N. 27° W.	N. 17° W	32	38	71	47	...	...	Naryangunge	
·574	·595	·577	·582	−·010	94	68	59	74	−1	2·6	2·2	2·4	−0·3	4	31	6	3	2	3	1	3	7	N.	N. 17° W.	58	58	46	65	...	...	Calcutta (Alipore).	
·585	·629	?	?	?	95	69	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	4·10	2·50	Do. (Chowringhee.)	
·593	·669	·630	·637	−·001	87	73	65	75	0	3·2	3·5	3·4	+0·6	1	27	11	1	2	2	3	2	11	N. 3° W.	N. 5° E	62	58	189	154	...	...	Saugor Island.	
·566	·594	·553	·571	+·025	91	68	56	72	+5	2·3	3·0	2·7	0	13	26	8	3	1	...	...	...	9	N. 4° E.	N. 7° W.	62	69	30*	44	...	...	Burdwan .	
·542	·614	·602	·586	+·023	86	72	64	74	0	1·9	2·5	2·2	−0·3	13	14	5	8	1	1	1	2	15	N. 3° W.	N. 25° W.	42	54	36	40	...	...	Berhampore	
·621	·673	·633	·642	+·016	98	70	63	77	+3	4·3	3·6	4·0	+0·3	...	25	6	15	3	6	2	1	2	N. 40° E	N. 22° E.	45	57	146*	157	...	...	False Point	
·590	·601	·572	·588	+·002	87	62	53	67	−1	2·2	2·7	2·5	−0·1	18	6	15	8	2	2	4	3	2	N. 48° E.	N. 1° W.	28	43	34	40	...	...	Cuttack .	
·325	·446	·422	·398	+·045	65	60	53	59	+5	3·4	4·5	4·0	+1·6	4	17	4	4	3	1	3	4	20	N. 22° W.	N. 42° W.	52	55	145	104	...	...	Hazaribagh.	Gangetic Plain and Chota Nagpur.
20	·576	·54	·548	+·089	87	67	58	71	+9	2·0	2·5	2·3	+0·6	20	2	3	8	2	1	3	13	8	N. 59° W.	N. 64° W.	18	29	58*	36	...	...	Patna .	
·559	·606	·591	·585	+·053	95	70	62	76	+6	1·5	1·6	1·6	+0·8	11	4	2	7	5	5	5	10	11	N. 84° W.	S. 79° W.	16	55	42	44	...	...	Darbhanga	
·451	·525	·473	·483	+·076	91	62	48	67	+4	2·4	1·9	2·2	+1·1	8	4	5	5	2	1	3	17	15	N. 55° W.	N. 65° W.	40	21	64	34	...	...	Allahabad.	
·498	·535	·499	·510	+·102	89	60	52	67	+14	2·3	2·2	2·3	+1·1	13	...	3	5	...	2	11	17	9	S. 87° W.	S. 83° W.	40	32	32	22	0·49	0·32	Ghazipur.	
·420	·494	·471	·462	+·107	93	61	51	68	+14	2·5	2·3	2·4	+1·4	44	...	...	...	...	...	...	1	1	N. 67° W.	N. 45° W.	37	46	?	34	...	...	Lucknow.	
·348	·405	·406	·387	?	84	62	59	68	?	2·4	5·0	3·7	+2·5	27	1	...	1	3	12	11	4	...	S. 23° W.	N. 76° W.	38	18	13	41	...	...	Dehra Dun	Upper Sub-Himalayas.
·391	·468	·426	·428	+·092	94	68	52	71	+14	1·7	2·9	2·3	+1·4	43	...	1	7	2	...	1	4	2	E.	S. 36° W.	5	28	?	27	...	...	Roorkee .	
·379	·398	·382	·386	+·059	89	58	45	64	+9	1·7	2·1	1·9	+1·2	34	...	2	3	3	...	1	15	2	W.	N. 50° W.	18	46	19	30	...	...	Meerut .	
·287	·346	·351	·328	+·015	76	50	37	54	+5	2·7	2·5	2·6	+1·4	17	6	2	7	2	3	2	9	12	N. 42° W.	N. 47° W.	23	22	37	33	...	...	Lahore .	
·328	·353	·372	·346	+·041	84	49	42	58	+6	3·4	4·6	4·0	+2·4	9	5	8	2	8	5	3	3	17	N. 22° W.	N. 44° W.	18	36	39	22	...	...	Ludhiana .	
·212	·267	·242	·240	−·031	64	43	30	45	−9	3·3	3·4	3·4	+1·4	31	3	...	4	8	3	2	2	7	S. 34° E.	N. 73° E.	5	15	58*	51	...	...	Peshawar .	Indus Valley and N.-W. Rajputana.
·281	·326	·316	·308	−·044	70	45	30	49	−5	1·8	1·6	1·7	+0·9	11	...	32	2	5	...	3	...	7	N. 46° E	S. 73° W.	50	8	29*	33	...	..	Mooltan .	
·201	·336	·368	·302	+·003	50	35	32	39	−6	2·3	2·1	2·2	+1·1	34	7	2	5	2	5	1	1	3	N. 50° E.	N. 12° W.	8	16	26*	38	...	...	Jacobabad.	
·370	·578	·581	·510	+·073	67	50	49	55	+1	0·4	0·3	0·4	−0·7	...	5	19	3	...	...	11	18	4	N. 42° W.	S. 81° W.	30	18	178	190	..	...	Kurrachee .	
·284	·338	·324	·315	+·028	71	38	29	46	+3	1·3	1·7	1·5	+0·5	6	1	3	3	1	1	11	21	13	N. 85° W.	N. 12° W.	53	39	39	70	...	...	Jeypore .	
·245	·339	·342	·309	+·001	63	40	31	46	0	0·7	1·3	1·0	+0·1	17	3	9	1	4	4	6	8	8	N. 63° W.	N. 32° E	15	10	32	35	...	...	Ajmere .	E. Rajputana, Central India, and Gujarat.
·272	·251	·207	·243	−·036	61	22	15	34	0	0·6	0·6	0·6	−0·8	...	5	8	12	19	8	4	3	1	S. 63° E.	N. 33° E.	45	31	169	181	...	...	Deesa .	
·401	·459	·410	·433	+·105	92	62	46	67	+15	1·4	1·6	1·5	+0·2	3	10	2	2	...	...	7	20	16	N. 62° W.	N. 10° W.	62	32	29*	24	...	...	Nowgong .	
·352	·387	·381	·373	+·061	78	45	38	53	+9	1·3	2·0	1·7	+1·1	...	...	5	...	7	...	8	...	40	N. 50° W.	N. 81° W.	55	36	60	60	...	...	Agra .	
·468	·446	·406	·440	−·030	86	52	41	59	0	3·2	3·8	3·5	−0·1	...	3	20	22	4	1	1	...	1	N. 67° E.	N. 84° E.	75	67	311	280	...	...	Belgaum .	Deccan.
·426	·447	·420	·431	−·037	76	46	36	53	0	3·0	3·3	3·2	−0·6	...	10	21	16	12	...	...	...	1	N. 70° E.	N. 69° E.	70	63	212*	191	...	...	Sholapur .	
·405	·375	·337	·373	−·050	84	40	29	51	+3	1·4	1·8	1·6	−1·2	15	...	8	27	10	.	...	...	..	S. 88° E.	N. 83° E.	65	45	123	138	...	...	Poona .	
·422	·467	·402	·431	+·031	92	53	36	60	+8	1·8	1·7	1·8	+0·3	14	8	25	7	1	...	..	1	4	N. 38° E.	N. 64° E.	59	50	60	84	...	...	Akola. .	
·352	·383	·352	·362	−·042	69	45	38	51	0	1·5	1·7	1·6	−0·9	...	13	27	3	9	1	...	...	7	N. 38° E.	N 69° E.	63	59	218*	113	*Nil*	*Nil*	Buldana .	
·359	·436	·381	·392	+·033	86	53	34	58	+10	1·1	1·1	1·1	−0·5	2	6	22	3	5	3	2	5	12	N. 18° E.	N. 63° E.	38	55	58	62	...	...	Khandwa .	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 88

Meteorological Province.	Station.	Elevation of barometer cistern above sealevel 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.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean to 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Deccan—*concld.*	Hoshangabad	...	29·064	28·948	·116	29·002	+·038	29·997	80·4	56·9	23·5	83·1	51·8	31·3	71·7	79·3	68·4	−2·1	54·3	63·4	65·9	61·2
	Nagpur	...	·036	·918	·118	28·973	+·038	·966	81·1	59·2	21·9	84·7	52·7	32·0	73·6	79·6	70·7	−1·7	55·9	64·4	65·2	61·8
	Jubbulpore	...	28·737	·629	·108	·679	+·028	·984	78·8	53·5	25·3	82·1	47·5	34·6	71·0	76·2	65·5	−0·9	52·7	62·8	63·0	59·5
	Saugor	...	·297	·198	·099	·244	+·041	·971	79·9	56·4	23·5	83·1	50·8	32·3	74·1	78·5	67·8	−0·1	52·5	61·5	62·8	58·9
	Raipur	...	29·094	·978	·116	29·032	+·039	·952	80·9	60·9	20·0	86·5	55·0	31·5	74·6	79·4	71·5	−0·1	58·5	65·4	65·8	63·2
	Sutna	...	·017	·915	·102	28·959	+·024	·978	78·6	56·2	22·4	83·5	51·1	32·4	73·2	76·3	66 2	+0·2	53·9	63·2	62·7	59·9
	Hyderabad (Deccan).	...	28·350	·235	·115	·291	?	·929	80·5	62·1	18·4	83·9	53·0	30·9	75·1	77·5	70·5	?	60·4	66·9	67·1	64·8
West Coast.	Bombay	...	30·008	29·892	·116	29·944	+·044	·921	86·2	71·4	14·8	89·0	68·1	20·9	79·8	82·9	77·7	−1·3	66·3	70·4	73·0	69·9
	Ratnagiri	...	29·905	·792	·113	·843	+·051	·890	90·0	70·3	19·7	94·3	66·0	28·3	85·5	83·6	78·3	−0·3	64·8	71·5	74·2	70·2
	Karwar	...	·968	·853	·115	·905	+·046	·880	87·6	69·7	17·9	91·3	64·2	27·1	80·5	84·9	77·7	+0·5	67·0	71·7	74·5	71·1
	Cochin	...	·968	·875	·093	·916	+·019	·853	88·1	73·8	14·3	92·2	69·9	22·3	82·1	85·1	79·9	+0·2	71·9	75·3	76·4	74·5
	Salem	...	·081	28·962	·119	·027	+·043	·905	86·3	69·1	17·2	90·5	62·2	28·3	80·1	81·3	76·0	+0·2	66·9	71·3	72·3	70·1
South India.	Mysore	...	27·505	27·389	·116	27·447	?	·878	81·1	63·8	17·3	84·7	56·1	28·6	74·0	78·0	71·7	?	62·7	67·0	68·1	65·9
	Mercara	...	26·290	26·206	·084	26·253	+·029	·900	73·2	60·4	12·8	76·6	55·1	21·5	67·7	69·8	66·0	−0·6	58·7	62·3	62·8	61·3
	Bangalore	...	27·017	·916	·101	·970	+·021	·886	78·4	61·4	17·0	82·4	53·8	28·6	72·1	75·0	69·1	−0·7	60·3	65·7	66·7	64·2
	Hassan	...	26·952	·852	·100	·905	?	·883	77·5	60·7	16·8	81·1	54·3	26·8	72·8	74·9	68·4	?	59·2	66·8	68·8	64·9
	Chitaldroog	...	27·616	27·509	·107	27·563	?	·893	79·2	62·1	17·1	83·8	55·1	28·7	73·0	77·1	70·1	?	58·5	65·4	65·8	63·2
	Trichinopoly	...	29·745	29·624	·121	29·690	+·031	·878	87·0	72·1	14·9	91·9	68·2	23·7	81·3	82·5	78·0	−0·3	69·3	73·5	74·3	72·4
	Madras	...	30·002	·905	·097	·953	+·034	·905	84·7	72·2	12·5	88·0	66·1	21·9	80·8	80·9	77·7	−0·5	?	74·6	74·4	73·7
	Bellary	...	28·555	28·432	·123	28·494	+·051	·916	?	64·1	?	?	57·1	?	76·2	80·1	?	?	62·0	67·2	67·4	65·6
	Vizagapatam	...	30·023	·918	·105	29·966	+·036	·935	81·3	75·6	5·7	87·3	71·3	16·0	78·3	79·7	78·1	−1·0	69·2	70·8	72·1	70·7
	Cocanada	...	·023	·917	·106	·970	?	·932	82·0	70·5	11·5	90·2	65·4	24·8	79·9	80·4	75·9	?	68·7	73·2	73·6	71·9
Hill Station, Baluchistan.	Quetta	...	24·790	24·716	·074	24·743	+·022	?	65·6	35·3	30·3	71·5	28·3	43·2	57·2	60·8	49·3	+2·5	31·1	44·2	45·3	40·2
Hill Stations, Northern India.	Leh	...	19·758	19·689	·069	19·725	−·002	?	44·1	21·6	22·5	57·2	8·5	48·7	36·4	38·0	32·1	−0·2	20·7	31·0	30·9	27·5
	Srinagar	...	25·053	24·958	·095	24·995	?	?	58·1	33·1	25·0	70·8	23·9	46·9	41·7	56·6	45·2	?	32·5	39·2	52·1	41·3
	Murree	...	23·966	23·925	·041	23·936	+·012	?	59·2	45·1	14·1	68·6	33·8	34·8	53·6	51·6	50·1	−0·5	35·7	42·4	42·1	40·1
	Chamba	3,005	27·073	26·982	·091	27·037	+·012	?	70·3	48·1	22·2	81·6	42·4	39·2	58·4	63·7	55·7	−0·5	45·2	50·9	53·8	49·9
	Kailang	10,087	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...
	Simla (Ridge)	...	23·208	23·167	·041	23·178	+·009	?	53·3	43·5	9·8	61·4	39·3	22·1	49·6	49·1	47·3	−1·7	37·0	41·6	43·3	40·7
	Simla (Chapslee)	?	?	?	?	?	?	?	59·5	43·2	16·3	68·1	37·8	30·3	52·1	?	?	?	37·5	43·2	?	?
	Chakrata	...	23·439	23·379	·060	23·399	+·021	?	57·1	43·0	14·1	66·3	36·2	30·1	53·3	52·6	48·7	−2·0	39·5	46·3	46·6	44·1
	Ranikhet	...	24·230	24·160	·070	24·182	+ 028	?	59·6	46·3	13·3	66·4	38·8	27·6	55·3	56·1	51·9	−2·2	43·0	48·5	49·8	47·1
	Katmandu	4,388	25·745	25·659	·086	25·698	−·010	?	70·1	46·5	23·6	76·1	40·2	35·9	58·7	63·9	56·7	−2·0	45·5	53·7	56·5	51·9
	Darjeeling	...	23·090	23·013	·077	23·048	+·016	?	53·3	42·2	11·1	59·0	37·2	21·8	49·9	50·4	46·9	−0·6	39·8	46·3	46·7	44·0
	Demagiri	?	?	?	?	?	?	?	87·7	66·9	20·8	92·7	60·1	32·6	76·9	82·2	75·9	+2·3	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	76·4	63·4	13·0	79·1	58·3	20·8	71·3	72·9	69·0	?	?	65·5	66·1	?
Hill Stations, Central India.	Mount Abu	...	26·207	26·130	·077	26·162	+·021	?	72·6	56·9	15·7	75·3	53·7	21·6	69·7	70·4	64·2	−0·4	4·81	54·4	55·0	52·5
	Pachmarhi	...	·605	·521	·084	·559	+·038	?	71·0	49·6	21·4	73·8	43·1	30·7	67·5	67·8	60·3	−1·3	46·0	55·2	56·1	52·4
	Chikalda	3,642	·475	·386	·089	·427	+·028	30·061	71·4	56·5	14·9	74·1	53·0	21·1	68·3	69·0	64·1	−2·5	50·7	56·2	57·5	54·8
	Makhia							Temporarily closed.														

II—*continued.*

Stations in India, Burma, etc., for November 1894—continued.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Rainfall.			
														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.	Station.	Meteorological Province.
																									%	%						
·396	·486	·476	·453	+·065	84	62	48	65	+11	1·1	1·7	1·4	0	14	6	24	11	1	1	...	2	1	N. 50° E.	N. 60° E.	57	66	41	48	...	...	Hoshangabad.	Deccan—*concld.*
·417	·494	·447	·453	+·038	81	60	45	62	+9	2·6	2·7	2·7	+0·2	32	7	16	3	...	1	...	...	1	N. 37° E.	N. 60° E.	38	60	76	71	...	...	Nagpur	
·399	·475	·417	·431	+·063	95	62	46	68	+12	1·7	2·2	2·0	+0·3	14	6	12	1	9	9	1	4	4	N. 83° E.	N. 47° E.	13	25	38	41	...	...	Jubbulpore.	
·362	·393	·378	·378	+·082	81	47	39	55	+12	1·1	1·2	1·2	+0·1	...	9	16	5	16	4	2	1	7	N. 67° E.	N. 20° E.	37	47	37	56	...	...	Saugor	
·469	·509	·463	·480	+·035	85	58	45	63	+4	2·6	2·8	2·7	+0·5	33	8	12	4	1	1	1	...	...	N. 41° E.	N. 31° E.	32	57	65*	83	...	...	Raipur	
·39	·462	·407	·422	+·124	85	55	45	62	+16	1·5	1·7	1·6	+0·4	10	20	2	4	1	1	...	6	16	N. 70° W.	N. 21° W.	55	33	67*	82	...	...	Sutna	
·512	·562	·540	·538	?	90	64	57	71	?	3·5	3·2	3·3	?	6	3	12	10	19	7	...	...	3	S. 77° E.	?	50	?	82*	?	...	...	Hyderabad (Deccan).	
·581	·619	·680	·627	−·066	76	61	61	66	−5	1·0	1·6	1·3	−0·9	...	2	11	19	2	...	...	4	22	N. 20° E.	N. 17° E.	42	59	244	236	...	...	Bombay	West Coast.
·543	·588	·722	·618	−·042	73	48	63	61	−3	1·3	2·2	1·8	+0·6	0	9	3	6	14	1	4	5	18	N. 13° W.	N. 1° W.	17	30	202	199	...	...	Ratnagiri	
·633	·663	·718	·671	−·045	87	63	60	70	−6	1·6	2·6	2·1	−0·4	9	1	8	2	...	...	1	10	29	N. 42° W.	N. 26° W.	59	46	42	?	...	...	Karwar	
·758	·789	·795	·781	−·027	90	72	66	76	−4	2·7	4·6	3·7	−0·8	9	7	9	1	...	...	2	27	5	N. 58° W.	S. 49° W.	48	24	111	?	...	...	Cochin	
·634	·651	·671	·652	−·001	89	64	63	72	−4	6·5	7·5	7·0	+2·0	18	7	27	4	3	...	...	1	...	N. 37° E	S. 65° E.	50	22	60	74	...	...	Salem	South India.
·560	·576	·565	·567	?	94	68	59	74	?	6·2	5·6	5·9	?	3	1	10	39	1	1	2	2	1	N. 82° E.	?	72	?	245*	?	...	...	Mysore	
·478	·503	·492	·491	−·050	90	74	68	78	−5	6·8	6·1	6·5	0	...	3	20	21	6	1	1	3	5	N. 65° E.	N. 61° E.	60	49	192	90	...	...	Mercara	
·516	·562	·562	·547	+·019	94	71	65	76	+3	5·8	4·7	5·3	+0·4	1	2	22	23	5	...	...	3	4	N. 65° E.	N. 60° E.	67	63	188*	90	...	...	Bangalore	
·490	·595	·637	·574	?	92	73	74	79	?	6·0	6·7	6·4	?	1	1	18	27	5	..	1	3	4	N. 71° E.	?	65	?	93*	?	...	...	Hassan	
·452	·535	·499	·495	?	80	65	54	67	?	5·3	5·0	5·2	?	...	1	17	25	5	1	2	5	4	N. 72° E.	?	55	?	181*	?	...	...	Chitaldroog.	
·683	·724	·738	·715	−·019	87	68	67	74	−2	6·2	7·4	6·8	−0·2	17	5	32	1	...	1	1	2	1	N. 37° E.	N. 31° E	55	53	77	100	...	...	Trichinopoly.	
?	·774	·765	·780	+·022	?	74	73	82	+2	5·8	6·0	5·9	−0·2	...	23	18	8	4	1	.	3	3	N. 28° E.	N. 24° E.	65	59	160	159	...	...	Madras	
·538	·558	·517	·538	−·007	89	62	52	67	+5	7·1	7·1	7·1	+2·4	...	1	18	29	2	1	...	3	6	N. 66° E.	N. 80° E.	65	56	79	78	...	...	Bellary	
·643	·670	·706	·673	+·013	76	68	68	71	+5	3·3	3·2	3·3	−0·1	...	9	27	2	...	2	5	6	9	N. 10° E.	N. 75° E.	48	56	59	53	...	...	Vizagapatam.	
·686	·730	·744	·720	?	91	71	72	78	?	2·6	2·2	2·4	?	...	1	36	12	5	1	3	2	...	N. 62° E.	?	70	?	250*	?	..	...	Cocanada	
·136	·157	·145	·146	−·004	65	35	28	43	−5	2·4	2·9	2·7	+1·5	6	4	...	...	...	4	2	12	32	N. 59° W.	N. 41° W.	70	46	66*	60	...	...	Quetta	Hill Station, Baluchistan.
·106	·131	·116	·118	+·033	90	63	54	69	+19	4·7	5·8	5·3	+1·4	13	...	3	2	1	11	19	7	4	S. 42° W.	S. 4° W.	45	24	21	46	...	...	Leh	Hill Stations, Northern India.
·179	·215	·353	·249	?	94	80	75	83	?	4·6	5·0	4·8	?	14	12	7	...	7	5	1	3	11	N. 60° W.	?	23	?	96*	?	...	...	Srinagar	
·116	·159	·174	·150	−·008	39	39	46	42	0	4·3	4·1	4·2	+1·3	11	1	2	2	28	4	2	1	9	S. 41° E.	S. 46° E.	37	17	183*	138	...	...	Murree	
·271	·289	·304	·288	+·012	80	59	52	64	+13	4·3	5·5	4·9	+2·7	50	...	...	...	1	...	...	...	9	N. 45° W.	S. 65° E.	13	14	74*	87	1·13	0·58	Chamba	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Kailang	
·156	·184	·221	·187	+·008	55	52	62	56	+8	4·0	5·9	5·0	+3·1	22	6	10	3	...	5	14	...	...	S. 11° E.	S. 89° W.	3	32	105	?	...	...	Simla (Ridge).	
·169	·190	?	?	?	60	49	?	?	?	4·1	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	3·10	2·45	Simla (Chapslee).	
·209	·245	·258	·238	+·042	74	60	65	66	+11	2·7	4·4	3·6	+2·0	14	...	4	9	2	...	1	18	12	N. 56° W.	S. 55° W.	27	28	124	109	...	...	Chakrata	
·245	·275	·295	·272	+·026	77	63	65	68	+10	1·9	3·8	2·9	+1·6	20	1	5	4	1	..	17	12	...	S. 63° W.	S. 52° W.	30	35	61	30	...	...	Ranikhet	
·290	·360	·376	·341	+·004	89	72	62	75	+4	3·6	3·8	3·7	+1·6	...	...	2	16	...	...	..	42	...	N. 86° W.	N. 81° W.	42	60	13	?	0·69	0·57	Katmandu	
·225	·281	·285	·260	−·006	82	78	77	79	−1	4·3	5·8	5·0	+0·8	1	2	10	6	4	2	9	16	8	N. 79° W.	N. 61° W.	31	8	93	40	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	...	3	4	4	2	26	19	2	S. 57° W.	N. 59° W.	60	34	?	?	3·28	1·17	Demagiri	
?	·564	·566	?	?	?	73	70	?	?	4·5	4·5	4·5	+1·0	...	6	2	2	3	16	22	7	2	S. 37° W.	S. 17° E.	52	47	?	?	0·96	0·35	Tura	
·236	·249	·257	·247	+·016	51	34	34	40	+3	1·1	1·1	1·1	−0·2	...	11	17	2	5	2	6	4	13	N 1° E.	N. 73° E	37	20	118*	90	...	...	Mount Abu	Hill Stations, Central India.
·277	·305	·321	·301	0	76	44	47	56	+2	1·4	2·4	1·9	−0·1	7	11	16	12	3	2	2	4	3	N. 43° E.	N. 52° E.	43	46	57*	60	...	...	Pachmarhi.	
·309	·318	·346	·325	−·043	67	46	49	54	−2	2·2	2·7	2·4	+0·2	20	19	2	3	1	3	1	1	10	N. 9° W.	N. 3° W.	38	21	116	114	1·40	0·76	Chikalda	
													Tem	pora	rily	clos	ed.														Makhla	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and at 4 P.M. at 88

Meteorological Province.	Station.	Elevation of barometer 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.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Hill Station, S. India.	Wellington	...	24·300	24·224	·076	24·262	+·020	P	65·4	53·1	12·3	70·6	44·2	26·4	61·8	61·2	58·2	−0·3	52·2	58·1	57·8	56·0
Extra India.	Muscat	...	30·073	29·989	·084	30·031	P	P	79·6	75·1	4·5	83·4	71·5	11·9	78·9	79·4	77·3	P	68·3	72·3	72·6	71·0
	Aden	...	29·945	·813	·132	29·883	−·030	29·912	83·7	75·5	8·2	89·5	70·7	18·8	80·7	82·0	79·3	+0·8	70·6	72·5	71·9	71·7
	Perim	...	·774	·691	·083	·735	P	P	86·7	76·8	9·9	89·1	73·2	15·9	83·7	82·7	80·8	P	64·1	75·1	74·8	71·3
	Minicoy	...	·986	·887	·099	·936	P	·870	87·1	P	P	90·0	P	P	83·4	83·5	P	P	74·7	77·8	77·4	76·6
	Zanzibar	...	·955	·854	·101	·905	P	·904	82·1	76·4	5·7	86·4	73·3	13·1	79·6	80·9	79·0	P	74·1	76·5	76·7	75·8
	Port Victoria (Seychelles).	15	·992	·899	·093	·946	P	·906	82·1	75·8	6·3	83·4	72·9	10·5	80·5	80·8	78·7	P	73·8	75·9	75·7	75·1

II—*concluded.*

Stations in India, Burma, etc., for November 1894—concluded.

Vapour Tension.					Humidity.					Cloud.				Wind Direction.											Wind Steadiness.		Wind Velocity.		Rainfall.			
														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	Station.	Meteorological Province.
																									%	%						
·386	·448	·445	·427	+·013	94	81	82	86	+ 2	7·9	8·1	8·0	+1·2	8	1	5	15	17	9	3	...	2	S. 58° E.	S. 41° E.	53	53	55	56	...	...	Wellington.	Hill Station, S. India.
·612	·707	·712	·677	?	69	72	71	71	?	1·0	0·8	0·9	?	...	1	15	23	2	...	1	3	15	N. 46° E.	?	48	?	91	?	...	...	Muscat .	Extra India.
·686	·692	·653	·677	+·027	77	67	60	68	+ 1	4·1	1·7	2·9	+0·8	4	1	20	22	8	4	...	1	...	N. 82° E.	E.	68	65	411	286	...	...	Aden .	
·436	·759	·756	·650	?	48	66	67	60	?	4·3	3·1	3·7	?	...	...	...	31	22	1	5	...	...	S. 65° E.	?	76	?	445	?	...	...	Perim .	
?	·878	·859	?	?	?	77	75	?	?	4·2	5·0	4·6	?	5	5	22	8	3	...	...	9	8	N. 24° E.	?	43	?	217	?	...	...	Minicoy .	
·812	·874	·865	·850	?	89	87	82	86	?	6·8	5·7	6·3	?	...	5	3	5	13	20	8	2	3	S. 15° E.	S. 6° W.	46	9	124*	104	...	...	Zanzibar .	
·807	·836	·822	·822	?	90	80	78	83	?	7·0	6·9	7·0	?	2	4	9	12	12	5	5	4	7	S. 84° E.	?	25	?	109	?	13·97	3·41	Port Victoria (Seychelles)	

* Corrected.

G. I. C. P. O.—No. 107 Meteor.—26-2-95.—400.

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 shown 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	,, ,, ,, ,, ,,

Reg. No. 155, Wr., I.—June 94.—5,000.

Zinco., S. I. O., Calcutta.

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.

Reg. No. 150, Wr., I.—June 94.—5,000.

Zinco., S. I. O., Calcutta.

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

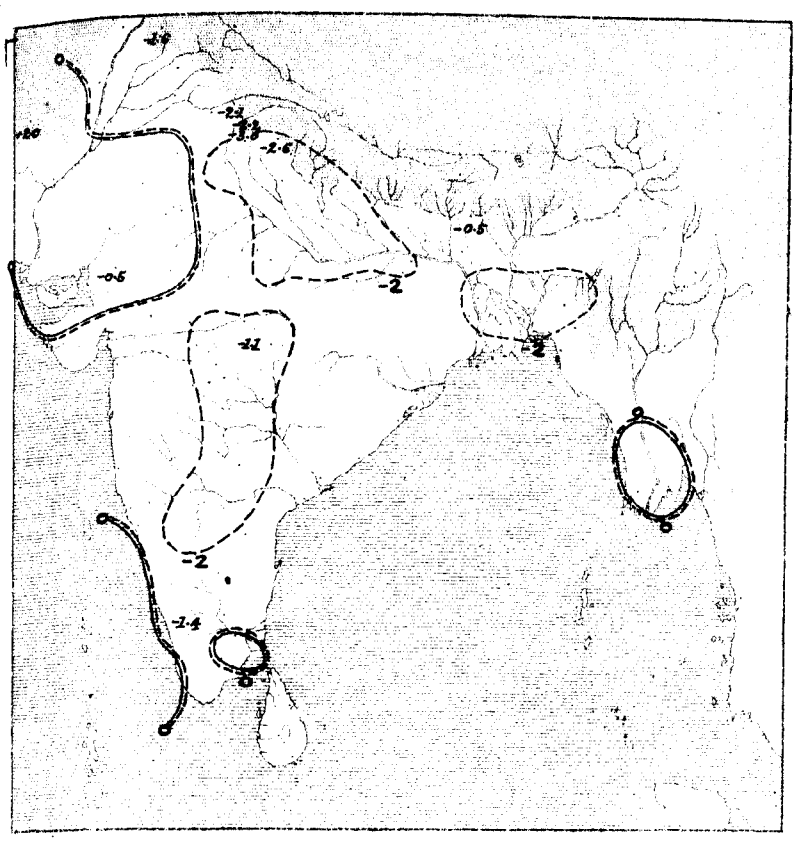
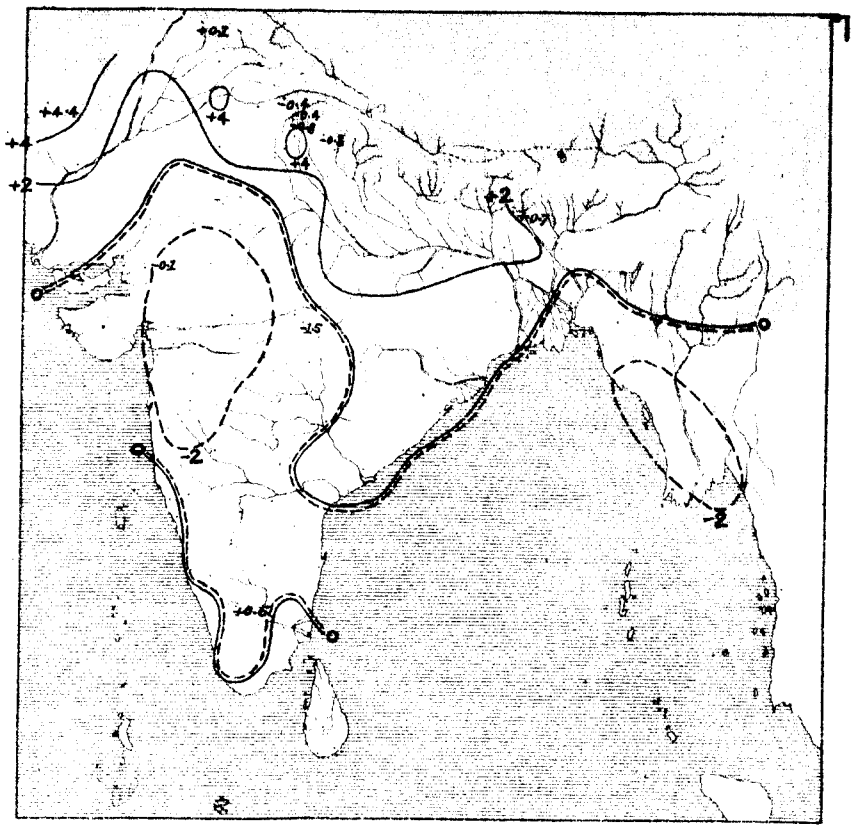


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

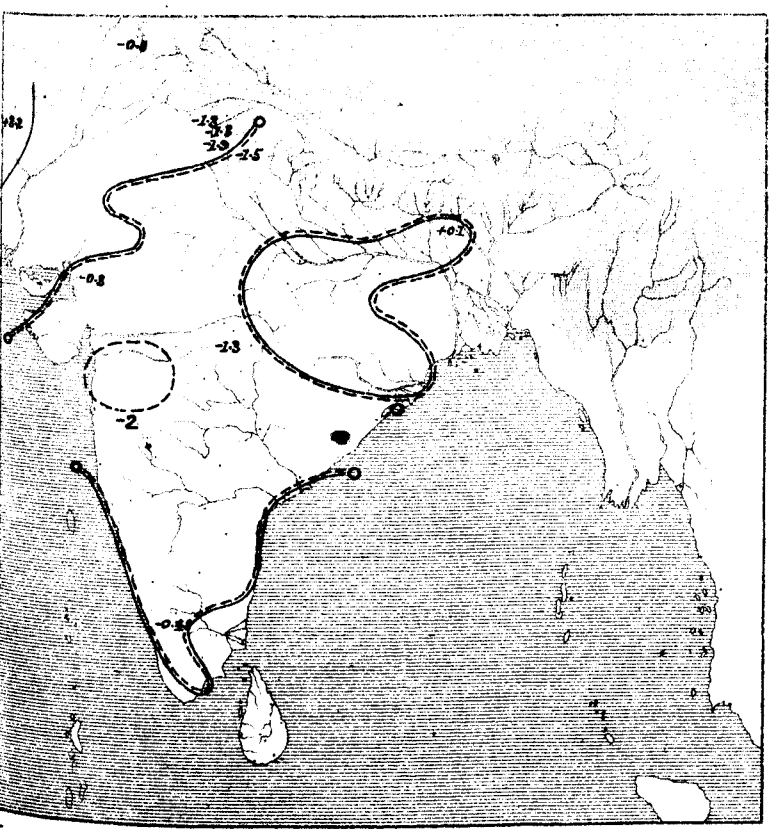
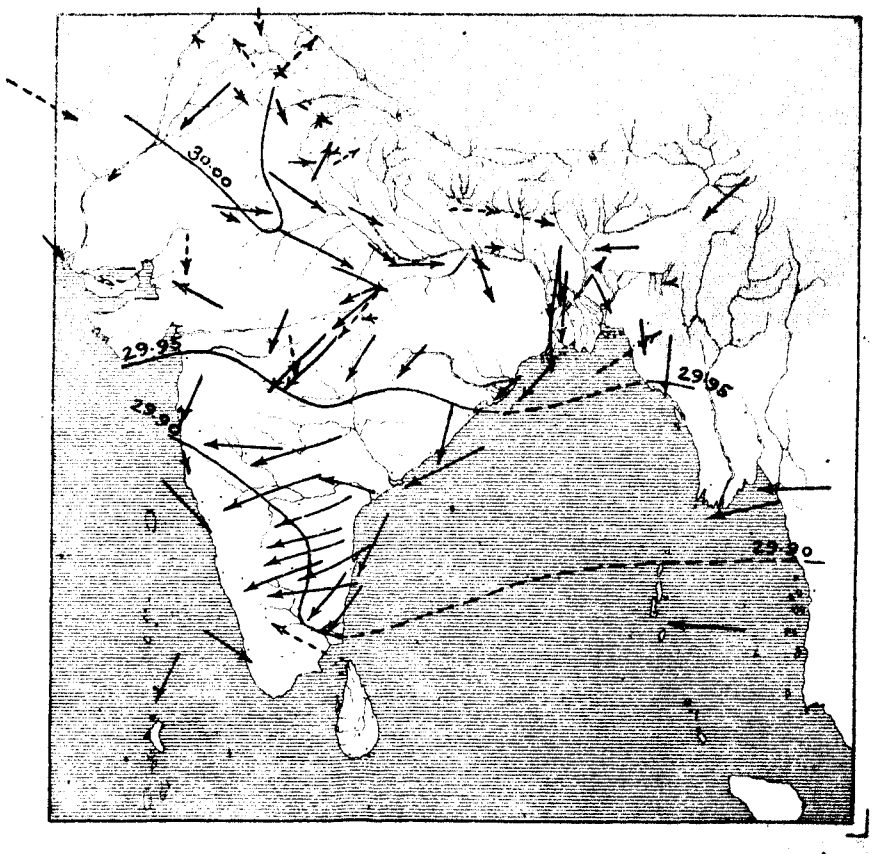


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF NOVEMBER 1894.



Explanation.

K. M. G.

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 of the resultant; a length of ⅛th of an inch being equal to 100 per cent.

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. 150, Wr. ... 95.

Zinco. ... 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 51 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 name of the districts 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 figures.

1. Tenasserim
2. Lower Burma
3. Central do.
4. Upper do.
5. Arakan
6. Eastern Bengal
7. Assam (Surma)
8. Do. (Brahmaputra)
9. Deltaic Bengal
10. Central do.
11. North do.
12. Orissa
13. Chota Nagpore
14. Behar (South)
15. Behar (North)
16. North Western Provinces (East)
17. Oudh (South)
18. Do. (North)
19. North Western Provinces (Central)
20. Do. do. (West)
21. Do. do (Submontane)
22. Punjab (South)
23. Do (Central)
24. Do. (Submontane)
25. Do (Hill Districts)
26. Do. (North West)
27. Do. (West)
28. Malabar
29. Madras (South Central)
30. Coorg
31. Mysore
32. Konkan
33. Bombay Deccan
34. Hyderabad (North)
35. Khandeish
36. Berar
37. Central Provinces (West)
38. Do. (Central)
39. Do. (East)
40. Gujarat
41. Kathiawar
42. Sind
43. Central India (East)
43(a). Do. do. (a)
44. Rajputana (East) Central India (West)
45. Rajputana (West))
46. East Coast (North)
46(a). Do. do. (a)
47. Hyderabad (South)
48. Madras (Central)
49. East Coast (Central)
50. East Coast (South)
51. Madras (South)

Litho. S. I. O., Calcutta.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, DECEMBER, 1894.

INTRODUCTION.

THIS review of the weather in India during the month of December 1894 is based on observations taken daily at 203 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 90 stations. The rainfall summary is based on the rainfall data of the meteorological observatories, and on 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 December 1894.

The most important feature in the meteorology of the month of December is the final withdrawal of south-west humid winds from the south of the Bay and the extension of north-east monsoon winds over the whole of the Bay. This change usually occurs in the third or fourth 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 to 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 and 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 apparently 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 ordinary features of the weather in December ar

the same as those of November over by far the greater part of the country. As a rule fine weather with light winds and clear skies obtains. Pressure is generally highest in the Punjab and Central Rajputana in North-Western India, and in Upper Assam at the eastern extremity of the Himalayas. It is lowest in the south of the Bay and the south-east of the Arabian Sea, and the range of pressure over the Indian area averages a quarter of an inch.

The following gives a summary of the chief features of the meteorology of India during December 1894. Weather was much finer than usual in the Bay and Southern India during the month. As stated in last month's review the retreating south-west monsoon current withdrew from the Bay in the third week of that month, and the north-east current was established very early. It was strong at the commencement of the month and gave showery weather to the Coromandel Coast districts and to Trichinopoly, Madura and Tinnevelly during the first week of the month. The rainfall was slight except in the Tanjore district which obtained moderate daily rain from the 1st to the 5th. Fine dry weather set in over Southern India on the 6th and continued for nearly a fortnight.

It was pointed out in the November review that weather was very abnormal during that month in Persia and Asiatic Turkey, and that exceptionally heavy rain had fallen at all the observing stations in that area, but more especially at Baghdad and Bushire. Similar weather continued during the month of December and extended to Baluchistan and North-Western India. A series of four disturbances formed either in Baluchistan or Persia during the month and advanced eastwards across Northern India, giving much cloudy weather and frequent rain in North-Western India and exceptionally heavy snow in the Kashmir Himalayas (according to newspaper reports). These four disturbances formed in fact the chief feature of the meteorology of the month.

The first disturbance probably formed in Baluchistan on the 30th of November and 1st of December. It advanced as a feeble primary depression from Baluchistan on the 2nd into Rajputana on the 3rd, and apparently gave rise to a very feeble secondary depression on that day in the Central Punjab. The latter filled up during the next 24 hours but the feeble primary continued to advance in an easterly direction and passed through Baghelkhand and Chota Nagpur and the adjacent districts of the Central Provinces on the 4th, and through Bengal on the 5th, and disappeared or filled up during the next 24 hours. The disturbance gave practically no rain in Baluchistan or Rajputana. The South-East Punjab and North-Western Provinces received light to moderate showers on the 3rd, and North Eastern India a few scattered local showers on the 4th and 5th.

Temperature was above the normal at the commencement of the month over the whole of India. The excess was large in Central India, Rajputana and the Central Provinces and increased considerably on the 2nd and 3rd. It averaged 6° in Rajputana and 5° in Central India and the Central Provinces on the 3rd. The advance of the depression across Northern India was followed by a feeble cold wave which reduced temperature to a moderate extent in the Punjab, Rajputana and the western districts of the North-Western Provinces on the 4th and 5th. Temperature continued more or less considerably in excess in the Central Provinces and Berar.

Meanwhile a disturbance had originated in the Persian area on the 6th and 7th. It marched eastwards through Persia and gave squally weather in the Persian Gulf on the 7th, 8th and 9th. It began to affect the weather in Baluchistan and Upper India on the 7th and 8th during which cloud steadily increased. A depression entered Sind on the 9th and advanced into Rajputana on the 10th. A secondary depression of moderate intensity formed in the North Punjab during the day and filled up again during the next 36 hours.

The primary depression also disappeared on the 12th, but the pressure changes were very irregular on the 13th and 14th, and weather continued more or less disturbed in North-Western India. Baluchistan received light to moderate showers on the 8th and 9th, and the greater part of North-Western India, including the Punjab, Rajputana and the western districts of the North-Western Provinces, were visited during the period fron the 10th to the 14th by numerous thunderstorms, in many cases accompanied with severe hail showers that did some damage to the crops

The precipitation was heaviest in Kangra and the south-east districts of the Punjab, and more especially in Delhi, Gurdaspur and Hoshiarpur.

This disturbance caused a considerable reduction of temperature over the whole of North-Western India, and temperature was largely in defect from the 10th to the 18th. The deficiency was greatest in the Punjab on the 11th when it averaged 5° and in Rajputana on the 12th when it was 5°. Temperature continued during the whole of this period from the 10th to the 18th in considerable to large excess in the area including Central India, the Central Provinces, Berar and the North Deccan. Thus the mean temperature of the Central Provinces and Berar was 4° in excess on the 10th, 3° on the 12th and also on the 14th, 4½° on the 16th, 5° on the 18th and 6½° on the 20th.

The increase of pressure in Northern India which accompanied and followed the disturbance of the 8th to the 15th gave steeper gradients and stronger north-east winds than usual in the Bay. Light showers were hence received in the South Coromandel Coast districts on the 16th, 17th, 18th and 19th.

It has been pointed out above that temperature had been from the beginning of the month more or less in excess in Central India, the Central Provinces, Berar and

the North Deccan, and also that the excess in the Central Provinces increased from an average of 3° on the 12th to 6½° on the 20th. Weather became slightly disturbed in that area of excess temperature on the 20th and thunderstorms gave light showers during the next 48 hours and caused a slight reduction of temperature, which, however, continued in considerable excess (averaging 5° on the 23rd, rising to 6° on the 24th).

A third cold weather disturbance which apparently originated in Persia on the 21st and 22nd advanced more rapidly than the first and second disturbances. It passed through Baluchistan on the 23rd and Rajputana on the 24th and gave rise to a feeble secondary depression on that day in the Central Punjab which filled up during the next 24 hours. The primary depression passed through Baghelkhand, Chota Nagpur and the north-eastern districts of the Central Provinces on the 25th and through Bengal on the 26th, and then disappeared. The double disturbance gave light to moderate showers to Baluchistan on the 21st and 22nd, and to the Punjab, Rajputana and the North-Western Provinces on the 23rd and 24th, and a few light local showers in Bengal on the 25th. Numerous thunderstorms and hailstorms occurred in the Punjab and Rajputana during the disturbance. The most noteworthy feature of the storm was the well marked cold wave which advanced eastwards across Northern India in the rear of the depression. The passage of the storm was accompanied at several stations in Rajputana and Central India by a total fall of temperature ranging from 15° to 20°.

The cold wave crossed the frontier on the 24th, passed through Rajputana on the 25th, Central India on the 26th, the Central Provinces and Gangetic Plain on the 27th, and Bengal on the 28th and 29th, on which days temperature was more or less in defect over nearly the whole of India. The following mean temperature variation data for the 23rd and 28th show roughly the general large reduction of temperature due to this cold wave:—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		Reduction of mean temperature during period 23rd—28th.
	23rd.	28th.	
	°	°	°
Punjab	+3·5	−1·0	−4·5
Sind and Rajputana	+3·2	−4·9	−8·1
North-Western Provinces and Oudh	+0·8	−3·3	−4·1
Gujarat and Central India	+3·3	−4·2	−7·5
Bengal and Assam	+1·3	−2·8	−4·1
Berar and Central Provinces	+4·9	−4·4	−9·3
Burma	+0·3	−1·7	−2·0

The mean temperature of the 28th was on the average 6° lower than that of the 23rd in Northern and Central India.

A feeble disturbance which originated in the Persian area under similar conditions to the second disturbance of the month began to affect the weather in Baluchistan on the 27th. It passed through that area on the 28th, and marched as a very feeble depression across Northern India during the next three days. It gave light to moderate showers in Baluchistan and the North Punjab and some cloud in its passage across Northern India. The cool wave following the disturbance was very feeble and caused a slight reduction of temperature in Baluchistan and the north-west frontier districts on the 30th and 31st.

Pressure.—The mean pressure of the whole of India for December 1894 was ·003″ higher than the normal. Pressure was in slight relative excess in Burma and the southern half of the peninsula and also in the Indus Valley, and in slight defect in the North-Western Provinces, Rajputana, Central India, the Central Provinces and North Deccan. The pressure anomalies were in all cases small, and only, exceeded ·020″ at two stations, *viz.*, Ajmere (—·032″) and Deesa (—·024″). The mean pressure conditions of the month at the level of the plains were hence approximately normal and gave no indications of the abnormal disturbed weather which prevailed during the greater part of the month in North-Western India and Baluchistan. As usual however under these conditions, pressure was in moderate defect at the hill stations relative to the plains. This relative deficiency of pressure averaged nearly ·040″ for five pairs of stations in Upper India. This deficiency of pressure at the level of the hill stations in Northern India was in fact the only important and marked feature of the pressure distribution.

The following table gives variation data for the eleven meteorological provinces and shows approximately the distribution of the pressure in different parts of India relatively to the normal of the month:—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Burma Coast and Bay Islands	+·013	+·010
Burma Inland	+·017	+·014
Assam	+·004	+·001
Bengal and Orissa	+·005	+·002
Gangetic Plain and Chota Nagpur	+·001	−·002
Upper Sub-Himalayas	+·003	0
Indus Valley and North-West Rajputana.	+·004	+·001
East Rajputana, Central India and Gujarat.	−·014	−·017
Deccan	−·008	−·011
West Coast	+·008	+·005
South India	+·012	+·009

Temperature.—The mean temperature conditions of the month were marked by large variations from the normal.

The mean maximum or day temperature of the month was in slight to moderate excess in the peninsula and northern districts of the Central Provinces. The excess was over 2° in two areas. The first included Berar, the southern and western districts of the Central Provinces and a part of the Bombay Deccan, in which the excess ranged from 3°·4 at Akola to 2°·8 at Poona and 2°·6 at Chanda. The second area included the central districts of South Madras extending from Cuddapah where temperature was 2°·5 above the normal to Trichinopoly where it was 2° in excess. The mean day temperature of the month was more or less in defect in Northern and Central India. The deficiency ranged between 2° and 6° in Baluchistan, Sind, the Punjab, Rajputana and the western and central districts of the North-Western Provinces. It was actually greatest at the hill stations, ranging from 4°·7 at Quetta and 5°·2 at Simla to 6°·0 at Chakrata and in the submontane districts of the South-East Punjab and adjacent districts of the North-Western Provinces where it was absolutely greatest at Ludhiana (—6°·6) and exceeded 5° at Roorkee (—5°·4) and perhaps Delhi (—6°·0).

The mean minimum or night temperature was above the normal over the whole of India with the exception of Cutch, Lower Sind and Lower Burma. It was in considerable to large excess in the Punjab, Gangetic Plain, Rajputana, Central India, the Central Provinces and North Deccan. The excess was large in the area of greatest deficiency of day temperature in the South-East Punjab (more especially at Ludhiana (+5°·2), Meerut (+5°·1) and Roorkee (+4°·9) and also in an area including the greater part of Central India, the Central Provinces, Berar and Khandesh. It exceeded 5° at the following stations, Khandwa (+6°·7), Akola (+6°·5), Hoshangabad (+5°·7), Jubbulpore (+5°·9) and Sutna (+5°·7) which hence define the area of greatest excess of the night temperature.

As the mean day temperature was in considerable to large defect in North-Western India and the night temperature in moderate to considerable excess, the mean temperature of the month was in slight defect in that area, comprising the Punjab, Sind, Baluchistan, Cutch, Kathiawar, Rajputana and the western districts of the North-Western Provinces. In consequence of the opposite variations of the day and night temperatures, the mean diurnal range was considerably less than usual. Thus in the Upper Sub-Himalayas it averaged only 20°·4 or 7°·7 lower than usual and was very slightly greater than in Bengal and Orissa where it averaged 19°·5.

The mean day and night temperatures were both more or less considerably in excess in Central India, the Central Provinces, Berar and the North Deccan, and hence the mean temperature also was in moderate to considerable excess, by amounts ranging from 2° to 5°. The excess was absolutely greatest at Akola (+5°·0) and Khandwa (+4°·7).

The mean temperature of the month was in slight excess in the southern half of the peninsula and in North-Eastern India and normal in Burma.

The most noteworthy feature of the temperature conditions of the month was the persistent large excess in Central India, the Central Provinces and Berar during the first three weeks of the month. The first two cold weather disturbances of the month were followed by cool waves, which only affected and reduced temperature in North-Western India. The third cold weather disturbance (of the 22nd to the 26th) gave rise to a well marked cold wave which advanced eastwards and southwards over Northern and Central India and the Deccan, and reduced temperature considerably below the normal on the 27th and following days over nearly the whole of India.

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

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

Winds.—Were stronger and steadier than usual in Burma and at Port Blair. They had, on the mean of the month, a stronger easterly component than usual. Winds in Bengal as in Burma showed a considerable easterly deflection and were on the whole of normal strength and steadiness. Winds were even lighter than usual in the Punjab and Gangetic plain, and were more directly from the north than usual, the westerly element being very feeble. Winds were much stronger than the normal at the hill stations, their velocity being nearly 50 per cent. in excess. Winds in Central India and Rajputana exhibited the same

easterly deflection as in Northern India. They were remarkably unsteady in the Central Provinces and North Deccan, but were at most stations more easterly than usual. Winds were more westerly than usual on the west coast, and hence they were deflected from the mean direction of the month in the opposite way to that which prevailed over the whole of Northern and Central India and the Deccan. Winds were normal in character in Madras.

Humidity and Cloud.—The air was considerably drier than usual in Burma and at Port Blair, but slightly more humid in Arakan, Assam, Bengal and Orissa. There was a large excess of aqueous vapour present in the air in Bihar, Chota Nagpur, the North-Western Provinces, the Punjab, Rajputana, Central India, the Central Provinces and Berar. The excess was greatest in Central India where the mean absolute humidity of the month averaged ·379″ or ·105″ in excess of the normal. The absolute humidity was also large in the Central Provinces but the relative humidity was, notwithstanding, in comparatively small excess in that area, due to the high temperature conditions prevailing during the month. It was largely in excess in the area of most deficient temperature in the South-East Punjab, Rajputana and the north-western districts of the North-Western Provinces. The excess was more than 15 at the following stations: Ajmere (+19), Chakrata and Chamba (each +18), Roorkee (+17), Ludhiana (+16) and Agra (+16).

The air was unusually dry in Sind, and the mean humidity of the month was 19 in defect at Kurrachee and 21 at Jacobabad. It was slightly drier then usual in the Konkan, Malabar, Coorg, Mysore and the Madras Deccan. The variations of the humidity percentage from the normal were small except in the areas represented by Mercara (—11), Salem (—9) and Bellary (—2).

Cloud was in excess over nearly the whole of Northern and Central India, Baluchistan and the Central Provinces. The variations from the normal amount were not large, except in the East Punjab, East Rajputana, the north-western districts of the North-Western Provinces and the Upper India hill districts, over the greater part of which area the mean cloud amount of the month was twice as large as the normal amount. The excess was absolutely greatest at Dehra Dun where the mean cloud amount of the month (5·5) was 3·1 above the normal (2·4). There was on the whole less cloud than usual in the Deccan, Coorg, Mysore, and the Bombay and Madras coast districts. Skies were least clouded at Karwar (average amount 0·6), Bombay (1·0) and Cocanada (1·0).

The following table gives variation data of the mean aqueous vapour pressure, mean humidity and mean cloud amount of ten meteorological provinces for the month of December 1894:—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean aqueous vapour pressure.	Mean Humidity.	Mean cloud amount.
	″		
Burma Coast and Bay Islands	—·040	— 4	+0·2
Assam	+·015	+ 2	0
Bengal and Orissa	+·027	+ 1	+0·3
Gangetic Plain and Chota Nagpur	+·054	+ 4	+0·5
Upper Sub-Himalayas	+·053	+14	+2·5
Indus Valley and North-West Rajputana.	—·059	—11	+0·9
East Rajputana, Central India and Gujarat.	+·074	+12	+1·1
Deccan	+·063	+ 7	0
West Coast	—·003	— 1	—0·6
South India	—·008	— 3	—0·8

Rainfall.—The rainfall in Southern India in December 1894 was similar in character and distribution to that of December 1893. North-east monsoon winds prevailed over the whole Bay area from the beginning of the month. They were stronger than the mean of the month during two periods, *viz.*, from the 1st to the 5th, and from the 18th to the 22nd or 23rd. The South Coromandel Coast districts, and the Madura, Tinnevelly and Trichinopoly districts received light to moderate showers during these two periods. The rainfall was heaviest in the Tanjore district and diminished rapidly from the coast into the interior.

North Madras, Coorg, Mysore, Hyderabad and the whole of Bombay except Kathiawar and Sind, received no rain during the month. The rainfall in Burma and Bengal was practically nil and below the small average of the month.

North-Western and Central India received unusually frequent rain during the month, due to the passage of four cold weather disturbances of feeble intensity, but all giving light to moderate rain. The periods of rainfall, due to these disturbances, were the 1st to the 5th, the 8th to the 15th, the 22nd to the 26th, and the 28th to the end of the month. Baluchistan, Rajputana, Central India, the North-Western Provinces (more especially the western and central districts), the Punjab and Kashmir hence received rainfall very considerably in excess of the normal. The precipitation was heaviest in the Kangra district of the Punjab. The Upper Sub-Himalayas division, received an average of 2·83 inches, upwards of six times the normal amount, (*viz.*, 0·46 inch), and East Rajputana, Central India and Gujarat had an average of 1·17 inches, also upwards of six times the normal fall of the month (0·17 inch).

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

Meteorological Province.	Rainfall.		
	Mean actual for December 1894.	Mean normal for December.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands .	0·23	1·09	−0·84
Burma Inland . . .	0·31	0·10	+0·57
Assam	0·55	0·47	+0·08
Bengal and Orissa . . .	0·27	0·28	−0·05
Gangetic Plain and Chota Nagpur.	0·23	0·24	−0·01
Upper Sub-Himalayas . .	2·83	0·46	+2·37
Indus Valley and North-West Rajputana.	0·46	0·19	+0·19
East Rajputana, Central India and Gujarat.	1·17	0·17	+1·19
Deccan	0·13	0·51	−0·35
West Coast	0·14	0·81	−0·65
South India	1·16	2·49	−1·19

Atmospheric Pressure.

The mean pressure conditions of the month at the level of the plains differed little from the normal. The mean pressure of the whole Indian area was ·003″ higher than the normal. Relatively to these conditions, pressure was in very slight excess in Burma, Bengal, the Deccan, South India and the Indus Valley and was in slight defect over the remainder of India. The local variations of pressure exceeded ·020″ at the following stations :—

Station.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Deesa	−·021	−·024
Ajmere	−·029	−·032
Sutna	−·019	−·022
Hoshangabad	−·020	−·023

Pressure at the level of the hill stations in Northern and Central India was in considerable defect relative to the conditions prevailing at the neighbouring plain stations. The following gives data for five pairs of stations :—

Hill Station.	Variation from normal pressure.	Plain Station.	Variation from normal pressure.	Vertical pressure anomaly (Hill−Plain).
	″		″	″
Leh . .	−·031	Lahore .	+·004	−·035
Murree . .	−·030	Peshawar .	+·007	−·037
Simla . .	−·026	Ludhiana .	+·004	−·030
Quetta . .	−·009	Jacobabad .	+·021	−·030
Darjeeling .	−·001	Purnea . .	+·014	−·015

The preceding data establish that pressure was in relative defect to a considerable extent at the level of the hill stations in Upper India, a condition in the cold weather which almost invariably accompanies more disturbed weather than usual in that area.

Barometric depressions and cold weather storms of the month.

The pressure conditions at the end of the previous month were normal. The south-west monsoon current had withdrawn from the Bay. The north-east winds which prevailed on the Coromandel coast were somewhat stronger than usual and gave frequent showers from the 1st to the 5th, after which dry weather set in for some days. Weather was also slightly disturbed during the first week of the month in North-Western India, due to the advance of a depression, of which the following is a brief account:

Feeble Depression of the 2nd to the 5th December.—Pressure gave way briskly to rapidly on the 1st in Baluchistan, Sind, the West Punjab and Rajputana, and a very shallow depression was shown over Baluchistan and Upper Sind on the morning of the 2nd.

Temperature had increased considerably in front of the area of depression and was 5° to 7° above the normal in Baluchistan, the South-West Punjab and Sind during the 24 hours period preceding 8 A.M. of the 2nd.

Pressure gave way during the next 24 hours, rapidly in the South Punjab, Rajputana, Central India and the western districts of the North-Western Provinces. The depression had advanced eastwards about 300 miles and lay over the South Punjab and North Rajputana at 8 A.M. of the 3rd. The following gives 8 A.M. observations taken at stations in the central area of the depression :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	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.		
	"	"	"				
Sirsa . . .	29·836	−·160	−·235	ESE	4	2	
Lahore . . .	·878	−·118	−·206	E	3	10	
Montgomery . .	·832	−·133	?	N	4	1	
Mooltan . . .	·897	−·073	−·214	NNE	2	0	
Bickaneer . .	·823	−·163	?	SSW	7	0	
Jeypore . . .	·926	−·129	−·171	Calm	1	0	

Temperature had increased considerably in Rajputana and Sind during the previous 24 hours for which it averaged 11° in excess at Jacobabad and 7° at Sirsa and Ajmere. Winds were very light at the plain stations in Upper India, but were moderately strong at Murree and Cherat. They averaged only 2 miles per hour at the Punjab plain stations. Skies were overcast in the Punjab and light showers had fallen in the North Punjab and adjacent hills. Skies were clear in Sind, Rajputana, Central India and the North-Western Provinces.

4th December.—Pressure had increased briskly to rapidly in Upper India and had fallen slightly to briskly in Baghelkhand and the adjacent districts of the Central Provinces and North-Western Provinces. The depression had partially filled up and the residual disturbance now lay over the eastern states of Central India. Light to moderate showers had fallen (chiefly during thunderstorms) over the whole of the South-East Punjab and the western and central districts of the North-Western Provinces. Temperature had fallen rapidly in Sind and Baluchistan and had risen briskly in the North-Western Provinces and was now most largely in excess in that area and Central India.

5th December.—The barometer continued to rise in Upper India, and ordinary cold weather conditions were re-established in North-Western India. Pressure had given way in North-Eastern India and the residual depression at 8 A.M. lay over Bihar and Chota Nagpur. Skies had partially clouded over in North Bengal and Chota Nagpur and a few showers had fallen in these two areas. Skies were clear again in North-Western India and a rapid fall of temperature had occurred in Sind, Rajputana, the North-Western Provinces and Central India. Northerly winds had set in at the Upper India hill stations and caused a large reduction of humidity. Thus at Simla the relative humidity had fallen from 90 at 8 A.M. of the 4th to 38 at the same hour of the 5th.

Pressure increased briskly to rapidly in North-Eastern India and Upper Burma during the next 24 hours, and the residual depression was no longer shown in the chart of the day and had probably filled up in that area. Some light local showers had been received during the previous 24 hours in Bengal and Assam. Skies were clearing, and on the morning of the 7th fine clear weather with light winds prevailed generally in North-Eastern India.

The disturbance although feeble in character was of the ordinary cold weather type. The observations indicate that it formed in the Baluchistan plateau on the 30th November and 1st of December. It marched in an east-south-east direction at an average rate of about 350 miles per diem and was followed by a fairly well-marked cold wave in North-Western India. The disturbance gave cloudy weather and light local showers to the area over which it passed, but the total precipitation was very small in amount.

Pressure increased over the whole of India on the 7th and 8th and was in moderate to considerable general excess on the morning of the 9th. Skies had however, clouded over in Baluchistan and snow commenced to fall, the first indications of the second disturbance of the month which gave unsettled weather to North-Western India during the next week. The following gives a history of this disturbance:—

Cold weather disturbance of the 9th to the 15th December.—A low pressure area, of considerable intensity lay over the Central Mediterranean during the first ten days of the month. It apparently filled up without moving eastwards. Pressure fell upwards of three-tenths of an inch in that area during the development of the depression. A corresponding and perhaps dependent fall occurred during the same period in Asiatic Turkey. Thus pressure fell from 29·90″ on the 2nd to 29·63″ on the 6th at Baghdad. Bushire had showery weather on the 7th and Muscat on the 7th, 8th and 9th. The available data hence appear to show that a feeble disturbance was generated in Asiatic Turkey during a period of disturbed or stormy weather in Southern Europe and the Mediterranean area and that the disturbance was transmitted eastwards, affecting Asiatic Turkey on the 6th, Persia on the 7th and 8th and North-East Arabia on the 7th, 8th and 9th. Snow fell at Koomisheh and Dehbeed in Persia on the 7th

and 8th. Weather was squally in the Persian Gulf and the Gulf of Oman on the 8th and 9th as is shown by the following extracts from the logs of the S. S. *Chanda* and *Mecca*.

Date.	Hour.	Name of vessel.	Position. Lat. N.	Position. Long. E.	Barometer.	Wind. Direction.	Wind. Force.	Weather.
			° ′		″			
8th	4 A.M.	S. S. *Chanda*	Proceeding from Muscat to Jask.	...	...	NE	4	Frequent squalls of wind and heavy rain with vivid lightning to north-west and south-east.
	8 „				29·937	NE	2	Squally appearance.
	10 „		Arrived at Jask.					
	1-5 P.M.		Left Jask and proceeded to Bunder Abbas					
	4 „					SE	2	Passing squalls of wind and rain.
	6 „					Var.		Heavy squall from north-west with blinding rain and vivid lightning.
	7 „					NW		Weather clearing.
	8 „					NE	4	Squally looking to east.
	Midnight.					E to W	2	Squally looking to north-west with lightning all round.
9th	4 A.M.	S. S. *Mecca* .				EE	6	Heavy wind and rain squall.
	8 „		24·50	63·06	29·932	S W to E N E	6	Squally.
	Noon.		24·52	63·43		ESE	6	Overcast.
	4 P.M.					E	6	Overcast with heavy sea.
	8 „					E	6	Do. do.
	Midnight.					E by N	6	Do. do. and lightning to south.

The disturbance gave cloudy showery weather to Baluchistan on the 8th.

9th December.—Pressure was unchanged in Baluchistan and Lower Sind and had increased slightly to briskly over India generally. Pressure at 8 A.M. was normal or in slight defect in Baluchistan and Lower Sind. Skies were clouding over in the Punjab and Sind. Temperature was in considerable excess in the Central Provinces and Sind, and in moderate excess in Central India and South-West Rajputana. General but light rain had fallen in Baluchistan during the previous 24 hours.

10th December.—Pressure had given way over the whole of India. The changes were small except in Rajputana and Central India where pressure had fallen briskly to rapidly. A very feeble depression lay over South-West Rajputana, probably the continuation of the area of slightly deficient pressure in Lower Sind on the previous day. Light local showers had fallen in Sind and Rajputana and moderate rain or snow in Baluchistan. Cloud was extending eastwards and southwards over Rajputana and Central India. Temperature had fallen rapidlly in Baluchistan and a cool wave was advancing across that area eastwards.

11th December.—Pressure had decreased more or less considerably over the whole of India. The changes were large in two areas *viz.*, the North Punjab, and Baghelkhand and the adjacent districts of the North-Western Provinces. The primary despression had hence advanced in an east-south-east direction, and was central near Sutna, and a secondary depression, in which pressure was nearly ·20″ in defect, had formed in the North Punjab. Skies were now clearing in Baluchistan and Sind, but were heavily clouded in Rajputana, Central India and the western districts of the North-Western Provinces, and were clouding over in the Central Provinces and Gangetic Plain. The double disturbance was of moderate intensity and had given light to moderate general rain in the Punjab, Rajputana, Gujarat and the western submontane districts of the North-Western Provinces during the previous 24 hours. The cool wave in the rear of the storm had now advanced from Baluchistan into Rajputana and the Punjab.

12th December.—The pressure changes during the previous 24 hours were very irregular. Pressure had given way briskly in Baluchistan and Sind and also over the Deccan and Southern India, and had increased slightly in Northern India and Burma. The secondary and primary depressions had both disappeared, but pressure was more or less below the normal over the whole of India.

Pressure increased rapidly in Upper India and slightly to briskly over the remainder of India on the 12th, slightly to briskly over the whole Indian area on the 13th and briskly to rapidly in North-Western and Central India and the North Deccan on the 14th. Weather however, continued cloudy and disturbed with numerous local thunderstorms and hailstorms in Rajputana, the South-East Punjab, the western districts of the North-Western Provinces and Central India during this period of large increase of pressure from the 12th to the 14th. Skies cleared in those areas on the 15th and fine dry weather set in for a short period.

The disturbance of the 9th to the 15th gave on the whole

the largest and most general rainfall during the month. The following is a statement of the rainfall day by day during the storm period :—

DIVISION.	AVERAGE ACTUAL RAINFALL DURING 24 HOURS PRECEDING 8 A.M. OF							
	9th.	10th.	11th.	12th.	13th.	14th.	15th.	Total of period.
	Inch.	Inch.	Inch.	Inches.	Inches.	Inch.	Inch.	
Baluchistan . .	0·24	0·18	0·01	0	0	0	0	0·43
Punjab (South) . .	0	0·06	0·20	0·10	0·11	0·24	0·03	0·74
„ (Central) .	0	0·01	0·54	0·18	0·05	0·46	0·32	1·56
„ (Submontane)	0	0·02	0·31	0·70	0·32	0·36	0·26	1·97
„ (Hill districts)	0	0·11	0·67	2·00	1·08	0·74	0·31	4·91
„ (North West)	0	0·02	0·05	0	0·01	0·01	0·03	0·12
„ (West) .	0·02	0·06	0·04	0	0	0·01	0	0·13
Sind . . .	0	0·07	0	0	0	0	0	0·07
Rajputana . .	0	0·20	0·31	0·10	0·22	0·17	0·02	1·02
North-Western Provinces (East).	0	0	0	0	0	0	0	0
North-Western (Submontane)	0	0·06	0·25	0·32	0·12	0·24	0·21	1·20
Oudh (South) . .	0	0	0	0·04	0	0·01	0	0·05
„ (North) . .	0	0	0	0·01	0	0	0·02	0·03
North-Western Provinces (Central).	0	0	0	0·05	0·01	0·02	0·17	0·25
North-Western (West)	0	0·03	0·21	0·14	0·06	0·24	0·21	0·89

Pressure was largely in excess in North-Western India on the morning of the 15th and steeper gradients than usual hence obtained, giving a strong air movement down the river plains in Northern India. Conditions were practically unchanged during the next three days.

Temperature was considerably below the normal in North-Western India on the 15th but steadily increased during the next four days. It was during the whole of this period (*viz.*, from the 9th to the 20th) largely in excess in Central India, Bihar and the Central Provinces. Skies were for some days previous to the 19th lightly clouded in that area of large excess of temperature, and winds were very feeble and unsteady. Weather became at length slightly disturbed in that area and light thundershowers occurred in the Central Provinces on the 19th and 20th and in North Bengal and Assam on the 21st. The pressure changes during this period from the 19th to 21st were irregular but appear on the whole to indicate that the showery weather was due to the eastward movement of a feeble disturbance from Sind.

Another disturbance began to affect Baluchistan and the frontier districts on the 23rd. The following gives a short account of this disturbance :—

Cold weather disturbance of the 22nd to the 26th December.—This disturbance most probably originated in the Persian area. Pressure was low and weather showery at Baghdad on the 20th. Bushire received heavy rain during the next 24 hours. Muscat had cloudy and showery weather on the 21st and 22nd. Weather was squally with light to moderate winds in the Persian Gulf on the 20th, 21st and 22nd. The following gives a summary of the observations taken on board ships in the Persian Gulf and Gulf of Oman from the 20th to the 22nd :—

Date.	Name of vessel.	POSITION.		Barometer.	WIND.		WEATHER
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
20th .	S. S. *Java* .		Jask*	30·056	SE	4	4 A.M.; hazy horizon.
	S. S. *Pemba*.	Gwader			NE	2	
21st .	S. S. *Mobile*.	27·37	51·11*		NW	2	4 A.M.; squally with rain.
„	S. S. *Java*† .	Near Muscat			SSE	4	
„	S.S. *Pemba*†.	Ditto			SSW	4	Cloudy.
22nd .	S. S. *Pemba*.		Jask*		NW	4	Cloudy. 6 A.M. heavy squalls of wind and rain.

* Noon position. † 4 A.M. observations.

These observations indicate that weather was feebly disturbed in the Persian Gulf due to a depression passing eastwards across Persia. The pressure changes at Muscat, Jask, Bushire and Baghdad indicate that the depression was of very feeble intensity. It began to give showery weather to Baluchistan on the afternoon of the 22nd.

23rd December.—Pressure had increased slightly in Baluchistan and slightly to briskly in Northern and Central India during the previous 24 hours, and was in slight to moderate excess in Western India, and in large excess in North Bengal and Assam on the morning of the 23rd. Skies were clouded in Upper India and temperature had increased considerably in the Punjab and Rajputana. Light showers had fallen generally in Baluchistan.

24th December.—Pressure had fallen rapidly in the East Punjab and also in Rajputana and Central India. The disturbance now consisted of a feeble primary depression in East Rajputana, Bundelkhand and Baghelkhand' and of a feeble secondary depression in the East Punjab. Numerous thunderstorms (in some cases accompanied with hail) had occurred in the Punjab, Rajputana, Central India, and the western and central districts of the North-Western Provinces.

A well marked cold wave had crossed from Baluchistan into Rajputana and the Punjab where it had reduced temperature on the average 5°.

25th December.—Pressure had risen in Rajputana and Central India and had fallen briskly to rapidly in North-Eastern India. The primary depression now lay over Baghelkhand and Chota Nagpur. The secondary depression in the Punjab was filling up. Skies had cleared in Upper India. Moderate snow had fallen in the Western Himalayas, and numerous thundershowers (in many cases with hail) in the South-East Punjab, North-Western Provinces and Central India. Temperature had fallen very rapidly in Central India and Rajputana, and was in large excess in Bihar, Chota Nagpur and the Central Provinces during the previous 24 hours.

26th December.—Pressure had fallen slightly in Bengal and the primary depression, now of very slight importance, was passing through that province. Pressure had increased rapidly in the Punjab, and the secondary depression in that area had completely disappeared. Skies were now clear in North-Western and Central India. The disturbance had given practically no rain during the previous day and it disappeared before the morning of the 27th.

The disturbance was of the ordinary cold weather type and was throughout of feeble intensity. It formed in the Persian area and advanced from Baluchistan on the 23rd along an easterly track into Bengal on the 26th. It gave rise to a feeble secondary depression in the Punjab. The Punjab, Rajputana and the North-Western Provinces received a slight to moderate burst of rain during the advance of the disturbance across Northern India. The following is a summary of the rainfall for the period 23rd to 26th:—

Division.	Average actual rainfall during 24 hours preceding 8 A.M. of				
	23rd.	24th.	25th.	26th.	Total.
	nch.	Inch.	Inch.	Inch.	
Baluchistan . . .	0·19	0·01	0	0	0·20
Punjab (South) . .	0·01	0·10	0·17	0	0·28
Do. (Central) . .	0·01	0·32	0·08	0	0·41
Do. (Submontane) .	0·01	0·22	1·03	0	1·26
Do. (Hill Districts) .	0	0·21	1·16	0·05	1·42
Do. (North-West) .	0·01	0·18	0·14	0	0·33
Do. (West) . .	0·05	0·08	0·03	0	0·16
Rajputana . . .	0·14	0·13	0·02	0	0·29

A noteworthy feature of the storm was the occurrence of numerous local thunderstorms and hailstorms in Central India, Rajputana and the Punjab.

Whilst the previous disturbance was passing eastwards across Northern India a deepish depression formed in and advanced eastwards across Persia. Its character is shown by the following table of barometric changes from the 24th to the 28th at the Persian stations:—

Station.	Change of pressure during 24 hours preceding 8 A.M. of				
	24th.	25th.	26th.	27th.	28th.
	"	"	"	"	"
Baghdad . . .	−·181	+·031	−·224	+·125	+·108
Bushire . . .	−·025	−·030	−·440	+·249	+·072
Muscat . . .	+·055	−·066	−·046	+·008	−·070
Teheran . . .	−·015	−·085	0	−·295	−·100
Jask	+·070	−·093	−·040	+·014	−·098
Quetta	+·025	−·062	+·044	+·008	−·035

Snow fell at Kashan and Koom on the 26th and at Dehbeed on the 27th; moderate rain fell at Baghdad on the 25th and 26th. Bushire registered a total of 4·49 inches for the 48 hours preceding 8 A.M. of the 27th.

The available data for the Persian Gulf given below, indicate that weather was cloudy with light to moderate winds and frequent rain during the period from the 26th to 28th:—

Date.	Name of Vessel.	Position.		Barometer.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	"			
26th .	*S.S. Pemba* .	27 11	52 00*		ESE	2	Overcast. Noon, squally and rainy.
27th .	*S.S. Kilwa* .	25 18	58 54*	30·029	N	4	Evenings, howery
"	*S.S. Pemba* .	Near	Bushire		WNW	4	Heavy rain.
28th .	*S.S. Kilwa* .	Bunder	Abbas*	29·837	N	4	Heavy rain.

* Noon position.

The data for Baghdad and Bushire indicate that a deepish depression passed over these two stations on the 25th and 26th. It probably advanced eastwards, but filled up considerably and passed into Baluchistan on the 28th as a shallow residual depression. It advanced eastwards through Sind on the 29th and Rajputana on the 30th and Baghelkhand and the north-eastern districts of the Central Provinces on the 31st. The disturbance gave moderate precipitation in Baluchistan from the 29th to the end of the month and some light showers in the North Punjab on the 29th and 30th.

Summary of the reports of the weather and snowfall in the mountain districts to the north and north-west of India.

I.—THE AFGHAN MOUNTAINS.

(*a*) *Hills west of Dera Ismail Khan.*—Snow fell in the Mahsud Waziristan country at Makin (5,500 feet) and Kanigoram (6,300 feet) for about seven hours on the 23rd. This was the first snowfall of the season. The fall at Kanigoram was about 3 inches in depth. No snow fell during the remainder of the month at Makin and Kanigoram.

In the Shirani country snow fell between the 24th and 30th to a depth of about 3½ feet on the highest peaks of Kaisar and Mizrighar (*i.e.*, Ubashta and Kat).

The latter half of the month was much colder than usual.

(*b*) *Khyber Pass.*—The first fall of the season in this district occurred on the Tirah Hills in the last week of the month. The fall was light and melted during the next 24 hours. No snow fell on the Lakha and Torsapper hills. The weather was much colder than usual and the snowfall larger in amount than in December 1893.

Hazara District.—Light rain fell at Abbottabad on the 3rd, 10th, 11th, 14th, and 15th, the 24th to 26th and on the 29th and 30th. On the 15th the rain was accompanied with hail and on the 24th, 29th and 30th it was followed by snow. Two inches of snow were lying at the end of the month at an elevation of 5,000 feet near Abbottabad. The following gives a statement of the reported depth of snow accumulated on the higher hills in the Hazara district:—

NAME OF HILL.	Elevation.	Approximate depth of snow at the end of month.
	Feet.	Feet.
Kaghan Hills	7,000 to 12,000	9
Koush and Bhogarmang Hills	5,000 to 10,000	4½
Kaghan Higher Hills	12,000 to 17,000	12
Bhalija Hills	?	7
Jacha and Panjul	?	6
Kawai and Jared	?	6
Balakot	3,650	3
Agror Hills	4,500 to 7,000	1½
Bathal Hills	?	6
Manur Hills	15,115.	9
Sangar Hills	?	6
Chhatar Plains	?	4½
Galli Range	?	6 to 8

The snowfall in the month was considered by the natives of the district to be moderate in amount.

II.—PUNJAB HIMALAYAS.

Upper Sutlej Valley.—The following report of the snowfall in the Sutlej Valley near Kilba during the month of November has been received from the Deputy Conservator of Forests:—"The snow line on the 4th was at an elevation of 9,500 feet, but descended on the 5th to 8,500 feet after a fall of snow in the night. It retreated to an elevation of 9,000 feet on the 19th, but came down to 7,500 feet on the 29th after heavy snowfall.

III.—NORTH-WESTERN PROVINCES HIMALAYAS.

Almora District.

Malla Danpur.—Snow fell on the 16th, 22nd, 23rd, 29th and 30th. The fall averaged 8 feet 6 inches in depth on the passes of Pindari, Kaphini and Kantela.

Malla Johar.—The chief periods of snowfall on the mountain ranges of this malla were the 17th, 19th to 21st, 23rd to 25th, and 27th to 29th. The fall during the month, as measured on the passes of Ralamdhura and Utadhura, was 12½ feet and 3½ feet.

Mallas Byans, Chandans and Darma.—Light snow fell on the 29th.

The month was unusually cloudy, damp and cold in the whole district, and the snowfall is said to have been larger in amount than in December 1893.

Summary of special storm Reports.

The following gives a statement of the chief local storms, of which reports were received during the month:—

16th.—Hailstorm in the Nalkhera Pergannah in the Gwalior State. The storm came from west.

11th to 22nd.—Numerous hailstorms occurred during this period in the Tarana Pergannah of Indore. According to the report received from the Political Agent the stones ranged in weight from ½lb to 4lbs (?). Considerable damage was done to the crops.

18th to 20th.—Hailstorms visited several districts of Gwalior and injured the crops to some extent.

19th.—Hailstorm in the villages of Delwada and Koita of the Pattan Taluka in the Baroda State. The storm lasted about three hours and injured the rape-seed crop to some extent.

20th—Hailstorms in the villages of Bharbharia and Bisalwas in the Tonk State.

21st.—Hailstorm at Shillong. The storm came from the north and lasted a few minutes.

22nd.—Hailstorm over the Tappa estate in Bhopal. The storm did no injury to the crops.

23rd.—Hailstorm at Agra lasting from 7-15 A.M. to 7-30 A.M. According to the report of the observer the largest stones were more than an inch in diameter and three ounces in weight. The hailstorm is said to have extended over a considerable area, about 10 miles long and 4 miles wide, and to have caused much damage to the crops.

23rd and 24th.—Hailstorms in the Nalkhera Perganah of the Gwalior State. The hailstorms weighed from one to eight tolas.

23rd to 26th.—Hailstorms occurred during this period in the following districts of Gwalior:—Bhander, Malhargarh, Bajranggarh and Agar. The storms were severe and the hail-stones are reported to have been of the size of lemons in some districts and in others to have weighed from ½lb to 2lbs (?).

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

Arabian Sea.—Remarkably steady northerly winds of force 3 to 6 and fine weather were experienced throughout the month over the centre and east of this area. On the other hand showers were of frequent occurrence over the south and of occasional occurrence in the neighbourhood of Socotra during the first three weeks of the month. Fine clear weather with moderate to strong north-east monsoon winds obtained generally during the last week of the month. Weather was fine and winds normal in direction in the Gulf of Aden throughout the month. There were three well-defined periods of disturbed weather in the Persian Gulf, the Gulf of Oman and the north of the Arabian Sea. These periods were from the 8th to the 10th, the 21st to the 23rd and the 26th to the 28th. Heavy squalls of wind and rain were experienced during these periods. The air movement ranged from 2·2 on the 5th to 4·6 on the 24th and averaged 3·5 for the whole month.

Bay of Bengal.—Moderate to strong northerly winds and fine weather prevailed during the first twelve days of the month over the whole of the Bay to the north of Lat. 8° N. To the south of that parallel weather was rainy and squally, more especially in the neighbourhood of the Nicobars and the East Ceylon coast. Fine weather set in at the entrance to the Bay on the 13th and continued until the 17th. On the other hand very unsteady winds, chiefly from between south and east, and showery squally weather were experienced over the centre of the Bay on these days. Weather during this period was most disturbed near the Burma coast, where the ship *Andrina* in Lat. 16½°N. and Long. 94°E. at 8 A.M. of the 13th, experienced south-east gales of force 9 and terrific squalls. On the 18th similar conditions to those which prevailed during the first twelve days of the month, were re-established over the Bay and continued until the 25th, when weather improved in the extreme south and was generally fine and clear during the remainder of the month.

The winds in the Bay were unusually steady and varied in strength from an average of 2·0 on the 4th to 4·3 on the 28th. The mean intensity for the whole month was 3·6, almost identical with the normal.

In the equatorial belt winds were very unsteady and weather unsettled with frequent squalls and rain during the first three weeks of the month. So far as can be judged from the scanty data available for this region weather was more unsettled and winds more unsteady in the eastern than in the western half. Weather improved on the 23rd and 24th and was practically fine with steady northerly winds during the remainder of the month.

Temperature of the Air.

The variations of the mean temperature conditions of the month were much larger than usual. The mean maximum or day temperature was more or less in defect over nearly the whole of Northern and Central India and was in excess in the Peninsula. The excess in the latter area was less than 2°, except in two districts, one including a

part of Berar and the Bombay Deccan and the second Mysore and a part of South and Central Madras. The following gives data for these two areas :—

PROVINCE.	STATION.	MEAN MAXIMUM TEMPERATURE.		
		Actual, December 1894.	Normal, December.	Variation of actual from normal.
		°	°	°
South India . .	Cuddapah .	87·4	84·9	+2·5
	Bangalore .	79·9	77·6	+2·3
	Salem . .	88·0	86·0	+2·0
	Trichinopoly .	86·6	84·6	+2·0
Berar and neighbouring districts of Bombay and Central Provinces.	Akola . .	85·4	82·0	+3·4
	Khandwa. .	84·4	81·7	+2·7
	Poona . .	86·1	83·3	+2·8
	Chanda . .	84·2	81·6	+2·6

The deficiency was more than 2° in amount over nearly the whole of the North-Western Provinces, the Punjab, Sind, Cutch, Rajputana and Baluchistan. It exceeded 4° at the stations in a considerable area, including the South-East Punjab, North-East Rajputana and the western districts of the North-Western Provinces, for which comparative data are given in the following table :—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, December 1894.	Normal, December.	Variation of actual from normal.
	°	°	°
Ludhiana.	64·7	71·3	−6·6
Roorkee	67·1	72·5	−5·4
Meerut	68·7	73·0	−4·3
Sirsa	70·5	74·9	−4·4
Agra	71·8	76·0	−4·2
Jeypore	73·4	77·6	−4·2
Bikaneer	71·1	75·2	−4·1
Delhi	68·3 (?)	74·3	−6·0 ?

The deficiency was as marked at the hill stations as at the neighbouring plains stations in Northern India, *e. g.*—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, December 1894.	Normal, December.	Variation of actual from normal.
	°	°	°
Chakrata	49·0	55·0	−6·0
Ranikhet	52·7	58·2	−5·5
Mussooree	47·3	52·6	−5·3
Simla	46·1	51·3	−5·2
Murree	48·3	53·7	−5·4
Quetta	52·4	57·1	−4·7

The minimum temperature of the month was slightly lower than usual in Burma, Lower Sind and Cutch and was more or less in excess over the remainder of India. The excess averaged more than 2° over the Punjab, Rajputana, North-Western Provinces, Central India, Berar, the Central Provinces, the Bombay Deccan, Chota Nagpur and Bihar. The excess was large, averaging more than 4° in amount, in two areas for which comparative data are given below :—

PROVINCE.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, December 1894.	Normal, December.	Variation of actual fom normal.
		°	°	°
South-East Punjab and western districts North Western Provinces.	Ludhiana .	48·5	43·3	+5·2
	Meerut . .	49·0	43·9	+5·1
	Roorkee . .	48·3	43·4	+4·9
	Sirsa . .	46·6	42·3	+4·3
Berar, Central Provinces, Bundelkhand, Baghelkhand and North-Western Provinces (south-east districts).	Khandwa. .	55·6	48·9	+6·7
	Akola . .	56·4	49·9	+6·5
	Hoshangabad .	56·4	50·7	+5·7
	Malegaon .	55·1	50·3	+4·8
	Jubbulpore .	51·1	45·2	+5·9
	Sutna . .	51·8	46·1	+5·7
	Nowgong. .	50·8	45·8	+5·0
	Allahabad .	52·1	47·4	+4·7
	Chanda . .	55·6	51·1	+4·5

The mean minimum temperature of the month at the hill stations in Upper India was, as the maximum temperature, in considerable defect, as is shown by the following :—

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, December 1894.	Normal, December.	Variation of actual from normal.
	°	°	°
Murree	36·6	40·0	−3·4
Simla	36·7	40·2	−3·5
Mussooree	38·0	40·6	−2·6
Chakrata	36·5	39·6	−3·1
Ranikhet	41·1	42·6	−1·5

As the maximum and minimum temperature variations were of opposite character in North-West India, the mean temperature of the month was in slight defect over the

whole of that area, *i.e.*, to the north-west of a line joining Rajkot, Ajmere, Agra and Bareilly. It was also in slight defect in Burma. It was above the normal over the remainder of India and the excess was large in an area including Berar, the Bombay Deccan, Central India and the Central Provinces, in which the day and night temperatures were both in moderate to considerable excess. The following gives comparative data for this area of increased temperature :—

Station.	Mean daily temperature.		
	Actual, December 1894.	Normal, December.	Variation of actual from normal.
	°	°	°
Akola	71·0	66·0	+5·0
Khandwa	70·0	65·3	+4·7
Chanda	69·9	66·3	+3·6
Jubbulpore	64·5	60·6	+3·9
Malegaon	70·2	66·8	+3·4
Sutna	63·4	60·4	+3·0
Nagpur	69·4	66·8	+2·6
Raipur	68·4	65·9	+2·5
Poona	71·2	68·5	+2·7
Sholapur	73·0	70·8	+2·2
Allahabad	63·5	61·2	+2·3

The increased temperature was hence most strongly exhibited in Berar (at Akola) and Nimar (at Khandwa).

The following gives a summary of the more important features of the mean temperature conditions of the month :—

1st.—The day temperature was considerably to largely in defect in North-Western India and the night temperature in moderate to considerable excess. The mean temperature of the month was slightly lower than usual and the diurna range of temperature largely below the normal. In the South-East Punjab and the north-western districts of the North-Western Provinces the diurnal range was, on the mean of the month, from 8° to 12° less than usual.

2nd.—Both day and night temperatures were in moderate to large excess in the area including Central India, Berar, the Bombay Deccan and Central Provinces. The mean temperature was hence in moderate to considerable excess, by amounts ranging from 2° to 5°. The excess was most marked in Berar and Nimar.

3rd.—Temperature was in slight excess in North-Eastern India and the southern half of the Peninsula and normal in Burma.

The following table gives comparative data for 51 meteorological areas or districts 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	87·5	64·5	76·0	23·0	33·8	+0·3	−0·6	+0·9
	Lower Burma	85·6	68·2	76·9	17·4	26·3	+0·3	−0·2	+0·5
	Central do.	85·6	58·3	72·0	27·3	39·2	+0·7	−0·9	+1·6
	Upper do.	76·4	54·7	65·6	21·8	35·1	−1·0	+1·9	−2·9
	Arakan	81·1	62·4	71·8	18·7	28·5	−0·8	−2·0	+1·2
Bengal and Assam	Eastern Bengal	75·3	56·9	66·1	18·4	29·0	−0·8	+1·6	−2·4
	Assam (Surma)	79·0	57·3	68·2	21·7	32·2	−0·5	+2·1	−2·6
	Do. (Brahmaputra)	71·4	53·6	62·5	17·8	28·3	−1·3	+0·4	−1·7
	Deltaic Bengal	76·9	57·3	66·1	19·6	32·0	−0·2	+1·4	−1·6
	Central do.	76·5	55·7	66·1	20·8	31·6	−0·4	+2·1	−2·5
	North do.	75·4	54·1	60·8	21·3	30·5	−0·4	+2·3	−2·7
	Orissa	79·3	61·5	70·4	17·8	29·6	+0·3	+2·1	−1·8
	Chota Nagpur	74·9	51·8	63·4	23·1	36·0	+0·8	+1·9	−1·1
	Bihar (South)	75·3	54·2	64·8	21·1	32·4	+0·2	+3·6	−3·4
	Do. (North)	74·7	58·2	63·8	21·9	31·5	−0·1	+2·6	−2·7
North-Western Provinces and Oudh.	North-Western Provinces (East)	73·6	52·2	62·9	21·5	33·5	−1·1	+3·7	−4·8
	Oudh (South)	72·8	49·4	61·1	23·4	37·9	−2·7	+3·8	−6·5
	Do. (North)	72·7	50·9	61·8	21·8	36·4	?	?	?
	North-Western Provinces (Central)	72·2	49·9	61·1	22·3	38·3	?	?	?
	Do. do. (West)	73·8	52·5	63·2	21·3	39·7	−3·3	+3·1	−6·4
	Do. do. (Submontane)	67·4	48·3	57·9	19·1	34·1	−4·2	+3·8	−8·0

Province.	Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of month of Minimum	Maximum.	Daily range.
		°	°	°	°	°	°	°	°
Punjab	Punjab (South)	69·4	48·3	58·9	21·1	40·0	−5·2	+2·9	−8·1
	Do. (Central)	67·5	44·4	56·0	23·1	39·6	−4·0	+3·8	−7·8
	Do. (Submontane)	66·0	47·8	56·9	18·3	35·6	−6·5	+5·2	−11·8
	Do. (Hill Districts)	47·5	35·5	41·5	12·1	31·1	−5·3	−3·5	−1·8
	Do. (North-West)	66·6	39·5	53·1	27·1	42·9	−3·2	+1·9	−5·1
	Do. (West)	70·4	44·5	57·5	25·9	43·7	−2·6	+2·8	−5·4
Bombay and Malabar Coast Districts (Madras).	Malabar	87·9	72·2	80·1	15·7	23·9	+1·3	+0·5	+0·8
	Madras (South Central)	87·4	65·5	76·5	21·9	31·4	+2·0	−0·2	+2·2
	Coorg	75·8	58·4	67·1	17·4	25·3	+1·3	+0·9	+0·4
	Mysore	81·2	59·3	70·2	21·9	31·1	+2·3	0	+2·3
	Konkan	86·0	69·3	77·7	16·7	26·6	−0·5	+0·3	−0·8
	Bombay Deccan	84·5	58·1	71·3	26·5	35·8	+1·6	−1·8	+3·4
	Hyderabad (North)	83·2	58·4	70·8	24·7	33·6	?	?	?
	Khandesh	84·0	53·9	69·0	30·2	39·2	+1·9	+4·8	−2·9
Central Provinces and Berar.	Berar	84·1	57·9	71·0	26·2	36·2	+2·2	+5·2	−3·0
	Central Provinces (West)	81·7	56·3	69·0	25·5	39·2	+1·5	+5·3	−3·8
	Do. (Central)	79·2	53·4	66·3	25·8	40·4	+1·5	+4·3	−2·8
	Do. (East)	80·0	56·6	68·3	23·4	35·6	+1·2	+3·0	−1·8
Bombay (North)	Gujarat	84·6	59·6	72·1	25·1	38·0	−1·9	+2·5	−4·4
	Kathiawar	82·8	57·2	70·0	25·6	41·6	−1·9	+0·5	−2·4
	Sind	76·5	51·0	63·8	25·5	46·6	−3·0	−0·6	−2·4
Rajputana and Central India.	Central India (East)	74·5	51·3	63·0	23·2	37·5	−0·5	+5·4	−5·9
	Rajputana (East), Central India (West)	75·7	52·0	63·2	25·1	45·7	−2·8	+3·0	−5·8
	Do. (West)	74·9	48·6	61·8	26·3	47·1	−4·1	−2·4	−1·7
Madras	East Coast (North)	81·6	65·6	73·6	16·1	24·7	+1·4	−0·2	+1·6
	Hyderabad (South)	84·5	59·9	72·2	24·6	33·0	+1·2	+1·8	−0·6
	Madras (Central)	86·0	62·1	74·1	24·0	32·1	+0·9	+0·1	+0·8
	East Coast (Central)	84·2	67·6	75·9	16·7	24·7	+0·7	+0·1	+0·6
	Do. (South)	84·0	70·4	77·2	13·7	21·3	+1·1	+0·3	+0·8
	Madras (South)	84·6	72·4	78·5	12·2	20·2	−0·4	−0·4	0

The following gives an account of the larger and more important changes of the temperature conditions in India during the month:—

Temperature at the commencement of the month was higher than usual over the whole of India, the excess being most marked in Rajputana, Central India and the Central Provinces, and was nearly as large in amount in the day as in the night temperature. The following gives variation data for the period, 1st to the 4th, during which these conditions lasted:—

Meteorological Province.	Variation from normal of mean temperature during 24 hours preceding 8 A.M. of 1st.	2nd.	3rd.	4th.
	°	°	°	°
Burma	+1·0	0	+0·1	+1·6
Bengal and Assam	+0·8	+1·4	+1·6	+1·7
N.-W. Provinces and Oudh	+3·9	+2·2	+2·4	+3·7
Punjab	+2·9	+3·4	+3·0	+1·3
Sind and Rajputana	+4·2	+3·5	+5·9	+3·8
Central India and Gujarat	+4·3	+4·0	+4·8	+3·3
Central Provinces and Berar	+2·1	+3·7	+4·7	+5·3
Bombay	+0·8	+1·6	+1·9	+1·8
Madras	+0·8	+0·8	+0·8	+1·5

A very feeble disturbance give light showers in Upper India, and light to moderate snow in Kashmir and on the higher elevations in Baluchistan and Afghanistan on the 4th and 5th, and was followed by a moderate reduction of temperature in North-Western India. Temperature was hence from the 5th to the 10th in slight to moderate defect in North-Western India, and continued more or less considerably in excess in North-Eastern India and the Peninsula. The excess was large during this period in the area including Berar, the Bombay Deccan and the Central Provinces. The following gives daily variation data in illustration:—

Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 6th.	7th.	8th.	9th.	10th.
	°	°	°	°	°
Central Provinces	+0·4	+1·6	+3·3	+4·3	+4·1
Berar	+2·9	+4·8	+6·2	+4·7	+5·4
Bombay Deccan	+3·8	+3·4	+2·8	+3·3	−0·2

A cold weather disturbance began to affect Baluchistan on the 8th. It gave cloudy showery weather to Baluchistan from the 8th to the 10th, to Kashmir, Rajputana and Central India from the 10th to the 14th, and to the Punjab from the 11th to the 15th. As usual a cool wave spread

eastwards from Baluchistan over North-Western and Central India in the rear of the disturbance. The following mean temperature variation data for the period from the 10th to the 15th show clearly the march of the cool wave :—

Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	10th.	11th.	12th.	13th.	14th.	15th.
	°	°	°	°	°	°
Quetta	−5·0	−3·9	−5·7	−7·7	−6·7	−6·1
Punjab	+0·3	−4·8	−3·0	−2·2	−0·6	−2·2
Sind and Rajputana	+0·8	−1·8	−5·1	−2·4	−3·3	−4·2
N-W. Provinces and Oudh	−1·2	+0·4	+0·7	+2·0	+2·3	−0·4
Gujarat and Central India	+4·5	+2·0	−1·8	−0·4	0	−1·7
Berar and Central Provinces	+4·3	+2·5	+3·2	+3·0	+2·7	+3·6
Bengal and Assam	−1·8	−1·4	−0·5	+0·7	+1·4	+3·7
Burma	−1·8	−2·4	−1·5	−1·1	+0·1	+0·1

The preceding data establish that the cold wave caused a large reduction of temperature on the 11th, 12th, 13th and 14th in Baluchistan, the Punjab, and Rajputana, but did not affect the temperature conditions in the Central Provinces and North-Eastern India, and its influence was hence confined to Baluchistan and North-Western India. Temperature increased steadily in that area from the 15th to the 18th and continued more or less considerably in excess in North-Eastern India and the Peninsula. The following gives data for that area of large excess of temperature during this period :—

Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	16th.	17th.	18th.	19th.
	°	°	°	°
Berar and Central Provinces	+4·3	+4·4	+5·0	+4·5
Bengal and Assam	+4·5	+2·3	+1·3	+1·2
Burma	+0·8	+2·2	+2·8	+3·7
Madras	+2·5	+2·0	+1·6	+1·9
Bombay	+1·2	+1·9	+2·7	+3·5

Temperature was throughout this period most largely in excess in the Central Provinces and Berar, as it had been during the preceding fortnight.

Temperature increased rapidly in Upper India and Baluchistan during the next 48 hours, *i.e.*, on the 20th and 21st, and was more or less in excess over the whole of India on the 22nd and 23rd. The excess was, as hitherto, greatest in the Central Provinces and Berar.

The following gives mean temperature variation data for this period :—

Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	20th.	21st.	22nd.	23rd.
	°	°	°	°
Burma	+3·5	+2·0	+0·5	+0·3
Bengal and Assam	+1·5	+2·5	+2·3	+1·3
North-Western Provinces and Oudh	+0·8	+0·3	+0·8	+0·8
Punjab	−0·7	−0·7	+1·5	+3·5
Sind and Rajputana	−1·7	−1·1	+0·8	+3·2
Central India and Gujarat	+3·8	+1·6	+1·7	+3·3
Central Provinces and Berar	+6·4	+3·6	+3·9	+4·9
Bombay	+2·9	+2·8	+2·4	+2·5
Madras	+1·7	+2·2	+1·1	+1·5

The fall of temperature in Burma and Bengal accompanied and followed local rainfall in Assam and Upper Burma.

A cold weather disturbance passed eastwards from Baluchistan across Northern India during the next three days from the 23rd to the 26th and gave moderate rain in Upper India and moderate to heavy snow in the Punjab and Kashmir Himalayas and Afghan mountains. Its progress across India was marked by large temperature changes. A well-defined warm wave advanced in front of the disturbance and depression and a severe cool wave in the rear. The following table gives the greatest excess and depression of temperature due to these waves from the 24th to the 28th :—

Date.	Cool wave.		Warm wave.	
	Station.	Mean temperature variation from normal.	Station.	Mean temperature variation from normal.
		°		°
24th	Jacobabad	−9·1	Nowgong	+10·0
"	.....	...	Khandwa	+10·0
25th	Bickaneer	−11·2	Jubbulpore	+10·4
26th	Deesa	−11·4	Ranchi	+6·2
"	Jeypore	−11·0	Patna	+5·4
27th	Jeypore	−10·5	Cuttack	+3·7
"	.....	...	Calcutta	+3·2
28th	Hoshangabad	−7·1		
"	Jubbulpore	−7·0		
"	Hazaribagh	−6·4		
29th	Sambalpur	−6·6		
"	Cuttack	−5·5		

The cold wave hence advanced eastwards across Northern India in about five days, and on the 29th when it was passing across Burma and East Bengal temperature was more or less below the normal over the whole of India with the exception of Baluchistan and Madras. The following gives mean temperature variation data for the 24 hours preceding 8 A.M. of the 28th in illustration :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.
	°	°	°
Burma	0	−3·3	−1·7
Bengal and Assam	−3·5	−2·0	−2·8
North-Western Provinces and Oudh	−5·9	−0·7	−3·3
Punjab	−4·6	+2·6	−1·0
Sind and Rajputana	−5·9	−3·9	−4·9
Central India and Gujarat	−5·0	−3·3	−4·2
Central Provinces and Berar	−4·1	−4·7	−4·4
Bombay	+0·8	+0·3	+0·6
Madras	+0·8	−0·5	+0·2

The advance of the fourth cold weather disturbance of the month from the Persian area into Baluchistan and Upper India during the last four days was preceded and accompanied by a large rise of temperature as is shown by the following data and followed by a moderate reduction of temperature due to a feeble cool wave in the rear of the disturbance :—

STATION OR DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PERCEDING 8 A.M. OF					
	26th.	27th.	28th.	29th.	30th.	31st.
	°	°	°	°	°	°
Quetta	−7·6	−1·5	+6·2	+4·0	−0·7	+0·8
Sind	−5·8	−6·1	−3·2	−3·5	−1·2	−0·3(?)
Punjab	−4·8	−4·4	−1·0	+1·6	−0·2	+1·1
Rajputana	−9·0	−8·4	−5·7	−0·9	+2·5	+1·6

At the end of the month the temperature conditions varied less from the normal than at any time during the month. The following gives variation data for the 31st and shows that the chief feature was a moderate excess in Central India and the North-Western Provinces and a slight deficiency in Madras :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.
	°	°	°
Burma	+0·6	−0·8	−0·1
Bengal and Assam	−0·7	−0·2	−0·5
North-Western Provinces and Oudh	+0·5	+3·7	+2·1
Punjab	−2·1	+4·3	+1·1
Sind and Rajputana	−1·3	+3·3	+1·0
Central India and Gujarat	+3·2	+2·2	+2·7
Central Provinces and Berar	+2·3	−0·4	+1·0
Bombay	+1·0	−2·4	−0·7
Madras	+0·1	−3·3	−1·6

The following table gives the variation of the mean daily temperature from the normal week by week during the month in nine of the larger provinces or political divisions of the Empire :—

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE FOR WEEK ENDING				
	8th.	15th.	22nd.	29th.	For whole month.
	°	°	°	°	°
Burma	−0·2	−1·2	+2·2	−1·3	−0·1
Bengal and Assam	+1·6	+0·2	+2·2	−0·3	+0·9
North-Western Provinces and Oudh.	+1·0	+0·4	+0·5	−1·2	+0·3
Punjab	+0·8	−2·0	−0·4	−1·4	−0·6
Sind and Rajputana	+1·5	−2·3	−2·0	−3·6	−0·8
Central India and Gujarat	+1·8	+0·7	+1·3	−1·7	+0·5
Central Provinces and Berar.	+3·5	+3·4	+4·6	+1·5	+3·0
Bombay	+1·2	+0·2	+2·5	+0·8	+1·0
Madras	+1·0	+0·1	+1·9	+0·3	+0·7

Winds.

Winds in December 1894, as in December 1893 and 1892, were stronger and steadier than the normal in Arakan, Lower Burma and at Port Blair, and were more easterly than usual. The following gives data illustrating the increased strength and easting of the winds in that area:—

Station.	Velocity in miles per diem.		Wind direction.		
	Mean actual, December 1894.	Percentage variation.	Mean actual, December 1894.	Mean normal, December.	Easterly deflection.
					°
Port Blair	188	+ 10	N 57° E	N 51° E	+ 6
Rangoon	125	+ 10	N 56° E	N 36° E	+ 20
Diamond Island	364	+ 119	N 50° E	N 34° E	+ 16

The air movement in Bengal, Orissa and Assam varied irregularly in amount, but was, on the average of all the stations, of normal intensity and steadiness. The only important feature was the increased northing and diminished westing (or increased easting) of the winds, as is shown by the following data of four stations:—

Station.	Wind direction.		
	Mean actual, December 1894.	Mean normal, December.	Easterly deflection.
			°
Cuttack	N 31° E	N 12° E	+ 19
Calcutta	N 3° E	N 26° W	+ 29
Burdwan	N 13° W	N 23° W	+ 10
Berhampore	N 12° W	N 26° W	+ 14

The deflection of the air movement in Bengal was hence in the same direction as in Burma and at Port Blair, but was somewhat larger in actual amount, averaging nearly 20°.

Winds were, as usual in December, very light and unsteady in the Gangetic Plain. The mean air movement, as registered by the anemometers in use, ranged from ½ mile per hour to 3 miles per hour. Winds were most unsteady at Roorkee (for which the percentage of steadiness was only 11), and at Ludhiana (where it was 19). The mean winds were from directions between north and west, but were at all stations more northerly than usual. This deflection was very strongly exhibited at the following stations:—

Station.	Wind direction.		
	Mean actual, December 1894.	Mean normal, December.	Decreased westing.
			°
Patna	N 40° W	N 83° W	43
Allahabad	N 16° W	N 54° W	38
Lucknow	N 42° W	N 53° W	11
Roorkee	N 1° E	N 82° W	83

Winds were of normal strength and steadier than usual in Sind and the Punjab. They were also normal in mean direction in Sind.

Winds were less westerly, or more easterly, in Rajputana and Central India. Thus at Jeypore the mean direction was N 30° E instead of N 14° W, at Nowgong N 15° W instead of N 34° W, and at Deesa N 67° E instead of N 17° E.

The preceding remarks have hence shown that over the whole area including Burma, Bengal, the Gangetic Plain, Rajputana and Central India, the direction of the air movement was characterised by a general and considerable westerly deviation from the normal, that is, the drift of the period from the north was directed more to the west than usual.

Winds were remarkably unsteady in the Central Provinces and North Deccan. The following gives the most noteworthy examples:—

Station.	Steadiness.			Velocity in miles per diem.		
	Mean actual, December 1894.	Mean normal, December.	Variation from normal.	Mean actual, December 1894.	Mean normal, December.	Percentage variation.
Nagpur	26	52	−26	77	68	+ 13
Buldana	11	52	−41	366?	116	+ 216?
Khandwa	23	41	−18	75	57	+ 35
Poona	14	56	−42	99	136	− 27

Winds were also generally more easterly than usual, but the easterly deflection was less marked than in the Gangetic Plain.

Winds were, on the other hand, more westerly at the stations on the Konkan coast. The following gives examples:—

Station.	Wind direction.	
	Mean actual, December 1894.	Mean normal, December.
Bombay	N 6° W	N 17° E
Ratnagiri	N 54° W	N 4° W
Karwar	N 41° W	N 1° E

These north-west winds extended southwards as far as Cochin, where the mean wind direction of the month was N 40° W, the normal being S 50° W.

Winds were normal in direction and strength in Madras and Mysore.

A noteworthy feature of the air movement in Northern India, due to the abnormally frequent disturbances of the month, was the increased strength of the winds at the hill stations. The following data for five stations illustrate this feature:—

Station.	Velocity in miles per diem.		Steadiness.		
	Mean actual, December 1894.	Percentage variation.	Mean actual, December 1894.	Mean normal, December.	Variation from normal.
Murree	210	+26	58	31	+27
Chakrata	148	+48	19	14	+5
Ranikhet	50	+43	3	22	−19
Darjeeling	83	+80	14	4	+10
Quetta	88	+52	35	37	−2

Humidity and cloud.

Humidity.—Humidity was considerably in defect in Burma, and to a slightly less extent at Port Blair, in December 1894, as in December 1893. These conditions in both years accompanied and followed the early retreat of the south-west monsoon from the Bay in the latter half of November. The following gives humidity data for three stations in this area:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, December 1894.	Normal, December.	Variation, from normal.	Actual, December 1894.	Normal, December.	Variation from normal.
	"	"	"	%	%	
Port Blair	·799	·834	−·035	75	80	−5
Diamond Island	·647	·698	−·051	69	75	−6
Rangoon	·574	·671	−·097	64	73	−9

The deficiency was somewhat less marked than in December 1893 and 1892, as is shown by the following comparative statement:—

Station.	Variation from normal of mean absolute humidity in		
	1894.	1893.	1892.
	"	"	"
Port Blair	−·035	−·092	−·098
Diamond Island	−·051	−·126	−·090
Rangoon	−·097	−·163	−·109

The mean absolute humidity of the month in Arakan Bengal, Assam and Orissa was slightly above the normal. The relative humidity was also greater than usual, notwithstanding that the mean temperature of the month was in slight excess. The relative humidity was most largely in excess in this area at Chittagong (+6) and Dacca (+5).

The amount of aqueous vapour present in the air was in moderate to considerable excess over the large area, including Bihar, Chota Nagpur, the North-Western Provinces, the East Punjab, Rajputana, Central India and the Central Provinces. The excess was most marked in the Central Provinces, at several stations in which area it exceeded ·100" or 30 per cent. of the normal. In a part of this area, comprising the South-East Punjab, the western districts of the North-Western Provinces, North-East Rajputana, Bhagelkhand and Bundelkhand, where the mean temperature of the month was considerably in defect, the relative humidity was in large excess, by amounts ranging from 10 to 20 per cent. The excess was also large at the hill stations in the Western Himaláyas. The following gives comparative data for the stations in this area, at which the mean

relative humidity of the month was 15 or upwards above the normal :—

Station.	Relative humidity.		
	Actual, December 1894.	Normal, December.	Variation from normal.
	%	%	
Roorkee	80	63	+17
Ludhiana	77	61	+16
Agra	69	53	+16
Ajmere	69	50	+19
Sutna	63	48	+15
Saugor	60	45	+15
Chakrata	69	51	+18
Chamba	73	55	+18
Mount Abu	57	41	+16

The following gives mean variation data for this large area characterised by excessive humidity :—

Division.	Absolute humidty.			Relative humidity.		
	Actual, December 1894.	Normal, December.	Variation from normal.	Actual, December 1894.	Normal, December.	Variation from normal.
	"	"	"	%	%	
Punjab	·284	·269	+·015	65	59	+ 6
N.-W. Provinces	·376	·311	+·065	72	62	+10
Bihar	·446	·401	+·045	73	69	+ 4
Rajputana	·334	·268	+·066	60	49	+11
Central India	·379	·274	+·105	67	53	+14
Berar	·385	·335	+·050	54	51	+ 3
Central Provinces	·405	·319	+·086	62	53	+ 9

The absolute humidity was hence most largely above the normal in Central India and the Central Provinces; but, in consequence of the high temperature prevailing in Berar and the Central Provinces during the greater part of the month, the relative humidity was in moderate excess, and to a less extent than in Rajputana, the North-Western Provinces and the South-East Punjab.

The air was considerably drier than usual in Sind, as is shown by the following data :—

Station.	Absolute humidity.			Relative humidity.		
	Actual, December 1894.	Normal, December.	Variation from normal.	Actual, December 1894.	Normal, December.	Variation from normal.
	"	"	"	%	%	
Jacobabad	·174	·241	−·067	28	49	−21
Kurrachee	·229	·380	−·151	37	56	−19

The humidity conditions varied to a much smaller extent from the normal in tropical than in extra tropical India. They were normal only in the Konkan. The mean aqueous vapour pressure was normal in the West Deccan and in moderate defect in the East Deccan, Central Madras, Malabar, Coorg and Mysore. The deficiency was greatest at Mercara where the humidity percentage was 11 below the normal, and Salem where it was 9 in defect. The variations of the humidity conditions from the normal were small at the Madras coast stations.

The following summarises the chief features of the humidity conditions of the month :—

(1) Moderate deficiency of humidity in Burma and the Andamans.

(2) Slight excess of humidity in Bengal, Assam and Orissa.

(3) Large excess of humidity in Bihar, the North Western Provinces, East Punjab, Rajputana, Central India and the Central Provinces. The absolute humidity was most largely in excess in Central India and the Central Provinces, and the relative humidity in the South-East Punjab and north-western districts of the North-Western Provinces and the adjacent hill districts.

(4) Large deficiency of humidity in Sind.

(5) Moderate deficiency in the South Deccan, Coorg Mysore and Malabar.

Cloud.—There was somewhat less cloud than usual at Rangoon and Sibsagar. Cloud was on the whole in slight excess in Arakan, Bengal, Chota Nagpur and Bihar, but the variations were small, as is shown by the following :—

Area.	Mean cloud amount.		
	Actual, December 1894.	Normal, December.	Variation from normal.
Arakan	2·6	2·4	+0·2
Bengal	2·5	1·9	+0·6
Chota Nagpur	2·3	2·0	+0·3
Orissa	1·5	2·2	−0·7
Bihar	1·6	1·4	+0·2

Cloud was very largely in excess over nearly the whole of Northern and Central India and the Central Provinces, more especially in the South-East Pnujab and north-western districts of the North-Western Provinces and

adjacent hills. The following gives data for five stations in this area :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, December 1894.	Normal, December.	Variation from normal.
Roorkee	4·6	2·1	+2·5
Dehra Dun	5·5	2·4	+3·1
Ludhiana	5·9	3·0	+2·9
Ranikhet	5·1	2·5	+2·6
Simla	6·1	3·6	+2·5

Comparative data for this area of increased cloud in December 1894 are given below :—

AREA.	MEAN CLOUD AMOUNT.		
	Actual, December 184	Normal, December.	Variation from normal.
North-Western Provinces	3·4	1·7	+1·7
Punjab	4·5	2·7	+1·8
Rajputana	2·6	1·7	+0·9
Central India	2·1	1·6	+0·5
Sind	2·6	1·9	+0·7
Baluchistan (Quetta)	4·3	3·0	+1·3

There was slightly less cloud than usual in the Deccan and Bombay and Madras Coast districts. The deficiency was small in amount, except in Coorg and Mysore and at Trichinopoly where it ranged between 30 and 40 per cent. of the normal amount.

The mean cloud amount of the month was less than 1·0 at Karwar (0·6).

The chief features of the mean cloud distribution of the month were—

(1) Decreased cloud in Upper Assam and (probably) Central and Upper Burma.

(2) Increased cloud in Northern and Central India, the Central Provinces and Baluchistan. The excess was large in amount in the South-East Punjab and the submontane districts of the North-Western Provinces and adjacent hill districts.

(3) Decreased cloud in Bombay, Madras and the Deccan.

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 of India, 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 inland and north-wards, and is less than one inch in amount to the west of a line joining Madura, Coimbatore, Salem, Cuddapah and Ongole, and is less than three or four-tenths of an inch over the whole of Northern and Central India, and the Deccan and also Burma.

The rainfall of December 1894 was less than a tenth of an inch in amount over the greater part of India, including Tenasserim, Lower and Central Burma, Assam Surma, Bengal (except North Bengal), Orissa, Bihar, Chota Nagpur, Malabar, Coorg, Mysore, the Konkan, Bombay Deccan, Khandesh, Gujarat, Sind, Hyderabad and North and Central Madras.

The rainfall of the month was small in amount, and largely in defect in the Coromandel Coast districts and South Madras, due to the early withdrawal of the retreating south-west monsoon from the Bay area.

In Persia, Baluchistan and North-Western India a series of disturbances gave more frequent rain than usual. The disturbances were of the ordinary cold weather type, but were of very slight intensity. The precipitation occurred chiefly during local thunderstorms and was hence very irregularly distributed. An important feature of these disturbances was the occurrence of numerous hailstorms in Rajputana and Central India.

The chief periods of disturbance and rainfall in Northern and Central India were as follows :—

1st.—From the 2nd to the 5th. The Punjab, Kashmir and the western and central districts of the North-Western Provinces obtained light to moderate showers during this period.

2nd.—From the 8th to the 15th. Baluchistan received moderate rain from the 8th to the 10th; Rajputana, Central India and Kashmir from the 10th to the 14th; and the Punjab and western districts of the North-Western Provinces, from the 11th to the 15th. The rainfall was heaviest and most general during this period in the South-East Punjab and the Kangra and Simla hill districts. Numerous hailstorms occurred in Rajputana.

3rd.—From the 20th to the 22nd. Thunderstorms gave light to moderate showers in Rajputana, Central India, and the Central Provinces.

Assam also received a moderate fall of rain, probably also accompanying thunderstorms, during this period.

4th.—From the 22nd to the 26th. This burst of rain was due to a cold weather disturbance. Baluchistan received moderate rain on the 22nd and 23rd; Kashmir, Central India and Rajputana from the 23rd to 25th; and the Punjab on the 24th and 25th. The rainfall of this period was moderate in amount in Baluchistan, the East Punjab and Kashmir, and light elsewhere.

5th.—From the 28th to the end of the month. This rainfall was confined to Baluchistan, Kashmir and the North Punjab. Baluchistan had light showers daily from the 28th to the 31st, the North Punjab on the 29th, 30th and 31st, and Kashmir on the 29th and 31st.

The following table gives mean actual, mean normal, and variation rainfall data for the 51 meteorological divisions or districts into which India is divided, in the same form as in the previous months, and has been prepared in exactly the same manner as hitherto:—

Province.	Division.	Number of Rainy days.		Rainfall.		
		Actual, December 1894.	Normal, December.	Actual, December 1894.	Normal, December.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	0	0	0
	Lower Burma*	?	?	0	0·19	−0·19
	Central do.*	?	?	0·01	0·09	−0·08
	Upper do.*	?	?	0·17	?	?
	Arakan*	?	?	0·34	0·51	−0·17
Bengal and Assam	Eastern Bengal	1·1	0·5	0·47	0·43	+0·04
	Assam (Surma)*	?	?	0·02	0·61	−0·59
	Do. (Brahmaputra)*	?	?	0·91	0·39	+0·52
	Deltaic Bengal	0·2	0·4	0·08	0·26	−0·18
	Central do.	0·1	0·3	0·03	0·17	−0·14
	North do.	0·7	0·4	0·32	0·18	+0·14
	Orissa	0	0·8	0·01	0·51	−0·50
	Chota Nagpur	0·3	0·4	0·08	0·34	−0·26
	Bihar (South)	0	0·4	0·02	0·22	−0·20
	Do. (North)	0·1	0·4	0·02	0·14	−0·12
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·7	0·4	0·30	0·26	+0·04
	Oudh (South)	1·6	0·6	0·83	0·41	+0·42
	Do. (North)	1·3	0·6	0·43	0·38	+0·05
	North-Western Provinces (Central)	2·4	0·4	1·03	0·37	+0·66
	Do. do. (West)	3·9	0·5	1·80	0·34	+1·46
	Do. do. (Submontane)	4·1	0·7	2·04	0·41	+1·63
Punjab	Punjab (South)	2·6	0·4	1·05	0·24	+0·81
	Do. (Central)	3·8	0·5	2·02	0·28	+1·74
	Do. (Submontane)	5·6	0·8	3·60	0·58	+3·02
	Do. (Hill Districts)	8·5	1·3	7·55	0·88	+6·67
	Do. (North-West)	2·2	0·8	0·68	0·51	+0·17
	Do. (West)	1·2	0·2	0·30	0·12	+0·18
Bombay and Malabar Coast Districts (Madras).	Malabar	0·2	1·4	0·08	0·80	−0·72
	Madras (South Central)	0·4	2·6	0·11	1·40	−1·29
	Coorg	0	?	0	?	?
	Mysore*	?	?	0	0·65	−0·65
	Konkan	0	0·3	0	0·14	−0·14
	Bombay Deccan	0	0·7	0	0·41	−0·41
	Khandesh	0	0·8	0·01	0·56	−0·55
Central Provinces and Berar.	Berar*	?	?	0	0·75	−0·75
	Central Provinces (West)*	?	?	0·17	0·53	−0·36
	Do. (Central)*	?	?	0·41	0·37	+0·04
	Do. (East)*	?	?	0·27	0·38	−0·11
Bombay (North)	Gujarat	0·1	0·1	0·02	0·06	−0·04
	Kathiawar	0·5	0·2	0·17	0·04	+0·13
	Sind	0·4	?	0·09	0·06	+0·03

Province.	Division.	Number of Rainy days. Actual, December 1894.	Number of Rainy days. Normal, December.	Rainfall. Actual, December 1894.	Rainfall. Normal, December.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Rajputana and Central India.	Central India (East)	2·6	?	1·21	0·41	+0·80
	Rajputana (East), Central India (West)	2·9	?	1·61	0·19	+1·42
	Rajputana (West)	1·2	?	0·62	0·02	+0·60
Madras	East Coast (North)	0	0·8	0·01	0·99	−0·98
	Do. (do.) (a)	0	0·7	0	0·34	−0·34
	Hyderabad (South)*	?	?	0	0·27	−0·27
	Madras (Central)	0·2	0·9	0·04	0·46	−0·42
	East Coast (Central)	1·2	2·9	0·38	2·72	−2·34
	Do. (South)	4·4	5·2	2·73	5·13	−2·40
	Madras (South)	4·1	4·8	1·87	3·93	−2·06

* Note—The figures entered against divisions marked with asterisk have been obtained from the weekly telegraphic reports.

British Baluchistan received general rainfall during three periods, *viz.*, from the 8th to the 10th, the 22nd and 23rd, and from the 28th to the end of the month. The falls were generally light, and the total fall of the month ranged between one and three inches. It was actually or practically *nil* in the Kachhi Desert Tract. The average rainfall of the month in Baluchistan is, so far as can be judged from the data of three stations, a third of an inch in amount. The actual rainfall of the month was hence in large excess over the whole of the Baluchistan plateau. The following gives a comparative statement for the three stations for which normal data are available :—

Station.	Rainfall. Actual December 1894.	Rainfall. Normal, December.	Rainfall. Variation from normal.
Quetta	1·90	0·36	+1·54
Pishin	1·61	0·35	+1·26
Kalat	·930	0·30	+0·63

The rainfall of the month was unusually heavy in the Punjab. The following gives a statement of the periods and distribution of the rainfall :—

1st.—The 4th and 5th, during which the hill and submontane districts of the East Punjab received light to moderate rain.

2nd.—The 11th to the 15th. The rainfall during this period was heavy in the hill, the south-eastern and submontane districts, and light in the northern districts. The Dera Ismail Khan, Kohat, Bannu, Shahpur, Lahore, Ferozepore and Montgomery districts obtained practically no rain during this period. Heavy downpours from thunderstorms were received in several districts during this period. The following gives the more noteworthy falls in 24 hours :—

Date.	District.	Station.	Heaviest rainfall in 24 hours preceding 8 A. M. of date.
			Inches.
11th	Gurdaspur	Dalhousie	3·00
12th	Hoshiarpur	Una	2·18
,,	Kangra	Palampur	3·60
,,	Ditto	Dera	2·95
,,	Ditto	Dharmsala	5·00
,,	Ditto	Nurpur	2·69
13th	Ditto	Palampur	2·24
,,	Ditto	Hamirpur	2·15
,,	Ditto	Kangra	2·12
,,	Hoshiarpur	Una	2·26
15th	Delhi	Delhi	2·10

3rd.—The 24th and 25th. The rainfall during this period was more generally distributed than during the previous disturbance. Light to moderate falls occurred in all districts. The largest amounts were received in the hill and submontane districts. The following amounts exceeding 2½ inches in 24 hours were received :—

Date.	District.	Station.	Rainfall in 24 hours, preceding 8 A. M. of date.
			Inches.
24th	Gurdaspur	Dalhousie	2·64
25th	Ditto	Pathankot	2·55
,,	Hoshiarpur	Hoshiarpur	3·00
,,	Ditto	Una	2·58
,,	Kangra	Dharmsala	3·50
,,	Ditto	Palampur	2·80

4th.—The 29th and 30th. The hill districts and the districts of Peshawar, Rawalpindi and Hazara received light to moderate showers during this period.

The following is a statement of the rainfall of the month in the six divisions of the province :—

Division.	Number of rainy days.			Rainfall.			
	Actual, December 1894.	Normal, December.	Variation from normal.	Actual, December 1894.	Normal, December.	Variation from normal.	Percentage variation.
				Inches.	Inches.	Inches.	
Punjab South . .	2·6	0·4	+2·2	1·05	0·24	+0·81	+338
„ Central .	3·8	0·5	+3·3	2·02	0·28	+1·74	+621
„ Submontane	5·6	0·8	+4·8	3·60	0·58	+3·02	+521
„ Hills . .	8·5	1·3	+7·2	7·55	0·88	+6·67	+758
„ North-West	2·2	0·8	+1·4	0·68	0·51	+0·17	+ 33
„ West . .	1·2	0·2	+1·0	0·30	0·12	+0·18	+150

The rainfall was hence in slight excess in the north-west divisions, in moderately large excess relatively to the normal in the western division, and in very large excess in the remaining four divisions, which received from four to nine times the normal fall of the period.

The North-Western Provinces obtained fairly general rain during the first three cold weather disturbances of the month. The following gives a brief statement of the periods and distribution of the rainfall of the month :—

1st.—The 3rd and 4th. Light showers were received in the hill and submontane districts.

2nd.—The 11th to the 15th. The hill, submontane and western districts, and the Etah, Manipuri, Farukhabad and Etawah districts obtained light to moderate daily rain during this period. No rain fell in Oudh or the eastern districts of the North-Western Provinces. The heaviest falls were recorded in the hill districts, and in the Meerut, Saharanpur and the Dehra Dun districts. The following falls of 2 inches or upwards were registered :—

Date.	District.	Station.	Heaviest fall in 24 hours, preceding 8 A.M. of date.
			Inches.
12th . .	Garhwal . .	Joshimath . .	2·39
„ . .	Dehra Dun . .	Kalsi . . .	2·00

3rd.—The 24th and 25th. The rainfall during this period extended over the whole province. It was very light in the eastern districts of the province, including Gorakhpur, Basti, Azamgarh and Ballia, and light to moderate over the remainder of the province. Falls in 24 hours, ranging between one and two inches, occurred at a considerable number of stations.

The districts of Gorakhpur, Basti, Azamgarh and Ballia received practically no rain during the month. Over the remainder of the province the rainfall was above the normal. The excess was small in amount in the eastern division of the province and in North Oudh, and was large relatively to the normal in the remaining districts. The excess was most marked in the west and submontane divisions, each of which received a total of about two inches or five times the normal of the month. The following is a comparative statement of the rainfall data of the month published in the North-Western Provinces Gazette :—

Division.	Number of rainy days.		Rainfall		Variation.	Percentage variation.
	Actual, December 1894.	Normal, December.	Actual, December 1894.	Normal, December.		
			Inches.	Inches.	Inches.	
North-Western Provinces (East).	0·7	0·4	0·30	0·26	+0·04	+ 15
Oudh (South) . .	1·6	0·6	0·83	0·41	+0·42	+102
„ (North) . .	1·3	0·6	0·43	0·38	+0·05	+ 13
North-Western Provinsce (Central).	2·4	0·4	1·03	0·37	+0·66	+180
North-Western Provinces (West)	3·9	0·5	1·80	0·34	+1·46	+430
North Western Provinces (Submontane).	4·1	0·7	2·04	0·41	+1·63	+400

Rajputana obtained general rain from the 10th to the 14th during the second disturbance of the month. The falls occurred chiefly as thunder-showers, and hence varied very largely in amount at neighbouring stations. Falls of one inch or upwards in 24 hours were recorded at a large number of stations during this period, the heaviest being a fall of 3·4 inches at Jawaja in Ajmere-Merwara. The central and eastern states, including Jeypore, Ulwar and Bhurtpore, received moderate and general rain from the 23rd to the 25th. The rainfall of the month was unusually large in amount, more especially in Jeypore

Ulwar and Bhurtpore. The following table gives comparative data for the larger states :—

STATE.	RAINFALL.		
	Actual, December 1894.	Normal, December.	Variation from normal.
	Inches.	Inches.	Inches.
Jeysulmere	0·01	0	+0·01
Jodhpore	0·70	0·02	+0·68
Jeypore	1·73	0·18	+1·55
Ulwar	2·30	0·39	+1·91
Bhurtpore	2·03	0·22	+1·81
Dholpur	1·29	?	?
Kerowlee	0·62	0·19	+0·43
Kotah	0·88	0·27	+0·61
Ajmere	2·18	0·22	+1·96
Oodeypore	1·00	0·08	+0·92

Central India received light to moderate showers in the second, third and fourth periods of rainfall during the month. Bhopal obtained rain, chiefly from the 12th to the 14th and from the 19th to the 21st, Gwalior from the 12th to the 14th, and Bundelkhand and Rewah from the 23rd to the 25th. The following table gives comparative data for the larger divisions :—

STATE.	RAINFALL.		
	Actual, December 1894.	Normal, December.	Variation from normal.
	Inches.	Inches.	Inches.
Bhopal	2·20	0·53	+1·67
Gwalior	0·85	0·25	+0·60
Rewah	0·78	0·56	+0·22
Bundelkhand	0·99	0·46	+0·53

No rain fell over the greater part of Bengal during the month. Some local showers were received from the 5th to the 8th in North, East, and South-West Bengal, and again on the 21st and 22nd in North and South-West Bengal. Moderate showers, giving light general rain, fell in the Backerganj, Noakhali and Chittagong districts on the 15th, 16th and 17th. The average normal rainfall over the whole province in December is less than three-tenths, ranging from one-tenth in North Bihar to five-tenths in Orissa. The average total rainfall of the month was less than a tenth of an inch (and hence practically *nil*) in all divisions, except North Bengal, for which it was ·32 inch and East Bengal for which it was 0·47 inch.

The Brahmaputra Valley districts received light showers on the 4th, 5th and 6th. Some local showers fell in Assam Surma (or Cachar) on the 20th, 21st and 22nd, and light to moderate rain in the Brahmaputra valley on the 21st and 22nd and again on the 28th. Amounts slightly exceeding one inch were registered at a few stations during this period. The rainfall of the month averaged less than a tenth of an inch in Assam Surma. The mean rainfall of the month in the Brahmaputra valley was nine-tenths of an inch and five-tenths of an inch above the normal.

The month was rainless in Tenasserim and Lower and Central Burma. Light showers fell in Upper Burma and Arakan, chiefly on the 21st and 22nd. The rainfall of the month was small in amount, averaging less than half an inch.

The Central Povinces, more especially the Jubbulpore, Nerbudda and Chhatisgarh Commissionerships, received light to moderate thunder-showers on the 20th, 21st and 22nd. The falls were heaviest in the Saugor and Hoshangabad districts, giving each an average total slightly exceeding half an inch. The total rainfall of the month was in slight excess in the northern and eastern districts, and was small in amount in the southern districts.

No rain fell over the greater part of the Bombay Presidency. Light showers were received in Sind, Kathiawar and Gujarat on the 10th and the 11th, in Gujarat on the 20th and in Sind on the 31st. The average total fall of the month in Sind was less than a tenth of an inch, and in Kathiawar less than two-tenths and hence small in amount and of no importance.

The rainfall in Madras was very scanty. No rain fell in the Ganjam or Circars coast districts, or in the Anantapur, Bellary and Kurnool districts of Central Madras, and practically none (*i e.*, less than an average of a tenth of an inch) in the South Canara and Coimbatore districts. The rainfall was due to intensified north east monsoon winds and not to the retreating south west monsoon current, and occurred chiefly in the Coromandel coast districts and the southern districts and during the following periods :—

1st.—From the 1st to the 5th. The Tanjore, Madura Tinnevelly and South Arcot districts obtained daily moderate rain during this period and Chingleput, North Arcot and the Nilgiri districts light to moderate showers, chiefly on the 1st and 2nd.

2nd.—From the 16th to the 24th. The Tanjore district obtained daily rain during this period; the Nellore, Chingleput, North Arcot and South Arcot districts light showers on the 19th and 20th and the Tinnevelly, Madura and Trichinopoly districts light occasional showers during the whole period.

The following gives comparative data for the six divisions of the presidency :—

Division.	Rainfall.			
	Actual, December 1894.	Normal, December.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Madras, Central	0·04	0·46	—0·42	—91
Madras East Coast, Central	0·38	2·72	—2·34	—86
Madras East Coast, South	2·73	5·13	—2·40	—47
Madras, South	1·87	3·93	—2·06	—52
Madras South, Central	0·11	1·40	—1·29	—92
Malabar	0·08	0·80	—0·72	—90

The distribution of the rainfall of the month is more fully shown by the following table, giving data for each of the Collectorates in the Madras Presidency :—

District.	No. of rainy days.		Rainfall.		
	Actual, December 1894.	Normal, December.	Actual, December 1894.	Normal, December.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam	0	1·1	0·01	1·40	—1·39
Vizagapatam	0	0·8	0	1·10	—1·10
Godavari	0	0·7	0·01	0·69	—0·68
Kistna	0	0·7	0	0·52	—0·52
Nellore	1·2	2·9	0·38	2·72	—2·34
Chingleput	2·8	4·7	1·92	5·03	—3.11
Madras	3·0	5·2	0·74	5·24	—4·50
North Arcot	1·9	3·3	1·11	2·83	—1·72
South Arcot	3·8	5·4	20·2	5·64	—3·62
Tanjore	9·0	7·3	6·05	8·02	—1·97
Trichinopoly	2·5	5·2	0·92	3·69	—2·77
Madura	4·1	4·9	2·29	4·02	—1·73
Tinnevelly	4·0	4·6	1·36	3·80	—2·44
Malabar	0·3	1·8	0·12	1·02	—0·90
South Canara	0	0·9	0	0·48	—0·48
Salem	0·6	2.7	0·17	1·47	—1·30
Coimbatore	0·1	2·5	0·02	1·31	—1·29
Nilgiris	1·2	4·5	0·41	2·95	—2·54
Cuddapah	0·7	1·7	0·14	1·06	—0·92
Anantapur	0	0·7	0	0·23	—0·23
Bellary	0	0·4	0	0·17	—0·17
Kurnool	0	0·6	0	0·28	—0·28

The Travancore and Pudukota States had light showers during the first five days of the month. No rain fell in Coorg or Mysore during the month.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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. Burma Coast and Bay Islands.		...	...	+·013	...	...	...	...	...	...	...	86·0	+0·4	66·9	−0·6	76·4	−0·2	19·1	...	...	...	...	29·1
Bay Islands	Port Blair	61	29·928	?	29·920	30·001	23rd	29·795	12th	·206	79·5	85·9	?	77·0	?	81·5	?	8·9	89·9	3rd	70·4	27th & 29th.	19·5
Tenasserim	Mergui	96	29·922	?	29·951	30·021	20th	29·836	1st	·185	78·7	88·7	?	67·1	?	77·9	?	21·6	93·3	11th	62·6	21st & 25th.	30·7
	Tavoy	26	30·012	?	29·969	30·118	19th	29·909	11th	·209	72·2	89·3	?	62·9	?	76·1	?	26·4	93·2	1st	57·2	24th	36·0
	Moulmein	94	29·956	+·014	29·988	30·051	18th	29·869	5th	·182	71·2	88·4	+1·2	67·0	+0·5	77·7	+0·9	21·4	94·0	1st	60·9	27th	33·1
	Toungoo	181	29·868	+·013	29·999	29·967	23rd	29·779	5th	·188	65·6	83·4	−0·6	61·0	−1·6	72·2	−1·1	22·4	87·8	2 days	52·6	30th	35·2
Lower Burma	Rangoon	41	29·995?	−·001?	29·974?	30·099	20th	29·905	5th	·194	70·4	88·9	+1·6	66·7	−1·0	77·8	+0·3	22·2	92·2	2 days	59·3	29th	32·9
	Bassein	27	30·027	+·018	29·990	30·127	23rd	29·943	5th	·184	69·4	85·2	+0·8	64·3	−1·0	74·8	−0·1	20·9	88·7	20th	57·5	30th	31·2
	Diamond Island	41	29·994	+·014	29·970	30·085	23rd	29·919	11th	·166	75·9	82·7	−1·6?	73·5	+1·5	78·1	−0·1	9·2	85·6	2 days	70·9	30th	14·7
Arakan	Akyab	20	30·037	+·008	30·000	30·146	23rd	29·964	5th	·182	65·7	81·1	−0·8	62·4	−2·0	71·8	−1·4	18·7	84·2	4th	55·7	28th	28·5
2. Burma Inland		...	...	+·017	...	...	...	...	...	...	...	80·4	−0·2	56·2	+0·5	68·3	+0·2	24·1	...	...	...	...	36·8
Central Burma	Thayetmyo	134	29·941	+·017	30·021	30·038	23rd	29·827	5th	·211	67·6	85·1	+0·7	58·0	−0·9	71·6	−0·1	27·1	89·1	3 days	51·2	5 days	37·9
	Minbu	?	29·922	?	?	30·035	23rd	29·808	5th	·227	68·3	86·6	?	59·3	?	73·0	?	27·3	90·6	4 days	52·0	25th	38·6
	Yamethin	?	29·391	?	?	29·479	20th	29·271	5th	·208	63·4	85·1	?	57·6	?	71·4	?	27·5	91·1	3 days	50·1	3 days	41·0
	Taunggyi*	?			Not recorded.						49·1	71·3	?	44·4	?	57·9	?	26·9	75·2	2 days	36·6	27th	38·6
Upper Burma	Mandalay	?	29·810	?	?	29·918	23rd	29·693	5th	·225	65·5	80·9	?	60·5	?	70·7	?	20·4	86·0	5th	53·2	30th	32·8
	Kindat	?	29·730?	?	?	29·840	20th	29·609	5th	·231	60·0	74·7	−1·0	57·2	+1·9	66·0	+0·5	17·5	79·8	5th	50·5	30th	29·3
	Lashio†	?	27·254	?	?	27·341	20th	27·180	5th	·161	53·4	73·4	?	48·6	?	61·0	?	24·8	77·6	1st	39·6	29th	38·0
	Bhamo	?	29·711	?	?	29·829	23rd	29·596	5th	·233	57·1	76·7	?	52·4	?	64·6	?	24·3	83·0	4th	42·9	29th	40·1
3. Assam		...	...	+·004	...	...	...	...	...	...	...	73·9	−1·0	54·8	+0·9	64·4	−0·1	19·1	...	...	...	...	29·6
Assam (Surma)	Silchar	104	29·982	+·007	30·044	30·127	23rd	29·903	4th	·224	60·9	79·0	−0·5	57·3	+2·1	68·2	+0·8	21·7	83·6	21st	51·4	25th	32·2
Brahmaputra	Sibsagar	333	29·789	+·009	30·099	29·960	23rd	29·689	4th	·271	55·5	69·2	−1·5	51·2	+0·7	60·2	−0·4	18·0	74·3	3 days	43·1	31st	31·2
	Dhubri	115	29·982	−·003	30·059	30·132	23rd	29·885	5th	·247	58·5	73·5	−1·1	55·9‡	0	64·7‡	−0·6	17·6	77·1	6th	51·7	31st	25·4
4. Bengal and Orissa		...	...	+·005	...	...	...	...	...	...	...	76·6	−0·3	57·1	+1·9	66·9	+0·8	19·5	...	...	...	...	3·5
East Bengal	Chittagong	87	29·979	+·003	30·017	30·111	23rd	29·901	11th	·210	64·0	77·3?	−0·6?	59·1	+0·7	68·2?	+0·1	18·2	80·7	2 days	52·6	29th	28·1
	Lungleh	?			Not recorded.						57·3	65·0	?	53·2	?	59·1	?	11·8	69·9	3rd	45·2	28th	24·7
	Noakhali	43	30·034	?	30·025	30·163	23rd	29·960	5th	·203	64·5	77·1	?	56·9	?	67·0	?	20·2	81·0	7th	49·6	29th	31·4
	Comilla	36	30·045	?	30·030	30·175	23rd	29·972	11th	·203	64·3	77·8	?	56·3	?	67·1	?	21·5	81·4	3 days	48·1	29th	33·3
	Sirajganj	49	30·034	?	30·035	30·175	23rd	29·942	5th	·233	60·3	75·6	?	56·2	?	65·9	?	19·4	79·3	16th	50·7	28th	28·6
	Narayanganj	26	30·051	+·011	30·026	30·185	23rd	29·973	3rd	·212	63·4	76·9	−1·5	59·0	+1·7	68·0	+0·1	17·9	79·6	2nd	52·8	28th	26·8
	Barisal	13	30·065	0	30·024	30·196	23rd	29·979	5th	·217	63·9	76·7	−0·5	58·5	+2·3	67·6	+0·9	18·2	81·3	6th	51·5	29th	29·8
	Mymensingh	59	30·014	−·009?	30·028	30·149	23rd	29·936	3rd	·213	60·3	76·1	−0·4	55·8	+1·8	66·0	+0·7	20·3	80·0	18th	50·6	28th	29·4
Deltaic Bengal	Faridpur	46	30·044	?	30·039	30·182	23rd	29·954	5th	·228	62·9	75·8	?	57·6	?	66·7	?	18·2	80·2	6th	51·0	28th	29·2
	Jessore	33	30·053	+·006	30·034	30·183	23rd	29·949	5th	·234	61·3	76·9	−0·9	56·3	+1·1	66·6	+0·1	20·6	80·6	6th	47·8	28th	32·8
	Calcutta	21	30·076	+·005	30·044	30·209	23rd	29·959	5th	·250	62·3	76·3	+0·2	58·2	+2·1	67·3	+1·2	18·1	81·7	6th	51·2	28th	30·5
	Saugor Island	25	30·070	+·004	30·041	30·199	23rd	29·963	5th	·236	64·1	75·8	0	60·2	+1·1	68·0	+0·6	15·6	79·2	3 days	52·2	28th	27·0
	Krishnagar	47	30·048	?	30·047	30·180	23rd	29·926	5th	·254	60·1	77·2	?	54·9	?	66·1	?	22·3	81·5	6th	46·3	28th	35·2
	Midnapore	149	29·959	?	30·062	30·092	23rd	29·831	5th	·261	63·1	79·5	?	56·5	?	68·0	?	23·0	86·3	6th	49·2	29th	37·1

* Mean of 23 days. † Mean of 30 days. ‡ Mean of 29 days.

I.

in India, Burma, etc., in December 1894.

Wind Direction. Number of Winds from: N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 December 1894.	Normal rainfall for period, 1st October to 31st December.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	0·23	1·09	−0·84	...	...	...	...	**1. Burma Coast and Bay Islands.**	
1	6	10	5	4	3	...	...	2	7·8	7·2	+ 8	79	·800	4·7	1	?	?	1·74	5·94	− 4·20	18·28	27·08	− 8·80	1·60	Port Blair .	Bay Islands.
...	14	6	2	2	1	...	...	6	1·6	1·8	− 11	69	·675	4·0	0	?	?	0	0·57	− 0·57	5·73	17·74	−12·01	0	Mergui .	Tenasserim.
23	3	4	1	...	...	...	...	...	1·7	?	?	77	·604	0	0	?	?	0	?	?	14·74	?	?	0	Tavoy.	
...	2	14	11	3	...	...	...	1	2·3	2·6	− 12	77	·591	3·2	0	0·18	−0·18	0	0·05	− 0·05	12·63	10·47	+ 2·16	0	Moulmein.	
6	20	...	...	...	...	...	...	5	1·0	2·3	− 57	90	·583	2·5	0	0·36	−0·36	0	0·20	− 0·20	6·46	8·33	− 1·87	0	Toungoo.	
...	8	14	6	1	1	...	...	1	5·1	4·9	+ 4	79	·594	1·9	0	0·45	−0·45	0	0·09	− 0·09	4·44	9·81	− 5·37	0	Rangoon .	Lower Burma.
5	4	13	1	...	...	...	...	8	4·5	2·7	+ 67	87	·594	2·4	0	0·55	−0·55	0	0·14	− 0·14	13·71	12·56	+ 1·15	0	Bassein.	
...	6	22	3	...	...	...	...	...	13·9	7·4	+ 74	73	·650	3·0	0	0·90	−0·90	0	0·87	− 0·87	7·34	17·30	− 9·96	0	Diamond Island.	
...	23	7	...	...	1	...	...	...	2·5	2·2	+ 14	90	·574	3·0	2	1·27	+0·73	0·30	0·88	− 0·58	10·66	14·26	− 3·60	0·20	Akyab .	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·31	0·10	+0·57	...	...	...	...	**2. Burma Inland.**	
...	14	5	3	1	2	1	1	4	2·7	3·2	− 16	76	·510	1·2	0	0·36	−0·36	0	0·10	− 0·10	2·11	6·50	− 4·39	0	Thayetmyo	Central Burma.
3	3	1	...	...	...	2	22	4·3	?	?	75	·525	0·9	0	?	?	0	?	?	1·62	?	?	0	Minbu.	
4	12	2	...	1	1	...	11	3·0	?	?	90	·503	1·5	1	?	?	0·10	?	?	6·72	?	?	0·10	Yamethin.	
12	...	...	...	3	5	3	...	...	?	?	?	89	·324	2·4	0	?	?	0	?	?	7·61	?	?	0	Taunggyi*	
25	2	1	1	1	1	...	...	...	1·2	?	?	87	·549	4·0	0	?	?	0	?	?	17·39	?	?	0	Mandalay .	Upper Burma.
27	1	...	...	...	...	1	1	1	1·0	?	?	96	·507	2·7	2	?	?	1·33	0·09	+ 1·24	8·48	8·72	− 0·24	1·01	Kindat.	
...	14	15	...	...	...	...	...	1	?	?	?	94	·391	6·7	1	?	?	0·86	?	?	6·57	?	?	0·83	Lashio.†	
22	3	3	...	...	...	...	...	2	1·8	?	?	94	·444	6·3	1	?	?	0·15	?	?	5·11	?	?	0·11	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·55	0·47	+0·08	...	...	...	...	**3. Assam.**	
31	...	...	...	...	...	...	...	...	0·8	1·9	− 58	92	·496	6·2	1	1·09	− 0·09	0·10	0·71	− 0·61	27·86	7·45	+20·41	0·10	Silchar .	Assam (Surma).
19	...	6	1	3	1	1	...	...	2·1	1·6	+ 31	99	·441	2·7	2	2·18	−0·18	0·85	0·63	+ 0·22	8·18	6·30	+ 1·88	0·45	Sibsagar .	Brahmaputra.
2	4	19	6	...	...	...	...	...	6·1	4·5	+ 36	94	·457	3·4	1	0·13	+0·87	0·70	0·06	+ 0·64	8·06	3·76	+ 4·30	0·68	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·27	0·28	−0·05	...	...	...	...	**4. Bengal and Orissa.**	
1	7	18	1	1	...	...	1	2	2·3	3·2	− 28	91	·549	2·7	4	0·91	+3·09	1·76	0·74	+ 1·02	11·22	7·69	+ 3·53	1·27	Chittagong	East Bengal.
				Not	recorded.			...	?	?	?	83	·399	?	4	?	?	1·65	?	?	23·05	?	?	0·73	Lungleh.	
...	21	7	1	1	...	...	...	1	2·4	?	?	89	·543	1·8	1	0·65	+0·35	1·15	0·59	+ 0·56	11·23	9·27	+ 1·96	1·02	Noakhali.	
22	7	2	...	...	...	...	...	...	0·8	?	?	92	·554	2·1	0	0·61	−0·61	0·06	0·44	− 0·38	6·12	5·61	+ 0·51	0·04	Comilla.	
13	5	1	...	...	...	...	3	9	0·8	?	?	92	·488	1·5	1	0·50	+0·50	0·62	0·14	+ 0·48	7·10	4·90	+ 2·20	0·62	Sirajganj.	
7	6	3	2	...	1	1	1	10	2·6	1·9	+ 37	91	·533	2·5	1	0·73	+0·27	0·14	0·15	− 0·01	9·11	5·85	+ 3·26	0·12	Narayanganj	
23	4	1	...	...	...	...	...	3	1·8	?	?	89	·531	2·7	3	0·50	+2·50	1·12	0·27	+ 0·85	9·03	6·81	+ 2·22	0·67	Barisal.	
10	7	5	3	2	...	...	1	3	1·7	?	?	93	·484	1·9	0	0·40	−0·40	0	0·14	− 0·14	12·17	6·21	+ 5·96	0	Mymensingh.	
21	3	...	1	...	1	...	1	4	1·2	?	?	89	·517	1·8	0	0·40	−0·40	0·05	0·15	− 0·10	11·97	4·84	+ 7·13	0·05	Faridpur .	Deltaic Bengal.
18	4	1	1	...	...	...	...	7	1·5	1·7	− 12	90	·489	1·5	0	0·64	−0·64	0·05	0·24	− 0·19	9·60	6·08	+ 3·52	0·05	Jessore.	
16	10	4	...	...	...	...	...	1	1·8	3·0	− 40	85	·493	1·9	0	0·73	−0·73	0·08	0·31	− 0·23	7·53	5·12	+ 2·41	0·08	Calcutta.	
...	15	12	1	1	...	...	1	1	8·2	6·4	+ 28	90	·541	2·9	1	1·27	−0·27	0·66	0·37	+ 0·29	18·67	10·45	+ 8·22	0·65	Saugor Island.	
2	7	2	2	...	1	1	6	10	2·8	?	?	82	·464	2·0	0	0·25	−0·25	0	0·11	− 0·11	6·63	4·64	+ 1·99	0	Krishnagar.	
3	19	1	...	...	1	1	...	6	2·8	?	?	73	·432	1·0	0	0·40	−0·40	0	0·37	− 0·37	6·65	5·38	+ 1·27	0	Midnapore.	

* Mean of 23 days. † Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of air. 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.
Central Bengal	Bankura	298	29·775	?	30·042	29·887	23rd	29·649	5th	·238	61·0	77·8	?	55·8	?	66·8	?	22·0	83·1	5th & 6th	48·3	29th	34·8
	Raniganj	334	29·765	?	30·070	29·900	23rd	29·627	5th	·273	59·5	77·5	?	55·2	?	66·4	?	22·3	83·0	6th	47·7	29th	35·3
	Burdwan	99	30·002	+·005	30·053	30·126	23rd	29·870	5th	·256	61·7	77·6	−0·1	57·4	+1·5	67·5	+0·7	20·2	83·3	6th	51·4	28th	31·9
	Naya Dumka	489	29·597	?	30·076	29·744	23rd	29·467	5th	·277	59·2	75·0	?	53·3	?	64·2	?	21·7	79·3	6th & 16th	45·3	28th	34·0
	Berhampore	67	30·031	+·002	30·049	30·172	23rd	29·902	5th	·270	61·6	75·8	−0·7	58·3	+3·0	67·1	+1·2	17·5	79·8	6th	51·7	28th	28·1
	Rampur Boalia.	70	30·015	?	30·037	30·168	23rd	29·894	5th	·269	63·6	75·8	?	56·5	?	66·2	?	19·3	79·6	16th	51·3	29th	28·3
	Malda*	72	30·025	?	30·053	30·184	23rd	29·915	4th	·269	60·4	76·0	?	53·9	?	65·0	?	22·1	79·3	2nd & 4th	48·6	28th	30·7
	Bogra	61	30·015	+·010	30·031	30·160	23rd	29·915	5th	·245	60·8	76·4	−0·5	55·5	+1·9	65·8	+0·7	20·9	80·1	16th	50·2	28th	29·9
North Bengal	Dinajpur	123	29·973	+·004	30·057	30·123	23rd	29·871	5th	·252	59·0	75·8	−0·8	54·2	+2·9	65·0	+1·1	21·6	79·3	3 days	49·4	2 days	29·9
	Rangpur	123	29·970	?	30·053	30·125	23rd	29·865	5th	·260	59·5	75·2	?	54·1	?	64·7	?	21·1	78·6	3 days	48·9	28th	29·7
	Jalpaiguri	294	29·816	+·012	30·074	29·976	23rd	29·714	5th	·260	59·2	75·3	0	54·0	+1·6	64·7	+0·8	21·3	79·9	1st	48·1	29th	31·8
Orissa	Balasore	56	30·041	−·014?	30·046	30·171	23rd	29·923	5th	·248	62·4	79·3	+0·5	57·0	+2·6	68·2	+1·6	22·3	84·9	6th	48·9	29th	36·0
	False Point	21	30·071	+·002	30·034	30·197	23rd	29·975	12th	·222	65·7	78·3	+1·0	58·5	+1·2	68·4	+1·1	19·8	82·9	6th	50·0	29th	32·9
	Cuttack	80	30·013	0	30·040	30·127	23rd	29·903	5th	·224	65·3	81·3	−0·7	60·9	+2·6	71·2	+1·0	20·4	84·8	6th	52·6	29th	32·2
	Shortt's Island	?	30·074	?	?	30·172	18th	29·965	5th	·207	71·8	77·4	?	67·7	?	72·5	?	9·7	82·2	5th	63·1	31st	19·1
	Puri*	24	30·075	?	30·039	30·197	23rd	29·974	12th	·223	68·1	80·0	?	63·4	?	71·7	?	16·6	83·2	8th, & 17th	55·6	29th	27·6
5. Gangetic Plain and Chota Nagpur.		...	...	+·001	...	...	...	...	...	...	...	74·3	−0·4	52·3	+3·1	63·3	+1·4	22·0	...	...	...	...	33·9
Chota Nagpur	Hazaribagh	2,007	28·031	+·005	30·070	28·150	23rd	27·925	5th	·225	58·5	72·1	+0·5	51·5	+1·3	61·8	+0·9	20·6	77·8	5th	42·2	28th	35·6
	Ranchi	2,128	27·925	?	30·084	28·065	23rd	27·819	5th	·246	58·3	72·4	?	51·5	?	62·0	?	20·9	76·5	5th	44·4	27th	32·1
	Daltonganj	730?	29·348	?	30·079	29·480	23rd	29·224	4th	·256	56·2	75·8	?	49·6	?	62·7	?	26·2	80·4	5th.	42·0	28th	38·4
	Chaibassa	760	29·309*	−·004?	30·058*	29·435	23rd	29·193	5th	·242	58·7*	79·2*	+1·1	54·4‡	+2·4	66·9‡	+1·8	24·8	83·1	5th	45·4	29th	37·7
Bihar, South	Gaya	375	29·727	+·008?	30·080	29·865	23rd	29·590	5th	·275	58·6	76·4	+0·6	54·0	+2·9	65·2	+1·8	22·4	80·8	2nd	48·4	28th	32·4
	Dehri	351	29·757	?	30·081	29·894	23rd	29·625	5th	·269	62·8	75·8	?	54·6	?	65·3	?	21·2	81·3	2nd	49·0	27th & 28th	32·3
	Patna	183	29·925	−·015	30·071	30·069	23rd	29·793	5th	·276	60·6	73·9	−0·2	55·3	+4·2	64·6	+2·0	18·6	78·5	2nd	46·9	28th	31·6
	Arrah	190	29·911	?	30·065	30·055	23rd	29·770	5th	·285	58·3	75·4	?	53·1	?	64·3	?	22·3	80·3	2nd	45·8	29th	34·5
	Buxar	239	29·862	?	30·070	30·003	23rd	29·735	5th	·268	60·3	75·1	?	53·9	?	64·5	?	21·2	80·1	2nd	48·9	29th & 30th	31·2
Bihar, North	Purnea	125	29·976	+·014	30·062	30·137	23rd	29·856	5th	·281	56·4	75·4	−0·5	53·0	+3·6	64·3	+1·6	22·4	79·6	16th	47·5	29th	32·1
	Bhagalpur	160	29·935	?	30·057	30·089	23rd	29·794	5th	·295	60·2†	75·6†	?	52·5†	?	64·1†	?	23·1	79·4	6th	46·2	28th	33·2
	Darbhanga	166	29·933	0	30·062	30·087	23rd	29·810	5th	·277	59·2	74·5	+0·4	55·6	+1·6	65·1	+1·0	18·9	77·9	3rd	50·9	28th	27·0
	Muzaffarpur	178	29·928	?	30·070	30·078	23rd	29·802	5th	·276	57·8	73·5	?	52·5	?	63·0	?	21·0	77·7	2nd & 3rd.	47·3	28th & 29th	30·4
	Motihari	224	29·876	?	30·071	30·028	23rd	29·748	5th	·280	56·7	74·6	?	48·9	?	61·8	?	25·7	78·0	2nd & 3rd	43·3	29th	32·7
	Chapra	181	29·917	?	30·062	30·062	23rd	29·776	5th	·286	58·2	74·3	?	54·0*	?	64·2*	?	20·3	79·0	2nd	47·7	29th	31·3
N.-W. Provinces (Eastern Districts).	Benares	267	29·834	+·002	30·075	29·961	23rd	29·704	4th	·257	56·5	74·5	−0·4	51·8	+4·0	63·2	+1·8	22·7	79·6	1st	44·5	29th	35·1
	Allahabad	309	29·791	−·001	30·075	29·911	23rd	29·647	4th	·264	58·2	74·9	−0·1	52·1	+4·7	63·5	+2·3	22·8	81·7	1st	44·9	29th	36·8
N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·827	−·003	30·059	29·967	23rd	29·703	5th	·264	58·2	71·5	−2·9	52·6	+2·4	62·1	−0·3	18·9	76·5	1st	47·8	29th	23·7
Oudh, South	Lucknow	368	29·725	+·005	30·079	29·866	23rd	29·579	4th	·287	56·4	72·8	−2·7	49·4	+3·8	61·1	+0·6	23·4	80·9	1st	42·0	29th	37·9
Oudh, North	Bahraich	403	29·680?	?	30·075?	29·790	20th	29·557	4th	·233	56·1	72·7	?	50·9	?	61·8	?	21·8	79·4	1st	43·0	28th	36·4
N.-W. Provinces (Central).	Cawnpore	416	29·674	?	30·079	29·795	23rd	29·511	4th	·284	56·0	73·1	?	50·3	?	61·7	?	22·8	82·3	1st	44·0	10th & 29th	38·3
	Mainpuri	516	29·562?	?	30·075?	29·685	18th	29·407	11th	·278	53·8	71·2	?	49·5	?	60·4	?	21·7	81·3	1st	43·1	8th & 27th	38·2

* Mean of 30 days. † Mean of 25 days. ‡ Mean of 22 days.

I—*continued.*

in India, Burma, etc., in December 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 Dec. 1894.	Normal rainfall for period, 1st Oct. to 31st Dec.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
24	...	...	1	...	...	...	3	3	1·0	P	P	76	·415	1·1	0	0·50	− 0·50	0·09	0·22	− 0·13	4·08	4·62	− 0·54	0·09	Bankura .	Central Bengal.
11	13	1	...	...	...	...	1	5	1·4	P	P	81	·415	1·8	0	0·35	− 0·35	0	0·12	− 0·12	4·98	3·73	+ 1·25	0	Raniganj.	
12	8	1	...	...	...	1	1	8	1·2	1·9	−37	76	·426	1·8	0	0·27	− 0·27	0	0·16	− 0·16	5·57	4·27	+ 1·30	0	Burdwan.	
5	5	...	...	1	...	...	6	14	2·2	P	P	82	·420	1·6	0	0·42	− 0·42	0·05	0·22	− 0·17	9·89	4·48	+ 5·41	0·05	Naya Dumka	
5	4	...	1	...	1	...	6	14	1·4	1·6	−13	87	·477	2·0	0	0·45	− 0·45	0	0·14	− 0·14	6·61	4·73	+ 1·88	0	Berhampore.	
13	15	1	...	...	...	1	1	...	3·8	P	P	85	·489	1·4	0	0·30	− 0·30	0	0·11	− 0·11	5·12	4·69	+ 0·43	0	Rampur Boalia.	
...	...	...	...	...	...	...	...	30	2·3	P	P	86	·451	0	0	0·30	− 0·30	0	0·18	− 0·18	14·22	4·72	+ 9·50	0	Malda.*	
11	19	...	...	...	...	...	...	1	?	P	P	87	·469	0	0	0·25	− 0·25	0	0·10	− 0·10	10·16	3·84	+ 6·32	0	Bogra.	
4	7	8	1	...	...	1	3	7	1·7	P	P	88	·440	1·3	0	0·30	− 0·30	0	0·09	− 0·09	6·11	4·89	+ 1·22	0	Dinajpur .	North Bengal.
3	9	16	2	...	...	1	...	...	1·5	P	P	93	·475	3·0	1	0·25	+ 0·75	0·13	0·10	+ 0·03	7·89	5·52	+ 2·37	0·13	Rangpur.	
...	17	5	2	3	...	...	...	4	1·5	P	P	86	·434	2·9	1	0·20	+ 0·80	0·24	0·09	+ 0·15	11·02	5·66	+ 5·36	0·21	Jalpaiguri.	
4	10	2	...	...	1	1	1	12	2·8	P	P	86	·494	0·3	0	0·70	− 0·70	0	0·31	− 0·31	8·51	8·05	+ 0·46	0	Balasore .	Orissa.
...	23	1	...	...	...	...	1	6	6·6	6·3	+ 5	86	·548	1·7	1	1·16	− 0·18	0·26	0·91	− 0·65	12·33	12·54	− 0·21	0·25	False Point.	
20	2	5	1	...	...	1	1	1	1·3	1·3	0	78	·488	0·9	0	1·18	− 1·18	0	0·35	− 0·35	7·94	4·15	+ 3·79	0	Cuttack.	
...	16	7	...	...	...	1	1	6	10·9	P	P	72	·564	1·3	0	P	P	0	P	P	8·12	P	P	0	Shortt's Island.	
3	17	8	...	...	...	1	...	1	7·4	P	P	77	·535	1·0	0	0·90	− 0·90	0	0·68	− 0·68	15·54	11·79	+ 3·75	0	Puri.*	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·23	0·24	−0·01	...	...	...	...	**5. Gangetic Plain and Chota Nagpur.**	
11	2	1	...	3	3	3	2	6	5·9	4·6	+ 28	76	·377	2·0	1	0·45	+ 0·55	0·17	0·25	− 0·08	11·93	3·48	+ 8·45	0·15	Hazaribagh.	Chota Nagpur.
13	1	...	...	...	...	1	4	7	4·8		P	76	·372	0·8	2	0·55	+ 1·45	0·45	0·23	+ 0·22	6·16	3·47	+ 2·69	0·30	Ranchi.	
...	2	1	2	...	...	5	3	18	1·0	P	P	83	·378	2·8	0	P	P	0	P	P	5·36	P	P	0	Daltonganj.	
3	...	...	...	1	...	11	11	4	1·3			84	·418	1·9	0	0·70	− 0·70	0	0·32	− 0·32	4·61	3·53	+ 1·08	0	Chaibassa.*	
...	...	...	3	2	19	2	4	1	5·3	1·3	+308	82	·407	1·6	1	0·27	+ 0·73	0·11	0·19	− 0·08	12·81	2·45	+10·36	0·11	Gaya .	Bihar, South.
...	...	...	2	3	4	16	5	1	4·4	P	P	82	·473	1·5	0	0·71	− 0·71	0·08	0·57	− 0·49	8·51	3·71	+ 4·80	0·08	Dehri.	
7	...	1	4	...	3	7	9	...	2·4	1·7	+ 41	81	·432	1·6	0	0·36	− 0·36	0·05	0·13	− 0·08	15·73	3·08	+12·65	0·05	Patna	
...	3	5	1	2	2	4	7	7	2·3	P	P	88	·433	2·0	0	0·35	− 0·35	0·05	0·21	− 0·16	8·16	3·64	+ 4·52	0·05	Arrah.	
3	1	2	3	1	2	5	11	3	2·1	P	P	80	·425	2·4	0	0·45	− 0·45	0·08	0·23	− 0·15	16·14	3·75	+12·39	0·08	Buxar.	
16	...	1	4	...	...	6	3	1	1·5	1·3	+ 15	94	·433	1·6	0	0·36	− 0·36	0	0·15	− 0·15	8·18	3·71	+ 4·47	0	Purnea .	Bihar, North.
11	1	...	...	2	3	7	4	3	2·3	P	P	85†	·446†	1·7	0	0·35	− 0·35	0	0·10	− 0·10	4·59	3·57	+ 1·02	0	Bhagalpur.	
12	...	...	2	2	1	4	7	3	1·8	2·0	− 10	88	·448	1·2	0	0·36	− 0·36	0	0·11	− 0·11	7·40	3·41	+ 3·99	0	Darbhanga.	
13	...	1	3	1	...	3	7	3	1·8	P	P	93	·450	1·5	0	0·20	− 0·20	0	0·13	− 0·13	7·74	3·69	+ 4·05	0	Muzaffarpur	
9	...	4	4	...	...	6	7	1	3·0	P	P	93	·431	2·0	0	0·56	− 0·56	0	0·18	− 0·18	7·92	3·69	+ 4·23	0	Motihari.	
4	1	4	1	...	1	9	10	1	2·7	P	P	92	·448	2·2	0	0·35	− 0·35	0·04	0·18	− 0·14	10·95	4·07	+ 6·88	0·04	Chapra.	
18	1	1	3	...	...	6	2	...	2·1	2·4	− 13	93	·429	2·1	2	0·45	+ 1·55	0·31	0·24	+ 0·07	13·04	2·90	+10·14	0·16	Benares .	N.-W. Provinces (Eastern Districts).
11	1	4	2	3	...	2	4	4	3·1	1·5	+107	88	·432	1·5	1	0·64	+ 0·36	0·52	0·32	+ 0·20	26·15	2·32	+23·83	0·50	Allahabad .	
...	4	...	4	1	5	3	9	5	1·3	0·9	+ 44	83	·410	2·0	0	0·45	− 0·45	0·07	0·17	− 0·10	21·23	4·04	+17·19	0·05	Gorakhpur	N.-W. Provinces (East Sub-montane).
7	4	3	2	...	1	3	2	9	0·9*	1·7	− 47	90	·408	2·6	2	0·82	+ 1·18	0·87	0·35	+ 0·52	11·00	1·23	+ 9·77	0·69	Lucknow .	Oudh, South.
5	2	5	2	2	...	3	3	9	2·4	P	P	89	·409	1·2	1	P	P	0·97?	0·45	+ 0·52	11·45	2·14	+ 9·31	0·93?	Bahraich .	Oudh, North.
17	2	2	3	...	...	...	5	2	2·6	P	P	88	·397	1·5	2	0·5	+ 1·5	0·60	0·30	+ 0·30	17·43	1·40	+16·03	0·49	Cawnpore .	N.-W. Provinces (Central).
...	8	3	2	3	2	1	4	8	0·4	P	P	84	·353	3·7	4	P	P	1·44	0·48	+ 0·96	9·80	1·30	+ 8·50	0·51	Mainpuri.	

* Mean of 30 days. † Mean of 25 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
6. Upper—Sub-Himalayas		...	...	+·003	...	...	...	...	...	...	...	66·9	−4·5	46·5	+3·2	56·7	−0·6	20·4	...	...	...	...	36·2
N.-W. Provinces (Sub-montane).	Bareilly	568	29·506	+·008	30·079	29·644	23rd	29·368	4th	·276	52·9	69·1	−3·6	49·2	+3·8	59·2	+0·1	19·9	75·7	1st & 2nd.	43·7	27th	32·0
	Dehra Dun	2,233	27·795	−·004	30·104	27·921	23rd	27·681	3rd	·240	49·5	64·8	−3·5	46·7	+1·2	55·8	−1·2	18·1	74·0	1st	40·5	26th & 27th.	33·5
	Roorkee	887	29·167	+·002	30·087	29·301	23rd	29·029	3rd	·272	50·4	67·1	−5·4	48·3	+4·9	57·7	−0·3	18·8	76·3	1st	42·0	19th & 27th	34·3
	Meerut	738	29·323	−·002	30·082	29·451	18th	29·187	3rd	·264	51·0	68·7	−4·3	49·0	+5·1	58·9	+0·4	19·7	78·1	1st	41·6	27th	36·5
Punjab, Central.	Delhi	718	29·357	+·001	30·088	29·477	18th	29·198	3rd	·279	53·7	68·3	−6·0	50·0	+1·5	59·2	−2·3	18·3	79·0	1st	44·4	27th & 28th	34·6
	Lahore	702	29·373	0	30·103	29·514	18th	29·166	3rd	·348	47·5	67·5	−4·0	44·4	+3·8	56·0	−0·1	23·1	77·8	1st	38·2	27th	39·6
Punjab (Sub-montane).	Umballa	962?	29·158?	?	30·093?	29·289	18th	28·988	3rd	·301	50·8	67·3	?	47·0	?	57·2	?	20·3	78·0	1st	42·0	19th	36·0
	Ludhiana	812	29·252	+·004	30·093	29·379	18th	29·051	3rd	·328	50·7	64·7	−6·6	48·5	+5·2	56·6	−0·7	16·2	76·6	1st	41·5	27th	35·1
Punjab, North	Sialkot	830	29·236	+·016	30·103	29·360	15th	29·077	3rd	·283	48·8	66·8	−3·4	44·2	+2·2	55·5	−0·6	22·6	75·5	1st	37·2	9th	38·3
	Rawalpindi	1,652	28·402	−·007?	30·123	28·553	15th	28·255	11th	·298	42·2	64·3	−3·3	37·6	+1·3	51·0	−1·0	26·7	74·1	2nd	32·4	3 days	41·7
7. Indus Valley and North-West Rajputana.		...	...	+·004	...	...	...	...	...	...	...	72·2	−3·2	45·6	+1·5	59·0	−0·8	26·7	...	...	...	...	46·1
Punjab, West	Peshawar	1,110	29·003	+·007	30·137	29·163	15th	28·859	3rd	·304	44·9	64·9	−2·9	40·4	+2·2	52·7	−0·4	24·5	75·1	2nd	30·4	15th	44·7
	Mardan	?	...	Not	recorded.		...	...	...	...	40·2	70·4		35·9		53·2	?	34·5	76·0	27th	29·0	27th	47·0
	Khushab	612	29·467?	?	30·097?	29·638	18th	29·276	3rd	·362	49·6	69·8	?	45·9	?	57·9	?	23·9	78·9	1st & 18th.	40·0	9th	38·9
	Montgomery	558	29·537	?	30·109	29·675	18th	29·276	3rd	·399	49·2	70·3	?	43·4	?	56·8	?	26·9	84·3	3rd	35·5	17th	48·8
	D. I. Khan	573	29·527	−·003?	30·126	29·680	15th	29·361	3rd	·319	44·4	70·3	−2·7	42·0	+2·2	56·2	−0·3	28·3	79·2	1st & 3rd	33·0	25th	46·2
	Mooltan	420	29·703	+·004	30·128	29·849	18th	29·482	3rd	·367	50·9	71·2	−2·5	46·8	+3·3	59·0	+0·4	24·4	81·3	2nd.	40·6	25th	40·7
	Sirsa	662	29·416	+·001	30·095	29·550	18th	29·174	3rd	·375	49·8	70·5	−4·4	46·6	+4·3	58·6	−0·1	23·9	84·5	4th	39·2	27th	45·3
Sind and Cutch.	Jacobabad	186	29·951	+·021	30·115	30·110	15th	29·742	3rd	·368	50·5	73·6	−3·0	43·8	+0·4	58·7	−1·3	29·8	88·0	3rd	32·5	25th	55·5
	Hyderabad								Observations not recorded.														
	Kurrachee	49	30·075	+·003	30·078	30·230	15th	29·921	12th	·309	58·6	77·2	−2·8	54·5	−1·4	65·9	−2·1	22·7	86·0	2nd	46·1	25th	39·9
	Bhuj	395	29·671	−·013	30·040	29·755	16th	29·555	4th	·200	61·1	78·8	−3·1	54·8	−0·7	66·8	−1·9	24·0	91·5	3rd	47·0	26th & 27th	44·5
Rajputana, West	Bickaneer	753	29·332	?	30·098	29·473	18th	29·082	3rd	·391	53·2	71·1	−4·1	?	?	?	?	?	81·2	2nd	?	?	?
	Pachpadra	380	29·711‡	?	30·072‡	29·855	18th	29·487	3rd	·368	56·4	78·6	?	47·3	?	63·0	?	31·3	90·5	3rd	35·0	26th	55·5
8. East Rajputana, Central India and Gujarat.		...	...	−·014	...	...	...	...	...	...	...	77·9	−2·6	53·6	+3·1	65·7	+0·2	24·2	...	...	...	...	42·3
Rajputana, East	Jeypore	1,431	28·636	−·009	30·110	28·762	18th	28·474	3rd	·288	54·6	73·4	−4·2	50·3	+2·2	61·9	−1·0	23·1	85·5	4th	40·2	26th & 27th.	45·3
	Sambhar	1,254	28·805	−·017	30·096	28·925	18th	28·671	3rd	·254	53·5	72·2	−3·1	47·8	+2·1	60·0	−0·5	24·4	84·9	4th	40·0	3 days	44·9
	Ajmere	1,611	28·439*	−·029	30·103*	28·544	9th	28·274	3rd	·270	53·8	72·5	−3·8	50·2	+5·9	61·4	+1·1	22·3	84·4	3rd	39·4	26th	45·0
	Deesa	466	29·594	−·021	30·041	29·705	15th	29·476	3rd	·229	61·5	83·6	−1·5	53·7	+1·6	68·7	+0·1	29·9	92·8	2nd & 3rd	40·5	26th	52·3
Kathiawar	Rajkot	429	29·632	−·005	30·033	29·724	15th	29·543	4th	·181	64·4	83·5	−1·9	52·6	+0·5	68·1	−0·7	30·9	91·9	10th	45·0	27th	46·9
	Veraval	?	30·039	?	29·999	30·114	15th	29·961	12th	·153	67·1	82·1	?	61·8	?	71·9	?	20·3	89·1	2nd	52·8	26th	36·3
Central India	Nowgong	757	29·328	−·012	30·087	29·436	19th & 23rd.	29·169	4th	·267	57·4	74·1	−1·2	51·8	+6·0	63·0	+2·4	22·3	81·1	1st	43·6	27th	37·5
	Indore	1,823	28·213	−·011	30·056	28·290	15th	28·082	12th	·208	60·5	?	?	53·0	+4·1	?	?	?	84·5	3rd	42·6	28th	41·9
	Neemuch	1,630	28·436	−·005?	30·095	28·538	15th	28·303	3rd	·235	59·5	76·6	−1·3	51·5	+2·6	64·1	+0·7	25·1	85·8	3rd & 4th.	41·0	26th	44·8
Gujarat	Surat	36	30·016	−·013	29·997	30·073	15th	29·923	12th	·150	66·1	84·9	−1·9	59·3	+2·5	72·1	+0·3	25·6	89·6	20th	52·6	26th	37·0
	Ahmedabad	176	29·903	?	30·036	30·004	15th	29·806	12th	·198	65·4	84·3	?	59·8	?	72·1	?	24·5	90·2	2nd & 3rd.	51·2	26th	39·0
N.-W. P., West	Agra	555	29·542	−·012?	30·096	29·671	18th	29·386	3rd	·285	54·7	71·8	−4·2	50·6	+2·4	61·2	−0·9	21·2	82·1	1st	42·4	27th	39·7
	Jhansi	858	29·236	+·010?	30·097	29·342	18th	29·064	4th	·278	60·0	75·7	−2·4	54·4	+3·8	65·1	+0·7	21·3	85·6	4th	45·9	26th	39·7

* Mean 19 days. ‡ Mean of 26 days.

I—*continued.*

in India, Burma, etc., in December 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 December 1894.	Normal rainfall for period, 1st October to 31st December.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·83	0·46	+2·37	...	...	...	...	**6. Upper—Sub-Himalayas.**	
23	...	2	...	2	...	...	...	4	1·4	2·2	−36	88	·359	2·9	4	0·64	+3·36	1·19	0·31	+0·88	6·31	1·59	+4·72	0·62	Bareilly	N.-W. Provinces (Sub-montane).
31	...	...	...	...	...	...	...	...	0·5*	1·7	−71	85	·304	5·9	7	1·10	+5·90	3·91	0·62	+3·29	9·32	1·98	+7·34	1·22	Dehra Dun.	
25	...	...	2	...	1	...	1	2	2·2	1·3	+69	92	·345	5·1	7	0·91	+6·09	3·84	0·33	+3·51	6·72	0·92	+5·80	1·04	Roorkee.	
22	...	...	1	...	...	...	8	...	1·3	1·6	−19	86	·324	4·8	8	1·00	+7·00	3·72	0·32	+3·40	6·31	0·82	+5·49	0·96	Meerut.	
19	...	...	1	1	...	...	10	...	1·4	2·7	−48	79	·326	4·3	7	0·55	+6·45	5·28	0·30	+4·98	6·09	0·45	+5·64	2·10	Delhi	Punjab, Central.
16	2	...	2	2	1	...	5	3	1·7	1·5	+13	83	·273	4·2	1	0·55	+0·45	0·32	0·38	−0·06	0·32	0·74	−0·42	0·18	Lahore.	
20	...	...	1	1	...	...	...	9	1·3	?	?	99	·334	5·1	6	?	?	2·81	0·44	+2·37	6·28	0·93	+5·35	0·90	Umballa	Punjab (Sub-montane).
17	1	2	...	2	...	...	3	6	1·5	0·8	+88	88	·329	6·1	7	1·27	+5·73	5·55	0·53	+5·02	5·74	1·02	+4·72	2·38	Ludhiana.	
26	1	...	3	...	...	...	1	...	1·0	1·1	−9	81	·280	3·8	2	0·82	+1·18	0·55	0·63	−0·08	0·58	1·03	−0·45	0·29	Sialkot	Punjab, North.
19	...	1	3	2	...	...	...	6	0·6	1·1	−45	85	·236	5·0	4	1·27	+2·73	1·17	0·76	+0·41	1·29	1·66	−0·37	0·55	Rawalpindi.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·46	0·19	+0·19	...	...	...	...	**7. Indus Valley and North-West Rajputana.**	
12	...	...	...	...	9	6	2	2	3·1	2·4	+29	69	·208	5·3	2	0·64	+1·36	0·44	0·34	+0·10	0·59	1·02	−0·43	0·20	Peshawar	Punjab, West.
...	...	...	Not	recorded.	...	...	...		?	?	?	?	?	?	3	?	?	1·35	?	?	2·75	?	?	0·90	Mardan.	
20	...	9	...	1	...	1	...	...	2·3	?	?	63	·227	2·3	1	0·2	+0·8	0·91?	0·16	+0·75	0·91?	0·56	+0·35	0·90	Khushab.	
16	3	1	4	2	...	1	3	1	2·5	?	?	76	·266	4·0	3	0·4	+2·6	0·40	0·20	+0·20	0·40	0·33	+0·07	0·17	Montgomery	
30	...	1	...	...	...	...	...	...	1·2	0·8	+50	72	·214	2·8	1	0·27	+0·73	0·15	0·24	−0·09	0·15	0·50	−0·35	0·13	D. I. Khan.	
20	2	6	...	3	...	...	...	...	0·9	1·3	−31	80	·302	2·9	2	0·18	+1·82	0·64	0·20	+0·44	0·64	0·30	+0·34	0·28	Mooltan.	
18	3	1	2	2	1	...	2	2	2·6	2·2	+18	81	·292	5·6	4	0·73	+3·27	0·67	0·35	+0·32	0·67	0·50	+0·17	0·21	Sirsa.	
25	3	...	2	...	...	...	...	1	1·7	1·6	+ 6	60	·232	3·5	0	0·09	−0·09	0·07	0·10	−0·03	0·07	0·26	−0·19	0·07	Jacobabad	Sind and Cutch.
											Observations not recorded.														Hyderabad.	
...	2	23	4	1	...	...	...	1	9·7	9·2	+ 5	57	·287	2·5	1	0·10	+0·90	0·32	0·16	+0·16	0·32	0·25	+0·07	0·32	Kurrachee.	
13	6	2	2	1	...	1	3	3	7·5	5·1	+47	65	·352	1·9	0	?	?	0	0·08	−0·08	0·08	0·45	−0·37	0	Bhuj.	
7	11	6	...	...	1	2	...	4	3·6	2·4	+50	74	·305	3·3	1	?	?	0·28	0·16	+0·12	0·28	0·34	−0·06	0·20	Bickaneer	Rajputana, West.
20	4	3	1	1	...	...	...	2	4·9	2·1	+133	69	·322	4·7	2	?	?	0·77	0·03	+0·74	0·77	0·08	+0·69	0·65	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·17	0·17	+1·19	...	...	...	...	**8. East Rajputana, Central India and Gujarat.**	
11	3	8	3	2	1	...	...	3	1·9	3·4	−44	77	·338	3·5	5	·30	+4·70	1·52	0·08	+1·44	1·52	0·62	+0·90	0·48	Jeypore	Rajputana, East.
9	7	6	4	3	1	...	...	1	5·8	3·7	+57	78	·320	2·6	5	0·60	+4·40	3·64	0·19	+3·45	3·64	0·55	+3·09	1·66	Sambhar.	
17	2	7	...	2	...	1	1	1	1·8	1·4	+29	83	·343	2·9	4	0·45	+3·55	2·31	0·15	+2·16	2·31	0·65	+1·66	1·30	Ajmere.	
...	7	8	5	7	2	...	...	2	8·9†	8·1	+10	59	·327	2·0	1	0·09	+0·91	0·17	0·06	+0·11	0·17	0·57	−0·40	0·15	Deesa.	
7	4	10	9	...	...	...	...	1	4·4	4·8	− 8	52	·319	1·1	1	0	+1·00	0·14	0·04	+0·10	1·73	0·85	+0·88	0·14	Rajkot	Kathiawar.
14	8	9	...	...	...	...	...	...	2·8	?	?	62	·411	1·7	1	?	?	0·20	?	?	3·99	?	?	0·20	Veraval.	
10	2	3	6	...	...	4	5	1	1·7	1·2	+42	84	·394	2·7	2	0·64	+1·36	2·21	0·55	+1·66	11·65	1·97	+9·68	1·21	Nowgong	Central India.
10	8	3	...	2	8	...	...	...	2·2	2·1	+ 5	75	·399	2·4	2	0·55	+1·45	0·79	0·21	+0·58	6·02	2·11	+3·91	0·42	Indore.	
4	1	9	15	...	...	2	...	..	4·6	8·1	−43	68	·350	3·0	3	0·73	+2·27	0·81	0·25	+0·56	1·22	0·95	+0·27	0·47	Neemuch.	
10	4	9	1	1	1	2	...	3	?	5·0	?	80	·520	1·2	0	0·18	−0·18	0	0·02	−0·02	16·89	1·72	+15·17	0	Surat	Gujarat.
4	5	11	7	2	...	1	...	1	4·8	?	?	63	·391	2·5	0	?	?	0·01	?	?	1·51	?	?	0·01	Ahmedabad	
4	...	7	...	6	...	4	...	10	3·1	2·6	+19	81	·349	2·5	5	0·55	+4·45	2·01	0·19	+1·82	3·77	0·71	+3·06	0·72	Agra	N.-W. P., West.
9	1	5	...	2	...	4	2	8	2·0	2·3	−13	71	·372	2·5	5	0·36	+4·64	1·41	0·13	+1·28	4·32	0·95	+3·37	0·64	Jhansi.	

* Mean of 28 days. † Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of barometer above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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
9. Deccan		...	...	−·008	...	...	...	...	...	...	...	82·4	+1·5	56·8	+3·9	69·6	+2·7	25·6	...	...	...	...	36·4
Bombay, Deccan	Belgaum	2,524	27·491	+·006	29·982	27·570	23rd	27·381	12th	·189	66·9	82·0	+0·9	57·9	−0·1	70·0	+0·4	24·1	85·3	22nd	53·4	13th	31·9
	Sholapur	1,590	28·453	+·005	30·023	28·532	20th	28·326	12th	·206	69·6	86·0	+1·2	60·0	+3·1	73·0	+2·2	26·0	88·7	3 days	54·1	30th & 31st.	34·6
	Poona	1,840	28·194	−·013	30·032	28·268	20th	28·068	12th	·200	64·2	86·1	+2·8	56·2	+2·5	71·2	+2·7	29·9	89·0	7th & 17th.	50·5	31st	38·5
	Bijapur	1,946	28·079	?	30·005	28·163	23rd	27·962	12th	·201	67·7	83·9	?	58·1	?	71·0	?	25·8	86·3	3 days	48·1	30th	38·2
Khandesh	Malegaon	1,430	28·312	−·011	30·042	28·676	18th	28·479	12th	·197	64·2	85·1	+1·9	55·1	+4·8	70·2	+3·4	30·0	87·9	4th & 24th,	50·0	26th & 31st.	37·9
	Ahmednagar	2,152	27·891	?	30·041	27·967	20th	27·758	12th	·209	64·0	82·9	?	52·6	?	67·7	?	30·3	85·3	7th	44·9	31st	40·4
Berar	Akola	930	29·121	−·014	30·039	29·197	18th	28·987	12th	·210	63·5	85·4	+3·4	56·4	+6·5	71·0	+5·0	29·0	88·0	4th	46·7	30th	41·3
	Amraoti	1,215	28·834	−·009	30·046	28·915	18th	28·693	12th	·222	65·1	82·7?	+1·0?	59·3	+3·9	71·0?	+2·5?	23·4?	85·9	31st	54·9	21st & 28th.	31·0
Central Provinces, West.	Khandwa	1,044	28·996	−·016	30·041	29·074	27th	28·868	12th	·206	62·2	84·4	+2·7	55·6	+6·7	70·0	+4·7	28·8	88·2	4th	44·1	28th	44·1
	Hoshangabad	1,020	29·049	−·020	30·079	29·139	23rd	28·907	12th	·232	59·7	78·9	+0·1	56·4	+5·7	67·7	+2·9	22·5	82·3	4 days	46·3	28th	36·0
	Nagpur	1,025	29·031	−·009	30·054	29·113	18th & 23rd	28·895	12th	·218	62·9	81·9	+1·6	56·8	+3·5	69·4	+2·6	25·1	84·8	3rd & 5th.	47·2	28th	37·6
Central Provinces, Central.	Chanda	634	29·430	−·009	30·042	29·510	20th	29·290	12th	·220	61·8	84·2	+2·6	55·6	+4·5	69·9	+3·6	28·6	92·5	12th	47·1	29th	45·4
	Seoni	2,033	28·019	+·005?	30·070	28·109	23rd	27·890	12th	·219	60·0	77·6	+0·4	52·1	+3·1	64·9	+1·8	25·5	82·2	3rd	44·0	28th	38·2
	Jubbulpore	1,327	28·734	−·007	30·081	28·830	23rd	28·606	12th	·224	58·6	77·9	+1·9	51·1	+5·9	64·5	+3·9	26·8	81·9	4th & 25th.	40·9	28th	41·0
	Saugor	1,762	28·285	−·003	30·077	28·367	23rd	28·164	4th	·203	58·6	76·9	+1·0	54·6	+3·6	65·8	+2·3	22·3	82·3	1st & 4th.	45·5	27th	36·8
Central Provinces, East.	Raipur	970	29·095	−·004	30·058	29·193	23rd	28·977	12th	·216	62·7	80·1	+1·8	56·6	+3·2	68·4	+2·5	23·5	84·3	5th	49·4	28th	34·9
	Sutna	1,040	29·019	−·019	30·075	29·132	23rd	28·864	4th	·268	58·0	74·9	+0·2	51·8	+5·7	63·4	+3·0	23·1	80·0	1st & 5th.	44·2	27th & 28th.	35·8
	Sambalpur	463	29·617	+·010	30·052	29·726	23rd	29·509	5th	·217	63·5	79·8	+0·5	56·5	+2·7	68·2	+1·6	23·3	83·5	2nd	47·2	29th	36·3
Hyderabad, North.	Aurangabad	?	28·193	?	?	28·275	20th	28·068	12th	·207	69·0	84·8	?	57·8	?	71·3	?	27·0	87·3	2nd	51·8	29th	35·5
	Indur	?		Not	recorded.		...	...	...	...	68·3	83·6	?	56·6	?	70·1	?	27·0	86·9	5th	48·3	30th	38·6
	Bidar	?	27·872	?	?	27·956	9th	27·733	12th	·223	67·6	81·1	?	60·9	?	71·0	?	20·2	83·8	6th & 22nd.	57·2	13th	26·6
Hyderabad, South.	Gulbarga	1,502	28·538	?	30·028	28·637	23rd	28·416	12th	·221	67·1	84·7	?	58·6	?	71·6	?	26·1	86·7	4th & 5th.	53·1	31st	33·6
	Raichur	1,378	28·664	?	30·018	28·752	23rd	28·543	12th	·209	70·0	85·4	?	64·0	?	74·7	?	21·4	88·1	10th	60·2	30th	27·9
	Hyderabad (Deccan).	1,690	28·360	+·015?	30·043	28·446	23rd	28·220	12th	·226	65·7	82·9	+1·2	58·4	+1·8	70·6	+1·5	24·5	85·4	5th	52·3	30th	33·1
	Secunderabad.	1,787	28·277	?	30·063?	28·362	23rd	28·154	12th	·208	64·4	83·4	?	58·5	?	71·0	?	24·9	87·1	5th	52·6	30th	34·5
	Khamamet	373	29·699	?	30·022	29·790	23rd	29·573	12th	·217	66·6	86·3	?	60·1*	?	73·2*	?	26·2	89·0	15th & 16th.	53·2	30th	35·8
10. West Coast		...	...	+·008	...	...	...	...	...	...	...	86·8	+0·4	70·6	+0·4	78·7	+0·4	16·2	...	...	...	...	25·4
Konkan	Bombay.	37	30·011	+·007	29·989	30·077	23rd	29·909	12th	·168	72·4	83·3	−0·9	69·4	−0·1	76·4	−0·5	13·9	88·0	20th	64·0	15th	24·0
	Ratnagiri	110	29·917	+·020	29·967	29·995	23rd	29·812	12th	·183	74·8	87·9	−1·4	67·5	+0·7	77·7	−0·4	20·4	94·4	19th	62·4	15th	32·0
	Mormugao	60	29·965	?	29·960	30·048	23rd	29·855	12th	·193	72·6	86·0	?	69·6	?	77·8	?	16·4	90·0	2nd	65·3	31st	24·7
	Goa	23	30·030	+·023	29·967	30·124	23rd	29·927	12th	·197	75·2	85·2	?	73·4	?	79·2	?	11·8	90·0	19th	67·0	12th & 13th.	23·0
	Karwar	44	29·981	+·017	29·958	30·062	23rd	29·879	12th	·183	69·7	87·8	+0·7	66·6	+0·3	77·3	+0·5	21·2	91·3	19th	62·1	31st	29·2
Malabar	Cochin	10	29·973	−·001	29·912	30·029	23rd	29·890	12th	·139	76·6	89·7	+1·8	73·0	+0·2	81·4	+1·0	16·7	93·3	2nd	67·8	31st	25·5
	Calicut	27	29·968	−·003	29·925	30·043	23rd	29·875	12th	·168	76·9	87·8	+0·3	71·4	+0·9	79·6	+0·6	16·4	90·3	19th	65·1	31st	25·2
	Mangalore	65	29·938	−·005	29·936	30·004	23rd	29·844	12th	·160	76·3	90·2	−1·7	70·8	+0·3	80·5	+1·0	19·4	93·8	18th & 20th.	65·5	31st	28·3
	Trivandrum	198	29·782	?	29·912	29·840	23rd	29·691	1st	·149	76·4	83·7	?	73·6	?	78·7	?	10·1	86·0	19th	69·5	31st	16·5
11. South India		...	...	+·012	...	...	...	...	...	...	...	83·4	+1·3	65·6	0	74·6	+0·7	17·5	...	...	...	...	25·9
Madras, South.	Pamban	37	29·978	?	29·942	30·031	23rd	29·883	12th	·148	77·6	81·6	?	75·2	?	78·4	?	6·4	86·2	20th	72·2	3rd	14·1
	Tinnevelly	168	29·861	?	29·959	29·921	20th	29·761	12th	·160	75·7	86·6	?	72·1	?	79·4	?	14·5	90·7	14th	67·4	30th	23·3
	Madura	447	29·572	+·022	29·963	29·626	23rd	29·473	12th	·153	75·0	85·6	−0·4	70·0	−0·4	77·8	−0·4	15·6	88·4	21st	65·1	30th	23·3

* Mean of 30 days.

I—*continued.*

in India, Burma, etc., in December 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity: Mean velocity in miles per hour.	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 December 1894.	Normal rainfall for period, 1st Oct. to 31st December.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·13	0·51	−0·35	...	...	...	..	9. Deccan.	
9	...	2	12	8	...	...	...	...	10·3	12·3	− 16	63	·420	1·6	0	0·18	−0·18	0	0·13	−0·13	5·09	8·63	− 3·54	0	Belgaum .	Bombay, Deccan.
2	...	1	9	17	2	...	...	...	9·2	6·8	+ 35	55	·396	1·3	0	0·91	−0·91	0	0·60	−0·60	0·93	6·85	− 5·92	0	Sholapur.	
18	...	1	7	3	...	...	...	2	4·3	5·7	−·25	65	·390	1·4	0	0·82	−0·82	0	0·26	−0·26	6·24	6·37	− 0·13	0	Poona.	
...	...	2	14	13	...	1	1	...	4·0	?	?	80	·544	1·6	0	0·09	−0·09	0	?	?	3·52	?	?	0	Bijapur.	
9	1	...	...	...	...	...	11	10	6·4	3·5	+ 83	69	·417	2·0	0	0·82	−0·82	0	0·37	−0·37	2·89	3·85	− 0·96	0	Malegaon .	Khandesh.
16	3	4	...	4	3	...	...	1	7·4	?	?	75	·459	0·8	0	?	?	0	?	?	2·96	?	?	0	Ahmednagar.	
8	1	6	9	4	1	...	1	1	4·0	3·1	+ 29	65	·379	2·6	0	0·95	−0·95	0	0·96	− 0·96	3·44	5·21	− 1·77	0	Akola .	Berar.
...	1	11	11	6	...	...	2	...	4·7	3·1	+ 52	62	·385	1·4	0	1·09	−1·09	0	0·73	− 0·73	4·88	4·23	+ 0·65	0	Amraoti.	
9	2	4	8	2	2	1	...	3	3·1	2·4	+ 29	74	·416	2·1	0	0·64	−0·64	0·06	0·56	− 0·50	3·00	2·60	+ 0·40	0·06	Khandwa .	Central Provinces, West.
6	1	17	6	...	...	...	...	1	3·1	2·4	+ 29	84	·437	3·1	1	1·00	0	0·54	0·63	− 0·09	9·19	3·06	+ 6·13	0·48	Hoshangabad.	
29	1	1	...	...	...	...	...	...	3·2*	2·8	+ 14	74	·428	2·1	1	1·00	0	0·18	0·64	− 0·46	6·81	4·49	+ 2·32	0·18	Nagpur.	
23	3	1	2	...	...	...	...	2	1·9	1·6	+ 19	76	·428	1·0	0	?	?	0	0·46	− 0·46	1·64	3·82	− 2·18	0	Chanda .	Central Provinces, Central.
				Not	recorded.				?	2·5	?	80	·421	2·7	2	0·91	+1·09	0·20	0·67	− 0·47	7·80	3·63	+ 4·17	0·10	Seoni.	
16	1	2	...	3	8	1	...	...	1·6	1·8	− 11	81	·405	1·3	1	0·91	+0·09	0·30	0·38	− 0·08	10·10	2·95	+ 7·15	0·25	Jubbulpore.	
11	2	5	4	6	3	...	...	...	2·3	2·5	− 8	79	·388	2·1	2	0·73	+1·27	1·14	0·76	+ 0·38	5·52	2·66	+ 2·86	0·67	Saugor.	
23	3	3	1	...	...	1	...	...	2·8	2·6	+ 8	72	·414	1·2	0	1·07	−1·07	0·01	0·35	− 0·34	4·78	3·16	+ 1·62	0·01	Raipur .	Central Provinces, East.
8	6	2	3	3	2	1	2	4	3·7	3·6	+ 3	82	·396	1·3	1	0·91	+0·09	1·03	0·42	+ 0·61	16·77	3·09	+13·68	0·95	Sutna.	
...	19	7	2	...	...	...	...	3	2·3	1·4	+ 64	79	·468	1·2	0	?	?	0	0·34	− 0·34	5·34	3·03	+ 2·31	0	Sambalpur.	
19	...	7	1	2	1	1	...	...	3·1	?	?	56	·398	1·3	0	?	?	0	0·78	− 0·78	5·18	4·35	+ 0·83	0	Aurangabad	Hyderabad, North.
19	...	...	2	5	5	...	...	...	3·3	?	?	75	·519	0·3	0	?	?	0	0·40	− 0·40	3·88	4·09	− 0·21	0	Indur.	
...	...	1	6	16	1	4	3	...	6·0	?	?	73	·492	0	0	?	?	0	0·61	− 0·61	4·55	5·41	− 0·46	0	Bidar.	
11	1	7	11	1	...	...	...	...	7·0	?	?	65	·432	1·2	0	?	?	0	0·40	− 0·40	4·60	4·10	+ 0·50	0	Gulbarga.	Hyderabad, South.
...	...	2	6	12	10	1	...	...	6·4	?	?	67	·496	0·8	0	?	?	0	?	?	7·18	?	?	0	Raichur.	
22	...	...	1	5	3	...	...	...	3·1	?	?	79	·509	0·8	0	?	?	0	0·27	− 0·27	6·26	5·11	+1·15	0	Hyderabad (Deccan).	
11	...	5	13	2	...	...	...	...	4·0	3·3	+ 21	75	·453	1·1	0	?	?	0	?	?	5·76	?	?	0	Secunderabad.	
28	...	...	...	2	...	...	...	1	4·0	?	?	84	·555	0·5	0	?	?	0	?	?	4·15	?	?	0	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·14	0·81	−0·65	...	...	...	...	10. West Coast.	
...	4	13	12	2	...	...	...	...	8·6	10·0	− 14	77	·625	1·0	0	0·18	−0·18	0·01	0·09	− 0·08	3·09	3·22	− 0·13	0·01	Bombay.	Konkan.
4	...	5	6	12	4	...	...	...	4·5	9·9	− 55	62	·532	1·9	0	0·27	−0·27	0	0·08	− 0·08	6·18	4·86	+ 1·32	0	Ratnagiri.	
1	1	6	8	12	...	...	1	2	8·3	?	?	78	·633	0·5	0	?	?	0·02	?	?	9·45	?	?	0·02	Mormugao.	
3	...	1	26	1	...	...	...	...	4·0	?	?	66	·584	1·0	0	?	?	0	0·09	− 0·09	6·35	7·51	− 1·16	0	Goa.	
...	2	13	15	1	...	...	...	...	3·3	?	?	80	·582	0·6	0	0·18	−0·18	0	0·09	− 0·09	6·36	10·40	− 4·04	0	Karwar.	
1	8	20	2	...	...	...	...	...	4·4	?	?	75	·691	1·9	2	3·36	−1·36	0·73	1·81	− 1·08	18·28	22·59	− 4·31	0·62	Cochin .	Malabar.
3	1	6	14	7	...	...	...	...	7·8	?	?	75	·701	0·3	0	2·11	−2·11	0·09	1·31	− 1·22	7·73	16·54	− 8·81	0·09	Calicut.	
5	1	1	19	5	...	...	...	...	2·5	3·5	−29	66	·605	1·6	0	1·10	−1·10	0	0·48	− 0·48	13·46	11·39	+ 2·07	0	Mangalore.	
13	1	9	1	3	...	2	...	2	3·6	?	?	82	·757	2·9	2	?	?	0·41	2·52	− 2·11	12·05	19·52	− 7·47	0·24	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·16	2·49	−1·19	...	...	...	...	11. South India.	
...	17	10	1	...	...	...	...	3	14·2	?	?	85	·806	4·7	9	7·00	+2·00	3·90	9·11	− 5·21	23·04	25·52	− 2·48	0·87	Pamban .	Madras, South.
1	15	3	...	...	...	...	...	12	6·1	?	?	79	·712	5·9	6	6·50	−0·50	1·59	?	?	13·23	?	?	0·36	Tinnevelly.	
...	14	12	...	...	...	...	...	5	2·8	4·9	− 43	76	·671	2·7	3	4·36	−1·36	1·46	1·81	− 0·35	19·29	14·68	+4·61	0·83	Madura .	

* Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches. 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.	Temperature of Air. 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.
Madras, South Central.	Salem	940	29·112	+·014	30·007	29·182	23rd	29·004	12th	·178	73·7	88·0	+2·0	65·3	+0·2	76·7	+1·1	22·7	90·4	15th & 16th.	57·9	29th & 31st.	32·5
	Coimbatore	1,348	28·673	+·014	29·985	28·736	20th	28·582	12th	·154	72·2	86·7	+2·0	65·7	−0·6	76·2	+0·7	21·0	89·4	6th & 14th.	59·1	31st	30·3
Coorg	Mercara	3,781	26·297	+·013	?	26·367	20th	26·202	12th	·165	62·0	75·8	+1·3	58·4	+0·9	67·1	+1·1	17·4	78·5	5th	53·2	31st	25·3
Mysore	Chitaldroog	2,405	27·631	?	29·993	27·712	20th	27·509	12th	·203	69·5	82·1	?	61·8	?	72·0	?	20·3	85·6	15th	57·4	27th	28·2
	Bangalore	3,021	27·034	+·003	30·010	27·103	23rd	26·923	12th	·180	64·7	79·9	+2·3	58·7	0	69·3	+1·2	21·2	83·3	4th	52·9	31st	30·4
	Hassan	3,091	26·970	?	29·996	27·043	23rd	26·855	12th	·188	67·4	80·0	?	56·5	?	68·2	?	23·5	82·0	15th & 17th.	48·7	31st	33·3
	Mysore	2,518	27·521	?	30·001	27·593	23rd	27·414	12th	·179	67·5	82·7	?	60·1	?	71·4	?	22·6	85·4	15th	52·9	31st	32·5
Madras, East Coast, South.	Negapatam	31	29·992	+·015	29·953	30·059	23rd	29·875	12th	·184	76·3	81·2	+0·2	72·1	+0·3	76·7	+0·3	9·1	83·2	3 days	68·7	27th	14·5
	Cuddalore	12	30·031	?	29·973	30·094	23rd	29·921	12th	·173	75·0	83·7	?	70·0	?	76·8	?	13·7	85·3	3 days	65·3	26th	20·0
	Trichinopoly	255	29·776	+·012	29·970	29·842	23rd	29·673	12th	·169	75·1	86·6	+2·0	69·4	+0·5	78·0	+1·3	17·2	89·5	16th	62·4	31st	27·1
	Madras	22	30·030	+·008	29·983	30·105	23rd	29·923	12th	·182	75·8	84·5	+0·9	70·0	+0·2	77·3	+0·6	14·5	87·0	16th	64·5	31st	22·5
Madras, East Coast, Central.	Nellore	71	29·990	?	29·995	30·072	23rd	29·875	12th	·197	73·9	85·2	?	68·5	?	76·9	?	16·7	87·7	4 days	64·1	31st	23·6
	Masulipatam	15	30·064	+·024	30·014	30·159	23rd	29·947	12th	·212	71·9	83·2	+0·7	66·6	+0·1	74·9	+0·4	16·6	85·5	16th	59·7	30th	25·8
Madras, Central	Cuddapah	433	29·625	?	30·009	29·717	23rd	29·505	12th	·212	73·1	87·4	+2·5	65·6	−0·3	76·5	+1·1	21·8	90·0	16th	61·4	11th	28·6
	Kurnool	923	29·127	−·010?	30·017	29·209	23rd	29·008	12th	·201	70·4	86·4	+1·1	59·5	+0·1	73·0	+0·6	26·9	89·2	16th	53·7	30th & 31st.	35·5
	Bellary	1,475	28·570	+·014	30·021	28·655	23rd	28·448	12th	·207	69·7	?	?	61·1	+0·4	?	?	?	?	...	56·1	30th	?
Madras, East Coast, North.	Rajahmundry	112	29·956	0	30·009	30·049	23rd	29·846	12th	·203	70·4	86·8	+1·4	64·8	−0·2	75·8	+0·6	22·0	89·5	16th	57·9	30th	31·6
	Cocanada	26	30·051	+·017	30·011	30·147	23rd	29·937	13th	·210	71·2	80·5	+1·5	65·8	−0·2	73·2	+0·7	14·7	82·2	3 days	59·6	30th	22·6
	Vizagapatam	31	30·041	+·003	30·011	30·129	23rd	29·927	13th	·202	72·1	79·2	+1·2	70·4	−0·3	74·8	+0·5	8·8	81·3	15th	65·0	30th	16·3
	Gopalpur	21	30·073	?	30·034	30·184	23rd	29·982	5th	·202	65·9	80·0	?	61·3	?	70·7	?	18·7	83·2	15th & 16th	55·1	30th	28·1
12. Hill Stations		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	Shirino								Observations suspended.														
	Kachh	?	?	?	?	?	?	?	?	?	37·3	46·8	?	25·6	?	36·2	?	21·2	61·0	1st & 2nd.	15·0	14th & 25th.	46·0
	Pishin				Not recorded						?	54·0	?	24·9	?	39·5	?	29·1	70·1	2nd	8·9	25th	61·2
	Quetta	5,502	24·732	−·009	?	24·828	18th	24·620	12th	·208	35·9	52·4	−4·7	30·8	+2·0	41·6	−1·4	21·6	67·7	2nd	21·8	25th	45·9
	Kalat				Not recorded.						32·8	53·3	?	18·0	?	35·7	?	35·3	70·1	2nd	4·4	25th	65·7
	Chaman	4,311	?	?	?	?	?	?	?	?	43·6*	55·5*	?	?	?	?	?	?	70·6	2nd	?	?	?
Northern India	Leh	11,503	19·632	?	?	19·867	19th	19·418	12th	·449	10·9	27·0	?	6·1	?	16·5	?	20·9	39·9	16th	−9·5	19th	49·4
	Srinagar	5,204	25·019	?	?	25·200	18th	24·806	12th	·394	32·2	43·5	?	29·1	?	36·3	?	14·4	52·5	2nd & 9th	22·1	3 days	30·4
	Gilghit	?	26·346	?	?	26·600	19th	26·080	7th	·520	35·6	45·3	?	33·2	?	39·5	?	12·6	56·4	2nd	27·7	20th	28·7
	Cherat	?	25·800	?	?	25·960	18th	25·652	3rd	·308	43·5	52·2	?	39·4	?	45·8	?	12·8	63·3	3rd	29·1	25th	34·2
	Murree	6,344	23·878	−·030	?	24·012	18th	23·733	12th	·279	38·8	48·3	−5·4	36·6	−3·4	42·5	−4·4	11·7	62·6	2nd	28·0	26th	34·6
	Poo				Not recorded.						?	39·7	?	23·8	?	31·8	?	15·9	53·1	1st & 2nd.	12·2	27th	40·9
	Simla	7,224	23·142	−·026	?	23·252	23rd	23·017	25th	·235	39·9	46·1	−5·2	36·7*	−3·5	41·4*	−4·4	9·4	53·2	3rd	28·0	25th	25·2
	Chakrata	6,977	23·371	+·004	?	23·484	23rd	23·281	25th	·203	39·8	49·0	−6·0	36·5	−3·1	42·8	−4·6	12·5	57·3	10th	29·1	25th	28·2
	Mussooree	6,705	23·603	?	?	23·714	23rd	23·514	25th	·200	40·8	47·3	−5·3	33·0	−2·6	42·6	−4·0	9·3	55·2	1st & 2nd.	31·0	26th	24·2
	Ranikhet	6,069	24·173	+·007	?	24·287	23rd	24·096	5th	·191	44·1	52·7	−5·5	41·1	−1·5	46·9	−3·5	11·6	60·7	2nd	35·5	25th & 26th.	25·2
	Yatung	10,180?			Not recorded.						?	43·8	?	21·5	?	32·7	?	22·3	52·9	14th	17·4	27th	35·5
	Gnatong	?	19·206	?	?	19·340	14th	19·080	27th	·260	27·0	36·5	?	19·3	?	27·8	?	17·2	43·9	11th	10·6	27th	33·3
	Darjeeling	7,421	23·033	−·001	?	23·130	14th	22·948	5th	·182	40·9	48·9	0	37·4	+0·6	43·1	+0·3	11·5	56·8	14th	31·7	22nd	25·1
	Gantak	?	24·572	?	?	24·674	23rd	24·454	5th	·220	47·4	59·8*	?	40·2*	?	50·0*	?	19·6	68·1	16th	34·9	22nd	33·2
	Kalimpong†	?	26·130	?	?	26·231	20th	26·046	31st	·185	49·4	61·2	?	?	?	?	?	?	67·3	15th	?	?	?

* Mean of 30 days. † Mean of 25 days.

I —*continued.*

in India, Burma, etc., in December 1894—continued.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 December 1894.	Normal rainfall for period, 1st October to 31st December.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
22	2	5	1	...	...	1	...	...	3·6	4·0	−10	71	·595	2·9	0	3·18	−3·18	0·08	1·39	− 1·31	10·42	12·24	− 1·82	0·05	Salem	Madras, South Central.
...	...	...	31	...	...	...	...	...	1·5	3·0	−50	85	·678	3·5	0	3·45	−3·45	0	1·21	− 1·21	6·25	10·87	− 4·62	0	Coimbatore.	
...	...	12	17	2	..	...	...	...	6·7	4·7	+43	81	·454	3·4	0	1·50	−1·50	0	0·70	− 0·70	8·59	13·64	− 5·05	0	Mercara	Coorg.
...	...	2	16	13	...	...	...	...	9·8	?	?	65	·473	1·9	0	?	?	0	?	?	9·02	?	?	0	Chitaldroog.	
...	...	11	18	2	...	...	...	...	8·3	3·9	+113	80	·495	3·1	0	1·36	−1·36	0	0·55	− 0·55	7·36	11·29	− 3·93	0	Bangalore	Mysore.
2	...	5	18	6	...	...	...	...	3·8	?	?	77	·515	2·7	0	?	?	0	?	?	13·17	?	?	0	Hassan.	
1	...	8	20	1	...	1	...	...	10·4	?	?	77	·521	1·5	0	?	?	0	?	?	11·36	?	?	0	Mysore.	
2	2	8	2	...	...	...	...	17	14·2	6·8	+109	84	·767	6·5	10	11·00	−1·00	14·07	12·41	+ 1·66	31·85	38·95	− 7·10	4·04	Negapatam	Madras, East Coast, South.
...	13	4	1	..	...	...	4	9	2·8	?	?	94	·809	1·6	6	6·9	− 0·9	2·90	?	?	21·85	?	?	1·06	Cuddalore.	
13	10	8	...	...	...	...	...	...	3·2	5·0	−36	78	·678	3·8	4	5·64	−1·64	1·78	2·55	− 0·77	11·89	15·41	− 3·52	0·82	Trichinopoly.	
1	15	11	1	...	...	...	...	3	6·6	7·6	−13	81	·731	4·3	3	5·73	−2·73	0·74	5·28	− 4·54	22·31	29·49	− 7·18	0·35	Madras.	
3	4	...	...	...	...	...	4	20	4·2	?	?	87	·730	6·3	1	3·8	−2·8	0·24	?	?	17·60	?	?	0·24	Nellore	Madras, East Coast, Central.
...	18	11	...	2	...	...	...	...	5·9	5·7	+ 4	83	·645	1·5	0	1·45	−1·45	0	1·06	− 1·06	15·71	17·46	− 1·75	0	Masulipatam.	
...	1	4	9	14	2	...	...	1	?	?	?	79	·641	2·3	0	1·50	−1·50	0	1·19	− 1·19	10·91	12·19	− 1·28	0	Cuddapah.	Madras, Central.
30	...	1	...	..	...	...	...	...	?	?	?	73	540	0·6	0	1·00	−1·00	0	0·20	− 0·20	6·02	6·38	− 0·36	0	Kurnool.	
1	...	1	10	17	2	...	...	...	3·2	3·1	+ 3	70	·508	2·2	0	0·45	−0·45	0	0·14	− 0·14	8·70	6·56	+ 2·14	0	Bellary.	
...	28	3	...	...	...	...	...	...	?	?	?	71	·531	2·2	0	0·03	−0·03	0	0·38	− 0·38	13·56	9·69	+ 3·87	0	Rajahmundry	Madras, East Coast, North.
...	20	4	...	...	...	...	...	7	9·2	?	?	78	·593	1·2	0	1·0	−1·0	0·01	0·76	− 0·75	19·38	18·53	+ 0·85	0·01	Cocanada.	
...	6	3	...	...	...	1	12	9	2·2	2·1	+ 5	77	·604	1·4	0	1·82	−1·82	0	2·49	− 2·49	24·55	19·93	+ 4·62	0	Vizagapatam.	
...	14	...	...	...	...	...	...	17	9·2	6·9	+33	84	533	0·2	0	1·18	−1·18	0	1·04	− 1·04	6·26	16·25	− 9·99	0	Gopalpur.	
...	...	...	.	...	...	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**12. Hill Stations.**	
												Observations suspended.													Shirino.	Baluchistan.
6	1	1	9	2	...	1	4	7	?	?	?	62	·139	3·4	5	?	?	1·20	?	?	1·32	?	?	0·40	Kachh.	
				Not	recorded.				?	?	?	?	?	?	4	?	?	1·61	?	?	1·61	?	?	0·53	Pishin.	
21	1	...	...	4	4	1	...	...	3·7	2·7	+37	74	·157	4·1	5	0·91	+4·09	1·90	0·73	+ 1·17	2·01	1·07	+ 0·94	0·57	Quetta.	
...	6	...	...	...	25	...	...	...	?	?	?	?	?	?	2	?	?	1·33	?	?	1·33	?	?	0·93	Kalat.	
...	1	2	7	16	2	2	1	.	5·3	?	?	72*	·205*	5·4	4	?	?	0·75	?	?	1·14‡	?	?	0·27	Chaman.	
3		12	5	...	2	6	1	...	0·7	1·3	−46	74*	·059*	7·0	3	?	?	1·00	?	?	1·20	?	?	0·27	Leh.	Northern India.
13	4	2	2	4	5	...	...	1	4·3	?	?	94	·171	8·0	8	?	?	1·91	?	?	2·81	?	?	0·44	Srinagar.	
				Not	recorded.				?	?	?	68	·141	8·5	2	?	?	0·29	?	?	0·40	?	?	0·15	Gilghit.	
7	9	1	1	1	...	...	...	12	15·5	?	?	57	·154	4·2	2	?	?	0·69	?	?	0·94	?	?	0·41	Cherat.	
8	3	3	5	8	2	...	...	2	8·6	6·1	+41	59	·132	5·8	5	1·55	+3·45	2·02	1·20	+ 0·82	2·25	3·93	− 1·68	0.65	Murree.	
20	4	...	...	1	1	...	1	4	?	?	?	?		6·7	8	?	?	2·40	?	?	3·27	?	?	0·62	Poo.	
13	1	5	2	3	2	4	...	...	4·4*	1·8	+144	52	·121	6·3	7	1·45	+5·55	8·13	0·74	+ 7·39	12·77	2·50	−10·27	1·82	Simla. §	
3	...	12	13	2	...	...	...	1	6·2	4·2	+48	65	·158	5·6	9	?	?	7·59	0·66	+ 6·93	11·73	2·09	+ 9·64	1·90	Chakrata.	
3	1	3	13	1	1	1	6	2	?	?	?	71	·180	5·2	8	1·5	+6·5	6·08	?	?	10·46	?	?	1·39	Mussooree.	
19	...	5	1	2	2	2	...	...	2·1	1·3	+62	66	·189	4·7	5	1·00	+4·00	2·34	0·53	+ 1·81	12·18	2·34	+ 9·84	0·76	Ranikhet.	
				Not	recorded.				?	?	?	?	?	?	1	?	?	0·19	?	?	4·27	?	?	0·11	Yatung.	
...	1	1	5	16	...	2	2	4	6·3	?	?	73	·105	2·7	3	?	?	0·81	?	?	11·04	?	?	0·31	Gnatong.	
3	2	9	2	1	2	3	...	9	3·5	1·9	+84	76	·193	3·8	2	0·75	+1·25	0·51	0·23	+ 0·28	6·23	5·17	+ 1·06	0·33	Darjeeling.	
...	2	5	8	9	2	1	3	1	1·0	?	?	80	·264	2·0	2	?	?	0·84	?	?	10·46	?	?	0·45	Gantak.	
...	6	...	1	1	...	...	2	15	?	?	?	85	·301	2·6	1	?	?	0·28	?	?	4·94	?	?	0·23	Kalimpong†	

* Mean of 30 days. † Mean of 25 days. ‡ Total for November and December. § Wind observations for 30 days.

Table

Abstract of Observations taken at 8 A.M. at 203 Stations

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.
Central India	Mount Abu	3,945	26·146	−·021	?	26·219	15th & 18th.	25·999	12th	·220	57·9	65·7	−3·2	51·7	−0·9	58·7	−2·1	14·0	74·1	3rd	41·1	26th	33·0
	Pachmarhi	3,528	26·586	+·007	?	26·667	23rd	26·465	12th	·202	62·1	71·6	+2·4	50·4	+5·4	61·0	+3·9	21·2	73·8	4 days	39·3	28th	34·5
South India	Wellington	6 200	24·302	0	?	24·362	20th	24·207	12th	·155	56·3	65·7	+0·1	46·9	−2·2	56·3	−1·1	18·8	71·2	27th & 31st.	37·2	31st	34·0
13. Extra India	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ceylon	Trincomalee	75	29·955†	?	29·958†	30·002	9th	29·885	10th	·117	79·6*	86·6*	?	74·3*	?	80·4*	?	12·3*	89·0	19th	72·0	12th	17·0
	Colombo	40	29·937	+·004	29·903	30·014	23rd	29·840	12th	·174	81·9	87·1	?	72·9	?	80·0	?	14·2	89·5	19th & 29th	68·5	27th	21·0
	Galle	48	29·925	?	29·899	29·998	23rd	29·825	12th	·173	79·5	82·5	?	74·5	?	78·4	?	8·0	87·0	19th	71·0	3 days	16·0
Persia	Teharan‡	?	26·139	?	?	26·300	23rd	25·905	27th	·395	38·6	50·4	?	34·0	?	42·2	?	16·4	57·3	20th	28·0	24th	29·3
	Ispahan	?	?	?	?	?	?	?	?	?	32·1	49·8	?	27·9	?	38·9	?	21·9	58·3	2nd	20·1	23rd	38·2
	Bushire	14	30·146‡	?	30·118‡	30·262	2nd	29·989	27th	·273	59·4a	65·5a	?	55·2a	?	60·3a	?	10·3a	72·6	18th	49·3	11th & 31st.	23·3
	Jask	?	30·125	?	?	30·261	24th	30·004	6th	·257	66·6	77·0	?	63·1	?	70·1	?	13·9	83·5	4th	56·8	25th	26·7
Arabia	Muscat	?	30·110	?	?	30·221	24th	29·997	4th	·224	71·5	74·3	?	69·7	?	72·0	?	4·6	78·6	3rd	63·7	10th	14·9
	Baghdad	?	29·711	?	?	29·892	2nd	29·481	26th	·411	47·5	61·5	?	44·8	?	53·2	?	16·7	68·6	17th	39·0	22nd	29·6
	Aden	94	29·992	−·009	30 019	30·057	10th	29·893	1st	·164	75·4	81·3	− 1·3	73·2	+0·6	77·3	−0·4	8·1	84·3	6th	69·9	16th	14·4
	Perim	?	29·860	?	?	29·905	31st	29·804	8th	·101	78·1	84·3	?	75·1	?	79·7	?	9·2	85·8	11th	73·4	13th	12·4
Central Asia	Kashgar	?	25·915	?	?	26·270	16th	25·470	11th	·800	16·6	31·2a	?	14·0	?	2·2a	?	17·2	42·1	6th	2·1	18th	40·0
Arabian Sea Islands.	Amini Devi	15	30·044	?	29·987	30·128	23rd	29·888	12th	·240	82·5	86·4	?	74·6	?	80·5	?	11·8	87·8	12th	69·5	29th	18·3
	Minicoy	10	29·982	?	29·917	30·039	23rd	29·893	12th	·146	79·9	86·9	?	?	?	?	?	?	88·9	11th	?	?	?
Africa	Zanzibar	73	29·923	?	29·923	29·977	23rd	29·812	1st	·165	80·8	85·0	?	78·8	?	81 9	?	6·2	87·6	22nd	75·1	2nd	12·5

(a) Mean of 30 days. * Mean of 19 days. † Mean of 27 days. ‡ Mean of 29 days.

I—*concluded.*

in India, Burma, etc., in December 1894—concluded.

Wind Direction. Number of Winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind Velocity. Mean velocity in miles per hour.	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 December, 1894.	Normal rainfall for period, 1st Oct. to December.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
5	1	9	2	3	1	7	2	1	5·6	3·6	+56	58	·275	2·3	2	0·18	+1·82	0·84	0·10	+0·74	0·95	1·08	− 0·13	0·74	Mount Abu	Central India.
7	...	1	5	5	4	7	2	...	4·4	2·6	+69	61	·344	2·2	2	0·91	+1·09	0·83	0·52	+ 0·31	6·13	3·86	+ 2·27	0·66	Pachmarhi.	
22	1	3	3	2	...	...	...	...	2·1	2·5	−16	73	·339	3·2	1	6·78	−5·78	0·87	4·16	− 3·29	11·64	24·71	−13·07	0·54	Wellington.	South India.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13. Extra India.	
5	4	13	...	1	...	1	...	3	1·1*	?	?	83*	·839*	5·3**	13	?	?	10·56	13·48	−2·92	28·18	34·57	− 6·39	2·06	Trincomalee	Ceylon.
1	13	13	2	1	...	...	...	1	8·3	7·9	+ 5	72	·783	4·5	8	?	?	3·28	6·70	−3·42	38·75	33·46	+ 5·29	0·84	Colombo.	
25	3	1	...	1	...	...	...	1	2·4	?	?	88	·890	3·5	9	?	?	6·05	6·43	−0·38	38·32	31·50	+ 6·82	1·63	Galle.	
23	4	2	...	...	...	...	...	...	3·0‡	?	?	71	·168	2·5	5	?	?	1·28	?	?	3·48	?	?	0·50	Teharan, §	Persia.
...	...	...	3	2	3	9	10	4	2·5	?	?	89	·164	3·9	1	?	?	0·16	?	?	3·65	?	?	0·10	Ispahan.	
...	6	9	3	10	...	...	...	2	?3·5b	6·6	−47?	80a	·406a	?	5	?	?	7·81	3·60	+4·21	20·01	5·13	+14·88	3·90	Bushire.	
1	10	13	3	1	1	...	...	2	11·5	?	?	71	·466	2·8	5	?	?	1·40	?	?	3·44	?	?	0·48	Jask.	
...	1	...	1	5	7	4	7	6	4·3	?	?	69	·539	2·9	3	?	?	1·24	?	?	1·24	?	?	0·62	Muscat	Arabia.
14	3	2	1	1	5	2	1	2	0·9	?	?	89	·296	0·8	2	?	?	1·03	?	?	5·99	?	?	0·51	Baghdad.	
9	...	9	10	2	1	...	...	...	11·0	12·4	− 11	77	·679	5·0	0	?	?	0·08	0·49	−0·41	1·36	0·72	+ 0·64	0·07	Aden.	
2	...	2	21	6	...	...	...	...	9·5	?	?	74	·715	5·4	0	?	?	0·05	?	?	0·32?	?	?	0·05	Perim.	
28	1	1	1	...	...	...	...	...	0·8	?	?	?	?	5·8	1	?	?	0·15	?	?	0·26	?	?	0·10	Kashgar	Central Asia.
...	14	6	...	...	...	...	...	11	?	?	?	78	·862	4·4	1	?	?	0·19	?	?	8·14	?	?	0·19	Amini Devi	Arabian Sea Islands.
...	6	11	8	1	1	1	1	2	7·4	?	?	81	·830	4·6	3	?	?	2·47	?	?	7·19	?	?	1·20	Minicoy	
...	10	18	...	...	...	1	1	1	8·5	?	?	84	·877	5·6	6	?	?	2·37	?	?	23·71	?	?	0·68	Zanzibar	Africa.

* Mean of 19 days. b Mean of 26 days. ‡ Mean of 28 days. (a) Mean of 30 days. § Mean of 29 day ** Mean of 27 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.	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.	Temperature of Air. Mean minimum.	Temperature of Air. Mean daily range.	Temperature of Air. Highest maximum.	Temperature of Air. Lowest minimum.	Temperature of Air. Absolute range.	Temperature of Air. Mean 10 hours.	Temperature of Air. Mean 16 hours.	Temperature of Air. Mean daily.	Temperature of Air. Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hours.	Temperature, Wet-bulb. Mean 16 hours.	Temperature, Wet-bulb. Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·937	29·833	·104	29·881	+·009	29·873	85·8	77·0	8·8	89·9	70·4	19·5	82·9	83·3	80·4	+0·7	72·9	76·3	76·2	75·2
	Rangoon	...	30·005	·874	·131	·938	0	·915	89·0	66·5	22·5	92·3	59·4	32·9	79·2	85·7	76·0	+0·5	64·3	69·6	70·6	68·1
	Diamond Island	...	·004	·892	·112	·943	+·002	·919	82·7	73·5	9·2	85·8	70·8	15·0	73·5	80·7	77·2	+0·2	68·5	70·6	71·8	70·3
	Cocos Island	111	29·941	·845	·096	·888	?	·932	82·9	75·6	7·3	86·0	72·5	13·5	81·1	79·5	78·0	?	69·8	73·2	72·4	71·8
	Akyab	...	30·055	·942	·113	·967	+·007	·960	81·0	62·4	18·6	84·2	55·7	28·5	73·5	78·0	71·4	−1·0	60·5	68·8	70·9	66·7
Assam.	Silchar	...	·003	·875	·128	·935	+·003	·993	79·0	57·1	21·9	83·6	51·4	32·2	68·5	76·6	66·9	+1·2	56·1	63·9	66·0	62·0
	Sibsagar	....	29·811	·668	·143	·738	+·008	30·043	69·0	51·3	17·7	74·3	43·2	31·1	60·2	67·9	59·2	+0·5	51·3	59·2	62·6	57·7
	Dhubri	...	30·006	·873	·133	·933	+·015	·007	73·4	55·8	17·6	77·1	51·7	25·4	64·1	72·4	64·0	−0·5	55·2	61·0	64·7	60·3
Bengal and Orissa.	Chittagong	...	29·998	·890	·108	·940	+·005	29·978	77·1	59·1	18·0	80·7	52·5	28·2	70·6	73·7	67·7	+0·3	58·4	66·4	66·8	63·9
	Narayanganj	...	30·070	·959	·111	30·010	+·008	·978	76·9	59·0	17·9	79·9	53·0	26·9	70·6	74·8	68·1	+0·6	57·6	65·7	65·9	63·1
	Calcutta (Alipore)	...	·095	·975	·120	·025	+·004	·992	76·2	58·3	17·9	81·7	51·2	30·5	69·4	74·9	66·5	+1·3	57·0	62·8	64·1	61·3
	Ditto (Chowringhee).	...	·098	?	?	?	?	?	77·4	58·5	18·9	83·9	51·4	32·5	71·2	?	?	?	57·6	64·0	?	?
	Saugor Island	...	·088	·972	·116	·022	+·006	·952	75·7	60·2	15·5	79·1	52·3	26·8	71·0	73·8	67·1	+0·6	58·2	65·8	65·9	63·3
	Burdwan	...	·018	·892	·126	29·945	+·003	·935	77·4	57·5	19·9	83·3	51·4	31·9	70·2	75·9	67·0	+0·2	56·2	61·9	62·8	60·3
	Berhampore	...	·049	·934	·115	·982	+·012	·999	75·7	58·4	17·3	79·8	51·7	28·1	68·9	74·5	66·7	+0·8	55·9	63·1	64·1	61·1
	False Point	...	·087	·977	·110	30·020	−·016	·983	78·2	58·6	19·6	82·7	50·1	32·6	74·3	75·3	67·3	+0·7	58·4	66·8	66·9	64·0
	Cuttack	...	·026	·902	·124	29·961	−·005	·965	81·3	60·9	20·4	84·7	52·5	32·2	73·4	79·6	70·4	+1·0	59·0	63·8	65·6	62·8
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	28·053	27·951	·102	27·991	−·005	·992	72·1	51·5	20·6	77·8	42·2	35·6	65·3	69·5	60·9	+0·5	45·7	57·2	57·8	53·6
	Patna	...	29·941	29·830	·111	29·880	0	30·022	73·8	55·3	18·5	78·5	46·9	31·6	67·3	72·4	64·1	+1·7	53·6	61·0	62·7	59·1
	Darbhanga	...	·961	·837	·124	·893	+·009	·020	74·4	55·6	18·8	77·8	50·9	26·9	67·3	72·1	64·3	+0·5	54·9	61·9	63·4	60·1
	Allahabad	...	·814	·699	·115	·745	−·003	·026	74·7	52·2	22·5	80·2	44·9	35·3	67·2	73·1	62·0	+2·2	51·0	60·3	61·4	57·6
	Ghazipur	220	·890	·777	·113	·825	−·009	·007	74·7	54·4	20·3	80·4	47·9	32·5	67·7	72·2	63·6	+2·9	54·2	60·7	61·3	59·2
	Lucknow	...	·755	·645	·110	·689	+·001	·030	72·7	49·4	23·3	78·4	43·2	35·2	65·6	70·5	60·1	+0·4	?	59·0	60·6	?
Upper Sub-Himalayas.	Dehra Dun	...	27·830	27·742	·088	27·775	+·004	·049	64·6	46·7	17·9	72·6	40·3	32·3	57·6	60·5	53·7	−2·0	44·9	52·2	53·8	50·3
	Roorkee	...	29·205	29·104	·101	29·142	+·010	·040	66·7	48·3	18·4	74·8	42·0	32·8	57·3	64·3	56·0	−0·6	47·5	54·3	57·2	53·0
	Meerut	...	·357	·263	·094	·301	+·003	·040	68·3	49·2	19·1	76·8	41·4	35·4	59·1	65·1	57·4	+0·2	48·2	54·1	56·5	52·9
	Lahore	...	·406	·327	·079	·355	+·004	·075	66·8	44·3	22·5	77·3	38·4	38·9	56·4	65·4	53·9	0	42·3	51·3	55·6	49·7
	Ludhiana	...	·288	·208	·080	·236	+·016	·061	64·3	48·5	15·8	75·7	41·7	34·0	57·1	62·6	54·8	−0·2	47·6	53·0	55·9	52·2
Indus Valley and N.-W. Rajputana.	Peshawar	...	·030	28·944	·086	28·975	+·012	·124	64·4	40·5	23·9	75·1	30·4	44·7	55·7	61·9	50·6	0	37·3	47·7	50·1	45·0
	Mooltan	...	·722	29·635	·087	29·667	+·020	·077	70·9	47·0	23·9	81·5	40·5	41·0	62·2	69·6	57·3	+1·2	44·2	52·9	57·7	51·6
	Jacobabad	...	·980	·864	·116	·910	+·022	·063	73·7	43·8	29·9	87·9	32·5	55·4	64·3	71·0	56·8	−1·0	31·4	52·7	55·3	46·5
	Kurrachee	...	30·083	30·006	·077	30·040	+·013	·041	76·8	54·5	22·3	86·2	46·0	40·2	70·9	74·3	64·6	−2·4	47·7	55·4	55·5	52·9
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·665	28·560	·105	28·602	−·003	·056	72·9	50·0	22·9	85·5	39·9	45·6	64·2	70·2	59·5	−0·4	47·6	55·6	58·9	54·0
	Ajmere	...			Imper	fect.			71·9	50·2	21·7	84·4	39·4	45·0	62·1	70·6	60·2	+1·2	47·6	56·0	60·4	54·8
	Deesa	...	29·615	29·498	·117	29·549	−·001	29·978	83·3	53·7	29·6	92·9	40·6	52·3	74·2	81·1	67·7	−0·3	49·6	59·6	61·1	56·7
	Nowgong	...	·342	·221	·121	·272	−·010	30·011	73·9	51·8	22·1	79·6	43·6	36·0	64·7	71·8	61·9	+2·0	50·5	58·6	61·1	56·7
	Agra	...	·571	·462	·109	·505	−·004	·042	71·5	50·6	20·9	81·8	42·5	39·3	64·1	69·1	60·4	−0·6	48·7	57·1	59·5	55·1
Deccan.	Belgaum	...	27·497	27·379	·118	27·435	+·001	29·867	82·3	57·9	24·4	85·2	53·4	31·8	74·7	80·7	69·8	+0·5	55·1	61·7	62·0	59·6
	Sholapur	...	28·464	28·327	·137	28·395	+·006	·926	86·1	59·7	26·4	88·9	53·9	35·0	77·3	84·4	72·1	+1·6	54·1	63·7	65·0	60·9
	Poona	...	·197	·070	·127	·135	−·008	·910	86·2	56·3	29·9	89·0	50·5	38·5	76·9	83·8	71·0	+2·6	53·1	61·5	62·9	59·1
	Akola	...	29·140	·998	·142	29·062	−·013	·951	85·6	56·5	29·1	89·2	46·8	42·4	74·3	84·5	70·2	+4·3	53·5	62·8	66·0	60·8
	Buldana	2,132	27·902	27·787	·115	27·838	−·023	·912	81·0	58·9	22·1	85·5	53·1	32·4	74·8	78·8	68·8	+1·6	54·1	61·7	62·4	59·5

II.

at 90 Stations in India, Burma, etc., for the month of December 1894.

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.		
·759	·824	·812	·799	−·035	82	73	71	75	− 5	5·2	4·8	5·0	+0·6	1	14	23	15	7	2	...	...	...	N 57° E	N 51° E	69	72	188	171	...	...	Port Blair	Burma Coast and Bay Islands.
·574	·601	·547	·574	−·097	87	60	44	64	− 9	2·0	3·0	2·5	−0·6	...	14	25	14	7	2	...	...	...	N 56° E	N 36° E	71	60	125	114	...	...	Rangoon	
·635	·647	·661	·647	−·051	76	66	64	69	− 6	3·0	4·2	3·6	+0·5	...	2	32	10	8	...	...	1	9	N 50° E	N 34° E	64	74	364*	166	...	...	Diamond Island	
·659	·715	·706	·693	?	74	67	70	70	?	2·1	2·9	2·5	?	...	13	43	2	3	...	...	...	...	N 40° E	?	87	?	?	?	0·27	0·27	Cocos Island.	
·507	·646	·667	·607	+·024	90	78	70	79	+ 4	2·7	2·4	2·6	+0·2	...	17	17	3	...	3	2	10	10	N 6° W	N 15° W	52	39	60	56	...	...	Akyab	
·443	·536	·502	·494	+·021	94	77	55	75	0	4·2	4·1	4·2	+1·3	50	...	1	3	1	2	3	1	1	S 10° E	S 57° E	6	35	19*	42	...	...	Silchar	Assam.
·381	·493	·499	·458	+·009	100	94	73	89	+ 4	2·7	1·9	2·3	−2·1	30	1	24	1	2	...	4	...	...	N 51° E	N 65° E	34	61	51*	37	...	...	Sibsagar	
·430	·499	·513	·481	+·014	96	83	64	81	+ 3	2·9	1·2	2·1	+0·9	6	3	31	16	2	...	...	2	2	N 55° E	N 58° E	71	42	147	109	...	...	Dhubri	
·487	·597	·568	·551	+·031	96	79	68	81	+ 6	3·1	2·8	3·0	+1·0	1	11	19	4	1	...	3	9	14	N 6° W	N 23° W	52	59	56*	76	...	...	Chittagong	
·461	·568	·523	·518	+·039	92	76	60	76	+ 5	2·4	4·2	3·3	+1·9	...	8	11	3	2	1	2	14	21	N 34° W	N 36° W	52	44	63	48	...	...	Naryanganj	Bengal and Orissa.
·455	·488	·460	·468	+·023	93	67	53	71	− 1	1·7	2·4	2·1	+0·3	5	33	9	4	...	...	...	2	9	N 3° E	N 26° W	74	60	41	66	...	...	Calcutta (Alipore).	
·468	·505	?	?	?	94	66	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	*Nil*	*Nil*	Ditto (Chowringhee).	
·463	·571	·538	·524	+·021	88	74	64	75	+ 1	2·6	3·0	2·8	+0·6	...	27	17	1	...	4	4	...	9	N 6° E	N 7° E	63	56	198	153	...	...	Saugor Island.	
·440	·450	·401	·430	+·021	92	60	45	66	+ 3	1·7	3·1	2·4	+0·5	21	19	6	...	...	1	1	2	12	N 13° W	N 23° W	50	67	27*	43	...	...	Burdwan	
·419	·507	·463	·463	+·031	85	71	54	70	− 2	1·2	1·5	1·4	−0·5	9	20	5	6	...	1	2	4	15	N 12° W	N 26° W	52	62	33	38	...	...	Berhampore	
·494	·560	·551	·535	+·036	99	66	62	76	+ 1	1·7	1·9	1·8	−0·8	...	28	15	12	2	4	...	...	1	N 35° E	N 43° E	66	64	161*	151	...	...	False Point	
·480	·471	·449	·467	+·010	89	57	44	63	− 2	0·8	1·5	1·2	−0·6	18	11	18	8	...	...	1	4	2	N 31° E	N 12° E	45	35	32	29	...	...	Cuttack	
·241	·374	·339	·318	+·063	62	60	46	56	+ 4	2·5	2·0	2·3	+0·3	3	7	4	4	5	3	2	10	24	N 44° W	N 54° W	42	64	143	110	...	...	Hazaribagh	
·392	·455	·443	·430	+·056	89	68	55	70	+ 5	1·5	1·7	1·6	−0·2	13	5	5	7	1	2	2	12	15	N 40° W	N 83° W	32	52	55*	41	...	...	Patna	Gangetic Plain and Chota Nagpur.
·427	·485	·471	·461	+·033	96	72	60	76	+ 2	1·3	1·7	1·5	+0·5	9	...	...	3	4	2	14	22	8	S 74° W	S 79° W	53	58	42	51	...	...	Darbhanga	
·364	·436	·392	·397	+·055	92	65	50	69	+ 2	1·0	2·6	1·8	+0·3	5	5	10	10	2	1	3	11	15	N 16° W	N 54° W	31	22	74	42	...	...	Allahabad	
·409	441	·403	·416	+·061	93	64	50	67	+ 6	1·5	2·0	1·8	+0·6	8	2	4	5	7	3	11	12	10	S 74° W	S 81° W	24	49	32	25	0·05	0·05	Ghazipur	
?	·416	·396	?	?	?	66	54	?	?	2·5	3·2	2·9	+1·2	2	8	7	8	3	2	6	14	12	N 42° W	N 53° W	29	49	28*	40	...	...	Lucknow	
·279	·326	·339	·315	?	87	69	64	73	?	5·2	5·7	5·5	+3·1	24	...	6	6	8	5	9	1	1	S 32° E	N 73° W	23	16	15	40	...	...	Dehra Dun	
·321	·386	·377	·361	+·075	94	82	63	80	+17	4·6	4·5	4·6	+2·5	37	3	5	4	2	1	...	6	4	N 1° E	N 82° W	11	11	49	32	...	...	Roorkee	Upper Sub-Himalayas.
·329	·356	·342	·343	+·058	93	70	57	73	+11	4·4	3·2	3·8	+2·1	24	4	3	6	1	...	1	22	1	N 69° W	N 52° W	26	50	30	39	...	...	Meerut	
·247	·314	·315	·292	+·012	84	69	52	68	+11	4·2	4·4	4·3	+2·1	10	8	5	6	4	3	1	7	18	N 25° W	N 36° W	32	22	40	35	...	...	Lahore	
·312	·352	·361	·342	+·066	89	76	65	77	+16	6·2	5·5	5·9	+2·9	11	1	10	...	12	1	2	6	19	N 26° W	N 30° W	19	24	37	26	...	...	Ludhiana	
·187	·236	·218	·214	−·034	74	54	41	56	− 5	4·5	4·5	4·5	+1·0	19	3	3	10	3	10	7	3	4	S 22° E	S 2° E	16	8	70*	59	...	...	Peshawar	
·255	·281	·323	·286	+·017	79	51	46	59	+ 3	2·6	3·6	3·1	+1·1	17	...	21	...	16	...	1	...	7	N 69° E	N 14° E	35	11	23*	30	...	...	Mooltan	Indus Valley and N.-W. Rajputana
·037	·253	·233	·174	−·067	11	42	31	28	−21	3·1	3·3	3·2	+1·2	29	4	5	4	1	2	3	1	13	N 20° W	N 15° W	21	22	43*	38	...	...	Jacobabad	
·250	·238	·198	·229	−·151	57	31	23	37	−19	1·9	1·8	1·9	+0·1	...	1	42	3	...	...	5	10	1	N 34° E	N 42° E	55	14	236	216	...	...	Kurrachee	
·307	·338	·358	·334	+·062	85	57	50	64	+15	3·0	4·4	3·7	+1·8	2	8	11	16	3	2	3	5	12	N 30° E	N 14° W	34	29	47	79	...	...	Jeypore	
·304	·378	·413	·365	+·096	82	69	57	69	+19	2·6	3·3	3·0	+1·6	15	1	8	7	11	5	6	3	6	S 56° E	N 84° E	18	15	45	35	...	...	Ajmere	E. Rajputana, C. India and Gujarat.
·309	·320	·278	·302	+·041	73	39	27	46	+ 9	1·2	0·9	1·1	−0·6	...	13	15	9	12	5	2	2	2	N 67° E	N 17° E	40	27	218	195	...	...	Deesa	
·354	·418	·399	·390	+·092	91	68	51	70	+12	2·5	3·1	2·8	+0·9	3	7	3	20	1	1	4	19	4	N 15° W	N 34° W	13	29	42*	27	...	...	Nowgong	
·323	·377	·383	·361	+·077	87	64	55	69	+16	2·8	3·5	3·2	+1·8	...	...	10	...	17	...	7	...	28	N 29° W	N 64° W	18	28	72	63	...	...	Agra	
·401	·391	·325	·372	−·004	83	45	31	53	+ 4	2·1	1·8	2·0	−0·8	1	4	8	19	14	7	3	3	3	S 75° E	S 84° E	45	70	247	296	...	...	Belgaum	Deccan.
·353	·422	·376	·384	+·004	69	45	32	48	− 1	1·3	2·5	1·9	−1·1	2	2	4	10	35	6	3	...	...	S 52° E	N 89° E	72	57	204*	169	...	...	Sholapur	
·367	·356	·315	·346	+·015	81	39	27	49	+ 6	1·4	1·9	1·7	−1·0	22	...	2	14	7	...	1	5	9	N 74° E	S 78° E	14	56	99	136	...	...	Poona	
·375	·423	·393	·397	+·064	81	50	33	55	+ 3	1·8	3·4	2·6	+0·9	10	5	18	15	8	1	2	...	3	N 68° E	N 61° E	52	58	94	77	...	...	Akola	
·363	·390	·363	·372	+·035	73	45	37	52	+ 3	1·6	3·9	2·8	+0·1	...	10	8	2	14	7	14	1	6	S 18° E	N 82° E	11	52	366*	116	*Nil*	*Nil*	Buldana	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 90 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.
Deccan—*continued.*	Khandwa	...	29·008	28·882	·126	28·938	−·016	29·947	84·6	55·6	29·0	88·2	44·1	44·1	74·5	82·7	69·0	+4·1	52·9	62·6	65·9	60·2
	Hoshangabad	...	·074	·937	·137	·999	−·011	·998	78·9	56·4	22·5	82·5	46·3	36·2	68·5	77·6	66·8	+3·2	53·7	62·2	66·0	60·7
	Nagpur	...	·053	·922	·131	·981	−·003	·974	82·0	56·9	25·1	84·8	47·0	37·8	72·6	80·4	68·4	+2·5	53·7	62·8	65·3	60·6
	Do. (Sanitary Commr.'s Office)	...	·075	·942	·133	29·002	+·011	·985	83·1	56·5	26·6	86·2	46·1	40·1	73·3	81·5	69·4	?	54·2	62·4	65·3	60·6
	Jubbulpore	...	28·749	·626	·123	28 681	−·006	·990	78·1	51·1	27·0	82·1	40·9	41·2	67·6	75·6	63·4	+3·8	50·4	59·7	62·1	57·4
	Saugor	...	·303	·195	·108	·242	+·006	·985	77·2	54·5	22·7	82·1	45·4	36·7	68·4	75·4	64·8	+1·5	51·0	59·2	61·8	57·3
	Raipur	...	29·119	·994	·125	29·050	+·008	·975	80·1	56·5	23·6	84·1	49·6	34·5	71·3	78·9	67·4	+1·8	53·7	61·3	62·8	59·2
	Sutna	...	·040	·925	·115	28·973	−·012	30·001	74·8	51·8	23·0	80·0	44·2	35·8	67·5	73·2	61·9	+2·6	49·3	59·2	60·6	56·4
	Hyderabad (Deccan).	...	28·372	·250	·122	·307	?	29·948	82·9	58·4	24·5	85·4	52·3	33·1	76·1	79·0	69·7	?	56·5	65·9	65·0	62·5
West Coast.	Bombay	...	30·009	29·895	·114	29·957	+·009	·935	83·2	69·3	13·9	88·1	64·0	24·1	76·4	80·2	74·9	−1·0	65·2	69·4	71·5	68·7
	Ratnagiri	...	29·924	·805	·119	·858	+·020	·905	88·2	67·6	20·6	94·3	62·3	32·0	83·8	83·0	76·0	−0·5	62·6	69·8	72·6	68·3
	Karwar	...	·984	·858	·126	·914	+·015	·890	88·0	66·6	21·4	91·6	62·1	29·5	79·3	84·8	75·9	+0·3	64·2	70·5	72·8	69·2
	Cochin	...	·978	·878	·100	·921	+·006	·859	89·8	73·0	16·8	93·5	67·8	25·7	83·4	86·4	79·9	+0·9	70·0	73·5	74·8	72·8
South India.	Salem	...	·110	28·978	·132	·043	+·008	·919	88·0	65·3	22·7	90·4	58·0	32·4	80·8	83·9	75·4	+1·4	63·3	69·4	69·1	67·2
	Mysore	...	27·526	27·399	·127	27·463	?	·887	82·7	60·2	22·5	85·6	52·9	32·7	74·2	80·8	71·0	?	58·3	64·7	65·2	62·7
	Mercara	...	26·305	26·214	·091	26·259	+·016	·894	75·8	58·4	17·4	78·9	53·2	25·7	67·8	73·2	66·5	+1·3	55·9	60·3	60·6	59·0
	Bangalore	...	27·040	·927	·113	·983	+·004	·894	79·8	58·7	21·1	83·5	52·9	30·6	72·1	77·0	68·6	+1·0	57·7	62·9	62·8	61·1
	Hassan	...	26·973	·857	·116	·914	?	·883	80·0	56·5	23·5	82·0	48·7	33·3	73·3	78·0	67·7	?	55·2	65·1	67·3	62·5
	Chitaldroog	...	27·632	27·514	·118	27·572	?	·893	82·1	61·8	20·3	85·8	57·5	28·3	74·8	80·1	71·5	?	55·9	63·6	63·3	60·9
	Trichinopoly	...	29·779	29·652	·127	29·715	+·010	·903	86·6	69·4	17·2	89·3	62·2	27·1	80·4	83·8	77·1	+1·0	67·0	71·5	72·1	70·2
	Madras	...	30·042	·942	·100	·989	+·014	·942	84·6	69·8	14·8	87·1	64·7	22·4	80·7	80·8	76·4	+0·4	?	73·5	72·8	72·2
	Bellary	...	28·578	28·438	·140	28·507	+·022	·924	?	61·0	?	?	55·9	?	77·7	83·7	?	?	57·9	65·2	65·4	62·8
	Vizagapatam	...	30·061	29·947	·114	29·997	+·002	·967	79·2	70·4	8·8	81·1	64·9	16·2	76·3	77·8	74·9	−0·3	66·3	67·8	68·8	67·6
	Cocanada	...	·067	·949	·118	30·008	?	·971	80·4	65·8	14·6	82·2	59·6	22·6	77·7	78·9	72·7	?	64·2	70·9	71·1	68·7
Hill Station, Baluchistan.	Quetta	...	24·749	24·674	·075	24·700	−·002	?	52·0	30·9	21·1	67·7	21·9	45·8	43·9	47·4	40·3	−1·8	28·8	37·1	39·0	35·0
Hill Stations, Northern India.	Leh	...	19·701	19·640	·061	19·667	−·031	?	26·5	6·1	20·4	39·9	−9·5	49·4	17·5	19·0	14·6	−9·7	5·1	15·2	16·0	12·1
	Srinagar	...	25·044	24·961	·083	24·991	?	?	43·1	29·0	14·1	52·5	21·9	30·6	36·2	42·2	35·9	?	28·9	34·6	39·1	34·2
	Murree	...	23·911	23·876	·035	23·882	−·025	?	47·8	36·6	11·2	62·4	28·0	34·4	42·9	41·6	40·4	−3·9	30·8	35·7	36·1	34·1
	Chamba	3,005	27·089	27·005	·084	27·050	+·003	?	57·7	41·3	16·4	70·2	32·0	38·2	48·4	52·2	46·0	−4·5	39·4	43·8	46·2	43·1
	Kailang	10,087	20·829	20·769	·060	20·8013	−·022	?	30·6	13·8	16·8	39·0	−2·5	41·5	22·0	24·5	18·6	−6·1	12·7	19·4	21·2	17·8
	Simla (Ridge)	...	23·163	23·109	·054	23·124	−·019	?	45·7	36·2	9·5	53·2	28·0	25·2	42·4	42·0	39·6	−5·0	31·3	35·2	36·6	34·4
	Simla (Chapslee)	?	?	?	?	?	?	?	49·1	36·8	12·3	63·4	28·3	35·1	43·1	?	?	?	31·6	35·5	?	?
	Chakrata	...	·405	·340	·065	·360	−·010	?	48·5	36·5	12·0	57·3	29·3	28·0	43·6	43·6	41·0	−4·8	33·3	37·8	39·4	36·8
	Ranikhet	...	24·206	24·133	·073	24·155	+·013	?	52·4	41·1	11·3	60·5	35·4	25·1	48·1	48·8	45·6	−3·9	37·9	42·3	43·5	41·2
	Katmandu	4,388	25·770	25·674	·096	25·720	+·015	?	65·1	39·7	25·4	72·1	34·2	37·9	48·6	58·0	50·8	−1·7	37·8	46·3	51·0	45·1
	Darjeeling	...	23·055	22·972	·083	23·012	+·009	?	48·9	37·3	11·6	57·3	31·9	25·4	45·9	45·6	42·3	+0·4	34·4	41·3	41·6	39·1
	Demagiri	?	?	?	?		?	?	83·6	60·6	23·0	90·4	54·3	36·1	69·0	75·8	70·1	+3·7	?	?	?	?
	Tura	3,943	?	?	?	?	?	?	73·2	57·2	16·0	77·8	53·6	24·2	66·9	70·0	64·4	?	?	60·6	62·6	?
Hill Stations, Central India.	Mount Abu	...	26·167	26·089	·078	26·120	−·028	?	65·5	51·7	13·8	73·9	41·1	32·8	62·2	62·3	57·8	−1·9	45·8	52·3	53·4	50·5
	Pachmarhi	...	·599	·511	·088	·548	+·009	?	71·6	50·4	21·2	73·8	39·5	34·3	66·8	67·7	60·0	+3·7	46·8	55·8	57·0	53·2
	Chikalda	3,642	·466	·374	·092	·413	−·011	?	72·2	57·3	14·9	76·1	55·0	21·1	67·3	70·5	64·4	+1·4	51·8	56·8	58·7	55·7

II—*continued.*

in India, Burma, etc., for the month of December 1894—continued.

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 of the month.	Heaviest rainfall during the month.		
·375	·423	·397	·398	+·077	83	49	35	56	+5	1·9	3·4	2·7	+0·8	1	1	8	5	13	10	13	1	10	S. 11° E.	N. 66° E.	23	41	75	57	...	...	Khandwa	Deccan—*amended.*
·385	·487	·497	·459	+·123	83	69	52	69	+14	2·0	1·8	1·9	+0·3	12	1	21	18	...	2	4	2	1	N. 67° E.	N. 61° E.	48	63	72	58	...	...	Hoshangabad	
·378	·455	·437	·424	+·079	81	56	42	60	+8	1·9	3·0	2·5	+0·1	33	3	9	8	4	3	1	1	...	N. 80° E.	N. 64° E.	26	52	77	68	...	...	Nagpur	
·392	·429	·411	·411	?	85	53	38	59	?	1·3	2·0	1·6	?	...	10	20	12	4	10	6	...	...	N. 74° E.	?	42	?	?	?	...	...	Do. (Sanitary Commr.'s Office)	
·363	·418	·395	·392	+·082	95	61	44	67	+10	1·6	1·5	1·6	−0·3	13	9	14	3	4	9	6	3	1	N. 65° E.	N. 32° E.	14	17	41	41	...	...	Jubbulpore	
·332	·394	·386	·372	+·107	78	57	44	60	+15	2·0	2·3	2·2	+1·0	...	6	10	6	22	4	6	2	6	S. 70° E.	N. 37° E.	31	38	56	60	...	...	Saugor	
·379	·414	·361	·384	+·039	82	54	36	57	+3	1·4	1·5	1·5	−0·3	32	7	9	7	2	...	2	2	1	N. 44° E.	N. 35° E.	24	48	66*	66	...	...	Raipur	
·320	·407	·378	·368	+·118	83	60	46	63	+15	1·0	1·8	1·4	0	4	18	2	9	6	4	1	7	11	N. 2° W.	N. 31° W.	29	39	88*	89	...	...	Sutna	
·439	·511	·445	·465	?	89	56	44	63	?	0·8	1·5	1·2	?	8	...	5	15	27	6	...	..	1	S. 61° E.	?	68	?	75*	?	...	...	Hyderabad (Deccan.)	
·576	·627	·658	·620	0	79	69	64	71	+1	1·1	0·9	1·0	−0·8	...	4	9	15	2	...	...	10	22	N. 6° W.	N. 17° E.	39	63	209	238	...	...	Bombay	West Coast.
·505	·543	·662	·570	+·012	75	47	59	60	+2	1·2	1·1	1·2	+0·3	...	7	...	5	10	1	5	9	25	N. 54° W.	N. 4° W.	35	36	181	213	...	...	Ratnagiri	
·570	·632	·648	·617	+·007	87	63	55	68	−1	0·6	0·6	0·6	−1·0	5	3	5	3	1	...	...	9	36	N. 41° W.	N. 1° E.	68	57	81	?	...	...	Karwar	
·696	·695	·711	·700	−·031	85	61	57	68	−6	1·9	2·9	2·4	−0·8	3	9	16	1	...	...	2	26	5	N. 40° W.	S. 50° W.	47	15	104	?	...	...	Cochin	
·561	·567	·516	·548	−·041	89	54	45	63	−9	3·9	4·4	4·2	+0·1	13	11	30	6	1	...	...	1	...	N. 40° E.	N. 89° E.	66	48	87	91	...	...	Salem	South India.
·470	·497	·427	·465	?	90	58	41	63	?	1·5	2·2	1·9	?	...	1	15	42	3	1	...	...	...	N. 81° E.	?	89	?	251*	?	...	...	Mysore	
·423	·441	·388	·417	−·050	86	65	48	66	−11	3·3	3·4	3·4	−1·7	...	3	20	27	12	...	...	...	...	N. 80° E.	N. 73° E.	81	75	163	117	...	...	Mercara	
·469	·471	·411	·451	−·005	94	59	44	66	−3	2·9	1·8	2·4	−1·7	1	1	21	34	5	...	...	...	...	N. 77° E.	N. 70° E.	87	84	197*	93	...	...	Bangalore (Fort)	
·425	·528	·552	·501	?	92	64	57	71	?	3·1	3·7	3·4	?	6	...	17	30	9	...	...	...	...	N. 83° E.	?	79	?	64*	?	...	...	Hassan	
·378	·451	·375	·401	?	68	52	36	52	?	2·0	2·3	2·2	?	...	...	14	32	14	...	1	...	1	E.	?	81	?	204*	?	...	...	Chitaldroog	
·639	·654	·634	·642	−·021	88	63	55	69	−5	3·7	5·1	4·4	−1·5	16	9	37	...	...	...	...	...	...	N. 37° E.	N. 39° E.	71	75	79	121	...	...	Trichinopoly	
?	·731	·701	·736	+·044	?	70	67	81	+3	5·5	4·1	4·8	−0·5	...	29	28	3	...	...	...	...	2	N. 23° E.	N. 24° E.	89	75	157	179	...	...	Madras	
·444	·469	·400	·438	−·027	82	49	35	56	−2	3·7	4·2	4·0	+0·6	1	...	3	43	14	...	...	1	...	S. 82° E.	S. 87° E.	87	69	78	75	...	...	Bellary	
·596	·577	·598	·590	+·040	81	63	62	69	+6	1·5	1·6	1·6	−0·9	...	15	20	6	2	3	4	2	10	N. 18° E.	N. 83° E.	50	55	53	49	...	...	Vizagapatam	
·584	·668	·660	·637	?	92	70	67	76	?	1·1	0·9	1·0	?	...	4	31	18	8	...	...	...	1	N. 65° E.	?	81	?	222*	?	...	...	Cocanada	
·141	·155	·155	·150	+·005	81	56	50	62	+6	4·4	4·2	4·3	+1·3	15	2	...	...	5	9	4	12	15	S. 83° W.	N. 48° W.	35	37	88*	58	...	...	Quetta	Hill Station, Baluchistan.
·053	·073	·071	·066	−·013	83	71	66	73	+13	7·2	7·5	7·4	+1·9	9	2	7	3	2	13	21	5	...	S. 24° W.	S. 1° W.	40	34	17	30	...	...	Leh	Hill Stations, Northern India.
·159	·185	·208	·184	?	98	85	77	87	?	7·1	7·0	7·1	?	22	6	3	...	12	12	...	...	7	S. 38° E.	?	14	?	77*	?	...	...	Srinagar	
·117	·136	·157	·137	+·002	57	53	62	57	+8	6·6	7·0	6·8	+2·1	9	5	3	8	32	2	2	1	...	S. 58° E.	S. 58° E.	58	31	210*	167	...	...	Murree	
·223	·236	·248	·236	−·002	85	70	64	73	+18	6·7	6·2	6·5	+2·1	48	...	...	1	8	1	...	...	4	S. 45° E.	S. 58° E.	8	16	59*	70	9·26	2·78	Chamba	
·073	·088	·091	·084	−·013	84	73	68	75	+ 9	7·4	6·9	7·2	+1·7	...	1	...	4	11	10	9	18	9	S. 49° W.	S. 44° W.	40	46	11	20	4·08	1·03	Kailang	
·128	·133	·164	·142	0	63	52	63	59	+13	6·4	5·8	6·1	+2·5	27	3	4	1	1	11	14	1	...	S. 22° W.	N. 83° W.	27	18	104	?	...	...	Simla (Ridge)	
·129	·134	?	?	?	62	51	?	?	?	6·4	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	6·42	1·22	Simla (Chapslee)	
·160	·170	·199	·176	+·027	74	63	70	69	+18	5·7	4·9	5·3	+2·1	11	...	9	15	3	...	1	12	11	N. 15° E.	S. 55° W.	19	14	148	100	...	...	Chakrata	
·197	·211	·228	·212	+·015	77	64	67	69	+13	5·0	5·2	5·1	+2·6	36	...	8	2	2	1	8	4	1	S. 38° W.	S. 54° W.	3	22	50	35	...	...	Ranikhet	
·215	·286	·290	·265	−·009	87	82	60	76	+3	3·5	3·3	3·4	+0·5	...	...	...	22	...	...	...	35	5	N. 78° W.	N. 64° W.	27	61	14	?	0·39	0·25	Katmandu	
·171	·215	·224	·203	+·003	77	71	74	74	−2	4·8	5·5	5·2	+0·9	6	1	7	9	6	3	7	19	3	S. 63° W.	N. 54° W.	14	4	83	46	...	...	Darjeeling	
?	?	?	?	?	?	?	?	?	?	?	?	?	?	...	12	7	5	3	...	1	8	26	N. 25° W.	N. 58° W.	58	33	?	?	1·37	0·81	Demagiri	
?	·459	·484	?	?	?	69	66	?	?	2·7	3·8	3·3	+0·3	...	9	2	2	5	15	22	5	2	S. 34° W.	S. 15° E.	43	45	?	?	0·49	0·49	Tura	
·246	·284	·312	·281	+·069	64	51	56	57	+16	1·7	1·9	1·8	0	...	6	11	4	7	7	13	6	8	S. 70° W.	N. 48° E.	6	14	135*	86	...	...	Mount Abu	Hill Stations, Central India.
·284	·323	·345	·317	+·050	76	50	50	59	+5	2·1	3·0	2·6	+0·5	8	8	2	11	5	3	10	11	4	S. 75° W.	N. 29° E.	8	22	92*	63	...	...	Pachmarhi	
·324	·344	·359	·342	+·034	69	52	48	56	+3	2·7	4·9	3·8	+1·5	29	4	...	...	11	12	4	...	2	S. 12° E.	N. 77° W.	29	9	128	117	*Nil*	*Nil*	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 90 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.
Hill Station, South India.	Wellington	...	24·308	24·233	·075	24·271	+·008	?	66·0	47·0	19·0	71·4	37·2	34·2	62·1	61·2	55·3	−0·8	46·0	55·7	56·3	52·7
Extra India.	Muscat	...	30·127	30·035	·092	30·081	?	?	74·1	69·7	4·4	78·6	63·7	14·9	73·2	74·0	71·9	?	63·9	66·4	67·0	65·8
	Aden	...	29·997	29·876	·121	29·940	−·016	29·967	81·5	73·2	8·3	84·3	69·9	14·4	78·3	79·8	76·9	+0·3	69·2	71·4	70·9	70·5
	Perim	...	·860	·759	·101	·813	?	?	84·5	75·1	9·4	86·1	73·4	12·7	80·9	80·9	78·9	?	61·8	73·2	72·6	69·2
	Minicoy	...	·989	·891	·098	·935	?	·870	86·8	?	?	88·9	?	?	82·8	82·8	?	?	73·7	76·7	76·1	75·5
	Zanzibar	...	·914	·794	·120	·854	?	·853	85·3	78·8	6·5	87·6	75·1	12·5	82·1	84·7	81·9	?	75·6	77·9	77·9	77·2
	Port Victoria (Seychelles)	15	·975	·890	·085	·933	?	·893	82·1	76·2	5·9	84·2	73·6	10·6	80·3	80·9	78·9	?	73·8	75·7	75·7	75·0

II—*concluded.*

in India, Burma, etc., for the month of December 1894—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.		
·307	·381	·404	·364	+·017	92	69	75	79	+3	3·9	5·9	4·9	−0·6	4	1	4	10	32	9	2	...	...	S. 50° E.	S. 35° E.	72	60	52	55	...	...	Wellington	Hill Station, South India.
·521	·559	·572	·551	?	72	68	68	69	?	2·5	2·9	2·7	?	...	1	10	17	1	2	1	8	22	N. 2° E.	?	32	?	101	?	...	...	Muscat	Extra India.
·663	·680	·639	·660	+·023	81	70	62	71	+1	4·5	1·2	2·9	−1·1	4	...	10	29	11	6	1	...	...	S. 80° E.	N. 89° E.	71	69	281	299	...	...	Aden	
·377	·713	·696	·594	?	43	68	66	59	?	4·5	2·1	3·3	?	3	...	1	15	38	2	2	...	...	S. 54° E.	?	82	?	229	?	...	...	Perim	
?	·839	·812	?	?	?	75	73	?	?	4·6	5·2	4·9	?	...	17	20	13	2	...	3	2	5	N. 34° E.	?	60	?	178	?	...	...	Minicoy	
·847	·896	·864	·870	?	86	81	73	80	?	41	20	31	?	...	21	31	3	...	2	...	1	3	N. 36° E.	N. 26° E.	87	30	213*	140	...	...	Zanzibar	
·802	·827	·820	·816	?	89	80	78	82	?	7·4	7·3	7·4	?	...	2	12	6	...	4	1	13	24	S. 31° W.	?	50	?	148	?	9·88	1·15	Port Victoria (Seychelles).	

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* 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 shown 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.

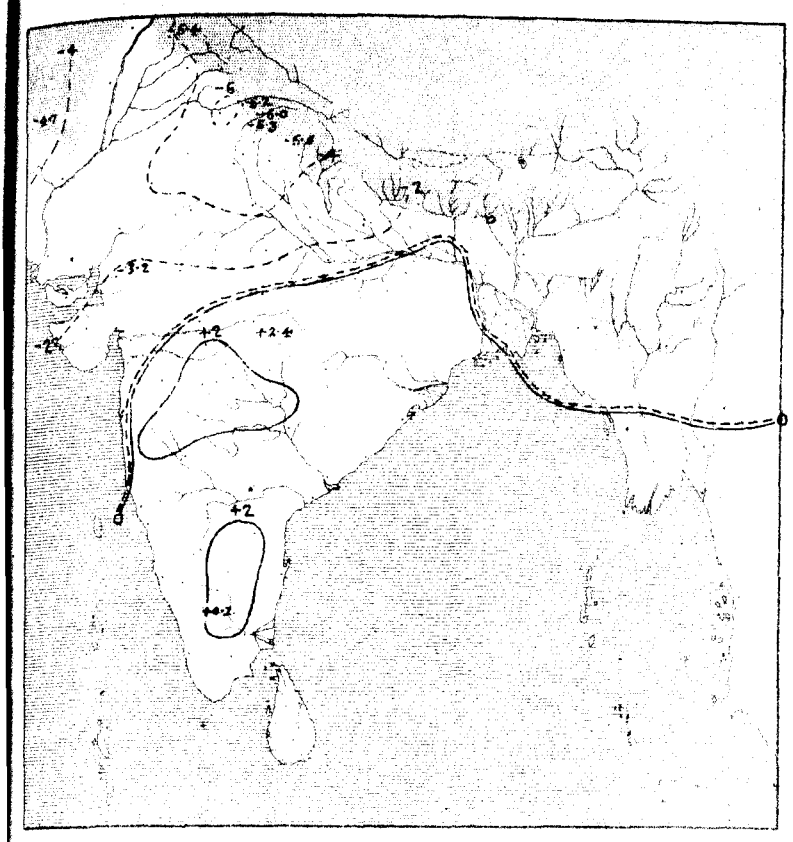
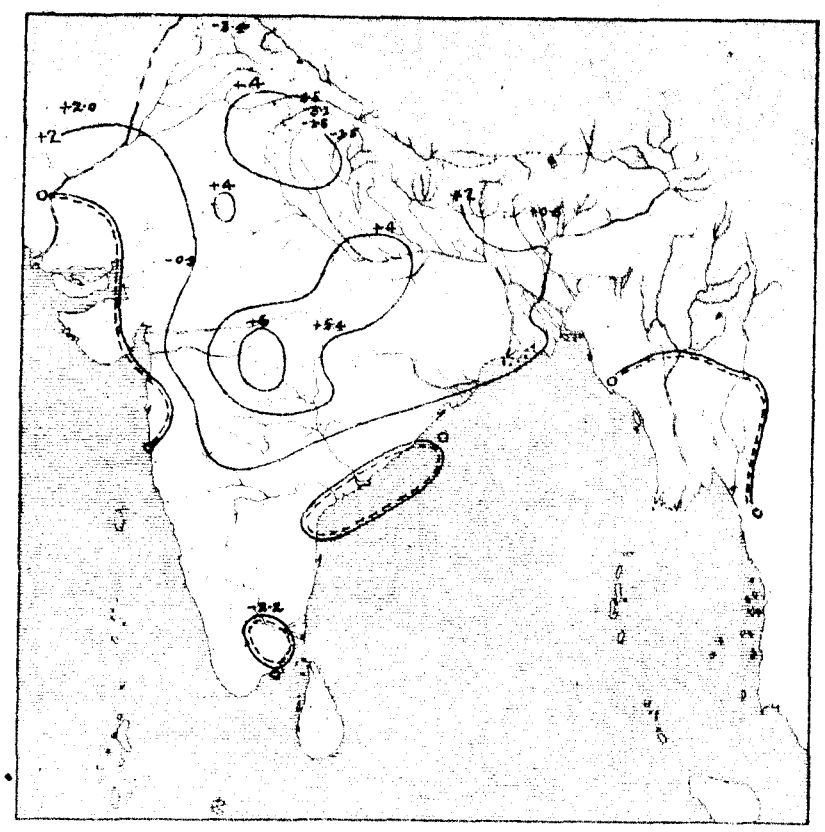


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

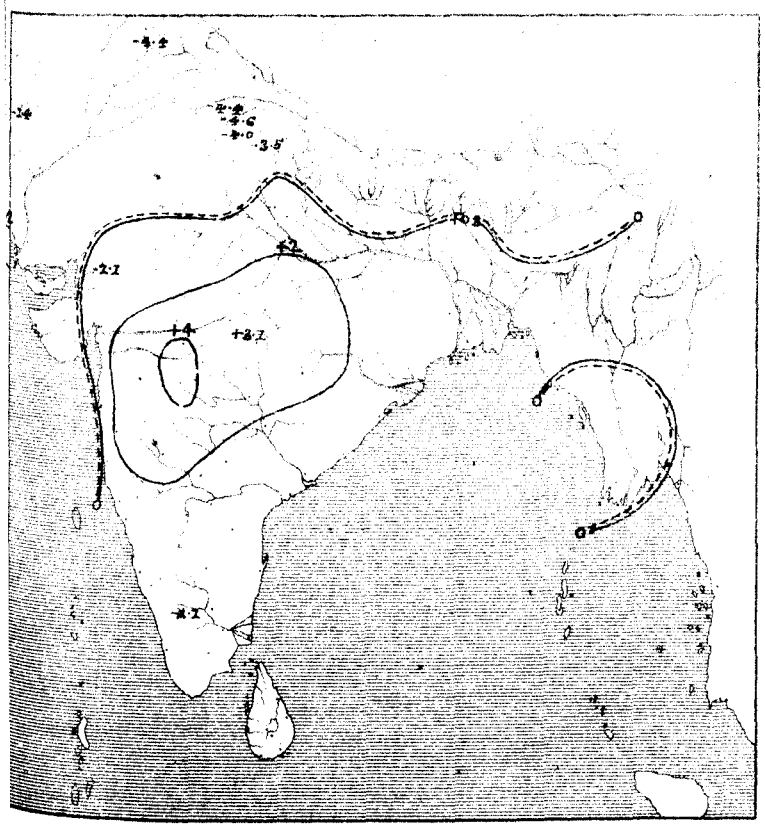
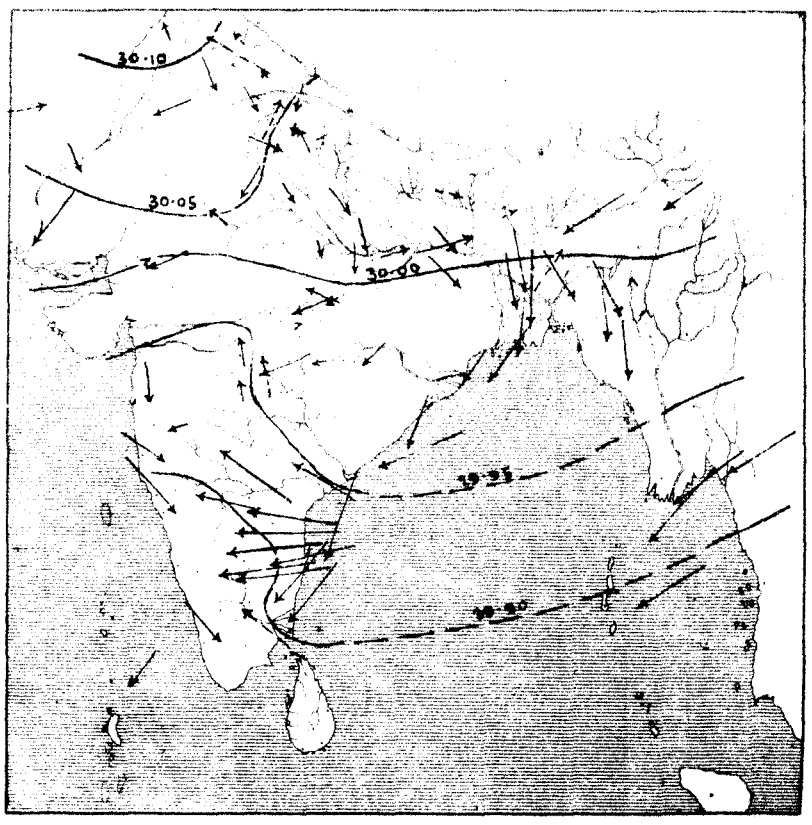


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF DECEMBER 1894.



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 of the resultant; a length of ⅕th of an inch being equal to 100 per cent.

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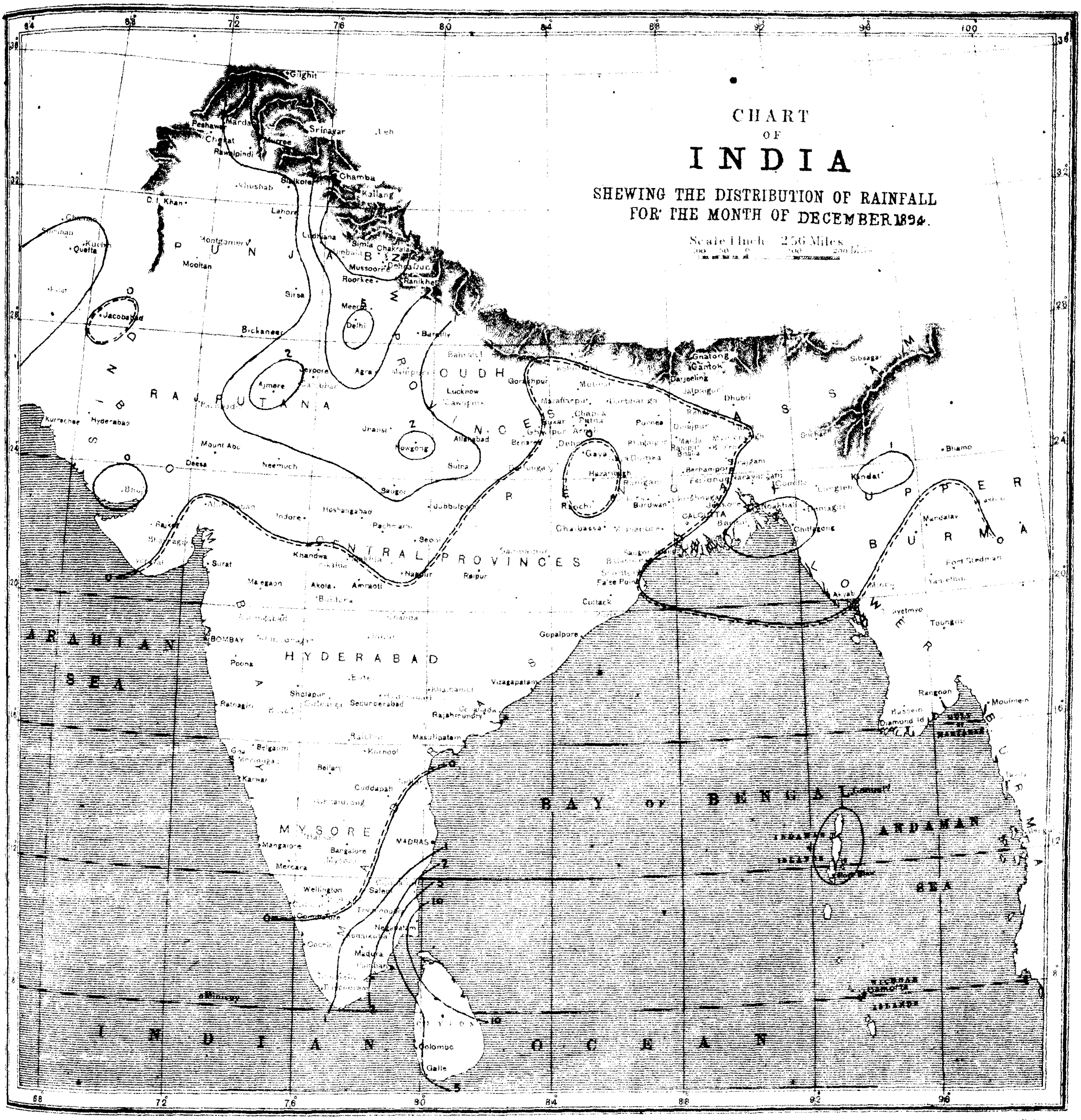

Explanation.

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

N. N. P.

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 51 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 name of the districts 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 figures.

1. Tenasserim	15. Behar (North)	29. Madras (South Central)	43. Central India (East)
2. Lower Burma	16. North Western Provinces (East)	30. Coorg	43(a). Do. do. (a)
3. Central do.	17. Oudh (South)	31. Mysore	44. Rajputana (East) Central India (West)
4. Upper do.	18. Do. (North)	32. Konkan	45. Rajputana (West))
5. Arakan	19. North Western Provinces (Central)	33. Bombay Deccan	46. East Coast (North)
6. Eastern Bengal	20. Do. do. (West)	34. Hyderabad (North)	46(a). Do. do. (a)
7. Assam (Surma)	21. Do. do (Submontane)	35. Khandeish	47. Hyderabad (South)
8. Do. (Brahmaputra)	22. Punjab (South)	36 Berar	48. Madras (Central)
9. Deltaic Bengal	23. Do (Central)	37. Central Provinces (West)	49. East Coast (Central)
10. Central do.	24. Do. (Submontane)	38. Do. (Central)	50. East Coast (South)
11. North do.	25. Do (Hill Districts)	39. Do. (East)	51. Madras (South)
12. Orissa	26. Do. (North West)	40. Gujarat	
13. Chota Nagpore	27. Do. (West)	41. Kathiawar	
14. Behar (South)	28. Malabar	42. Sind	

Reg. No. 166. Wr. ... 26 94 — 5 00.

Litho. S. I. O., Calcutta.