LIBRARY
WEATHER BUREAU
No. 20641

LIBRARY
JUL 18 1898
Weather Bureau

GOVERNMENT OF INDIA.

India. METEOROLOGICAL DEPARTMENT.

THE

INDIA WEATHER REVIEW

FOR THE YEAR

1896.

QC
996
.I39
I52
1896

BY

JOHN ELIOT, M.A., F.R.S., C.I.E.,
METEOROLOGICAL REPORTER TO THE GOVERNMENT OF INDIA.

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

Published by authority of the Government of India.

CALCUTTA:
OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, INDIA.
1897.

LIBRARY
OCT
22
1897
WEATHER BUREAU

National Oceanic and Atmospheric Administration

Environmental Data Rescue Program

ERRATA NOTICE

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

Discolored pages
Faded or light ink
Binding intrudes into the text

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

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

Corrigenda in India Monthly Weather Reviews and Annual Summary for 1891.

TABLES I AND II.

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column number.	CORRECTION.
	Monthly Weather Reviews, January to December 1891.	II	Nowgong . . .	Pressure . .	1,2 and 4 to 6	*Add* ·008.
31	January 1891 . .	I	Wellington . .	Wind Velocity .	1	Insert 2.
„	Ditto „ . .	I	Ditto . . .	Rainfall . .	1	Insert 2.
56	February „ . .	I	Raniganj . .	Pressure . .	4	*For* "30·904" *read* 29·904.
92	March „ . .	I	Jessore . . .	Temperature of air	5	*For* "0·8" *read* —0·8.
155	May „ . .	I	Moulmein . . .	Rainfall . .	1	Insert 9.
229	July „ . .	I	Dhubri . . .	Wind Direction .	3	Insert 6.
„	Ditto „ . .	I	Chittagong . .	Ditto . .	9	Insert 2.
„	Ditto „ . .	I	Noakhali . . .	Ditto . .	6	Insert 5.
„	Ditto „ . .	I	Saugor Island . .	Ditto . .	6	Insert 6.
„	Ditto „ . .	I	Krishnagar . .	Ditto . .	9	Insert 1.
273	August „ . .	I	Simla . . .	Rainfall . .	7	Insert 44·89.
312	September „ . .	I	Surat . . .	Temperature of air	5	*For* "—0" *read* —0·2.
317	Ditto „ . .	I	Ranikhet . . .	Wind Velocity .	3	*For* '0' *read* —100.
„	Ditto „ . .	I	Simla . . .	Rainfall . .	4,6,7 and 9.	*For* "11·53," "+5·70," "56·42" and "+8·49" *read* 11·60, +5·77, 56·49 and +8·56, respectively.
349	October „ . .	I	Hazaribagh . .	Wind Velocity .	3	*For* "+00" *read* +200.
„	Ditto „ . .	I	Allahabad . . .	Rainfall . .	4,6,7 and 9.	*For* "2·47," "+0·82," "2·47" and "+0·82" *read* 3·47, +1·82, 3·47 and +1·82, respectively.
392	November „ . .	I	Hyderabad, (Sind) .	Temperature of air	8	*For* "18·7" *read* 30·2.
420	December „ . .	I	Mymensingh . .	Ditto .	3 and 7	*For* "*2·1" and "*1·9" *read* +2·1 and +1·9, respectively.
426	Ditto „ . .	I	Coimbatore . .	Ditto .	8	*For* "13·5" *read* 18·5.
427	Ditto „ . .	I	Mangalore . .	Wind Direction .	5	Reject "3".
„	Ditto „ . .	I	Pamban . . .	Rainfall . .	4	*For* "12·37" *read* 12·39.
	India Weather Review, Annual Summary, 1891.	II	Nowgong . . .	Pressure . .	1, 2 and 4 to 6	*Add* ·008.

Corrigenda in India Monthly Weather Reviews, and Annual Summaries for the years 1892–94.

TABLES I AND II.

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column number.	CORRECTION.
	Monthly Weather Reviews for January to December 1892, 1893 and 1894.	II	Nowgong . . .	Pressure . .	1,2 and 4 to 6.	*Add* ·008.
	India Weather Review, Annual Summaries for 1892, 1893 and 1894.	II	Ditto . . .	Ditto . .	1,2 and 4 to 6.	*Add* ·008.
38	January 1894 . .	I	Darjeeling . . .	Temp. of Air .	1	*For* " 58·7 " *read* " 38·7".

Corrigenda in India Weather Review, Annual Summary for the year 1895.

TEXT.

Page.	Column.	Part.	CORRECTION.
597	...	Annual Summary, 1895 .	*For* " +·062 " *read* + 0·62 in the column of ' mean anomaly ' under year 1878 and *for* " —·037 " *read* —0·37 in the column of ' Progressive variation ' under year 1883, in the 1st tabular statement.
617	2	Ditto .	*For* " —04 " and " +01 " *read* — ·004 and + ·001 against " Annual Variation of pressure of vapour " under the years 1880 and 1885, respectively.
624	...	Ditto .	*For* " 266, 4000 " *read* 266,400 in column 8 of the tabular statement against I Punjab Plains.
650	1	Ditto .	*For* " south-west monsoon period, June to September 1896 " *read* south-west monsoon period June to September 1895 in line 1.
654	2	Ditto .	*For* " south-west " *read* south-west in line 3.

TABLE II.

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column number.	CORRECTION.
	Monthly Weather Reviews, January to December 1895.	II	Nowgong . . .	Pressure . .	1,2 and 4 to 6.	*Add* ·008.
672	India Weather Review, Annual Summary, 1895.	II	Ditto . . .	Ditto . .	1,2 and 4 to 6.	*Add* ·008.
675	Ditto . . .	II	Quetta . . .	Vapour tension .	4 and 5.	*For* " ·246 " and " —·007 " *read* ·238 and —·015, respectively.

Corrigenda in India Monthly Weather Reviews for the year 1896.

TEXT.

Page.	Column.	Part.	Correction.
3	1	January 1896 . .	*For* " —·006 " and " —·003 " *read* —·009 and —·006 against Burma Inland in the tabular statement.
„	2	Ditto „ . .	*For* " +0·2," " +0·8 " and " +0·5 " *read* +0·5, +1·0 and +0·7 in columns 2, 3 and 4, respectively against 'Burma Coast and Bay Islands' and *for* " —1·3 " *read* —1·2 in column 2 against Burma Inland in the tabular statement.
5	2	Ditto „ . .	*For* " 0·42," " 0·33 " and " +0·08 " *read* 0·47, 0·36 and +0·10 in columns 2, 3 and 4, respectively, against 'Burma Coast and Bay Islands' and *for* " 0·31 " and " —0·31 " *read* 0·24 and —0·24 in columns 3 and 4, respectively, against 'Burma Inland' in the tabular statement.
99	1	March „ . .	*For* " +1·2 " and " +1·5 " *read* +0·7 and +1·3 against 'Indus Valley and North-West Rajputana' in columns 2 and 4, respectively, of the 2nd tabular statement.
109	...	Ditto „ . .	*For* " +1·6 " and " —0·3 " *read* +0·6 and —1·3 against 'Punjab (South)' in columns 8 and 10, respectively, of the 2nd tabular statement.
381	1	August „ . .	*For* " ·390 " and " —·004 " *read* ·395 and +·001 against Quetta in columns 2 and 4, respectively, of the 2nd tabular statement.
432	2	September 1896 .	*For* " ·679 " *read* ·660 against Bombay Deccan in column 3 and *for* " 71 " and " —13 " *read* 77 and —7 against 'Madras Deccan' in columns 6 and 7, respectively, of the 1st tabular statement.
438	2	Ditto „ .	*For* " 7·62," " 7·95," " 8·83 " and " 6·23 " *read* —4·48, —6·66, —8·22 and —5·85, respectively, in column 5 and *for* " —46 " *read* —94 against Berar in column 6 of the 1st tabular statement.

TABLES I AND II.

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column number.	Correction.
28	January 1896 . .	I	Burma Coast and Bay Islands.	Temperature of Air	2—8 and 13.	*For* " 86·9," " +0·2," " 66·2," " +0·8," " 76·8," " +0·5," " 20·3 " and " 28·6 " *read* 87·3, +0·5, 67·3, +1·0, 77·6, +0·7, 19·2 and 27·4, respectively.
„	Ditto „ . .	I	Burma Inland . .	Pressure . .	2	*For* " —·006 " *read* —·009.
„	Ditto „ . .	I	Ditto . .	Temperature of Air	2—4, 6, 8 and 13.	*For* " 78·8," " —1·3," " 49·5," " 63·8," " 28·5 " and " 40·8 " *read* 79·4, —1·2, 50·5, 64·7, 28·3 and 40·6 respectively.
„	Ditto „ . .	I	Noakhali . . .	Pressure . .	8	*For* " ·315 " *read* ·215.
29	Ditto „ . .	I	Burma Coast and Bay Islands.	Rainfall . .	4—6	*For* " 0·42," " 0·33 " and " +0·08 " *read* 0·47, 0·36 and +0·10, respectively.
„	Ditto „ . .	I	Port Blair . . .	Hygrometry .	2	*For* " 7·82 " *read* ·827.
„	Ditto „ . .	I	Burma Inland . .	Rainfall . .	5 and 6	*For* " 0·31," " —0·31 " *read* 0·24, —0·24, respectively.
30	Ditto „ . .	I	Puri	Elevation . .	...	*For* " 24 " *read* 20.
31	Ditto „ . .	I	Rangpur . . .	Rainfall . .	3	*For* " —1·25 " *read* +1·25.
41	Ditto „ . .	II	Akyab . . .	Vapour tension .	3—5	*For* " ·605," " ·523 " and " +·026 " *read* ·602, ·522 and +·025, respectively.

Corrigenda in India Monthly Weather Reviews for the year 1896—continued.

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column number.	Correction.
	January and February 1896	I	Trincomalee	Elevation	...	*For* "75" *read* 12.
	Ditto ditto	I	Ditto	Pressure	1, 4 and 6	*Add* ·055.
	Ditto ditto	I	Ditto	Ditto	3	*Deduct* ·009.
	January to April 1896	II	Mauritius	Pressure	4 and 6	*Add* ·012 and ·011 respectively.
83	February 1896	I	Trivandrum	Rainfall	8	*For* "0·16" *read* 1·16.
84	Ditto "	I	Poo	Temperature of Air	4	*For* "26·5" *read* 26·8.
87	Ditto "	I	Baghdad	Wind Velocity	1	*For* "3" *read* 3·9.
90	Ditto "	II	Nagpur	Temperature of Air	2, 3, 9 and 10.	*For* "61·1," "32·4," "76·6" and "+2·8" *read* 61·5, 32·1, 76·8 and +3·0, respectively.
91	Ditto "	II	Ditto	Vapour tension	1, 4 and 5	*For* "·266," "·315" and "—·007" *read* ·262, ·314 and —·008, respectively.
"	Ditto "	II	Ditto	Humidity	1, 4 and 5	*For* "49," "35" and '—5' *read* 47 34 and —6, respectively.
123	March "	I	Port Blair	Wind Velocity	2 and 3	*For* "?" and "?" *read* 4·4 and —9, respectively.
"	Ditto "	I	Mergui	Ditto	2 and 3	*For* "?" and "?" *read* 2·0 and +2·0, respectively.
124	Ditto "	I	Malda	Temperature of air	6	*For* "78·0" *read* 78·8.
125	Ditto "	I	Buxar	Hygrometry	2	*For* "·330" *read* ·336.
126	Ditto "	I	Indus Valley and North-West Rajputana.	Temperature of Air	3 and 7	*For* "+1·2" and "+1·5" *read* +0·7 and +1·3 respectively.
"	Ditto "	I	Sirsa	Ditto	3 and 7	*For* "+3·7" and "+3·2" *read* +0·7 and +1·7 respectively.
127	Ditto "	I	Pachpadra	Wind Velocity	2 and 3	*For* "?" and "?" *read* 4·1 and +7·1 respectively.
128	Ditto "	I	Bidar	Temperature of Air	13	*For* "21·0" *read* 30·0.
130	Ditto "	I	Madras, East Coast, North.	Station	...	Insert Rajahmundry next after Bellary in list of station.
"	Ditto "	I	Ditto	Temperature of Air	1 to 13	Insert 79·9, 97·8, +1·9, 74·1, +0·3, 86·0, +1·1, 23·7, 103·1, 25th, 70·0, 5 days and 33·1, respectively.
"	Ditto "	I	Kachh	Ditto	8	*For* "11·4" *read* 22·9.
"	Ditto "	I	Yatung	Ditto	2 and 8	*For* "58·1" and "26·9" *read* 50·1 and 17·9, respectively.
131	Ditto "	I	Rajahmundry	Wind direction	1 to 9	Insert 10, 3, 0, 0, 3, 5, 0, 5, 5, respectively.
"	Ditto "	I	Ditto	Hygrometry	1 and 2	Insert 70, ·727, respectively.
"	Ditto "	I	Ditto	Mean cloud amount	1	Insert 4·2.
"	Ditto "	I	Ditto	Rainfall	1 to 10.	Insert 0, 0·05, —0·05, 0, 0·43, —0·43 0, 0·43, —0·43, 0, respectively.
"	Ditto "	I	Gantok	Wind direction	1	Insert 9.
"	Ditto "	I	Ditto	Rainfall	1	*For* "2" *read* 6.
133	Ditto "	I	Teheran	Ditto	10	*For* "0·32" *read* 0·82.
"	Ditto "	I	Bushire	Wind Velocity	2 and 3	*For* "?" and "?" *read* 8·9 and +2·1 respectively.
"	Ditto "	I	Kabul	Mean cloud amount	...	*For* "?" *read* 2·6.

Corrigenda in India Monthly Weather Reviews for the year 1896—concluded.

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column number.	Correction.
176	April 1896	I	Hoshangabad	Temperature of Air	7	*For* " +2·3 " *read* ?.
"	Ditto "	I	Sambalpur	Ditto	7	*For* " +2·5 " *read* ?.
178	Ditto "	I	Gantok	Pressure	4 and 8	*For* " 24·513 " and " ·332 " *read* 24·533 and ·312 respectively.
179	Ditto "	I	Kachh Fort	Wind Direction	5	*For* " ... " *read* 1.
180	Ditto "	I	Teheran	Pressure	8	*For* " 655 " *read* ·605.
182	Ditto "	II	Coco's Island	Temperature of Air	9	*For* " 89·5 " *read* 85·9.
"	Ditto "	II	Dehra Dun	Ditto	1, 3, 9 and 10.	*For* " 95·4," " 30·4," " 79·8 " and " +2·8 " *read* 95·0, 30·0, 79·7 and +2·7 respectively.
183	Ditto "	II	Sibsagar	Humidity	5	*For* " —4 " *read* +2.
186	Ditto "	II	Perim	Temp. Wet-bulb	4	*For* " 73·7 " *read* 77·1.
219	May "	I	Port Blair	Wind Velocity	1 and 3	*For* " 8·3 " and " +14 " *read* 8·2 and +12 respectively.
225	Ditto "	I	Pamban	Rainfall	10	*For* " 0·90 " *read* 0·20.
228	Ditto "	I	Resht	Temperature of Air	1	*For* " ? " *read* 64·3.
284	June "	I	Hassan	Pressure	6	*For* " 29·653 " *read* 26·653.
287	Ditto "	I	Zanzibar	Rainfall	10	*For* " 0·18 " *read* 0·19.
288	Ditto "	II	Roorkee	Temperature of Air	1, 3, 9 and 10.	*For* " 97·3," " 18·7," " 87·6 " and " —2·2 " *read* 97·8, 19·2, 87·8 and —2·0, respectively.
290	Ditto "	II	Murree	Ditto	2, 3, 5, 6 and 9.	*For* " ? " *read* 64·8, 18·4, 49·3, 45·2 and 73·9, respectively.
"	Ditto "	II	Ditto	Temp. Wet-bulb	1 and 4	*For* " ? " *read* 56·5 and 63·9, respectively.
291	Ditto "	II	Ditto	Vapour tension	1 and 4	*For* " ? " *read* ·380 and ·413, respectively.
"	Ditto "	II	Ditto	Humidity	1 and 4	*For* " ? " *read* 65 and 52, respectively.
	July to November 1896	II	Mauritius	Pressure	4 and 6	Add ·023 and ·022, respectively.
401	August 1896	I	Bangalore	Rainfall	4, 6, 7 and 9.	*For* " 3·21," " —2·59," " 7·04 " and " —6·80 " *read* 3·18, —2·62, 7·01 and —6·83, respectively.
408	Ditto "	II	Perim	Temp. Wet-bulb	4	*For* " 78·1 " *read* 78·5.
454	September "	II	Diamond Island	Ditto	4	*For* " 74·0 " *read* 77·4.
455	Ditto "	II	Chittagong	Humidity	5	*For* " —5 " *read* 0.
"	Ditto "	II	Buldana	Vapour tension	4 and 5	*For* " ·557 " and " —·126 " *read* ·559 and —·124, respectively.
485	October "	I	Kindat	Rainfall	4, 6, 7 and 9.	*For* " 3·78," " —3·12," " 3·78 " and " —3·12 " *read* 4·78, —2·12, 4·78 and —2·12, respectively.
499	Ditto "	II	Hyderabad (Deccan)	Vapour tension	4	*For* " ·531 " *read* ·521.
535	November "	I	Kindat	Rainfall	7 and 9	*For* " 4·22 " and " —4·41 " *read* 5·22 and —3·41, respectively.
546	Ditto "	II	Saugor Island	Temp. Wet-bulb	4	*For* " 66·6 " *read* 70·0.
550	Ditto "	II	Port Victoria	Pressure	4	*For* " ·962 " *read* ·926.
583	December "	I	Kindat	Rainfall	7 and 9	*For* " 4·22 " and " —4·50 " *read* 5·22 and —3·50, respectively.

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JANUARY, 1896.

INTRODUCTION.

THE monthly review of the weather in India for the month of January 1896 is based on observations taken daily at 8 A.M. at 209 stations, and on additional observations recorded at 10 A.M. and 4 P.M. at 84 stations. In the case of the rainfall section of the review there are also utilized the weekly rainfall telegrams received from District Officers throughout India, and the rainfall statements of the month published in the Government Gazettes by the Provincial Governments that have been issued prior to the date of the publication of the review. A brief summary of the information relating to the weather in the Bay of Bengal and Arabian Sea, extracted from the logs of vessels entering the ports of Calcutta and Bombay, is also given. In the remaining monthly reviews of the present year, the brief statements of the methods of recording and tabulating the data for each of the elements of observation given in the present number at the commencement of each section, will not be repeated.

Summary of the chief features of the weather in India during the month of January, 1896.

The month of January is 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 and hence also of humidity (more especially in Northern and Central India and the Deccan), and 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 by a secondary depression, it either gives no rain or light to moderate scattered rain over Northern and Central India. When a primary depression gives rise to a secondary depression in the Punjab, the double disturbance usually gives 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 from 5° to 15° above the normal precedes each storm, and a dry cool wave follows in its rear.

At the commencement of the month temperature was generally above the normal. The excess was large in Kathiawar, Gujarat and Khandesh. Pressure was in moderate to considerable defect in Baluchistan and Upper India, due to the approach of a feeble disturbance and cold weather depression to the North-West Frontier from the Persian area. It advanced across North Rajputana on the

3rd, and disappeared during the next 24 hours. It gave cloudy weather for a brief period in North-Western India, but no rain.

Pressure increased rapidly on the 5th in North-Western India, and high pressure conditions obtained from the 5th to the 10th. Temperature diminished considerably in the Deccan and Central India on the 4th and 5th and was largely below the normal, more especially in Berar and the Central Provinces, from the 6th to the 10th as is shown by the following data :—

	Variation from normal of 24 hours preceding 8 A.M. of				
	6th.	7th.	8th.	9th.	10th.
	°	°	°	°	°
Maximum	+0·3	−0·6	−0·4	−0·4	−0·2
Minimum	−5·2	−5·0	−4·4	−4·6	−5·1
Mean	−2·5	−2·8	−2·4	−2·5	−2·7

The data show that nights were abnormally cool in that area. This was due to the great dryness and clearness of the atmosphere and the prevalence of very light winds and calms.

A feeble cold weather storm which had formed in the Persian area on the 6th and 7th entered Baluchistan on the 11th. It passed across North Rajputana on the 12th to the foot of the Mussooree hills on the 13th, and disappeared during the next 24 hours. The disturbance gave light showers in Baluchistan, the North and East Punjab, Kashmir and the Punjab hills. It was preceded by a warm wave which advanced across Baluchistan to the foot of the hills in Upper India. Temperature was 10° above the normal in Baluchistan on the 11th, 6° in excess in Central Rajputana on the 12th, and 10° in the South East Punjab on the 13th. The advance of this warm wave displaced the area of decreased temperature from the Central Provinces eastwards across Orissa and South Bengal on the 14th and 15th into Upper and Central Burma on the 16th. Skies had cleared in the Punjab, Rajputana and North-Western Provinces on the 14th, but temperature continued to be very largely in excess in the eastern districts of the Punjab and the western districts of the North-Western Provinces, as is shown by the following data of two representative stations :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A. M. of			
	14th.	15th.	16th.	17th.
	°	°	°	°
Lahore	+4·0	+8·0	+5·8	+4·7
Meerut	+4·0	+6·5	+6·8	+5·1

A very shallow depression formed in this area of excessive temperature on the 18th. Light local showers, occurring chiefly during thunderstorms, were received in the South-East Punjab and adjacent hills on the 18th and 19th, on which day the depression filled up. Temperature decreased considerably in that area on the 18th and was approximately normal over the whole of India on that day.

Normal anti-cyclonic conditions were re-established in North-Western India on the 18th, and finer and drier weather than usual obtained for some days. The night temperature was hence reduced largely below the normal over the greater part of the interior, as is shown by the following data :—

Province.	Variation from normal of minimum temperature of 24 hours preceding 8 A. M. of			
	20th.	21st.	22nd.	23rd.
	°	°	°	°
North-Western Provinces and Oudh.	−3·2	−4·7	−3·3	−3·3
Sind and Rajputana	−5·0	−2·5	−2·9	−3·0
Central India and Gujarat	−2·9	−2·9	−1·6	−1·3
Central Provinces and Berar.	−3·8	−6·1	−4·3	−1·2

The day temperature was somewhat higher than usual in these areas, and the diurnal range of temperature was hence very large. Thus on the 22nd the diurnal range was 7° greater than the normal in the Punjab and Rajputana and 5° in the Central Provinces and the North-Western Provinces.

A noteworthy feature of this period was the diminished temperature both by day and night in Madras as is shown by the following data :—

	Variation from normal of 24 hours preceding 8 A. M. of				
	19th.	20th.	21st.	22nd.	23rd.
	°	°	°	°	°
Maximum	−0·4	−0·8	−1·1	−1·6	−1·6
Minimum	−2·5	−2·6	−2·9	−2·9	−2·2
Mean	−1·5	−1·7	−2·0	−2·3	−1·9

Temperature increased over the whole of India from the 23rd to the 26th and was approximately normal on the 26th over the whole area except Baluchistan and the frontier districts where it had increased rapidly during the previous 24 hours due to the approach of a cold weather storm.

This storm formed in Persia on the 22nd and 23rd and passed eastwards into Baluchistan on the 26th, Sind on the 27th, Rajputana and Central India on the 28th, Bihar on the 29th, and Bengal on the 30th. It probably advanced across Burma out of the Indian area on the 31st. This primary depression gave rise to a short-lived secondary depression in the Punjab on the 28th. A second depression

formed on the 25th and 26th in Persia and was passing through Baluchistan on the 31st.

The disturbance gave moderate rain to Baluchistan, the Punjab, Kashmir, the western districts of the North-Western Provinces, and light showers to North Bihar and Bengal and moderate showers to Assam during the last five days of the month.

A warm wave advanced across Northern India in front of the first depression.

Pressure.—The mean pressure of the Indian area was only ·003″ below the normal. Relatively to the general conditions pressure was locally in slight excess in Assam, Central India, Berar, Central Provinces, the Deccan and Madras, and in slight defect elsewhere. The local variations were, however, everywhere small and apparently of little significance. Pressure was relatively in excess at the hill stations as compared with the plains stations, the excess increasing with increase of elevation. Thus, for the Western Himalaya hill stations from Murree to Ranikhet, the vertical anomaly averaged ·02″, for Quetta it was ·03″ and for Leh ·07″. As is invariably the rule in January, the increased pressure at the hill stations relative to the plains accompanied drier and less disturbed weather than usual during the month under review.

The following table 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	−·010	−·007
Burma Inland	−·006	−·003
Assam	−·001	+·002
Bengal and Orissa	−·006	−·003
Gangetic Plain and Chota Nagpur	0	+·003
Upper Sub-Himalayas	−·011	−·005
Indus Valley and North-West Rajputana	−·021	−·018
East Rajputana, Central India and Gujarat	−·003	0
Deccan	+·008	+·011
West Coast	0	+·003
South India	+·004	+·007

Temperature.—The variations of the temperature conditions of the month from the normal were mainly determined by two features, *viz.*, the unusual dryness of the air and decreased cloud in North-Eastern and Central India and the Deccan and the prevalence of much finer and more settled weather than usual in North-Western India.

The mean maximum or day temperature of the month was above the normal over the whole of India with the exception of Burma, Madras and the South Deccan. It was more than 2° in excess over the whole of India to the west of a line joining Bombay and Gorakhpur and exceeded 4° at Quetta (+6°·5), Bickaneer (+5°·5), Sirsa and Sambhar (each +4°·9), Dessa (+4°·8), Hyderabad Sind (+4°·5), Bhuj (+4°·3) and Jeypore (+4°·2) *i. e.* over the greater part of Sind and Rajputana. The mean minimum or night temperature was in slight to moderate excess in North-West and South India and Lower Burma. The excess was more than 3° in amount, at Jacobabad (+3°·3) and Mooltan and Lahore (each +3°·2). The night temperature was below the normal over the remainder of India and the deficiency was most marked in the Central Provinces and the greater part of Bengal, Assam and the North-Western Provinces. It was absolutely greatest at Sambalpur (−5°·8), Sibsagar and Jubbulpore (each −4°·3) and Chanda (−3°·9).

The mean temperature of the month was in moderate to considerable excess in the greater part of Upper India and Baluchistan where both the day and night temperatures were higher than usual. It was more than 3° above the normal at Quetta (+4°·7), Mooltan (+3°·4), Jacobabad, Hyderabad Sind and Murree (each +3°·3).

The mean temperature of the month was in slight defect in Central and Upper Burma, Asam, Bengal, Orissa, Berar, the Central Provinces, the Deccan and Madras. The day and night temperatures varied in opposite directions from the normal over the greater part of this area, and hence the mean temperature of the month differed little from the normal and was in slight defect due to the low night temperature over the greater part of the area, more especially Bengal, the Central Provinces and Berar.

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 Island	+0·2	+0·8	+0·5
Burma Inland	−1·3	−0·5	−0·9
Assam	+1·0	−3·0	−1·0
Bengal and Orissa	+0·9	−2·0	−0·6
Gangetic plain and Chota Nagpur.	+1·9	−1·7	+0·1
Upper Sub-Himalayas	+3·2	+0·2	+1·7
Indus Valley and North-West Rajputana.	+3·8	+1·3	+2·6
East Rajputana, Central India and Gujarat.	+3·4	−0·3	+1·6
Deccan	+1·3	−1·8	−0·3
West Coast	+1·3	+0·7	+1·0
South India	−0·6	−0·5	−0·6

Winds—were of normal strength in Burma. They were slightly weaker but of normal steadiness in Bengal and were on the average of the month somewhat more directly from the north than usual. The mean air movement of the month down the Gangetic Plain was normal in direction and was even feebler and more unsteady than usual. Winds were also weaker than usual in Central India, Berar, the Central Provinces and the Deccan.

The following gives a rough comparison of the actual and normal air movement of the month in the ten meteorological provinces of the Empire :—

Meteorological Province.	Wind velocity in miles per diem.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.
Burma Coast and Bay Islands	163	117	+46
Assam	60	61	−1
Bengal and Orissa	70	78	−8
Gangetic Plain and Chota Nagpur	68	66	+2
Upper Sub-Himalayas	41	44	−3
Indus Valley and North-West Rajputana	86	96	−10
East Rajputana, Central India and Gujarat	81	92	−11
Deccan	97	106	−9
West Coast	188	229	−41
South India	127	99	+28

Humidity and Cloud.—The air was drier than usual over the whole of Burma and India with the exception of British Baluchistan, Sind and the Punjab. The relative humidity was most largely in defect in the Central Provinces, Berar, Chota Nagpur, West Bengal and the eastern districts of the North-Western Provinces. The mean humidity of the month was more than 12 below the normal at Allahabad and Raipur (each 17 below), Saugor and Chakrata (each 15 below), Chikalda and Khandwa (each 14 below) and Hoshangabad (13 below). The dryness of the air was not a temperature effect and was due almost solely to the amount of aqueous vapour present in the air being more or less considerably below the normal. At many stations in the Central Provinces, Berar, Chota Nagpur, Bihar and West Bengal there was from 30 to 40 per cent. less vapour than usual in the air.

There was somewhat more cloud than usual in January in the Andamans, Burma, the Punjab and Baluchistan. Over the remainder of India cloud was more or less considerably below the normal, and skies were unusually serene over the large area including Bengal, Chota Nagpur, Bihar, the Central Provinces, Berar, the Bombay Deccan and Hyderabad. The mean cloud amount of the month averaged only 0·7 for the whole of that area and was less than 1·0 at almost all stations in it. The mean cloud proportion of the month was least for Bombay and Durbhanga (0·2), Buldana (0·3), and Calcutta and Poona (each 0·4). Cloud was as largely in defect at the hill stations of Northern and Central India as at the adjacent plains stations. It is noteworthy that this feature of decreased cloud extended westwards as far as Aden (0·3 in defect) and southwards as far as Zanzibar (0·9 in defect).

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 January 1896 :—

Meteorological Provinces.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean Humidity.	Mean cloud amount.
	"		
Burma Coast and Bay Islands	−·001	−3	+0·2
Assam.	−·028	−3	−1·1
Bengal and Orissa	−·050	−7	−1·1
Gangetic Plain and Chota Nagpur	−·051	−11	−1·2
Upper Sub-Himalayas	−·015	−2	−0·3
Indus Valley and North-West Rajputana	+·026	+2	+0·3
East Rajputana, Central India and Gujarat	−·033	−6	−1·5
Deccan	−·062	−9	−1·3
West Coast	−·020	−6	−0·4
South India	−·031	−1	−0·6

Rainfall.—The rainfall of the month was *nil* (*i. e.* less than an average of a tenth of an inch) over by far the greater part of India. The Madras coast districts south of Kistna, and the South Madras districts received light

showers on the 1st, 8th and 9th. There were three periods of disturbance and rainfall in Northern India. The first was from the 11th to the 14th, when a feeble cold weather storm gave light to moderate showers to Baluchistan, the North and East Punjab, Kashmir and the Punjab hills. The second period was the 18th and 19th, when a feeble local disturbance in the South-East Punjab gave light showers in that area and the adjacent hills. The third period extended from the 27th to the 31st, during which a cold weather disturbance of moderate intensity crossed Northern India. Baluchistan, the Punjab, Kashmir, a part of the North-Western Provinces, North Bihar, Bengal and Assam had light to moderate rain during this period. The total rainfall of the month was more or less in defect over the whole of India, Baluchistan and Burma and was *nil* in Rajputana, Central India, Berar, the Central Provinces, South Bihar, Chota Nagpur, Orissa, North Madras, the Deccan and West Coast districts. The following table gives comparative rainfall data for the eleven meteorological provinces of India, based on the rainfall data of 164 meteorological stations :—

Meteorological Province.	Rainfall.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.*
	Inch.	Inch.	Inches.
Burma Coast and Bay Islands	0·42	0·33	+0·08
Burma Inland	0·06	0·31	−0·31
Assam	0·93	0·90	+0·04
Bengal and Orissa	0·20	0·44	−0·23
Gangetic Plain and Chota Nagpur.	0·06	0·70	−0·64
Upper Sub-Himalayas	0·63	1·74	−1·09
Indus Valley and North-West Rajputana.	0·33	0·54	−0·28
East Rajputana, Central India and Gujarat.	0·02	0·38	−0·36
Deccan	0	0·32	−0·32
West Coast	0·13	0·27	−0·12
South India	0·28	0·38	−0·05

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

Atmospheric Pressure.

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

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

Aden.	Dinajpur.	Noakhali.
Akyab.	Faridpur.	Nowgong.
Arrah.		Perim.
Barisal.	Gorakhpur.	
	Hyderabad (Sind).	Rampur Boalia.
Bhuj.	Jalpaiguri.	Rangpur.
Bogra.	Mandalay.	
Bushire.	Mangalore.	Sambhar.
Chapra.	Midnapore.	
Cochin.	Mooltan.	Silchar.
Cocos Island.	Mymensingh.	
Comilla.	Naya Dumka.	Toungoo.
Cuddapah.	Negapatam.	

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

Amini Divi.	Gnatong.	Leh.
Chanda.	Kailang.	Malegaon.
	Katmandu.	Mercara.
Dehra.	Kurnool.	Sirsa.

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

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

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

The elevations of the barometers of all stations, with the exception of Camorta, Kindat, Bhamo, Taunggyi, Minbu, Lashio, Daltonganj, Patiala, Kachh Gilgit, Gantak, Teheran, Ispahan, Jask, Muscat, Baghdad, Kashgar, Shortt's Island, Veraval, Aurangabad, Indur, Bidar, Cherat, Gnatong, Yatung, Bickaneer, Umballa, Mardan, Peshin, Kelat, Astor, Minimargh, Samana, Resht, Kabul 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 (reduced to 32° F.) of the month, the mean 8 A.M. pressure corrected to constant gravity and to sea-level, the highest and the lowest pressures and their respective dates of occurrence and the total range of 8 A.M. pressure during the month.

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

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 years period 1878—93, the same period being selected for all stations (with ten or eleven exceptions), in order that the means may be fairly comparable.

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

The monthly means employed in the determination of the variations of the mean actual from the mean normal pressures of the month given in Table II are derived from all the available trustworthy pressure data for each station, and hence are the means for very varying numbers of years, ranging from 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 pressure conditions in January 1896 at the level of the plains agreed closely with the normal. The mean pressure for the whole of India was ·003″ below the normal.

Pressure variation and anomaly data of the month for the large meteorological divisions of India are given in page 3.

Pressure was, relatively to the normal, in very slight defect in Burma, Bengal, the North-Western Provinces, Punjab, Rajputana, Sind and Kathiawar, and in slight excess in the remainder of India. The anomalies were generally very small in amount but exceeded ·02″ in three small areas, for which data are given below:—

Division.	Station.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
		″	″
Punjab	Mooltan	—·035?	—·032?
Sind	Hyderabad	—·026	—·023
Cutch	Bhuj	—·029	—·026
Central India	Indore	+·018	+·021
	Neemuch	+·032?	+·035?
Central Provinces	Sambalpur	+·019	+·022

The chief feature in the pressure distribution was a moderate excess at the level of the hill stations in Northern India, as compared with the neighbouring plain stations. The following gives data for several pairs of stations:—

Hill Station.	Variation of pressure from normal. (a)	Neighbouring Plain Station.	Variation of pressure from normal. (b)	Vertical pressure anomaly or (a)—(b).
	″		″	″
Leh	+·062	Lahore	—·011	+·073
Murree	+·018	Peshawar	—·014	+·032
Simla	+·006	Ludhiana	—·010	+·016
Ranikhet	+·017	Bareilly	—·003	+·020
Darjeeling	+·012	Dhubri	—·004	+·016
Mount Abu	+·005	Deesa	—·011	+·016
Quetta	+·024	Jacobabad	—·016	+·040

The chief features in the pressure conditions of the month were—

(1) Very slight deficiency over the whole Indian area.

(2) Slight relative defect in North-Western India,

Bengal and Burma, greatest in Sind and the West Punjab, but small in amount and of little importance.

(3) Slight relative excess in the Peninsula.

(4) A moderately large excess of pressure at the hill stations as compared with the plains stations in Upper India and Baluchistan. The excess increased with elevation up to the height of Leh where it was large in amount. This was the only important pressure feature of the month and was directly related to the drier and more settled weather than usual of the period in North-Western India.

Barometric depressions or cold weather storms of the month.

Pressure at the commencement of the month was in moderate excess in Baluchistan and normal or in slight defect in India. Fine weather with clear or lightly clouded skies obtained in Northern India. Weather was cloudy in the Madras coast districts and light to moderate showers had been received during the previous 24 hours. Pressure gave way rapidly in Baluchistan during the next 24 hours and a shallow depression lay over that area and Upper Sind on the morning of the 2nd. It passed into North-West Rajputana on the 3rd and North-East Rajputana on the 4th, filling up as it advanced. A brisk to rapid increase of pressure occurred in North-Western India during the next 24 hours and there was no trace of the depression on the morning of the 5th. The disturbance gave some cloud in Upper India, chiefly in the hill districts, but no rain. The barometric changes during the next four days were unimportant and the general character of the pressure distribution was unaltered. During the period from the 4th to the 11th pressure was very high over Western and Central Europe. A low pressure area formed in the Mediterranean on the 7th and 8th and lay over the Central Mediterranean on the 9th, 10th and 11th and filled up without moving. Weather was slightly unsettled during this period in Persia. Baghdad had showers on the 6th, 8th and 9th, Bushire on the 6th and again on the 9th, 10th and 11th and Jask on the 6th and 7th.

Pressure gave way rapidly at Ispahan on the 9th, and at Jask and Chaman on the 11th. The changes at Baghdad and Bushire were small at this time. It is hence probable that a shallow depression formed in Central Persia on the 8th and 9th, and that it advanced eastwards and began to affect Baluchistan on the 10th. This depression gave disturbed weather in Upper India during the next three days.

Cold weather storm of the 11th to 13th January.—Pressure fell briskly to rapidly in Baluchistan and Kashmir during the 24 hours preceding 8 A.M. of the 11th. A shallow depression lay over Baluchistan at that hour. Skies had clouded over and temperature was increasing rapidly. Light showers had fallen at the majority of stations in British Baluchistan.

The pressure changes of the next 24 hours indicated that the disturbance had passed into Central Rajputana (or the area defined by the stations of Sirsa, Jeypore, Ajmere and Bikaneer) at 8 A.M. of the 12th. The depression had filled up partially and was now very slight. Baluchistan, the northern districts of the Punjab and Kashmir had received light to moderate showers. The largest reported fall was 1 inch at Murree. The depression moved to the foot of the Mussooree hills during the next 24 hours. Rain had fallen during this day in Baluchistan, the North and East Punjab and the Punjab and Kashmir hills. The rainfall was more local and more irregularly distributed than on the 12th. The largest reported falls were 2·1 inches at Sharigh in Baluchistan and 1·92 inches at Nagar and 1·89 inches at Kulu, both in the Kangra district.

The depression filled up and disappeared during the next 24 hours. Baluchistan, the East Punjab, Kashmir and the Punjab hills received light showers during the day.

The disturbance was feeble throughout. It apparently formed in Central Persia on the 9th and advanced eastwards to the foot of the South Punjab hills where it broke up on the 13th. It gave moderate rain to Baluchistan, the North and East Punjab, Kashmir and the Punjab hills.

The pressure changes in India during the period from the 14th to the 17th were generally small in amount and irregular in character. A very shallow low pressure area was shown over Nepaul and Sikkim and the adjacent submontane districts on the 15th, 16th and 17th, but it does not appear to have been associated with stormy weather in the Nepaul Hills.

Pressure fell rapidly during the 24 hours preceding 8 A.M. of the 18th in the South East and East Punjab, Kashmir and the Punjab Hills and a shallow depression, central near Sirsa, was shown at that hour in the South-East Punjab. It advanced along the foot of the hills during the next 24 hours and filled up on the 20th. The eastern and south eastern districts of the Punjab (including Lahore, Ferozepore, Hoshiarpur, Amritsar, Sialkot and the Simla Hills) received light showers on the 18th and 19th from this feeble disturbance.

Pressure increased generally on the 21st, decreased on the 22nd and increased briskly to rapidly on the 23rd and 24th, on which day it was in large excess in Northern

India. Pressure gave way in the Persian area from the 21st to the 23rd, and a deepish depression lay over West Persia on the morning of the 23rd. Baghdad received two inches of rain during this period. The following gives observations recorded at the Persian stations at 8 A.M. of the 23rd:—

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.
Baghdad	29·659	—·109	—·331	NE	2	10	1·12
Bushire	·812	—·189	—·252	SE	5	10	
Ispahan	?	—·150	—·124	SSW	6	10	
Teheran	?	—·270	—·200	ENE	2	10	0·25
Muscat	?	—·059	—·050	SE	3	0	
Jask	?	—·041	—·019	E	5	1	
Quetta	?	—·010	+·145	Calm	1	0	

The observations show that a deepish depression had formed in West Persia and Mesopotamia where skies were now overcast and weather showery. The chief feature in the storm area was the high temperature, more especially at night. Thus the mean temperature of the 23rd was 6° above the normal at Ispahan, 3°·4 at Baghdad, 11°·3 at Bushire, 4° at Jask, and 3°·9 at Quetta. The depression drifted eastwards and began to affect Baluchistan on the 25th. Pressure decreased very rapidly in that area during the next 48 hours and a deepish depression lay over East Baluchistan and Sind on the morning of the 27th. The following gives 8 A.M. data of that day for the depression area:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.
	8 P.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.
Quetta	?	—·074	—·099	SSW	3	10	0·44
D. I. Khan	29·868	—·135	—·185	N	1	7	
Bickaneer	·841	—·162	?	SSE	3	3	
Jacobabad	·764	—·207	—·272	NE	2	4	
Hyderabad	·837	—·136	—·194	SSW	4	0	
Kurrachee	·848	—·120	—·177	WSW	7	6	

The deficiency of pressure at Jacobabad on this day was hence almost as large as at Baghdad on the 23rd. During this period from the 23rd to the 26th, fine clear and very dry weather obtained in Northern and Central India. Pressure had increased generally on the 24th but gave way largely during the next three days over the whole Indian area. This fall was in part due to the approach of depression from the Persian area of which a brief account is given below.

Cold weather storm of the 27th to the 31st.—For some days previous to the formation of this depression (and in fact from the 19th up to the end of the month) high pressure conditions held steadily in South and South East Europe.

The origin of this storm has been described above. It was on the 26th passing through Baluchistan and advanced into Sind on the 27th.

Temperature had increased very considerably in Sind, Rajputana and the Punjab in front of the advancing depression. The following gives data for the 24 hours preceding 8 A.M. of the 27th:—

Provinces.	Increase during 24 hours preceding 8 A.M. of 27th in		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Sind and Rajputana	+4·2	+6·9	+5·6
Punjab	+1·1	+5·1	+3·1

The data show that both the day and night temperatures had increased during the previous 24 hours, and that the rise was most marked in the night temperature.

Another noteworthy feature was the very large effect the storm had already produced in the Kashmir and Punjab hills. The following gives data:—

Station.	Elevation.	Pressure.		Wind.		Cloud.
		Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	
	ft.	"	"			
Leh	11,503	—·166	?	SSW	2	10
Srinagar	5,204	—·185	?	WSW	3	10
Astor	...	—·156	?	S	2	10
Minimarg	...	—·141	?	NNE	10	10
Gilgit	...	—·180	?	...	...	10
Murree	6,344	—·084	—·042	SE	13	10
Simla	7,224	—·026	+·018	NNE	5	10

The data show that the decrease of pressure was largest at the most northerly and most elevated stations and

was as large as in the central area in Sind. Winds in the open, as shown by the data of Murree and Minimarg were blowing with the force of a gale, and weather was very stormy in the Kashmir hills.

Moderate rain had fallen in Baluchistan during the previous 24 hours, and skies had clouded in the Punjab and Upper India hills. They were as yet clear in the North-Western Provinces, Bihar, Rajputana and Central India.

28th January.—The depression in Upper Sind on the previous day had advanced into the Punjab and was now central near Montgomery. The following data show its character and position 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.			
	"	"	"				Inch.	
Bickaneer .	29·826	—·015	?	SSW	8	0	0·05	Duststorm.
Sirsa . .	·794	—·103	—·228	Calm	6	9		
Lahore . .	·773	—·121	—·235	SE	5	10		
Montgomery .	·773	—·073	?	SSW	8	4		
Khushab .	·790	—·122	?	ENE	11	8		
D. I. Khan .	·822	—·046	—·221	NNW	6	0		Strong wind.
Mooltan .	·809	—·008	—·250	SW	1	0		

Pressure was upwards of a quarter of an inch below the normal in the centre of the depression at the level of the plains. Pressure had again given way rapidly at the hill stations in Upper India as is shown by the following data :—

Station.	Pressure.		Wind.		Cloud.	Rainfall.	Remarks.
	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"				Inch.	
Leh . .	—·211	—·297	SSW	2	10	...	
Srinagar . .	—·122	—·279	NNW	2	10	0·06	
Astor . .	—·142	—·305	NW	8	10	0·15	
Minimarg . .	—·168	—·316	E	11	10	0·10	Snowstorm.
Murree . .	—·097	—·135	SE	25	10	...	
Simla . .	—·152	—·122	SE	8	10	0·04	Snowing.

Pressure had decreased most rapidly at the most elevated stations (Minimarg and Leh) and was below the normal to a larger extent than at the level of the plains at Mooltan and Montgomery.

Light to moderate rain had fallen during the previous 24 hours in Kashmir, the northern and eastern districts of the Punjab and in the hill and submontane districts of the Punjab and North-Western Provinces. Falls exceeding 2 inches were reported at the following stations :—

District.	Station.	Rainfall in past 24 hours.
		Inches.
Rawalpindi . . .	Murree . . .	2·40
Dehra Dun . . .	Mussooree . . .	2·20

Temperature had increased rapidly in Central India, the Central Provinces and the North-Western Provinces, as is shown by the following data :—

Province.	Increase during 24 hours preceding 8 A.M. of 27th, in		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
North-Western Provinces and Oudh.	+1·1	+7·4	+4·3
Central India and Gujarat .	—0·5	+5·5	+2·5
Central Provinces and Berar .	+1·7	+5·7	+3·7

The day temperature had hence increased slightly and the night temperature largely in front of the advancing depression.

The observations of this and the following day indicate that the depression and disturbance really consisted of a feeble primary disturbance passing eastwards through Rajputana and Central India and of a secondary depression in the Central and North Punjab. The former was, as is frequently the case, obscured to so large an extent by the secondary that its existence is only indicated in the chart of the day by a slight bend of the isobars in Rajputana.

29th January.—As pointed out above, the disturbance on the previous day consisted of a feeble primary depression passing rapidly eastwards across Northern India and of a stationary secondary depression in the North and Central Punjab. The latter had given showery weather with much snow in the mountain districts to the north-west, north and east of the Punjab.

Pressure had increased very rapidly in the Punjab during the previous 24 hours and the secondary depression in that area on the 28th had filled up.

Pressure had given way briskly in Bihar and the primary depression had advanced to that area. 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	
Hazaribagh .	29·897	—·032	—·105	S	8	0	0·06	Thunderstorm.
Patna . .	·887	—·067	—·133	ESE	4	4	0·13	
Gorakhpur .	·927	—·002	—·083	NNW	3	2	0·02	
Allahabad .	·926	+·014	—·098	Calm	6	1		
Suttia . .	·945	+·054	—·100	NW	5	0		

The double disturbance had given showers to Kashmir, North Punjab, and the submontane and hill districts of the Punjab and North-Western-Provinces and also to North Bihar and Assam during the previous 24 hours. The falls were heavy in the hill districts and severe snowstorms were in progress on the higher elevations.

Pressure had given way rapidly over the whole Persian area during the previous 24 hours and weather had again become disturbed in that area as is shown by the following data:—

Station.	Pressure.		Wind.		Cloud.	Rainfall.
	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.		
	"	"				Inch.
Bushire .	—·180	—·180	ENE	5	10	0·68
Ispahan . .	—·150	—·200?	SW	5	10	...
Jask . . .	—·076	—·100?	NW	10	0	...
Quetta . .	+·016	—·056	Calm	2	0	...

This disturbance had apparently originated during the previous 48 hours in the Persian area and was advancing eastwards through Central Persia to Baluchistan on the 29th.

The warm wave in front of the first depression or storm was now passing through Bengal, where temperature was 2°·3 higher than on the previous day. Temperature had fallen on the average 6°·3 in Sind and Rajputana, 4° in the Punjab, 3° in Central India and the Central Provinces and 2° in the North-Western-Provinces in the rear of the primary depression.

30th January.—Pressure had fallen briskly in Upper Burma and East and South Bengal and the primary depression now lay over Bengal and Assam. Winds were very irregular in that area, but indicated a feeble cyclonic circulation in the lower atmosphere. The disturbance had given light to moderate showers in Assam and Bengal during the previous 29 hours. The largest amounts were recorded in Western Bengal and the Assam valley.

Pressure had increased briskly to rapidly at the Persian stations and fallen rapidly in Baluchistan and was unchanged in North-Western India. Skies had clouded over in Baluchistan and were partially clouded in the Punjab and North-Western Provinces hill districts.

The disturbance which was passing through Central Persia on the 29th was now in Baluchistan. The mean temperature of the previous 24 hours was 7° higher than on the 29th at Quetta and 4° higher at Chaman. The advancing depression had given light to moderate rain during the previous 24 hours to Balachistan. Mudgorge had recorded the large fall of 3·30 inches.

Temperature had fallen considerably in the North-Western Provinces, (4°·5) and slightly in Central India and the Central Provinces, but was rising rapidly in Rajputana and Sind in front of the disturbance now passing through Baluchistan.

31st January.—Pressure had increased briskly to rapidly in Burma and North-Eastern India and the disturbance in that area on the 30th had either filled up or passed eastwards out of the Indian area. Light showers had fallen in Assam and the Lushai hills but skies had again cleared over the whole of North-Eastern India.

Pressure had given way briskly in Sind and Rajputana and Baluchistan, and a deepish depression lay over that area. The following data define 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.		
	"	"	"				Inch.
Quetta . .	...	—·091	—·215	ESE	4	8	0·36
Jacobabad .	29·855	—·075	—·189	ENE	2	3	...
Hyderabad .	·877	—·043	—·169	SSW	8	5	...
Deesa . .	·966	—·014	—·068	WSW	7	0	...
Bikaneer .	·873	—·058	?	SSE	4	5	...
Mooltan . .	·893	—·080	—·178	NE	2	8	...

Skies were overcast in the Punjab and were clouding over in Rajputana. The disturbance had given moder-

ate rain to Baluchistan, the North Punjab and Kashmir during the previous 24 hours. Falls slightly exceeding one inch were registered at several stations. Temperature had increased rapidly in Rajputana in front of the storm, and was on the mean of all stations in that area 9° above the normal during the previous 24 hours.

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

I.—AFGHAN MOUNTAIN DISTRICTS.

(1) *Hills bordering the Dera Ismail Khan District.*

The following report has been received from the Deputy Commissioner:—On the 27th and 28th January 1896 snow fell on the highest peaks of the Suleman Range, *i.e.*, Gat Ubashta and Kaisar Ghar and Marmash and Sharyala. The depth was 1 foot and 9 inches. During the storm the weather was cold and cloudy.

(2) *Waziristan.*—The following account of the weather in this district has been received from the Political Officer, Wano:—

January 11th.—Weather cloudy, rain fell at night in Wano and snow on the neighbouring hills.

The following gives the depth of the snowfall at different elevations:—

	Elevation.	Fall.
Marwattai	(11,000 feet)	about 3 feet.
Bosh		Do.
Pir Ghal	(11,500 feet)	Do.
Karbono		Do.
Dre Nashtar		4 feet.
Kundighar	(8,000 feet)	2 feet.
Janimela		Do.
Kot kun	(7,900 feet)	1 foot.
Ghat		Do.
Oybasta		Do.

13th and 14th.—Rain fell during the day and night and snow on the neighbouring mountains.

27th.—Rain fell during the day and night and snow on the neighbouring mountain ranges.

30th and 31st.—Heavy and continuous snowfall on the hills. On the Pirghal (11,500 ft.) between 3 and 4 feet, was received, on Kundighar (8,140 ft.) and at Kuniguram (6,5[illegible]oft.) about 3 feet. The snow fell down to a[illegible]ut 4,500 feet.

During each storm the weather was cloudy and dull for some few days previous and generally cleared quickly after the storm was over.

The weather was clear, bright and cold between the storms. The snowfall this year is reported by the inhabitants of the district to be heavier than last year.

(3) *Kurram.*—There was a slight snowstorm on the 17th instant. Snow fell as low as 6,000 feet. On the Safed Koh the snow line descended to 5,500 feet. There was a severe snowstorm on the 30th and 31st January. Snow fell for 48 hours and there was about 2 feet of snow at Para Chinar. On the Safed Koh the fall was about 6 feet in amount. This is the heaviest fall in Kurram during the past three winters. The weather was calm during each snow storm. The weather in the intervals between the snowstorms was unusually warm, more like spring weather. It is reported that there were ten feet of snow on Sikadan, the highest peak of the Safed Koh, at the end of the month. The inhabitants of the district say that they have never known such a heavy fall in so short a time as that which took place on the 31st January 1896.

(4) *Kabul.*—The following is a statement of the snowfall as recorded at the observatory at the dispensary attached to the office of the British Agent:—

Date.	Fall. Ft.	Inches.
11th, 4 P.M. to 8 P.M.	1	6
16th, 2 A.M. to 6 A.M.	0	2
29th, during the night	0	1
30th and 31st, 5 P.M. of the 30th to 8 P.M. of the 31st	2	6
TOTAL OF MONTH	4	3

The snowfall was heavier in the adjacent hills, and according to the accounts received, the fall on the Paghman mountains averaged 4½ feet, the Kohidaman 4½ feet, and the Ghazni range about 6 feet. Eighteen feet of snow are reported to have fallen in Kafiristan. The snowfall of the month is regarded by the natives as much larger than usual in January.

II.—KASHMIR AND PUNJAB HIMALAYAS.

(1) *Hills adjacent to Murree.*—Snow fell on eight days during the month, *viz.*, the 11th, 12th, 14th, 15th, 17th, 28th, 30th and 31st. The falls were generally light, but were heavy on the 28th (when 2 feet were received) and the 31st (when 14 inches fell). The total amount during the month was 5 feet 2 inches. The snowfall at Kahuta amounted to only 1 foot, occurring chiefly on the 29th.

(2) *Chamba.*—The Deputy Conservator of Forests, Chamba Division, has sent a full and interesting account of the snowfall in that state during the month.

The following table gives accurate measurements of the observed snowfall at four places at different elevations in the Chamba State during the month of January:—

Month.	Date.	Depth of snowfall at Chanan, 65,00 feet.		Thanela, 7,000 feet.		Tisa, 5,000 f t.		Bhandal, 6,000 feet.	
		Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
	11 and 12th	0	1	0	3	...		0	1
January 1896	13th	*Nil*		*Nil*		...		*Nil*	
	28th and 29th	1	3	2	0	0	8	0	10
	30th	0	4	*Nil*		*Nil*		1	4
	31st	0	4	0	6	Nil		0	6
	Total	2	0	2	9	0	8	2	9

During the storm of the 28th and 29th January the snow line descended to 3,000 feet. The snowfall is reported to have been very unequally and irregularly distributed below 7,000 feet. The depth of snow on the Chaori pass (9,000 feet high) was 2 feet 6 inches on the 15th February. The snowfall of the present winter commenced later than usual and did not fall so low as frequently occurs in January. The fall on the higher elevations is stated to be about the average.

(3) *Kulu.*—The following report has been received from the Assistant Commissioner. There were falls of snow on 9th, 10th, 11th, 12th, 13th, 27th, and 31st January in the Kulu Tahsil, and on 12th, 13th, 14th 19th, 27th, and 31st January 1896 in the Plach Tahsil. The falls of 13th and 31st January descended to an elevation of 5,000 feet.

The weather was cold and cloudy during the month under report. The falls of snow were general on the higher passes of the sub-division. Nearly all the higher passes were closed during the month.

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

District.	Name of pass.	Height above sea-level.	Reported depth of snow at the end of January 1896.	Reported depth of snow at the end of January 1895.	Reported depth of snow at the end of January 1894.
		Feet.	Feet.	Feet.	Feet.
Kulu	Rotang	13,000	12	19	16
	Hamta	14,500	8	38?	14
	Chanderkhani	14,500	5	7	13
	Barsai	?	4	12	14
	Bujadhar	?	5	11	11
	Lohri Achri	?	7	13	11
	Bhubhu	10,000	3½	9	7
	Pashtari	?	2½	11	6
	Majhang	?	1	2	2
Plach	Sirikhand	15,000	9	20	14
	Chul	?	1	9	7
	Maghian	?	1	9	7
	Dundku	?	1	10	7
	Tikar	?	1	8	7
	Jalori	10,500	1	10	7
	Raghopur	?	1	10	8
	Lambri	?	1	12	7
	Sakiran	?	1	12	8
	Supakun	?	1	10	9
	Gargarasan	17,000	2	18	11
	Basleo	11,000	1	11½	7
	Plach	?	1	14	10
	Tirath	?	1	17	12

Summary of Special Storm Reports.

An occasional feature of cold weather disturbances of the month in the plains of Northern India is the occurrence of thunderstorms and hailstorms. The following gives a statement of the storms in January 1896 for which special reports were received:—

19th.—Hailstorm at Dibrugarh in North Lakhimpur.

27th—Thunderstorm at Pachpadra.

28th.—Thunderstorm at Jeypore.

29th.—Hailstorm in the Nij Ghugua Mauza of the Nowgong district, Assam. Storm came from west. The stones were of the size of pigeon's eggs. The tobacco and mustard crops were injured by the hailstorm.

30th.—Hailstorm in Mauzas Gerua and Bokani of the Nowgong district in Assam which injured the crops to some extent.

31st.—Thunderstorm at Pachpadra.

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

Arabian Sea.—North-east monsoon winds prevailed during the month over this area. The normal mean force of the winds over the whole area in January is 3·3. From the 1st to the 9th winds were slightly stronger than the normal ranging between daily averages of 3·3 and 3·8. Winds were, as usual in the north-east monsoon, feeblest in the north of the area where they were of force 0 to 2 and slight to moderate in the centre and moderate to strong in the south-west where they were reported to be of force 4 to 7. Skies were more or less clouded in the south and occasional showers were experienced in the extreme south near the equatorial belt. Weather was squally at the head of the Persian Gulf on the 6th and 7th. Winds were considerably lighter on the 11th, 12th and 13th, averaging only 2·6 in force over the whole area. They increased during the next three days and were 4·4 in average strength on the 16th and 17th. Winds of force 6 to 7 were experienced by a number of vessels in the Gulf of Aden and the south-west of the Arabian Sea on these days. The captain of the S.S. Caledonia in Lat. 15°·38″ N and Long. 57°·6″E at 8 A.M. of the 14th (and proceeding in a north-easterly course to Bombay) notes that from 1 P.M. until sunset the sea surface was covered with an unusual whitish substance to a depth of about 2 feet in the water.

The air movement decreased from an average force of 4·4 on the 17th to 3·0 on the 21st, and was practically unchanged from that date to the 27th, during which it averaged 3·1. It fell to an average of 2·4 on the 30th and the air movement was hence, as in the Bay, feeblest on that day during the month.

Fine weather with moderate to strong winds obtained in the Persian Gulf during the disturbed period of the last ten days of the month.

North-westerly winds held steadily during the month at the Seychelles. Weather was much more rainy probably than usual, as a total of 22·93 inches fell in January 1896 as compared with a fall of 13·82 inches in January 1895.

Bay of Bengal.—Fine weather held steadily over the north and centre of the Bay during the month, winds usually ranging in force between 2 at the head of the Bay and 4 to 5 in the centre and south of the Bay. The mean air movement over the Bay ranged in force between 2·9 and 3·8 during the first fortnight of the month, the normal force being 3·0. Strong, gradients for north-east winds prevailed during this period but during the next six days, from the 15th to the 20th, gradients were very feeble and the air movement hence decreased considerably and ranged between 1·9 on the 19th and 2·8 on the 17th. Gradients increased on the 21st and were slightly above the normal up to the 26th, during which period winds were somewhat stronger than usual. Gradients decreased considerably on the 27th, and were feebler than usual during the remainder of the month. The mean air movement over the Bay hence decreased from an average of 3·0 on the 26th to 2·4 on the 30th.

Weather was throughout the month fine, skies generally clear and sea smooth in the north of the Bay. Weather was generally fine with occasional cloud and a moderate sea in the centre of the Bay. Over the south and entrance of the Bay moderate to strong north-east winds prevailed during the month. Weather was frequently showery with occasional squalls and heavy rain. Heavy to hard squalls were experienced on the 13th, 14th, 17th, and 22nd. The weather in the Bay during the month was of ordinary character and the mean air movement of the month identical with normal.

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 variation of the true daily means derived from the readings at 16 hours and of the maximum and minimum thermometers, and the employment of corrections deduced from the various series of hourly observations which have been taken at many stations in different parts of India.

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

In Table II are given means of the 10 and 16 hours

temperatures of the month in addition to maximum and minimum temperature data. The mean temperature of the month (*i.e.*, the arithmetical mean of the mean temperatures of each day of the month) is also shown. The mean temperature of the day is obtained by the use of the formula:—

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

and by applying a constant correction for each month obtained from the hourly observations at the same, or a neighbouring station, except in the cases of Darjeeling, Katmandu, Muscat, Quetta, Mercara, Wellington, Aden, Mount Abu, Seychelles and Zanzibar (for all of which crude means are given), and Vizagapatam and Madras. For Vizagapatam the means of observations at 4, 10, 16 and 22 hours are tabulated and for Madras the means as given in the registers sent by the Government Astronomer.

The methods of exposing thermometers will be found fully described in the "Instructions to Observers" 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. The variations of the temperature of the month from the normal at the hill stations (*i.e.*, stations the elevations of which exceed 5,000 feet) are given in figures with a positive or negative sign to indicate excess or defect.

Tables of normal mean maximum, minimum and mean daily temperatures for each month and for the whole year were first given in the annual summary for 1891. Similar tables are given in the annual summary of 1894, based on the data for sixteen years, 1878 to 1893, and the temperature variations given in Table I are obtained by the use of the means of the latter tables.

Weather was less disturbed than usual in January 1896, and the rainfall was *nil* over by far the greater part of the Empire and was in defect in all districts. As usual under these conditions in January temperature was in general excess in Baluchistan and North-Western and Central India, and the excess was nearly as large in the night as in the day temperature.

The mean maximum or day temperature was above the normal over the whole area except Burma, South and Central Madras and the Madras Deccan and Hyderabad where it was below the normal to a slight extent (in no case exceeding 2°). The excess in the day temperature was more than 2° in amonut in North Bihar and the whole of North-Western India to the west of a line running from Bombay to Allahabad and Gorakhpur. It was more than 4° in amount in the area defined by the stations for which comparative data are given below:—

Provinces.	Station.	Mean maximum temperature.		
		Actual, January 1896.	Normal, January.	Variation of actual from normal.
		°	°	°
Baluchistan	Quetta	58·0	51·5	+6·5
Sind	Hyderabad	81·0	76·5	+4·5
Rajputana	Bickaneer	77·3	71·8	+5·5
„	Sambhar	77·3	72·4	+4·9
„	Deesa	83·5	83·7	+4·8
„	Jeypore	77·9	73·7	+4·2
Punjab (South)	Sirsa	75·8	70·9	+4·9
Cutch	Bhuj	84·4	80·1	+4·3

The day temperature was almost as largely in excess at the Himalayan stations as at the neighbouring plains stations. Thus at Murree it was 3°·2 above the normal, at Darjeeling 3°·2, at Simla 2°·4 and at Ranikhet 0°·9

The mean minimum or night temperature of the month was higher than usual in Baluchistan, the Punjab, Sind, West Rajputana, Kathiawar, Gujarat, the Konkan, Southern India and Lower Burma. It was more than 2°

above the normal at stations for which data are given below :—

Station.	Mean minimum temperature. Actual, January, 1896.	Normal, January.	Variation of actual from normal.
	°	°	°
Murree	38·5	35·4	+3·1
Quetta	32·1	29·3	+2·8
Jacobabad	46·4	43·1	+3·3
Mooltan	45·9	42·7	+3·2
Lahore	44·6	41·4	+3·2

The mean night temperature of the month was in defect over the remainder of India. The deficiency averaged more than 2° in amount in the North-Western Provinces, Berar, the Central Provinces, Orissa, Assam and Central Bengal, where the air was abnormally dry and hence radiation at night much greater than usual. The following table gives comparative data for stations in this area where the deficiency was more than 2°·5 in amount :—

Province.	Station.	Mean minimum temperature. Actual, January 1896.	Normal, January.	Variation of actual from normal.
		°	°	°
Assam	Sibsagar	45·5	49·8	−4·3
	Dhubri	50·7	53·6	−2·9
Orissa	False Point	55·3	58·9	−3·6
	Balasore	52·8	55·7	−2·9
	Cuttack	57·1	59·9	−2·8
Deltaic Bengal	Jessore	50·6	53·2	−2·6
Central Provinces.	Sambalpur	49·2	55·0	−5·8
	Jubbulpore	44·0	48·3	−4·3
	Chanda	50·7	54·6	−3·9
	Seoni	48·9	51·6	−2·7
Berar	Akola	50·5	53·3	−2·8

The mean temperature of the month was in moderate to considerable excess in North-Western India and Baluchistan in which areas both the day and night temperatures were above the normal. It was upwards of 2° above the normal at the stations for which data are given below :—

Province.	Station.	Mean daily temperature. Actual, January 1896.	Normal, January.	Variation of actual from normal.
		°	°	°
Baluchistan	Quetta	45·1	40·4	+4·7
Punjab	Murree	45·0	41·7	+3·3
	Mooltan	59·6	56·2	+3·4
	Sirsa	59·5	56·7	+2·8
	Lahore	57·2	54·4	+2·8
	Rawalpindi	53·1	50·6	+2·5
Sind	Jacobabad	61·5	58·2	+3·3
	Hyderabad	67·1	63·8	+3·3
Rajputana	Deesa	69·9	67·1	+2·8
	Bickaneer	63·2	61·1	+2·1
Cutch	Bhuj	70·1	67·4	+2·7
Kathiawar	Rajkot	69·9	67·7	+2·2

The mean temperature of the month was in slight defect in Assam, Upper Burma, Bengal, Orissa, the Central Provinces, the Deccan and the Madras Presidency, over the greater part of which area the deficiency was chiefly due to lower night temperatures than usual. The deficiency exceeded 1° in actual amount, at Sibsagar (−1°·6), False Point (−1°·8), Cuttack (−2°·0), Sambalpur (−2°·6), Chanda (−1°·6), Masulipatam (−1°·1) and perhaps Kindat (−1°·3).

The following table gives temperature data for 55 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	90·2	67·4	78·8	22·8	31·0	+2·2	+0·5	+1·7
	Lower Burma	86·4	66·8	77·9	17·7	28·0	+0·4	+1·8	−1·4
	Central do.	84·5	55·2	69·9	29·3	39·8	−0·9	−0·4	−0·5
	Upper do.	77·9	48·9	62·9	28·0	40·5	−1·7	−0·8	−0·9
	Arakan	80·3	58·9	69·6	21·4	30·5	−1·1	−0·6	−0·5

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 temperatures of each day of the month) is also shown. The mean temperature of the day is obtained by the use of the formula:—

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

and by applying a constant correction for each month obtained from the hourly observations at the same, or a neighbouring station, except in the cases of Darjeeling, Katmandu, Muscat, Quetta, Mercara, Wellington, Aden, Mount Abu, Seychelles and Zanzibar (for all of which crude means are given), and Vizagapatam and Madras. For Vizagapatam the means of observations at 4, 10, 16 and 22 hours are tabulated and for Madras the means as given in the registers sent by the Government Astronomer.

The methods of exposing thermometers will be found fully described in the "Instructions to Observers" 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. The variations of the temperature of the month from the normal at the hill stations (*i.e.*, stations the elevations of which exceed 5,000 feet) are given in figures with a positive or negative sign to indicate excess or defect.

Tables of normal mean maximum, minimum and mean daily temperatures for each month and for the whole year were first given in the annual summary for 1891. Similar tables are given in the annual summary of 1894, based on the data for sixteen years, 1878 to 1893, and the temperature variations given in Table I are obtained by the use of the means of the latter tables.

Weather was less disturbed than usual in January 1896, and the rainfall was *nil* over by far the greater part of the Empire and was in defect in all districts. As usual under these conditions in January temperature was in general excess in Baluchistan and North-Western and Central India, and the excess was nearly as large in the night as in the day temperature.

The mean maximum or day temperature was above the normal over the whole area except Burma, South and Central Madras and the Madras Deccan and Hyderabad where it was below the normal to a slight extent (in no case exceeding 2°). The excess in the day temperature was more than 2° in amonut in North Bihar and the whole of North-Western India to the west of a line running from Bombay to Allahabad and Gorakhpur. It was more than 4° in amount in the area defined by the stations for which comparative data are given below:—

Province.	Station.	Mean Maximum Temperature.		
		Actual, January 1896.	Normal, January.	Variation of actual from normal.
		°	°	°
Baluchistan	Quetta	58·0	53·5	+6·5
Sind	Hyderabad	81·0	76·5	+4·5
Rajputana	Bickaneer	77·3	71·8	+5·5
"	Sambhar	77·3	72·4	+4·9
"	Deesa	83·5	79·7	+4·8
"	Jeypore	77·9	73·7	+4·2
Punjab (South)	Sirsa	75·8	70·9	+4·9
Cutch	Bhuj	84·4	80·1	+4·3

The day temperature was almost as largely in excess at the Himalayan stations as at the neighbouring plains stations. Thus at Murree it was 3°·2 above the normal, at Darjeeling 3°·2, at Simla 2°·4 and at Ranikhet 0°·9

The mean minimum or night temperature of the month was higher than usual in Baluchistan, the Punjab, Sind, West Rajputana, Kathiawar, Gujarat, the Konkan, Southern India and Lower Burma. It was more than 2°

above the normal at stations for which data are given below :—

Station.	Mean minimum temperature. Actual, January, 1896.	Normal, January.	Variation of actual from normal.
	°	°	°
Murree	38·5	35·4	+3·1
Quetta	32·1	29·3	+2·8
Jacobabad	46·4	43·1	+3·3
Mooltan	45·9	42·7	+3·2
Lahore	44·6	41·4	+3·2

The mean night temperature of the month was in defect over the remainder of India. The deficiency averaged more than 2° in amount in the North-Western Provinces, Berar, the Central Provinces, Orissa, Assam and Central Bengal, where the air was abnormally dry and hence radiation at night much greater than usual. The following table gives comparative data for stations in this area where the deficiency was more than 2°·5 in amount :—

Province.	Station.	Mean minimum temperature. Actual, January 1896.	Normal, January.	Variation of actual from normal.
		°	°	°
Assam	Sibsagar	45·5	49·8	−4·3
	Dhubri	50·7	53·6	−2·9
Orissa	False Point	55·3	58·9	−3·6
	Balasore	52·8	55·7	−2·9
	Cuttack	57·1	59·9	−2·8
Deltaic Bengal	Jessore	50·6	53·2	−2·6
Central Provinces.	Sambalpur	49·2	55·0	−5·8
	Jubbulpore	44·0	48·3	−4·3
	Chanda	50·7	54·6	−3·9
	Seoni	48·9	51·6	−2·7
Berar	Akola	50·5	53·3	−2·8

The mean temperature of the month was in moderate to considerable excess in North-Western India and Baluchistan in which areas both the day and night temperatures were above the normal. It was upwards of 2° above the normal at the stations for which data are given below :—

Province.	Station.	Mean daily temperature. Actual, January 1896.	Normal, January.	Variation of actual from normal.
		°	°	°
Baluchistan	Quetta	45·1	40·4	+4·7
Punjab	Murree	45·0	41·7	+3·3
	Mooltan	59·6	56·2	+3·4
	Sirsa	59·5	56·7	+2·8
	Lahore	57·2	54·4	+2·8
	Rawalpindi	53·1	50·6	+2·5
Sind	Jacobabad	61·5	58·2	+3·3
	Hyderabad	67·1	63·8	+3·3
Rajputana	Deesa	69·9	67·1	+2·8
	Bickaneer	63·2	61·1	+2·1
Cutch	Bhuj	70·1	67·4	+2·7
Kathiawar	Rajkot	69·9	67·7	+2·2

The mean temperature of the month was in slight defect in Assam, Upper Burma, Bengal, Orissa, the Central Provinces, the Deccan and the Madras Presidency, over the greater part of which area the deficiency was chiefly due to lower night temperatures than usual. The deficiency exceeded 1° in actual amount, at Sibsagar (−1°·6), False Point (−1°·8), Cuttack (−2°·0), Sambalpur (−2°·6), Chanda (−1°·6), Masulipatam (−1°·1) and perhaps Kindat (−1°·3).

The following table gives temperature data for 55 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	90·2	67·4	78·8	22·8	31·0	+2·2	+0·5	+1·7
	Lower Burma	86·4	66·8	77·9	17·7	28·0	+0·4	+1·8	−1·4
	Central do.	84·5	55·2	69·9	29·3	39·8	−0·9	−0·4	−0·5
	Upper do.	77·9	48·9	62·9	28·0	40·5	−1·7	−0·8	−0·9
	Arakan	80·3	58·9	69·6	21·4	30·5	−1·1	−0·6	−0·5

Province.	Division.	Actual Temperature.					Variation from normal of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bengal and Assam	Eastern Bengal	76·1	52·2	64·2	24·0	31·6	+0·8	−1·5	+2·3
	Assam (Surma)	78·2	50·6	64·4	27·6	35·6	+1·0	−1·7	+2·7
	Do. (Brahmaputra)	72·7	48·1	60·5	29·6	31·7	+1·0	−3·6	+4·6
	Deltaic Bengal	78·7	52·6	65·7	26·1	35·8	+1·0	−2·1	+3·1
	Central do.	78·2	51·1	64·7	27·2	36·9	+1·5	−1·6	+3·1
	North do.	75·5	48·1	61·8	27·4	34·1	+1·5	−1·8	+3·3
	Bengal Hills	47·3	26·8	37·1	20·5	33·4	+3·2	+0·5	+2·7
	Orissa	79·9	58·1	69·0	21·8	32·5	−0·1	−3·1	+3·0
	Chota Nagpur	73·9	48·3	61·1	25·6	37·4	+1·1	−1·7	+2·8
	Bihar (South)	76·5	49·5	63·0	26·9	36·5	+1·9	−0·8	+2·7
	Do. (North)	75·5	47·3	61·5	28·2	35·6	+2·2	−1·7	+3·9
North-Western Provinces and Oudh.	North-Western Provinces (East)	76·8	44·7	60·8	32·1	43·2	+2·6	−3·2	+5·8
	Oudh (South)	76·2	43·9	60·0	32·3	44·6	+2·4	−2·5	+4·9
	Do. (North)	75·2	45·7	60·5	29·5	41·8	?	?	?
	North-Western Provinces (Central)	77·4	46·5	62·0	31·0	43·7	+3·4	+0·6	+2·8
	Do. do. (West)	75·3	46·4	60·9	28·9	39·4	+3·5	−0·2	+3·7
	Do. do. (Submontane East)	74·9	45·8	60·9	28·1	38·2	+1·7	−2·1	+3·8
	Do. do. (do. West)	71·9	43·4	57·7	28·5	42·0	+3·5	−1·6	+5·1
	Do. do. (Hills)	52·6	39·7	46·2	12·9	31·9	+1·3	−1·3	+2·6
Punjab	Punjab (South-East)	74·5	48·1	61·3	26·4	42·1	+3·5	+0·1	+3·4
	Do. (South)	71·6	43·8	57·8	27·8	41·1	+3·2	+0·8	+2·4
	Do. (Central)	69·7	44·6	57·2	25·1	39·1	+2·3	+3·2	−0·9
	Do. (Submontane)	72·3	41·1	56·7	31·2	45·5	?	?	?
	Do. (Hill Districts)	44·7	25·9	34·6	17·5	33·8	+3·0	−2·3	+5·3
	Do. (North)	65·8	38·9	52·4	26·9	44·8	+2·8	+1·0	+1·8
	Do. (West)	72·3	43·1	57·7	29·2	44·0	+3·4	+1·8	+1·6
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	87·6	71·0	79·3	16·6	25·0	+1·1	+0·4	+0·7
	Madras (South Central)	86·5	63·4	74·9	23·1	35·0	−1·0	−0·3	−0·7
	Coorg	76·9	57·1	67·0	19·8	27·3	+0·5	+1·2	−0·7
	Mysore	81·8	57·6	69·6	24·2	34·8	+0·2	+0·2	0
	Konkan	86·0	68·5	77·3	17·6	24·9	+1·5	+0·9	+0·6
	Bombay Deccan	85·6	56·5	71·1	29·1	39·0	+0·4	−0·5	+0·9
	Hyderabad (North)	84·3	55·7	70·0	28·6	37·3	?	?	?
	Khandesh	85·3	50·0	67·7	35·3	43·7	+1·2	−0·5	+1·7
Central Provinces and Berar.	Berar	85·7	53·9	69·9	31·8	41·3	+1·4	−1·4	+2·8
	Central Provinces (West)	83·9	51·3	67·6	32·6	42·7	+1·7	−2·0	+3·7
	Do. (Central)	81·6	49·0	65·4	32·6	44·6	+2·2	−2·5	+4·7
	Do. (East)	82·6	51·6	67·1	31·0	41·1	+1·1	−3·5	+4·6
Bombay (North)	Gujarat	88·4	58·0	73·2	30·4	38·6	+3·6	+0·6	+3·0
	Kathiawar	85·0	56·5	70·8	28·4	41·2	+3·5	+1·4	+2·1
	Sind	79·8	52·4	66·2	27·4	40·2	+3·9	+2·7	+1·2
	Baluchistan Hills	57·0	33·8	45·4	23·2	41·8	+6·5	+2·8	+3·7
Rajputana and Central India.	Central India (East)	79·0	46·8	62·9	32·3	42·8	+2·5	−1·6	+4·1
	Rajputana (East), Central India (West)	80·1	47·4	63·7	42·7	44·0	+4·4	+0·4	+4·0
	Do. (West)	79·9	49·0	63·2	28·3	38·6	+5·5	−1·3	+6·8
Madras	East Coast (North)	82·4	61·9	72·2	20·5	31·4	+0·3	−1·9	+2·2
	Hyderabad (South)	85·1	58·8	72·0	26·2	35·6	−0·4	−0·8	+0·4
	Madras (Central)	86·5	60·8	73·7	25·8	36·7	−1·3	−0·4	−0·9
	East Coast (Central)	83·4	65·3	74·3	18·1	28·0	−0·8	−1·3	+0·5
	Do. (South)	83·6	68·1	75·8	15·5	25·0	−0·6	−0·2	−0·4
	Madras (South)	84·6	71·6	78·2	13·0	21·1	−1·9	+0·5	−2·4

The following describes briefly the more important changes of temperature conditions during the month.

Temperature at the commencement of the month was higher than usual over nearly the whole of India. The

excess was largest and most marked in Bombay and the Punjab, as is shown by the following variation data for the 24 hours period preceding 8 A.M. of the 1st :—

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

Temperature decreased during the next four days, more especially in Bombay, Berar and the Central Provinces, and was by this change reduced below the normal in Madras, the Deccan, Berar, Central Provinces and North-Western Provinces.

The following table shows the total change relative to the normal conditions of the period during this interval from the 1st to the 6th :—

Political area or province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		Mean reduction of temperature during the period from the 1st to 6th.
	1st.	6th.	
	°	°	°
Burma	+2·0	+0·8	−1·2
Bengal and Assam	+0·7	+0·8	+0·1
North-Western Provinces and Oudh.	+1·2	−0·6	−1·8
Punjab	+3·3	+1·3	−2·0
Sind and Rajputana	+2·2	+0·5	−1·7
Central India and Gujarat	+3·0	+1·1	−1·9
Central Provinces and Berar	+2·0	−2·5	−4·5
Bombay	+5·1	−1·0	−6·1
Madras	+0·1	−2·6	−2·7

The temperature changes during the next four days were small in amount. On the 11th temperature increased rapidly in Baluchistan, Sind and the West Punjab, and was in large excess in that area. The following gives variation data for the 11th :—

Political area or province.	Variation from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·2	+1·3	+0·8
Bengal and Assam	−0·8	−4·2	−2·5
N.-W. Provinces and Oudh	+1·4	−4·0	−1·3
Punjab	+5·0	+1·5	+3·3
Baluchistan	+8·3	+12·4	+10·4
Sind and Rajputana	+5·1	+0·5	+2·8
Central India and Gujarat	+2·0	−2·1	−0·1
Central Provinces and Berar	+0·2	−5·1	−2·5
Bombay	+1·6	+0·9	+1·3
Madras	+0·8	+0·8	+0·8

The area of greatest deficiency of temperature was transferred during the next six days from the Central Provinces to Burma, and the warm wave or area of large excess of temperature advanced slowly eastwards from Baluchistan to Bihar and the eastern districts of the North-Western Provinces. These changes are fully shown by the following variations of the mean temperature from the normal on the 11th, 13th, 15th and 17th :—

Political area or province.	Variation from normal of mean temperature of 24 hours preceding 8 A. M. of			
	11th.	13th.	15th.	17th.
	°	°	°	°
Burma	+0·8	−0·1	−0·6	−1·5
Bengal and Assam	−2·5	−2·9	−0·7	+1·6
North-Western Provinces and Oudh	−1·3	+2·2	+5·7	+3·3
Punjab	+3·3	+2·6	+5·1	+4·0
Baluchistan	+10·4	+6·3	+2·3	+4·0
Sind and Rajputana	+2·8	+4·0	+4·9	+2·7
Central India and Gujarat	−0·1	+1·9	+3·1	+1·0
Central Provinces and Berar	−2·5	−1·0	+1·0	+2·2

The feeble disturbance of the 18th and 19th in Upper India was accompanied and followed by a general reduc-

tion of temperature during the period from the 17th to the 21st. The following gives data in illustration:—

Political area or province.	Variation from normal of temperature of 24 hours preceding 8 A.M. of		Mean increase or reduction of temperature.
	17th.	21st.	From 17th to 21st.
	°	°	°
Burma	−1·5	+0·4	+1·9
Bengal and Assam	+1·6	−1·0	−2·6
North-Western Provinces and Oudh	+3·3	−2·2	−5·5
Punjab	+4·0	−0·7	−4·7
Baluchistan	+4·0	+5·7	+1·7
Sind and Rajputana	+2·7	−0·1	−2·8
Central India and Gujarat	+1·0	−1·4	−2·4
Central Provinces and Berar	+2·2	−4·1	−6·3
Bombay	+1·1	−0·8	−1·9
Madras	−1·2	−2·0	−0·8

The reduction of temperature was hence greatest in the Central Provinces, Berar and the North-Western Provinces.

Temperature began to rise again generally on the 22nd and increased steadily until the 27th when it was normal or in excess. The following data illustrate the changes during this period:—

Political area or province.	Variation from normal of temperature of 24 hours preceding 8 A.M. of		Mean increase of temperature.
	21st.	27th.	From 21st to 27th.
	°	°	°
Burma	+0·4	−1·2	−1·6
Bengal and Assam	−1·0	−0·5	+0·5
North-Western Provinces and Oudh	−2·2	+1·5	+3·7
Punjab	−0·7	+6·1	+6·8
Baluchistan	+5·7	+9·2	+3·5
Sind and Rajputana	−0·1	+7·2	+7·3
Central India and Gujarat	−1·4	+3·7	+5·1
Central Provinces and Berar	−4·1	+2·5	+6·6
Bombay	−0·8	+1·6	+2·4
Madras	−2·0	−0·9	+1·1

The data show that temperature on the 27th was very largely above the normal at Quetta in Baluchistan. This was due to the eastward progress through that area of the warm wave in front of the disturbance and storm of the 27th to the end of the month. The warm wave advanced during the next three days across Northern India as far as Bengal and a second warm wave appeared in the North-West Frontier on the 31st. The larger changes of temperature during this disturbed period are shown by the following variation data:—

Political area or province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	27th.	28th.	29th.	30th.	31st.
	°	°	°	°	°
Burma	−1·2	−1·9	−1·0	−0·8	−0·7
Bengal and Assam	−0·5	+1·0	+3·3	+3·0	+0·8
North-Western Provinces and Oudh	+1·5	+5·8	+2·3	+1·6	+1·5
Punjab	+6·1	+6·1	+2·0	+2·2	+1·7
Baluchistan	+9·2	−2·2	−1·2	+5·4	+4·2
Sind and Rajputana	+7·2	+7·5	+1·2	+3·7	+7·1
Central India and Gujarat	+3·7	+6·2	+3·5	+2·1	+3·4
Central Provinces and Berar	+2·5	+6·2	+2·9	+0·7	+0·2
Bombay	+1·6	+2·1	+1·0	−0·5	−0·5
Madras	−0·9	−0·3	+1·1	+2·1	+1·7

Temperature was in slight defect in the hill and sub-montane districts of Northern India and the Deccan, and in excess over the remainder of India on the 31st. The excess was very large in Sind (7°·0) and Rajputana (7°·1).

The following gives variation data for the 24 hours preceding 8 A. M. of the 31st, and illustrates the temperature conditions obtaining at the end of the month:—

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

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*:—

Political area or province.	Variation from normal of mean temperature for week ending					
	4th Jan.	11th Jan	18th Jan.	25th Jan.	1st Feb.	For whole month.
	°	°	°	°	°	°
Burma	+2·1	+0·8	−0·8	+0·4	−1·1	0
Bengal and Assam	−0·1	−1·0	−0·8	−0·7	+1·1	−0·4
North-Western Provinces and Oudh.	+1·1	−0·5	+2·6	−1·0	+2·7	+0·7
Punjab	+2·7	+1·5	+3·9	+0·1	+3·2	+2·2
Sind and Rajputana	+1·9	+1·4	+3·5	0	+5·5	+2·4
Central India and Gujarat	+1·3	+0·7	+1·7	−0·4	+4·0	+1·3
Central Provinces and Berar	−0·2	−2·4	+0·6	−1·2	+2·1	−0·3
Bombay	+3·4	+0·1	+0·5	−0·1	+0·9	+0·7
Madras	+0·2	0	−1·4	−1·8	+0·6	−0·7

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 direction and wind velocity." In these columns are shown the number of days the wind at 8 A.M. blew from each of eight points, and also the mean hourly air movement. 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 direction and steadiness and wind velocity" 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 and the mean diurnal movement of the air at each station and the average monthly values of the last two elements computed from the previous wind observations at that station.

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

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

Winds were of normal strength and steadiness in January 1896 at Port Blair, but were slightly stronger than usual in Burma. Winds were stronger than the normal of the month in Burma, but varied very irregularly both in direction and steadiness from the normal.

The mean winds of the month in Bengal varied very slightly from the normal in strength and steadiness. They were on the whole somewhat less westerly and more northerly than usual, but the deflection of the mean air movement from the normal was small and of little importance.

Winds were feebler than usual in the North-Western Provinces, Rajputana and Central India. The mean wind directions for the month varied irregularly from the normal.

The following gives comparative data of the strength and steadiness of the winds in different parts of northern India :—

Provinces.	Velocity in miles per diem.			Steadiness.		
	Mean actual, January 1896.	Mean normal, January.	Variation from normal.	Mean actual percentage, January 1896.	Mean normal percentage, January.	Variation from normal.
Bengal . . .	70	74	−4	42	39	+3
Bihar . . .	57	54	+3	37	46	−9
Chota Nagpur . .	152	118	+34	45	54	−9
North-Western Provinces and Oudh.	42	56	−14	31	29	+2
Punjab . . .	48	43	+5	24	19	+5
Rajputana . .	105	115	−10	28	23	+5
Central India . .	47	66	−19	58	25	+33

Winds were weaker at the west coast stations and in Madras, and were less easterly than usual at the Madras coast stations. They were, judging from the data, much stronger in Mysore and Coorg. The following gives comparative data :—

Division.	Velocity in miles per diem.			Steadiness.		
	Mean actual, January 1896.	Mean normal, January.	Variation from normal.	Mean actual percentage, January 1896.	Mean normal percentage, January.	Variation from normal.
Berar . . .	103	109	−6	28	26	+2
Central Provinces .	60	64	−4	29	26	+3
West Coast . .	188	229	−41	28	47	−19
Deccan . . .	171	190	−19	43	43	0
Madras Coast . .	86	93	−7	44	59	−15

Winds were steadier at the hill stations in Northern India and slightly stronger than usual, but the variations were of little significance. The mean winds contained a southerly component at all these stations except Darjeeling, where the mean wind direction was N 58° W, the normal being S 84° W.

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 mean humidity conditions of the month at Port Blair were almost identical with the normal. The air contained somewhat less aqueous vapour, and was drier than usual in Burma and Assam. The following gives comparative data for these two areas :—

Province.	Absolute humidity.			Relative humidity.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.	Average actual, January 1896.	Average normal, January.	Variation from normal.
	"	"	"	%	%	
Burma . . .	·558	·569	−·011	66	70	−4
Assam . . .	·397	·425	−·028	75	78	−3

The air was in January 1896 abnormally dry in Bengal, Bihar, Chota Nagpur, the North-Western Provinces, Rajputana, Central India, the Central Provinces and Berar. The humidity percentages were more than 10 in defect at

the majority of the observing stations in those areas. The deficiency in the mean humidity percentages of the month exceeded 12 at stations for which data are given below :—

Station.	Absolute humidity.			Relative humidity.		
	Average actual, January 1896.	Variation from normal.	Percentage variation from normal.	Average actual, January 1896.	Average normal, January.	Variation from normal.
	"	"	%	%	%	
Allahabad .	·257	—·083	—24	51	68	—17
Khandwa .	·236	—·093	—28	36	50	—14
Hoshangabad .	·254	—·085	—25	41	54	—13
Saugor . .	·206	—·067	—25	33	48	—15
Raipur . .	·240	—·113	—32	37	54	—17

The air was hence excessively dry in the eastern districts of the North-Western Provinces and over nearly the whole of the Central Provinces.

The following table gives comparative data for this large area of abnormal dryness of the lower air strata :—

Province.	Absolute humidity.			Relative humidity.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.	Average actual, January 1896.	Average normal, January.	Variation from normal.
	"	"	"	%	%	
Bengal . .	·400	·443	—·043	64	70	— 6
Bihar . .	·342	·381	—·039	63	70	— 7
Chota Nagpur .	·217	·267	—·050	39	51	—12
Orissa . .	·437	·508	—·071	65	72	— 7
North-Western Provinces and Oudh.	·253	·300	—·047	53	63	—10
Rajputana .	·228	·264	—·036	41	47	— 6
Central India .	·233	·278	—·045	46	55	— 9
Berar . .	·247	·319	—·072	36	46	—10
Central Provinces	·255	·329	—·074	41	53	—12

The variations of the mean humidity conditions of the month from the normal were small in amount and irregular in the Punjab and Sind. Thus the relative humidity of the month was normal at Peshawar and Mooltan, 6 above the normal at Jacobabad, 3 above it at Lahore, and 5 below it at Ludhiana.

The increased dryness of the air was almost as marked a feature at the hill stations in Northern India as in the Gangetic Plain. The following gives comparative data for four representative stations :—

Station.	Absolute humidity.			Relative humidity.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.	Average actual, January 1896.	Average normal, January.	Variation from normal.
	"	"	"	%	%	
Quetta . .	·158	·158	0	57	66	— 9
Murree . .	·130	·139	—·009	51	58	— 7
Simla . .	·135	·151	—·016	52	58	— 6
Darjeeling .	·189	·203	—·014	72	80	— 8

The air was much drier than usual at the West Coast stations, the deficiency increasing southwards from an average of 3 in the relative humidity for the month at Bombay to 10 at Cochin.

The variations from the mean or normal conditions were small and irregular in Madras, the Deccan and Mysore. The mean relative humidity was in slight defect at Mercara, Trichinopoly, Salem and Bellary, and in slight excess at Bangalore, Madras and Vizagapatam.

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

(1) Decreased humidity to a moderate extent in Burma and Assam.

(2) Abnormal dryness of the air in Bengal, the North-Western Provinces, Rajputana, Central India, Berar and the Central Provinces, and also at the hill stations in Northern India.

(3) Decreased humidity in the West Coast districts most marked in Malabar.

(4) Small and irregular variations from the normal in the Punjab and Sind and also in Southern India.

The variations of the mean cloud estimates of the month from the normal were generally small and somewhat irregular in character in Lower Burma and the Andamans. They, however, indicate that skies were somewhat more clouded than usual in that area.

The following gives comparative data :—

Area.	Mean cloud amount.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.
Lower Burma	2·5	2·3	+0·2
Andamans (Port Blair)	4·2	3·3	+0·9

There was much less cloud than usual on the mean of the month over the whole of Northern and Central India (excepting the Punjab and Sind), the Deccan, and the West Coast districts. The mean cloud amount of the month was less than 1 at the gre at majority of stations in Bengal, Berar, the Central Provinces,Central India, the Deccan and West Coast districts. The following gives comparative data for this large area of decreased cloud amount:—

Division.	Mean cloud amount.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.
Assam	1·5	2·6	−1·1
Bengal	0·7	1·7	−1·0
Orissa	0·7	1·9	−1·2
Chota Nagpur	1·0	2·3	−1·3
Behar	0·6	2·0	−1·4
North-Western Provinces and Oudh	1·9	3·0	−1·1
Rajputana	1·2	2·6	−1·4
Central India	0·8	2·6	−1·8
Central Provinces	0·6	1·7	−1·1
Berar	0·6	1·8	−1·2
Deccan	0·6	1·8	−1·2
West Coast	0·9	1·3	−0·4

The mean cloud amount was slightly above the normal in the Punjab, and was normal in Sind. The following gives comparative data:—

Province.	Mean cloud amount.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.
Punjab	4·4	3·7	+0·7
Sind	2·8	2·8	0

Cloud was almost as largely in defect at the hill stations of Northern India as in the plains of Northern and Central India. Data are given for six representative stations in the following table:—

Station.	Mean cloud amount.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.
Leh	5·8	6·5	−0·7
Simla	4·7	5·4	−0·7
Chakrata	2·9	4·7	−1·8
Darjeeling	3·2	5·7	−2·5
Mount Abu	0·6	2·6	−2·0
Pachmarhi	1·0	2·3	−1·3

Skies were generally less clouded than usual in January, in Madras, Mysore and Coorg, but the variations were moderate in amount, as is shown by the following data:—

Province.	Mean cloud amount.		
	Average Actual, January 1896.	Average normal, January.	Variation from normal.
Madras	2·6	2·9	−0·3
Mysore	1·6	2·7	−1·1
Coorg	2·0	3·1	−1·1

The chief features of the mean distribution of cloud amount for the month of January were:—

(1) Slight excess in Lower Burma and the Andamans.
(2) Slight excess in the Punjab.
(3) Large general deficiency over the whole of Northern and Central India (except Sind and the Punjab) and the Deccan, most marked in Bihar, Central India, the Central Provinces and Berar.
(4) Large deficiency at the hill stations of Northern and Central India.
(5) Moderate deficiency in Southern India.

Rainfall.

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

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

The first rainfall chart (Plate IV) shows the actual distribution of the rainfall of the month so far as it is indicated by the returns of upwards of 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 stating the rainfall in inches.

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

The month of January 1896 was fine and less disturbed than usual in Northern India, and the rainfall of the month was hence in general defect.

There were three periods of disturbance and of rainfall during the month, two of which were due to the passage of cold weather storms across Northern India. The first period of rainfall was from the 11th to the 14th, and was due to a feeble depression which advanced from Central Persia to Baluchistan on the 11th and passed across North Rajputana to the foot of the South Punjab hills, where it broke up on the 13th. Baluchistan, Kashmir, Upper Sind, the northern and eastern plain districts and the hill districts of the Punjab received light to moderate rain.

The second disturbance was very local in character. It only affected the South-East Punjab and adjacent hills. It was due to a shallow depression which formed in the South-East Punjab on the 18th and filled up on the 19th. The disturbance gave light local showers to the East Punjab and adjacent hills.

The third period of rainfall extended from the 27th to the end of the month and was due to a cold weather storm of moderate intensity. A depression which formed in the Persian area passed across Baluchistan on the 27th and advanced eastwards into Bengal and Upper Burma on the 30th. It gave rise to a short-lived, secondary depression in the Punjab on the 28th. A second depression which formed in the Persian area on the 26th and 27th advances to Baluchistan on the 30th, and Sind and Rajputana on the 31st. Baluchistan received moderate rain on the 27th, the 30th and 31st, Kashmir from the 27th to the 31st Punjab from the 28th to the 31st, the western and hill districts of the North-Western Provinces from the 28th to the 30th, Assam light showers from the 29th to the 31st and North Bihar and Bengal on the 29th and the 30th. The chief feature of this disturbed period was the very heavy snowfall on the Afghan higher mountain ranges, more especially the Safed Koh.

Practically no rain fell during the month over by far the greater part of India, including Burma, Orissa, Chota Nagpur, South Bihar, the greater part of the North-Western Provinces, Rajputana, Lower Sind, Central India, Berar, the Central Provinces, Gujarat, Kathiawar, Bombay, Deccan, Konkan, Coorg, the whole of Madras (except the central and southern division) and Hyderabad.

The following table gives comparative rainfall data of the month for the fifty-seven meteorological districts or divisions into which India is divided. The data for Lower Burma, Bengal, the North-Western Provinces, Punjab, Bombay, Coorg, Central Provinces, Rajputana, Central India and Madras are obtained 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 in those provinces:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, January 1896.	Average normal, January.	Average actual, January 1896.	Average normal, January.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim	0·5	?	0·30	?	?
	Lower Burma	0	?	0·01	?	?
	Central do.	0	?	0	?	?
	Upper do.	0·2	?	0·10	?	?
	Arakan	0	?	0	?	?
Bengal and Assam	Eastern Bengal	0·7	1·2	0·30	0·57	−0·27
	Assam (Surma)*	?	?	0·53	0·87	−0·34
	Do. (Hill tracts)*	?	?	1·05	0·93	+0·12
	Do. (Brahmaputra)*	?	?	0·88	1·03	−0·15.
	Deltaic Bengal	0·5	0·9	0·16	0·46	−0·30
	Central do.	0·4	0·9	0·10	0·42	−0·32
	North do.	1·7	0·9	0·60	0·52	+0·08
	Bengal (Hills)	1·3	2·0	0·39	0·96	−0·57
	Orissa	0·1	0·7	0·01	0·37	−0·36
	Chota Nagpur	0·1	1·4	0·02	0·68	−0·66
	Bihar (South)	0·1	1·4	0·03	0·62	−0·59
	Do. (North)	0·5	1·3	0·12	0·61	−0·49

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, January 1896.	Average normal, January.	Average actual, January 1896.	Average normal, January.	Variation from normal.
				Inches.	Inches.	Inches.
North-Western Provinces and Oudh.	North-Western Provinces (East)	0	1·4	0·01	0·65	−0·64
	Oudh (South)	0	1·4	0·01	0·72	−0·71
	Do. (North)	0·3	1·3	0·07	0·78	−0·71
	North-Western Provinces (Central)	0	1·3	0·01	0·58	−0·57
	Do. do. (West)	0	1·3	0·02	0·54	−0·52
	Do. do. (Submontane East)	0·2	1·2	0·02	0·59	−0·57
	Do. do. (do. West)	1·3	2·3	0·52	1·38	−0·86
	Do. do. (Hills)	2·0	3·2	1·24	2·54	−1·30
Punjab	Punjab (South-East)	0·5	1·5	0·12	0·70	−0·58
	Do. (South)	0·7	1·3	0·22	0·65	−0·43
	Do. (Central)	1·4	2·1	0·48	1·11	−0·63
	Do. (Submontane)	1·9	2·5	0·80	1·55	−0·75
	Do. (Hill Districts)	4·1	4·2	2·32	3·19	−0·87
	Do. (North)	3·7	2·8	1·55	1·81	−0·26
	Do. (West)	1·1	1·3	0·42	0·55	−0·13
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	0·2	0·3	0·21	0·19	+0·02
	Madras (South Central)	0·2	0·3	0·11	0·12	—0·01
	Coorg	0	?	0·01	?	?
	Mysore*	?	?	0·13	0·07	+0·06
	Konkan	0	0·2	0	0·14	−0·14
	Bombay Deccan	0·1	0·2	0·03	0·07	−0·04
	Khandesh	0·1	0·2	0·07	0·10	−0·03
Central Provinces and Berar.	Berar	0	?	0	?	?
	Central Provinces (West)	0	0·9	0	0·56	−0·56
	Do. (Central)	0	1·1	0	0·53	−0·53
	Do. (East)	0	1·0	0	0·47	−0·47
Bombay (North)	Gujarat	0	0·2	0	0·06	−0·06
	Kathiawar	0	0·2	0	0·05	—0·05
	Sind	0·5	?	0·11	0·40	−0·29
	Baluchistan (Hills)	3·3	?	1·41	2·20	−0·79
Rajputana and Central India.	Central India (East)	0·1	?	0·03	0·59	−0·56
	Rajputana (East), and Central India (West)	0·2	?	0·06	0·26	—0·20
	Rajputana (West)	0	?	0·01	0·23	−0·22
Madras	East Coast (North)	0	0·3	0·01	0·20	−0·19
	Do. (do.)	0	0·3	0	0·07	−0·07
	Hyderabad (South)*	?	?	0·01	0·18	−0·17
	Madras (Central)	0·2	0·1	0·28	0·05	+0·23
	East Coast (Central)	0·6	0·6	0·29	0·48	−0·19
	Do. (South)	0·4	0·8	0·21	0·48	−0·27
	Madras (South)	0·7	1·0	0·33	0·61	−0·28

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

Baluchistan received light general rain from the 11th to the 14th, on the 27th, and again on the 30th and 31st. The total rainfall of the month on the plateau was moderate in amount and probably below the normal. The following gives comparative data for two stations for which normals have been obtained :—

Station.	Rainfall.		
	Actual, January 1896.	Normal, January.	Variation from normal.
	Inches.	Inches.	Inches.
Quetta	1·92	1·83	+0·09
Pishin	1·79	3·07	—1·28

There were two periods of precipitation in Kashmir, *viz.*, from the 12th to the 14th and from the 28th to the 31st. The falls at the recording stations were generally small in amount and the total precipitation of the month was almost certainly considerably below the normal.

The chief periods of rainfall in the Punjab were as follows :—

(1) From the 11th to the 14th. The rainfall during this period was almost restricted to the western, northern and the hill districts. The falls were generally very light, except in Kangra, which received moderate rain during this period.

(2) The 18th to the 19th. A feeble disturbance in the South-East Punjab gave light local showers of little importance to the eastern and hill districts and the Shahpur district.

(3) The 27th to the 31st. The disturbance of this period gave fairly general rain to the greater part of the province. The rainfall was moderate in the hill districts and in the

Hoshiarpur, Gurdaspur, Peshawar, Hazara and Rawalpindi districts. It was light in the southern districts. No rain fell in the Mooltan, Muzaffergarh and Lahore districts during this period.

The rainfall was more or less in defect over the whole province. The deficiency was, relatively to the normal, least in the northern and western divisions, and increased in percentage amount southwards, and was most marked in the south-east districts. The following gives comparative data for the seven divisions of the province:—

Division.	Rainy days.			Rainfall.			
	Average actual, January 1896.	Average normal, January.	Variation from normal.	Average actual, January 1896.	Average normal, January.	Variation from normal.	Percentage variation from normal.
				Inches.	Inches.	Inch.	
Punjab (South-East) .	0·5	1·5	−1·0	0·12	0·70	−0·58	−83
„ (South) . .	0·7	1·3	−0·6	0·22	0·65	−0·43	−66
„ (Central) .	1·4	2·1	−0·7	0·48	1·11	−0·63	−57
„ (Submontane) .	1·9	2·5	−0·6	0·80	1·55	−0·75	−48
„ (Hills) . .	4·1	4·2	−0·1	2·32	3·19	−0·87	−27
„ (North) . .	3·7	2·8	+0·9	1·55	1·81	−0·26	−14
„ (West) . .	1·1	1·3	−0·2	0·42	0·55	−0·13	−24

The month was practically rainless in Rajputana and Central India.

Light to moderate showers were received in the Meerut, Bareilly, Moradabad, Bijnor, Muzaffarnagar, Saharanpur and hill districts of the North-Western Provinces during the last five days of the month. Practically no rain fell over the remainder of the province. The rainfall in the hill districts averaged 1·24 inches, or slightly less than half the normal amount, 2·54 inches. The following gives comparative data for the plains districts named above:—

District.	Rainfall.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.
	Inch.	Inches.	Inches.
Meerut	0·09	0·91	−0·82
Bareilly	0·15	1·07	−0·92
Moradabad	0·26	1·28	−1·02
Bijnor	0·51	1·67	−1·16
Muzaffarnagar	0·30	1·15	−0·85
Saharanpur	0·64	1·55	−0·91

The following table gives comparative data for the eight divisions of the province:—

Division.	Number of rainy days.			Rainfall.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.	Average actual, January 1896.	Average normal, January.	Variation from normal.
				Inches.	Inches.	Inches.
North-West Provinces (East).	0	1·4	−1·4	0·01	0·65	−0·64
Oudh (South) .	0	1·4	−1·4	0·01	0·72	−0·71
„ (North) .	0·3	1·3	−1·0	0·07	0·78	−0·71
North-Western Provinces (Central).	0	1·3	−1·3	0·01	0·58	−0·57
North-Western Provinces (West).	0	1·3	−1·3	0·02	0·54	−0·52
North-Western Provinces (Submontane East.)	0·2	1·2	−1·0	0·02	0·59	−0·57
North-Western Provinces (Submontane) West.	1·3	2·3	−1·0	0·52	1·38	−0·86
North-Western Provinces (Hills).	2·0	3·2	−1·2	1·24	2·54	−1·30

Bengal and North Bihar received light showers on the 29th and 30th and Assam from the 29th to the 31st, due to the passage of the second cold weather storm across Bihar and Bengal into Upper Burma. The rainfall was heaviest in North Bengal and the Assam hills, and these two divisions received averages very slightly exceeding the normal average fall of the month. The month was practically rainless in South Bihar, Chota Nagpur and Orissa. The following table gives comparative data for the provinces of Assam and Bengal:—

Division.	Number of rainy days.			Rainfall.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.	Average actual, January 1896.	Average normal, January.	Variation from normal.
				Inches.	Inches.	Inch.
Assam (Surma) .	?	?	?	0·53	0·87	−0·34
„ (Hill tracts)	?	?	?	1·05	0·93	+0·12
„ (Brahmaputra).	?	?	?	0·88	1·03	−0·15
Bengal (East) .	0·7	1·2	−0·5	0·30	0·57	−0·27
„ (Deltaic) .	0·5	0·9	−0·4	0·16	0·46	−0·30
„ (Central)	0·4	0·9	−0·5	0·10	0·42	−0·32
„ (North) .	1·7	0·9	+0·8	0·60	0·52	+0·08
„ (Hills) .	1·3	2·0	−0·7	0·39	0·96	−0·57
Orissa . .	0·1	0·7	−0·6	0·01	0·37	−0·36
Chota Nagpur .	0·1	1·4	−1·3	0·02	0·68	−0·66
Bihar (South) .	0·1	1·4	−1·3	0·03	0·62	−0·59
„ (North) .	0·5	1·3	−0·8	0·12	0·61	−0·49

Light local showers fell in South Tenasserim on the 9th, 13th, 26th and 28th. The northern districts of Upper Burma received light rain on the 21st, 24th, and 31st. No rain fell over the remainder of the province. The total rainfall of the month averaged three-tenths of an inch in Tenasserim and one-tenth in Upper Burma.

No rain fell in Berar, the Central Provinces, the Bombay Presidency (with the exception of Sind and the Deccan districts) and the whole of the Deccan. The normal rainfall of the month averages a tenth of an inch in the Bombay Presidency, three-tenths in Berar and five-tenths in the Central Provinces.

The coast districts of Madras from Kistna southwards and the southern districts (including Madura, Tinnevelly and Salem), and the Cuddapah district received light local showers on the 1st, and again on the 8th and 9th. The total rainfall of the month was slightly below the small normal average of the month except in the central division.

Rainfall data for the month, are given for the eight divisions of the presidency.

Division.	Number of rainy days.			Rainfall.		
	Average actual, January 1896.	Average normal, January.	Variation from normal.	Average actual, January 1896.	Average normal, January.	Variation from normal.
				Inch.	Inch.	Inch.
Malabar Coast.	0·2	0·3	—0·1	0·21	0·19	+0·02
Madras (South Central).	0·2	0·3	—0·1	0·11	0·12	—0·01
Madras East Coast (North).	0	0·3	—0·3	0·01	0·20	—0·19
Madras East Coast (North) (*a*).	0	0·3	—0·3	0	0·07	—0·07
Madras Central	0·2	0·1	+0·1	0·28	0·05	+0·23
Madras East Coast (Central)	0·6	0·6	0	0·29	0·48	—0·19
Madras East Coast (South).	0·4	0·8	—0·4	0·21	0·48	—0·27
Madras (South)	0·7	1·0	—0·3	0·33	0·61	—0·28

Table

Abstract of Observations taken at 8 A.M. at 209 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.
I.—Burma Coast and Bay Islands.		...	...	−·010	...	...	...	...	...	...	...	83·9	+0·2	66·2	+0·8	76·8	+0·5	20·3	...	...	...	...	28·6
Bay Islands	Port Blair	61	29·934	?	29·926	29·989	9th	29·884	26th	·105	79·3	86·6	?	77·1	?	81·8	?	9·5	89·8	25th	72·1	17th	17·7
Tenasserim	Mergui	96	29·923	?	29·952	29·963	22nd & 26th	29·878	30th	·085	77·0	89·3	?	70·3	?	79·8	?	19·0	91·6	1st	66·1	4th	25·5
	Tavoy	26	30·011	?	29·969	30·048	5th	29·945	3rd	·103	71·3	90·8	?	65·8	?	78·3	?	25·0	93·2	2 days	59·7	31st	33·5
	Moulmein	94	29·941	−·011	29·975	29·999	2 days	29·882	30th	·117	69·2	90·5	+2·2	66·1	+0·5	78·3	+1·4	24·4	96·0	10th	61·9	30th	34·1
Lower Burma	Rangoon	41	29·993	−·009	29·973	30·070	5th	29·919	30th	·151	68·4	89·8	+1·1	64·7	+0·8	77·3	+1·0	25·1	93·2	30th	57·7	27th	35·5
	Bassein	27	30·022*	−·009*	29·985*	30·077	5th	29·987	1st	·090	66·7	?	?	62·5	+1·5	?	?	?	?	...	53·5	19th	?
	Diamond Island	41	29·984	−·009	29·960	30·044	5th	29·921	30th	·123	75·8	83·5	−0·4	73·3	+3·0	78·4	+1·3	10·2	86·6	26th	71·4	19th	15·2
Arakan	Akyab	20	30·029	−·012	29·992	30·117	5th	29·912	30th	·205	62·2	80·3	−1·1	58·9	−0·6	69·6	−0·9	21·4	83·2	7th	52·7	25th	30·5
II.—Burma, Inland		...	...	−·006	...	...	...	...	...	...	...	78·8	−1·3	49·5	−0·5	63·8	−0·9	28·5	...	...	...	...	40·8
Central Burma	Toungoo	183	29·840	−·011	29·975	29·930	5th	29·750	30th	·180	60·1	84·3	−1·0	56·9	−0·7	70·6	−0·9	27·4	87·8	21st	49·2	2 days	38·6
	Thayetmyo	134	29·919	−·006	30·001	30·026	5th	29·817	30th	·209	60·7	84·6	−0·8	53·5	−0·1	69·1	−0·5	31·1	90·1	31st	47·2	27th	42·9
Upper Burma	Minbu	?	29·907	?	...	30·025	5th	29·792	30th	·233	60·8	81·9	?	55·9	?	68·9	?	26·0	88·6	31st	49·0	2 days	39·6
	Yamethin	645	29·392	?	30·021	29·508	5th	29·283	30th	·225	59·6	84·0	?	?	?	?	?	?	89·0	31st	?	...	?
	Taunggyi	?	...	Not recorded.							54·0	72·7	?	41·0	?	56·9	?	31·7	76·7	1st	31·1	26th	45·6
	Mandalay	249	29·802	?	?30·015	29·918	5th	29·676	30th	·242	59·5	82·7	?	54·5	?	68·6	?	28·2	86·5	2 days	48·7	26th	37·8
	Kindat	?	29·732	?	?	29·859	5th	29·578	30th	·281	53·0	74·1	−1·7	51·5	−0·8	62·8	−1·3	22·6	77·3	30th	49·0	2 days	28·3
	Lashio	?	27·239	?	?	27·334	9th	27·169	30th	·165	49·7	74·0	?	43·8	?	58·9	?	30·2	83·6	25th	31·1	25th	52·5
	Bhamo	?	29·711	?	?	29·826	5th	29·544	30th	·282	51·1	76·1	?	46·6	?	61·4	?	29·5	80·0	21st	40·9	13th	39·1
III.—Assam		...	...	−·001	...	...	...	...	...	...	...	74·5	+1·0	48·9	−3·0	61·8	−1·0	25·6	...	...	...	...	33·0
Surma	Silchar	104	29·985	+·002	30·004	30·078	5th	29·894	30th	·184	56·2	78·2	+1·0	50·6	−1·7	64·4	−0·4	27·6	81·4	3 days	45·8	12th	35·6
Brahmaputra	Sibsagar	333	29·770	−·002	30·088	29·885	5th	29·625	30th	·260	49·0	71·0	+1·1	45·5	−4·3	58·3	−1·6	25·5	74·3	29th	*	2 days	33·3
	Dhubri	115	29·969	−·004	30·047	30·084	24th	29·834	30th	·250	54·6	74·4	+0·9	50·7†	−2·9	62·6	−1·0	23·7	77·1	25th	47·0	8th	30·1
IV.—Bengal and Orissa		...	...	−·006	...	...	...	...	...	...	...	77·8	+0·9	52·5	−2·0	65·2	−0·6	25·2	...	...	...	...	34·2
East Bengal	Chittagong	87	29·968	−·015	30·009	30·052	24th	29·849	30th	·203	58·7	77·4	−0·4	54·1	−1·3	65·8	−0·9	23·3	81·7	6th	49·1	13th	32·6
	Lungleh	?				Not recorded.					54·9	65·9	?	50·7	?	58·3	?	15·2	68·9	21st	45·2	11th & 19th.	23·7
	Noakhali	43	30·012	?	30·004	30·111	24th	29·896	30th	·315	59·8	77·8	?	51·1	?	64·5	?	26·7	81·1	6th	47·6	10th	33·5
	Comilla	36	30·034	?	30·019	30·122	24th	29·917	30th	·205	60·5	78·2	?	52·5	?	65·4	?	25·7	81·4	6th	49·1	3 days	32·3
	Sirajganj	49	30·022	?	30·024	30·113	5th	29·892	30th	·221	55·4	77·1	?	51·0	?	64·0	?	26·1	79·8	29th	46·4	19th	33·4
	Narayanganj	26	30·040	−·016	30·015	30·134	24th	29·909	30th	·225	59·1	77·8	−0·4	54·3	−0·7	66·1	−0·6	23·5	81·1	2 days	51·3	26th	29·8
	Barisal	13	30·047	−·006	30·006	30·138	24th	28·921	30th	·217	59·8	78·7	+2·2	53·2	−1·8	66·0	+0·2	25·5	83·3	17th	49·0	10th	34·3
	Mymensingh	59	30·012	?	30·027	30·103	24th	29·876	30th	·227	54·9	76·2	+1·7	50·4	−2·0	63·3	−0·2	25·8	78·8	6th	45·8	19th	33·0
Deltaic Bengal	Faridpur	46	30·026	?	30·022	30·115	5th	29·897	30th	·218	57·3	76·8	?	51·5	?	64·2	?	25·3	81·2	17th	48·0	19th	33·2
	Jessore	33	30·041	−·006	30·022	30·136	24th	29·893	30th	·243	57·3	78·6	+0·6	50·6	−2·6	64·6	−1·0	28·0	82·1	3 days	45·4	2 days	36·7
	Calcutta	21	30·057	−·013	30·025	30·155	24th	29·904	30th	·251	58·3	78·3	+1·4	53·4	−2·0	65·9	−0·3	24·9	82·8	17th	47·7	11th	35·1
	Saugor Island	25	30·048	−·010	30·018	30·145	24th	29·904	30th	·241	61·9	77·6	+1·0	57·7	−1·7	67·7	−0·4	19·9	82·0	17th	51·2	13th	30·8
	Krishnagar	47	30·041	?	30·040	30·142	24th	29·892	30th	·250	57·2	78·3	?	49·2	?	63·8	?	29·1	81·9	17th & 31st.	44·0	12th	37·9
	Midnapore†	149	29·929	?	30·035	30·026	24th	29·783	30th	·243	59·2	82·3	?	53·2	?	67·7	?	29·1	89·3	30th	48·2	4th	41·1

* Mean of 16 days. † Mean of 30 days.

India, Burma, etc., in January 1896.

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 to 31st January 1896.	Normal rainfall for period, 1st to 31st January.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·42	0·33	+0·08	...	...	...	...	**I.—Burma Coast and Bay Islands.**	
10	10	3	2	1	...	1	4	6·9	7·0	− 1	83	7·82	4·1	2	?	?	0·82	0·81	+ 0·01	0·82	0·81	+ 0·01	0·45	Port Blair .	Bay Islands.
11	2	3	1	1	...	1	12	1·8	2·0	− 10	81	·750	4·1	4	?	?	2·43	0·61	+ 1·82	2·43	0·61	+ 1·82	0·81	Mergui .	Tenasserim.
...	1	...	...	...	...	...	2	1·2	?	?	86	·663	0	1	?	?	0·52	?	?	0·52	?	?	0·52	Tavoy.	
1	5	7	2	...	2	9	5	2·1	2·4	− 13	81	·585	2·5	0	0·09	−0·09	0	0·51	− 0·51	0	0·51	− 0·51	0	Moulmein.	
12	9	1	1	1	1	2	4	4·9	4·3	+ 14	77	·541	2·2	0	0·27	−0·27	0	0·17	− 0·17	0	0·17	− 0·17	0	Rangoon .	Lower Burma.
1	12	1	...	...	...	...	8	4·5	2·9	+ 55	85	·561	2·0	0	0	0	0	0·17	− 0·17	0	0·17	− 0·17	0	Bassein.	
12	15	2	...	...	...	...	2	11·5	5·6	+ 74	71	·633	2·7	0	0·44	−0·44	0	0·18	− 0·18	0	0·18	− 0·18	0	Diamond Island.	
9	20	2	...	...	...	...	...	2·9	2·6	+ 12	88	·497	1·9	0	0·18	−0·18	0	0·08	− 0·08	0	0·08	− 0·08	0	Akyab .	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·06	0·31	−0·31	...	...	...	...	**II.—Burma, Inland.**	
23	1	...	...	...	...	...	6	2·8	1·9	+ 47	85	·456	1·3	0	0·27	−0·27	0	0·12	− 0·12	0	0·12	− 0·12	0	Toungoo .	Central Burma.
9	7	7	1	1	1	2	3	3·3	2·4	+ 38	74	·395	0·3	0	0	0	0	0·02	− 0·02	0	0·02	− 0·02	0	Thayetmyo.	
1	...	...	...	...	1	5	15	6·8	?	?	81	·435	1·5	0	?	?	0	?	?	0	?	?	0	Minbu .	Upper Burma.
9	1	...	...	...	...	...	5	2·7	?	?	85	·438	0·8	0	?	?	0	?	?	0	?	?	0	Yamethin.	
...	1	1	11	4	...	...	...	?	?	?	71	·295	1·9	0	?	?	0	?	?	0	?	?	0	Taunggyi.	
7	6	1	1	1	3	...	1	3·1	?	?	86	·434	1·1	0	?	?	0	?	?	0	?	?	0	Mandalay.	
...	...	...	...	...	...	...	...	0·5	?	?	96	·395	0·3	0	?	?		0·59	− 0·59	0	0·59	− 0·59	0	Kindat.	
				Not recorded.				?	?	?	91	·327	4·2	1	?	?	0·22	?	?	0·22	?	?	0·15	Lashio.	
...	4	...	...	1	...	1	...	1·6	?	?	97	·371	2·5	1	?	?	0·28	?	?	0·28	?	?	0·15	Bhamo.	
...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	0·93	0·90	+0·04	...	...	...	...	**III.—Assam.**	
...	...	1	...	...	...	...	...	0·9	2·0	− 55	89	·403	3·0	2	1·91	+0·09	0·81	0·77	+ 0·04	0·81	0·77	+ 0·04	0·53	Silchar .	Surma
...	2	...	4	1	...	...	...	1·9	1·8	+ 5	97	·343	?	0	4·09	−4·09	0·11	1·48	− 1·37	0·11	1·48	− 1·37	0·09	Sibsagar .	Brahmaputra.
10	11	2	2	1	...	1	3	4·7	3·9	+ 21	90	·388	1·5	3	1·29	+1·71	1·88	0·44	+ 1·44	1·88	0·44	+ 1·44	0·97	Dhubri.	
...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	0·20	0·44	−0·23	...	...	...	...	**IV.—Bengal and Orissa.**	
12	13	2	...	1	...	...	...	2·3	3·7	− 38	90	·447	0·7	0	0·82	−0·82	0·03	0·39	− 0·36	0·03	0·39	− 0·36	0·03	Chittagong	East Bengal
			Not	recorded.				?	?	?	76	·327	?	1	?	?	0·10	?	?	0·10	?	?	0·10	Lungleh.	
12	8	2	1	...	1	...	7	1·2	?	?	90	·460	0·8	1	1·10	−0·10	1·23	0·62	+ 0·61	1·23	0·62	+ 0·61	1·12	Noakhali.	
3	1	4	...	1	...	...	...	1·1	?	?	94	·500	0·3*	0	1·53	−1·53	0	0·68	− 0·68	0	0·68	− 0·68	0	Comilla.	
2	1	...	...	...	...	...	4	1·9	?	?	89	·390	1·1†	1	1·11	−0·11	0·16	0·45	− 0·29	0·16	0·45	− 0·29	0·16	Sirajganj.	
4	4	1	1	...	...	4	7	2·2	2·1	+ 5	89	·451	?	0	1·09	−1·09	0·04	0·32	− 0·28	0·04	0·32	− 0·28	0·02	Narayanganj.	
2	1	...	...	...	1	...	1	1·3	?	?	87	·449	1·0	2	1·30	+0·70	0·34	0·77	− 0·43	0·34	0·77	− 0·43	0·24	Barisal.	
4	3	4	2	...	...	...	1	1·3	?	?	92	·392	?	1	0·80	+0·20	0·38	0·38	0	0·38	0·38	0	0·37	Mymensingh.	
5	1	...	...	...	...	1	...	1·0	?	?	92	·436	0·7	2	0·85	+1·15	0·68	0·34	+ 0·34	0·68	0·34	+ 0·34	0·53	Faridpur .	Deltaic Bengal.
6	1	...	...	...	...	...	2	1·9	1·6	+ 19	84	·399	0·9	0	0·82	−0·82	0·02	0·49	− 0·47	0·02	0·49	− 0·47	0·02	Jessore.	
8	1	1	...	2	1	1	6	2·2	3·0	− 27	83	·410	0·6	0	0·82	−0·82	0·03	0·38	− 0·35	0·03	0·38	− 0·35	0·03	Calcutta.	
12	6	1	...	1	2	1	7	7·8	6·3	+ 24	87	·437	1·0‡	0	1·00	−1·00	0	0·23	− 0·23	0	0·23	− 0·23	0	Saugor Island.	
6	...	1	4	1	...	8	9	2·9	?	?	72	·340	0·5	0	0·80	−0·80	0	0·30	− 0·30	0	0·30	− 0·30	0	Krishnagar.	
11	...	...	...	2	...	...	3	1·4	?	?	66	·336	0·2	0	1·00	−1·00	0	0·61	− 0·61	0	0·61	− 0·61	0	Midnapore.†	

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

Table

Abstract of Observations taken at 8 A.M. at 209 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	29·762	?	30·032	29·860	24th	29·618	30th	·242	57·2	79·7	?	52·8	?	66·3	?	26·9	86·4	30th	46·8	12th	39·6
	Raniganj	334	29·753	?	30·059	29·868	24th	29·615	29th & 30th	·253	57·9	79·1	?	52·3	?	65·7	?	26·8	86·9	30th	47·0	12th	39·9
	Burdwan	99	29·986	−·005	30·039	30·094	24th	29·848	30th	·246	57·3	79·6	+1·1	53·1	−1·6	66·4	−0·3	26·5	85·1	30th	48·1	12th	37·0
	Naya Dumka	489	29·572	?	30·056	29·689	24th	29·423	30th	·266	56·0	77·0	?	50·2	?	63·6	?	26·8	82·8	16th	44·2	12th	38·6
	Berhampore	67	30·014	−·009	30·033	30·133	24th	29·870	30th	·263	55·0	78·4	+1·6	51·0	−2·3	64·7	−0·4	27·4	83·7	30th	47·1	12th	36·6
	Rampur Boalia.	70	30·001	?	30·024	30·119	24th	29·888	30th	·231	59·1	77·8	?	51·1	?	64·4	?	26·7	81·3	29th	47·3	10th & 19th.	34·0
	Malda	72	30·022	?	30·057	30·147	24th	29·907	29th	·240	56·4	76·6	?	47·2	?	61·9	?	29·4	79·3	24th	44·2	12th & 19th.	35·1
	Bogra	61	30·004*	?	30·021*	30·104	24th	29·901	30th	·203	56·3†	77·5	+1·8	50·8	−0·8	64·2	+0·5	26·7	80·6	29th	46·2	19th	34·4
North Bengal	Dinajpur	123	29·914	+·002	30·032	30·067	24th	29·784	30th	·283	51·6	76·8	+1·5	47·4	−1·8	62·1	−0·2	29·4	80·3	29th	42·5	19th	37·8
	Rangpur	123	29·957	?	30·044	30·079	24th	29·804	30th	·266	52·7	75·3	?	48·0	?	61·7	?	27·3	78·1	29th	44·8	27th	33·3
	Jalpaiguri	284	29·786	+·012	30·047	29·899	24th	29·691	29th	·208	53·5	74·5	+1·4	48·9	−1·8	61·7	−0·2	25·6	76·6	25th	45·3	25th	31·3
Orissa	Balasore	56	30·035	+·004	30·031	30·136	24th	29·888	30th	·248	59·5	81·0	+0·9	52·8	−2·9	67·0	−1·0	28·2	86·9	2 days	45·4	13th	41·5
	False Point	21	30·062	−·004	30·026	30·148	24th	29·923	30th	·225	62·0	78·8	0	55·3	−3·6	67·0	−1·8	23·5	84·4	31st	48·0	13th	36·4
	Cuttack	80	29·996	−·010	30·024	30·081	24th	29·859	30th	·222	59·6	83·5	−1·1	57·1	−2·8	70·3	−2·0	26·4	89·7	30th	51·6	13th	38·1
	Shortt's Island	?	30·062	?	?	30·150	24th	29·902	30th	·248	69·4	76·8	?	64·6	?	70·7	?	12·2	80·8	31st	60·4	14th	20·4
	Puri	24	30·060	?	30·024	30·144	30th	29·926	24th	·218	64·3	79·6	?	60·7	?	70·1	?	18·9	81·6	10th & 31st.	55·6	12th	26·0
V.—Gangetic Plain and Chota Nagpur.		...	...	0	...	...	...	...	...	...	...	75·6	+1·9	47·2	−1·7	61·4	+0·1	28·4	...	...	...	...	38·5
Chota Nagpur	Hazaribagh	2,007	28·010	−·003	30·061	28·117	24th	27·878	29th	·239	60·4	74·3	+1·5	50·5	0	62·4	+0·8	23·8	79·9	29th	46·0	9th	33·9
	Ranchi	2,128	27·891	+·013	30·058	28·006	24th	27·770	29th	·236	57·3	74·9	+1·2	50·3	+0·2	62·6	+0·7	24·6	80·4	29th	43·8	12th	36·6
	Daltonganj	730?	29·312	?	30·061	29·431	24th	29·161	29th	·270	47·8	65·3	?	42·5	?	53·9	?	22·8	74·4	3 days	38·0	3rd	36·4
	Chaibassa	760	29·293	+·009	30·052	29·399	24th	29·160	30th	·239	55·6	80·9	+0·7	49·9	−3·6	65·4	−1·5	31·0	86·8	29th	44·2	3rd	42·6
South Bihar	Gaya	375	29·707	+·001	30·063	29·838	24th	29·542	29th	·296	55·7	77·3	+1·6	50·1	−1·4	63·7	+0·1	27·2	82·8	16th	45·9	12th	36·9
	Dehri	351	29·725	?	30·057	29·854	24th	29·567	29th	·287	55·6	77·2	?	51·8	?	64·5	?	25·4	84·3	16th	48·1	3rd & 12th.	36·2
	Patna	183	29·902	−·009	30·050	30·030	24th	29·743	29th	·287	55·5	74·9	+2·2	49·8	−0·1	62·4	+1·1	25·1	80·1	16th	46·2	2 days	33·9
	Arrah	190	29·898	?	30·055	30·029	24th	29·759	30th	·270	53·0	76·6	?	47·5	?	62·1	?	29·1	82·1	16th	43·3	11th	38·8
	Buxar	239	29·847	?	30·058	29·985	24th	29·711	30th	·274	57·0	76·4	?	48·5	?	62·5	?	27·9	81·1	16th	44·4	11th & 12th.	36·7
North Bihar	Purnea	125	29·959	+·005	30·049	30·084	24th	29·803	30th	·281	51·1	76·7	+2·0	46·2	−1·7	61·5	+0·2	30·5	80·8	29th	42·3	19th	38·5
	Bhagalpur	160	29·917	?	30·040	30·054	24th	29·763	29th	·291	56·7	76·8	?	48·3	?	62·6	?	28·5	81·5	16th	43·7	12th	37·8
	Darbhanga	166	29·907	−·007	30·040	30·043	24th	29·745	30th	·298	53·7	74·5	+2·3	50·5	−1·6	62·5	+0·4	24·0	76·3	26th	47·1	2 days	29·2
	Muzaffarpur	178	29·902	?	30·049	30·032	24th	29·746	30th	·286	51·9	74·6	?	47·2	?	60·9	?	27·4	76·6	28th	42·8	10th	33·8
	Motihari	224	29·848	?	30·048	30·000	24th	29·701	30th	·299	51·1	74·8	?	44·2	?	59·5	?	30·6	77·0	25th & 26th.	40·5	11th	36·5
	Chapra	181	29·891	?	30·043	30·027	24th	29·751	30th	·276	51·8	75·8	?	47·6	?	61·7	?	28·2	81·0	16th	43·5	11th	37·5
N.-W. Prov. East	Benares	267	29·818	+·006	30·063	29·913	5th	29·688	29th	·225	49·9	76·2	+1·8	43·9	−4·1	60·1	−1·2	32·3	83·6	16th	40·4	3 days	43·2
	Allahabad	309	29·774	+·002	30·062	29·897	24th	29·630	28th	·267	51·9	77·3	+3·3	45·5	−2·2	61·4	+0·6	31·8	84·6	16th	41·4	1st & 12th.	43·2
N.-W. Provinces (East Sub-Montane).	Gorakhpur	256	29·800	−·012	30·035	29·927	24th	29·668	30th	·259	51·0	74·9	+1·7	46·8	−2·1	60·9	−0·2	28·1	81·5	16th	43·3	21st	38·2
South Oudh	Lucknow	368	29·703	−·005	30·059	29·830	24th	29·544	28th	·286	50·4	76·2	+2·4	43·9	−2·5	60·0	−0·1	32·3	83·8	16th	39·2	6th	44·6
North Oudh	Bahraich	403	29·650	?	30·047	29·789	24th	29·532	30th	·257	50·4	75·2	?	45·7	?	60·5	?	29·5	82·9	16th	41·1	10th	41·8
N.-W. Prov. (Central).	Cawnpore	416	29·653	?	30·058	29·772	24th	29·490	28th	·282	50·8	76·9	?	43·5	?	60·2	?	33·4	85·1	16th	38·5	11th	46·6
	Mainpuri	516	29·554	?	30·071	29·691	24th	29·379	28th	·312	49·7	76·0	?	44·7	?	60·4	?	31·3	83·3	16th	40·1	6th	43·2

* Mean of 16 days. † Mean of 30 days.

ontinued.

ndia, Burma, etc., in January 1896—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.
	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 Jan. to 31st Jan. 1896.	Normal rainfall for period, 1st Jan. to 31st Jan.	Variation from normal of period			
1	...	...	...	...	...	6	1	1·1	?	?	70	·334	0·4	1	1·10	— 0·10	0·22	0·37	— 0·15	0·22	0·37	— 0·15	0·22	Bankura .	CENTRAL BENGAL.
3	...	...	2	1	...	8	13	2·0	?	?	65	·313	0·4	0	1·05	— 1·05	0·02	0·33	— 0·31	0·02	0·33	— 0·31	0·02	Raniganj.	
5	1	...	...	...	...	...	6	1·6	1·8	−11	68	·324	0·5	0	0·27	— 0·27	0·05	0·23	— 0·18	0·05	0·23	— 0·18	0·05	Burdwan.	
2	...	2	1	2	...	3	6	1·8	?	?	70	·316	0·4	0	1·28	— 1·28	0	0·58	— 0·58	0	0·58	— 0·58	0	Naya Dumka	
2	...	1	...	...	1	6	9	1·9	1·8	+ 5	86	·375	0·4	0	0·73	— 0·73	0·03	0·39	— 0·36	0·03	0·39	— 0·36	0·02	Berhampore.	
3	...	...	...	...	...	...	...	3·1	?	?	84	·394	0	0	0·80	— 0·80	0·05	0·40	— 0·35	0·05	0·40	— 0·35	0·04	Rampur Boalia.	
.	1	...	1	...	4	...	24	2·0	?	?	75	·341	0·4	0	0·90	— 0·90	0·07	0·42	— 0·36	0·07	0·43	— 0·36	0·07	Malda.	
8	5	2	1	...	1	2	6	1·7	?	?	83*	·379	?	1	0·85	+ 0·15	0·40	0·45	— 0·05	0·40	0·45	— 0·05	0·40	Bogra.	
6	5	...	4	...	3	2	6	1·5	?	?	89	·339	1·1	2	0·90	+ 1·10	0·64	0·40	+ 0·24	0·64	0·40	+ 0·24	0·45	Dinajpur .	NORTH BENGAL.
7	8	1	1	1	...	...	...	1·4	?	?	92	·366	1·2	2	0·75	— 1·25	1·18	0·58	+ 0·60	1·18	0·58	+ 0·60	0·67	Rangpur.	
8	2	2	...	...	1	...	4	1·6	?	?	89	·364	?	1	1·21	— 0·21	0·31	0·55	— 0·24	0·31	0·55	— 0·24	0·31	Jalpaiguri.	
0	...	...	...	...	5	1	10	3·3	?	?	73	·376	0·2	0	·075	— 0·75	0	0·49	— 0·49	0	0·49	— 0·49	0	Balasore .	ORISSA.
6	...	...	...	1	...	6	3	4·7	6·0	−22	86	·466	0·6	0	0·82	— 0·82	0	0·63	— 0·63	0	0·63	— 0·63	0	False Point.	
2	1	...	...	...	2	...	1	1·0	1·4	−29	81	·418	0·4*	0	0·45	— 0·45	0	0·23	— 0·23	0	0·23	— 0·23	0	Cuttack.	
1	3	...	...	1	4	4	7	8·0	?	?	73	·523	0·3	0	?	?	0	?	?	0	?	?	0	Shortt's Island.	
9	2	...	...	...	2	1	2	8·3	?	?	82	·500	0·6	0	0·50	— 0·50	0	0·25	— 0·25	0	0·25	— 0·25	0	Puri.	
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·06	0·70	— 0·64	...	...	...	...	V—Gangetic Plain and Chota Nagpur.	
1	...	3	2	2	4	6	5	6·3	4·9	+ 29	56	·263	0·7	0	1·27	— 1·27	0·06	0·55	— 0·49	0·06	0·55	— 0·49	0·06	Hazaribagh.	CHOTA NAGPUR.
2	2	1	...	3	2	4	6	4·6	?	?	51	·241	0	0	1·53	— 1·53	0	0·56	— 0·56	0	0·56	— 0·56	0	Ranchi.	
1	...	3	4	17	6	...	...	1·0	?	?	86	·287	0·8	0	?	?	0	?	?	0	?	?	0	Daltonganj.	
..	...	...	...	...	9	9	...	0·8	?	?	72	·323	0·3	0	1·55	— 1·55	0·06	0·73	— 0·67	0·06	0·73	— 0·67	0·06	Chaibassa.	
..	...	1	...	2	3	2	...	1·7	1·6	+ 6	67	·300	0·6	0	1·09	— 1·09	0	0·62	— 0·62	0	0·62	— 0·62	0	Gaya .	SOUTH BIHAR.
..	1	...	...	7	16	2	...	3·5	?	?	70	·309	0·6	0	1·43	— 1·43	0	0·62	— 0·62	0	0·62	— 0·62	0	Dehri.	
..	...	1	1	5	6	11	1	2·5	2·0	+ 25	72	·323	0·3	1	1·18	— 0·18	0·13	0·66	— 0·53	0·13	0·66	— 0·53	0·13	Patna.	
2	2	2	1	...	1	13	9	1·8	?	?	77	·312	0·5†	0	1·70	— 1·70	0	0·71	— 0·71	0	0·71	— 0·71	0	Arrah.	
2	1	...	...	1	14	10	2	2·0	?	?	66	·313	1·0	0	1·80	— 1·80	0	0·79	— 0·79	0	0·79	— 0·79	0	Buxar.	
..	...	1	1	1	7	6	...	2·3	1·7	+ 35	87	·303	0·6	1	0·55	+ 0·45	0·23	0·60	— 0·37	0·23	0·60	— 0·37	0·21	Purnea .	NORTH BIHAR.
..	1	...	2	3	4	1	1	1·6	?	?	72	·332	0·5†	1	1·30	— 0·30	0·14	0·48	— 0·34	0·14	0·4	— 0·34	0·12	Bhagalpur.	
3	2	3	2	...	2	5	4	2·2	2·3	— 4	85	·351	0·4	0	1·27	— 1·27	0·09	0·69	— 0·60	0·09	0·69	— 0·60	0·09	Darbhanga.	
..	...	1	1	...	2	3	1	1·5	?	?	89	·347	0·3	1	1·53	— 0·53	0·18	0·79	— 0·61	0·18	0·79	— 0·61	0·18	Muzaffarpur	
..	2	3	1	...	10	13	1	3·5	?	?	92	·343	0·6	0	1·41	— 1·41	0·03	0·65	— 0·62	0·03	0·65	— 0·62	0·03	Motihari.	
1	...	1	...	2	10	4	2	2·2	?	?	82	·317	0·3	0	1·70	— 1·70	0·08	0·66	— 0·58	0·08	0·66	— 0·58	0·06	Chapra.	
..	...	...	...	2	7	2	1	2·4	2·9	— 17	83	·301	0·7	0	1·55	— 1·55	0·05	0·79	— 0·74	0·05	0·79	— 0·74	0·05	Benares .	N.-W. PROV., EAST.
..	...	1	...	...	...	3	2	1·7	1·9	— 11	76	·295	0·6	0	2·09	— 2·09	0	0·85	— 0·85	0	0·85	— 0·85	0	Allahabad .	
7	2	...	1	3	1	...	9	1·4	1·7	— 18	84	·317	1·0	0	1·18	— 1·18	0·06	0·84	— 0·78	0·06	0·84	— 0·78	0·04	Gorakhpur	N.-W. PROVINCES (EAST SUB-MONTANE).
1	...	1	1	...	4	5	2	0·9	2·4	— 63	84	·306	2·1	0	1·64	— 1·64	0·05	1·10	— 1·05	0·05	1·10	— 1·05	0·05	Lucknow .	SOUTH OUDH.
..	...	1	1	...	3	2	4	1·4	?	?	82	·307	0·5	1	?	?	0·20	0·86	— 0·66	0·20	0·86	— 0·66	0·16	Bahraich .	NORTH OUDH.
..	...	2	2	1	3	12	3	2·8	?	?	75	·279	0·4	0	1·40	— 1·40	0·03	0·64	— 0·61	0·03	0·64	— 0·61	0·03	Cawnpore .	N.-W. PROV. EST. (CENTRAL).
1	...	...	...	...	1	1	1	0·4	?	?	70	·250	2·3	0	?	?	0	0·61	— 0·61	0	0·61	— 0·61	0	Mainpuri.	CEN-

* Mean of 30 days. † Mean of 28 days.

Tal

Abstract of Observations taken at 8 A.M. at 209 Stati

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
VI.—Upper Sub-Himalayas		...	...	−·011	...	...	...	...	...	...	...	71·3	+3·2	43·6	+0·2	57·5	+1·7	27·7	...	...	...	...	4
N.-W. Provinces West (Sub-montane).	Bareilly	568	29·478	−·003	30·059	29·604	24th	29·324	28th	·280	48·2	73·7	+3·4	44·0	−2·1	58·9	+0·7	29·7	81·3	16th	38·7	2nd	4
	Dehra Dun	2,233	27·760	−·008	30·082	27·885	24th	27·607	28th	·278	47·4	69·1	+3·5	44·5	−0·2	56·8	+1·7	24·6	76·5	15th	38·0	19th	3
	Roorkee	887	29·135	−·009	30·067	29·266	24th	28·976	28th	·290	45·1	73·0	+3·5	41·8	−2·5	57·4	+0·5	31·2	80·8	15th	35·8	2nd	4
N.-W. P. West	Meerut	738	29·296	−·011	30·063	29·436	24th	29·106	28th	·330	47·5	73·9	+3·8	44·9	+0·3	59·4	+2·1	29·0	79·1	16th	39·6	1st	3
South-East Punjab	Delhi	718	29·316	−·020	30·052	29·454	24th	29·111	28th	·343	51·9	74·5	+3·5	48·1?	+0·1	61·3	+1·8	26·4	83·0	15th	40·9	2nd	4
Central Punjab.	Lahore	702	29·336	−·014	30·071	29·478	24th	29·069	28th	·409	46·7	69·7	+2·3	44·6	+3·2	57·2	+2·8	25·1	75·3	15th	36·2	1st	3
Punjab (Sub-montane).	Umballa	892?	29·108?	?	30·062?	29·249	24th	28·923	28th	·326	44·2	72·3	?	41·1	?	56·7	?	31·2	79·5	15th	34·0	2nd	4
South Punjab	Patiala	?	29·209	?	?	29·348	5th	29·050	31st	·298	48·2	71·7	?	43·9	?	57·8	?	27·8	78·8	15th	37·0	2nd	4
	Ludhiana	812	29·219	−·010	30·067	29·350	5th	28·975	28th	·375	47·8	70·1	+2·5	44·8	+1·1	57·5	+1·8	25·3	75·6	15th & 28th.	37·4	2nd	3
	Sialkot	830	29·207	?	30·080	29·347	24th	28·972	28th	·375	47·2	68·7	+2·1	43·5	+0·7	56·2	+1·4	25·2	74·5	15th	36·0	9th	3
North Punjab	Rawalpindi	1,643	28·342	?	30·100	28·473	24th	28·167	28th	·306	42·7	67·4	+4·1	38·7	+0·8	53·1	+2·5	28·7	76·1	2nd	31·9	1st	4
VII.—Indus Valley and North-West Rajputana.		...	...	−·021	...	...	...	...	...	...	...	75·3	+3·8	46·3	+1·3	60·5	+2·6	28·4	...	...	...	...	4
North Punjab	Peshawar	1,110	28·960	−·014	30·100	29·100	5th	28·779	28th	·321	43·3	65·3	+1·4	40·6	+1·2	53·0	+1·3	24·7	75·1	2nd	30·9	6th	4
	Mardan	?			Not recorded.						46·0	64·7	?	37·4	?	51·1	?	27·3	73·0	1st	27·0	3rd & 4th,	4
West Punjab	Khushab	612	29·451	?	30·092	29·591	24th	29·177	28th	·414	45·4	71·2	?	41·6	?	56·4	?	29·6	81·2	1st	34·0	1st	4
	Montgomery	558	29·494	?	30·068	29·631	24th	29·204	28th	·427	48·5	72·2	?	44·0	?	58·1	?	28·2	78·3	2nd & 3rd	36·5	9th	4
	D. I. Khan	594?	29·481?	−·007?	30·103?	29·608	24th	29·226	28th	·382	44·3	72·4	+3·3	40·9	+0·3	56·7	+1·8	31·5	80·8	1st	33·0	4th	4
	Mooltan	420	29·646	−·035?	30·072	29·790	5th	29·390	28th	·400	48·8	73·3	+3·5	45·9	+3·2	59·6	+3·4	27·4	81·3	1st	42·2	3 days	3
South Punjab	Sirsa	662	29·375	−·021	30·061	29·504	24th	29·131	28th	·373	46·8	75·8	+4·9	43·1	+0·6	59·5	+2·8	32·7	83·2	28th	37·2	10th	4
Sind and Cutch.	Jacobabad	186	29·894	−·016	30·057	30·045	9th	29·606	27th	·439	50·7	76·6	+3·3	46·4	+3·3	61·5	+3·3	30·2	82·5	1st & 2nd.	39·5	7th	4
	Hyderabad	96	29·981	−·026	30·036	30·112	9th	29·784	27th	·328	58·2	81·0	+4·5	53·2	+2·0	67·1	+3·3	27·8	87·7	27th	45·0	2nd	4
	Kurrachee	12	30·069	−·021	30·032	30·193	9th	29·885	27th	·308	62·7	81·9	?	57·7	?	69·9	?	24·2	87·8	24th	52·9	3 days	3
Kathiawar	Bhuj	395	29·650	−·029	30·019	29·746	9th	29·504	27th	·242	62·2	84·4	+4·3	55·8	+1·0	70·1	+2·7	28·6	89·4	3rd & 27th	53·0	5th & 25th,	3
West Rajputana	Bickaneer	771?	29·275	?	30·069	29·414	24th	29·042	28th	·372	54·0	77·3	+5·5	49·0	−1·3	63·2	+2·1	28·3	83·2	27th	44·6	3 days	3
	Pachpadra	380	29·706	?	30·077	29·804	9th	29·537	31st	·267	50·0	82·5	?	?	?	?	?	?	87·6	27th & 28th.	?	?	
VIII.—East Rajputana, Central India and Gujarat.		...	...	−·003	...	...	...	...	...	...	...	81·7	+3·4	50·8	−0·3	66·3	+1·6	30·9	...	...	...	...	4
East Rajputana	Jeypore	1,431	28·611	−·007	30·098	28·740	24th	28·413	28th	·327	51·8	77·9	+4·2	47·7	−0·7	62·8	+1·8	30·2	84·0	15th	40·2	19th	4
	Sambhar	1,254	28·778	−·007	30·087	28·914	24th	28·575	28th	·339	49·0	77·3	+4·9	45·1	−1·0	61·2	+2·0	32·2	83·4	15th	40·0	2nd	4
	Ajmere	1,611	28·441	0	30·133	28·558	24th	28·242	28th	·326	48·1	77·6	+3·6	44·4	−0·5	61·0	+1·6	33·2	82·9	28th	36·9	2nd	4
	Deesa	466	29·587	−·011	30·038	29·686	9th	29·449	27th	·237	58·1	87·5	+4·8	52·2	+0·8	69·9	+2·8	35·3	92·3	1st	49·6	4 days	4
Kathiawar	Rajkot	429	29·631	+·003	30·029	29·695	15th	29·524	27th	·171	68·1	86·8	+2·6	53·0	+1·8	69·9	+2·2	33·8	91·4	1st & 2nd	46·0	19th	4
	Veraval	?	30·031	?	29·991	30·108	9th	29·956	27th	·152	66·3	83·7	?	60·8	?	72·3	?	22·9	93·1	1st	51·3	12th	4
Central India	Nowgong	757	29·315	−·004	30·088	29·429	24th	29·141	28th	·288	51·3	77·1	+1·8	44·8	−2·1	61·0	−0·2	32·3	84·1	16th	40·5	2nd & 3rd,	4
N.	Indore	1,823	28·218	+·018	30·088	28·305	9th	28·107	27th	·198	55·6	81·5	+2·6	48·2	−2·1	64·9	+0·3	33·3	85·7	28th	44·1	24th & 25th,	4
(	Neemuch	1,630	28·429	?	30·101	28·538	24th	28·275	28th	·263	57·9	80·2	+2·8	48·9	0	64·6	+1·4	31·3	84·8	14th & 15th.	42·9	2nd & 19th.	4
Sou. Gujarat	Surat	36	30·020	−·007	30·001	30·110	9th	29·958	27th	·152	64·2	90·0	+3·6	57·0	+0·6	73·5	+2·1	33·0	94·7	1st	51·6	19th	4
Nort	Ahmedabad	176	29·890	?	30·023	29·973	9th	29·769	27th	·204	64·1	86·8	?	59·0	?	72·9	?	27·8	90·2	1st	56·2	12th	3
N.-W. (Cent.-W. P., West	Agra	555	29·51	−·008	30·069	29·642	24th	29·319	28th	·323	53·2	76·7	+3·2	47·9	−0·6	62·3	+1·3	28·8	83·6	15th	44·4	3 days	3
(.-W. P. Central.	Jhansi	858	29·210	−·003	30·078	29·332	24th	29·027	28th	·305	57·8	79·4	+3·4	51·2	+0·6	65·3	+2·0	28·2	87·1	15th	45·9	11th	4

* Mean of 30 days.

-continued.

India, Burma, etc., in January 1896—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.
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 to 31st January 1896.	Normal rainfall for period, 1st to 31st January.	Variation from normal of period.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·63	1·74	−1·09	...	...	...	...	V—Upper Sub-Himalayas.	
...	...	...	1	...	...	...	4	1·0	2·8	−64	76	·258	0·8	0	2·36	−2·36	0·01	1·10	−1·09	0·01	1·10	−1·09	0·01	Bareilly .	N.-W. Provinces West (Sub-montane).
...	...	...	...	...	...	...	...	0·3	1·8	−83	69	·228	4·2	3	3·73	−0·73	1·23	2·54	−1·31	1·23	2·54	−1·31	0·94	Dehra Dun.	
2	1	4	1	...	1	1	...	2·1	2·2	−5	81	·247	2·5	2	2·73	−0·73	0·81	1·76	−0·95	0·81	1·76	−0·95	0·68	Roorkee.	
...	...	1	...	1	...	5	1	1·4	2·1	−33	72	·240	2·4	1	2·45	−1·45	0·11	1·27	−1·16	0·11	1·27	−1·16	0·11	Meerut .	N.-W. Provinces West.
...	...	1	1	...	...	13	1	2·5	3·0	−17	59.	·230	2·4	0	1·82	−1·82	0·04	1·24	−1·20	0·04	1·24	−1·20	0·04	Delhi .	South-East Punjab.
...	1	2	5	...	...	1	1	1·6	1·9	−16	79	·258	4·0	1	2·00	−1·00	0·39	1·06	−0·67	0·39	1·06	−0·67	0·29	Lahore .	Central Punjab.
1	...	1	2	...	...	...	2	1·2	P	P	87	·253	2·4	2	P	P	0·53	1·15	−0·62	0·53	1·15	−0·62	0·30	Umballa .	Punjab Sub-montane.
...	2	...	2	7	3	1	...	P	?	?	87	·297	2·1	2	P	?	0·51	?	P	0·51	P	P	0·33	Patiala .	South Punjab.
...	3	...	4	...	...	2	5	2·0	1·1	+82	77	·260	4·4	3	3·00	0	0·74	1·97	−1·23	0·74	1·97	−1·24	0·45	Ludhiana.	
...	1	2	...	...	...	...	1	1·1	1·4	−21	75	·245	3·1	1	2·36	−1·36	0·19	2·49	−2·30	0·19	2·49	−2·30	0·12	Sialkot.	
3	1	1	...	...	...	5	1	1·7	1·9	−11	72	·206	5·2	4	4·00	0	2·34	2·84	−0·50	2·34	2·84	−0·50	1·75	Rawalpindi.	North Punjab.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·33	0·54	−0·28	...	...	...	...	VII.—Indus Valley and North-West Rajputana.	
...	...	...	3	4	4	2	...	1·9	2·5	−24	75	·216	5·2	6	2·73	+4·27	0·98	1·77	−0·79	0·98	1·77	−0·79	0·22	Peshawar .	North Punjab.
			Not recorded.					P	P	P	P	P	0	5	P	P	1·21	P	P	1·21	P	P	0·30	Mardan.	
1	5	1	...	1	...	1	...	2·8	P	P	71	·221	3·3	1	1·30	−0·30	0·38	0·52	−0·14	0·38	0·52	−0·14	0·30	Khushab .	West Punjab.
...	8	2	2	2	1	2	2	3·5	P	P	72	·251	3·6	3	0·90	+2·10	0·99	0·24	+0·75	0·99	0·24	+0·75	0·55	Montgomery	
3	2	1	...	...	1	1	2	1·4	1·4	0	82	·246	2·7	2	1·45	+0·55	0·39	0·53	−0·14	0·39	0·53	−0·14	0·25	D. I. Khan.	
3	8	...	2	...	2	...	2	1·6	1·7	−6	74	·261	3·0	1	1·27	−0·27	0·15	0·48	−0·33	0·15	0·48	−0·33	0·15	Mooltan.	
3	1	6	4	1	2	2	3	3·6	2·6	+4	67	·218	4·5	0	1·36	−1·36	0	0·90	−0·90	0	0·90	−0·90	0	Sirsa .	South Punjab.
3	3	3	2	...	1	...	3	2·8	2·1	+33	67	·252	2·8	1	0·73	+0·27	0·15	0·25	−0·10	0·15	0·25	−0·10	0·10	Jacobabad .	Sind and Cutch.
10	...	...	2	3	3	...	9	9·9	7·2	+38	61	·298	1·3	0	0·90	−0·90	0	0·31	−0·31	0	0·31	−0·31	0	Hyderabad.	
1	9	13	3	1	2	1	1	6·1	10·0	−39	61	·357	2·1	0	1·18	−1·18	0	0·72	−0·72	0	0·72	−0·72	0	Kurrachee.	
1	1	1	2	8	4	5	1	6·1	6·0	+2	65	·390	0·4	0	P	P	0	0·11	−0·11	0	0·11	−0·11	0	Bhuj .	Kathiawar.
6	4	3	4	3	1	3	4	3·6	2·9	+24	46	·196	2·7	0	P	P	0·05	0·30	−0·25	0·05	0·30	−0·25	0·05	Bickaneer .	West Rajputana.
4	4	4	2	1	2	...	2	4·4	2·8	+57	59	·217	3·6	0	P	P	0	0·37	−0·37	0	0·37	−0·37	0	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·02	0·38	−0·36	...	...	...	...	VIII.—East Rajputana, Central India, and Gujarat.	
...	2	4	2	...	2	6	5	2·7	3·9	−31	61	·236	1·8	0	1·60	−1·60	0·08	0·69	−0·61	0·08	0·69	−0·61	0·08	Jeypore .	East Rajputana.
1	1	2	...	...	...	...	...	2·5	4·5	−44	64	·227	1·7	0	1·10	−1·10	0·04	0·47	−0·43	0·04	0·47	−0·43	0·04	Sambhar.	
3	3	...	1	2	1	...	1	2·4	1·9	+26	71	·246	1·5	0	1·45	−1·45	0·07	0·52	−0·45	0·07	0·52	−0·45	0·07	Ajmere.	
6	10	5	2	2	1	4	1	7·5	8·6	−13	39	·191	0·4	0	0·36	−0·36	0	0·17	−0·17	0	0·17	−0·17	0	Deesa.	
1	3	6	...	...	...	4	...	4·5	5·2	−13	53	·374	0·5	0	0·20	−0·20	0	0·04	−0·04	0	0·04	−0·04	0	Rajkot .	Kathiawar.
13	11	2	1	...	...	...	1	4·8	P	P	53	·342	0·5	0	P	P	0	P	P	0	P	P	0	Veraval.	
5	...	1	...	3	3	4	2	1·2	1·4	−14	70	·266	0·9	0	1·73	−1·73	0·02	0·65	−0·63	0·02	0·65	−0·63	0·02	Nowgong .	Central India.
3	2	1	2	...	...	4	5	1·9	2·5	−24	60	·287	0·7	0	0·36	−0·36	0	0·18	−0·18	0	0·18	−0·18	0	Indore.	
5	16	2	1	1	2	3	1	4·0	8·1	−51	50	·239	0·4	0	0·45	−0·45	0	0·30	−0·30	0	0·30	−0·30	0	Neemuch.	
1	4	4	...	...	2	3	11	P	5·2	P	57	·351	0·5	0	0·18	−0·18	0	0·05	−0·05	0	0·05	−0·05	0	Surat .	Gujarat.
1	19	6	...	...	...	1	2	4·6	P	P	46	·277	0·4	0	P	P	0	P	P	0	P	P	0	Ahmedabad.	
...	2	...	3	...	4	...	9	2·5	3·5	−29	61	·245	1·2	0	1·27	−1·27	0	0·53	−0·53	0	0·53	−0·53	0	Agra .	N.-W. P., West.
...	...	...	...	...	7	5	3	1·6	2·2	−27	49	·239	0·5	0	1·18	−1·18	0·04	0·59	−0·55	0·04	0·59	−0·55	0·04	Jhansi .	N.-W. P., Central.

* Mean of 28 days.

Tab

Abstract of Observations taken at 8 A.M. at 209 Statio

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
IX.—Deccan		...	...	+·008	...	...	...	...	...	...	...	84·0	+1·3	53·6	−1·8	68·8	−0·3	30·4	...	...	...	...	40
Bombay, Deccan	Belgaum	2,524	27·494	+·010	30·000	27·550	9th	27·452	27th	·098	66·0	83·4	+0·3	57·3	−0·1	70·4	+0·1	26·1	86·2	31st	52·4	13th	33
	Sholapur	1,590	28·455	+·009	30·041	28·524	9th	28·396	27th	·128	66·9	86·4	−0·9	57·9	+0·2	72·2	−0·4	28·5	89·2	31st	52·1	13th	37
	Poona	1,840	28·199	+·006	30·058	28·286	9th	28·137	28th	·149	60·7	86·8	+1·7	53·3	−1·7	70·1	0	33·5	89·5	3 days	49·0	7th	40
	Bijapur	1,946	28·088	?	30·029	28·149	9th	28·027	27th	·122	66·1	85·8	?	57·4	?	71·5*	?	28·4	94·2	17th	49·6	7th	44
Khandesh	Malegaon	1,430	28·606	?	30·058	28·688	9th	28·516	27th	·172	58·9	86·3	+1·2	51·4	−0·5	68·9	+0·4	34·9	89·9	28th	46·5	7th & 8th	42
	Ahmednagar	2,152	27·894	?	30·063	27·981	9th	27·824	27th	·157	61·6	84·2	?	48·6	?	66·4	?	35·6	87·4	24th	43·4	12th	44
Berar	Akola	930	29·116	+·003	30·049	29·207	9th	29·033	27th	·174	58·4	85·9	+1·5	50·5	−2·8	68·3	−0·7	35·4	90·5	28th	44·7	7th	43
	Amraoti	1,215	28·833	+·013	30·054	28·912	9th	28·740	28th	·172	63·5	85·4	+1·2	57·3	0	71·4	+0·6	28·1	88·7	16th, 17th & 18th	51·9	4th	36
Central Provinces, West.	Khandwa	1,044	29·011	+·012	30·073	29·100	9th	28·897	27th	·203	56·6	85·9	+2·5	49·7	−2·2	67·9	+0·2	36·2	90·2	27th	43·6	21st	46
	Hoshangabad	1,000	29·056?	?	30·078?	29·154?	24th	28·937?	27th	·217	54·4	81·2	+1·0	50·5	−1·9	65·9	−0·5	30·7	87·3	28th	45·8	3rd & 21st	41
	Nagpur	1,025	29·029	+·007	30·064	29·113	24th	28·912	28th	·201	59·1	84·5	+1·5	53·6	−1·9	69·1	−0·2	30·9	88·3	18th, 19th & 28th	48·2	4th	40
Central Provinces, Central.	Chanda	634	29·427	+·004	30·043	29·507	9th	29·326	28th	·181	58·5	85·7	+0·8	50·7	−3·9	68·2	−1·6	35·0	90·0	29th	44·1	4th & 5th	45
	Seoni	2,033	28·010	+·012	30·082	28·093	9th	27·893	28th	·200	57·0	80·6	+1·6	48·9*	−2·7*	65·0*	−0·6	31·7	85·2	15th & 17th.	44·0	9th	41
	Jubbulpore	1,327	28·705	?	30·079	28·804	24th	28·566	28th	·238	50·7	80·0	+2·8	44·0	−4·3	62·1	−0·8	36·0	86·9	28th	36·9	2nd	50
	Saugor	1,762	28·278	+·015	30·079	28·380	24th	28·130	28th	·250	57·8	80·1	+3·4	52·4	+1·1	66·3	+2·3	27·7	86·3	28th	45·1	20th	41
Central Provinces, East.	Raipur	970	29·089	+·009	30·061	29·188	24th	28·970	28th	·218	60·0	82·4	+1·4	54·0	−1·2	68·2	+0·1	28·4	86·8	17th & 18th	49·4	4th	37
	Sambalpur	463	29·606	+·019	30·049	29·687	24th	29·485	30th	·202	58·2	82·7	+0·7	49·2	−5·8	66·0	−2·6	33·5	88·0	31st	43·2	3rd	44
Central India	Sutna	1,040	29·011	−·003	30·083	29·120	24th	28·844	28th	·276	51·6	77·2	+2·6	45·1	−2·2	61·2	+0·2	32·1	84·0	15th	40·1	21st	43
Hyderabad, North.	Aurangabad	?	28·110	?	?	28·251	9th	28·120	28th	·131	67·0	86·4	?	52·7	?	69·5	?	33·7	89·9	2nd	47·6	1st	42
	Indur	?				Not recorded.					66·0	84·7	?	54·3	?	69·5	?	30·4	86·9	19th & 20th	48·2	7th	38
	Bidar	?	27·868	?	?	27·924	9th	27·808	27th	·116	68·3	81·9	?	60·2	?	71·1	?	21·7	85·4	28th	54·4	18th	31
Hyderabad, South.	Gulbarga	1,502	28·541	?	30·037	28·628	15th	28·470	27th	·158	65·9	85·6	?	58·2	?	71·9	?	27·4	88·9	31st	52·0	12th	36
	Raichur	1,378	28·657	?	30·017	28·709	9th	28·583	30th	·126	67·8	86·2	?	62·3	?	74·3	?	23·9	90·1	29th & 31st.	58·2	4th	31
	Hyderabad (Deccan), Secunderabad	1,690	28·354	+·001	30·053	28·423	9th	28·274	30th	·149	63·4	83·6	−0·4	57·1	−0·8	70·4	−0·6	26·5	86·9	29th	52·3	4th & 12th.	34
		1,787	28·252	?	30·054	28·313	9th	28·179	30th	·134	61·3	83·8	?	57·1	?	70·5	?	26·7	89·1	31st	52·6	4th	36
	Khamamet	373	29·697	?	30·031	29·756	5th	29·609	30th	·147	65·9	86·2	?	59·5	?	72·9	?	26·7	91·5	31st	53·2	4th & 11th.	38
X.—West Coast		...	...	0	...	...	...	...	...	...	...	86·7	+1·3	69·6	+0·7	78·2	+1·0	17·1	...	...	...	...	25
Konkan	Bombay	37	30·008	+·008	29·986	30·077	9th	29·958	22nd	·119	72·0	84·2	+1·9	69·8	+1·9	77·0	+1·9	14·4	88·5	3rd	66·0	19th	22
	Ratnagiri	110	29·916	+·011	29·967	29·970	9th	29·874	3rd	·096	74·2	88·7	+1·3	67·8	+1·7	78·3	+1·5	20·9	92·9	11th & 18th.	63·9	31st	29
	Mormugao	60	29·970	?	29·966	30·016	15th	29·930	1st	·086	71·7	86·0	?	69·0	?	77·5	?	17·0	89·0	2nd & 18th.	66·3	4 days	22
	Goa	199	29·817	−·005?	29·956	29·868	15th	29·775	3rd	·093	73·1	83·5	?	70·8	?	77·2	?	12·7	87·0	1st & 2nd	67·5	31st	19
	Karwar	44	29·987	+·010	29·964	30·040	9th	29·938	1st	·102	67·9	87·8	+1·3	65·0	−0·8	76·4	+0·3	22·8	91·8	18th	61·0	15th	30
Malabar	Cochin	11	29·992	−·004	29·930	30·049	11th	29·929	1st	·120	75·4	90·1	+1·5	72·2	+0·9	81·2	+1·2	17·9	95·8	2nd	67·3	19th	28
	Calicut	27	29·980	−·014	29·937	30·027	11th	29·923	1st	·104	74·0	87·4	−0·1	69·4	+0·2	78·4	+0·1	18·0	89·8	1st & 2nd.	64·5	25th	25
	Mangalore	23	29·990	−·008	29·944	30·032	11th	29·945	1st	·087	74·1	89·6	+1·8	69·2	0	79·4	+0·9	20·4	93·8	1st	65·5	20th & 22nd.	28
	Trivandrum	198	29·792	?	29·924	29·847	11th	29·711	1st	·136	75·2	83·2	?	73·0	?	78·1	?	10·2	85·0	31st	67·0	22nd	18
XI.—South India		...	...	+·004	...	...	...	...	...	...	...	83·5	−0·6	63·6	−0·5	73·5	−0·6	20·0	...	...	...	...	30
Madras, South.	Pamban	37	30·002	?	29·968	30·064	11th	29·951	1st	·103	76·8	81·3	?	74·6	?	78·0	?	6·7	84·3	31st	72·2	18th & 20th.	12
	Tinnevelly	168	29·881	?	29·981	29·942	9th	29·824	30th	·118	74·8	86·6	?	71·3	?	79·0	?	15·3	92·7	30th	67·9	3 days	24
	Madura	447	29·591	+·009	29·984	29·642	9th	29·547	30th	·095	74·3	85·9	−1·9	69·0	+0·5	77·5	−0·7	16·9	91·9	30th	65·6	23rd	26

* Mean of 24 days.

—continued.

India, Burma, etc., in January 1896—continued.

WIND DIRECTION. Number of Winds from								Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.									Heaviest rainfall during month.	Station.	Meteorological Provinces or District.
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 1896.	Normal rainfall for period, 1st January to 31st January.	Variation from normal of period.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0·32	−0·32	...	...	...	...	IX.—Deccan.	
...	1	12	8	1	...	...	...	10·4	10·9	− 5	54	·348	0·3	0	0·27	−0·27	0	0·06	− 0·06	0	0·06	− 0·06	0	Belgaum .	Bombay, Deccan.
1	2	10	9	2	..	...	2	7·6	7·1	+ 7	49	·325	0·8	0	0·36	−0·36	0	0·11	− 0·11	0	0·11	− 0·11	0	Sholapur.	
...	2	1	1	2	3	2	1	4·0	5·7	−30	61	·329	0·2	0	0·36	−0·36	0	0·06	− 0·06	0	0·06	− 0·06	0	Poona.	
...	...	13	12	...	...	2	2	3·4	P	P	75	·490	0·6	0	0·20	−0·20	0·01	P	P	0·01	P	P	0·01	Bijapur.	
...	2	...	...	...	2	13	13	6·9	3·9	+77	56	·284	1·4	0	0·27	−0·27	0	0·16	− 0·16	0	0·16	− 0·16	0	Malegaon .	Khandesh.
3	...	...	1	...	...	...	...	3·0	P	P	54	·299	0·1	0	P	P	0·07	P	P	0·07	P	P	0·07	Ahmednagar.	
1	3	12	5	...	2	3	1	4·0	3·4	+18	47	·234	0·4	0	0·45	−0·45	0	0·43	− 0·43	0	0·43	− 0·43	0	Akola .	Berar.
3	4	11	3	1	3	3	3	5·3	3·2	+66	43	·256	0·5	0	0·55	−0·55	0	0·39	− 0·39	0	0·39	− 0·39	0	Amraoti.	
1	5	5	1	...	...	2	1	3·5	2·8	+25	46	·221	0·4	0	0·45	−0·45	0	0·31	− 0·31	0	0·31	− 0·31	0	Khandwa .	Central Provinces, West.
...	11	10	...	...	...	2	...	2·9	2·5	+16	53	·230	0·7	0	0·82	−0·82	0	0·25	− 0·25	0	0·25	− 0·25	0	Hoshangabad.	
1	1	...	...	...	...	...	...	2·7	3·1	−13	61	·310	0·5	0	0·64	−0·64	0	0·55	− 0·55	0	0·55	− 0·55	0	Nagpur.	
2	7	3	2	2	...	...	2	1·9	2·1	−10	75	·376	0·3	0	P	P	0	0·37	− 0·37	0	0·37	− 0·37	0	Chanda .	Central Provinces, Central.
			Not	recorded.				P	2·7	P	57	·268	0·4	0	1·18	−1·18	0	0·63	− 0·63	0	0·63	− 0·63	0	Seoni.	
...	12	16	...	...	1	1	1	1·3	2·2	−41	66	·247	0·6	0	1·73	−1·73	0·01	0·76	− 0·75	0·01	0·76	− 0·75	0·01	Jubbulpore.	
1	...	2	3	2	2	...	...	2·0	2·8	−29	47	·221	0·6	0	1·36	−1·36	0	0·70	− 0·70	0	0·70	− 0·70	0	Saugor.	
4	4	1	...	1	2	4	3	2·8	2·6	+ 8	48	·253	0·3	0	0·45	−0·45	0	0·20	− 0·20	0	0·20	− 0·20	0	Raipur .	Central Provinces, East.
12	10	3	4	...	...	...	2	3·0	1·6	+88	70	·344	0·2	0	P	P	0	0·30	− 0·30	0	0·30	− 0·30	0	Sambalpur.	
15	...	1	...	2	...	3	6	3·1	4·0	−23	56	·214	0·1	0	1·73	−1·73	0	1·05	− 1·05	0	1·05	− 1·05	0	Sutna .	Central India.
...	12	3	1	...	...	...	2	2·8	P	P	44	·294	0·2	0	P	P	0	0·19	− 0·19	0	0·19	− 0·19	0	Aurangabad	Hyderabad, North.
3	1	3	5	4	...	1	2	3·4	P	P	70	·445	0·4	0	P	P	0	0·05	− 0·05	0	0·05	− 0·05	0	Indur.	
3	2	7	3	3	8	...	...	5·8	P	P	75	·516	0	0	P	P	0	0	0	0	0	0	0	Bidar.	
1	9	5	1	1	...	...	...	6·8	P	P	57	·363	0·9	0	P	P	0	0·08	− 0·08	0	0·08	− 0·08	0	Gulbarga.	Hyderabad, South.
1	3	7	8	8	2	1	1	5·9	P	P	61	·422	0·7	0	P	P	0	P	P	0	P	P	0	Raichur.	
1	...	1	...	1	...	2	...	3·1	P	P	75	·442	0·7	0	P	P	0	0·09	− 0·09	0	0·09	− 0·09	0	Hyderabad (Deccan).	
2	1	5	...	...	...	...	1	3·8	3·8	0	73	·392	0·8	0	P	P	0	P	P	0	P	P	0	Secunderabad.	
...	...	...	5	...	...	...	...	3·1	P	P	81	·525	0·5	0	P	P	0	P	P	0	P	P	0	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·13	0·27	−0·12	...	...	...	...	X.—West Coast.	
1	15	14	1	...	...	...	..	8·4	10·1	−17	75	·570	0·3	0	0·27	−0·27	0	0·13	− 0·13	0	0·13	− 0·13	0	Bombay.	Konkan.
3	11	10	4	...	...	...	...	4·7	9·8	−52	60	·497	0·8	0	0·45	−0·45	0	0·22	− 0·22	0	0·22	− 0·22	0	Ratnagiri.	
1	3	5	21	1	...	...	...	7·8	P	P	77	·603	0·1	0	P	P	0	P	P	0	P	P	0	Mormugao.	
...	3	28	...	...	...	...	...	5·6	P	P	67	·542	0·3	0	P	P	0	0·25	− 0·25	0	0·25	− 0·25	0	Goa.	
...	9	20	2	...	...	...	...	4·2	P	P	74	·512	0·5	0	0·27	−0·27	0	0·12	− 0·12	0	0·12	− 0·12	0	Karwar.	
8	15	1	...	...	...	...	...	4·5	P	P	71	·645	2·2	0	0·82	−0·82	0	0·59	− 0·59	0	0·59	− 0·59	0	Cochin .	Malabar.
1	12	14	2	1	...	...	...	9·4	P	P	77	·647	1·7	2	0·38	+1·62	1·04	0·08	+ 0·96	1·04	0·08	+ 0·96	0·55	Calicut.	
...	1	21	9	...	...	...	...	3·0	3·9	−23	65	·553	0·9	0	0·10	−0·10	0	0·09	− 0·09	0	0·09	− 0·09	0	Mangalore.	
1	11	2	1	1	...	1	...	2·3	P	P	76	·675	2·3	1	P		0·13	0·64	− 0·51	0·13	0·64	−0·51	0·13	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·28	0·38	−0·05	...	...	...	...	XI.—South India.	
19	12	...	...	...	...	...	...	13·4	P	P	89	·817	3·2	2	1·50	+0·50	1·47	1·80	− 0·33	1·47	1·80	− 0·33	1·35	Pamban .	Madras, South.
11	4	...	...	...	...	...	16	5·2	P	P	76	·667	4·9	0	2·20	−2·20	0·09	P	P	0·09	P	P	0·05	Tinnevelly.	
15	9	1	...	...	...	...	5	4·9	5·4	− 9	72	·617	1·6	0	1·00	−1·00	0	0·33	− 0·33	0	0·33	− 0·33	0	Madura.	

Tab

Abstract of Observations taken at 8 A.M. at 209 Statio

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
Madras, South Central.	Salem	940	29·132	+·005	30·037	29·180	24th	29·073	30th	·107	71·4	86·9	−1·4	63·3	0	75·1	−0·7	23·6	92·4	30th	57·9	18th & 23rd.	34
	Coimbatore	1,348	28·692	+·010	30·016	28·753	9th	28·639	30th	·114	70·0	86·0	−0·6	63·4	−0·6	74·7	−0·6	22·6	93·4	30th	58·0	14th & 21st.	35
Coorg	Mercara	3,781	26·296	−·014	?	26·343	9th & 11th.	26·263	27th	·080	61·3	76·9	+0·5	57·1	+1·2	67·0	+0·9	19·8	80·5	11th & 31st,	53·2	5th	27
Mysore	Chitaldroog	2,405	27·629†	P	29·995	27·666	24th	27·584	27th	·082	69·0	82·4	?	60·9	P	71·7	?	21·5	87·1	31st	55·9	4th & 17th.	31
	Bangalore	3,021	27·029	−·010	30·017	27·099	5th	26·981	30th	·118	62·5	79·5	+0·2	56·8	+0·2	68·2	+0·2	22·7	87·8	31st	51·4	19th	36
	Hassan	3,091	26·971	P	30·028	27·014	9th	26·925	27th	·089	64·6	81·9	P	53·9	P	67·4	P	28·0	84·9	31st	48·5	21st	36
	Mysore	2,518	27·529	P	30·015	27·575	9th	27·479	30th	·096	66·4	83·3	P	58·8	P	71·1	P	24·5	88·9	31st	53·9	19th & 22nd.	35
Madras, East Coast, South.	Negapatam	31	30·011	+·006	29·972	30·065	9th & 11th.	29·962	30th	·103	74·8	81·3	−0·5	70·6	0	76·0	−0·3	10·7	87·2	31st	65·7	13th	21
	Cuddalore	12	30·054	P	29·996	30·113	9th	29·991	30th	·122	72·7	82·6	P	67·8	P	75·2	?	14·8	86·3	30th	64·3	3 days	22
	Trichinopoly	255	29·791	−·001	29·985	29·835	9th	29·742	27th	·093	73·2	86·4	−0·8	67·2	+0·2	76·8	−0·3	19·2	92·5	30th	61·4	13th	31
	Madras	22	30·052	+·003	30·005	30·108	9th	29·980	30th	·128	73·1	84·0	−0·6	66·6	−0·9	75·3	−0·8	17·4	87·0	31st	61·5	12th	25
Madras, East Coast, Central.	Nellore	71	29·997	P	30·003	30·059	9th	29·903	30th	·156	70·8	84·2	?	66·0	P	75·1	P	18·2	91·2	31st	62·1	20th & 21st,	29
	Masulipatam	15	30·069	+·017	30·019	30·130	5th	29·983	30th	·147	69·4	82·5	−0·8	64·5	−1·3	73·5	−1·1	18·0	87·0	31st	60·2	13th	26
Madras, Central	Cuddapah	433	29·623	P	30·010	29·675	24th	29·527	30th	·148	70·3	86·0	−1·6	64·2	0	75·1	−0·8	21·8	92·0	3 days	59·3	3 days	32
	Kurnool	923	29·120	P	30·024	29·176	5th	29·042	30th	·134	65·1	87·5	−0·8	57·8	−1·0	72·7	−0·9	29·7	92·7	31st	50·7	17th	42
	Bellary	1,475	28·564	+·008	30·027	28·612	9th	28·505	30th	·107	67·7	86·1	−1·4	60·3	−0·2	73·2	−0·8	25·8	90·7	31st	55·4	6th	35
Madras, East Coast, North.	Rajahmundry	112	29·966	?	30·020	30·037	24th	29·874	30th	·163	68·3	87·2	+0·5	63·6	−0·7	75·4	−0·1	23·6	92·0	31st	58·9	17th	33
	Cocanada	26	30·047	+·008	30·008	30·112	24th	29·952	30th	·160	68·5	80·1	+0·8	64·2	−1·0	72·2	−0·1	15·9	88·6	31st	59·0	13th	29
	Vizagapatam	31	30·047	+·005	30·017	30·115	24th	29·934	30th	·181	67·6	82·1	−0·5	61·1	−4·0	71·6	−2·3	21·0	86·3	31st,	53·9	12th	32
	Gopalpur	21	30·060	P	30·022	30·143	24th	29·928	30th	·215	62·0	80·2	P	58·7	P	69·5	P	21·5	83·7	17th	53·1	4th	30
12 · Hill Stations		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	Kachh	P	23·925	P	P	24·040	21st	23·660	31st	·380	37·6	51·2	P	28·6	P	39·9	P	22·6	60·0	3 days	21·0	5th & 8th.	39
	Pishin	...	...	...	Not recorded.						P	P	P	28·0	P	P	P	P	P		16·9	30th	P
	Quetta	5,502	24·705	+·024	P	24·825	21st	24·436	31st	·389	36·9	58·0	+6·5	32·1	+2·8	45·1	+4·7	25·9	69·7	26th	26·3	4th	43
	Kalat	?			Not recorded.																		
	Chaman	4,311	25·754	P	P	25·895	21st	25·542	30th	·353	46·2	61·8	P	40·8	?	51·3	?	21·0	74·1	25th	31·1	18th	43
Punjab	Leh	11,503	19·718	P	P	19·948	1st	19·410	29th	·538	12·3	32·6	P	9·1†	P	20·6†	P	23·5	41·1	28th	3·5	6th	37
	Srinagar	5,204	25·027	P	?	25·252	6th	24·740	29th	·512	30·4	41·1	?	27·2	P	34·2	P	13·9	52·0	27th	20·1	9th	31
	Astor (Kashmir).	P	22·322	P	P	22·585	1st	21·991	29th	·594	23·1	38·0	P	19·9	?	29·0	P	18·1	46·4	5th	11·0	3 days	35
	Minimarg	P	21·406	P	P	21·557	1st	21·058	29th	·499	18·5	32·5	?	9·9	P	21·2	P	22·6	44·3	29th	3·0	30th	41
	Gilgit	P	24·852	P	?	25·110	1st & 24th,	24·490	28th	·620	36·5	48·7	P	33·3	P	41·0	P	15·4	55·8	11th	26·3	3rd	29
	Cherat	P	25·791	P	P	26·033	5th	25·590	28th	·443	45·9	55·1	P	P	P	P	P	P	65·2	27th	P	...	P
	Samana	P	23·824	P	P	24·030	5th	23·530	31st	·500	P	53·9	P	31·0	P	42·5	P	22·9	60·0	1st & 2nd	27·0	2nd & 31st.	33
	Murree	6,344	23·871	+·018	P	23·996	5th	23·674	28th	·322	41·5	51·4	+3·5	38·5	+3·1	45·0	+3·3	12·9	63·6	2nd	29·0	31st	34
	Poo	P			Not recorded.						?	45·3	P	26·4	P	35·9	P	?	?	...	?	...	P
	Simla	7,224	23·128	+·006	P	23·241	5th	22·929	28th	·312	41·3	48·8	+2·4	37·9	+1·4	43·4	+1·9	10·9	54·3	27th & 28th,	27·1	19th	27
N.-W. Provinces	Chakrata	6,977	23·346	+·018	P	23·459	5th	23·159	28th	·300	40·4	52·3	+1·7	37·6	+1·6	45·0	+1·7	14·7	61·3	27th	26·1	30th	35
	Mussooree	6,705	23·586	P	P	23·692	5th	23·412	28th	·280	42·3	50·3	P	40·7	P	45·5	P	9·6	61·2	16th	32·0	29th & 30th.	23
	Ranikhet	6,069	24·152	+·017	P	24·264	5th	24·011	30th	·253	43·7	55·1	+0·9	40·7	+1·0	48·0	+1·0	14·4	61·7	15th	30·5	30th	31
Bengal	Yatung	10,180?			Not recorded.						P	44·8	P	22·7	P	33·8	P	22·1	51·9	9th	13·4	31st	38
	Gnatong	P	19·168	P	P	19·292	8th	18·964	30th	·328	26·9	35·8	P	18·1	P	27·0	P	17·7	46·2	28th	8·1	23rd	38
	Darjeeling	7,421	22·990	+·012	P	23·110	5th	22·798	30th	·312	39·2	48·2	+3·2	35·1	+0·5	41·6	+1·9	13·1	55·2	9th	29·7	31st	25
	Gantok	P	24·505	P	P	24·624	1st	24·277	30th	·347	45·7	60·5	P	31·4	P	46·0	P	29·1	65·3	6th	24·0	31st	41

† Mean of 27 days. (a) Uncorrected.

-continued.

India, Burma, etc., in January 1896—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 to 31st January 1895.	Normal rainfall for period, from 1st to 31st January.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
4	18	...	...	...	2	...	1	3·4	5·0	−32	73	·570	1·5	0	0·36	−0·36	0·01	0·31	− 0·30	0·01	0·31	− 0·30	0·01	Salem .	Madras, South Central.
...	...	31	...	...	...	...	...	2·1	3·1	−32	88	·648	4·4	1	0·64	+0·36	0·20	0·19	+ 0·01	0·20	0·19	+ 0·01	0·20	Coimbatore.	
...	15	11	...	...	...	...	...	8·7	4·3	+93	73	·401	1·9	0	0·30	−0·30	0	0·04	− 0·04	0	0·04	− 0·04	0	Mercara .	Coorg.
1	1	14	13	...	...	1	1	9·3	P	P	57	·411	1·1	0	P	P	0·01	P	P	0·01	?	?	0·01	Chitaldroog.	Mysore.
...	8	19	2	1	1	...	...	7·7	3·8	+103	79	·453	2·4	0	0·50	− 0·50	0·03	0·19	− 0·16	0·03	0·19	− 0·16	0·03	Bangalore.	
...	7	12	7	...	...	1	...	3·0	P	P	71	·438	1·8	0	P	P	0	P	P	0	P	P	0	Hassan.	
...	15	9	2	...	...	...	...	8·4	P	P	72	·471	3·0	0	P	P	0	?	P	0	P	P	0	Mysore.	
5	7	...	..	...	...	...	18	14·2	5·4	+163	83	·720	5·4	0	2·82	−2·82	0·14	1·46	− 1·32	0·14	1·46	−1·32	0·08	Negapatam	Madras, East Coast, South.
13	4	...	...	...	...	1	13	1·8*	P	P	87	·707	2·7	1	1·40	−0·40	0·82	?	P	0·82	P	?	0·80	Cuddalore.	
10	3	...	...	...	...	1	6	4·3	4·7	− 9	75	·614	3·2	0	0·91	−0·91	0	0·26	− 0·26	0	0·26	− 0·26	0	Trichinopoly.	
18	4	...	...	...	1	...	...	5·5	6·1	−10	84	·694	2·9	1	1·36	−0·36	0·13	0·89	− 0·76	0·13	0·89	− 0·76	0·13	Madras.	
...	1	...	1	1	...	5	14	3·9	P	P	88	·661	3·8	0	0·60	−0·60	0·05	P	P	0·05	P	P	0·05	Nellore .	Madras, East Coast, Central.
22	5	1	...	...	...	...	...	4·1	5·2	−21	85	·608	2·1	0	0·27	−0·27	0·04	0·12	− 0·08	0·04	0·12	− 0·08	0·02	Masulipatam.	
1	6	6	2	1	1	1	3	P	?	?	79	·584	1·6	1	0·20	+0·80	3·34	0·02	+ 3·32	3·34	0·02	+ 3·32	3·34	Cuddapah .	Madras, Central.
...	...	2	...	...	...	...	...	P	P	?	69	·432	0·5	0	0·60	−0·60	0	0·08	− 0·08	0	0·08	− 0·08	0	Kurnool.	
...	...	...	9	9	...	...	3	2·7	3·3	−18	56	·382	2·1	0	0·18	−0·18	0	0·13	− 0·13	0	0·13	− 0·13	0	Bellary.	
27	...	...	...	...	...	...	...	P	P	P	70	·487	2·1	0	0·30	−0·30	0·02	0·08	− 0·06	0·02	0·08	− 0·06	0·02	Rajahmundry	Madras, East Coast, North.
17	3	...	...	...	...	...	11	7·2	P	P	74	·517	1·0	1	0·50	+0·50	0·16	0·14	+ 0·02	·16	0·14	+ 0·02	0·16	Cocanada.	
...	...	...	...	...	1	28	2	1·8	1·8	0	81	·552	0·6	0	0·64	−0·64	0	0·19	− 0·19	0	0·19	− 0·19	0	Vizagapatam.	
13	...	...	...	...	...	...	13	7·4	6·5	+15	79	·443	1·0	0	0·38	−0·38	0	0·18	− 0·18	0	0·18	− 0·18	0	Gopalpur.	
...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**XII.—Hill Stations.**	
1	1	5	3	1	1	7	1	5·5	P	P	65	·149	3·0	4	?	?	1·72	P	P	1·72	P	P	0·62	Kachh.	Baluchistan.
					Not	record	ed.							4	P	P	1·79	P	P	1·79	P	P	0·47	Pishin.	
...	1	1	2	2	1	3	1	3·0	3·8	−21	77	·168	4·0	5	4·36	+0·64	1·68	2·11	− 0·43	1·68	2·11	− 0·43	0·55	Quetta.	
					Not	record	ed.																	Kalat.	
2	...	11	13	5	...	...	...	10·0	?	P	56	·175	5·0	3	?	P	1·25	P	P	1·25	P	P	0·37	Chaman.	
...	...	...	...	13	15	3	...	1·7	P	P	50	·038	5·3	0	?	P	0·07	P	P	0·07	P	P	0·05	Leh .	Punjab.
3	1	4	3	3	2	1	2	3·9	P	P	88	·150	7·7	5	?	P	1·09	P	P	1·09	P	P	0·35	Srinagar.	
...	1	1	...	10	14	2	1	3·3	P	?	71	·094	5·9	3	P	?	1·20	?	P	1·20	P	P	0·67	Astor (Kashmir).	
...	2	23	6	...	...	...	...	7·8	P	P	85	·084	0·4	2	P	P	0·52	P	P	0·52	P	P	0·42	Minimarg.	
Not	record	ed.		...	...	...	...	P	P	P	72	·156	6·5	0	P	P	0·16	P	P	0·16	P	P	0·08	Gilgit.	
11	...	1	...	1	...	...	12	14·4	P	P	48	·139	5·4	5	P	?	2·04	?	?	2·04	P	?	0·65	Cherat.	
...	2	4	6	10	...	1	...	P	P	?	P	P	4·2	7	?	P	2·43	?	P	2·43	P	P	1·00	Samana.	
3	2	2	10	...	...	...	5	9·7	8·1	+20	46	·111	6·1	6	3·18	+2·82	4·37	3·52	+0·85	4·37	3·52	+ 0·85	1·54	Murree.	
					Not	record	ed.	P	P	P	P	P	3·4	3	?	P	1·75	P	P	1·75	P	P	1·08	Poo.	
5	6	2	6	7	1	...	...	4·3	2·0	+115	42	·103	4·6	3	4·27	−1·27	1·33	2·35	− 1·02	1·33	2·35	− 1·02	0·61	Simla.	
16	2	...	...	...	...	...	2	8·0	4·8	+67	45	·106	3·6	0	P	P	0	3·53	− 3·53	0	3·53	− 3·53	0	Chakrata .	N.-W. Provinces.
3	1	5	2	3	1	3	13	P	P	P	49	·129	2·8	3	3·30	−0·30	1·66	P	P	1·66	P	P	0·97	Mussooree.	
1	3	...	...	2	1	1	...	1·3	1·4	−7	56	·160	1·9	3	3·71	−0·71	1·15	2·94	− 1·79	1·15	2·94	− 1·79	0·58	Ranikhet.	
					Not	record	ed.	P	P	P	P	P	P	0	P	P	0	P	P	0	P	P	0	Yatung .	Bengal.
...	4	1	12	1	...	5	2	7·0	P	P	60	·086	1·4	5	?	?	0·99	P	?	0·99	P	P	0·30	Gnatong.	
1	1	12	1	...	2	1	...	4·4	2·6	+69	71	·171	1·7	0	1·71	−1·71	0·06	0·72	− 0·66	0·06	0·72	− 0·66	0·03	Darjeeling.	
3	3	9	9	2	2	1	2	1·9	P	P	68	·206	?	2	P	P	0·57	P	P	0·57	P	P	0·34	Gantok.	

* Mean of 29 days.

Tab

Abstract of Observations taken at 8 A.M. at 209 Statio

Meteorological Province or District.	Station.	Elevation of barcistern 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	26·143	+·005	?	26·237	9th	25·979	28th	·258	58·7	68·3	+1·3	53·0	+1·9	60·7	+1·6	15·3	74·6	27th	47·0	28th	27
	Pachmarhi	3,528	26·564	+·004	?	26·639	9th	26·460	28th	·179	55·8	72·2	+1·3	45·3	−2·2	58·8	−0·5	26·9	77·3	28th	38·3	2nd & 3rd.	39
South India	Wellington	6,200	24·303	−·005	?	24·370	9th	24·271	27th	·099	53·4	67·6	+1·1	44·1	−1·4	55·9	−0·2	23·5	71·2	21st & 22nd	36·2	22nd & 24th.	35
XIII.—Extra India.																							
Ceylon	Trincomalee	75	29·949	?	29·953	29·992	24th	29·903	2nd	·089	79·5	82·5	?	74·6	?	78·6	?	7·9	84·5	31st	70·5	18th	14·
	Colombo	40	29·949	−·003	29·915	29·999	11th	29·905	1st	·094	80·9	87·7	?	72·7	?	80·2	?	15·0	90·5	26th	69·5	13th	21·
	Galle	48	29·928	?	29·902	29·990	9th	29·880	3rd	·110	78·8	82·2	?	74·3	?	78·3	?	7·9	87·0	13th	72·0	19th	15·
Persia	Meshed	3,104			Not recorded.						35·6	?	?	32·1	?	?	?	?	?	...	4·0	?	?
	Resht				Dit to.						43·2	52·1	?	39·4	?	45·8	?	12·7	74·3	20th	14·0	21st	60·
	Teheran	?	28·026	?	?	26·330	21st	25·800	29th	·530	37·0	49·9	?	32·9	?	41·4	?	17·0	59·5	21st	14·0	30th	45·
	Ispahan	?	24·414	?	?	24·660	21st	24·200	30th	·460	34·8	52·9	?	29·1	?	41·0	?	23·8	62·5	19th	14·8	31st	47·
			24·681	?	?	24·930	21st	24·470	30th	·460													
	Bushire	14	30·102	−·018	30·073	30·211	17th	29·841	23rd	·370	58·0	67·3	+2·1	54·7	+2·6	61·0	+2·4	12·6	79·4	22nd	42·3	31st	37·
	Jask	?	30·070	?	?	30·196	16th	29·906	21st	·290	67·9	76·4	?	64·5	?	70·5	?	11·9	82·2	23rd	56·5	15th	25·
Arabia	Muscat	?	30·082	?	?	30·179	15th & 16th	29·924	31st	·255	71·3	74·9	?	69·7	?	72·3	?	5·2	78·9	21st	65·7	27th	13·
	Baghdad	220?	29·689*	−·060?	29·895*	29·842	2nd	29·444	5th	·398	47·2*	57·8*	−5·4*	44·6*	+7·3*	51·2*	+1·0	13·2	65·8	1st	33·5	31st	32·
	Aden	94	29·962	−·022	29·989	30·040	16th	29·901	31st	·139	75·3	80·1	−1·5	73·3	+1·1	76·7	−0·2	6·8	82·8	12th & 13th.	70·4	4th	12·
	Perim	?	29·768	?	?	29·835	17th	29·687	30th	·148	76·9	83·2	?	74·0	?	78·6	?	9·2	84·5	5th & 30th	70·8	24th	13·
Afghanistan	Kabul	?			Not recorded.						27·8	47·7	?	21·8	?	34·8	?	25·9	68·2	2nd	9·0	20th	59·
Central Asia	Kashgar	?	25·697	?	?	25·920	23rd	25·410	25th	·510	20·1	39·3	?	17·7	?	28·2	?	21·6	47·0	17th	12·9	1st	34·
Arabian Sea Islands.	Amini Devi	15	30·008	?	29·951	30·104	11th	29·957	1st	·147	81·3	81·5‡	?	72·8	?	77·1	?	8·7	84·3	1st	67·9	22nd	16·
	Minicoy	10	29·989	?	29·924	30·054	11th	29·898	19th	·156	79·8	87·2	?	77·5†	?	82·2†	?	9·7	89·3	7th	74·0	19th	15·
Africa	Zanzibar	73	29·901	?	29·900	29·962	12th	29·808	1st	·154	83·0	87·1	?	80·5	?	83·8	?	6·6	89·6	25th	74·1	28th	15·

* Mean of 24 days.

† Mean of 15 days.
‡ Uncorrected.

-concluded.

India, Burma, etc., in January 1896—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.
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 Jan. to 31st Jan. 1896.	Normal rainfall for period, from 1st Jan. to 31st Jan. 1896.	Variation from normal of period.			
3	9	...	...	...	8	1	2	5·7	4·8	+19	41	·199	0·8	0	0·73	−0·73	0	0·42	− 0·42	0	0·42	− 0·42	0	Mount Abu	Central India.
1	...	1	...	1	2	1	1	4·6	3·1	+48	69	·308	0·8	0	1·55	−1·55	0	0·51	− 0·51	0	0·51	− 0·51	0	Pachmarhi.	
1	1	...	...	...	...	...	1	1·9	2·4	−21	72	·299	1·9	2	1·75	+0·25	0·90	1·04	− 0·14	0·90	1·04	− 0·14	0·53	Wellington.	South India.
																								XIII.—Extra India.	
6	13	...	1	...	1	...	5	1·3	?	?	80	·803	4·5	10	?	?	8·10	5·26	+2·84	8·10	5·26	+2·84	2·76	Trincomalee	Ceylon.
14	12	3	2	...	...	...	...	11·6	8·4	+3·8	70	·744	4·3	4	?	?	2·91	2·92	−0·01	2·91	2·92	−0·01	2·51	Colombo.	
...	5	...	...	...	...	...	1	2·4	?	?	90	·880	3·7	8	?	?	6·06	4·29	+1·77	6·06	4·29	+1·77	1·82	Galle.	
			Not	recor	ded.			?	?	?	?	?	6·2	2	?	?	0·37	?	?	0·37	?	?	0·18	Meshed.	Persia.
				Ditto.				?	?	?	86	·244	?	8	?	?	9·76	?	?	9·76	?	?	5·40	Resht.	
...	12	1	2	...	1	1	4	3·8	?	?	65	·151	4·7	6	?	?	1·80	?	?	1·80	?	?	0·45	Teheran.	
1	3	...	2	...	12	1	7	5·6	?	?	90	·188	3·8	1	?	?	0·34	?	?	0·34	?	?	0·34	Ispahan.	
5	7	5	5	1	...	...	5	11·3	?	?	77	·376	4·4	4	?	?	2·64	?	?	2·64	?	?	1·61	Bushire.	
11	6	3	1	...	...	3	6	13·8	?	?	80	·546	2·7	2	?	?	0·88	?	?	0·88	?	?	0·53	Jask.	
...	1	2	8	3	1	15	1	3·9	?	?	70	·540	1·0	1	?	?	2·47	?	?	2·47	?	?	2·47	Muscat	Arabia.
3	2	1	1	6	1	1	4	4·8‡	?	?	91*	·304*	1·8	7	?	?	4·76	?	?	4·76	?	?	1·12	Baghdad.	
1	8	15	3	1	...	...	...	11·0*	12·0	− 8	77	·666	6·2	3	?	?	0·59	0·28	+0·31	0·59	0·28	+0·31	0·36	Aden.	
1	1	24	3	1	...	...	...	21·2	?	?	80	·736	4·7	1	?	?	0·25	?	?	0·25	?	?	0·20	Perim.	
7	1	13	...	3	...	7	...	?	?	?	?	?	2·3	0	?	?	0	?	?	0	?	?	0	Kabul	Afghanistan.
...	...	...	...	...	..	...	...	0·6	?	?	?	?	4·5	0	?	?	0	?	?	0	?	?	0	Kashgar	Central Asia.
16	11	3	...	...	...	...	1	6·2	?	?	78	·838	2·3	1	?	?	0·14	?	?	0·14	?	?	0·14	Amini Devi	Arabian Sea Islands.
			Not	record	ed.			8·3†	?	?	79†	·808†	3·5	3	?	?	0·98	?	?	0·98	?	?	0·54	Minicoy.	
10	17	3	1	...	...	...	...	6·3*	?	?	79	·890	5·2	6	?	?	3·94	?	?	3·94	?	?	1·65	Zanzibar	Africa.

† Mean of 19 days. * Mean of 30 days.
‡ „ „ 22 „

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·949	29·844	·105	29·892	−·001	29·884	86·6	77·1	9·5	89·8	72·1	17·7	83·5	84·4	80·9	+1·5	73·4	77·3	77·1	75·9
	Rangoon	...	30·010	·874	·136	·941	−·011	·919	89·9	64·6	25·3	93·3	57·6	35·7	78·0	87·3	74·8	+1·0	61·5	67·7	70·0	66·4
	Diamond Island	...	·005	·892	·113	·945	−·007	·921	83·3	73·2	10·1	86·6	71·6	15·0	79·0	81·0	77·3	+1·5	68·0	70·5	71·3	69·9
	Cocos Island	111	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Akyab	...	·049	·936	·113	·987	−·011	·950	80·3	58·9	21·4	82·7	52·8	29·9	70·8	77·8	69·4	−0·8	56·5	64·7	69·1	63·4
Assam.	Silchar	...	·002	·863	·139	·933	0	·991	78·0	50·6	27·4	81·4	45·8	35·6	65·5	76·4	63·2	−0·1	49·8	60·3	63·0	57·7
	Sibsagar	...	29·788	·632	·156	·707	−·025	30·011	70·8	45·4	25·4	74·3	41·0	33·3	58·9	69·5	57·0	−0·8	45·5	56·8	60·6	54·3
	Dhubri	...	·992	·852	·140	·915	−·010	29·988	74·3	50·8	23·5	77·1	47·0	30·1	63·4	73·3	61·2	−1·0	50·1	58·6	62·7	57·1
Bengal and Orissa.	Chittagong	...	·997	·871	·126	·930	−·015	·968	77·8	54·1	23·7	81·6	49·3	32·3	68·5	74·9	65·7	−0·4	53·7	63·0	64·3	60·3
	Narayanganj	...	30·066	·937	·129	·995	−·019	·970	78·0	54·3	23·7	81·0	51·5	29·5	68·5	76·4	66·4	+0·4	52·5	62·4	63·6	59·5
	Calcutta (Alipore)	...	·083	·950	·133	30·005	−·011	·971	78·4	53·5	24·9	82·9	47·5	35·4	69·2	77·6	65·1	−0·1	52·1	60·1	61·2	57·8
	Saugor Island	...	·071	·946	·125	29·999	−·007	·969	77·8	57·6	20·2	82·0	51·3	30·7	70·6	75·0	66·6	−0·5	55·4	63·6	64·5	61·2
	Burdwan	...	·007	·870	·137	·927	−·009	·976	79·9	53·1	26·8	85·2	48·1	37·1	69·7	78·1	65·7	−0·3	51·1	58·0	60·9	56·7
	Berhampore	...	·036	·904	·132	·958	−·005	·975	78·5	51·0	27·5	83·7	47·1	36·6	68·7	78·0	64·2	−0·5	48·7	59·7	62·1	56·8
	False Point	...	·085	·964	·121	30·020	−·009	·984	78·8	55·3	23·5	84·4	47·7	36·7	73·0	75·5	65·9	−2·2	55·2	64·3	66·3	61·9
	Cuttack	...	·021	·877	·144	29·945	−·013	·969	83·9	57·1	26·8	89·5	51·6	37·9	69·7	82·0	69·4	−1·4	55·0	60·9	63·2	59·7
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	28·035	27·925	·110	27·972	−·008	·971	74·4	50·5	23·9	79·9	46·0	33·9	66·6	72·3	61·5	+0·7	43·7	52·9	54·7	50·4
	Patna	...	29·922	29·802	·120	29·853	−·013	·995	75·0	49·8	25·2	80·1	46·2	33·9	64·2	73·8	61·9	+1·4	47·4	56·3	59·8	54·5
	Darbhanga	...	·939	·805	·134	·863	−·013	·990	74·6	50·5	24·1	76·3	47·1	29·2	65·0	73·5	62·1	0	49·2	57·8	60·4	55·8
	Allahabad	...	·804	·677	·127	·728	−·003	30·001	77·4	45·5	31·9	84·7	41·4	43·3	66·6	76·2	60·4	−0·1	43·5	55·2	57·4	52·0
	Lucknow	...	·734	·613	·121	·665	−·006	·005	76·5	43·8	32·7	83·9	39·1	44·8	64·2	74·3	61·0	+0·1	38·8	55·2	58·2	50·7
Upper Sub-Himalayas.	Dehra Dun	...	27·808	27·710	·098	27·749	+·001	·019	68·9	44·5	24·4	76·7	38·1	38·6	58·1	64·7	55·1	+0·7	40·9	49·3	52·0	47·4
	Roorkee	...	29·174	29·066	·108	29·109	−·004	·002	72·8	41·6	31·2	80·8	35·8	45·0	59·0	70·6	56·2	+0·3	40·4	51·3	55·0	48·9
	Meerut	...	·329	·229	·100	·270	−·014	·007	73·8	45·1	28·7	79·3	39·3	40·0	59·3	70·7	58·2	+2·1	43·1	50·7	55·2	49·7
	Lahore	...	·375	·282	·093	·317	−·011	·025	69·4	44·6	24·8	75·3	36·4	38·9	56·5	68·1	55·6	+3·7	42·1	51·0	56·7	49·9
	Ludhiana	...	·262	·166	·096	·202	−·001	·023	69·5	44·5	25·0	75·7	37·3	38·4	58·4	68·1	55·7	+2·0	42·6	51·4	55·6	49·9
Indus Valley and N.W. Rajputana.	Peshawar	...	28·990	28·897	·093	28·932	−·011	·087	64·5	40·7	23·8	75·1	30·9	44·2	53·2	62·1	50·9	+1·3	38·1	47·1	50·9	45·4
	Mooltan	...	29·676	29·588	·088	29·620	−·007	·036	72·7	45·9	26·8	79·1	42·2	36·9	58·8	69·9	57·5	+3·5	43·1	51·3	57·1	50·5
	Jacobabad	...	·928	·799	·129	·852	−·017	·003	76·4	46·3	30·1	82·5	39·3	43·2	65·9	74·7	59·8	+3·1	42·5	54·8	59·2	52·2
	Kurrachee	...	30·096	·985	·111	30·032	−·018	29·993	81·9	57·7	24·2	87·7	52·7	35·0	73·5	78·2	68·6	?	51·9	61·4	65·0	59·4
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·648	28·538	·110	28·582	−·007	30·008	77·8	47·4	30·4	84·1	39·9	44·2	68·0	75·9	60·8	+2·1	42·6	53·8	57·3	51·2
	Ajmere	...	·468	·356	·112	·405	−·003	·023	77·6	44·4	33·2	82·9	36·9	46·0	63·7	76·4	60·2	+2·0	40·7	53·2	59·6	51·2
	Deesa	...	29·615	29·492	·123	29·542	+·003	29·968	87·3	52·1	35·2	91·9	49·4	42·5	76·1	85·4	69·7	+2·2	44·8	56·4	59·1	53·5
	Nowgong	...	·327	·206	·121	·257	−·010	·995	77·4	44·7	32·7	84·1	40·2	43·9	64·8	75·4	60·3	−0·1	41·8	54·3	58·7	51·6
	Agra	...	·540	·420	·120	·468	−·012	30·003	76·9	47·8	29·1	84·0	44·5	39·5	65·4	75·4	61·5	+1·4	44·2	54·1	58·0	52·1
Deccan.	Belgaum	...	27·501	27·385	·116	27·438	+·002	29·876	83·7	57·3	26·4	89·1	52·4	36·7	74·7	82·1	70·1	+0·2	53·2	59·5	60·4	57·7
	Sholapur	...	28·473	28·333	·140	28·400	+·013	·940	86·6	57·9	28·7	91·0	52·1	38·9	75·7	85·6	71·7	−0·1	50·7	61·8	64·0	58·8
	Poona	...	·208	·077	·131	·141	+·008	·924	86·9	53·3	33·6	91·2	49·0	42·2	75·4	85·2	69·9	+0·9	49·5	58·4	61·1	56·3
	Akola	...	29·135	·995	·140	29·057	+·001	·951	86·4	50·5	35·9	90·8	44·6	46·2	74·2	85·6	67·6	−0·3	44·9	58·2	62·7	55·3
	Buldana	2,132	27·922	27·806	·116	27·856	+·013	·936	82·0	58·4	23·6	85·6	53·8	31·8	75·5	80·8	69·2	+0·8	49·6	57·1	58·7	55·1

84 Stations in India, Burma, etc., for January 1896.

Vapour Tension.				Humidity.					Cloud.				Wind Direction. Number of Winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	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.		
																							%	%						
·853	·836	·822	+·028	83	74	71	76	0	4·3	4·1	4·2	+0·9	...	20	30	6	4	2	...	...	...	N 40° E	N 39° E	76	78	165	159	...	...	Port Blair	Burma Coast and Bay Islands.
·544	·507	·520	−·047	83	56	39	59	− 7	1·6	3·0	2·3	0	...	17	22	6	3	4	2	5	4	N 26° E	N 22° E	50	35	114	96	...	...	Rangoon	
·635	·639	·630	−·011	75	64	60	66	− 6	2·5	2·9	2·7	+0·3	...	6	23	5	...	...	...	·7	21	N 1° W	N 6° E	60	74	302*	147	...	...	Diamond Island	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	Cocos Island.	
·535	·605	·523	+·026	86	71	63	73	+ 2	1·1	0·8	1·0	−0·5	...	5	23	5	...	...	1	12	16	N 5° W	N 23° W	52	39	69	65	...	...	Akyab	
·457	·398	·402	−·024	94	73	45	71	− 3	2·1	2·0	2·1	−1·1	47	1	2	7	1	2	1	1	...	S 83° E	S 29° E	13	27	22*	47	...	...	Silchar	Assam.
·425	·412	·385	−·039	100	88	57	82	− 4	2·3	1·6	2·0	?	21	...	31	3	6	1	...	...	...	N 61° E	N 61° E	53	51	46*	43	...	...	Sibsagar	
·429	·431	·403	−·022	93	73	53	73	− 3	0·7	0·9	0·8	−1·1	5	3	21	18	1	3	3	6	2	N 61° E	N 74° E	45	20	111	93	...	...	Dhubri	
·507	·466	·461	−·006	97	72	53	74	+ 1	0·5	0·5	0·5	−0·9	1	9	20	5	2	2	2	8	13	N 8° E	N 24° W	43	48	54*	89	...	...	Chittagong	Bengal and Orissa.
·485	·418	·426	−·010	88	70	46	68	− 1	1·0	1·0	1·0	−0·6	1	3	13	5	5	1	6	15	13	N 40° W	N 53° W	26	32	52	51	...	...	Narayanganj	
·404	·325	·369	−·068	90	56	34	60	−11	0·4	0·3	0·4	−1·1	1	18	7	3	...	2	9	9	13	N 36° W	N 38° W	47	38	53	68	...	...	Calcutta (Alipore).	
·496	·471	·462	−·066	86	66	54	69	− 7	0·4	0·9	0·7	−1·0	...	17	19	1	2	10	7	2	13	N 22° W	N 1° E	29	19	184	151	...	...	Saugor Island	
·331	·307	·330	−·064	86	45	32	54	− 9	0·6	0·5	0·6	−1·1	4	22	4	2	...	1	9	5	15	N 31° W	N 32° W	53	46	35*	43	...	...	Burdwan	
·395	·349	·353	−·042	84	56	36	59	−11	0·8	0·8	0·8	−1·4	4	18	6	1	1	3	2	12	15	N 33° W	N 41° W	53	50	44*	43	...	...	Berhampore	
·492	·528	·487	−·056	99	60	58	72	− 7	0·8	1·0	0·9	−1·1	...	29	1	18	7	11	...	4	1	N 75° E	N 51° E	31	22	108*	147	...	...	False Point	
·420	·331	·387	−·085	87	58	30	58	− 7	0·2	0·7	0·5	−1·2	23	15	7	2	...	1	6	4	4	N 18° W	N 45° E	29	11	26	33	...	...	Cuttack	
·235	·212	·217	−·050	55	36	27	39	−12	0·6	1·3	1·0	−1·3	3	10	3	3	5	4	2	6	26	N 39° W	N 62° W	45	54	152	118	...	...	Hazaribagh	
·350	·327	·325	−·038	83	59	39	60	− 7	0·7	1·3	1·0	−1·5	12	...	1	4	...	6	6	25	8	S 88° W	N 83° W	48	45	59*	48	...	...	Patna	Gangetic Plain and Central Rajputana.
·385	·353	·358	−·040	91	62	43	65	− 6	0·2	0·2	0·2	−1·3	9	2	4	7	5	2	4	16	13	N 69° W	S 80° W	26	47	54	59	...	...	Darbhanga	
·288	·225	·257	−·083	85	44	25	51	−17	0·9	0·8	0·9	−1·1	11	4	7	5	2	1	1	16	15	N 44° W	N 34° W	37	20	45	50	...	...	Allahabad	
·320	·272	·255	−·046	60	54	33	49	−11	1·5	2·3	1·9	−1·0	7	7	3	1	6	3	5	16	14	N 70° W	N 57° W	39	41	30*	57	...	...	Lucknow	
·242	·233	·230	?	73	51	39	54	?	3·7	3·5	3·6	−0·5	33	2	1	1	5	6	8	2	...	S 10° W	S 75° W	21	17	11	43	...	...	Dehra Dun	
·278	·230	·249	−·035	90	56	31	59	−6	2·2	2·3	2·3	−1·1	15	3	3	5	6	...	8	1	21	N 45° W	N 72° W	24	16	55	52	...	...	Roorkee	Upper Sub-Himalayas.
·258	·232	·248	−·037	85	51	31	56	− 8	1·7	1·8	1·8	−1·4	23	...	...	2	4	...	1	16	10	N 80° W	N 49° W	31	45	38*	50	...	...	Meerut	
·303	·312	·285	+·020	81	66	47	64	+ 3	3·8	4·3	4·1	+0·8	14	6	3	7	5	3	1	14	9	N 49° W	N 25° W	18	21	41	45	...	...	Lahore	
·291	·279	·274	−·007	84	60	41	62	− 5	5·0	5·0	5·0	+0·9	14	1	10	1	7	1	...	5	23	N 24° W	N 56° W	32	25	62	30	...	...	Ludhiana	
·252	·236	·230	+·005	78	62	46	62	0	4·5	6·3	5·4	+0·7	22	5	6	4	5	5	6	4	5	0	S 19° E	0	6	55*	60	...	...	Peshawar	
·281	·300	·275	+·015	78	57	43	59	0	3·3	3·1	3·2	+0·4	16	...	31	...	5	...	3	...	5	N 45° E	N 9° W	47	24	35	37	...	...	Mooltan	Indus Valley and N.-W. Rajputana.
·285	·299	·270	+·058	71	46	36	51	+ 6	12·6	3·1	2·9	0	22	2	10	8	7	1	6	1	5	N 79° E	N 10° W	18	27	69*	49	...	...	Jacobabad	
·393	·450	·388	?	65	48	47	53	?	2·1	3·1	2·6	0	...	2	8	12	4	5	15	15	1	S 3° W	N 23° W	19	17	186*	237	...	...	Kurrachee	
·241	·241	·233	−·035	66	35	26	42	− 9	1·6	1·6	1·6	−1·6	2	2	5	6	6	4	12	15	10	S 76° W	N 15° E	27	21	66	91	...	...	Jeypore	
·278	·306	·265	+·002	72	47	34	51	0	1·1	1·6	1·4	−0·9	9	...	5	3	14	11	6	9	5	S 1° W	N 82° E	29	8	63	47	...	...	Ajmere	E. Rajputana, C. India and Gujarat.
·197	·155	·186	−·075	52	23	13	29	− 9	0·6	0·4	0·5	−1·8	...	9	17	11	5	5	3	9	3	N 47° E	N 3° W	29	39	186	207	...	...	Deesa	
·288	·277	·264	−·025	77	46	32	52	− 5	0·8	1·2	1·0	−1·9	10	14	...	4	...	2	3	19	10	N 56° W	N 24° W	48	22	15*	32	...	...	Nowgong	
·271	·252	·256	−·032	73	43	28	48	− 8	1·1	1·0	1·1	−1·3	...	1	5	...	14	...	10	...	22	N 58° W	N 64° W	31	35	73*	82	...	...	Agra	
·323	·259	·313	−·039	76	37	24	45	− 1	0·2	0·7	0·5	−1·1	...	1	8	23	18	2	4	3	1	S 74° E	S 71° E	58	50	246	261	...	...	Belgaum	
·381	·330	·332	−·010	59	42	27	43	0	0·4	1·1	0·8	−1·2	5	4	8	9	24	5	2	1	4	S 68° E	S 60° E	46	55	171*	171	...	...	Sholapur	Deccan.
·285	·240	·278	−·045	75	32	20	42	+ 1	0·3	0·5	0·4	−1·4	10	2	8	10	15	...	7	4	4	S 71° E	S 63° E	25	24	96	137	...	...	Poona	
·275	·268	·257	−·064	61	32	22	39	− 9	0·6	0·7	0·7	−0·6	2	4	12	18	3	1	4	11	7	N 40° E	N 54° E	24	30	95*	83	...	...	Akola	
·238	·223	·236	−·080	50	27	21	33	−11	0·6	0·3	0·5	−1·7	2	8	4	3	5	4	8	3	25	N 36° W	N 76° E	31	21	110*	134	Nil	Nil	Buldana	

* Corrected.

Tabl

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 84 Station

Meteorological Provinces	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.
Deccan—continued.	Khandwa	...	29·032	28·894	·138	28·955	+·020	29·968	86·0	49·8	36·2	90·2	43·6	46·6	72·4	85·1	67·0	+0·3	43·5	56·2	61·2	53·1
	Hoshangabad	...	·079	·940	·139	29·002	?	·983	81·3	50·5	30·8	87·3	45·6	41·7	67·3	80·3	65·0	−0·7	44·2	54·4	60·2	52·1
	Nagpur	...	·055	·915	·140	28·977	+·012	·972	84·8	53·6	31·2	89·0	48·1	40·9	72·0	83·2	68·1	−0·1	47·4	60·2	66·0	57·1
	Do. (Sanitary Commr.'s Office)	...	·076	·937	·139	29·007	P	·992	85·5	52·0	33·5	90·5	46·8	43·7	72·9	84·2	68·4	P	45·8	57·1	62·0	55·1
	Jubbulpore	...	28·729?	·602	·127	28·358?	?	·970?	80·2	44·1	36·1	86·7	36·9	49·8	65·0	78·5	61·0	−0·6	41·7	53·0	58·0	50·1
	Sangor	...	·300	·183	·117	·234	+·011	·972	80·3	52·4?	27·9?	86·5	45·2?	41·3?	70·9	79·2	65·4?	?	44·2	54·0	57·7	52·1
	Raipur	...	29·117	28·980	·137	·041	+·014	·968	82·5	54·0	28·5	86·9	49·5	37·4	70·6	80·9	67·2	+0·4	47·4	55·6	59·5	54·1
	Sutna	...	·033	·912	·121	·962	−·005	·991	77·3	45·1	32·2	84·0	40·1	43·9	68·0	76·1	60·1	0	40·6	52·9	55·5	49·1
	Hyderabad (Deccan).	...	28·369	·244	·125	·301	P	·947	83·9	57·0	26·9	89·2	52·1	37·1	75·1	80·9	69·7	P	54·6	63·6	64·2	60·8
West Coast.	Bombay	...	30·020	29·906	·114	29·954	+·002	·931	81·0	69·7	14·3	88·7	65·8	22·9	75·9	81·2	75·8	+2·7	64·0	68·6	71·6	68·1
	Ratnagiri	...	29·927	·812	·115	·861	+·007	·908	88·5	67·8	20·7	93·0	64·1	28·9	84·2	83·7	76·6	+1·5	61·9	68·3	72·2	67·5
	Karwar	...	·994	·870	·124	·923	+·005	·899	87·8	65·0	22·8	92·1	61·1	31·0	77·8	86·1	75·6	+0·3	61·8	68·1	71·4	67·1
	Cochin	...	·996	·886	·110	·932	+·007	·869	90·1	72·2	17·9	95·8	67·4	28·4	84·0	89·6	79·9	+1·3	68·4	72·3	74·4	71·7
South India.	Salem	...	·133	28·987	·146	·063	+·008	·944	87·2	63·3	23·9	93·3	57·8	35·5	78·7	84·5	73·9	−0·3	61·9	68·0	70·3	66·7
	Mysore	...	27·534	27·403	·131	27·469	P	·902	83·5	58·8	24·7	88·9	53·7	35·2	74·0	82·0	70·8	?	56·0	62·3	62·5	60·3
	Mercara	...	26·309	26·210	·099	26·263	−·008	?	77·2	57·1	20·1	81·0	53·4	27·6	67·7	74·9	66·6	+1·3	53·2	58·4	59·3	57·0
	Bangalore	...	27·041	·930	·111	·985	+·001	·911	79·9	56·8	23·1	87·7	51·4	36·3	70·7	78·1	67·9	+0·1	55·5	60·9	61·3	59·2
	Hassan	...	26·981	·865	·116	·922	P	·904	81·2	53·9	27·3	86·0	48·5	37·5	72·4	79·7	67·2	?	50·7	59·9	60·3	57·0
	Chitaldroog	...	27·642	27·521	·121	27·578	P	·909	82·3	60·9	21·9	88·1	55·7	32·4	74·4	80·9	71·4	P	53·0	61·5	61·1	58·5
	Trichinopoly	...	29·794	29·666	·128	29·733	−·005	·922	86·6	67·3	19·3	92·3	61·6	30·7	79·9	84·8	75·8	+0·3	64·4	69·4	70·4	68·1
	Madras	...	30·066	·954	·112	30·006	+·004	·959	84·2	66·4	17·8	87·6	61·7	25·9	79·7	80·8	74·8	−0·7	P	71·3	70·8	69·8
	Bellary	...	28·582	28·444	·138	28·509	+·020	·932	86·6	60·2	26·4	92·5	55·4	37·1	76·9	84·7	72·7	−0·5	56·1	60·0	62·2	59·4
	Vizagapatam	...	30·063	29·948	·115	29·996	+·003	·965	82·3	61·0	21·3	86·3	53·9	32·4	78·8	79·7	72·8	?	60·1	67·9	68·4	65·5
	Cocanada	...	·068	·942	·126	30·005	P	·968	80·5	64·1	16·4	88·4	59·0	29·4	77·0	79·0	72·0	P	61·4	68·1	68·8	66·1
Hill Station, Baluchistan.	Quetta	E...	24·718	24·638	·080	24·668	+·010	P	57·6	32·1	25·5	69·6	26·2	43·4	48·8	53·3	43·8	+3·6	29·5	40·6	42·7	37·6
Hill Stations, Punjab.	Leh	...	19·732	19·647	·089	19·688	+·062	P	33·0	9·1	23·9	41·1	3·5	37·6	19·9	29·1	19·9	+1·2	?	15·2	24·3	P
	Srinagar	...	25·047	24·971	·076	24·999	P	P	41·3	27·2	14·1	52·0	20·1	31·9	33·4	40·7	34·1	P	26·8	30·8	36·4	31·3
	Murree	...	23·908	23·864	·044	23·876	+·015	P	50·4	38·6	11·8	63·6	29·0	34·6	45·6	44·5	42·5	+3·1	31·0	36·8	37·6	35·1
	Chamba	3,005	27·053	26·964	·089	27·007	+·003	P	61·7	42·1	19·6	73·5	34·0	39·5	50·3	57·0	49·5	+1·0	38·6	43·7	47·8	43·4
	Kailang	10,087	20·837	20·782	·055	20·809	+·056	P	34·3	15·4	18·9	45·1	4·0	41·1	25·7	30·2	22·5	+0·3	14·1	20·9	24·6	19·9
	Simla (Ridge)	...	23·162	23·106	·056	23·124	+·014	P	48·4	37·5	10·9	54·3	27·1	27·2	44·8	44·6	41·5	+1·6	31·8	35·8	37·8	35·1
Hill Stations, N.W.P.	Chakrata	...	·381	·320	·061	·341	+·014	P	51·7	37·5	14·2	61·3	26·0	35·3	44·9	45·4	42·5	+0·7	31·6	35·2	36·9	34·6
	Ranikhet	...	24·183	24·113	·070	24·133	+·023	P	55·1	40·7	14·4	61·5	30·5	31·0	49·4	51·5	46·4	+0·2	36·0	42·1	43·7	40·6
Hill Station, Nepal.	Katmandu	4,388	25·696?	25·601?	·095	25·642?	P	P	65·6	33·6	32·2	70·1	30·2	39·9	50·1	60·1	48·2	P	32·5	45·3	49·9	42·6
Hill Station, Bengal.	Darjeeling	...	23·019	22·933	·086	22·970	+·013	P	47·9	35·0	12·9	55·2	29·7	25·5	44·8	45·5	40·9	+1·7	32·3	40·0	41·0	37·8
Hill Stations Central India.	Mount Abu	...	26·172	26·094	·078	26·121	+·001	P	68·2	53·0	15·2	74·6	47·0	27·6	64·2	65·9	60·0	+1·8	44·3	49·8	50·8	48·3
	Pachmarhi	...	·592	·504	·088	·540	+·010	P	72·2	45·3	26·9	77·3	38·2	39·1	66·8	70·5	56·6	−0·4	41·9	56·6	58·3	52·3
	Chikalda	3,642	·490	·389	·101	·432	+·017	P	74·1	56·1	18·0	78·8	50·8	28·0	67·3	72·5	63·0	+0·7	47·4	52·6	54·8	51·6

—continued.

India, Burma, etc., for January 1896—continued.

Vapour tension.				Humidity.					Cloud.				WIND DIRECTION. Number of Winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	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.		
08	·255	·244	·236	−·093	57	32	20	36	−14	0·5	0·4	0·5	−1·0	4	5	18	6	6	2	4	1	16	N 21° E	N 25° E	55	23	84	69	...	...	Khandwa .	Deccan—*continued.*
15	·271	·275	·254	−·085	58	40	26	41	−13	0·5	0·6	0·6	−1·2	32	...	14	8	...	...	5	1	2	N 56° E	N 59° E	23	39	69	58	...	...	Hoshangabad .	
54	·379	·426	·353	+·002	61	48	37	49	− 2	0·5	1·0	0·8	−1·4	36	3	6	5	2	4	2	2	2	N 74° E	N 72° E	10	30	64	73	...	...	Nagpur . .	
33	·272	·281	·262	P	60	33	24	39	P	0·3	0·7	0·5	P	19	5	3	...	...	6	1	5	23	N 50° W	P	42	P	17*	P	...	...	Do. (Sanitary Commr.'s Office)	
39	·257	·231	·242	−·087	82	41	23	49	−11	0·7	0·5	0·6	−1·5	...	4	5	8	10	5	6	11	13	N 86° W	N 8° E	10	17	31	50	...	...	Jubbulpore .	
92	·211	·214	·206	−·067	49	28	21	33	−15	0·6	0·9	0·8	−0·7	...	6	5	6	24	13	4	3	1	S 42° E	N 13° E	48	24	46	66	...	...	Saugor . .	
15	·248	·228	·240	−·113	58	32	22	37	−17	0·4	0·6	0·5	−1·0	6	18	14	1	...	...	5	10	8	N 15° W	N 5° E	50	21	67*	67	...	...	Raipur . .	
99	·219	·187	·202	−·065	66	32	20	39	−12	0·5	0·4	0·5	−1·6	2	28	...	4	...	2	...	8	18	N 23° W	N 16° W	68	27	79*	100	...	...	Sutna. . .	
01	·448	·394	·414	P	86	52	38	59	P	0·4	1·4	0·9	P	16	2	3	15	16	5	1	2	2	S 65° E	P	43	P	76*	P	...	...	Hyderabad (Deccan),	
24	·603	·647	·591	+·012	72	67	61	67	− 3	0·2	0·2	0·2	−1·3	...	1	12	16	3	...	...	16	14	N 89° E	N 6° E	27	63	203	242	...	...	Bombay .	West Coast.
80	·483	·639	·534	−·021	70	41	55	56	− 4	1·2	0·5	0·9	+0·3	...	11	1	6	6	4	10	5	19	N 8° W	N 34° W	28	30	173	216	...	...	Ratnagiri .	
15	·562	·576	·551	−·044	83	59	47	63	− 6	0·4	0·7	0·6	−0·3	4	...	6	7	2	...	...	14	29	N 43° W	N 5° W	51	53	101	P	...	...	Karwar . .	
47	·641	·691	·660	−·026	81	54	44	60	−10	1·5	2·3	1·9	−0·1	7	7	13	...	...	...	...	24	10	N 43° W	S 11° W	52	13	109	P	...	...	Cochin . .	
40	·544	·552	·545	−·022	92	55	46	64	− 1	1·6	2·7	2·2	−0·4	2	7	40	11	1	...	...	1	...	N 49° E	S 84° E	84	61	157	115	...	...	Salem . .	South India.
20	·423	·325	·389	P	83	50	30	54	P	3·2	3·1	3·2	P	8	2	18	24	8	1	...	...	1	N 78° E	P	69	P	200*	P	...	...	Mysore . .	
64	·386	·327	·359	−·067	77	57	38	57	− 5	1·7	2·2	2·0	−1·1	10	...	19	19	4	2	...	4	4	N 68° E	N 68° E	50	60	207	105	...	...	Mercara . .	
30	·427	·351	·403	+·004	92	56	37	62	+ 1	1·4	1·3	1·6	−1·1	...	2	22	30	4	...	3	1	...	N 74° E	N 88° E	76	83	184*	92	...	...	Bangalore .	
42	·375	·303	·340	P	82	47	30	53	P	2·4	3·2	2·8	P	...	...	25	28	8	...	...	1	...	N 76° E	P	84	P	69*	P	...	...	Hassan . .	
11	·388	·297	·332	P	58	45	28	44	P	1·5	1·9	1·7	P	...	2	12	29	15	...	...	1	3	N 88° E	P	72	P	190*	P	...	...	Chitaldroog .	
70	·582	·554	·569	−·040	85	57	47	63	− 5	2·7	3·6	3·2	−1·0	10	21	27	2	1	...	...	...	1	N 28° E	N 48° E	74	77	103	115	...	...	Trichinopoly .	
P	·662	·623	·667	+·027	P	65	59	77	+ 3	4·1	2·8	3·5	−0·4	...	15	35	8	2	1	1	...	...	N 43° E	N 48° E	81	76	128	143	...	...	Madras . .	
03	·312	·281	·332	−·075	77	34	23	45	− 4	2·5	3·1	2·8	+0·6	6	1	3	31	11	6	...	...	4	S 78° E	S 69° E	63	68	66	80	...	...	Bellary . .	
15	·539	·548	·534	−·047	95	55	54	68	+ 3	1·1	1·3	1·2	−0·5	...	7	13	4	4	13	7	12	2	S 36° W	S 60° E	6	42	44	42	...	...	Vizagapatam .	
13	·570	·573	·552	P	85	61	58	68	?	1·0	1·2	1·1	P	...	1	18	19	15	2	3	31	1	S 89° E	P	60	P	176*	P	...	...	Cocanada .	
39	·170	·166	·158	0	76	51	43	57	− 9	3·6	15·0	4·3	+0·1	18	2	1	...	5	10	6	11	9	S 64° W	N 83° W	31	27	76*	84	...	...	Quetta . .	Hill Station, Baluchistan.
P	·051	·093	P	P	P	49	60	P	P	5·3	6·3	5·8	−0·7	...	...	...	...	...	29	28	5	...	S 27° W	S 8° E	87	24	40	24	...	...	Leh . .	
43	·148	·175	·155	?	95	76	66	79	?	7·6	7·5	7·6	P	15	9	4	3	9	12	3	4	3	S 30° E	P	13	P	86*	?	...	...	Srinagar . .	Hill Stations, Punjab.
02	·130	·157	·130	−·009	47	48	57	51	− 7	6·1	6·4	6·3	+0·4	12	6	2	4	29	3	...	...	6	S 62° E	S 54° E	39	35	199*	198	...	...	Murree . .	
97	·213	·231	·214	−·002	73	59	51	61	− 5	6·2	6·0	6·1	+0·1	50	...	...	...	2	...	...	...	10	N 45° W	S 70° E	13	13	87*	64	3·10	1·24	Chamba . .	
75	·076	·086	·079	−·020	83	54	51	63	−9	5·4	5·9	5·7	−1·0	...	2	...	3	9	12	17	13	6	S 39° W	S 68° W	50	48	23	20	1·25	0·97	Kailang . .	
23	·121	·160	·135	−·016	58	42	56	52	− 6	4·5	4·8	4·7	−0·7	11	7	10	2	3	19	9	1	...	S 16° E	S 31° W	23	19	101	?	...	...	Simla (Ridge).	
21	·108	·134	·121	−·035	55	40	47	47	−15	2·9	2·8	2·9	−1·8	9	11	2	...	4	36	...	...	...	S 9° E	S 66° W	43	9	190	114	...	...	Chakrata .	Hill Stations, N.W.P.
66	·195	·199	·187	−·004	66	59	54	60	− 2	2·9	2·3	2·6	−1·4	42	...	2	...	1	1	11	5	...	S 53° W	S 70° W	21	17	35*	43	...	...	Ranikhet .	
70	·250	·243	·221	−·032	87	69	47	68	− 6	1·5	2·6	2·0	−1·4	...	...	...	32	...	...	...	30	...	E	N 78° W	3	64	21	?	0·25	0·18	Katmandu .	Hill Station, Nepal.
56	·200	·212	·189	−·014	77	68	70	72	− 8	2·2	4·1	3·2	−2·5	12	3	8	7	1	...	4	21	6	N 58° W	S 84° W	27	22	105	62	...	...	Darjeeling .	Hill Station, Bengal.
93	·194	·200	·196	−·002	48	34	32	38	− 3	0·8	0·4	0·6	−2·0	...	6	10	2	5	2	20	5	12	N 83° W	N 83° W	24	6	136*	113	...	...	Mount Abu .	Hill Stations, Central India.
31	·344	·352	·309	+·032	76	53	47	59	+ 5	0·9	1·1	1·0	−1·3	23	5	2	4	2	1	7	8	10	N 65° W	N 68° W	24	13	97*	73	...	...	Pachmarhi .	
29	·230	·229	·229	−·081	51	35	29	38	−14	0·7	0·9	0·8	−1·2	21	14	...	...	1	9	10	1	6	N 82° W	S 48° W	19	24	113	118	*Nil*	*Nil*	Chikalda .	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 84 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	...	24·312	24·240	·072	24·276	−·009	?	67·8	43·9	23·9	71·4	36·1	35·3	63·5	62·8	54·6	−0·5	42·2	53·3	55·8	50·4
Extra India.	Muscat	...	30·097	30·001	·096	30·049	?	?	74·9	69·7	5·2	78·9	65·7	13·2	73·4	74·8	72·3	?	63·0	66·8	68·2	66·0
	Aden	...	29·978	29·868	·110	29·915	−·021	29·942	80·2	73·2	6·9	82·9	70·5	12·4	76·9	78·9	76·4	+0·5	68·6	70·7	70·2	69·8
	Perim	...	·773	·669	·104	·713	?	?	83·2	74·0	9·2	94·5	70·8	13·7	79·6	80·5	77·9	?	70·0	73·1	72·9	72·0
	Zanzibar	...	·897	·783	·114	·840	−·003	·839	87·1	80·5	6·6	89·6	74·1	15·5	84·1	86·4	83·6	+1·3	76·7	78·3	79·1	78·0
	Port Victoria (Seychelles)	15	·969	·885	·084	·927	?	·868	81·8	76·8	5·0	83·2	73·3	9·4	80·8	80·8	79·1	?	73·1	75·9	76·0	75·0
	Mauritius	181	?	?	?	·762	+·005	·887	?	?	?	90·2	64·6	25·6	?	?	78·6	−0·9	?	?	?	?

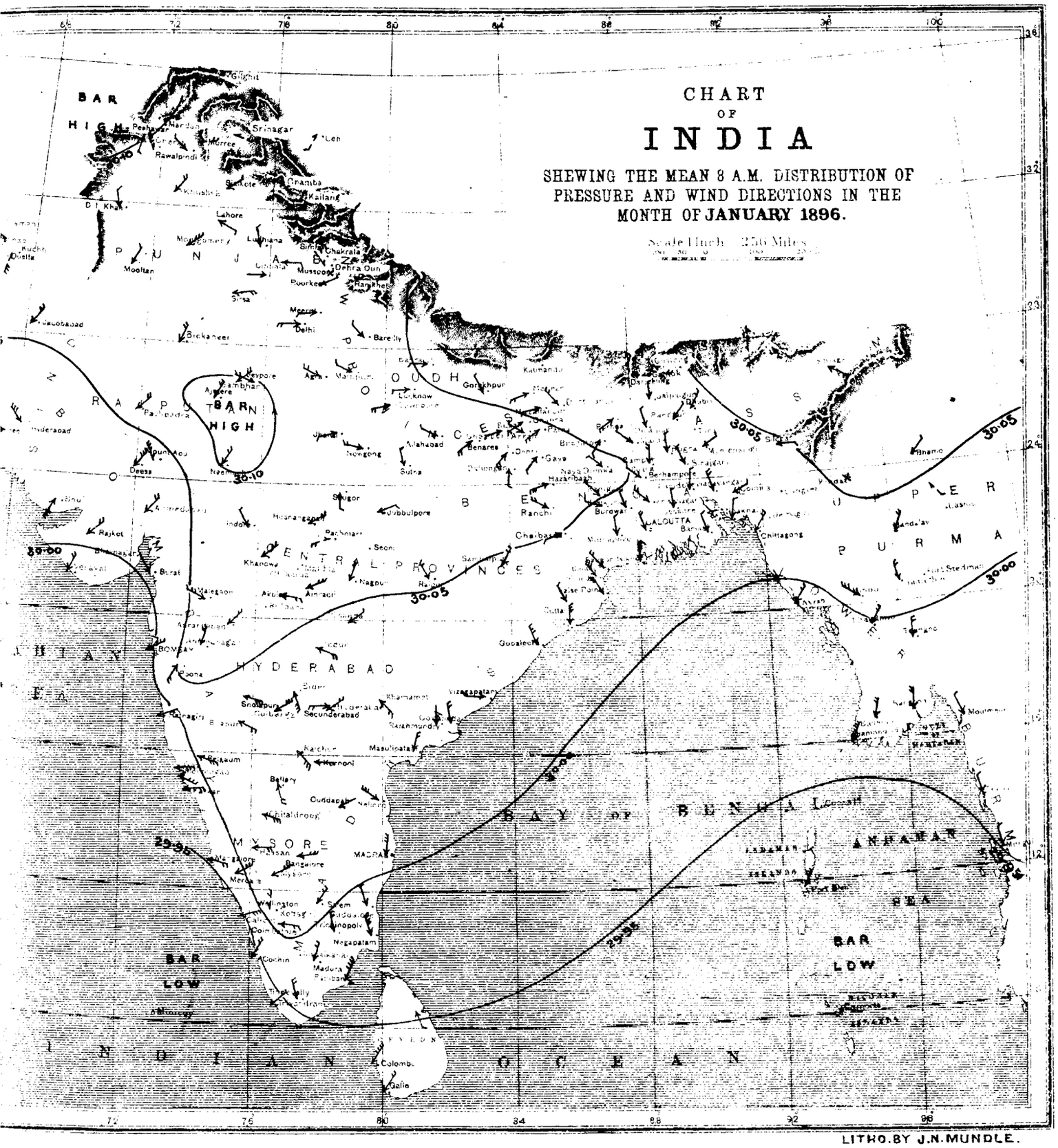
II—*concluded.*

India, Burma, etc., for January 1896—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.		
																								%	%						
260	·307	·374	·314	+·014	84	54	65	68	0	2·1	4·5	3·3	0	2	5	4	3	29	17	1	...	1	S 40° E	S 14° E	63	62	50	53	...	...	Wellington	Hill Station, South India.
490	·572	·606	·556	P	67	69	68	68	P	1·1	0·8	1·0	P	...	...	17	11	4	1	1	11	17	N 6° E	P	32	P	95	P	...	...	Muscat	Extra India.
639	·666	·625	·643	−·001	78	73	63	71	−1	5·9	1·2	3·6	−0·3	5	2	4	34	13	3	...	...	1	S 82° E	N 84° E	74	70	372	309	...	...	Aden	
680	·720	·708	·706	P	81	72	68	74	P	3·8	1·0	2·4	P	1	1	...	32	18	6	...	3	1	S 67° E	P	72	P	500	P	...	...	Perim	
866	·894	·896	·885	+·037	84	77	71	77	0	4·4	3·1	3·8	−0·9	...	21	27	6	1	1	3	1	2	N 30° E	N 27° E	69	60	147	195	...	...	Zanzibar	
767	·831	·834	·811	P	83	79	80	81	P	7·1	7·5	7·3	P	10	6	2	1	1	1	1	13	27	N 51° W	P	61	P	144	?	22·93	4·15	Port Victoria (Seychelles)	
P	P	P	·730	P	P	P	P	79	+2	P	P	P	?	...	...	...	...	...	...	...	...	...	P	P	P	P	245	271	8·92	5·66	Mauritius	

G. I. C. P. O.—No. 138 Meteor.—2-5-96.—385.

* 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 ure 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 observations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal, ared by Mr. Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Depart-. 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 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 bert'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 ndicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during nouth 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.	,,	,,	,,	,,	,,
		20					fi[illegible]					

Zinco. S. I. O. Calcutta.

LITHO. BY J. N. MUNDLE.

Explanation.

e 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 tion (of two hundredths of an inch or ·020″). The numbers are given in thousandths of an inch, 20 representing ·020″ or two lths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to s, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines each other, one continuous and the other broken or dotted, represent the line of no variation, the dotted line facing the area of t pressure or negative variations.

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

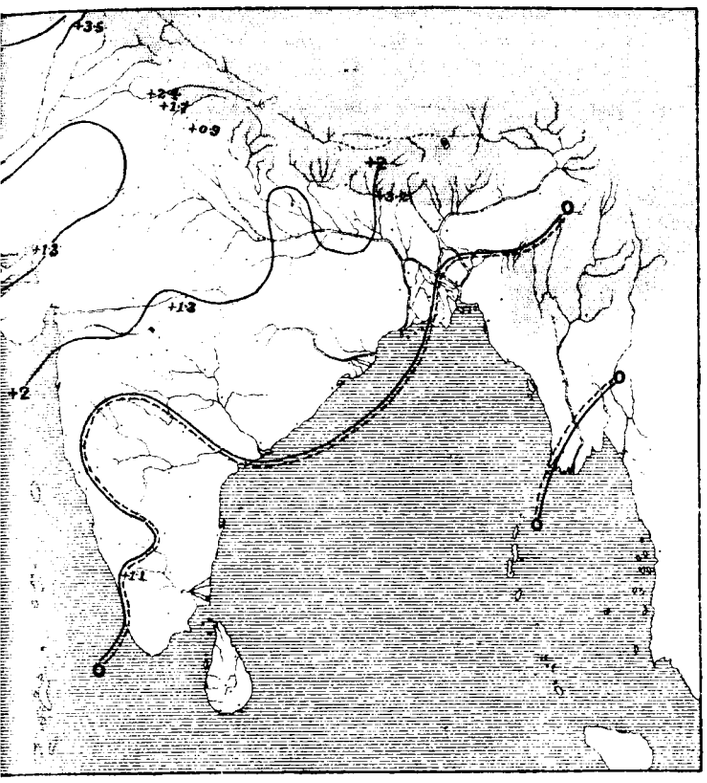
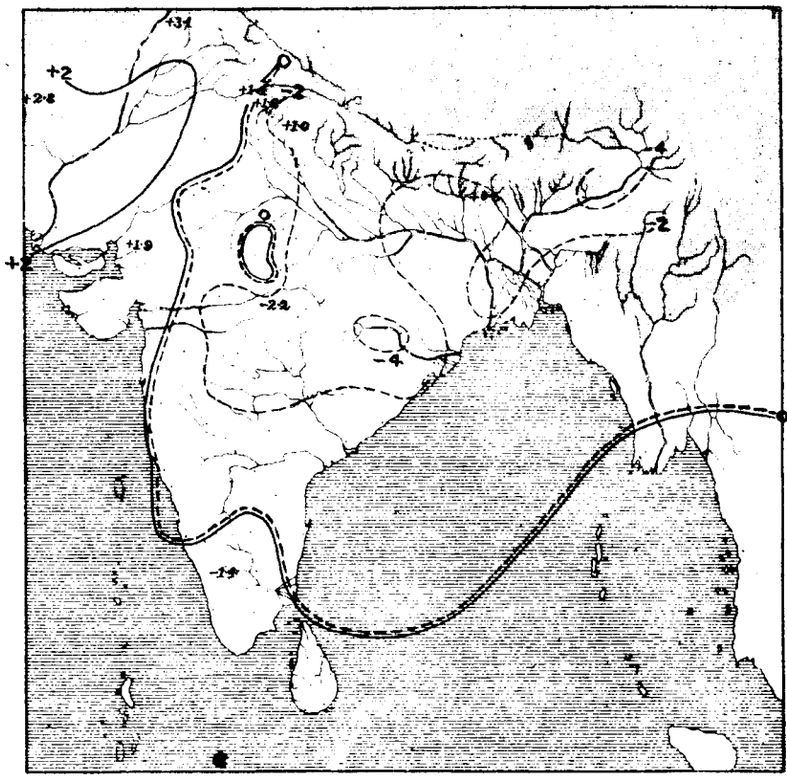


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



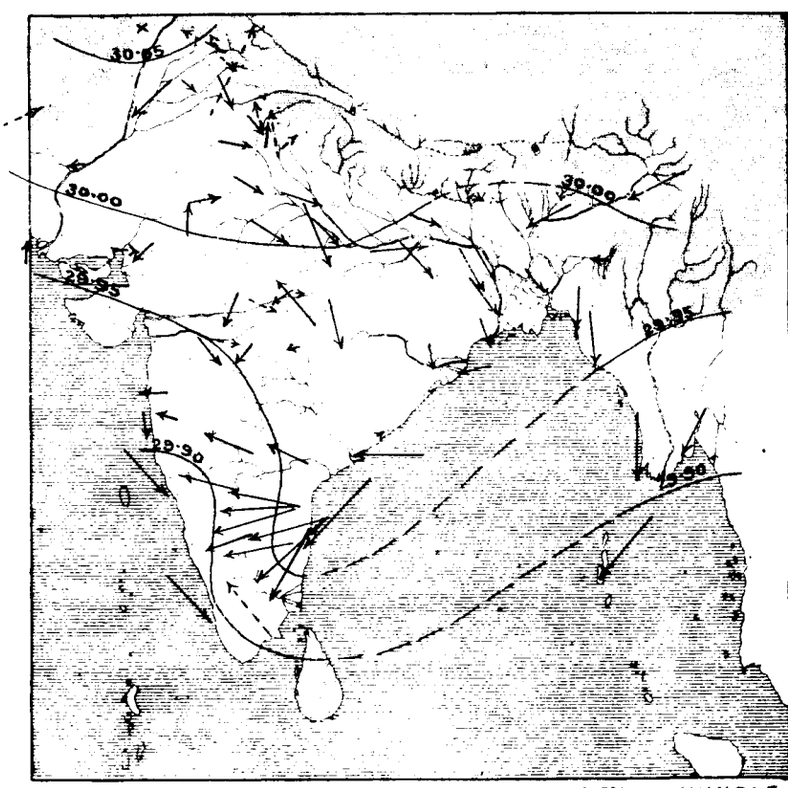
Explanation.

inuous lines indicate that the mean maximum of month was in s by amounts indicated by the attached numbers. Broken or dotted that it was in defect by the amounts indicated by the attached bers Double lines are the lines of no variation, the broken line facing rea 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 1896.

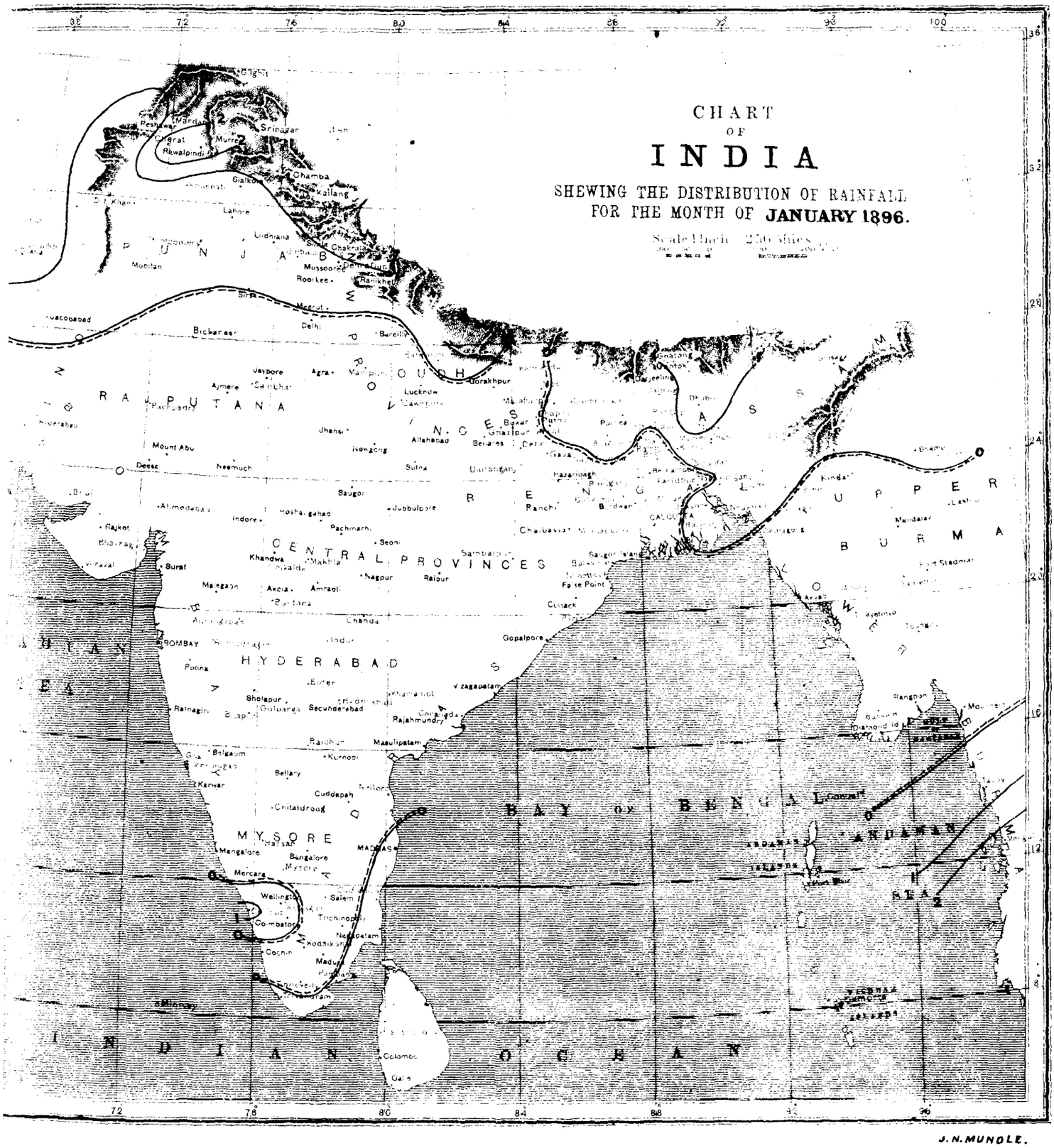


LITHO. BY J.N. MUNDLE.

Explanation.

tinuous lines indicate that the mean daily temperature of month in excess by amounts indicated by the attached numbers. Broken dotted lines that it was in defect by the amounts indicated by the

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



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 used in the preparation of this Chart are the rainfall returns of all the observatories in India (182 in number), except those at the 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 ch 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

Calcutta.

r India—Apr. 93—2,500.

LITHO. BY J. N. MUNDLE.
Zinco, S. I. O. Calcutta

Explanation.

e Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers n the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean 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 ounts indicated by the numbers to which the signs are attached. The name of the district can be at once ascertained by referring ollowing list to the number given near the right hand boundary of each district in small slanting red figures.

asserim	17. North Bihar	33. Malabar	49. Central India, East
ver Burma Deltaic	18. North Western Provinces, East	34. Madras, South Central	49a Do. do.
tral do.	19. South Oudh	35. Coorg	50. Rajputana East, Central India West
per do.	20. North Do.	36. Mysore	
kan	21. North Western Provinces, Central	37. Konkan	51. West Rajputana
t Bengal	22. Do. do., West	38. Bombay Deccan	52. East Coast, North
am, Surma	23. Do. do., East Submontane	39. Hyderabad, North	52(a). Do. do. (a)
., Hills	24. Do. do., West do.	40. Khandesh	53. Hyderabad, South
., Brahmaputra	25. Do. do., Hills	41. Berar	54. Madras, Central
taic Bengal	26. South East Punjab	42. Central Provinces, West	55. East Coast, Central
tral do.	27. South do.	43. Do., Central	56. East Coast, South
th do.	28. Central do.	44. Do., East	57. Madras, South
gal Hills	29. Punjab, Submontane	45. Gujarat	
[illegible]	30. Do., Hills	46. Kathiawar	
ta Nagpur	31. North Punjab	47. Sind	

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, FEBRUARY, 1896.

INTRODUCTION.

THIS Review of the weather in India during the month of February 1896 is based on observations taken daily at 8 A. M. at 207 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 84 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, 1896.

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 that of January. An important change, however, commences at the head of the Bay in the latter half of the month, shown by the establishment of local southerly winds 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 establishment of these winds usually accompanies the appearance of a shallow depression in West Bengal and Chota Nagpur. It is at first very shallow, 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 disturbance 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 following is a summary of the more important features of the meteorology of the month:—

As stated in last month's review a shallow depression which had advanced from Persia was passing through Sind and Rajputana on the 31st. It passed rapidly through Central India on the 1st and Bengal on the 2nd and disappeared during the next 24 hours. Weather was disturbed in Upper India until the 3rd. Baluchistan, the Punjab and the western districts of the North-Western Provinces received light to moderate rain from the 1st to the 3rd and the Punjab and Kashmir Himalayas moderately heavy snow. The disturbance in its passage across North-Eastern India gave some cloud, but practically no rain.

Temperature was during this period in general excess, and the excess was very large in amount in Rajputana and Central India, as is shown by the following data:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	1st February.	2nd February.	3rd February.
	°	°	°
Sind and Rajputana	+10·0	+9·1	+8·6
Central India and Gujarat . . .	+ 6·4	+6·4	+7·6
Central Provinces and Berar . .	+ 2·7	+4·5	+5·0

A feeble cool wave advanced across Baluchistan on the 3rd into Upper India. It reduced temperature to a moderate extent in North-West India but its chief effect was to displace the area of greatest excess of temperature from Rajputana into Central India and Chota-Nagpur on the 4th and into South Bengal on the 5th. Temperature increased rapidly on the 5th in front of an advancing low-pressure wave. This low-pressure wave passed from Baluchistan on the 5th into the South-East Punjab and East Rajputana on the 6th, Bihar and Chota Nagpur on the 7th and Bengal on the 8th. It was not exhibited as a closed low pressure area in the daily weather charts of the period, but its transmission was shown very clearly by the pressure changes and variations from the normal in Northern India. Light showers were received in Kashmir and the Punjab Himalayas. It passed through North-Eastern India as an almost cloudless disturbance, but gave some light showers in the Assam Valley on the 7th and 8th.

A cold wave advanced across North-Western India in the rear of this disturbance, and reduced temperature considerably on the 8th and 9th.

Temperature increased rapidly on the 10th in Rajputana, Central India and the Central Provinces in front of a second low pressure wave which was passing through Baluchistan on that day. The wave passed eastwards into Rajputana and the Punjab on the 11th, Bihar and Chota Nagpur on the 12th and Bengal on the 13th. A wave of high temperature, as usual, preceeded this low pressure wave. The disturbance developed to some extent on the 12th and 13th, on which days it was shown as a closed depression. It gave light showers in Kashmir and the Punjab hills on the 10th and 11th and light to moderate showers in South-West and East Bengal and Assam on the 13th. A well-marked cool wave followed the storm and reduced temperature below the normal to a moderate extent in Northern and Central India on the 13th and 14th.

Another low pressure wave, the third of the month, appeared in Baluchistan on the 13th and advanced through Sind and Rajputana on the 14th, Central India on the 15th, the North-Western Provinces on the 16th and Bihar and Bengal on the 17th and 18th. Like the previous it developed into a closed area of low pressure in Bengal on the 17th. It gave heavy local thunder-showers in Chittagong, Noakhali and South Lushai hills on the 18th and 19th. The disturbance apparently passed on the 19th into Burma, and that area received light to moderate showers during the next 48 hours. A cool wave advanced across Northern India in the rear of the disturbance. Westerly winds of abnormal dryness prevailed in Northern and Central India from the 16th to the 22nd, and abnormally low humidities were hence recorded at the great majority of stations during this period.

It may be noted that the conditions in Persia during the first eighteen days of the month were practically the opposite of those obtaining in India. Temperature was steadily and remarkably low. Thus the mean temperature of the first fortnight was 8° below the normal both at Bushire and Baghdad. Pressure was excessive and weather fine and settled, with light to moderate north-west winds in the Persian Gulf. Pressure gave way in that area for a brief interval on the 18th and 19th, apparently due to a shift in the position of the European anticyclone at this period. Notwithstanding this change, fine weather with clear skies, high pressure and unusually low temperature obtained during the remainder of the month in Persia and Mesopotamia.

Temperature increased very rapidly in Sind and Baluchistan on the 22nd and 23rd. A shallow depression lay over Sind on those days. Pressure gave way rapidly in the depression area on the 23rd, and a cold weather storm of moderate intensity, central near Jacobabad, lay over Upper Sind on that day. The primary depression filled up considerably during the next 24 hours but gave rise to a feeble secondary depression in the North Punjab on the 24th. A very rapid increase of pressure in Upper India obliterated both depressions on the 25th. Light to moderate rain fell during the disturbance in Baluchistan, the Punjab and the western districts of the North-Western Provinces from the 23rd to the 25th, and very heavy snow was received on the higher elevations to the north of Kashmir.

Pressure increased rapidly in Upper India on the 25th and 26th and was in large excess in North-Western India from the 26th to the 28th. A depression appeared in North and Central Bengal on the 26th, and was almost stationary during the remainder of the month. The depression gave cloud and light showers in Assam, but little or no cloud in Bengal.

Very dry westerly winds prevailed on the 26th and following days in the Gangetic Plain and extended on the 27th across Bihar into Central and North Bengal. The period from the 26th to the end of the month was

hence marked by very high temperatures in North-Eastern aswell as in Central India, and the highest temperatures of the month in these areas were hence recorded during this period. The following gives data showing the mean temperature variations in these areas: —

Political area or Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	26th Feb.	27th Feb.	28th Feb.	29th Feb.
	°	°	°	°
North-Western Provinces and Oudh	+5·3	+7·8	+5·9	+4·1
Bengal and Assam . . .	+4·2	+5·7	+6·2	+5·3
Central Provinces and Berar .	+5·4	+6·4	+5·6	+6·2

Higher temperatures were registered in this hot area during this period than have been recorded in the month of February during the previous 25 years. The following gives data for five stations at which the temperature was most excessive.

Province.	Station.	Maximum temperature of 24 hours preceding 8 A.M. of date				Highest maximum temperature recorded in February 1896.	Date on which recorded.	Highest maximum temperature recorded in February previous to 1896.	Year in which recorded.
		26th.	27th.	28th.	29th.				
		°	°	°	°	°		°	
Bengal	Calcutta.	90·4	96·4	98·4	97·4	98·4	28th	91·7	1881
	Berhampore.	91·2	95·7	97·7	97·2	97·7	28th	96·5	1873
	Burdwan	94·7	96·7	100·2	99·7	100·2	28th	96·0	1877
North-Western Provinces.	Allahabad	93·6	96·6	94·6	93·6	96·6	27th	96·1	1884
Central Provinces.	Jubbulpore	96·0	95·5	95·5	94·5	96·0	26th	94·7	1878

The weather was fine and drier than usual during the month in Southern India, and the variations of temperature were generally inverse in character to those in Northern India. When the passage of the low pressure waves gave excessive temperatures in North-Eastern India, they modified the winds in the Peninsula, so that dry north-west winds prevailed in the Deccan and Madras coast districts. These dry land winds were unusually feeble during the night hours, and hence the night temperatures were very low during their prevalence. The chief periods of diminished temperature in Madras were the 10th to the 13th and the 26th to the end of the month. The following gives data of the second period, which should be compared with the corresponding data for Bengal, the Central Provinces and North-Western Provinces given above :—

Madras Presidency.	Variation from normal of 24 hours preceding 8 A.M. of date			
	26th Feb.	27th Feb.	28th Feb.	29th Feb.
	°	°	°	°
Maximum temperature . . .	−0·4	−0·2	+0·9	+2·2
Minimum „ . . .	−2·2	−3·2	−4·1	−2·9
Mean „ . . .	−1·3	−1·7	−1·6	−0·4

Pressure.—The mean pressure of the whole of India was ·012″ below the normal. The pressure anomalies at the level of the plains were very marked and such as frequently occur in the months of April and May when the hot weather conditions are more strongly pronounced than usual. Pressure was relatively to the general condition in defect in Northern India. The deficiency was moderately large in amount in Bengal and Bihar, in which it ranged between ·02″ and ·04″ and averaged ·025″. Pressure was locally in excess in the Peninsula, the excess being greatest in the West Deccan and Bombay coast districts from Surat to Karwar. It averaged ·03″ in that area and was absolutely greatest at Ratnagiri (+·04″). Pressure was in moderate excess at the hill stations, relatively to the plains, in Northern India. Probably the most important feature of the pressure conditions of the month in Southern Asia was a large excess in Persia, which was due to the prevalence of strongly marked abnormal anticyclonic conditions during nearly the whole month in Southern, Central and Eastern Europe. The following table gives comparative pressure-variation data for the eleven meteorological provinces of India:—

Meteorological Province.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Burma Coast and Bay Islands	−·004	+·008
Burma Inland	?	?
Assam	−·022	−·010
Bengal and Orissa	−·034	−·022
Gangetic Plain and Chota Nagpur . . .	−·033	−·021
Upper Sub-Himalayas	−·020	−·008
Indus Valley and North-West Rajputana .	−·022	−·010
East Rajputana, Central India and Gujarat .	−·004	+·008
Deccan	+·002	+·014
West Coast	+·015	+·027
South India	+·001	+·013

Temperature.—One of the more important features of the meteorology of the month was the abnormally high temperature, both by day and night, over the whole of Northern and Central India.

The mean day temperature of the month was above the normal over the whole of India except South Madras, Assam, Arakan and Burma. The excess ranged between 2° and 6° over the large area including Bengal, Bihar, Chota Nagpur, Central India, Rajputana, Berar and the Central Provinces. It was 5° or over at the following stations :—Chaibassa (+6°·1), Ranchi (+5°·6), Sutna and Allahabad (each +5°·1), and Jubbulpore and Jhansi each (+5°·0).

The mean night temperature was above the normal over the whole of India to the north of Latitude 20°N. and was in slight defect in the Peninsula. The excess was more than 2° in South and East Bengal and over the whole of North-Western and Central India. It was absolutely greatest for the following stations :—Ajmere (+5°·3), Jhansi (+4°·7), Lahore and Sambhar (each +4°·6) and Jeypore (+4°·3).

The mean temperature of the month was very slightly lower than usual in the southern half of the Peninsula and Burma, and was in excess over the remainder of India. The excess was considerable in amount in Rajputana, Central India, the Central Provinces, the North-Western Provinces, Bihar and Chota Nagpur and South-West Bengal in which both the day and night temperatures were in considerable to large excess. The mean temperature of the month was more than 4° above the normal at Jhansi (4°·9 in excess), Chaibassa (4°·7 in excess) and Sutna, Ajmere and Sambhar (each 4°·2 in excess).

The peculiar pressure and temperature conditions which obtained during the last four days of the month gave an unusually early period of hot dry winds in the eastern half of the Gangetic Plain and Bengal. Higher temperatures were registered during the period from the 27th to the 29th at many stations than have been previously recorded. Calcutta, Burdwan, Berhampore, Gaya, Allahabad, Sutna and Jubbulpore all recorded unprecedented temperatures. The most remarkable case was Calcutta, where a maximum temperature of 98°·4 was registered. The highest temperature recorded at that station in February previous to the present year was only 91°·7 in 1881. The temperature conditions of the month were most abnormal in South-West Bengal and Chota Nagpur.

The following table gives temperature variation data of the month of February 1896 for the eleven meteorological provinces of India :—

Meteorological Provinces.	Variation from normal of		
	Mean maximum temperature, February 1896.	Mean minimum temperature, February 1896.	Mean daily temperature, February 1896.
	°	°	°
Burma Coast and Bay Islands .	0	+0·7	+0·3
Burma Inland . . .	−2·5	+0·7	−1·0
Assam	−0·6	+1·5	+0·4
Bengal and Orissa . . .	+2·7	+1·8	+2·3
Gangetic Plain and Chota Nagpur.	+4·0	+1·9	+3·0
Upper Sub-Himalayas . .	+1·2	+2·5	+1·9
Indus Valley and North-West Rajputana.	+1·6	+2·0	+1·8
East Rajputana, Central India and Gujarat.	+2·9	+2·9	+3·0
Deccan	+3·0	+0·7	+1·8
West Coast	+0·2	−0·8	−0·3
South India	+1·2	−0·7	+0·3

Winds—Were more westerly than usual in Bengal, where southerly sea winds set in very early during the month. Winds were steadier than usual in the Gangetic Plain and were above the normal strength in Bihar. Winds were of normal strength but more westerly than usual in Rajputana and Central India. They were feeble in Berar and the Deccan, but had an abnormally strong westerly component (which in a part of the area replaced the normal easterly element). The abnormal westing of the winds in the Deccan, Central Provinces and Berar was an important feature of the meteorology of the month. Winds were of normal strength, but steadier than usual, at the west coast stations and were feeble and weaker than usual in Madras. Winds were very strong at the hill stations and the increased strength was as pronounced at Wellington and Pachmarhi as at the Himalayan hill stations.

Humidity and Cloud.—The most remarkable feature of the meteorology of the month was the excessive dryness over by far the greater part of the country. The air was slightly damper than usual in Assam, East Bengal, the Punjab, Rajputana and the Madras coast districts. Over the remainder of India and in Burma the air was much drier and contained less vapour than usual. The increased dryness was most pronounced in West Bengal, Chota Nagpur, the northern division of the Central Provinces, Baghelkhand and the adjacent districts of the North-Western Provinces and in the Deccan and Mysore. Humidity was more than 10 below the normal at the majority of stations in these areas. The deficiency was absolutelygreatest at Mercara (−18), Jubbulpore and Allahabad (each −16), Calcutta (−14), Berhampore and Raipur (each −13), Lucknow (−12) and Chikalda and Khandwa (each −11).

There were two periods of excessive dryness during the month. The first lasted from the 16th to the 22nd and the second from the 27th to the end of the month.

The excessively low humidity percentage of 1 was recorded at Buldana at 4 P.M. of the 21st and of 3 at Deesa at 4 P.M. of the 18th.

There was somewhat more cloud than usual in Burma, Assam and East Bengal, and also in the Punjab and adjacent Himalayan districts. Over the remainder of India the mean cloud amount was less than the normal. The deficiency was most marked in Bihar, Central India, and the Central Provinces. The actual amount barely averaged 1 in West Bengal, Bihar, the eastern districts of the North-Western Provinces, the Central Provinces, and parts of the west coast districts. It was absolutely least at Karwar and Berhampore, for which it averaged only 0·4.

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

Meteorological Province.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
	"		
Burma Coast and Bay Islands	—·003	—1	+0·2
Assam	+·031	+2	+0·8
Bengal and Orissa	—·007	—6	—0·2
Gangetic Plain and Chota Nagpur	—·037	—11	—0·9
Upper Sub-Himalayas	+·003	+1	+0·5
Indus Valley and North-West Rajputana.	+·034	+3	—0·3
East Rajputana, Central India and Gujarat.	+·028	+1	—0·7
Deccan	—·038	—7	—0·6
West Coast	—·033	—3	+0·3
South India	—·043	—4	—0·4

Rainfall.—The month was remarkably dry over nearly the whole of India. A series of five feeble depressions or low pressure waves passed across Northern India during the month. The precipitation accompanying these storms was small in amount in the plains of Northern India and was restricted to the eastern and western extremities of those plains. The Punjab and the western districts of the North-Western Provinces received light to moderate rain during the first and last of these disturbances, *viz.*, from the 1st to the 3rd and the 23rd to the 25th. South-West and East Bengal and Assam obtained light showers on the 13th and a portion of East Bengal, including Chittagong, Noakhali and the South Lushai hills had very heavy thunder-showers on the 18th and 19th. Burma received light showers from the 19th to the 21st and Assam frequent moderate showers from the 16th to the 25th. The rainfall in the remaining districts of India was *nil*. The hill districts of Upper India received more frequent falls of snow than usual, but the total fall of the month was probably considerably less than the normal except in Kashmir. The rainfall of the month was in defect over the whole of India except East Bengal, the Assam valley, the Punjab and Burma. It was in slight to moderate excess in the Punjab, Burma and Assam and in large excess in the Bengal districts which had heavy rain on the 18th and 19th. The following table gives comparative data of the eleven meteorological provinces:—

Meteorological Province.	Rainfall.		
	Average actual, February 1896.	Average normal, February.	Variation from normal. *
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	0·81	0·49	+0·43
Burma Inland	0·72	0·10	+0·62
Assam	2·82	1·39	+1·43
Bengal and Orissa	0·57	0·96	—0·37
Gangetic Plain and Chota Nagpur	0·03	0·48	—0·45
Upper Sub-Himalayas	1·16	1·29	—0·07
Indus Valley and North-West Rajputana.	0·71	0·42	+0·19
East Rajputana, Central India and Gujarat.	0·03	0·19	—0·16
Deccan	0	0·22	—0·22
West Coast	0	0·18	—0·18
South India	0	0·27	—0·27

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

Atmospheric Pressure.

The mean pressure of the whole Indian area for the month was ·012" below the normal. Relatively to this general condition, pressure was at the level of the plains in slight to moderate defect in Assam, Bengal, the North-Western Provinces, the Punjab, North Rajputana, Sind, and in excess over the remainder of India and Burma. The local excess, as measured by the variations or anomalies relative to the mean condition, was moderate in amount

in the Bombay coast districts, Berar and West Deccan, where it ranged between ·02″ and ·04″. The following gives comparative data of stations for which the positive anomalies of the month exceeded ·030″:—

Station.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Surat	+·023	+·035
Bombay	+·023	+·035
Poona	+·019	+·031
Ratnagiri	+·027	+·039
Belgaum	+·021	+·033
Karwar	+·022	+·034
Neemuch	+·019	+·031

The negative anomalies were more than ·02″ in an area including nearly the whole of Bengal, Bihar and the north-eastern districts of the North-Western Provinces. The following gives data for that area :—

Area.	Station.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
		″	″
Bengal	Saugor Island	—·037	—·025
	Calcutta	—·040	—·028
	Jessore	—·040	—·028
	Barisal	—·041	—·029
	Dacca	—·042	—·030
	Berhampore	—·037	—·025
	Burdwan	—·033	—·021
Bihar	Gaya	—·035	—·023
	Patna	—·048	—·036
	Darbhanga	—·037	—·025
North-Western Provinces	Gorakhpur	—·040	—·028

The variations of the mean pressure conditions of the month at the level of the plains were hence large and of a character which is not unusual in the hot weather months of April and May and is, on the other hand, of rare occurrence in February.

Pressure at the level of the hill stations was in slight to moderate general excess relatively to the adjacent plains stations. The following gives data in illustration :—

Hill Station.	Variation of pressure from normal (*a*).	Neighbouring Plain Station	Variation of pressure from normal (*b*).	Vertical pressure anomaly or (*a*)—(*b*).
	″		″	
Leh	—·003	Lahore	—·021	+·018
Kailang	+·022	Ludhiana	—·014	+·036
Murree	+·001	Peshawar	—·019	+·020
Quetta	+·001	Jacobabad	—·036	+·037
Simla	+·003	Ludhiana	—·014	+·017
Chakrata	+·008	Roorkee	—·021	+·029
Ranikhet	+·014	Bareilly	—·020	+·034
Darjeeling	—·005	Dhubri	—·026	+·021

The positive vertical anomalies were associated with drier and less disturbed weather than usual in Northern India.

The following is a summary of the chief features of the mean pressure distribution of the month :—

(1) Pressure was in slight general defect over the Indian area.

(2) Pressure was in relative defect in Northern India, the deficiency being most marked in Bihar and Lower Bengal where it was moderate in amount.

(3) Pressure was locally in excess in the Peninsula, the excess being most pronounced in the west coast districts from Surat to Karwar.

(4) Pressure was in moderate excess at the hill stations relatively to the adjacent plains in Northern India.

It may be noted that the mean pressure conditions of the month were practically normal at Zanzibar (·017″ in excess) and Mauritius (·006″ in defect).

A noteworthy feature of the meteorology of the month was a large excess of pressure in Persia, apparently due to the prevalence of very strongly pronounced anticyclonic conditions during nearly the whole of the month in Central and Southern Europe. The following data illustrate the conditions in the Persian area :—

Station.	Mean Pressure, February 1896.	
	8 A.M. reduced to sea-level and constant gravity at Lat. 45°.	Variation from normal.
	″	″
Baghdad	30·268	+·091
Bushire	30·116	+·070
Aden	30·005	+·024

Barometric Depressions and Cold Weather Storms of the Month.

The following gives a brief sketch of the disturbances of the month so far as can be drawn from the available data :—

Disturbance of the 1st to the 4th February.—The origin of this cold weather storm was described in the January Review. It formed in the Persian area on the 28th and 29th of January, and advanced through Baluchistan on the 30th into Sind on the 31st.

Pressure increased over the whole of India during the next 24 hours.

The depression filled up partially and was in Central India on the morning of the 1st.

A second depression, also of very slight intensity, lay over Sind. Weather was feebly disturbed over the whole of North-Western India and light to moderate rain had fallen during the previous 24 hours in Baluchistan, the Punjab and western districts of the North-Western Provinces.

2nd February.—Pressure had given way briskly to rapidly in North-Eastern India, and was unchanged in Sind and Rajputana. The depression which was in Central India on the 1st, lay over Bengal on the morning of the 2nd, and the second depression was unchanged in position and character. Skies were overcast in the Punjab but were generally clear in the Gangetic Plain and Bengal. Light local showers had been received during the previous 24 hours in Upper India.

3rd February.—Pressure had increased locally in Sind and decreased in the North-Western Provinces due to the transfer of the depression from the former to the latter area. Series of thunderstorms had given moderate rain to the Punjab and western districts of the North-Western Provinces, and snow had fallen generally in the Punjab and Western Himalayas above 6,000 feet. The depression which was in Bengal on the previous day was now passing through Burma, but was of no importance.

4th February.—Pressure had risen briskly in the North-Western Provinces and was falling in Bengal. The depression was passing eastwards through Bengal, but it was now filling up. It gave some cloud but no rain to Bengal on the 4th.

The disturbance of the period from the 31st January to the 4th February was hence due to two shallow depressions which crossed Northern India, the former during the period from the 1st to the 3rd, and the latter from the 2nd to the 4th. They gave rain only in Baluchistan and Upper India. The following gives a summary of the rainfall :—

Division.	Average actual rainfall in 24 hours preceding 8 A.M. of date.				Total of period.
	1st.	2nd.	3rd.	4th.	
	Inch.	Inch.	Inch.	Inch.	Inch.
Baluchistan	0·23	0·47	0·11	0·01	0·82
Punjab (South East). . .	0·45	0·08	0·10	0	0·63
,, (South). . . .	0·28	0·07	0·22	0	0·57
,, (Central) . . .	0·04	0·08	0·32	0·02	0·46
,, (Submontane) . .	0·16	0·12	0·30	0	0·58
,, (Hill Districts) . .	0·44	0·38	0·62	0·02	1·46
,, (North). . . .	0·45	0·14	0.26	0	0·85
,, (West). . . .	0·08	0·19	0·25	0	0·52
North-Western Provinces (West)	0·38	0·02	0·13	0	0·53
,, (Submontane West).	0·21	0·05	0·06	0·02	·034
,, ,, (Hills) .	0·29	0·02	0·25	0·08	·064

A noteworthy feature of the whole month, but more especially of the first fortnight of the month, was the unusually low temperature which prevailed in Persia and the Euphrates and Tigris valleys. Thus the maximum temperature at Baghdad averaged 15°·1 below the normal during the first week and 12°·7 during the second week of the month. The minimum temperature averaged 2°·4 and 3°·0 respectively below the normal for the same periods at that station. Again at Bushire, the mean maximum temperature of the period from the 1st to 7th was 10°·1 below the normal, and the mean minimum temperature 7°·5 below it. Similarly for the second week of the month, the 8th to 14th, the maximum or day temperature averaged 8°·6 below the normal of the period and the night temperature 4°·5 below it at that station.

The remarkably low temperature in Persia during this period was apparently due to the abnormal prevalence of marked anticyclonic conditions in Europe. An anticyclone lay over Southern and Central Europe from the 1st to the 19th. It was transferred north-eastwards into European Russia on the 20th and lay over that area during the remainder of the month. A depression appeared in the Mediterranean on the 21st and was almost stationary until the 27th when it was transferred eastwards to the Black Sea on the 28th and 29th and apparently filled up in that area.

The anticyclonic conditions which obtained in Southern Europe extended into Asia Minor and Mesopotamia and West Persia at the commencement of the month of February and held steadily throughout the month. Very high

pressures were recorded, more especially on the 5th and 6th, at Baghdad and Bushire, higher probably than have been registered for many years. The following gives the readings of those dates, reduced to sea level and constant gravity:—

Station.	5th.		6th.	
	8 A.M. Pressure reduced to sea level and constant gravity at Lat. 45°.	Variation from normal.	8 A.M. Pressure reduced to sea level and constant gravity at Lat. 45°.	Variation from normal.
	"	"	"	"
Baghdad . . .	30·548	+·280	30·548	+·280
Bushire	·310	+·210	312	+·216

The pressure and temperature conditions of the month in Europe and the Persian area are very interesting. They confirm the results derived from previous experience that the cold weather storms in Northern India are not the continuation of European storms or depressions, but that their origin and character are dependent upon the position and intensity of the winter anticyclone in Europe and Northern and Central Asia.

Immediately after the disappearance of the low pressure areas of the first disturbance of the month, pressure gave way locally in Baluchistan and Sind on the 4th and a shallow depression was shown in that area on the morning of the 5th. It was transferred to the South-East Punjab on the 6th, and was at 8 A.M. central near Sirsa where pressure was ·11″ below the normal. It advanced eastwards during the day along the Gangetic Plain and was in Bihar on the morning of the 7th. It filled up during the next 48 hours in Bengal and Burma. The disturbance gave cloudy weather in the Punjab and light rain in the submontane districts and light to moderate snow in the Punjab and Kashmir hills.

Pressure increased briskly to rapidly in Northern India on the 8th and 9th, and was in considerable excess in the Punjab on the morning of the 10th. It had given way during the same period in Baluchistan and was in slight defect on the 10th in that area where skies clouded over and light showers were received on the 10th and 11th. A wave of low pressure was transmitted eastwards during the next 72 hours. It passed through Rajputana and Central India on the 11th, Bihar and Chota Nagpur on the 12th and Bengal on the 13th. It gave light local showers in Upper India and the adjacent hills on the 11th and 12th. Its passage through Bengal gave moderate and fairly general rain to that area and Assam on the 13th, and showers in Assam and Upper Burma on the 14th. A rapid increase of pressure occurred on the 14th in North-Eastern India, re-establishing high pressure conditions and fine weather.

A low pressure wave similar in character to the previous was transmitted eastwards from Upper India during the next three days. It was in the North-Western Provinces on the 16th, in Bihar and West Bengal on the 17th and in South and East Bengal on the 18th. It was shown as a shallow low pressure area on the 16th and 17th. The disturbance gave light snow in the hill districts in Upper India. It gave much cloud in Bengal and severe thunderstorms on the 18th and 19th in the Backergunge, Noakhali and Chittagong districts. The following large falls were recorded :—

Date.	District.	Station.	Rainfall in past 24 hours.
			Inches.
18th	Chittagong	Kodala . . .	4·43
19th	"	Chittagong . .	8·50
"	"	Fenoa . . .	4·00

Pressure gave way in Persia on the 18th and 19th, during which period the anticyclone in Europe was transferred north-eastwards into Central Russia. Skies clouded over in Persia and some light showers fell in North Persia. Temperature increased rapidly during this period and was 7°·5 above the normal on the 20th at Bushire and 6° above it on the 19th at Baghdad. Pressure increased on the 20th and temperature fell rapidly on the 20th and 21st and was considerably in defect during the remainder of the month. The Jask, Muscat and Quetta observations appear to indicate that the disturbance was not propagated eastwards, and weather was fine with light to moderate winds in the Persian Gulf from the 19th to the 23rd.

The pressure changes in India during the period from the 17th to the 20th were large and irregular, due chiefly to the abnormal temperature conditions of the period. Pressure was steady in Baluchistan on the 20th but gave way slightly to briskly in Sind and Rajputana and a very shallow depression lay over Sind on the morning of the 21st. Skies clouded over in Baluchistan and the frontier districts and temperature increased rapidly. Pressure was steady in Sind and Baluchistan during the next 24 hours and the depression was unchanged in position on the morning of the 22nd. Pressure gave way rapidly in Baluchistan and Sind during the next 24 hours and a well marked depression lay over that area on the 23rd. The following gives a history of that disturbance.

Disturbance and storm of the 23rd to the 25th February.—The available observations indicate that this depression originated in Sind. It developed slowly on the 21st and 22nd, and rapidly on the 23rd, on the morning of which day it was a cold weather storm of moderate intensity. The centre of the depression at 8 A.M. of that day was

near Jacobabad where pressure was ·26″ below the normal Winds were light in Upper India but were strong and in creasing on the Sind and Cutch coasts. Skies were more or less clouded over the whole of North-Western India and were overcast in the Punjab and Kashmir hills.

Pressure increased rapidly in North-Eastern India and Baluchistan and Sind during the next 24 hours and gave way slightly in the North Punjab. The original depression had, as indicated by the pressure anomalies, advanced eastwards over Rajputana, and there was a slight tendency shown for the formation of a secondary depression in the north of the Punjab. The combination of these changes gave nearly uniform pressure on the 24th over the whole of Upper India. Pressure was slightly lower in Lower Sind than elsewhere. Light to moderate showers had fallen over the greater part of Baluchistan and the Punjab and skies were at 8 A.M. overcast in the Punjab and adjacent hill districts, but were beginning to clear in Baluchistan and Sind. Pressure increased rapidly to very rapidly in North-Western India during the next 24 hours, the rise being greatest at Peshawar (+·23″). Pressure was hence at 8 A.M. in more or less general excess over the whole of Burma, India and Baluchistan. Showers had fallen in the hill and submontane districts of the Punjab during the previous 24 hours and skies were still heavily clouded in the Punjab. Pressure increased briskly to rapidly in Baluchistan, Sind and Rajputana during the next 24 hours and was in large excess in those areas on the morning of the 26th, by amounts ranging between ·12″ and ·20″. Weather had been unsettled during the previous day in the hill districts. Heavy snow had fallen in North Kashmir and moderate showers in the hill and submontane districts of the Punjab, and North-Western Provinces (West).

Pressure gave way slightly to briskly on the 25th in North-Eastern India and was lowest in that area. The low pressure area intensified slightly on the 26th and strong dry westerly winds prevailed in the Gangetic Plain on the 27th. Skies were practically cloudless in the depression area and no rain was received on either the 26th or 27th. The depression was slightly altered in position during the next 24 hours and lay along the foot of the hills from Upper Assam to Gorakhpur during the remainder of the month.

Strong and very dry westerly winds hence extended from Bihar across Central and North Bengal and very high day temperatures were recorded in that area. The highest temperatures of the month were registered on the 28th and 29th over the whole of Bengal, Bihar and Chota Nagpur, and on the 27th in the North-Western Provinces

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 1896 in the Himalayan and Afghan mountain areas received up to date.

I.—AFGHAN MOUNTAIN DISTRICTS.

(1) *Shirani country (west of Dera Ismail Khan).*—Snow fell on the 1st, 4th, 23rd, 24th and 25th February, 1896, on the higher peaks of the Suleiman Range, *i. e.*, Kaisarghar, Ubashta, Kat Marmaz and Mizri Ghar. The depth of the fall was said to be 8 feet and 3 inches. The weather was unusually cold.

(2) *Wano (Waziristan).*—The following account of the snowfall during the month of February 1896 has been received from the Political Officer, Wano :—

"*2nd February.*—Weather cloudy. Rain and slight sprinkling of snow at Wano. Snow fell on the higher peaks of Marwatti Bosh and Pirghal (11,000 feet), the depth of the fall being between 1 and 2 feet. Snow also fell on Janimela (9,400 feet) and on Kotkun (7,900 feet), about 6 inches deep."

"*10th February.*—Slight snow on Wano plain. Snow fell on all the hills."

"*14th and 23rd.*—Rain fell at Wano and snow on the hills."

"Almost all the snow melted off the sunny slopes before the end of the month. Snow in sheltered places was lying from 3 to 6 inches deep."

(3) *Kurram.*—The following report has been received from J. Donald, Esq. "Very heavy snow fell in the Kurram valley on the 31st of January. The snow descended as low down as 4,000 feet at Para Chinar; the fall was 2 feet in depth. During February there were two slight falls of snow, one on the 11th February and the other on the 23rd. Probably not more than 2 feet fell on the higher peaks of the Sufed Koh. Only a few inches fell at Para Chinar. During each snowstorm the weather was stormy. The two snowstorms in February appeared to be local. In the intervals between the snowstorms the weather was mild. Only on one occasion was there a very strong wind. From the reports received it would appear that there was about 7 feet of snow on the higher peaks of the Sufed Koh at the end of the month."

The month was unusually warm. The inhabitants of the district think that the snowfall at the end of January was abnormally heavy for a single fall. They state that such a very heavy fall in such a short time is very unusual.

(4) *Khyber Pass districts.*—It is reported that during the first week in February 1896 about 3 feet of snow fell on the Lakka Hills. The fall on the Tor Sappar Hills was more than 6 inches deep, while on the Surghar range it was 2 feet.

Snow also fell on the Loarzi plateau, but it soon melted away. A little snow fell during the second half of February on the Tirah hills, but none on the Lakka or Khyber hills.

About the end of January and in the early part of February the weather was abnormally cold at Landi Kotal and Tirah. The snowfall of the period was more than usual.

(5) *Kabul* (*Afghanistan*).—The following account of the snowfall in the Kabul valley has been received from the Meteorological Observer, Kabul.

Snow fell on the 2nd from 4 A.M. till 7 P.M. measuring 11 inches; on the 6th from early morning to 4 P.M. measuring 8 inches; on the 14th from 6 A.M. to 10 A.M. measuring 3 inches, and on the 24th from 10 A.M. to 2 A.M. of the next day. This fall measured 14 inches.

These falls extended over the surrounding hills as well as the Kabul plain and the higher mountains (*viz.*, Wasilabad, Hindki, Paghman, Kohidaman, etc.) received larger amounts. The total accumulation of the snow on the 28th February on the mountains noted below was as follows:—

	Depth.		Depth.
Wasilabad . . .	3 ft.	Kohidaman . .	4½ ft.
Paghman . . .	6 ft.	Ghazni . . .	6 ft.
Hindki . . .	3 ft.	Hazarajat . .	9 ft.

The snowfall of the present year is considered by the natives to be larger than has been recorded during the previous four or five years.

(6) *Mardan Sub-Division, Peshawar district.*—The Deputy Commissioner, Peshawar district, has communicated the following information. "Snow fell during the first week of February 1896 on the Panja range and lay as low as about 4,000 feet for some weeks on the eastern slopes. Snow also fell and lay on Mahaban at about the same height, its average depth being 6 inches. Snowfall has been less than usual."

II.—KASHMIR AND PUNJAB HIMALAYAS.

(1) *Chamba.*—Snowstorms occurred on the 1st and 2nd, the 6th and 7th, the 11th and the 24th to the 26th. The following gives the amounts received at different elevations.

Month.	Date.	Depth of Snowfall at				
		Kalatop 8,000 ft.	Chanan 6,500 ft.	Thanela 7,000 ft.	Tisa 5,000 ft.	Bhandal 6,000 ft.
		Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
February 1896	1st and 2nd .	2 0	0 8	1 5	*Nil.*	0 8
	6th and 7th .	*Nil.*	0 2	0 11	*Nil.*	0 4
	11th . .	*Nil.*	0 5	0 5	*Nil.*	*Nil.*
	24th to 26th .	1 6	*Nil.*	1 8	*Nil.*	*Nil.*
	Total .	3 6	1 3*	4 5	*Nil.*	1 0

The snow line descended to about 5,000 feet during the earlier snowstorms of the month, but to 6,000 feet on the inner ranges and 8,000 feet on the outer ranges during the last storm of the month.

The accumulation on the Chauri pass (9,000 feet high) on the 15th February was only 2½ feet. The total snowfall of the season up to the middle of March was less than usual and the weather warmer than usual.

(2) *Simla Hill districts.*—The following report of the snowfall in these districts from the 15th December to 15th February has been received from the Deputy Conservator of Forests, Bushahr Division.

"During January several slight falls of snow were recorded and one heavy fall on the 13th January. At Kilba 6,000 feet, the snow on the ground was 1 inch deep. In February snow fell on different dates. The heaviest fall gave a depth of 2 inches at Kilba. The snowstorm of the 13th January 1896 continued throughout the day and was accompanied at low elevations below 6,000 feet with rain. At Kilba 0·96 inch of rain was registered. The snow appears to have been general and was brought up by north-east winds. In the intervals the weather was fine. During February 1896 north-east and east winds prevailed on the approach of snowstorms. A good deal of rain is said to have fallen with the snow, and at Kilba the snow was washed away by rain. No very reliable reports have been received as to the depth of snow on the passes, but it is generally said to be much less than last year. At Esdiling, above Kilba, (10,000 feet) the snow was 4 feet deep and on the Bulder pass between Kanawar and Spitti (elevation 15,000 feet), the depth of snow at the end of February was about 10 feet. At Kilba the temperature during the snowfall was higher than last year and altogether the winter has been a very mild one. It is generally stated that the winter has been a mild one, and that the snowfall has been comparatively small."

There have really been only three good falls descending to as low as 6,000 feet during the season. The other falls were slight.

The height of the snow line on the hills opposite Kilba at different periods during the interval from the 15th October to the 15th January as given below is taken from the same report:—

Date.	Elevation of snowline.	Character of snowfall during intermediate period.
16th October 1895	9,000 ft.	Slight.
10th November	9,500 ft.	Do.
16th do.	9,500 ft.	Do.
17th do.	9,000 ft.	Moderate.
18th do.	9,000 ft.	Slight.
26th do.	10,500 ft.	Do.
3rd December	8,500 ft.	Do.
5th do.	7,700 ft.	Do.
9th do.	9,000 ft.	Do.
13th January 1896	6,000 ft.	Heavy.

(3) *Kashmir.*—The following extract from the "*Pioneer*" newspaper gives interesting information of the snowfall to the north of the Kashmir valley in February.

"The snowstorm on the passes between Srinagar and North Kashmir at the close of last month was an exceptionally heavy one, and telegraphic communication was interrupted for four days. The party which went out from Minimarg to repair the wire had a hard time on the Burzil Pass. They reached a point a mile beyond the Waitor shelter-hut, two miles from the summit of the pass, but had to return to the hut as the storm was so violent that further progress was impossible. The signaller with the party was nearly swept away by an avalanche; his arm was injured and he lost his kit and rations. The men remained snowed up at Waitor for two days when they managed to get down to the Burzil Chowki. The snow at Waitor was thirteen feet deep, showing how heavy was the fall. Another attempt to reach the summit was made on February 28th and this was successful. There are certain to be terrific avalanches later on when the thaw sets in."

(4) *Lahoul.*—The Reverend A. W. Heyde has forwarded the following information for this district for the period from 1st January to 17th March.

"The snowfall at Kailang during this period was as follows:—

	Feet.	Inches.
January	1	2
February	3	½
1st to 17th March	0	10
TOTAL	5	0½

Several times the snow fell on the high hills when there was none at Kailang. The snowfall on the high hills around Kailang has, as it appears, been much less than in other years.

Calm weather and clear skies were the chief characteristics of this winter. On the 17th of March the southern slopes of the hills about Kailang up to the height of about 12,000 ft. were free from snow. On flat ground the snow lay about 6 inches deep.

The passes having not yet been crossed, no information can be given as to the depth of snow on them.

The period from 1st January to 17th March was unusually warm. The minimum thermometer never came down to zero, which it often did in former winters. The inhabitants are wondering what this winter's small amount of snow may mean."

(5) *Kulu.*—According to the account of the snowfall in this district received from the Assistant Commissioner there were falls of snow on 1st, 3rd, 6th, 9th, 11th, 14th, 15th, 16th, 24th and 25th February 1896 in the Kulu Tahsil; and on 1st, 2nd, 3rd, 7th, 12th, 13th, 15th, 24th and 25th February in the Plach Tahsil. The falls in both tahsils were generally on the higher passes and hills at elevations exceeding 6,000 feet.

The weather was cold and cloudy during the month under report. The falls of snow were generally on the higher passes of the sub-division. Nearly all the passes were closed during the month except the Jalori pass (10,000 feet) which was open for foot passengers and was crossed on the 17th and 25th February.

The following table gives the reported depth of snow on the higher passes at the end 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.									
			1896.		1895.		1894.		1893.		1892.	
			Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
Kulu	Rotang	13,000	16	0	21	0	19	0	29	0	6	0
	Hamta	14,500	12	0	12	0	16	0	24	6	6	0
	Barsai	...	5	0	8	0	12	0	19	6	4	0
	Chandarkhani	...	7	0	6	0	12	0	26	0	8	0
	Bujadhar	...	5	0	7	0	11	0	19	0	1	6
	Lohri Achri	...	11	0	8	0	11	0	19	0	5	0
	Bhubu	10,000	6	0	8	0	8	0	17	6	5	0
	Pastari	...	5	0	9	0	5	0	12	0	4	0
Plach	Srikhand	15,000	14	0	24	0	18	0	33	0	9	0
	Chul	...	5	0	9	0	6	0	24	0	3	0
	Maghin	...	5	0	7	0	6	0	20	0	3	0

Tahsil.	Name of pass.	Height above sea level in feet.	Reported depth of snow on 25th February.							
			1896.		1895.		1894.		1893.		1892.	
			Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
Plach	Tikar	...	5	0	7	0	6	0	20	0	3	0
	Dundku	...	6	0	8	0	8	0	22	0	4	0
	Nuhnu	...	?	?	7	0	4	0	10	0	2	0
	Jalori	10,500	6	0	9	0	6	0	20	0	3	0
	Raghopur	...	5	0	10	0	6	0	21	0	3	0
	Lambri	...	5	0	9	0	6	0	22	0	3	0
	Sakiran	...	5	0	10	0	6	6	19	0	3	0
	Supakun	...	5	0	10	0	9	0	19	0	6	0
	Gargarasan	17,000	7	0	19	0	11	0	24	0	7	0
	Basleo	11,000	6	0	9	6	6	0	22	0	4	0
	Plach	...	6	0	14	0	9	0	23	0	5	0
	Tirath	...	6	0	17	0	11	0	24	0	5	0

The snowfall in the month under report was similar in amount and distribution to that of February 1892.

III.—The North-Western Provinces Himalayas.

(1) *Almora district.*—The following report of the snowfall in this district from the 16th December 1895 to the end of February 1896 has been received from the office of the Commissioner of Kumaon :—

"*Malla Danpur.*—Snow fell as under :—

	Feet.	Inches.
27th to 31st January 1896	3	0
1st to 8th February „	2	6
10th to 14th do. „	1	6
17th and 18th do. „	1	0
24th February „	0	6
Total	8	6

This was the depth on the well-known peaks of Pindari, Kaphini and Kantela. In places of less elevation the depth was about 7 feet.

Mallas Byans, Chandans and Darma.—Snow fell as under :—

	Feet.	Inches.
22nd January 1896	1	0
28th „ „	1	0
29th „ „	1	0
6th February „	0	6
12th „ „	1	0
15th „ „	0	6
18th „ „	0	6
24th „ „	1	0
Total	6	6

Malla Johar.—There were several falls of snow during this period, more especially on—

	Feet.	Inches.
3rd January 1896	0	6
28th „ „	7	0
3rd February „	4	0
11th „ „	5	0
27th „ „	2	0
28th „ „	2	0
Total	20	6

This was the depth of the snowfall on the well-known passes of Utamdhura and Rolamdhura.

The weather was unusually cold throughout the month.

The snowfall of the month was generally less than in the corresponding month of the previous year."

(2) *Garhwal.*—The following report of the snowfall in this district during the month of February has been received from the Deputy Commissioner :—

"It began to snow on the 28th January and lasted till 2nd February. The depth on the highest peaks in Upper Painikhanda was reported to be 15 ft. In Malla Kaliphat it was said to be 7 or 8 feet, and in Kinlash Danda the roads were blocked up with snow. It is difficult to report on the height of the snow line, as the highest peaks are covered with permanent snow. The depth of each fall cannot be ascertained. Snow fell down to about 5,000 feet, and the depth at 6,000 feet was about 18 inches in the middle of the district."

"The weather was abnormally cold throughout the month. The whole area of the upper pattis, *viz.*, Malla and Talla Painikhanda, Malla and Talla Kaliphat, and Malla Dasauli, was covered with snow. The snow accumulation at the end of the month was about 15 feet in Upper Painikhanda, about 8 feet in Malla Kaliphat, about 5 feet in Malla Dasauli and about 2 feet in Talla Painikhanda."

"The snowfall has been less this year as compared with other years in the pattis of Malla Painikhanda and Malla and Talla Kaliphat and heavier in Talla Painikhanda. Taking the district as a whole the snowfall extended over a greater area and was severer than has been known for many years."

IV.—Assam Himalayas.

(1) *Darrang district.*—No reliable information is available regarding the snowfall in the neighbouring hills. The hill people who have come down and been questioned on the subject, state that the snowfall has been normal. There has of course been no snowfall in this district. The Charduar Bhutias reported that snowfall was abundant and about the same as last year, and the Thepengia Bhutias reported a somewhat heavier snowfall than that of last year.

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 following reported storms were of sufficient importance to be deserving of record:—

1st.—Thunderstorm at Jeypore (11-45 P.M. to midnight).

12th.—Duststorm at Raipur from 11-30 A.M. to 1-15 P.M., 25 miles of wind were registered by the anemometer between 11-30 A.M. and noon.

13th.—Severe hailstorm in the Jorhat Tahsil of the Sibsagar district. The storm came down from the north. It lasted about an hour and the largest hail-stones were of the size of peaches. Twenty head of cattle were killed and the standing crops much injured. Hailstorms in the Namtidole and Sibsagar Tahsils of the Sibsagar district. Slight damage was inflicted on the crops in the latter tahsil.

19th.—Duststorm at Delhi at 4-45 P.M.

20th.—Hailstorm of slight intensity at Gunjong in North Cachar. No damage was done to the crops. Hailstorm at Shwegu in the Bhamo district. The storm which lasted 20 minutes was of considerable severity and did much damage to property. The largest stones are stated to have been of the size of pigeon's eggs.

22nd.—Hailstorm at Nimka Thana in the Jeypore State.

24th.—Thunderstorm at Lahore.

25th.—Thunderstorm at Lahore.

25th.—Hailstorm in the Suratgarh Tahsil of the Bickanir State. The storm advanced from the west.

26th.—Severe hailstorm in the Kotah State. The storm began at 7 P.M. and during the first 13 minutes rain and small hail fell. The storm then changed in character and was exceptionally severe from about 8 P.M. to 8-30 P.M. The largest stones were of the size of apples and pears. The villagers state that the hail lay to the depth of 6 to 8 inches at the end of the storm. The storm covered an area of 160 miles and affected about 70 villages. It totally destroyed the opium, wheat and gram crops in 17 villages and more or less partially destroyed them in the remaining villages affected. The loss of revenue is estimated at about ₹60,000.

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

Arabian Sea.—North-east monsoon winds held steadily over this area. Winds were light in the north of the sea and increased in strength southwards. The normal force of the winds over the whole area in February is 3·0 and the mean force in February 1896 (*viz*, 3·2) was almost identical with the normal. Winds were above their normal strength to a moderate extent during three periods, *viz.*, the 4th to the 7th, the 9th to the 13th and the 25th to the end of the month. They averaged 4·2 in force on the 29th. Weather was squally off the Mekran Coast on the 4th, 5th and 6th, and in the Persian Gulf on the 9th and 10th. The S.S. *Purulia* had hard squalls in the Persian Gulf on the 10th. Weather was slightly disturbed with light to moderate squalls in the north and west of the Arabian sea on the 23rd, 24th and 25th. Occasional squalls and showers were also experienced in the extreme south of the sea. With these exceptions fine weather with a smooth to moderate sea prevailed generally during the whole month.

Bay of Bengal.—Weather was even finer than usual throughout the month in the Bay. The mean force of the winds was 2·7 or 0·2 above the normal of the month. Weather was fine and skies generally clear in the north and centre of the Bay, but was cloudy with occasional showers in the extreme south and the Straits of Malacca, more especially during the period from the 12th to the 16th. The S. S. *Pentakota* experienced a thunderstorm with heavy rain from 8 to 11 P.M. on the 13th in the Straits of Malacca.

Weather was squally to the south and east of Ceylon on the 15th and 16th.

Winds were above their normal strength to a moderate extent from the 4th to the 7th, on the 9th, the 13th and 14th, 16th, 19th and 20th and the 26th and 27th. The variations of strength were however less than usual, the mean force over the whole area ranging between an average of 1·9 on the 12th and of 3·3 on the 16th.

Temperature of the Air.

The mean day or maximum temperature of the month was more or less considerably above the normal over by far the greater part of India. It was in slight defect in Assam, Burma and South Madras and also locally at Peshawar.

The excess ranged between 2° and 6° over the whole area including Lower Sind, Rajputana, Central India, the eastern and central districts of the North-Western Provinces, Bihar, Chota Nagpur, West Bengal, the Central Provinces and Berar and was more than 4° in amount in the case of the stations for which comparative data are given below :—

Province.	Station.	Mean maximum temperature. Actual, February 1896.	Normal, February.	Variation, of actual from normal.
		°	°	°
Bengal	Chaibassa	89·8	83·7	+6·1
	Ranchi	82·4	76·8	+5·6
	Balasore	89·1	83·5	+5·6
	Calcutta	85·8	81·6	+4·2
	Hazaribagh	81·8	77·7	+4·1
North-Western Provinces.	Allahabad	85·0	79·9	+5·1
	Jhansi	85·7	80·7	+5·0
Central India	Sutna	84·3	79·2	+5·1
Central Provinces.	Jubbulpore	87·1	82·1	+5·0
	Saugor	85·5	80·7	+4·8
	Seoni	88·3	84·0	+4·3

The day temperature was in slight to moderate excess at the hill stations in Northern India and in Baluchistan.

The mean night or minimum temperature was above the normal over the whole of Northern and Central India, and was more than 2° in excess over the greater part of the area including South-East Bengal, Chota Nagpur, Central India, Rajputana, the Punjab and the greater part of the North-Western Provinces. It was more than 4° in amount at stations for which data are given below :—

Province.	Station.	Mean minimum temperature. Actual, February 1896.	Normal, February.	Variation of actual from normal.
		°	°	°
Rajputana	Ajmere	53·7	48·4	+5·3
	Sambhar	52·7	48·1	+4·6
	Jeypore	54·3	50·0	+4·3
North-Western Provinces.	Jhansi	59·1	54·4	+4·7
Punjab	Lahore	48·7	44·1	+4·6

The mean night temperature of the month was below the normal to a slight extent in the Peninsula south of Lat. 20°N. and in Central Burma. The deficiency exceeded 2° at Poona (—2°·2) and perhaps at Karwar (—2°·3).

The mean temperature of the month was in very slight defect in the southern half of the Peninsula and in slight excess in the northern half of that area. It was above the normal by moderate to considerable amounts over nearly the whole of Northern and Central India. The excess was 4° or upwards at stations for which data are given below:—

Province.	Station.	Mean daily temperature. Actual, February 1896.	Normal, February.	Variation of actual from normal.
		°	°	°
Bengal	Ranchi	69·7	65·0	+4·7
N.-W. Provinces	Jhansi	72·4	67·5	+4·9
Rajputana	Ajmere	67·0	62·8	+4·2
	Sambhar	66·5	62·3	+4·2
Central India	Sutna	69·3	65·1	+4·2
Central Provinces	Saugor	71·6	67·6	+4·0

The area of greatest excess of temperature hence included Central Rajputana, Central India and the northern districts of the Central Provinces.

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

1st.—Higher temperature both by day and night over the whole of Northern and Central India. The mean temperature of the month was above the normal over the whole of that area, the excess being large and marked in a narrow belt of country stretching from Central Rajputana to the central districts of Chota Nagpur.

2nd.—Increased day temperature and decreased night temperature in the Peninsula. The excess in the day temperature was greatest in the northern half and the deficiency in the night temperature greatest in the southern half of the Peninsula. The mean temperature of the month was in slight excess in the north and in very slight defect in the south of the Peninsula.

3rd.—The variations of the temperature conditions were smaller at the hill stations than in the neighbouring plains in Northern India Temperature was in slight excess at Kailang and in moderate defect at Leh.

One of the more important features of the meteorology of the month was the excessive temperature. Higher day

temperatures were registered during the month at stations in the area of the greatest excess of the day temperature in Bihar, Chota Nagpur, the Central Provinces and West Bengal than have been recorded during the month of February in the previous 25 years. The following gives data illustrating these features :—

PROVINCE.	STATION.	Highest maximum temperature recorded in February 1896.	Date on which recorded.	Highest maximum temperature recorded in February previous to 1896.	Year in which recorded.
		°		°	
West Bengal	Calcutta	98·4	28th	91·7	1881
	Burdwan	100·2	28th	96·0	1877
	Berhampore	97·7	28th	96·5	1873
	Cuttack	102·2	29th	101·3	1878
Chota Nagpur	Hazaribagh	92·2	26th	91·8	1876
Bihar	Patna	94·4	27th and 28th.	93·8	1878
North-Western Provinces.	Allahabad	96·6	27th	96·1	1884
Central Provinces	Jubbulpore	96·0	26th	94·7	1878
	Saugor	94·0	29th	93·6	1878
Central India	Sutna	95·0	27th	92·7	1887

The abnormal excess of the day temperature was hence most marked in South-West Bengal, *viz.*, at Calcutta and Burdwan. The highest temperature of the month at Calcutta was 6°·8 higher than has been previously recorded and at Burdwan 4°·2 higher.

A remarkable feature of the meteorology of the month was the excessively low temperature in Persia and the Euphrates Valley. The following gives data for two stations for which normal means are available :—

STATION.	VARIATION FROM NORMAL OF		
	Mean maximum temperature of month.	Mean minimum temperature of month.	Mean temperature of month.
	°	°	°
Bushire	—5·6	—3·8	—4·7
Baghdad	—8·7	—1·0	—4·9

The month was finer and drier than usual in the Persian area. The mean cloud amount at Baghdad was 1·2 and at Bushire 2·2.

The following gives temperature variation data of February for each of the fifty-six meteorological divisions or areas into which India is arranged for meteorological statistics :—

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	91·4	69·0	80·2	22·4	35·4	+0·3	+0·6	—0·3
	Lower Burma (Deltaic)	88·8	68·1	79·2	19·1	26·5	+0·4	+1·1	—0·7
	Central do.	91·4	57·9	74·7	33·6	45·8	—0·5	—0·7	+0·2
	Upper do.	81·8	52·9	66·6	27·4	42·2	—4·4	+1·5	—5·9
	Arakan	84·4	62·1	73·3	22·3	31·5	—0·3	+1·4	—1·7
BENGAL AND ASSAM	Eastern Bengal	80·7	58·9	69·9	21·8	38·8	+1·8	+3·0	—1·2
	Assam (Surma)	79·4	58·1	68·8	21·3	34·3	—0·5	+3·1	—3·6
	Do. (Brahmaputra)	74·2	54·6	64·4	19·6	38·5	—0·7	+0·7	—1·4
	Deltaic Bengal	86·0	60·4	73·2	25·7	45·8	+3·1	+1·6	+1·5
	Central do.	85·1	56·4	70·8	28·7	46·9	+3·6	+0·8	+2·8
	North do.	78·7	52·0	65·4	26·7	42·3	+2·1	+1·1	+1·0
	Bengal Hills	44·6	27·7	36·2	16·9	37·6	+0·4	+1·3	—0·9
	Orissa	86·5	67·2	76·9	19·2	34·8	+3·2	+1·7	+1·5
	Chota Nagpur	80·8	55·8	68·3	24·9	45·0	+5·3	+2·9	+2·4
	Bihar (South)	83·4	56·1	69·7	27·3	45·4	+3·4	+2·3	+1·1
	Do. (North)	81·2	52·3	66·7	28·9	48·5	+3·1	+0·4	+2·7
NORTH-WESTERN PROVINCES AND OUDH.	North-Western Provinces (East)	84·6	53·0	68·8	31·6	50·8	+4·3	+2·1	+2·2
	Oudh (South)	82·6	52·4	67·5	30·2	49·1	+3·9	+1·9	+2·0
	Do. (North)	80·7	51·4	66·1	29·3	47·9	?	?	?
	North-Western Provinces (Central)	83·5	54·3	68·9	29·2	46·6	+5·0	+4·7	+0·3
	Do. do. (West)	78·8	52·8	65·8	26·0	42·3	+2·2	+3·0	—0·8
	Do. do. (Submontane East)	81·4	53·2	67·3	28·2	48·1	+3·2	+1·2	+2·0
	Do. do. (West)	74·4	49·4	61·9	25·0	43·3	+1·8	+1·6	+0·2
	Do. do. (Hills)	52·9	38·9	45·4	13·1	29·8	—0·3	+0·6	—0·9

Province.	Division.	Actual Temperature.					Variation from normal of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Punjab	Punjab (South-East)	76·2	53·4	64·8	22·8	38·6	+1·1	+1·7	−0·6
	Do. (South)	72·7	49·0	60·8	23·7	40·0	+0·6	+2·8	−2·2
	Do. (Central)	71·3	48·7	60·0	23·6	40·6	+0·6	+4·6	−4·0
	Do. (Submontane)	72·4	47·9	60·2	24·5	37·0	?	?	?
	Do. (Hill Districts)	44·1	25·0	34·0	18·0	34·8	+1·3	+0·4	+0·9
	Do. (North)	65·9	42·7	54·3	23·2	41·6	+0·6	+2·2	−1·6
	Do. (West)	72·7	47·1	59·9	25·7	45·1	+0·7	+1·5	−0·8
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	88·0	72·0	80·0	16·0	24·1	+0·3	−0·9	+1·2
	Madras (South Central)	93·2	63·6	78·4	29·6	39·6	+0·3	−1·4	+1·7
	Coorg	82·3	60·0	71·2	22·3	28·8	+1·1	+2·7	−1·6
	Mysore	88·3	60·2	74·3	28·1	37·5	+1·7	+0·5	+1·2
	Konkan	84·6	68·4	76·5	16·2	24·1	+0·1	−0·6	+0·7
	Bombay Deccan	92·4	59·3	75·9	33·2	41·5	+1·4	−1·2	+2·6
	Hyderabad (North)	92·6	58·8	75·7	33·8	46·1	?	?	?
	Khandesh	91·1	54·3	72·7	36·8	52·0	+2·0	+0·2	+1·8
Central Provinces and Berar.	Berar	93·1	59·9	76·6	33·2	52·0	+3·0	+1·0	+2·0
	Central Provinces (West)	90·5	58·5	74·5	32·1	49·1	+2·8	+1·8	+1·0
	Do. (Central)	89·0	56·3	72·6	32·7	50·4	+4·3	+1·2	+3·1
	Do. (East)	90·8	60·3	75·6	30·5	45·5	+3·3	+0·4	+2·9
Bombay (North)	Gujarat	90·0	60·2	75·1	29·8	44·1	+1·3	+1·0	+0·3
	Kathiawar	85·1	59·4	72·2	25·6	42·7	+0·7	+2·1	−1·4
	Sind	81·4	56·2	68·8	25·3	46·7	+2·8	+2·4	+0·4
	Baluchistan Hills	53·2	29·3	41·3	23·9	50·3	+1·7	+1·3	+0·4
Rajputana and Central India.	Central India (East)	84·6	53·6	69·1	31·1	48·3	+4·0	+2·5	+1·5
	Rajputana (East), and Central India (West).	82·5	54·1	68·3	28·4	49·0	+3·1	+3·8	−0·7
	Do. (West)	81·9	51·8	67·2	30·1	48·8	+3·9	+0·5	+3·4
Madras	East Coast (North)	89·1	67·8	78·5	21·3	35·8	+3·1	−0·5	+2·6
	Hyderabad (South)	93·9	63·6	78·8	30·3	40·2	+1·4	−1·6	+3·0
	Madras (Central)	95·5	64·2	79·9	31·3	41·1	+1·1	−1·5	+2·6
	East Coast (Central)	90·2	68·1	79·2	22·1	33·5	+1·4	0	+1·4
	Do. (South)	87·6	67·9	77·8	19·7	29·2	+0·5	−1·3	+1·8
	Madras (South)	89·9	71·6	80·8	18·3	28·4	−0·3	−1·0	+0·7

The following is a brief statement of the larger changes of the temperature conditions of the month over India:—

Temperature at the commencement of the month was above the normal over the whole area except Burma, Assam and the North Punjab. The excess was very large in Rajputana. The following gives comparative data for the 24 hours preceding 8 A.M. of the 1st:—

Political area or Province.	Variation from normal of		
	Mean maximum temperature.	Mean Minimum temperature.	Mean temperature.
	°	°	°
Burma	−1·8	−0·7	−1·3
Bengal and Assam	+1·2	+1·0	+1·1
North-Western Provinces and Oudh	+5·2	+7·1	+6·2
Punjab	−3·9	+6·1	+1·1
Sind and Rajputana	+6·8	+13·1	+10·0
Central India and Gujarat	+5·0	+7·7	+6·4
Central Provinces and Berar	+3·2	+2·1	+2·7
Bombay	+0·9	+0·1	+0·5
Madras	+2·5	+0·6	+1·6

Conditions were unchanged during the next two days and the chief feature of the period was excessive temperature in Rajputana, Central India and the North-Western Provinces, as is shown by the following:—

Political area or Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.		
	1st February.	2nd February.	3rd February.
	°	°	°
Sind and Rajputana	+10·0	+9·1	+8·6
Central India and Gujarat	+6·4	+6·4	+7·6
North-Western Provinces and Oudh	+6·2	+2·2	+4·5

During the next two days temperature decreased considerably in North-Western and Central India, and the area of greatest excess of temperature was transferred eastwards to South Bengal. This reduction of temperature followed the disappearance of the first disturbance of the month in Upper India. A further reduction occurred on the 7th and 8th after the second disturbance of the

month which gave light showers. The following mean temperature variation data for the 4th, 6th, and 8th illustrate these changes :—

Political area or Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.		
	4th February.	6th February.	8th February.
	°	°	°
Burma	+0·6	+2·8	−0·3
Bengal and Assam	+3·9	+0·6	+4·7
North-Western Provinces and Oudh	+2·9	+2·2	+1·4
Punjab	−1·5	+2·9	−0·2
Sind and Rajputana	+2·3	+6·9	−1·1
Central India and Gujarat	+5·1	+3·2	−0·2
Central Provinces and Berar	+5·1	+3·3	+0·6
Bombay	+1·6	+0·8	−1·2
Madras	+1·4	+0·6	−0·2

Temperature on the 8th was approximately normal over the whole of India with the exception of Bengal where it was in considerable excess, the excess being most pronounced in the southern districts.

Temperature increased considerably in Rajputana, Central India and the Central Provinces on the 10th and 11th, and was in moderate to large excess on these days and also on the 12th as is shown by the following :—

Political area or Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.					
	10th Feb.	11th Feb.	12th Feb.	13th Feb.	14th Feb.	15th Feb.
	°	°	°	°	°	°
Sind and Rajputana	+3·7	+2·8	+1·5	−3·1	−1·6	+2·7
Central India and Gujarat	+3·0	+3·9	+2·3	−2·3	−2·7	+1·1
Central Provinces and Berar	+2·4	+5·5	+5·6	+0·2	−3·5	−0·6

Temperature fell considerably in Madras during the same period due to the abnormal prevalence of dry north-westerly winds, more especially at the coast stations. The deficiency was hence chiefly in the night temperature as is shown by the following comparative data :—

Madras Presidency.	Variation from normal of date.			
	10th February.	11th February.	12th February.	13th February.
Maximum temperature	+0·5	−1·0	−0·2	+0·3
Minimum temperature	−1·4	−2·1	−3·9	−3·9
Mean temperature	−0·5	−1·6	−2·1	−1·8

Weather was feebly disturbed with numerous thunderstorms in Bengal on the 13th and in Baluchistan and Kashmir on the 14th and 15th. A large general reduction of temperature occurred during this period as is shown by the following—

Political area or Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.		
	12th February.	14th February.	Change in period.
	°	°	°
Bengal and Assam	+4·6	−0·3	−4·9
North-Western Provinces and Oudh	+4·9	−0·7	−5·6
Sind and Rajputana	+1·5	−1·6	−3·1
Central India and Gujarat	+2·3	−2·7	−5·0
Central Provinces and Berar	+5·6	−3·5	−9·1

Temperature increased as rapidly during the next two days as it had fallen during the previous two days. The following gives data for comparison with those of the preceding table :—

Political area or Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of date.		Mean increase of temperature during period.
	14th February.	16th February.	
	°	°	°
Bengal and Assam	−0·3	+1·1	+1·4
North-Western Provinces and Oudh	−0·7	+3·8	+4·5
Punjab	+2·5	+3·3	+0·8
Sind and Rajputana	−1·6	+4·7	+6·3
Central India and Gujarat	−2·7	+5·0	+7·7
Central Provinces and Berar	−3·5	+4·2	+7·7

The conditions of the 16th were hence very similar to those of the 12th; the chief feature being the excessive temperature in the Central Provinces, Central India, Rajputana and the North-Western Provinces.

Temperature again decreased over nearly the whole Indian area. The following gives data showing the fall in different parts of India during the period from the 16th to the 20th :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.		Mean reduction of temperature during period.
	16th February.	20th February.	
	°	°	°
Bengal and Assam	+1·1	−0·7	−1·8
North-Western Provinces and Oudh .	+3·8	−1·9	−5·7
Punjab	+3·3	−1·6	−4·9
Sind and Rajputana	+4·7	−0·6	−5·3
Central India and Gujarat . . .	+5·0	−2·0	−7·0
Central Provinces and Berar . .	+4·2	−3·6	−7·8
Bombay	+0·2	−2·3	−2·5

Central India and the Central Provinces were hence, as during the preceding period from the 12th to the 16th, the areas of greatest change of temperature.

The deficiency was, it may be noted, chiefly in the night temperature, the usual rule in the cold weather period when the mean temperature is below the normal.

A very rapid increase of temperature took place in Upper India and Baluchistan on the 21st and temperature was largely in excess in that area during the next two days. The following gives data :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.		
	21st February.	22nd February.	23rd February.
	°	°	°
Baluchistan (Quetta) . .	+6·3	+12·2	+ 6·2
Sind and Rajputana . .	+5·6	+ 8·2	+10·4
Punjab	+3·7	+ 5·4	+0·6

This rapid increase occurred in front of the cold weather storm of the last week of the month.

Temperature also increased during this period in North-Eastern India and was on the 23rd more or less above the normal over India but was in considerable deficiency in Burma (—3°·3).

The warm wave in front of the storm was transferred slowly eastwards to Rajputana on the 24th, Central India on the 25th, and Chota Nagpur on the 26th. The cool wave in the rear of the disturbance was feeble. It passed through Baluchistan on the 25th (the mean temperature at Quetta on that day being 6° below the normal) and passed into Sind and the West Punjab on the 26th.

Temperature increased generally on the 27th, and the chief feature of the remainder of the month was abnormally high temperature in North Eastern and Central India and the Central Provinces as is indicated by the following:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.			
	26th February.	27th February.	28th February.	29th February.
	°	°	°	°
North-Western Provinces and Oudh	+5·3	+7·8	+5·9	+4·1
Bihar	+4·7	+8·3	+8·9	+5·8
Chota Nagpur	+9·8	+9·9	+9·1	+6·8
Bengal and Orissa . . .	+3·5	+4·5	+5·5	+5·1
Central Provinces and Berar . .	+5·4	+6·4	+5·6	+6·3
Central India and Gujarat . .	+3·4	+3·6	+2·3	+2·0

Temperature was, during this period from the 26th to the 29th, steadily in defect to a slight extent in Madras as is shown by the following statement :—

MADRAS PRESIDENCY.	VARIATION FROM NORMAL OF DATE.					
	24th February.	25th February.	26th February.	27th February.	28th February.	29th February.
	°	°	°	°	°	°
Maximum temperature . .	+1·7	+0·1	−0·4	−0·2	+0·9	+2·2
Minimum ,, . .	+2·3	−2·3	−2·2	−3·2	−4·1	−2·9
Mean ,, . .	+2·0	−1·1	−1·3	−1·7	−1·6	−0·4

The following table gives the variations of the mean temperature, week by week, and also for 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				
	8th February.	15th February.	22nd February.	29th February.	For whole month.
	°	°	°	°	°
Burma	+0·7	+0·5	−0·4	−0·6	0
Bengal and Assam . .	+2·9	+1·5	+0·3	+3·7	+2·3
North-Western Provinces and Oudh.	+2·4	+1·9	+0·5	+5·3	+2·7
Punjab	+0·3	+0·8	+2·5	+2·8	+1·6
Sind and Rajputana .	+4·7	+1·1	+2·3	+3·1	+3·3
Central India and Gujarat	+3·9	+0·9	+1·0	+3·4	+2·5
Central Provinces and Berar.	+3·5	+1·4	−0·1	+4·5	+2·3
Bombay . . .	+0·8	+0·3	−0·8	−0·1	+0·1
Madras	+0·6	−1·1	+0·9	−0·2	+0·1

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 establishment 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 Chota Nagpur 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 were, on the mean of the month, stronger, but not so steady as usual at Port Blair and the Burma coast stations. They were of normal strength, but steadier than usual in Bengal. The mean wind directions were less westerly than usual at the coast stations of Saugor Island and False Point, but more westerly at the interior stations. The following gives data in illustration :—

Station.	Wind direction.		
	Mean actual, February 1896.	Mean normal, February.	Westerly deflection.
	°	°	
False Point	S 4 W	S 12 W	— 8
Saugor Island	S 24 W	S 50 W	—26
Calcutta	S 88 W	S 81 W	+ 7
Burdwan	N 78 W	N 58 W	+20

The mean direction of the air movement during the month in the Gangetic Plain was normal. It was steadier than usual over the whole area and stronger than usual in Bihar and Chota Nagpur. The following data for four stations illustrate the increased steadiness :—

Station.	Steadiness.		
	Actual percentage, February 1896.	Normal percentage, February.	Variation from normal.
Patna	53	47	+ 6
Allahabad	56	25	+31
Roorkee	44	23	+21
Lahore	47	30	+17

Winds were of normal strength, but steadier than usual in Lower Sind and the West Punjab. The mean wind direction of the month for Kurrachee was S 66° W, the normal being N 80° W.

Winds were in Rajputana and Central India of normal strength and steadiness, but were more westerly than usual, as is indicated by the following :—

Station.	Wind direction.		
	Mean actual, February 1896.	Mean normal, February.	Westerly deflection.
	°	°	°
Deesa	N 41 W	N 28 W	+13
Jeypore	N 70 W	N 9 W	+61
Nowgong	N 86 W	N 52 W	+34

Winds were, as might be expected from the abnormal pressure conditions in the Peninsula feebler than usual but were on the whole steadier. The mean wind directions in that area contained a very strong westerly element and in several instances the normal easterly component was replaced by a westerly component. The following data of four stations illustrate this feature :—

Station.	Wind direction.	
	Mean actual, February 1896.	Mean normal, February.
	°	°
Sholapur	S 45 W	S 33 E
Akola	N 67 W	N 1 E
Khandwa	N 44 W	N 8 W
Nagpur	S 81 W	N 55 E

The air movement at the west coast stations was normal in strength and direction, but steadier than usual, more especially in Malabar. Winds were stronger than usual in Coorg and Mysore, but were weak and unsteady in the Madras coast districts and Central Madras. The mean air movement at Madras, for example, was nearly 30 per cent. less than the normal.

The chief feature of the air movement of the month at the hill stations over the whole of India was its increased strength and steadiness. The following data for five stations illustrate these features:—

STATION.	VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, February 1896.	Mean normal, February.	Variation from normal.	Actual percentage, February 1896.	Normal percentage, February.	Variation from normal.
Murree	262	196	+66	59	29	+30
Darjeeling	140	121	+19	29	33	— 4
Mount Abu	203	131	+72	70	24	+46
Pachmarhi	119	92	+27	38	24	+14
Wellington	73	62	+11	73	60	+13

The following gives a brief summary of the chief abnormal features of the air movement of the month in India:—

(1) Southerly winds were established earlier than usual in South Bengal and the mean winds of the month in the interior were more westerly than usual.

(2) Winds were much steadier in the Gangetic Plain.

(3) Winds were stronger at the hill stations over the whole of India

(4) Sea winds set in earlier than usual on the Sind coast. Winds were more westerly than usual in Central India and the Central Provinces.

(5) Winds were feebler than usual over the whole of Rajputana, and the Deccan and contained an abnormally strong westerly component.

The following table gives comparative data of the mean air movement of the month in different provinces of Northern and Central India:—

PROVINCE.	VELOCITY IN MILES PER DIEM.		Percentage variation.
	Mean actual, February 1896.	Mean normal February.	
Burma	170	115	+48
Bengal	110	92	+20
Chota Nagpur	224	156	+44
Bihar	104	80	+30
North-Western Provinces and Oudh	71	71	0
Punjab	62	57	+ 9
Rajputana	126	127	— 1
Central India	86	79	+ 9
Central Provinces	85	78	+ 9
Berar	120	120	0

Humidity and Cloud.

The air was slightly drier than usual in Burma and slightly damper in East Bengal and Assam. The following gives comparative data for these areas:—

DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, February 1896.	Average normal, February.	Variation from normal.	Average actual, February 1896.	Average normal, February.	Variation from normal.
	"	"	"	%	%	
Burma	·596	·591	+·005	68	69	—1
Assam	·453	·422	+·031	74	72	+2
East Bengal	·515	·475	+·040	67	67	0

The variations in the relative humidity of the month for these areas were small in amount and chiefly due to corresponding variations in the actual amount of aqueous vapour present in the air. The air was remarkably and unusually dry over the large area including Bengal (except the eastern districts), Orissa, Chota Nagpur, the eastern and central districts of the North-Western Provinces, the Central Provinces, Berar, the Deccan and Mysore. The following table gives comparative data:—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, February 1896.	Average normal, February.	Variation from normal.	Average actual, February 1896.	Average normal, February.	Variation from normal.
	"	"	"	%	%	
Bengal (except East)	·445	·475	—·030	57	67	—10
Orissa	·565	·573	—·008	64	70	— 6
Bihar	·325	·364	—·039	51	60	— 9
Chota Nagpur	·231	·244	—·013	32	42	—10
North-Western Provinces (except Agra), Berar	·272	·297	—·025	47	56	— 9
	·248	·281	—·033	30	35	— 5
Central Provinces	·271	·308	—·037	34	44	—10
Deccan	·256	·312	—·056	33	35	— 2
Mysore	·326	·394	—·068	43	52	— 9

Over nearly the whole area the diminished humidity was due in part to much higher temperature than usual and in part to the presence of a smaller amount of aqueous vapour in the lower atmospheric strata.

The mean humidity of the month was more than 12 in defect at stations for which data are given below:—

Station.	Relative humidity.		
	Actual, February 1896.	Normal, February.	Variation from normal.
	%	%	
Calcutta	54	68	−14
Berhampore	51	64	−13
Allahabad	39	55	−16
Jubbulpore	42	58	−16
Raipur	32	45	−13
Mercara	40	58	−18

The mean humidity of the month was slightly higher than usual in the Punjab, Rajputana and Sind, as is shown by the following:—

Province.	Absolute humidity.			Relative humidity.		
	Average actual, February 1896.	Average normal, February.	Variation from normal.	Average actual, February 1896.	Average normal, February.	Variation from normal.
	"	"	"	%	%	
Punjab	·276	·268	+·008	58	57	+1
Rajputana	·276	·246	+·030	40	38	+2
Sind	·374	·313	+·061	53	48	+5

The air was also, on the average of the month, somewhat damper than usual at the hill stations in Northern and Central India (but not in Baluchistan). The following gives data for four typical stations:—

Station.	Absolute Humidity.			Relative humidity.		
	Actual, February 1896.	Normal February.	Variation from normal.	Actual, February 1896.	Normal February.	Variation from normal.
	"	"	"	%	%	
Murree	·220	·151	+·069	82	63	+19
Simla	·162	·152	+·009	64	55	+ 9
Darjeeling	·217	·211	+·006	85	79	+ 6
Mount Abu	·235	·176	+·059	43	34	+ 9

The air was slightly drier than usual in the west coast districts. Thus the mean humidity of the month was 5 below the normal at Cochin and Karwar, 2 at Bombay and 1 at Ratnagiri. It was, on the other hand, slightly in excess at the Madras coast stations. For example, it was 3 in excess at Madras and 4 at Vizagapatam. The increased dryness extended as far west as Aden where the mean humidity of the month was 5 in defect.

The chief features of the mean humidity conditions of the month may hence be summarized as follows:—

(1) Slightly decreased humidity in Burma.

(2) Slightly increased humidity in Assam and East Bengal.

(3) Abnormal dryness of the air over a greater part of the interior including Bengal, the Gangetic Plain, Berar, the Central Provinces, Deccan and Mysore.

(4) Decreased humidity in the west coast districts and South Madras.

(5) Increased humidity to a slight extent in the Madras coast districts.

(6) Increased humidity to a slight or moderate extent in Rajputana, the Punjab and hill districts of Northern India.

In consequence of the abnormal conditions of the month remarkably low humidity percentages were registered over the whole of the interior of India. The driest periods were from the 18th to the 22nd and from the 27th to the 29th. The following table gives the minimum humidity of the month (with the date) recorded at a large number of stations:—

Province.	Station.	Lowest humidity recorded during the month.	Date.
		%	
Bengal	Calcutta	13	20th
	Burdwan	12	29th
	Hazaribagh	12	20th
North-Western Provinces.	Allahabad	8	21st
	Lucknow	11	21st
Sind	Jacobabad	11	18th
Rajputana	Jeypore	6	19th
	Deesa	3	18th
	Mount Abu	8	19th
Central India	Sutna	6	21st
	Nowgong	9	20th
	Khandwa	6	19th & 20th
Central Provinces	Jubbulpore	8	20th
	Raipur	7	21st
Berar	Buldana	1	21st
	Akola	9	20th & 21st
	Chikalda	8	19th
Deccan	Poona	8	20th
	Sholapur	7	22nd
	Bellary	6	21st
Mysore	Mysore	7	14th
	Chittaldroog	9	12th

The variations of the mean amount of cloud of the month were similar at the great majority of stations to those of the humidity conditions. Cloud was in slight excess in Burma, Assam and East Bengal, as is shown below :—

Province.	Mean cloud amount.		
	Average actual, February 1896.	Average normal, February.	Variation from normal.
Burma	1·8	1·7	+0·1
Assam	4·2	3·4	+0·8
East Bengal	2·7	1·8	+0·9

There was considerably less cloud than usual in Bengal (except the Eastern Districts), Bihar, Chota Nagpur, the North-Western Provinces, Central India, Berar, the Central Provinces, the Deccan, Mysore and South Madras. The following gives data for this large area of decreased cloud (and of excessive dryness of the air) :—

Province or division.	Mean cloud amount.		
	Average actual, February 1896.	Average normal February.	Variation from normal.
Bengal (except East Bengal)	1·3	1·9	—0·6
Bihar	1·0	2·0	—1·0
Chota Nagpur	1·6	2·0	—0·4
North-Western Provinces and Oudh	2·8	2·9	—0·1
Central India	0·8	2·7	—1·9
Central Provinces	1·0	1·6	—0·6
Berar	1·1	1·7	—0·6
Deccan	1·1	1·5	—0·4
ysore	1·1	·2	—1·1
South Madras	1·8	·3	—0·6

The amount of cloud in the west coast districts was practically identical with the small normal amount of the month. It was, on the other hand, in slight defect in the Madras coast districts.

Cloud was in slight excess, on the mean of the month, in the Punjab and at the hill stations in Northern India :—

Province or station.	Mean cloud amount.		
	Average actual, February 1896.	Average normal February.	Variation from normal.
Punjab	3·7	3·6	+0·1
Leh	7·1	6·7	+0·4
Simla	6·7	5·3	+1·4
Darjeeling	6·6	5·7	+0·9

There was, on the other hand, much less cloud at the hill stations in Central and Southern India. The mean data for Zanzibar indicate that there was much less cloud than usual at that station whereas at Mauritius cloud was in large excess.

The mean cloud amount of the month was 1·0 or less at a large number of stations. Fifteen out of the 84 second class reporting stations had average cloud amounts not exceeding 1·0. The means of the month were least for the following stations :—

Station.	Mean cloud amount.		
	Actual, February 1896.	Normal, February.	Variation from normal.
Karwar	0·4	0·6	—0·2
Berhampore	0·4	1·9	—1·5
Sutna	0·6	2·0	—1·4
Khandwa	0·7	1·3	—0·6
Hoshangabad	0·7	1·5	—0·8
Darbhanga	0·7	1·5	—0·8

The following gives a brief summary of the chief features of the mean distribution of cloud during the month :—

(1) Cloud was in slight excess in Burma, Assam and East Bengal.

(2) It was in slight excess in the Punjab plains and the Western Himalayan area.

(3) It was in moderate to large defect over the greater part of the interior, including Bengal (except the Eastern Districts), Bihar, the North-Western Provinces, Chota Nagpur Central India, Berar, the Central Provinces, Deccan, Mysore and South India.

(4) It was normal in amount in the west coast districts and slightly below it in the Madras coast districts.

(5) Skies were on the average of the month most serene in Bihar, Central Bengal and the Central Provinces, and (perhaps) the west coast districts.

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, more especially in the hill and submontane districts. 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 1896 was less than the normal over the greater part of India and was absolutely or practically *nil* over the Peninsula and a large part of Northern and Central India, including Orissa, Bihar, Chota Nagpur, the eastern districts of the North-Western Provinces, Oudh, Rajputana and the Central Provinces. The chief periods of rainfall were as follows:—

1st.—From the 1st to the 4th, during the advance of a feeble cold weather depression across Northern India. The Punjab and western districts of the North-Western Provinces received a light to moderate fall of rain during this period.

2nd.—The 7th and 8th, when the hill and submontane districts of Upper India obtained light showers.

3rd.—The 13th and 14th, Bengal and Cachar received moderate but fairly general rain on the 13th and Assam on the 14th.

4th.—The 18th to the 21st. The Chittagong, Noakhali and Backergunge districts received very heavy thunder-showers on the 18th and 19th and Burma and Arakan light to moderate showers from the 19th to the 21st.

5th.—The 23rd to the 25th. The Punjab and western districts of the North-Western Provinces obtained moderate and fairly general rain during this period. The Assam Valley and Cachar also had a moderate burst of rain.

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

(1) No rain fell in the Peninsula, the Central Provinces, Central India, Berar, Chota Nagpur, Bihar, Oudh and the eastern half of the North-Western Provinces.

(2) Baluchistan received unusually frequent and heavy rain.

(3) The rainfall of the month was in slight excess in the Punjab and the western districts of the North-Western Provinces.

(4) It was in moderate excess in Tennasserim, Arakan, East Bengal and Assam (Surma).

(5) The precipitation in the Western Himalayas was more or less above the normal of the month, but was small in amount and below the normal in the Eastern Himalayas.

The following table gives mean actual, mean normal and variation rainfall data for the 57 meteorological divisions or districts into which India is divided, in the same form as in the previous month, and has been prepared in the same manner as hitherto:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, February 1896.	Average normal, February.	Average actual, February 1896.	Average normal, February.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	0·9	?	0·75	0·04	+0·71
	Lower Burma (Deltaic)	1·0	?	0·60	0·16	+0·44
	Central do.	0	?	0	0·13	—0·13
	Upper do.	1·5	?	0·79	?	?
	Arakan	1·2	?	0·78	0·15	+0·63
Bengal and Assam	Eastern Bengal	1·5	1·7	1·32	1·06	+0·26
	Assam (Surma)*	?	?	4·40	2·28	+2·12
	Do. (Hill tracts)*	?	?	0·68	1·93	—1·25
	Do. (Brahmaputra)*	?	?	0·95	1·30	—0·35
	Deltaic Bengal	0·4	1·8	0·17	1·17	—1·00
	Central do.	0·5	1·4	0·14	0·76	—0·62
	North do.	0	1·1	0·01	0·43	—0·42
	Bengal Hills	1·0	2·5	0·26	0·69	—0·43
	Orissa	0	1·5	0	0·90	—0·90
	Chota Nagpur	0·1	1·3	0·04	0·63	—0·59
	Bihar (South)	0	1·1	0·01	0·43	—0·42
	Do. (North)	0	1·1	0	0·44	—0·44

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, February 1896.	Average normal, February.	Average actual, February 1896.	Average normal, February.	Variation from normal.
				Inches.	Inches.	Inches.
North-Western Provinces and Oudh:	North-Western Provinces (East)	0	0·8	0	0·34	−0·34
	Oudh (South)	0·1	0·6	0·02	0·23	−0·21
	Do. (North)	0·3	0·8	0·08	0·31	−0·23
	North-Western Provinces (Central)	0·3	0·6	0·08	0·22	−0·14
	Do. do. (West)	1·3	0·8	0·61	0·32	+0·29
	Do. do. (Submontane East)	0	1·0	0	0·41	−0·41
	Do. do. (do. West)	1·6	1·9	0·51	0·98	−0·47
	Do. do. (Hills)	3·8	3·0	1·55	2·05	−0·50
Punjab	Punjab (South-East)	1·8	1·0	0·74	0·37	+0·37
	Do. (South)	2·7	1·1	0·88	0·43	+0·45
	Do. (Central)	2·3	2·0	0·82	0·89	−0·07
	Do. (Submontane)	3·8	2·4	1·43	1·30	+0·13
	Do. (Hill Districts)	8·3	4·4	4·25	3·04	+1·21
	Do. (North)	3·3	2·6	1·46	1·42	+0·04
	Do. (West)	2·1	1·1	0·76	0·66	+0·10
Bombay and Malabar Coast Districts Madras.	Malabar Coast	0	0·2	0	0·16	−0·16
	Madras (South Central)	0	0·2	0	0·13	−0·13
	Coorg	0	?	0	?	?
	Mysore*	?	?	0	0·04	−0·04
	Konkan	0	0	0	0	0
	Bombay Deccan	0	0·1	0	0·03	−0·03
	Khandesh	0	0	0	0·03	−0·03
Central Provinces and Berar.	Berar	?	?	0	0·24	−0·24
	Central Provinces (West)	0	0·5	0	0·21	−0·21
	Do. do. (Central)	0	0·6	0	0·34	−0·34
	Do. do. (East)	0	0·6	0	0·32	−0·32
Bombay (North)	Gujarat	0	0	0	0·01	−0·01
	Kathiawar	0	0	0·01	0·09	−0·08
	Sind	0	?	0·07	0·31	−0·24
	Baluchistan Hills	3·0	?	1·16	1·43	−0·27
Rajputana and Central India.	Central India (East)	0·1	?	0·04	0·31	−0·27
	Rajputana (East), Central India (West)	0·3	?	0·08	0·26	−0·18
	Rajputana (West)	0·1	?	0·04	0·12	−0·08
Madras	East Coast (North)	0	0·4	0	0·21	−0·21
	Ditto (do.) (a)	0	0·4	0	0·19	−0·19
	Hyderabad (South)*	?	?	0	0·12	−0·12
	Madras (Central)	0	0·1	0	0·03	−0·03
	East Coast (Central)	0	0·2	0	0·19	−0·19
	Ditto (South)	0	0·2	0	0·30	−0·30
	Madras (South)	0	0·8	0	0·57	−0·57

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

British Baluchistan received rain during four periods, *viz.*, the 1st to the 3rd, the 10th and 11th, the 14th and 15th, and the 22nd to the 24th. The rainfall was general during the first period but was restricted to the plateau during the remaining periods. The rainfall stations on the Mushkaf-Bolan State railway below 3,500 feet received a total average of ·66 inch and above 3,500 feet, an average of 1·93 inches or nearly three times as large an amount as the lower level stations.

The rainfall of the month was probably in slight excess.

The following gives data for the stations for which reliable means have been determined :—

	Rainfall.		
	Actual, February 1896.	Normal, February.	Variation, from normal.
	Inches.	Inches.	Inch.
Pishin	1·66	1·35	+0·31
Quetta	1·61	1·50	+0·11

Kuchh reported the largest total fall of the month, *viz.*, 4·65 inches, of which 3 inches were registered on the 2nd.

In Kashmir the precipitation of the month was unusually frequent and heavy. The chief periods were from the 1st to the 3rd, the 5th to the 7th, the 11th, the 14th and 15th and the 23rd to the 25th. The precipitation during the last period was unusually heavy. The following large amounts were registered:—

DATE.	STATION.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
23RD	Ramban	2·15
24TH	Ramban	3·67
	Kishtwar	2·82
	Punch	2·35

Very heavy snow fell during this period in the mountain ranges to the north and east of the Kashmir valley and probably also on the Pir Panjal (judging by the falls given above at Punch and Kishtwar). The precipitation of the month was almost certainly in considerable to large excess. Normal data are only available for Leh. That station received a total of 1·72 inches or 1·49 inches more than the normal amount of the month (·23 inch.)

There were four periods of rainfall in the Punjab of which the following is a brief account.

The first period was from the 1st to the 3rd. Rain fell more or less generally over the whole province during this period. It was light in the southern districts, more especially in Gurgaon and Hissar, and was heavy in the Kangra district.

The second period was the 6th and 7th when the hill and submontane districts obtained light to moderate showers.

The third period was the 14th and 15th. The rainfall of this period was less in amount than during the previous period and occurred chiefly in Kangra.

The fourth period was from the 23rd to the 26th when the rainfall was due to a local disturbance. The precipitation was heavy on the hills, moderate in the submontane districts and light in the remainder of the Province, more especially in the southern and central districts.

The following is a comparative statement of the rainfall of the month in the seven divisions of the province.

DIVISION.	RAINY DAYS.			RAINFALL.		
	Average actual, February 1896.	Average normal, February.	Variation from normal.	Average actual, February 1896.	Average normal, February.	Variation from normal.
				Inches.	Inches.	Inches.
Punjab (South-East)	1·8	1·0	+0·8	0·74	0·37	+0·37
„ (South)	2·7	1·1	+1·6	0·88	0·43	+0·45
„ (Central)	2·3	2·0	+0·3	0·82	0·89	−0·07
„ (Submontane)	3·8	2·4	+1·4	1·43	1·30	+0·13
„ (Hill Districts)	8·3	4·4	+3·9	4·25	3·04	+1·21
„ (North)	3·3	2·6	+0·7	1·46	1·42	+0·04
„ (West)	2·1	1·1	+1·0	0·76	0·66	+0·10

The rainfall of the month was hence below the normal in the central districts and was in excess over the remainder of the Province. The excess was large in amount only in the hill districts and was apparently largest on the interior and more elevated ranges. The following gives data of the Simla and Kangra hill districts:—

DISTRICT.	RAINFALL.			
	Average actual, February 1896.	Average normal, February.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Simla	2·97	2·21	+0·76	+34
Kangra	4·96	3·50	+1·46	+42

The following data show that the excess was most marked in the interior:—

DISTRICT.	STATION.	RAINFALL.		
		Actual, February 1896.	Normal, February.	Variation from normal.
		Inches.	Inches.	Inches.
SIMLA	Kasauli	1·44	1·78	−0·34
	Simla	4·63	1·48	+3·15
KANGRA	Plach	4·55	2·33	+2·22
	Kulu	7·67	4·51	+3·16
	Nagar	9·23	4·24	+4·99

Oudh and the eastern half of the North-Western Provinces were practically rainless throughout the month. The western half of the province and the hill districts received fairly general rain from the 1st to the 3rd during the first disturbance of the month and light rain

from the 23rd to the 26th during the last disturbance of the month. The hill districts had also showers on the 7th and the 12th.

The rainfall of the month was below the normal over the whole province with only a few local exceptions, chiefly in the hill districts. The most noteworthy are given below :—

DISTRICT.	STATION.	RAINFALL.		
		Actual, February 1896.	Normal, February.	Variation from normal.
		Inches.	Inches.	Inches.
NAINI TAL . .	Naini Tal .	7·55	2·56	+4·99
GARHWAL . .	Goshimath .	5·60	3·90	+1·70

The rainfall was below the normal in seven divisions, and in excess in the remaining division of the province, the deficiency relatively to the normal increasing southwards from the hills and eastwards down the Gangetic Plain. The following is a comparative statement of the rainfall of the month :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Actual, February 1896.	Normal, February.	Variation from normal.	Actual, February 1896.	Normal, February.	Variation from normal.
				Inches.	Inches.	Inch.
North-Western Provinces (East).	0	0·8	—0·8	0	0·34	—0·34
Oudh (South) . .	0·1	0·6	—0·5	0·02	0·23	—0·21
„ (North) . .	0·3	0·8	—0·5	0·08	0·31	—0·23
North-Western Provinces (Central).	0·3	0·6	—0·3	0·08	0·22	—0·14
North-Western Provinces (West).	1·3	0·8	+0·5	0·61	0·32	+0·29
North-Western Provinces (Submontane East).	0	1·0	—1·0	0	0·41	—0·41
North-Western Provinces (Submontane West).	1·6	1·9	—0·3	0·51	0·98	—0·47
North-Western Provinces (Hills).	3·8	3·0	+0·8	1·55	2·05	—0·50

South-West and East Bengal had light local showers on the 13th. The Backergunge, Noakhali and Chittagong districts and the South Lushai hills obtained local downpours accompanying thunderstorms during the period from the 18th to the 20th. The large fall of 9·25 inches was registered at Chittagong during the 24 hours preceding 8 A.M. of the 19th.

The rainfall of the month was practically or absolutely *nil* in Bihar, Chota Nagpur, Orissa and North Bengal. It was in defect over the whole province except in three districts in East Bengal. The Chittagong district had a total average fall of 5·3 inches, the South Lushai hills of 3·4 inches, Noakhali of 2 inches, and Backergunge of 1 inch.

The following statement shows the amount of the deficiency in the various divisions of the province :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Average actual, February 1896.	Average normal, February.	Variation from normal.	Average actual, February 1896.	Average normal, February.	Variation from normal.
				Inches.	Inches.	Inch.
Eastern Bengal . .	1·5	1·7	—0·2	1·32	1·06	+0·26
Deltaic „ . .	0·4	1·8	—1·4	0·17	1·17	—1·00
Central „ . .	0·5	1·4	—0·9	0·14	0·76	—0·62
North „ . .	0	1·1	—1·1	0·01	0·43	—0·42
Bengal Hills . .	1·0	2·5	—1·5	0·26	0·69	—0·43
Orissa	0	1·5	—1·5	0	0·90	—0·90
Chota Nagpur . .	0·1	1·3	—1·2	0·04	0·63	—0·59
Bihar (South) . .	0	1·1	—1·1	0·01	0·43	—0·42
„ (North) . .	0	1·1	—1·1	0	0·44	—0·44

The Assam valley (more especially the eastern districts) had moderate showers on the 2nd, 7th and 14th, and fairly general rain from the 17th to the 24th. Cachar received showers on the 13th, again on the 17th and 18th, and from the 23rd to the 25th. The rainfall of the month was very unequally distributed. It was above the normal in the Sibsagar district of Upper Assam and Cachar and generally below it in Lower Assam. The following gives data for each of the eight plains districts :—

DIVISION.	DISTRICT.	RAINFALL.		
		Average actual, February 1896.	Average normal, February.	Variation from normal.
		Inches.	Inches.	Inches.
UPPER ASSAM .	Nowgong . .	0·22	0·89	—0·67
	Sibsagar . .	1·86	1·62	+0·24
	Lakhimpur . .	1·57	2·66	—1·09
LOWER ASSAM .	Darrang . .	0·14	0·77	—0·63
	Kamrup . .	0·16	0·54	—0·38
	Goalpara . .	0·17	0·44	—0·27
CACHAR . .	Cachar . .	4·86	1·69	+3·17
	Sylhet . . .	3·51	1·03	+2·48

No rain fell in the Bombay and Madras Presidencies, the Deccan, Central Provinces and Berar (or over the whole of the Peninsula).

The northern districts of Upper Burma received light to moderate showers on the 14th, 17th and 18th, and Lower and Upper Burma and Arakan showers from the 19th to the 21st which gave moderate and fairly general rain.

The following statement is drawn up from the rainfall data for the month published in the Burma Gazette.

Division.	Number of rainy days.		Rainfall.		Variation from normal.
	Average actual, February 1896.	Average actual, February.	Average actual, February 1896.	Average actual, February.	
Tenasserim . .	0·9	?	0·75	?	?
Lower Burma . .	1·0	?	0·60	?	?
Central Burma .	0	?	0	?	?
Upper Burma . .	1·5	?	0·79	?	?
Arakan . . .	1·2	?	0·78	?	?

Appendix.

The following interesting account of a cyclone in the South Indian Ocean, as experienced by the British Indian Steam Navigation Co.'s Steamer *Matiana*, has been received from the Second Officer J. N. Cammach, Esq.:—

At 6 P.M. on Wednesday, February 12th, 1896, the British Indian Steam Navigation Co.'s S.S. *Matiana* of 5,264 tons gross, passed port limits and discharged her pilot, being bound from Port Louis, Mauritius to Calcutta, *viâ* Colombo, with mails and about 1,500 tons cargo, the ship's draft being 15 feet forward and 19 feet 6 inches aft.

Almost before we cleared the light-vessel the ship commenced to roll to a slight swell, and on opening up Flat Island the S.E. swell became at once pronounced, the ship steering N. 36° E. (true), feeling it right abeam and causing her to roll heavily; the weather was fine but cloudy, with a moderate S.E. wind.

February 13th.—After midnight of the 12th frequent squalls of rain passed, and by 8 A.M. (13th) the wind had shifted to S.S.E., the swell (S.E.) now being very heavy. The aneroid which in port stood at 30·10″, had risen to 30·24″. The course was now changed to N. 46° E. and sights obtained, the ship having made 9·2 knots per hour (by patent log) throughout. By noon the aneroid had fallen to 29·80″, the ship then being in Lat. 17° 47′ S. and 58° 44′ E. Long. having had a N. 77° W. current of 27 miles for 18 hours. The S.E. wind had by this time freshened into a brisk gale with fine dull weather and occasional rain squalls, heavy south-easterly swell causing the ship to roll heavily. (Whilst on watch this morning, at about 10 A.M. I noticed a quadrantal edge to a heavy bank of cumulus clouds extending from about N.E. to N.N.W. and a dark angry patch of black mist hovering about the sun). Noon, the course was again altered to N. 54° E., ship steaming about 8 knots through the water by log, but gradually decreasing in speed; by 3-30 P.M. the S.E. swell had become so heavy that the course was again altered to N. 64° E., the ship rolling very heavily; by this time there was every appearance of bad weather, the sky having become overcast with a dull leaden haze and wearing a very threatening appearance. Precautions were now taken for bad weather, awnings being furled, hatches securely battened down and all lashings about the decks examined. The frequent squalls of rain now became more frequent and heavier; by 4 P.M. the aneroid shewed 29·75″, with overcast threatening weather, high sea, and heavy S.E. swell with frequent squalls. By 8 P.M. the weather had again changed for the worse, the S.E. wind having by this time increased to a heavy gale with high increasing sea, overcast dirty weather, ship rolling heavily and shipping heavy sprays. Aneroid 29·73″. At 10 P.M. the sails were handed, but the wind was so strong that before it could be secured they were blown to ribbands. Whilst handing them the third officer was thrown from the No. 2 hatch into the scuppers, having his head cut open and his knee badly bruised, two of the crew also falling from the rigging to the deck, one only being slightly injured. The ship continued to increase her rolling and sprays went blinding across the decks, the sea also having become very high and dangerous, with an ever-increasing S.E. swell, sky overcast and weather becoming very thick. The ship still continued to steer N. 65° E., but the speed was now only 6 knots by log. At midnight the wind had worked round to E. by S., the aneroid showing 29·70″.

February 14th.—The weather now rapidly grew worse. Blinding sprays swept the ship fore and aft, and these, combined with the frequent hard squalls of heavy rain, entirely obscured the horizon. By 4 A.M. the wind had worked round to E. by N. blowing very hard, with high cross sea and overcast sky, ship rolling heavily and taking continuous sprays. Aneroid stood at 29·84″. At 5-30 A.M. the Chief Officer (then on watch) observed a peculiar white line at the horizon, on the port-bow and called the Commander. The white line upon closer inspection proved to be a patch of broken water, presumably the reefs off Coco Island of the St. Brandon Group. The ship's course was at once altered to east, on which course she continued for about half-an-hour, when she was again put back to her former course of N. 65° E., this latter being altered at 6-20 A.M. to N. 40° E. By 8 A.M. the aneroid had again fallen, although not so rapidly as before, the instrument now registered 29·71″. The weather being much the same as for 4 A.M., but the wind had increased in strength and the sea was more confused, the squalls also were much more fierce, sky still being overcast, looking very dirty and angry, no direction of clouds distinguishable. At 10-55 A.M. altered course to N. 66° E. and continued on this course until noon, when dead reckoning placed ship in 16° 36′ S. Lat. 60° 42′ E. Long., but allowing for the westerly set, as shown by the vessel having sighted the Coco reef, the assumed position was placed at 16° 36′ S., Lat. 60°·04′ E. Long. The aneroid still continued to fall, being now 29·69″, wind at E.N.E. The storm was now, as we thought, at its height, the wind blowing with hurricane force, the sea wild, high and cross, whilst sea and sky seemed intermingled. At 4 P.M. the aneroid shewed 29·66″, thermometer 78°. Other conditions as above only more so. At 6 P.M. a rumbling noise in the No. 2 hatch warned us that something was adrift below, and on examining we found the casks of molasses (about 1,000) had worked adrift and were rolling from side to side at a furious rate, being quite beyond control. They soon, however, broke, and then the hatch became one seething mass of fluid and staves, rushing in waves from side to side with every roll of the ship. At 8 P.M. the aneroid had risen to 29·70″, but the storm in no way abated. At 9-30 P.M. the wind shifted suddenly to N.E. by N. and blew with increased violence, causing the ocean to become one mass

of flying spoon drift. If we had rain after this it was too slight to be noticeable, for the sprays and drift kept a continuous drenching shower going. The sea now took a more northerly direction, being as near as we could judge about N.E. but very confused and angry. By 10 P.M. the storm had assumed such a character that the ship utterly refused to steer, although the engines were going 10 knots; ship's head now stood at N. by E. with helm hard-a-port; the squalls were now something terrible, no one being able to hear above the uproar, which was far worse than the noise caused by an express train passing through a covered station and to which it seemed most comparable. The ship was now rolling at an angle of about 45° each way. At midnight the aneroid shewed 29·60″. Wind at N.E. by N. still; the sea being very high, cross and dangerous with tremendous scud. It was now quite impossible to see anything, the sea and sky being intermingled.

February 15th.—Ten minutes after midnight of the 14th, the ship became engulfed in two monster seas, which seemed to rise on either side like two walls and then tumbled on-board; the saloon deck being flooded, and the quater deck filled; in doing which it carried away the steam pipe covers, which, rolling with the wash of the water on deck, struck the steering rod and bent it, cutting off communication with the helm from the bridge. Fortunately this ship is fitted with steam gear aft as well as on the bridge, and this after-gear was at once connected and the engines slowed down, but shortly after they had to be put on again to keep the ship laying to; these seas also washed the tarpaulins off the No· 3 hatch and carried away the mail boat hanging in the port quarter davits. The wind seemed now to be about N.E.; ship continuing to head N. by E., but making great leeway. The log only showed 2·5 knots per hour, although the engines were steaming 10½ knots. It was now blowing a terrific gale, with blinding sprays and drift, sea very high and confused, but N.E. sea predominating. At 4 A.M. the aneroid shewed only 29·55″. At 5 A.M. ship fell off a point. At 6 A.M. wind shifted to E.N.E. and blew with greater violence. By 8 A.M. aneroid had fallen to 29·44″. Wind, sea and weather the same as at 4 A.M., the squalls being more lengthened and fierce. 9 A.M. ship broke off to N. by W. and by 10 A.M. to N.N.W., refusing to steer. At noon the weather still continued as before, E.N.E. wind blowing with terrific force, accompanied with blinding sprays and drift; sea tremendously high and confused, of no direction, weather thick and overcast; ship labouring heavily and taking water aboard. Aneroid now registered 29·20″. Ship by D. R. was in 15° 26′ S. Lat. and 61° 20′ E. Long., but by assumed position in 15° 26′ S. Lat. and 60° 42′ E. Long. At 4 P.M. the conditions were the same as for noon, but the aneroid at 28·70″, and this weather continued until 5-30 P.M. when the wind suddenly fell and a calm ensued. It was now noticed that the water was of a bright blue colour and the ship was now probably over the bank running from St. Brandon Isles to Nazareth Bank; the ship was brought up to N.E. and made about 4·5 knots per hour (from 4 P.M. to 8 P.M.); 6 P.M. weather apparently moderating, but sea still confused, high and angry, though the sun broke through for a few seconds, only to be again buried in an impenetrable overcast; the glass now stood at 28·55″. At 6-30 P.M. it stood at 28·55″ till, by 7-15 P.M. it had again fallen now only showing 28·45″; 7-30 PM.. wind set in again from E.N.E. increasing rapidly, and by 8 P.M. the weather had again resumed its unpleasant fierceness, the ship now commenced to fall off to her old point and remained so with helm hard-a-port till 8 P.M. The aneroid registered 28·40″. The weather now blew a terrific gale with squalls of hurricane force, sea high, confused and dangerous with a vicious scud. At 10 P.M. the weather commenced to moderate, but only slightly; enough however to allow the ship to head N.E. and make 4·75 knots (by log) which gave her steerage-way. The helm was eased and ship kept on that course. By midnight the aneroid read 28·38″.

February 16th.—At 1 A.M. the wind suddenly shifted to N., and blew with terrific force, bringing with it cold blinding rain. Sprays and drift were flying across the vessel and the weather was thick, and overcast. Ship continued to head N.E. and making 5 knots by log. At 2-30 A.M. wind again shifted suddenly to E. backing almost immediately to N.E., ship breaking off to N.W. Again about 3-30 A.M. it changed to N.N.E., the ship again coming up to N.E.; at 4 A.M. hard gale with frequent terrific squalls, overcast thick weather, high cross sea, ship labouring heavily and taking water, "blinding sprays and drift." The reading of the aneroid at 4 A.M. was 28·40.″ At 6 A.M. the wind again shifted to N.E. blowing with terrible fierceness and accompanied with even fiercer squalls. Weather still remained overcast and thick, and sea running high and cross. The aneroid at 8 A.M. read 28·52″. At 9-30 A.M. experienced a fierce squall from the N. with blinding rain and spray, which continued to about noon. This wind raised a mountainous sea. The waves were, so far as I could judge, quite 35 to 40 feet from trough to crest. By noon the wind had gone into the N.W., and was blowing a fierce gale still. The sea was now far worse than any we had experienced, and caused a very cross and angry dispute with the N.E. sea previously predominating. The sky still remained overcast, ship labouring heavily and rolling, taking heavy sprays fore and aft, but still heading N.E. and making 4·5 knots by log. The noon position by D. R. was 14°·25′ S. Lat. 61°·44′ E. Long., but assumed position placed her in 14°·25′ S. Lat. 61° 06′ E., Long. The aneroid now shewed 28·86″. At 3 P.M. a lull occurred, and the native quarter master having no fixed course, allowed the ship to come up too far. The wind and sea took her on the starboard bow and drove her off to W. by S. in spite of the engines going 10½ knots; there she remained with the helm hard-a-port. The wind by this time was again blowing a fierce gale and the sea tremendously high and cross, but decidedly N.W., ship taking sprays fore and aft. At 4 P.M. the aneroid had risen to 28·90″. At 4-30 P.M. speed was increased to 11½ knots by engines, (ship making 4 knots by log), to try and bring her round to N.E. again. At 6-30 P.M. during a slight lull ship steamed up to the sea, and then fell off to N.N.E., speed having again been reduced. The weather now showed signs of breaking for by 7 P.M. it seemed much lighter than at 4 P.M., although no horizon was distinguishable and wind continued a hard gale, sea running high and cross, but N.W. sea still predominating. At 8 P.M. aneroid registered 29·38″, and between 8 and 12 P.M. occasional glimpses of the stars were seen. At midnight it still continued to blow a heavy gale, with high sea of a more decided N.W. ··· direction, but still confused. Weather, however, continued to moderate and wind remained steady at N.W. Aneroid 29·56″.

February 17th.—The ship was now set on a N 13° E course, to let her head the sea better and we continued on this course to 4 A.M. when the aneroid shewed 29·70″. Gale moderating; high sea continuing, ship labouring and rolling heavily. Weather overcast and cloudy, but clearing at intervals. At 7 A.M. altered course to N. 42° E. and proceeded on voyage. At 8 A.M. wind still at N.W., blowing a moderate gale, high N.W. sea, ship taking sprays fore and aft, and rolling. Aneroid now stood at 29·80″. The sky by this time being only 'cloudy' sights were obtained. At noon the aneroid reached 29·82″, with a fresh N.W. wind, and fine cloudy weather. High sea still unning, ship's position by observation being at 13° 27′ S. Lat., 62° 38′ E. Long.

The N.W. sea continued until the following noon; when it had become only a moderate sea. The weather was by this time quite fine and ship's position for noon of February 18th by observation 10° 55′ S. Lat., 64° 31′ E. Long. From this to Colombo we found fine weather and smooth sea.

Table

Abstract of Observations taken at 8 A.M. at 207

Meteorological Province or District.	Station.	Elevation of bar-cistern above sea level in feet.	Pressure 8 A.M. in inches.								Temperature of air.											
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
I.—Burma Coast and Bay Islands.		...	...	−·004	...	...	...	...	...	...	...	89·1	+0·2	68·5	+1·0	79·1	+0·7	20·1	...	...	...	...	30·6
Bay Islands	Port Blair	61	29·935	?	29·927	30·016	24th	29·867	8th	·149	78·3	87·4	?	74·8	?	81·1	?	12·6	92·1	22nd	68·8	2nd	23·3
Tenasserim	Mergui	96	29·914	?	29·943	29·999	24th	29·825	10th	·174	78·5	89·8	?	71·6	?	80·7	?	18·2	97·1	17th	65·1	3rd	32·0
	Tavoy	26	30·014	?	29·971	30·088	24th	29·928	10th	·160	72·7	92·8	?	67·1	?	80·0	?	25·7	94·7	4 days	54·7	1st	40·0
	Moulmein	94	29·922	+·001	29·955	30·018	24th	29·855	7th	·163	72·1	91·6	+0·3	68·2	+0·6	79·9	+0·5	23·4	95·5	11th	61·4	1st	34·1
Lower Burma	Rangoon	41	29·968	0	29·947	30·068	24th	29·908	11th	·160	68·9	93·5	+1·0	65·3	0	79·4	+0·5	28·2	97·1	12th	60·8	1st	36·3
	Bassein	27				Not recorded.					69·9	?	?	65·0	+1·0	?	?	?	?	?	60·5	18th	?
	Diamond Island,	41	29·961	−·012	29·938	30·058	24th	29·896	7th	·162	76·9	84·0	−0·3	74·0	+2·2	79·0	+1·0	10·0	88·6	25th	71·9	17th	16·7
Arakan	Akyab	20	29·999	−·005	29·962	30·118	24th	29·936	7th	·182	66·5	84·4	−0·3	62·1	+1·4	73·3	+0·6	22·3	89·7	29th	58·2	4 days	31·5
II.—Burma Inland.		...	...	−·005	...	...	...	...	...	...	...	84·0	−1·8	54·1	0	68·7	−0·9	29·0	...	...	...	...	43·1
Central Burma	Toungoo	183	29·806	−·005	29·839	29·920	24th	29·746	7th	·174	63·5	90·5	−0·5	59·5	−1·2	75·0	−0·9	31·0	96·7	29th	54·1	2 days	42·6
	Thayetmyo	134	29·863	?	29·945	30·009	24th	29·807	7th	·202	65·3	92·3	−0·5	56·2	−0·2	74·3	−0·4	36·1	99·1	29th	50·2	23rd	48·9
Upper Burma	Minbu	?	29·840	?	?	29·999	24th	29·780	18th	·219	65·2	89·2	?	59·1	?	74·2	?	30·1	98·1	29th	53·0	23rd	45·1
	Yamethin	645	29·338	?		29·489	24th	29·283	7th & 13th.	·206	64·7	91·2	?	?	?	?	?	?	100·0	28th	?	...	?
	Taunggyi	?				Not recorded.					57·5	75·8	?	45·1	?	60·5	?	30·7	83·2	29th	39·1	2nd	44·1
	Mandalay	249?	29·739	?	?29·948	29·877	24th	29·670	17th	·207	63·9	86·9	?	58·2	?	72·6	?	28·7	97·0	29th	54·2	22nd	42·8
	Kindat	?	29·650	?	?	29·789	24th	29·573	17th	·216	57·2	77·2	−4·4	54·9	+1·5	66·1	−1·5	22·3	86·8	28th	50·0	1st	36·8
	Lashio	?	27·186	?	?	27·293	25th	27·103	17th	·190	54·2	75·8	?	47·6	?	61·7	?	28·2	84·1	2 days	41·6	1st	42·5
	Bhamo	?	29·636	?	?	29·772	24th	29·549	29th	·223	57·1	77·4	?	52·4	?	64·9	?	25·0	88·0	29th	46·4	7th	41·6
III.—Assam.		...	...	−·022	...	...	...	...	...	...	...	75·9	−0·6	55·8	+1·5	65·8	+0·4	20·2	...	...	...	...	37·1
Surma	Silchar	104	29·917	−·020	29·978	30·037	24th	29·812	18th	·225	63·4	79·4	−0·5	58·1	+3·1	68·8	+1·3	21·3	86·5	29th	52·2	1st	34·3
Brahmaputra	Sibsagar	333	29·691	−·019	30·001	29·864	24th	29·566	18th	·298	56·2	71·1	−1·6	53·8	+0·7	62·5	−0·5	17·3	81·3	28th	43·1	1st	38·2
	Dhubri	115	29·876	−·026	29·952	30·006	24th	29·753	18th	·253	59·9	77·3	+0·2	55·4*	+0·7	66·2*	+0·5	21·9	87·2	28th	48·4	21st	38·8
IV.—Bengal and Orissa.		...	...	−·034	...	...	...	...	...	...	...	83·5	+2·5	59·4	+1·9	71·3	+2·2	24·3	...	...	...	...	41·6
East Bengal	Chittagong	87	29·913	−·026	29·952	30·010	24th	29·814	20th	·196	65·6	81·4	−0·1	61·2	+2·7	71·3	+1·3	20·2	85·7	13th	55·1	11th	30·6
	Lungleh	?				Not recorded.					60·2	68·1	?	56·7	?	62·4	?	11·4	76·9	28th	51·0	21st	25·9
	Noakhali	43	29·946	?	29·937	30·056	24th	29·856	20th	·200	67·4	80·9	?	60·3	?	70·7	?	20·6	89·5	29th	50·0	2nd	39·5
	Comilla	36	29·964	?	29·949	30·061	24th	29·864	18th	·197	67·1	83·8	?	59·9	?	71·9	?	23·9	93·3	29th	51·4	21st	41·9
	Sirajganj	49	29·927	?	29·928	30·040	24th	29·813	17th	·227	61·0	83·0	?	54·7	?	68·9	?	28·3	94·5	29th	47·2	10th	47·3
	Narayanganj	26	29·960	−·042	29·935	30·065	24th	29·871	17th	·194	66·2	83·4	+1·2	61·6	+3·8	72·5	+2·5	21·8	93·6	28th	54·3	21st	39·3
	Barisal	13	29·973	−·041	29·932	30·072	24th	29·891	18th	·181	67·5	?	?	?60·9	?+2·8	?	?	?	?	?	52·0	21st	?
	Mymensingh	59	29·924	−·045	29·938	30·038	24th	29·820	17th	·218	62·2	81·1	+3·3	56·2	+2·6	68·7	+3·0	24·9	92·0	29th	48·5	21st	43·5
Deltaic Bengal	Faridpur	46	29·944	?	29·940	30·031	5th	29·851	17th	·180	64·1	83·6	?	57·1	?	70·4	?	26·5	93·8	28th	48·0	21st	45·8
	Jessore	33	29·953	−·040	29·934	30·058	5th	29·834	17th	·224	65·4	85·9	+2·8	57·8	+1·2	71·9	+2·0	28·1	98·5	28th	48·3	21st	50·2
	Calcutta	21	29·971	−·040	29·939	30·085	5th	29·859	17th	·226	67·4	85·8	+4·2	61·0	+1·2	73·4	+2·7	24·8	98·4	28th	52·2	21st	46·2
	Saugor Island	25	29·963	−·037	29·933	30·065	5th	29·850	18th	·215	70·7	83·3*	+2·4	67·5*	+2·4	75·4*	+2·4	15·8	91·4	29th	?58·9	6th	?32·5
	Krishnagar	47	29·950	?	29·948	30·068	5th	29·829	17th	·239	66·3	86·6	?	56·9	?	71·8	?	29·7	100·1	28th	48·1	10th	52·0
	Midnapore	149	29·842	?	29·944	29·959	5th	29·730	17th	·229	68·5	91·0	?	61·9	?	76·5	?	29·1	103·3	28th	55·2	14th & 21st.	48·1

* Mean of 28 days.

tions in India, Burma, etc., in February 1896.

Wind Direction. Number of winds from 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 29th February 1896.	Normal rainfall for period, 1st January to 29th February.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·92	0·53	+0·52	...	...	...	...	I.—Burma Coast and Bay Islands.	
10	8	1	1	3	1	1	4	6·1	5·1	+ 20	83	·805	3·8	0	?	?	0	1·17	−1·17	0·82	1·98	− 1·16	0	Port Blair .	Bay Islands.
11	1	...	3	3	1	1	9	2·2	2·0	+ 10	83	·807	4·8	4	?	?	1·37	1·43	−0·06	3·80	2·04	+ 1·76	0·50	Mergui .	Tenasserim.
...	1	...	...	...	...	...	2	1·3	?	?	86	·701	0·6	0	?	?	0·02	?	?	0·54	?	?	0·02	Tavoy.	
...	7	9	4	2	4	3	...	2·3	2·4	− 4	82	·646	2·1	2	0·45	+1·55	2·28	0·21	+2·07	2·28	0·72	+ 1·56	2·10	Moulmein.	
2	1	1	1	3	11	8	2	3·8	3·9	− 3	83	·588	0·9	1	0·45	+0·55	0·80	0·34	+0·46	0·80	0·51	+ 0·29	0·80	Rangoon .	Lower Burma.
4	2	...	...	...	3	...	13	5·5	3·8	+ 45	88	·644	1·5	1	0·45	+0·55	1·46	0·32	+1·14	1·46	0·49	+ 0·97	1·45	Bassein.	
11	5	...	1	...	1	...	11	12·6	7·2	+ 75	75	·690	2·4	0	0·40	−0·40	0	0·10	−0·10	0	0·28	− 0·28	0	Diamond Island.	
9	17	1	1	...	...	...	1	3·8	3·4	+ 12	84	·554	0·6	2	0·36	+1·64	1·40	0·12	+1·28	1·40	0·20	+ 1·20	0·92	Akyab.	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·64	0·13	+0·35	...	...	...	...	II.—Burma Inland.	
13	2	...	3	1	1	...	7	2·7	1·9	+ 42	82	·492	1·2	0	0·36	−0·36	0	0·19	−0·19	0	0·31	− 0·31	0	Toungoo .	Central Burma.
7	3	4	...	1	1	6	7	4·1	4·2	− 2	63	·390	0	0	0	0	0	0·01	−0·01	0	0·03	− 0·03	0	Thayetmyo .	
3	...	1	1	3	2	3	6	6·8	?	?	70	·441	0·6	1	?	?	0·10	?	?	0·10	?	?	0·10	Minbu .	Upper Burma.
3	...	...	3	2	...	...	1	2·2	?	?	67	·423	0·4	1	?	?	0·50	?	?	0·50	?	?	0·50	Yamethin.	
...	...	...	9	1	1	...	...	?	?	?	54	·255	0·1	1	?	?	0·41	?	?	0·41	?	?	0·40	Taunggyi.	
13	1	...	4	2	4	1	2	3·8	?	?	75	·444	1·2	2	?	?	0·56	?	?	0·56	?	?	0·44	Mandalay.	
...	...	...	...	...	1	...	...	0·9	?	?	96	·458	2·8	4	?	?	1·42	0·18	+1·24	1·42	0·76	+ 0·66	0·59	Kindat.	
		Not recorded.						?	?	?	80	·335	3·6	2	?	?	0·69	?	?	0·91	?	?	0·53	Lashio.	
4	5	...	...	...	1	1	...	2·3	?	?	92	·432	3·9	5	?	?	2·05	?	?	2·33	?	?	0·63	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·82	1·39	+1·43	...	...	...	...	III.—Assam.	
...	...	...	...	...	1	...	...	1·4	2·8	− 50	88	·518	4·5	6	3·91	+2·09	6·60	1·76	+4·84	7·27	2·53	+ 4·84	2·92	Süchar .	Surma.
...	11	3	1	...	1	2	1	3·8	2·2	+ 73	97	·452	3·4†	3	4·55	−1·55	1·85	1·87	−0·02	2·31	3·35	− 1·04	0·72	Sibsagar .	Brahmaputra.
5	12	6	...	2	1	1	1	6·2	4·0	+ 55	81	·422	1·6	0	0·71	−0·71	0·01	0·53	−0·52	1·89	0·97	+ 0·92	0·01	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·57	0·96	−0·37	...	...	...	...	IV.—Bengal and Orissa.	
2	11	6	5	2	...	...	...	4·6	4·4	+ 5	88	·561	2·8	3	1·55	+1·45	9·85	0·72	+9·13	9·88	1·11	+ 8·77	9·25	Chittagong .	East Bengal.
		Not recorded.						?	?	?	67	·345	?	...	?	?	...	?	?	0·10‡	?	?	...	Lungleh.	
4	4	5	8	5	...	...	3	2·3	?	?	90	·616	3·2	2	1·60	+0·40	1·72	0·91	+0·81	2·95	1·53	+ 1·42	1·05	Noakhali.	
1	...	3	3	11	3	...	...	3·6	?	?	98	·648	3·5§	2	2·00	0	0·33	0·87	−0·54	0·33	1·55	− 1·22	0·22	Comilla.	
1	...	...	...	1	...	2	1	3·0	?	?	84	·459	1·2†	1	1·47	−0·47	0·10	1·01	−0·91	0·26	1·46	− 1·20	0·10	Sirajganj.	
2	...	1	3	6	6	1	2	3·6	2·6	+ 38	85	·559	3·6	1	1·91	−0·91	0·53	1·55	−1·02	0·57	1·87	− 1·30	0·52	Narayanganj.	
...	1	...	1	...	3	...	...	2·3	?	?	87	·599	2·4	2	1·75	+0·25	0·84	1·06	−0·22	1·18	1·83	− 0·65	0·61	Barisal.	
...	6	7	3	1	...	...	...	2·2	?	?	84	·479	?	0	1·30	−1·30	0·06	1·04	−0·98	0·44	1·42	− 0·98	0·06	Mymensingh.	
...	...	...	...	...	4	...	...	0·7	?	?	86	·526	1·2†	1	2·05	−1·05	0·62	1·41	−0·79	1·30	1·75	− 0·45	0·62	Faridpur .	Deltaic Engal.
3	...	...	3	2	3	1	3	2·4	2·0	+ 20	80	·514	2·3	1	2·00	−1·00	0·23	1·51	−1·28	0·25	2·00	− 1·75	0·23	Jessore.	
3	2	1	1	3	3	2	2	3·7	3·8	− 3	76	·524	2·5	0	1·64	−1·64	0·02	1·27	−1·25	0·05	1·65	− 1·60	0·02	Calcutta.	
7	5	1	...	5	3	1	1	10·9	7·9	+ 38	85	·793	3·0	2	2·00‖	0	0·21	1·37	−1·16	0·21	1·60	− 1·39	0·11	Sangor Island.	
1	...	1	4	7	3	7	4	4·1	?	?	64	·423	2·4‖	1	1·55	−0·55	0·47	1·04	−0·57	0·47	1·34	− 0·87	0·47	Krishnagar.	
8	1	...	...	3	2	1	4	1·6	?	?	64	·446	0·6†	0	1·40	−1·40	0·07	0·89	−0·82	0·07	1·50	− 1·43	0·07	Midnapore.	

† Mean of 25 days. ‡ For January only. § Mean of 22 days. ‖ Mean of 27 days

Table

Abstract of Observations taken at 8 A.M. at 207 Station

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 of 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	29·671	?	29·935	29·789	5th	29·565	17th	·224	64·6	87·4	?	59·4	?	73·5	?	28·0	100·1	28th	53·2	21st	46
	Raniganj	334	29·648‡	?	29·949‡	29·732	24th	29·526	17th	·206	63·4‡	86·6‡	?	58·1‡	?	72·4‡	?	28·5	98·7	28th	52·2	22nd	46
	Burdwan	99	29·895	−·033	29·947	30·023	5th	29·772	17th	·251	65·8	86·8	+3·6	59·2	+1·1	73·1	+2·4	27·6	100·0	28th	52·1	2 days	47
	Naya Dumka	489	29·483	?	29·954	29·596	5th	29·372	17th	·224	64·3	84·6	?	56·5	?	70·6	?	28·1	97·5	28th	49·3	21st	48
	Berhampore	67	29·923	−·037	29·942	30·039	5th	29·802	17th	·237	62·2	85·0	+3·1	?	?	?	?	?	97·7	28th	?	...	?
	Rampur Boalia.	70	29·909	?	29·931	30·019	5th	29·831	18th	·188	63·0	84·0?	?	55·5?	?	69·7?	?	28·5	95·3	28th	49·9	15th	45
	Malda	72	29·915	?	29·943	30·027	5th	29·812	17th	·215	62·8	83·3	?	52·0	?	67·6	?	31·3	92·9	29th	45·8	21st	47
	Bogra	61	29·912	−·027	29·928	30·022	5th	29·796	17th	·226	62·0	83·2?	?+4·1	?54·7	+1·4?	69·0?	+2·8?	28·5	94·2	29th	48·4	21st	45
North Bengal	Dinajpur	123	29·850	−·036	29·936	29·976	24th	29·742	18th	·234	56·5	80·7	+2·3	51·3	+0·1	66·0	+1·2	29·4	91·1	28th	45·5	21st	45
	Rangpur	123	29·862	?	29·946	29·986	24th	29·755	18th	·230	58·6	78·7	?	51·9	?	65·4	?	26·8	88·4	26th	46·6	21st	41
	Jalpaiguri	284	29·696	−·025	29·954	29·834	24th	29·571	18th	·263	58·5	76·8	+1·9	52·9	+2·1	64·9	+2·0	23·9	84·5	29th	45·1	19th	39
Orissa	Balasore†	56	29·944	−·030	29·938	30·056	5th	29·817	18th	·239	68·9?	?	?	62·3†	+2·1	?	?	?	?	...	50·5	19th	?
	False Point.	21	29·979	−·025	29·942	30·061	25th	29·876	18th	·185	73·0	83·8	+1·2	66·6	+2·3	75·2	+1·8	17·2	93·0	29th	56·0	10th	37
	Cuttack	80	29·914	−·032	29·930	29·999	25th	29·811	18th	·188	68·6	92·7	+2·7	65·9	+0·8	79·3	+1·8	26·8	102·2	29th	58·6	2 days	43
	Shortt's Island.	?	29·973	?	?	30·069	6th	29·871	17th & 18th	·198	74·5	83·0	?	71·6	?	77·3	?	11·1	88·0	29th	67·6	10th	20
	Puri	20	29·983	?	29·946	30·067	5th	29·853	18th	·214	73·5	83·7	?	69·7	?	76·7	?	14·0	88·7	29th	63·6	3 days	25
V.—Gangetic Plain and Chota Nagpur.		...	...	−·033	...	...	...	...	...	...	...	82·1	+4·0	53·8	+1·9	68·0	+3·0	28·2	...	...	...	...	47
Chota Nagpur	Hazaribagh	2,007	27·943	−·025	29·962	28·044	5th	27·856	18th	·188	63·8	81·8	+4·1	57·1	+3·2	69·5	+3·7	24·7	92·2	26th	50·1	14th	42
	Ranchi	2,128	27·833	?	29·965	27·925	25th	27·749	17th & 18th	·176	65·2	82·4	+5·6	56·9?	+3·7	69·7	+4·7	25·5	91·8	27th	48·7	14th	43
	Daltonganj	730?	29·230	?	29·960	29·345	5th	29·132	22nd	·213	57·4	69·0	?	50·7	?	59·9	?	18·3	87·4	29th	42·0	21st	45
	Chaibassa	760	29·214	−·030	29·953	29·332	5th	29·109	18th	·223	65·6	89·8	+6·1	58·6	+1·7	74·2	+3·9	31·2	100·5	28th	51·0	21st	49
South Bihar	Gaya	375	29·612	−·035	29·959	29·729	5th	29·522	18th	·207	64·3	?84·4	+3·1	57·6?	?+1·8	71·0?	?+2·5	26·8?	95·9	28th	52·2	13th	41
	Dehri	351	29·631	?	29·953	29·745	5th	29·535	22nd	·210	64·6	84·4	?	59·0	?	71·7	?	25·4	95·8	27th	49·5	20th	41
	Patna	183	29·803	−·048	29·948	29·926	5th	29·703	18th	·223	63·0	81·7	+3·7	55·3	+2·7	68·5	+3·2	26·4	94·4	2 days	49·8	9th	42
	Arrah	190	29·799	?	29·951	29·921	5th	29·705	18th	·216	60·5	83·6	?	53·6	?	68·6	?	30·0	96·4	27th	48·8	10th	43
	Buxar	239	29·737	?	29·944	29·852	5th	29·653	18th	·199	62·9	82·8	?	55·0	?	68·9	?	27·8	93·9	28th	48·9	3 days	44
North Bihar	Purnea	125	29·846	−·041	29·933	29·972	5th	29·723	18th	·249	57·1	?81·6	?+2·8	?51·0	?+0·3	?66·3	+1·6?	30·6	93·8	28th	44·1	21st	44
	Bhagalpur	160	29·817	?	29·937	29·934	5th	29·710	17th	·224	64·3	82·8	?	54·3	?	68·6	?	28·5	94·7	28th	48·2	21st	46
	Darbhanga	166	29·811	−·037	29·942	29·954	24th	29·695	18th	·259	58·7	79·5	+3·3	54·1	+0·4	66·8	+1·9	25·4	92·8	28th	49·3	1st	46
	Muzaffarpur	178	29·796	?	29·939	29·917	24th	29·690	18th	·227	58·0	80·4	?	51·7	?	66·1	?	28·7	94·7	28th	44·3	9th	50
	Motihari	224	29·748	?	29·943	29·884	24th	29·621	18th	·263	57·8	80·5	?	49·1	?	64·8	?	31·4	96·0	28th	42·9	19th & 21st	47
	Chapra	181	29·795	?	29·941	29·918	5th	29·695	18th	·223	58·6	82·1	?	53·4	?	67·8	?	28·7	95·0	28th	47·2	9th	47
N.-W. Provinces (East).	Benares	267	29·726	−·024	29·965	29·840	5th	29·623	22nd	·217	59·7	84·1	+3·5	52·3	+1·6	68·2	+2·6	31·8	95·3	27th	43·9	21st	51
	Allahabad	309	29·689	−·022	29,969	29·803	5th	29·585	22nd	·218	62·3	85·0	+5·1	53·7	+2·6	69·4	+3·9	31·3	96·6	27th	46·4	9th	44
N.-W. Provinces (East Submontane), South Oudh	Gorakpur	256	29·702	−·040	29·931	29·825	25th	29·587	18th	·238	59·1	81·4	+3·2	53·2	+1·2	67·3	+2·2	28·2	95·4	28th	47·3	6th & 21st	47
	Lucknow	368	29·612	−·032	29·961	29·732	5th	29·503	18th	·229	59·9	82·6	+3·9	52·4	+1·9	67·5	+2·9	30·2	94·3	27th	45·2	20th	44
North Oudh	Bahraich	403	29·559	?	29·947	29·688	25th	29·434	18th	·254	58·2	80·7	?	51·4	?	66·1		29·3	92·9	27th	45·0	3 days	41
N.-W. Provinces (Central),	Cawnpore	416	29·569	?	29·964	29·690	5th	29·464	18th	·226	60·6	83·7	?	52·4	?	68·1	?	31·3	95·3	27th	44·5	8th	45
	Mainpuri	516	29·475	?	29·982	29·596	5th	29·363	18th	·238	57·6	81·0	?	51·4	?	66·3	?	29·6	91·8	27th	45·1	8th & 19th	42

† Mean of 28 days. ‡ Mean of 27 days.

—continued.

i India, Burma, etc., in February 1896—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 January to 29th February 1896.	Normal rainfall for period 1st January to 29th February.	Variation from normal of period.	Heaviest rainfall during month.		
25	...	...	...	...	...	...	2	2	1·4	P	P	62	·381	0·8	1	1·75	−0·75	0·13	0·87	−0·74	0·35	1·24	− 0·89	0·13	Bankura .	Central Bengal.
11	1	1	...	1	...	1	5	7	2·4	P	P	58‡	·341‡	0·7‡	1	1·35	−0·35	0·44	1·19	−0·75	0·48	1·52	— 1·06	0·44	Raniganj.	
15	4	...	...	...	3	4	...	3	2·1	2·3	− 9	65	·417	2·4	1	1·64	−0·64	0·32	1·03	−0·71	0·37	1·26	— 0·89	0·32	Burdwan.	
12	1	...	...	1	1	...	5	9	2·9	P	P	53	·319	0·3	1	1·44	−0·44	0·16	0·72	−0·56	0·16	1·30	−1·14	0·13	Naya Dumka.	
9	..	...	2	1	...	7	5	5	2·9	2·4	+21	75	·418	1·8	1	1·73	−0·73	0·27	1·20	−0·93	0·30	1·59	− 1·29	0·27	Berhampore	
18	3	1	...	1	2	3	1	...	3·4	P	P	76	·442	0·9	0	1·35	−1·35	0·08	0·79	−0·71	0·13	1·19	− 1·06	0·08	Rampore Boalia.	
1	...	...	...	1	...	7	...	20	2·8	P	P	58	·329	0·1	0	1·10	−1·10	0·01	0·52	−0·51	0·08	0·95	− 0·87	0·01	Malda.	
1	3	7	4	1	2	3	5	3	2·7	P	P	74	·414	?	0	1·35	−1·35	0·07	0·87	−0·80	0·47	1·32	− 0·85	0·07	Bogra.	
7	4	6	3	...	3	4	2	...	2·1	P	P	79	·363	0·4	0	1·25	−1·25	0·02	0·52	−0·50	0·66	0·92	− 0·26	0·02	Dinajpur.	North Bengal.
10	...	11	2	2	...	2	2	...	2·1	P	P	84	·417	1·2	0	1·00	−1·00	0	0·39	−0·39	1·18	0·97	+ 0·21	0	Rangpur.	
6	4	9	8	2	...	...	...	...	2·6	P	P	82	·406	P	0	1·05	−1·05	0	0·30	−0·30	0·31	0·85	− 0·54	0	Jalpaiguri.	
...	6	3	...	...	1	15	1	2	5·0	P	P	68†	·490†	0·2†	0	2·20	−2·20	0	1·39	−1·39	0	1·88	− 1·88	0	Balasore .	Orissa.
4	8	1	...	...	2	5	4	5	7·5	7·5	0	87	·711	2·5*	0	1·55	−1·55	0	1·03	−1·03	0	1·66	— 1·66	0	False Point.	
20	2	1	1	...	...	1	4	...	2·1	2·2	− 4	79	·555	0·6	0	1·36	−1·36	0	0·60	−0·60	0	0·83	− 0·83	0	Cuttack.	
...	8	3	1	...	2	10	3	2	13·2	P	P	79	·677	0·2	0	P	P	0	P	P	0	P	P	0	Shortt's Island.	
9	3	3	...	...	...	8	4	2	11·8	P	P	84	·700	1·2‡	0	1·20	−1·20	0	0·86	−0·86	0	1·11	− 1·11	0	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·03	0·48	−0·45	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**	
2	2	...	1	...	8	2	8	6	9·2	6·5	+42	43	·261	1·0	0	1·45	−1·45	0·08	0·79	−0·71	0·14	1·41	− 1·27	0·05	Hazaribagh	Chota Nagpur.
2	1	1	...	2	5	4	6	8	7·2	P	P	45	·282	0·1	0	1·94	−1·94	0	1·04	−1·04	0	1·60	− 1·60	0	Ranchi.	
...	4	...	...	5	9	9	2	...	3·0	P	P	68	·326	0·5	0	P	P	0	P	P	0	P	P	0	Daltonganj.	
5	...	...	...	...	...	8	10	6	1·5	P	P	60	·379	0·7	0	1·35	−1·35	0	0·84	−0·84	0·06	1·58	− 1·52	0	Chaibassa.	
16	...	...	...	...	3	4	6	...	3·0	2·6	+15	52	·302	0·9	0	0·73	−0·73	0·03	0·86	−0·63	0·03	1·28	— 1·25	0·02	Gaya . .	South Bihar.
4	...	...	...	1	7	12	5	...	7·3	P	P	49	·299	1·1	0	0·67	−0·67	0	0·20	−0·20	0	0·82	— 0·82	0	Dehri.	
2	...	1	6	...	2	4	14	...	4·7	2·9	+62	57	·331	1·3	0	0·82	−0·82	0	0·56	−0·56	0·13	1·22	— 1·09	0	Patna.	
...	3	1	2	1	...	7	12	3	3·6	P	P	63	·333	0·9	0	0·85	−0·85	0	0·45	−0·45	0	1·16	− 1·16	0	Arrah.	
...	...	...	...	4	1	3	6	15	...	3·5	P	P	55	·325	1·1	0	1·10	−1·10	0	0·36	−0·36	0	1·15	− 1·15	0	Buxar.	
7	1	5	4	...	1	9	1	1	4·2	2·5	+68	85	·400	0	0	1·00	−1·00	0	0·68	−0·68	1·10	1·28	− 0·18	0	Purnea .	North Bihar.
6	2	1	3	2	1	8	6	...	3·8	P	P	56	·331	1·0	0	1·25	−1·25	0	0·43	−0·43	0·14	0·98	− 0·82	0	Bhagalpur.	
2	1	2	4	3	...	4	9	4	3·9	3·3	+18	70	·345	1·0	0	1·27	−1·27	0	0·56	−0·56	0·09	1·25	− 1·16	0	Darbhanga.	
12	...	3	3	...	...	3	6	2	3·7	P	P	76	·371	0·8	0	1·26	−1·26	0·05	0·41	−0·36	0·23	1·20	− 0·97	0·05	Muzaffarpur.	
...	...	4	5	1	...	8	10	1	6·9	P	P	81	·389	0·6	0	1·06	−1·06	0	0·35	−0·35	0·03	1·00	− 0·97	0	Motihari.	
2	1	1	4	2	2	9	6	2	4·4	P	P	70	·346	0·9	0	0·80	−0·80	0	0·33	−0·33	0·08	0·99	− 0·91	0	Chapra.	
5	1	1	...	3	1	6	11	1	5·0	4·1	+22	65	339	1·4	0	0·82	−0·82	0	0·37	−0·37	0·05	1·16	− 1·11	0	Benares .	N.-W. Provinces (Eastern Districts).
10	...	...	2	1	1	3	9	3	3·9	2·7	+44	55	·311	1·5	0	0·64	−0·64	0	0·28	−0·28	0	1·13	− 1·13	0	Allahabad.	
2	6	5	1	...	6	4	3	2	2·4	2·3	+ 4	67	·337	1·6	0	0·73	−0·73	0·02	0·41	−0·39	0·08	1·25	− 1·17	0·02	Gorakhpur .	N.-W. Provinces (East Submontane).
3	2	3	2	...	...	5	6	8	2·0	3·3	−39	62	·322	2·7	0	0·55	−0·55	0·04	0·25	−0·21	0·09	1·35	− 1·26	0·03	Lucknow .	South Oudh.
7	...	1	2	3	...	3	6	7	2·7	P	P	69	·340	1·2	0	P	P	0·08	0·63	−0·55	0·28	1·49	− 1·21	0·08	Bahraich .	Oudh, North.
2	5	2	2	1	2	2	9	4	5·2	P	P	58	·307	0·3	0	0·60	−0·60	0·05	0·29	−0·24	0·08	0·93	− 0·85	0·05	Cawnpore .	N.-W. Provinces (Central).
20	2	...	2	1	...	...	4	...	1·1	P	?	61	·295	3·2	1	P	P	0·27	0·17	+0·10	0·27	0·78	− 0·51	0·27	Mainpuri.	

* Mean of 21 days.

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Meteorological Province or District.	Station.	Elevation of barometer above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
VI.—Upper Sub Himalayas		...	...	−·020	...	...	...	...	...	...	...	72·7	+1·2	48·8	+2·3	60·6	+1·8	23·6	...	...	...	...	40·4
N.-W. Provinces West (Submontane).	Bareilly	568	29·395	−·020	29·962	29·499	25th	29·268	18th	·231	56·9	79·0*	+3·7*	51·5	+2·5	65·3	+3·1	27·5	90·3	27th & 28th	43·7	21st	46·6
	Dehra Dun	2,223	27·701	−·023	29·995	27·843	25th	27·555	20th	·288	52·5	69·8	+0·8	47·8	+0·9	58·8	+0·9	22·0	78·5	27th	40·5	13th	38·0
	Roorkee	887	29·065	−·021	29·978	29·198	25th	28·933	18th	·265	53·5	74·3	+0·9	43·8	+1·5	61·6	+1·2	25·5	84·8	27th	39·4	20th	45·4
N.-W. P. West.	Meerut	738	29·224	−·025	29·977	29·329	27th	29·106	18th	·223	54·5	76·4	+1·7	51·3?	+3·6?	63·9?	+2·7?	25·1?	87·5	27th	44·6?	18th	42·9?
South East Punjab.	Delhi	718	29·251	−·029	29·976	29·350	27th	29·139	18th	·211	57·6	76·2	+1·1	53·4	+1·7	64·8	+1·4	22·8	85·0	22nd & 27th	46·4	5th	38·6
Central Punjab.	Lahore	702	29·288	−·011	30·014	29·428	26th	29·137	18th	·291	51·7	71·3	+0·6	43·7	+4·6	60·0	+2·6	22·6	80·8	22nd & 23rd	40·2	10th	40·6
South Punjab	Patiala	?	29·146	?	?	29·260	27th	29·016	18th	·244	54·7	72·2	?	49·2	?	60·7	?	23·0	80·8	22nd	41·0	7th	39·8
	Ludhiana	812	29·157	−·014	29·996	29·280	26th	29·021	18th	·259	53·9	70·7	−1·1	50·0	+3·4	60·4	+1·2	20·7	78·6	22nd	44·1	11th	34·5
	Sialkot	830	29·157	?	30·019	29·310	26th	29·035	20th	·275	51·7	71·2	+1·7	47·2	+1·7	59·2	+1·7	24·0	80·1	22nd	40·1	9th	40·0
Punjab Sub-montane.	Umballa	892	29·056	?	29·972	29·179	26th & 27th	28·933	18th	·246	52·2	72·4	?	47·9	?	60·2	?	24·5	80·0	22nd	43·0	5th & 18th	37·0
North Punjab.	Rawalpindi	1,683	28·290	?	30·062	28·439	26th	28·142	18th	·297	47·9	66·3	+1·7	43·0	+2·3	54·7	+2·0	23·3	78·1	23rd	34·9	9th	43·2
VII.—Indus Valley and North-West Rajputana.		...	...	−·022	...	·A	...	...	...	...	...	76·3	+1·6	50·4	+2·1	63·4	+1·9	25·8	...	...	...	...	45·0
North Punjab	Peshawar	1,110	28·917	−·019	30·044	29·065	26th	28·773	18th	·292	48·1	65·3	−0·6	43·7	+2·0	54·5	+0·7	21·6	76·1	22nd	37·4	5th	38·7
	Mardan	?				Not recorded.					48·1	66·1	?	41·4	?	53·8	?	24·7	77·0	22nd	34·0	9th	43·0
West Punjab	Khushab	612	29·404	?	30·035	29·560	26th	29·243	18th	·317	51·7	71·9	?	46·6	?	59·3	?	25·3	82·7	22nd	38·5	9th	44·2
	Montgomery	558	29·448	?	30·014	29·576	28th	29·300	21st	·276	53·7	72·9	?	48·1	?	60·5	?	24·8	84·3	23rd	39·5	10th	44·8
	D. I. Khan	594?	29·456	?	30·066?	29·599	26th	29·319	18th	·280	51·0	71·9	+0·1	44·3	+0·9	58·1	+0·1	27·6	84·3	23rd	37·0	10th	47·3
	Mooltan	420	29·604	−·027	30·026	29·746	27th	29·443	23rd	·303	52·5	74·2	+1·2	49·3	+3·0	61·8	+2·1	24·9	85·8	22nd	41·6	4th	44·2
South Punjab	Sirsa	662	29·318	−·025	29·992	29·432	27th	29·199	18th	·233	53·3	76·5	+1·2	49·5	+3·3	63·0	+2·3	27·0	87·7	22nd & 24th	42·2	8th	45·5
Sind and Cutch	Jacobabad	186	29·829	−·036	29·991	30·006	26th	29·578	23rd	·428	55·2	78·9	+1·8	50·1	+2·3	64·5	+2·1	28·8	93·5	22nd	40·0	13th	53·5
	Hyderabad	96	29·942	−·025	29·995	30·095	27th	29·787	23rd	·308	62·4	83·8	+3·8	56·6	+2·5	70·2	+3·2	27·2	97·2	22nd	48·0	18th	49·2
	Kurrachee	12	30·037	−·015	30·000	30·181	26th	29·881	23rd	·300	67·1	81·6	?	61·8	?	71·7	?	19·8	87·8	18th	50·4	13th	37·4
Kathiawar	Bhuj	395	29·632	−·004	29·998	29·724	26th	29·533	23rd	·191	65·9	85·1	+1·3	59·9	+2·0	72·5	+1·7	25·2	91·5	21st	52·0	13th	39·5
West Rajputana.	Bickaneer	771	29·216	?	30·000	29·356	27th	29·058	23rd	·298	58·3	79·1	+3·9	53·9	+0·5	66·5	+2·2	25·2	88·2	22nd & 23rd	46·1	12th	42·1
	Pachpadra	330	29·632	?	29·994	29·763	13th	29·471	24th	·292	58·3	84·6	?	49·7†	?	67·8†	?	34·9	93·5	23rd	38·0	19th	55·5
VIII.—East Rajputana, Central India and Gujarat.		...	...	−·004	...	...	...	...	...	...	...	84·7	+2·9	56·0	+2·9	70·4	+3·0	28·6	...	...	...	...	46·4
Rajputana, East.	Jeypore	1,431	28·556	−·021	30·019	28·652	27th	28·449	18th	·203	58·6	81·0	+3·1	54·3	+4·3	67·7	+3·7	26·7	89·5	23rd	42·2	20th	47·3
	Sambhar	1,254	28·731	−·010	30·012	28·833	27th	28·628	18th	·205	57·5	80·2	+3·8	52·7	+4·6	66·5	+4·2	27·5	90·4	23rd	41·0	19th	49·4
	Ajmere	1,611	28·391	−·008	30·044	28·502	27th	28·275	23rd	·227	59·0	80·3	+3·0	53·7	+5·3	67·0	+4·2	26·6	88·4	23rd	39·9	19th	48·5
	Deesa	466	29·564	+·002	30·009	29·637	26th	29·490	23rd	·147	62·7	88·3	+2·6	55·7	+1·0	72·1	+1·8	32·6	96·3	29th	45·6	19th	50·7
Kathiawar	Rajkot	429	29·613	+·013	30·011	29·673	27th	29·540	23rd	·133	68·1	87·8	+0·1	56·5	+2·2	72·1	+1·2	31·3	93·9	29th	43·5	13th	50·4
	Veraval	?	30·033	?	29·993	30·093	26th	29·983	18th	·110	67·7	82·3	?	61·9	?	72·1	?	20·4	92·1	29th	53·8	13th	38·3
Central India	Nowgong	757	29·238	−·028	29·992	29·336	25th	29·143	16th	·193	60·5	84·1	+3·8	53·4	+3·4	68·8	+3·6	30·7	94·0	26th & 27th	47·0	3 days	47·0
	Indore	1,823	28·182	+·014	30·024	28·265	26th	28·088	18th	·167	62·0	86·2	+3·7	52·8	+1·2	69·5	+2·5	33·4	95·2	29th	44·1	20th	51·1
	Neemuch	1,630	28·380	+·019	30·031	28·464	26th	28·288	18th	·166	63·2	93·8	+3·3	53·7	+2·2	68·8	+2·8	30·1	91·8	28th	43·9	19th	47·9
Gujarat	Surat	36	30·021	+·023	30·001	30·084	26th	29·967	18th	·117	67·6	91·0	+1·3	59·5	+1·0	75·2	+1·2	31·5	99·7	28th	52·1	20th	47·6
	Ahmedabad*	176	29·865	?	29·998	29·921	27th	29·799	18th	·122	67·1	88·9‡	?	60·8‡	?	74·9‡	?	28·1	95·2	28th & 29th	54·7	20th	40·5
N.-W. P. (West)	Agra	555	29·435	−·027	29·983	29·535	5th	29·325	18th	·210	59·3	81·1	+2·6	54·2	+2·3	67·7	+2·5	26·9	89·6	25th	47·9	8th & 19th	41·7
N.-W.P. Central	Jhansi	858	29·143	−·024	29·994	29·248	5th	29·044	16th	·204	65·7	85·7	+5·0	59·1	+4·7	72·4	+4·9	26·6	95·1	25th & 26th	52·9	8th	42·2

* Mean of 28 days.
† " " 19 "
‡ " " 27 "

I—*continued.*

in India, Burma, etc., in February 1896—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 29th February 1896.	Normal rainfall for period, 1st January to 29th February.	Variation from normal of period, 1st October to 31st December.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·16	1·29	−0·07	...	...	...	...	**VI.—Upper Sub-Himalayas**	
10	2	1	...	2	...	...	1	13	2·9	4·0	− 28	74	·304	3·2	3	1·18	+ 1·82	0·69	0·62	+ 0·07	0·70	1·72	− 1·02	0·32	Bareilly	N.-W. Provinces West (Sub-montane).
27	2	...	...	...	...	...	...	...	0·7	2·0	− 65	71	·282	0·4	4	3·00	+ 1·00	1 14	1·95	− 0·81	2·37	4·49	− 2·12	0·52	Debra Dun,	
15	1	3	...	3	...	1	2	4	3·2*	2·8	+ 14	71	·297	3·4	2	2·09	− 0·09	0·89	1·23	− 0·34	1·70	2·99	− 1·29	0·55	Roorkee,	
14	...	...	1	...	...	5	3	6	2·0	2·6	− 23	65	·281	2·3	2	1·27	+ 0·73	0·48	0·81	− 0·33	0·59	2 08	− 1·49	0·26	Meerut,	N.-W. Provinces West.
12	2	...	...	2	...	...	9	4	3·8	3·6	+ 6	59	·288	3·9	2	1·00	+ 1·00	1·45	0·62	+ 0·83	1·49	1·86	− 0·37	1·00	Delhi .	South East Punjab.
14	2	2	3	...	...	1	6	1	2·3	2·4	− 4	74	·285	3·6	3	2·00	+ 1·00	1·29	1·12	+ 0·19	1·68	2·18	− 0·50	0·58	Lahore,	Central Punjab.
2	1	5	1	...	5	4	11	...	4·8	P	P	80*	·351*	5·0	3	?	?	0·73	?	P	1·24	P	P	0·31	Patiala .	South Punjab.
6	...	5	1	3	1	...	5	8	2·6	1·6	+ 63	72	·309	5·1	4	1·82	+ 2·18	1·25	1·26	+ 0·02	1·99	3·23	− 1·24	0·45	Ludhiana,	
22	1	...	3	1	...	1	...	1	1·4	1·7	− 18	75	·291	3·1	4	2·45	+ 1·55	2·90	1·74	+ 1·20	3·09	4·23	− 1·14	1·96	Sialkot .	
10	3	1	1	3	1	...	3	7	2·3	?	?	79	·314	3·8	3	?	?	0·88	1·07	− 0·19	1·41	2·22	− 0·81	0·33	Umballa .	Punjab Sub-montane.
15	2	...	...	...	1	1	8	2	2·9	2·4	+ 21	79	·262	3·5	5	3·18	+ 1·82	1·04	2·48	− 1·37	3·38	5·32	− 1·94	0·33	Rawalpindi,	North Punjab.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·71	0·42	+0·19	...	...	...	...	**VII.—Indus Valley and North-West Rajputana.**	
6	...	1	...	5	6	8	2	1	4·1	3·3	+ 24	73	·246	3·9	4	2·00	+ 2·00	2·44	1·03	+ 1·46	3·42	2·80	+ 0·62	1·24	Peshawar .	North Punjab.
			Not recorded.						P	P	P	P	P	P	4	P	P	1·99	P	?	3·20	P	P	0·87	Mardan,	
8	1	7	3	1	2	5	2	...	3·4	?	?	65	·245	2·9	2	1·70	+ 0·30	0·73	0·76	− 0·03	1·11	1·30	− 0·19	0·52	Khushab,	Punjab, West.
4	6	5	2	2	...	1	5	4	4·5	?	?	68	·284	3·6	4	1·10	+ 2·90	1·62	0·64	+ 0·98	2·61	0·88	+ 1·73	0·88	Montgomery,	
16	5	1	...	...	...	1	...	6	3·4	2·0	+ 70	72	·272	3·0	2	0·91	+ 1·09	0·62	0·54	+ 0·10	1·01	1·07	− 0·06	0·22	D. I. Khan,	
9	4	10	...	4	...	...	...	2	1·3	2·4	− 46	65	·262	3·6	3	1·00	+ 2·00	0·62	0·39	+ 0·24	0·77	0·87	− 0·10	0·22	Mooltan,	
8	2	3	1	3	1	3	3	5	5·7	3·4	+ 68	63	·263	5·1	2	0·55	+ 1·45	0·62	0·28	+ 0·34	0·62	1·18	− 0·56	0·40	Sirsa.	Punjab, South.
16	2	3	5	...	...	...	2	1	3·6	3·0	+ 20	61	·272	3·0	1	1·00	0	0·19	0·40	− 0·21	0·34	0·65	− 0·31	0·14	Jacobabad .	Sind and Cutch.
5	7	1	...	...	2	7	...	7	10·0	7·0	+ 43	52	·307	1·8	0	0·30	− 0·30	0	0·23	− 0·23	0	0·54	− 0·54	0	Hyderabad,	
...	1	6	8	2	...	4	6	2	7·9	10·5	− 25	69	·477	3·1	0	0·36	− 0·36	0·01	0·31	− 0·30	0·01	1·03	− 1·02	0·01	Kurrachee,	
2	3	1	1	...	3	2	14	3	9·1	6·7	− 36	74	·485	1·2	0	?	?	0·14	0 11	+ ·03	0·14	0·22	− 0·08	0·08	Bhuj.	Kathiawar.
...	2	4	1	2	2	6	4	8	4·7	3·7	+ 27	54	·271	4·5	2	?	?	0·26	0·22	+ 0·04	0·31	0·52	− 0·21	0·16	Bickaneer .	Rajputana, West.
13	...	...	...	9	...	1	...	6	6·9	3·3	+109	62	·323	4·3	0	?	?	0	0·09	− 0·09	0	0·46	− 0·46	0	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·0	0·19	−0·16	...	...	...	...	**VIII.—East Rajputana, Central India and Gujarat.**	
10	1	5	3	...	1	...	3	6	4·0	4·4	− 9	54	·273	3·4	1	0·60	+ 0·40	0·15	0·19	− 0·04	0·23	0·88	− 0·65	0·15	Jeypore .	East Rajputana.
20	3	3	...	...	1	...	1	1	3·7	5·3	− 30	59	·289	3·1	0	0·55	− 0·55	0·06	0·21	− 0·15	0·10	0·68	− 0·58	0·06	Sambhar,	
15	1	6	...	1	...	2	4	...	4·0	2·5	+ 60	66	·231	2·3	0	0·64	− 0·64	0	0·31	− 0·31	0·07	0·83	− 0·76	0	Ajmere.	
...	6	6	1	...	1	3	5	7	7·7	9·0	− 14	44	·270	2·0	0	0·27	− 0·27	0	0·10	− 0·10	0	0·27	− 0·27	0	Deesa.	
5	3	5	1	...	...	2	4	9	6·4	6·2	+ 3	63	·448	1·6	0	0·10	− 0·10	0·03	0·09	− 0·06	0·03	0·13	− 0·10	0·03	Rajkot .	Kathiawar.
1	19	5	...	...	...	1	1	2	8·2	?	?	68	·471	0·8	0	?	P	0	?	?	0	?	?	0	Veraval.	
6	2	1	3	...	4	8	5	...	1·8	1·7	+ 6	59	·319	1·1	0	0·73	− 0·73	0·05	0·27	− 0·22	0·07	0·92	− 0·85	0·05	Nowgong .	Central India.
10	4	1	...	...	...	2	8	4	2·8	3·0	− 7	53	·298	0·6	0	0·55	− 0·55	0	0·18	− 0·18	0	0·36	− 0·36	0	Indore,	
...	4	6	2	1	1	1	7	7	7·8	9·1	− 14	48	·282	1·1	0	0·55	− 0·55	0	0·20	− 0·20	0	0·50	− 0·50	0	Neemuch,	
2	6	1	...	...	1	...	5	14	P	5·4	P	66	·459	0·7	0	0	0	0	0·01	− 0·01	0	0·06	− 0·06	0	Surat .	Gujarat.
2	5	5	2	...	...	2	2	10	3·9‡	?	?	57	·381	1·3	0	?	?	0	?	?	0	?	?	0	Ahmedabad*	
5	...	1	...	3	...	4	...	16	4·6	4·0	+ 15	60	·307	1·7	0	0·36	− 0·36	0·05	0·22	− 0·17	0·05	0·75	− 0·70	0·05	Agra .	N.-W. P., (West.)
13	...	1	...	1	...	7	5	2	2·1	2·7	− 22	43	·275	0·3	0	1·09	− 1·09	0	0·34	− 0·34	0·04	0·93	− 0·89	0	Jhansi,	N.-W.P., Central.

* Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 207 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		...	...	+·002	...	...	...	...	...	...	...	91·4	+3·0	59·4	+0·8	75·4	+1·9	32·0	...	...	...	...	45·5
Bombay, Deccan	Belgaum	2,524	27·487	+·021	29·966	27·560	27th	27·415	18th	·145	70·6	90·1	+1·5	58·6	−0·9	74·5	+0·3	31·5	92·2	5 days	55·4	13th	36·8
	Sholapur	1,590	28·428	+·017	29·998	28·501	26th	28·362	18th	·139	71·3	94·3	+0·5	61·3	−0·4	77·8	+0·1	33·0	98·2	24th & 29th	56·6	3rd & 4th.	41·6
	Poona	1,840	28·183	+·019	30·032	28·253	25th	28·107	18th	·146	63·1	93·0	+2·2	55·3	−2·2	74·2	0	37·7	97·0	27th	50·0	20th	47·0
	Bijapur	1,946	28·071	?	29·986	28·141	25th & 26th	28·009	18th	·132	72·3	92·2	?	61·8	?	77·0	?	30·4	95·2	29th	54·6	2nd	40·6
Khandesh	Malegaon	1,430	28·580	+·009	30·017	28·647	25th	28·499	18th	·148	63·4	92·0	+2·0	55·3	+0·2	73·6	+1·1	36·7	97·4	29th	44·5	20th	52·9
	Ahmednagar	2,152	27·876	?	30·021	27·954	26th	27·796	18th	·158	66·8	90·1	?	53·3	?	71·7	?	36·8	94·4	27th & 29th	43·4	21st	51·0
Berar	Akola	930	29·068	+·003	29·983	29·133	26th	28·983	18th	·150	66·2	93·2	+2·8	56·9	+0·1	75·1	+1·5	36·3	100·8	27th	45·2	21st	55·6
	Amraoti	1,215	28·783	+·012	29·985	28·847	27th	28·696	17th	·151	69·9	92·9	+3·1	62·9	+1·9	78·0	+2·5	30·0	99·7	29th	53·4	20th	46·3
Central Provinces, West.	Khandwa	1,044	28·970	+·013	30·013	29·048	26th	28·886	18th	·162	64·4	90·6	+2·0	56·6	+1·4	73·6	+1·7	34·0	98·7	29th	46·6	20th	52·1
	Hoshangabad	1,000?	28·993	−·004	?	29·076	5th	28·904	18th	·172	62·8	88·1	+2·8	57·2	+1·9	72·7	+2·4	30·9	96·9	29th	48·8	20th	48·1
	Nagpur	1,025				Not recorded.					68·0	93·1	+3·8	61·6	+2·2	77·4	+3·0	31·5	100·3	29th	53·2	21st	47·1
Central Provinces, Central.	Chanda	634	29·365	−·003	29·970	29·443	27th	29·264	18th	·179	66·0	94·9	+3·1	57·8	−1·1	76·4	+1·0	37·1	100·9	29th	47·6	21st	53·3
	Seoni	2,033	27·958	−·001	29·993	28·037	27th	27·858	18th	·179	64·9	88·3	+4·3	56·9	+1·7	72·6	+3·0	31·4	99·2	29th	48·0	14th	51·2
	Jubbulpur	1,327	28·638	?	29·978	28·709	27th	28·564	18th	·145	61·0	87·1	+5·0	52·7	+0·9	69·9	+3·0	34·4	96·0	26th	43·4	20th & 21st.	52·6
	Saugor	1,762	28·220	?	30·001	28·309	27th	28·121	18th	·188	62·9	85·5	+4·8	57·6	+3·2	71·6	+4·0	27·9	93·9	29th	49·4	3 days	44·5
Central Provinces, East.	Raipur	970	29·023	−·004	29·973	29·095	25th	28·919	17th	·176	69·7	91·0	+4·0	62·4	+2·2	76·7	+3·1	28·5	98·6	27th	56·0	14th	42·6
	Sambalpur	463	29·521	−·016	29·953	29·591	5th	29·404	18th	·187	67·0	90·7	+2·6	?	?	?	?	?	97·5	28th	?	...	?
Central India	Sutna	1,040	28·937	−·026	29·986	29·042	5th	28·842	16th	·200	61·8	84·3	+5·1	54·3	+3·3	69·3	+4·2	30·0	95·0	27th	47·8	20th	47·2
Hyderabad North.	Aurangabad	?	28·162	?	?	28·237	23rd	28·091	18th	·146	70·6	92·7	?	58·0	?	75·3	?	34·7	97·4	27th	51·1	21st	46·3
	Indur	?				Not recorded.					71·3	92·4	?	59·6	?	76·0	?	32·8	96·8	29th	51·0	21st	45·8
	Bidar	?	27·844	?	?	27·930	12th	27·720	24th	·210	74·8	88·0	?	65·5	?	76·8	?	22·5	92·3	28th & 29th	58·4	8th	33·9
Hyderabad South.	Gulbarga	1,502	28·508	?	29·988	28·584	27th	28·447	8th	·137	71·6	94·1	?	62·1	?	78·1	?	32·0	97·9	29th	55·3	20th	42·6
	Raichur	1,378	28·621	?	29·965	28·700	26th & 27th	28·539	18th	·161	73·1	94·6	?	66·7	?	80·6	?	27·9	98·6	24th	62·7	13th	35·9
	Hyderabad (Deccan), Secunderabad	1,690 1,787	28·315 28·216	+·014 ?	29·990 29·895	28·397 28·299	27th 27th	28·230 28·134	18th 18th	·167 ·165	69·1 67·2	92·6 93·7	+1·4 ?	61·3 61·9	−1·6 ?	77·0 77·8	−0·1 ?	31·3 31·8	97·4 97·2	29th 28th & 29th.	56·3 57·6	1st 13th	41·1 39·6
	Khamamet	373	29·642	?	29·969	29·725	25th & 27th	29·533	18th	·192	72·8	94·5	?	66·1	?	80·3	?	28·4	100·8	29th	59·2	13th	41·6
X.—West Coast		...	...	+·015	...	...	...	...	...	...	...	86·1	+0·2	70·0	−0·8	78·1	−0·3	16·1	...	...	...	...	24·1
Konkan	Bombay	37	30·008	+·023	29·986	30·083	25th	29·949	9th	·134	71·9	82·3	−0·2	69·0	+0·6	75·7	+0·2	13·3	84·5	3 days	65·5	21st	19·0
	Ratnagiri	110	29·908	+·027	29·959	30·010	25th	29·852	17th	·158	73·0	86·3	0	66·7	−0·2	76·5	−0·1	19·6	95·4	4th	62·9	21st	32·5
	Mormugao	60	29·959	?	29·954	30·061	25th	29·902	9th	·159	72·4	85·1	?	69·8	?	77·5	?	15·3	90·0	5th	66·3	1st	23·7
	Goa	199	29·811	+·018	29·850	29·904	25th	29·752	9th	·152	73·5	82·8	?	71·8	?	77·3	?	11·0	86·0	5th	70·0	19th & 27th.	16·0
	Karwar	44	29·979	+·022	29·957	30·071	25th	29·920	9th	·151	67·0	86·6	+0·4	64·8	−2·3	75·7	−1·0	21·8	91·6	15th	62·5	6th & 15th.	29·1
Malabar	Cochin	11	29·992	+·005	29·930	30·065	27th	29·911	9th	·154	77·5	90·4	+0·9	73·6	+0·5	82·0	+0·7	16·8	94·8	29th	69·7	11th & 12th.	25·1
	Calicut	27	29·981	+·003	29·938	30·053	27th	29·912	9th	·141	76·0	88·2	−0·6	70·6	−1·9	79·4	−1·3	17·6	90·8	29th	66·5	12th	24·3
	Mangalore	23	29·990	+·008	29·944	30·068	25th	29·934	9th	·134	74·9	88·5	+0·7	70·2	−1·2	79·4	−0·3	18·3	95·3	10th	68·0	14th	27·3
	Trivandrum	198	29·799	?	29·931	29·867	25th	29·711	9th	·156	76·3	84·8	?	73·6	?	79·2	?	11·2	87·0	3 days	67·5	7th	19·5
XI.—South India		...	...	+·001	...	...	...	...	...	...	...	89·8	+1·2	66·4	−0·8	78·1	+0·2	23·5	...	...	...	...	33·9
Madras South	Pamban	37	29·988	?	29·952	30·053	27th	29·931	9th	·122	79·1	85·0	?	75·0	?	80·0	?	10·0	90·3	23rd	71·2	18th	19·1
	Tinnevelly	168	29·858	?	29·959	29·934	27th	29·802	9th	·132	76·0	92·9	?	71·6	?	82·3	?	21·3	98·8	23rd	66·9	28th	31·9
	Madura	447	29·574	+·005	29·965	29·651	27th	29·522	9th	·129	75·9	91·9	−0·3	68·3	−1·0	80·1	−0·7	23·6	98·0	22nd	63·7	7th	34·3

† Mean of 28 days. ‡ Mean of 27 days.

I—*continued.*

in India, Burma, etc., in February 1896—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 29th February 1896.	Normal rainfall for period, 1st January to 29th February.	Variation from normal of period.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0·22	−0·22	...	...	...	...	IX.—Deccan.	
12	...	4	3	4	1	...	3	2	8·6	10·0	−14	38	·285	1·1	0	0·09	−0·09	0	0·02	−0·02	0	0·08	−0·08	0	Belgaum .	Bombay, Deccan.
8	3	1	1	3	2	3	4	4	6·5	6·5	0	32	·252	1·1	0	0·09	−0·09	0	0·03	−0·03	0	0·14	−0·14	0	Sholapore.	
15	...	...	...	...	...	2	3	9	4·7	6·3	−25	53	·309	1·1	0	0	0	0	0·04	−0·04	0	0·10	−0·10	0	Poona.	
7	...	...	1	1	2	4	9	5	3·3	P	P	58	·463	1·5	0	0·10	−0·10	0	P	P	0·01	?	P	0	Bijapur.	
...	2	...	...	1	...	...	6	20	8·6	5·0	+ 72	45	·270	1·0	0	0·18	−0·18	0	0·06	−0·06	0	0·22	−0·22	0	Malegaon .	Khandesh.
2	8	4	2	1	...	...	3	9	12·7	P	P	50	·340	0·8	0	?	?	0	P	P	0·07	?	P	0	Ahmednagar.	
1	...	1	1	6	6	6	6	2	4·4	3·8	+ 16	38	·251	1·2	0	0·18	−0·18	0	0·15	−0·15	0	0·58	−0·58	0	Akola . .	Berar.
...	2	2	8	2	2	7	6	...	8·7	3·7	+135	58	·431	1·0	0	0·27	−0·27	0	0·22	−0·22	0	0·61	−0·61	0	Amraoti.	
10	...	1	2	1	...	2	2	11	4·4	3·6	+ 22	41	·249	0·7	0	0·18	−0·18	0	0·06	−0·06	0	0·37	−0·37	0	Khandwa .	Central Provinces, West.
16	...	7	2	...	...	3	...	1	3·1	2·9	+ 7	53	·310	0·7	0	0·36	−0·36	0	0·24	−0·24	0	0·49	−0·49	0	Hoshangabad	
28	1	...	...	...	...	...	...	...	4·3	3·9	+ 10	43	·297	1·2	0	0·91	−0·91	0	0·29	−0·29	0	0·84	−0·84	0	Nagpur,	
9	...	...	3	4	4	3	4	2	2·7	2·7	0	53	·348	0·5	0	?	P	0	0·26	−0·26	0	0·63	−0·63	0	Chanda .	Central Provinces, Central.
			Not	rec	orde	d.			?	2·9	?	56	·354	0·9	0	1·55	−1·55	0	0·78	−0·78	0	1·41	−1·41	0	Seoni,	
...	1	8	14	1	...	1	1	3	2·1	2·5	−16	52	·284	0·8	0	0·91	−0·91	0	0·49	−0·49	0·01	1·25	−1·24	0	Jubbulpore.	
19	...	1	2	3	1	1	2	...	2·7	2·8	− 4	49	·282	0·7	0	0·82	−0·82	0·01	0·31	−0·30	0·01	1·01	−1·00	0·01	Saugor.	
10	1	4	1	...	...	9	3	1	5·2	3·7	+ 41	39	·287	0·9	0	0·73	−0·73	0	0·34	−0·34	0	0·54	−0·54	0	Raipur.	Central Provinces, East.
...	5	11	2	3	1	1	2	4	4·1	1·7	+141	58	·390	1·0	0	P	P	0	0·52	−0·52	0	0·82	−0·82	0	Sambalpore.	
2	11	...	2	...	...	...	3	11	5·0	4·7	+ 6	44	·248	0·7	0	1·18	−1·18	0	0·60	−0·60	0	1·65	−1·65	0	Sutna.	
17	...	3	2	4	1	2	...	...	2·6	?	?	40	·297	0·8	0	P	P	0	0·03	−0·03	0	0·22	−0·22	0	Aurangabad.	Hyderabad North.
6	3	1	1	2	3	4	2	7	6·0	P	?	63	·486	0·5	0	P	?	0	0·01	−0·01	0	0·06	−0·06	0	Indur.	
...	...	...	2	5	8	12	1	...	8·0	P	P	66	·544	0	0	P	?	0	0·01	−0·01	0	0·01	−0·01	0	Bidar.	
18	3	5	1	...	1	1	...	...	5·0	?	P	36	·281	1·1	0	?	?	0	0·12	−0·12	0	0·20	−0·20	0	Gulbarga .	Hyderabad South.
...	4	1	3	5	7	...	4	5	5·3	P	P	37	·302	0·9	0	?	P	0	P	P	0	P	P	0	Raichur.	
20	2	2	1	...	...	1	1	2	3·2	P	P	54	·394	0·5	0	?	?	0	0·05	−0·05	0	0·14	−0·14	0	Hyderabad (Deccan), Secunderabad	
11	6	1	7	...	...	...	...	4	3·9	3·8	+ 3	52	·348	0·5	0	?	P	0	P	?	0	P	?	0		
17	1	...	...	7	4	...	...	...	4·3	P	?	77	·630	1·0	0	?	P	0	P	P	0	?	?	0	Khamamet.	
...	...	...	...	...	...	...	...	...	..	...	...	...	....	...	...	...	...	0	0·18	−0·18	...	...	...	...	X.—West Coast.	
...	11	8	10	...	...	...	...	...	10·4	10·7	− 3	74	·589	1·3	0	0	0	0	0·01	−0·01	0	0·14	−0·14	0	Bombay .	Konkan.
1	5	6	7	3	...	...	1	6	5·3	9·8	− 46	66	·535	1·3	0	0	0	0	0	0	0	0·22	−0·22	0	Ratnagiri.	
2	4	4	3	13	3	...	...	...	8·8	P	P	83	·670	0·6	0	?	P	0	P	?	0	?	P	0	Murmagao.	
...	4	7	18	...	...	...	...	..	6·4	?	?	73	·499	0·9	0	?	P	0	0	0	0	0·25	−0·25	0	Goa.	
1	5	15	8	...	...	...	...	...	4·9	P	?	84	·556	0·6	0	0	0	0	0	0	0	0·12	−0·12	0	Karwar.	
4	11	12	2	...	...	...	...	...	6·1	P	?	73	·696	1·6	0	1·00	−1·00	0	0·63	−0·63	0	1·22	−1·22	0	Cochin .	Malabar.
...	1	16	10	1	...	...	...	...	13·5	P	P	80	·712	1·9	0	0·13	−0·13	0	0·25	−0·25	1·04	0·33	+0·71	0	Calicut.*	
1	...	4	21	3	...	...	...	...	2·9	3·5	− 17	76	·662	0·8	0	0	0	0	0·01	−0·01	0	0·10	−0·10	0	Mangalore.	
14	6	5	3	...	...	...	...	1	2·4	?	?	73	·668	1·8	0	?	P	0	0·52	−0·52	0·13	0·16	−1·03	0	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0·27	−0·27	...	...	...	...	XI.—South India.	
1	3	17	4	2	2	...	...	...	9·4	P	P	78	·773	2·7	0	0·50	−0·50	0	0·13	−0·13	1·47	1·93	−0·46	0	Pamban .	Madras South.
...	8	2	1	3	...	...	2	13	5·4	?	?	74	·631	2·9	0	1·50	−1·50	0	P	P	0·09	P	?	0	Tinnevelly	
3	9	5	3	3	...	...	...	6	4·4	5·0	− 12	71	·647	1·2	0	0·45	−0·45	0	0·33	−0·33	0	0·66	−0·66	0	Madura.	

* Winds of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 207 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	29·110	−·001	30·010	29·184	27th	29·061	18th	·123	73·1	93·7	+0·1	63·3	−1·5	78·5	−0·7	30·4	98·4	22nd & 24th,	57·5	8th	40·9
	Coimbatore	1,348	28·674	+·007	29·989	28·749	27th	28·615	9th	·134	73·0	92·6	+0·5	63·8	−1·3	78·2	−0·4	28·8	97·4	24th	59·1	10th & 11th,	38·3
Coorg	Mercara	3,781	26·303	+·014	?	26·376	25th	26·249	9th	·127	67·0	82·3	+1·1	?	?	?	?	?	85·5	28th	?	...	?
Mysore	Chitaldroog	2,405	27·615	?	29·952	27·683	25th & 27th	27·559	18th	·124	74·7	89·5	?	66·0	?	77·8	?	23·5	93·1	22nd & 29th,	58·9	13th	34·2
	Bangalore	3,021	27·019	−·007	29·972	27·090	25th	26·964	8th	·126	68·2	86·9	+1·7	59·4	+0·5	73·2	+1·1	27·5	91·3	3 days	53·4	12th	37·9
	Hassan	3,091	26·967	?	30·002	27·034	25th	26·918	8th	·116	68·0	87·4	?	54·8	?	71·1	?	32·6	91·1	22nd	50·1	13th	41·0
	Mysore	2,518	27·521	?	29·985	27·587	25th	27·468	8th	·119	70·7	89·4	?	60·7	?	75·1	?	28·7	93·9	20th	56·9	3 days.	37·0
Madras, East Coast, South.	Negapatam	31	29·991	0	29·952	30·062	27th	29·943	8th	·119	75·9	84·0	−0·3	70·4	−1·2	77·2	−0·8	13·6	87·7	22nd & 23rd	66·7	7th	21·0
	Cuddalore	12	30·025	?	29·966	30·099	26th	29·967	29th	·132	74·5	85·9	?	67·9	?	76·9	?	18·0	93·3	29th	62·3	29th,	31·0
	Trichinopoly	255	29·766	−·009	29·960	29·837	27th	29·721	8th	·116	74·8	93·0	+0·9	66·6	−1·3	79·3	−0·2	26·4	99·1	22nd	61·9	28th	37·2
	Madras	22	30·017	−·001	29·970	30·104	25th	29·965	18th	·139	74·9	87·6	+1·0	66·8	−1·3	77·2	−0·2	20·8	90·5	21st & 23rd	63·0	28th & 29th,	27·5
Madras, East-Coast, Central.	Nellore	71	29·947	?	29·952	30·042	25th	29·857	18th	·185	73·9	92·0	?	68·4	?	80·2	?	23·6	96·2	5 days	64·6	13th	31·6
	Masulipatam	15	30·018	?	29·968	30·115	25th	29·917	18th	·198	74·7	88·3	+1·4	67·8	0	78·1	+0·7	20·5	96·6	29th	61·2	13th	35·4
Madras, Central	Cuddapah	423	29·577	?	29·959	29·661	27th	29·511	18th	·150	74·4	95·7	+1·1	67·1	−1·2	81·4	−0·1	28·8	101·2	23rd	59·3	12th	41·9
	Kurnool	923	29·078	−·003	29·973	29·155	27th	28·998	18th	157	69·0	95·8	+1·2	?	?	?	?	?	98·7	27th & 29th	?	...	?
	Bellary	1,475	28·531	+·016	29·975	28·612	27th	28·467	18th	·145	73·5	95·1	+0·9	64·6	−0·3	79·9	+0·3	30·5	98·7	24th	60·4	3rd & 15th,	38·3
Madras, East-Coast, North	Rajahmundry	112	29·914	?	29·966	30·001	25th	29·822	18th	·179	73·7	94·4	+2·7	68·7	+0·3	81·6	+1·5	25·7	102·0	29th	63·0	13th	39·0
	Cocanada	26	29·990	−·005	29·951	30·084	25th	29·893	18th	·191	74·1	89·1?	+5·2?	69·0	−0·4	79·1?	+2·4?	20·1?	99·6?	29th	64·0	13th	35·6
	Vizagapatam	31	29·884	−·010	29·954	30·073	25th	29·891	18th	·182	74·5	87·6	+1·5	67·6	−1·4	77·6	+0·1	20·0	95·0	28th	62·4	12th & 13th,	32·6
	Gopalpur	21	29·981	?	29·942	30·053	25th	29·850	18th	·203	69·9	85·2	?	66·0	?	75·7	?	19·2	96·2	29th	60·1	21st	36·1
XII.—Hill Stations.																							
Baluchistan	Kachh Fort	?	23·872	?	?	24·000	27th	23·750	23rd	·250	36·5	48·4	?	28·8	?	38·6	?	19·6	62·0	21st & 22nd,	15·0	7th	47·0
	Pishin	?				Not recorded,					?	55·7	?	28·8	?	42·3	?	26·9	73·0	22nd	14·9	7th	58·1
	Quetta	5,502	24·661	+·001	?	24·806	27th	24·504	23rd	·302	39·3	54·0	+1·7	32·8	+1·3	43·4	+1·5	21·2	67·2	21st & 22nd,	22·3	7th & 12th,	44·9
	Chaman	4,311	25·753	?	?	25·909	26th	25·622	2nd	·287	44·9	57·3	?	26·3?	?	41·8?	?	31·0?	72·1	22nd,	13·1?	15th	59·0
Punjab	Leh	11,503	19·595	?	?	19·800	28th	19·415	7th	·385	14·2	29·7	?	9·0†	?	19·4†	?	20·7	38·6	27th	0	5th	38·6
	Srinagar	5,204	24·925	?	?	25·120	27th	24·814	6th	·306	35·1	47·9	?	31·5	?	39·7	?	16·4	61·9	23rd	25·1	20th	36·8
	Astor (Kashmir),	?	22·222	?	?	22·455	27th	22·047	6th	·408	23·9	38·2	?	20·6	?	29·4	?	17·6	51·4	29th	13·0	18th	38·4
	Minimarg	?	21·229	?	?	21·348	4th	21·096	24th	·252	18·0	37·2	?	6·1	?	21·7	?	31·1	46·3	15th & 16th,	1·0	3rd & 13th,	45·3
	Gilgit	?	24·729	?	?	24·970	27th	24·570	3 days	·400	40·5	50·5	?	37·0	?	43·7	?	13·5	60·6	23rd	32·3	4th & 20th,	28·3
	Cherat	?	25·739	?	?	25·896	27th	25·617	18th	·279	43·6	58·1	?	?	?	?	?	?	63·3	21st & 22nd,	?	...	?
	Murree	6,344	23·816	+·001	?	23·974	27th	23·712	18th	·262	39·2	50·8	+3·1	35·1	+1·0	42·9	+2·1	15·7	58·6	8 days.	28·0	7th	30·6
	Poo	?				Not recorded,					?	43·9	?	26·5	?	35·4	?	17·1	52·5	22nd	22·0	5th	30·5
	Simla	7,224	23·092	+·003	?	23·242	28th	22·939	18th	·303	39·9	46·7	−0·5	35·9	−0·3	41·3	−0·4	10·8	54·0	29th	28·6	13th	25·4
N.-W. Provinces.	Chakrata	6,977	23·304	+·008	?	23·479	27th	23·151	18th	·328	39·2	50·4	−0·7	36·4	+0·5	43·4	−0·1	14·0	59·3	29th	28·1	12th	31·7
	Mussoorie	6,705	23·521	?	?	23·685	27th	23·358	20th	·327	42·1	50·9	?	38·8	?	44·4	?	11·2	57·7	29th	31·5	12th	26·2
	Ranikhet	6,069	24·113	+·014	?	24·308	25th	23·958	20th	·350	44·8	55·5	+0·1	41·4	+0·7	48·5	+0·4	14·1	64·1	29th	32·5	1st	31·6
Bengal	Yatung	10,480?	...			Not recorded,					?	41·9	?	24·1	?	33·0	?	17·8	55·9	29th	11·9	1st	44·0
	Gnatong	?	19·102	?	?	19·251	26th	18·972	20th	·279	24·3	32·2	?	17·3	?	24·8	?	14·9	45·2	28th	9·7	21st	35·5
	Darjeeling	7,421	22·937	−·005	?	23·058	25th	22·830	18th	·228	39·3	46·6	+0·4	35·4	+1·3	41·0	+0·9	11·2	59·9	28th	30·6	20th	29·3
	Gantok	?	24·398	?	?	24·554	25th	24·165	20th	·389	45·9	57·6	?	33·9	?	45·8	?	23·7	68·6	29th	27·0	1st	41·6

† Mean of 28 days.

—continued.

n India, Burma, etc., in February 1896—continued.

Wind Direction, Number of winds from									Wind Velocity.			Hygrometry, 8a.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 29th February 1896.	Normal rainfall for period, 1st January to 29th February.	Variation from normal of period, 1st October to 31st December.			
16	...	6	5	...	...	1	1	...	5·9	5·6	+ 5	69	·561	1·3	0	0·09	−0·09	0	0·34	−0·34	0·01	0·65	−0·64	0	Salem . .	Madras, South, Central.
...	...	...	20	...	1	7	1	...	2·5	3·2	− 22	80	·653	3·2	0	0·30	−0·30	0	0·30	−0·30	0·20	0·49	−0·29	0	Coimbatore.	
20	1	3	4	1	...	...	...	...	6·8	4·0	+ 70	49	·327	1·3	0	0·30	−0·30	0	0·08	−0·08	0	0·12	−0·12	0	Mercara .	Coorg.
2	...	1	6	11	2	...	4	3	8·9	?	?	36	·305	1·8	0	?	?	0	?	?	0·01	?	?	0	Chitaldroog .	Mysore.
...	1	5	13	4	3	2	1	...	7·8	3·6	+117	58	·402	1·8	0	0·18	−0·18	0	0·11	−0·11	0·03	0·30	−0·27	0	Bangalore	
5	...	5	9	7	...	...	...	3	3·3	?	?	56	·381	2·1	0	?	?	0	?	?	0	?	?	0	Hassan.	
7	2	11	4	1	2	...	2	...	7·8	?	?	51	·384	2·6	0	?	?	0	?	?	0	?	?	0	Mysore.	
6	...	3	...	1	...	1	1	17	11·5	3·6	+219	85	·758	3·8	0	0·55	−0·55	0	0·53	−0·53	0·14	1·99	−1·85	0	Negapatam .	Madras, East Coast, South.
...	5	1	...	...	4	1	7	11	1·2‡	?	?	92	·790	1·2	0	0·40	−0·40	0	?	?	0·82	?	?	0	Cuddalore.	
20	2	4	...	...	...	...	2	1	3·0	4·1	− 27	74	·641	2·7	0	0	0	0	0·91	−0·91	0	1·17	−1·17	0	Trichinopoly.	
11	1	...	...	1	6	6	1	3	3·7	5·0	− 26	85	·737	2·4	0	0·09	−0·09	0	0·29	−0·29	0·13	1·18	−1·05	0	Madras.	
11	...	...	3	7	5	...	1	2	4·4	?	?	87	·728	1·5	0	0·20	−0·20	0	?	?	0·05	?	?	0	Nellore .	Madras, East-Coast, Central.
8	9	3	1	1	3	...	...	4	3·9	5·1	− 24	86	·739	2·1	0	0·27	−0·27	0	0·17	−0·17	0·04	0·29	−0·25	0	Masulipatam.	
16	...	4	2	5	1	1	...	...	?	?	?	63	·539	1·0	0	0·10	−0·10	0	0·07	−0·07	3·34	0·09	+3·25	0	Cuddapah .	Madras, Central.
28	...	...	1	...	...	...	...	...	?	?	?	49	·346	0·8	0	0	0	0	0	0	0	0·08	−0·08	0	Kurnool.	
16	...	...	...	1	6	1	...	5	3·7	4·0	− 8	38	·314	2·0	0	0·09	−0·09	0	0·05	−0·05	0	0·18	−0·18	0	Bellary.	
7	18	...	1	...	...	...	...	3	?	?	?	68	·578	3·3	0	0·30	−0·30	0	0·17	−0·17	0·02	0·25	−0·23	0	Rajahmundry	Madras, East-Coast, North.
...	8	1	...	...	...	1	7	12	6·3	?	?	78	·651	1·3	0	0·40	−0·40	0	0·47	−0·47	0·16	0·61	−0·45	0	Cocanada.	
8	...	...	...	...	1	...	20	...	2·3	2·0	+ 15	80	·697	1·4	0	0·18	−0·18	0	0·11	−0·11	0	0·30	−0·30	0	Vizagapatam.	
3	10	1	...	...	...	3	2	10	11·9	9·6	+ 24	82	·593	0·6	0	1·13	−1·13	0	0·58	−0·58	0	0·76	−0·76	0	Gopalpur.	
																									XII.—Hill Stations.	
14	2	1	2	3	...	1	4	2	5·3	?	?	65	·143	2·9	8	?	?	3·28	?	?	5·00	?	?	1·03	Kachh Fort,	Baluchistan.
			Not	rec	orde	d.			?	?	?	?	?		5	?	?	1·66	?	?	3·45	?	?	0·44	Pishin.	
18	...	1	...	2	3	1	2	2	4·3	4·4	− 2	72	·173	3·9	7	4·09	+2·91	1·85	2·29	−0·44	3·53	4·40	−0·87	0·43	Quetta.	
...	1	2	9	9	4	1	2	1	18·4	?	?	59	·176	4·1	4	?	?	0·87	?	?	3·12	?	?	0·26	Chaman.	
1	...	...	...	...	...	27	1	...	1·3	1·4	− 7	33	·027	7·4	7	?	?	1·74	?	?	1·81	?	?	0·50	Leh . .	Northern India.
10	1	...	2	4	3	...	4	5	5·5	?	?	93	·190	8·1	6	?	?	2·46	?	?	3·55	?	?	0·60	Srinagar.	
5	...	...	...	...	11	9	3	1	5·2	P	P	69	·094	6·4	4	?	P	1·87	P	P	3·07	P	?	0·90	Astor (Kashmir). .	
...	3	5	17	1	...	2	1	...	8·9	P	P	84	·085	4·8	13	?	?	22·34	P	?	22·86	P	P	6·33	Minimarg.	
			Not	rec	orde	d			P	?	?	50	·124	6·3	1	P	?	0·12	?	?	0·28	?	?	0·12	Gilghit.	
2	12	1	...	...	2	1	1	10	20·2	?	?	54	·147	3·9	3	?	?	3·19	?	?	5·23	?	?	1·74	Cherat.	
...	1	2	3	14	1	...	2	6	11·3	8·2	+ 38	83	·207	5·3	8	3·36	+4·64	3·71	3·91	−0·20	8·08	7·43	+ 0·65	1·02	Murree.	
14	3	...	1	2	2	1	3	3	P	?	?	P	P	5·7	7	P	?	3·35	?	?	5·10	?	?	1·39	Poo.	
8	2	3	2	2	7	1	...	...	4·7	2·5	+ 88	58	·141	4·9	9	4·36	+4·64	4·63	2·76	+1·87	5·96	5·11	+ 0·85	1·10	Simla.*	
12	13	3	...	...	...	...	...	1	8·4	5·4	+ 56	63	·148	3·1	6	P	?	1·82	3·87	−2·05	1·82	7·40	− 5·58	0·60	Chakrata.	
...	3	3	10	1	...	...	4	8	?	P	?	63	·170	3·4	4	3·50	+0·50	2·06	P	P	3·72	?	P	0·72	Mussooree.	
22	...	3	1	...	1	2	...	...	2·0	2·0	0	68	·199	3·6	4	4·09	−0·09	1·31	2·01	−0·70	2·46	4·95	− 2·49	0·47	Ranikhet.	
			Not	rec	orde	d.	...	...	P	?	?	P	P	P	...	...	...	...	P	?	...	?	?	...	Yatung.	
8	2	1	1	6	1	3	3	4	6·8	?	?	84	·110	2·2	4	?	?	1·05	?	?	2·17	?	?	0·25	Gnatong.	
3	1	3	6	6	2	4	3	1	6·8	5·1	+ 33	84	·205	3·3	P	2·29	−2·29	0·11	1·05	−0·94	0·17	1·37	− 1·20	0·06	Darjeeling.	
7	4	3	4	4	1	3	2	1	2·3	P	?	78	·241	?	2	?	?	0·47	?	?	1·04	?	?	0·20	Gantok .	

* Winds of 26 days. ‡ Mean of 23 days.

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Meteorological Province or District.	Stations.	Elevation of barometer above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
			Mean actual pressure (reduced to 32°.)	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
CENTRAL INDIA.	Mount Abu.	3,945	26·114	−·002	P	26·223	27th	26·035	18th	·188	59·4	68·4	−0·5	54·7	+1·5	61·6	+0·5	13·7	75·1	29th	46·0	13th	29·1
	Pachmarhi .	3,528	26·534	+·006	P	26·628	26th	26·431	18th	·197	64·5	78·0	+2·7	52·8	+2·0	65·4	+2·4	25·2	85·7	27th	43·3	14th & 21st.	42·4
SOUTH INDIA .	Wellington .	6,200	24·320	+·007	?	24·387	27th	24·261	8th	·126	56·7	71·7	+1·3	44·8	−1·9	58·3	−0·3	26·9	75·7	23rd	34·2	11th	41·5
XIII.—Extra India.																							
CEYLON . .	Trincomalee	75	29·948	?	29·952	30·007	26th	29·889	8th	·118	81·0	84·5	?	75·5	?	80·0	?	9·0	88·0	21st	71·0	15th	17·0
	Colombo .	40	29·858	+·004	29·924	30·020	26th	29·875	9th	·145	82·7	89·7	?	72·4	?	81·1	?	17·3	93·5	27th	67·5	2nd	26·0
	Galle . .	48	29·975	?	29·949	30·044	26th	29·814	8th	·230	80·4	84·0	?	75·3	?	79·7	?	8·7	87·0	29th	71·0	29th	16·0
PERSIA . .	Meshed .	3,104				Not recorded.					32·6	P	?	27·2	P	P	P	P	P	...	4·0	1st	P
	Resht . .	?				Ditto.					38·6	47·7	?	33·2	P	40·5	P	14·5	59·8	16th	20·1	5th	39·7
	Teheran .	? *	26·034	P	P	26·300	6th	25·835	4th	·465	34·4	47·5	?	28·2	?	37·8	P	19·3	58·0	18th	17·0	5th	41·0
	Ispahan .	?	24·402			24·560	17th	24·170	1st	·390	32·7	50·9	P	25·5	?	38·2	?	25·4	61·3	19th	15·0	6th	46·3
			24·668	P	P	24·820	17th	24·540	1st, 4th, 7th & 12th,	·280													
	Bushire .	14	30·145	+·070	30·116	30·340	6th	29·929	19th	·411	53·3	60·4	−5·6	48·8	−3·8	54·6	−4·7	11·6	76·5	20th	39·4	1st	37·1
	Jask . .	?	30·075	?	?	30·185	6th	29·970	23rd	·215	66·3	75·5	?	62·7	?	69·1	?	12·8	81·7	23rd	55·7	7th & 12th	26·0
ARABIA . .	Muscat .	?	30·079	?	?	30·176	6th	29·970	23rd	·206	70·0	73·6	?	68·2	?	70·9	?	5·4	78·4	29th	63·9	7th & 12th.	14·5
	Baghdad .	220?	30·054	?	30·268	30·327	6th	29·762	19th	·565	45·5	57·1	−8·7	41·5	−1·0	49·3	−4·9	15·6	70·1	26th	31·5	1st	38·6
	Aden . .	94	29·978	+·024	30·005	30·065	6th	29·919	1st	·146	75·8	82·2	−0·3	73·7	+0·7	77·9	+0·2	8·5	87·8	24th	69·4	19th	18·4
	Perim . .	?	29·788	?	?	29·878	6th	29·726	9th	·152	77·4	84·0	P	74·6	?	79·3	?	9·4	86·9	25th	73·6	8th & 21st.	13·3
AFGHANISTAN .	Kabul* .	?				Not recorded.					22·9	41·9	?	17·0	?	29·4	?	24·9	57·2	22nd	5·0	4th	52·2
CENTRAL ASIA .	Kashgar .	?	†25·691	?	?	25·820	10th, 15th & 17th.	25·490	6th	·330	23·2	44·1	?	20·3	?	32·2	?	23·8	61·6	23rd	14·2	2nd	47·4
ARABIAN SEA ISLANDS.	Amini Devi.	15	30·004	P	29·947	30·079	25th	29·946	18th	·133	81·4	81·6a	?	76·7	P	79·2	?	4·9	83·1	21st	72·5	22nd	10·6
	Minicoy .	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
AFRICA . .	Zanzibar .	73	29·928	?	29·927	29·972	24th	29·876	9th	·096	83·2	87·3	?	81·3	?	84·3	?	6·0	89·7	16th	78·7	26th	11·0

* Mean of 28 days.

† Mean of 27 days.

a Uncorrected.

—concluded.

India, Burma, etc., in February 1896—concluded.

Wind Direction. Number of winds from								Wind velocity.			Hygrometry, 8A.M.		Mean cloud amount.	Rainfall.									Station.	Meteorological Province or District.
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 29th February 1896.	Normal rainfall for period, 1st January to 29th February.	Variation from normal of period.	Heaviest rainfall, during month.		
1	1	1	...	5	11	1	8	8·6	5·6	+54	49	·243	2·1	0	0·36	−0·36	0	0·36	−0·36	0	0·78	−0·78	0	Mount Abu.	Central India.
3	...	...	1	1	...	...	2	2	5·7	3·8	+50	64	·394 ·254	1·4	0	0·82	−0·82	0	0·46	−0·46	0	0·97	−0·97	0	Pachmarhi.	
1	1	4	1	1	1	...	...	...	3·0	2·7	+11	55		1·3	0	0·50	−0·50	0	1·66	−1·66	0·90	2·70	−1·80	0	Wellington.	South India.
XIII.—Extra India.																										
3	...	12	...	...	1	2	...	6	1·1	?	?	76	·802	3·4	1	?	?	2·05	2·10	−0·05	10·15	7·36	+2·79	2·05	Trincomalee	Ceylon.
.	5	16	2	...	...	1	2	3	7·9	6·2	+27	67	·752	3·2	1	?	?	0·35	2·75	−2·40	3·26	5·67	−2·41	0·33	Colombo.	
7	1	7	1	1	...	...	...	2	2·9‡	?	?	84	·873	2·9	2	?	?	0·39	3·18	−2·79	6·45	7·47	−1·02	0·16	Galle.	
			Not	rec	orde	d.			?	?	?	?	?	4·4	2	?	?	1·85	?	?	2·22	?	?	1·40	Meshed	Persia.
			dit	to.					?	?	?	**87	**·206	?	6	?	?	5·45	?	?	15·21	?	?	2·45	Resht.	
.	4	17	2	...	2	2	...	2	4·1	?	?	57‖	·133‖	3·5	2	?	?	0·31	?	?	2·11	?	?	0·18	Teheran.	
1	...	1	1	2	2	9	8	5	6·9	?	?	94	·178	2·8	1	?	?	0·11	?	?	0·45	?	?	0·11	Ispahan.	
1	12	5	2	4	...	...	...	5	13·0	?	?	69	·283	2·2	0	?	?	0·02	3·17	−3·15	2·66	6·80	−4·14	0·02	Bushire.	
.	8	3	5	...	...	...	...	13	12·1	?	?	83§	·543§	1·3	1	?	?	0·25	?	?	1·13	?	?	0·20	Jask.	
.	...	...	1	4	3	4	12	4	5·5‡	?	?	67	·489	1·4	1	?	?	0·14	?	?	2·61	?	?	0·14	Muscat†	Arabia.
7	8	1	2	1	4	1	2	3	3·	?	?	78	·245	1·2	1	?	?	0·31	?	?	5·07	?	?	0·28	Baghdad.	
5	1	5	13	4	1	...	...	...	10·2‡	12·9	−21	75	·656	6·9	0	?	?	0	0·36	−0·36	0·59	0·64	−0·05	0	Aden.	
1	2	...	18	2	...	...	...	6	16·1	?	?	76	·718	5·4	0	?	?	0·01	?	?	0·26	?	?	0·01	Perim.	
.	6	...	10	1	2	...	8	1	?	?	?	?	?	1·4	0	?	?	0	?	?	0	?	?	0	Kabul*	Afghanistan.
9	...	...	...	...	...	...	...	...	0·5‡	?	?	?	?	2·3	0	?	?	0	?	?	0	?	?	0	Kashgar	Central Asia.
.	20	9	...	...	...	...	...	...	9·9	?	?	78	·832	4·2	0	?	?	0	?	? ●	0·14		?	0	Amini Devi.	Arabian Sea Islands.
.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Minicoy.	
.	9	12	2	...	1	2	...	1	5·7¶	?	?	77	·874	5·6**	3	...	?	0·83	?	?	4·77	?	?	0·56	Zanzibar††	Africa.

* Mean and wind direction of 28 days. † Wind direction of 28 days. ‡ Mean of 28 days. § Mean of 25 days.
‖ Mean of 18 days. ¶ Mean of 26 days. ** Mean of 27 days. †† Wind directions of 27 days.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.									Temperature, wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
								29+													
Burma Coast and Bay Islands.	Port Blair	...	29·958	29·847	·111	29·898	+·010	·890	87·5	74·8	12·7	92·1	68·3	23·3	83·8	85·5	80·2	+0·5	71·9	76·8	76·5	75·1
	Rangoon	...	·987	·842	·145	·911	−·002	·888	93·7	65·3	28·4	97·2	60·6	36·6	79·1	90·5	77·0	+1·0	62·9	69·6	70·2	67·6
	Diamond Island	...	·989	·871	·118	·925	−·011	·901	84·0	74·0	10·0	88·4	71·8	16·6	81·0	80·3	77·6	+1·0	69·4	72·5	72·2	71·4
	Cocos Island	111							Not yet received.												
	Akyab	...	30·018	·907	·111	·955	+·001	·918	84·7	62·4	22·3	89·7	58·2	31·5	73·8	81·3	73·2	+0·9	59·4	67·7	71·4	66·2
Assam.	Silchar	...	29·932	·796	·136	·860	−·027	·918	79·6	58·1	21·5	86·6	52·2	34·4	70·6	77·0	67·7	+0·8	57·2	64·8	66·0	62·7
	Sibsagar	...	·709	·565	·144	·635	−·035	·937	71·6	53·8	17·8	81·3	43·1	38·2	62·4	70·2	61·3	+0·2	53·6	59·9	62·2	58·6
	Dhubri	...	·903	·756	·147	·826	−·032	·898	77·8	55·4	22·4	87·6	43·4	39·2	67·3	77·0	64·8	+0·3	53·6	60·6	62·7	59·0
Bengal and Orissa.	Chittagong	...	·939	·823	·116	·874	−·031	·919	81·7	61·2	20·5	86·3	55·2	31·1	74·0	78·8	71·4	+1·3	60·2	67·7	68·7	65·5
	Narayanganj	...	·888	·852	·136	·913	−·034	·888	84·0	61·6	22·4	93·7	54·1	39·6	74·7	82·5	72·7	+2·8	58·4	66·1	65·5	63·3
	Calcutta (Alipore)	...	·898	·861	·137	·919	−·033	·885	86·3	61·6	24·7	98·5	52·4	46·1	76·3	85·4	73·4	+3·6	58·3	64·8	64·8	62·6
	Saugor Island	...	·994	·867	·127	·918	−·030	·887	83·4	67·8	15·6	91·6	59·2	32·4	77·1	80·1	74·3	+2·2	64·4	69·4	71·0	68·3
	Burdwan	...	·919	·777	·142	·835	−·044	·883	87·5	59·2	28 3	100·2	52·1	48·1	76·5	85·9	72·5	+2·2	56·3	62·5	63·8	60·9
	Berhampore	...	·941	·813	·128	·864	−·036	·880	85·4	P	P	97·7	P	P	75·2	85·1	P	P	52·0	63·0	64·6	59·9
	False Point	...	30·008	·882	·126	·942	−·033	·905	84·0	66·4	17·6	92·8	56·0	36·8	80·2	81·1	74·0	+2·0	65·3	71·7	72·5	69·8
	Cuttack	...	29·942	·789	·153	·865	−·033	·888	93·2	65·9	27·3	102·2	58·6	43·6	78·5	91·4	78·3	+2·2	63·0	66·8	67·4	65·7
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·972	27·863	·109	27·914	−·025	·879	82·2	57·1	25·1	92·2	50·1	42·1	73·3	80·2	69·0	+3·4	46·6	56·5	59·1	54·1
	Patna	...	29·822	29·700	·122	29·755	−·046	·894	82·1	55·3	26·8	91·4	49·8	44·6	71·3	81·0	68·3	+3·2	50·6	58·5	61·2	56·8
	Darbhanga	...	·838	·708	·130	·767	−·045	·890	80·0	53·9	26·1	93·0	49·3	43·7	70·0	79·6	66·8	+2·1	51·5	59·0	61·9	57·5
	Allahabad	...	·714	·591	·123	·644	−·034	·911	85·0	53·8	31·2	96·6	46·5	50·1	74·2	84·1	68·7	+3·3	48·5	58·2	60·6	55·8
	Lucknow	...	·642	·527	·115	·578	−·037	·911	83·0	52·5	30·5	91·7	45·4	49·3	72·2	81·4	67·7	+2·2	44·9	58·7	60·9	54·8
Upper Sub-Himalayas.	Dehra Dun	...	27·747	27·657	·090	27·695	−·012	·951	70·2	47·8	22·4	78·7	40·4	38·3	60·8	65·9	57·3	+0·9	44·6	52·4	53·6	50·2
	Roorkee	...	29·098	29·008	·090	29·045	−·023	·928	74·8	48·8	26·0	85·2	39·5	45·7	64·0	72·9	60·7	+0·6	46·3	55·1	56·3	52·6
	Meerut	...	·256	·169	·087	·207	−·025	·934	76·6	51·3	25·3	87·5	44·6	42·9	66·0	74·2	62·9	+1·9	48·3	55·0	57·3	53·5
	Lahore	...	·316	·231	·085	·264	−·021	·965	71·9	48·7	23·2	80·9	40·2	40·7	60·4	70·8	59·4	+2·8	45·4	53·3	57·2	52·0
	Ludhiana	...	·190	·113	·077	·143	−·016	·956	71·3	49·9	21·4	78·7	44·0	34·7	63·1	69·5	59·6	+2·0	47·5	54·5	56·2	52·7
Indus Valley and N.W. Rajputana.	Peshawar	...	28·935	28·857	·078	28·886	−·022	30·032	66·0	43·8	22·2	76·1	37·4	38·7	57·1	64·2	53·9	+1·6	40·8	49·1	51·8	47·2
	Mooltan	...	29·630	29·535	·095	29·573	−·012	29·980	74·8	49·3	25·5	85·8	41·6	44·2	62·3	72·6	60·9	+2·5	45·1	53·2	57·8	52·0
	Jacobabad	...	·866	·739	·127	·793	−·028	·943	79·2	50·0	29·2	93·4	39·8	53·6	68·5	78·1	63·6	+1·7	44·5	55·9	60·1	53·5
	Kurrachee	...	30·063	·958	·105	30·003	−·018	·964	81·6	61·8	19·8	87·6	50·4	37·2	75·6	78·2	70·9	+2·7	57·2	64·9	67·3	63·1
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·591	28·489	·102	28·530	−·012	·944	81·2	54·1	27·1	89·6	41·9	47·7	71·1	79·7	67·3	+4·2	47·5	55·7	59·0	54·0
	Ajmere	...	·416	·309	·107	·359	−·014	·960	80·5	53·6	26·9	88·6	39·9	48·7	69·3	79·2	67·0	+5·3	48·0	57·8	62·4	56·1
	Deesa	...	29·592	29·470	·122	29·522	+·016	·947	88·6	55·7	32·9	96·3	45·6	50·7	77·6	87·0	71·9	+1·5	48·7	60·0	61·6	56·5
	Nuwgong	...	·257	·138	·119	·190	−·032	·914	84·4	53·3	31·1	94·4	47·0	47·4	72·7	83·0	68·3	+3·4	48·1	58·5	62·2	56·3
	Agra	...	·468	·355	·113	·403	−·032	·931	81·4	54·2	27·2	89·6	47·9	41·7	70·3	79·9	67·1	+2·8	49·4	58·0	61·7	56·4
Deccan.	Belgaum	...	27·502	27·376	·126	27·435	+·018	·844	90·2	58·9	31·3	92·4	55·5	36·9	81·3	87·6	73·4	+0·6	53·9	58·6	60·9	57·8
	Sholapur	...	28·446	28·296	·150	28·366	+·017	·884	94·6	61·4	33·2	98·2	56·5	41·7	82·5	92·8	78·1	+0·1	49·8	61·2	65·0	58·8
	Poona	...	·198	·049	·149	·123	+·023	·886	93·2	55·3	37·9	97·0	50·2	46·8	79·6	91·3	73·9	+0·9	50·6	59·2	62·1	57·3
	Akola	...	29·092	·945	·147	29·013	−·001	·892	93·8	56·8	37·0	100·8	45·0	55·8	81·3	92·9	74·8	+1·9	48·0	61·7	65·0	58·1
	Buldana	2,132	27·900	27·776	·124	27·832	+·017	·893	87·8	63·9	23·9	93·5	56·0	37·5	78·0	86·7	75·2	+1·9	52·9	58·2	60·5	57·2
	Khandwa	...	28·993	28·846	·147	28·914	+·016	·913	91·0	56·4	34·6	98·9	46·8	52·1	78·9	90·7	73·4	+2·3	47·6	60·1	62·9	56·9

Stations in India, Burma, etc., for February 1896.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
745	·831	·795	·790	−·024	86	71	65	74	−3	3·8	2·9	3·4	+0·6	2	13	25	4	9	4	...	...	1	N. 52° E.	N. 41° E.	60	76	145	115	...	...	Port Blair	Burma Coast and Bay Islands.
546	·599	·471	·539	−·037	87	62	34	61	−2	1·1	1·7	1·4	−0·6	...	8	11	6	6	6	10	9	2	S. 79° E.	S. 46° W.	2	18	93	92	...	...	Rangoon	
660	·686	·684	·677	−·004	79	65	66	70	−3	2·7	3·5	3·1	+1·0	...	8	5	2	3	...	2	12	26	N. 42° W.	N. 25° W.	62	86	328*	168	...	...	Diamond Island, Cocos Island	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
472	·599	·644	·572	+·055	82	72	61	72	+3	1·1	0·7	0·9	−0·2	...	5	18	4	1	1	5	9	15	N. 76° W.	N. 27° W.	42	45	89	84	...	...	Akyab	
464	·539	·503	·502	+·064	95	72	54	74	+4	4·8	5·0	4·9	+1·8	36	...	4	5	3	2	4	4	...	S. 37° E.	S. 33° E.	9	25	33*	64	...	...	Silchar	Assam.
414	·488	·460	·454	+·006	99	87	63	83	+2	6·9	4·7	5·8	+0·3	9	1	42	1	...	2	3	...	...	N. 47° E.	N. 58° E.	67	53	89*	51	...	...	Sibsagar	
382	·441	·385	·403	+·024	87	67	42	65	+1	2·3	1·6	2·0	+0·4	2	2	11	16	1	4	12	9	1	S. 67° E.	S. 22° E.	12	13	146	95	...	...	Dhubri	
517	·599	·571	·562	+·058	94	71	58	74	+4	2·5	2·0	2·3	+0·6	...	1	6	5	14	6	11	8	5	S. 1° W.	N. 38° W.	27	30	102*	106	...	...	Chittagong	Bengal and Orissa.
456	·541	·407	·468	+·021	81	63	37	60	−4	3·6	2·4	3·0	+1·2	...	1	2	4	9	8	12	12	10	S. 50° W.	S. 76° W.	34	35	87	63	...	...	Narayanganj	
452	·471	·348	·423	−·064	81	52	29	54	−14	1·6	1·1	1·4	−0·4	1	5	5	...	2	8	12	13	12	S. 88° W.	S. 81° W.	44	23	87	85	...	...	Calcutta (Alipore), Saugor Island	
578	·628	·647	·618	−·005	82	67	63	71	−5	2·8	1·7	2·3	+0·3	...	8	3	1	5	19	16	3	3	S. 24° W.	S. 50° W.	42	23	261	189	...	...		
421	·387	·301	·370	−·027	82	43	24	50	−6	1·2	1·0	1·1	−0·7	4	15	1	...	1	2	17	11	7	N. 78° W.	N. 58° W.	47	43	52*	52	...	...	Burdwan	
?	·422	·341	?	?	?	49	28	?	?	0·3	0·5	0·4	−1·5	1	3	1	1	1	3	12	21	15	N. 87° W.	N. 72° W.	65	44	70*	56	...	...	Berhampore	
619	·673	·691	·661	+·036	94	65	65	75	−3	2·9	2·6	2·8	+0·2	...	9	2	7	7	14	13	4	2	S. 4° W.	S. 12° W.	28	16	184*	185	...	...	False Point	
543	·506	·355	·468	−·052	84	52	24	53	−9	0·6	0·9	0·8	−1·0	14	9	6	2	...	2	10	12	3	N. 67° W.	S. 16° W.	28	13	50	50	...	...	Cuttack	
193	·255	·246	·231	−·013	40	31	24	32	−10	1·3	1·9	1·6	−0·4	1	5	...	2	2	5	3	17	23	N. 68° W.	N. 68° W.	61	60	224	156	...	...	Hazaribagh	Ganoetic Plain and Chota Nagpur.
312	·324	·281	·306	+·043	71	43	27	47	−10	1·6	1·0	1·3	−1·1	2	2	5	3	2	2	3	27	12	N. 74° W.	N. 79° W.	53	47	113*	71	...	...	Patna	
351	·358	·321	·343	−·034	83	49	33	55	−8	0·8	0·6	0·7	−0·8	4	1	2	8	5	2	6	18	12	N. 85° W.	S. 72° W.	31	46	95	88	...	...	Darbhanga	
278	·281	·222	·260	−·065	66	33	19	39	−16	1·0	0·7	0·9	−1·1	1	1	3	4	2	2	4	17	24	N. 65° W.	N. 66° W.	56	25	94	70	...	...	Allahabad	
203	·321	·268	·264	−·028	50	42	25	39	−12	1·6	2·2	1·9	−1·0	...	7	3	2	1	3	5	16	21	N. 61° W.	N. 58° W.	59	44	57*	78	...	...	Lucknow	
259	·291	·263	·271	?	77	55	42	58	?	4·3	6·1	5·2	+1·1	23	7	3	...	...	3	10	8	4	N. 83° W.	S. 85° W.	28	19	16	48	...	...	Dehra Dun	Upper Sub-Himalayas.
288	·322	·236	·282	−·001	83	55	31	56	−4	3·8	4·1	4·0	+0·7	9	...	5	4	5	...	3	...	32	N. 34° W.	N. 52° W.	44	23	72	68	...	...	Roorkee	
305	·291	·252	·283	−·005	79	46	31	52	−4	3·1	3·0	3·1	+0·3	11	1	5	1	3	1	6	14	16	N. 70° W.	N. 54° W.	41	52	58*	64	...	...	Meerut	
261	·318	·293	·291	+·014	76	61	41	59	+2	4·0	2·7	3·4	−0·1	5	16	3	6	3	...	1	11	13	N. 24° W.	N. 25° W.	47	30	53	57	...	...	Lahore	
303	·318	·279	·300	+·004	83	56	41	60	−2	4·8	4·3	4·6	+0·6	7	1	7	...	10	...	3	5	25	N. 42° W.	N. 48° W.	33	39	64	41	...	...	Ludhiana	
219	·254	·234	·236	+·007	77	55	41	58	+1	3·3	4·4	3·9	−0·4	8	5	6	6	5	...	7	6	15	N. 34° W.	N. 21° W.	24	9	100*	80	...	...	Peshawar	Indus Valley and N.W. Rajputana.
250	·289	·286	·275	+·006	72	52	38	54	+1	3·5	2·4	3·0	+0·3	12	1	29	1	5	...	3	...	7	N. 41° E.	N. 5° E.	47	18	30*	51	...	...	Mooltan	
229	·286	·286	·267	+·046	61	42	31	45	+5	2·5	2·3	2·4	−1·0	8	6	11	12	4	5	...	9	3	N. 55° E.	N. 17° E.	24	36	87*	69	...	...	Jacobabad	
425	·487	·531	·481	+·075	73	54	55	61	+4	3·5	2·7	3·1	+0·1	...	2	5	5	1	4	20	18	3	S. 66° W.	N. 80° W.	47	27	238*	252	...	...	Kurrachee	
257	·260	·245	·254	0	59	33	24	38	−5	2·4	3·4	2·9	+0·1	2	3	8	3	4	4	7	14	13	N. 70° W.	N. 9° W.	31	38	94	104	...	...	Jeypore	E. Rajputana, Central India, and Gujarat.
277	·344	·359	·327	+·071	65	47	36	49	+5	2·1	2·8	2·5	+0·2	3	2	7	2	5	5	7	22	5	S. 80° W.	S. 77° W.	36	8	97	63	...	...	Ajmere	
264	·291	·216	·247	+·020	58	32	17	34	+5	1·3	1·2	1·3	−1·2	...	9	10	2	1	1	5	14	16	N. 41° W.	N. 28° W.	50	36	187	215	...	...	Deesa	
274	·308	·289	·290	+·015	66	39	26	44	−3	0·5	1·3	0·9	−2·3	3	3	1	9	...	1	6	30	5	N. 86° W.	N. 52° W.	49	33	50*	41	...	...	Nowgong	
296	·324	·315	·312	+·036	69	44	30	48	+1	1·6	2·3	2·0	−0·5	...	...	7	...	10	...	9	...	32	N. 50° W.	N. 75° W.	38	38	130*	97	...	...	Agra	
355	·211	·206	·256	−·077	71	20	16	36	−2	1·1	0·9	1·0	−0·2	...	4	6	10	15	6	3	9	3	S. 54° E.	S. 78° E.	31	23	214	281	..	...	Belgaum	Deccan.
216	·278	·272	·258	−·055	39	25	17	27	−7	1·0	1·2	1·1	−0·5	7	6	5	4	7	8	8	6	7	S. 45° W.	S. 33° E.	10	32	150*	160	...	...	Sholapur	
314	·253	·195	·254	−·035	71	25	13	36	+4	1·0	1·1	1·1	−0·5	6	1	1	...	1	...	10	15	22	N. 75° W.	N. 28° W.	67	21	114	150	...	...	Poona	
223	·293	·248	·255	−·026	47	27	16	30	−5	0·9	1·2	1·1	−0·3	1	4	2	4	2	1	7	17	20	N. 67° W.	N. 1° E.	55	25	108*	93	...	...	Akola	
270	·245	·207	·241	−·039	45	26	16	29	−5	0·8	1·4	1·1	−0·8	1	6	3	...	...	1	6	2	39	N. 57° W.	N. 5° W.	65	29	131*	147	*Nil*	*Nil*	Buldana	
228	·294	·231	·251	−·065	48	29	15	31	−11	0·6	0·8	0·7	−0·6	....	1	10	3	1	2	8	4	29	N. 44° W.	N. 8° W.	49	32	104	88	...	...	Khandwa	

* Corrected.

Table

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

Meteorological Province	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S.L. and for gravity 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Deccan—*contd.*	Hoshangabad	...	29·015	28·877	·138	28·940	−·011	29+·905	88·6	57·1	31·5	96·8	49·0	47·8	76·2	87·5	72·1	+2·1	49·8	54·2	65·4	56·5
	Nagpur	...			Not received.				93·5	61·1	32·4	100·3	53·4	46·9	80·1	91·8	76·6	+2·8	51·4	62·2	66·4	60·0
	Do. (Sanitary Commr.'s Office).	...	·018	·875	·143	·947	?	·913	94·2	60·1	34·1	100·6	52·0	48·6	81·5	92·8	76·8	?	50·3	61·9	66·3	59·5
	Jubbulpore	...	28·666	·536	·120	·595	−·035	·883	87·5	52·7	34·8	96·0	43·2	52·8	74·2	86·3	69·6	+3·4	48·5	57·8	61·8	56·0
	Saugor	...	·252	·129	·123	·185	−·003	·900	86·1	57·6	28·5	94·0	49·3	44·7	76·3	85·1	71·4	+4·2	48·4	57·9	60·5	55·6
	Raipur	...	29·047	·910	·137	·973	−·012	·880	91·4	62·4	29·0	98·6	55·2	43·4	80·0	89·9	76·2	+3·6	52·8	61·0	64·3	59·4
	Sutna	...	28·962	·841	·121	·894	−·027	·904	84·6	54·2	30·4	95·0	47·8	47·2	75·2	83·5	68·7	+4·2	46·9	56·6	59·5	54·3
	Hyderabad (Deccan.)	...	·336	·203	·133	·264	?	·880	93·0	61·3	31·7	98·1	56·5	41·6	82·5	91·0	76·7	?	55·7	64·8	66·1	62·2
West Coast.	Bombay	...	30·026	29·902	·124	29·955	+·031	·932	82·4	69·0	13·4	85·5	65·4	20·1	76·2	79·9	75·4	+0·3	63·6	68·2	71·6	67·8
	Ratnagiri	...	29·923	·804	·119	·855	+·022	·903	86·4	66·7	19·7	95·2	62·8	32·4	81·6	82·8	76·0	.0	61·6	69·0	72·6	67·8
	Karwar	...	·998	·867	·131	·924	+·018	·899	86·7	64·9	21·8	92·1	62·7	29·4	78·1	84·5	75·6	−0·9	63·0	69·3	73·3	68·5
	Cochin	...	30·006	·874	·132	·931	+·014	·868	90·5	73·6	16·9	94·9	69·5	25·4	84·5	87·3	81·6	+0·9	70·3	74·1	75·2	73·2
South India.	Salem	...	29·119	28·960	·159	·044	+·007	·914	93·8	63·3	30·5	98·3	57·5	40·8	83·3	91·3	76·9	−0·4	61·5	69·8	72·1	67·8
	Mysore	...	27·534	27·390	·144	27·462	?	·876	89·7	60·7	29·0	93·8	56·7	37·1	79·4	88·4	74·9	?	54·0	61·3	61·2	58·8
	Mercara	...	26·322	26·210	·112	26·270	+·016	?	82·4	?	?	85·4	?	?	73·6	79·4	?,	?	51·4	57·5	60·3	56·4
	Bangalore	...	27·042	·921	·121	·981	+·012	·865	86·9	59·4	27·5	91·2	53·4	37·8	77·9	85·1	72·7	+1·1	54·6	60·6	61·2	58·8
	Hassan	...	26·985	·859	·126	·921	?	·867	87·6	54·8	32·8	91·1	50·1	41·0	78·2	85·9	70·8	?	51·7	60·0	60·8	57·5
	Chitaldroog	...	27·635	27·503	·132	27·564	?	·862	89·8	65·9	23·9	93·1	59·0	34·1	81·3	88·1	77·5	?	52·2	60·8	62·1	58·4
	Trichinopoly	...	29·771	29·640	·131	29·710	−·009	·896	93·2	66·6	26·6	99·3	61·9	37·4	83·1	91·5	78·5	+0·5	64·0	70·2	70·5	68·2
	Madras	...	30·040	·918	·122	·974	+·006	·927	87·7	66·6	21·1	95·7	63·1	32·6	82·5	84·0	76·8	−0·3	?	73·2	73·0	71·6
	Bellary	...	28·555	28·408	·147	28·477	+·034	·876	95·3	64·6	30·7	98·7	60·2	38·5	84·4	92·9	80·0	+0·4	55·7	61·2	63·7	60·2
	Vizagapatam	...	30·008	29·880	·128	29·934	−·017	·903	87·8	67·6	20·2	95·2	62·2	33·0	83·9	84·6	78·6	−0·3	66·3	72·4	73·1	70·6
	Cocanada	...	·018	·876	·142	·947	?	·909	89·5?	69·0	20·5	99·4?	64·2	35·2	82·4	87·3	78·7?	?	66·4	71·8	74·2	70·8
Hill Stations, Baluchistan.	Quetta	...	24·680	24·608	·072	24·637	−·007	?	54·3	32·8	21·5	67·4	22·3	45·1	45·4	51·3	42·8	+1·4	30·1	38·7	41·7	36·8
Hill Stations, Punjab.	Leh	...	19·615	19·545	·070	19·586	−·003	?	30·1	9·0	21·1	38·6	0	38·6	20·0	25·6	19·8	−2·5	?	13·4	20·4	?
	Srinagar	...	24·950	24·884	·066	24·910	?	?	48·5	31·4	17·1	61·7	24·9	36·8	38·7	47·6	39·8	?	31·1	36·6	43·1	36·9
	Murree	...	23·840	23·820	·020	23·823	0	?	51·5	35·5	16·0	58·6	28·2	30·4	43·3	43·2	40·9	+1·4	31·4	41·8	42·0	38·4
	Chamba	3,005	27·005	26·925	·080	26·971	−·013	?	60·5	43·5	17·0	71·1	37·9	33·2	51·2	57·6	49·9	−0·5	41·3	45·8	49·0	45·4
	Kailang	10,087	20·738	20·694	·044	20·722	+·022	?	33·2	16·5	16·7	40·0	5·5	34·5	26·7	30·2	22·7	+2·0	15·3	22·5	25·2	21·0
	Simla (Ridge)	...	23·112	23·071	·041	23·085	+·002	?	47·2	35·8	11·4	54·3	28·6	25·7	43·3	43·5	40·0	−0·5	32·5	36·5	38·3	35·8
Hill Stations, N.W.P.	Chakrata	...	·339	·289	·050	·307	+·011	?	50·9	36·4	14·5	59·6	28·3	31·3	43·3	45·2	41·7	−1·0	33·0	37·4	38·6	36·3
	Ranikhet	...	24·141	24·075	·066	24·096	+·012	?	56·0	41·5	14·5	64·9	32·5	32·4	50·2	52·7	47·3	−0·2	37·5	43·1	44·4	41·7
Hill Station, Nepal.	Katmandu	4,388	25·625?	25·533?	·092	25·574?	?	?	70·8	38·5	32·3	83·1	34·6	48·5	58·7	64·5	53·3	+0·5	36·9	49·6	51·2	45·9
Hill Station, Bengal.	Darjeeling	...	22·963	22·897	·066	22·925	−·009	?	47·2	35·3	11·9	59·9	30·6	29·3	41·7	44·7	40·9	+0·2	34·4	39·3	41·7	38·5
Hill Stations, Central India.	Mount Abu	...	26·145	26·072	·073	26·100	−·003	?	68·7	54·7	14·0	75·1	46·0	29·1	63·4	66·9	61·2	+0·7	46·3	50·9	52·9	50·0
	Pachmarhi	...	·567	·476	·091	·515	+·013	?	78·4	52·9	25·5	86·5	43·3	43·2	71·9	77·4	65·2	+3·0	?	?	?	?
	Chikalda	3,642	·462	·365	·097	·408	+·017	?	80·2	60·9	19·3	87·8	53·1	34·7	71·9	78·9	70·0	+2·2	49·6	53·9	56·0	53·2

—continued.

84 Stations in India, Burma, etc., for February 1896—continued.

Vapour tension.					Humidity.					Cloud.				Wind Direction.										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
														Number of winds from								Mean wind direction.	Normal mean wind direction of month.								
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.			Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·274	·155	·357	·262	−·045	58	16	27	34	−10	0·6	0·8	0·7	−0·8	9	...	11	4	2	4	17	8	3	S. 50° W.	N. 58° E.	18	18	68	65	...	...	Hoshangabad	Deccan—*concld.*
·266	·342	·337	·315	−·007	49	33	22	35	− 5	1·1	2·1	1·6	−0·3	18	4	6	1	4	4	9	7	5	S. 81° W.	N. 55° E.	15	17	102	93	...	...	Nagpur	
·248	·316	·320	·295	?	47	29	20	32	?	1·0	1·9	1·5	?	7	...	4	...	6	5	11	13	12	S. 75° W.	?	39	?	26*	?	...	...	Do. (Sanitary Commr.'s Office).	
·294	·282	·251	·276	−·035	73	33	19	42	−16	0·8	1·1	0·9	−1·2	...	2	2	4	6	12	16	9	7	S. 39° W.	N. 13° W.	44	20	50	59	...	...	Jubbulpore	
·232	·260	·228	·240	0	48	28	19	32	− 6	0·7	0·8	0·8	−0·6	...	1	7	3	11	4	19	7	6	S. 30° W.	N. 6° W.	31	24	60	68	...	...	Saugor	
·279	·295	·263	·279	−·068	49	28	19	32	−13	0·9	1·6	1·3	−0·1	9	4	6	...	1	6	15	14	3	S. 72° W.	N. 40° W.	39	13	124*	93	...	...	Raipur	
·236	·233	·215	·228	−·002	55	26	18	33	− 7	0·6	0·6	0·6	−1·4	...	11	2	7	...	...	1	14	23	N. 39° W.	N. 41° W.	63	38	122*	116	...	...	Sutna	
·377	·397	·332	·369	?	69	36	23	43	?	0·5	1·3	0·9	?	18	4	7	8	8	2	1	7	3	N. 72° E.	?	16	?	76*	?	...	...	Hyderabad (Deccan.)	
·516	·585	·664	·588	−·018	73	64	65	67	− 2	1·3	1·3	1·3	0	...	5	12	11	...	...	...	4	26	N. 5° W.	N. 4° W.	55	60	259	256	...	...	Bombay	West Coast.
·481	·544	·666	·565	−·027	74	50	59	61	− 1	1·3	1·8	1·6	+1·2	...	17	...	1	...	1	1	6	32	N. 37° W.	N. 52° W.	82	52	217	219	...	...	Ratnagiri	
·555	·598	·669	·607	−·043	90	62	57	70	− 3	0·3	0·5	0·4	−0·2	1	3	1	...	...	...	...	12	41	N. 51° W.	N. 50° W.	89	61	122	?	...	...	Karwar	
·702	·706	·713	·707	−·035	84	59	56	66	− 5	1·3	2·8	2·1	0	5	10	4	...	...	...	2	19	18	N. 52° W.	N. 89° W.	67	28	146	?	...	...	Cochin	
·529	·551	·539	·540	−·015	90	49	36	58	+ 1	1·2	2·2	1·7	−0·1	6	1	15	19	6	1	7	1	2	N. 84° E.	S. 75° E.	46	53	143	129	...	...	Salem	South India.
·340	·357	·204	·300	?	63	32	15	37	?	2·4	2·1	2·3	?	11	1	11	21	11	1	...	1	1	N. 89° E.	?	61	?	188*	?	...	...	Mysore	
?	·292	·305	?	?	?	35	31	?	?	1·5	1·6	1·6	−0·9	9	2	22	8	7	...	3	1	6	N. 55° E.	N. 59° E.	45	35	164	95	...	...	Mercara	
·374	·336	·268	·326	−·068	73	35	22	43	− 9	1·1	1·0	1·1	−1·1	...	2	15	26	5	2	4	3	1	N. 82° E.	S. 67° E	59	66	191*	86	...	...	Bangalore	
·351	·312	·246	·303	?	80	32	19	44	?	2·9	2·8	2·9	?	...	2	15	23	14	...	1	1	2	N. 85° E.	?	71	?	80*	?	...	...	Hassan	
·224	·284	·237	·248	?	35	27	19	27	?	2·0	2·7	2·4	?	...	5	9	20	15	2	...	3	4	N. 87° E.	?	53	?	188*	?	...	...	Chitaldroog	
·567	568	·469	·535	−·075	86	50	32	56	− 6	1·6	2·0	1·8	−1·0	19	4	30	1	1	1	...	1	1	N. 41° E.	N. 65° E.	55	74	75	101	...	...	Trichinopoly	
?	·691	·667	·707	+·043	?	62	58	76	+ 3	2·7	1·6	2·2	−0·4	...	2	10	21	14	8	2	1	...	S. 74° E.	E.	64	68	88	119	...	...	Madras	
·335	·253	·228	·272	−·088	55	22	15	31	− 6	2·2	2·8	2·5	+1·2	5	2	5	18	10	9	...	2	7	S. 64° E.	S. 56° E.	23	50	92	94	...	...	Bellary	
·630	·646	·665	·647	+·005	93	56	57	69	+ 4	0·8	1·1	1·0	−0·3	...	...	...	1	5	23	9	19	1	S. 34° W.	S. 11° W	67	43	52	49	...	..	Vizagapatam	
·625	·642	·674	·647	?	87	59	53	66	?	1·2	0·9	1·1	?	...	2	1	3	16	11	12	12	1	S. 13° W.	?	49	?	155*	?	...	...	Cocanada	
·143	·171	·169	·161	−·003	76	57	47	60	− 5	3·3	4·6	4·2	0	14	4	2	1	2	6	6	14	9	N. 89° W.	N. 76° W.	35	30	106*	96	...	...	Quetta	Hill Stations, Baluchistan.
?	·030	·070	?	?	?	28	51	?	?	7·3	6·9	7·1	+0·4	6	...	...	...	...	3	49	...	...	S. 43° W.	S. 25° E.	88	18	30	33	...	...	Leh	
·173	·196	·231	·200	?	97	84	71	84	?	6·9	6·2	6·6	?	13	13	5	...	8	9	1	1	8	N. 16° E.	?	12	?	102*	?	...	...	Srinagar	Hill Stations Punjab.
·138	·258	·265	·220	+·069	67	89	91	82	+19	4·9	6·0	5·5	0	...	3	...	2	37	5	4	3	4	S. 55° E.	S. 39° E.	59	29	262*	196	...	...	Murree	
·238	·249	·253	·247	+·021	84	67	57	69	+ 6	6·3	7·0	6·6	+1·1	37	1	1	1	4	...	...	2	12	N. 38° W.	N. 21° E.	15	7	89*	86	6·80	1·56	Chamba	
·081	·089	·098	·089	−·016	84	60	58	67	−10	6·3	6·4	6·4	+0·1	...	1	...	...	2	11	17	20	7	S. 63° W.	S. 69° W.	69	64	43	26	3·97	1·61	Kailang	
·152	·150	·181	·161	+·009	73	54	65	64	+ 9	5·1	8·3	6·7	+1·4	10	8	5	3	2	15	10	...	...	S. 5° E.	S. 22° W.	20	28	112	?	...	...	Simla (Ridge)	
·155	·165	·169	·163	+·003	73	60	57	63	+ 1	4·0	4·9	4·5	−0·3	12	13	3	...	...	28	1	...	1	S. 3° E.	S. 54° E	23	3	209	125	...	...	Chakrata	Hill Stations, N.W.P.
·192	·207	·210	·203	+·011	74	59	53	62	+ 2	3·9	4·6	4·3	−0·1	30	2	2	1	1	1	3	12	6	N. 76° W.	S. 55° W.	27	24	52*	52	...	...	Ranikhet	
·204	·256	·228	·229	−·015	86	53	38	59	− 6	2·5	3·0	2·8	−0·3	...	...	...	17	2	...	1	38	...	S. 84° W.	N. 82° W.	34	67	36	?	0·03	0·03	Katmandu	Hill Station, Nepal.
·192	·220	·239	·217	+·006	93	83	80	85	+ 6	6·1	7·1	6·6	+0·9	...	2	10	4	1	2	13	11	11	N. 73° W.	S. 83° W.	29	33	140	121	...	...	Darjeeling	Hill Station, Sikkim, Bengal.
·225	·233	·247	·235	+·059	53	41	37	43	+ 9	1·4	1·7	1·6	−1·2	...	2	...	...	1	3	21	14	17	S. 84° W.	N. 71° W.	70	24	203*	131	...	...	Mount Abu	Hill Stations, Central India.
?	?	?	?	?	?	?	?	?	?	1·3	1·3	1·3	−0·6	24	2	1	...	1	2	8	12	8	W.	N. 49° W.	38	24	119*	92	...	...	Pachmarhi	
·231	·215	·189	·212	−·072	43	28	19	30	−11	0·9	1·3	1·1	−0·4	18	16	1	...	...	5	2	...	16	N. 29° W.	N. 83° W.	43	26	171	143	*Nil*	*Nil*	Chikalda	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 84

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, S. India.	Wellington . .	...	24·339	24·258	·081	24·298	+·007	?	71·9	44·8	27·1	75·6	34·2	41·4	67·0	68·0	57·4	−0·5	41·2	51·9	53·9	49·0
Extra India.	Muscat . .	...	30·102	30·009	·093	30·056	?	?	73·7	68·2	5·5	78·4	63·9	14·5	71·9	73·5	70·9	?	60·9	65·1	66·6	64·2
	Aden . . .	...	·004	29·894	·110	29·941	+·032	29·968	82·2	73·7	8·5	87·7	69·3	18·4	78·3	80·0	77·4	+0·6	68·6	70·5	70·1	69·7
	Perim . . .	...	29·808	·696	·112	·744	?	?	84·0	74·6	9·4	86·9	73·6	13·3	80·3	81·0	78·6	?	70·0	73·1	73·2	72·1
	Minicoy . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Zanzibar . .	...	·921	·804	·117	·863	+·017	·862	87·4	81·2	6·2	89·7	78·7	11·0	84·5	86·7	84·2	+0·8	76·8	78·2	77·9	77·6
	Port Victoria (Seychelles).	15	·993	·902	·091	·948	?	·887	82·0	76·6	5·4	84·2	73·1	11·1	80·6	81·1	79·1	?	72·9	75·8	75·7	74·8
	Mauritius . .	181	?	?	?	·679	−·068	805	?	?	?	90·1	65·1	25·0	?	?	78·3	−0·7	?	?	?	?

II—*concluded.*

Stations in India, Burma, etc., for February 1896—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.		
																									%	%						
·227	·234	·275	·245	—·035	76	35	40	50	−7	1·5	1·8	1·7	−0·8	...	1	8	7	29	12	1	...	...	S. 51° E.	S. 31° E.	73	60	73	62	...	...	Wellington,	Hill Stations, S. India.
·440	·530	·564	·511	?	64	68	68	67	?	1·7	1·7	1·7	?	...	1	6	4	2	2	...	7	34	N. 39° W.	?	59	?	128	?	...	...	Muscat,	Extra India.
·632	·645	·604	·627	−·029	76	67	59	67	−5	6·9	1·7	4·3	+0·2	3	3	9	21	11	8	3	...	...	S. 75° E.	N. 81° E.	59	72	235	332	...	...	Aden,	
·675	·718	·715	·703	?	79	70	67	72	?	3·6	0·3	2·0	?	2	2	1	27	15	1	...	5	5	S. 80° E.	?	51	?	393	?	...	...	Perim	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
·868	·882	·839	·862	+·011	81	74	66	74	−1	3·4	2·0	2·7	−1·8	...	20	19	6	...	2	3	...	1	N. 29° E.	N. 25° E.	60	26	129	162	...	...	Zanzibar,†	
·759	·828	·818	·802	?	83	79	77	80	?	6·2	6·9	6·6	?	8	6	3	4	2	2	...	7	26	N. 38° W.	?	46	?	139	?	20·98	5·00	Port Victoria (Seychelles).	
?	?	?	·756	?	?	?	?	81	+4	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	212	264	30·06	17·34	Mauritius,	

G. I. C. P. O.—No. 3 Meteor.—19-6-96.—385.

† Wind direction 7 observations wanting.

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 more 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	,,	,,	,,	,,	,,

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.

R. No. 1... Wr. I—June 94—5 000. Simco ... lcutta.

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

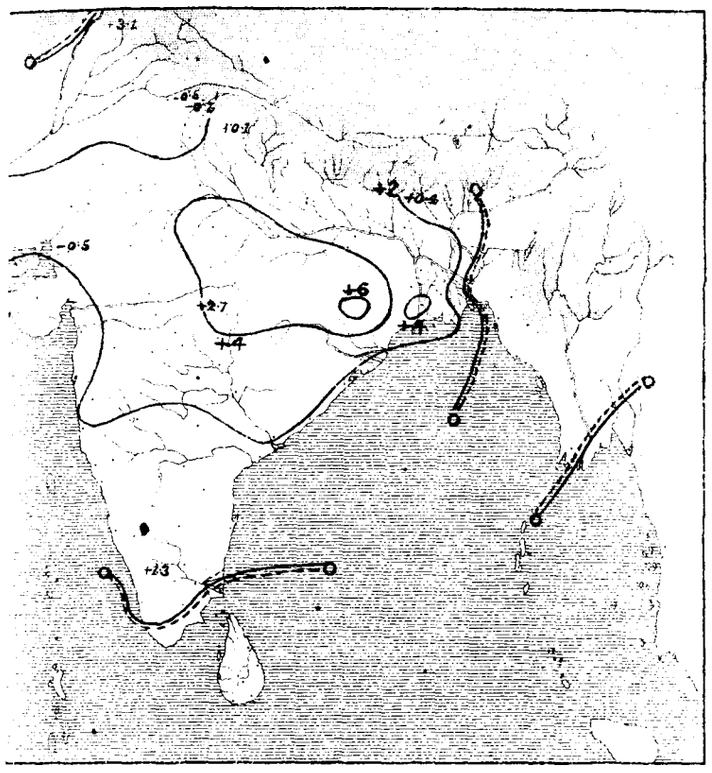
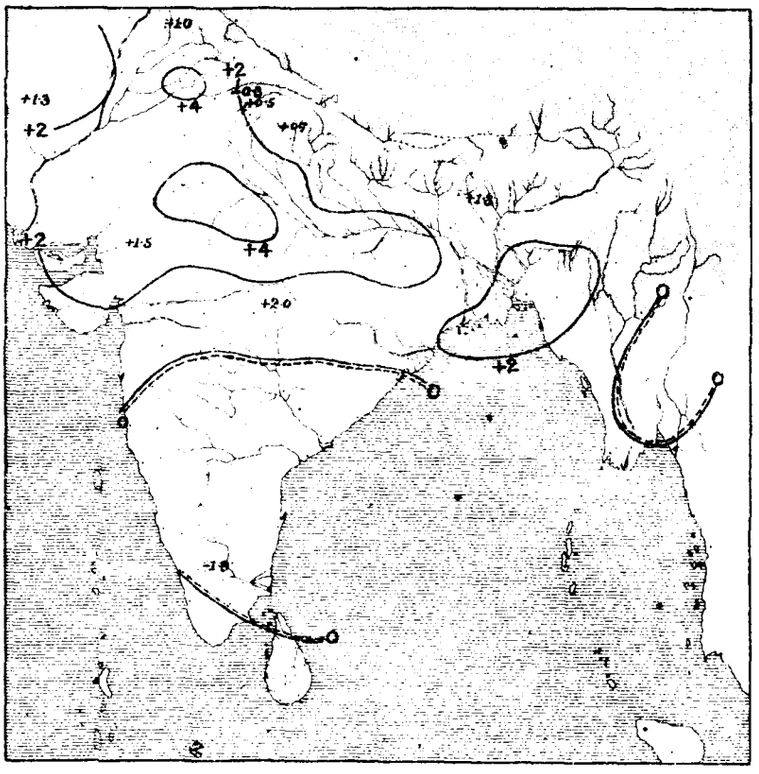


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

tinuous lines indicate that the mean maximum of month was in ss by amounts indicated by the attached numbers. Broken or dotted that it was in defect by the amounts indicated by the attached bers Double lines are the lines of no variation, the broken line facing rea 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.

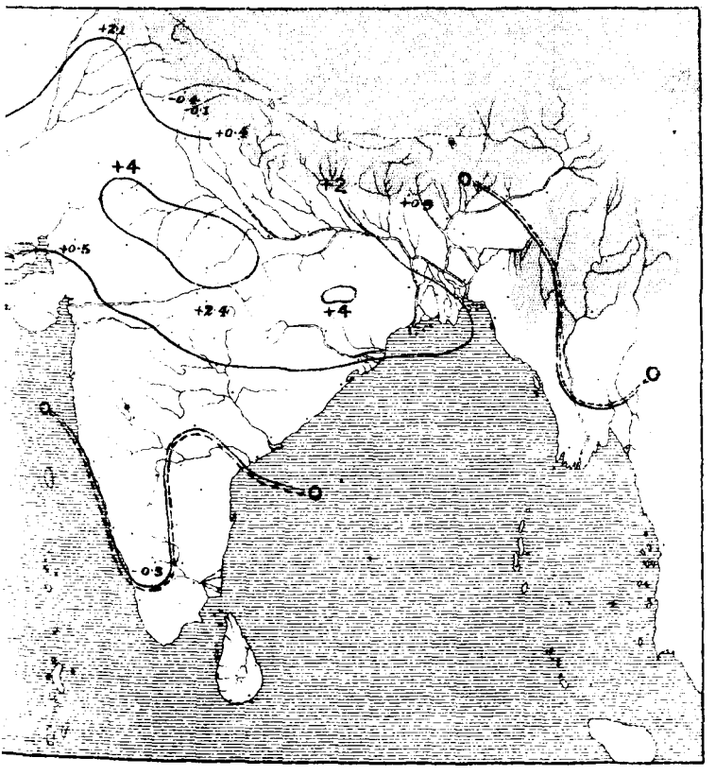
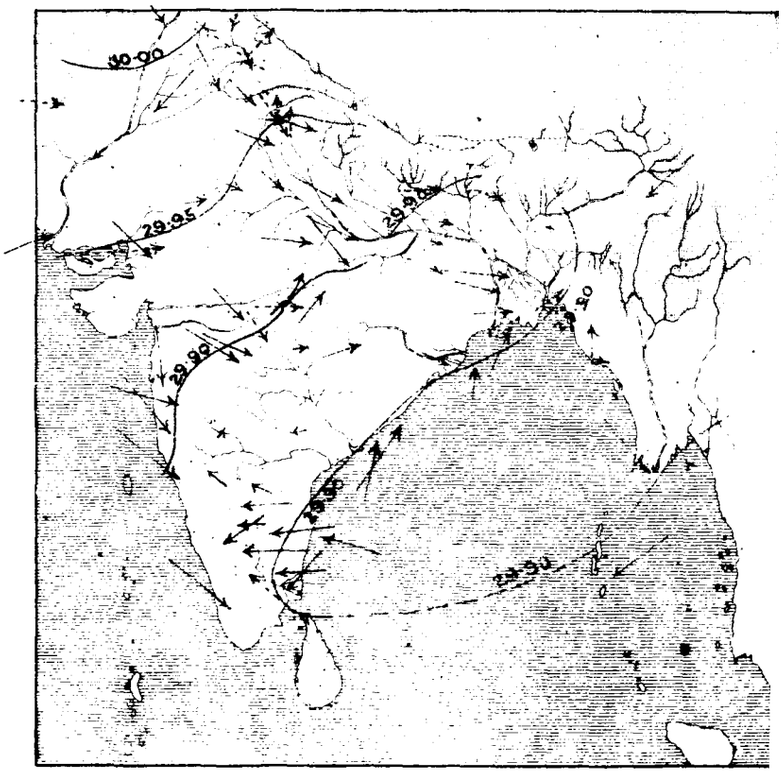


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF FEBRUARY 1896



LITHO BY J.N. MUNDLE.

Explanation.

ntinuous lines indicate that the mean daily temperature of month s in excess by amounts indicated by the attached numbers. Broken dotted lines that it was in defect by the amounts indicated by the

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

Explanation.

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

Explanation.

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

Tenasserim
Lower Burma Deltaic
Central do.
Upper do.
Arakan
East Bengal
Assam, Surma
Do., Hills
Do., Brahmaputra
Deltaic Bengal
Central do.
North do.
Bengal Hills

17. North Bihar
18. North Western Provinces, East
19. South Oudh
20. North Do.
21. North Western Provinces, Central
22. Do. do., West
23. Do. do, East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane

33. Malabar
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat

49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. East Coast, North
52(a). Do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. East Coast, Central
56. East Coast, South
57. Madras, South

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, MARCH, 1896.

INTRODUCTION.

THIS review of the weather in India during the month of March 1896 is based on observations taken daily at 8 A.M. at 207 stations, and on additional observations taken at 8 A.M. and 4 P.M. at 85 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 1896.

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 temperature was

more or less considerably in excess over the whole of Northern and Central India. Pressure was considerably to largely above the normal in North-Western India, and a shallow depression lay over Bihar, which filled up on the 2nd and 3rd.

Temperature was most largely in excess in the Central Provinces at the commencement of the month. On the 1st it averaged 4° above the normal in that area, and on the 2nd 3½° above.

Conditions were slightly disturbed at the commencement of the month in the Persian area. A shallow depression began to form in Sind on the 4th. Its formation accompanied a large increase of temperature in Baluchistan and Upper India. The following table, giving variation data for each day, from the 3rd to the 6th, illustrates the temperature conditions which obtained during the formation of the depression :—

	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	3rd March.	4th March.	5th March.	6th March.
	°	°	°	°
Baluchistan (Quetta) .	+2·6	+5·4	+ 1	+ 4·3
Sind	+1·6	+3·9	+ 8·1	+ 8·7
Punjab	+3·4	+5·7	+ 8·1	+10·2
Rajputana . . .	−1·6	+1·4	+ 3·7	+ 6·6

The period from the 3rd to the 5th was one of intense dryness of the air in North-Western and Central India. Humidities of 4 per cent. were recorded at Deesa and Raipur during this period. The Sind depression increased in intensity until the 5th, and was stationary during that period and central near Jacobabad. The depression at the centre on the 5th was nearly three-tenths of an inch. It filled up during the next forty-eight hours in Sind. It was hence a stationary hot weather depression which formed in that area during a period of general but feeble disturbance over the whole area including Persia, Afghanistan, Baluchistan and Upper India. Some light showers fell in Baluchistan on the 5th and 6th. Whilst the Sind depression was filling up, pressure gave way in North-Eastern India, and a shallow depression lay over Bihar and Chota Nagpur on the morning of the 7th. This depression was displaced northwards on the 8th and occupied the sub-montane districts of Bihar and North Bengal from the 9th to the 13th. As usually occurs with this distribution of pressure in North-Eastern India in March, Assam received daily rain from the 8th to the 14th. Thunderstorms and hailstorms of considerable intensity visited portions of Assam and Cachar during this period.

The wave of high temperature which appeared in Baluchistan on the 3rd and 4th extended eastwards across Northern India during the next three days, and temperature was excessive from the 7th to the 11th over the whole of Northern and Central India.

The following table gives the daily variations of the mean temperature of the larger provinces in Northern and Central India from the normal from the 7th to the 10th :—

POLITICAL PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	7th March.	8th March.	9th March.	10th March.
	°	°	°	°
Punjab	+5·5	+6·1	+5·3	+2·2
North-Western Provinces and Oudh .	+6·2	+6·1	+5·6	+5·3
Bengal and Assam	+4·2	+4·1	+4·7	+4·0
Sind and Rajputana	+6·8	+4·0	+2·6	+3·0
Central India and Gujarat . . .	+3·5	+3·4	+2·7	+2·2
Central Provinces and Berar . . .	+4·1	+5·9	+5·5	+4·1

Weather was feebly unsettled and showery in the Persian area on the 9th and 10th. The disturbance extended eastwards into Baluchistan and Upper India on the 11th. The pressure data of the period show most clearly that it was not due to the eastward movement of a cyclonic storm, but merely to the eastward extension of an area of diffused irregular disturbance. Baluchistan, the North and Central Punjab, Kashmir and the Punjab hills received light to moderate rain on the 10th, 11th and 12th. Pressure increased considerably in Upper India on the 12th and 13th, establishing anti-cyclonic conditions for a brief period. A well-defined cool wave crossed Northern India during the next four days. The following temperature variation data show clearly the advance of this cool wave (the only important one of the month) across Northern India :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	12th March.	13th March.	14th March.	15th March.	16th March.	17th March.
	°	°	°	°	°	°
Baluchistan (Quetta) .	−4·0	−7·8	−6·7	+0·1	+4·9	+5·3
Punjab . . .	−3·3	−4·2	−4·1	−3·1	−1·0	+3·3
North-Western Provinces and Oudh .	+3·3	+2·1	−1·1	−4·1	−3·3	−2·3
Bengal and Assam .	+2·9	+4·4	+2·4	−0·3	−1·9	−1·3
Sind and Rajputana .	+0·8	−1·6	−3·3	−4·8	−2·4	+1·9
Central India and Gujarat . . .	+1·4	+0·4	−1·4	−4·4	−3·9	−1·1
Central Provinces and Berar . . .	+1·4	+4·9	+1·8	−1·1	−4·1	−0·2

Temperature was hence on the 15th and 16th more or less below the normal over nearly the whole of Northern and Central India and the North Deccan.

The advance of this cool wave (accompanying strong westerly winds) gave a period of excessive dryness of the air from the 13th to the 16th over the greater part of Northern and Central India, and remarkably low humidities were recorded at many stations. The most noteworthy were the following: —

Station.	Date.	Humidity at	
		10 A.M.	4 P.M.
		%	%
Deesa	13th	11	5
Allahabad	...	12	11
Deesa	14th	7	3
Allahabad	...	18	10
Deesa	15th	4	0
Allahabad	...	13	4
Deesa	16th	9	4
Allahabad	...	12	5

A feeble disturbance originated in the Persian area on the 13th and 14th, which gave showery weather to the whole of Persia on the 14th and 15th.

It advanced eastwards as a shallow depression through Baluchistan on the 15th, Sind and Rajputana on the 16th and 17th and the South-East Punjab on the 18th, where it broke up. Its progress gave numerous duststorms in Rajputana and the South Punjab, and light local showers in Baluchistan, Kashmir and the Upper India hills. During its progress a rapid increase of temperature occurred over the whole of Northern and Central India, and temperature was again on the 18th and 19th in general excess. The following gives comparative data for the 15th and 19th:—

Political Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		Change of temperature from 15th to 19th March.
	15th March.	19th March.	
	°	°	°
Punjab	−3·1	+1·4	+4·5
North-Western Provinces and Oudh	−4·1	+3·9	+8·0
Bengal and Assam	−0·3	+2·1	+2·4
Sind and Rajputana	−4·8	+4·1	+8·9
Central India and Gujarat	−4·4	+3·5	+7·9
Central Provinces and Berar	−1·1	+2·1	+3·2

The depression which lay over Bihar from the 8th to the 13th filled up on the 14th. Dry weather set in for a brief period in Assam, *viz.*, from the 15th to the 18th. A brisk to rapid local fall of the barometer on the 18th in North-Eastern India re-established the Bihar depression. It lay over North Bihar and Bengal from the 20th to the 22nd. Assam had numerous series of thunderstorms, which gave moderate rain to that area during this period.

A second disturbance, similar to that of the 13th and 14th, originated in Persia on the 18th and 19th. It passed through Baluchistan on the 20th, Sind on the 21st, and North Rajputana on the 22nd. It was a very feeble disturbance, but gave light to moderate rain to Baluchistan, the North and Central Punjab and Punjab hills. It was followed by a moderate reduction of temperature for a brief period in Upper India. Temperature was excessive in North-Eastern and Central India and the Central Provinces from the 20th to the 24th, as is shown by the following data:—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	20th March.	21st March.	22nd March.	23rd March.	24th March.
	°	°	°	°	°
Bengal and Assam	+2·9	+2·6	+3·7	+4·2	+4·3
Central India and Gujarat	+3·6	+2·9	+3·1	+4·1	−2·4
Central Provinces and Berar	+2·4	+3·8	+4·4	+7·0	+4·2

A large and rapid increase of pressure re-established anti-cyclonic conditions on the 24th in North-Western India, and a considerable reduction of temperature occurred on the 23rd, 24th and 25th.

A third disturbance originated in Persia on the 24th and 25th. It gave squally weather with much rain on these days in the Persian Gulf. It affected Upper India slightly from the 26th to the 28th, and gave light local showers in Baluchistan and the hill districts of Upper India. During this period from the 24th to the 28th the depression in North-Eastern India was displaced westwards to the submontane districts of the North-Western Provinces. Dry westerly winds prevailed over the Gangetic Plain, and extended across West Bengal into Central Bengal. Temperature was excessive during this period over the whole of Northern and Central India, and more especially in North-Eastern India. The following

gives temperature variation data of five provinces from the 26th to the end of the month in illustration :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	26th March.	27th March.	28th March.	29th March.	30th. March.	31st March.
	°	°	°	°	°	°
Punjab . . .	−0·4	+0·1	+1·7	−3·4	+1·8	+4·2
North-Western Provinces and Oudh .	−1·0	+1·7	+2·4	+2·6	+1·8	+3·0
Bengal and Assam .	+2·1	+2·5	+3·0	+4·4	+4·4	+3·2
Burma . . .	+2·4	+2·1	+2·6	+2·2	+1·6	+2·2
Central Provinces and Berar . . .	+1·8	+3·4	+3·7	+4·9	+4·8	+3·9

A noteworthy feature of this period was the high temperature in Bengal and the Central Provinces. The highest maximum temperatures of the month were recorded during this period in North-Eastern India, and were at several stations higher than have been previously recorded in March, *e.g.* :—

STATION.	Highest maximum temperature recorded in March 1896.	Date on which recorded.	Highest maximum temperature recorded in March previous to 1896.	Year in which recorded.
	°		°	
Calcutta . . .	101·4	29th and 30th.	101·0	1892
Jessore	105·5	30th.	104·5	1870
Darbhanga . . .	100·2	30th.	99·0	1879

The depression in North-Eastern India was transferred on the 29th south-eastwards into Bihar and Chota Nagpur, and showery weather recommenced in Assam and continued for some days. Weather was slightly disturbed during the last three days of the month in Southern India, and light thunder showers fell over the greater part of that area.

Pressure.—The mean pressure of the Indian land area for the month was ·022″ below the normal. Relatively to this general condition pressure was in slight to moderate defect in Burma, North-Eastern India and the eastern half of the Peninsula. The deficiency was largest in amount in North Bihar, North Bengal and Assam, or in the submontane districts of North-Eastern India. An important effect of these conditions was to displace the hot weather depression from its normal position in Chota Nagpur into North and Central Bihar. Pressure was locally in excess in North-Western India and the western half of the Peninsula. The positive anomalies were small, except in a small area, including the North and West Punjab, where they ranged between ·02″ and ·04″. Pressure was in slight to moderate excess at the hill stations in Northern India relatively to the neighbouring plains. This was almost certainly an effect of the high temperature of the month.

The following table gives mean pressure variation and anomaly data 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 . . .	−·028	−·006
Burma Inland	−·039	−·017
Assam	−·040	−·018
Bengal and Orissa	−·038	−·016
Gangetic Plain and Chota Nagpur . . .	−·034	−·012
Upper Sub-Himalayas	−·016	+·006
Indus Valley and North-West Rajputana .	−·009	+·013
East Rajputana, Central India and Gujarat .	−·010	+·012
Deccan	−·021	+·001
West Coast	−·020	+·002
South India	−·024	−·002

Temperature.—The mean maximum temperature of the month was normal or in slight defect in Arakan, Upper Assam, the North-West and Central Punjab and the West Coast districts. It was above the normal over the remainder of India. The excess was more than 2° in amount over nearly the whole of North-Eastern and Central India and the North Deccan, and was absolutely greatest in North and Central Bengal, Bihar and Chota Nagpur, more specially at Bogra (+6°·3), Mymensingh (+5°·2), Chaibassa (+5°·1) and Dinajpur (+5°·0).

The mean minimum temperature of the month was also above the normal over nearly the whole of India and Burma, but by generally smaller amounts than the maximum. The excess ranged between 2° and 4° over the greater part of South Bengal, South Bihar, Chota Nagpur, the Central Provinces, the Punjab and Sind, and was absolutely greatest at Seoni (+3°·6), Chanda (+3°·3), Lahore (+3°·9) and Dacca and Mymensingh (+3°·2 each). The night temperature was slightly lower than usual in some parts of Madras and Malabar, but the variations were small and unimportant.

The mean temperature of the month was in excess over Burma and the whole of India and Baluchistan, with the exception of Upper Assam and the West Coast

districts from Karwar to Calicut. The excess was moderate to considerable in amount in Bengal, Bihar, Chota Nagpur, the North-Western Provinces, Central Provinces and Berar, for which comparative data are given below:—

Area.	Variation from normal of		
	Mean maximum temperature, March 1896.	Mean minimum temperature, March 1896.	Mean daily temperature, March 1896.
	°	°	°
Bengal	+3·2	+2·0	+2·6
Bihar	+4·0	+1·4	+2·7
Chota Nagpur	+4·4	+2·7	+3·6
North-Western Provinces and Oudh	+3·0	+1·6	+2·3
Central Provinces	+3·0	+2·7	+2·9
Berar	+3·1	+3·2	+3·2

The excess was on the whole most marked in Central and West Bengal, and higher day temperatures were registered at some stations, more especially Jessore and Calcutta, than have been previously recorded in the month of March. The following table gives temperature variation data of the month of March 1896 for the eleven meteorological provinces of India:—

Meteorological Province.	Variation from normal of		
	Mean maximum temperature, March 1896.	Mean minimum temperature, March 1896.	Mean daily temperature, March 1896.
	°	°	°
Burma Coast and Bay Islands	—0·1	+1·2	+0·6
Burma Inland	+1·1	+1·9	+1·5
Assam	+1·6	+0·7	+1·2
Bengal and Orissa	+2·9	+2·0	+2·4
Gangetic Plain and Chota Nagpur	+3·8	+1·6	+2·6
Upper Sub-Himalayas	+1·6	+1·7	+1·7
Indus Valley and North-West Rajputana	+1·2	+1·9	+1·5
East Rajputana, Central India and Gujarat	+2·0	+1·5	+1·8
Deccan	+2·5	+2·2	+2·4
West Coast	—0·1	+0·3	+0·1
South India	+1·4	+0·1	+0·8

Winds were, on the average of the month, of normal strength and steadiness at Port Blair and the Burma Coast stations. They were more westerly than usual in the interior of Bengal, and remarkably steady. The westerly winds in the Gangetic Plain were also stronger and steadier than usual. Winds in Rajputana and Central India, as in Bengal, were more westerly than the normal. They were very unsteady in the Bombay Deccan, the Central Provinces and Berar, and varied in mean direction irregularly from the normal. Strong southerly winds prevailed throughout the month at the hill stations.

Humidity and Cloud.—The air was slightly drier at Port Blair, and somewhat damper in East Bengal and Assam. It was excessively dry in West Bengal, Chota Nagpur, Bihar and the North-Western Provinces, and the mean humidity of the month was between 10 and 17 per cent. in defect at a large number of stations in that area. The deficiency was absolutely greatest at Patna (—17) and Allahabad (—16). The air was slightly damper in the Punjab, Sind and Baluchistan. Humidity was more or less below the normal over the whole of Rajputana, Central India, Berar, the Central Provinces, Deccan, Mysore and Coorg. The decreased humidity in the area was most pronounced in Coorg, Berar and the Central Provinces. The mean humidity conditions of the month were practically normal in the Madras and the West Coast districts.

Humidity was also largely below the normal in Sikkim (at Darjeeling 12 in defect) and in the Kumaon, Garhwal and Simla hills.

There was less cloud than usual in Burma, Bengal Assam, the Gangetic Plain and Central India. The deficiency was large and marked in West Bengal, Bihar, and the eastern districts of Central India and the North-Western Provinces, and was absolutely greatest at Darjeeling and Katmandu.

Cloud was in slight excess in the area affected by the feeble disturbances of the month in Upper India, *i.e.*, Baluchistan, the Punjab, Sind and Rajputana. The excess was greatest in Baluchistan. Cloud was more or less below the normal over the whole of the Peninsula. The deficiency was large in the Central Provinces, Berar, Mysore and Coorg.

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

Meteorological Province.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
	"	%	
Burma Coast and Bay Islands	+·027	+ 1	—0·4
Assam	+·010	— 1	—1·1
Bengal and Orissa	—·005	— 5	—0·5
Gangetic Plain and Chota Nagpur.	—·081	—13	—0·8
Upper Sub-Himalayas	—·038	—·7	+0·6
Indus Valley and North-West Rajputana.	+·023	+ 1	+0·7
East Rajputana, Central India and Gujarat.	—·026	— 4	—0·3
Deccan	—·031	— 5	—0·8
West Coast	+·010	— 1	—0·4
South India	—·023	— 2	—0·7

Rainfall.—The month was unusually dry over nearly the whole of India, and the rainfall of the month in general defect.

The only areas which had a surplus were Assam, Hyderabad the West Punjab, and Baluchistan. Over by far the greater part of the interior, including nearly the whole of Rajputana, Central India, the North-Western Provinces, Bihar, Chota Nagpur, North and Central Bengal, Berar, Bombay, the Central Provinces, Central Madras and Burma, the rainfall was absolutely or practically *nil.* The only areas which received average falls exceeding one inch were Assam, East Bengal, Sikkim, the North Punjab, the Punjab hills and Baluchistan. Assam had two periods of rainfall, *viz.*, from the 8th to the 14th and from the 17th to the 25th. Baluchistan and Upper India (chiefly Kashmir, the Punjab hills, and the North Punjab) received frequent light rain from a series of five very feeble disturbances occurring at short intervals during the month. Southern India received light thunder showers during the third and fourth weeks of the month. The following table gives comparative data of the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	RAINFALL.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.*
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands .	0·21	0·52	−0·34
Burma Inland	0·03	0·78	−0·78
Assam	7·19	5·27	+1·92

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

METEOROLOGICAL PROVINCE.	RAINFALL.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.
	Inches.	Inches.	Inches.
Bengal and Orissa . . .	0·40	1·68	−1·26
Gangetic Plain and Chota Nagpur.	0	0·50	−0·50
Upper Sub-Himalayas . . .	0·29	0·95	−0·63
Indus Valley and North-West Rajputana.	0·51	0·41	+0·14
East Rajputana, Central India and Gujarat.	0	0·18	−0·18
Deccan	0.17	0·47	−0·31
West Coast	0·33	0·58	−0·21
South India	0·17	0·53	−0·36

The normal rainfall of the month is small in amount, and the deficiency was hence generally small. It was, however the continuation of a marked feature of the meteorology of the previous four months. The deficiency was more than an inch in amount in the following districts:—

East Bengal (1·79 inches or 63 per cent.), Assam Brahmaputra (2·4 inches or 44 per cent.), Deltaic Bengal (1·35 inches or 75 per cent.), North Bengal (1·23 inches or 95 per cent.), Bengal hills (1·35 inches or 50 per cent.), North-Western Provinces hills (1·74 inches or 83 per cent) and Punjab hills (1·66 inches or 48 per cent.).

Atmospheric Pressure.

The mean pressure of the Indian land area, as determined from the 8 A.M. observations, was ·022″ below the normal, and almost exactly the same amount in defect as in the corresponding months of 1894 and 1895. In March 1894 it was ·017″ in defect, and in March 1895 ·018″ in defect. The deficiency in each of these years accompanied, and was partly at least due to the prevalence of higher temperature than usual (more especially in Northern India). Relatively to the general condition pressure was in local defect in Burma, North-Eastern India and the eastern half of the Peninsula. The deficiency was most pronounced in the Assam Valley, North Bihar, Central Bengal and the submontane districts of the North-Western Provinces. The local deficiency was more than ·020″ at stations for which data are given below:—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Darbhanga	−·057	−·035
Patna	−·055	−·033
Gorakhpur	−·050	−·028
Sibsagar	−·051	−·029
Dacca	−·046	−·024
Jessore	−·047	−·025

Pressure was locally in excess over the remainder of India, but the positive anomalies were small for all stations

in that area, except those in the North-West Punjab, for which data are given below :—

Station.	Variation of mean 8 A.M. pressure of month from *normal*.	Pressure anomaly.
	"	"
Rawalpindi	+·026?	+·048?
Dera Ismail Khan	+·019?	+·041?
Peshawar	+·003	+·025
Sialkot	+·005	+·027

Pressure was in slight to moderate excess at the hill stations in Northern India as compared with the neighbouring plain stations. The following gives data for nine pairs of stations :—

Hill Station.	Variation of actual mean pressure from normal pressure. (*a*)	Neighbouring Plains Station.	Variation of actual mean pressure from normal pressure. (*b*)	Vertical pressure anomaly or (*a*)—(*b*)
	"		"	
Quetta	+·007	Jacobabad	—·010	+·017
Leh	—·001	Lahore	—·006	+·005
Kailang	0	Lahore	—·006	+·006
Murree	+·008	Peshawar	+·003	+·005
Simla	+·001	Ludhiana	—·016	+·017
Chakrata	—·001	Roorkee	—·032	+·031
Ranikhet	+·005	Bareilly	—·033	+·038
Darjeeling	+·004	Dhubri	—·040	+·044
Mount Abu	—·005	Deesa	—·013	+·008

The vertical pressure anomalies were hence positive and were largest in amount in North Bengal and Sikkim, the area of greatest excess of temperature. The increased pressure at the level of the hill stations relative to the plains was hence mainly a temperature effect.

The chief features of the mean pressure distribution of the month were :—

(1) Moderate general deficiency of pressure.

(2) Local deficiency of pressure in Burma, North-Eastern India and the east of the Peninsula. The deficiency was most marked in Bihar and Assam, or in the submontane districts of North-East India.

(3) Local excess of pressure over the remainder of India, small in amount except in the North-West Punjab, where it was slightly above ·02".

(4) Slight to moderate excess of pressure at the hill stations as compared with the neighbouring plains. The excess was greatest in North Bengal and Sikkim.

Barometric depressions and storms of the month.

Weather was somewhat less disturbed than usual in March 1896. There were five periods of disturbance, *viz.*, the 3rd to the 7th, the 11th to 13th, the 16th and 17th, the 22nd, and 23rd and the 27th and 28th. Two of these disturbances at least apparently originated in India, and were due to hot weather actions. These hot weather depressions and disturbances differ in several respects from the storms of the cold weather period. They usually form in Sind, the South-West Punjab, West Rajputana, or the Central Provinces during periods of considerable excess of temperature and are usually stationary for periods of two to four days, during which they intensify very slightly. Finally, they either fill up or advance eastwards across Northern India, following the same general course as the storms of the cold weather. This is apparently due to the ascensional movement in the depression in such cases gradually extending upwards into the higher strata characterized by approximately uniform eastward movement, when the depression is carried eastwards by that upper current. The remaining disturbances probably originated over the plateau of Iran and extended eastwards across Baluchistan and Northern India. They were diffused and irregular disturbances and their eastward propagation may rather be described as that of a low pressure wave than of a cyclonic storm.

At the commencement of the month pressure was in considerable to large excess in Upper India, and in slight defect in North Bengal, Assam and Burma. Well-defined anti-cyclonic conditions hence obtained in Northern India.

Pressure gave way rapidly on the 3rd in Persia, Baluchistan and Upper India. It increased very rapidly in Persia on the 4th and gave way briskly in Baluchistan and Upper India. The following gives the pressure and temperature changes on the 3rd, 4th and 5th at several stations :—

Station.	Pressure: Change in 24 hours preceding 8 A.M. of			Temperature: Change in 24 hours preceding 8 A.M. of		
	3rd March.	4th March.	5th March.	3rd March.	4th March.	5th March
	"	"	"	°	°	°
Baghdad	—·068	+·350	+·013	—0·2	—7·8	—1·7
Ispahan	—·120	+·020	+·100	+6·1	—8·1	—4·0
Bushire	—·103	+·132	+·024	+4·5	—6·8	—6·1
Jask	—·081	—·849	—·071	—0·3	+0·7	+4·2
Quetta	—·086	—·070	—·092	+3·2	+2·8	+10·8
Jacobabad	—·127	—·089	—·152	+1·5	+4·7	+2·5

The following table gives the variations of pressure and temperature from the normal at the same stations during this period :—

STATION	PRESSURE			TEMPERATURE		
	Variation from normal of 24 hours preceding 8 A.M. of			Variation from normal of 24 hours preceding 8 A.M. of		
	3rd March.	4th March.	5th March.	3rd March.	4th March.	5th March.
	"	"	"	°	°	°
Baghdad .	−·225	+·099	+·094	+4·8	−3·2	−5·2
Ispahan . .	−·056	−·036	+·064	+10·4	+2·4	−1·7
Bushire . . .	−·152	−·011	+·020	+12·9	+4·6	−2·5
Jask . .	+·061	+·012	−·059	−2·4	−1·7	+2·5
Quetta . .	+·051	−·023	−·120	+2·6	+5·4	+15·8
Jacobabad .	−·025	−·114	−·267	+1·6	+6·6	+9·1

It will be seen from the above that during the formation of the depression temperature was in very large excess in Persia, and that its eastward advance was followed by a very large reduction of temperature.

The preceding data indicate that weather was disturbed over the Iran plateau on the 3rd and 4th. Showers were received on either of these dates at Baghdad, Bushire and Ispahan, and light local showers in Baluchistan on the 5th. The disturbance gave rise to very irregular pressure changes in Persia, and it is very doubtful whether the disturbance was transmitted eastwards as a definite cyclonic circulation and whirl, and its eastward movement may perhaps be best described as the advance of a low pressure wave from Persia to Baluchistan.

Disturbance of the 4th to the 7th March.—On the morning of the 5th a low pressure area lay over Sind and West Rajputana. The centre was near Jacobabad, where pressure at 8 A.M. was ·27″ below the normal. Skies were lightly clouded in Baluchistan, the Punjab plains and Sind, and overcast in the Punjab hills, but were generally clear elsewhere.

The pressure changes were small in amount in India during the next 24 hours, and the depression was unchanged in position and character on the morning of the 6th. Pressure was ·23″ below the normal at 8 A.M. at Jacobabad. Pressure increased rapidly in the North Punjab and briskly in Upper Sind during the next 24 hours, and the depression was now filling up. It disappeared during the following day.

The depression was hence stationary from the 5th to the 7th in Sind, and filled up in that area on the 8th. It gave some light showers in Baluchistan on the 5th and 6th, and the North Punjab on the 7th and 8th.

Feeble disturbance of the 9th to the 11th March.—As stated above, the filling up of the previous depression on the 8th was accompanied by a rapid increase of pressure in the North Punjab and by a slight decrease in North-Eastern India. These changes brought into prominence the Chota Nagpur and Bihar depression, which formed one of the prominent features of the month. Pressure was on the morning of the 9th in slight defect in Upper India, and in considerable to large defect in Chota Nagpur, Bihar and Bengal. Showers had been received during the previous 24 hours in Baluchistan and the North Punjab and also in South Bengal and Assam. The pressure changes of the next 24 hours were slight and apparently of no importance, except in the South and East Punjab, where pressure had increased briskly. Pressure gave way briskly in the South-East Punjab during the next 24 hours, but elsewhere the pressure changes were insignificant. Pressure increased generally in Northern India on the 12th. Light to moderate showers fell in Baluchistan, the North and West Punjab, and in Kashmir and the Punjab hill districts during this period from the 9th to 12th. The precipitation during the disturbance was much heavier and more general than that of the first disturbance of the month. The following gives a summary of the rainfall of the period :—

DIVISION.	AVERAGE ACTUAL RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF				Total of period.
	9th March.	10th March.	11th March.	12th March.	
	Inch.	Inch.	Inch.	Inch.	Inch.
Baluchistan	0·13	0·07	0·04	0	0·24
Kashmir	0·09	0·22	0·35	0·10	0·76
Punjab (North West) . .	0·09	0·01	0·08	0·16	0·34
,, (Central) . . .	0·01	0	0	0	0·01
,, (Hills) . . .	0	0·12	0·05	0·22	0·39
,, (South) . . .	0	0	0	0·01	0·01
,, (Submontane) . .	0·01	0·01	0·01	0·01	0·04
,, (West) . . .	0·04	0·05	0·16	0·04	0·29

This disturbance, unlike the previous, was not associated with the formation of a low pressure area in Sind. The changes of pressure at Baghdad and the Persian stations were large and very irregular from the 8th to the 11th, and hence the disturbance was not due to the eastward movement of a depression across that area into Baluchistan.

Pressure decreased briskly in North-Eastern India on the 13th, thus bringing into further prominence the depression in Bihar and Chota Nagpur which had been a persistent feature from the 8th. Pressure increased briskly in that area during the next 24 hours, and the depression disappeared temporarily. During the existence of this depression from the 8th to the 14th, showers

had fallen daily in the Assam Valley, Cachar, and occasionally in East Bengal (chiefly on the 11th and 14th).

The following gives the average daily rainfall in eight districts of Assam and Cachar during this rainy period:—

Division.	District.	Average actual rainfall in 24 hours preceding 8 A.M. of							Total of period.
		8th March.	9th March.	10th March.	11th March.	12th March.	13th March.	14th March.	
		Inch.	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.	Inch.
Upper Assam	Nowgong	0·19	0·06	0·12	0·06	0	0·02	0	0·45
	Sibsagar	0·48	0·75	0·54	0·39	0·08	0·36	0	2·60
	Lakhimpur	0·29	0·44	0·45	0·37	0·39	0·23	0·50	2·67
Lower Assam	Darrang	0·06	0·09	0·13	0	0	0	0	0·28
	Kamrup	0·38	0·05	0	0	0	0·01	0	0·44
	Goalpara	0	0	0	0	0	0	0	0
Cachar	Cachar	0·86	0·46	0·77	0·79	0·90	0·64	0·02	4·44
	Sylhet	0·53	0·92	0·94	0·90	0·60	0·36	0·06	4·31

It may be noted that the disturbance of the 9th to the 12th gave rise to a well-marked cool wave which advanced eastwards across Northern India. It is described in the temperature section.

Disturbance of the 16th to the 18th March.—This disturbance probably originated on the 13th and 14th in Asiatic Turkey and the Persian area. Pressure was lowest at Baghdad on the 14th, at Ispahan on the 15th and at Bushire and Muscat on the 16th. Light showers fell at each of these stations, and the wind shifted from south to north-west as the depression passed eastwards. Pressure fell briskly in Baluchistan and rapidly in Sind on the 16th, and a shallow depression was shown in the latter area on that day. It advanced eastwards across North Rajputana on the 17th, intensifying slightly, into the submontane districts of the South-East Punjab on the 18th, and disappeared during the next 24 hours. The disturbance gave light to moderate showers in Baluchistan, Kashmir and the Punjab hills on the 17th and 18th, and numerous duststorms in the plains of North-Western India.

During the period from the 14th to the 18th pressure was fairly uniform in North Eastern India. It decreased briskly to rapidly in that area on the 19th, thus re-establishing the low pressure area in Bihar and Chota Nagpur. the depression diminished considerably in extent, and lay over the submontane districts of Bihar and the North Western Provinces during the next week. Assam received occasional light to moderate thunder showers during this period. The following is a statement of the average daily rainfall in the eight plains districts of that province during this period:—

Division.	District.	Average actual rainfall in 24 hours preceding 8 A.M. of					Total of period.
		14th March.	15th March.	16th March.	17th March.	18th March.	
		Inch.	Inch.	Inch.	Inch.	Inch.	Inch.
Upper Assam	Nowgong	0	0	0	0	0	0
	Sibsagar	0	0	0	0	0·01	0·01
	Lakhimpur	0·50	0·01	0	0	0·03	0·54
Lower Assam	Darrang	0	0	0	0	0	0
	Kamrup	0	0	0	0·01	0·01	0·02
	Goalpara	0	0	0	0	0	0
Cachar	Cachar	0·02	0·04	0·03	0·34	0·32	0·75
	Sylhet	0·06	0·03	0·04	0·17	0·11	0·41

It is noteworthy that in this, as in the previous period of rainfall in Assam, the precipitation in the Naga and Khasia hills was generally small in amount, and smaller than in the plain districts to the north or south. The total rainfall at Cherra Poonjee during the period from the 14th to the 18th was only 1·22 inches.

Feeble disturbance of the 21st to the 23rd March.—This appears to have been similar in its origin and general character to the third disturbance of the month described above. It apparently originated in Mesopotamia and West Persia during a period of strongly marked anticyclonic conditions in Southern and Eastern Europe, and advanced as a depression or wave of low pressure. It gave minimum pressure to Baghdad and Bushire on the 19th, Ispahan and Muscat on the 20th and to Jask and Quetta on the 21st. Baghdad had light showers on the 19th and 20th, Meshed on the 19th and 21st, Muscat on the 20th and 21st, and Jask on the 19th and 20th. The S.S. *Kilwa* at Jask on the 19th had a very heavy squall from east "with sheets of rain" at 8 P.M. "The sky was covered with flashes of lightning." The same vessel had a very heavy squall of rain off Muscat at 7A.M. of the 20th. The preceding hence indicates that a disturbance was transmitted eastwards across the Persian area on the 19th and 20th, and began to affect Baluchistan on the 21st. Pressure gave way locally in that area and Sind on the 21st, and a shallow depression lay over the Sind area at 8 A.M. of that day. It advanced eastwards across North and Central Rajputana on the 22nd, and filled up during the next 24 hours. The disturbance gave moderate rain to Baluchistan from the 20th to the 23rd, Kashmir from the 21st to the 23rd, and the greater part of the Punjab on the 22nd and 23rd.

The following is a summary of the rainfall due to this disturbance :—

DIVISION.	AVERAGE ACTUAL RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF				Total of period.
	20th March.	21st March.	22nd March.	23rd March.	
	Inch.	Inch.	Inch.	Inch.	Inch.
Baluchistan	0·07	0·04	0·07	0·15	0·33
Kashmir	0	0·03	0·43	0·26	0·72
Punjab (North-West) . .	0	0·02	0·16	0·40	0·58
„ (Central) . . .	0	0·01	0·06	0·02	0·09
„ (Hills) . . .	0	0	0·27	0·37	0·64
„ (South) . . .	0	0	0·02	0·02	0·04
„ (Submontane) . .	0	0	0·11	0·11	0·22
„ (West) . . .	0	0·01	0·21	0·23	0·45

Pressure increased over the whole Indian area, slightly in Southern India and very rapidly in North Western India on the 22nd and 23rd, and was in general excess on the 23rd. The excess on that day was greatest in the Punjab, where it ranged between ·10″ and ·17″. The changes were very irregular on the 24th and 25th, during which period pressure gave way very rapidly in the Persian area and was upwards of three-tenths of an inch in defect at Baghdad, Bushire and (probably) Ispahan on the 25th. Weather was showery at Baghdad, Bushire and Ispahan on the 24th and 25th. High pressure conditions continued in North Western India on the 26th, but skies clouded over in Baluchistan, thus indicating the extension of the disturbance into that area. The pressure changes in Upper India were small and of little significance on the 27th and 28th, but the feeble disturbance transmitted from Persia gave light showers on these dates in Baluchistan and Kashmir and the submontane and hill districts of the Punjab.

Pressure gave way briskly in North Eastern India on the 28th and 29th, and a depression was shown in North Bihar on the morning of the 29th. It intensified considerably on the 30th and formed the principal feature of the pressure distribution on the 30th and 31st. As usually occurs with this distribution of pressure, showery weather prevailed in Assam and Cachar and heavy thunderstorms visited some parts of the Assam Valley.

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 March 1896 in the Himalayan and Afghan mountain areas, received up to date :—

I.—AFGHAN MOUNTAIN DISTRICTS.

(1) *Hills bordering the Dera Ismail district.*—The Political Officer, Wano, has sent the following account of the snowfall of the month on the mountain ranges in Waziristan. "Snowstorms occurred on the Marwatti, Bosh and Pirghal ranges on the following dates :—

Date.	*Character of Storm.*
5th	Short.
8th	Do.
10th	Do.
11th	Do. and heavy.
17 and 18th	Continuous and heavy.
21st and 22nd	Do.
24th, 26th and 27th	Snow showers at intervals.

At the end of the month there was no considerable snow accumulation on these hills. On the southern face there was snow in the sheltered ravines, and on the northern face it lay to a depth not exceeding one foot."

(2) *Kurram.*—Slight snow showers fell on the 3rd, 5th, 6th, 11th and 17th on the higher hills and rain in the valley. The snow melted rapidly during the latter half of the month, and at the and of the month the accumulation on the higher peaks of the Sufed Koh did not exceed 6 feet in depth.

(3) *Khyber district.*—No snow fell on the hills in this district during the month.

II.—KASHMIR AND PUNJAB HIMALAYAS.

(1) *Hills adjacent to Murree.*—Very little snow fell at Murree, and no snow at Kahuta.

(2) *Chamba.*—The following information is taken from reports received from the Deputy Conservator of Forests, Chamba Division : "The following is a statement of the snowfall during the month at the forest rain-gauge stations in this district :—

Month.	Date.	DEPTH OF SNOWFALL AT					
		Kalatop, 8,000 feet.	Chanan, 6,500 feet.	Thanela, 7,000 feet.		Bhandal, 6,000 feet.	
				Ft.	In.	Ft.	In.
March 1896 .	11th	*Nil*	*Nil*	0	8	0	1
	12th	*Nil*	*Nil*	0	3	*Nil.*	

"The snowfall of the past winter is considered by the natives of the district to have been heavier than usual. It began later than usual and melted very rapidly during the latter half of March. Crops are consequently more forward than usual, more especially at high elevations."

(3) *Kulu.*—The following report has been received from the Assistant Commissioner, Kulu:—"There were falls of snow on the 8th, 10th, 12th, 13th, 18th, 19th, 22nd, 23rd and 28th March in the Kulu Tahsil, and on the 9th, 10th, 12th, 18th, 19th, 23rd and 24th March in the Plach Tahsil. The falls were light and only on high passes, down to an elevation of about 11,000 feet."

The following table gives the reported depth of snow on the higher passes of the Kulu Sub-Division at the end of the month and at the corresponding periods of the past four years for comparison:—

District.	Name of Pass.	Height above sea-level.	Depth of snow on 25th of				
			March 1896.	March 1895.	March 1894.	March 1893.	March 1892.
		Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
Kulu.	Rotang	13,000	15	17	16	27	5
	Hamta	14,500	12	10	15	25	4
	Barsai	?	4	6	11	14	3
	Chander Khani	?	4	5	11	26	4
	Bujadhar	?	3½	5	10	15½	1
	Lohri Achri	?	8	6	10	12	1
	Bhubbu	10,000	3	5	6	12	1
	Pastari	?	...	5	4	10	2
	Majhang	?	...	...	1½	6	?
Plach.	Srikhand	15,000	10	20	20	40	10
	Chul	?	2	6	6	20	1
	Maghin	?	2	5	8	19	1
	Tikar	?	2	5	8	14	1
	Dundku	?	4	6	9	15	2
	Nohau	?	...	2	3	6	1
	Ramgarh	?	...	...	½	?	?
	Jalori	10,500	3	6	8	14	1
	Raghopur	?	3	7	10	14	1
	Lambri	?	3	5	7	15	1
	Sakiran	?	3	5	8	15	2
	Supakun	?	2	6	10	15	2
	Basleo	11,000	3	6	8	15	1
	Plach	?	3	8	9	20	2
	Tirath	?	4	11	12	25	3
	Gargarasan	...	4	12	...	...	...

The weather was hot and dry during the latter part of the month and the snow began to melt rapidly. About 50 Lahaulies crossed the Rotang Pass which was open at the end of the month for foot passengers.

(4) *Upper Sutlej Valley and neighbouring mountain ranges.*—The Deputy Conservator of Forests, Bushahr Division, reports that light snow fell on the 7th, 8th, 12th and 13th of March at elevations above 10,000 feet.

The following interesting account of the snowfall in this valley during the past winter, which has been received from the Reverend Mr. Schreve is given *in extenso*:—

Month.	*Date.*	*Snowfall.*
December 1895.	9th	Very light.
January 1896	12th to 14th	1 ft. 8 inches.
"	28th	1 inch.
"	31st	4 inches.
February 1896	2nd	6 "
"	6th	2 "
"	11th	1 inch.
"	14th and 15th.	2½ inches.
"	23rd to 27th	2 ft. 4 inches.
"	29th	4 "
March 1896	11th and 12th.	1 ft.
"	22nd and 23rd	2 ft.
"	29th	light.

"The storm of the 22nd and the 23rd of March gave the heaviest fall of the season. The winter was milder than usual and the accumulation at the end of the season was very small in the valley. The winter was unusually dry and warm throughout the whole period from the beginning of December to the end of March."

III.—THE NORTH-WESTERN PROVINCES HIMALAYAS.

Kumaon (Almora district).—The following gives the snowfall at the observing stations on the higher elevations:—

(*a*) *Malla Danpur.*

7th—0 ft. 6 inches.

(*b*) *Mallas Byans, Chandans and Darma.*

10th—0 ft. 6 inches.

(*c*) *Malla Johar.*

8th—1 ft. 6 inches.

The snowfall of the past winter was much less than in the previous winter and probably considerably below the normal.

Summary of the snowfall information.—The chief periods of moderate to heavy snowfall during the month were the 11th to the 13th, the 17th to the 19th and the 22nd to the 24th. The falls were moderate to heavy in amount in Waziristan, Kashmir and the Upper Sutlej valley districts. Little or no snow appears to have fallen during the month on the Central and Eastern Himalayas.

The winter commenced earlier than usual in the Persian area. A large number of depressions formed in that area and passed eastwards but they decreased in intensity as they advanced eastwards and were feeble when passing

across Northern India. The most noteworthy feature of the season was the absence of secondary depressions in the North Punjab. The primary depressions advanced along more northerly paths than usual and gave rain and snow chiefly in Baluchistan, Afghanistan, Kashmir, the Punjab and the Punjab hills. The snowfall of the season was probably normal in Afghanistan and Baluchistan. It was, on the other hand, almost certainly much below the normal in the Western Himalayas, except perhaps in North Kashmir. The snowfall was moderate to heavy in amount on the higher elevations in the Punjab Himalayas in the months of January and February, and was probably in slight to moderate defect. The precipitation on the lower ranges was considerably below the normal, and the snowfall was restricted, as a rule, to higher elevations than usual in this period.

March was undoubtedly much drier than usual in the hill districts, and the winter snow hence began to disappear rapidly and much earlier than usual. The accumulation at the end of March was considerably below the normal on the average of the whole area and with the continuation of the unusual dryness and warmth, which has characterized the present hot weather, the accumulation during the hot weather will be very largely in defect. It is probable, judging from the conditions in North Eastern India that the snowfall in the Eastern Himalayan area has been much below the normal.

Summary of Special Storm Reports.

The following gives a statement of the more important thunderstorms and hailstorms in the various provinces of India, and more especially in Kashmir, Assam, Rajputana and Central India, during the month. The accounts of the hailstorms are derived from reports received from the Political Agents or other local authorities:—

6th.—Hailstorm in the Nohar and Bahadran Tahsils of the Bikanir State. The storm came from the west and lasted ten minutes. It caused much damage to the standing gram and tobacco crops, but filled the water tanks with two months' supply. It is stated that no thunder or lightning was observed during the march of the storm through the Bahadran Tahsil. The larger stones were of the size of plums.

Hailstorm at Tomarghar in the Gohad Tahsil of the Gwalior State.

7th.—Hailstorm of moderate intensity at Gauhati. The storm came from north and blew down some thatched native huts.

Duststorm at Jeypore at 2-30 P.M. Thunderstorm at Jask at 11-5 A.M.

Thunderstorm at Delhi at 8-30 P.M. Storm came from east.

Violent duststorm at Jacobabad at 8 P.M. The storm came from north-west and lasted half an hour.

8th.—Hailstorm of moderate intensity in the Roha sub-division of the Nowgong district of Assam.

Severe hailstorm in the Tezpur Tahsil of the Darrang district. The storm came from north-west.

11th.—Duststorm at Delhi at 5-15 P.M.

Thunderstorm at Simla, which began at 8-40 P.M. and continued to 10 P.M.

Duststorm at Jeypore. Storm began at 2-30 P.M. and ended at 4-25 P.M.

13th.—Severe nor-wester with hail in the Manikganj sub-division of the district of Dacca. It is reported that many trees and houses were blown down by the storm.

16th.—Severe duststorm at Indur in the Hyderabad State. The following is an extract from the observer's account of the storm:—

"On the afternoon of the 16th instant a dust-storm accompanied with rain and hail passed over Indur at about 4 P.M. The duration of storm was about 20 minutes. The storm was severe, uprooting trees, killing sheep, cattle and men, and carrying off the roofs of several houses. The hail stones were in some cases about 1½ inches in diameter, and caused great damage, leaving scarcely a sound tile on the buildings and depriving trees of all their leaves. The rainfall during the storm was 1·02 inches.

17th.—Thunderstorm at Nagpur.

18th.—Hailstorm of moderate intensity at Avokapalle in the Vizagapatam district. The storm lasted 20 minutes.

19th.—Hailstorms of slight to moderate intensity in the Cachar district. The storms came from north and inflicted slight damage on the standing crops.

22nd.—Thunderstorm at Pachpadra during the afternoon.

23rd.—Duststorm at Allahabad at 7 P.M.

Duststorm at Pachpadra at 3 P.M.

Hailstorm in the Hailakandi sub-division of the Cachar district. The storm was severe and the largest stones were reported to be of the size of oranges. Many houses were blown down the town of Hailakandi and the neighbouring villages.

23rd.—Severe hailstorm in the Ubauro Taluka of the Shikarpur district. The following is an account of this storm received from the *Collector*:—

"The storm came from west at 8 P.M. and was at its height in the villages of Rauti and Tig, where it was accompanied by thunder and lasted for 10 or 12 minutes. The hail stones were said to be in some cases as large as oranges and weighed 30 tolas. The storm moved from west to east. The storm also passed over the villages of Khairpur, Saidino Malak, Jhangal Malak, Kata, Reti, Gorhelo, Jahanpur, Choranwala, Reni, Kotla Munshi, Dabli and Kotla Usif, where the stones were smaller. In Rauti Tapa 26 goats, 12 sheep, 1 buffalo, 2 cows, 1 calf and 1 donkey were said to have been killed by the hail which caused much damage to the standing crops. Holes in the road, several inches in diameter, were visible at Khairpur and other places."

28th.—Severe duststorm at Pachpadra at 6-30 A.M. Strongest winds as reported by the observer were of velocity 80 miles per hour (?). Much injury was inflicted on houses in the town.

29th.—Violent hailstorm at Murree. Storm came from south-west and lasted from 3-50 A.M. to 4 A.M. The precipitation is reported to have been 1·50 inches during this interval.

Hailstorm of moderate intensity at Gauhati. The hail stones were very small. The winds accompanying the storm blew down many huts.

31st.—Hailstorm of moderate intensity in Mouzas Gerua and Bokaui of the Nowgong district. The storm came from west and lasted about ten minutes at the places over which it passed. The largest stones are stated to have been about 2 inches in diameter (?). Much damage was inflicted on the tobacco and other standing crops.

The following interesting account of a large water spout at the Sandheads on the 14th has been received from Captain Beahan, Commander of the F. L. V. *Torch*:—

"I observed a large water spout bearing north-west at 11-30 A.M. this day. I noticed that the base suddenly became detached from the top or upper part of the spout which disappeared, and in ten minutes it had altered its bearings from north-west to east, where apparently it became stationary and attached itself again to another heavy cloud above. Immediately four other large well-formed spouts made up round it, the whole being visible for 20 minutes, when they were obscured by a heavy rain shower. I would judge that the base of the spout passed about 2 miles north of our station buoy (which is one mile from the ship), and the rapidity with which it altered its bearings from north-west to east, shows that its rate of travel could not have been less than 100 miles per hour, which is, I think, very remarkable, considering that at the time the wind was variable and its force not more than 3. The disturb ance of the sea surface in the shape of spray at its base looked very extensive and was showing three times higher than the beacon on our station buoy."

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

Arabian Sea.—Ordinary northerly winds of the north-east monsoon prevailed generally over the Arabian Sea during the greater part of the month. They were, however, stronger than usual on the majority of days, averaging 2·9 in force for the whole month or 0·2 above the normal air movement in March. Weather was generally fine to hazy, although some occasional showers and squalls were experienced to the west of Ceylon during the second and fourth weeks of the month.

In the Persian Gulf and the Gulf of Oman, on the other hand, conditions were more or less unsettled, more especially during the third week of the month. Thus the S.S. *Kilwa* at anchor at Jask, on the evening of the 19th, experienced heavy rain, very heavy squalls and flashes of lightning.

The data for the equatorial belt are scanty. They, however, show that the eastern half of this region was occupied by a belt of calms and light variable airs. In the western half northerly winds prevailed during the first fortnight and irregular winds during the second half of the month. There were some instances of south-east winds during the latter period.

The data for Zanzibar and the Seychelles indicate that conditions were somewhat abnormal over the area represented by these stations. Thus the mean wind directions of the month at Zanzibar and the Seychelles were S. 18° E. and N. 42° W., the normals being N. 39° E. and N. 15° W. respectively.

Bay of Bengal.—Abnormal northerly winds prevailed off the Bengal and Orissa coasts during the first four days of the month instead of the local sea breezes which usually obtain in that area in March. During the remainder of the month the meteorology of the Bay was normal, and light north-east or variable winds, with fine weather and clear skies or passing clouds obtained steadily throughout the period.

Temperature of the air.

The mean day or maximum temperature of the month was above the normal over the whole of India except Arakan, Upper Assam, the North-West Punjab and the west coast districts from Ratnagiri to Calicut. The deficiency in these areas was very small and exceeded 1° only at Peshawar (—1°·8) and perhaps Diamond Island (—1°·2)

The mean day temperature was more than 2° in excess over the Gangetic Plain, Bengal, Orissa, Central India, Berar and the Central Provinces. It was most largely in excess in the area of greatest deficiency of pressure in North-East India, *i.e.*, in North and Central Bengal, Bihar and Chota Nagpur.

The following gives comparative data for the stations in this area of greatest excess of day temperature:—

Station.	Mean maximum temperature.		
	Actual, March 1896.	Normal, March.	Variation of actual from normal.
	°	°	°
Bogra	95·8	89·5	+6·3
Mymensingh	91·7	86·5	+5·2
Chaibassa	99·2	94·1	+5·1
Dinajpur	94·2	89·2	+5·0
Ranchi	92·0	87·1	+4·9
Purnea	94·8	90·2	+4·6
Darbhanga	92·3	87·7	+4·6
Patna	95·3	91·1	+4·2
Dhubri	90·7	86·5	+4·2

The excess was not so marked generally as in the corresponding month of the very dry hot weather season of 1892.

Higher maximum temperatures were, however, registered at three stations in North-Eastern India than have been previously recorded in March as is shown by the following data:—

Station.	Highest maximum temperature recorded in March 1896.	Date on which recorded.	Highest maximum temperature recorded in March previous to 1896.	Year in which recorded.
	°		°	
Jessore	105·5	30th	104·5	1870
Calcutta	101·4	29th and 30th.	101 0	1892
Darbhanga	100·2	30th	99·0	1879

The highest maximum temperatures of the month were recorded over nearly the whole of Northern and Central India during the last three days of the month.

The mean night or minimum temperature of the month was above the normal over the whole of India with the exception of the area including the stations of Madras, Salem, Trichinopoly, Calicut, Mangalore and Karwar, where it was very slightly below the normal. It was more or less above the normal elsewhere and the excess was more than 2° in amount over two areas, the first including the greater part of Upper India and the second including Berar, the Central Provinces, Chota Nagpur, South Bihar and Central Bengal.

The excess was 3° or above at the following stations in these two areas:—

Area.	Station.	Mean minimum temperature.		
		Mean Actual, March 1896.	Mean Normal.	Variation of actual from normal.
		°	°	°
First area	Lahore	58·7	54·8	+3·9
	Mooltan	61·0	58·0	+3·0
	Jacobabad	62·4	59·4	+3·0
Second area	Amraoti	73·1	68·5	+4·6
	Raipur	72·2	68·5	+3·7
	Seoni	67·1	63·5	+3·6
	Chanda	70·5	67·2	+3·3
	Mymensingh	67·3	64·1	+3·2
	Dacca	71·6	68·4	+3·2
	Gaya	69·2	66·2	+3·0

It may also be noted that the lowest night temperatures of the month were generally registered in the Deccan, the Central Provinces and Berar during the period from the 4th to the 6th, and in Bengal and the Gangetic Plain on the 4th and the 15th and 16th.

The mean temperature of the month was normal in the west coast districts, Southern India and Upper Assam and was above the normal over the remainder of India. The excess was more than 2° in amount over the large area including Bengal, Bihar, Chota Nagpur, the North-Western Provinces and the Central Provinces. Compara-

tive data are given for those stations at which the excess was more than 3° in amount :—

Province.	Station.	Mean daily temperature. Actual, March 1896.	Normal, March.	Variation of actual from normal.
		°	°	°
Berar	Amraoti	87·2	83·4	+3·8
Central Provinces	Seoni	82·4	78·5	+3·9
	Raipur	85·9	82·4	+3·5
	Chanda	86·9	83·7	+3·2
Chota Nagpur	Chaibassa	84·4	80·6	+3·8
	Hazaribagh	79·4	76·3	+3·1
Bihar	Patna	80·9	77·4	+3·5
Bengal	Mymensingh	79·5	75·3	+4·2
	Bogra	80·6	76·6	+4·0

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

(1) The day and night temperatures and hence also the mean temperature were, on the mean of the month, practically normal in the west coast districts, Southern India, Arakan and Upper Assam.

(2) The day and night temperatures and hence also the mean temperature were more or less in excess over the remainder of India and to almost as marked an extent as in February. Temperature was most largely in excess in the Central Provinces, Chota Nagpur and some parts of Bengal.

The following table gives comparative data of the month for the 56 meteorological divisions of India :—

Province.	Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of month of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	93·1	73·3	83·2	19·8	28·8	+1·0	+0·9	+0·1
	Lower Burma (Deltaic)	91·9	73·3	82·6	18·6	29·1	−0·2	+1·4	−1·6
	Central do.	100·1	69·2	84·7	30·9	43·2	+1·4	+2·4	−1·0
	Upper do.	91·6	61·8	76·7	29·8	46·9	+0·7	+1·0	−0·3
	Arakan	88·2	69·7	79·0	18·5	31·5	−0·7	+0·9	−0·2
Bengal and Assam	Eastern Bengal	90·3	69·8	80·0	20·5	37·0	+2·3	+2·8	−0·5
	Assam (Surma)	86·4	65·0	75·7	21·4	33·7	+1·1	+1·6	−0·5
	Do. (Brahmaputra)	84·8	62·6	73·7	22·2	37·6	+1·9	+0·3	+1·6
	Deltaic Bengal	94·6	71·3	83·0	23·3	41·5	+2·6	+2·0	+0·6
	Central do.	96·7	67·1	81·9	29·6	48·4	+4·5	+1·8	+2·7
	North do.	91·1	61·5	76·3	29·6	46·8	+4·0	+0·7	+3·3
	Bengal Hills	49·2	34·1	41·7	15·1	28·3	+2·9	+1·4	+1·5
	Orissa	90·9	75·1	83·0	15·8	28·3	+1·7	+1·9	−0·2
	Chota Nagpur	91·6	65·6	78·6	25·9	43·4	+4·4	+2·7	+1·7
	Bihar (South)	95·7	67·2	81·5	28·5	46·2	+3·3	+2·9	+0·4
	Do. (North)	94·2	62·1	78·2	32·1	49·1	+4·6	−0·1	+4·7
North-Western Provinces and Oudh.	North-Western Provinces (East)	96·1	62·9	79·6	33·2	51·3	+2·9	+0·7	+2·2
	Oudh (South)	94·0	61·8	77·9	32·2	51·1	+2·7	+1·2	+1·5
	Do. (North)	93·4	59·8	76·6	33·6	49·9	?	?	?
	North-Western Provinces (Central)	95·0	64·3	79·6	30·7	48·3	+3·2	+3·5	−0·3
	Do. do. (West)	91·1	62·1	76·7	29·1	47·0	+1·9	+1·8	+0·1
	Do. do. (Submontane East)	94·8	63·9	79·4	30·9	48·0	+4·0	+1·4	+2·6
	Do. do. (do. West)	87·4	57·6	72·5	29·8	47·5	+3·1	+0·7	+2·4
	Do. do. (Hills)	64·3	48·4	56·4	16·0	31·3	+1·7	+3·0	−0·3
Punjab	Punjab (South-East)	89·9	64·1	77·0	25·8	42·1	+1·7	+2·0	−0·3
	Do. (South)	86·0	58·6	72·3	27·5	44·6	+1·6	+1·9	−0·3
	Do. (Central)	83·2	58·7	71·0	24·5	40·6	−0·5	+3·9	−4·4
	Do. (Submontane)	85·8	58·7	72·3	27·1	42·0	?	?	?
	Do. (Hill Districts)	55·0	34·7	44·9	20·3	36·5	+4·6	+0·2	+4·4
	Do. (North)	75·9	52·6	64·3	23·3	42·1	−0·6	+2·3	−2·9
	Do. (West)	84·9	58·9	71·9	25·9	43·0	+1·1	+3·0	−1·9
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	89·7	76·5	83·1	13·2	22·8	+0·2	+0·2	0
	Madras (South Central)	98·4	70·0	84·2	28·5	42·2	+1·1	−0·3	+1·4
	Coorg	85·9	63·3	74·6	23·6	30·3	+1·4	+2·1	−0·7
	Mysore	93·4	66·2	79·8	27·2	36·3	+1·3	+0·7	+0·6
	Konkan	86·2	74·4	80·3	11·8	21·4	−0·4	+0·3	−0·7
	Bombay Deccan	98·7	67·8	83·3	31·0	42·1	+1·6	+1·0	+0·6
	Hyderabad (North)	98·5	70·5	84·5	28·0	36·0	?	?	?
	Khandesh	98·0	64·6	81·3	33·5	48·9	+1·6	+1·0	+0·6

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.
		°	°	°	°	°	°	°	°
Central Provinces and Berar.	Berar	101·7	70·4	86·0	31·3	46·1	+3·1	+3·4	−0·3
	Central Provinces (West)	99·6	68·3	83·9	31·3	48·6	+2·2	+2·7	−0·5
	Do. (Central)	98·1	66·6	82·4	31·6	49·4	+3·4	+2·5	+0·9
	Do. (East)	99·8	72·2	85·9	27·6	44·8	+3·3	+3·7	−0·4
Bombay (North)	Gujarat	98·3	68·3	83·2	30·1	47·7	+2·2	+1·2	+1·1
	Kathiawar	93·1	65·7	79·4	27·4	46·3	+0·5	+0·9	−0·4
	Sind	91·4	65·6	78·5	25·8	45·5	+1·3	+2·3	−1·6
	Baluchistan Hills	68·0	38·9	51·9	26·1	52·3	+1·1	+2·7	−6·0
Rajputana and Central India.	Central India (East)	95·3	63·7	79·5	31·6	49·9	+2·0	+1·4	+0·7
	Rajputana (East), Central India (West)	93·5	62·4	77·9	31·1	52·5	+2·6	−0·1	+0·2
	Do. (West)	94·2	63·8	79·0	30·5	50·0	+2·1	−0·1	+2·2
Madras	East Coast (North)	91·2	73·8	82·6	17·4	29·0	+3·6	−0·7	+4·3
	Hyderabad (South)	99·6	71·6	85·6	28·0	37·6	+1·2	+0·7	+0·5
	Madras (Central)	102·0	73·3	87·7	28·8	39·5	+1·3	+0·3	+1·0
	East Coast (Central)	94·9	72·5	83·7	22·5	34·4	+1·1	+0·2	+0·9
	Do. (South)	92·1	72·5	82·4	19·6	32·1	+1·0	−0·4	+1·4
	Madras (South)	94·2	74·8	84·5	19·4	29·3	+0·1	+0·2	−0·1

The following is a brief summary of the more important changes of the temperature conditions in India during the month.

Temperature was at the commencement of the month in slight to moderate defect in Southern India and in moderate excess in Northern and Central India. The following variation data for the 24 hours preceding 8 A.M. of the 1st indicate that the night and day temperatures were both in excess, the latter to a greater extent than the former (as usual in the hot weather) :—

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

No important change occurred during the next 48 hours. Temperature increased rapidly in Upper India on the 4th and 5th and was very largely above the normal on the 5th and 6th. The following data illustrate this feature :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of	
	5th March.	6th March.
	°	°
Baluchistan (Quetta)	+15·8	+ 4·3
Punjab	+ 8·1	+10·2
Sind	+ 8·1	+ 8·7
Rajputana	+ 3·7	+ 6·6

This wave of high temperature extended across Northern and Central India during the next three days, as is shown by the following mean variation data :—

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

During this period temperature was excessive over the whole of Northern and Central India and the area of greatest excess was transferred from Baluchistan (where it was on the 5th) to the Punjab on the 6th and to Chota Nagpur, South Bihar and the eastern districts of the Central Provinces on the 9th. The following gives variation data for the 9th, which show that the excess was even more strikingly exhibited in the night than in the day temperature.

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	−1·8	+0·8	−0·5
Bengal and Assam	+4·2	+5·1	+4·7
N.-W. Provinces and Oudh	+7·3	+3·8	+5·6
Punjab	+4·0	+6·5	+5·3
Sind and Rajputana	+1·5	+3·6	+2·6
Central India and Gujarat	+1·5	+3·8	+2·7
Central Provinces and Berar	+4·4	+6·5	+5·5
Bombay	−0·7	+0·3	−0·2
Madras	+1·0	−0·5	+0·3

Temperature decreased to a moderate extent on the 10th and 11th over the whole of Northern and Central India and was above the normal on the 11th in that area by amounts ranging between an average of 2° in Central India and 4° in the Punjab.

A cool wave (following the second disturbance of the month) appeared on the frontier on the 12th. It advanced into Rajputana on the 13th, the North-Western Provinces on the 14th and Bengal on the 15th.

The following variation data indicate roughly the transmission of this cool wave :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24-HOURS PRECEDING 8 A.M. OF			
	12th March.	13th March.	14th March.	15th March.
	°	°	°	°
Baluchistan (Quetta)	−4·0	−7·8	−6·7	1 0·1
Punjab	−3·3	−4·2	−4·1	−3·1
North-Western Provinces and Oudh.	+3·3	+2·1	−1·1	−4·1
Bengal and Assam	+2·9	+4·4	+2·4	−0·3
Sind and Rajputana	+0·8	−1·6	−3·3	−4·8
Central India and Gujarat	+1·4	+0·4	−1·4	−4·4
Central Provinces and Berar	+1·4	+4·9	+1·8	−1·1

The preceding data are given in a slightly different form in the following table :—

POLITICAL AREA OR PROVINCE.	CHANGE OF TEMPERATURE DURING 24 HOURS PRECEDING 8 A.M. OF			
	12th March.	13th March.	14th March.	15th March.
	°	°	°	°
Baluchistan (Quetta)	−4·1	−3·8	+1·1	+6·8
Punjab	−7·0	−0·9	+0·1	+1·0
North-Western Provinces and Oudh.	+0·2	−1·2	−3·3	−2·9
Bengal and Assam	−0·4	+1·5	−2·0	−2·7
Sind and Rajputana	−1·6	−2·4	−1·7	−1·5
Central India and Gujarat	−0·9	−1·0	−1·8	−3·0
Central Provinces and Berar	−0·1	+3·5	−3·1	−2·9

The latter table shows clearly the eastward and southward progression of the cooling effect.

The following gives temperature variation data of the 15th and a comparison of the conditions of the 8th and 15th.

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF			Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 8th March.	Change of mean temperature from 8th to 15th March.
	Mean maximum temperature of 15th March.	Mean minimum temperature of 15th March.	Mean temperature of 15th March.		
	°	°	°	°	°
Burma	−0·3	+2·6	+1·2	−1·0	+ 2·2
Bengal and Assam	−0·5	0	−0·3	+4·1	− 4·4
N.-W. Provinces and Oudh.	−2·4	−5·8	−4·1	+6·1	−10·2
Punjab	−1·0	−5·2	−3·1	+6·1	− 9·2
Sind and Rajputana	−2·5	−7·0	−4·8	+4·0	− 8·8
Central India and Gujarat.	−2·4	−6·4	−4·4	+3·4	− 7·8
Central Provinces and Berar.	−0·9	−1·3	−1·1	+5·9	− 7·0
Bombay	+0·4	−1·1	−0·4	−0·6	+ 0·2
Madras	+1·7	+4·3	+3·0	−0·3	+

Temperature increased steadily from the 17th to the 19th over the whole of the Northern and Central India and was again in moderate to large excess at the end of this period.

The following data show the rise of temperature in different parts of India during this interval from the 15th to the 19th:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF.		Rise of temperature during period.
	15th March.	19th March.	
	°	°	°
Baluchistan (Quetta)	+0·1	+3·1	+3·0
Punjab	−3·1	+1·4	+4·5
North-Western Provinces and Oudh	−4·1	+3·9	+8·0
Bengal and Assam	−0·3	+2·1	+2·4
Sind and Rajputana	−4·8	+4·1	+8·9
Central India and Gujarat	−4·4	+3·5	+7·9
Central Provinces and Berar	−1·1	+2·1	+3·2

Temperature decreased generally to a slight extent on the 20th and 21st, but increased considerably on the 22nd and was as largely in excess over the whole of Northern and Central India on that day as on the 19th. The fourth feeble disturbance of the month in Upper India caused a brief reduction of temperature from the 23rd to the 25th over the whole of North-Western India.

Temperature steadily increased during the next four days (from the 25th to the 28th) and was more or less considerably in excess at the end of this period over the whole of Northern and Central India, as is shown by the following mean temperature variation data for each day of the period from the 28th to the 31st:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	28th March.	29th March.	30th March.	31st March.
	°	°	°	°
Burma	+2·6	+2·2	+1·6	+2·2
Bengal and Assam	+3·0	+4·4	+4·4	+3·2
North-Western Provinces and Oudh.	+2·4	+2·6	+1·8	+3·0
Punjab	+1·7	−3·4	+1·8	+4·2
Sind and Rajputana	+3·8	+4·0	+3·7	+5·0
Central India and Gujarat	+3·1	+5·1	+4·4	+4·8
Central Provinces and Berar	+3·7	+4·9	+4·8	+3·9
Bombay	+2·3	+2·1	+2·6	+2·4
Madras	−1·0	−1·0	+0·5	+0·2

The highest maximum temperatures of this month were registered during this period in Northern India. The following gives the most noteworthy:—

STATION.	Highest maximum temperature recorded in March 1896.	Date on which recorded.
	°	
Pachpadra	108·0	31st
Deesa	108·4	29th
Ahmedabad	108 3	31st
Malegaon	108·3	30th
Akola	108·6	30th & 31st
Amraoti	108·4	30th & 31st
Khandwa	108·7	31st
Nagpur	108·2	30th
Chanda	109·9	31st

The hottest area at the end of the month hence included the Central Provinces, Berar, Khandesh, Gujarat, and South-West Rajputana, and which it may be noted is the normal position of what Mr. Blanford termed 'the thermal focus' of India in the last half of March and beginning of April.

The following gives the variations 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:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE, OF WEEK ENDING				
	7th March.	14th March.	21st March.	28th March.	For whole month.
	°	°	°	°	°
Burma	+0·1	+0·2	+0·5	+2·4	+0·9
Bengal and Assam	+2·0	+3·7	+0·6	+3·1	+2·5
North-Western Provinces and Oudh.	+2·7	+3·4	+0·2	+1·7	+2·1
Punjab	+5·3	+0·8	+0·9	−0·8	+1·6
Sind and Rajputana	+3·2	+1·1	+0·9	+1·5	+1·9
Central India and Gujarat	+1·3	+1·5	+0·2	+1·1	+1·4
Central Provinces and Berar	+2·5	+3·6	+0·6	+3·5	+2·8
Bombay	+0·5	−0·1	−0·1	+1·7	+0·7
Madras	+0·1	+1·3	+2·0	−0·1	+0·7

Winds.

Winds were of normal strength and steadiness at Port Blair and the Burma Coast stations. They were much more easterly than usual at Port Blair. Winds were, on the mean of the month, more westerly than usual

in Bengal. The following gives data for three stations:—

Station.	Wind direction. Mean actual, March 1896.	Mean normal, March.	Increased westing.
	°	°	°
Calcutta	S 51° W	S 32° W	+19
Dacca	S 32° W	S 23° W	+ 9
Burdwan	S 81° W	S 78° W	+ 3

The strong westerly influence due to the abnormal pressure conditions was most strongly exhibited at Dhubri, where the mean wind direction was S 13° W, the normal being S 81° E.

Winds were, on the other hand, less westerly than usual at False Point and Saugor Island as is shown by the following data:—

Station.	Wind direction. Mean actual, March 1896.	Mean normal, March.	Decreased westing.
	°	°	°
False Point	S 2° W	S 38° W	−36
Saugor Island	S 15° W	S 33° W	−18

Westerly winds of abnormal strength and steadiness prevailed in the Gangetic Plain and Chota Nagpur. The following gives mean data:—

Province.	Velocity in miles per diem. Mean actual, March 1896.	Mean normal, March.	Percentage variation.	Steadiness. Mean actual, March 1896.	Mean normal, March.	Variation from normal.
Bihar	121	99	+22	64	38	+26
North-Western Provinces and Oudh.	93	78	+19	59	36	+23
Chota Nagpur	219	178	+23	72	61	+11

The mean direction of the air movement during the month in the Gangetic Plain was practically normal.

Winds were more westerly than usual in Rajputana and Central India, as is shown by the following:—

Station.	Wind direction. Mean actual, March 1896.	Mean normal, March.	Increased westing.
			°
Jeypore	N 73° W	N 24° W	+49
Nowgong	N 71° W	N 63° W	+ 8

They were of ordinary strength but much steadier than usual.

The following gives comparative data of the air movement in different provinces of Northern and Central India:—

Province.	Velocity in miles per diem. Mean actual, March 1896.	Mean normal, March.	Variation from normal.
Punjab	71	65	+ 6
North-Western Provinces and Oudh	93	78	+15
Bengal	161	142	+19
Rajputana	121	144	−23
Central India	87	96	− 9

Winds were exceedingly unsteady in the Bombay Deccan, although they were of normal strength. The mean percentage of steadiness was only 4 at Belgaum and Sholapur.

Winds were very variable in character in the Central Provinces and Berar. They were on the whole slightly more northerly than usual. Winds were slightly weaker than the normal at the west coast stations. They were abnormally strong in Mysore and Coorg and slightly steadier than usual and approximately normal in direction in the Madras coast districts.

The following gives a comparative statement of the mean daily air movement in different parts of the Peninsula:—

Division.	Velocity in miles per diem. Mean actual, March 1896.	Mean normal, March.	Variation from normal.	Steadiness. Mean actual, March 1896.	Mean normal, March.	Variation from normal.
Bombay Deccan	199	221	−22	14	20	− 6
Konkan	238	255	−17	68	58	+10
Mysore	185	86	+99	52	50	+ 2
Coorg	142	78	+64	26	18	+ 8
Madras Coast	102	110	− 8	82	70	+12
South Madras	127	112	+15	47	47	0
Central Provinces	92	91	+ 1	28	24	+4
Berar	139	144	− 5	57	47	+10

It is noteworthy that the Zanzibar data show that south-east winds set in at that station earlier than usual. The change did not extend to the Seychelles during the month.

Humidity and cloud.

The mean humidity conditions of Port Blair and the Burma coast stations were practically normal. There was a considerable excess of aqueous vapour in Assam and East Bengal and at the coast stations of Bengal and Orissa. The following gives data for five stations in illustration :—

STATION.	ABSOLUTE HUMIDITY.				RELATIVE HUMIDITY.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.	Percentage variation from normal.	Average actual, March 1896.	Average normal, March	Variation from normal.
	"	"	"		%	%	%
False Point	·847	·781	+·066	+ 8	81	82	−1
Saugor Island	·833	·822	+·011	+ 1	77	79	−2
Chittagong	·755	·687	+·068	+10	80	74	+6
Silchar	·625	·585	+·040	+ 7	73	72	+1
Sibsagar	·557	·544	+·013	+ 2	80	79	+1

The air was abnormally dry over nearly the whole of the interior of India. The following gives comparative data for the large area of decreased humidity in March, including the greater part of Bengal, Bihar, Chota Nagpur, the North-Western Provinces, Rajputana and Central India :—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.	Average actual, March 1896.	Average normal, March.	Variation from normal.
	"	"	"	%	%	%
Bengal (except East)	·588	·636	−·048	55	65	−10
Bihar	·337	·432	−·095	37	50	−13
Chota Nagpur	·240	·289	−·049	23	34	−11
North Western Provinces and Oudh.	·289	·351	−·062	34	44	−10
Rajputana	·300	·324	−·024	32	36	− 4
Central India	·261	·294	−·033	28	35	− 7

The increased dryness of the air was very marked in West Bengal and the Gangetic Plain. The following gives mean humidity data for stations at which the mean humidity of the month was 10 or more in defect :—

STATION.	RELATIVE HUMIDITY.			ABSOLUTE HUMIDITY.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.	Average actual, March. 1896.	Average normal, March.	Variation from normal.
	%	%		"	"	"
Calcutta	56	70	−14	·596	·675	−·079
Berhampore	41	57	−16	·440	·512	−·072
Hazaribagh	23	34	−11	·240	·289	−·049
Patna	28	45	−17	·276	·403	−·127
Allahabad	26	42	−16	·248	·370	−·122
Meerut	38	50	−12	·291	·369	−·078
Roorkee	38	49	−11	·264	·331	−·067
Lucknow	33	43	−10	·317	·362	−·045

The decreased humidity was hence most pronounced in the heart of the Gangetic Plain at Patna and Allahabad. The mean amount of aqueous vapour pressure in the air was 32 per cent. less than the normal at Patna and 33 per cent. at Allahabad.

The air was slightly damper than usual in the Punjab and Sind as is shown by the following data :—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.	Average actual, March 1896.	Average normal, March.	Variation from normal.
	"	"	"	%	%	%
Punjab	·363	·360	+·003	52	53	−1
Sind	·365	·313	+·052	41	38	+3

The mean humidity of the month was more or less considerably below the normal in Berar, the Central Provinces, the Deccan, Mysore and Coorg. Comparative data are given below :—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.	Average actual, March 1896.	Average normal, March.	Variation from normal.
	"	"	"	%	%	%
Berar	·255	·291	−·036	23	28	−5
Central Provinces	·296	·324	−·028	27	34	−7
Deccan	·336	·364	−·028	32	34	−2
Mysore	·395	·456	−·061	44	50	−6
Coorg	·402	·479	−·077	51	62	−11

Humidity was more than 10 in defect in this area at Raipur (14 below the normal) and Mercara (11 below).

The variations of the mean humidity conditions from the normal were small in amount at the Bombay and Madras coast stations.

The air was very dry at the hill stations in Sikkim, the North-Western Provinces and Central Provinces. The following gives data for four representative stations:—

Station.	Absolute humidity.			Relative humidity.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.	Average actual, March 1896.	Average normal, March.	Variation from normal.
	"	"	"	%	%	
Darjeeling	·236	·255	—·019	61	73	—12
Ranikhet	·225	·231	—·006	45	53	— 8
Simla	·176	·197	—·021	46	51	— 5
Chikalda	·227	·296	—·069	24	33	— 9

The month was characterized throughout by deficient aqueous vapour pressure and decreased humidity over nearly the whole of the interior. These features were most marked during two periods, the first extending from the 3rd to the 5th, and the second from the 13th to the 16th. The following remarkably low humidities were observed during this period:—

Station.	Date.	Humidity at 4 P.M.
		%
Deesa	3rd	5
Ditto	4th	4
Raipur	5th	4
Deesa	13th	5
Ditto	14th	3
Ditto	15th	0?
Ditto	16th	4
Allahabad	15th	4
Ditto	16th	5

The mean humidity of the month was 1 above the normal at the Mauritius and 6 above it at Zanzibar.

The driest stations in India during the month (at which the mean humidity percentages of the month were less than 25) are given below:—

Station.	Relative humidity.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.
	%	%	
Khandwa	22	31	— 9
Buldana	22	28	— 6
Saugor	22	31	— 9
Raipur	23	37	—14
Chikalda	24	33	— 9
Akola	24	28	— 4

This list of stations indicates that Berar and the Central Provinces were, on the mean of the month, marked by the greatest dryness of the air.

The following gives the chief features of the mean humidity conditions of the month:—

(1) Conditions were normal at Port Blair and in Lower Burma.

(2) The air was slightly damper at the Bengal coast stations and in East Bengal and Assam.

(3) The air was excessively dry in West Bengal and the Gangetic Plain and very dry in Rajputana and Central India. The mean humidity of the month was more than 12 in defect at Patna, Allahabad, Berhampore and Calcutta.

(4) The air was slightly damper in Sind and the Punjab.

(5) It was much drier than usual in Berar, the Central Provinces, the Deccan, Mysore and Coorg.

(6) Conditions were practically normal at the Madras and Bombay coast stations.

Cloud was in slight defect in Burma and in slight excess at the Bengal coast stations. The mean cloud amount of the month was more or less considerably in defect in Assam, Bengal, Bihar and Central India, as is shown by the following comparative data:—

Province.	Mean cloud amount.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.
Assam	3·2	4·3	—1·1
Bengal	2·5	2·9	—0·4
Bihar	0·7	2·2	—1·5
North-Western Provinces and Oudh	2·6	2·6	0
Central India	0·9	2·5	—1·6

The deficiency was most marked at Patna (—1·9), Nowgong (—1·8) and Berhampore (—1·6) and perhaps Sibsagar (—1·9).

Cloud was in slight to moderate excess in the Punjab, Sind and Rajputana and Baluchistan. The following gives data :—

PROVINCE.	MEAN CLOUD AMOUNT.		
	Average actual, March. 1890.	Average normal, March.	Variation from normal.
Baluchistan (Quetta) . . .	5·4	4·2	+1·2
Punjab	4·7	3·7	+1·0
Sind	3·3	3·0	+0·3
Rajputana	2·6	2·5	+0·1

Cloud was also in slight excess at the Punjab hill stations, but was more or less considerably below the normal in Dehra Dun, Garhwal, Kumaon, Nepal and Sikkim. The deficiency was most marked at Darjeeling and Katmandu as is shown below :—

STATION.	MEAN CLOUD AMOUNT.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.
Darjeeling	3·0	5·2	—2·2
Katmandu	1·2	3·8	—2·6

Cloud was more or less considerably in defect in Berar, the Central Provinces, Deccan, Mysore and Coorg, and was in slight to moderate defect in the Bombay and Madras coast districts. Comparative data for this area are given below.

PROVINCE.	MEAN CLOUD AMOUNT.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.
Berar	1·4	1·9	—0·5
Central Provinces	1·4	2·0	—0·6
Deccan	1·5	2·3	—0 8
Mysore	1·2	2·6	—1·4
Coorg	2·1	3·7	—1·6
West Coast	1·4	1·8	—0·4
Madras Coast	1·6	2·2	—0·6

Cloud was hence in more or less general defect over the whole of India except the area affected by the feeble disturbances of the month, *i.e.*, Baluchistan and Upper India.

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

STATION.	MEAN CLOUD AMOUNT.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.
Darbhanga	0·4	1·4	—1·0
Sutna	0·6	2·0	—1·4
Patna	0·9	2·8	—1·9
Saugor	0·9	1·4	—0·5
Bombay	0·9	1·7	—0·8
Khandwa	0·7	1·7	—1·0

It is noteworthy that the skies were as free from cloud at Bombay as at the driest stations in the interior of India.

The chief abnormal features of the cloud distribution of the month were :—

1st.—Considerable to large deficiency in Assam, Bengal, Bihar and Central India, and large deficiency over the Eastern and Central Himalayas.

2nd.—Slight to moderate excess in Rajputana, Sind the Punjab and the Punjab hills and Baluchistan.

3rd.—Moderate to considerable deficiency in the Peninsula, most pronounced in the Central Provinces and Berar.

Rainfall.

The rainfall of the month of March is small in amount over by far the greater part of India, ranging between an average of a hundredth of an inch and an inch in amount over the whole of India, except the following districts :—

1st.—South Madras, where it slightly exceeds an inch.

2nd.—Bengal, Orissa and Assam, in which it rang from an inch in Orissa and Central

Bengal to 3 inches in East Bengal, 4 inches in the Assam Valley and 9 inches in Cachar.

3rd.—The hill districts of the North-Western Provinces and the hill, submontane and north-west divisions of the Punjab, in which it ranges between 1 inch in the submontane districts and 3 inches in the Punjab hills.

The chief periods of rainfall were as follows:—

(1) From the 5th to the 7th, during which Baluchistan, the Punjab and Kashmir received light showers.

(2) From the 8th to the 13th. Baluchistan, Kashmir, Punjab, the North-Western Provinces hill districts and Assam obtained light to moderate rain during this period.

(3) From the 16th to the 19th, during which Baluchistan, Kashmir and the Punjab hills had light showers.

(4) From the 20th to the 23rd. Baluchistan, Kashmir, the north, west and hill districts of the Punjab, the hill district of the North-Western Provinces and Assam received light to moderate showers.

(5) From the 26th to the 29th, during which period Baluchistan, Kashmir, the north and west divisions of the Punjab and the Punjab hills had light showers.

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

(1) Slight excess in the Assam hills and Cachar.

(2) Considerable deficiency in Bengal.

(3) Considerable deficiency in the hill districts of the North-Western Provinces and the Punjab.

(4) Large excess in the western districts of the Punjab and Baluchistan.

(5) Largish deficiency in the central districts of Madras and in Malabar.

The following table gives comparative data of the month for the 57 meteorological divisions of India:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, March 1896.	Average normal, March.	Average actual, March 1896.	Average normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	0	0·50	−0·50
	Lower Burma*	?	?	0	0·26	−0·26
	Central do.*	?	?	0	0·17	−0·17
	Upper do.*	?	?	0·01	?	?
	Arakan*	?	?	0	0·32	−0·32
Bengal and Assam	Eastern Bengal	1·5	3·6	1·04	2·83	−1·79
	Assam (Surma)*	?	?	10·90	10·18	+0·72
	Do. (Hill tracts)*	?	?	8·94	8·76	+0·18
	Do. (Brahmaputra)*	?	?	3·07	5·47	−2·40
	Deltaic Bengal	1·1	2·5	0·45	1·80	−1·35
	Central do.	0	1·6	0·01	0·93	−0·92
	North do.	0·1	1·8	0·08	1·31	−1·23
	Bengal Hills	3·2	3·4	1·33	2·68	−1·35
	Orissa	1·2	1·8	0·47	1·17	−0·70
	Chota Nagpur	0·1	1·7	0·02	0·86	−0·84
	Bihar (South)	0	0·9	0	0·37	−0·37
	Do. (North)	0	0·8	0	0·38	−0·38
North-Western Provinces and Oudh.	North-Western Provinces (East)	0	0·7	0	0·26	−0·26
	Oudh (South)	0	0·7	0	0·30	−0·30
	Do. (North)	0	0·9	0	0·43	−0·43
	North-Western Provinces (Central)	0	0·7	0	0·28	−0·28
	Do. do. (West)	0·1	1·1	0·03	0·42	−0·39
	Do. do. (Submontane East)	0	0·7	0	0·29	−0·29
	Do. do. (do. West)	0·3	1·8	0·08	0·72	−0·64
	Do. do. (Hills)	1·0	3·5	0·35	2·09	−1·74
Punjab	Punjab (South-East)	0·7	1·0	0·16	0·47	−0·31
	Do. (South)	0·3	0·9	0·10	0·49	−0·39
	Do. (Central)	2·0	1·5	0·63	0·89	−0·26
	Do. (Submontane)	1·1	1·4	0·37	1·01	−0·64
	Do. (Hill Districts)	4·4	4·4	1·79	3·45	−1·66
	Do. (North)	4·9	3·2	1·53	1·98	−0·43
	Do. (West)	2·8	1·0	0·90	0·54	+0·36
Bombay and Malabar Coast Districts (Madras).	Malabar coast	0·4	0·8	0·16	0·44	−0·28
	Madras (South Central)	0·2	0·9	0·05	0·54	−0·49
	Coorg	0·6	?	0·17	?	?
	Mysore*	?	?	0·05	0·39	−0·34
	Konkan	0	0·2	0	0·07	−0·07
	Bombay Deccan	0·1	0·4	0·04	0·20	−0·16
	Khandesh	0	0	0	0·03	−0·03

PROVINCE.	DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
		Average actual, March 1896.	Average normal, March.	Average actual, March 1896.	Average normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
CENTRAL PROVINCES AND BERAR.	Berar*	?	?	0·01	0·18	−0·17
	Central Provinces (West)*	?	?	0·04	0·28	0·24
	Do. (Central)*	?	?	0·03	0·51	−0·48
	Do. (East)*	?	?	0·01	0·66	−0·65
BOMBAY (NORTH)	Gujarat	0	0	0	0·01	−0·01
	Kathiawar	0	0·1	0	0·05	−0·05
	Sind	0·1	?	0·13	0·28	−0·15
	Baluchistan Hills	5·0	?	1·46	1·70	−0·24
RAJPUTANA AND CENTRAL INDIA.	Central India (East)	0	?	0	0·20	−0·20
	Rajputana (East) and Central India (West)	0	?	0·02	0·13	−0·11
	Rajputana (West)	0·1	?	0·06	0·08	−0·02
MADRAS	East Coast (North)	0·5	0·8	0·32	0·50	−0·18
	Do. (do.) (a)	2·0	2·0	0·50	1·01	−0·51
	Hyderabad (South)*	?	?	0·05	0·59	−0·54
	Madras (Central)	0·1	0·3	0·03	0·15	−0·12
	East Coast (Central)	0·1	0·3	0·03	0·21	−0·18
	East Coast (South)	0·3	0·5	0·16	0·36	−0·20
	Madras (South)	1·6	1·5	0·95	1·06	−0·11

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

The rainfall of the month was actually or practically *nil* (*i.e.*, less than a tenth of an inch) in Lower Sind, Cutch, Gujarat, Kathiawar, Bombay, Mysore, the whole of Burma (with the exception of the more northerly districts and the Tavoy and Mergui districts), Central and North Bengal, Chota Nagpur, Bihar, the North-Western Provinces except the hill districts, the Central Provinces, Berar, Rajputana, Central India, and East Coast Central, South Central and Central Madras. It was less than an inch in total amount over the whole of the remainder of India with the exception of three areas, *viz.*:—

(1) Baluchistan.

(2) The North Punjab and the Punjab hill districts.

(3) Assam, East Bengal and Sikkim.

Baluchistan received more frequent rain than usual, due to five feeble disturbances, three at least of which advanced from Persia. The periods of rain were the 5th and 6th, the 8th to the 11th, the 16th to 18th, the 20th to the 23rd, and the 26th to the 29th. The rainfall was heaviest as usual on the plateau. Thus the eight stations of the Mushkaf-Bolan State Railway below 3,500 feet in elevation obtained an average of ·95 inch, and the three stations above that level an average of 2·08 inches.

The rainfall of the month was probably in slight excess of the normal. The following gives comparative data for two stations:—

STATION.	RAINFALL.		
	Actual, March 1896.	Normal, March.	Variation from normal.
	Inches.	Inches.	Inch.
Pishin	1·47	1·48	−0·01
Quetta	2·20	1·92	+0·28

Kashmir received rain during each of the five periods of disturbance in Upper India, *viz.*, the 6th and 7th, the 9th to 12th, the 17th and 18th, the 21st to 23rd, and the 27th and 28th. The precipitation in that area was apparently in moderate to considerable excess.

The following is a brief statement of the periods of rainfall of the month in the Punjab:—

(1) From 9th to the 13th. The north and west divisions and the hill districts obtained light to moderate rain during this period. Falls exceeding one inch were recorded at two stations in the Jhelum and Rawalpindi districts.

(2) The 18th and 19th. The rainfall of the period occurred almost entirely in the hill districts.

(3) The 22nd and 23rd. The north-west, west, submontane and hill divisions received light to moderate rain. Little or no rain fell in the central or south divisions. The following gives the heaviest falls:—

DISTRICT.	STATION.	Date.	Heaviest rainfall in 24 hours preceding 8 A.M. of date.
			Inches
Simla	Kilba	22nd	1·73
Shahpur	Sakesar	,,	1·30
Jhang	Badwali	,,	1·00
Peshawar	Katlang	23rd	1·10
Kangra	Nagar	24th	1·33

(4) The 27th and 28th. Light local showers were received in the north-west and west divisions and the hill districts.

The falls were generally light, and hence, although the

number of rainy days was above the average, the rainfall of the month was in general defect.

The following gives a comparative statement of the rainfall of the seven divisions of the province :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.	Average actual, March 1896.	Average normal, March.	Variation from normal.
				Inches.	Inches.	Inches.
Punjab (South-East) .	0·7	1·0	—0·3	0·16	0·47	—0·31
,, (South) . .	0·3	0·9	—0·6	0·10	0·49	—0·39
,, (Central) . .	2·0	1·5	+0·5	0·63	0·89	—0·26
,, (Sub-montane) .	1·1	1·4	—0·3	0·37	1·01	—0·64
,, (Hill Districts) .	4·4	4·4	0	1·79	3·45	—1·66
,, (North) . .	4·9	3·2	+1·7	1·55	1·98	—0·43
,, (West) . .	2·8	1·0	+1·8	0·90	0·54	+0·36

The comparative data show that the western division received an average total rainfall in moderate excess of the normal. The rainfall of the mouth was in defect in the remaining divisions. The deficiency was absolutely greatest in the hill districts, where it averaged 1·66 inches, but was relatively to the normal in greatest percentage defect in the southern division which obtained only 20 per cent. of its normal fall.

The hill districts of the North-Western Provinces (including Dehra Dun, Garhwal and Almora) received light rain during the second and fourth disturbances of the month, *i.e.*, from the 8th to 10th and the 22nd to the 24th.

The western and submontane districts had some light showers on the 7th and 8th, and the Meerut district on the 23rd. No rain fell over the remainder of the province. The total rainfall of the month was absolutely *nil* over nearly the whole province. The normal rainfall of the month ranges between an average of three and seven-tenths of an inch in the plain districts.

The average total rainfall of the hill districts was only ·35 inch, or 1·74 inches less than the normal of the month.

The month was abnormally dry in Bengal. No rain fell in Bihar and Chota Nagpur. Orissa received light showers, chiefly on the 14th and 15th. Thunderstorms gave moderate rain to East Bengal on the 11th, 14th and 15th, and to Deltaic Bengal on the 10th and 14th.

Central and North Bengal received practically no rain, and Sikkim light showers of little value.

The rainfall of the month was hence more or less seriously in defect in all divisions, as is shown by the following comparative statement :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.	Average actual, March 1896.	Average normal March.	Variation from normal.
				Inches.	Inches.	Inches.
Eastern Bengal . .	1·5	3·6	—2·1	1·04	2·83	—1·79
Deltaic ,, . .	1·1	2·5	—1·4	0·45	1·80	—1·35
Central ,, . .	0	1·6	—1·6	0·01	0·93	—0·92
North ,, . .	0·1	1·8	—1·7	0·08	1·31	—1·23
Bengal Hills. . .	3·2	3·4	—0·2	1·33	2·68	—1·35
Orissa	1·2	1·8	—0·6	0·47	1·17	—0·70
Chota Nagpur . .	0·1	1·7	—1·6	0·02	0·86	—0·84
Bihar (South) . .	0	0·9	—0·9	0	0·37	—0·37
,, (North) . .	0	0·8	—0·8	0	0·38	—0·38

The month of March was drier than usual in Lower Assam but more showery in Cachar and Upper Assam. There were two periods of showery weather during the month. The first extended from the 8th to the 14th, and the second from the 19th to the 25th. A third period commenced on the 30th of the month. Hail-storms were unusually numerous, and caused much destruction to the tea and other standing crops in some parts of Cachar and Tezpur.

The following gives a comparative statement of the rainfall of each district in the Province :—

Division.	District.	Rainfall.		
		Average actual, March 1896.	Average normal, March.	Variation from normal.
		Inches.	Inches.	Inches.
Upper Assam . .	Nowgong . .	1·99	2·71	—0·72
	Sibsagar . .	6·54	4·44	+2·10
	Lakhimpur . .	6·21	6·18	+0·03
Lower Assam . .	Darrang . .	1·43	3·10	—1·67
	Kamrup . . .	1·52	3·81	—2·29
	Goalpara . .	0·15	2·37	—2·22
Cachar	Cachar . .	10·72	8·70	+2·02
	Sylhet . .	8·47	8·25	+0·22

The rainfall of the month was either actually or practically *nil* over the whole of Burma, with the exception of the districts of Mergui and Tavoy which received light to moderate showers during the last week of the month and the districts of Bhamo and Katha in Upper Burma which had light showers on the 8th and 11th.

The normal rainfall of the month is small in amount and hence the general deficiency was of little importance.

Division.	Number of rainy days.		Rainfall.		
	Average actual, March 1896.	Average normal, March.	Average actual, March 1896.	Average normal, March.	Variation from normal.
			Inch		
Tenasserim . .	1·0	?	0·50	?	?
Lower Burma . .	0	?	0	?	?
Central Burma . .	0	?	0	?	?
Upper Burma . .	0·1	?	0·04	?	?
Arakan . . .	0·1	?	0·11	?	?

No rain fell in Berar during the month. The Central Provinces obtained local thunder showers chiefly on the 15th. Sambalpur received 1·33 inches during a thunderstorm on the 15th. The rainfall was however generally small in amount and of no importance.

Upper Sind had light to moderate showers on the 8th and 28th. No rain fell over the remaining districts of the Bombay Presidency, where the month was even drier than usual. The deficiency ranged between an average of one-tenth of an inch in the Bombay Deccan and three-tenths in the Konkan division.

The Godavari, Vizagapatam and Ganjam districts of Madras received occasional thunderstorms during the period from the 14th to the 19th.

The southern districts, including Tanjore, Trichinopoly, Madura, Tinnevelly and Malabar, obtained moderate rain from series of thunderstorms on the 30th and 31st. The Madura district received an average total of ·59 inch and the Tinnevelly district of 1·39 inches during the month.

The month was practically rainless over the remainder of the Presidency.

The following is a summary of the rainfall data as published in the *Fort St. George Gazette* :—

Division.	Rainfall.		
	Average actual, March 1896.	Average normal, March.	Variation from normal.
	Inch.	Inches.	Inch.
Madras, Central	0·03	0·15	—0·12
Madras East Coast, Central . . .	0·03	0·21	—0·18
Madras East Coast, South	0·16	0·36	—0·20
Madras, South	0·95	1·06	—0·11
Madras South, Central	0·05	0·54	—0·49
Malabar Coast	0·16	0·44	—0·28

The following gives comparative data for the 22 Collectorates of the Presidency:—

District.	No. of rainy days.		Rainfall.		
	Average actual, March 1896.	Average normal, March.	Average actual, March 1896.	Average normal, March.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam . . .	0·6	1·2	0·53	0·66	—0·13
Vizagapatam . .	0·8	1·0	0·41	0·62	—0·21
Godavari . . .	0·4	0·4	0·19	0·28	—0·09
Kistna . . .	0·3	0·6	0·07	0·46	—0·39
Nellore . . .	0·1	0·3	0·03	0·21	—0·18
Chingleput . .	0	0·4	0	0·23	—0·23
Madras . . .	0	0·5	0	0·41	—0·41
North Arcot . .	0·1	0·4	0·10	0·21	—0·11
South Arcot . .	0	0·5	0	0·31	—0·31
Tanjore . . .	0·1	0·6	0·27	0·52	—0·25
Trichinopoly . .	0·3	0·7	0·11	0·55	—0·44
Madura . . .	1·3	1·2	0·59	0·85	—0·26
Tinnevelly . .	2·0	2·0	1·39	1·35	+0·04
Malabar . . .	0·6	1·3	0·26	0·72	—0·46
South Canara . .	0	0·9	0	0·05	—0·05
Salem . . .	0·2	0·9	0·05	0·57	—0·52
Coimbatore . .	0·1	0·8	0·05	0·50	—0·45
Nilgiris . . .	0·4	1·9	0·17	1·41	—1·24
Cuddapah . . .	0·1	0·4	0·07	0·21	—0·14
Anantapur . .	0	0·3	0	0·11	—0·11
Bellary . . .	0	0·3	0	0·10	—0·10
Kurnool . .	0·1	0·3	0·05	0·12	—0·07

Table

Abstract of Observations taken at 8 A.M. at 207 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.
I.—Burma Coast and Bay Islands.		...	...	−·027	...	...	...	...	...	...	...	92·0	−0·1	72·9	+1·2	82·5	+0·6	19·2	...	...	...	...	29·2
Bay Islands	Port Blair	61	29·885	?	29·877	29·938	26th	29·839	17th	·099	81·2	91·3	?	77·2	?	84·2	?	14·1	93·7	31st	73·3	1st & 5th	20·4
Tenasserim	Mergui	96	29·878	?	29·905	29·957	19th	29·798	20th	·159	82·1	91·8	?	73·2	?	82·5	?	18·6	95·6	22nd	70·6	3rd	25·0
	Tavoy	26	29·970	?	29·927	30·038	26th	29·918	20th	·120	76·8	94·5	?	69·7	?	82·1	?	24·8	98·2	24th	64·2	3 days	34·0
	Moulmein	94	29·864	−·024	29·896	29·928	26th	29·811	19th	·117	78·7	94·9	+1·0	73·2	+0·9	84·0	+1·0	21·7	100·0	26th	64·4	8th	35·6
Lower Burma	Rangoon	41	29·903	−·028	29·882	29·983	26th	29·834	20th	·149	74·5	96·7	+0·4	71·6	+0·7	84·1	+0·6	25·1	101·1	31st	65·3	7th	35·8
	Bassein	27	29·915	−·020	29·878	30·010	26th	29·849	17th	·161	76·9	94·4	+0·1	71·5	+1·3	83·0	+0·7	22·9	99·7	3 days	63·0	7th	36·7
	Diamond Island	41	29·903	−·031	29·880	29·987	26th	29·833	20th	·154	79·4	84·5	−1·2	76·8	+2·1	80·7	+0·5	7·7	88·6	27th	73·9	7th	14·7
Arakan	Akyab	20	29·925	−·031	29·888	29·984	26th	29·846	20th	·138	75·4	88·2	−0·7	69·7	+0·9	79·0	+0·1	18·5	93·7	29th	62·2	2nd	31·5
II.—Burma, Inland		...	...	−·037	...	...	...	...	...	...	...	94·5	+1·1	63·6	+1·9	78·7	+1·5	30·1	...	...	...	...	46·0
Central Burma	Toungoo	183	29·728	−·035	29·858	29·822	26th	29·663	17th	·159	77·8	99·3	+1·6	70·7	+3·2	85·1	+2·4	28·6	103·7	28th	63·2	3rd	40·5
	Thayetmyo	134	29·771	−·039	29·849	29·847	26th	29·706	10th	·141	77·0	100·8	+1·1	67·7	+1·5	84·3	+1·3	33·1	105·1	26th & 30th.	59·2	2nd & 3rd	45·9
Upper Burma	Minbu	?	29·749	?	?	29·821	26th	29·680	20th	·141	75·5	99·6	?	69·3	?	84·5	?	30·3	105·6	26th	58·0	2nd	47·6
	Yamethin	645	29·255	?	29·855	29·343	26th	29·187	20th	·156	77·8	100·8	?	?	?	?	?	?	107·0	25th	?	...	?
	Taunggyi	?				Not recorded.					68·2	83·4	?	54·8	?	69·1	?	28·6	88·1	31st	48·5	4th & 5th	39·6
	Mandalay	249	29·645	?	29·846	29·717	26th & 27th	29·571	20th	·146	77·2	99·1	?	68·9	?	84·0	?	30·2	106·6	31st	58·2	4th	48·4
	Kindat	?	29·551	?	?	29·651	27th	29·462	30th	·189	65·8	90·6	+0·7	61·1	+1·0	75·9	+0·9	29·5	101·3	31st	53·5	3rd	47·8
	Lashio	?	27·144	?	?	27·190	1st	27·086	20th & 31st	·104	61·0	87·8	?	55·6	?	71·7	?	32·2	103·5	11th	49·0	2nd & 4th	54·5
	Bhamo	?	29·536	?	?	29·636	27th	29·437	30th	·199	68·8	89·0	?	60·8	?	74·9	?	28·2	97·1	30th & 31st.	53·4	4th	43·7
III.—Assam		...	...	−·040	...	...	...	...	...	...	...	85·3	+1·6	63·4	+0·7	74·4	+1·2	21·9	...	...	...	...	36·3
Surma	Silchar	104	29·836	−·028	29·895	29·903	27th	29·727	20th	·176	70·7	86·4	+1·1	65·0	+1·6	75·7	+1·4	21·4	92·1	28th & 29th.	58·4	5th	33·7
Brahmaputra	Sibsagar	333	29·585	−·051	29·887	29·683	27th	29·488	20th	·195	64·1	78·8	−0·4	60·2	+0·1	69·5	−0·2	18·6	86·6	26th	52·9	3rd	33·7
	Dhubri	115	29·769	−·010	29·842	29·865	27th	29·640	20th	·225	70·7	90·7	+4·2	64·9†	+0·4	77·9†	+2·3	25·8	98·3	31st	56·9	16th	41·4
IV.—Bengal and Orissa		...	...	−·038	...	...	...	...	...	...	...	92·6	+2·9	69·2	+2·0	80·9	+2·4	23·4	...	...	...	...	40·5
East Bengal	Chittagong	87	29·838	−·039	29·875	29·907	26th	29·733	20th	·174	74·5	85·7	−0·5	?69·8	+2·1?	777·8	+0·8	15·9	94·2	29th	62·1	2nd	32·1
	Lungleh	?				Not recorded.					68·2	76·7	?	61·6	?	69·2	?	15·1	83·8	29th, 30th & 31st.	51·4	12th	32·4
	Noakhali	43	29·863	?	29·853	29·937	26th	29·759	20th	·178	?77·6	86·9	?	71·4?	?	79·2	?	15·5	92·9	29th	61·0	1st	31·9
	Comilla	36	29·879	?	29·863	29·937	27th	29·767	20th	·170	75·8	90·3	?	70·3	?	80·3	?	20·0	96·3	28th & 29th	61·9	5th	34·4
	Sirajganj	49	29·828	?	29·828	29·904	27th	29·694	20th	·210	73·5	95·3	?	66·1	?	80·7	?	29·2	104·6	30th	56·6	18th	48·0
	Narayanganj	26	29·871	−·046	29·845	29·938	26th	29·743	20th	·195	76·1	91·4	+1·4	71·6	+3·2	81·5	+2·3	19·8	100·1	30th	61·3	4th	38·8
	Barisal	13	29·888	−·035	29·846	29·957	26th	29·781	20th	·176	76·5	90·8	+2·9	71·8	+2·6	81·3	+2·8	19·0	96·8	26th & 29th.	64·9	1st & 2nd	31·9
	Mymensingh	59	29·836*	−·041*	29·848*	29·905	27th	29·713	20th	·192	73·0*	91·7*	+5·2*	67·3*	+3·2*	79·5*	+4·2	24·4	97·7	31st	55·9	3rd	41·8
Deltaic Bengal	Faridpur	46	29·853	?	29·847	29·921	26th	29·731	20th	·190	74·9	93·2	?	68·5	?	80·9	?	24·7	102·8	30th	57·0	2nd	45·8
	Jessore	33	29·852	−·047	29·833	29·931	26th	29·735	20th	·196	77·7	95·5	+3·0	70·4	+2·1	83·0	+2·6	25·1	105·5	30th	58·8	3rd & 4th	46·7
	Calcutta	21	29·870	−·041	29·837	29·960	26th	29·752	20th	·208	77·1	93·7	+3·3	71·7	+2·0	82·7	+2·7	22·0	101·4	29th & 30th.	63·2	1st & 4th	38·2
	Saugor Island	25	29·870	−·037	29·840	29·958	26th	29·746	20th	·212	79·9	88·9	+1·7	76·8	+1·8	82·9	+1·8	12·1	97·4	25th	66·9	4th	30·5
	Krishnagar	47	29·842	?	29·838	29·927	26th	29·720	20th	·207	78·1	96·9	?	69·2	?	83·1	?	27·7	106·0	30th	57·8	16th	48·2
	Midnapore	149	29·744	?	29·842	29·842	26th	29·631	20th	·211	78·3	99·5	?	71·2	?	85·4	?	28·3	107·9	30th	63·7	4th	44·2

* Mean of 30 days. † Mean of 25 days.

India, Burma, etc., in March 1896.

WIND DIRECTION. Number of Winds from 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 to 31st March 1896.	Normal rainfall for period, 1st to 31st March.	Variation from normal of period, 1st to 31st March.	Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·23	0·58	−0·38	...	...	...	...	I.—Burma Coast and Bay Islands.	
9	2	...	...	2	7	6	4·0	?	?	83	·880	3·7	0	?	?	0	0·47	− 0·47	0	0·47	− 0·47	0	Port Blair .	BAY ISLANDS.
2	1	...	...	...	1	12	2·4	?	?	79	·862	4·2	2	?	?	1·43	2·48	− 1·05	1·43	2·48	− 1·05	0·65	Mergui .	TENASSERIM.
...	...	...	...	...	...	1	0·9	?	?	83	·771	0·3	1	?	?	0·42	?	?	0·42	?	?	0·42	Tavoy.	
1	4	10	8	5	2	1	3·5	3·0	+ 17	81	·806	1·1	0	0·36	−0·36	0	0·41	− 0·41	0	0·41	− 0·41	0	Moulmein.	
...	...	...	5	15	11	...	4·9	5·0	− 2	86	·738	3·1	0	0·36	−0·36	0	0·28	− 0·28	0	0·28	− 0·28	0	Rangoon .	LOWER BURMA.
...	...	1	...	...	2	23	7·3	4·9	+ 49	86	·795	1·6	0	0	0	0	0·02	− 0·02	0	0·02	− 0·02	0	Bassein.	
1	...	...	...	...	1	22	14·8	7·9	+ 87	78	·777	3·7	0	0	0	0	0·01	− 0·01	0	0·01	− 0·01	0	Diamond Island.	
16	8	...	1	...	...	...	3·5	3·7	− 5	88	·780	1·3	0	0·82	−0·82	0	0·42	− 0·42	0	0·42	− 0·42	0	Akyab .	ARAKAN.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·03	0·54	−0·54	...	...	...	...	II.—Burma, Inland.	
2	2	17	5	3	...	1	4·4	2·8	+ 57	72	·702	1·0	0	0·18	−0·18	0	0·05	− 0·05	0	0·05	− 0·05	0	Toungoo .	CENTRAL BURMA.
...	...	...	4	7	11	7	5·3	5·2	+ 2	60	·559	0	0	0	0	0	0·05	− 0·05	0	0·05	− 0·05	0	Thayetmyo	
...	6	11	3	...	2	3	8·2	?	?	59	·530	0·3	0	?	?	0	?	?	0	?	?	0	Minbu .	UPPER BURMA.
...	...	11	6	...	1	...	3·0	?	?	58	·560	0·2	0	?	?	0	?	?	0	?	?	0	Yamethin.	
...	...	1	7	10	...	...	?	?	?	47	·322	0·5	0	?	?	0	?	?	0	?	?	0	Taunggyi.	
...	...	2	13	5	1	1	5·4	?	?	53	·496	0·4	0	?	?	0	?	?	0	?	?	0	Mandalay.	
...	...	...	2	...	...	1	0·9	?	?	88	·561	0·8	0	?	?	0	1·51	− 1·51	0	1·51	− 1·51	0	Kindat.	
			Not recorded.				?	?	?	70	·376	4·5	0	?	?	0	?	?	0	?	?	0	Lashio.	
9	1	...	...	2	5	3	2·6	?	?	80	·525	0·8	1	?	?	0·27	?	?	0·27	?	?	0·22	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·19	5·27	+1·92	...	...	...	...	III.—Assam.	
2	4	2	...	...	...	...	3·1	3·3	− 6	84	·630	4·1	16	9·82	+6·18	13·22	8·81	+ 4·41	13·22	8·81	+ 4·41	2·53	Silchar .	SURMA.
25	1	4	...	...	...	...	6·3	2·8	+125	93	·560	5·7*	12	9·27	+2·73	8·34	4·83	+ 3·51	8·34	4·83	+ 3·51	1·31	Sibsagar .	BRAHMAPUTRA.
12	10	...	2	4	...	...	6·2	6·3	− 2	70	·526	1·3	0	2·29	−2·29	0	2·16	− 2·16	0	2·16	− 2·16	0	Dhubri.	
...	..	...	...	...	..	...	...	...	...	...	...	...	...	...	...	0·41	1·68	−1·26	...	...	...	...	IV.—Bengal and Orissa.	
10	5	12	3	...	...	...	5·4	5·8	− 7	86	·750	3·1§	1	3·45	−2·45	0·41	2·56	− 2·15	0·41	2·56	− 2·15	0·34	Chittagong	EAST BENGAL.
		Not recorded.					?		?	63	·434	?	2	?	?	0·64	?	?	0·64	?	?	0·39	Lungleh.	
1	2	2	8	12	2	2	3·3		?	88	·831	4·2	2	3·65	−1·65	2·32	3·55	− 1·23	2·32	3·55	− 1·23	1·32	Noakhali.	
...	5	3	21	...	...	...	5·2	?	?	96	·859	5·3‡	3	4·41	−1·41	1·94	3·76	− 1·82	1·94	3·76	− 1·82	0·83	Comilla.	
...	...	2	10	6	1	...	5·0	?	?	77	·643	3·9‡	0	2·26	−2·26	0	1·28	− 1·28	0	1·28	− 1·28	0	Sirajganj.	
...	3	5	8	10	2	...	6·8	4·7	+ 45	86	·784	4·9*	2	4·00	−2·00	1·19	3·11	− 1·92	1·19	3·11	− 1·92	0·80	Narayangauj.	
...	...	1	5	7	1	...	3·7	?	?	91	·840	1·3‡	3	4·65	−1·65	0·55	2·72	− 2·17	0·55	2·72	− 2·17	0·30	Barisal.	
2	14	11	...	1	...	...	3·9	?	?	82*	·678*	4·3†	0	5·90	−5·90	0	2·24	− 2·24	0	2·24	−2·24	0	Mymensingh.	
...	...	2	6	11	...	...	1·9	?	?	86	·754	2·8‡	1	3·85	−2·85	0·45	2·93	− 2·48	0·45	2·93	− 2·48	0·39	Faridpur .	DELTAIC BENGAL.
...	...	2	3	11	3	1	3·1	3·2	− 3	80	·770	2·8	1	3·64	−2·64	0·36	2·42	− 2·06	0·36	2·42	− 2·06	0·27	Jessore.	
...	...	...	4	18	...	...	4·8	5·5	− 13	82	·764	2·7*	1	2·09	−1·09	0·15	1·43	− 1·28	0·15	1·43	− 1·28	0·10	Calcutta.	
1	...	1	7	15	1	2	14·8	12·3	+ 20	84	·860	4·5*	1	2·18	−1·18	0·30	1·63	− 1·33	0·30	1·63	− 1·33	0·25	Saugor Island.	
1	...	...	9	10	9	2	5·7	?	?	64	·617	1·9	0	2·20	−2·20	0	1·48	− 1·48	0	1·48	− 1·48	0	Krishnagar	
...	...	2	18	...	...	1	2·5	?	?	69	·652	1·7*	2	2·20	−0·20	0·24	1·46	− 1·22	0·24	1·46	− 1·22	0·12	Midnapore.	

‡ Mean of 29 days. § Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 207 Station

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	29·568	?	29·822	29·652	1st	29·461	20th	·191	77·0	98·1	?	70·0	?	84·1	?	28·1	107·3	30th	62·5	4th	44·8
	Raniganj	334	29·550	?	29·839	29·645	26th	29·431	20th	·214	75·2	98·0	?	69·0	?	83·5	?	29·0	107·3	30th	61·6	4th	45·7
	Burdwan	107	29·782	−·036	29·838	29·883	26th	29·667	20th	·216	78·4	96·6	+3·0	70·3	+1·8	83·6	+2·4	26·3	106·0	30th	60·1	4th	45·9
	Naya Dumka	489	29·380	?	29·833	29·466	26th	29·259	20th	·207	77·7	96·1	?	67·5	?	81·8	?	28·6	105·0	30th	58·0	4th	47·0
	Berhampore	67	29·810	−·042	29·827	29·892	26th	29·687	20th	·205	75·1	96·6	+3·8	67·8*	+1·8	82·2*	+2·8	28·8	106·0	30th	57·7	15th	48·3
	Rampur Boalia.	70	29·800	?	29·820	29·890	26th	29·662	20th	·228	75·9†	96·0†	?	66·0†	?	81·0†	?	30·0	104·0	31st	50·1	17th	53·9
	Malda	72	29·780	?	29·805	29·865	27th	29·659	20th	·206	74·1	96·4	?	61·1	?	78·0	?	35·3	104·4	30th	52·2	17th	52·2
	Bogra	61	29·803	?	29·818	29·882	27th	29·680	20th	·202	73·5	95·8	+6·3	65·3	+1·7	80·6	+4·0	30·5	104·3	30th	55·0	3rd	49·3
North Bengal	Dinajpur	123	29·740	?	29·821	29·827	27th	29·593	20th	·234	70·2	94·2	+5·0	61·0	−0·5	77·6	+2·3	33·2	101·8	30th	50·9	16th	50·9
	Rangpur	123	29·756	?	29·837	29·848	27th	29·606	20th	·242	70·6	91·1	?	62·4	?	76·8	?	28·7	97·3	31st	51·5	16th	45·8
	Jalpaiguri	284	29·589	−·032	29·840	29·694	27th	29·450	20th	·244	68·6	88·0	+3·0	61·1	+1·9	74·6	+2·5	26·9	94·4	30th	50·6	16th	43·8
Orissa	Balasore	56	29·847	?	29·840	29·944	26th	29·737	20th	·207	77·0	94·5	+3·4	71·6	+1·8	83·1	+2·6	22·9	101·5	20th	61·6	4th	39·9
	False Point	21	29·388	−·033	29·851	29·984	26th	29·789	20th	·195	79·8	?86·9	?−0·7	?74·4	+2·2	?80·7	+0·8?	12·5	92·5	26th	67·0	3 days	25·5
	Cuttack	80	29·815	−·041	29·839	29·895	26th	29·723	20th	·172	77·7	99·2	+2·4	74·5	+1·8	86·9	+2·1	24·7	103·8	26th	68·2	4th	35·6
	Shortt's Island	?	29·882	?	?	29·970	26th	29·779	20th	·191	80·0	87·3	?	77·2	?	82·3	?	10·1	93·0	25th	73·4	1st	19·6
	Puri	20	29·889	?	29·852	29·966	26th	29·790	20th	·176	79·8	86·5	?	77·6	?	82·1	?	8·9	91·7	3 days	70·6	1st & 4th.	21·1
V.—Gangetic Plain and Chota Nagpur.		...	...	−·034	...	...	...	...	...	...	...	94·3	+3·8	63·8	+1·6	79·1	+2·6	30·5	...	...	...	...	48·0
Chota Nagpur	Hazaribagh	2,007	27·882	?	29·846	27·993	24th	27·780	20th	·213	76·5	91·9	+3·2	66·8	+2·9	79·4	+3·1	25·1	100·2	30th	58·3	16th	41·9
	Ranchi	2,128	27·771?	?	29·851?	27·870	24th	27·666	20th	·204	76·5	92·0*	+4·9	?	?	?	?	?	100·4	30th	?	?	?
	Daltonganj	730?	29·137	?	29·845	29·254	25th	29·013	20th	·241	69·4	83·4	?	60·4	?	71·9	?	23·0	92·3	29th	50·0	16th	42·3
	Chaibassa	760	29·121	−·024	29·839	29·218	26th	29·011	19th	·207	77·6	99·2	+5·1	69·6	+2·4	84·4	+3·8	29·6	105·9	31st	60·0	4th	45·9
South Bihar	Gaya	375	29·511	−·033	29·845	29·618	24th	29·378	20th	·240	78·4	96·1	+2·4	69·2	+3·0	82·7	+2·7	26·9	104·5	30th	59·5	5th	45·0
	Dehri	351	29·532‡	?	29·843‡	29·633	24th	29·394	20th	·239	77·8‡	96·5‡	?	70·0‡	?	83·3‡	?	26·5	105·1	30th	61·4	16th	43·7
	Patna	183	29·661	−·055	29·820	29·784	24th	29·525	20th	·259	76·2	95·3	+4·2	66·4	+2·8	80·9	+3·5	28·9	104·7	30th	57·8	5th	46·9
	Arrah	190	29·686	?	29·832	29·782	24th	29·530	20th	·252	74·0	96·6	?	64·5	?	80·6	?	32·1	105·5	30th	55·9	4th	49·6
	Buxar	239	29·619‡	?	29·818‡	29·714	1st	29·481	20th	·233	73·8‡	94·2‡	?	66·1‡	?	80·2	?	28·1	103·0	30th	57·4	15th	45·6
North Bihar	Purnea	125	?29·740†	−·042	?29·823†	29·822	4th	29·651	21st	·171	69·0	94·8	+4·6	60·2	−0·2	77·5	+2·2	34·6	102·3	30th	50·8	16th	51·5
	Bhagalpur	160	29·704	?	29·819	29·782	24th	29·551	20th	·231	79·3	96·0	?	65·7	?	80·9	?	30·3	104·8	30th	56·7	4th	48·1
	Darbhanga	166	29·688	−·057	29·813	29·800	24th	29·532	20th	·268	71·1	92·5	+4·8	63·2	0	77·9	+2·5	29·3	100·2	30th	54·8	16th	45·4
	Muzaffarpur	178	29·675	?	29·812	29·785	24th	29·525	20th	·270	71·3	93·5	?	61·0	?	77·3	?	32·5	101·7	30th	53·3	18th	48·4
	Motihari	224	29·627	?	29·815	29·739	24th	29·445	20th	·294	70·9	93·2	?	58·4	?	75·8	?	34·8	101·5	30th	49·9	15th	51·6
	Chapra	181	29·681	?	29·821	29·775	24th	29·523	20th	·252	72·5	95·4	?	63·9	?	79·7	?	31·5	104·2	30th	54·6	4th	49·6
N.-W. Prov., East	Benares	267	29·621	−·025	29·850	29·719	1st	29·482	20th	·237	72·4	96·1	+2·8	61·9	−0·4	79·0	+1·2	34·2	105·3	30th	52·5	5th	52·8
	Allahabad	309	29·581	−·029	29·851	29·683	1st	29·451	20th	·232	75·5	96·1	+2·9	63·9	+1·7	80·1	+2·3	32·2	104·6	29th	54·9	5th	49·7
N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·588	−·050	29·809	29·669	1st	29·413	20th	·256	72·2	94·8	+4·0	63·9	+1·4	79·4	+2·7	30·9	103·3	30th	55·3	3 days	48·0
South Oudh	Lucknow	368	29·503	−·034	29·839	29·597	1st	29·357	20th	·240	73·4	94·2	+2·8	61·8	+1·2	78·0	+2·0	32·4	103·3	29th	52·2	4th	51·1
North Oudh	Bahraich	403	29·440	?	29·815	29·535	1st	29·272	20th	·263	70·5	93·4	?	59·8	?	76·6	?	33·6	100·9	29th	51·0	3rd & 16th.	49·9
N.-W. Prov. (Central).	Cawnpore	416	29·466	?	29·846	29·567	1st	29·336	20th	·231	73·9	95·0	?	63·0	?	79·0	?	32·0	103·4	29th	53·0	5th	50·4
	Mainpuri	516	29·368	?	29·858	29·475	1st	29·236	20th	·239	71·0	93·6	?	60·8	?	77·2	?	32·8	103·3	29th	52·0	4th & 5th.	50·7

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

-continued.

India, Burma, etc., in March 1896—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 to 31st March 1896.	Normal rainfall for period, from 1st to 31st March.	Variation from normal of period from 1st to 31st March.	Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.
...	...	...	...	...	...	5	1	1·9	P	P	53	·496	1·9*	0	1·85	− 1·85	0·03	1·25	− 1·22	0·03	1·25	− 1·22	0·02	Bankura .	CENTRAL BENGAL.
1	1	...	...	1	5	4	8	2·3	P	P	44	·380	0·7†	0	1·45	− 1·45	0·01	0·65	− 0·64	0·01	0·65	− 0·64	0·01	Raniganj.	
1	...	...	...	4	16	3	4	3·4	3·4	0	60	·586	2·2	0	1·82	− 1·82	0	1·73	− 1·73	0	1·73	− 1·73	0	Burdwan.	
...	...	...	1	2	1	7	11	3·3	P	P	32	·302	1·2	0	1·28	− 1·28	0	0·70	− 0·70	0	0·70	− 0·70	0	Naya Dumka	
...	...	...	...	8	13	4	1	4·6	3·4	+35	P67	·595	1·8*	0	1·64	− 1·64	0·01	1·21	− 1·20	0·01	1·21	− 1·20	0·01	Berhampore.	
...	1	...	...	9	9	1	1	4·5	P	P	64†	·581†	0·3†	0	1·35	− 1·35	0	0·81	− 0·81	0	0·81	− 0·81	0	Rampur Boalia.	
...	...	...	...	3	14	1	13	2·7	P	P	56	·457	P	0	1·10	− 1·10	0	0·74	− 0·74	0	0·74	− 0·74	0	Malda.	
1	3	10	11	...	5	1	...	4·1	P	P	73	·614	1·9‡	0	3·50	− 3·50	0	0·82	− 0·82	0	0·82	− 0·82	0	Bogra.	
3	9	7	1	3	4	1	1	2·5	P	P	67	·508	1·0	0	2·60	− 2·60	0	0·97	− 0·97	0	0·97	− 0·97	0	Dinajpur .	NORTH BENGAL.
2	7	6	1	5	2	1	...	3·8	P	P	72	·547	2·1*	0	1·60	− 1·60	0·01	1·30	− 1·29	0·01	1·30	− 1·29	0·01	Rangpur.	
4	5	11	7	2	...	...	2	3·1	P	P	74	·515	?	0	5·79	− 5·79	0·02	1·80	− 1·78	0·02	1·80	− 1·78	0·02	Jalpaiguri.	
1	2	3	...	6	15	1	1	6·5	P	P	82	·754	1·5*	4	3·85	+ 0·15	1·92	1·35	+ 0·57	1·92	1·35	+ 0·57	1·31	Balasore .	ORISSA.
...	...	...	...	7	15	5	1	10·9	10·9	0	85	·864	5·0‡	1	2·00	− 1·00	1·07	1·26	− 0·19	1·07	1·26	− 0·19	1·07	False Point.	
...	...	...	...	3	10	3	...	3·5	3·5	0	82	·782	3·2‖	1	1·64	− 0·64	0·50	1·34	− 0·84	0·50	1·34	− 0·84	0·44	Cuttack.	
2	...	...	1	8	18	2	...	9·0	P	P	84	·864	2·1	0	P	P	0	P	P	0	P	P	0	Shortt's Island.	
...	1	...	...	...	22	2	...	12·1	P	P	86	·877	3·4*	1	0·80	+ 0·20	0·21	0·52	− 0·31	0·21	0·52	− 0·31	0·21	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0·50	− 0·50	...	...	...	...	**V—Gangetic Plain and Chota Nagpur.**	
5	...	...	...	5	5	6	9	9·2	7·4	+ 24	31	·283	2·0	0	1·82	− 1·82	0	0·96	− 0·96	0	0·96	− 0·96	0	Hazaribagh.	CHOTA NAGPUR.
1	...	...	1	5	4	6	10	6·6	?	P	33*	·266*	0·7	0	2·32	− 2·32	0	1·40	− 1·40	0	1·40	− 1·40	0	Ranchi.	
...	1	1	2	3	16	7	1	3·7	P	P	49	·357	1·2	0	P	P	0	P	P	0	P	P	0	Daltonganj.	
1	...	...	...	...	5	13	4	1·7	P	P	51	·474	2·4	0	2·20	− 2·20	0·01	1·21	− 1·20	0·01	1·21	− 1·20	0·01	Chaibassa.	
...	...	...	...	1	6	8	...	3·8	3·3	+ 15	35	·350	1·3	0	1·18	− 1·18	0	0·58	− 0·58	0	0·58	− 0·58	0	Gaya .	SOUTH BIHAR.
1	...	...	...	6	15	4	...	7·8	P	P	36*	·336*	1·8	0	1·14	− 1·14	0	0·70	− 0·70	0	0·70	− 0·70	0	Dehri.	
...	...	1	...	...	10	16	3	5·1	3·4	+ 50	34	·304	1·0	0	0·82	− 0·82	0	0·48	− 0·48	0	0·48	− 0·48	0	Patna.	
...	...	...	...	4	7	15	4	5·3	P	P	41	·345	0·7	0	0·95	− 0·95	0	0·34	− 0·34	0	0·34	− 0·34	0	Arrah.	
...	...	2	...	3	9	15	...	4·8	P	P	40*	·330*	1·1*	0	0·85	− 0·85	0	0·28	− 0·28	0	0·28	− 0·28	0	Buxar.	
3	7	5	...	2	4	3	4	6·5	3·4	+ 91	?	P	0*	0	0·73	− 0·73	0	0·49	− 0·49	0	0·49	− 0·49	0	Purnea .	NORTH BIHAR.
1	...	2	...	1	3	7	6	1	4·6	P	P	31	·313	1·0	0	0·65	− 0·65	0	0·33	− 0·33	0	0·33	− 0·33	0	Bhagalpur.	
1	2	2	3	2	1	6	10	4	4·9	4·5	+ 9	53	·403	0·6	0	0·91	− 0·91	0	0·41	− 0·41	0	0·41	− 0·41	0	Darbhanga.	
4	...	...	3	2	...	8	11	3	5·6	P	P	54	·410	0·5	0	1·05	− 1·05	0	0·42	− 0·42	0	0·42	− 0·42	0	Muzaffarpur	
...	...	2	2	...	...	9	13	5	8·5	P	P	61	·448	0·6	0	0·82	− 0·82	0	0·37	− 0·37	0	0·37	− 0·37	0	Motihari.	
6	1	1	...	1	1	11	9	1	7·1	P	P	50	·407	0·6	0	0·75	− 0·75	0	0·29	− 0·29	0	0·29	− 0·29	0	Chapra.	
7	1	...	...	...	2	7	13	1	5·7*	4·8	+ 19	48	·389	1·5	0	0·64	− 0·64	0	0·28	− 0·28	0	0·28	− 0·28	0	Benares .	N.-W. PROV., EAST.
8	2	1	1	1	1	4	10	3	4·2	2·8	+ 50	34	·305	1·4	0	0·73	− 0·73	0	0·32	− 0·32	0	0·32	− 0·32	0	Allahabad .	
1	8	3	...	...	2	2	10	5	3·9	3·6	+ 8	48	·382	1·5	0	0·73	− 0·73	0	0·42	− 0·42	0	0·42	− 0·42	0	Gorakhpur	N.-W. PROVINCES (EAST SUB-MONTANE).
2	3	...	...	...	...	3	12	11	3·4	4·0	− 15	46	·384	1·8	0	1·00	− 1·00	0	0·37	− 0·37	0	0·37	− 0·37	0	Lucknow .	SOUTH OUDH.
5	1	...	...	2	...	5	3	15	3·3	P	P	55	·416	0·4	0	P	P	0	0·47	− 0·47	0	0·47	− 0·47	0	Bahraich .	NORTH OUDH.
2	3	1	1	2	3	2	11	6	6·0	P	P	37	·319	0	0	0·80	− 0·80	0	0·24	− 0·24	0	0·24	− 0·24	0	Cawnpore .	N.-W. PROV. (CENTRAL).
7	1	...	...	...	...	...	3	...	1·9	P	P.	38	·290	2·3	0	P	P	0	0·24	− 0·24	0	0·24	− 0·24	0	Mainpuri.	

* Mean of 30 days. † Mean of 29 days. ‡ Mean of 26 days. ‖ Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 207 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.
VI.—Upper Sub-Himalayas		...	...	−·016	...	...	...	...	...	...	...	85·7	+1·6	58·3	+1·7	72·0	+1·7	27·4	...	...	...	...	44·5
N.-W. Provinces, West (Sub-montane).	Bareilly	568	29·283	−·033	29·833	29·384	1st	29·136	20th	·248	69·4	91·0	+3·4	60·1	+1·1	75·6	+2·3	30·9	101·3	29th	49·7	4th	51·6
	Dehra Dun	2,233	27·628	−·041	29·863	27·703	1st	27·496	20th	·207	64·1	83·0	+3·6	55·7	+0·4	69·3	+2·0	27·3	90·5	27th & 28th.	48·0	1st & 14th.	42·5
	Roorkee	887	28·966	−·032	29·852	29·067	1st	28·822	20th	·245	65·7	88·1	+2·3	56·9	+0·5	72·5	+1·4	31·2	95·2	28th	46·9	15th	48·3
N.-W. P., West.	Meerut	738	29·128	−·023	22·856	29·225	1st	29·006	20th	·219	67·5	89·5	+2·6	59·7	+1·9	74·7	+2·3	29·8	97·5	29th	50·6	3rd	46·9
South-East Punjab.	Delhi	718	29·160	−·024	29·862	29·269	1st	29·053	20th	·211	70·6	89·9	+1·7	64·1	+2·0	77·0	+1·9	25·8	98·0	29th	55·9	3rd	42·1
Central Punjab.	Lahore	702	29·195	−·005	29·898	29·331	1st & 24th.	29·079	20th	·252	64·0	83·2	−0·5	58·7	+3·9	71·0	+1·7	24·5	89·3	22nd	48·7	14th	40·6
South Punjab	Patiala	?	29·052	?	?	29·191	24th	28·937	20th	·254	67·7	86·6	?	58·9	?	72·7	?	27·7	93·0	28th	51·0	14th & 15th.	42·0
	Ludhiana	812	29·064	−·016	29·876	29·211	24th	28·948	20th	·263	65·7	85·3	+0·1	58·8	+1·6	72·1	+0·9	26·5	93·1	19th	51·3	2nd & 4th.	41·8
	Sialkot	830	29·065	+·005	29·902	29·194	1st	28·944	20th	·250	63·8	82·8	+1·0	56·8	+1·5	69·9	+1·3	26·0	92·6	31st	44·6	15th	48·0
Punjab (Sub-montane).	Umballa	892?	28·967	?	29·855	29·074	1st	28·854	20th	·220	64·9	85·8	?	58·7	?	72·3	?	27·1	93·0	19th & 28th.	51·0	14th	42·0
North Punjab	Rawalpindi	1,643	28·242	+·026	29·928	28·380	1st	28·118	20th	·262	60·3	77·3	+0·6	52·9	+2·5	65·1	+1·6	24·4	85·6	5th	42·0	13th	43·6
VII.—Indus Valley and North-West Rajputana.		...	...	−·009	...	...	...	...	...	...	...	87·4	+1·2	60·9	+1·9	74·2	+1·5	26·5	...	...	...	...	45·0
North Punjab	Peshawar	1,110	28·852	+·003	29·947	29·004	1st	28·730	20th	·274	60·6	74·9	−1·8	53·8	+2·1	64·4	+0·2	21·1	84·1	4th	44·9	14th	39·2
	Mardan	?			Not	recorded.					56·4	75·6	?	51·2	?	63·4	?	24·4	84·4	6th	41·0	15th	43·4
West Punjab	Khushab	612	29·309	?	29·917	29·470	1st	29·170	20th	·300	66·1	83·2	?	59·0	?	71·1	?	24·2	90·8	31st	50·0	14th	40·8
	Montgomery	558	29·349	?	29·896	29·486	1st	29·191	17th	·295	67·2	87·0	?	58·4	?	72·8	?	28·6	94·3	6th & 28th.	47·5	14th	46·8
	D. I. Khan	594?	29·364	+·019	29·956	29·539	1st	29·228	20th	·311	64·0	81·8	?	57·3	?	69·6	?	24·5	90·3	4th & 5th.	49·0	3rd	41·3
	Mooltan	420	29·504	−·013	29·912	29·659	1st	29·314	17th	·345	66·0	87·4	+1·1	61·0	+3·0	74·2	+2·1	26·4	94·8	31st	51·7	2nd	43·1
South Punjab	Sirsa	662	29·228	−·015	29·881	29·353	1st	29·116	17th	·237	66·5	89·4	+3·7	59·7	+2·6	74·6	+3·2	29·7	99·0	28th	52·3	3 days	46·7
Sind and Cutch.	Jacobabad	186	29·725	−·010	29·879	29·897	1st	29·528	5th	·369	70·1	91·5	+0·4	62·4	+3·0	77·0	+1·7	29·1	99·5	31st	50·0	14th	49·5
	Hyderabad	96	29·829	−·016	29·880	29·997	1st	29·700	31st	·297	74·5	95·4	+2·1	66·1	+1·6	80·7	+1·9	29·3	107·7	31st	55·5	15th	52·2
	Kurrachee	12	29·937	−·017	29·900	30·089	1st	29·820	31st	·269	75·3	87·2	?	68·2	?	77·7	?	19·0	94·3	14th	59·4	3rd	34·9
Kathiawar	Bhuj	395	29·542	−·015	29·898	29·665	1st	29·436	31st	·229	74·9	94·3	+0·6	66·6	+0·8	80·5	+0·7	27·7	106·6	31st	59·9	4th	46·7
West Rajputana	Bickaneer	771?	29·132	?	29·899	29·275	1st	29·016	6th	·259	72·1	91·5	+2·1	65·4	−0·1	78·5	+1·0	26·1	100·6	28th	57·6	3 days	43·0
	Pachpadra	380	29·538	?	29·888	29·696	2nd	29·392	31st	·304	69·9	93·9	?	62·1	?	79·5	?	34·8	108·0	31st	51·1	3 days	56·9
VIII.—East Rajputana, Central India and Gujarat.		...	...	−·010	...	...	...	...	...	...	...	94·4	+2·0	64·3	+1·5	79·4	+1·8	30·1	...	...	...	...	49·3
East Rajputana	Jeypore	1,431	28·487	−·008	29·907	28·599	1st	28·390	20th	·209	72·3	92·5	+2·5	63·2	+2·3	77·8	+2·4	29·3	103·0	29th	51·7	15th	51·3
	Sambhar	1,254	28·653	−·005	29·900	28·759	1st	28·566	17th	·193	70·4	91·8	+3·6	61·1	+1·8	76·5	+2·7	30·7	101·5	29th	50·9	15th	50·6
	Ajmere	1,611	28·322	−·006	29·934	28·437	1st	28·229	17th	·208	70·3	91·1	+1·8	60·8	+1·6	76·0	+1·7	30·3	99·4	28th & 29th.	46·8	3rd	52·6
	Deesa	466	29·469	−·013	29·899	29·576	1st	29·368	31st	·208	75·7	98·4	+2·5	64·3	+0·4	81·3	+1·5	34·1	108·4	29th	53·1	1st	55·3
Kathiawar	Rajkot	429	29·516	−·016	29·907	29·621	1st	29·425	31st	·196	73·9	96·7	+0·4	63·6	+1·0	80·1	+0·7	33·1	105·4	31st	55·0	4th	50·4
	Veraval	?	29·933	?	29·893	30·017	1st	29·842	31st	·175	75·0	88·4	?	66·8	?	77·6	?	21·6	102·2	30th	60·3	3 days	41·9
Central India	Nowgong	757	29·149	−·026	29·882	29·261	1st	29·052	20th	·209	71·7	94·7	+1·4	62·0	+1·2	78·4	+1·3	32·7	103·0	23rd & 29th.	52·0	15th & 16th.	51·0
	Indore	1,823	28·108	−·004	29·903	28·202	24th	28·035	17th	·167	73·8	94·8	+2·2	61·5	+0·9	78·1	+1·6	33·3	103·6	29th	52·6	4th	51·0
	Neemuch	1,630	28·311	+·017	29·917	28·405	1st	28·231	17th	·174	75·8	93·5	+1·6	63·0	+1·4	78·2	+1·5	30·5	101·8	28th & 29th.	50·9	3rd & 4th.	50·9
Gujarat	Surat	36	29·920	−·019	29·899	30·009	1st	29·830	30th	·179	76·7	98·3	+2·2	66·9	+1·2	82·6	+1·7	31·4	107·6	31st	58·5	5th	49·1
	Ahmedabad	176	29·772	?	29·903	29·882	1st	29·674	31st	·208	77·0*	98·3*	?	69·6	?	83·8*	?	28·7	108·3	31st	62·1	4th	46·2
N.-W. P., West	Agra	555	29·340	−·019	29·870	29·456	1st	29·231	20th	·225	72·6	92·5	+1·0	64·4	+1·6	78·5	+1·3	28·1	102·5	29th	55·4	15th	47·1
N.-W. P., Central.	Jhansi	858	29·061	−·017	29·888	29·172	1st	28·955	20th	·217	77·5	96·3	+3·2	69·0	+3·5	82·7	+3·4	27·3	105·6	29th	61·9	5th	43·7

* Mean of 30 days.

—continued.

n India, Burma, etc., in March 1896—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.	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 to 31st March 1896.	Normal rainfall for period, 1st to 31st March.	Variation from normal of period, 1st to 31st March.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·29	0·95	−0·63	...	...	...	...	**VI—Upper Sub-Himalayas.**	
12	1	1	...	...	...	...	1	16	4·3	4·3	0	41	·302	1·5	0	1·82	−1·82	0·02	0·94	−0·92	0·02	0·94	−0·92	0·02	Bareilly .	N.-W. PROVINCES, WEST (SUB-MONTANE).
29	1	...	...	...	...	...	1	...	1·4	2·3	−39	52	·310	4·1	1	2·64	−1·64	0·26	1·07	−0·81	0·26	1·07	−0·81	0·17	Dehra Dun.	
13	1	...	2	...	...	1	1	13	3·9	2·9	+34	49	·307	2·4	0	1·82	−1·82	0·08	0·72	−0·64	0·08	0·72	−0·64	0·08	Roorkee.	
12	...	1	...	1	...	1	8	8	2·8	2·7	+ 4	47	·315	2·3	0	1·55	−1·55	0	0·77	−0·77	0	0·77	−0·77	0	Meerut .	N.-W. PROVINCES, WEST.
9	2	...	1	...	1	1	12	5	4·4	3·9	+13	41	·311	2·5	0	1·18	−1·18	0·08	0·56	−0·48	0·08	0·56	−0·48	0·05	Delhi .	SOUTH-EAST PUNJAB.
8	5	3	4	1	...	1	4	5	2·8	3·1	−10	64	·386	4·0	1	1·36	−0·36	0·37	0·73	−0·36	0·37	0·73	−0·36	0·20	Lahore .	CENTRAL PUNJAB.
8	3	5	1	...	1	7	6	...	5·3	?	?	69*	·450*	3·8	0	?	?	0	?	?	0	?	?	0	Patiala .	SOUTH PUNJAB.
7	3	4	1	3	...	...	3	10	3·2	1·8	+78	58	·367	3·8	0	2·36	−2·36	0·11	0·99	−0·88	0·11	0·99	−0·88	0·05	Ludhiana.	
11	6	6	2	...	1	...	3	2	2·8	1·9	+47	69	·419	3·1	2	2·64	−0·64	0·78	1·18	−0·40	0·78	1·18	−0·40	0·51	Sialkot.	
11	2	...	1	1	...	...	4	12	3·2	?	?	61	·374	2·5	0	?	?	0·04	0·73	−0·69	0·04	0·73	−0·69	0·04	Umballa .	PUNJAB (SUB-MONTANE).
10	3	3	2	...	1	1	6	5	4·3	2·6	+65	67	·354	4·1	3	3·91	−0·91	1·40	1·76	−0·36	1·40	1·76	−0·36	0·54	Rawalpindi.	NORTH PUNJAB.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·51	0·41	+0·14	...	...	...	...	**VII.—Indus Valley and North-West Rajputana.**	
15	2	1	...	...	3	6	1	3	3·7	3·7	0	72	·383	5·9	6	3·55	+2·45	1·25	1·70	−0·45	1·25	1·80	−0·45	0·42	Peshawar .	NORTH PUNJAB.
			Not recorded.						?	?	?	?	?	?	0	?	?	0	?	?	0	?	?	0	Mardan,	
6	7	7	3	3	1	3	1	...	4·7	?	?	57	·362	4·1	3	1·60	+1·40	1·26	0·54	+0·72	1·26	0·54	+0·72	0·46	Khushab .	WEST PUNJAB.
5	8	3	7	4	1	...	1	2	5·0	?	?	57	·380	4·0	2	1·00	+1·00	0·28	0·41	−0·13	0·28	0·41	−0·13	0·17	Montgomery	
17	10	1	...	...	...	...	1	2	2·7	2·1	+29	72	·375	3·6	4	1·55	+2·45	1·53	0·63	+0·90	1·53	0·63	+0·90	0·58	D. I. Khan.	
6	3	11	1	4	...	4	...	2	1·9	2·1	−10	63	·415	2·9	2	1·18	+0·82	0·30	0·38	−0·08	0·30	0·38	−0·08	0·16	Mooltan.	
3	7	7	1	4	3	2	4	...	6·1	3·8	+61	51	·330	4·5	1	0·55	+0·45	0·42	0·37	+0·05	0·42	0·37	+0·05	0·39	Sirsa .	SOUTH PUNJAB.
8	2	1	11	3	2	...	2	2	4·0	3·9	+ 3	54	·407	3·2	3	0·73	+1·27	0·61	0·14	+0·47	0·61	0·14	+0·47	0·31	Jacobabad .	SIND AND CUTCH.
10	2	1	...	...	1	11	2	4	9·4	8·3	+13	52	·445	2·7	0	0·50	−0·50	0	0·14	−0·14	0	0·14	−0·14	0	Hyderabad.	
...	2	3	4	1	...	4	11	6	8·6	11·8	−27	79	·692	4·0	0	0·55	−0·55	0	0·23	−0·23	0	0·23	−0·23	0	Kurrachee.	
1	3	1	1	...	1	4	9	11	9·2	8·3	+11	62	·534	1·2	0	?	?	0	0·09	−0·09	0	0·09	−0·09	0	Bhuj .	KATHIAWAR.
3	5	3	1	4	4	4	2	5	4·6	4·3	+ 7	53	·431	4·2	1	?	?	0·96	0·20	+0·76	0·96	0·20	+0·76	0·96	Bickaneer .	WEST RAJPUTANA.
17	2	5	1	3	1	1	...	1	7·0	?	?	52	·393	4·1	0	?	?	0	0·07	−0·07	0	0·07	−0·07	0	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	0·18	−0·18	...	...	...	...	**VIII.—East Rajputana, Central India, and Gujarat.**	
7	4	5	...	...	1	4	5	5	3·7	5·7	−35	39	·319	2·4	0	0·50	−0·50	0·02	0·39	−0·37	0·02	0·39	−0·37	0·01	Jeypore .	EAST RAJPUTANA.
22	4	1	1	...	1	...	2	...	3·7	6·2	−40	44	·330	2·4	0	0·64	−0·64	0·02	0·36	−0·34	0·02	0·36	−0·34	0·02	Sambhar,	
15	1	4	...	2	2	3	4	...	3·5	3·6	− 3	49	·365	2·1	0	0·27	−0·27	0	0·17	−0·17	0	0·17	−0·17	0	Ajmere.	
...	4	6	1	...	...	1	8	11	7·9	8·9	−11	36	·321	1·2	0	0·18	−0·18	0	0·05	−0·05	0	0·05	−0·05	0	Deesa.	
1	6	3	1	...	...	...	6	14	7·6	8·1	−6	74	·622	1·5	0	0	0	0	0·01	−0·01	0	0·01	−0·01	0	Rajkot .	KATHIAWAR.
3	17	3	...	1	...	...	...	7	8·3	?	?	63	·553	1·6	0	?	?	0	?	?	0	?	?	0	Veraval,	
9	...	1	2	...	...	3	7	4	1·9	2·3	−17	43	·241	0·8	0	0·55	−0·55	0	0·27	−0·27	0	0·27	−0·27	0	Nowgong .	CENTRAL INDIA.
9	8	3	...	2	1	...	3	5	2·9	3·7	−22	39	·325	1·0	0	0	0	0·01	0·02	−0·01	0·01	0·02	−0·01	0·01	Indore.	
...	3	14	3	2	...	1	4	4	7·0	9·1	−23	31	·275	0·4	0	0·18	−0·18	0	0·08	−0·08	0	0·08	−0·08	0	Neemuch.	
8	4	...	...	...	2	3	2	12	?	6·5	?	59	·546	1·1	0	0	0	0	0	0	0	0	0	0	Surat .	GUJARAT.
1	6	5	1	...	...	2	1	13	4·4	?	?	46*	·425*	2·1	0	?	?	0	?	?	0	?	?	0	Ahmedabad†	
3	...	...	...	4	...	7	...	17	5·3	4·5	+18	41	·330	1·2	0	0·82	−0·82	0	0·31	−0·31	0	0·31	−0·31	0	Agra . .	N.-W. P., WEST.
21	1	1	1	...	...	3	2	2	1·9	3·4	−44	30	·287	0·5	0	1·00	−1·00	0·02	0·35	−0·33	0·02	0·35	−0·33	0·02	Jhansi .	N.-W. P., CENTRAL.

† Wind direction of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 207 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		...	...	−·021	...	...	...	...	...	...	...	98·9	+2·5	68·6	+2·2	83·8	+2·4	30·3	...	...	...	...	44·1
Bombay, Deccan	Belgaum	2,524	27·414	−·017	29·865	27·493	26th	27·336	30th	·157	75·6	95·1	+1·3	64·8	+0·7	80·0	+1·0	30·3	99·2	28th & 30th.	59·9	6th	39·3
	Sholapur	1,590	28·333	−·017	29·868	28·408	26th	28·273	20th	·135	81·4	101·4	+0·9	71·4	+2·6	86·4	+1·8	30·0	105·7	31st	64·1	6th	41·6
	Poona	1,840	28·104	−·016	29·908	28·182	24th	28·042	20th	·140	73·5	99·8	+2·7	64·0	−0·3	81·9	+1·2	35·8	106·5	31st	56·9	7th	49·6
	Bijapur	1,946	27·936	?	29·866	28·069	26th	27·927	16th	·142	80·2	98·5	?	70·8	?	84·7	?	27·7	102·7	31st	65·0	1st & 7th	37·7
Khandesh	Malegaon	1,430	28·496	−·022	29·894	28·595	24th	28·423	20th	·172	75·9	99·1	+1·8	64·8	+1·1	82·0	+1·5	34·3	108·3	30th	56·4	10th	51·9
	Ahmednagar	2,152	27·798	?	29·892	27·878	24th	27·739	17th	·139	77·6	96·9	?	64·3	?	80·6	?	32·6	104·4	31st	58·5	3 days	45·9
Berar	Akola	930	28·973	−·023	29·858	29·065	24th	28·893	31st	·172	79·0	102·0	+3·1	67·6	+1·7	84·8	+2·4	34·4	108·6	30th & 31st	58·0	4th	50·6
	Amraoti	1,215	28·688	−·018	29·862	28·767	1st	28·614	21st	·153	80·5	101·3	+3·0	73·1	+4·6	87·2	+3·8	28·2	108·4	30th & 31st.	66·8	5th	41·6
Central Provinces, West.	Khandwa	1,044	28·877	−·015	29·890	28·967	24th	28·790	31st	·177	77·2	99·9	+2·4	67·7	+2·7	83·8	+2·6	32·2	108·7	31st	57·1	4th	51·6
	Hoshangabad	1,000?	28·903*	−·018*	?	28·985	26th	28·828	20th & 31st	·157	74·5	97·7	+1·6	66·9	+2·6	82·3	+2·1	30·8	105·5	29th	57·3	4th	48·2
	Nagpur	1,025	28·867†	−·014†	29·852†	28·969	24th	28·791	21st	·178	78·8	101·1	+2·6	70·5	+2·9	85·8	+2·8	30·6	108·2	30th	62·1	4th	46·1
Central Provinces, Central.	Chanda	634	29·258	?	29·841	29·350	24th	29·165?	21st	·185	80·1	103·2	+3·0	70·5	+3·3	86·9	+3·2	32·7	109·9	31st	61·1	4th	48·8
	Seoni	2,033	27·884	−·017	29·866	27·977	24th	27·815	21st	·162	76·6	97·6	+4·1	67·1	+3·6	82·4	+3·9	30·5	105·2	30th & 31st	57·0	4th	48·2
	Jubbulpore	1,327	28·561	?	29·865	28·654	26th	28·482	21st	·172	73·5	96·7	+3·6	62·8	+1·7	79·8	+2·7	33·9	104·5	30th	50·4	4th	54·1
	Saugor	1,762	28·146	−·004	29·879	28·238	26th	28·061	20th	·177	74·6	95·2	+3·0	65·9	+1·5	80·6	+2·3	29·3	103·8	29th	56·3	4th & 16th.	47·5
Central Provinces, East.	Raipur	970	28·938	−·009	29·859	29·035	24th	28·866	21st	·169	82·6	99·8	+3·3	72·2	+3·7	85·9	+3·5	27·6	105·5	28th & 31st	60·7	5th	44·8
	Sambalpur	463	29·419	−·025	29·838	29·513	26th	29·330	20th	·183	77·6	99·3	+2·3	68·3?	+0·9?	83·8	+1·6	31·0	106·0	30th	57·7	4th & 5th.	48·3
Central India	Sutna	1,040	28·852	−·027	29·867	28·949	26th	28·746	20th	·203	75·9	94·4	+2·8	63·8	+2·8	79·1	+2·8	30·6	101·5	23rd	54·3	16th	47·2
Hyderabad, North.	Aurangabad	?	28·081	?	?	28·174	1st	28·016	17th	·158	79·5	100·2	?	67·3	?	83·7	?	32·9	107·0	30th	60·0	7th	47·0
	Indur	?				Not recorded.					82·5	99·6	?	71·3	?	85·5	?	28·3	104·6	31st	64·5	2nd	40·1
	Bidar	?	27·760	?	?	27·857	10th	27·700	14th	·157	81·2	95·6	?	72·9	?	84·3	?	22·7	98·0	23rd & 26th.	68·0	17th	21·0
Hyderabad, South.	Gulbarga	1,502	28·429	?	29·877	28·532	7th	28·357	20th	·175	81·1	100·9	?	72·7	?	86·8	?	28·2	104·3	31st	66·3	3rd	38·0
	Raichur	1,378	28·534	?	?	28·632	27th	28·467	16th	·165	?	?	?	?	?	?	?	?	?	?	?	?	?
	Hyderabad (Deccan).	1,690	28·228	−·040	29·867	28·306	24th	28·158	14th	·148	78·5	98·9	+1·2	70·2	+0·7	84·6	+1·0	28·7	103·4	31st	65·7	1st & 9th	37·7
	Secunderabad	1,787	28·137	?	29·878	28·213	24th	28·067	14th	·146	76·5	99·9	?	70·2	?	85·1	?	29·7	104·7	31st	65·5	9th & 10th	39·2
	Khamamet	373	29·550	?	29·870	29·626	24th	29·476	21st	·150	79·1	98·6	?	73·2	?	85·9	?	25·4	101·8	3 days	66·2	3rd	35·6
X.—West Coast		...	...	−·020	...	...	...	...	...	...	...	87·7	−0·1	75·3	+0·3	81·5	+0·1	12·4	...	...	...	...	22·0
Konkan	Bombay	37	29·916	−·020	29·893	29·990	26th	29·831	20th	·159	77·8	86·0	+0·4	74·3	+0·8	80·2	+0·6	11·7	92·0	25th	69·5	10th	22·5
	Ratnagiri	110	29·826	−·018	29·875	29·920	26th	29·728	20th	·192	78·5	87·1	−0·6	73·2	+0·9	80·2	+0·2	13·9	92·9	25th	68·9	1st	24·0
	Mormugao	60	29·885	?	29·880	29·963	26th	29·806	20th	·157	79·5	86·7	?	75·5	?	81·1	?	11·2	92·0	31st	71·4	1st & 12th	20·6
	Goa	199	29·737	−·011	29·874	29·616	26th	29·654	20th	·162	78·7	84·2	?	76·6	?	80·4	?	7·6	87·0	29th & 31st	73·0	3 days	14·0
	Karwar	44	29·904	−·014	29·880	29·975	26th	29·827	20th	·148	74·8	86·8	−1·0	72·4	−0·7	79·6	−0·9	14·4	90·3	28th	64·5	1st	25·8
Malabar	Cochin	11	29·931	−·027	29·869	30·006	26th	29·862	20th	·144	82·1	91·6	+1·0	77·9*	+1·2	*84·8	+1·1	13·7	93·3	3rd	70·7	1st	22·6
	Calicut	27	29·914	−·030	29·871	29·980	26th	29·846	20th	·134	81·3	90·2	−0·2	75·6	−0·3	82·9	−0·3	14·6	92·3	22nd & 28th.	67·5	1st	24·8
	Mangalore	23	29·927	−·019	29·881	29·994	26th	29·852	20th	·142	80·4	88·9	0	75·4	−0·4	82·2	−0·2	13·5	90·8	22nd & 29th.	69·0	1st	21·8
	Trivandrum	198	29·746	?	29·875	29·800	26th	29·675	20th	·125	80·2	87·9	?	77·0	?	82·5	?	10·9	93·0	27th	71·0	1st	22·0
XI.—South India		...	...	−·024	...	...	...	...	...	...	...	94·4	+1·4	71·3	+0·1	82·9	+0·8	23·1	...	...	...	...	34·1
Madras, South.	Pamban	37	29·913	?	29·877	29·969	1st	29·850	20th	·119	82·1	88·5	?	76·6	?	82·6	?	11·9	90·3	6 days	71·2	5th & 6th.	19·1
	Tinnevelly	168	29·784	?	29·883	29·854	1st	29·714	20th	·140	80·0	97·1	?	75·0	?	86·1	?	22·1	100·8	27th & 28th	67·9	3rd	32·9
	Madura	447	29·502	−·023	29·888	29·570	26th	29·436	20th	·134	80·5	97·0	+0·1	72·7	+0·2	84·9	+0·2	24·3	100·5	28th	64·7	3rd	35·8

* Mean of 30 days. † Mean of 21 days.

I—*continued.*

in India, Burma, etc., in March 1896—continued.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.		Mean cloud amount.	RAINFALL.								Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCES OR DISTRICTS.
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 to 31st March 1896.	Normal rainfall for period, 1st to 31st March.	Variation from normal of period, 1st to 31st March.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·17	0·47	−0·31	...	...	...	...	IX.—Deccan.	
15	2	3	3	2	2	1	1	2	10·9	11·6	− 6	42	·368	0·2	0	1·00	−1·00	0·09	0·35	− 0·26	0·09	0·35	− 0·26	0·09	Belgaum	Bombay, Deccan.
3	...	7	4	3	4	...	1	9	7·9	7·4	+ 7	29	·311	0·3	0	0·36	−0·36	0	0·34	− 0·34	0	0·34	− 0·34	0	Sholapur.	
12	...	...	2	...	1	4	5	7	6·7	8·3	−19	41	·394	1·1	0	0·36	−0·36	0	0·05	− 0·05	0	0·05	− 0·05	0	Poona.	
6	...	...	...	...	...	3	13	9	4·2	P	P	63	·646	1·3	0	0·03	−0·03	0	P	P	0	P	P	0	Bijapur.	
...	2	1	...	...	...	1	13	14	11·1	6·4	+73	39	·354	1·3	0	0	0	0	0·03	− 0·03	0	0·03	− 0·03	0	Malegaon	Khandesh.
2	12	5	1	1	...	...	2	8	14·7	P	P	71	·695	0·7	0	P	P	0	P	P	0	P	P	0	Ahmednagar.	
1	2	1	3	3	2	5	6	8	4·9	4·4	+11	27	·268	0·7	0	0·82	−0·82	0	0·55	−0·55	0	0·55	− 0·55	0	Akola	Berar.
...	1	6	6	2	3	8	4	1	5·3	4·0	+33	42	·437	1·1	0	0·45	−0·45	0	0·40	− 0·40	0	0·40	− 0·40	0	Amraoti.	
5	1	4	...	3	1	4	7	6	5·5	4·6	+20	27	·254	0·8	0	0·18	−0·18	0	0·13	− 0·13	0	0·13	− 0·13	0	Khandwa	Central Provinces, West.
8	...	7	7	...	4	3	2	...	2·9	2·6	+12	41‡	·359‡	1·5	0	0·36	−0·36	0	0·23	− 0·23	0	0·23	− 0·23	0	Hoshangabad.	
29	...	1	1	...	...	...	...	...	3·4	4·5	−24	43	·421	1·7	1	1·00	0	0·17	0·61	− 0·44	0·17	0·61	− 0·44	0·15	Nagpur.	
8	2	...	1	...	4	6	3	7	2·9	3·2	−9	42	·428	1·4	0	P	P	0·06	1·49	− 1·43	0·06	1·49	− 1·43	0·06	Chanda	Central Provinces, Central.
				Not	recorded.				P	3·4	P	43	·393	1·8	0	1·73	−1·73	0·05	0·70	− 0·65	0·05	0·70	− 0·65	0·05	Seoni.	
...	...	6	8	2	3	2	2	8	2·7	3·0	−10	37	·307	1·1	0	0·82	−0·82	0·03	0·51	− 0·48	0·03	0·51	− 0·48	0·03	Jubbulpore.	
13	1	7	3	3	2	1	1	...	2·7	3·2	−16	27	·241	0·6	0	0·64	−0·64	0·04	0·26	− 0·22	0·04	0·26	− 0·22	0·04	Saugor.	
5	5	6	1	...	2	7	4	1	5·5	4·7	+17	28	·308	1·1	0	1·00	−1·00	0·12	0·81	− 0·69	0·12	0·81	− 0·69	0·04	Raipur	Central Provinces, East.
...	3	15	3	1	2	3	1	3	4·5	2·0	+125	54	·513	1·5	1	P	P	1·37	1·20	+ 0·17	1·37	1·20	+ 0·17	1·33	Sambalpur.	
3	9	1	...	...	2	1	4	11	5·2	5·5	− 5	28	·250	0·7	0	0·91	−0·91	0	0·50	− 0·50	0	0·50	− 0·50	0	Sutna	Central India.
18	1	7	1	1	1	2	...	...	2·9	P	P	31	·315	0·5	0	P	P	0	0·06	− 0·06	0	0·06	− 0·06	0	Aurangabad	Hyderabad, North.
3	4	1	3	5	4	1	4	6	5·5	P	P	48	·529	0·4	1	P	P	1·02	0·27	+ 0·75	1·02	0·27	− 0·27	1·02	Indur.	
...	7	3	...	1	2	12	2	4	6·2	P	P	48	·508	0	1	P	P	0·28	0·34	− 0·06	0·28	0·34	− 0·06	0·28	Bidar.	
17	2	3	2	1	2	3	...	1	6·1	P	P	36	·379	0·5	0	P	P	0	0·21	− 0·21	0	0·21	− 0·21	0	Gulbarga.	Hyderabad, South.
...	2	...	2	5	8	5	5	4	6·2	P	P	P	P	0·4	0	P	P	0	P	P	0	P	P	0	Raichur.	
21	1	...	3	3	...	...	2	1	3·6	P	P	54	·528	0·6	1	P	P	0·12	0·75	− 0·63	0·12	0·75	− 0·63	0·12	Hyderabad (Deccan).	
6	...	...	16	3	...	2	1	3	5·0	5·0	0	51	·459	0·5	1	P	P	0·10	P	P	0·10	P	P	0·10	Secunderabad.	
6	...	...	2	15	8	...	...	...	7·3	P	P	73	·734	2·4	1	P	P	1·03	P	P	1·03	P	P	1·03	Khamamet.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·33	0·58	−0·21	...	...	...	...	X.—West Coast.	
...	10	10	6	1	1	1	...	2	10·5	11·5	− 1	74	·707	1·2	0	0·09	−0·09	0	0·03	− 0·03	0	0·03	− 0·03	0	Bombay.	Konkan.
1	3	2	5	5	2	2	2	9	5·4	9·9	−45	76	·740	2·1	0	0	0	0	0·01	− 0·01	0	0·01	− 0·01	0	Ratnagiri.	
3	7	6	3	5	4	3	...	...	9·4	P	P	80	·812	2·5	0	P	P	0	P	P	0	P	P	0	Mormugao.	
3	5	5	12	1	3	2	...	...	7·3	P	P	79	·780	2·3	0	P	P	0	0	0	0	0	0	0	Goa.	
4	6	10	10	1	...	...	...	...	5·9	P	P	85	·730	1·4	0	0	0	0	0	0	0	0	0	0	Karwar.	
2	12	17	...	...	...	...	...	...	7·5	P	P	77	·859	2·5	3	2·45	+0·55	2·38	2·44	− 0·06	2·38	2·44	− 0·06	1·52	Cochin	Malabar.
3	4	13	5	1	...	...	...	5	14·6	P	P	76	·813	1·2	0	0·63	−0·63	0	0·52	− 0·52	0	0·52	− 0·52	0	Calicut.	
12	...	2	12	3	1	1	...	...	3·1	3·4	− 9	78	·802	1·2	0	0·19	−0·10	0	0·06	− 0·06	0	0·06	− 0·06	0	Mangalore.	
10	6	6	2	1	...	...	...	6	5·1	P	P	74	·770	2·1	2	P	P	0·59	1·57	− 0·98	0·59	1·57	− 0·98	0·45	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·17	0·53	−0·36	...	...	...	...	XI.—South India.	
2	...	9	15	3	2	...	...	...	7·6	P	P	78	·861	2·4	1	1·30	−0·30	0·38	0·79	− 0·41	0·38	0·79	− 0·41	0·38	Pamban	Madras, South.
...	7	3	...	1	2	3	7	8	4·8	P	P	73	·761	4·2	2	2·40	−0·40	0·87	P	P	0·87	P	P	0·65	Tinnevelly.	
4	6	5	5	7	...	...	...	4	4·1	4·1	0	71	·750	2·1	2	0·36	+1·64	0·73	0·61	+ 0·12	0·73	0·61	+ 0·12	0·50	Madura.	

‡ Mean of 18 days

Table

Abstract of Observations taken at 8 A.M. at 207 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	29·039	−·023	29·924	29·103	26th	28·970	20th	·133	79·1	99·2	+0·8	70·4	−0·2	84·8	+0·3	28·8	102·4	27th & 28th, 3 days	57·9	1st	44·5
	Coimbatore	1,348	28·605	−·024	29·903	28·679	26th	28·518	20th	·161	77·8	97·6	+1·3	69·5	−0·3	83·6	+0·5	28·1	100·4		60·6	2nd	39·8
Coorg	Mercara	3,781	26·260	−·009	?	26·328	26th	26·192	20th	·136	71·8	85·9	+1·4	63·3?	+2·1?	74·6	+1·8	22·6	91·0	21st	60·7	10th	30·3
Mysore	Chitaldroog	2,495	27·550	?	29·857	27·632	24th	27·480	20th	·152	80·2	95·7	?	70·9	?	83·3	?	24·8	99·7	29th & 30th,	67·4	2nd	32·3
	Bangalore	3,021	26·972	−·023	29·885	27·049	26th	26·910	20th	·139	74·1	91·6	+1·3	65·0	+0·7	78·3	+1·0	26·6	94·3	27th & 28th,	60·9	9th	33·4
	Hassan	3,091	26·911	?	29·912	26·983	26th	26·845	20th	·138	72·5	92·1	?	61·7	?	76·9	?	30·4	96·2	30th	54·3	2nd	41·9
	Mysore	2,518	27·461	?	29·896	27·535	26th	27·394	20th	·141	75·4	94·1	?	67·3	?	80·7	?	26·8	97·4	28th	59·9	1st	37·5
Madras, East Coast, South.	Negapatam	31	29·919	−·025	29·879	29·986	26th	29·864	16th	·122	81·8	89·1	+0·5	74·9*	0*	82·2*	+0·3	14·2	92·2	3 days	69·7	4 days	22·5
	Cuddalore	12	29·950	?	29·891	30·022	26th	29·886	20th	·136	79·3	89·9	?	71·6	?	80·8	?	18·3	94·3	16th	61·3	1st	33·0
	Trichinopoly	255	29·696	−·030	29·886	29·759	26th	29·635	20th	·124	80·0	98·6	+1·1	72·1	−0·6	85·4	+0·3	26·5	101·6	17th & 28th,	60·4	1st	41·2
	Madras	22	29·937	−·025	29·890	30·007	26th	29·869	20th	·138	79·9	90·7	+1·5	71·4	−0·7	81·1	+0·4	19·3	95·5	1st & 28th	64·0	1st	31·5
Madras, East Coast, Central.	Nellore	71	29·859	?	29·864	29·916	26th	29·785	20th	·131	79·2	97·2	?	72·3	?	84·8	?	24·9	101·8	26th	65·6	1st	36·2
	Masulipatam	15	29·931	−·024	29·881	29·992	26th	29·852	20th	·140	81·0	92·6	+1·1	72·6	+0·2	82·6	+0·7	20·0	98·7	1st	66·2	2nd & 9th,	32·5
Madras, Central	Cuddapah	433	29·482	?	29·855	29·537	1st	29·402	20th	·135	83·6	102·4	+1·2	74·9	−0·1	88·7	+0·6	27·5	106·2	3 days	69·6	2nd	36·6
	Kurnool	923	28·983	−·032	29·852	29·056	1st	28·903	20th	·153	80·2	102·1	+1·4	72·3	+0·3	87·2	+0·9	29·8	105·3	21st & 22nd.	63·8	1st	41·5
Madras, East Coast, North.	Bellary	1,475	28·444	−·019	29·859	28·521	26th	28·377	20th	·144	82·2	101·6	+1·3	72·6	+0·7	87·1	+1·0	29·0	104·7	3 days	64·4	2nd	40·3
	Cocanada	26	29·913	−·020	29·874	29·972	24th	29·838	20th	·134	79·7	94·7?	+5·1?	73·8	−0·7	84·3	+2·2?	20·9	100·1	25th	69·0	9th	31·1
	Vizagapatam	31	29·898	−·035	29·867	29·960	27th	29·817	20th	·143	80·4	91·9	+2·1	73·8	−0·6	82·9	+0·8	18·1	97·2	25th	66·4	1st	30·8
	Gopalpur	21	29·885	?	29·846	29·961	26th	29·788	20th	·173	77·0	87·1	?	73·8	?	80·5	?	13·3	92·2	1st	67·1	2nd	25·1
XII.—Hill Stations		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	Kachh	?	23·869	?	?	24·000	1st	23·750	17th	·250	47·1	59·1	?	36·2	?	47·7	?	11·4	69·0	5th & 31st,	23·0	12th	46·0
	Pishin	?			Not recorded.						?	70·3	?	38·1	?	54·2	?	32·2	80·0	31st	26·9	3 days	53·1
	Quetta	5,502	24·656	+·007	?	24·816	1st	24·542	5th	·274	51·6	65·6	+1·1	42·4	+2·7	54·0	+1·9	23·2	76·2	31st	29·8	13th & 14th,	46·4
	Chaman	4,311	25·761	?	?	25·967	1st	25·615	5th	·352	57·5	70·1	?	?	?	?	?	?	80·1	5th	?	?	?
Punjab	Leh	11,503	19·685	?	?	19·874	3rd	19·549	12th & 13th,	·325	25·1	39·2	?	18·6	?	28·9	?	20·6	55·2	28th	4·3	2nd & 3rd,	50·9
	Srinagar	5,204	24·931	?	?	25·068	26th	24·804	20th	·264	43·0	57·7	?	38·8	?	48·3	?	18·9	67·4	31st	31·6	14th & 15th,	35·8
	Astor (Kashmir)	?	22·252	?	?	22·433	3rd	22·145	12th	·288	33·7	47·4	?	30·1	?	38·7	?	17·3	53·9	22nd	21·0	15th	32·9
	Minimarg	?	21·321	?	?	21·492	22nd	21·220	13th	·272	23·7	43·0	?	5·9	?	24·5	?	37·1	51·4	3rd & 12th	3·0	5 days	48·4
	Gilgit	?	24·725	?	?	24·930	3rd	24·590	22nd	·340	52·4	64·8	?	47·8	?	56·3	?	17·0	72·6	22nd	38·3	14th	34·3
	Cherat	?	25·732	?	?	25·859	26th	25·627	20th	·232	52·7	61·8	?	46·6†	?	54·3	?	15·2	72·8	6th	39·1	23rd	33·7
	Samana	?	23·743	?	?	23·880	2nd	23·580	22nd	·300	?	56·0	?	22·0	?	39·0	?	34·0	62·0	4th & 5th,	20·0	6 days	42·0
	Murree	6,344	23·846	+·008	?	23·949	27th	23·767	20th	·182	48·4	66·6	+7·9	43·2	−0·6	54·9	+3·7	23·4	67·6	27th	33·0	12th	34·6
	Poo	?			Not recorded.						?	50·1	?	32·9	?	41·5	?	17·2	62·6	31st	23·0	1st	39·6
	Simla	7,224	23·111	+·001	?	23·236	27th	23·009	20th	·227	51·2	58·1	+1·2	45·4	+0·9	51·8	+1·1	12·7	65·4	28th	35·2	13th	30·2
N.-W. Provinces	Chakrata	6,977	23·324	−·001	?	23·445	27th	23·199	20th	·246	50·3	61·5	−0·4	45·6	+1·6	53·6	+0·6	15·9	69·2	31st	38·7	12th	30·5
	Mussooree	6,705	23·535	?	?	23·649	27th	23·403	20th	·246	52·6	62·7	?	48·3	?	55·5	?	14·4	70·8	28th & 31st	42·0	14th	28·8
	Ranikhet	6,069	24·110	+·005	?	24·223	23rd	23·972	20th	·251	56·2	68·8	+3·7	51·2	+2·3	60·0	+3·0	17·6	77·5	31st	43·0	10th	34·5
Bengal	Yatung	10,480?			Not recorded.						0	58·1	?	32·2	?	41·2	?	26·9	58·9	4th	26·9	15th & 16th,	32·0
	Gnatong	?	19·186	?	?	19·291	27th	19·097	20th	·194	32·8	38·0	?	25·8	?	32·0	?	12·2	48·6	27th	21·1	16th	27·5
	Darjeeling	7,421	22·972	+·004	?	23·060	27th	22·852	20th	·238	50·6	58·6	+2·9	44·4	+1·4	52·0	+2·2	15·2	65·5	31st	40·2	3rd	25·3
	Gantok	?	24·325	?	?	24·444	5th & 6th.	24·230	30th	·214	57·1	69·7	?	42·6	?	56·2	?	27·1	84·2	8th	35·0	26th	49·2

* Mean of 27 days. † Mean of 22 days.

—continued.

n India, Burma, etc., in March 1895—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.	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 to 31st March 1896.	Normal rainfall for period from 1st to 31st March.	Variation from normal of period, 1st to 31st March.			
11	...	6	10	...	1	2	...	1	6·8	5·5	+24	70	·717	1·3	1	1·64	−0·64	0·20	0·88	− 0·68	0·20	0·88	− 0·68	0·20	Salem	MADRAS, SOUTH CENTRAL.
...	2	...	18	...	...	2	7	2	2·3	3·3	−30	76	·735	3·5	0	1·18	−1·18	0·06	0·59	− 0·53	0·06	0·59	− 0·53	0·06	Coimbatore.	
27	1	3	...	...	...	...	...	...	6·1	3·4	−79	56	·437	1·0	0	2·00	−2·00	0·01	0·87	− 0·86	0·01	0·87	− 0·86	0·01	Mercara	COORG.
1	1	1	...	7	2	4	10	5	8·1	P	P	44	·447	1·4	0	P	P	0	P	P	0	?	?	0	Chitaldroog	MYSORE.
...	...	...	4	9	10	7	1	...	7·7	3·6	+114	59	·499	1·3	1	0·82	+0·18	0·59	0·54	+ 0·05	0·59	0·54	+ 0·05	0·59	Bangalore.	
5	1	...	4	9	3	3	4	2	3·3	P	P	72	·576	2·1	0	P	P	0·01	P	P	0·01	P	P	0·01	Hassan.	
8	...	3	2	2	4	8	3	1	7·0	P	?	64	·558	1·4	1	P	P	0·27	?	P	0·27	P	P	0·24	Mysore.	
7	1	5	3	2	4	2	3	4	11·6	3·6	+222	80	·866	4·0	1	0·73	+0·27	0·44	0·54	− 0·10	0·44	0·54	− 0·10	0·42	Negapatam	MADRAS, EAST COAST, SOUTH.
...	2	...	...	...	3	3	17	6	1·5	P	P	84	·851	1·5	0	1·50	−1·50	0	?	P	0	P	?	0	Cuddalore.	
20	...	5	1	1	1	...	2	1	3·7	3·8	− 3	72	·746	2·6	0	0·82	−0·82	0·13	0·55	− 0·42	0·13	0·55	− 0·42	0·09	Trichinopoly.	
8	...	...	...	1	11	10	1	...	5·2	6·4	−19	78	·808	1·8	0	0·64	−0·64	0	0·39	− 0·39	0	0·39	− 0·39	0	Madras.	
2	...	...	1	26	2	...	...	...	6·5	P	P	80	·799	2·5	0	0·40	−0·40	0	P	P	0	P	P	0	Nellore	MADRAS, EAST COAST, CENTRAL.
7	...	1	...	4	17	1	...	1	5·5	6·8	−19	80	·849	4·0	0	0·27	−0·27	0	0·12	− 0·12	0	0·12	− 0·12	0	Masulipatam.	
4	...	1	9	15	1	1	...	...	P	?	?	55	·637	0·8	0	0·20	−0·20	0	0·06	− 0·06	0	0·06	− 0·06	0	Cuddapah	MADRAS, CENTRAL.
24	...	...	6	1	...	...	...	...	P	P	?	53	·549	0·7	0	0·67	−0·67	0	0·54	− 0·54	0	0·54	− 0·54	0	Kurnool.	
12	2	...	1	2	6	1	2	5	3·7	4·6	−20	40	·442	1·6	0	0·73	−0·73	0	0·22	− 0·22	0	0·22	− 0·22	0	Bellary.	
1	2	1	1	...	1	6	9	10	6·6	P	P	75	·759	1·5	0	0·60	−0·60	0·05	0·53	− 0·48	0·05	0·53	− 0·48	0·05	Cocanada	MADRAS, EAST COAST, NORTH.
4	...	...	...	...	...	2	25	...	3·2	3·0	+ 7	74	·773	1·4	0	1·09	−1·09	0·01	0·39	− 0·38	0·01	0·39	− 0·38	0·01	Vizagapatam.	
9	3	...	...	...	2	14	1	2	14·2	11·3	+20	84	·782	1·4	0	1·13	−1·13	0·09	0·90	− 0·81	0·09	0·90	− 0·81	0·07	Gopalpur.	
...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**XII.—Hill Stations.**	
12	...	1	7	2	2	2	3	2	3·7	P	P	67	·224	2·7	8	P	P	2·92	P	P	2·92	P	P	0·91	Kachh	BALUCHISTAN.
Not recorded.												P	P	P	7	P	P	1·47	P	P	1·47	P	P	0·39	Pishin.	
6	...	...	2	4	8	4	4	3	5·1	4·8	+ 6	63	·242	3·6	8	4·91	+3·09	2·19	1·70	+ 0·49	2·19	1·70	+ 0·49	0·41	Quetta.	
...	2	1	7	11	5	4	1	...	21·5	?	P	63	·301	3·6	6	?	P	1·32	P	P	1·32	P	P	0·53	Chaman.	
...	...	2	...	3	3	16	7	...	1·9	P	P	40	·057	6·1	0	?	P	0·17	P	P	0·17	P	P	0·07	Leh	PUNJAB.
3	3	1	1	8	6	1	2	6	7·1	P	P	94	·262	7·2	10	?	P	2·22	P	P	2·22	P	P	0·29	Srinagar.	
2	...	...	...	...	14	12	2	1	6·8	P	?	71	·141	6·7	6	P	P	1·97	?	P	1·97	P	P	0·80	Astor (Kashmir).	
...	...	...	25	5	...	...	...	1	5·0	P	P	86	·108	5·8	19	P	P	24·59	P	P	24·59	P	P	2·04	Minimarg.	
Not recorded.									P	P	P	47	·187	6·6	1	P	P	0·29	P	P	0·29	P	P	0·20	Gilgit.	
8	8	1	...	2	1	...	...	11	17·1	P	P	63	·242	3·5	6	P	P	1·65	?	?	1·65	P	?	0·56	Cherat.	
Not recorded.									P	P	P	P	P	5·5	9	P	?	3·87	P	P	3·87	P	P	0·80	Samana.	
...	4	3	6	15	...	...	...	3	12·0	9·4	+28	95	·331	5·7	7	5·36	+1·64	3·04	3·65	−0·61	3·04	3·65	− 0·61	0·89	Murree.	
10	2	1	2	1	6	5	2	2	P	P	P	P	P	4·2	6	?	P	5·16	P	P	5·16	P	P	2·30	Poo.	
11	4	10	2	...	4	...	...	...	4·6*	2·8	+64	39	·144	5·0	2	4·64	−2·64	0·57	2·24	− 1·67	0·57	2·24	− 1·67	0·25	Simla.	
7	21	2	...	...	...	...	...	1	10·7	5·9	+81	47	·173	2·0	3	4·80	−1·80	1·55	2·39	− 0·84	1·55	2·39	− 0·84	0·62	Chakrata	N.-W. PROVINCES.
...	4	1	7	...	...	...	5	14	P	P	P	47	·187	2·7	2	P	?	0·65	P	P	0·65	P	P	0·28	Mussooree.	
18	5	1	2	1	2	2	...	...	3·3	2·6	+27	53	·242	3·2	1	4·00	−3·00	0·29	2·24	− 1·95	0·29	2·24	− 1·95	0·29	Ranikhet.	
Not recorded.									P	P	P	P	P	P	9	?	?	3·47	P	P	3·47	P	P	1·00	Yatung	BENGAL.
7	2	...	2	4	1	2	5	8	7·7	P	P	85	·158	2·4	12	?	?	4·75	?	?	4·75	P	P	0·94	Gnatong.	
5	...	6	6	2	1	3	6	2	9·3	6·6	+41	63	·235	2·1	2	4·29	−2·29	0·34	1·63	− 1·29	0·34	1·63	− 1·29	0·13	Darjeeling.	
	...	4	2	4	1	5	2	4	1·5	P	P	53	·250	0	2	P	P	6·06	P	P	6·06	P	P	2·34	Gantok.	

* Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 207 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	26·088	−·005	?	26·188	27th	26·015	17th	·173	69·6	78·0	−0·5	62·6	+0·8	70·3	+0·2	15·4	86·7	28th & 31st	56·9	3rd	29·8
	Pachmarhi	3,528	26·490	−·008	?	26·581	24th	26·429	20th	·152	74·7	87·1	+2·6	62·2	+1·8	74·7	+2·2	24·9	94·2	30th	50·2	4th	44·0
South India	Wellington	6,200	24·290	−·020	?	24·361	26th	24·236	20th	·125	63·2	75·3	+1·6	51·2	−1·6	63·3	0	24·1	77·7	28th	46·2	9th	31·5
XIII.—Extra India.																							
Ceylon	Trincomalee	12**	29·936	?	29·875	29·996	26th	29·856	20th	·140	84·1	87·8	?	76·2	?	82·1	?	11·6	91·0	29th	71·0	3rd	20·0
	Colombo	40	29·909	−·024	29·875	29·954	26th	29·852	20th	·102	85·9	90·6	?	75·1	?	82·9	?	15·5	92·5	3 days	70·5	1st	22·0
	Galle	48	29·938	?	29·912	29·992	26th	29·880	31st	·112	82·5	86·2	?	77·1	?	81·7	?	9·1	89·0	3 days	74·0	3 days	15·0
Persia	Meshed	3,104			Not recorded.						44·5	?	?	39·3	?	?	?	?	?	...	31·0	1st	?
	Resht				Ditto.						46·5	53·9	?	40·7	?	47·3	?	13·2	73·2	12th	33·8	24th	39·4
	Teheran	?	25·950	?	?	26·115	12th	25·720	20th	·395	44·3	54·8	?	38·1	?	46·5	?	16·7	67·5	15th	29·5	5th & 22nd.	38·0
	Ispahan	?	24·351	?	?	24·540	12th	24·130	20th	·410	45·3	60·4	?	37·3	?	48·8	?	23·1	70·1	14th	30·3	8th	39·8
			24·606	?	?	24·790	12th & 31st	24·390	20th	·400													
	Bushire	14	29·943	−·053	29·916	30·108	11th	29·664	25th	·444	64·6	71·6	−1·0	59·8	+1·6	65·7	+0·3	11·8	86·1	15th	52·3	6th	33·8
	Jask	?	29·938*	?	?	30·096	1st	29·809	17th	·287	72·3	80·3	?	67·2	?	73·7	?	13·1	88·0	31st	62·3	9th	25·7
Arabia	Muscat	?	29·942	?	?	30·124	1st	29·808	16th	·316	75·0	77·2	?	72·9	?	75·1	?	4·3	83·0	26th & 27th.	68·5	1st	14·5
	Baghdad	220?	29·789	−·140	29·995	30·021	5th	29·560	25th	·461	56·9	66·9	−7·8	52·3	+5·2	59·6	−1·3	14·6	73·1	28th	43·5	5th	29·6
	Aden	94	29·863	−·039	29·890	29·944	12th	29·776	18th	·168	79·1	84·9	−0·3	76·9	+2·1	80·9	+0·9	8·0	90·8	22nd	73·4	31st	17·4
	Perim	?	29·686	?	?	29·785	13th	29·619	18th	·166	79·7	86·4	?	76·8	?	81·6	?	9·6	89·1	24th	74·2	7th	14·9
Afghanistan	Kabul	?			Not recorded.						40·1	57·2	?	34·5	?	45·8	?	22·7	68·2	7th	25·8	1st	42·4
Central Asia	Kashgar	?	25·610	?	?	25·830	20th	25·270	17th	·560	39·8	57·8	?	36·3	?	47·1	?	21·5	69·2	16th	28·5	1st	40·7
Arabian Sea Islands.	Amini Devi	15	29·946	?§	29·889	30·019	26th	29·865	14th	·154	83·3	83·6§	?	77·9	?	80·7	?	5·7	85·8	28th	73·1	2nd	12·7
Africa	Zanzibar	73	29·904	?	29·904	29·968	24th	29·828	20th	·140	81·2	86·7	?	79·2	?	83·0	?	7·5	90·8	16th	73·9	23rd	16·9

** Erroneously given as 75 feet in the Monthly Weather Reviews for January and February 1896.

* Mean of 30 days.

§ Uncorrected.

—concluded.

India, Burma, etc., in March 1896—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.
	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 to 31st March 1896.	Normal rainfall for period from 1st to 31st March 1896.	Variation from normal of period 1st to 31st March.		
5	4	6	...	...	1	6	3	6	7·6	6·7	+13	39	·285	1·3	0	0·27	−0·27	0	0·12	− 0·12	0	0·12	− 0·12	0	Mount Abu	CENTRAL INDIA.
3	1	1	4	1	...	...	...	1	5·3	4·6	+26	49	·409	1·2	0	0·73	−0·73	0·02	0·32	− 0·30	0·02	0·32	− 0·30	0·02	Pachmarhi.	
1	1	5	3	1	...	...	...	...	3·1	2·8	+11	57	·326	1·4	1	3·13	−2·13	0·21	2·81	− 2·60	0·21	2·81	− 2·60	0·17	Wellington.	SOUTH INDIA.
																									XIII.—Extra India.	
1	1	1	...	2	...	6	...	...	0·6	?	?	76	·887	2·8	3	?	?	0·63	1·21	−0·58	0·63	1·21	−0·58	0·25	Trincomalee	CEYLON.
*	7	5	5	5	5	2	1	1	6·5	5·0	+30	70	·876	3·3	7	?	?	5·57	4·65	+0·92	5·57	4·65	+0·92	2·20	Colombo.	
3	4	5	5	1	...	...	...	3	3·3	?	?	81	·900	3·1	4	?	?	6·66	4·73	+1·93	6·66	4·73	+1·93	4·24	Galle.	
				Not	recorded.				?	?	?	?	?	6·6	10	?	?	5·23	?	?	5·23	?	?	1·05	Meshed.	PERSIA.
				Ditto.					?	?	?	86	·272	?	10	?	?	6·28	?	?	6·28	?	?	1·54	Resht.	
3	3	8	2	3	3	2	3	3	4·0	?	?	69	·202	6·6	9	?	?	3·44	?	?	3·44	?	?	0·32	Teheran,†	
..	...	2	3	2	...	14	4	6	7·5	?	?	95	·2J2	4·0	6	?	?	1·97	?	?	1·97	?	?	0·86	Ispahan.	
1	6	5	4	7	1	1	...	6	10·8	?	?	70	·425	3·7	4	?	?	1·05	?	?	1·05	?	?	0·38	Bushire.	
..	6	5	11	2	1	...	...	6	8·9	?	?	76	·605	1·6	5	?	?	2·20	?	?	2·20	?	?	0·90	Jask.	
..	1	...	3	2	1	...	11	13	4·4	?	?	74	·645	1·8	4	?	?	1·54	?	?	1·54	?	?	0·76	Muscat .	ARABIA.
5	5	2	2	2	8	1	2	4	5·7	?	?	83	·388	1·7	7	?	?	3·64	?	?	3·64	?	?	1·61	Baghdad.	
3	...	4	22	2	...	...	...	...	10·6*	14·9	−29	75	·739	5·1	0	?	?	0	1·16	−1·16	0	1·16	−1·16	0	Aden.	
1	...	...	19	5	...	...	6	...	9·7	?	?	80	·804	5·3	0	?	?	0·17	...	...	0·17	...	...	0·09	Perim.	
..	11	1	10	...	...	...	9	...	?	?	?	?	?	?	8	?	?	9·50	?	?	9·50	?	?	2·00	Kabul .	AFGHANISTAN.
30	...	...	...	...	...	...	1	...	2·0	?	?	51‡	·132‡	3·9	2	?	?	0·35	?	?	0·35	?	?	0·25	Kashgar .	CENTRAL ASIA.
..	15	3	...	...	...	...	3	10	11·0	?	?	77	·876	3·0	0	?	?	0	?	?	0	?	?	0	Amini Devi	ARABIAN SEA ISLANDS.
...	...	3	1	2	13	11	...	1	4·5	?	?	87	·931	3·1	11	?	?	5·28	?	?	5·28	?	?	1·66	Zanzibar .	AFRICA.

* Mean of 30 days. † Wind direction of 30 days. ‡ Mean of 22 days.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·805	29·795	·110	29·839	−·018	29·831	91·3	77·2	14·1	93·7	73·3	20·4	86·5	89·1	82·6	+1·3	74·6	79·1	80·0	77·9
	Rangoon	...	·916	·765	·151	·843	−·025	·820	97·1	71·5	25·6	101·8	65·1	36·7	82·7	93·2	81·6	+1·4	69·2	74·2	75·4	72·9
	Diamond Island	...	·922	·809	·114	·855	−·033	·831	84·6	76·8	7·8	88·6	73·8	14·8	82·0	81·7	78·9	+0·3	73·1	74·8	75·0	74·3
	Cocos Island	111	·843	·740	·103	·782	?	·824	88·6	76·0	12·6	92·4	73·2	19·2	83·9	84·6	80·1	?	72·4	75·4	75·4	74·4
	Akyab	...	·945	·826	·119	·891	−·022	·843	88·3	69·8	18·5	93·7	62·2	31·5	82·0	84·9	78·7	+0·6	67·6	75·9	77·6	73·7
Assam.	Silchar	...	·846	·704	·142	·771	−·034	·827	86·4	65·0	21·4	92·1	58·4	33·7	77·8	83·7	74·7	+1·3	63·4	70·5	72·5	68·8
	Sibsagar	...	·603	·456	·147	·530	−·059	·825	78·4	60·2	18·2	86·6	52·9	33·7	70·3	77·1	68·0	+0·4	59·8	65·8	68·4	64·7
	Dhubri	...	·783	·611	·172	·694	−·061	·763	91·0	64·8	26·2	98·3	56·9	41·4	78·4	89·6	76·6	+2·0	61·7	67·6	64·3	64·5
Bengal and Orissa.	Chittagong	...	·859	·738	·121	·793	−·037	·828	85·5	69·8	15·7	94·1	61·9	32·2	80·6	82·9	77·5	+0·7	68·8	74·8	75·2	72·9
	Narayanganj	...	·887	·747	·140	·813	−·037	·787	91·5	71·5	20·0	100·2	61·3	38·9	82·8	89·9	80·9	+2·4	68·0	74·5	73·0	71·8
	Calcutta (Alipore)	...	·886	·750	·136	·811	−·044	·778	93·9	71·7	22·2	101·2	63·1	38·1	84·9	92·1	81·9	+2·5	66·8	72·9	72·1	70·6
	Saugor Island	...	·891	·764	·127	·821	−·037	·790	88·9	77·0	11·9	97·4	66·9	30·5	83·4	85·2	80·9	+1·3	73·6	77·3	77·6	76·2
	Burdwan	...	·798	·656	·142	·718	−·034	·771	97·1	70·3	26·8	106·2	60·1	46·1	85·8	95·3	83·2	+2·2	64·8	69·3	69·6	67·9
	Berhampore	...	·825	·680	·145	·744	−·045	·758	97·0	67·9	29·1	106·0	57·7	48·3	87·6	96·4	82·2	+3·5	59·0	70·5	70·6	66·7
	False Point	...	·908	·780	·128	·843	−·043	·806	86·8	74·5	12·3	92·7	67·0	25·7	83·9	83·9	78·8	+0·8	73·2	77·5	77·8	76·2
	Cuttack	...	·832	·673	·159	·757	−·045	·778	99·4	74·5	24·9	105·4	68·1	37·3	85·0	96·7	84·8	+2·8	70·9	74·9	74·1	73·3
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·900	27·781	·119	27·836	−·030	·757	92·2	66·8	25·4	100·2	58·3	41·9	84·0	89·7	79·2	+3·7	51·2	61·6	63·4	58·7
	Patna	...	29·696	29·560	·136	29·623	−·054	·757	95·6	66·4	29·2	104·7	57·8	46·9	85·4	94·6	81·2	+4·0	55·4	63·2	65·5	61·4
	Darbhanga	...	·708	·561	·147	·630	−·060	·749	93·1	63·2	29·9	100·5	54·8	45·7	81·7	92·3	78·3	+2·2	58·4	65·3	67·7	63·8
	Allahabad	...	·598	·459	·139	·518	−·036	·777	96·1	64·0	32·1	104·4	54·8	49·6	86·9	95·3	79·9	+1·6	53·8	62·8	64·6	60·4
	Lucknow	...	·523	·397	·126	·454	−·045	·776	94·7	61·8	32·9	103·5	52·4	51·1	85·5	93·1	78·7	+2·2	53·4	64·5	66·9	31·6
Upper Sub-Himalayas.	Dehra Dun	...	27·663	27·563	·100	27·605	−·030	·796	83·8	55·7	28·1	94·7	48·0	46·7	73·5	79·6	68·6	+1·4	49·3	58·1	58·3	55·2
	Roorkee	...	28·986	28·880	·106	28·926	−·034	·779	88·9	56·7	32·2	99·0	46·8	52·2	78·2	86·4	72·1	+2·2	51·0	60·3	61·0	57·4
	Meerut	...	29·150	29·046	·104	29·090	−·027	·794	89·9	59·7	30·2	98·5	50·8	47·7	79·9	86·7	73·8	+2·3	53·7	61·0	62·3	59·0
	Lahore	...	·216	·124	·092	·164	−·006	·845	83·6	58·7	24·9	92·1	48·8	43·3	73·3	82·2	70·6	+1·7	53·6	61·4	64·5	59·8
	Ludhiana	...	·088	28·991	·097	·034	−·022	·821	85·5	58·7	26·8	92·9	51·4	41·5	76·2	83·7	71·5	+1·7	54·5	61·2	63·1	59·6
Indus Valley and N.W. Rajputana.	Peshawar	...	28·870	·779	·091	28·819	+·005	·941	75·1	53·9	21·2	84·1	44·9	39·2	67·3	73·0	63·8	+0·6	50·0	58·3	59·5	55·9
	Mooltan	...	29·520	29·416	·104	29·462	−·003	·857	87·9	61·0	26·9	97·3	51·7	45·6	74·8	85·0	73·5	+2·5	55·2	62·5	66·1	61·3
	Jacobabad	...	·746	·618	·128	·676	−·010	·821	92·0	62·4	29·6	101·7	49·9	51·8	81·7	89·9	76·4	+1·4	55·2	64·7	66·7	62·2
	Kurrachee	...	·951	·853	·098	·899	−·019	·861	87·5	68·2	19·3	94·3	59·4	34·9	82·7	82·6	76·7	?	65·6	73·1	73·8	70·8
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·512	28·397	·115	28·449	0	·828	93·0	62·9	30·1	104·2	51·2	53·0	83·9	90·7	77·2	+2·4	52·8	62·2	64·2	59·7
	Ajmere	...	·342	·226	·116	·280	−·003	·841	91·7	60·8	30·9	103·7	46·8	56·9	82·2	90·1	76·4	+2·2	53·0	64·1	67·0	61·4
	Deesa	...	29·488	29·354	·134	29·415	−·009	·828	98·9	64·3	34·6	111·0	53·1	57·9	87·8	96·9	82·1	+1·3	55·0	63·9	64·6	61·1
	Nowgong	...	·157	·031	·126	·086	−·027	·790	95·2	62·1	33·1	103·0	52·0	51·0	84·5	93·8	78·5	+1·3	53·0	63·2	65·6	60·6
	Agra	...	·361	·232	·129	·285	−·026	·796	93·2	64·4	28·8	102·6	55·4	47·2	83·7	91·6	77·9	+1·6	55·3	64·2	66·4	62·0
Deccan.	Belgaum	...	27·424	27·296	·128	27·359	−·025	·740	95·5	64·8	30·7	101·2	60·1	41·1	86·7	91·2	78·5	+1·3	58·5	61·8	67·3	62·5
	Sholapur	...	28·342	28·190	·152	28·263	−·025	·751	101·7	71·4	30·3	106·6	63·9	42·7	91·5	99·7	86·0	+1·8	56·9	66·7	70·2	64·6
	Poona	...	·109	27·965	·144	·043	−·013	·778	100·1	64·0	36·1	106·6	56·7	49·9	87·4	97·2	81·6	+1·8	55·4	62·2	64·8	60·8
	Akola	...	·977	28·826	·151	·897	−·036	·756	102·4	67·4	35·0	110·2	57·8	52·4	91·4	101·2	85·5	+2·6	54·3	65·4	68·8	62·9
	Buldana	2,132	27·817	27·681	·136	27·744	−·017	·765	96·6	72·2	24·4	105·0	66·5	38·5	86·8	94·5	84·8	+2·4	56·2	61·4	64·5	60·7

I.

t 85 Stations in India, Burma, etc., for March 1896.

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.		
																								%	%						
·821	·896	·902	·873	+·004	88	71	66	75	− 2	3·0	2·8	2·9	0	..	6	21	12	17	2	1	2	1	N 79° E	N 56° E	58	69	96	100	...	...	Port Blair .	Burma Coast and Bay Islands.
·686	·734	·646	·689	+·015	88	66	42	65	+ 1	1·4	1·7	1·6	−0·5	...	1	1	...	11	19	16	11	2	S 24° W	S 20° W	64	58	118	114	...	...	Rangoon .	
·769	·768	·778	·772	−·004	83	70	72	75	− 1	2·1	2·0	2·1	−0·1	...	7	1	...	...	...	...	11	43	N 47° W	N 42° W	90	85	390*	185	...	...	Diamond Island	
·749	·769	·762	·760	?	83	66	64	71	?	1·5	1·3	1·4	?	5	18	1	...	...	...	...	7	28	N 34° W	?	77	?	?	?	*Nil*	*Nil*	Cocos Island.	
·652	·819	·852	·774	+·091	89	75	71	78	+ 6	1·6	0·4	1·0	−1·1	...	5	7	14	3	3	2	22	6	N 41° W	N 58° W	16	26	86	91	...	...	Akyab .	
·568	·651	·655	·625	+·040	92	69	58	73	+ 1	4·1	4·0	4·1	−0·3	37	2	5	6	4	2	4	2	...	S 75° E	S 60° E.	13	22	74*	76	...	...	Silchar .	Assam.
·514	·577	·581	·557	+·013	98	78	64	80	+ 1	5·0	3·4	4·2	−1·9	3	1	54	1	2	...	...	...	1	N 46° E	N 57° E	89	59	150*	66	...	...	Sibsagar .	
·522	·539	·385	·482	−·024	84	57	28	56	− 5	1·5	1·1	1·3	−1·1	...	...	15	11	1	5	19	10	1	S 13° W	S 81° E	13	14	143	151	...	...	Dhubri .	
·697	·790	·779	·755	+·068	95	75	69	80	+ 6	4·3	1·7	3·0	−0·2	1	3	5	2	10	15	12	10	4	S 23° W	S 54° W	37	20	131*	139	...	...	Chittagong .	Bengal and Orissa.
·648	·750	·594	·664	+·027	83	67	43	64	− 3	3·6	3·1	3·4	+0·3	...	1	...	...	5	21	23	8	4	S 32° W	S 23° W	71	54	165	114	...	...	Narayanganj .	
·600	·657	·530	·596	−·079	77	55	37	56	−14	1·8	1·9	1·9	−0·5	...	4	1	1	1	12	29	9	5	S 51° W	S 32° W	64	49	114	125	...	...	Calcutta (Alipore).	
·791	·858	·850	·833	+·011	85	75	71	77	− 2	3·7	4·2	4·0	+0·3	...	4	1	...	4	33	16	3	1	S 15° W	S 33° W	69	60	357	295	...	...	Saugor Island.	
·550	·507	·385	·481	−·052	73	42	23	46	− 8	1·3	1·6	1·5	−0·9	2	6	1	1	...	6	21	13	12	S 81° W	S 78° W	56	43	78*	79	...	...	Burdwan .	
·390	·524	·407	·440	−·072	58	41	24	41	−16	0·8	1·5	1·2	−1·6	...	...	1	1	...	7	25	17	11	S 68° W	S 76° W	71	44	109*	82	...	...	Berhampore .	
·807	·861	·874	·847	+·060	94	74	75	81	− 1	3·3	2·7	3·0	−0·1	...	...	1	3	6	39	11	2	...	S 2° W	S 38° W	81	58	267*	268	...	...	False Point .	
·713	·730	·544	·662	0	83	61	32	59	− 3	1·0	1·6	1·3	−1·2	9	5	1	3	2	10	23	7	2	S 43° W	S 16° W	45	43	85	81	...	...	Cuttack .	
·188	·272	·261	·240	−·049	28	23	19	23	−11	2·6	2·5	2·6	+0·1	2	10	...	1	1	1	3	15	29	N 53° W	N 75° W	72	61	219	178	...	...	Hazaribagh .	
·299	·286	·242	·276	−·127	46	24	15	28	−17	1·0	0·7	0·9	−1·9	4	...	...	1	...	...	10	21	26	N 76° W	N 74° W	76	48	123*	84	...	...	Patna .	Gangetic Plain and Chota Nagpur.
·431	·413	·350	·398	−·063	74	38	22	45	− 9	0·2	0·5	0·4	−1·0	...	1	2	4	4	3	9	23	16	N 87° W	S 70° W	52	27	118	113	...	...	Darbhanga .	
·286	·255	·203	·248	−·122	48	20	12	26	−16	0·9	1·5	1·2	−0·8	5	3	2	3	1	1	2	22	23	N 63° W	N 65° W	63	34	102	74	...	...	Allahabad .	
·300	·332	·318	·317	−·045	52	27	20	33	−10	2·0	2·6	2·3	−0·5	1	6	1	...	...	4	6	20	24	N 69° W	N 54° W	69	49	94*	97	...	...	Lucknow .	
·277	·294	·224	·265	?	62	36	22	40	?	4·0	5·0	4·5	+1·0	17	6	...	1	4	2	6	25	1	S 85° W	N 78° W	43	25	29	55	...	...	Dehra Dun .	
·302	·288	·201	·264	−·067	66	31	16	38	−11	2·9	3·9	3·4	+0·9	6	...	6	1	4	1	5	2	37	N 46° W	N 58° W	53	23	97	70	...	...	Roorkee .	Upper Sub-Himalayas.
·340	·293	·241	·291	−·078	66	29	19	38	−12	1·5	2·8	2·2	−0·4	11	1	1	3	1	...	2	21	22	N 69° W	N 51° W	58	44	76*	63	...	...	Meerut .	
·350	·390	·378	·373	+·017	70	48	35	51	+ 2	4·0	4·1	4·1	+0·9	5	20	4	8	2	2	...	3	18	N 6° W	N 10° W	52	33	67	73	...	...	Lahore .	
·375	·343	·308	·342	−·024	75	38	27	47	− 7	4·3	5·0	4·7	+0·7	1	1	11	...	9	...	2	3	35	N 31° W	N 47° W	48	33	78	46	...	...	Ludhiana .	
·319	·379	·346	·348	+·018	75	57	45	59	+ 2	5·9	7·1	6·5	+1·6	19	6	7	5	4	1	5	4	11	N 13° W	N 11° E	19	17	90*	90	...	...	Peshawar .	
·367	·408	·394	·390	0	68	48	34	50	− 2	2·9	3·6	3·3	+0·8	1	...	30	...	7	...	8	...	15	N 24° E	N 11° W	29	21	48*	49	...	...	Mooltan .	Indus Valley and N.-W. Rajputana.
·353	·392	·350	·365	+·052	61	36	25	41	+ 3	2·6	3·8	3·2	+0·1	7	1	5	13	9	9	7	7	4	S 32° E	N 67° E	25	26	97*	82	...	...	Jacobabad .	
·605	·694	·721	·674	?	86	62	65	71	?	2·9	3·7	3·3	+0·4	...	...	1	3	1	2	24	28	3	S 68° W	S 69° W	74	64	266*	286	...	...	Kurrachee .	
·231	·296	·276	·285	−·031	48	24	18	30	− 8	2·7	4·4	3·6	+0·7	...	5	2	2	1	2	11	18	21	N 73° W	N 24° W	61	31	89	128	...	...	Jeypore .	
·324	·380	·378	·361	+·023	59	34	27	40	0	2·1	3·2	2·7	+0·3	4	2	6	1	5	6	7	24	7	S 82° W	S 61° W	37	28	87	91	...	...	Ajmere .	E. Rajputana, C. India and Gujarat.
·315	·283	·183	·256	−·062	51	23	11	28	− 2	1·0	2·1	1·6	−0·8	...	11	7	3	...	...	6	16	19	N 46° W	N 88° W	58	35	188	213	...	...	Deesa .	
·288	·294	·255	·279	−·058	51	25	16	31	− 8	0·5	1·9	1·2	−1·8	6	6	0	8	1	...	4	27	10	N 71° W	N 63° W	48	34	48*	55	...	...	Nowgong .	
·323	·345	·314	·327	0	53	30	21	35	− 3	1·0	3·0	2·0	−0·1	...	...	...	...	4	...	17	...	41	N 70° W	N 70° W	66	39	158*	108	...	...	Agra .	
·420	·245	·375	·347	−·061	68	19	27	38	− 3	0·3	2·0	1·2	−0·9	...	8	10	9	7	4	9	11	4	N 17° E	S 38° W	4	8	255	279	...	...	Belgaum .	
·289	·350	·370	·337	+·005	38	24	20	27	− 3	0·5	2·1	1·3	−1·3	10	7	7	5	9	4	9	2	9	N 45° E	N 51° E	4	9	177*	185	...	...	Sholapur .	Deccan.
·336	·249	·211	·265	−·060	57	20	12	29	− 1	0·7	1·5	1·1	−1·3	8	2	10	4	2	1	4	13	15	N 44° W	N 41° W	34	42	165	199	...	...	Poona .	
·254	·283	·270	·269	−·022	38	19	14	24	− 4	0·7	1·4	1·1	−0·5	...	10	9	7	1	1	4	10	20	N 26° W	N 43° W	47	44	118*	108	...	...	Akola .	
·258	·230	·236	·241	−·050	32	19	15	22	− 6	0·8	2·5	1·7	−0·5	1	10	7	3	1	1	2	2	35	N 28° W	N 28° W	67	50	160*	180	0·02	0·02	Buldana .	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85 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.
Deccan—*continued.*	Khandwa	...	28·889	28·740	·149	28·810	−·013	29·786	100·3	67·7	32·6	109·7	57·1	52·6	89·6	99·5	84·2	+3·0	53·8	63·0	65·6	60·8
	Hoshangabad	...	·919	·768	·151	·839	−·025	·778	98·1	66·9	31·2	106·3	57·2	49·1	87·4	97·1	82·7	+2·1	54·7	?	?	?
	Nagpur	...	·889	·724	·165	·802	−·021	·755	101·6	70·3	31·3	109·2	62·1	47·1	89·8	99·2	86·3	+2·7	57·3	70·6	74·5	67·5
	Do. (Sanitary Commr.'s Office)	...	·906	·764	·142	·835	?	·782	102·7	69·1	33·6	109·8	60·9	48·9	91·0	100·9	85·5	?	56·0	70·6	75·4	67·3
	Jubbulpore	...	·578	·437	·141	28·503	−·039	·760	96·9	62·8	34·1	104·5	50·3	54·2	85·9	95·7	80·0	+3·1	54·3	62·7	65·8	60·9
	Sangor	...	·165	·036	·129	·096	−·016	·773	95·8	66·0	29·8	103·7	56·3	47·4	87·1	93·9	80·8	+2·7	52·5	61·2	63·7	59·1
	Raipur	...	·852	·802	·150	·872	−·018	·758	100·1	72·4	27·7	106·7	60·7	46·0	90·7	97·9	86·6	+3·9	57·5	65·3	66·7	63·2
	Sutna	...	·869	·737	·132	·795	−·026	·781	94·7	63·8	30·9	101·5	54·5	47·0	87·1	93·4	79·1	+2·5	51·6	62·5	63·9	59·3
	Hyderabad (Deccan)	...	·243	·108	·135	·172	?	·761	99·2	70·2	29·0	103·2	65·6	37·6	89·3	97·0	84·2	?	62·9	69·7	71·2	67·9
West-Coast.	Bombay	...	29·924	29·801	·123	29·857	−·019	·833	86·1	74·2	11·9	91·9	69·4	22·5	81·4	83·4	79·7	+0·9	68·9	73·5	74·6	72·3
	Ratnagiri	...	·836	·723	·113	·774	−·017	·821	87·1	73·3	13·8	93·1	68·8	24·3	83·5	84·6	79·7	0	69·8	75·0	75·7	73·5
	Karwar	...	·922	·797	·125	·854	−·016	·828	86·8	72·3	14·5	90·3	64·6	25·7	83·0	85·1	79·4	−0·8	70·5	74·4	76·3	73·7
	Cochin	...	·944	·820	·124	·876	−·022	·813	91·5	78·0	13·5	93·4	70·9	22·5	86·9	88·7	84·2	+1·0	77·7	78·2	79·2	78·4
South India.	Salem	...	·044	28·871	·173	28·964	−·024	·822	99·3	70·4	28·9	102·6	57·9	44·7	87·5	96·7	83·0	+0·1	67·5	76·0	76·7	73·4
	Mysore	...	27·465	27·321	·144	27·393	?	·773	94·2	67·3	26·9	97·3	66·0	37·3	83·9	91·8	80·2	?	59·2	66·6	65·0	63·6
	Mercara	...	26·276	26·158	·118	26·223	−·017	?	86·0	63·3	22·7	90·8	60·7	30·1	78·0	81·3	73·6	+2·1	57·7	62·7	63·9	61·4
	Bangalore	...	·985	·854	·131	·922	−·018	·774	91·7	65·0	26·7	94·5	60·9	33·6	82·1	89·8	77·9	+0·9	58·6	65·3	64·7	62·9
	Hassan	...	·921	·793	·128	·859	?	·773	92·2	61·7	30·5	96·2	54·3	41·9	82·3	90·3	76·5	?	59·7	67·6	68·9	65·4
	Chitaldroog	...	27·556	27·422	·134	27·487	?	·752	96·6	70·9	25·1	99·7	67·3	32·4	86·9	94·4	83·1	?	58·3	66·0	67·3	63·9
	Trichinopoly	...	29·701	29·553	·148	29·633	−·028	·815	98·6	72·1	26·5	101·4	60·3	41·1	83·9	96·1	83·5	+0·3	68·6	73·5	73·0	71·7
	Madras	...	·950	·824	·126	·887	−·021	·839	90·5	71·8	18·7	95·3	66·0	29·3	86·5	85·9	80·5	−0·3	?	5·5	75·9	74·4
	Bellary	...	28·458	28·308	·150	28·381	−·006	·759	101·8	72·6	29·2	105·2	64·5	40·7	90·6	98·8	86·5	+0·7	61·6	67·9	69·9	66·5
	Vizagapatam	...	29·912	29·785	·127	29·842	−·035	·810	91·9	73·8	18·1	97·2	66·2	31·0	88·4	87·7	83·1	−0·2	70·9	75·6	77·0	74·5
	Cocanada	...	·930	·787	·143	·859	?	·820	94·7	73·8	20·9	100·1	69·0	31·1	86·4	92·6	83·7	?	70·8	75·2	75·6	73·9
Hill Station, Baluchistan.	Quetta	...	24·665	24·588	·077	24·619	+·001	?	66·1	42·4	23·7	76·2	29·7	46·5	57·4	61·8	53·2	+2·1	38·4	48·1	49·1	45·2
Hill Stations, Punjab.	Leh	...	19·697	19·619	·078	19·663	−·001	?	40·1	18·7	21·4	61·0	4·3	56·7	30·9	37·5	29·2	−3·2	?	23·1	29·5	?
	Srinagar	...	24·950	24·870	·080	24·904	?	?	57·8	38·8	19·0	67·4	31·6	35·8	48·4	56·4	47·9	?	38·6	45·6	50·6	44·9
	Murree	...	23·875	23·836	·039	23·848	−·001	?	67·0	?	?	67·6	?	?	51·9	53·2	?	?	?	52·1	53·1	
	Chamba	3,005	26·960	26·862	·098	26·922	−·009	?	71·5	51·4	20·1	79·9	44·0	35·9	61·5	69·0	59·8	−0·8	47·6	53·0	55·9	52·2
	Kailang	10,087?	20·815	20·787	·028	20·812	0	?	40·7	22·8	17·9	46·9	10·5	36·4	33·5	36·1	29·6	0	21·6	28·6	31·0	27·1
	Simla (Ridge)	...	23·138	23·089	·049	23·106	−·003	?	58·5	45·4	13·1	65·4	35·2	30·2	54·1	55·8	51·5	+1·7	38·6	43·1	45·1	42·3
Hill Stations, N.W.P.	Chakrata	...	·351	·286	·065	·312	−·004	?	61·8	45·6	16·2	72·1	38·6	33·5	55·3	56·3	52·5	+1·0	39·4	44·7	44·0	42·7
	Ranikhet	...	24·129	24·057	·072	24·086	+·001	?	69·2	51·1	18·1	77·4	43·1	34·3	63·2	64·9	59·3	+2·6	44·0	50·4	50·6	48·3
Hill Station, Nepal.	Katmandu	4,388	25·581?	25·4977	·084	25·5407	?	?	81·6	?	?	88·4	?	?	68·4	75·8	?	?	42·5	54·4	56·1	51·0
Hill Station, Bengal.	Darjeeling	...	22·989	22·907	·082	22·948	+·001	?	59·5	44·4	15·1	65·5	40·2	25·3	55·2	55·7	51·0	+2·7	40·2	47·0	47·9	45·0
Hill Stations, Central India.	Mount Abu	...	26·115	26·028	·087	26·066	−·002	?	78·5	62·6	15·9	90·0	57·1	32·9	73·1	76·7	70·1	+0·6	50·7	56·7	58·1	55·2
	Pachmarhi	...	·512	·412	·100	·458	−·004	?	87·5	62·3	25·2	95·7	50·3	45·4	80·5	86·0	76·4	+2·4	54·6	?	?	?
	Chikalda	3,642	·407	·298	·109	·348	−·005	?	88·6	69·3	19·3	96·9	63·6	33·3	81·2	86·8	80·4	+2·8	54·1	57·9	60·2	57·4

I—*continued.*

n India, Burma, etc., for March 1896—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 for the month.	Heaviest rainfall during the month.		
																								%	%						
·247	·249	·210	·235	—·072	36	18	11	22	— 9	0·7	0·7	0·7	−1·0	...	3	11	2	3	1	3	10	29	N 38° W	N 46° W	53	48	131	113	...	...	Khandwa .	Deccan—*continued.*
·281	?	?	?	?	42	?	?	?	?	1·0	1·3	1·2	−0·7	17	4	12	5	...	3	14	5	2	N 71° W	N 55° W	5	15	70	61	...	...	Hoshangabad.	
·313	·512	·547	·457	+·120	43	37	29	36	+ 4	1·2	3·7	2·5	0	21	4	12	5	3	3	4	5	5	N 27° E	N 20° W	14	6	87	108	...	...	Nagpur .	
·291	·504	·568	·454	?	41	34	28	34	?	1·0	3·2	2·1	?	4	11	6	5	2	10	3	8	6	N 32° W	?	12	?	32*	?	...	...	Do. (Sanitary Commr.'s Office)	
·322	·287	·266	·292	—·039	56	23	15	31	− 7	0·8	1·7	1·2	−1·1	...	5	1	4	6	11	15	14	6	S 52° W	N 69° W	42	22	68	70	...	...	Jubbulpore .	
·234	·223	·218	·225	—·053	36	17	13	22	− 9	0·5	1·4	0·9	−0·5	...	7	15	2	6	3	13	8	8	N 42° W	N 53° W	14	33	65	78	...	...	Saugor .	
·283	·292	·241	·272	−·096	35	20	13	23	−14	0·8	2·4	1·6	−0·4	4	4	6	2	...	9	25	5	7	S 58° W	N 79° W	40	20	132*	118	...	...	Raipur .	
·237	·262	·231	·243	−·008	40	20	14	25	− 6	0·4	0·2	0·6	−1·4	4	13	3	...	...	4	...	11	27	N 43° W	N 55° W	66	39	126*	137	...	...	Sutna. .	
·487	·485	·442	·471	?	66	36	26	43	?	0·4	1·7	1·1	?	7	2	1	11	10	7	4	14	6	S 14° W	?	16	?	87*	?	...	...	Hyderabad (Deccan).	
·637	·724	·772	·711	−·005	76	68	65	70	− 3	1·1	0·6	0·9	−0·8	...	4	3	6	...	2	1	11	35	N 45° W	N 28° W	64	55	255	274	...	...	Bombay .	West Coast.
·688	·765	·775	·743	+·036	84	66	65	71	+ 3	1·0	1·7	1·4	+0·8	...	11	...	...	...	...	13	11	27	N 62° W	N 72° W	72	60	220	236	...	...	Ratnagiri .	
·727	·740	·790	·752	−·006	91	65	65	74	0	0·8	1·2	1·0	−0·6	...	1	...	...	...	...	8	22	31	N 71° W	N 80° W	85	70	142	?	...	...	Karwar .	
·849	·852	·870	·857	+·017	88	67	64	73	− 2	2·6	1·5	2·1	−0·8	...	2	3	...	1..	...	...	31	26	N 65° W	N 81° W	84	47	179	?	...	...	Cochin .	
·647	·752	·658	·686	+·049	85	58	38	60	+ 6	1·7	2·4	2·1	−0·2	10	2	10	18	5	5	7	3	2	S 80° E	S 55° E	32	42	164	129	...	...	Salem .	South India.
·409	·442	·285	·379	?	60	38	20	39	?	1·5	2·6	2·1	?	9	3	13	18	8	4		2	2	N 87° E	?	43	?	166*	?	...	...	Mysore .	
·416	·396	·395	·402	−·077	72	42	38	51	−11	1·1	3·1	2·1	−1·6	8	2	5	9	9	7	14	5	3	S 7° E	N 42° W	26	18	142	78	...	...	Mercara .	
·423	·436	·325	·395	—·061	68	40	23	44	— 6	0·8	1·5	1·2	−1·4	...	2	9	21	13	8	6	2	1	S 67° E	S 22° E	52	50	185*	86	...	...	Bangalore .	
·497	·511	·461	·490	?	89	46	32	56	?	1·7	3·3	2·5	?	...	2	15	18	15	4	2	3	3	S 88° E	?	52	?	78*	?	...	...	Hassan .	
·336	·384	·335	·352	?	45	30	20	32	?	0·8	1·6	1·2	?	...	5	11	19	10	2	3	6	6	N 75° E	?	35	?	170*	?	...	...	Chitaldroog .	
·663	·609	·506	·593	—·078	83	43	30	52	− 6	1·8	2·5	2·2	−1·0	16	4	33	5	...	1	...	1	2	N 43° E	S 86° E	61	51	90	95	...	...	Trichinopoly .	
?	·738	·763	·772	+·004	?	58	62	74	0	2·6	1·1	1·9	−0·5	...	...	1	10	36	12	3	...	...	S 41° E	S 50° E	84	81	126	152	...	...	Madras .	
·415	·394	·372	·394	+·006	52	28	20	33	0	1·4	3·3	2·4	+0·2	9	3	3	16	6	11	4	4	6	S 52° E	S 26° E	23	20	89	110	...	...	Bellary .	
·723	·720	·788	·744	—·001	86	54	60	67	+ 1	1·1	1·2	1·2	−0·7	...	...	...	...	2	12	23	25	...	S 53° W	S 45° W	80	58	77	68	...	...	Vizagapatam .	
·720	·726	·663	·703	?	86	58	44	63	?	1·2	0·8	1·0	?	...	...	...	3	12	18	20	8	1	S 16° W	?	66	?	159*	?	...	...	Cocanada .	Hill Stations, Baluchistan.
·199	·245	·220	·221	+·013	72	52	41	55	− 1	4·8	6·0	5·4	+1·2	6	1	...	2	7	14	11	12	9	S 45° W	S 65° W	43	36	121*	107	...	...	Quetta .	
?	·067	·097	?	?	?	37	43	?	?	5·5	6·4	6·0	−0·4	...	...	4	2	6	9	31	9	1	S 35° W	S 37° W	63	18	45	50	...	...	Leh .	Hill Stations, Punjab.
·237	·278	·307	·274	?	98	82	68	83	?	6·5	6·9	6·7	?	6	13	6	2	11	11	1	3	8	N 53° E	?	10	?	129*	?	...	...	Srinagar.	
?	·393	·411	?	?	?	98	98	?	?	5·5	6·9	6·2	+0·2	...	3	4	4	38	6	1	1	5	S 50° E	S 35° E	65	28	262*	210	...	...	Murree .	
·290	·309	·301	·300	+·023	76	57	45	59	+ 5	6·1	8·1	7·1	+1·5	28	3	...	...	4	...	...	6	21	N 50° W	N 1° E	39	19	110*	118	3·36	0·74	Chamba.	
·110	·120	·133	·121	−·006	87	62	63	71	− 1	6·5	8·1	7·3	+1·0	...	...	...	...	2	6	16	27	11	S 76° W	S 64° W	74	71	33	32	3·65	1·69	Kailang .	
·165	·168	·191	·176	−·021	54	40	43	46	− 5	5·5	6·9	6·2	+1·3	8	11	9	2	1	16	12	1	2	S 17° W	S 42° W	11	31	110	?	...	...	Simla (Ridge).	Hill Stations, N.W.P.
·181	·188	·164	·178	−·017	59	45	37	47	− 5	2·4	4·4	3·4	−0·6	8	14	4	...	1	36	1	...	...	S 7° E	S 56° W	39	8	259	138	...	...	Chakrata .	
·217	·235	·222	·225	—·006	58	41	36	45	− 8	2·2	4·0	3·1	−0·7	12	4	4	3	...	6	12	18	3	S 77° W	S 56° W	37	44	91*	71	...	...	Ranikhet .	
?	·266	·227	?	?	?	38	25	?	?	1·2	1·3	1·2	−2·6	...	2	...	23	2	...	1	34	...	S 89° W	N 74° W	16	66	35	?	*Nil*	*Nil*	Katmandu .	Hill Station, Nepal.
·209	·242	·256	·236	—·019	71	55	58	61	—12	1·8	4·2	3·0	−2·2	...	1	5	6	3	...	12	19	9	N 89° W	S 77° W	35	43	236	160	...	...	Darjeeling .	Hill Stations, Hill Station, Bengal.
·239	·274	·274	·262	+·049	42	34	30	35	+ 4	1·6	2·5	2·1	−0·5	...	6	4	...	2	4	13	16	17	N 79° W	S 85° W	54	39	182*	159	...	...	Mount Abu .	Hill Stations, Central India.
·344	?	?	?	?	61	?	?	?	?	1·1	2·1	1·6	−0·5	35	3	2	3	1	...	2	8	8	N 52° W	N 57° W	19	36	120*	109	...	...	Pachmarhi .	
·247	·215	·218	·227	−·069	34	20	17	24	− 9	1·0	2·7	1·9	−0·3	24	12	2	...	1	3	5	2	13	N 39° W	N 52° W	32	34	170	172	0·05	0·05	Chikalda .	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85 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 Stations, South India.	Wellington . .	...	24·303	24·224	·079	24·264	−·010	?	75·6	51·2	24·4	77·8	46·2	31·6	71·0	70·8	62·2	0	47·1	55·7	57·0	53·3
Extra India.	Muscat . . .	...	29·957	29·861	·096	29·909	?	?	77·1	72·9	4·2	83·0	68·5	14·5	75·9	76·9	75·0	?	66·7	70·6	71·8	69·7
	Aden . . .	...	·887	·766	·121	·815	−·037	29·840	85·2	76·9	8·3	90·9	73·3	17·6	80·9	83·0	80·5	+1·4	70·8	73·7	73·3	72·6
	Perim . . .	...	·702	·573	·129	·625	?	?	86·5	76·8	9·7	89·1	74·2	14·9	83·1	83·6	80·9	?	73·0	76·1	76·3	75·1
	Zanzibar . .	...	·909	·800	·109	·855	−·004	·855	86·7	79·2	7·5	90·8	74·0	16·8	83·1	86·2	82·9	+0·2	76·1	79·2	80·5	78·6
	Port Victoria (Seychelles) .	15	·953	·862	·091	·908	?	·847	82·9	77·2	5·7	84·7	74·5	10·2	81·5	82·3	79·9	?	73·5	76·2	76·3	75·3
	Mauritius . .	181	?	?	?	·799	+·020	·927	?	?	?	89·5	64·3	25·2	?	?	77·2	−1·2	?	?	?	?

II—*concluded.*

in India, Burma, etc., for March 1896—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.		
																								%	%						
·289	·289	·327	·302	−·032	75	39	44	53	−6	2·0	3·9	3·0	0	3	5	7	10	27	8	...	...	2	S 64° E	S 42° E	58	65	71	62	...	...	Wellington	Hill Station, South India.
·576	·683	·716	·658	?	71	76	77	75	?	1·8	3·1	2·4	?	...	2	11	12	3	2	...	5	27	N 5° W	?	40	?	104	?	...	...	Muscat	Extra India.
·678	·736	·694	·703	−·006	73	70	62	68	−4	3·8	0·6	2·2	−1·3	3	2	13	29	6	6	3	...	...	S 88° E	N 83° E	64	73	345	355	...	...	Aden	
·763	·809	·823	·798	?	83	71	71	75	?	3·4	0·1	1·8	?	1	...	1	27	24	...	1	6	2	S 67° E	?	64	?	391	?	...	...	Perim	
·861	·949	·971	·927	+·045	87	84	77	83	+6	4·5	5·1	4·8	−0·1	...	3	7	7	8	22	11	...	2	S 18° E	N 39° E	13	12	101	150	...	...	Zanzibar	
·776	·834	·827	·812	?	83	78	75	79	?	6·4	5·8	6·1	?	4	7	2	3	3	...	...	10	33	N 42° W	?	64	?	133	?	15·11	2·26	Port Victoria (Seychelles)	
?	?	?	·709	?	?	?	?	79	+1	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	240	240	3·51	1·15	Mauritius	

G. I. C. P. O.—No. 21 Meteor.—16-7-96.—385.

LITHO. BY J. N. MUNDLE.

Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric pressure in inches and are drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the more 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. 150, Wr. I—June 96—6 ..
Reg. No. 149, Wr. I—Apl 95—4,500
Jones ... 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.
Reg No 149. Wr. I.—Apl. 95.—4,500.
Calcutta

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

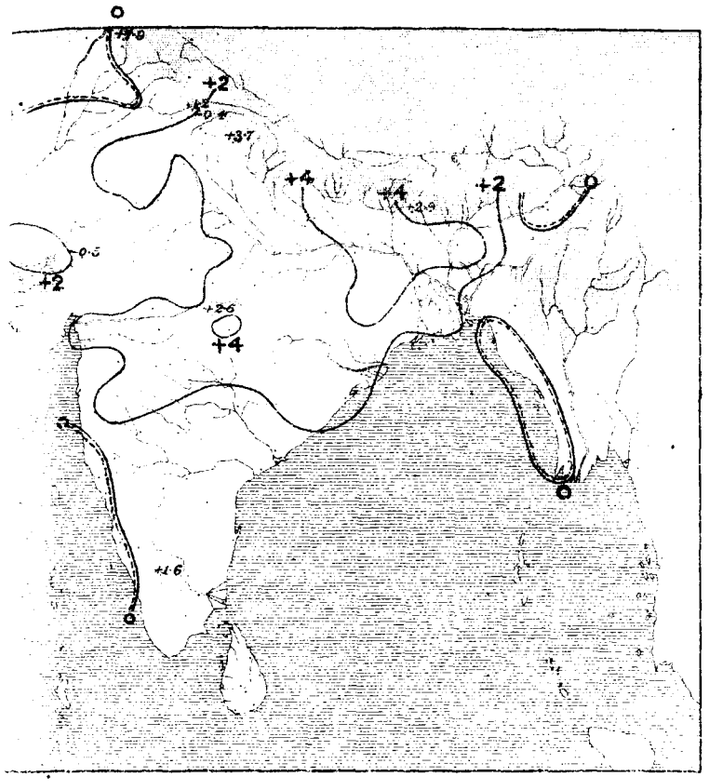
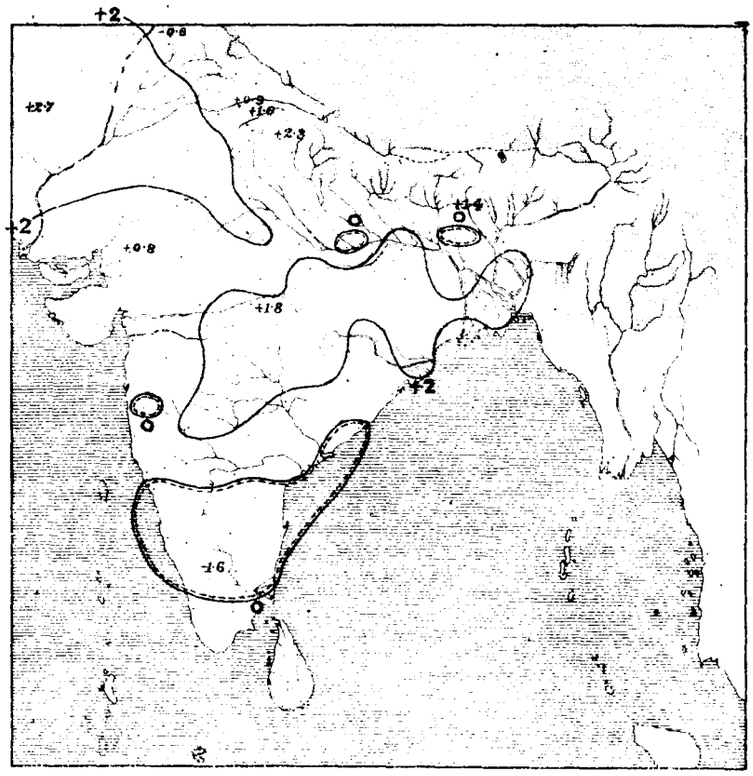


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

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

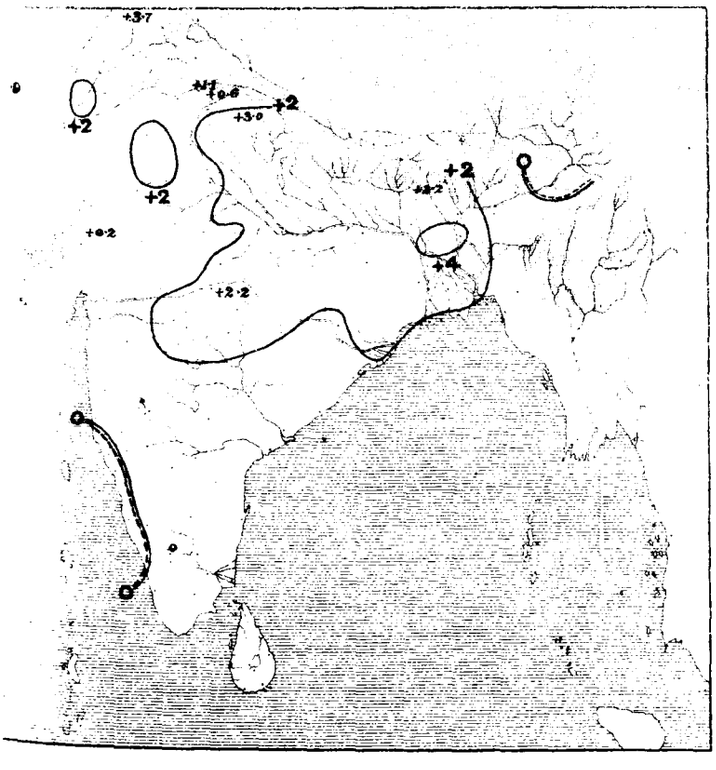
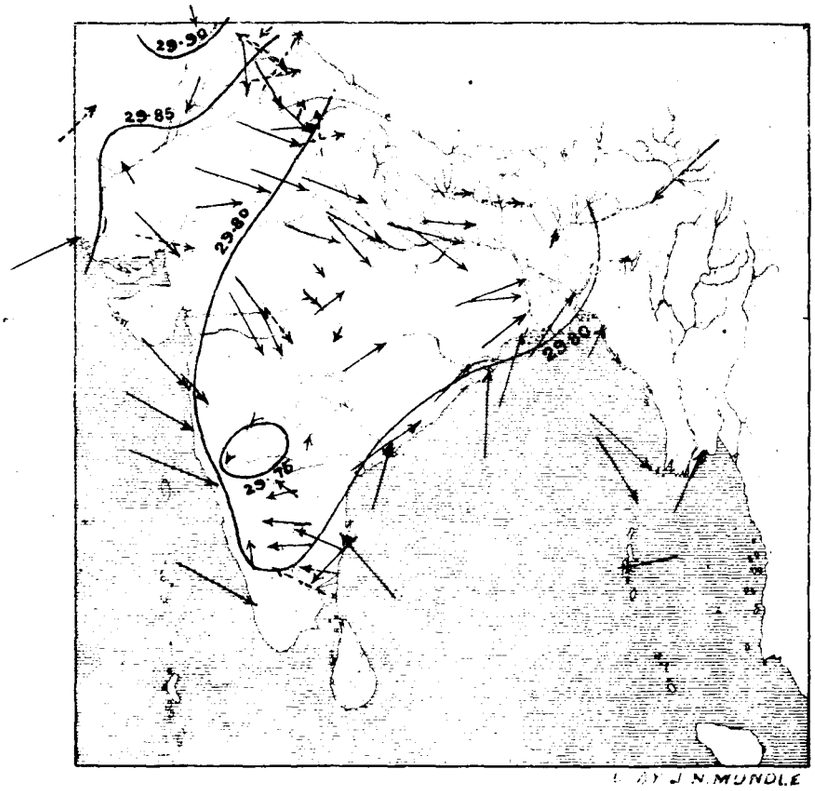


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF MARCH 1896.



Explanation.

Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°) The isobars are given for each twentieth of an inch. The arrows show the directions of the resultants of the wind recorded at 10 and 16 hours, and by their

Explanation.

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

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

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

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, APRIL, 1896.

INTRODUCTION.

THIS Review of the weather in India during the month of April 1896 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 85 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 1896.

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 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 dust-storms. 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 south-westerly winds from the equatorial belt.

At the commencement of the month pressure was in general defect, the deficiency being greatest in North-Eastern India (more especially Central Bengal). Temperature was largely in excess over the whole of Northern and Central India. The area of greatest excess included Rajputana, Sind, Cutch and Kathiawar, where the mean temperature of the previous 24 hours was from 8° to 12° above the normal. No important change occurred in the distribution of pressure until the 4th, when the area of low pressure in North-Eastern India was transferred from Chota Nagpur to the submontane districts of North Bihar and North Bengal. Assam received light to moderate showers from the 1st to the 4th.

The transfer of the low pressure area to the submontane districts of Bengal intensified the westerly winds in the Gangetic Plain. Their extension on the 4th and 5th into Central Bengal accompanied the transfer of the area of greatest excess of temperature from Rajputana to Chota Nagpur.

The following table gives data illustrating this change and also the large excess of temperature which obtained over the whole of Northern India at this time :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	1st April.	2nd April.	3rd April.	4th April.	5th April.
	°	°	°	°	°
Punjab	+5·1	+4·6	+5·3	+3·9	+2·8
Sind and Rajputana	+9·0	+8·8	+7·1	+5·8	+3·0
Central India and Gujarat	+6·6	+8·4	+9·7	+6·0	+3·4
Central Provinces and Berar	+4·9	+7·7	+9·7	+5·3	+3·0
North-Western Provinces and Oudh.	+5·2	+6·6	+6·8	+4·5	+3·8
South Bihar	+3·7	+3·8	+4·3	+6·0	+6·9
West Bengal	+4·4	+5·6	+5·9	+5·1	+6·7
Central Bengal	+7·3	+7·5	+5·3	+6·2	+8·6
Chota Nagpur	+4·4	+7·4	+8·3	+8·0	+7·8

Pressure was on the 5th in large defect in North-Eastern India, in considerable defect in North-Western India, and in slight defect in Southern India. The most important feature of the pressure distribution was the position of the area of minimum pressure in the submontane districts of North Bihar and North Bengal. It was unchanged during the next four days. Strong westerly dry winds giving very high temperatures continued in Northern India and more especially in North-Eastern India during this period.

The following table gives mean temperature data for Northern and Central India from the 6th to the 10th :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	6th April.	7th April.	8th April.	9th April.	10th April.
	°	°	°	°	°
Baluchistan (Quetta)	−0·5	+4·0	+5·8	+6·8	+5·4
Sind	+1·3	+2·2	+4·0	+2·6	+4·6
Punjab	+3·3	+4·0	+5·0	+6·2	+9·5
Rajputana	+4·3	+4·6	+2·6	+6·9	+5·5
Central India and Gujarat	+1·3	+2·9	+2·3	+4·6	+3·1
North-Western Provinces and Oudh.	+1·5	+3·2	+2·4	+3·6	+3·2
Bihar	+5·4	+3·5	+3·3	+4·6	+3·6
Chota Nagpur	+3·6	+5·3	+6·0	+4·7	+5·5
West Bengal	+4·6	+3·9	+5·0	+3·9	+4·4

The chief features during this period were, (1st), the excessive temperature in Chota Nagpur, South Bihar and West and Central Bengal due to the persistent abnormal extension of westerly winds into Central Bengal, and (2nd), the rapid and large increase of temperature on the 9th and 10th in Upper India. This was the prelude to the first disturbance or hot weather storm of the month.

Weather was showery and slightly disturbed in Persia from the 6th to the 10th. The disturbance extended into Baluchistan on the 9th. Pressure gave way locally in Upper India on the 11th and a depression was shown in Upper Sind on the morning of the 12th. It intensified slightly during the day and began to advance eastwards on the morning of the 13th. It lay along the foot of the Punjab hills on the morning of the 14th. An unusually large fall of pressure had occurred during the previous 24 hours over the Western Himalayas and weather was stormy with much rain and snow over the higher and interior ranges. The depression filled up during the next 24 hours, but weather was disturbed in the hills of Upper India until the 17th. The storm gave light to moderate showers in the North and East Punjab and Kashmir and numerous duststorms in the South Punjab and Rajputana.

Temperature was excessive during this period from the 11th to the 14th in North-Western India, as is shown by the following data :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	11th April.	12th April.	13th April.	14th April.	15th April.
	°	°	°	°	°
Baluchistan (Quetta) . . .	+7·3	+9·6	+7·6	−4·1	−6·2
Sind	+6·9	+8·7	+9·5	+9·8	+4·7
Punjab	+6·3	+4·7	+5·0	+5·9	−3·1
Rajputana	+5·8	+7·2	+8·6	+11·0	−0·1
Central India and Gujarat . .	+3·1	+4·6	+6.8	+8·4	+6·5
North-Western Provinces and Oudh.	+4·3	+5·5	+6·6	+9·8	+4·6

The low pressure area at the foot of the hills in North-Eastern India disappeared on the 12th during the existence of the cyclonic storm in Upper India. It re-appeared on the 15th, and Assam and North and East Bengal received moderate rain for a short period, *viz.*, from the 14th to the 18th.

The temperature data given in the preceding table show that a very large decrease of temperature occurred at Quetta from the 13th to the 15th. This was due to an unusually well-defined dry and cool wave which advanced from the Persian area across Northern India during the next five days, and was on the whole the most remarkable feature of the meteorology of the month.

The passage of this wave caused a temporary reduction of temperature, ranging between 15° and 26° in amount, over nearly the whole of Northern and Central India. The following data of the largest mean excess and mean deficiency of temperature in the political divisions of Northern and Central India between the 13th and 20th of the month, give an approximate intensity of the effect of this cool wave :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M.	Date.	Variation from normal of mean temperature of 24 hours preceding 8 A.M.	Date.	Total fall.
	°		°		°
Punjab	+5·0	14th	−10·7	18th	−15·7
Rajputana	+11·0	,,	−11·7	19th	−22·7
Central India and Gujarat . .	+8·4	,,	−8·8	,,	−17·2
North-Western Provinces and Oudh.	+9·8	,,	−9·5	,,	−19·3
Central Provinces and Berar .	+6·0	15th	−5·8	20th	−11·8
Bihar	+6·1	,,	−4·7	,,	−10·8
Chota Nagpur	+9·6	,,	−5·4	,,	−15·0
West Bengal	+5·2	13th	−3·2	,,	−8·4

The reduction of temperature below the normal was as marked in the day as in the night temperature. The lowest minimum or night temperatures of the month were recorded during this period. They were not quite so low as have been occasionally recorded in April, but were remarkable from their contrast with the excessive temperature which had previously prevailed.

The passage of this cold wave caused a comparatively sudden and large reduction in the amount of aqueous vapour in the air, so that notwithstanding the very low temperature of the period, the humidity of the air was reduced largely below the normal.

The following gives data for nine stations illustrating the humidity conditions of this very dry period :—

Station.	Normal.		Lowest.		
	Aqueous vapour pressure, April.	Relative humidity, April.	Aqueous vapuor pressure during period 14th to 22nd April 1896.	Relative humidity during period 14th to 22nd April 1896.	Date.
	"	%	"	%	
Mount Abu . . .	·348	28	·039	4	19th
Deesa	·366	28	o?	o?	17th
Jeypore . . .	·317	28	·063	3	14th
Khandwa . . .	·347	27	o?	o?	19th
Saugor	·301	26	·068	4	19th
Sutna	·249	22	·041	2	22nd
Buldana . . .	·314	26	·026	2	20th
Allahabad . . .	·390	32	·034	2	15th
Hazaribagh . . .	·296	28	·075	6	22nd

Pressure increased rapidly at the level of the plains during the advance of this dry and cool wave, and was on the 20th and following days in general excess.

A shallow depression due to hot weather actions formed in Sind on the 19th. It advanced eastwards across Rajputana to the foot of the hills in Rohilkhand on the 21st. It gave some duststorms on the plains and a few light showers in the hills, but was otherwise of little importance.

A similar but feebler depression formed in Sind on the 22nd and advanced eastwards through Rajputana on the 23rd. It disappeared at the foot of the hills during the next 24 hours.

Temperature had increased steadily from the 21st to the 26th and was on the latter day again in general excess. The following table giving mean variation data for

the 13th, 20th and 26th illustrates the large changes of temperature during this fortnightly interval :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	13th April.	20th April.	26th April.
	°	°	°
Burma	+1·8	+2·5	+1·0
Bengal and Assam	+3·4	−1·3	+1·0
North-Western Provinces and Oudh	+6·6	−7·5	+3·9
Punjab	+5·0	−4·5	+5·9
Sind and Rajputana	+8·9	−5·2	+5·4
Central India and Gujarat	+6·8	−6·1	+5·2
Central Provinces and Berar	+4·3	−5·8	+4·8
Bombay	+2·7	−0·8	+3·8
Madras	+2·5	+1·1	+2·1

Pressure changed irregularly during the same interval, but on the whole increased to a moderate extent and was in considerable to large excess on the 23rd over the whole of Northern and Central India. It decreased steadily during the remainder of the month and was in considerable to large defect in Northern India on the 28th and 29th. The area of lowest pressure lay over Chota Nagpur and Baghelkhand, and steep gradients obtained in Bengal. As usual under these conditions in April, Assam and North and East Bengal were visited by series of thunderstorms which gave heavy and general rain from the 27th to the end of the month.

The following gives the average daily rainfall in the three divisions of Assam and in three divisions of Bengal from the 27th to the 30th :—

DIVISION.	AVERAGE ACTUAL RAINFALL OF 24 HOURS PRECEDING 8 A.M. OF				Total of period.
	27th April.	28th April.	29th April.	30th April.	
	Inch.	Inches.	Inches.	Inch.	Inches.
Assam, Surma	0·11	0·98	0·99	0·88	2·96
„ Brahmaputra	0·09	0·34	0·99	0·80	2·22
„ Hills	0·11	0·56	1·03	0·76	2·46
Bengal, South-West	0·10	0·05	0·24	0	0·39
„ North	0·31	0·54	0·26	0·13	1·24
„ East	0·37	1·42	0·97	0·41	3·17

This rainfall reduced temperature in North-Eastern India, but temperature continued during this period in considerable to large excess in North-Western and Central India, as is shown by the following statement :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	27th April.	28th April.	29th April.	30th April.
	°	°	°	°
Bengal and Assam	+2·4	+1·4	−1·5	+0·9
North-Western Provinces and Oudh.	+4·6	+3·4	+1·2	+1·8
Punjab	+4·6	+1·1	+1·6	+3·5
Sind and Rajputana	+6·9	+4·7	+2·3	+4·3
Central India and Gujarat	+6·8	+6·2	+4·3	+2·4
Central Provinces and Berar	+6·0	+5·7	+4·0	+3·5

Pressure.—The mean pressure of the Indian area was ·033″ below the normal. Pressure was locally in defect in North-Eastern India and in excess over Lower Burma and North-Western India and the peninsula. The local deficiency ranged between ·02″ and ·03″ in Bihar and North and Central Bengal. The excess was also moderate in amount, ranging between ·02″ and ·03″ in Sind, the Bombay Deccan and Konkan where it was greatest. Pressure was in slight to moderate excess at the hill stations in Northern India relatively to the adjacent plains, as is usual when pressure is in defect and temperature above the normal in the plains of Northern India. The following table gives pressure variation data for the eleven meteorological provinces of the empire :—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Burma Coast and Bay Islands	−·023	+·010
Burma Inland	−·039	−·006
Assam	−·048	−·015
Bengal and Orissa	−·053	−·020
Gangetic Plain and Chota Nagpur	−·047	−·014
Upper Sub-Himalayas	−·033	0
Indus Valley and North-West Rajputana	−·021	+·012
East Rajputana, Central India and Gujarat	−·030	+·003
Deccan	−·027	+·006
West Coast	−·018	+·015
South India	−·022	+·011

Temperature.—The variations of the mean temperature conditions of the month were very broadly marked. The

mean maximum or day temperature was in slight excess in the Konkan and Malabar and on the Madras and Burma coasts, and in moderate to considerable excess over the whole of the interior of India, except the submontane districts of the Punjab where, it was in slight excess. The excess was greatest at Deesa (+6°·0), Chaibassa (+4°·9), Bogra (+5°·3), Burdwan (+4°·7), Bhuj (+4°·6), Calcutta (+4°·2) and Hyderabad (Sind) and Jessore (each +4°·1). The area of greatest excess hence included West and Central Bengal, Lower Sind, Cutch and South-West Rajputana.

The mean minimum or night temperature was normal or in slight excess in the coast districts and also in the submontane districts of Northern India. Over the remainder of the country it was in moderate to considerable excess. The excess was greatest in amount at Jhansi (+4°·6), Ajmere (+4°·1) and perhaps Akola (+4°·1).

The mean temperature was below the normal locally at Sibsagar (— 0°·3) and was in excess at all other stations. The excess was small in amount, not exceeding 2°, in the coast districts and the submontane districts of Northern India. Over the remainder of India temperature was in moderate to considerable excess. The excess was on the whole slightly greater in West Bengal, Chota Nagpur, Berar and Rajputana than elsewhere. It was more than 3°·5 at stations for which comparative data are given below :—

District.	Station.	Mean daily temperature.		
		Actual, April 1896.	Normal, April.	Variation of actual from normal.
		°	°	°
Rajputana	Deesa	91·6	86·9	+4·7
	Ajmere	88·3	84·4	+3·9
Cutch	Bhuj	89·2	85·6	+3·6
Central India	Jhansi	93·6	89·8	+3·8
Berar	Akola	93·6	89·9	+3·7
Chota Nagpur	Chaibassa	94·1	89·9	+4·2
West Bengal	Hazaribagh	88·9	85·2	+3·7
	Balasore	90·6	86·7	+3·9
	Burdwan	91·7	88·1	+3·6

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, April 1896.	Mean minimum temperature April 1896.	Mean daily temperature April 1896.
	°	°	°
Burma Coast and Bay Islands	+1·4	+1·9	+1·2
Burma Inland	+0·8	+2·5	+2·1
Assam	+0·3	+1·1	+0·7
Bengal and Orissa	+3·2	+1·7	+2·5
Gangetic Plain and Chota Nagpur.	+3·0	+2·2	+2·5
Upper Sub-Himalayas	+2·4	+1·4	+1·7
Indus Valley and North-West Rajputana.	+2·8	+2·1	+2·2
East Rajputana, Central India and Gujarat.	+3·7	+3·7	+3·6
Deccan	+3·1	+2·7	+2·8
West Coast	+1·6	+2·2	+1·9
South India	+·9	+1·4	+1·9

Winds.—Were more westerly and stronger than usual at Port Blair and in Lower Burma. They were steadier and stronger than usual in April in Bengal, Orissa and the Gangetic Plain. There was much westing in the mean wind directions of the month at the interior stations of Bengal and in the Gangetic Plain. On the other hand the winds were less westerly at the coast stations of Bengal. Winds were irregular in direction, but stronger and steadier than usual in Rajputana and Central India. The air movement was stronger than usual in the Deccan and Central Provinces, but fairly normal in direction. Winds were normal on the west coast. They were remarkably unsteady in Mysore and Central Madras. The mean winds varied very irregularly from the normal at the hill stations.

A noteworthy feature of the air movement was the prevalence of south-east winds at the Seychelles.

Humidity and Cloud.—The air was slightly drier at Port Blair and in Lower Burma and somewhat damper in Arakan and Assam. It was abnormally dry over nearly the whole of Northern and Central India, Berar and the Central Provinces, and the mean humidity of the month was upwards of 10 in defect at a large number of stations in these areas. The deficiency was actually greatest at Berhampore (19 in defect), Peshawar and Raipur (each 16 in defect), Calcutta (15 in defect), Meerut (14 in defect), Roorkee (13 in defect), Nowgong (12 in defect) and Ludhiana and Burdwan (each 11 in defect).

The decreased humidity was in part due to the high temperature of the month, but was chiefly due to a large

deficiency in the amount of aqueous vapour present in the air. The amount was at the majority of stations in this dry area from 25 to 50 per cent. less than usual.

The air was excessively dry at the lower hill stations. The mean humidity of the month was 16 below the normal at Chakrata and Simla. The air was, on the other hand, slightly damper than usual at the most elevated and interior hill stations, *viz.*, Leh and Kailang.

The mean humidity conditions of the month were practically normal in the West Coast districts. The air was drier than usual in the Deccan, Mysore and Madras, but the variations were small compared with those which obtained in Northern India. The mean absolute humidity differed little from the normal and the relative humidity was in slight defect, due to increased temperature.

Cloud was in slight excess at Port Blair and in Burma, Arakan, Assam and East Bengal. The mean cloud amount was below the normal over the dry area in the interior of India, and the deficiency was on the whole most marked in the hill districts of Northern India and in West Bengal, Bihar 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 April 1896:—

Meteorological Province.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean Humidity.	Mean cloud amount.
	"		
Burma Coast and Bay Islands	+·027	− 2	+0·4
Assam	+·018	0	0
Bengal and Orissa	−·027	− 8	−0·3
Gangetic Plain and Chota Nagpur	−·015	− 6	−0·8
Upper Sub-Himalayas	−·090	−11	−0·5
Indus Valley and North-West Rajputana.	−·056	−11	−0·6
East Rajputana, Central India, and Gujarat.	−·026	− 6	−0·7
Deccan	−·030	− 4	−0·2
West Coast	+·044	− 2	0
South India	−·002	− 2	−0·7

Rainfall.—The month was abnormally dry over nearly the whole of India and no rain fell in the large area including the greater part of the Punjab, Sind, Rajputana, the North-Western Provinces (except the hill districts), Bihar, Chota Nagpur, Central India, Berar, the Central Provinces, North Bombay and Hyderabad. Tenasserim and Malabar received occasional rain from thunderstorms, but the total fall of the month was considerably below the normal in the former area. Light showers fell in Baluchistan, the North and West Punjab and Kashmir on the 13th and 14th. North and East Bengal received moderate rain on the 14th and 15th and again from the 27th to the 30th, and South Bengal light to moderate showers during the latter period. Assam obtained frequent and heavy rain during three periods, *viz.*, from the 1st to the 8th, the 13th to the 18th and the 28th to the 30th. The rainfall of the month was in considerable to large excess in that area. The following gives data for the eleven meteorological provinces of the empire:—

Meteorological Province.	Rainfall.		
	Average actual, April 1896.	Average normal, April.	Variation from normal.*
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	1·66	2·14	−0·68
Burma Inland	1·11	1·06	+0·47
Assam	12·54	9·57	+2·98
Bengal and Orissa	1·79	2·36	−0·58
Gangetic Plain and Chota Nagpur	0·02	0·37	−0·36
Upper Sub-Himalayas	0·05	0·63	−0·58
Indus Valley and North-West Rajputana.	0·07	0·39	−0·35
East Rajputana, Central India and Gujarat.	0·01	0·07	−0·06
Deccan	0·19	0·40	−0·19
West Coast	0·85	1·73	−0·79
South India	0·36	1·17	−0·92

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

Atmospheric Pressure.

The mean pressure of the whole of India in April 1896 was ·033″ below the normal of the month. The local conditions were more strongly marked than in the preceding three months.

Pressure, relatively to the general condition, was in local defect in Upper Burma, Assam, Bengal, the Gangetic Plain, the eastern districts of the Central Provinces, Chota Nagpur, Orissa and North Madras. The anomalies

were moderate, exceeding ·020″, in North and Central Bengal and North Bihar at the stations for which data are given below :—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Sibsagar	—·055	—·022
Darbhanga	—·056	—·023
Patna	—·057	—·024
Dinajpur	—·057	—·024
Mymensingh	—·054	—·021
Berhampore	—·055	—·022
Dacca	—·058	—·025
Jessore	—·067	—·034
Calcutta	—·054	—·021
Burdwan	—·060	—·027

Pressure was in relative excess over the remainder of India. The excess was moderate in amount in Sind, the Konkan and West Deccan, and exceeded ·020″ at the following stations in Sind and the Konkan :—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Jacobabad	—·011	+·022
Hyderabad	—·012	+·021
Belgaum	—·007	+·026
Bellary	—·012	+·021
Karwar	—·012	+·021
Mangalore	—·011	+·022
Rawalpindi	—·008?	+·025?

Pressure was in slight to moderate excess at the lower hill stations as compared with the plains stations. The following gives the vertical pressure anomalies as determined from six pairs of stations :—

HILL STATION.	Variation of pressure from normal (*a*).	NEIGHBOURING PLAINS STATION.	Variation of pressure from normal (*b*).	Vertical pressure anomaly or (*a*)—(*b*).
	″		″	″
Leh	—·010	Lahore	—·036	+·026
Murree	—·009	Peshwar	—·015	+·006
Simla	—·007	Ludhiana	—·037	+·030
Ranikhet	—·005	Bareilly	—·038	+·033
Darjeeling	+·002	Dhubri	—·034	+·036
Mount Abu	—·020	Deesa	—·028	+·008

This relative excess of pressure at the hill stations was evidently a result of the increased temperature and decreased pressure at the level of the plains in Northern India and was greatest at Darjeeling and Ranikhet or at the hill stations nearest to that part of the plains where pressure was most largely in defect.

Barometric depressions and cyclonic storms of the month.

Pressure at the commencement of the month was in general defect, the deficiency being greatest in Central Bengal, where it slightly exceeded a tenth of an inch. Pressure was lowest over Bengal, Chota Nagpur and Bihar. No change of importance occurred in the distribution of pressure on the 2nd and 3rd. Pressure decreased in the submontane districts of North-Eastern India on the 4th and 5th and the area of minimum pressure lay over North Bengal and Bihar from the 4th to the 9th. Strong westerly winds hence prevailed in the Gangetic Plain. Assam received light to moderate daily rain, chiefly from thunderstorms, during this period.

Weather was very feebly disturbed in Persia on the 7th and 8th and light showers fell at Baghdad, Bushire, and Teheran. Pressure gave way considerably in that area from the 4th to the 7th and increased rather rapidly on the 9th. This disturbance apparently extended eastwards into Baluchistan on the 9th. Pressure was in slight to moderate excess in North-Western India and in slight to moderate defect in Burma and North-Eastern India on the 8th. It gave way locally on the 9th in Upper India and a shallow depression was shown over that area on that day. It advanced eastwards towards the foot of the Punjab hills and filled up on the afternoon of the 10th. This disturbance gave duststorms in the North Punjab.

Disturbance and low pressure area of the 12th to the 15th.—On the morning of the 11th pressure was lowest in North Bihar and strong westerly winds

obtained in the Gangetic Plain. A low pressure area began to form on that day in Upper Sind and was well defined on the 12th. Pressure was at 8 A.M. a sixth of an inch below the normal in the depression area. Pressure fell rapidly in Upper India during the next 24 hours, thus intensifying the depression. The following gives data defining the area at 8 A.M of the 13th :—

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.	
	"	"	"			
Jacobabad . . .	29·495	—·100	—·266	Calm	5	6
Hyderabad . . .	·619	—·034	—·168	SW	12	2
Pachpadra . . .	·622	—·047	?	SE	13	10
Bickaneer . . .	·543	—·052	?	SSW	7	0
Montgomery . .	·482	—·139	?	S	7	0
Khushab . . .	·503	—·151	?	ENE	9	10
Mooltan . . .	·479	—·150	—·304	SW	2	4

Pressure was now lowest at Mooltan and was probably about a third of an inch below the normal near the centre of the depression. The data also show that the depression had commenced to move eastwards. Light showers had fallen in the North Punjab and Kashmir during the previous 24 hours.

April 14th.—Pressure had increased briskly to rapidly in Baluchistan and Upper Sind, and had fallen rapidly in the Punjab submontane districts. The depression now lay over these districts. The following gives 8 A.M. data of stations in the area of 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.		
	"	"	"				Inch
Meerut . .	29·437	—·129	—·287	SW	2	0	
Roorkee . .	·428	—·132	—·292	NW	3	0	
Ludhiana .	·429	—·105	—·312	SW	3	0	0·02
Lahore . .	·449	—·046	—·313	W	5	0	
Sialkot . .	·420	—·106	—·331	SSW	5	0	0·13
Rawalpindi .	·438	—·065	—·349	NNW	7	7	0·04

Pressure was hence about a third of an inch below the normal in the area of depression at the level of the plains. Steep gradients obtained to the west and south and strong winds were blowing in the South Punjab, Rajputana, Central India and Kathiawar. Numerous dust-storms had visited Rajputana and Sind and light showers had fallen in the North Punjab, Kashmir, the Punjab hills, Kumaon and Gurhwal.

The most noteworthy feature of the storm was the very large depression at the level of the hill stations in Upper India. The following gives data :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Remarks.
	8 A.M. reduced to 32.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				"	
Leh. .	19·343	—·179	—·370	SW	2	10	0·87	
Kailang *	20·500	—·251	—·350	W	4	10	0·87	Thunderstorm.
Gilgit .	24 410	+·080	—·301			10	0·20	
Srinagar .	24·490	—·184	?	NNE	10	3	0 28	
Murree .	23·483	—·157	—·340	N	11	10	1·37	Thunderstorm with hail.
Simla .	22·870	—·192	—·237	S	14	9		Thunderstorm.
Kashgar .	25·320	+·170	?	NW	6	8	*Nil*	

* 10. A.M. observations.

A comparison of the data of the two preceding tables shows that the fall of the barometer during the previous 24 hours was actually less at the level of the plains in the submontane districts of the Punjab than at the neighbouring hill stations, and that it increased with elevation. It averaged a tenth of an inch at the level of the plains, nearly two-tenths at the elevation of Simla and a quarter of an inch at the elevation of Kailang. The data hence establish that the disturbance was of considerable intensity and that it was most strongly developed in the middle atmospheric strata over the Western Himalayas. Hailstorms and thunderstorms were experienced during the preceding 24 hours at Chakrata, Simla, Murree and Leh and the Kashmir valley stations had a moderate fall of rain.

An important effect of the changes of pressure during the previous 48 hours in Northern India was the disappearance of the local depression in North Bengal and Bihar. Steepish gradients for easterly winds obtained in Bengal and the Gangetic Plain. Assam and North Bengal had received light to moderate showers during the previous 24 hours.

April 15th.—Pressure had increased rapidly in the Punjab and had fallen briskly in North-East India. The depression in Upper India was now filling up rapidly, but weather continued more or less disturbed and showery in the hill districts during the next two days.

The following gives 8 A. M. data for eight stations show-

ing the pressure changes in the area of depression during the previous 24 hours :—

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	
Sialkot .	29·592	+·172	—·165	NNE	2	0		
Ludhiana	·547	+·118	—·191	N	3	3		
Srinagar .		+·202	?	Calm	8	0		
Murree .		+·114	—·232	SE	12	0	0·05	Showery.
Simla .		+·058	—·183	S	8	9		Dust haze.
Gilgit .		+·100	?	...	...	6		
Kailang *		+·093	?	NW	3	3	0·04	
Leh .		+·149	?	SW	2	8	0·15	Cloudy.

* 10 A.M. observations.

Practically no rain had fallen except in Kashmir and Thibet. Numerous duststorms had visited Rajputana and Sind.

The most important effect of the pressure changes was to transfer the area of lowest pressure again to Bengal and Bihar.

Moderate to heavy showers had fallen in Assam and East and North Bengal. The following large amounts were recorded at 8 A. M. :—

DISTRICT.	STATION.	DATE.	Heaviest rainfall in 24 hours preceding 8 A.M. of date
			Inches.
Cachar . . .	Nemotha . . .	14th	4·35
Jalpaiguri . . .	Alipore Duar . .	,,	2·30
Cachar . . .	Nemotha . . .	15th	11·20
Sylhet	Karimganj . . .	,,	4·04
Khasi and Jaintia hills.	Cherra Punji . .	,,	5·06
Kuch Bihar . .	Dinhatta . . .	,,	1·69
Jalpaiguri . . .	Debiganj . . .	,,	1·96
Rangpur . . .	Rangpur . . .	,,	1·60
,,	Kurigram . . .	,,	1·56

The depression under discussion originated in a period of general feeble disturbance over the whole Persian area. It apparently formed on the 12th in the Sind hot area characterized at the time by large excess of temperature. It intensified during the next 24 hours and marched eastwards to the foot of the Punjab hills on the 14th and then filled up. It was chiefly remarkable for the very large pressure changes to which it gave rise at the most elevated stations in the Punjab Himalayas, thus indicating that the disturbance was most developed in the middle or higher atmospheric strata. The storm gave light rain in the North Punjab and the Kashmir valley, and moderate snow on the higher elevations.

The most noteworthy feature of the storm was the advance of an unusally vigorous cool and dry wave across Northern India on the 14th and following days. Data of this wave are given in the temperature and humidity sections, showing the reduction of temperature and humidity produced by its advance. It also produced, chiefly as a temperature effect, a large increase of pressure at the level of the plains. The following gives data illustrating this feature of the advance of the wave :—

PROVINCE.	CHANGE OF PRESSURE DURING 24 HOURS PRECEDING 8 A.M. OF					
	16th April.	17th April.	18th April.	19th April.	20th April.	21st April.
	"	"	"	"	"	"
Baluchistan (Quetta) .	+·025	+·122	—·010	—·064	+·088	+·003
Punjab	—·001	+·169	+·071	+·001	—·013	+·019
Rajputana . . .	+·001	+·170	+·049	+·007	+·022	+·027
North-Western Provinces and Oudh.	+·037	+·028	+·109	+·055	+·016	—·061
Central India . .	—·002	+·086	+·105	+·028	—·001	—·044
Bihar	+·068	—·019	+·088	+·095	+·062	—·037
Chota Nagpur . . .	+·024	—·064	+·118	+·102	+·059	—·046
Bengal	+·107	—·017	+·012	+·110	+·072	—·026

The greatest rise of pressure on the 17th was in Rajputana and the Punjab, on the 18th in the North-Western Provinces, Central India and Chota Nagpur, on the 19th in Bihar, Chota Nagpur and Bengal, and on the 20th in Assam and Upper Burma. The advance of a wave of high pressure was hence as marked as that of the cool wave, and in fact both were effects of the passage of a single wave-like action across Northern India.

The transmission of the high pressure wave is shown even more clearly by the following data giving the mean

variation of pressure from the normal in the different provinces of Northern India from the 16th to the 21st:—

PROVINCE.	VARIATION OF MEAN 8 A.M. PRESSURE FROM NORMAL.					
	16th April.	17th April.	18th April.	19th April.	20th April.	21st April.
	"	"	"	"	"	"
Baluchistan (Quetta)	—·073	+·050	+·048	—·011	+·078	+·079
Punjab	—·180	—·009	+·069	+·079	+·082	+·103
Rajputana	—·168	—·021	+·036	+·052	+·063	+·077
North-Western Provinces and Oudh.	—·137	—·105	—·003	+·057	+·080	+·024
Central India	—·132	—·057	+·037	+·073	+·087	+·051
Bihar	—·150	—·168	—·080	+·016	+·079	+·042
Chota Nagpur	—·091	—·145	—·041	+·055	+·120	+·080
Bengal	—·119	—·131	—·125	—·011	+·061	+·037

Pressure gave way briskly in Baluchistan and Upper Sind on the 19th and a depression of very slight intensity lay over that area at 8 A.M. It was transferred to North-East Rajputana and the South-East Punjab on the morning of the 20th and had intensified to some extent during the previous 24 hours. It advanced to the foot of the hills in the North-Western Provinces and lay between Roorkee and Bahraich on the morning of the 21st. It disappeared during the next 24 hours. It gave a few dust-storms in the plains but little or no rain in the hill districts.

Pressure gave way briskly to rapidly in Upper Sind and Baluchistan on the 21st, and a low pressure area was shown in that area on the morning of the 22nd. It was transferred to Central Rajputana on the 23rd, but was of even less importance than the preceding depression.

Pressure had increased generally over India during the previous four days (chiefly due to the advance of the dry cool wave), and was in considerable to large excess on the 23rd over the whole of Northern India. The following gives pressure variation data of the larger provinces:—

PROVINCE.	Variation of mean 8 A.M. pressure from normal on the 23rd.
	"
Burma	+·048
Bengal and Assam	+·093
North-Western Provinces and Oudh	+·113
Punjab	+·164
Baluchistan (Quetta)	+·064
Sind and Rajputana	+·076
Central India and Gujarat	+·065
Central Provinces and Berar	+·080
Bombay	+·011
Madras	+·041

Pressure gave way over the whole area during the next six days from the 23rd to the 29th. The following gives a comparison of the pressure variations of the 29th and the 23rd in different provinces:—

PROVINCE.	VARIATION OF MEAN 8 A.M. PRESSURE FROM NORMAL.	
	29th.	23rd.
	"	"
Burma	—·004	+·048
Bengal and Assam	—·103	+·093
North-Western Provinces and Oudh	—·142	+·113
Punjab	—·116	+·164
Baluchistan (Quetta)	—·067	+·064
Sind and Rajputana	—·106	+·076
Central India and Gujarat	—·081	+·065
Central Provinces and Berar	—·094	+·080
Bombay	—·026	+·011
Madras	—·056	+·041

The preceding data show that the diminution of pressure was greatest in the Punjab and the Gangetic Plain. The most important effect of the changes was to form a trough of low pressure extending from the South-East Punjab to Chota Nagpur and to establish steepish gradients for south-east winds in Bengal. As usual under these conditions in April, numerous series of thunderstorms and nor'-westers occurred daily in Assam and Bengal (more especially the eastern districts) from the 27th to the end of the month, which gave general and moderate to heavy rain. Some heavy downpours occurred in East Bengal during these thunderstorms, the most remarkable being a fall of 12·24 inches at Nasirnagar in the Tippera district on the 28th.

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

I. THE AFGHAN MOUNTAIN DISTRICTS.

(1) *Kurram.*—The following report has been received from the Political Officer: "One or two slight falls of snow on the higher ranges of the Sufed Koh were reported about the middle of the month, but before this the weather was abnormally warm and much snow had melted and

except in patches, snow had generally melted except on the higher ranges.

"Heavy rain fell on the 12th, 13th, 14th and 15th and weather was generally stormy with very heavy winds.

"Between storms weather was mild and the storms were local, being confined chiefly to the Upper Kurram Valley.

"Snow is melting rapidly and not more than 4 or 5 feet of snow is said to exist on the higher passes only.

"The crops are in excellent condition and the water-supply in Kurram is abnormal owing to general rain in the previous month."

(2) *Khyber.*—No snow fell in the Khyber pass districts or neighbouring hills during the month.

II. KASHMIR AND PUNJAB HIMALAYAS.

(1) *Murree.*—No snow fell during the month.

(2) *Chamba.*—The following report of the snowfall at Kilar in Chamba at an elevation of 8,000 feet has been received from the Deputy Conservator of Forests, Chamba Division:—

"The snowfall measurement at Kilar during the past winter is as follows:—

Month.	*Fall.* ft.	in.
October 15th to 31st, 1895	0	5
November 1895	1	10
December „	1	10
January 1896	2	9
February „	7	4
March „	4	7
April „	*nil.*	
TOTAL	18	9

"The snowfall on the 23rd to the 27th February was very heavy all over the valley and caused many avalanches which created great havoc in the forests and blocked the Chenab for a time.

"The fall on the Sach Pass is not of course exactly known, but has been estimated at 60 feet.

"Actually on the pass on the 10th of May there remained an accumulation of 2 feet only, but owing to its position on the crest of a spur the snow gets blown off to a great extent by the wind.

"Snowfall was very heavy at high elevations and is said to have been more severe and heavier than usual owing to its having chiefly fallen within two months, *viz.*, from the 12th January to the 12th March 1896.

"The snowfall is said to have been heavier than during the previous four years. It fell later in the season and melted more rapidly than usual. The result is that crops are in a more forward condition than usual at high elevations, but the supply of water in the streams is small."

(3). *Kulu.*—The following report for the month of April has been received from the Assistant Commissioner:

"There were slight falls of snow on the 13th and 14th April in the Kulu Tahsil, and no falls in the Plach Tahsil except on the Srikhand Peak (17,132 feet elevation). The falls on the 13th and 14th April were only on high passes and descended to an elevation of 13,550 feet.

"There has been much hot sunshine during the month. Nearly all the passes in the sub-division are now open for foot passengers. The Rotang pass is expected to be open for laden animals in the current month.

"The following table gives the reported depth of snow on the higher passes of the sub-division at the end of the month and at the corresponding periods of the past five years:—

DISTRICT.	Name of pass.	Height above sea-level.	REPORTED DEPTH OF SNOW ON THE 26TH APRIL. 1896.	1895.	1894.	1893.	1892.	1891.
		feet.	feet.	feet.	feet.	feet.	feet.	feet.
Kulu	Rotang	13,000	16	13	13	13	3	10
	Hamta	14,500	9	4	10	11	2½	?
	Chander Khani	...	3	4	9	12	3½	10
	Barsai	...	3	4	6	6	2	5
	Bujadhar	...	2	4	8	6	½	4
	Lohri Achri	...	5	5	7	5	*nil*	3
	Bhubbu	10,000	½	3	2	5	„	5
Plach	Sirikhand	15,000	8	15	15	30	6	36
	Dundku	...	1	4	5	6	*nil*	7
	Gargarasan	17,000	1	10	8	25	„	12
	Tirath	...	1	8	7	25	„	10

"The snowfall in the month under report was the same as that in 1892."

(4) *Upper Sutlej Valley.*—The Rev. T. Schreve, Missionary at Poo, has sent the following statement and account of the snowfall at Poo and on the neighbouring mountains during the past winter:—

Month.	*Date.*	*Character of snowfall.*
December 1895	9th	Very light.
January 1896	12th to 14th	Fall 20 inches at Poo.
„ „	28th	Light.
„ „	31st	4 inches.
February „	2nd	6 „
„ „	6th	2 „
„ „	11th	8 „
„ „	14th and 15th	2 feet 5 inches.
„ „	23rd to 27th	2 „ 4 „
„ „	29th	4 „
March „	11th and 12th	1 foot.

Month.	*Date.*	*Character of snowfall.*
March 1896	22nd and 23rd	Heaviest fall of the season, amounting to 23 inches on the 22nd.
„ „	29th	Snow fell down to 11,000 feet.
April „	13th and 14th	Ditto ditto.
„ „	20th	Rain in the valley 0·14 inch rain in the valley at Poo and snow on the hills.

The winter was mild in character, the first three months of the year being unusually warm. The spring on the other hand was cold and damp.

III. THE ASSAM HIMALAYAS.

The Deputy Commissioner of Kamrup has sent the following report regarding snowfall in the Darrang district,

"The snowfall in this part of the Himalayas during the cold weather of 1895-96 was slightly less than that of the year 1894-95. The hill people who have come down state that the snowfall of the past winter has been normal."

Summary.—The month was much finer and drier than usual in the mountain districts of Upper India. Moderate to heavy snow fell on the 13th and 14th on the higher elevations in the Kashmir and Punjab Himalayas (above 11,000 to 12,000 feet). The snow accumulation melted rapidly during the month and was probably below the normal at the end of the month.

Summary of special Storm Reports.

The following gives a statement of the chief local storms of which reports were received from observers 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 specially the Punjab and Rajputana :—

2nd April.—Severe thunderstorm at Bombay from 11-45 A.M. to 3-50 A.M.
Duststorm at Jacobabad at 7 P.M.

3rd.—Duststorm at Roorkee 4-18 P.M. to 4-33 P.M.
Severe thunderstorm and hailstorm at Poona. The storm lasted from 4-20 to 4-45 P.M. Many of the hailstones were as large as pigeon's egg. Much damage was done to plants and trees, while precipitation during storm was 1·99 inches.

4th.—Thunderstorm at Belgaum at 4 P.M.

6th.—Thunderstorm at Poona. Heavy fall of hail occurred about 1½ miles from the observatory during this storm.

8th.—Thunderstorm at Poona at 4 P.M.
Violent thunderstorm and hailstorm at Dacca at 6 P.M. Storm came down from north-west and lasted ten minutes.

9th.—Duststorms at Jeypore and Pachpadra (2-5 P.M.).

12th.—Duststorm at Mymensingh from 8-30 P.M. to 9 P.M.
Duststorm at Pachpadra.

13th.—Duststorm at Pachpadra.

14th.—Duststorm at Jacobabad from 7 A.M. to 10 A.M. Storm came from north-west.
Severe duststorm at Ajmere at 0-30 P.M., which came from west. Strongest winds observed were of velocity 30 miles per hour.

22nd.—Severe duststorm at Jacobabad. Storm began at midnight and continued till 6 A.M. and came from east.

24th.—Duststorm at Pachpadra.
Violent hailstorm at Dacca. Storm came down from north-west at 5-30 and lasted until 5-45 P.M.

26th.—Violent duststorm at Jacobabad from north-west. The storm lasted from 9-20 A.M. to 9-50 A.M.
Duststorm at Delhi at 4-45 P.M.

27th.—Thunderstorm at Dacca from 1-20 P.M. to 2-25 P.M.

28th.—Severe nor'-wester at Burdwan from 4 P.M. to 5-15 P.M.
Severe thunderstorm at Dacca from 6-20 P.M. to 8 P.M. Storm came from the north-east.
Nor'-wester with thunder at Calcutta from 5 P.M. to 6 P.M. The velocity of the strongest gust of wind was about 40 miles per hour.
This storm was remarkable for the very large and sudden changes of the barometer. The following gives pressure and temperature observations taken at the Alipore observatory during the storm :—

HOUR.	BAROMETER.		Temperature.	Wind direction.
	Actual.	Corrected.		
	"		°	°
5-0 P.M. . . .	29·620	29·415	88·0	S
5-15 „ . . .	·558	·353	...	SSW
5-45 „ . . .	·800	·595	77·0	N
6-30 „ . . .	·750	·545	...	E

The total rainfall at the observatory was only 0·04 inch, but heavy rain is said to have fallen in the neighbourhood.

28th.—Severe nor'-wester at Saugor Island from 5 P.M. to 5-47 P.M. The greatest velocity of the wind was 56 miles per. hour at 5-30 P.M. The storm raised a tremendous sea. The barometer rose from 29·578″ at 5-47 P.M. to 29·752″ at 8 P.M. This storm was evidently part of the same disturbance as the Calcutta storm.

Severe thunderstorm at Krishnagar from 5 P.M. to 5-20 P.M. The storm came from north-west.

Severe thunderstorm at False Point from 9 P.M. to 11 P.M.

30th.—Duststorm at Cuddapah at 6-15 P.M.

The following gives a brief summary of the more important hailstorms in Assam, and the Vizagapatam district in Madras during the month of which reports have been received from the Political Agents or other local authorities:—

3rd.—Severe hailstorm in the Sadar Tahsil of the Nowgong district. Slight damage was inflicted on the crops.

4th.—Severe hailstorm in the Sadar Tahsil of Nowgong. The largest stones were of the size of plums. Slight injury was done to the crops.

Severe hailstorm in the Hailakandi sub-division of Cachar. Great damage was done to the crops and many houses were blown down in the town of Hailakandi and the neighbouring villages. The largest stones were of the size of small oranges.

Severe hailstorms in three sub-divisions of Cachar. The storm came down from north and caused much damage to the crops. Arcatipur tea garden and its out-garden were very badly damaged.

Severe hailstorm in the Karimganj sub-division of Sylhet. Storm came from north-west and caused much damage to the crops and buildings.

4th.—Severe hailstorm in the Sunamganj sub-division of the Sylhet district. The damage to the crops was estimated at 2 annas. Storm came from north-west.

5th.—Slight hailstorm in the Hailakandi sub-division of Cachar.

10th.—Severe hailstorm in the Mouza Chatialgaon of the Nowgong district. The largest stones were of the size of small limes. The stones caused considerable damage to property.

12th.—Hailstorm of slight intensity at Gauhati, which came from north.

14th.—Severe hailstorm in the Sunamganj sub-division of Sylhet which caused much injury to the standing crops.

17th.—Hailstorm in the Barpeta sub-division of Kamrup. The storm inflicted slight injury on trees and houses.

Severe hailstorm in six sub-divisions of Cachar. The heaviest stones weighed 2 chhataks. The storm caused great damage to the crops and blew down many houses.

Hailstorm of slight intensity in Bejur, Goalpara district. Storm came from north-west.

19th.—Hailstorm in the Rajaghola sub-division of the Vizagapatam district. It is reported that no thunder and lightning occurred during the storm.

20th.—Hailstorm in the Khasi Hills of slight intensity. Storm come from south-west.

28th.—Hailstorm of slight intensity in the Khasi hills.

29th.—Hailstorm and thunderstorm in the Rajaghola Tahsil of the Vizagapatam district. The storm extended over the whole tahsil.

30th.—Hailstorm of slight intensity at Gauhati. Storm passed from west to east.

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

Arabian Sea.—As is usually the case in the month of April, unsteady northerly to easterly winds prevailed almost throughout the month in the centre and west, and north-west winds in the north of the sea. On the other hand, winds were very abnormal in the east, where easterly and southerly winds obtained during the first fourteen days of the month to the exclusion of the normal north-westerly winds of the period. Conditions were also abnormal in the south of the sea where the normal westerly winds alternated with easterly winds and the latter were hence not as predominant as usual in April.

Weather was even finer than usual, except in the neighbourhood of the Ceylon and Malabar coasts, where showers and squalls were of occasional occurrence.

In the Persian Gulf and the Gulf of Oman weather was fine throughout the month with normal north-westerly winds, except for two brief periods, *viz.*, the 6th to the 11th and the 19th to the 22nd, when abnormal easterly winds were experienced.

The air movement for the whole area ranged from 2·0 to 3·2 and averaged 2·6 for the whole month or only 0·1 less than the normal of the month.

Bay of Bengal.—Normal winds of indraught to the

heated land area prevailed along the coasts of the Bay throughout the month, except from the 18th to the 21st, when abnormal northerly winds were experienced in the north-west corner of the Bay due to the existence of a slight depression over that area. Over the centre and south of the Bay winds were more unsteady than usual. The principal abnormal feature of the meteorology of the Bay was the prevalence during the greater part of the month of winds from between north and east over the south of the Bay. There were but few instances of south-westerly winds, and hence the weather over that region, as indeed over the whole of the Bay, was remarkably fine and settled.

The air movement of the month varied considerably in strength from day to day. Winds, although feebler than usual in the south and probably also the centre of the Bay, were stronger than usual in the neighbourhood of the coasts due to the strongly marked hot weather conditions over the land. The mean air movement of the month hence did not differ to any extent from the normal. There were three well-defined periods of stronger winds than usual in the Bay, *viz.*, the 3rd to the 5th, the 14th to the 18th, and the 26th to the 29th. The air movement during the first of these periods was 0·3 above the normal and during the second and third periods 0·7 above. The increased movement of the air during these periods was, it may be noted, almost entirely due to the strength of the winds of indraught in the neighbourhood of the coasts, as the air movement in the south and probably also the centre of the Bay was almost unaffected.

Winds were unsteady in the Equatorial Belt, though there was a predominance of northerly winds in the first week and of southerly winds in the remaining three weeks of the month.

So far as can be inferred from the limited data available for this region, there was an abnormal easting in the winds over the western half of the belt. This is confirmed by the data of the Seychelles where the mean wind direction of the month was S60°E as compared with N49°E in April 1895 and S69°W in the corresponding month of 1894.

Temperature of the air.

The mean maximum or day temperature of the month was above the normal over the whole of India and Burma, except locally at the following stations: Sibsagar (2° in defect), Negapatam (1°·8 in defect) and Madura (0°·4 in defect). The excess was more than 2° in amount except in Burma, the East and North Punjab, and a narrow belt of the west coast districts south of Bombay and of the coast districts of the Bay. The excess was over 4° in amount in two areas, one including Central and West Bengal, and the other Lower Sind, Cutch and South-West Rajputana. Comparative data for these areas are given below:—

Province.	Station.	Mean maximum temperature.		
		Actual, April 1896.	Normal, April.	Variation of actual from normal.
		°	°	°
Bengal	Balasore	102·8	97·4	+5·4
	Bogra	100·9	95·6	+5·3
	Chaibassa	109·0	104·1	+4·9
	Dinajpur	99·4	94·6	+4·8
	Burdwan	105·3	100·6	+4·7
	Mymensingh	95·0	90·4	+4·6
	Calcutta	99·6	95·4	+4·2
	Jessore	101·4	97·3	+4·1
Rajputana	Deesa	108·9	102·9	+6·0
Cutch	Bhuj	104·8	100·2	+4·6
Sind	Hyderabad	106·0	101·9	+4·1

The highest temperatures of the month were registered between the 26th and 30th in Berar, the Central Provinces, Central India, the North-Western Provinces, Rajputana and the Punjab. The dates of the occurrence of the maximum temperatures of the month in Bihar and Bengal were very variable, but ranged generally between the 15th and 22nd. Higher day temperatures were registered during these periods at several stations in the Central Provinces, Chota Nagpur and West and Central Bengal than have been previously recorded in April. The following gives the more noteworthy cases:—

Station.	Highest maximum temperature recorded in April 1896.	Date on which recorded.	Higher maximum temperature recorded in April previous to 1896.	Year in which recorded.
	°		°	
Calcutta	107·0	16th	105·6	1890
Khandwa	115·2	27th	112·6	1876
Amraoti	114·5	28th	112·9	1892
Deesa	114·5	27th & 28th	114·5	1892
Indore	110·0	27th	108·2	1886
Nowgong	112·6	29th	112·0	1881&1883
Jeypore	111·5	27th & 28th	111·3	1892
Akola	114·0	27th	113·4	1876

The mean minimum or night temperature of the month was above the normal over the whole Indian area. The

excess was more than 2° in amount, except in the submontane districts of Northern India, the coast districts of the Bay and Burma (except the central districts). Over the remainder of India the mean night temperature of the month was from 2° to 5° above the normal. The excess was greatest at the stations for which data are given below :—

Province.	Station.	Mean minimum temperature.		
		Actual, April 1896.	Normal, April.	Variation of actual from normal.
		°	°	°
North-Western Provinces.	Jhansi	80·5	75·9	+4·6
Chota Nagpur	Hazaribagh	76·0	72·2	+3·8
	Chaibassa	79·2	75·8	+3·4
Bihar	Gaya	78·0	75·0	+3·0
Rajputana	Ajmere	74·4	70·3	+4·1
Central Provinces	Khandwa	77·8	74·3	+3·5
Central India	Neemuch	74·2	70·7	+3·5
	Sutna	74·4	71·0	+3·4
Berar	Akola	78·1	74·0	+4·1
Sind	Jacobabad	71·6	68·9	+2·7

The lowest temperatures of the month were recorded in Northern and Central India during the advance of the cool wave in the third week of the month, or between the 17th and 23rd. They were in no way remarkable (except by contrast with the high temperatures previously prevailing), and were not so low as have been previously recorded.

The mean temperature of the month was above the normal at all stations except Sibsagar (—0°·3). The excess was less than 2° in the North and East Punjab, the submontane districts of the North-Western Provinces, Lower Assam, Burma and the coast districts of the Bay and of the Arabian Sea south of Bombay. Over nearly the whole of the interior the variations ranged between 2° and 5°. They were more than 3°·5 at stations for which data are given in the following table :—

Province.	Station.	Mean daily temperature.		
		Actual, April 1896.	Normal, April.	Variation of actual from normal.
		°	°	°
Bengal	Chaibassa	74·1	69·9	+4·2
	Balasore	90·3	86·7	+3·3
	Hazaribagh	88·9	85·2	+3·7
	Burdwan	91·7	88·1	+3·6
North-Western Provinces.	Jhansi	93·6	89·8	+3·8
Rajputana	Deesa	91·6	86·9	+4·7
	Ajmere	88·3	84·4	+3·9
Berar	Akola	93·6	89·9	+3·7

The mean temperature was as largely above the normal at the hill stations in Northern and Central India as at the adjacent plains stations. The following gives comparative data for six stations :—

Station.	Mean daily temperature.		
	Actual, April 1896.	Normal, April.	Variation of actual from normal.
	°	°	°
Murree	62·9	60·2	+2·7
Simla	61·4	59·6	+1·8
Ranikhet	69·2	65·7	+3·5
Darjeeling	57·9	54·5	+3·4
Mount Abu	79·9	77·0	+2·9
Pachmarhi	83·6	80·8	+2·8

The mean temperature of the month was only 0°·2 above the normal at Quetta, and was 1°·3 below it at Kailang and 1°·8 below it at Leh. It was normal at Aden, but 1°·1 in defect at Bushire and 0°·7 at Baghdad. The condition of excessive temperature, which was a general feature of the plains of India, did not extend across the Himalayas into Thibet or across the Suleiman range into the Persian area.

The abnormal temperature conditions of the month in the Indian area were hence due to local conditions and actions in that area and not to general conditions common to the whole of Central and Southern Asia.

The following gives a summary of the mean temperature conditions of the month :—

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	94·6	75·7	85·2	19·0	25·8	+1·4	+1·6	−0·2
	Lower Burma (Deltaic)	95·2	78·5	86·9	16·7	24·1	+1·6	+2·1	−0·5
	Central do.	102·9	78·6	90·7	24·3	34·0	+1·3	+3·1	−1·8
	Upper do.	97·4	69·7	83·1	26·8	38·5	−0·1	+1·9	−2·0
	Arakan	92·7	77·5	85·1	15·2	29·4	+0·8	+1·7	−0·9

Province.	Division.	Actual Temperature.					Variation from normal of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bengal and Assam	Eastern Bengal	92·2	74·1	83·2	18·1	35·3	+2·2	+1·9	+0·3
	Assam (Surma)	88·7	70·3	79·5	18·4	31·7	+1·1	+1·4	−0·3
	Do. (Brahmaputra)	85·3	69·5	77·3	15·8	30·1	−0·1	+1·0	−1·1
	Deltaic Bengal	100·6	77·8	89·1	23·0	37·0	+3·2	+1·8	+1·4
	Central do.	104·4	76·3	90·4	28·0	43·0	+4·6	+2·2	+2·4
	North do.	95·3	70·6	82·9	24·7	43·2	+3·9	+1·2	+2·7
	Bengal Hills	59·9	43·3	51·6	16·6	29·0	+3·8	+2·9	+0·9
	Orissa	95·0	79·2	87·1	15·9	27·1	+2·9	+1·3	+1·6
	Chota Nagpur	102·0	75·6	88·8	26·4	41·6	+3·9	+3·5	+0·4
	Bihar (South)	104·9	76·4	90·7	28·4	44·6	+2·4	+2·5	−0·1
	Do. (North)	101·2	71·5	86·4	29·8	45·4	+3·3	+1·1	+2·2
North-Western Provinces and Oudh.	North-Western Provinces (East)	106·2	72·6	89·4	33·6	49·4	+2·4	+1·4	+1·0
	Oudh (South)	104·6	72·7	88·7	31·9	46·0	+2·3	+1·7	+0·6
	Do. (North)	103·4	70·9	87·2	32·5	47·1	?	?	?
	North-Western Provinces (Central)	105·6	75·0	90·3	30·6	50·3	+2·9	+4·6	−1·7
	Do. do. (West)	102·0	72·4	87·2	29·7	48·8	+2·4	+1·7	+0·7
	Do. do. (Submontane East)	103·4	72·7	88·1	30·7	48·5	+2·6	+0·3	+2·3
	Do. do. (West)	99·1	67·8	83·5	31·2	50·4	+3·1	+1·3	+1·8
	Do. do. (Hills)	74·5	57·2	65·8	17·3	33·6	+2·2	+2·6	−0·4
Punjab	Punjab (South-East)	101·9	75·4	88·7	26·5	47·1	?	+2·1	?
	Do. (South)	99·2	68·2	83·7	31·0	53·6	+1·8	+1·1	+0·7
	Do. (Central)	96·4	66·9	81·7	29·5	51·6	?	+2·2	?
	Do. (Submontane)	99·4	67·8	83·6	31·6	50·0	?	?	?
	Do. (Hill Districts)	66·8	45·6	55·7	20·0	41·4	+3·3	+1·2	+2·1
	Do. (North)	88·5	59·7	74·1	28·8	50·2	+1·4	+0·5	+0·9
	Do. (West)	98·1	67·7	82·9	30·4	52·8	+3·3	+2·5	+0·8
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	91·6	80·1	85·9	11·5	19·1	+1·5	+2·0	−0·5
	Madras (South Central)	102·5	76·5	89·5	26·0	34·0	+2·9	+2·0	+0·9
	Coorg	86·9	66·2	76·6	20·7	31·7	+2·4	+2·1	+0·3
	Mysore	96·5	70·7	83·6	25·8	34·9	+2·5	+2·0	+0·5
	Konkan	90·5	80·6	85·6	9·9	16·4	+1·6	+2·5	−0·9
	Bombay Deccan	103·4	73·2	88·3	30·2	39·9	+2·7	+1·8	+0·9
	Hyderabad (North)	106·4	77·4	91·9	29·1	42·2	?	?	?
	Khandesh	104·6	71·8	88·1	32·8	46·9	+3·1	+2·4	+0·7
Central Provinces and Berar.	Berar	108·5	78·5	93·5	30·0	48·5	+3·0	+3·8	−0·8
	Central Provinces (West)	107·7	77·6	92·7	30·1	48·0	+3·3	+3·1	+0·2
	Do. (Central)	106·1	74·9	90·5	31·2	47·6	+3·2	+2·2	+1·0
	Do. (East)	107·7	79·8	93·7	27·9	47·8	+3·4	+2·9	+0·5
Bombay (North)	Gujarat	103·3	77·0	90·2	26·3	42·5	?	?	?
	Kathiawar	100·2	72·6	86·4	27·6	46·5	+4·2	+2·3	+1·9
	Sind	101·2	73·6	87·4	27·6	50·6	+3·2	+2·7	+0·5
	Baluchistan Hills	75·6	40·0	56·9	33·7	60·2	+0·7	−0·4	+1·1
Rajputana and Central India.	Central India (East)	103·2	74·3	89·7	30·9	50·9	+3·1	+3·2	−0·1
	Rajputana (East), and Central India (West).	104·5	73·6	89·1	30·8	53·5	+4·2	+3·4	+0·8
	Do. (West)	105·5	74·7	90·1	30·8	54·7	+2·1	?	?
Madras	East Coast (North)	95·8	79·3	87·6	16·5	27·2	+2·5	+0·4	+2·1
	Hyderabad (South)	105·7	79·6	92·7	26·1	35·1	+2·8	+3·4	−0·6
	Madras (Central)	107·0	81·0	94·0	25·9	34·8	+2·4	+2·4	0
	East Coast (Central)	100·3	77·8	89·1	22·5	31·9	+1·7	+0·6	+1·1
	Do. (South)	95·5	77·9	86·8	17·6	27·3	+0·7	+0·3	+14
	Madras (South)	97·4	79·7	88·6	17·6	26·2	−0·4	+1·5	−1·9

The following gives a brief account of the more important changes of the temperature conditions of the month in India.

Temperature at the commencement of the month was above the normal over the whole area except South Madras. The excess was large in Rajputana, Central India and North Bombay, where it ranged between 6° and 12°

The following gives mean variation data for the 24 hours preceding 8 A.M. of the 1st:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature 1st April.	Mean minimum temperature 1st April.	Mean temperature, 1st April.
	°	°	°
Burma	+1·4	+1·9	+1·7
Bengal and Assam	+3·5	+4·7	+4·1
N.-W. Provinces and Oudh	+4·4	+5·9	+5·2
Punjab	+3·5	+6·7	+5·1
Sind and Rajputana	+9·6	+8·4	+9·0
Central India and Gujarat	+6·7	+6·5	+6·6
Central Provinces and Berar	+5·0	+4·8	+4·9
Bombay	+1·7	+3·9	+2·8
Madras	—0·7	+2·0	+0·7

The area of greatest excess of temperature shifted during the next three days from Rajputana to North, West and Central Bengal. This change is shown by the following data:—

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	1st April.	2nd April.	3rd April	4th April.	5th April.
	°	°	°	°	°
Sind and Rajputana	+9·0	+8·8	+7·1	+5·8	+3·0
Central India and Gujarat	+6·6	+8·4	+9·7	+6·0	+3·4
Central Provinces and Berar	+4·9	+7·7	+9·7	+5·3	+3·0
North-Western Provinces and Oudh.	+5·2	+6·6	+6·8	+4·5	+3·8
Chota Nagpur	+4·4	+7·4	+8·3	+8·0	+7·8
Bihar	+3·4	+4·1	+3·6	+4·0	+6·0
West Bengal	+4·4	+5·6	+5·9	+5·1	+6·7

This shift of the area of greatest excess of temperature accompanied the transfer of the area of minimum pressure to the foot of the hills in North Bihar and North Bengal.

The low pressure area in North Bengal and Bihar remained almost unchanged in position during the next four days. Dry westerly winds hence continued to give very high temperatures in Bihar, Chota Nagpur and West Bengal, as is shown by the following data:—

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	6th April.	7th April.	8th April.	9th April.	10th April.
	°	°	°	°	°
Bihar	+5·4	+3·5	+3·3	+4·6	+3·6
Chota Nagpur	+5·6	+5·3	+6·0	+4·7	+5·5
West Bengal	+4·6	+3·9	+5·0	+3·9	+4·4

During the period from the 5th to the 10th temperature increased very rapidly in North-Western India and was in large excess from the 8th to the 10th, as is shown by the following data:—

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	6th April.	7th April.	8th April.	9th April.	10th April.
	°	°	°	°	°
Baluchistan (Quetta)	—0·5	+4·0	+5·8	+6·8	+5·4
Sind	+1·3	+2·2	+4·0	+2·6	+4·6
Punjab	+3·3	+4·0	+5·0	+6·2	+9·5
Rajputana	+4·3	+4·6	+2·6	+6·9	+5·5
North-Western Provinces and Oudh.	+1·5	+3·2	+2·4	+3·6	+5·2

Temperature was at the end of this period in excess over the whole of India and the excess was very large in the two areas for which data have been given above, *viz.*, Upper India and the area including Bihar, Chota Nagpur and West Bengal.

The following gives temperature variation data for the 24 hours preceding 8 A.M. of the 10th:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·3	+3·6	+2·0
Bengal and Assam	+4·3	+2·8	+3·6
N.-W. Provinces and Oudh	+5·0	+5·3	+5·2
Punjab	+9·9	+9·1	+9·5
Sind and Rajputana	+4·6	+5·8	+5·2
Central India and Gujarat	+2·3	+3·8	+3·1
Central Provinces and Berar	+1·8	+3·9	+2·9
Bombay	+1·2	+4·0	+2·6
Madras	+2·0	+0·9	+1·5

Similar conditions continued during the next three days. The following gives variation data for the two areas of excessive temperature:—

	Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
		11th April.	12th April.	13th April.
		°	°	°
First area.	Baluchistan (Quetta)	+7·3	+9·6	+7·6
	Sind	+6·6	+8·7	+9·5
	Rajputana	+5·8	+7·2	+8·6
	Punjab	+6·3	+4·7	+5·0
Second area.	South Bihar	+4·4	+5·9	+4·9
	Chota Nagpur	+6·1	+5·5	+5·6
	West Bengal	+4·9	+5·3	+5·2

A depression formed in the hot area in Upper India on the 12th and the depression in the submontane districts of Bengal and Bihar filled up and disappeared. Easterly winds set in over Central Bengal and North Bihar, slightly reducing temperature. The depression in Upper India intensified slightly on the 13th and advanced eastwards on the 14th and 15th and disappeared at the foot of the Punjab hills on the afternoon of the 15th.

A wave of great excess of temperature advanced across Northern India between the 13th and 16th. Its progress is indicated roughly by the following variation data:—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	13th April.	14th April.	15th April.	16th April.
	°	°	°	°
Baluchistan (Quetta)	+7·6	— 4·1	—6·2	—12·5
Sind	+9·5	+ 9·8	+4·7	+ 2·1
Punjab	+5·0	+ 5·0	—3·1	— 0·4
Rajputana	+8·6	+11·0	—0·1	+ 1·8
North-Western Provinces and Oudh.	+6·6	+ 9·8	+4·6	+ 1·0
Central India and Gujarat	+6·8	+ 8·4	+6·5	+ 5·1
„ Provinces and Berar.	+4·3	+ 5·7	+6·0	+ 5·3
Bihar	+5·1	+ 4·7	+6·1	+ 1·2
Chota Nagpur	+5·6	+ 6·5	+9·6	+ 4·1
West Bengal	+5·2	+ 3·7	+4·5	+ 5·8

The previous data show that the area of greatest excess of temperature covered Baluchistan, Sind and Rajputana on the 13th. It was transferred to Rajputana, the North-Western Provinces and Central India on the 14th, Central India, the Central Provinces, Bihar and Chota Nagpur on the 15th and West Bengal on the 16th.

The following table gives mean variation data for the 24 hours preceding 8 A.M. of the 16th:—

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

The preceding data have shown that temperature fell steadily in Baluchistan from the 13th to the 16th and was in very large defect (12°·5) on the 16th at Quetta. The following data establish that this reduction of temperature commenced in the Persian area and was transmitted slowly eastwards from Persia to Baluchistan as a cool wave:—

Date.	Variation of mean temperature from the mean of the month.						
	Baghdad.	Bushire.	Ispahan.	Meshed.	Quetta.	Kelat.	Kabul.
	°	°	°	°	°	°	°
11th	—5·8	+5·5	— 7·4	— 0·6	+ 7·3	+ 0·2	+ 2·3
12th	—6·9	—2·0	—11·0	— 8·6	+ 9·6	+ 5·6	— 0·2
13th	—9·1	—5·4	—10·0	— 7·4	+ 7·6	+ 6·4	— 3·2
14th	—8·2	—9·6	— 7·2	—10·4	— 4·1	— 4·9	—10·0
15th	—5·5	—8·7	— 5·2	—11·2	— 6·2	— 6·2	— 5·2
16th	—2·0	—9·6	— 1·3	— 2·4	—12·5	— 8·5	—10·0
17th	—0·6	—8·9	— 0·9	— 1·6	—14·0	—11·8	— 9·4
18th	+4·9	—5·0	+ 0·9	+ 2·6	—12·2	—11·9	— 9·2
19th	+6·3	+0·4	+ 3·0	— 6·2	— 9·9	— 5·3	— 2·7
20th	+6·8	0	+ 6·0	— 2·4	— 7·3	— 7·9	— 7·9
21st	+0·7	+4·1	+ 8·3	— 1·2	— 3·5	— 1·5	— 5·7

The preceding data establish that the cold wave originated in or to the north-west of the Persian area. It gave the greatest reduction of temperature to Baghdad and Teheran from the 12th to 14th, to Bushire from the 14th to 17th, and to Kelat and Quetta from the 16th to 19th.

The origin of this cold wave is obscure. During the period from the 11th to the 15th a low pressure area lay over South-Eastern and Central Europe. The winds and temperature conditions in the Persian area were evidently in no way related to that low pressure area, but apparently to the low pressure area and disturbance in Upper India, which, as has been shown, gave very stormy weather in the Himalayan area and perhaps Thibet. Strong north-west winds prevailed throughout the period in the Persian Gulf and Persia as is shown by the following data:—

Date.	Velocity in miles per hour.				
	Baghdad.	Bushire.	Ispahan.	Jask.	Muscat.
11th	5	9	10	4	3
12th	4	14	11	3	4
13th	5	22	9	6	5
14th	3	21	4	6	7
15th	2	17	4	5	6
16th	3	13	4	6	10
Mean of month	5	12	8	7	5

Date.	Wind direction.				
	Baghdad.	Bushire.	Ispahan.	Jask.	Muscat.
11th	WNW	ENE	WSW	E	SSW
12th	NNE	NNW	WSW	WNW	WNW
13th	NE	NW	NW	W	WSW
14th	NNE	NW	E	NW	NW
15th	NNE	NW	NW	W	WNW
16th	N	NW	WSW	NW	W

The cool wave which originated in the Persian area on the 12th and following days gave unusually low temperature from the 14th to the 17th at Bushire and the Persian stations and from the 16th to the 19th at Quetta and Kabul. It was hence of great extent and was advancing at a rate of about 400 miles per diem. It began to affect India on the 17th and gradually extended over the whole of Northern India. The following mean variation data show approximately the advance of the wave across Northern India:—

Province.	Variation from normal of mean temperature preceding 8 A.M. of					
	17th April.	18th April.	19th April.	20th April.	21st April.	22nd April.
	°	°	°	°	°	°
Baluchistan (Quetta)	−14·0	−12·2	− 9·9	−7·3	−3·5	+8·3
Sind	− 6·7	−10·9	− 5·0	−2·3	−0·6	+1·2
Punjab	− 4·9	−10·7	− 7·7	−4·5	−6·0	−2·8
Rajputana	− 2·8	−10·6	−11·7	−6·6	−3·8	−5·7
North-Western Provinces and Oudh.	+ 3·4	− 4·2	− 9·5	−7·5	−4·1	−4·8
Central India and Gujarat.	+ 4·8	− 5·5	− 8·8	−6·1	−2·4	−1·3
Bihar.	+ 4·7	+ 4·7	− 3·5	−4·7	−4·1	−1·1
Chota Nagpur	+ 5·5	+ 6·2	− 2·9	−5·4	−4·4	−1·9
West Bengal	+ 6·0	+ 5·1	− 0·6	−3·2	−2·1	+2·1

The area of greatest deficiency of temperature was transferred from West Persia and Baluchistan on the 17th to Baluchistan, Sind, the Punjab and Rajputana on the 18th, to Rajputana and the North-Western Provinces on the 19th, and to the North-Western Provinces, Bihar and Chota Nagpur on the 20th. The following statement, giving comparative data for the 14th and 19th, shows roughly the large temporary reduction of temperature produced by this cool wave:—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		Change from 14th to 19th April.
	14th April.	19th April.	
	°	°	°
Baluchistan (Quetta)	− 4·1	− 9·9	− 5·8
Sind	+ 9·8	− 5·0	−14·8
Punjab	+ 5·0	− 7·7	−12·7
Rajputana	+11·0	−11·7	−22·7
North-Western Provinces and Oudh	+ 9·8	− 9·5	−19·3
Central India and Gujarat	+ 8·4	− 8·8	−17·2
Central Provinces and Berar	+ 5·7	− 5·5	−11·2
Bihar	+ 4·7	− 3·5	− 8·2
Chota Nagpur	+ 6·5	− 2·9	− 9·4
West Bengal	+ 3·7	− 0·6	− 4·3

The effect of the wave in reducing temperature is shown more fully by the following data which give the greatest positive and negative variations of temperature during the

period from the 14th to the 21st at selected stations in Northern India :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		Change from 14th to 19th April.
	14th April.	19th April.	
	°	°	°
Quetta	— 4·1	— 9·9	— 5·8
Jacobabad	+ 9·1	— 6·9	—16·0
Ajmere	+12·2	—12·7	—24·9
Sirsa	+11·1	— 6·0	—17·1
Roorkee	+12·6	—10·4	—23·0
Jhansi	+11·4	— 9·6	—21·0
Allahabad	+ 9·8	— 9·8	—19·6
Gaya	+ 7·5	— 4·6	—12·1
Hazaribagh	+ 7·9	— 4·2	—12·1

The lowest night temperatures of the month were recorded during the advance of this cool wave. The following gives the lowest night temperatures registered at several stations :—

Station.	Lowest minimum temperature recorded in April 1896.	Date on which recorded.	Normal minimum temperature, April.
	°		°
Leh	22·0	15th & 22nd	...
Meshad	35·9	13th	...
Kabul	33·0	16th	...
Kelat	17·0	17th	...
Bickaneer	62·0	18th	76·0?
Pachpadra	56·1	18th	...
Jhansi	68·9	19th	75·9
Sirsa	51·2	18th	68·1

The cool wave described above was one of the best defined and most severe cool waves which have passed across Northern India in the month of April (*i.e.*, during the north-east or dry monsoon). It originated in the Persian area and intensified on the 13th and 14th and gradually extended eastwards. It caused a reduction of from 20° to 25° at many of the stations in Persia, Baluchistan and North-West and Central India.

The data as yet available for the explanation of the origin of this wave are insufficient, but appear to indicate that it was due to the formation of a deepish depression to the north and east of the Punjab which gave north-westerly winds in Persia. The extension of these winds across Baluchistan into India was the predominant factor in the spread of the cool wave over India.

Temperature was more or less below the normal on the 20th and 21st over the whole of India except Burma and South India.

Temperature increased steadily over the whole area during the next four days and was on the 25th again above the normal over the whole of India except Assam, East Bengal, Upper Burma and the Madras coast districts. The following gives comparative data showing the amount of this change :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		Change from 20th to 25th April.
	20th April.	25th April.	
	°	°	°
Punjab	—4·5	+2·4	+ 6·9
Sind and Rajputana	—5·2	+4·3	+ 9·5
North-Western Provinces and Oudh	—7·5	+1·7	+ 9·2
Central India and Gujarat	—6·1	+5·3	+11·4
Central Provinces and Berar	—5·8	+3·8	+ 9·6
Bombay	—0·8	+3·3	+ 4·1
Madras	+1·1	+0·5	— 0·6

Temperature continued in general excess during the next three days. The following gives variation data for the 24 hours preceding 8 A.M. of the 28th :—

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

Weather was very disturbed with series of thunderstorms, giving heavy rain in Assam and East Bengal on the 29th and 30th, and a considerable reduction of temperature occurred in that area. Temperature continued in general

and moderate to large excess over the remainder of India.

The following gives variation data for the 30th :—

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

The following table gives variation data of the mean temperature week by week during the month and of the whole 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					
	4th April.	11th April.	18th April.	25th April.	2nd May.	For whole month.
	°	°	°	°	°	°
Burma	+1·8	+2·1	+2·2	+1·6	+1·1	+1·7
Bengal and Assam	+4·0	+4·0	+3·4	+0·2	+0·4	+2·4
North-Western Provinces and Oudh.	+4·4	+3·4	+3·8	−4·0	+3·2	+2·0
Punjab	+3·1	+5·3	−0·6	−3·0	+4·2	+1·5
Sind and Rajputana	+6·2	+4·1	+2·3	−1·3	+4·6	+3·1
Central India and Gujarat.	+6·4	+3·0	+4·4	−1·3	+4·1	+3·3
Central Provinces and Berar.	+5·9	+3·2	+4·5	−2·2	+4·0	+2·9
Bombay	+2·7	+2·2	+2·5	+1·0	+2·4	+2·0
Madras	+0·9	+1·3	+3·4	+0·9	+2·8	+1·8

Winds.

Winds were on the mean of the month slightly stronger than usual at Rangoon and Diamond Island, and were of normal steadiness but less easterly or more westerly than usual.

Winds were on the mean of the month less westerly than usual at the coast stations of Bengal and more westerly at the interior stations.

The following gives data in illustration : —

	Station.	Wind direction.		
		Mean actual, April 1896.	Mean normal, April.	Westerly deflection.
				°
Coast Stations	False Point	S 13° W	S 38° W	−25
	Saugor Island	S 4° W	S 20° W	−16
Interior	Calcutta	S 23° W	S 3° W	+20
	Chittagong	S 28° W	S 12° W	+16
	Berhampore	S 64° W	S 23° W	+41
	Burdwan	S 51° W	S 40° W	+11

The inverse relation between the directions of the winds at the coast stations and interior stations in Bengal was very marked in April 1896.

Winds were stronger and steadier in Orissa and Bengal. The following gives data for four representative stations :—

Station.	Steadiness.			Velocity in miles per diem.		
	Actual percentage, April 1896.	Normal percentage, April.	Variation from normal.	Mean actual, April 1896.	Mean normal, April.	Variation from normal.
False Point	85	79	+ 6	348	336	+12
Saugor Island	78	76	+ 2	448	401	+47
Chittagong	73	37	+36	222	169	+53
Berhampore	52	32	+20	139	124	+15

Winds were generally stronger and steadier than usual in the Gangetic Plain in April 1896 and the westerly element of the air movement was more strongly marked than usual. The following gives comparative data for three stations :—

Station.	Wind direction.			Velocity in miles per diem.		
	Mean actual, April 1896.	Mean normal, April.	Increased westerly deflection.	Mean actual, April 1896.	Mean normal, April.	Variation from normal.
Patna	N 54° W	N 38° W	+16°	145	108	+37
Allahabad	N 64° W	N 52° W	+12°	121	86	+35
Lahore	N 44° W	N 19° W	+25°	70	80	−10

Winds were somewhat stronger and steadier than the normal in Rajputana and Central India. The direction of the air movement varied slightly and irregularly from station to station; but on the mean of the whole area was practically normal.

The following gives comparative data of the mean air movement over Northern India during the month: —

DISTRICT.	STEADINESS.			WIND VELOCITY IN MILES PER DIEM.		
	Mean actual percentage, April 1896.	Mean normal percentage, April.	Variation from normal.	Mean actual, April 1896.	Mean normal, April.	Variation from normal.
Bengal	66	53	+13	223	191	+32
Chota Nagpur	70	49	+21	257	201	+56
Bihar	28	18	+10	149	123	+26
North-Western Provinces.	62	31	+31	99	84	+15
Punjab	47	23	+24	77	74	+ 3
Sind	48	49	— 1	229	220	+ 9
Rajputana	58	53	+ 5	166	163	+ 3
Central India	66	55	+11	112	118	— 6
Central Provinces	42	38	+ 4	130	106	+24
Berar	64	56	+ 8	192	172	+20

Winds were of normal steadiness and direction on the West Coast but slightly weaker than usual, *e.g.*:—

STATION.	VELOCITY IN MILES PER DIEM.		
	Mean actual, April 1896.	Mean normal, April.	Variation from normal.
Bombay	228	271	—43
Ratnagiri	165	242	—77

Winds were on the average of the month stronger than usual in the Central Provinces and the Deccan and were approximately normal in direction. They were also slightly steadier than usual. Winds were remarkably unsteady in Mysore and Central Madras. The following give examples:—

STATION.	STEADINESS.			VELOCITY IN MILES PER DIEM.		
	Actual percentage, April 1896.	Normal, percentage, April.	Variation from normal.	Mean actual, April 1896.	Mean normal, April.	Variation from normal.
Salem	23	37	—14	148	112	+36
Mysore	15	?	?	180	?	?
Bangalore	10	52	—42	175	85	+90
Hassan	7	?	?	101	?	?
Chitaldroog	15	?	?	172	?	?
Bellary	17	11	+ 6	126	126	0

The air movement was greater than usual in Coorg and Mysore.

The mean winds at the hill stations varied in a very irregular manner from the normal. The mean direction at Murree was S 41° W, the normal being S 40° E and at Chakrata S 8° E, the normal being S 68° W. Northerly winds were more prevalent than usual. Thus the mean wind direction of the month at Simla was N 58° W instead of S 69° W.

The most noteworthy feature of the air movement was the prevalence of south-east winds at the Seychelles. The following is a comparison of the wind data for April 1896 and April 1895 and 1894.

MONTH.	Mean actual wind direction.	Mean actual wind steadiness.	Mean wind velocity in miles per diem.
April 1894	S 69° W	13	?
„ 1895	N 49° E	15	103
„ 1896	S 60° E	33	74

Humidity and Cloud.

The air was slightly drier than usual in Burma and at Port Blair due to somewhat higher temperature than usual, as the amount of aqueous vapour contained in the air was on the average of the month almost identical with the normal.

In Arakan and Assam the air contained slightly more vapour than usual and the humidity percentage of the month was in slight excess at Akyab (+3) and Silchar (+3).

The air was remarkably dry over the whole of Northern and Central India. The air contained much less vapour than usual in those areas, the deficiency at the majority of stations in the North-Western Provinces, Punjab and Central India ranging from 25 to 50 per cent. in amount. As temperature was much higher than usual over the whole of that area, the mean relative humidity of the month was in very large defect over the

whole area. It was 15 or above in defect at stations for which comparative data are given below:

Station.	Relative humidity.		
	Average actual, April 1896.	Average normal, April.	Variation from normal.
	%	%	
Berhampore	40	59	−19
Calcutta	56	71	−15
Peshawar	38	54	−16
Raipur	17	33	−16
Simla	30	46	−16
Chakrata	27	43	−16

The following gives mean data for the whole area of decreased humidity, including Northern and Central India, Berar and the Central Provinces :—

Province.	Absolute humidity.			Relative humidity.		
	Average actual, April 1896.	Average normal, April.	Variation from normal.	Average actual, April 1896.	Average normal, April.	Variation from normal.
	"	"	"	%	%	
Bengal	·736	·778	−·042	60	69	−9
Bihar	·443	·468	−·025	34	41	−7
Chota Nagpur	·257	·296	−·039	19	28	−9
N.-W. Provinces and Oudh.	·277	·362	−·085	23	33	−10
Punjab	·356	·415	−·059	35	45	−10
Rajputana	·327	·358	−·031	25	30	−5
Central India	·239	·316	−·077	18	27	−9
Berar	·287	·300	−·013	20	25	−5
Central Provinces	·286	·345	−·059	20	28	−8

The air was generally drier on the mean of the month in the Peninsula south of Lat. 18° N., but the variations were small in amount compared with those which obtained in Northern and Central India. The following gives comparative data for this area :—

Division.	Absolute humidity.			Relative humidity.		
	Average actual, April 1896.	Average normal, April.	Variation from normal.	Average actual, April 1896.	Average normal, April.	Variation from normal.
	"	"	"	%	%	
Bombay Deccan	·430	·428	+·002	38	36	+2
Madras	·632	·650	−·018	47	50	−3
West Coast	·848	·806	+·042	71	73	−2
Mysore	·543	·536	+·007	50	53	−3
Madras Coast	·873	·853	+·020	71	70	+1

The month of April 1896 was one of the driest on record in Northern and Central India. The mean 4 P.M. relative humidity of the month was 10 per cent. or less at a considerable number of the observing stations, including those for which data are given below :—

Station.	Relative humidity.	
	Mean 4 P.M.	Lowest during month.
	%	%
Dehra Dun	10	2
Roorkee	8	0
Deesa	8	0
Nowgong	9	3
Kandhwa	9	0
Saugor	10	4
Sutna	9	2

The mean daily humidity was less than 20 per cent. at the following stations :—

Station.	Relative humidity.		
	Average actual, April 1896.	Average normal, April.	Variation from normal.
	%	%	
Hazaribagh	19	28	−9
Nowgong	19	31	−12
Buldana	18	26	−8
Khandwa	17	27	−10
Saugor	18	26	−8
Raipur	17	33	−16
Sutna	17	22	−5

The driest districts of the month hence included Chota Nagpur, Bandelkhand, Baghelkhand, and the greater part of the Central Provinces and Berar.

A remarkable feature of the meteorology of the month was the excessive dryness which obtained in Northern and Central India during the advance of the cool wave across

that area from the 16th to the 20th. The following data show the chief features of this dry and cool wave :—

STATION.	NORMAL OF MONTH.		LOWEST ACTUAL.		Date.
	Aqueous vapour pressure.	Relative humidity.	Aqueous vapour pressure.	Relative humidity.	
	"	%	"	%	
Mount Abu	·248	28	·039	4	19th
Deesa	·366	28	0	0	17th
Jeypore	·317	28	·063	3	14th
Khandwa	·347	27	0	0	19th
Saugor	·301	26	·068	4	19th
Sutna	·249	22	·041	2	22nd
Buldana	·314	26	·026	2	20th
Allahabad	·390	32	·034	2	15th
Hazaribagh	·296	28	·075	6	22nd

The following is a brief summary of the mean humidity conditions of the month of April 1896 :—

(1) The air was slightly drier than usual at Port Blair and in Lower Burma.

(2) It was slightly damper on the mean of the month in Assam and Arakan.

(3) Humidity was largely in defect in Bengal, Bihar, Chota Nagpur, the North-Western Provinces, the Punjab, Rajputana, Central India, the Central Provinces and Berar. The deficiency was, on the whole, most marked in West Bengal, Chota Nagpur and the western districts of the North-Western Provinces.

(4) It was considerably drier at Wellington and at the hill stations in Northern and Central India with the exception of Kailang, where the mean humidity of the month was 5 above the normal.

Cloud was in slight excess in Lower Burma, Arakan, East Bengal and Silchar.

It was more or less considerably below the normal over the large area including Northern and Central India and the Central Provinces, in which humidity was largely in defect. The following gives comparative data :—

STATION.	MEAN CLOUD AMOUNT.		
	Average actual, April 1896.	Average normal, April.	Variation from normal.
Bengal (except East)	2·7	3·2	—0·5
Bihar	0·4	1·6	—1·2
Chota Nagpur	1·4	2·6	—1·2
North-Western Provinces and Oudh	1·6	2·0	—0·4
Punjab	2·5	3·0	—0·5
Rajputana	1·1	2·0	—0·9
Central India	1·6	2·1	—0·5
Central Provinces	2·0	2·2	—0·2
Berar	2·4	2·1	+0·3

The deficiency in the mean amount of cloud was hence most pronounced in the Gangetic Plain, more especially Bihar and Chota Nagpur, and in Rajputana.

The following gives data for the stations at which skies were most serene during the month and the cloud amount was largely in defect :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, April 1896.	Normal, April.	Variation from normal.
Darbhanga	0·1	1·1	—1·0
Deesa	0·5	1·8	—1·3
Patna	0·7	2·0	—1·3
Agra	0·9	1·4	—0·5
Mount Abu	0·9	2·2	—1·3

Cloud was as largely in defect at the hill stations in Upper India as at the neighbouring plains stations, but was in excess at the more interior and elevated stations of Leh and Kailang.

The following gives data for five stations in illustration :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, April 1896.	Normal, April.	Variation from normal.
Leh	6·8	6·3	+0·5
Kailang	6·6	6·0	+0·6
Murree	3·7	5·4	—1·7
Ranikhet	2·2	3·2	—1·0
Darjeeling	5·4	6·1	—0·7

The mean amount of cloud during the month was normal at the Konkan, stations but was more or less considerably in defect at the Deccan and Madras stations. The following gives comparative data for six representative stations :—

DIVISION.	STATION.	MEAN CLOUD AMOUNT.		
		Actual, April 1896.	Normal, April.	Variation from normal.
Malabar	Cochin	3·3	3·8	—0·5
South India hills	Wellington	4·0	4·5	—0·5
Deccan	Sholapur	3·0	3·4	—0·4
Madras Coast	Vizagapatam	1·5	2·6	—1·1
	Madras	2·1	2·9	—0·8
Madras South	Trichinopoly	2·6	4·5	—1·9

The mean cloud amount of the month was very largely below the normal at Aden (—1·5) and also at Bushire and Zanzibar.

Rainfall.

The mean rainfall of the month was less than a tenth of an inch (*i.e.*, practically or absolutely nil) in amount in Sind, Rajputana, the Punjab (except the northern and hill districts), the North-Western Provinces, Bihar, Chota Nagpur, Central India, the Central Provinces, Berar, Kathiawar, Gujarat, the Konkan, Hyderabad and the Coromandel coast districts. It was less than half an inch in amount in Central and Upper Burma, parts of the Punjab, Baluchistan and the Madras Deccan. The following areas received moderate to heavy rain :—

(1) Lower Burma and Tenasserim.
(2) Bengal and Assam.
(3) Malabar.
(4) Mysore and Coorg.

The rainfall of the month occurred chiefly during thunderstorms and was hence very irregularly distributed both as to time and locality. The chief periods of disturbed weather and rainfall were as follows :—

1st.—The 1st to the 5th. Kashmir received light showers on the 1st and 2nd and the Deccan and Malabar coast districts light to moderate showers from the 1st to the 5th.

2nd.—The 13th to the 15th. Baluchistan obtained showers from the 12th to the 14th, the hill and submontane districts of the Punjab and the hill districts of the North-Western Provinces on the 13th and 14th, East and North Bengal light to moderate showers on the 14th and 15th and Assam from the 13th to the 15th.

3rd.—The 16th to the 21st. The Bombay Deccan received thundershowers on the 17th and 18th, Ganjam from the 19th to the 21st and Malabar from the 17th to the 19th.

4th.—From the 28th to the 30th. Assam and East Bengal received heavy general rain during this period, and North Bengal moderate to heavy rain.

The following table gives comparative rainfall data of April 1896 for the 57 meteorological divisions of India :—

Provinces.	Division.	Number of rainy days.		Rainfall.		
		Average actual, April 1896.	Average normal, April.	Average actual, April 1896.	Average normal, April.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	2·70	3·98	—1·28
	Lower Burma (Deltaic)*	?	?	0·72	1·78	—1·06
	Central do.*	?	?	0·49	1·36	—0·87
	Upper do.*	?	?	0·35	?	?
	Arakan*	?	?	0·63	2·42	—1·79
Bengal and Assam	Eastern Bengal	3·8	5·3	4·07	4·35	—0·28
	Assam (Surma)*	?	?	19·88	14·53	+5·35
	Do. (Hill tracts)*	?	?	20·43	11·15	+9·28
	Do. (Brahmaputra)*	?	?	9·92	7·97	+1·95
	Deltaic Bengal	1·5	3·5	0·89	2·39	—1·50
	Central do.	0·9	2·5	0·45	1·45	—1·00
	North do.	3·4	4·9	2·67	3·78	—1·11
	Bengal (Hills)	7·0	8·1	4·80	5·22	—0·42
	Orissa	1·0	1·8	0·35	1·09	—0·74
	Chota Nagpur	0·1	1·1	0·02	0·61	—0·59
	Bihar (South)	0·1	0·5	0·01	0·21	—0·20
	Do. (North)	0·4	1·3	0·19	0·76	—0·57
North-Western Provinces and Oudh.	North-Western Provinces (East)	0	0·4	0	0·14	—0·14
	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	0·09	—0·09
	Do. do. (West)	0	0·4	0	0·12	—0·12
	Do. do. (Submontane East)	0	0·5	0	0·27	—0·27
	Do. do. (do. West)	0·1	0·6	0·03	0·27	—0·24
	Do. do. (Hills)	0·7	2·5	0·25	0·83	—0·58
Punjab	Punjab (South-East)	0	0·6	0·01	0·25	—0·24
	Do. (South)	0	0·7	0	0·35	—0·35
	Do. (Central)	0·2	1·5	0·05	0·64	—0·59
	Do. (Submontane)	0·2	1·3	0·06	0·62	—0·56
	Do. (Hill Districts)	1·3	3·5	0·55	2·32	—1·77
	Do. (North)	0·8	2·6	0·23	1·48	—1·25
	Do. (West)	0·1	0·9	0·01	0·41	—0·40
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	3·3	3·4	2·35	2·26	+0·09
	Travancore	4·2	?	2·42	?	?
	Madras (South Central)	0·3	2·2	0·12	1·49	—1·37
	Coorg	4·4	?	1·97	?	?
	Mysore*	?	?	1·08	1·83	—0·75
	Konkan	0·2	0·6	0·05	0·29	—0·24
	Bombay Deccan	0·2	1·6	0·74	0·80	—0·06
	Khandesh	0·3	0·3	0·08	0·12	—0·04

Province.	Division.	Number of rainy days. Average actual, April 1896.	Number of rainy days. Average normal, April.	Rainfall. Average actual, April 1896.	Rainfall. Average normal, April.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Central Provinces and Berar.	Berar*	?	?	0	0·22	−0·22
	Central Provinces (West)	0·2	0·5	0·03	0·20	−0·17
	Do. (Central)	0·1	0·7	0·01	0·29	−0·28
	Do. (East)	0·1	1·0	0·07	0·55	−0·48
Bombay (North)	Gujarat	0	0	0	0·01	−0·01
	Kathiawar	0	0	0·01	0·08	−0·07
	Sind	0	?	0	0·21	−0·21
	Baluchistan (Hills)	0·3	?	0·08	0·99	−0·91
Rajputana and Central India.	Central India (East)	0	?	0·01	0·12	−0·11
	Rajputana (East), and Central India (West)	0	?	0·01	0·08	−0·07
	Rajputana (West)	0	?	0	0·04	−0·04
Madras	East Coast (North)	0·9	1·0	0·51	0·49	+0·02
	Do. (do.)	0	2·4	0·09	0·89	−0·80
	Hyderabad (South)*	?	?	0	0·70	−0·70
	Madras (Central)	0·6	0·9	0·27	0·44	−0·17
	East Coast (Central)	0·2	0·4	0·14	0·19	−0·05
	Do. (South)	0·1	0·9	0·03	0·61	−0·58
	Madras (South)	1·0	2·6	0·47	1·62	−1·15

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 30 out of the 58 rainfall divisions, and less than half an inch in eleven divisions and between half an inch and an inch in six divisions. It exceeded one inch in 11 divisions only, for which data are given below:—

Division.	Rainfall. Average actual, April 1896.	Rainfall. Average normal, April.	Rainfall. Variation from normal.
	Inches.	Inches.	Inches.
Tenasserim	2·70	3·98	−1·28
Eastern Bengal	4·07	4·35	−0·28
Assam (Surma)	19·88	14·53	+5·35
„ (Hill tracts)	20·43	11·15	+9·28
„ (Brahmaputra)	9·92	7·97	+1·95
North Bengal	2·67	3·78	−1·11
Bengal Hills	4·80	5·22	−0·42
Malabar Coast	2·35	2·26	+0·09
Travancore	2·42	?	?
Coorg	1·97	?	?
Mysore	1·08	1·83	−0·75

The rainfall of the month was in moderate to largish excess in the three Assam divisions but was normal or in defect in all other divisions. An important feature of the month was the scanty rainfall in South and Central Madras and the Punjab.

There were three periods of general rainfall during the month in Assam. These were the 1st to the 8th, the 13th to the 18th and the 28th to the 30th. The rainfall during the first period was generally light to moderate in amount. The second period gave general and heavy rain over the whole province. The following are the most noteworthy falls in 24 hours registered during this period:—

District.	Station.	Date.	Heaviest fall in 24 hours preceding 8 A.M. of date.
			Inches.
Cachar	Nemotha	15th	11·20
Khasi and Jaintia Hills	Cherra Poonji	17th	8·15

A large number of stations recorded falls in 24 hours ranging between 3 and 4 inches during this period.

General rain was received daily in all districts from the 28th to the end of the month. The following gives the largest falls in 24 hours during this period:—

District.	Station.	Date.	Heaviest fall in 24 hours preceding 8 A.M. of date.
			Inches.
Kamrup	Palashari	28th	3·10
„	„	29th	3·05
„	„	30th	4·05
Sylhet	Habiganj	28th	3·42
Kamrup	Barpeta	29th	3·27
Khasi and Jaintia Hills	Cherra Poonji	„	3·05

Hailstorms appear to have been unusually frequent in Cachar and the Kamrup district and caused much damage to the crops. The precipitation of the month was in general excess. The following gives comparative data for each of the eight plains districts :—

District.	Rainfall.			
	Average actual, April 1896.	Average normal, April.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cachar	16·46	11·87	+4·59	+39
Sylhet	14·52	11·51	+3·01	+26
Goalpara	7·46	6·14	+1·32	+21
Kamrup	12·23	7·20	+5·03	+70
Darrang	8·18	6·43	+1·75	+27
Nowgong	7·34	5·23	+2·11	+40
Sibsagar	15·56	8·43	+7·13	+86
Lakhimpur	10·45	10·53	—0·08	—1

The month was practically rainless in Bihar and Chota Nagpur. North Bengal obtained light to moderate showers and East Bengal very light showers on the 14th and 15th.

Numerous series of thunderstorms occurred during the last week of the month in South-West (Deltaic), North and East Bengal. South-West Bengal received fairly general rain from these storms on the 29th and North and East Bengal on the 27th, 28th and 29th.

Very heavy falls were recorded at several stations in East Bengal during this period. The most noteworthy were the following :—

District.	Station.	Date.	Heaviest fall in 24 hours preceding 8 A.M. of date.
			Inches.
Tippera	Nasirnagar	28th	12·24
Mymensingh	Subarnakhali	27th	5·08
,,	Durgapur	,,	4·65
Chittagong	Fenoa	28th	3·85
,,	Mirsarai	,,	3·10
,,	Satkania	29th	3·98

Light showers fell in the Cuttack district on the 29th and in the Sonthal Parganahs on the 28th.

The following gives comparative rainfall data of the nine divisions of the province :—

Division.	Number of rainy days.		Rainfall.		
	Average actual, April 1896.	Variation from normal.	Average actual, April 1896.	Variation of actual from normal.	Percentage variation from normal.
			Inches.	Inches.	
Eastern Bengal	3·8	—1·5	4·07	—0·28	— 6
Deltaic Bengal	1·5	—2·0	0·89	—1·50	—63
Central ,,	0·9	—1·6	0·45	—1·00	—69
North ,,	3·4	—1·5	2·67	—1·11	—29
Bengal Hills	7·0	—1·1	4·80	—0·42	— 8
Orissa	1·0	—0·8	0·35	—0·74	—68
Chota Nagpur	0·1	—1·0	0·02	—0·59	—97
Bihar (South)	0·1	—0·4	0·01	—0·20	—95
,, (North)	0·4	—0·9	0·19	—0·57	—75

The normal rainfall of the month on the plains of the North-Western Provinces ranges between one and three-tenths.

No rain fell in the North-Western Provinces except in the districts of Dehra Dun, Almora and Garhwal, which received light showers on the 13th and 14th and the 27th and 28th. The following gives comparative data for these three districts :—

District.	Rainfall.		
	Average actual, April 1896.	Average normal, April.	Variation from normal.
	Inch.	Inches.	Inch.
Dehra Dun	0·22	0·70	—0·48
Almora	0·33	0·89	—0·56
Garhwal	0·62	1·33	—0·71

The submontane, north-west and hill districts of the Punjab obtained light showers from the 12th to the 14th, and also a few light local showers of no importance on the 22nd and 23rd. The rainfall of the month was small in these districts and nil over the remainder of the province. It was in general defect, the deficiency being large in the northern and the hill districts which usually receive

moderate rain in April. The following give comparative data :—

Division.	Rainy days.			Rainfall.		
	Actual, April 1896.	Normal, April.	Variation from normal.	Average actual, April 1896.	Average normal, April.	Variation from normal.
				Inch.	Inches.	Inches.
Punjab, South-East	0	0·6	−0·6	0·01	0·25	−0·24
„ South	0	0·7	−0·7	0	0·35	−0·35
„ Central	0·2	1·5	−1·3	0·05	0·64	−0·59
„ Submontane	0·2	1·3	−1·1	0·06	0·62	−0·56
„ Hill Districts	1·3	3·5	−2·2	0·55	2·32	−1·77
„ North	0·8	2·6	−1·8	0·23	1·48	−1·25
„ West	0·1	0·9	−0·8	0·01	0·41	−0·40

Baluchistan received some light local showers from the 1st to the 3rd. Light showers also fell on the plateau between the 9th and 14th, but the rainfall of the month was in considerable defect as is shown by the following data for three stations :—

Station.	Rainfall.		
	Average actual, April 1896.	Average normal, April.	Variation from normal.
	Inch.	Inches.	Inches.
Kalat	0·02	0·65	−0·63
Pishin	0·23	1·10	−0·87
Quetta	0·14	1·21	−1·07

The rainfall of the month in Baluchistan was as largely in defect in April 1896 as in the corresponding month of 1895.

Rain fell during three periods in Kashmir, *viz.*, the 1st to the 4th, the 11th to the 14th and the 25th and 26th. The precipitation during the second period was unusually heavy, and heavy snow fell on the higher elevations. The total rainfall of the month ranged between 0·15 inch at Jummoo to 4·76 inches at Kargil. Leh received the unusually large fall of 1·43 inches, or 1·33 inches above the normal of the month.

The Bombay Deccan districts received occasional thunder showers from the 1st to the 5th, the 8th and 10th, the 17th and 18th and the 27th and 28th. The following gives a comparative statement of the rainfall of the month in these districts :—

District.	Rainfall.		
	Average actual, April 1896.	Average normal, April.	Variation from normal.
	Inches.	Inches.	Inch.
Dharwar	0·51	1·21	−0·70
Bijapur	0·43	0·78	−0·35
Belgaum	1·02	1·23	−0·21
Kolhapur	0·86	0·94	−0·08
Satara	1·14	0·71	+0·43
Sholapur	0·38	0·38	0
Poona	0·52	0·34	+0·18
Ahmednagar	0·27	0·17	+0·10
Nasik	0·04	0·10	−0·06
Khandesh	0·02	0·02	0

No rain fell during the month over the greater part of the Madras Presidency. The Ganjam and Vizagapatam districts had occasional thundershowers from the 19th to the 21st. The Malabar districts, including South Canara and Malabar and the native states of Cochin and Travancore obtained frequent but moderate rain during the month. The chief periods of thunderstorms and rain were the 1st to the 5th, the 11th to the 20th and the 28th to the 30th. The southern districts of Madras including Tinnevelly, Madura and Tanjore, received occasional showers of little importance during the third week of the month.

The following gives a comparative statement of the rainfall of the month in the eight divisions of the Presidency :—

Division.	Rainfall.			
	Average actual, April 1896.	Average normal, April.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Madras East Coast (North).	0·51	0·49	+0·02	+ 4
„ „ (a)	0·09	0·89	−0·80	−90
„ Central	0·27	0·44	−0·17	−39
„ East Coast (Central).	0·14	0·19	−0·05	−26
„ „ (South)	0·03	0·61	−0·58	−95
„ (South)	0·47	1·62	−1·15	−71
„ South Central	0·12	1·49	−1·37	−92
Malabar Coast	2·35	2·26	+0·09	+ 4

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.								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.		...	...	−·023	...	...	...	...	...	...	...	94·6	+1·3	77·5	+1·9	86·1	+1·2	17·1	...	...	...	...	24·6
Bay Islands	Port Blair	61	29·839	?	29·831	29·890	3rd	29·791	15th	·099	85·0	94·3	?	80·0	?	87·1	?	14·3	96·9	19th	77·8	2nd	19·1
Tenasserim	Mergui	96	29·827	?	29·854	29·881	2nd	29·759	18th	·122	84·2	93·0	?	75·7	?	84·4	?	17·3	94·9	24th	72·6	2nd	22·3
	Tavoy	26	29·932	?	?	29·994	3rd	29·870	18th	·124	81·9	95·1	?	73·9	?	84·5	?	21·2	98·2	24th	70·2	2nd	28·0
	Moulmein	94	29·816	−·021	29·847	29·881	23rd	29·748	18th	·133	82·8	95·8	+1·4	77·4	+1·6	86·6	+1·5	18·4	98·4	2 days	71·3	29th	27·1
Lower Burma	Rangoon	41	29·850	−·026	29·828	29·921	2nd	29·776	18th	·145	81·9	100·8	+2·8	77·6	+1·7	89·2	?	23·2	104·1	19th	73·9	1st	30·2
	Bassein	27	29·862	?	29·824	29·938	24th	29·809	15th	·129	83·1	95·8	?	76·9	+1·8	86·4	+0·9	18·9	100·7	23rd	72·9	24th	27·8
	Diamond Island,	41	29·856	−·021	29·832	29·918	24th	29·798	18th	·120	84·3	89·1	+0·3	81·0	+2·9	85·1	+1·1	8·1	93·1	30th	78·9	1st	14·2
Arakan	Akyab	20	29·855*	−·025*	?	29·932	24th	29·768	15th	·164	84·1	92·6	+0·7	77·5	+1·7	85·1	+1·3	15·2	96·0	22nd	67·7	29th	28·3
II.—Burma Inland.		...	...	−·039	...	...	...	...	...	...	...	98·6	+0·8	71·9	+2·5	85·0	+2·1	26·2	...	...	...	...	37·4
Central Burma	Toungoo	183	29·671	−·038	29·795	29·766	24th	29·602	18th	·164	84·7	101·8	+1·7	78·6	?	90·2	+3·5	23·2	105·2	20th	70·2	25th	35·0
	Thayetmyo	134	29·701	−·040	29·776	29·802	23rd	29·628	15th	·174	84·6	103·9	+0·9	78·5	+3·1	91·2	+2·0	25·4	107·1	19th	74·1	30th	33·0
Upper Burma	Minbu	?	29·669	?	?	29·777	23rd	29·570	15th	·207	83·4	104·9	?	78·4	?	91·7	?	26·5	108·1	2 days	73·1	29th	35·0
	Yamethin	645	29·179	?	29·768	29·290	23rd	29·096	15th	·194	83·9	103·1	?	?	?	?	?	?	109·6	3rd	?	...	?
	Taunggyi	?				Not recorded.					73·0	87·4	?	61·1	?	74·3	?	26·3	93·1	4th	55·5	22nd	37·6
	Mandalay	248	29·547	?	29·743	29·674	23rd	29·437	15th	·237	86·1	104·7	?	79·8	?	92·3	?	24·9	107·6	19th	71·1	22nd	36·5
	Kindat	?	29·459	?	?	29·594	23rd	29·364	17th	·230	75·3	96·4	−0·1	68·3	+1·9	82·4	+0·9	28·1	103·3	12th	61·5	22nd	41·8
	Lashio	?	27·092	?	?	27·209	26th	26·982	15th	·227	69·9	92·5	?	63·1	?	77·8	?	29·4	101·5	5th	56·0	10th	45·5
	Bhamo	?	29·430	?	?	29·559	26th	29·345	17th	·214	73·7	92·3	?	67·4	?	80·1	?	25·4	98·6	6th	63·8	23rd	34·8
III.—Assam.		...	...	−·048	...	...	...	...	...	...	...	86·4	+0·3	69·8	+1·1	78·1	+0·7	16·6	...	...	...	...	30·6
Surma	Silchar	104	29·738	−·041	29·796	29·838	26th	29·645	14th	·193	75·3	88·7	+1·1	70·3	+1·4	79·5	+1·3	18·4	95·3	24th	63·6	22nd	31·7
Brahmaputra	Sibsagar	333	29·497	−·055	29·794	29·673	23rd	29·268	15th	·405	70·7	80·6	−2·0	67·8	+1·4	74·2	−0·3	12·8	87·2	2 days	64·0	9th	23·2
	Dhubri	115	29·679	?	29·750	29·839	23rd	29·481	15th	·358	75·6	90·0	+1·9	71·2*	+0·6	80·3*	+1·3	18·3	102·1	7th	65·1	20th	37·0
IV.—Bengal and Orissa.		...	...	−·053	...	...	...	...	...	...	...	97·8	+3·2	75·9	+1·7	86·9	+2·5	21·7	...	...	...	...	37·1
East Bengal	Chittagong	87	29·743	−·052	29·778	29·832	26th	29·594	15th	·238	82·0	89·7	+1·1	75·5	+2·0	82·6	+1·6	14·2	97·2	23rd	67·1	2 days	30·1
	Lungleh	?				Not recorded.					71·0	82·0	?	65·9	?	73·9	?	16·1	88·8	24th	56·2	29th	32·6
	Noakhali	43	29·768	?	29·757	29·864	23rd	29·609	15th	·255	83·5	90·2	?	76·9	?	83·6	?	13·3	96·9	23rd	66·1	25th	30·8
	Comilla	36	29·770	?	29·754	29·882	26th	29·578	15th	·304	82·7	94·1	?	74·4	?	84·3	?	19·7	100·3	24th	65·8	3 days	34·5
	Sirajganj	49	29·719	?	29·718	29·867	23rd	29·510	15th	·357	80·4	99·2*	?	73·8	?	86·5*	?	25·4	106·2	12th	60·8	20th	45·4
	Narayanganj	26	29·760	−·058	29·734	29·881	25th	29·554	15th	·327	82·1	94·4	+1·2	76·0	+1·7	85·2	+1·5	18·4	101·0	22nd	64·8	25th	36·2
	Barisal	12	29·778	−·050	29·738	29·894	23rd	29·610	15th	·284	83·3	93·1	+1·9	77·3	+2·4	85·2	+2·2	15·8	101·3	22nd	63·9	28th	37·4
	Mymensingh	59	29·733	−·054	29·744	29·856	25th	29·541	15th	·315	79·4	95·0	+4·6	73·3	+1·5	84·2	+3·1	21·7	101·5	12th	66·1	19th	35·4
Deltaic Bengal	Faridpur	46	29·737	?	29·731	29·860	25th	29·543	15th	·317	80·9	97·2	?	74·7	?	86·0	?	22·5	103·3	12th	68·4	28th	34·9
	Jessore	33	29·729	−·067	29·708	29·866	23rd	29·531	15th	·335	84·1	101·4	+4·1	76·5	+1·4	89·0	+2·8	24·9	107·5	2 days	64·4	21st	43·1
	Calcutta	21	29·747	−·054	29·713	29·877	20th	29·564	15th	·313	84·2	99·6	+4·2	78·0	+2·3	88·8	+3·3	21·6	107·0	16th	70·2	21st	36·8
	Saugor Island	25	29·752	−·052	29·721	29·869	20th	29·588	15th	·281	84·4	92·2	+1·4	81·5	+1·7	86·8	+1·6	10·7	100·4	21st	78·0	19th	22·4
	Krishnagar	47	29·715	?	29·710	29·856	20th & 23rd.	29·525	15th	·331	85·0	104·5	?	75·9	?	90·2	?	28·6	109·1	12th	65·4	21st	43·7
	Midnapore	149	29·617	?	29·712	29·758	20th	29·446	15th	·312	86·4	108·5	?	78·6	?	93·6	?	29·9	112·4	4 days	71·2	20th	41·2

* Mean of 28 days.

tations in India, Burma, etc., in April, 1896.

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 1896.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·60	2·14	−0·68	...	...	...	...	**I.—Burma Coast and Bay Islands.**	
6	...	...	1	3	2	4	6	8	4·7	4·9	− 4	80	·966	5·0	2	?	?	0·60	2·18	−1·58	0·60	2·65	− 2·05	0·23	Port Blair .	Bay Islands.
...	11	...	...	2	1	...	3	13	2·5	2·1	+ 19	80	·933	4·3	3	?	?	1·73	5·46	−3·73	3·16	7·94	− 4·78	1·16	Mergui .	Tenasserim.
29	1	...	...	...	...	...	...	...	0·9	?	?	80	·865	0·3	2	?	?	0·87	?	?	1·29	?	?	0·43	Tavoy.	
...	2	2	2	7	6	7	4	...	4·3	3·2	+ 34	77	·868	5·6	6	4·00	+2·00	6·43	2·95	+3·48	6·43	3·36	+ 3·07	3·57	Moulmein.	
...	...	...	1	...	4	15	9	1	6·3	4·0	+ 58	79	·861	2·1	0	2·82	−2·82	0·01	2·09	−2·08	0·01	2·11	− 2·10	0·01	Rangoon .	Lower Burma.
2	...	1	1	...	1	4	6	15	7·1	5·7	+ 25	77	·875	2·6	1	2·18	−1·18	2·05	1·83	+0·22	2·05	1·50	+ 0·55	2·05	Bassein.	
...	1	1	...	...	...	5	7	16	10·1	5·1	+ 98	74	·847	4·1	0	2·09	−2·09	0	1·48	−1·48	0	1·17	− 1·17	0	Diamond Island.	
...	4	5	8	...	10	2	1	...	3·8	7·2	− 47	80	·929	4·9	1	1·09	−0·09	1·60	1·16	+0·44	1·60	1·50	+ 0·10	1·60	Akyab. .	Arakan.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·11	1·06	+0·47	...	...	...	...	**II.—Burma Inland.**	
2	...	...	...	19	9	...	...	...	6·1	4·0	+ 53	74	·888	2·6	1	1·00	0	3·29	1·09	+2·21	3·29	2·14	+ 1·15	3·17	Toungoo .	Central Burma.
...	...	...	...	3	16	7	2	2	6·9	7·0	− 1	63	·747	0·3	1	1·09	−0·09	0·14	0·80	−0·66	0·14	0·85	− 0·71	0·10	Thayetmyo .	
1	1	1	7	15	4	...	...	1	11·3	?	?	61	·698	0·4	1	?	?	0·13	?	?	0·13	?	?	0·13	Minbu .	Upper Burma.
2	...	...	...	18	10	...	...	...	5·7	?	?	64	·741	0	1	?	?	0·37	?	?	0·37	?	?	0·37	Yamethin.	
14	...	...	...	2	...	14	...	...	?	?	?	60	·486	1·4	2	?	?	0·80	?	?	0·80	?	?	0·45	Taunggyi.	
...	2	...	...	7	11	8	2	...	8·5	?	?	80	·749	0·6	3	?	?	0·44	?	?	0·44	?	?	0·18	Mandalay.	
26	1	1	...	...	2	...	...	...	1·1	?	?	73	·649	1·6	3	?	?	1·15	1·30	−0·15	1·15	2·81	− 1·66	0·47	Kindat.	
			Not	rec	orde	d.			?	?	?	65	·479	5·5	3	?	?	1·53	?	?	1·53	?	?	0·65	Lashio.	
4	...	12	...	...	...	6	3	5	4·6	?	?	78	·647	2·8	8	?	?	2·13	?	?	2·40	?	?	0·65	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12·54	9·57	+2·98	...	...	...	...	**III.—Assam.**	
19	2	3	2	2	...	...	1	1	3·8	3·4	+ 12	85	·740	6·7	15	14·55	+0·45	14·77	14·69	+0·08	27·99	23·50	+ 4·49	2·40	Silchar .	Surma.
2	...	20	2	3	1	2	...	...	5·8	2·9	+100	91	·685	7·2	18	13·55	+4·45	16·44	9·16	+7·28	24·78	13·99	+10·79	2·36	Sibsagar .	Brahmaputra.
1	3	14	9	1	1	1	...	...	10·0	8·0	+ 25	77	·682	5·1	6	6·71	−0·71	6·42	4·85	+1·57	6·42	7·01	−0·59	3·38	Dhubri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·79	2·36	−0·58	...	...	...	...	**IV.—Bengal and Orissa.**	
...	...	2	3	17	6	...	...	2	9·3	7·1	+ 31	77	·843	3·5†	2	4·18	−2·18	4·17	4·21	−0·04	4·58	6·77	−2·19	2·58	Chittagong .	East Bengal.
			Not	rec	orde	d.			?	?	?	84	·641	?	4	?	?	2·64	?	?	3·28	?	?	1·43	Lungleh.	
...	1	2	1	4	13	9	...	...	6·5	?	?	83	·949	4·6	2	4·35	−2·35	3·29	4·23	−0·94	5·61	7·78	− 2·17	1·76	Noakhali.	
1	...	...	4	1	24	...	...	...	8·8	?	?	87	·979	5·3	5	6·47	−1·47	5·74	5·20	+0·54	7·68	8·96	− 1·28	2·94	Comilla.	
3	...	...	...	10	13	3	...	1	6·3	?	?	79	·820	6·1	4	4·21	−0·21	1·96	2·78	−0·82	1·96	4·06	− 2·10	1·02	Sirajganj.	
1	...	...	3	8	13	8	2	...	9·0	6·7	+ 34	80	·874	6·0	6	6·30	−0·30	6·53	4·81	+1·72	7·72	7·92	− 0·20	2·50	Narayanganj.	
5	...	...	...	1	17	7	...	...	7·3	?	?	79	·912	5·1	3	4·65	−1·65	2·15	3·24	−1·09	2·70	5·96	− 3·26	1·72	Barisal.	
1	...	1	12	12	2	1	...	1	6·1	?	?	78	·786	5·2	5	5·90	−0·90	3·38	3·89	−0·51	3·38	6·13	− 2·75	1·66	Mymensingh.	
5	...	...	2	2	21	...	...	...	6·3	?	?	83	·879	4·8	4	5·70	−1·70	3·65	3·74	−0·09	4·10	6·67	− 2·57	1·25	Faridpur .	Deltaic Bengal.
8	...	...	...	8	9	5	...	...	4·3	4·5	− 4	78	·919	6·1	5	4·82	+0·18	1·96	3·42	−1·46	2·32	5·84	− 3·52	0·86	Jessore.	
...	2	...	...	2	11	13	2	...	7·3	7·5	− 3	75	·872	3·4	0	2·73	−2·73	0·05	1·36	−1·31	0·20	2·79	− 2·59	0·05	Calcutta.	
...	2	1	...	2	13	11	1	...	21·3	16·7	+ 28	80	·948	6·3	1	2·36	−1·36	0·20	0·91	−0·71	0·50	2·54	− 2·04	0·20	Saugor Island.	
...	1	...	2	4	12	6	3	2	8·0	?	?	65	·774	2·3	3	3·35	−0·35	2·57	2·49	+0·08	2·57	3·97	− 1·40	1·29	Krishnagar.	
4	3	...	...	2	18	2	...	1	4·1	?	?	62	·771	0·8†	0	2·85	−2·85	0·08	1·50	−1·42	0·32	2·96	− 2·64	0·08	Midnapore.	

† 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 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 at 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	29·432	?	29·677	29·581	20th	29·253	15th	·328	87·0	107·7	?	79·2	?	93·5	?	28·5	113·1	15th	72·8	20th	40·3
	Raniganj††	334	29·414	?	29·694	29·573	20th	29·245	15th	·328	85·1	107·1	?	78·4	?	92·8	?	28·7	113·4	18th	69·6	20th	43·8
	Burdwan	107	29·653	−·060	29·707	29·808	20th	29·455	15th	·353	85·3	105·3	+4·7	78·1	+2·5	91·7	+3·6	27·2	108·8	2 days	66·2	20th	42·6
	Naya Dumka	489	29·257	?	29·699	29·412	20th	29·074	15th	·338	86·8	104·1	?	76·7	?	90·4	?	27·4	109·9	14th	69·2	20th	40·7
	Berhampore	67	29·687	−·055	29·703	29·838	23rd	29·482	15th	·356	82·4	104·0	+3·8	76·3	+1·9	90·2	+2·9	27·7	108·9	3rd	65·2	20th	43·7
	Rampur Boalia.	70	29·683	?	29·702	29·842	23rd	29·478	15th	·364	83·4?	102·6?	?	75·3?	?	89·0?	?	27·3	107·2	13th	65·1	20th	42·1
	Malda	72	29·662	?	29·685	29·833	23rd	29·457	15th	·376	83·5	103·1	?	72·4	?	87·7	?	30·7	109·2	18th	60·8	19th	48·4
	Bogra	61	29·694	−·042	29·707	29·854	23rd	29·494	15th	·360	81·3	100·9	+5·3	74·2	+2·3	87·6	+3·8	26·7	107·1	2 days	62·9	20th	44·2
North Bengal	Dinajpur	123	29·630	−·057	29·708	29·789	23rd	29·439	15th	·350	78·4	99·4	+4·8	71·2	+0·8	85·3	+2·8	28·2	106·7	6th	59·3	2 days	47·4
	Rangpur	123	29·657	?	29·736	29·810	25th	29·468	15th	·342	77·3?	94·4?	?	71·3?	?	82·9	?	23·1	103·1	7th	61·5	20th	41·6
	Jalpaiguri	284	29·495	−·045	29·739	29·655	23rd	29·316	15th	·339	76·9	92·0	+3·0	69·2	+1·6	80·6	+2·3	22·8	100·7	6th	60·1	20th	40·6
Orissa	Balasore	56	29·722	−·039	29·714	29·855	20th	29·561	2 days	·294	85·2	102·8	+5·4	77·8	+1·7	90·3	+3·6	25·0	112·0	15th	71·8	2 days	40·2
	False Point.	21	29·773	−·048	29·736	29·882	23rd	29·633	15th	·249	83·8	89·5‡	−1·1	78·7‡	+1·0	84·1‡	−0·1	10·8	94·5	20th	72·1	21st	22·4
	Cuttack	80	29·698	−·056	29·720	29·805	23rd	29·554	15th	·251	83·9	106·0	+3·7	79·4	+1·4	92·7	+2·6	26·6	110·8	12th	73·2	29th	37·6
	Shortt's Island.	?	29·762‡	?‡	?	29·858	24th	29·611	14th	·247	83·5‡	89·1‡	?	80·1‡	?	84·6‡	?	9·0	93·0	22nd	73·4	21st	19·6
	Puri	20	29·779	?	29·742	29·886	23rd	29·641	15th	·245	81·6*	87·1	?	80·0	?	83·5	?	7·1	90·2	22nd	77·6	21st	12·6
V.—Gangetic Plain and Chota Nagpur.		...	...	−·047	...	...	...	...	...	...	...	103·3	+3·0	73·6	+2·2	88·5	+2·5	29·7	...	...	...	...	45·8
Chota Nagpur	Hazaribagh	2,007	27·767	−·043	29·683	27·895	20th	27·615	14th	·280	87·4	101·7	+3·5	76·0	+3·8	88·9	+3·7	25·7	106·9	18th	68·2	19th	38·7
	Ranchi	2,128	27·671	?	29·699	27·803	20th	27·528	14th	·275	87·3*	100·9†	+3·4	75·0†	+3·4	87·9†	+3·4	25·9	106·0	18th	68·4	19th	37·6
	Daltonganj	730?	29·018	?	29·702	29·206	23rd	28·828	14th	·378	82·8	96·3	?	72·3*	?	84·3*	?	24·0	105·3	13th	59·5	19th	45·8
	Chaibassa	760	28·995	−·041	29·692	29·135	20th	28·828	14th	·307	89·2	109·0	+4·9	79·2	+3·4	94·1	+4·2	29·8	114·1	15th	69·8	20th	44·3
South Bihar	Gaya	375	29·370	−·044	29·694	29·509	23rd	29·192	14th	·317	88·6	105·7	+2·1	78·0	+3·0	91·9	+2·9	27·7	112·4	15th	68·5	20th	43·9
	Dehri	351	29·378	?	29·679	29·525	20th	29·195	14th	·330	88·5	106·5	?	79·1	?	92·8	?	27·4	112·5	15th	66·0	20th	46·5
	Patna	183	29·551	−·057	29·686	29·714	23rd	29·387	14th	·327	85·3	103·5	+2·6	75·3	+2·0	89·5	+2·3	28·2	108·3	18th	67·2	20th	41·6
	Arrah	190	29·551	?	29·692	29·707	23rd	29·384	14th	·323	84·6	105·1	?	74·2	?	89·7	?	30·9	111·0	15th	65·8	20th	45·2
	Buxar	239	29·488	?	29·681	29·631	23rd	29·321	14th	·310	84·3	103·5	?	75·5	?	89·5	?	28·0	109·5	14th & 15th.	63·9	20th	45·6
North Bihar	Purnea	125	29·617	−·057	29·697	29·783	23rd	29·447	15th	·336	78·4	101·1	+3·9	71·3	+1·7	86·2	+2·8	29·8	107·1	6th	61·1	21st	46·0
	Bhagalpur	160	29·574	?	29·686	29·743	23rd	29·402	15th	·341	84·3	102·8	?	73·1	?	88·0	?	29·7	108·3	18th	62·6	25th	45·7
	Darbhanga	166	29·571	−·056	29·692	29·745	23rd	29·410	15th	·335	80·6	99·0	+2·7	72·2	+0·4	85·7	+1·6	26·8	103·8	18th	62·2	21st	41·6
	Muzaffarpur	178	29·554	?	29·687	29·724	23rd	29·400	15th	·324	80·2	100·2	?	70·5	?	85·4	?	29·7	105·2	13th	60·3	21st	44·9
	Motihari	224	29·509	?	29·692	29·698	23rd	29·343	15th	·355	81·0	100·6	?	68·2	?	84·4	?	32·4	105·5	17th	55·9	20th	49·6
	Chapra	181	29·550	?	29·685	29·703	23rd	29·391	14th	·312	82·8	103·6	?	73·5	?	88·6	?	30·1	108·8	18th	64·3	21st	44·5
N. W. Provinces (East).	Benares	267	29·479	−·035	29·701	29·615	20th & 23rd.	29·282	14th	·333	83·1	106·1	+2·6	71·7	?	88·9	+1·1	34·4	111·3	14th & 15th.	62·2	19th & 20th.	49·1
	Allahabad	309	29·438	−·040	29·700	29·577	23rd	29·237	14th	·340	88·2	106·2	+2·2	73·5	+1·4	89·9	+1·8	32·7	112·1	28th	62·4	19th & 20th.	49·7
N.-W. Provinces (East Submontane).	Goraipur	256	29·462	−·051	29·676	29·625	23rd	29·319	14th	·306	82·7	103·4	+2·6	72·7	+0·3	88·1	+1·5	30·7	107·3	18th	58·8	19th	48·5
South Oudh	Lucknow	368	29·360	−·049	29·686	29·498	23rd	29·145	14th	·353	84·8	104·6	+2·3	72·7	+1·7	88·7	+2·0	31·9	110·3	14th & 30th.	64·3	3 days	46·0
North Oudh	Bahraich	403	29·316	?	29·679	29·464	23rd	29·137	14th	·327	82·8	103·4	?	70·9	?	87·2	?	32·5	108·6	13th & 14th.	61·5	20th	47·1
N.-W. Provinces (Central).	Cawnpore	416	29·321	?	29·689	29·453	23rd	29·106	14th	·347	85·5	105·2	?	72·3	?	88·7	?	32·9	112·0	28th	59·5	19th	52·5
	Mainpuri	516	29·230	?	29·702	29·358	23rd	28·981	14th	·377	84·0	104·8	?	72·2	?	88·5	?	32·6	111·2	3 days	57·1	19th & 20th.	54·1

* Mean of 29 days, † Mean of 24 days, ‡ Mean of 25 days, †† Mean of 21 days,

I—*continued.*

in India, Burma, etc., in April 1896—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 1896.	Normal rainfall for period 1st March to 30th April.	Variation from normal of period.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
16	2	1	1	1	6	1	2	...	3·0	P	P	58	·730	1·4	1	2·80	−1·80	0·19	1·46	−1·27	0·22	2·71	− 2·49	0·19	Bankura .	Central Bengal.
7	...	...	1	3	4	2	2	2	3·0	P	P	50	·599	1·3	0	2·15	−2·15	0	1·26	−1·26	0·01	1·91	— 1·90	0	Raniganj.	
...	1	...	...	4	8	15	1	1	5·5	4·8	+15	62	·754	3·0	1	3·09	−2·09	0·18	1·54	−1·36	0·18	3·27	— 3·09	0·17	Burdwan.	
4	1	...	6	5	3	1	5	5	4·6	P	P	44	·548	1·6	2	2·44	−0·44	0·40	0·99	−0·59	0·40	1·69	— 1·29	0·25	Naya Dumka.	
1	..	...	2	5	10	10	2	...	5·7	5·2	+10	71	·797	3·4	1	2·45	−1·45	0·36	1·29	−0·93	0·37	2·50	− 2·13	0·36	Berhampore.	
2	1	...	3	8	7	9	...	...	6·0	P	P	73?	·837?	1·2	2	2·56	−0·56	1·91	1·42	+0·49	1·91	2·23	− 0·32	1·11	Rampore Boalia.	
...	1	3	1	6	7	8	2	2	4·0	P	P	49	·563	0·8	1	1·55	−0·55	0·40	0·94	−0·54	0·40	1·68	− 1·28	0·40	Malda.	
2	...	6	5	14	...	...	3	...	4·6	P	P	74	·796	3·4	2	3·50	−1·50	0·97	2·21	−1·24	0·97	3·03	− 2·06	0·73	Bogra.	
...	...	8	13	1	2	5	...	1	4·6	P	P	67	·646	3·1	1	2·60	−1·60	0·36	1·87	−1·51	0·36	2·84	− 2·48	0·36	Dinajpur .	North Bengal.
2	...	12	8	3	2	3	...	...	4·0	P	P	75	·718	4·1	3	4·40	−1·40	3·99	3·14	+0·85	4·00	4·44	− 0·44	1·99	Rangpur.	
...	3	5	12	9	...	...	...	1	4·7	P	P	72	·667	1·6	4	5·79	−1·79	4·25	4·08	+0·17	4·27	5·88	— 1·61	1·79	Jalpaiguri.	
1	1	...	...	1	9	18	...	...	9·0	P	P	70	·835	1·6	1	3·85	−2·85	0·10	2·52	−2·42	2·02	3·87	− 1·85	0·10	Balasore .	Orissa.
...	1	...	...	1	6	20	1	1	14·3	13·3	+ 8	82	·958	4·7*	1	1·18	−0·18	0·50	0·50	0	1·57	1·76	— 0·19	0·50	False Point.	
6	...	...	...	...	3	19	2	...	5·3	5·1	+ 4	74	·857	2·1*	1	1·00	0	0·49	0·54	−0·05	0·99	1·88	− 0·89	0·43	Cuttack.	
...	...	...	...	...	11	12	...	...	18·8‡	P	P	85§	·983§	0·1§	2	P	P	0·32	P	P	0·32	P	P	0·22	Shortt's Island.	
3	...	...	...	...	...	25	2	...	16·4	P	P	89	·968	3·7	0	0·90	−0·90	0	0·55	−0·55	0·21	1·07	− 0·86	0	Puri.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·02	0·37	−0·36	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**	
1	1	...	...	...	10	3	6	9	10·3	8·4	+29	27	·340	0·5	0	0·73	−0·73	0	0·25	−0·25	0	1·21	− 1·21	0	Hazaribagh	Chota Nagpur.
3	...	1	...	2	6	3	7	8	3·1	P	P	30*	·395*	0·1	0	1·75	−1·75	0	0·57	−0·57	0	1·97	− 1·97	0	Ranchi.	
...	2	2	3	...	3	13	6	1	5·0*	P	P	39	·437	1·0	1	P	P	0·30	P	P	0·30	P	P	0·30	Daltonganj.	
3	2	...	1	1	2	11	8	2	2·1	P	P	40	·546	0·7	0	1·55	−1·55	0·02	0·67	−0·65	0·03	1·88	− 1·85	0·02	Chaibassa.	
12	...	1	1	1	2	4	8	1	5·5	3·8	+45	37	·506	0·4	0	0·27	−0·27	0	0·15	−0·15	0	0·73	— 0·73	0	Gaya . .	South Bihar.
2	...	...	1	2	7	12	6	...	17·1	P	P	26	·351	0·8	0	0·29	−0·29	0	0·11	−0·11	0	0·81	— 0·81	0	Dehri.	
1	1	1	12	1	...	3	10	1	6·0	4·4	+36	42	·499	0·6	0	0·36	−0·36	0	0·24	−0·24	0	0·72	− 0·72	0	Patna.	
1	1	2	3	5	1	4	11	2	4·9	P	P	46	·552	0	0	0·50	−0·50	0	0·22	−0·22	0	0·56	− 0·56	0	Arrah.	
...	2	3	4	1	3	5	10	2	4·7	P	P	32	·394	0·7	0	0·40	−0·40	0	0·17	−0·17	0	0·45	− 0·45	0	Buxar.	
2	...	14	5	2	...	2	...	5	7·5	3·6	+108	58	·565	1·2*	0	1·64	−1·64	0	1·21	−1·21	0	1·70	− 1·70	0	Purnea .	North Bihar.
2	1	6	8	2	3	3	4	1	5·8	P	P	45	·506	1·6	0	1·35	−1·35	0·06	0·77	−0·71	0·06	1·10	− 1·04	0·06	Bhagalpur.	
2	...	...	10	10	...	3	4	1	6·3	5·1	+24	62	·644	1·0	0	1·45	−1·45	0·04	0·53	−0·49	0·04	0·94	− 0·90	0·04	Darbhanga.	
2	...	5	10	4	...	2	4	3	6·5	P	P	59	·605	0·2	0	1·05	−1·05	0	0·58	−0·58	0	1·00	− 1·00	0	Muzaffarpur.	
...	...	4	9	5	...	4	6	2	8·0	P	P	65	·676	0·4	0	1·35	−1·35	0	0·78	−0·78	0	1·15	− 1·15	0	Motihari.	
4	...	1	8	3	...	7	5	2	6·5	P	P	53	·594	0·3	0	0·65	−0·65	0	0·28	−0·28	0	0·57	− 0·57	0	Chapra.	
6	...	1	3	...	2	5	13	...	6·0	5·0	+ 2	39	·451	1·0	0	0·27	−0·27	0	0·08	−0·08	0	0·36	− 0·36	0	Benares .	N.-W. Provinces (Eastern Districts).
3	1	1	2	...	3	4	12	4	4·9*	3·2	+53	28	·359	1·5	0	0·55	−0·55	0	0·11	−0·11	0	0·43	− 0·43	0	Allahabad.	
2	3	4	8	...	3	5	4	1	3·8	4·4	−14	46	·505	0·7	0	0·73	−0·73	0	0·43	−0·43	0	0·85	− 0·85	0	Gorakhpur .	N.-W. Provinces (East Submontane).
1	...	...	3	2	1	2	12	9	3·3	4·4	−25	35	·425	1·6	0	0·27	−0·27	0	0·02	−0·02	0	0·39	− 0·39	0	Lucknow .	South Oudh.
7	1	...	4	4	...	2	2	9	3·5	P	P	49	·556	0·5	0	P	P	0	0·34	−0·34	0	0·81	− 0·81	0	Bahraich† .	North, Oudh.
1	4	2	1	1	1	2	10	8	5·4	P	P	38	·466	1·2	0	0·50	−0·50	0	0·11	−0·11	0	0·35	− 0·35	0	Cawnpore .	N.-W. Provinces (Central).
22	1	...	...	...	1	1	3	2	2·7	P	P	25	·298	2·7	0	P	P	0	0·12	−0·12	0	0·36	− 0·36	0	Mainpuri.	

* Mean of 29 days. † Winds for 29 days. ‡ Mean of 24 days. § Mean of 25 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Meteorological Province or District.	Station.	Elevation of barometer above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
VI.—Upper Sub-Himalayas		...	...	−·033	...	...	...	...	...	...	...	98·1	+2·4	67·5	+1·4	83·0	+1·7	30·3	...	...	...	...	50·5
N.-W. Provinces, West (Submontane).	Bareilly	568	29·155	−·038	29·688	29·291	23rd	28·919	14th	·372	81·2	102·0	+2·5	71·4	+2·7	86·7	+2·6	30·6	108·4	14th	60·7	19th	47·7
	Dehra Dun	2,223	27·528	−·051	29·709	27·667	23rd	27·265	14th	·402	74·8	94·7	+4·5	65·0	+0·7	79·9	+2·6	29·7	100·5	30th	53·5	19th	47·0
	Roorkee	887	28·834	−·047	29·690	28·966	23rd	28·591	14th	·375	79·1	100·5	+2·4	67·1	+0·5	83·8	+1·5	33·4	106·7	26th & 28th	50·3	18th	56·4
N.-W. P., West.	Meerut	738	28·991	−·038	29·694	29·120	23rd	28·747	14th	·373	81·1	100·8	+2·4	69·7	+1·9	85·2	+2·2	31·1	107·5	3 days	58·0	19th	49·5
South-East Punjab.	Delhi	718	29·021	−·038	29·699	29·144	24th	28·786	14th	·358	83·4	101·9	?	75·4	+2·1	88·7	+1·8	26·5	109·5	27th	62·4	18th	47·1
Central Punjab.	Lahore	702	29·041	−·027	29·722	29·197	23rd	28·769	14th	·428	76·1	96·4	?	66·9	+2·2	81·7	+1·0	29·5	105·3	27th & 30th	53·7	18th	51·6
South Punjab.	Patiala	?	28·914	?	?	29·038	29th	28·743	24th	·290	81·2	98·5	?	68·7	?	83·6	?	29·8	106·2	27th	55·9	18th	50·3
	Ludhiana	812	28·921	−·037	29·701	29·057	24th	28·655	14th	·402	82·2	99·3	+1·7	67·8	+1·1	83·5	+1·4	31·5	108·9	27th	57·7	19th	51·2
	Sialkot	830	28·919	−·015	29·728	29·085	23rd	28·613	14th	·472	77·3	96·5	+1·6	66·7	+0·7	81·6	+1·2	29·8	106·2	30th	54·7	18th	51·5
Punjab, Sub-montane.	Umballa	892	28·834	?	29·695	28·964	23rd	28·580	14th	·384	76·6	99·4	?	67·8	?	83·6	?	31·6	107·0	3 days	57·0	18th	50·0
North Punjab	Rawalpindi	1,643	28·107	−·008	29·744	28·294	23rd	27·780	14th	·514	72·7	89·5	+1·5	59·9	+0·3	74·7	+0·9	29·6	101·6	30th	48·0	18th	53·6
VII.—Indus Valley and North-West Rajputana.		...	...	−·021	...	...	...	...	...	...	...	99·2	+2·8	69·5	+2·1	84·4	+2·2	29·7	...	...	...	...	53·0
North Punjab	Peshawar	1,110	28·714	−·015	29·775	28·908	23rd	28·415	14th	·493	72·9	87·8	+1·2	61·4	+0·7	74·7	+1·0	26·4	98·0	27th & 29th, 4 days	54·0	18th & 20th 18th	44·0
	Mardan	?				Not recorded.					67·9	88·1	?	57·7	?	72·9	?	30·4	98·0		45·0		53·0
West Punjab	Khushab	612	29·147	?	29·733	29·328	23rd	28·851	14th	·477	80·8	96·3	?	67·5	?	81·9	?	28·8	105·3	30th	52·0	18th	53·3
	Montgomery	558	29·194	?	29·719	29·355	24th	28·959	14th	·396	83·8	100·3	?	68·2	?	84·3	?	32·1	109·9	30th	55·0	18th	54·9
	D. I. Khan.	594?	29·203	?	?	29·394	23rd	28·941	14th	·453	77·1	94·5	?	65·1	?	79·9	?	29·4	102·7	30th	54·0	18th	48·7
	Mooltan	420	29·346	−·034	29·739	29·506	24th	29·093	13th	·413	79·0	101·1	+3·3	70·0	+2·5	85·6	+2·9	31·1	109·4	27th & 30th,	55·2	17th	54·2
South Punjab	Sirsa	682	29·078	−·036	29·709	29·205	24th	28·865	14th	·340	81·1	102·5	+2·0	69·6	+1·5	86·1	+1·8	32·9	112·6	27th	51·2	18th	61·4
Sind and Cutch	Jacobabad	186	29·593	−·011	29·741	29·742	17th	29·350	13th	·392	83·4	104·4	+2·3	71·6	+2·7	88·0	+2·5	32·8	112·2	27th	57·5	18th	54·7
	Hyderabad	96	29·713	−·012	29·761	29·830	17th	29·562	29th	·268	84·3	106·0	+4·1	74·6	+2·6	90·3	+3·4	31·4	114·2	27th	58·0	18th	56·2
	Kurrachee	12	29·825	−·016	29·787	29·917	24th	29·669	29th	·248	82·4	93·2	?	74·7	?	84·0	?	18·5	103·9	15th	63·0	18th	40·9
Kathiawar	Bhuj	395	29·434	−·025	29·782	29·520	9th	29·313	14th	·207	83·4	104·8	+4·6	73·6	+2·6	89·2	?	31·2	113·5	27th	64·9	18th	48·6
West Rajputana	Bickaneer	771?	28·993	?	29·727	29·119	24th	28·822	13th	·297	86·4	102·7	+2·1	76·7	?	89·7	+1·4	26·0	111·5	27th	62·0	18th	49·5
	Pachpadra	390?	29·390	?	29·726	29·499	20th	29·235	15th	·264	83·8	108·2	?	72·7	?	90·5	?	35·5	115·9	28th	56·1	18th	59·8
VIII.—East Rajputana, Central India, and Gujarat.		...	...	−·030	...	...	...	...	...	...	...	104·2	+3·7	74·5	+3·7	89·9	+3·6	28·8	...	...	...	...	49·4
Rajputana, East	Jeypore	1,431	28·369	−·026	29·751	28·469	9th	28·174	14th	·295	84·3	103·7	+3·2	72·7	+3·4	88·2	+3·3	31·0	111·5	27th & 28th,	57·1	19th	54·4
	Sambhar	1,254	28·532	−·023	29·741	28·621	21st	28·357	14th	·264	83·7	103·0	+3·9	73·2	+2·9	88·1	+3·4	29·8	111·5	27th	60·2	18th	51·3
	Ajmere	1,611	28·209	−·021	29·770	28·301	21st	28·052	14th	·249	84·6	102·2	+3·6	74·4	+4·1	88·3	+3·9	27·8	109·9	28th	55·2	19th	54·7
	Deesa	466	29·363	−·028	29·782	29·478	9th	29·244	14th & 15th	·234	85·8	108·9	+6·0	74·2	+3·3	91·6	+4·7	34·7	114·5	27th & 28th,	61·1	19th	53·4
Kathiawar	Rajkot	429	29·424	−·024	29·805	29·514	9th	29·318	14th	·196	82·9	106·0	+3·8	71·0	+1·9	88·5	+2·9	35·0	112·4	27th	59·9	19th	52·5
	Veraval	?	29·840	?	29·880	29·912	10th	29·752	15th	·160	80·8	89·7	?	73·2	?	81·5	?	16·5	102·7	11th	64·3	20th	38·4
Central India	Nowgong	757	29·019	−·034	29·726	29·128	23rd	28·828	14th	·300	84·7	105·5	?	73·6	+2·5	89·6	+2·1	31·9	112·6	29th	60·0	19th	52·6
	Indore	1,823	28·025	?	29·778	28·100	9th	27·910	14th	·190	85·6	103·2	+3·0	72·3	+3·2	87·8	+3·1	30·9	110·0	27th	56·1	19th	53·9
	Neemuch	1,630	28·212	?	29·778	28·292	20th	28·076	14th	·216	86·6	103·5	+3·1	74·2	+3·5	88·9	+3·3	29·3	110·6	27th & 28th	56·8	19th	53·8
Gujarat	Surat	36	29·822	−·039	29·801	29·905	10th	29·721	15th	·184	83·0	98·8?	?	77·5?	?	88·2?	+2·2?	21·3?	105·7	26th	67·5	19th	38·2
	Ahmedabad*	164	29·670	?	29·794	29·781	9th	29·553	15th	·228	85·9	107·7†	?	76·5†	?	92·2†	?	31·2	115·3	27th	68·6	20th	46·7
N.-W. P. (West)	Agra	555	29·198	−·040	29·710	29·319	23rd	28·944	14th	·375	85·0	103·2	?	75·0	+1·5	89·2	+1·0	28·2	110·0	28th	61·9	19th	48·1
N.-W.P., Central	Jhansi	858	28·929	−·032	29·731	29·044	3rd	28·710	14th	·334	89·6	106·7	+2·9	80·5	+4·6	93·6	+3·8	26·2	113·2	29th	68·9	19th	44·3

* Mean of 29 days. † Mean of 28 days.

I—*continued.*

in India, Burma, etc., in April 1896—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 March to 30th April 1896.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·05	0·63	−0·58	...	...	...	...	VI.—Upper Sub-Himalayas.	
11	2	1	...	...	1	1	...	14	3·5	4·5	− 22	25	·279	1·6	0	0·45	− 0·45	0	0·17	− 0·17	0·02	1·11	− 1·09	0	Bareilly .	N.-W. Provinces, West (Sub-montane).
23	...	...	...	...	1	2	4	...	1·9	2·6	− 27	32	·283	2·4	0	1·45	− 1·45	0·01	0·53	− 0·52	0·27	1·60	− 1·33	0·01	Dehra Dun.	
17	...	2	1	3	...	...	1	6	4·5	3·2	+ 41	27	·272	1·2	0	1·18	− 1·18	0	0·42	− 0·42	0·08	1·14	− 1·06	0	Roorkee.	
22	...	...	1	...	...	2	4	1	2·3	2·4	− 4	29	·311	1·2	0	0·73	− 0·73	0	0·24	− 0·24	0	1·01	− 1·01	0	Meerut. .	N.-W. Provinces, West.
7	...	...	...	2	2	1	15	3	4·4	3·9	+ 13	23	·264	1·9	0	0·64	− 0·64	0	0·24	− 0·24	0·08	0·80	− 0·72	0	Delhi . .	South-East Punjab.
10	8	3	...	4	1	...	2	2	2·9	3·3	− 12	40	·358	1·7	0	1·45	− 1·45	0	0·46	− 0·46	0·37	1·19	− 0·82	0	Lahore.	Central Punjab.
12	1	3	1	1	2	2	6	2	3·8*	?	?	37†	·397‡	1·6	0	?	?	0	?	?	0	?	?	0	Patiala .	South Punjab.
9	1	5	...	2	1	3	2	7	2·9	2·1	+ 38	34	·366	1·7	0	1·55	− 1·55	0·08	0·85	− 0·77	0·19	1·84	− 1·65	0·06	Ludhiana.	
7	11	3	2	1	...	1	...	5	3·4	2·3	+ 48	44	·411	1·4	2	2·09	− 0·09	0·23	0·91	− 0·68	1·01	2·09	− 1·08	0·13	Sialkot.	
8	1	1	1	2	...	...	6	11	2·7	?	?	40	·369	0·7	0	?	?	0	0·53	− 0·53	0·04	1·26	− 1·22	0	Umballa .	Punjab, Sub-montane.
11	3	1	...	...	...	2	7	6	4·4	2·8	+ 57	44	·354	3·4	1	3·27	− 2·27	0·23	1·95	− 1·72	1·63	3·71	− 2·08	0·11	Rawalpindi.	North Punjab.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·07	0·39	−0·35	...	...	...	...	VII.—Indus Valley and North-West Rajputana.	
14	1	...	1	2	3	4	2	3	5·0	4·2	+ 19	49	·400	3·6	1	3·36	− 2·36	0·26	1·84	− 1·58	1·51	3·54	− 2·03	0·17	Peshawar .	North Punjab.
Not recorded.									?	?	?	?	?	?	2	?	?	0·40	?	?	0·40	?	?	0·30	Mardan.	
1	6	11	4	1	...	1	5	1	5·1	?	?	30	·301	2·5	0	1·30	− 1·30	0·05	0·62	− 0·57	1·31	1·16	+ 0·15	0·05	Khushab .	West Punjab.
2	2	7	4	4	4	1	1	5	5·5	?	?	29	·338	1·9	0	0·70	− 0·70	0	0·11	− 0·11	0·28	0·52	− 0·24	0	Montgomery.	
22	3	1	...	...	...	...	...	4	2·7	2·4	+ 13	48	·453	1·9	1	1·64	− 0·64	0·15	0·77	− 0·62	1·68	1·40	+ 0·28	0·15	D. I. Khan.	
4	1	17	...	4	...	3	...	1	1·9	2·5	− 24	45	·448	1·8	0	0·36	− 0·36	0	0·07	− 0·07	0·30	0·45	− 0·15	0	Mooltan.	
5	4	4	2	3	4	6	1	1	6·5	4·0	+ 63	23	·239	2·3	0	0·64	− 0·64	0	0·31	− 0·31	0·42	0·68	− 0·26	0	Sirsa.	South Punjab.
11	5	1	4	1	1	...	2	5	6·1	3·9	+ 56	31	·327	1·5	0	0·27	− 0·27	0	0·20	− 0·20	0·61	0·24	+ 0·37	0	Jacobabad .	Sind and Cutch.
2	5	1	...	...	3	14	...	5	12·9	10·2	+ 26	34	·439	1·5	0	0	0	0	0·04	− 0·04	0	0·18	− 0·18	0	Hyderabad.	
3	...	1	4	2	...	9	10	1	10·5	14·0	− 25	72	·796	2·1	0	0·45	− 0·45	0	0·33	− 0·33	0	0·56	− 0·56	0	Kurrachee.	
...	1	2	...	...	...	3	10	14	13·5	10·9	+ 24	49	·557	0·1	0	?	?	0	0·18	− 0·18	0	0·27	− 0·27	0	Bhuj.	Kathiawar.
1	1	4	2	3	3	9	4	3	6·5	4·7	+ 38	28	·368	1·9	0	?	?	0	0·17	− 0·17	0·96	0·37	+ 0·59	0	Bickaneer .	West Rajputana.
4	1	2	1	12	1	2	1	6	9·3	4·5	+107	53	·625	3·6	0	?	?	0	0·01	− 0·01	0	0·08	− 0·08	0	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·01	0·07	−0·06	...	...	...	...	VIII.—East Rajputana, Central India, and Gujarat.	
7	2	4	1	...	...	3	7	6	4·7	5·7	− 18	33	·351	1·5	0	0·30	− 0·30	0	0·09	− 0·09	0·02	0·48	− 0·46	0	Jeypore .	East Rajputana.
13	5	1	...	1	...	...	9	1	5·6	7·0	− 20	32	·384	1·6	0	0·30	− 0·30	0	0·08	− 0·08	0·02	0·44	− 0·42	0	Sambhar.	
9	...	4	...	2	1	3	10	1	6·1	5·0	+ 22	33	·407	0·9	0	0·18	− 0·18	0	0·06	− 0·06	0	0·23	− 0·23	0	Ajmere.	
...	2	5	1	...	...	5	9	8	9·8	9·4	+ 4	34	·420	0·5	0	0	0	0	0·01	− 0·01	0	0·06	− 0·06	0	Deesa.	
...	5	1	1	...	...	...	9	14	10·3	11·1	− 7	51	·574	1·1	0	0·10	− 0·10	0	0·02	− 0·02	0	0·03	− 0·03	0	Rajkot. .	Kathiawar.
2	10	1	...	...	1	...	7	9	7·4	?	?	67	·705	2·1	0	?	?	0	?	?	0	?	?	0	Veraval.	
13	...	...	...	...	1	5	7	4	2·9	2·8	+ 4	29	·365	1·7	0	0	0	0	0·06	− 0·06	0	0·33	− 0·33	0	Nowgong .	Central India.
2	4	4	...	2	1	...	7	10	4·0	4·4	− 9	39	·483	2·3	0	0	0	0	0·06	− 0·06	0·01	0·08	− 0·07	0	Indore.	
...	3	5	5	1	...	1	12	3	7·1	10·3	− 31	39	·492	1·1	0	0·09	− 0·09	0·02	0·09	− 0·07	0·02	0·17	− 0·15	0·02	Neemuch.	
15	3	...	...	...	...	...	3	9	?	8·0	?	59	·674	1·3	0	0	0	0	0·01	− 0·01	0	0·01	− 0·01	0	Surat . .	Gujarat.
...	5	5	1	1	1	3	2	11	5·6†	?	?	43	·529	0·3	0	?	?	0	?	?	0	?	?	0	Ahmedabad*	
3	...	1	...	1	...	10	...	15	5·6	4·7	+ 19	27	·327	0·7	0	0·55	− 0·55	0·01	0·14	− 0·13	0·01	0·45	− 0·44	0·01	Agra . .	N.-W. P. (West.)
18	2	...	...	...	...	5	1	4	1·7	4·2	− 60	19	·277	0·8	0	0·55	− 0·55	0·09	0·13	− 0·04	0·11	0·48	− 0·37	0·09	Jhansi.	N.-W.P., Central.

* Mean of 29 days. † Mean of 28 days, ‡ Mean 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 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	...	...	...	−·027	...	...	...	...	...	...	...	105·7	+3·1	76·5	+2·7	91·1	+2·8	29·2	...	...	...	...	42·3
Bombay, Deccan	Belgaum	2,524	27·368	−·007	29·801	27·431	3rd	27·294	16th	·137	78·4	98·6	+2·2	63·9	+1·6	83·8	+1·9	29·7	102·7	12th	64·8	3 days	37·9
	Sholapur	1,590	28·266	−·014	29·778	28·343	3rd	28·181	16th	·162	87·6	106·9	?	77·6	+2·6	92·3	+2·2	29·3	111·2	27th	72·5	19th & 20th	38·7
	Poona	1,840	28·041	−·018	29·811	28·104	9th	27·964	15th	·140	82·1	104·3	+3·2	71·0	+1·2	87·7	+2·2	33·3	109·6	27th	64·9	19th	44·7
	Bijapur	1,946	27·923	?	29·782	27·995	25th	27·839	15th	·156	84·7	103·6	?	75·3	?	89·5	?	28·3	107·7	17th	69·5	2nd	38·2
Khandesh	Malegaon	1,430	28·419?	−·022?	25·7837	28·482	24th	28·320	15th	·162	86·8	105·9	+3·1	73·3	+2·4	89·6	+2·8	32·6	111·8	26th	61·9	19th & 20th.	49·9
	Ahmednagar	2,152	27·730	?	29·785	27·812	9th	27·650	15th	·162	86·0	103·2	?	70·2	?	86·6	?	33·0	106·4	4 days	62·5	21st	43·9
Berar	Akola	930	28·882	−·024	29·746	28·967	3rd	28·777	15th	·190	89·8	109·0	+3·3	78·1	+4·1	93·6	+3·7	30·9	114·0	27th	64·8	20th	49·2
	Amraoti	1,215	28·601	?	29·748	28·690	3rd	28·491	15th	·199	90·0	107·9	+2·6	78·9?	+3·5?	93·4?	+3·1	29·0	114·5	28th	66·8	20th	47·7
Central Provinces, West.	Khandwa	1,044	28·784	−·020	29·773	28·863	20th	28·679	15th	·184	87·6	107·8	+3·5	77·8	+3·5	92·8	+3·5	30·0	115·2	27th	62·1	19th & 20th	53·1
	Hoshangabad	1,000?	28·801	−·028	29·751	28·913	20th	28·675	14th	·238	86·5	106·4	?	76·2	+3·0	91·3	+2·3	30·2	112·6	28th	65·8	19th & 21st.	46·8
	Nagpur	1,025	28·768	−·035	29·730	28·878	23rd	28·627	29th	·251	90·6	108·9	+3·1	78·8	+2·9	93·9	+3·0	30·1	113·2	5 days	69·1	21st	44·1
Central Provinces, Central.	Chanda	634	29·152	−·039	29·720	29·242	3rd	29·057	15th	·185	89·7	110·2	+3·0	79·6	+3·4	94·9	+3·2	30·6	114·4	26th	73·0	24th	41·4
	Seoni	2,033	27·799	?	29·735	27·907	20th	27·681	29th	·226	87·1	105·1	+3·8	74·2	+2·5	89·7	+3·2	30·9	109·3	29th & 30th	64·9	21st	44·4
	Jubbulpur	1,327	28·465	−·037	29·732	28·597	20th	28·342	28th	·255	86·4	104·8	+3·1	71·5	+1·0	88·2	+2·1	33·3	111·5	28th	58·3	19th	53·2
	Saugor	1,762	28·047	−·026	29·732	28·156	20th	27·898	14th	·258	86·9	104·2	+2·7	74·3	+2·0	89·3	+2·4	29·9	111·4	28th	60·1	19th	51·3
Central Provinces, East.	Raipur	970	29·821	−·027	29·721	28·939	23rd	28·680	29th	·259	91·8	107·7	+3·4	80·1*	+3·2*	93·9*	+3·4	27·6	111·5	29th & 30th	71·6	20th	39·9
	Sambalpur	463	29·295	−·043	29·702	29·426	23rd	29·150	15th	·276	89·0	108·8	+3·9	76·8	?	92·8	+2·5	32·0	112·5	28th	68·2	23rd	44·3
Central India	Sutna	1,040	28·730	−·030	29·717	28·859	20th	28·557	14th	·302	88·2	104·6	+3·0	74·4	+3·4	89·5	+3·2	30·2	112·6	29th	62·7	19th	49·9
Hyderabad, (North).	Aurangabad	?	28·012	?	?	28·102	9th	27·912	15th	·190	89·5	106·8	?	75·0	?	90·9	?	31·8	112·6	27th	66·0	21st	46·6
	Indur	?	Not recorded.								89·9	106·0	?	79·7	?	92·8	?	26·3	109·9	26th	72·2	12th	37·7
	Bidar	?	27·698	?	?	27·786	8th	27·602	15th	·184	86·7	97·8	?	79·4	?	88·6	?	18·4	98·5	2nd & 8th	77·0	21st	21·5
Hyderabad (South).	Gulbarga	1,502	28·372	?	29·799	28·434	24th	28·242	16th	·192	87·4	106·4	?	79·5	?	93·0	?	26·9	110·7	17th	73·7	29th	37·0
	Raichur	1,309	28·527	?	29·763	28·606	24th	28·426	15th	·180	87·8	105·2	?	82·3	?	93·7	?	22·9	109·0	15th & 16th	79·1	7th	29·9
	Hyderabad (Deccan), Secunderabad	1,690 1,787	28·163 28·069	−·040 ?	29·769 29·775	28·242 28·150	24th 3rd	28·066 27·970	15th 15th	·176 ·180	87·4 85·6	105·0 106·4	+2·8 ?	78·4 78·0	+3·4 ?	91·7 92·3	+3·1 ?	26·6 28·4	108·4 111·8	3 days 5th	73·7 73·4	8th 7th	34·7 38·4
	Khamamet	373	29·463	?	29·778	29·574	3rd	29·354	15th	·220	85·6	105·5	?	79·7	?	92·6	?	25·8	110·7	30th	75·3	3rd	35·4
X.—West Coast	...	...	...	−·018	...	...	...	...	...	...	...	91·0	+1·6	80·4	+2·2	85·7	+1·9	10·6	...	...	...	...	17·6
Konkan	Bombay	37	29·843	−·024	29·820	29·925	3rd	29·761	15th	·164	83·7	90·4	+2·2	79·4	+2·1	84·9	+2·2	11·0	95·0	11th	76·0	6th	19·0
	Ratnagiri	110	29·763	−·013	29·811	29·836	3rd	29·671	15th	·165	84·6	91·4	+1·5	80·0	+3·2	85·7	+2·4	11·4	97·4	11th	76·4	21st	21·0
	Mormugao	60	29·827	?	29·821	29·892	3rd	29·754	15th	·138	85·6	91·8	?	81·4	?	86·6	?	10·4	94·5	27th	79·4	3 days	15·1
	Goa	199	29·677	−·016	29·811	29·736	24th	29·602	15th	·134	84·7	88·0	?	82·4	?	85·2	?	5·6	89·0	7 days	79·0	22nd	10·0
	Karwar	44	29·844	−·012	29·819	29·912	3rd	29·771	15th	·141	83·3	90·9	+1·1	79·9	+2·1	85·4	+1·6	11·0	92·3	13th & 27th	75·5	21st	16·8
Malabar	Cochin	11	29·880	−·023	29·818	29·944	24th	29·813	15th	·131	85·4	93·0	+1·9	80·6	+2·3	86·8	+2·1	12·4	95·3	17th	75·6	29th	19·7
	Calicut	27	29·860	−·024	29·816	29·926	3rd & 24th	29·794	15th	·132	85·4	92·5	+1·2	79·9	+2·1	86·2	+1·7	12·6	94·4	4 days	74·0	1st	20·4
	Mangalore	23	29·871	−·011	29·825	29·940	3rd	29·801	15th	·139	85·2	92·3	+1·5	80·3	+1·5	86·3	+1·5	12·0	94·8	27th	72·9	29th	21·9
	Trivandrum	198	29·692	?	29·719	29·750	24th	29·629	15th	·121	83·3	88·6	?	79·6	?	84·1	?	9·0	90·5	3 days	76·0	2nd & 3rd.	14·5
XI.—South India	...	...	...	−·022	...	...	...	...	...	...	...	93·1	+1·9	76·9	+1·4	87·5	+1·9	21·2	...	...	...	...	30·6
Madras, South	Pamban	37	29·845	?	29·808	29·912	24th	29·765	15th	·147	85·6	92·1	?	81·7	?	86·9	?	10·4	95·3	30th	78·2	23rd	17·1
	Tinnevelly	168	29·709	?	29·806	29·787	24th	29·623	15th	·164	85·5	100·3	?	79·8	?	90·1	?	20·5	105·0	15th	75·4	2nd	29·6
	Madura	447	29·431	−·018	29·811	29·509	24th	29·348	15th	·161	85·5	99·7	−0·4	77·7	+1·5	88·7	+0·6	22·0	104·5	19th	72·5	25th	32·0

* Mean of 29 days.

I—*continued.*

in India, Burma, etc., in April 1896—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 March to 30th April 1896.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period.			
...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·19	0·40	−0·19	...	...	...	...	IX.—Deccan.	
6	3	2	...	1	3	3	9	3	13·4	13·1	+ 2	61	·582	1·4	3	3·36	−0·36	1·52	1·72	−0·20	1·61	2·07	−0·46	0·64	Belgaum .	Bombay, Deccan.
1	4	2	2	4	...	6	2	9	9·4	8·2	+15	34	·450	1·9	0	1·20	−1·20	0·05	0·57	−0·52	0·05	0·91	−0·86	0·03	Sholapore.	
1	...	...	1	...	1	6	11	10	11·3	9·9	+14	39	·430	1·7	1	1·09	−0·09	2·13	0·54	+1·59	2·13	0·59	+1·54	2·01	Poona.	
3	1	1	...	...	...	6	10	9	4·3	?	?	46	·542	1·5	1	1·80	−0·80	0·19	?	?	0·19	?	?	0·12	Bijapur.	
5	3	...	...	1	...	1	12	8	13·4	7·7	+ 74	36	·457	1·2	0	0·18	−0·18	0	0·10	−0·10	0	0·13	−0·13	0	Malegaon .	Khandesh.
...	16	3	1	1	1	...	3	5	18·4	?	?	52	·676	1·9	1	?	?	0·48	?	?	0·48	?	?	0·47	Ahmednagar.	
4	1	3	2	2	...	1	10	7	6·3	5·4	+ 17	25	·349	2·0	0	0·36	−0·36	0·04	0·16	−0·12	0·04	0·71	−0·67	0·04	Akola .	Berar.
...	2	3	3	3	2	4	11	2	6·6	4·4	+ 50	37	·530	2·1	0	0·45	−0·45	0	0·25	−0·25	0	0·65	−0·65	0	Amraoti.	
4	1	2	1	...	1	2	14	5	7·6	5·6	+ 36	24	·316	1·4	0	0·18	−0·18	0	0·17	−0·17	0	0·30	−0·30	0	Khandwa .	Central Provinces, West.
1	...	5	2	1	6	9	4	2	3·7	2·9	+ 28	25	·320	2·1	0	0·09	−0·09	0	0·16	−0·16	0	0·39	−0·39	0	Hoshangabad	
19	2	1	...	...	1	1	2	4	?	5·3	?	36	·522	2·2	1	0·82	+0·18	0·12	0·34	−0·22	0·29	0·95	−0·66	0·12	Nagpur.	
...	6	1	4	4	2	1	5	7	3·6	3·8	− 5	30	·416	1·3	0	?	?	0	0·38	−0·38	0·06	1·87	−1·81	0	Chanda .	Central Provinces, Central.
			Not recorded.						?	3·8	?	32	·426	2·1	0	0·45	−0·45	0	0·35	−0·35	0·05	1·05	−1·00	0	Seoni.	
10	...	1	2	4	3	3	5	2	3·2	3·5	− 9	27	·337	1·2	0	0·27	−0·27	0	0·18	−0·18	0·03	0·69	−0·66	0	Jubbulpore.	
7	3	5	...	3	...	3	7	2	3·8	3·7	+ 3	19	·248	1·1	0	0·09	−0·09	0	0·10	−0·10	0·04	0·36	−0·32	0	Saugor.	
...	3	4	...	...	3	14	2	4	7·9	5·9	+ 34	20	·296	2·1	0	1·00	−1·00	0	0·47	−0·47	0·12	1·28	−1·16	0	Raipur.	Central Provinces, East.
...	4	5	3	5	7	3	1	2	4·4	2·6	+ 69	40	·547	1·6	1	?	?	0·16	0·51	−0·35	1·53	1·71	−0·18	0·16	Sambalpore.	
4	4	...	...	...	3	1	11	7	6·4	6·8	− 6	20	·267	1·0	0	0·27	−0·27	0·03	0·12	−0·09	0·03	0·62	−0·59	0·03	Sutna.	Central India.
7	4	7	2	...	1	5	2	2	3·9	?	?	23	·310	2·0	0	?	?	0·07	0·18	−0·11	0·07	0·24	−0·17	0·04	Aurangabad.	Hyderabad (North).
4	2	...	2	3	3	3	6	7	6·3	?	?	45	·631	3·1	0	?	?	0	0·31	−0·31	1·02	0·58	+0·44	0	Indur.	
...	9	1	1	1	3	9	3	3	7·3	?	?	54	·688	0·9	1	?	?	0·48	0·83	−0·35	0·76	1·17	−0·41	0·48	Bidar.	
8	4	5	1	3	2	2	3	2	9·0	?	?	34	·442	2·7	0	?	?	0	0·71	−0·71	0	0·92	−0·92	0	Gulbarga .	Hyderabad (South).
...	4	...	...	1	4	9	9	3	8·5	?	?	51	·676	0·9	0	?		0	?	?	0	?	?	0	Raichur.	
9	3	..	...	1	1	3	8	5	4·1	?	?	47	·600	1·8	0	?	?	0·02	0·67	−0·65	0·14	1·42	−1·28	0·02	Hyderabad (Deccan),	
3	...	...	4	3	...	3	6	11	5·2	5·3	− 2	41	·495	1·8	0	?	?	0·01	?	?	0·11	?	?	0·01	Secunderabad	
5	...	...	...	13	12	...	...	...	7·7	?	?	67	·819	0·2	0	?	?	0	?	?	1·03	?	?	0	Khamamet.	
...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	0·85	1·73	−0·79	...	...	...	...	X.—West Coast.	
...	6	6	1	5	5	5	...	2	9·3	11·3	− 18	74	·863	2·7	0	0	0	0	0·01	−0·01	0	0·04	−0·04	0	Bombay .	Konkan.
1	4	...	1	2	5	6	2	9	5·3	11·1	− 52	74	·880	4·7	0	0·09	−0·09	0·06	0·07	−0·01	0·06	0·08	−0·02	0·04	Ratnagiri.	
3	4	...	6	6	2	5	2	2	7·0	?	?	76	·941	3·7	1	?	?	0·17	?	?	0·17	?	?	0·17	Mormugao.	
4	3	2	7	...	4	4	2	4	7·0	?	?	74	·884	4·6	0	?	?	0	0·07	−0·07	0	0·07	−0·07	0	Goa.	
2	12	3	2	3	1	3	4	...	5·1	?	?	77	·873	3·3	0	0·36	−0·36	0·02	0·41	−0·39	0·02	0·41	−0·39	0·02	Karwar.	
4	8	13	1	...	...	...	...	4	7·9	?	?	77	·929	3·2	4	5·55	−1·55	2·81	4·37	−1·56	5·19	6·81	−1·62	1·73	Cochin .	Malabar.
2	4	2	3	1	1	...	6	11	15·2	?	?	75	·915	3·7	4	3·13	+0·87	2·02	3·17	−1·15	2·02	3·69	−1·67	1·00	Calicut.	
10	3	4	8	1	...	...	1	3	3·3	3·7	− 11	74	·894	3·3	2	1·00	+1·00	1·16	1·13	+0·03	1·16	1·19	−0·03	0·73	Mangalore.	
6	13	4	1	...	...	...	...	6	5·8	?	?	76	·875	2·8	4	?	?	1·45	4·58	−3·13	2·04	6·15	−4·11	0·72	Trivandrum.	
..	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	0·36	1·17	−0·92	...	...	...	...	XI.—South India.	
...	...	1	7	15	3	4	...	...	8·4	?	?	82	1·010	2·4	0	1·30	−1·30	0	4·13	−4·13	0·38	4·92	−4·54	0	Pamban .	Madras (South).
...	8	1	...	1	...	6	4	10	4·5	?	?	69	·847	4·1	2	3·40	−1·40	0·25	?	?	1·12	?	?	0·13	Tinnevelly.	
7	7	5	3	5	1	...	...	2	2·4	3·6	− 33	69	·851	2·5	1	1·82	−0·82	0·27	1·88	−1·61	1·00	2·49	−1·49	0·25	Madura.	

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.
Madras, South Central.	Salem	940	28·968	−·020	29·839	29·037	24th	28·879	15th	·158	85·7	104·1	+3·0	78·4	+2·9	91·3	+3·0	25·7	107·5	19th	72·0	25th	35·5
	Coimbatore	1,348	28·535	−·021	29·824	28·608	24th	28·453	15th	·155	80·1	100·8	+2·7	74·6	+1·0	87·7	+1·9	26·2	103·4	3 days	70·6	1st	32·8
Coorg	Mercara	3,781	26·225	?	?	26·283	3rd	26·167	15th	·116	73·3	86·9	+2·4	66·2	+2·1	76·6	+2·3	20·7	93·0	26th	61·3	17th	31·7
Mysore	Chitaldroog	2,405	27·503	?	29·805	27·574	24th	27·428	15th	·146	80·3	98·9	?	72·6	?	85·8	?	26·3	101·7	27th	64·4	29th	37·3
	Bangalore	3,021	26·030	−·013	29·815	26·992	24th	26·856	15th	·136	78·0	95·7	+2·5	71·2	+2·0	83·5	+2·3	24·5	98·8	26th	67·8	7th & 20th.	31·0
	Hassan	3,091	26·870	?	29·840	26·930	24th	26·803	15th	·127	76·8	94·6	?	67·8	?	81·2	?	26·8	98·0	26th	63·3	29th	34·7
	Mysore	2,518	27·418	?	29·833	27·488	3rd	27·352	15th	·136	78·6	96·8	?	71·3	?	84·1	?	25·5	99·9	26th	63·5	19th	36·4
Madras, East Coast, South.	Negapatam	31	29·850	−·020	29·809	29·915	24th	29·761	15th	·154	85·7	90·8†	−1·8†	78·3‡	−0·7‡	84·7‡	?	12·5	95·2	17th	72·4	20th	22·8
	Cuddalore	12	29·875	?	29·816	29·943	24th	29·788	15th	·155	85·4	93·4	?	77·1	?	85·3	?	16·3	98·8	13th	73·2	24th & 25th.	25·6
	Trichinopoly	255	29·625	−·022	29·811	29·699	24th	29·538	15th	·161	86·5	103·8	+2·7	78·9	+1·5	91·4	+2·1	24·9	109·2	19th	74·4	25th	34·8
	Madras	22	29·859	−·021	29·812	29·931	24th	29·761	15th	·170	85·2	94·1	+1·1	77·4	+0·2	85·7	+0·7	16·7	99·5	13th & 17th.	73·5	6th	26·0
Madras, East-Coast, Central.	Nellore	71	29·770	?	29·775	29·859	3rd	29·632	15th	·227	85·6	103·9	?	77·6	?	90·8	?	26·3	109·8	14th	74·1	5th & 24th.	35·7
	Masulipatam	15	29·841	−·023	29·791	29·934	24th	29·714	15th	·220	85·9	96·6	+1·7	77·9	+0·6	87·3	+1·2	18·7	101·7	29th	73·6	7th	28·1
Madras, Central	Cuddapah	433	29·408	?	29·773	29·478	3rd	29·288	15th	·190	91·1	108·1	+3·0	82·8	+2·2	95·5	+2·6	25·3	111·3	16th & 17th.	77·4	5th	33·9
	Kurnool	923	28·918	−·028	29·769	29·006	24th	28·793	15th	·213	88·4	107·0	+2·4	81·0	+2·7	94·0	+2·6	26·0	112·3	16th	75·0	6th & 21st.	37·3
	Bellary	1,475	28·387	−·012	29·785	28·459	24th	28·297	15th	·162	87·5	105·8	+1·9	79·3	+2·3	92·5	+2·1	26·5	109·2	27th	75·9	8th	33·3
	Rajahmundry				Observa	tions d	oubtful.				85·0	101·3	+0·9	79·9	+1·2	90·6	+1·1	21·4	105·1	11th	74·1	19th.	31·0
Madras, East-Coast, North	Cocanada	26	29·828	?	29·789	29·920	24th	29·714	15th	·206	84·9	99·6	+4·7	79·5	+0·4	89·6	+2·6	20·1	102·6	11th	76·5	3rd & 21st.	26·1
	Vizagapatam	31	29·799	−·039	29·767	29·885	24th	29·682	15th	·203	85·9	94·3	+1·9	80·0	?	87·3	?	14·3	98·3	11th	67·9	21st	30·4
	Gopalpur	21	29·764	?	29·725	29·874	23rd	29·625	15th	·249	81·1	87·9	?	77·6	?	82·7	?	10·3	94·2	29th	73·1	21st	21·1
XII.—Hill Stations.																							
Baluchistan	Kachh Fort	?	23·873*	?	?	23·960	25th & 26th,	23·750	3 days	·210	61·5*	71·4*	?	41·7*	?	56·5*	?	29·7	92·0	30th	28·0	20th	64·0
	Pishin	?				Not rec	orded.				?	82·7	?	44·2	?	63·5	?	38·5	94·0	26th & 30th,	29·9	17th & 18th.	64·1
	Quetta	5,502	24·645	+·024	?	24·746	26th	24·524	13th	·222	60·8	74·3	+0·7	46·0	−0·4	60·2	+0·2	28·3	84·2	25th	34·8	17th	49·4
	Kalat	?				Not rec	orded.				52·9	75·6	?	32·4	?	54·0	?	43·2	84·3	3 days.	17·0	17th	67·3
	Chaman	4,311	25·744	?	?	25·870	25th & 26th	25·574	13th	·296	68·5	80·9	?	?	?	?	?	?	92·0	25th	?	...	?
Punjab	Leh	11,503	19·696	?	?	19·869	8th	19·343	14th	·526	37·4	51·6	?	29·4	?	40·5	?	22·2	61·0	1st	22·0	15th & 22nd	39·0
	Srinagar	5,204	24·881	?	?	25·030	24th	24·490	14th	·540	51·0	68·1	?	43·5	?	55·9	?	24·6	79·8	30th	33·1	19th	46·7
	Astor (Kashmir).	?	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimarg	?	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Gilgit	?	24·711	?	?	24·870	10th	24·330	13th	·540	59·4	72·0	?	52·6	?	62·3	?	19·4	88·7	29th	39·7	18th	49·0
	Cherat	?	25·656	?	?	25·819	23rd	25·337	14th	·482	64·1	75·9	?	?	?	?	?	?	88·4	30th	?	...	?
	Murree	6,344	23·810	−·009	?	23·944	24th	23·483	14th	·461	58·6	73·5	+5·1	52·3	+0·3	62·9	+2·7	21·2	78·6	30th	38·0	14th	40·6
	Samana	?	23·762	?	?	23·880	4 days	23·480	13th & 14th	·400	?	64·2	?	?	?	?	?	?	73·0	9th	?	...	?
	Poo	?				Not rec	orded.				?	60·0	?	41·0	?	50·5	?	19·0	71·2	26th	33·0	3 days.	38·2
	Simla	7,224	23·095	−·007	?	23·201	23rd	22·870	14th	·331	59·9	68·3	+1·5	54·5	+2·0	61·4	+1·8	13·8	75·3	27th	41·6	18th	33·7
N.-W. Provinces.	Chakrata	6,977	23·305	−·008	?	23·425	23rd	23·118	14th	·307	60·6	70·7	+0·1	54·5	+2·5	62·6	+1·3	16·2	77·2	27th	44·7	18th	32·5
	Mussooree	6,705	23·510	?	?	23·621	23rd	23·324	14th	·297	62·4	74·1	?	57·3	?	65·7	?	16·8	80·8	27th	46·0	18th	34·8
	Ranikhet	6,069	24·078	−·005	?	24·222	23rd	23·909	15th	·313	66·6	78·7	+4·3	59·7	+2·7	69·2	+3·5	19·0	84·0	14th	50·5	18th	33·5
Bengal	Yatung	10,480?	...			Not rec	orded.				?	56·9	?	43·0	?	49·9	?	13·9	62·4	18th	37·9	24th	24·5
	Gnatong	?	19·216	?	?	19·304	23rd	19·101	15th	·203	38·3	44·8	?	32·3	?	38·6	?	12·5	50·2	10th	26·1	21st	24·1
	Darjeeling	7,421	22·957	+·002	?	23·099	23rd	22·798	15th	·301	56·9*	65·2*	+3·8	50·4	+2·9	57·9*	+3·4	14·8	73·9	19th	42·9	25th	30·0
	Gantok	?	24·329	?	?	24·513	27th	24·221	16th	·332	62·3	72·6	?	47·3	?	59·9	?	25·3	77·0	7th	39·6	6th	37·4

* Mean of 29 days. † Mean of 28 days. ‡ Mean of 23 days.

I—*continued.*

in India, Burma, etc., in April 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8A.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 March to 30th April 1896.	Normal rainfall for period, 1st March to 30th April.	Variation from normal of period.			
5	...	3	5	1	5	7	4	...	6·3	5·0	+ 26	65	·809	1·6	0	2·27	−2·27	0·02	1·58	−1·56	0·22	2·46	−2·24	0·01	Salem . .	Madras, South, Central.
...	2	...	11	...	...	...	13	4	2·4	3·5	− 31	85	·879	3·2	0	2·18	−2·18	0·07	1·71	−1·64	0·13	2·30	−2·17	0·07	Coimbatore.	
19	6	...	...	1	...	...	1	3	6·3	3·8	+ 66	72	·584	2·9	1	4·70	−3·70	0·44	2·72	−2·28	0·45	3·59	−3·14	0·37	Mercara .	Coorg.
...	...	1	...	...	...	14	13	2	8·3	?	?	65	·658	1·4	2	?	?	0·98	?	?	0·98	?	?	0·73	Chitaldroog .	Mysore.
...	...	...	...	1	5	14	9	1	7·4	3·5	+112	70	·677	1·9	1	1·18	−0·18	0·17	1·15	−0·98	0·76	1·69	−0·93	0·16	Bangalore	
...	1	1	1	1	2	5	12	7	3·8	?	?	72	·661	3·3	2	?	?	1·38	?	?	1·39	?	?	1·12	Hassan.	
4	1	...	...	...	...	9	11	5	7·6	?	?	68	·667	3·6	2	?	?	1·57	?	?	1·84	?	?	1·29	Mysore.	
2	...	...	1	12	3	8	3	1	11·9	5·2	+129	79	·974	3·4	0	0·55	−0·55	0·06	0·35	−0·29	0·50	0·89	−0·39	0·06	Negapatam .	Madras, East-Coast, South.
...	...	...	...	2	14	14	...	...	1·7	?	?	79	·972	2·4	0	0·60	−0·60	0	?	?	0	?	?	0	Cuddalore.	
12	...	3	2	1	2	5	5	...	3·5	4·0	− 13	65	·813	2·8	0	1·27	−1·27	0	1·53	−1·53	0·13	2·08	−1·95	0	Trichinopoly.	
...	...	...	...	4	21	5	...	...	7·8	7·9	− 1	74	·907	3·4	0	0·27	−0·27	0	0·62	−0·62	0	1·01	−1·01	0	Madras.	
...	...	...	1	21	8	...	...	...	8·9	?	?	71	·874	3·9	0	0·30	−0·30	0	?	?	0	?	?	0	Nellore .	Madras, East-Coast, Central.
...	...	...	...	5	19	6	...	...	10·6	8·8	+ 20	78	·963	3·5	0	0·27	−0·27	0	0·15	−0·15	0	0·27	−0·27	0	Masulipatam.	
...	1	1	3	7	...	9	6	3	?	?	?	51	·749	1·7	1	0·70	+0·30	0·12	0·38	−0·26	0·12	0·44	−0·32	0·12	Cuddapah .	Madras, Central.
13	...	...	1	2	...	3	7	4	?	?	?	51	·687	0·8	2	1·33	+0·67	0·69	0·65	+ 0·04	0·69	1·19	−0·50	0·54	Kurnool.	
8	1	...	...	...	...	7	7	7	5·3	5·2	+ 2	40	·520	2·4	1	1·27	−0·27	0·34	0·58	−0·24	0·34	0·80	−0·46	0·34	Bellary.	Madras, East-Coast, North.
1	2	...	...	1	16	5	5	...	Not	recor	ded.	71	·856	6·0	0	?	?	0·05	?	?	0·05	?	?	0·05	Rajahmundry	
...	1	...	...	...	3	16	8	2	8·0	?	?	75	·904	3·2	0	0·50	−0·50	0	0·21	−0·21	0·05	0·74	−0·69	0	Cocanada.	
...	...	...	...	...	...	5	25	...	4·2	3·9	+ 8	69	·867	1·4	1	0·36	+0·64	1·30	0·49	+0·81	1·31	0·88	+0·43	1·30	Vizagapatam.	
5	...	1	...	...	8	15	1	...	15·1‡	14·5	+ 4	86	·915	2·0	1	0·78	+0·22	0·50	0·54	−0·04	0·59	1·44	−0·85	0·39	Gopalpur.	
																									XII.—Hill Stations.	
12	3	2	1	...	...	1	4	5	2·2‡	?	?	47*	·249*	1·3*	1	?	?	0·34	?	?	3·26	?	?	0·13	Kachh Fort.	Baluchistan.
			Not	rec	orde	d			?	?	?	?	?	?	1	?	?	0·22	?	?	1·69	?	?	0·14	Pishin.	
20	...	...	...	...	1	1	4	4	4·2	4·8	− 13	47	·255	3·1	1	3·55	−2·55	0·14	1·20	−1·06	2·33	2·90	−0·57	0·10	Quetta.	
...	...	...	4	...	22	...	4	...	?	?	?	?	?	?	0	?	?	0·02	?	?	0·02	?	?	0·02	Kalat.	
...	1	1	3	9	5	8	3	...	7·7	?	?	47	·310	2·4	1	?	?	0·25	?	?	1·57	?	?	0·20	Chaman.	
...	...	3	1	...	...	9	14	3	3·5	?	?	45	·103	6·3	3	?	?	1·26	?	?	1·43	?	?	0·87	Leh . .	Punjab.
13	...	1	2	5	3	1	3	2	8·3	?	?	86	·322	3·9	4	?	?	1·48	?	?	3·70	?	?	0·66	Srinagar.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Astor (Kashmir).	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Minimarg.	
			Not	rec	orde	d.			?	?	?	48	·232	5·3	4	?	?	0·87	?	?	1·16	?	?	0·28	Gilghit.	
4	12	3	...	...	...	...	2	9	18·2	?	?	43	·258	3·7	2	?	?	0·39	?	?	2·04	?	?	0·18	Cherat.	
5	2	2	2	8	1	...	2	8	11·4	8·7	+ 31	80	·397	4·2	5	6·64	−1·64	2·46	3·40	−0·94	5·50	7·05	− 1·55	1·37	Murree.	
			Not	rec	orde	d.			?	?	?	?	?	3·5	1	?	?	0·36	?	?	4·23	?	?	0·35	Samana.	
16	1	...	1	1	3	6	1	1	?	?	?	?	?	3·5	7	?	?	2·03	?	?	7·19	?	?	0·70	Poo.	
7	7	4	1	...	7	1	1	...	5·9	2·9	+ 10	30	·155	4·1	0	4·09	−4·09	0·02	1·90	−1·88	0·59	4·14	− 3·55	0·01	Simla.	
13	11	3	...	2	...	...	...	1	11·4‡	6·1	+ 87	29	·155	2·6	2	?	?	0·49	1·48	−0·99	2·04	3·87	− 1·83	0·32	Chakrata .	North Western Provinces.
...	2	2	5	...	1	...	4	16	?	?	?	30	·171	2·4	1	1·10	−0·10	0·29	?	?	0·94	?	?	0·21	Mussooree.	
7	7	5	...	1	...	4	6	...	4·8	3·0	+ 60	37	·246	1·9	1	2·55	−1·55	0·40	1·11	−0·71	0·69	3·35	− 2·66	0·34	Ranikhet.	
			Not	rec	orde	d			?	?	?	?	?	?	13	?	?	9·83	?	?	13·30	?	?	1·84	Yatung.	Bengal.
7	...	...		3	2	5	7	4	7·4	?	?	77	·181	2·8	14	?	?	12·05	?	?	17·80	?	?	1·92	Gnatong.	
...	1	7	7	5	1	2	6	1	10·2	8·4	+ 21	74	·336	2·2	7	6·86	+0·14	2·53	4·53	−2·00	2·87	6·16	− 3·29	0·83	Darjeeling.	
16	1		...	1	1	5	5	1	5·7	?	?	67	·374	?	15	?	?	13·70	?	?	19·76	?	?	3·75	Gantok .	

‡ Mean of 28 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.								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	26·034	−·020	?	26·117	9th	25·914	14th	·203	78·7	87·8	+2·2	71·9	+3·6	79·9	+2·9	15·9	95·7	26th	64·3	18th	31·4
	Pachmarhi .	3,528	26·434	−·009	?	26·513	20th	26·314	14th	·199	83·3	94·8	+2·5	72·2	+3·0	83·6	+2·8	22·6	100·7	28th	59·2	21st	41·5
South India .	Wellington .	6,200	24·267	−·010	?	24·326	24th	24·214	15th	·112	68·6	78·9	+3·0	55·5	−0·5	67·2	+1·3	23·4	81·2	3 days.	51·2	7th	30·0
XIII.—Extra India.																							
Ceylon . .	Trincomalee†	12	29·838*	?	29·776*	29·920	23rd	29·761	6th	·159	84·1*	92·7*	?	79·5*	?	86·1*	?	13·2	97·0	16th	76·5	1st	20·5
	Colombo .	40	29·854	−·031	29·820	29·900	3rd	29·792	29th	·106	82·7	90·8	?	76·9	?	83·9	?	13·9	93·0	27th	74·5	5th	18·5
	Galle . .	48	29·896	?	29·870	29·944	26th	29·828	16th	·116	82·7	86·1	?	78·3	?	82·2	?	7·8	88·0	7 days.	76·0	27th	12·0
Persia . .	Meshed .	3,104				Not recorded.					54·9	?	?	47·5	?	?	?	?	?	...	35·9	13th	?
	Reshtt .	?				Not recorded.					56·4	64·4	?	47·5	?	55·9	?	16·9	83·4	6th	39·0	13th	44·4
	Teheran .	?	25·966	?	?	26·250	25th	25·645	10th	·655	57·1	69·9	?	43·2	?	59·0	?	21·7	78·1	12th	32·3	13th	45·8
			25·477	?	?	25·730	25th	25·170	7th	·560													
	Ispahan .	?	24·442	?	?	24·640	25th	24·220	8th	·420	57·0	71·0	?	45·5	?	58·2	?	25·5	80·5	21st	34·7	13th	45·8
			24·770	?	?	24·900	25th	24·490	8th	·410													
	Bushire .	14	29·917	+·032	29·890	30·071	25th	29·695	7th	·376	71·5	78·1	−3·5	67·4	+1·3	72·7	−1·1	10·7	99·5	8th	60·0	17th	39·5
	Jask . .	?	29·849	?	?	29·938	17th	29·673	29th	·265	80·5	87·2	?	74·9	?	81·0	?	12·3	94·3	25th	70·2	6th	24·1
Arabia . .	Muscat .	?	29·860	?	?	29·970	3rd	29·724	29th	·246	84·7	87·4	?	81·8	?	84·6	?	5·6	93·9	25th	76·1	6th	17·8
	Baghdad .	220?	29·859	+·010	30·061	30·062	24th	29·487	7th	·575	64·4	75·1	−5·8	58·8	+4·4	66·9	−0·7	16·3	85·0	28th	49·8	14th	35·2
	Aden . .	94	29·824	−·021	29·850	29·900	25th	29·731	8th	·169	80·9	91·6	+1·0	76·6	−1·0	84·1	0	15·0	98·3	20th & 30th.	70·9	6th	27·4
	Perim . .	?	29·621	?	?	29·704	25th	29·523	7th	·181	83·4	89·6	?	79·7	?	84·6	?	9·9	92·7	23rd & 29th.	77·4	1st & 5th.	15·3
Afghanistan .	Kabul .	?				Not recorded.					52·4*	70·8	?	43·4	?	57·1	?	27·4	80·2	3 days	33·0	16th	47·2
Central Asia .	Kashgar .	?	25·558	?	?	26·032	27th	25·150	13th	·882	54·8	68·2	?	46·8*	?	57·5*	?	21·4	92·0	10th	36·7	21st	55·3
Arabian Sea Islands.	Amini Devi.	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Africa . .	Zanzibar .	23	29·908	?	29·907	29·957	28th	29·855	5th	·102	79·6	83·8	?	78·0	?	80·9	?	5·8	88·2	9th	74·9	18th	13·3

* Mean of 29 days. † Observations of 28 days. ‡ Observations taken at 9 A.M.

I—*concluded.*

in India, Burma, etc., in April 1896—concluded.

Wind Direction: Number of winds from									Wind velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Variation from normal of period.	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 March to 30th April 1896.	Normal rainfall for period, 1st March to 30th April.				
...	5	5	...	...	...	9	5	6	10·1	7·7	+31	21	·209	0·6	0	0·09	−0·09	0	0·06	−0·06	0	0·18	−0·18	0	Mount Abu.	Central India.
11	1	...	3	1	...	2	6	6	8·4	5·3	+58	29	·339	1·5	0	0·45	−0·45	0	0·23	−0·23	0·02	0·55	−0·53	0	Pachmarhi.	
22	1	5	2	...	..	...	...	...	2·8	2·9	−4	55	·388	2·0	3	4·50	−1·50	0·93	2·78	−1·85	1·14	5·59	−4·45	0·37	Wellington.	South India.
																									XIII.—Extra India.	
9	...	...	...	...	...	19	...	...	1·3*	?	?	81*	?	2·6*	0	?	?	0	1·75	−1·75	0·63	2·96	−2·33	0	Trincomalee	Ceylon.
...	...	...	3	19	4	2	2	...	6·9	5·6	+23	81	·913	4·8	11	?	?	5·79	12·32	−6·53	11·36	16·97	−5·61	1·75	Colombo.	
15	...	3	...	1	...	1	...	10	3·9	?	?	89	·998	4·5	13	?	?	11·66	9·55	+2·11	18·32	14·28	+4·04	1·75	Galle.	
			Not	rec	orde	d.			?	?	?	?	?	4·7	4	?	?	1·21	?	?	6·44	?	?	0·61	Meshed	Persia.
			Not	rec	orde	d.			?	?	?	77	·345	?	7	?	?	2·75	?	?	9·03	?	?	0·64	Resht‡	
17	...	2	...	1	3	2	4	1	6·3	?	?	44	·204	4·1	3	?	?	0·54	?	?	3·98	?	?	0·18	Teheran.	
...	1	...	4	...	...	6	12	7	8·3	?	?	60	·282	3·6	1	?	?	0·14	?	?	2·11	?	?	0·14	Ispahan.	
...	4	2	3	2	2	...	3	14	12·2	9·1	+34	67	·514	3·6	1	?	?	0·18	0·68	−0·50	1·23	1·40	−0·17	0·16	Bushire.	
...	2	...	5	5	...	...	6	12	7·0	?	?	68	·710	0·7	0	?	?	0	?	?	2·20	?	?	0	Jask.	
...	1	1	4	3	1	1	11	8	5·1	?	?	57	·672	0·8	0	?	?	0	?	?	1·54	?	?	0	Muscat†	Arabia.
5	9	5	1	1	1	2	2	4	5·3	?	?	69	·421	1·2	2	?	?	0·49	?	?	4·13	?	?	0·33	Baghdad.	
5	...	5	18	1	...	...	...	1	12·1*	14·8	−18	71	·749	2·0	0	?	?	0	0·66	−0·66	0	1·82	−1·82	0	Aden.	
...	...	...	13	16	1	...	...	...	10·5	?	?	75	·858	2·5	0	?	?	0	?	?	0·17	?	?	0	Perim.	
...	6	2	12	...	5	...	5	...	?	?	?	?	?	0	3	?	?	1·95	?	?	11·45	?	?	1·40	Kabul*	Afghanistan.
27	1	1	...	...	...	...	...	1	2·8	?	?	49	·200	4·7	1	?	?	0·35	?	?	0·70	...	...	0·35	Kashgar	Central Asia.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Amini Devi.	Arabian Sea Islands.
...	...	...	...	5	14	10	...	1	5·3	?	?	88	·867	6·6	15	?	?	9·95	?	?	15·23	?	?	2·10	Zanzibar	Africa.

* Mean of 29 days.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
								29+														
Burma Coast and Bay Islands.	Port Blair	...	29·850	29·745	·105	29·791	−·010	·781	91·3	80·0	14·3	96·9	77·8	19·1	90·4	90·9	85·5	+1·8	77·3	81·8	81·6	80·2
	Rangoon	...	·852	·698	·154	·779	−·024	·756	101·0	77·6	23·4	104·2	73·9	30·3	90·0	94·7	86·7	+2·2	73·8	78·0	79·0	76·9
	Diamond Island	...	·870	·756	·114	·805	−·021	·784	89·2	81·0	8·2	93·2	79·1	14·1	86·4	86·2	83·5	+1·5	76·9	78·2	78·2	77·8
	Cocos Island	111	·733	·637	·096	·678	?	·719	94·9	81·1	13·5	99·5	78·0	21·5	89·7	90·1	89·5	?	76·3	80·2	80·1	78·9
	Akyab	...	·867	·756	·111	·809	−·023	·771	92·6	77·4	15·2	96·0	67·9	28·1	89·0	89·4	84·4	+1·6	74·9	81·0	81·2	79·0
Assam.	Silchar	...	·748	·618	·130	·684	−·039	·739	88·5	70·3	18·2	95·3	63·6	31·7	79·8	84·5	78·2	+0·5	68·2	74·1	76·2	72·8
	Sibsagar	...	·513	·392	·121	·451	−·047	·743	80·5	67·8	12·7	87·2	64·0	23·2	74·7	79·1	73·3	+0·2	66·6	70·7	73·0	70·1
	Dhubri	...	·685	·529	·156	·601	−·047	·670	89·3	71·2	18·1	102·1	65·1	37·0	80·2	88·3	78·9	+0·7	67·9	72·5	73·7	71·4
Bengal and Orissa.	Chittagong	...	·759	·651	·108	·699	−·049	·733	89·7	75·5	14·2	97·5	67·0	30·5	86·7	86·7	82·1	+1·6	73·4	77·9	78·6	76·6
	Narayanganj	...	·774	·641	·133	·707	−·049	·680	94·4	76·0	18·4	101·0	64·6	36·4	87·1	91·1	84·1	+1·8	72·1	78·0	78·4	76·2
	Calcutta (Alipore)	...	·754	·621	·133	·686	−·057	·652	99·4	78·0	21·4	106·8	70·0	36·8	90·8	97·0	88·1	+3·3	72·3	77·9	76·5	75·6
	Saugor Island	...	·768	·644	·124	·701	−·055	·670	92·2	81·4	10·8	100·4	77·9	22·5	88·0	88·3	85·0	+1·6	78·1	80·5	81·6	80·1
	Burdwan	...	·664	·518	·146	·589	−·053	·640	105·5	78·1	27·4	109·3	66·2	43·1	92·4	103·1	90·3	+3·1	69·8	75·2	72·9	72·6
	Berhampore	...	·693	·545	·148	·617	−·060	·631	104·0	76·3	27·7	108·9	65·2	43·7	92·7	103·4	89·1	+2·9	65·0	76·2	74·1	71·8
	False Point	..	·789	·666	·123	·726	−·056	·688	89·5	78·6	10·9	94·3	72·1	22·2	87·1	85·9	82·4	+0·4	76·8	80·7	80·5	79·3
	Cuttack	...	·704	·555	·149	·635	−·061	·654	105·7	79·4	26·3	110·8	73·4	37·4	91·8	101·3	89·8	+3·3	74·8	78·3	78·6	77·2
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·781	27·668	·113	27·727	−·047	·604	101·9	76·0	25·9	106·9	68·2	38·7	94·4	99·0	88·6	+4·0	56·4	66·0	66·9	63·1
	Patna	...	29·559	29·422	·137	29·488	−·059	·618	103·7	75·3	28·4	108·8	67·2	41·6	93·5	102·3	89·0	+2·4	63·9	71·2	72·4	69·2
	Darbhanga	...	·584	·436	·148	·508	−·064	·624	99·3	72·2	27·1	104·0	62·2	41·8	89·1	99·1	85·5	+1·0	66·4	75·3	77·8	73·2
	Allahabad	...	·450	·319	·131	·380	−·046	·631	106·2	73·5	32·7	112·0	62·4	49·6	97·4	104·8	90·0	+2·4	59·5	68·0	70·4	65·9
	Lucknow	...	·382	·253	·129	·316	−·053	·629	105·0	72·7	32·3	110·3	64·1	46·2	95·7	102·7	89·6	+2·2	?	70·0	71·3	?
Upper Sub-Himalayas.	Dehra Dun	...	27·563	27·452	·111	27·496	−·046	·630	95·4	65·0	30·4	102·5	53·7	48·8	84·7	91·3	79·8	+2·8	52·9	61·1	60·7	58·2
	Roorkee	...	28·853	28·747	·106	28·791	−·044	·619	100·9	67·0	33·9	107·3	50·3	57·0	91·8	98·4	84·0	+1·8	54·7	64·3	64·5	61·2
	Meerut	...	29·014	·906	·108	·953	−·042	·635	101·2	69·8	31·4	108·2	58·2	50·0	93·4	98·2	85·3	+3·0	58·1	65·2	65·9	63·1
	Lahore	...	·058	·967	·091	29·008	−·036	·665	96·8	66·9	29·9	106·6	53·6	53·0	87·0	95·8	82·0	+1·1	56·5	65·2	67·3	63·0
	Ludhiana	...	28·945	·844	·101	28·889	−·038	·650	99·7	67·7	32·0	108·9	57·7	51·2	91·4	95·8	83·2	+1·8	59·2	66·6	68·2	64·7
Indus Valley and N.-W. Rajputana.	Peshawar	...	·729	·637	·092	·678	−·013	·766	88·7	61·5	27·2	100·0	54·0	46·0	80·4	87·1	75·1	+2·3	53·0	62·0	63·7	59·6
	Mooltan	...	29·364	29·251	·113	29·303	−·031	·682	101·6	70·1	31·5	111·9	55·4	56·5	88·3	99·3	85·7	+3·5	59·4	69·2	73·5	67·4
	Jacobabad	...	·611	·487	·124	·544	−·009	·683	104·7	71·6	33·1	112·2	57·7	54·5	94·7	103·6	88·3	+3·2	56·6	68·4	71·3	65·4
	Kurrachee	...	·835	·738	·097	·786	−·033	·747	93·2	74·9	18·3	104·0	63·2	40·8	88·8	87·7	81·9	?	71·6	78·4	78·8	76·3
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·388	28·273	·115	28·326	−·023	·669	103·7	73·0	30·7	111·7	57·0	54·7	94·5	101·5	88·5	+3·9	57·3	66·4	68·7	64·1
	Ajmere	...	·230	·111	·119	·164	−·021	685	102·1	74·4	27·7	109·9	55·0	54·9	93·7	100·5	89·1	+4·5	60·3	68·4	71·0	66·6
	Deesa	...	29·371	29·236	·135	29·299	−·028	·701	108·8	74·2	34·6	114·7	61·0	53·7	96·0	106·6	91·8	+4·5	61·5	68·3	68·5	66·1
	Nowgong	...	·023	28·898	·125	28·955	−·041	·638	105·8	73·6	32·2	112·6	59·9	52·7	96·9	104·2	89·7	+2·4	58·2	66·8	67·8	64·3
	Agra	...	·215	29·092	·123	29·145	−·047	·641	103·7	75·0	28·7	110·1	61·9	48·2	95·2	101·8	89·3	+1·3	60·1	67·9	69·7	65·9
Deccan.	Belgaum	...	27·372	27·250	·122	27·314	−·010	·691	97·9	68·9	29·0	102·6	64·8	37·8	88·4	88·7	80·6	+1·3	65·4	68·4	72·5	68·8
	Sholapur	...	28·265	28·110	·155	28·187	−·017	·654	107·0	77·6	29·4	111·0	72·5	38·5	96·6	104·6	91·4	+2·6	62·8	69·5	71·3	67·9
	Poona	...	·043	27·907	·136	27·981	−·010	·698	104·3	71·0	33·3	109·7	65·0	44·7	93·8	99·6	86·9	+2·3	62·3	66·5	69·0	66·1
	Akola	...	·885	28·733	·152	28·804	−·034	·648	109·2	77·8	31·4	114·3	64·8	49·5	99·5	107·5	93·8	+3·5	60·7	70·2	71·9	67·6
	Buldana	2,182	27·740	27·609	·131	27·670	−·013	·656	103·4	80·0	23·4	109·2	70·6	38·6	94·3	101·5	92·0	+4·0	60·1	64·9	66·3	63·8
	Khandwa	...	28·791	28·649	·142	28·715	−·017	·675	107·6	77·9	29·7	115·2	62·1	53·1	97·9	106·5	93·5	+4·2	58·6	67·1	68·0	64·1

II.

85 Stations in India, Burma, etc., for April 1896.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·902	·967	·952	·940	+·008	88	68	66	74	−4	5·2	4·8	5·0	+0·9	...	1	6	7	22	8	4	7	5	S. 37° E.	N. 84° E.	37	45	112	113	...	...	Port Blair	Burma Coast and Bay Islands.
·785	·796	·781	·787	−·003	83	56	48	62	−5	2·6	3·2	2·9	−0·4	...	...	...	1	7	13	19	17	3	S. 42° W.	S. 24° W.	65	60	154	136	...	...	Rangoon	
·872	·851	·860	·861	+·003	82	68	69	73	−3	3·8	4·1	4·0	+1·0	1	2	...	...	1	...	12	17	27	N. 75° W.	N. 58° W.	75	73	265*	168	...	...	Diamond Island, Cocos Island	
·844	·907	·896	·882	?	79	65	64	69	?	1·8	2·0	1·9	?	...	7	...	1	...	8	10	16	16	N. 84° W.	?	59	?	?	?	...	...	Akyab	
·839	·952	·957	·916	+·100	89	70	69	76	+3	4·7	1·7	3·2	+0·2	...	2	1	5	...	27	6	18	1	S. 32° W.	S. 75° W.	53	40	89	97	...	...	Silchar	Assam.
·667	·772	·796	·745	+·026	90	77	69	79	+3	6·4	6·2	6·3	+1·0	33	3	7	10	2	1	1	1	2	N. 65° E.	S. 86° E.	25	21	91*	81	...	...	Sibsagar	
·637	·700	·732	·690	+·022	93	82	75	83	−4	6·3	5·9	6·1	−0·8	3	1	41	3	6	...	6	...	...	N. 56° E.	N. 59° E.	65	51	139*	67	...	...	Dhubri	
·642	·698	·639	·660	+·006	84	69	50	68	0	4·2	2·0	3·1	−0·2	5	2	23	17	1	3	4	5	...	N. 66° E.	N. 74° E.	48	32	246	192	...	...	Chittagong	Bengal and Orissa.
·803	·838	·870	·837	+·019	91	66	69	75	−2	5·2	3·1	4·2	+0·2	...	...	1	1	5	20	24	7	2	S. 28° W.	S. 12° W.	73	37	222*	169	...	...	Narayanganj	
·747	·845	·805	·799	−·008	82	66	57	68	−5	5·4	4·2	4·8	+0·9	...	1	3	1	11	30	5	1	2	S. 8° W.	S. 4° E.	66	60	217	165	...	...	Calcutta (Alipore).	
·726	·792	·651	·723	−·092	75	55	39	56	−15	1·5	1·0	1·3	−1·4	...	2	1	1	5	22	24	4	1	S. 23° W.	S. 3° W.	71	73	178	175	...	...	Saugor Island	
·920	·942	·956	·939	0	86	72	74	77	−3	6·2	3·7	5·0	+0·5	...	3	...	...	9	35	12	1	...	S. 4° W.	S. 20° W.	78	76	448	401	...	...		
·660	·654	·413	·576	−·077	65	43	20	43	−11	1·8	2·5	2·2	−0·2	...	3	1	...	7	10	20	12	7	S. 51° W.	S. 40° W.	55	40	132*	114	...	...	Burdwan	
·477	·692	·448	·539	−·091	52	46	22	40	−19	1·7	2·6	2·2	−1·0	1	...	1	2	6	7	16	16	11	S. 64° W.	S. 23° W.	58	32	139*	124	...	...	Berhampore	
·906	·964	·971	·947	+·041	92	74	78	81	−3	2·2	2·8	2·5	−0·6	...	...	...	2	2	35	20	...	1	S. 13° W.	S. 38° W.	85	79	348*	336	...	...	False Point	
·805	·789	·676	·757	−·011	80	53	35	56	−6	0·8	2·7	1·8	−1·0	1	3	1	5	3	19	20	7	1	S. 25° W.	S. 17° W.	57	62	129	124	...	...	Cuttack	
·220	·289	·261	·257	−·039	24	18	14	19	− 9	0·6	2·2	1·4	−1·2	1	5	1	...	...	4	5	17	27	N. 66° W.	N. 74° W.	70	49	257	201	...	...	Hazaribagh	Gangetic Plain and Chota Nagpur.
·454	·477	·399	·443	−·025	51	31	19	34	− 7	0·6	0·9	0·7	−1·3	...	1	3	11	1	1	4	15	24	N. 54° W.	N. 38° W.	43	27	145*	108	...	...	Patna	
·581	·696	·670	·649	+·088	72	51	36	53	+2	0	0·1	0·1	−1·0	7	1	2	13	13	1	4	12	7	S. 34° E.	S. 24° E.	12	8	152	138	...	...	Darbhanga	
·330	·298	·286	·305	−·085	39	16	13	23	− 9	1·0	1·4	1·2	−0·2	2	6	1	1	1	2	5	18	24	N. 64° W.	N. 52° W.	67	25	121	86	...	...	Allahabad	
?	·401	·374	?	?	?	23	18	?	?	1·5	1·8	1·7	−0·3	...	6	1	4	2	...	7	21	19	N. 68° W.	N. 53° W.	60	44	88*	106	...	...	Lucknow	
·257	·251	·154	·221	?	40	21	10	24	?	2·0	2·9	2·4	−0·4	7	4	1	...	...	4	19	25	...	S. 71° W.	N. 79° W.	67	21	48	62	...	...	Dehra Dun	
·272	·234	·158	·221	−·098	41	15	8	21	−13	0·7	2·3	1·5	−0·6	12	2	2	1	6	...	1	3	33	N. 43° W.	N. 73° W.	50	10	107	76	...	...	Roorkee	Upper Sub-Himalayas.
·336	·252	·209	·266	−·133	46	16	11	24	−14	1·0	2·7	1·9	−0·1	12	...	1	1	1	...	3	30	12	N. 80° W.	N. 53° W.	65	44	67*	60	...	...	Meerut	
·325	·335	·292	·317	−·071	49	26	17	31	−6	1·6	2·0	1·8	−0·8	...	15	3	2	2	4	3	12	19	N. 44° W.	N. 19° W.	53	26	70	80	...	...	Lahore	
·390	·328	·328	·349	−·056	56	22	20	33	−11	1·9	3·1	2·5	−0·5	5	4	11	...	6	1	5	5	23	N. 33° W.	N. 59° W.	38	27	71	52	...	...	Ludhiana	
·303	·336	·306	·315	−·096	55	33	25	38	−16	3·4	4·4	3·9	−0·7	13	9	6	5	3	1	2	8	13	N. 22° W.	N. 9° E.	32	24	118*	104	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·373	·465	·484	·441	−·013	49	34	25	36	−8	1·7	1·8	1·8	+0·1	4	...	41	...	7	...	3	...	5	N. 48° E.	N. 26° W.	63	13	49*	59	...	...	Mooltan	
·268	·348	·339	·318	−·062	34	21	15	23	−11	1·4	1·7	1·6	−1·1	11	6	2	6	3	8	5	9	10	N. 85° W.	S. 84° E.	17	18	142*	94	...	...	Jacobabad	
·740	·844	·874	·819	?	85	62	67	71	?	1·2	1·7	1·5	−0·5	...	...	1	2	1	3	26	26	1	S. 64° W.	S. 62° W.	78	80	315*	345	...	...	Kurrachee	
·285	·309	·294	·296	−·021	34	18	14	22	−6	1·5	2·0	1·8	−0·4	2	3	6	1	...	...	13	24	11	N. 81° W.	N. 43° W.	60	53	113	133	...	...	Jeypore	
·362	·383	·395	·380	−·011	42	24	20	29	−5	0·7	1·3	1·0	−1·0	5	2	5	1	3	4	4	26	10	N. 83° W.	S. 74° W.	48	52	147	131	...	...	Ajmere	E. Rajputana, Central India, and Gujarat.
·389	·331	·192	·304	−·062	44	20	8	24	−4	0·3	0·7	0·5	−1·3	...	5	3	3	...	...	7	25	17	N. 69° W.	N. 89° W.	65	53	239	225	...	...	Deesa	
·284	·254	·198	·245	−·136	34	15	9	19	−12	1·3	3·0	2·2	−0·1	1	6	...	2	3	2	4	27	15	N. 75° W.	N. 76° W.	63	54	72*	68	...	...	Nowgong	
·327	·320	·298	·315	−·024	37	19	14	23	−5	0·6	1·2	0·9	−0·5	...	1	2	...	4	...	14	...	35	N. 63° W.	N. 84° W.	63	44	160*	114	...	...	Agra	
·583	·450	·602	·545	+·026	83	35	46	54	+4	1·1	3·8	2·5	−0·1	...	3	8	4	2	2	7	24	1	N. 74° W.	S. 88° W.	43	25	336	314	..	...	Belgaum	Deccan.
·394	·389	·355	·379	−·003	41	23	16	27	−2	1·5	4·4	3·0	0·4	...	9	4	5	13	...	7	7	15	N. 34° W.	N. 18° E.	17	14	214*	205	...	...	Sholapur	
·464	·313	·332	·365	−·018	61	20	18	34	+3	1·0	3·1	2·1	−0·4	2	7	7	7	1	1	5	13	17	N. 40° W.	N. 35° W.	41	49	311*	232	...	...	Poona	
·315	·352	·310	·325	+·040	32	19	13	21	−1	1·7	2·6	2·2	+0·5	1	10	5	4	4	1	3	14	18	N. 42° W.	N. 48° W.	46	57	153	131	...	...	Akola	
·280	·252	·211	·248	−·066	27	16	10	18	−8	2·3	2·7	2·5	0	...	8	3	2	...	...	1	5	41	N. 39° W.	N. 31° W.	82	55	230*	213	0·02	0·02	Buldana	
·264	·288	·212	·255	−·092	27	16	9	17	−10	1·1	1·9	1·5	−0·4	...	5	·8	3	3	...	1	13	27	N. 39° W.	N. 49° W.	59	62	186	140	...	...	Khandwa	

* Corrected.

Table

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

Meteorological Province	Station	Elevation of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to Sea-level and for gravity at 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—*contd.*	Hoshangabad	...	28·816	28·663	·153	28·735	−·030	29+·655	106·4	76·3	30·1	112·8	65·8	47·0	96·9	105·1	92·0	+2·6	59·5	68·9	72·7	67·0
	Nagpur	...	·778	·630	·148	·699	−·030	·636	109·0	78·8	30·2	113·6	68·9	44·7	99·8	106·1	94·0	+3·7	63·3	75·4	77·7	72·1
	Do. (Sanitary Commr.'s Office).	...	·801	·659	·142	·725	?	·653	109·5	80·2	29·3	113·9	69·5	44·4	100·3	107·4	94·3	?	62·5	74·8	79·1	72·1
	Jubbulpore	...	·471	·335	·126	·398	−·041	·628	105·0	71·5	33·5	111·6	58·5	53·1	96·5	103·4	88·9	+2·7	59·6	67·5	69·2	65·4
	Saugor	...	·057	27·938	·119	27·993	−·033	·636	104·4	74·3	30·1	111·4	60·1	51·3	96·3	102·2	87·8	+1·1	57·1	65·1	66·7	63·0
	Raipur	...	·829	28·681	·148	28·750	−·032	·617	107·8	80·2	27·6	113·1	71·6	41·5	99·9	105·4	94·2	+3·4	61·1	67·8	69·7	66·2
	Sutna	...	·741	·612	·129	·672	−·034	·634	104·9	74·4	30·5	112·6	62·7	49·9	98·1	102·4	89·8	+3·3	56·7	65·9	66·6	63·1
	Hyderabad (Deccan.)	...	·165	·029	·136	·094	?	·660	105·2	78·5	26·7	109·2	73·8	35·4	96·3	102·5	91·1	?	67·3	73·6	74·0	71·6
West Coast.	Bombay	...	29·850	29·730	·120	29·788	−·023	·764	90·5	79·3	11·2	94·8	76·2	18·6	86·5	87·9	84·2	+1·6	74·1	78·4	78·5	77·0
	Ratnagiri	...	·772	·660	·112	·714	−·013	·760	91·5	80·0	11·5	97·5	76·3	21·2	87·9	88·8	85·0	+2·6	75·6	79·2	79·4	78·0
	Karwar	...	·856	·741	·115	·797	−·015	·772	90·9	79·8	11·1	92·3	75·4	16·9	87·8	88·9	84·8	+2·1	76·4	78·7	79·1	78·1
	Cochin	...	·890	·785	·105	·836	−·017	·773	93·1	80·7	12·4	95·2	75·8	19·4	89·3	90·9	86·3	+2·0	77·9	80·7	81·8	80·1
South India.	Salem	...	28·963	28·796	·167	28·889	−·034	·737	104·2	78·4	25·8	107·6	72·0	35·6	91·8	100·3	89·3	+3·3	73·6	79·1	77·4	76·7
	Mysore	...	27·417	27·273	·144	27·345	?	·710	97·0	71·3	25·7	99·9	63·2	36·6	85·5	94·3	83·6	?	64·4	71·4	68·5	68·1
	Mercara	...	26·235	26·126	·109	26·190	−·012	?	86·6	66·3	20·3	93·0	61·2	31·8	79·1	79·5	74·7	+1·8	63·6	68·4	69·6	67·2
	Bangalore	...	·932	·803	·129	·872	−·019	·699	96·0	71·1	24·9	98·6	67·8	30·8	85·8	93·0	82·8	+1·8	64·3	72·4	69·8	68·8
	Hassan	...	·872	·754	·118	·817	?	·721	94·5	67·8	26·7	98·0	63·3	34·7	84·8	89·8	80·0	?	65·1	70·5	69·4	68·3
	Chitaldroog	...	27·506	27·368	·138	27·436	?	·689	99·0	72·6	26·4	102·0	64·6	37·4	87·9	97·1	85·4	?	63·7	71·9	70·0	68·5
	Trichinopoly	...	29·629	29·465	·164	29·556	−·028	·735	104·2	78·9	25·3	109·0	74·6	34·4	93·8	101·4	89·6	+2·6	73·7	76·5	75·2	75·1
	Madras	...	·859	·738	·121	·805	−·018	·755	94·2	77·6	16·6	99·6	73·5	26·1	90·4	88·6	84·7	−0·1	?	78·7	79·4	78·2
	Bellary	...	28·392	28·239	·153	28·315	−·005	·680	105·8	79·2	26·6	109·0	75·7	33·3	94·9	102·5	91·4	+2·0	68·2	71·7	73·3	71·1
	Vizagapatam	...	29·810	29·686	·124	29·745	−·044	·713	94·5	80·1	14·4	98·3	68·1	30·2	91·6	89·7	86·9	+0·3	76·1	79·2	80·3	78·5
	Cocanada	...	·835	·690	·145	·760	?	·721	99·8	79·5	20·3	102·5	76·3	26·2	91·2	96·2	88·8	?	76·2	79·1	80·1	78·5
Hill Station, Baluchistan.	Quetta	...	24·658	24·580	·078	24·611	+·027	?	74·7	46·0	28·7	85·3	34·9	50·4	66·5	72·1	59·7	+0·8	40·4	52·2	54·0	48·9
	Leh	...	19·697	19·625	·072	19·667	−·010	?	51·4	29·4	22·0	60·7	22·0	38·7	43·5	48·6	41·0	−1·8	20·4	33·2	37·9	30·5
Hill Stations, Punjab.	Srinagar	...	24·900	24·813	·087	24·848	?	?	68·7	43·5	25·2	79·8	33·1	46·7	57·1	67·3	55·8	?	42·6	51·5	57·0	50·4
	Murree	...	23·838	23·800	·038	23·811	−·013	?	73·9	52·2	21·7	79·7	38·0	41·7	62·4	65·0	60·8	+2·4	?	56·7	59·3	?
	Chamba	3,005	26·855	26·768	·087	26·823	−·038	?	83·8	57·6	26·2	96·4	48·6	47·8	71·6	80·3	69·6	+0·1	51·1	57·7	58·8	55·9
	Kailang	10,087?	20·801	20·770	·031	20·797	−·011	?	49·0	31·4	17·6	59·9	22·5	37·4	41·9	45·1	39·0	−1·3	29·1	36·2	37·8	34·4
	Simla (Ridge)	...	23·119	23·072	·047	23·088	−·006	?	68·6	54·4	14·2	75·3	41·6	33·7	63·3	65·9	60·8	+2·2	42·7	47·4	48·4	46·2
Hill Stations, N.W.P.	Chakrata	...	·325	·267	·058	·288	−·016	?	70·7	54·5	16·2	77·1	44·5	32·6	65·5	66·9	61·7	+2·0	42·2	47·9	47·4	45·8
	Ranikhet	...	24·098	24·023	·075	24·050	−·013	?	78·9	59·6	19·3	83·8	50·5	33·3	72·8	74·1	68·1	+3·4	48·0	54·8	55·2	52·7
Hill Station, Nepal.	Katmandu	4,388	25·524?	25·454?	·070	25·487?	?	?	87·5	?	?	90·8	?	?	76·7	82·0	?	?	50·8	60·6	61·0	57·5
Hill Station, Bengal.	Darjeeling	...	22·967	22·879	·088	22·923	−·007	?	65·1	50·4	14·7	73·9	43·9	30·0	59·5	60·6	56·6	+2·9	45·9	53·8	53·9	51·2
Hill Stations, Central India.	Mount Abu	...	26·056	25·973	·083	26·010	−·017	?	87·7	71·9	15·8	95·7	64·4	31·3	81·7	85·8	79·3	+3·5	54·3	58·2	58·9	57·1
	Pachmarhi	...	·449	26·350	·099	·394	−·003	?	94·8	72·2	22·6	100·7	59·4	41·3	88·2	93·1	84·6	+3·3	58·1	?	?	?
	Chikalda	3,642	·345	·242	·103	·289	+·002	?	95·0	75·7	19·3	101·0	69·5	31·5	86·9	93·2	86·4	+3·5	57·6	63·1	65·4	62·0

II—*continued*.

at 85 Stations in India, Burma, etc., for April 1896—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 for the month.	Heaviest rainfall during the month.		
																								%	%						
·309	·362	·402	·358	+·016	33	21	18	24	− 3	1·8	3·0	2·4	+0·1	14	2	7	1	1	2	9	15	9	N. 80° W.	S. 89° W.	35	32	87	70	...	...	Hoshangabad	Deccan—*contd.*
·395	·581	·597	·521	?	40	30	26	32	?	2·0	3·8	2·9	−0·1	29	2	4	1	...	1	7	10	6	N. 79° W.	N. 63° W.	27	20	?	127	...	...	Nagpur .	
·354	·555	·650	·520	?	35	29	28	31	?	1·8	3·8	2·8	?	8	15	3	3	...	9	7	11	4	N. 66° W	?	25	?	47*	?	...	...	Do. (Sanitary Commr.'s Office).	
·371	·311	·287	·315	−·014	47	18	13	26	− 3	1·2	2·3	1·7	−0·5	7	8	6	2	1	1	10	12	13	N. 59° W	N. 66° W.	42	32	77	81	...	...	Jubbulpore .	
·264	·239	·216	·240	−·061	30	13	10	18	− 8	1·0	2·0	1·5	+0·1	...	4	6	2	5	1	12	13	17	N. 73° W.	N. 73° W.	42	47	89	90	...	...	Saugor .	
·286	·255	·252	·264	−·146	23	13	11	17	−16	1·7	2·3	2·0	−0·4	4	8	3	2	...	5	20	11	7	S. 81° W.	N. 88° W.	45	35	213*	150	...	...	Raipur .	
·248	·239	·210	·232	−·017	29	13	9	17	− 5	0·9	1·1	1·0	−0·8	...	8	1	...	...	6	2	18	25	N. 62° W	N. 60° W.	68	55	152*	168	...	...	Sutna .	
·534	·550	·484	·523	?	55	33	24	37	?	1·7	2·5	2·1	?	9	9	6	3	6	4	4	8	11	N. 36° W.	?	20	?	99*	?	...	...	Hyderabad (Deccan.)	
·776	·870	·848	·831	+·014	77	69	65	70	− 5	2·8	1·9	2·4	+0·2	...	3	...	1	1	4	10	20	21	N. 81° W.	N. 52° W.	68	55	228	271	...	...	Bombay .	West Coast.
·831	·881	·880	·864	+·070	81	67	65	71	+ 1	3·2	3·8	3·5	?	...	7	...	...	...	7	14	18	14	W.	N. 76° W.	63	67	165	242	...	...	Ratnagiri .	
·866	·861	·866	·864	+·037	85	66	64	71	− 2	2·6	2·6	2·6	+0·3	...	...	...	...	1	...	19	28	12	S. 83° W.	N. 84° W.	33	75	122	?	...	...	Karwar .	
·922	·932	·964	·939	+·053	88	68	66	74	− 3	2·8	3·8	3·3	−0·5	1	2	2	...	...	...	...	29	26	N. 65° W	N. 82° W.	85	55	192	?	...	...	Cochin .	
·770	·828	·626	·741	+·005	79	56	32	56	− 2	2·0	3·6	2·8	−0·8	5	1	8	11	6	7	15	5	2	S. 15° E.	S. 7° W.	23	37	148	112	...	...	Salem .	South India.
·521	·597	·369	·496	?	68	49	23	47	?	3·2	5·1	4·2	?	13	4	10	10	5	2	3	10	3	N. 49° E.	?	15	?	180*	?	...	...	Mysore .	
·560	·572	·609	·580	−·009	86	59	62	69	− 4	3·3	6·3	4·8	−0·6	15	6	3	2	...	2	6	9	17	N. 57° W.	N. 70° W.	42	45	157	80	...	...	Mercara.	
·526	·640	·462	·543	+·007	69	52	30	50	− 3	1·4	3·0	2·2	−1·2	1	4	8	16	5	4	6	12	4	N. 83° E.	S. 33° W.	10	52	175*	85	...	...	Bangalore .	
·590	·580	·480	·550	?	86	48	37	57	?	3·4	7·1	5·2	?	2	...	7	14	10	1	5	12	9	S. 86° E.	?	7	?	101	?	...	...	Hassan .	
·481	·582	·394	·486	?	60	44	22	42	?	1·5	4·6	3·1	?	...	4	9	11	4	3	6	12	11	N. 25° W.	?	15	?	172*	?	...	...	Chitaldroog .	
·765	679	·522	·655	−·069	78	43	26	49	− 6	2·4	2·7	2·6	−1·9	14	2	18	8	7	1	6	4	...	N. 76° E.	S. 54° E.	30	17	86	99	...	...	Trichinopoly .	
?	·826	·877	·881	+·015	?	58	65	74	0	2·5	1·6	2·1	−0·8	...	...	...	2	33	19	6	...	...	S. 24° E.	S. 40° E.	85	83	190	186	...	...	Madras .	
·552	·490	·456	·499	+·010	55	30	22	36	0	2·2	7·1	4·7	?	5	4	7	7	4	6	3	13	11	N. 54° W.	S. 37° W	17	11	126	126	...	...	Bellary .	
·853	·830	·910	·864	+·025	83	56	65	68	1	0·9	2·1	1·5	−1·1	...	...	...	...	...	4	40	16	...	S. 54° W.	S. 48° W.	91	64	102	91	...	..	Vizagapatam.	
·862	·834	·802	·833	?	86	57	48	64	?	1·0	0·6	0·8	?	...	...	...	...	3	17	32	7	1	S. 35° W.	?	84	?	192*	?	...	...	Cocanada .	
·202	·251	·237	·230	−·026	63	38	30	44	− 7	2·2	3·5	2·9	−0·6	18	...	...	1	1	3	6	18	13	N. 87° W.	N. 81° W.	48	36	98*	101	...	...	Quetta .	Hill Station, Baluchistan.
·042	·105	·140	·096	−·009	25	38	42	35	− 8	6·6	7·0	6·8	+0·5	1	1	4	1	...	3	16	28	6	S. 81° W.	S. 54° W.	67	19	84	72	...	...	Leh.	Hill Stations Punjab.
·267	·320	·353	·313	?	93	69	54	72	?	3·7	5·1	4·4	?	10	10	6	3	8	7	1	3	12	N. 7° E.	?	17	?	148*	?	...	...	Srinagar,	
?	·417	·462	?	?	?	76	77	?	?	3·1	4·3	3·7	−1·7	2	2	1	3	16	7	5	11	13	S. 41° W.	S. 40° E	22	16	241*	216	...	...	Murree.	
·306	·320	·253	·293	−·020	64	42	27	44	− 4	4·5	6·3	5·4	−1·1	28	3	...	...	1	...	...	7	21	N. 51° W.	N 10° W.	47	17	117*	115	1·36	0·58	Chamba.	
·143	·168	·168	·160	−·007	80	63	57	67	+ 5	5·3	7·9	6·6	+0·6	...	...	1	1	5	7	23	17	6	S. 56° W.	S. 61° W.	65	72	59	51	2·67	0·87	Kailang.	
·156	·167	·163	·163	−·081	36	28	25	30	−16	3·1	3·8	3·5	−0·7	3	17	7	1	...	14	9	4	4	N. 58° W.	S. 69° W	13	38	141	?	...	...	Simla (Ridge).	
·146	·155	·132	·144	−·060	34	25	21	27	−16	2·2	3·2	2·7	−0·9	10	1	2	...	8	37	1	...	1	S. 8° E.	S. 68° W.	68	19	282	143	...	...	Chakrata.	Hill Stations, N.W.P.
·218	·247	·242	·236	−·026	42	30	29	34	−10	1·9	2·4	2·2	−1·0	3	6	3	...	1	3	15	26	3	S. 84° W.	S. 62° W.	60	47	138*	84	...	...	Ranikhet.	
?	·349	·301	?	?	?	38	28	?	?	1·5	3·0	2·3	−2·0	...	1	...	28	1	...	1	27	1	N. 45° E.	N. 83° W.	2	62	41	?	1·34	0·91	Katmandu.†	Hill Station, Nepal.
·270	·357	·351	·326	+·003	74	72	67	71	− 4	4·9	5·8	5·4	−0·7	...	5	8	4	1	1	14	24	2	N. 89° W.	S. 72° W.	42	49	250	202	...	...	Darjeeling.	Hill Station, Bengal.
·225	·218	·194	·212	−·036	28	20	15	21	− 7	0·6	1·2	0·9	−1·3	...	6	1	...	1	...	25	11	16	S. 89° W.	S. 76° W.	28	53	244*	187	...	...	Mount Abu.	Hill Stations, Central India.
·327	?	?	?	?	41	?	?	?	?	1·6	2·5	2·1	0	18	5	2	1	1	...	7	17	9	N. 74° W.	N. 58° W.	43	47	177*	128	...	...	Pachmarhi.	
·272	·306	·307	·295	+·019	31	24	20	25	− 1	1·5	2·9	2·2	−0·1	20	19	2	1	2	1	...	3	12	N. 16° W.	N. 40° W.	46	48	203	192	0·06	0·06	Chikalda.	

* Corrected. † Wind observations of 59 days.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S.L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Hill Station, S. India.	Wellington . .	...	24·277	24·198	·079	24·238	−·001	?	79·1	55·5	23·6	81·4	51·2	30·2	75·1	73·2	65·8	+0·9	52·2	58·5	59·1	56·6
Extra India.	Muscat . .	...	29·875	29·793	·082	29·834	?	?	87·2	81·8	5·4	93·8	76·1	17·7	85·7	86·1	84·2	?	68·8	74·2	74·4	72·5
	Aden . . .	...	·837	·726	·111	·773	−·013	29·797	91·8	76·6	15·2	98·5	71·1	27·4	84·3	89·9	83·7	+1·0	68·4	75·0	71·2	71·5
	Perim . . .	...	·631	·514	·117	·563	?	?	89·6	79·7	9·9	92·7	77·4	15·3	86·5	86·8	84·0	?	74·3	78·5	78·4	73·7
	Zanzibar . .	...	·924	·832	·092	·878	−·010	·877	83·8	78·0	5·8	88·2	74·9	13·3	80·9	83·0	80·7	+0·1	75·7	77·2	77·2	76·7
	Port Victoria (Seychelles).	15	·943	·850	·093	·897	?	·836	84·3	77·1	7·2	85·7	74·9	10·8	83·2	84·1	80·6	?	73·8	77·5	77·5	76·3
	Mauritius . .	181	?	?	?	·816	−·009	·944	?	?	?	88·0	63·8	24·2	?	?	77·1	+0·2	?	?	?	?

II—*concluded.*

85 Stations in India, Burma, etc., for April 1896—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.		
																								%	%						
·359	·322	·357	·346	—·046	82	38	45	55	−8	2·7	5·2	4·0	−0·5	1	5	13	7	29	4	...	...	1	S. 75° E.	S. 49° E.	62	68	66	·64	...	...	Wellington.	Hill Station, S. India.
·534	·695	·702	·644	?	50	57	57	55	?	0·4	1·1	0·7	?	...	1	10	11	...	...	...	4	34	N. 18° W.	?	57	?	123	?	...	...	Muscat.	Extra India.
·590	·748	·515	·618	−·163	64	64	38	55	−15	1·4	0·9	1·2	−1·5	1	...	6	41	6	1	2	2	1	S. 88° E.	N. 81° E.	75	61	395	373	...	...	Aden.	
·777	·865	·857	·833	?	77	68	67	71	?	1·4	0·2	0·8	?	...	...	...	21	39	...	...	...	...	S. 60° E.	?	94	?	504	?	...	...	Perim.	
·860	·885	·859	·868	+·028	90	84	76	83	+3	5·5	6·0	5·8	+0·3	...	1	...	1	17	28	11	1	1	S. 4° E.	S. 12° W.	77	64	128	155	...	...	Zanzibar.	
·793	·867	·856	·839	?	85	77	73	78	?	4·5	5·2	4·9	?	12	4	8	4	16	11	...	1	4	S. 60° E.	?	38	?	74	?	4·42	1·10	Port Victoria (Seychelles).	
?	?	?	·729	?	?	?	?	80	+2	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	226	202	3·36	0·76	Mauritius.	

G. I. C. P. O.—No. 3 Meteor.—5-8-96.—385.

CHART OF INDIA

SHEWING THE MEAN 8 A.M. DISTRIBUTION OF PRESSURE AND WIND DIRECTIONS IN THE MONTH OF APRIL 1896.

Scale 1 Inch = 256 Miles

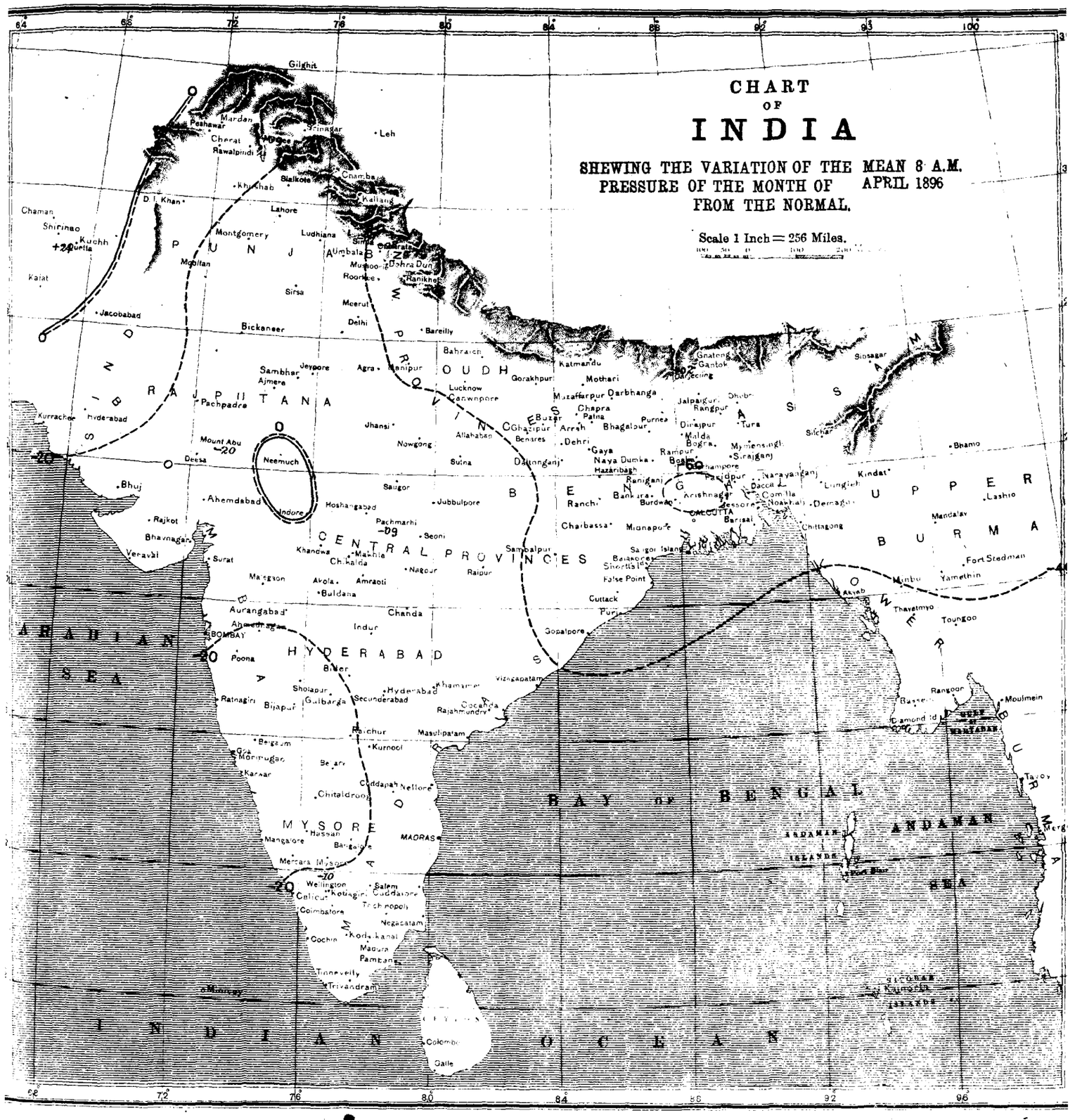
LITHO. BY J. N. MUNDLE

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	,,	,,	,,	,,	,,		



Explanation

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

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

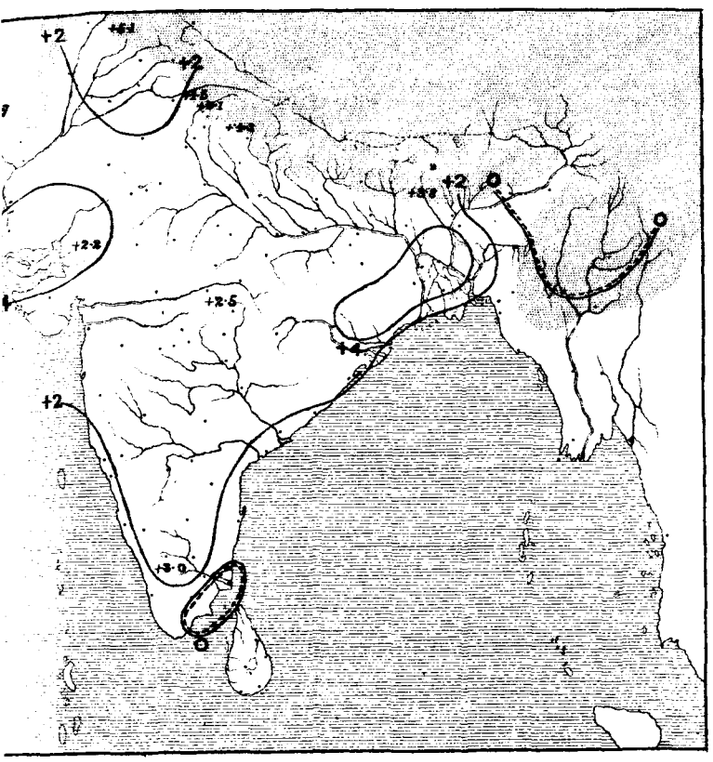
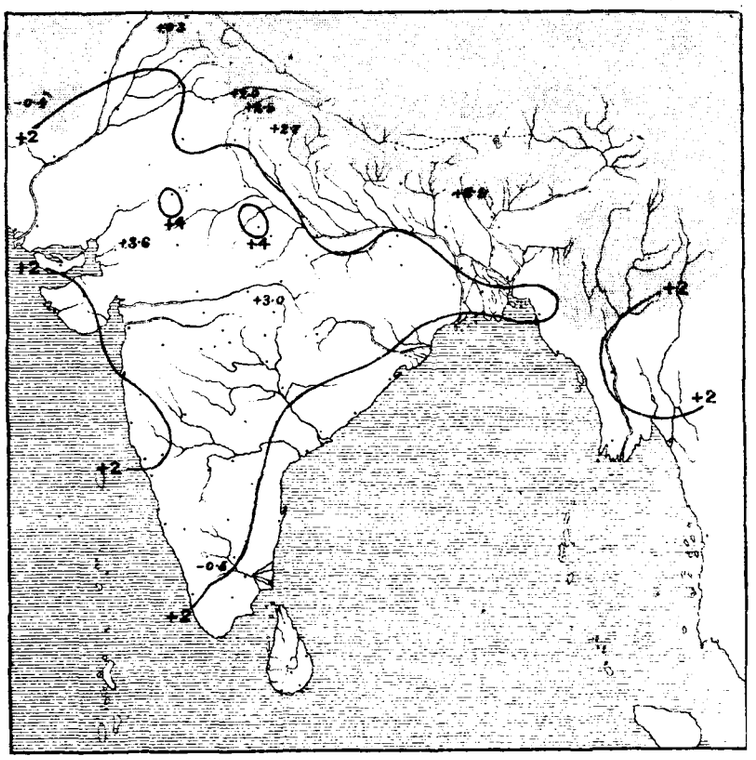


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

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

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

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

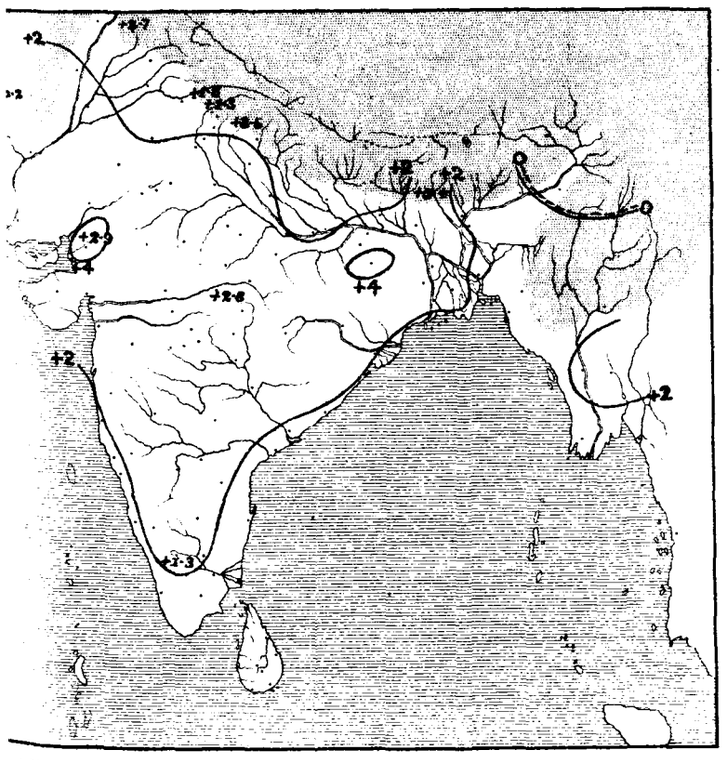
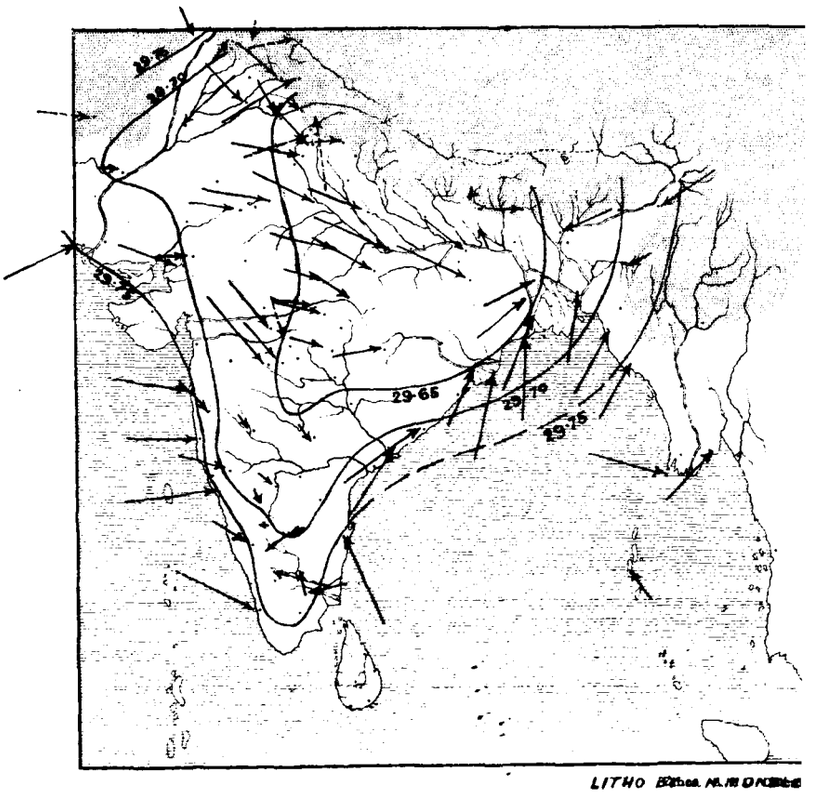


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF APRIL 1896.



LITHO

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

Explanation.

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

Explanation.

LITHO. BY J. N. MUNDLE.

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

Tenasserim	17. North Bihar	33. Malabar	49. Central India, East
Lower Burma Deltaic	18. North Western Provinces, East	34. Madras, South Central	49a Do. do.
3. Central do.	19. South Oudh	35. Coorg	50. Rajputana East, Central India West
Upper do.	20. North Do.	36. Mysore	51. West Rajputana
Arakan	21. North Western Provinces, Central	37. Konkan	52. East Coast, North
East Bengal	22. Do. do., West	38. Bombay Deccan	52(a). Do. do. (a)
Assam, Surma	23 Do do., East Submontane	39. Hyderabad, North	53. Hyderabad, South
Do., Hills	24 Do. do., West do.	40. Khandesh	54. Madras, Central
Do., Brahmaputra	25 Do. do., Hills	41. Berar	55. East Coast, Central
Deltaic Bengal	26 South East Punjab	42. Central Provinces, West	56. East Coast, South
Central do.	27 South do.	43. Do., Central	57. Madras, South
North do.	28. Central do.	44. Do., East	
Bengal Hills	29. Punjab, Submontane	45. Gujarat	
14 Orissa	30. Do., Hills	46. Kathiawar	
15. Chota Nagpur	31. North Punjab	47. Sind	
16. South Bihar	32. West do.	48. Baluchistan Hills	

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, MAY, 1896.

INTRODUCTION.

THIS Review of the weather in India during the month of May 1896 is based on observations taken daily at 8 A.M. at 207 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 85 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 1896.

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. It 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 the 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 indraught 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 Cherra Poonji in the Khasia Hills and averaging 10 inches for the whole area.

At the commencement of the month temperature was in large excess in Upper India. Pressure was lowest at the foot of the Nepal Hills. Weather was disturbed with thunderstorms in Bengal and Assam and temperature was hence in considerable defect in that area. No important change occurred during the next four days. The following gives data showing the great excess of temperature during this period from the 1st to the 5th in Upper India:—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	1st May.	2nd May.	3rd May.	4th May.	5th May.
	°	°	°	°	°
Punjab	+5·1	+7·4	+6·4	+5·9	+6·0
Upper Sind	+6·2	+7·5	+4·8	+3·1	+3·1
Rajputana	+2·9	+5·6	+6·3	+5·9	+7·0

Bengal and Assam received moderate rain from thunderstorms on the 1st, 2nd, 4th and 5th. The pressure changes of the 5th and 6th transferred the area of minimum pressure southwards and it stretched from the South-West Punjab to the eastern districts of the Central Provinces from the 6th to the 14th. A hot weather depression formed in Sind and the South-West Punjab on the 7th and 8th. The centre of the depression was near Mooltan on the 8th. It advanced slowly eastwards across the South Punjab and was between Mooltan and Montgomery on the morning of the 9th and between Montgomery and Lahore on the morning of the 10th. The storm broke up in the Simla hills on the 11th. It gave numerous dust-storms in the West and Central Punjab and Rajputana and thunderstorms in the submontane and hill districts of the Punjab on the 10th and 11th. The chief feature of the disturbance was the excessive temperature which obtained in the central depression. The following gives the maximum day temperature and its variation from the normal at the two stations nearest the centre on each day from the 8th to the 10th:—

DATE.	STATION.	Maximum temperature of 24 hours preceding 8 A.M. of	Variation from normal of the day.
		°	°
8th	Mooltan	115·5	+ 11·8
„	D. I. Khan	110·2	+ 10·3
9th	Mooltan	116·0	+ 12·3
„	Montgomery	118·4	+ 15·5
10th	Montgomery	114·9	+ 12·0
„	Lahore	105·3	+ 3·3

Pressure was very unsteady during this period in North-Eastern India, as is usually the case during the disturbed weather accompanying thunderstorms. Bengal received moderate rain from series of thunderstorms on the 8th, 9th, 11th and 12th and Southern India from the 8th to the 11th.

Pressure on the 12th, 13th and 14th decreased considerably in Northern India relatively to Southern India. The hot weather area or trough of low pressure was transferred northwards to the Gangetic Plain and South-East Punjab and steep and increasing gradients were established in the Peninsula and south of the Bay. Humid south-westerly to westerly winds set in over the south of the Bay and were determined chiefly to the Andaman Sea to which they gave squally weather with much rain on the 16th, 17th and 18th. There was a slight tendency on the 16th and 17th to the establishment of a cyclonic storm in the Gulf of Martaban. It failed to develope, but the rainfall, which had commenced in the coast districts on the 16th, extended to Central and Upper Burma on the 17th and the whole of Burma obtained a moderate burst of rain during this period from the 15th to the 17th.

Whilst this disturbance was in progress, a hot weather depression formed in Sind on the 16th and 17th. It intensified slightly on the 18th, but filled up during the next 48 hours without moving from its place of origin. It gave duststorms and thunderstorms on the 18th in Upper India,

and the submontane and hill districts of the Punjab received light showers.

A noteworthy feature of this period was the excessive temperature which prevailed in the Coromandel Coast districts, where dry land winds of considerable intensity obtained. This feature is best exhibited by the following variation data for four coast stations:—

DATE.	VARIATION FROM NORMAL OF MAXIMUM TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE AT			
	Cocanada.	Masulipatam.	Madras.	Negapatam.
	°	°	°	°
15th . .	− 1·6	+ 1·8	+10·4	+9·4
16th . .	+ 8·5	+ 9·1	+14·8	+9·4
17th . .	+13·0	+ 8·4	+11·6	+8·6
18th . .	+10·9	+11·0	+11·0	+9·7
19th . .	+13·6	+14·7	+10·3	+7·0
20th . .	+14·2	+14·9	+10·1	+8·5
21st . .	+ 8·6	+12·9	+ 7·4	+2·8
22nd . .	+14·6	+13·1	+ 3·6	+8·9

Bengal and Bihar received light to moderate showers on the 21st. Temperature was steadily in excess over the greater part of North-Western and Central India during this period from the 15th to the 22nd.

The pressure changes on the 22nd and 23rd transferred the western extremity of the trough of low pressure slightly eastwards and the eastern extremity southwards, and on the 23rd and following days the low pressure trough stretched from the South-East Punjab to Chota Nagpur and the eastern districts of the Central Provinces. This distribution of pressure gave daily rain to Bengal and Assam during the remainder of the month. Burma and Southern India also received frequent showers during this period and temperature was hence generally in slight to moderate defect in these areas from the 24th to the 31st. The rainfall was not so heavy as usually occurs in the last week of May, more especially in the Malabar coast districts, and there were no indications at the end of the month of the early commencement of the monsoon rains proper.

Temperature on the 23rd and 24th was in large excess in Upper India. The area of greatest excess of temperature was transferred eastwards on the 25th and was in Chota Nagpur from the 25th to the 28th and in Bundelkhand and Baghelkhand on the 31st. The following data illustrate the general temperature conditions obtaining in North-Eastern and Central India during this period:—

POLITICAL PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF							
	24th May.	25th May.	26th May.	27th May.	28th May.	29th May.	30th May.	31st May.
	°	°	°	°	°	°	°	°
Punjab . . .	+3·7	+4·0	+5·7	+3·5	+3·1	+4·6	+4·1	+5·1
Sind and Rajputana .	+1·7	+2·7	+3·1	+3·9	+3·3	+4·6	+4·9	+2·9
Central India and Gujarat.	+1·1	+1·4	+2·4	+2·3	+1·7	+2·1	+4·5	+3·7
North-Western Provinces and Oudh.	+5·0	+4·2	+4·8	+6·7	+4·8	+3·8	+5·7	+3·8
Chota Nagpur . .	+6·9	+7·5	+7·8	+9·4	+7·9	+5·6	+4·7	+7·0
Central Provinces and Berar.	+2·9	+2·9	+4·1	+4·3	+3·3	+5·2	+5·0	+2·2

Pressure.—The mean pressure of the Indian land area averaged ·013″ above the normal of the month. Pressure was, relatively to this general condition of slight excess, in defect in Northern India and Burma. The deficiency was most marked in South Bihar and the eastern districts of the Central Provinces and the eastern and central districts of the North-Western Provinces, where it was moderate in amount, ranging between ·02″ and ·03″. Pressure was, relatively to the general condition, in excess in the Peninsula, Central India and North Bombay. The excess was on the whole greatest in Gujarat and the Konkan in which it averaged ·035″, and ranged between ·03″ and ·04″.

Pressure was in considerable to large excess at the hill stations relatively to the plains in Northern India. The excess was greatest at the highest stations in Upper India.

The local variations were very similar in character to those of May 1892, 1894 and 1895, in each of which months temperature was more or less largely in excess in Northern India and the hot weather conditions very pronounced. They were slightly less marked in May 1896 than in May 1892 and May 1895, in which months temperature was more largely in excess than in May 1896. The abnormal features of the mean distribution of the month were hence almost solely a result of the temperature conditions of the month.

The following gives a summary of the pressure variation data of the eleven meteorological provinces of India:—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Burma Coast and Bay Islands . . .	+·005	−·008
Burma Inland	−·003	−·016
Assam	+·006	−·007
Bengal and Orissa	+·003	−·010
Gangetic Plain and Chota-Nagpur . . .	−·004	−·017
Upper Sub-Himalayas	−·006	−·019
Indus Valley and North-West Rajputana .	+·012	−·001
East Rajputana, Central India and Gujarat .	+·026	+·013
Deccan	+·019	+·006
West Coast	+·046	+·033
South India	+·020	+·007

Temperature.—The temperature conditions of the month were directly related to the rainfall distribution of the month. The month was drier than usual over the whole area with the exception of Tenasserim, East and North Bengal, North Bihar, the Bombay Deccan and Malabar. Temperature was hence generally in excess over the whole of India and the night temperature was, as is the rule in the hot weather, almost as largely in excess as the day temperature.

The mean day or maximum temperature of the month was above the normal over the whole of India with the exception of Lower Burma, North Bengal and the Assam Valley. The excess increased from the coast districts into the interior and exceeded 4° in three areas. The first included the Punjab and Upper Sind, in which the excess averaged 5° and was greatest at Rawalpindi (+6°·9) and Mooltan (+6°·7). The second area included Chota Nagpur, Baghelkhand and the eastern districts of the Central Provinces, in which the day temperature ranged between 4° and 5° in excess. The third area in which temperature averaged 4°·9 above the normal was defined by the stations of Salem, Trichinopoly and Negapatam.

The mean minimum temperature was above the normal over the whole area with the exception of North and Central Bengal. The excess increased in amount from the coast districts to the interior and was greatest in the Punjab, Rajputana, Bundelkhand, Baghelkhand and the adjacent districts of the North-Western Provinces. It averaged 5° in amount in this area and was absolutely greatest at Lahore (+6°·6) and Ajmere and Jhansi (each +6°·0).

The mean temperature of the month was in very slight defect in North and East Bengal, North Bihar and Lower Burma. It was above the normal over the remainder of India, the excess increasing in amount from the Bombay and Bengal coast districts into the interior. It was more than 4° in excess in the Punjab, Upper Sind, North Rajputana, Bundelkhand and Baghelkhand, and locally at Raipur (+4°·6) in the Central Provinces and at Salem (+4°·1) in Madras. The excess was greater than 5° at Rawalpindi (+6°.0), Mooltan (+5°·9), Lahore (+5°·8) and Jhansi (+5°·1). These stations define the area of greatest excess of temperature. The hottest area or area of greatest mean daily temperature of the month included Jhansi (99°·9), Chanda (99°), Nagpur (98°·8) and Raipur (98°·5).

The highest maximum temperatures during the month were registered at Jacobabad (121°), Mooltan (117°·5) and Montgomery 118°·4.

These temperatures are almost as high as have been previously recorded at these stations, thus indicating that the month was unusually hot in Upper India.

The following gives data for the districts in which the mean temperature of the month exceeded 95° :—

DISTRICT.	Mean temperature, May 1896.	Mean maximum temperature, May 1896.
	°	
Central Provinces (East)	98·6	111·2
,, ,, (West)	96·9	109·8
,, ,, (Central)	95·6	109·6
North-Western Provinces (Central) . . .	96·7	109·4
,, ,, (East) . . .	95·4	108·7
Berar	96·2	109·7
Rajputana (West)	96·0	109·5

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

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, May 1896.	Mean minimum temperature, May 1896.	Mean daily temperature, May 1896.
	°	°	°
Burma Coast and Bay Islands . .	−0·6	+0·4	−0·1
Burma Inland	+0·1	+1·4	+0·8
Assam	−0·4	+0·3	0
Bengal and Orissa	+0·1	+0·2	+0·2
Gangetic Plain and Chota Nagpur .	+2·3	+2·4	+2·4
Upper Sub-Himalayas . . .	+4·6	+3·9	+4·3
Indus Valley and North-West Rajputana.	+3·7	+2·9	+3·3
East Rajputana, Central India and Gujarat.	+1·8	+3·7	+2·8
Deccan	+3·0	+3·0	+3·0
West Coast	+1·2	+1·6	+1·4
South India	+3·1	+1·7	+2·5

Winds.—The chief feature of the air movement of the month was the strength of the winds in the interior, due to the strongly marked hot weather conditions of the period, which gave vigorous hot dry winds in the Gangetic Plain and strong local sea winds on the Bengal and North Bombay coasts. The mean winds of the month were hence generally stronger and steadier than usual, more especially in the Gangetic Plain, Rajputana, Central India, the Central Provinces, the Deccan and Mysore. The following gives data showing the strength of the mean winds

of the month in different parts of India and their variation from the normal:—

Division.	Velocity in miles per diem.		
	Mean actual, May 1896.	Mean normal, May.	Percentage variation from normal.
Burma	149	123	+21
Bengal	200	184	+ 9
Assam	133	104	+28
Bihar	192	132	+45
Chota Nagpur	238	210	+13
North-Western Provinces and Oudh	109	92	+18
Punjab	81	80	+ 1
Sind	276	264	+ 5
Rajputana	226	220	+ 3
Central India	152	140	+ 9
Central Provinces	193	148	+30
Berar	312	246	+27

The mean direction of the air movement did not differ much from the normal. Westerly winds prevailed to a much greater extent than usual in over the greater part of the Gangetic Plain and hence gave a very strongly westerly component to the mean wind directions of the month. Wind was also more westerly than usual in the Central Provinces and Central India. Winds were not so strong as usual at the west coast stations from Bombay to Cochin and at Madras but were considerably stronger at Port Blair and the Burma coast stations.

Humidity and Cloud.—The mean humidity of the month was slightly above the normal in Burma, Assam, Orissa, Chota Nagpur and Bihar and slightly below it in Bengal. It was more or less in defect over the remainder of India with one or two local exceptions. The decreased humidity was in slight part due to the presence of a smaller quantity of aqueous vapour in the air, more especially in the interior, but was mainly due to the increased temperature of the period The deficiency in the mean humidity percentages of the month was most marked in the area of greatest excess of temperature, *viz*, the Punjab. It was absolutely greatest at Chakrata (—12), Simla and Murree (each —11) and Mooltan and Ludhiana (each—10) and was small in amount in the coast districts.

There was more cloud than usual at Port Blair and in Lower Burma, Assam, East and South Bengal and North Madras. Cloud was, on the other hand, in general defect over the remainder of India. The deficiency was large and marked in Upper India and the Punjab hills, where skies were unusually free from cloud. The following stations registered the smallest amount of cloud during the month, *viz.*: Mooltan (0·2) and Allahabad (0·4).

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 May 1896:—

Meteorological Province.	Variation from normal of		
	Mean Aqueous Vapour pressure.	Mean Humidity.	Mean cloud amount.
	"		
Burma Coast and Bay Islands	+·016	+3	+1·5
Assam	+·016	+1	+0·6
Bengal and Orissa	+·013	—2	+0·5
Gangetic Plain and Chota Nagpur	+·004	—1	—0·7
Upper Sub-Himalayas	—·010	—6	—0·9
Indus Valley and North-West Rajputana	—·020	—7	—0·2
East Rajputana, Central India and Gujarat	—·009	—4	—0·2
Deccan	—·019	—3	—0·6
West Coast	+·018	—3	—0·6
South India	—·020	—4	—0·1

Rainfall.—The rainfall of the month was due to feeble hot weather disturbances of the ordinary type which gave series of thunderstorms, chiefly in Burma, Bengal, Assam and Southern India. Malabar usually receives heavy rain in the last week of the month from the advancing south-west monsoon, but this was considerably delayed in the present month. The chief periods of rainfall due to the various disturbances of the month were the 1st to the 5th, the 10th to the 12th, the 15th to the 18th and the 23rd to the 31st. Tenasserim received more frequent rain than usual and the rainfall of the month was in moderate to considerable excess in that area. It was, on the other hand, considerably below the normal over the remainder of Burma and Arakan. The rainfall of the month was in large excess in North Bengal (48 per cent.) and in slight excess in Eastern and Deltaic Bengal and North Bihar, but was normal or more or less below the normal over the remainder of India. The deficiency was marked in the Konkan coast districts, where it was due to the delay in the establishment of the monsoon. That division received an average of only 0·91"—barely half of the normal fall of the month. The rainfall of the month was in slight to moderate defect in West Bengal, Bihar, Chota Nagpur and South India and in considerable defect in Assam. Practically no rain fell in Baluchistan, the greater part of the Punjab, Sind,

Rajputana, Central India, the North-Western Provinces (excepting the submontane districts), Gujarat, Kathiawar, Cutch, Berar and the Central Provinces. The month was also abnormally dry in the hill districts of Upper India.

The following table gives comparative rainfall data of the eleven meteorological provinces of the Empire :—

METEOROLOGICAL PROVINCE.	RAINFALL. Average actual for May 1896.	Average normal for May.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	19·42	11·73	+5·52*
Burma Inland	4·57	7·18	−3·96*
Assam	15·45	15·01	+0·43*
Bengal and Orissa	7·98	6·95	+1·30*
Gangetic Plain and Chota Nagpur	1·41	1·98	−0·51*
Upper Sub-Himalayas	0·42	1·09	−0·67*
Indus Valley and North-West Rajputana	0·15	0·47	−0·35*
East Rajputana, Central India, and Gujarat	0·21	0·50	−0·26*
Deccan	0·49	0·99	−0·57*
West Coast	5·60	6·04	+0·05*
South India	2·18	2·69	−0·54*

*A reference to table I will show that the means in columns 2nd and 3rd are derived from a smaller number of stations than the means in the first column. The sum of the figures in the second and third columns hence do not generally agree with the figures in column 1.

Atmospheric Pressure.

The mean pressure of the Indian land area for the month of May 1896 was ·013″ above the normal. Pressure was, relatively to the general condition, in defect to the north of a curved line through Central Sind, Jeypore, Seoni, Masulipatam, Madras and Moulmein. The negative variations over the greater part of this area were small in amount and less than ·02″, but over a part of the North-Western Provinces, South Bihar and the eastern districts of the Central Provinces they were moderate in amount, ranging between ·02″ and ·03″. The following gives data for stations in this area of moderate negative pressure anomalies :—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Dehra Dun	−·015	−·028
Roorkee	−·008	−·021
Delhi	−·011	−·024
Agra	−·012	−·025
Ludhiana	−·018	−·031
Allahabad	−·013	−·026
Benares	−·007	−·020
Patna	−·010	−·023
Gaya	−·010	−·023
Sambalpur	−·018	−·031
Raipur	−·010	−·023

Pressure was in relative excess to the south and west of the line defined above. The positive anomalies exceeded ·02″ in the western half of the peninsula and were ·035″ or upwards at the following stations :—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Neemuch	+·053	+·040
Indore	+·050	+·037
Deesa	+·048	+·035
Rajkot	+·054	+·041
Ratnagiri	+·050	+·037
Belgaum	+·048	+·035
Goa	+·054	+·041

The local excess of pressure in Western India was hence most marked in Kathiawar, Gujarat, the western states of Central India and the Konkan.

The abnormal features of the pressure distribution were such as invariably accompany strongly pronounced hot weather conditions in Northern India in April and May and were hence chiefly related to the large excess of temperature of the period. They very strongly resemble the anomalies in the corresponding months of the years 1895, 1894 and 1892.

Pressure was in moderate excess at the Himalayan stations and hence the vertical anomalies were positive and large in amount. The following gives data for six pairs of stations :—

HILL STATION.	Variation of (*a*) from normal pressure.	NEIGHBOURING PLAINS STATION.	Variation of (*b*) from normal pressure.	Vertical pressure anomaly or (*a*)—(*b*).
	in.		in.	in.
Leh . . .	+·058	Lahore . . .	—·027	+·085
Murree . . .	+·044	Peshawar . .	—·001	+·045
Simla . . .	+·032	Ludhiana . .	—·018	+·050
Chakrata . .	+·040	Roorkee . .	—·008	+·048
Ranikhet . .	+·031	Bareilly . .	+·003	+·028
Quetta . . .	+·038	Jacobabad . .	—·008	+·046

The following is a summary of the abnormal features of the pressure conditions of the month :—

(1) Pressure was in slight general excess in the Indian area.

(2) Pressure was, relatively to the general condition, in slight to moderate defect in Northern India and Burma, the deficiency being most marked in the North-Western Provinces, South Bihar and the eastern districts of the Central Provinces.

(3) Pressure was in local excess in the Peninsula and North Bombay, the excess being greatest in the west coast districts from Kathiawar to Karwar, and in Gujarat and the western states of Central India (in which it ranged between ·03″ and ·04″).

(4) Pressure was in considerable excess at the hill stations in Northern India relatively to the adjacent plains stations. The relative excess of pressure was greatest at the Punjab stations (more especially Leh, the most elevated).

Barometric depressions and cyclonic storms of the month.

The distribution of pressure at the commencement of the month differed very slightly from the normal. Pressure was in slight excess in Western India and in slight to moderate defect in North Eastern India. It was lowest at the foot of the Nepal hills and the hot weather low pressure area was hence further north than usual. The changes during the next four days were small to moderate in amount, but very irregular. Assam and East Bengal obtained moderate showers on the 1st and 2nd. The area of lowest pressure was transferred westwards into the South-East Punjab on the 4th. Bengal and Assam received light to moderate showers on the 4th and 5th. The changes of pressure on the 5th modified the pressure distribution in Northern and Central India considerably. The chief effect was to displace the trough of low pressure southwards and it stretched on the 6th and following eight days from Upper Sind into the eastern districts of the Central Provinces. A shallow depression was shown at its south-eastern extremity on the 7th and 8th. Bengal and Assam received moderately heavy rain from series of thunderstorms on the 8th and 9th and Southern India on the 8th. The chief feature of the period from the 7th to the 10th was a hot weather depression which formed in Upper Sind at the north-western extremity of the trough of low pressure. The following gives a brief history of this depression.

Depression of the 7th to the 10th May in Upper India.—Pressure was very uniform on the 5th in Upper India. It gave way very slightly on the 6th and 7th in the West Punjab, Rajputana, Sind and Baluchistan and a very shallow area of depression was shown in the South-West Punjab and Upper Sind on these days. Temperature was excessive in the area in which the depression formed, as is shown by the following data :—

STATION.	6TH.		7TH.	
	Maximum temperature of 24 hours preceding 8 A.M.	Variation from normal.	Maximum temperature of 24 hours preceding 8 A.M.	Variation from normal.
	°	°	°	°
Dera Ismail Khan . .	109·7	+ 9·6	110·2	+10·0
Mooltan . . .	113·9	+ 9·8	115·0	+10·8
Jacobabad . . .	116·1	+ 7·0	116·1	+ 7·2
Montgomery . .	113·4	+10·5	116·9	+13·9
Quetta	86·2	+ 5·6	87·6	+ 6·7

The day temperature on the 7th averaged 10° in excess in the Punjab and 6° in Sind and Rajputana. The area in which the depression formed was hence characterized by very great excess of temperature and by the highest

day temperature at this time. The depression was due to purely thermal actions and was what may be termed a hot weather or thermal sink.

8th May.—Pressure had given way briskly to rapidly in Upper India and the depression was now of moderate intensity, as is shown by the following data :—

STATION.	PRESSURE.			WIND.		CLOUD AT 8 A.M.	RAINFALL PREVIOUS 24 HOURS.	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.			
	"	"	"				In.	
Hyderabad .	29·629	—·045	—·045	SW	11	0	..	
Jacobabad .	·539	—·105	—·097	SE	4	0	...	
Bickaneer . .	·585	—·082	?	SSW	8	0	0·15	Duststorm with rain.
Montgomery .	·536	—·083	?	S	5	0	...	
Mooltan . .	·541	—·083	—·100	SW	3	0	...	
Dera Ismail Khan.	·537	—·085	—·098	NE	1	0	...	

The weather was now slightly disturbed in North-Western India and numerous duststorms had occurred in Rajputana, the Punjab and North-Western Provinces. The hill stations in Upper India had been visited by thunderstorms (generally with hail) during the previous 24 hours.

9th May.—Pressure had increased in Sind and fallen in the Punjab. The depression at 8 A.M. was slightly to the east of its position on the previous day. The following data show its character at that hour :—

STATION.	PRESSURE.			WIND.		CLOUD AT 8 A.M.	RAINFALL PREVIOUS 24 HOURS.	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.	
Jacobabad .	29·548	+·009	—·088	calm	8	0	*nil*	Hot wind.
Bickaneer . .	·551	—·034	?	SSW	8	0	...	Gale of wind.
Montgomery .	·485	—·051	?	S	9	1	...	...
Lahore . .	·559	—·039	—·072	SE	7	0	...	Dust haze.
Mooltan . .	·506	—·035	—·134	SW	4	0	...	Do.
Dera Ismail Khan.	·494	—·043	—·136	Calm	2	0	...	Hot wind.

The central depression covered the South-West Punjab at 8 A.M. The air movement was irregular in the depression. The following data illustrate the abnormally high temperature which obtained at this time in the West Punjab :—

STATION.	Maximum temperature of 24 hours preceding 8 A.M. of 9th May 1896.	Variation from normal of the day.
	°	°
Peshawar	107·0	+11·3
Dera Ismail Khan	110·7	+10·5
Khushab	111·9	+12·0
Montgomery	118·4	+15·5
Mooltan	116·0	+12·3

Skies were clear at 8 A.M. over the whole of the South-West Punjab.

Winds had increased considerably over the whole of North-Western India. Several stations in that area had been visited by duststorms during the previous afternoon.

10th May.—The depression at 8 A.M. was, as shown by the observations, central in the South Punjab between Montgomery and Lahore. The following data indicate its position and character at that hour :—

STATION.	PRESSURE.			WIND.		CLOUD AT 8 A.M.	RAINFALL PREVIOUS 24 HOURS.	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	
Sirsa . .	29·609	+·052	—·020	SW	7	7	*nil.*	Dust haze.
Ludhiana .	·634	+·029	—·010	SE	12	0	...	Duststorm.
Lahore . .	·583	+·024	—·046	SE	9	0	...	Dust haze.
Khushab .	·654	+·113	?	WNW	21	0	...	Duststorm.
Dera Ismail Khan.	·707	+·213	+·062	NW	7	0	0·01	Do.
Montgomery	·598	+·113	?	NW	13	0	*nil*	Do.

Temperature had fallen below the normal in Baluchistan and at Peshawar during the previous 24 hours. The depression area was on this, as on the previous day, characterized by high temperature and large excess of temperature. These features were, however, less pronounced than on the previous day, as series of duststorms and thunderstorms had occurred in the Punjab and been in many cases accompanied with rain which had considerably reduced temperature.

11th May.—Pressure had increased briskly to rapidly in the Punjab plains during the previous 24 hours. The

observations indicate that the depression had advanced eastwards during the previous 24 hours to the Simla hills over which it lay at 8 A.M. Series of duststorms visited the East Punjab on the evening of the 10th. Thunderstorms occurred in the hill districts of Upper India on the 10th and in Kumaon, Garhwal and the Simla hill districts on the 11th.

The changes of pressure in the whole Indian area during this period from the 7th to the 12th had considerably modified the pressure distribution. Pressure on the 12th was in general excess, the excess being greatest in Upper India, where it slightly exceeded a tenth of an inch in amount. Pressure fell largely in Northern India on the 12th and 13th, and the trough of low pressure on the 14th stretched from the South-West Punjab to South Bihar. It was unchanged in position on the 15th and 16th. Pressure increased on these dates in Western India and steep gradients for westerly winds obtained in the Peninsula and Central India on the 17th and following days. Weather was slightly unsettled at this time in the south of the Bay, where moderate to strong south-west or west winds had set in on the 14th and 15th. Squally weather with much rain set in over the Andaman Sea on the 15th. Several vessels in that area on the 16th had heavy rain squalls during the day. Winds shifted to north-easterly or easterly directions on the Burma coast and moderate to heavy rain fell in the coast districts during the day. Weather was slightly more disturbed on the 17th, and there was a tendency to the formation of a depression in the Gulf of Martaban. South-westerly winds of force 4 to 7 were reported in the south of the Bay and Andaman Sea, and weather was squally with "heavy rain," and "heavy and continuous rain." Heavy rain had fallen in the Burma coast districts during the previous 24 hours, and light to moderate showers in the interior. The incipient depression disappeared during the day, but moderate rain was received on the 18th, when fine weather set in for a brief period in Lower Burma.

Whilst this feeble disturbance was in progress in the Andaman Sea, a hot weather depression of considerable intensity formed in Sind.

Pressure was in moderate to considerable defect in Upper India on the 16th. It gave way briskly in Upper Sind on the 17th and a shallow depression lay over that area at 8 A.M. Series of duststorms and thunderstorms visited the greater part of the Punjab on the evening of the 17th and were followed by a very rapid local increase of pressure (averaging a sixth of an inch). This large rise brought the depression in Sind into greater prominence, and it was on the morning of the 18th a well-defined depression.

The following gives data of the depression at this stage:—

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.	
Hyderabad .	29·565	−·024	−·068	SW	20	0		
Pachpadra .	·624	+·049	?	SSW	29	10		Strong wind.
Bickaneer .	·545	−·019	?	SSE	16	0		Duststorm.
Jacobabad .	·449	0	−·158	E	8	0		...
Mooltan .	·562	+·092	−·057	SE	6	0		Duststorm.

The depression began to fill up during the day. Pressure increased two-tenths of an inch in Sind during the next 48 hours and the depression disappeared before the morning of the 20th.

The pressure changes were at this time large and rapid and the distribution changed considerably from day to day. The most important features were, however, persistent from the 23rd to the 30th. The trough of low pressure stretched from the South-East Punjab in a south-easterly direction to the eastern districts of the Central Provinces and the southern districts of Chota Nagpur. Moderately steep gradients obtained in the Peninsula and Western India and in the south of the Bay. Tenasserim, Lower Burma, Assam, Bengal and Southern India (more especially Malabar) received almost daily rain from the 23rd to the end of the month. The rainfall was heaviest and most general in Burma on the 23rd, 27th and 30th in Bengal and Assam on the 24th, 25th, 27th, 30th and 31st and in Southern India on the 24th, 25th, 26th 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.

Khyber.—No snow fell in the Khyber Pass districts or neighbouring hills during the month.

II.—HIMALAYAS.

(*A*) *The Punjab and Kashmir Himalayas.*

(1) *Murree.*—No snow fell at Murree or the adjacent hills in May.

(2) *Kulu.*—There were slight falls of snow on the higher passes and peaks on three days during the month. The following table gives the reported depth of snow on the higher passes of the sub-division at the end of the month and also the corresponding data of the past six years.

TAHSIL.	NAME OF PASS.	DEPTH OF SNOW IN FEET DURING MAY						
		1896.	1895.	1894.	1893.	1892.	1891.	1890.
Kulu	Rotang	8	6	9	9	1	9	5
	Hamta	1	3	6	7	½	12	6
	Barsai	1	2	...	...	...	...	...
	Chandarkhani	1	3	...	...	...	...	...
	Bujadhar	2	2	...	...	...	...	...
	Lohri Achri	1	1½	...	...	...	...	...
Plach	Sirikhand	7	10	12	15	4	32	12
	Gargarassan	2	2	2	4	1	4	2
	Tirath	2	2	...	...	...	...	...

(*B*) *North-Western Provinces Himalayas.*

Almora.—The following gives a statement of the snowfall on the higher peaks of this division from the 16th March to the 15th May :—

NAME OF PATH.	Date.	DEPTH OF SNOW.	
		Feet.	Inches.
Malla Danpur	24th March.	0	6
Malla Byans Chandans and Darma	13th April.	0	3
	14th „	0	3
Malla Johar	27th March.	3	0
	14th April.	1	6
	9th May.	0	4
	10th „	0	4
	11th „	0	4
	12th „	0	4

There was less snowfall than during the corresponding period of last year and the weather was hence hotter than usual.

Summary of the snowfall data of the cold-weather season 1895-96.—The following summary is taken from a memorandum on the snowfall and meteorology of the cold weather period, 1895-96, published in the *Gazette of India* of the 6th June 1896 :—

The winter commenced considerably earlier than usual in the Persian area (more specially Afghanistan) and the Upper India hill districts. The first general and heavy fall was on the 15th to the 20th of October. It was almost unprecedented in the time of its occurrence in the Kurram valley and other districts in Afghanistan and also in the Punjab hills. Weather was, on the other hand, finer than usual during nearly the whole of November and December and little or no snow fell in Upper India during these months.

A series of cold-weather disturbances formed, chiefly in Persia, in January, February and March. They advanced eastwards across Northern India, but were of very feeble intensity, and, with only one exception, did not give rise to well-marked secondary depressions in the Punjab. The precipitation due to these disturbances was hence confined to Baluchistan, Afghanistan, the Punjab and Assam. The periods of most general and heaviest snowfall were the 28th January to the 2nd February, the 23rd to the 27th February and the 22nd and 23rd March. The heaviest fall of the season in Kashmir and Afghanistan occurred during the first of these periods, in Garhwal and Kumaon during the second of these periods, and in the Simla hills during the last period. The weather was finer and much drier than usual in the Upper India hill districts in April and May, and the snow melted with unusual rapidity.

The chief features of the snowfall of the cold-weather season were :—

(1) The winter commenced considerably earlier than usual in the Persian area, Afghanistan and Kashmir.

(2) The number of cold-weather disturbances from November to March was as large as usual, but the storms were of very slight intensity and the precipitation was much less than usual. The most noteworthy feature was the absence of heavy general falls of snow in the hill districts.

(3) The snowfall was restricted to higher elevations than usual and did not fall below 5,000 feet on the outer ranges of the Kashmir and Punjab Himalayas.

The snowfall of the cold-weather season was, so far as can be judged from the data, normal in amount or in slight defect in Persia, Baluchistan and Afghanistan. Frequent light falls were received and heavy falls in the third week of October and last week of January.

The fall in Kashmir was much below the normal during the period from November to February. Frequent snow was received in March. Drier weather than usual obtained during the months of April and May. The fall of the past winter was hence much below the normal. The observations at Leh and Kashgar indicate that the snowfall in Thibet and Yarkand was also light and probably below the normal amount.

The fall in the Punjab Himalayas and in Garhwal and Kumaon was much below the average. All the reports for these areas state that the winter was much milder than usual and the snowfall very light. The snowfall measurements of the Chamba forest stations (except perhaps Kilar), Murree, Kulu, the Upper Sutlej valley and Kumaon indicate clearly that the total precipitation of the winter in those areas was very small and probably barely one-half of the normal amount.

The data hence establish that there was much less snow than usual during the past winter over the whole of the Western Himalayas and in Thibet. The winter commenced early and terminated in March about the normal date, but was characterized throughout by the absence of heavy falls.

Hence as a result of the light snowfall of the winter and of the unusually dry and hot weather prevailing in Northern India and the adjacent hill districts from February to May, the winter snow accumulation melted unusually rapidly and the extent and depth of the snow accumulation at the end of May were much less than usual over the whole of the Western Himalayas and probably also in Afghanistan.

The information for the Sikkim and Assam Himalayas is even more scanty than in previous years. It however indicates that the snowfall of the past season has almost certainly been below the normal. The accumulation is hence probably less than usual. This is strongly confirmed by the following information received from H. E. Hobson, Esq., the Chinese Commissioner of Customs at Yatung: "On Saturday last, the 9th May, the Chammalarhi peaks (24,100 feet) were, with the exception of the summit of the highest peak of all, entirely clear of snow. I was astonished, as when I last looked at them through field-glasses, they were all pearly white and covered with snow."

Summary of Special Storm Reports.

The following gives 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.

The following is a brief statement of the local storms of which reports have been received from observers:—

2nd.—Duststorm at Jacobabad at 8-45 A.M.

3rd.—Thunderstorm at Cochin from 7-55 P.M. to 8-10 P.M.

Nor'-wester at Burdwan at 5 P.M. and again at 7-10 P.M.

4th.—Severe nor'-wester at Alipur from 7-30 P.M. to 9 P.M. The strongest winds were of velocity 42 miles per hour. Nor'-wester at Burdwan from 6-7 P.M. to 7 P.M. Violent nor'-wester at Mymensingh.

7th.—Thunderstorm at the Mutlah station.

Severe nor'-wester at Burdwan. The storm began at 4-30 P.M. and ended at 5 P.M.

Nor'-wester at Calcutta. It commenced about 5-45 P.M. Many large trees were blown down on the Calcutta maidan.

Severe thunderstorm at Salem from 4 P.M. to 4-45 P.M.

Severe hailstorm at Mussooree from 8-15 P.M. to 8-45 P.M. Storm came from north-west.

Duststorm at Allahabad. It began at 5-30 P.M.

9th.—Nor'-wester at False Point from 8-30 P.M. to 9-30 P.M. Duststorm at Cherat from 5-20 P.M. to 7-45 P.M.

10th.—Thunderstorm at Salem from 3-35 P.M. to 4-45 P.M.

11th.—Duststorm at Allahabad at 5-20 P.M.

Thunderstorm at Roorkee at 2-50 P.M. to 4 P.M.

16th.—Duststorms at Delhi, Jeypore (10-30 P.M. to 10-50 P.M.) and Pachpadra (10 P.M.).

17th.—Duststorm at Lahore. Thunderstorm at Delhi.

18th.—Duststorm at Lahore at 7 P.M.

Violent duststorm at Jacobabad (10 A.M. to noon). Duststorm at Jeypore (early morning).

19th.—Duststorm at Allahabad at 7 A.M.

Violent duststorm at Jacobabad at 7 P.M.

20th.—Severe duststorm at Allahabad lasting from 9-10 A.M. to 11-30 A.M. The velocity of the strongest gust of wind was 45 miles per hour.

Duststorm at Benares lasting from 9-25 A.M. to 10-5 A.M. Storm came from north-west.

Hailstorm at Poona (4 P.M. to 4-55 P.M.). The precipitation amounted to 1·04 inches.

Severe thunderstorm at Simla from 1-44 P.M. to 2-50 P.M.

Duststorm at Jeypore from 4-30 P.M. to 5-30 P.M.

21st.—Thunderstorm at Mymensingh from 9-10 P.M. to 9-50 P.M.

22nd.—Hailstorm at Bellary from 6-30 to 6-45 P.M.

25th.—Nor'-wester at Burdwan from 6-25 P.M. to 6-45 P.M.

26th.—Severe thunderstorm at Delhi from west at 4-30 P.M.

27th.—Duststorm at Allahabad from 5-5 A.M. to 6 A.M.

The following observations were recorded during the storm :—

HOUR.	Temperature.	Humidity.	Aqueous vapour pressure.	Wind direction.
	°	%	"	
5-5 A.M.	93·3	18	·278	N
5-30 ,,	94·3	18	·282	ENE
5-45 ,,	101·3	12	·243	NW
6 ,,	93·4	23	·352	SSW

The high temperature at 5-45 A.M. is noteworthy as illustrating the character of the hot gusts that frequently blow for short periods during these storms.

Hailstorm at Gulbarga at 7-30 P.M. The largest hailstones were about half an inch in diameter.

Thunderstorm at Poona from 5 P.M. to 6 P.M.

28th.—North-west squall at the Mutlah station at 10 P.M.

29th.—Duststorms, at Jeypore (3-15 P.M. to 4-35 P.M.) and Delhi (5 P.M.).

Duststorm at Jubbulpore.

Thunderstorm at Rajkot.

30th.—Duststorm at Allahabad. It is described as follows by the chief observer: "At 5-30 A.M. a regular duststorm of the ordinary type was seen moving slowly along the northern skirt of the plain on which the observatory is situated. The path of the storm when nearest was only about two hundred yards to the north of the observatory. The passage of the storm was distinctly seen from the roof of the building. The trees falling in the track of the storm could be seen swayed by the force of the wind, whilst the cups of the anemometer were moving at the same time as gently as in ordinary weather. The direction of the wind was, however, variable and the oscillation of the barometer irregular. The storm moved from west to east, columns of dust drifting ahead and indicating the direction."

Duststorm at Khandwa at 1 A.M.

Duststorm at Jubbulpore.

31st.—Severe duststorm at Nagpur from 6-30 P.M. to 7-30 P.M.

Nor'-wester at the Mutlah station from 0-45 P.M. to 2 P.M. Temperature fell from 90° to 77° in ten minutes (0-45 to 0-55 P.M.).

The following reports of hailstorms in Assam, Ganjam, Orissa and Rajputana have been received from Political Agents and District Officers :—

1st.—Hailstorm in Jajpur in the Cuttack district. It was at first accompanied by a northerly and then a southerly wind and brought with it a light rainfall of about 0·25 inch. The wind was rather high and the hailstones which fell were as big as betel-nuts and in some cases even bigger. The storm lasted for a quarter of an hour during which the hailstones fell in large number accompanied by loud thunder.

8th.—Hailstorm at Jeypur in the Vizagapatam district.

19th.—Hailstorm in mouzah Chenga in the Kamrup district in Assam. It was confined to a very small area estimated at 4 square miles in extent. The largest stones were about half an inch in diameter. The storm inflicted slight damage on the crops.

20th.—Hailstorm at Bhor in the Bhor State of moderate intensity. The largest stones were of the size of betel-nuts.

21st.—Hailstorm at Nimka-Thana in the Jeypore State at 1 P.M.

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

Arabian Sea.—Fairly steady normal north-westerly winds prevailed along the east and north coasts of the Arabian Sea during the first three weeks of the month. Over the remainder of the sea, on the other hand, the air movement during this period was remarkably unsteady and feeble, its general strength averaging only 2·8, or fully 0·6 less than the normal strength in May. This feature of the air movement was most strikingly exhibited on the 7th and 8th, days typical of the period, when the majority of vessels contributing meteorological information reported light variable winds. Weather was generally fine except in the neighbourhood of the Malabar and West Ceylon coasts where squalls were of occasional occurrence.

Light irregular winds and calms obtained over the centre and east of the Arabian Sea on the 21st and 22nd, and light to moderate westerly winds over the remainder of the sea. The general air movement, as derived from the data of 35 vessels, averaged 2·6 at 8 A.M. of the 22nd. Weather was generally fine to cloudy. A significant change occurred in the south and south-east of the sea during the next

48 hours where winds strengthened considerably and weather became disturbed with heavy to hard squalls. Winds increased further in force in the south, and on the morning of the 25th were of force 6 to 9. The disturbed conditions were extending northwards. South-westerly and westerly winds obtained generally at 8 A.M. of the 25th over the Arabian Sea except an area comprised between Lat. 15°N. and Lat. 19° N. and Long. 64°E and Long. 71° E. where abnormal northerly winds of force 2 prevailed. Weather was cloudy to the north and west of this area, but to the south and east conditions were unsettled with increasing winds and squalls and heavy rain. The mean wind intensity was 3·9 or 1·1 greater than on the 24th. Winds remained unchanged in strength during the next 24 hours, but fell off considerably during the next 48 hours. Weather improved considerably in the south on these days, but became unsettled in the area of light northerly winds in the centre of the sea. An important change took place over this area during the day. Winds increased very rapidly in force and the weather became worse, so that on the morning of the 29th the vessels in that area reported winds of force 6 to 10, violent squalls, torrents of rain and a high increasing sea. Winds were cyclonic in direction and there was a strong tendency to the formation of a storm in about Lat. 16° to 17° N. and Long. 65° to 66° E. The area of unsettled weather extended slowly northwards during the next 48 hours without however developing into a regular storm, and on the 31st was but faintly indicated. The air movement was decreasing and averaged 3·5 at 8 A.M. of the 31st or 0·3 less than on the preceding day.

Bay of Bengal.—Light to moderate south-west and west winds obtained generally over the Bay during the first eight days of the month. Except in the Straits of Malacca and off the South and East Ceylon coasts weather was fine over the Bay during this period. Winds were more or less unsteady during the next four days. On the 12th an important change took place at the southern limits of the eastern half of the equatorial belt where south-east trade winds set in. Thus the S. *Lena* in Lat. 8° S. and Long. 81½°E at 8 A.M. of the 13th had fresh S. S. E. winds. These trade winds advanced rapidly northwards (veering to south-west through south during their advance northwards) up the south and east of the Bay during the next three days. On the morning of the 16th fresh to strong south-west winds obtained over the Bay at least as far north as the latitude of Port Blair and were chiefly determined to the Andaman Sea. The mean wind force at 8 A.M. of the 16th was 3·9.

There was on that day a tendency to the initiation of an irregular cyclonic circulation over the Andaman Sea and the Gulf of Martaban and winds shifted to northerly and easterly directions on the Burma coast. Winds intensified slightly during the next 48 hours and the weather became more unsettled. Thus on the morning of the 18th several vessels in that area reported winds of force 5 to 7 and heavy rain squalls. The disturbed conditions failed to develop into a storm. They, however, initiated a period of rainy squally weather and increasing winds over the east of the sea which lasted until the 26th. The mean wind intensity during this period varied from 3·8 on the 20th to 4·6 on the 24th. No change of significance occurred during the remainder of the month except that the air movement decreased slowly and steadily in strength and averaged 3·4 at the end of the month.

Conditions were apparently abnormal in the western half of the equatorial belt during the first three weeks of the month, light unsteady winds and unusually fine weather prevailing generally. Moderate to fresh south-east trade winds obtained over this area from the 22nd to the 30th. Notwithstanding the prevalence of fairly normal winds weather was finer than usual during this period. At the end of the month there was again a tendency for the winds to fall off in strength.

In the eastern half of the belt, on the other hand, conditions were probably approximately normal.

The chief feature of the meteorology of the Indian seas and the equatorial belt was the delay in the establishment of the ordinary monsoon conditions.

Temperature of the air.

May 1896 was characterized by higher temperature than usual over the whole of India with the exception of North Bihar, North and East Bengal, the Assam Valley and Lower Burma. The hot weather conditions were, in fact, very strongly marked in India and more especially in the Punjab, Bundelkhand, Baghelkhand, Chota Nagpur and the eastern districts of the Central Provinces, and, as usually happens under these conditions, the night temperature was almost as largely above the normal as the day temperature.

The mean maximum or day temperature of the month was above the normal over the whole of India, with the exception of North Bihar, North and East Bengal, the Assam Valley and Lower Burma, which areas generally received more frequent rain than usual during the month, thus depressing temperature below the normal. The excess was more than 2° in amount over the whole of India with the exception of Burma, Bengal, Assam, North Bihar, Orissa and a narrow belt along the west coast of India.

It was more than 4° in amount in the Punjab, Upper

Sind, Chota Nagpur, Baghelkhand and the eastern districts of the Central Provinces and in a part of South India defined by the stations of Trichinopoly, Salem and Negapatam and was 5° or upwards at stations for which data are given below :—

PROVINCE.	STATION.	MEAN MAXIMUM TEMPERATURE.		
		Actual, May 1896.	Normal, May.	Variation of actual from normal.
		°	°	°
PUNJAB	Rawalpindi	104·1	97·2	+6·9
	Mooltan	111·4	104·7	+6·7
	Sialkot	107·7	102·5	+5·2
N. W. PROVINCES	Dehra Dun	99·2	93·8	+5·4
CHOTA NAGPUR	Hazaribagh	103·3	98·3	+5·0
MADRAS	Trichinopoly	106·1	101·1	+5·0

The area of greatest excess of day temperature hence included the West and Central Punjab. The excess was absolutely greatest at Rawalpindi, for which it averaged 6°·9. The excess was nearly as large in amount at the adjacent hill stations of Murree (+5°·6), Simla (+5°·0) and Ranikhet (+4°·9).

The mean maximum or day temperature was in slight defect in Lower Burma, more especially at Moulmein (—2°·4) and in North Bihar, North and East Bengal and the Assam Valley. The deficiency averaged 1°·2 in that area.

The mean minimum or night temperature was in excess over the whole of India except North and Central Bengal, where it was in very slight defect. The excess was more than 2° in amount in Upper Sind, the Punjab, Rajputana, Central India, the North-Western Provinces, Chota Nagpur, the Central Provinces, Berar and the North Deccan. The mean minimum temperature was most largely in excess in the Punjab, Rajputana, Bundelkhand, Baghelkhand and the southern districts of the North-Western Provinces.

The following gives data for the stations at which the excess was more than 5° in amount :—

PROVINCE.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, May 1896.	Normal May.	Variation of actual from normal.
		°	°	°
PUNJAB	Lahore	78·8	72·2	+6·6
	Mooltan	81·0	75·9	+5·1
	Rawalpindi	72·5	67·5	+5·0
RAJPUTANA	Ajmere	83·7	77·7	+6·0
	Sambhar	83·4	78·1	+5·3
N. W. PROVINCES	Jhansi	88·3	82·3	+6·0
CENTRAL INDIA	Sutna	83·3	78·1	+5·2

The mean temperature of the month was in very slight defect in Lower Burma, North and East Bengal, North Bihar and the Assam Valley and was above the normal over the remainder of India. The mean temperature of the month was more than 2° in excess over by far the greater part of India and was 4° or upwards above it in four areas for which data are given below :—

PROVINCE.	STATION.	MEAN DAILY TEMPERATURE.		
		Actual, May 1896.	Normal, May.	Variation of actual from normal.
		°	°	°
PUNJAB, UPPER SIND AND EAST RAJPUTANA	Rawalpindi	88·3	82·3	+6·0
	Mooltan	96·3	90·4	+5·9
	Lahore	93·3	87·5	+5·8
	Sialkot	92·9	88·1	+4·8
	Ludhiana	93·4	88·8	+4·6
	Sirsa	94·9	90·3	+4·6
	Jacobabad	97·9	93·6	+4·3
	Ajmere	94·7	90·5	+4·2
	Sambhar	95·4	91·2	+4·2
BUNDELKHAND	Jhansi	99·9	94·8	+5·1
	Nowgong	97·0	93·2	+3·8
CENTRAL PROVINCES	Raipur	98·5	93·9	+4·6
	Seoni	93·9	89·9	+4·0
CENTRAL INDIA	Sutna	96·5	91·5	+5·0

Temperature was as largely in excess at the Himalayan hill stations in North-Western India as in the adjacent plains.

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, May 1896.	Normal, May.	Variation of actual from normal.
	°	°	°
Murree	71·8	67·4	+4·4
Simla	68·7	64·5	+4·2
Chakrata	67·0	64·8	+2·2
Ranikhet	73·1	68·1	+5·0

The hot weather temperature conditions were hence strongly exhibited in Upper India in May 1896.

The following gives a brief summary of the chief features of the mean temperature conditions of the month :—

1st.—Temperature, both by day and night, and hence also the mean temperature of the month, was very slightly below the normal in North and

East Bengal, the Assam Valley and North Bihar.

2nd.—The mean day and night temperatures and hence also the mean temperature of the month were more or less above the normal over the whole of India with the exceptions named above. The excess was least marked in the West Coast districts and was largest in amount in the Punjab and Baghelkhand in which it ranged between 5° and 6°.

3rd.—Temperature was as largely in excess at the hill stations in North-Western India as in the adjacent plains.

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

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	88·2	75·3	81·8	12·9	24·4	−2·4	−0·1	−2·3
	Lower Burma (Deltaic)	90·6	78·0	84·3	12·5	24·9	−0·6	+0·5	−1·1
	Central do.	97·7	78·3	88·0	19·4	31·0	−0·1	+1·4	−1·5
	Upper do.	94·5	72·4	83·0	21·2	36·0	+0·6	+1·5	−0·9
	Arakan	91·8	78·6	85·2	13·2	24·9	+1·3	+0·8	+0·5
Bengal and Assam	Eastern Bengal	88·3	73·4	80·9	14·9	26·7	0	−0·1	+0·1
	Assam (Surma)	89·3	73·0	81·2	16·3	33·2	+1·3	+0·9	+0·4
	Do. (Brahmaputra)	85·0	72·2	78·6	12·8	27·3	−1·2	+0·1	−1·3
	Deltaic Bengal	94·4	77·0	85·7	17·4	29·3	+0·5	+0·2	+0·3
	Central do.	96·9	76·0	85·2	20·9	37·2	+0·1	−0·3	+0·2
	North do.	87·9	72·1	80·0	15·8	27·9	−1·1	−0·3	−0·8
	Bengal Hills	55·6	44·4	50·1	11·2	22·6	+1·4	+1·6	−0·2
	Orissa	94·6	81·0	87·9	13·6	29·8	+1·1	+1·6	−0·5
	Chota Nagpur	104·5	79·5	92·0	25·0	40·4	+4·6	+2·9	+1·7
	Bihar (South)	105·2	80·7	93·0	24·5	39·8	+1·4	+2·1	−0·7
	Do. (North)	96·5	76·1	86·3	20·4	35·4	−1·5	+0·5	−2·0
North-Western Provinces and Oudh.	North-Western Provinces (East)	108·7	82·0	95·4	26·7	39·9	+3·3	+3·4	−0·1
	Oudh (South)	107·4	81·2	94·3	26·2	42·0	+3·2	+4·5	−1·3
	Do. (North)	104·1	79·1	91·7	25·0	41·6	?	?	?
	North-Western Provinces (Central)	109·4	83·8	96·7	25·6	38·5	+4·1	+6·0	−1·9
	Do. do. (West)	107·5	80·9	94·2	26·6	40·8	+3·2	+3·3	−0·1
	Do. do. (Submontane East)	102·6	77·8	90·2	24·8	39·6	+2·1	+1·1	+1·0
	Do. do. (do. West)	103·6	76·0	89·8	27·5	41·1	+4·1	+2·9	+1·2
	Do. do. (Hills)	78·4	61·8	70·1	16·7	35·0	+3·0	+4·3	−1·3
Punjab	Punjab (South-East)	107·4	82·2	94·8	25·2	44·1	+3·1	+3·1	0
	Do. (South)	108·1	78·9	93·4	29·2	42·9	+4·7	+4·5	+0·2
	Do. (Central)	107·7	78·8	93·3	28·9	41·7	+4·9	+6·6	−1·7
	Do. (Submontane)	108·4	77·2	92·8	31·2	44·9	?	?	?
	Do. (Hill Districts)	82·5	58·3	68·8	20·9	36·9	+5·3	+3·3	+2·0
	Do. (North)	103·2	71·8	87·5	31·5	46·2	+5·8	+3·8	+2·0
	Do. (West)	108·9	78·4	93·6	30·5	45·5	+6·7	+5·1	+1·6
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	89·7	78·6	84·1	11·1	20·4	+1·1	+1·0	+0·1
	Madras (South Central)	101·0	76·6	88·8	24·4	35·2	+4·2	+2·2	+2·0
	Coorg	79·9	65·6	72·8	14·3	21·8	−1·0	+1·1	−2·1
	Mysore	102·2	89·9	81·1	22·3	32·3	+1·1	+0·7	+0·4
	Konkan	90·8	82·0	86·4	8·8	14·8	+1·3	+2·1	−0·8
	Bombay Deccan	100·9	73·8	87·4	27·1	38·9	+1·7	+1·5	+0·2
	Hyderabad (North)	104·1	80·5	92·3	23·6	32·6	?	?	?
	Khandesh	104·2	74·4	89·3	29·8	40·3	+1·9	+2·1	−0·2
Central Provinces and Berar.	Berar	109·7	82·7	96·2	27·0	40·6	+2·5	+2·8	−0·3
	Central Provinces (West)	109·8	84·0	96·9	25·8	35·7	+2·7	+3·7	−1·0
	Do. (Central)	109·6	81·5	95·6	28·1	39·5	+4·1	+3·0	+1·1
	Do. (East)	111·2	85·6	98·6	25·6	35·0	+4·7	+4·5	+0·2
Bombay (North)	Gujarat	108·4	87·7	94·1	27·7	34·7	?	?	?
	Kathiawar	98·9	77·6	88·3	21·3	28·9	+1·0	+0·6	+0·4
	Sind	102·0	79·7	90·9	22·3	31·2	+3·0	+2·3	+0·7
	Baluchistan Hills	89·9	51·7	68·5	33·6	49·2	+2·3	−0·3	+2·6
Rajputana and Central India.	Central India (East)	107·8	81·7	94·8	26·1	38·4	+2·4	+3·3	−0·9
	Rajputana (East), Central India (West)	107·5	81·4	94·5	26·1	40·3	+2·9	+4·1	−1·2
	Do. (West)	109·5	82·7	96·0	26·8	41·2	+3·4	+3·1	+0·3
Madras	East Coast (North)	97·1	82·6	89·9	14·5	34·6	+4·7	+2·6	+2·1
	Hyderabad (South)	106·8	81·7	94·3	25·1	37·5	+3·1	+4·0	−0·9
	Madras (Central)	105·8	81·1	93·5	24·7	39·4	+1·9	+0·8	+1·1
	East Coast (Central)	105·4	82·9	94·2	22·5	40·9	+3·9	+1·5	+2·4
	Do. (South)	102·4	81·4	91·9	21·1	34·4	+4·5	+1·9	+2·6
	Madras (South)	98·1	80·8	89·4	17·3	28·6	+2·1	+3·2	−1·1

At the commencement of the month temperature was more or less in excess over the whole of India with the exception of Assam, North Bihar and North and East Bengal. The excess was very marked in the Punjab and Upper Sind. The following gives variation data for the 24 hours preceding 8 A.M. of the 1st :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·2	+3·3	+2·3
Bengal and Assam	0	—0·6	—0·3
N.-W. Provinces and Oudh	+5·2	+1·5	+3·4
Punjab	+7·2	+3·0	+5·1
Sind and Rajputana	+3·1	+3·7	+3·4
Central India and Gujarat	+1·8	+1·3	+1·6
Central Provinces and Berar	+3·1	+1·3	+2·2
Bombay	+2·5	+1·7	+2·1
Madras	+3·3	+4·0	+3·7

Weather was showery in Bengal from the 1st to the 5th, in Madras from the 3rd to the 5th and in Burma on the 5th and 6th. The showery weather caused a large temporary reduction of temperature during the period of rainfall, in the areas affected, but during the whole of this period from the 1st to the 7th temperature was steadily in moderate to large excess in North-Western India. The following gives mean daily variation data for this area of increased temperature :—

AREA.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	1st May.	2nd May.	3rd May.	4th May.	5th May.	6th May.	7th May.
	°	°	°	°	°	°	°
Quetta (Baluchistan)	+7·8	+2·3	—2·6	—2·1	+2·3	+3·2	+3·4
Punjab	+5·1	+7·4	+6·4	+5·9	+6·0	+6·5	+7·5
Upper Sind	+6·2	+7·5	+4·8	+3·1	+3·1	+4·6	+4·4
Rajputana	+2·9	+5·6	+6·3	+5·9	+7·0	+5·9	+5·9

A depression formed in Upper Sind on the 7th and advanced eastwards on the 8th, 9th and 10th to the foot of the Punjab hills on the 11th. Temperature was in very large excess in the depression area but fell considerably after its advance. Numerous hailstorms and thunderstorms occurred in the Punjab and Kashmir during its progress. Bengal and Assam also received moderate rain on the 8th and 9th and again on the 11th and 12th. The following gives variation data showing the excess of temperature in North-Western India from the 7th to the 11th :—

AREA.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					Mean of period.
	7th May.	8th May.	9th May.	10th May.	11th May.	
	°	°	°	°	°	°
Quetta (Baluchistan)	+3·4	+4·2	+3·0	—4·0	—3·3	+0·7
Punjab	+7·5	+7·5	+8·2	+4·0	+0·2	+5·5
Upper Sind	+4·4	+7·0	+7·9	+6·3	—1·2	+4·9
Rajputana	+5·9	+7·9	+7·3	+3·3	+2·0	+5·3

In the following table are given the variations of the mean temperature from the normal on the 1st, 7th and 11th in nine provinces, illustrating the larger changes of temperature conditions during this period :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	1st May.	7th May.	11th May.
	°	°	°
Burma	+2·3	+0·1	+2·2
Bengal and Assam	—0·3	+3·6	+0·2
North-Western Provinces and Oudh	+3·4	+4·9	+2·3
Punjab	+5·1	+7·5	+0·2
Sind and Rajputana	+3·4	+5·3	+1·4
Central India and Gujarat	+1·6	+5·0	+1·5
Central Provinces and Berar	+2·2	+6·2	+0·6
Bombay	+2·1	+3·1	+1·4
Madras	+3·7	+2·4	+2·1

Dry weather prevailed over the whole of India during the next three days and temperature hence increased rapidly and was in large general excess on the 14th and 15th. The following data show the changes during this period :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		Change.
	11th May.	15th May.	
	°	°	°
Burma	+2·2	+0·9	—1·3
Bengal and Assam	+0·2	+3·5	+3·3
North-Western Provinces and Oudh.	+2·3	+4·7	+2·4
Punjab	+0·2	+6·6	+6·4
Sind and Rajputana	+1·4	+4·6	+3·2
Central India and Gujarat	+1·5	+3·4	+1·9
Central Provinces and Berar	+0·6	+3·8	+3·2
Bombay	+1·4	+1·0	—0·4
Madras	+2·1	+3·3	+1·2

The following gives data for representative stations in the Madras coast districts illustrating the increase of temperature which occurred in that area :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		Change.
	11th May.	15th May.	
	°	°	°
Masulipatam	0	+2·3	+2·3
Madras	+2·4	+6·2	+3·8
Vizagapatam	—0·2	+3·5	+3·7

Weather was showery in Burma from the 15th to the 17th and in Assam and Bengal from the 15th to the 18th. This rainfall reduced temperature considerably in Burma, Assam and Bengal. Over the remainder of India temperature was throughout largely above the normal. The excess was most marked in the interior of Northern India and in the Coromandel coast districts. The following table gives mean variation data for the area of large excess of temperature in Northern India during this period from 16th to the 8th :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	16th May.	17th May.	18th May.
	°	°	°
Quetta (Baluchistan) . . .	+3·3	+3·0	+4·3
Upper Sind	+5·8	+5·4	+7·3
Punjab	+7·2	+9·4	+1·4
Rajputana	+5·5	+3·8	—0·7
Central India and Gujarat . .	+2·1	+1·9	+1·1
North-Western Provinces and Oudh .	+6·1	+7·5	+1·7
Chota Nagpur	+7·8	+5·7	+4·7
Central Provinces and Berar . .	+3·1	+2·2	+1·7

Burma received fairly general and heavy rain during the period from the 16th to the 19th from a very feeble disturbance accompanying an advance of south-west winds in the south-east of the Bay. This reduced temperature very considerably below the normal in Burma, more especially in Lower Burma, as is shown by the following data :—

LOWER BURMA.

VARIATION FROM NORMAL OF	16th May.	17th May.	18th May.	19th May.	20th May.
	°	°	°	°	°
Maximum temperature . .	—5·9	—7·4	—8·4	+1·2	+1·7
Minimum ,, . .	+0·3	—3·8	—1·9	+1·7	—1·4
Mean ,, . .	—2·8	—5·6	—5·2	+1·5	+0·2

BURMA (WHOLE).

VARIATION FROM NORMAL OF	16th	17th	18th	19th	20th
	°	°	°	°	°
Maximum temperature . .	—3·1	—6·0	—7·5	—0·7	+1·4
Minimum ,, . .	+0·5	—1·5	—0·1	+0·8	+1·5
Mean ,, . .	—1·3	—3·8	—3·8	+0·1	+1·5

A noteworthy feature of the period was the excessive temperature in the Coromandel coast districts due to the abnormal prevalence of dry westerly land winds. The following gives data for four stations in illustration :—

DATE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE AT			
	Cocanada.	Masulipatam.	Madras.	Negapatam.
	°	°	°	°
16th	+6·1	+ 0·5 ?	+8·6	+6·3
17th	+9·1	+ 6·5	+7·0	+6·5
18th	+7·6	+ 7·9	+7·4	+6·6
19th	+9·1	+10·7	+7·8	+5·3
20th	+9·0	+12·3	+6·4	+5·9
21st	+6·0	+ 9·6	+4·7	+3·2
22nd	+8·9	+ 8·9	+3·8	+6·5

The excess was chiefly in the day temperature, as is shown by the following variation data of the maximum temperature at these stations :—

DATE.	VARIATION FROM NORMAL OF MAXIMUM TEMPERATURE AT			
	Cocanada.	Masulipatam.	Madras.	Negapatam.
	°	°	°	°
16th	+ 8·5	+ 9·1	+14·8	+9·4
17th	+13·0	+ 8·4	+11·6	+8·6
18th	+10·9	+11·0	+11·0	+9·7
19th	+13·6	+14·7	+10·3	+7·0
20th	+14·2	+14·9	+10·1	+8 5
21st	+ 8·6	+12·9	+ 7·4	+2·8
22nd	+14·6	+13·1	+ 3·6	+8·9

Temperature was during this period more or less in excess in North-Western India and a stationary depression formed in Sind on the 16th and 17th. It filled up in that area on the 19th. The temperature conditions of this

lepression were similar to those of the depression of the 7th to the 10th but were less marked, and hence it is not necessary to state them. The following gives temperature variation data for the 24 hours ending at 8 A.M. of the 22nd, illustrating the conditions obtaining at the end of this period :—

POLITICAL AREA OF PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	—2·1	+0·9	—0·6
Bengal and Assam	—1·6	+1·5	—0·1
N.-W. Provinces and Oudh	—0·4	+4·3	+2·0
Punjab	+3·2	+8·4	+5·8
Sind and Rajputana	—1·8	+3·3	+0·8
Central India and Gujarat	—0·5	+1·4	+0·5
Central Provinces and Berar	+1·4	+2·0	+1·7
Bombay	+1·8	+1·9	+1·9
Madras	+6·1	+2·5	+4·3

The temperature conditions varied considerably from day to day during the remainder of the month. Temperature was generally below the normal in the three areas of rainfall, *viz.*, Burma, Assam and Bengal, and Southern India.

Temperature was steadily in considerable to large excess in the Punjab and North-Western Provinces from the 23rd to the 26th. The following gives data of the variation of the mean daily temperature from the normal :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE PRECEDING 8 A.M. OF			
	23rd May.	24th May.	25th May.	26th May.
	°	°	°	°
Punjab	+5·6	+2·4	+2·8	+4·1
North-Western Provinces and Oudh.	+ 2·5	+5·1	+5·3	+5·8

The area of greatest excess of temperature was transferred eastwards to Chota Nagpur, the south-eastern districts of the North-Western Provinces and the eastern districts of the Central Provinces from the 27th to the 31st.

The following gives temperature variation data for the two stations at which the excess of temperature was greatest for each day during this period :—

DATE.	STATION.	VARIATION FROM NORMAL OF		
		Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
		°	°	°
27th	Ranchi	+11·2	+10·6	+10·9
„	Chaibassa	+10·4	+ 8·2	+ 9·3
28th	Chaibassa	+12·2	+ 5·0	+ 8·6
„	Ranchi	+11·9	+ 3·7	+ 7·8
29th	Raipur	+ 7·3	+10·7	+ 9·0
„	Ranchi	+11·6	+ 5·9	+ 8·8
30th	Jhansi	+ 6·8	+10·9	+ 8·9
„	Jubbulpore	+ 7·6	+ 7·8	+ 7·7
31st	Sutna	+11·2	+10·5	+10·9
„	Nowgong	+ 6·5	+11·6	+ 9·1

The following gives temperature variation data for the 24 hours period ending at 8 A.M. of the 31st :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·1	—0·2	+0·5
Bengal and Assam	+0·2	—1·1	—0·5
N.-W. Provinces and Oudh	+5·9	+1·6	+3·8
Punjab	+6·7	+3·5	+5·1
Sind and Rajputana	+2·5	+3·2	+2·9
Central India and Gujarat	+3·1	+4·3	+3·7
Central Provinces and Berar	+4·8	—0·5	+2·2
Bombay	+2·6	—0·1	+1·3
Madras	+2·8	+0·4	+1·6

The highest temperatures of the month were recorded in the Coromandel coast districts from the 14th to the 20th, in the Deccan generally during the first week of the month, in Berar and the Central Provinces during the first week of the month (generally from the 1st to the 3rd), in Bihar and Chota Nagpur during the hot period of the last week of the month, and in the North-Western Provinces and Punjab generally during the last five days of the month.

The following gives the highest maximum temperatures of the month recorded at the hottest stations :—

STATION.	Highest maximum temperature recorded in May 1896.	Date on which recorded.
	°	
Jacobabad	121·0	30th
Montgomery	118·4	9th
Mooltan	117·5	31st
Chanda	116·9	8th

The temperatures were not quite so high as were registered during the very hot periods of the last week of the month in the years 1894 and 1895, of which data are given below :—

STATION.	Highest maximum temperature recorded in May 1896.	Date on which recorded.	Highest maximum temperature recorded in May 1894 or 1895.	Year in which recorded.
	°		°	
Jacobabad	121·0	30th	123·0	1895
Montgomery	118·4	9th	121·9	1895
Mooltan	117·5	31st	120·5	1895
Chanda	116·9	8th	115·4	1894

The following gives the variations 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 OF 24 HOURS PRECEDING 8 A.M. OF				
	9th	16th	23rd	30th	For whole month.
	°	°	°	°	°
Burma	+0·9	+1·2	−0·8	−0·8	+0·3
Bengal and Assam	0	+1·8	+1·3	+0·9	+0·7
North-Western Provinces and Oudh.	+4·0	+2·5	+2·2	+5·0	+3·4
Punjab	+6·5	+3·3	+4·3	+4·1	+4·8
Sind and Rajputana	+5·8	+3·4	+0·7	+3·5	+3·5
Central India and Gujarat	+4·1	+2·4	+0·9	+2·2	+2·4
Central Provinces and Berar	+4·9	+2·9	+1·9	+4·0	+3·3
Bombay	+2·1	+1·6	+1·6	+0·6	+1·5
Madras	+1·0	+2·9	+4·6	+2·3	+2·7

Winds.

Winds were more steady and stronger than usual at Port Blair and the Burma stations. They were on the average of the month much more westerly than usual as is shown by the following data for Port Blair and the Burma coast stations :—

STATION.	WIND DIRECTION.		
	Mean actual, May 1896.	Mean normal, May.	Westerly deflection.
			°
Port Blair	S75°W	S34°W	+41
Rangoon	S38°W	S19°W	+19
Diamond Island	S83°W	S76°W	+ 7

Winds were considerably steadier and stronger than usual in Bengal and Orissa. The following gives data for four stations:—

STATION.	VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, May 1896.	Mean normal, May.	Percentage variation.	Actual percentage, May 1896.	Normal percentage, May.	Variation from normal.
False Point	344	324	+ 6	92	71	+21
Saugor Island	420	367	+14	90	69	+21
Calcutta	162	172	− 6	71	66	+ 5
Dacca	200	149	+34	68	60	+ 8

As might be expected from the abnormal pressure features of the month, winds were slightly more westerly than usual in the interior of Bengal and Orissa, and less westerly at Saugor Island and False Point, where winds almost invariably show an opposite deflection to that of

the inland stations. The following data illustrate these features :—

STATION.		WIND DIRECTION. Mean actual, May 1896.	Mean normal, May.	Westerly deflection.
				°
COAST STATIONS	False Point .	S6°E	S31°W	−37
	Saugor Island .	S9°E	S12°W	−21
INLAND STATIONS	Cuttack . .	S23°W	S5°W	+18
	Chittagong .	S12°W	S	+12
	Calcutta . .	S5°W	S11°E	+16
	Burdwan . .	S7°E	S9°E	+ 2

Winds were largely above their normal strength in Bihar, Chota Nagpur and the eastern districts of the North-Western Provinces and were also very steady. This is shown by the following data for four representative stations :—

STATION.	STEADINESS. Actual percentage, May 1896.	Normal percentage, May.	Variation from normal.	VELOCITY IN MILES PER DIEM. Mean actual, May 1896.	Mean normal, May.	Variation from normal.
Hazaribagh . .	19	15	+ 4	238	210	+28
Patna	74	38	+36	190	118	+72
Allahabad . . .	42	20	+22	154	99	+55
Agra	48	30	+18	201	139	+62

Easterly winds frequently extend in May 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 extended westwards only as far as Bihar and was hence less marked than usual. The following gives data for two stations in North Bihar, and also for Hazaribagh, Allahabad and Lucknow :—

STATION.	WIND DIRECTION. Mean actual, May 1896.	Mean normal, May.	STEADINESS. Actual percentage, May 1896.	Normal percentage, May.	Variation from normal.
Darbhanga . .	S69°E	S86°E	76	59	+17
Patna . . .	N74°E	N84°E	74	38	+36
Hazaribagh . .	N61°W	N77°W	19	15	+ 4
Allahabad . .	N18°W	N 8°E	42	20	+22
Lucknow . . .	N7°W	N15°E	14	15	− 1

The preceding data hence indicate that there was a much stronger westerly element than usual in the mean air movement of the month over the Gangetic Plain (except North Bihar and Chota Nagpur), as was also the case in West and Central Bengal.

Winds were very unsteady in the western districts of the North-Western Provinces, the Punjab and Upper Sind. The following gives comparative data for stations at which this feature was most marked :—

STATION.	STEADINESS. Actual percentage, May 1896.	Normal percentage, May.	Variation from normal.	VELOCITY IN MILES PER DIEM. Mean actual, May 1896.	Mean normal, May.	Variation from normal.
	%	%				
Roorkee . . .	6	6	0	109	88	+21
Lahore . . .	3	21	−18	73	79	− 6
Ludhiana . . .	18	10	+ 8	91	56	+35
Jacobabad . . .	9	17	− 8	127	107	+20

The following gives comparative wind data of the various provinces of Northern India for the month :—

PROVINCE.	STEADINESS. Actual percentage, May 1896.	Normal percentage, May.	Variation from normal.	VELOCITY IN MILES PER DIEM. Mean actual, May 1896.	Mean normal, May.	Variation from normal.
Bengal . . .	67	54	+13	200	184	+16
Orissa	80	66	+14	237	225	+12
Bihar	75	49	+26	192	132	+60
Chota Nagpur . .	19	15	+ 4	238	210	+28
North-Western Provinces and Oudh.	28	19	+ 9	109	92	+17
Punjab . . .	16	25	− 9	81	80	+ 1

Winds were slightly stronger and much steadier than usual and also more directly from the west in Rajputana and Central India. The following data for three stations illustrate these features :—

STATION.	STEADINESS. Actual percentage, May 1896.	Normal percentage, May.	Variation from normal.	WIND DIRECTION. Mean actual, May 1896.	Mean normal, May.	Westerly deflection.
						°
Ajmere . . .	89	63	+26	S 81° W	S 60° W	+21
Deesa	93	76	+17	S 84° W	S 55° W	+29
Nowgong . . .	71	44	+27	N 82° W	N 70° W	+12

The mean air movement of the month was unusually vigorous and was practically normal in direction in Berar,

the Central Provinces and the Deccan. The data of the following stations illustrate these features :—

STATION.	VELOCITY IN MILES PER DIEM.			WIND DIRECTION.		
	Mean actual, May 1896.	Mean normal, May.	Variation from normal.	Mean actual, May 1896.	Mean normal, May.	Westerly deflection.
Akola	305	208	+ 97	N 59° W	N 51° W	+ 8°
Nagpur . . .	256	168	+ 88	N 33° W	N 41° W	— 8
Poona	447	337	+110	N 72° W	N 55° W	+17
Bellary . . .	204	200	+ 4	N 78° W	N 76° W	+ 2

The increased air movement in this area was on the whole most strongly shown in Berar and the Central Provinces.

Winds were steadier, but not quite so strong as usual at the west coast stations. The variations were small and of no significance. Winds were slightly more westerly than usual at Ratnagiri and Karwar. They were somewhat stronger in Mysore and the interior of Madras, but were feebler at Madras where they were also more variable in direction than usual. The following gives data for four stations in illustration :—

STATION.	VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, May 1896.	Mean normal, May.	Variation from normal.	Actual percentage, May 1896.	Normal percentage, May.	Variation from normal.
Madras . . .	189	220	—31	47	66	—19
Trichinopoly . .	214	145	+69	64	59	+ 5
Salem	145	100	+45	39	61	—22
Bangalore . . .	199	133	+66	66	72	— 6

Humidity and Cloud.

The air contained slightly more aqueous vapour than usual in Burma and Assam and humidity was hence above the normal in these areas to a moderate extent. The mean humidity percentage of the month was 5 in excess at Diamond Island, 4 at Akyab, and 3 at Rangoon, Sibsagar and Dhubri.

The mean absolute humidity of the month varied slightly and was generally above the normal in Bengal, but the relative humidity was in moderate defect, due to the increased temperature of the month in that area. The decrease was largest at Calcutta (5 in defect) and at Berhampore and False Point (each 3 in defect).

The mean absolute humidity of the month was in slight to moderate excess and the relative humidity in slight excess in Bihar due to the more frequent extension of easterly winds into that area than usual during the month.

The following gives comparative data for the larger political divisions of North-Eastern India :—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, May 1896.	Average normal, May.	Variation from normal.	Average actual, May 1896.	Average normal, May.	Variation from normal.
	"	"	"	%	%	
Burma	·910	·883	+·027	79	75	+4
Assam	·805	·789	+·016	82	81	+1
Bengal . . .	·880	·874	+·006	74	76	—2
Bihar	·751	·722	+·029	62	58	+4
Orissa	·931	·897	+·034	71	68	+3
Chota Nagpur . .	·483	·472	+·011	37	34	+3

The mean humidity percentages of the month were considerably to largely below the normal (mainly due to the excessive temperature of the period) in the North-Western Provinces, Punjab, Sind, Rajputana, Central India, Berar and the Central Provinces. Comparative data for these provinces are given in the following table :—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, May 1896.	Average normal, May.	Variation from normal.	Average actual, May 1896.	Average normal, May.	Variation from normal.
	"	"	"	%	%	
North-Western Provinces and Oudh.	·482	·461	+·021	33	37	—4
Punjab . . .	·468	·480	—·012	32	40	—8
Sind	·443	·450	—·007	25	31	—6
Rajputana . . .	·482	·509	—·027	32	36	—4
Central India . .	·360	·382	—·022	23	30	—7
Berar	·408	·421	—·013	28	31	—3
Central Provinces . .	·392	·437	—·045	25	32	—7

The decreased humidity was most marked at the stations for which data are given below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1896.	Normal, May.	Variation from normal.	Actual, May 1896.	Normal, May.	Variation from normal.
	"	"	"	%	%	
Ludhiana . . .	·489	·481	+·008	32	42	—10
Jacobabad . . .	·443	·450	—·007	25	31	—6
Raipur . . .	·407	·471	—·064	24	33	—9

The preceding data indicate that the amount of aqueous vapour present in the air was somewhat less than usual and that the decreased humidity was chiefly a result of the excessive temperature of the month.

Humidity was as largely below the normal at the hill stations of Upper India as at the adjacent plains stations. The following gives data for four representative stations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, May 1896.	Normal, May.	Variation from normal.	Actual, May 1896.	Normal, May	Variation from normal.
	"	"	"	%	%	
Murree	·239	·261	—·022	33	44	—11
Simla	·239	·286	—·047	36	47	—11
Chakrata	·226	·274	—·048	37	49	—12
Ranikhet	·336	·325	+·011	43	51	—8

The air was slightly drier than usual over the Peninsula, with the exception of some parts of the Bombay Deccan. The decreased humidity in these areas was almost solely a temperature effect. The following gives comparative data :—

AREA.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, May 1896.	Average Normal, May	Variation from normal.	Average actual, May 1896.	Average normal, May.	Variation from normal.
	"	"	"	%	%	
Bombay Coast	·877	·853	+·024	70	72	—2
Bombay Deccan	·540	·523	+·017	48	46	+2
Madras Coast	·911	·889	+·022	67	70	—3
„ Central	·505	·570	—·065	39	43	—4
„ South	·701	·754	—·053	52	61	—9
Mysore	·593	·592	+·001	60	62	—2

The mean humidity of the month was 3 below the normal at Quetta (representative of Baluchistan) and 9 in defect at the hill station of Wellington in Southern India.

The following gives a list of the stations at which the mean humidity of the month was below 30 per cent., showing the driest areas in India during the month :—

STATION.	RELATIVE HUMIDITY.	
	Mean daily, May 1896.	Mean 16 hours, May 1896
	%	%
Saugor	20	12
Sutna	22	12
Nowgong	23	13
Raipur	24	15
Jubbulpore	25	14
Hoshangabad	26	17
Jeypore	27	15
Akola	27	15
Lahore	29	17

Hence in May 1896, as in May 1895, the area of greatest dryness of the air included the stations of Saugor, Jubbulpore, Sutna and Nowgong, *i.e.*, the north-eastern districts of the Central Provinces, Bundelkhand and Baghelkhand.

The driest periods of the month in North-Western and Central India were from the 2nd to the 4th, the 13th to the 16th, the 29th to the 31st, and the following low humidities were recorded during these periods :—

STATION.	Date.	Humidity at 4 P.M.
		%
Nowgong	1st	7
Saugor	„	7
Jubbulpore	„	8
Sutna	2nd	5
Sutna	3rd	4
Jacobabad	„	6
Deesa	14th	7
Jubbulpore	15th	8
Khandwa	16th	7
Sutna	29th	3
Nowgong	„	6
Saugor	„	8
Jubbulpore	„	8
Chakrata	30th	2
Sutna	„	5
Nowgong	„	6

The humidity percentages during these very dry periods were not quite so low as are occasionally registered in May.

The following gives the most noteworthy of the very large changes in the amount of aqueous vapour present in the air at stations on or near the sea coast which occasionally or usually experience the alternating influence of land and sea winds during the day in May :—

Station.	Date.	Amount of aqueous Vapour.		
		Early morning.	10 A.M.	4 P.M.
		"	"	"
Deesa	11th	·457	·714	·297
	22nd	...	·676	·225
Patna	1st	·648	·768	·460
	14th	·726	·698	·352
	26th	·915	·856	·389
Aden	1st	·503	·893	·483
	17th	·540	·947	·962
	25th	·658	1·044	·949
Muscat	16th	·438	·886	·982
	17th	·585	1·015	·719
	20th	·435	·947	1·097

The air was slightly damper at Mauritius and Zanzibar, but the variations were too small to be of any significance. The mean humidity of the month was 7 below the normal at Aden.

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

(1) The air was very slightly damper in Burma and Assam.

(2) The mean humidity of the month was more or less below the average over the remainder of India, with the exception of Orissa, Bihar, Chota Nagpur and the Bombay Deccan, where it was in very slight excess.

(3) The deficiency was most marked in the Punjab and the Upper India hill districts, and was chiefly a temperature effect, and was not, as in the preceding months of April and March, a result of the presence of a much smaller quantity of aqueous vapour than usual in the air.

(4) This condition of decreased humidity extended westwards as far as Quetta, Aden and Bushire. It was the continuation of conditions established at the end of the previous south-west monsoon and remarkably persistent throughout the cold and hot weather periods of 1896.

The mean cloud amount of the month was in considerable excess at Port Blair, and in some parts of Burma and Chota Nagpur, and in moderate excess in Assam, Bengal and Chota Nagpur. The following gives comparative data :—

Station or Province.	Mean cloud amount.		
	Actual, May 1896.	Normal, May.	Variation from normal.
Port Blair	8·4	6·3	+2·1
Burma	7·1	5·9	+1·2
Assam	6·8	6·2	+0·6
Bengal	5·5	4·9	+0·6
Chota Nagpur	4·2	3·4	+0·8

There was less cloud than usual in Bihar, the North-Western Provinces, the Punjab, Rajputana, Central India, the Central Provinces and the peninsula generally. The following gives mean data :—

Province.	Mean cloud amount.		
	Average actual, May 1896.	Average normal, May.	Variation from normal.
Bihar	1·4	2·4	—1·0
North-Western Provinces and Oudh	1·2	1·9	—0·7
Punjab	1·1	2·1	—1·0
Rajputana	1·4	1·7	—0·3
Central India	2·1	2·8	—0·7
Central Provinces	2·1	2·8	—0·7
Mysore	4·6	4·4	+0·2
Bombay Deccan	3·0	3·5	—0·5
Madras	4·5	4·5	0

Cloud was locally in excess at Vizagapatam (+0·7) and Bellary (+1·9).

Skies were unusually free from cloud in the Punjab, and the mean cloud amount of the month was in large defect in that area and at the hill stations in Upper India. The following gives data :—

Station.	Mean cloud amount.		
	Actual, May 1896.	Normal, May.	Variation from normal.
Lahore	1·0	2·3	—1·3
Ludhiana	0·7	2·2	—1·5
Leh	6·0	6·4	—0·4
Kailang	5·4	6·2	—0·8
Murree	2·4	4·3	—1·9
Simla	2·7	3·9	—1·2
Chakrata	1·5	3·7	—2·2
Ranikhet	1·7	3·6	—1·9
Darjeeling	4·0	7·3	—3·3

The data for Leh and Kailang indicate that cloud was almost as largely in defect in the interior of the Himalayas as in the plains of Northern India. The cloud variation data for Darjeeling are doubtful, due to the recent appointment of a new observer whose estimate of cloud appears to differ largely from that of his predecessors.

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

STATION.	MEAN CLOUD AMOUNT.		
	Actual, May 1896.	Normal, May.	Variation from normal.
Multan	0·2	1·1	—0·9
Allahabad	0·4	1·6	—1·2
Jacobabad	0·5	1·2	—0·7
Meerut	1·0	1·8	—0·8
Roorkee	0·6	1·8	—1·2
Mount Abu	0·6	1·6	—1·0
Deesa	0·7	1·5	—0·8
Ludhiana	0·7	2·2	—1·5
Lucknow	0·8	1·9	—1·1
Muscat	0·9	?	?

Skies were hence, so far as is indicated by the observations, most serene throughout the whole month at Mooltan and Allahabad.

The following is a summary of the chief featuresof the distribution of cloud during the month :—

(1) Cloud was in large excess in Burma and in slight to moderate excess in Bengal, Assam and Chota Nagpur.

(2) Cloud was in slight to moderate defect in the North-Western Provinces, Rajputana, Central India, the Central Provinces and the Deccan.

(3) The mean cloud amount of the month was largely below the normal in Bihar and the Punjab and in the Kashmir and Punjab Himalayan areas.

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 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 4 inches in the western districts to 11 inches at Mymensingh in East Bengal, and 15 inches at Kuch Bihar in North Bengal. In Assam it ranges from 9 inches in the Central Assam valley districts to 52 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.

The rainfall of the month of May 1896 was below the normal over the whole of India with the exception of Tenasserim, Deltaic, North and East Bengal, North Bihar, Punjab (South-East), Malabar and Bombay Deccan, and the excess was small and unimportant in these areas except Tenasserim (+3·82 inches or 25 per cent.) and North Bengal (+5·07 inches or 48 per cent.). The rainfall of the month averaged less than a tenth of an inch and was hence actually or practically *nil* in Baluchistan, Sind, Kathiawar, Gujarat, Central India, Berar, Central Provinces, Rajputana and the southern districts of the Madras Presidency. The rainfall in the remaining districts occurred chiefly during thunderstorms and was even more irregularly distributed than usual in the Bombay Deccan and Malabar. In Upper India the only period of disturbance and light showers was the 10th, 11th and 12th, in Bengal and Assam the periods of rainfall were from the 1st to the 5th, the 8th and 9th, the 11th and 12th, the 15th to 18th and the 24th to the end of the month, in Burma the 5th and 6th, the 15th to 17th and

the 23rd to the 27th; and in Southern India and the Deccan the 3rd to the 5th, the 8th to the 11th and the 22nd to the 26th.

The following table gives comparative rainfall data for the 57 meteorological divisions of India :—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, May 1896.	Average normal, May.	Average actual, May 1896.	Average normal, May.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	19·25	15·43	+3·82
	Lower Burma Deltaic*	?	?	7·54	13·42	−5·88
	Central do.*	?	?	3·23	5·16	−1·93
	Upper do.*	?	?	1·96	?	?
	Arakan*	?	?	1·73	14·76	−13·03
Bengal and Assam	Eastern Bengal	12·9	10·7	11·15	10·29	+0·86
	Assam (Surma)*	?	?	10·65	14·41	−3·76
	Do. (Hill tracts)*	?	?	10·28	13·38	−3·10
	Do. (Brahmaputra)*	?	?	7·16	8·93	−1·77
	Deltaic Bengal	9·5	7·9	6·01	5·53	+0·48
	Central do.	7·8	6·7	5·03	5·25	−0·22
	North do.	16·4	11·0	15·63	10·56	+5·07
	Bengal Hills	16·8	13·4	10·99	11·38	−0·39
	Orissa	6·7	5·2	3·39	4·44	−1·05
	Chota Nagpur	2·5	3·7	1·33	2·57	−1·24
	Bihar (South)	1·6	2·2	0·93	1·70	−0·77
	Do. (North)	4·8	4·2	3·49	3·15	+0·34
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·3	1·0	0·11	0·51	−0·40
	Oudh (South)	0·3	1·2	0·11	0·57	−0·46
	Do. (North)	0·8	1·8	0·37	0·95	−0·58
	North-Western Provinces (Central)	0·5	0·9	0·24	0·36	−0·12
	Do. do. (West)	1·0	1·2	0·44	0·48	−0·04
	Do. do. (Submontane East)	0·5	1·9	0·33	1·19	−0·86
	Do. do. (do. West)	1·0	1·9	0·39	0·97	−0·58
	Do. do. (Hills)	3·1	5·1	1·35	2·23	−0·88
Punjab	Punjab (South-East)	1·5	1·5	0·68	0·59	+0·09
	Do. (South)	1·0	1·6	0·47	0·56	−0·09
	Do. (Central)	0·9	1·8	0·25	0·83	−0·58
	Do. (Submontane)	0·7	1·9	0·24	0·86	−0·62
	Do. (Hill Districts)	2·0	5·3	0·81	2·66	−1·85
	Do. (North)	1·3	2·0	0·54	1·10	−0·56
	Do. (West)	1·1	1·0	0·32	0·45	−0·13
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	6·9	7·1	5·78	5·40	+0·38
	Madras (South-Central)	0·2	0·3	0·14	0·24	−0·10
	Coorg	7·1	?	5·35	?	?
	Mysore*	?	?	2·09	2·64	−0·55
	Konkan	1·7	2·4	0·91	1·72	−0·81
	Bombay Deccan	3·4	3·5	2·10	1·82	+0·28
	Khandesh	0·8	1·7	0·39	1·07	−0·68
Central Provinces and Berar.	Berar*	?	?	0	0·31	−0·31
	Central Provinces (West)*	?	?	0·07	0·33	−0·26
	Do. (Central)*	?	?	0·02	0·41	−0·39
	Do. (East)*	?	?	0·10	0·75	−0·65
Bombay (North)	Gujarat	0	0·5	0	0·30	−0·30
	Kathiawar	0·1	0·4	0·05	0·24	−0·19
	Sind	0·2	?	0·08	0·11	−0·03
	Baluchistan Hills	0·1	?	0·02	0·29	−0·27
Rajputana and Central India.	Central India (East)	0·1	?	0·05	0·42	−0·37
	Rajputana (East) and Central India (West)	0·4	?	0·05	0·44	−0·39
	Rajputana (West)	0·2	?	0·10	0·53	−0·43
Madras	East Coast (North)	0·1	0·2	0·07	0·12	−0·05
	Do. (do.) (a)	7·0	5·3	3·56	2·98	+0·58
	Hyderabad (South)*	?	?	0·41	1·37	−0·96
	Madras (Central)	0·3	0·3	0·15	0·16	−0·01
	East Coast (Central)	1·4	1·8	0·70	1·66	−0·96
	East Coast (South)	0·1	0·2	0·08	0·22	−0·14
	Madras (South)	0·2	0·2	0·09	0·12	−0·03

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

Burma received more frequent rain than usual during the month.

The chief periods of rainfall were the 5th and 6th, the 15th to the 17th and the 23rd to the 27th. The following comparative statement of the rainfall of the month is based on the weekly rainfall telegrams received from district officers in that province :—

DIVISION.	RAINFALL.		
	Average actual, May 1896.	Average normal, May.	Variation from normal.
	Inches.	Inches.	Inches.
Tenasserim	19·25	15·49	+ 3·82
Lower Burma (Deltaic) . . .	7·54	13·42	− 5·88
Central „ . . .	3·23	5·16	− 1·93
Upper „ . . .	1·96	?	?
Arakan	1·73	14·76	−13·03

The rainfall of the month ranged between 0·94 inch at Thayetmyo in the central dry district and 34·59 inches at Tavoy in Tenasserim. It was in moderate excess (25 per cent.) in Tenasserim. It was in considerable to large defect in Burma. The deficiency averaged 44 per cent. in Lower Burma, 37 per cent. in Central Burma and 88 per cent. in Arakan.

Bengal received unusually frequent rain during the month, the average number of rainy days being about 20 per cent. above the normal. The rainfall occurred chiefly as thundershowers accompanying nor'westers or other hot weather storms. The falls were, however, not so heavy as are occasionally received in May. The following gives a brief statement of the periods of rainfall of the month :—

1st.—The 1st and 2nd. North, East and Central Bengal received moderate rain during this period.

2nd.—The 4th and 5th. The whole of Bengal and North Bihar obtained moderate to heavy showers.

3rd.—The 8th and 9th. Bengal and Orissa received moderate to heavy showers on both days and Bihar and Chota Nagpur light to moderate showers on the 8th.

4th.—The 11th and 12th, when Orissa and Bengal obtained moderate showers.

5th.—The 15th to the 18th. North and East Bengal received moderately heavy rain daily during this period. In South Bengal, light local showers fell on the 18th and 19th and in Bihar on the 18th.

6th.—The 21st on which day thundershowers were received over the whole province except Orissa and Chota Nagpur.

7th.—The 24th to the end of the month. East and North Bengal obtained daily rain during this period and the remainder of the province occasional light local showers. The heaviest falls in 24 hours during this period were :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Dinajpur	Thakurgaon . . .	24th .	5·32
Jalpaiguri . . .	Alipore Duar . . .	„ .	4·36
Rangpur	Rangpur . . .	„ .	4·04
Tippera	Nasirnagar . . .	„ .	4·21
Mymensingh . . .	Netrokona . . .	25th .	4·30
„ . . .	Durgapur . . .	28th .	4·00
Tippera	Laksham . . .	31st .	4·00

The following table gives comparative data for the nine divisions of the province :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Average actual, May 1896.	Average normal, May.	Variation from normal.	Average actual, May 1896.	Average normal, May.	Variation from normal.
				Inches.	Inches.	Inches.
Eastern Bengal . .	12·9	10·7	+2·2	11·15	10·29	+0·86
Deltaic „ . .	9·5	7·9	+1·6	6·01	5·53	+0·48
Central „ . .	7·8	6·7	+1·1	5·03	5·25	−0·22
North „ . .	16·4	11·0	+5·4	15·63	10·56	+5·07
Bengal Hills . .	16·8	13·4	+3·4	10·99	11·38	−0·39
Orissa . . .	6·7	5·2	+1·5	3·39	4·44	−1·05
Chota Nagpur . .	2·5	3·7	−1·2	1·33	2·57	−1·24
Bihar (South) . .	1·6	2·2	−0·6	0·93	1·70	−0·77
„ (North) . .	4·8	4·2	+0·6	3·49	3·15	+0·34

The preceding data indicate that the rainfall was in large excess in North Bengal (averaging 48 per cent.) and was in slight excess (and hence practically normal) in East and Deltaic Bengal and North Bihar. South Bihar obtained an average of barely 55 per cent. of its normal, and Chota Nagpur only 50 per cent.

The rainfall was very unequally distributed. It was 33 per cent. or more in excess in the divisions for which data are given below :—

DISTRICT.	RAINFALL.			
	Actual, May 1896.	Normal, May.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Rangpur . . .	19·13	10·51	+8·62	+82
Rajshahi . . .	8·58	6·15	+2·43	+40
Bhagalpur . . .	4·70	3·38	+1·32	+39
Kuch Bihar . . .	19·37	14·43	+4·94	+34
Dacca	12·84	9·57	+3·27	+34
Burdwan . . .	6·68	5·01	+1·67	+33

It was upwards of 50 per cent. in defect in the following divisions :—

DISTRICT.	RAINFALL.			
	Actual, May 1896.	Normal, May.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Gaya	0·22	1·36	—1·14	—84
Shahabad	0·33	1·09	—0·76	—70
Hazaribagh . . .	0·74	2·48	—1·74	—70
Patna	0·70	2·04	—1·34	—66
Saran	0·76	1·75	—0·99	—57
Lohardaga	1·07	2·17	—1·10	—51

The central, submontane and hill districts of the North-Western Provinces had light to moderate thundershowers on the 11th and 12th and from the 18th to the 20th. The following gives a summary of the rainfall data of the month :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Average actual, May 1896.	Average normal, May.	Variation from normal.	Average actual, May 1896.	Average normal, May.	Variation from normal.
				Inches.	Inches.	Inch.
North-Western Provinces (East)	0·3	1·0	—0·7	0·11	0·51	—0·40
Oudh (South) .	0·3	1·2	—0·9	0·11	0·57	—0·46
,, (North) .	0·8	1·8	—1·0	0·37	0·95	—0·58
North-Western Provinces (Central)	0·5	0·9	—0·4	0·24	0·36	—0·12
,, ,, (West) .	1·0	1·2	—0·2	0·44	0·48	—0·04
,, ,, (Submontane, East)	0·5	1·9	—1·4	0·33	1·19	—0·86
,, ,, ,, (West)	1·0	1·9	—0·9	0·39	0·97	—0·58
,, ,, (Hills) .	3·1	5·1	—2·0	1·35	2·23	—0·88

The rainfall of the month averaged less than a quarter of an inch over three divisions of the province, *viz.*, the central and east divisions of the North-Western Provinces and South Oudh. It was below the normal over the whole province, the deficiency being greatest in the submontane districts.

The Punjab hill and northern districts received thundershowers on the 11th and 12th, the central, southern and submontane districts on the 18th and 20th and the hill districts on the 23rd and 24th. The month was, as May 1895, unusually dry in the hill districts which received an average of only 0·8 inch, barely a third of the normal average rainfall of the month. The rainfall of the month was below the normal over nearly the whole of the province as is shown by the following statement :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Average Actual, May 1896.	Average normal, May.	Variation from normal.	Average actual, May 1896.	Average normal, May.	Variation from normal.
				Inch.	Inches.	Inches.
Punjab (South East) .	1·5	1·5	0	0·68	0·59	+0·09
,, (South) . .	1·0	1·6	—0·6	0·47	0·56	—0·09
,, (Central) . .	0·9	1·8	—0·9	0·25	0·83	—0·58
,, (Submontane) .	0·7	1·9	—1·2	0·24	0·86	—0·62
,, (Hill Districts) .	2·0	5·3	—3·3	0·81	2·66	—1·85
,, (North) . .	1·3	2·0	—0·7	0·54	1·10	—0·56
,, (West) . .	1·1	1·0	+0·1	0·32	0·45	—0·13

Practically no rain fell in Baluchistan and Central India during the month. Rajputana received local thundershowers, chiefly from the 20th to the 22nd. They were most numerous in the Jeypore and Jodhpore States. The average total rainfall of the month was small in amount and only averaged 0·33 inch in Jeypore where it was greatest.

Berar and the Central Provinces received light local thundershowers of little importance, chiefly on the 31st. The average rainfall of the Central Provinces area was less than a tenth of an inch and was considerably below the normal, as is shown by the following statement :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Average actual, May 1896.	Average normal, May.	Variation from normal.	Average actual, May 1896.	Average normal, May.	Variation from normal.
				Inch.	Inch.	Inch.
Berar	0·9	?	?	0·62	?	?
Central Provinces (West) .	0·3	1·0	—0·7	0·14	0·48	—0·34
,, ,, (Central)	0·1	1·3	—1·2	0·03	0·57	—0·54
,, ,, (East) .	0·3	1·6	—1·3	0·07	0 85	—0·78

No rain fell in the Khandesh district and the Sind, Gujarat and Kathiawar divisions of the Bombay Presidency. The North Kanara district in the Konkan obtained light showers daily during the last week of the month. The South Deccan and Karnatak districts received thundershowers which gave light and fairly general rain on the 5th and 6th, from the 20th to 26th and from the 29th to the 31st. The Ahmednagar and Nasik districts of the Khandesh division received light showers from the 28th to the 31st. The following gives comparative data for the Deccan districts :—

DISTRICT.	RAINFALL.		
	Average actual, May 1896.	Average normal, May.	Variation from normal.
	Inches.	Inches.	Inch.
Dharwar	3·17	2·71	+0·46
Bijapur	1·65	1·21	+0·44
Belgaum	2·88	2·16	+0·72
Satara	2·24	1·56	+0·68
Sholapur	0·98	1·23	−0·25
Poona	1·24	1·30	−0·06
Ahmednagar	0·64	1·05	−0·41

The rainfall of the month in the Madras Presidency was much smaller in amount than usual, chiefly due to the delay in the establishment of the monsoon but in part to the less frequent occurrence of series of thunderstorms. The chief periods of rainfall were as follows :—

1st.—The 3rd to the 5th, during which Malabar, Travancore and the southern districts received moderate rain. The Travancore State had an average of 1·14 inches on the 4th.

2nd.—The 8th to the 11th, during which thundershowers occurred in the whole presidency with the exception of the Kistna, Chingleput and South Arcot districts. The falls were generally light and the total rainfall of the period very moderate in amount.

3rd.—The 22nd to the 26th. Thundershowers occurred in all districts during this period, but the falls were very light in the northern and central districts. Madura and Tinnevelly received practically no rain. The falls were moderately heavy in the Malabar coast districts. The Travancore State received an average of 2·1 inches during the period, the Malabar district of 3·17 inches and Canara of 1·19 inches.

4th.—The 31st, on which the Malabar coast districts obtained heavy rain. Thus Ponani received 4·82 inches, Taliparamba 4·52 inches and Quilandi 4·36 inches.

The following gives comparative data for each of the 22 collectorates of the Presidency :—

DISTRICT.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Average actual, May 1896.	Average normal, May.	Average actual, May 1896.	Average normal, May.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam	4·2	4·3	1·88	2·54	−0·66
Vizagapatam	3·9	4·2	2·26	2·70	−0·44
Godavari	1·2	2·8	0·76	2·00	−1·24
Kistna	1·0	2·6	0·69	1·73	−1·04
Nellore	1·4	1·8	0·70	1·66	−0·96
Chingleput	0·5	2·1	0·16	2·56	−2·40
Madras	0	1·1	0	2·21	−2·21
North Arcot	3·5	3·5	2·21	2·95	−0·74
South Arcot	1·6	3·4	0·84	3·30	−2·46
Tanjore	1·4	3·5	0·66	3·34	−2·68
Trichinopoly	4·6	4·6	2·77	4·02	−1·25
Madura	3·9	3·8	2·21	2·33	−0·12
Tinnevelly	2·7	2·9	1·71	1·79	−0·08
Malabar	9·0	9·0	7·49	8·39	−0·90
South Canara	6·9	7·1	5·78	5·40	+0·38
Salem	5·0	6·2	2·91	4·31	−1·40
Coimbatore	4·5	5·5	2·52	3·69	−1·17
Nilgiris	5·4	9·8	2·69	6·31	−3·62
Cuddapah	2·8	2·8	1·67	1·92	−0·25
Anantapur	3·7	3·2	2·49	2·39	+0·10
Bellary	3·5	3·5	2·06	1·94	+0·12
Kurnool	2·4	2·2	1·07	1·19	−0·12

Table

Abstract of Observations taken at 8 A.M. at 207 Station

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.		...	...	+·005	...	...	...	...	...	...	...	89·7	−0·6	77·1	+0·4	83·4	−0·1	12·6	...	...	...	...	24·
Bay Islands	Port Blair	61	29·817	?	29·809	29·861	11th	29·721	16th	·140	82·6	89·6	?	78·2	?	83·9	?	11·4	96·5	9th	73·5	22nd	23·
Tenasserim	Mergui	96	29·799	?	29·827	29·913	27th	29·688	19th	·225	80·5	88·4	?	75·3	?	81·8	?	13·1	96·7	6th	73·7	21st	23·
	Tavoy	26	29·902	?	29·859	29·988	26th	29·746	18th	·242	80·1	88·6	?	75·1	?	81·9	?	13·5	98·2	5th	72·7	10th	25·
	Moulmein	94	29·780	+·012	29·812	29·861	30th	29·624	19th	·237	78·8	87·6	−2·4	75·6	−0·1	81·6	−1·3	12·0	96·0	5th	71·3	6th	24·
Lower Burma	Rangoon	41	29·809	−·005?	29·787	29·878	30th	29·673	17th	·205	80·7	91·9	−0·6	77·2	0	84·6	−0·3	14·7	103·1	1st	73·9	17th	29·
	Bassein	27	29·823	+·010	29·784	29·892	30th	29·710	18th	·182	82·2	91·2	−0·8	77·3	+0·4	84·3	−0·2	13·9	98·7	2 days	72·9	24th	25·
	Diamond Island	41	29·808	+·006	29·784	29·874	2nd & 30th	29·697	18th	·177	84·1	88·6	−0·4	79·6	+1·1	84·1	+0·4	9·0	92·6	13th	72·9	2 days	19·
Arakan	Akyab	20	29·800	+·004	29·763	29·884	3rd	29·701	2 days	·183	84·7	91·8	+1·3	78·6	+0·8	85·2	+1·1	13·2	96·1	3rd	71·2	30th	24·
II.—Burma, Inland		...	...	−·003	...	...	...	...	...	...	...	95·2	+0·1	73·9	+1·4	84·3	+0·8	20·8	...	...	...	...	34·
Central Burma	Toungoo	183	29·644	−·001	29·768	29·721	29th	29·528	18th	·193	82·5	95·6	−0·6	77·8	+1·4	86·7	+0·4	17·8	102·7	2 days	74·2	6th	28·
	Thayetmyo	134	29·680	−·004	29·754	29·756	6th	29·570	19th	·186	25·4	99·8	+0·4	78·8	+1·3	89·3	+0·9	21·0	106·1	2nd	72·6	7th	33·
Upper Burma	Minbu	?	29·645	?	?	29·721	11th	29·519	19th	·202	84·1	100·4	?	79·9	?	90·2	?	20·5	106·1	2 days	76·1	28th	30·
	Yamethin	645	29·165	?	29·757	29·235	11th	29·053	19th	·182	83·9	99·6	?	?	?	?	?	?	107·0	4th	?	...	?
	Taunggyi	?				Not recorded.					69·9	80·8	?	62·0	?	71·4	?	18·8	87·6	1st	57·5	18th	30·
	Mandalay	249	29·553	?	29·750	29·631	11th	29·424	19th	·207	84·8	101·8	?	79·4	?	90·6	?	22·4	106·1	2 days	70·1	31st	36·
	Kindat	?	29·450	?	?	29·558	2nd	29·334	22nd	·224	80·6	96·3	+0·6	75·0	+1·5	85·7	+1·1	21·3	103·3	9th	64·5	2nd	38·
	Lashio	?	27·088	?	?	27·188	8th	26·970	27th	·218	72·4	88·1	?	65·4	?	76·8	?	22·7	100·0	25th	58·0	7th	42·
	Bhamo	?	29·427	?	?	29·543	5th	29·307	19th	·236	78·8	94·2	?	72·6	?	83·4	?	21·6	104·6	2nd	65·8	6th	38·
III.—Assam		...	...	+·006	...	...	...	...	...	...	...	86·4	−0·4	72·5	+0·3	79·4	0	13·9	...	...	...	...	29·
Surma	Silchar	104	29·711	+·006	29·767	29·820	5th	29·587	22nd	·233	78·7	89·2	+1·2	73·0	+0·9	81·1	+1·1	16·2	96·6	8th	63·9	2nd	32·
Brahmaputra	Sibsagar	333	29·486	+·006	29·779	29·628	4th	29·362	22nd	·266	76·3	85·6	−0·7	72·2	+0·7	78·9	0	13·4	93·2	12th	62·5	2nd	30·
	Dhubri	115	29·681	?	29·753	29·810	5th	29·566	18th	·244	75·6	84·3	−1·6	72·2	−0·6	78·3	−1·1	12·1	91·2	14th	67·4	1st	23·
IV.—Bengal and Orissa		...	...	+·003	...	...	...	...	...	...	...	92·8	+0·1	75·9	+0·2	84·4	+0·2	16·9	...	...	...	...	3·
East Bengal	Chittagong	87	29·709	+·001	29·744	29·812	4th	29·625	2 days	·187	81·6	88·2	+0·2	75·5	+0·4	81·9	+0·3	12·7	91·2	22nd	68·1	2 days	2·
	Lungleh	?				Not recorded.					71·3	80·2	?	64·7	?	72·5	?	15·5	84·8	17th	56·2	2nd	2·
	Noakhali	43	29·741	?	29·730	29·873	4th	29·658	17th	·215	82·1	88·8	?	75·3	?	82·1	?	13·5	91·5	18th	65·9	1st	2·
	Comilla	36	29·752	?	29·737	29·850	4th	29·666	22nd	·184	80·0	90·4	?	74·1	?	82·2	?	16·3	93·8	8th	65·8	1st & 2nd	2·
	Sirajganj	49	29·713	?	29·712	29·845	5th	29·606	26th	·239	78·8	89·4	?	72·8	?	81·1	?	16·6	95·3	18th	67·2	2nd	2·
	Narayanganj	26	29·748	+·004	29·722	29·856	7th	29·664	22nd	·192	81·0	90·2	−0·6	75·4	−0·1	82·8	−0·4	14·8	94·1	18th	66·7	1st	2·
	Barisal	13	29·754	+·008	29·712	29·870	5th	29·673	17th	·197	83·9	91·4	+0·3	76·7	+0·1	84·1	+0·2	14·7	94·3	2 days	66·9	2nd	2·
	Mymensingh	59	29·724	+·003	29·735	29·829	11th	29·626	18th	·203	77·8	87·5	−0·8	72·8	−0·7	80·2	−0·8	14·7	92·2	24th	66·6	2nd	2·
Deltaic Bengal	Faridpur	46	29·730	?	29·724	29·849	7th	29·651	19th	·198	80·6	91·6	?	73·6	?	82·6	?	18·0	95·3	2nd	66·9	1st	2·
	Jessore	33	29·713	?	29·694	29·837	7th	29·613	16th	·224	83·0	94·2	0	75·7	−0·7	85·0	−0·4	18·5	97·5	16th	68·8	2nd	2·
	Calcutta	21	29·720	+·003	29·687	29·849	11th	29·622	16th	·227	84·1	94·5	+1·0	77·6	+0·7	86·0	+0·9	16·9	99·4	2 days	70·2	8th	2·
	Saugor Island	25	29·719	+·002	29·688	29·835	7th	29·621	17th	·214	86·0	92·0	+0·5	81·0	+0·5	86·5	+0·5	11·0	94·9	2 days	72·0	31st	2·
	Krishnagar	47	29·697	?	29·692	29·829	11th	29·598	16th	·231	82·9	95·2	?	75·7	?	85·5	?	19·5	99·2	2nd & 24th	68·2	4th	3·
	Midnapore	149	29·579	?	29·674	29·721	11th	29·490	17th	·231	84·8	99·1	?	78·4	?	88·8	?	20·7	104·9	2nd	69·2	5th	3·

I.

in India, Burma, etc., in May 1896.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.			RAINFALL.												STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour.	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st March to 31st May 1896.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st May.	Heaviest rainfall during month.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19·42	11·73	+5·52	...	...	...	...	I.—Burma Coast and Bay Islands.	
1	1	1	...	...	2	7	12	7	8·3	7·3	+ 14	86	·961	8·0	20	?	?	27·23	15·74	+11·49	27·83	18·39	+ 9·44	4·90	Port Blair .	BAY ISLANDS.
...	6	2	1	1	7	6	3	5	2·2	2·1	+ 5	87	·903	5·6	18	?	?	23·76	16·86	+ 6·90	26·92	24·80	+ 2·12	3·28	Mergui .	TENASSERIM.
21	...	1	...	...	1	5	1	2	1·8	?	?	87	·886	4·8	18	?	?	34·59	?	?	35·88	?	?	9·52	Tavoy.	
...	1	5	3	11	8	2	...	1	3·4	3·1	+ 10	88	·860	7·6	19	15·45	+3·55	24·51	17·45	+ 7·06	30·94	20·81	+10·13	3·56	Moulmein.	
...	2	2	2	...	7	11	5	2	4·6	3·9	+ 18	86	·901	6·7	16	9·36	+6·64	10·21	5·77	+ 4·44	10·22	7·91	+ 2·31	1·85	Rangoon .	LOWER BURMA.
6	...	...	...	1	3	14	7	10	5·4	5·0	+ 8	84	·928	5·4	13	12·27	+0·73	13·40	9·42	+ 3·98	15·45	11·53	+ 3·92	4·18	Bassein.	
...	3	...	1	1	1	14	5	6	9·3	4·5	+107	76	·881	7·0	13	11·18	+1·82	13·99	8·23	+ 5·66	13·99	9·83	+ 4·16	2·78	Diamond Island.	
...	3	6	13	2	6	1	...	...	3·7	7·0	− 47	84	·994	6·1	8	10·18	−2·18	7·63	8·55	− 0·92	9·23	9·72	− 0·49	3·33	Akyab .	ARAKAN.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4·57	7·18	−3·96	...	...	...	...	II.—Burma, Inland.	
2	1	2	...	13	9	1	1	2	5·3	3·5	+ 51	82	·925	7·8	9	10·09	−1·09	4·74	12·30	− 7·56	8·03	13·80	− 5·77	1·66	Toungoo .	CENTRAL BURMA.
...	2	...	...	7	15	4	3	...	7·7	7·3	+ 5	68	·824	3·2	4	6·64	−2·64	0·94	3·72	− 2·78	1·08	4·57	− 3·49	0·27	Thayetmyo.	
1	1	1	5	13	5	2	1	2	11·3	?	?	69	·800	5·0	4	?	?	1·83	?	?	1·96	?	?	0·77	Minbu .	UPPER BURMA.
6	...	...	...	16	9	...	...	...	6·6	?	?	68	·780	1·5	3	?	?	2·63	?	?	3·00	?	?	1·56	Yamethin.	
11	1	...	...	9	...	7	...	3	?	?	?	80	·586	6·0	13	?	?	12·05	?	?	12·85	?	?	4·20	Taunggyi.	
...	4	4	...	1	17	5	...	...	7·9	?	?	68	·800	4·5	5	?	?	4·93	?	?	5·37	?	?	3·68	Mandalay.	
22	5	...	...	1	2	...	...	1	1·1	?	?	76	·803	5·4	9	?	?	3·97	5·52	− 1·55	5·12	8·33	− 3·21	0·95	Kindat.	
				Not recorded.					?	?	?	82	·652	7·2	13	?	?	5·45	?	?	6·98	?	?	1·30	Lashio.	
9	1	10	1	1	2	5	...	2	3·4	?	?	83	·803	5·0	11	?	?	4·58	?	?	6·98	?	?	0·76	Bhamo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15·45	15·01	+0·43	...	...	...	...	III.—Assam.	
22	...	...	2	3	1	1	1	1	3·0	3·4	− 12	84	·824	7·8	19	17·27	+1·73	12·55	18·63	− 6·08	40·54	42·13	− 1·59	2·12	Silchar .	SURMA.
3	...	15	1	5	...	4	3	...	4·6	2·9	+ 59	91	·829	8·4	17	16·91	+0·09	11·23	12·22	− 0·99	36·03	26·21	+ 9·82	1·75	Sibsagar .	BRAHMAPUTRA.
3	5	8	9	3	1	...	1	1	9·0	7·0	+ 28	89	·788	7·4	22	15·13	+[illegible]	22·56	14·19	+ 8·37	28·98	21·20	+ 7·78	2·71	Dhubri.	
...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	7·98	6·95	+1·30	...	...	...	...	IV.—Bengal and Orissa.	
1	1	5	7	10	6	1	...	...	5·6	6·4	− 13	83	·897	5·4	13	10·91	+2·09	11·59	10·14	+ 1·45	16·17	16·91	− 0·74	3·40	Chittagong	EAST BENGAL.
				Not recorded.					?	?	?	83	·636	?	12	?	?	6·20	?	?	9·48	?	?	1·72	Lungleh.	
...	...	2	8	9	6	6	...	...	5·5	?	?	84	·837	4·2	14	10·00	+4·00	14·77	9·82	+ 4·95	20·38	17·60	+ 2·78	3·15	Noakhali.	
...	...	1	14	3	13	...	...	...	5·5	?	?	92	·954	5·5	11	11·47	−0·47	11·39	10·35	+ 1·04	19·07	19·31	− 0·24	1·93	Comilla.	
14	2	2	2	5	6	...	...	...	3·2	?	?	85	·844	6·0	16	9·95	+6·05	10·35	7·27	+ 3·08	12·31	11·33	+ 0·98	2·77	Sirajganj.	
...	1	5	5	10	8	2	...	...	8·3	6·2	+ 34	87	·922	6·6	13	10·55	+2·45	10·99	9·21	+ 1·78	18·71	17·13	+ 1·58	2·23	Narayanganj.	
14	...	2	1	1	11	2	...	...	4·3	?	?	82	·957	6·3	9	10·00	−1·00	11·36	8·03	+ 3·33	13·05	13·99	− 0·94	2·15	Barisal.	
3	3	6	13	5	...	1	...	...	3·6	?	?	85	·816	5·8	18	13·05	+4·95	15·20	11·03	+ 4·17	18·58	17·16	+ 1·42	3·20	Mymensingh.	
10	...	1	3	7	9	1	...	...	3·2	?	?	88	·926	4·8	14	10·70	+3·30	10·48	8·90	+ 1·58	14·58	15·57	− 0·99	1·57	Faridpur .	DELTAIC BENGAL.
5	...	...	4	11	8	2	...	1	4·8	4·9	− 2	84	·941	5·9	15	9·18	+5·82	9·59	7·62	+ 1·97	11·91	13·46	− 1·55	1·58	Jessore.	
1	...	2	3	6	10	3	2	...	6·8	7·1	− 4	78	·922	5·1	6	7·82	−1·82	4·35	6·12	− 1·77	4·55	8·91	− 4·36	1·04	Calcutta.	
...	...	1	2	3	19	6	...	...	18·2	15·3	+ 19	81	1·016	6·2	9	7·09	+1·91	6·54	5·19	+ 1·35	7·04	7·73	− 0·69	2·00	Saugor Island.	
1	...	1	9	7	12	...	1	...	7·9	?	?	75	·849	5·0	8	7·55	+0·45	9·72	5·83	+ 3·89	12·29	9·80	+ 2·49	2·19	Krishnagar.	
5	...	2	...	5	19	...	...	...	3·6	?	?	78	·940	2·3*	9	7·05	+1·95	4·93	5·13	− 0·20	5·25	8·09	− 2·84	1·08	Midnapore.	

* Mean of 30 days.

Tab

Abstract of Observations taken at 8 A.M. at 207 Statio

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	29·398	?	29·645	29·548	11th	29·304	16th	·244	84·6	101·9	?	78·4	?	90·2	?	23·5	111·1	16th	67·6	28th	4
	Raniganj	334	29·393	?	29·674	29·540	11th	29·289	17th	·251	83·3	101·8	?	78·0	?	89·9	?	23·8	111·8	2nd	71·4	5th & 8th	4
	Burdwan	107	29·629	−·006	29·683	29·767	11th	29·518	16th	·249	84·1	98·0	+0·8	77·8	+0·6	87·8	+0·7	20·2	106·2	2nd	68·2	8th	3
	Naya Dumka	489	29·234	?	29·678	29·379	11th	29·122	26th	·257	83·6	98·5	?	76·6	?	87·6	?	21·9	103·4	2nd & 15th	67·6	29th	4
	Berhampore	67	29·673	+·010	29·694	29·807	11th	29·579	19th	·228	81·6	96·9	+1·2	76·1	+0·1	86·6	+0·7	20·8	107·9	2nd	70·3	2 days	3
	Rampur Boalia.	70	29·679	?	29·698	29·808	11th	29·569	26th	·239	91·3	93·0	?	73·8	?	83·4	?	19·2	99·1	16th & 20th.	67·1	27th	3
	Malda	72	29·658	?	29·682?	29 807	5th	29·533	26th	·274	80·9	94·7	?	74·4	?	84·6	?	20·3	102·1	26th & 27th.	65·5	4th	3
	Bogra	61	29·693	?	29·706	29·816	11th	29·579	26th	·237	78·5	90·4	−1·8	72·6	−1·6	81·5	−1·7	17·8	95·7	18th	66·7	4th	2
NORTH BENGAL	Dinajpur	123	29·611	?	29·720	29·767	5th	29·529	26th	·238	77·5	89 3	−1·8	72·7	−1·0	81·0	−1·4	16·6	94·8	14th	66·8	4th	2
	Rangpur	123	29·658	?	29·736	29·788	4th & 5th	29·556	26th	·232	77·3	87·1	?	72·9	?	79·6	?	15·1	92·7	23rd	66·7	31st	2
	Jalpaiguri	284	29·505	+·010	29·750	29·641	5th	29·389	18th	·252	77·4	87·2	−0·4	71·5	+0·4	79·4	0	15·7	93·4	12th	63·6	1st	2
ORISSA	Balasore	56	29·680	+·009	29·672?	29·803	11th	29·579	17th	·224	86·5	97·9	+2·3	79·8	+1·9	88·9	+2·1	18·1	106·0	2 days	68·3	9th	3
	False Point	21	29 724	+·004	29·686	29·851	5th	29·610	2 days	·241	86·2	91·2	+0·1	80·6	+1·4	85·9	+0·8	10·6	98·0	25th	68·0	9th	3
	Cuttack	80	29·647	−·008	29·669	29·758	5th	29·541	17th	·217	86·3	102·4	+1·0	81·1	+1·6	91·9	+1·3	21·3	110·3	21st	72·7	10th	3
	Shortt's Island	?	29·712	?	?	29·820	7th	29·595	17th	·225	86·0	91·3	?	81·7	?	86·5	?	9·6	95·2	25th	71·4	9th	2
	Puri	20	29·721	?	29·683	29·842	5th	29·609	23rd	·233	85·1	90·3	?	82·0	?	86·1	?	8·3	92·7	5 days	73·6	10th	1
V.—Gangetic Plain and Chota Nagpur.		...	...	−·004	...	...	...	...	...	...	...	103·2	+2·3	79·2	+2·4	91·3	+2·4	24·0	...	...	...	...	3
CHOTA NAGPUR	Hazaribagh	2,007	27·717	−·006	29·632	27·838	11th	27·631	17th	·207	86·5	103·3	+5·0	78·0	+3·7	90·7	+4·4	25·3	108·6	31st	67·8	8th	4
	Ranchi	2,128	27·616	+·008	29·644	27·711	11th	27·533	17th	·178	86·4	102·6	+4·6	76·9	+3·0	89·9	+3·8	25 7	106·8	29th & 30th	68·9	9th	3
	Daltonganj	730?	28·965	?	29·637	29·083	11th	28·871	17th	·212	88·7	104·2	?	82·2	?	93·2	?	22·0	112·2	3rd & 4th	74·0	8th	3
	Chaibassa	760	28·945	?	29·643	29·070	11th	28 846	16th	·224	88·2	107·7	+4·3	80·8	+2·0	94·3	+3·2	26·9	114·2	6th	69·5	29th	4
SOUTH BIHAR	Gaya	375	29·310	−·010	29·633	29·471	11th	29·217	26th	·254	89·8	106·6	+2·5	82·2	+4·1	94·4	+3·3	24·4	113·1	27th	72·3	8th	4
	Dehri	351	29·319	?	29·618	29·474	11th	29·214	17th	·260	89·8	111·4	?	84·6	?	98·0	?	26·8	113·5	17th	73·0	8th	4
	Patna	183	29·515	−·010	29·650	29·645	5th	29·398	26th	·247	83·6	99·9	+0·3	77·3	+0·1	88·6	+0·2	22·6	109·5	27th	71·2	2 days	3
	Arrah	190	29·514	?	29·655?	29·674	11th	29·406	26th	·268	85·2	103·1	?	79·3	?	91·4	?	24·1	110·9	27th	70·0	21st	4
	Buxar*	239	29·426	?	29·618	29·555	5th & 6th	29·343	26th	·212	86·6	104·9	?	80·3	?	92·6	?	24·6	110·9	27th	72·3	8th	3
NORTH BIHAR	Purnea	125	29·625	+·013	29·704	29·770	11th	29·497	26th	·273	79·7	92·8	−1·7	74·2	+0·6	83·6	−0·6	18·6	100·3	14th	68·7	28th	3
	Bhagalpur†	160	29·556	?	29·663	29·693	5th	29·426	26th	·267	83·2	96·5	?	75·9	?	86·2	?	20·6	102·8	4th & 15th	67·1	31st	3
	Darbhanga	166	29·558	−·003	29·678	29·717	11th	29·420	26th	·297	82·3	94·2	−1·2	76·2	+0·4	85·2	−0·4	18·0	102·0	15th	68·5	31st	3
	Muzaffarpur	178	29·537	?	29·669	29·695	11th	29·417	26th	·278	81·9	96·7	?	76·3	?	86·5	?	20·4	103·7	15th	67·7	31st	3
	Motihari	224	29·501	?	29·683	29·654	11th	29·372	26th	·282	83·3	97·2	?	75·3	?	86·3	?	21·9	104·0	15th & 16th	66·3	31st	3
	Chapra	181	29·520	?	29·654	29·680	11th	29·414	26th	·266	84·3	101·5	?	78·4	?	90·0	?	23·1	109·7	27th	71·6	9th	3
N.-W. PROV., EAST	Benares	267	29·412	−·007	29·631	29·559	11th	29·317	26th	·242	88·3	108·1	+3·6	81·1	+2·6	94·6	+3·1	27·0	114·3	27th	73·5	1st	3
	Allahabad	309	29·363	−·013	29·621	29·487	11th	29·270	30th	·217	91·7	109·3	+3·0	82·9	+4·2	96·1	+3·6	26·4	115·2	27th	76·3	8th	3
N.-W. PROVINCES (EAST SUB-MONTANE).	Gorakhpur	256	29·441	+·001	29·654	29·598	11th	29·319	17th	·279	84·7	102·6	+2·1	77·8	+1·1	90·2	+1·6	24·8	108·8	25th & 27th	69·2	31st	3
SOUTH OUDH	Lucknow	368	29·305	−·010	29·627	29·441	12th	29·184	26th	·257	89·4	107·4	+3·2	81·2	+4·5	94·3	+3·9	26·2	113·3	27th	71·3	2nd	3
NORTH OUDH	Bahraich	403	29·289	?	29·648	29·451	11th	29·181	26th	·270	87·2	104·1	?	79·1	?	91·7	?	25·0	111·1	25th	69·5	8th	3
N.-W. PROV. (CENTRAL).	Cawnpore	416	29·251	?	29·613	29·381	12th	29·152	30th	·229	91·2	108·5	?	82·4	?	95·5	?	26·1	113·6	3 days	74·5	20th	3
	Mainpuri	516	29·162	?	29·628	29·287	12th	29·066	26th	·221	89·4	108·3	?	80·8	?	94·6	?	27·5	114·7	17th	71·5	20th	3

* Mean of 27 days.

† Mean of 30 days.

I—*continued.*

in India, Burma, etc., in May 1896—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.	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 March to 31st May 1895.	Normal rainfall for period, from 1st March to 31st May.	Variation from normal of period from 1st March to 31st May.			
9	...	1	3	9	8	...	1	...	4·8	?	?	75	·895	3·1	7	8·45	— 1·45	3·32	3·87	− 0·55	3·54	6·58	— 3·04	1·26	Bankura .	CENTRAL BENGAL.
13	...	2	6	6	2	2	...	...	3·1	?	?	74	·844	4·5	7	5·50	+ 1·50	3·44	3·13	+ 0·31	3·45	5·04	— 1·59	1·19	Raniganj.	
...	...	1	4	9	10	6	1	...	6·6	5·5	+20	74	·874	6·7	10	7·18	+ 2·82	6·93	6·97	− 0·04	6·91	10·24	— 3·33	1·08	Burdwan.	
...	...	1	9	12	7	1	...	1	5·4	?	?	68	·785	4·3	4	5·22	— 1·22	2·60	3·48	− 0·88	3·00	5·17	− 2·17	1·15	Naya Dumka	
1	...	1	13	8	5	3	...	...	5·5	5·5	0	80	·873	5·4	7	8·64	− 1·64	2·01	6·05	− 4·04	2·38	8·55	− 6·17	0·61	Berhampore.	
9	...	4	7	6	4	1	...	...	5·4	?	?	83	·888	4·0	11	7·90	+ 3·10	9·31	5·44	+ 3·87	11·22	7·67	+ 3·55	3·83	Rampur Boalia.	
...	2	5	8	11	4	1	...	...	4·1	?	?	79	·835	3·5	8	5·65	+ 2·35	5·23	4·13	+ 1·10	5·63	5·81	− 0·18	1·74	Malda.	
8	1	7	6	9	...	...	...	...	3·1	?	?	83	·811	5·1	16	9·30	+ 6·70	10·47	8·37	+ 2·10	11·44	11·40	+ 0·04	1·19	Bogra.	
1	..	13	10	4	3	...	...	...	3·8	?	?	49	·772	5·7	13	7·60	+ 5·40	8·91	7·22	+ 1·69	9·27	10·06	− 0·79	1·65	Dinajpur .	NORTH BENGAL.
6	1	12	8	3	...	...	...	1	2·8	?	?	87	·810	6·6	21	10·40	+10·60	22·77	10·22	+12·55	26·77	14·66	+12·11	4·04	Rangpur.	
...	3	7	12	8	1	...	...	...	4·3	?	?	84	·787	2·7	16	12·00	+ 4·00	12·40	11·96	+ 0·44	16·67	17·84	− 1·17	1·48	Jalpaiguri.	
...	1	...	...	...	12	17	1	...	9·1	?	?	74	·938	3·5	5	8·50	— 3·50	3·12	4·97	− 1·85	5·14	8·84	− 3·70	0·96	Balasore .	ORISSA.
...	1	...	...	5	20	4	1	...	14·2	12·6	+13	83	1·038	5·5	6	5·20	+ 0·80	3·76	6·60	− 2·84	5·33	8·36	− 3·03	1·67	False Point.	
3	...	1	...	2	7	15	3	...	5·4	5·1	+ 6	74	·935	4·8	7	6·09	+ 0·91	3·42	4·93	— 1·51	4·41	6·81	— 2·40	0·92	Cuttack.	
1	...	...	...	1	14	14	1	...	16·3	?	?	84	1·042	3·0	4	?	?	2·31	?	?	2·63	?	?	1·00	Shortt's Island.	
3	...	...	...	...	2	24	2	...	16·3	?	?	86	1·046	4·1	6	3·45	+ 2·55	2·01	2·58	− 0·57	2·22	3·65	− 1·43	0·75	Puri.	
..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·41	1·98	− 0·51	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**	
1	...	...	1	5	18	6	...	...	9·9	8·8	+ 13	52	·640	2·7	1	4·73	— 3·73	0·19	2·64	— 2·45	0·19	3·35	− 3·66	0·10	Hazaribagh.	CHOTA NAGPUR.
4	...	2	...	4	9	11	1	...	8·7	?	?	56‖	·661‖	2·0	1	5·00	− 4·00	1·35	2·98	— 1·63	1·35	4·95	− 3·60	1·33	Ranchi.	
...	2	3	8	3	4	6	2	3	7·3	?	?	54	·728	2·4	0	?	?	0	?	?	0·30	?	?	0	Daltonganj.	
4	...	2	1	...	4	12	6	2	2·4	?	?	60	·804	2·1	6	6·11	− 0·11	3·60	4·17	− 0·57	3·60	6·05	− 2·45	2·10	Chaibassa.	
13	...	5	7	2	3	1	...	...	7·0	3·9	+ 79	54	·743	0·5	1	2·45	− 1·45	0·25	1·50	− 1·25	0·25	1·93	− 1·68	0·14	Gaya .	SOUTH BIHAR.
6	2	2	11	6	1	3	...	...	17·3†	?	?	47†	·652†	1·1	0	1·57	— 1·57	0·01	1·42	− 1·41	0·01	2·23	− 2·22	0·01	Dehri.	
...	...	5	24	1	...	1	...	...	7·8	4·8	+ 63	69	·801	1·3	3	3·18	− 0·18	1·46	2·24	— 0·78	1·46	2·96	— 1·50	0·98	Patna,	
...	...	14	14	2	1	...	...	...	4·5	?	?	68	·821	0·9	3	2·60	+ 0·40	1·32	1·80	− 0·48	1·32	2·36	− 1·04	0·71	Arrah.	
1	...	6	17	...	1	...	...	2	6·3	?	?	60	·746	1·0	2	2·15	− 0·15	0·28	1·03	— 0·75	0·28	1·48	— 1·20	0·16	Buxar.*	
...	...	11	17	2	1	...	...	...	7·6	3·4	+ 124	77	·777	5·6	8	5·45	+ 2·55	6·66	5·08	+ 1·58	6·66	6·78	− 0·12	1·41	Purnea .	NORTH BIHAR.
1	...	9	7	12	1	...	...	...	6·9	?	?	71	·806	3·5	3	4·15	− 1·15	4·03	2·59	+ 1·44	4·09	3·69	+ 0·40	2·86	Bhagalpur.†	
...	...	2	17	12	...	...	...	...	8·0	5·9	+ 36	70	·778	2·1	4	4·73	− 0·73	4·28	3·20	+ 1·08	4·32	4·14	+ 0·18	1·96	Darbhanga.	
...	...	5	16	10	...	...	...	...	8·4	?	?	77	·844	1·4	5	3·35	+ 1·65	2·87	2·72	+ 0·15	2·87	3·72	− 0·85	1·05	Muzaffarpur	
...	...	11	16	4	...	...	...	...	8·8	?	?	66	·775	2·3	4	4·25	− 0·25	1·59	2·50	− 0·91	1·59	3·65	− 2·06	0·52	Motihari.	
1	1	4	21	4	...	...	...	...	6·3	?	?	67	·793	0·5	1	2·20	− 1·20	0·48	1·52	− 1·04	0·48	2·09	− 1·61	0·43	Chapra.	
6	1	7	8	...	1	1	3	4	5·8	5·2	+ 12	53	·713	0·8	0	1·45	− 1·45	0	0·72	− 0·72	0	1·08	− 1·08	0	Benares .	N.-W. PROV., EAST.
2	1	3	10	1	1	2	7	4	6·6	3·8	+ 74	39	·560	0·9	1	1·18	− 0·18	0·14	0·39	− 0·25	0·14	0·82	− 0·68	0·12	Allahabad.	
1	5	16	5	2	2	...	...	...	3·4	3·9	− 13	68	·810	1·0	2	2·64	− 0·64	0·58	1·37	− 0·79	0·58	2·22	− 1·64	0·33	Gorakhpur	N.-W. PROVINCES (EAST SUB-MONTANE).
...	3	3	12	3	2	3	2	3	3·5	4·3	− 19	48	·647	2·4	1	1·91	− 0·91	0·12	1·10	− 0·98	0·12	1·49	− 1·37	0·12	Lucknow .	SOUTH OUDH.
...	...	2	13	13	1	...	1	...	3·6	?	?	67	·867	0·4	1	?	?	0·27	1·42	− 1·15	0·27	2·23	− 1·96	0·18	‡Bahraich .	NORTH OUDH.
1	1	3	3	7	1	3	6	6	6·0	?	?	44	·636	1·1	0	1·10	− 1·10	0·08	0·56	— 0·48	0·08	0·91	− 0·83	0·08	Cawnpore .	N.-W. PROV. (CENTRAL).
12	...	...	7	...	1	1	10	...	1·9	?	?	39	·518	1·7	1	?	?	1·44	0·66	+ 0·78	1·44	1·02	+ 0·42	1·39	Mainpuri.	

‡ Winds for 30 days.

‖ Mean for 26 days.

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Meteorological Province or District.	Station.	Elevation of barometer above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
			Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
VI.—Upper Sub-Himalayas		...	...	−·006	...	...	...	...	...	...	...	106·0	+4·6	77·4	+3·9	91·8	+4·3	28·6	...	...	...	...	42·6
N.-W. Provinces, West (Sub-montane).	Bareilly	568	29·108	+·003	29·632	29·269	11th	28·985	26th	·284	87·9	106·3	+3·7	79·1	+3·7	92·7	+3·7	27·2	111·4	3 days	72·1	1st	39·3
	Dehra Dun	2,233	27·493	−·015	29·642	27·648	11th	27·404	30th	·244	81·3	99·2	+5·4	73·0	+3·0	86·1	+4·2	26·2	106·0	31st	65·0	12th	41·0
	Roorkee	887	28·782	−·008	29·622	28·934	11th	28·690	26th	·244	87·4	105·2	+3·2	76·0	+2·0	90·6	+2·6	29·2	111·2	31st	68·2	12th	43·0
N.-W. P., West.	Meerut	738	28·926	−·005	29·619	29·063	12th	28·830	26th	·233	87·5	106·2	+4·3	77·9	+2·9	92·1	+3·6	28·3	112·4	31st	70·0	18th	42·4
South-East Punjab.	Delhi	718	28·942	−·011	29·610	29·075	12th	28·664	18th	·211	90·3	107·4	+3·1	82·2	+3·1	94·8	+3·1	25·2	114·0	30th	69·9	18th	44·1
Central Punjab.	Lahore	702	28·938	−·006	29·600	29·108	11th	28·830	31st	·278	88·1	107·7	+4·9	78·8	+6·6	93·3	+5·8	28·9	113·8	30th	72·1	13th	41·7
South Punjab	Patiala	?	28·837*	?	?	28·984	12th	28·739	31st	·245	89·4*	106·1*	?	78·5*	?	92·3*	?	27·6	112·0	31st	70·5	18th	41·5
	Ludhiana	812	28·835	?	29·600	28·994	12th	28·734	31st	·260	89·6	108·2	+4·4	78·5	+4·7	93·4	+4·6	29·7	114·4	30th	71·5	12th & 13th,	42·9
	Sialkot	830	28·823	0	29·608	28·993	11th	28·697	31st	·296	90·1	107·7	+5·2	78·1	+4·3	92·9	+4·8	29·6	113·4	30th	70·6	6th	42·8
Punjab (Sub-montane).	Umballa	892	28·766	?	29·607	28·914	12th	28·676	16th	·238	87·0	108·4	?	77·2	?	92·8	?	31·2	112·9	31st	68·0	12th & 18th,	44·9
North Punjab	Rawalpindi	1,643	28·017	?	29·604	28·181	11th	27·905	16th	·276	86·4	104·1	+6·9	72·5	+5·0	88·3	+6·0	31·6	110·0	7th	65·2	11th	44·8
VII.—Indus Valley and North-West Rajputana.		...	...	+·012	...	...	...	...	...	...	...	106·0	+3·7	78·4	+2·9	92·2	+3·3	27·5	...	...	...	...	39·9
North Punjab	Peshawar	1,119	28·597	−·001	29·626	28·784	11th	28·465	31st	·319	85·9	102·3	+4·6	72·0	+2·6	87·2	+3·6	30·3	110·0	31st	65·0	11th	45·0
	Mardan	?			Not recorded.						79·6*	103·3*	?	70·8*	?	87·1*	?	32·5	109·9	8th & 9th,	61·0	3 days	48·9
West Punjab	Khushab	612	29·029	?	29·598	29·209	11th	28·895	31st	·314	91·7	108·5	?	78·9	?	93·7	?	29·6	113·4	5 days	70·5	13th	42·9
	Montgomery	558	29·070	?	29·580	29·235	11th	28·963	17th	·272	95·1	111·5	?	79·3	?	95·4	?	32·2	118·4	9th	73·0	1st	45·4
	D. I. Khan (Tel. Office),	594?	29·071	−·004	29·601	29·265	11th	28·940	31st	·325	88·4	105·8	?	75·7	?	90·8	?	30·1	111·7	31st	68·0	4th	43·7
	D. I. Khan (Jail).	...			Not recorded.						90·2	107·2	?	76·9	?	92·0	?	30·3	113·1	31st	68·2	4th	44·9
	Mooltan	420	29·217?	?	29·598?	29·374	11th	29·117	31st	·257	90·3	111·4	+6·7	81·0	+5·1	96·3	+5·9	30·4	117·5	31st	73·1	3rd	44·4
South Punjab	Sirsa	662	28·983	−·010	29·596	29·129	11th	28·896	26th	·233	91·5	110·3†	+4·6†	80·5	+4·5	94·9†	+4·6	29·8	114·6	5th & 7th,	70·3	18th	44·3
Sind and Cutch.	Jacobabad	186	29·455	−·008	29·597	29·610	11th	29·306	17th & 18th	·304	92·3	115·0	+4·6	80·8	+3·9	97·9	+4·3	34·2	121·0	30th	73·1	11th	47·9
	Hyderabad	96	29·617	+·032	29·663	29·724	11th	29·518	18th	·206	87·5	108·1	+1·3	79·0	+0·6	93·5	+1·0	29·1	113·7	24th	75·0	12th	38·7
	Kurrachee (Tel. Office).	12	29·757	+·036	29·720	29·849	11th	29·690	18th	·159	85·5	92·8	?	79·9	?	86·4	?	12·9	96·3	8th	77·0	1st	19·3
	Kurrachee (Hospital).	49	29·729	?	?	29·822	11th	29·655	19th	·167	84·6	92·0	?	79·2	?	85·6	?	12·8	95·5	9th	76·8	1st	18·7
Kathiawar	Bhuj	395	29·391	+·036	29·738	29·470	11th	29·336	18th	·134	85·6	102·4	+0·9	77·1	+0·4	89·7	+0·7	25·3	106·6	3 days	73·9	1st	32·7
West Rajputana	Bickaneer	771?	28·901	?	29·623	29·024	11th	28·815	18th	·209	92·7	109·8	+3·4	85·5*	+3·1?	97·8*	+3·3?	24·3	114·4	29th	76·0	18th	38·4
	Pachpadra	380	29·281	?	29·613	29·424	11th	29·191	16th & 23rd	·233	85·7	109·1	?	79·9	?	94·5	?	29·2	115·5	6th	71·5	12th	44·0
VIII.—East Rajputana, Central India and Gujarat.		...	...	+·026	...	...	...	...	...	...	...	105·1	+1·8	81·3	+3·7	93·2	+2·8	23·8	...	...	...	...	35·3
East Rajputana	Jeypore	1,431	28·307	+·016	29·671	28·395	12th	28·248	26th	·147	89·5	108·1	+2·6	80·9	+4·7	94·5	+3·7	27·2	112·5	3 days	71·0	21st	41·5
	Sambhar	1,254	28·464	+·015	29·655	28·550	12th	28·393	26th	·157	90·3	107·4	+3·1	83·4	+5·3	95·4	+4·2	24·0	112·5	8th	71·0	21st	41·5
	Ajmere	1,611	28·147	+·024	29·690	28·228	11th	28·077	17th	·151	89·3	105·6	+2·4	83·7	+6·0	94·7	+4·2	21·9	109·9	7th & 8th,	72·1	1st	37·8
	Deesa	466	29·338	+·048	29·757	29·423	11th	29·295	18th	·128	85·1	109·0	+2·8	77·8	+0·3	93·4	+1·6	31·2	112·5	5th	72·0	2nd	40·3
Kathiawar	Rajkot	429	29·400	+·054	29·779	29·481	11th	29·367	18th & 19th	·114	85·3	106·5	+1·1	75·9	+0·7	91·2	+0·9	30·6	109·9	8th	70·8	5th	39·1
	Veraval	?	29·337	?	29·797	29·932	11th	29·805	26th	·127	83·3	87·7	?	79·8	?	83·8	?	7·9	90·1	21st & 22nd,	75·3	1st	14·8
Central India	Nowgong	757	28·945	+·007	29·639	29·056	12th	28·887	17th	·169	93·5	110·3	+3·0	83·7	+4·6	97·0	+3·8	26·6	115·1	30th	77·5	3rd	37·6
	Indore	1,823	27·999	+·050	29·743	28·062	11th	27·942	14th	·120	86·5	104·5	+2·1	78·4	+3·0	91·5	+2·6	26·1	109·0	3 days	70·1	1st	38·9
	Neemuch*	1,630	28·166	+·053	29·728	28·236	12th	28·116	26th	·120	87·1	105·3	+1·4?	79·5	+3·1	92·4	+2·3	25·8	109·6	29th	73·6	4th	36·0
Gujarat	Surat	36	29·815	?	29·793	29·912	11th	29·777	14th	·135	85·9	93·7?	−4·5?	81·7	+4·0?	87·7	−0·3?	12·0	100·7?	7th	77·1	1st	23·6
	Ahmedabad	164	29·653	?	29·772	29·739	11th	29·618	14th & 17th	·121	86·9	108·4	?	79·7	?	94·1	?	28·7	111·3	14th	76·6	10th	34·7
N.-W. P., West	Agra	555	29·113	−·012	29·615	29·234	12th	29·037	26th	·197	92·7	108·7	+2·0	83·8	+3·1	96·3	+2·6	24·9	113·5	30th	74·3	20th	39·2
N.-W. P., Central.	Jhansi	858	28·854	+·004	29·643	28·962	12th	28·783	31st	·179	95·7	111·4	+4·1	88·3	+6·0	99·9	+5·1	23·1	115·7	6th & 30th.	82·4	18th	33·3

* Mean of 30 days. † Mean of 22 days.

I—*continued.*

in India, Burma, etc., in May 1896—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.	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 March to 31st May 1896	Normal rainfall for period, from 1st March to 31st May.	Variation from normal of period 1st to 31st May.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·42	1·09	−0·67	...	...	...	...	VI.—Upper Sub-Himalayas.	
5	1	4	...	14	...	1	1	5	4·3	5·2	−17	38	·490	0·5	0	2·27	−2·27	0	0·84	−0·84	0·02	1·95	−1·93	0	Bareilly	N.-W. PROVINCES, WEST (SUB-MONTANE).
25	1	...	1	...	...	1	3	...	1·5	2·5	−40	41	·437	2·3	3	4·09	−1·09	0·88	1·95	−1·07	1·15	3·55	−2·40	0·55	Dehra Dun.	
13	3	...	...	10	4	...	...	1	4·7*	3·7	+27	37	·481	0·8	2	2·00	0	1·05	0·86	+0·19	1·13	2·00	−0·87	0·67	Roorkee.	
13	...	...	4	4	...	3	5	2	2·3	2·6	−12	38	·485	0·7	2	1·64	+0·36	0·45	0·69	−0·24	0·45	1·70	−1·25	0·20	Meerut	N.-W. PROVINCES, WEST.
1	1	3	2	5	1	2	12	4	5·6	4·5	+24	33	·453	3·2	2	1·64	+0·36	0·53	0·78	−0·25	0·61	1·58	−0·97	0·48	Delhi	SOUTH-EAST PUNJAB.
7	4	2	4	7	3	2	1	1	3·1	3·3	− 6	37	·483	0·6	1	2·00	−1·00	0·25	1·03	−0·78	0·62	2·22	−1·60	0·25	Lahore	CENTRAL PUNJAB.
12	2	5	...	1	5	5	...	...	7·5†	?	?	38*	·515*	0·6*	1	?	?	0·38	?	?	0·38	?	?	0·38	Patiala	SOUTH PUNJAB.
8	...	8	...	7	1	4	...	3	3·7	2·2	+68	39	·539	0·4	1	1·91	−0·91	0·20	0·78	−0·58	0·39	2·62	−2·23	0·14	Ludhiana.	
2	10	5	4	3	2	1	...	4	3·8	2·5	+52	45	·640	0·6	2	2·73	−0·73	0·39	1·23	−0·84	1·40	3·32	−1·92	0·20	Sialkot.	
8	...	...	12	3	...	1	2	5	2·5	?	?	42	·534	0·3	0	?	?	0·02	0·97	−0·95	0·06	2·23	−2·17	0·01	Umballa	PUNJAB (SUB-MONTANE).
9	8	2	1	1	1	1	3	5	4·0	2·8	+43	35	·440	1·8	1	3·00	−2·00	0·45	1·80	−1·35	2·08	5·51	−3·43	0·41	Rawalpindi.	NORTH PUNJAB.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·15	0·47	−0·35	...	...	...	...	VII.—Indus Valley and North-West Rajputana.	
15	2	1	2	3	5	...	1	2	4·0	4·8	−17	40	·495	1·6	2	2·09	−0·09	0·50	0·75	−0·25	2·01	4·29	−2·28	0·32	Peshawar	NORTH PUNJAB.
				Not recorded.					?	?	?	?	?	?	1	?	?	0·84	?	?	1·24	?	?	0·84	Mardan.	
2	3	7	9	1	4	1	3	1	6·0	?	?	29	·433	0·3	0	1·00	−1·00	0	0·41	−0·41	1·31	1·57	−0·26	0	Khushab	WEST PUNJAB.
4	...	3	1	8	4	6	1	4	6·4	?	?	33	·542	0·3	2	1·10	+0·90	0·38	0·45	−0·07	0·68	0·97	−0·31	0·16	Montgomery	
26	...	2	...	...	...	...	...	3	1·5	2·3	−35	46	·615	0·9	1	0·82	+0·18	0·11	0·40	−0·29	1·79	1·80	−0·01	0·10	D. I. Khan (Tel. Office.)	
				Not recorded.					?	?	?	48	·673	0	0	?	?	0	?	?	0a	?	?	0	D. I. Khan Jail.	
8	...	8	...	7	1	6	1	...	2·7	2·9	− 7	43	·603	0	0	0·82	−0·82	0	0·42	−0·42	0·30	0·87	−0·57	0	Mooltan.	
4	1	...	4	7	3	6	6	...	9·3	4·8	+94	29	·405	3·6	1	1·82	−0·82	0·25	0·81	−0·56	0·67	1·49	−0·82	0·15	Sirsa	SOUTH PUNJAB.
7	2	...	4	11	4	...	...	3	2·0	4·7	−58	38	·609	0·3	0	0·45	−0·45	0	0·10	−0·10	0·61	0·44	+0·17	0	Jacobabad.	SIND AND CUTCH.
1	...	...	...	...	2	28	...	...	13·6	12·7	+ 7	52	·659	1·0	0	0·45	−0·45	0	0·25	−0·25	0	0·43	−0·43	0	Hyderabad.	
...	...	...	...	...	...	14	16	1	14·4	17·5	−18	78	·917	4·4	0	0	0	0	0	0	0	0·56	−0·56	0	Kurrachee. (Tel. Office)	
...	1	...	...	...	...	...	26	3	17·3	?	?	79	·935	6·1	0	?	?	0	?	?	0a	?	?	0	Kurrachee Hospital ‡	
...	...	...	...	...	...	6	23	2	21·9	15·4	+42	61	·754	0·7	0	?	?	0	0·13	−0·13	0	0·40	−0·40	0	Bhuj	KATHIAWAR.
1	...	...	1	1	10	13	4	1	8·3	6·5	+28	50	·761	0·8	1	?	?	0·15	1·08	−0·93	1·11	1·45	−0·34	0·15	Bickaneer	WEST RAJPUTANA.
...	...	...	...	1	11	19	...	...	15·6	8·8	+77	78	·969	4·4	0	?	?	0	0·83	−0·83	0	0·91	−0·91	0	Pachpadra.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·21	0·50	−0·26	...	...	...	...	VIII.—East Rajputana, Central India, and Gujarat.	
3	...	2	...	...	...	7	14	5	6·2	6·9	−10	36	·484	1·7	1	1·20	−0·20	0·88	0·45	+0·43	0·90	0·93	−0·03	0·87	Jeypore	EAST RAJPUTANA.
...	1	...	2	...	1	2	23	2	9·8	9·9	0	43	·607	1·2	1	1·27	−0·27	0·94	0·80	+0·14	0·56	1·24	−0·28	0·94	Sambhar.	
2	...	...	...	...	3	2	24	...	9·0	7·1	+27	41	·557	0·8	1	2·09	−1·09	0·23	0·75	−0·52	0·23	0·98	−0·75	0·23	Ajmere.	
...	...	...	...	...	...	11	19	1	14·0	13·4	+4	61	·747	1·8	0	0·55	−0·55	0	0·25	−0·25	0	0·31	−0·31	0	Deesa.	
...	1	...	...	...	...	8	17	5	14·6	14·6	0	61	·745	0·8	0	0·36	−0·36	0·09	0·25	−0·16	0·09	0·28	−0·19	0·09	Rajkot	KATHIAWAR.
1	1	...	...	1	3	3	20	2	7·6‡	?	?	83	·946	4·8	0	?	?	0	?	?	0	?	?	0	Veraval.	
3	2	1	3	...	...	2	18	2	4·3	3·4	+26	29	·453	2·4	0	1·09	−1·09	0·02	0·42	−0·40	0·02	0·75	−0·73	0 02	Nowgong	CENTRAL INDIA.
...	1	...	...	...	...	...	17	13	7·2	6·1	+18	51	·639	0·9	1	1·36	−0·36	0·43	0·75	−0·32	0·44	0·83	−0·39	0·43	Indore.	
1	1	2	...	...	...	5	20	1	10·0	12·4	−18	53	·694	0·4	0	1·18	−1·18	0·06	0·59	−0·53	0·03	0·76	−0·68	0·06	Neemuch.	
11	...	5	...	1	2	11	1	...	?	12·7	?	70	·870	3·9	0	0·45	−0·45	0	0·19	−0·19	0	0·20	−0·20	0	Surat	GUJARAT.
...	...	...	...	...	...	13	8	10	7·2	?	?	60	·763	1·7	0	?	?	0	?	?	0	?	?	0	Ahmedabad	
...	...	1	...	7	...	17	1	5	6·8	5·9	+15	36	·543	0·5	0	1·91	−1·91	0·02	0·60	−0·58	0·03	1·05	−1·02	0·02	Agra	N.-W. P., WEST.
7	...	1	...	3	1	1	10	8	3·8	4·8	−21	26	·420	0·9	0	1·36	−1·36	0·01	0·49	−0·48	0·12	0·97	−0·85	0·01	Jhansi	N.-W. P., CENTRAL.

† Mean of 29 days.

‡ Winds for 30 days.
(a) For May only.

Table

Abstract of Observations taken at 8 A.M. at 207 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		...	...	+·019	...	...	...	...	...	...	...	106·8	+3·0	80·4	+3·0	93·6	+3·0	26·4	...	...	...	...	37·9
Bombay, Deccan	Belgaum	2,524	27·376	+·048	29·815	27·433	11th	27·337	3rd	·096	77·4	93·8	+0·7	69·6	+1·7	81·7	+1·2	24·2	102·2	4th	66·3	20th	35·9
	Sholapur	1,590	28·266	+·043	29·785	28·330	11th	28·219	13th	·111	85·5	106·3	+2·0	78·5	+2·5	92·4	+2·3	27·8	110·7	7th	71·0	29th	39·7
	Poona	1,840	28·043	+·042	29·815	28·125	11th	28·009	13th	·116	81·6	100·8	+2·3	72·3	+0·4	86·6	+1·4	28·5	107·5	6th	68·9	11th	38·6
	Bijapur	1,946	27·931	?	29·797	27·995	11th	27·868	13th	·127	82·9	102·8	?	74·7	?	88·8	?	28·1	108·2	2nd & 3rd.	67·0	27th	41·2
Khandesh	Malegaon	1,430	28·408	+·039	29·769	28·478	11th	28·360	13th	·118	87·5	105·6	+1·9	76·8	+2·1	91·2	+2·0	28·8	109·8	3rd	72·1	3rd	37·7
	Ahmednagar	2,152	27·724	?	29·783	27·795	11th	27·678	14th	·117	84·7	102·8*	?	71·9	?	87·3*	?	30·9	106·4	3rd & 4th.	63·5	11th	43·8
Berar	Akola	930	28·855	+·025	29·713	28·935	11th	28·796	14th	·139	91·1	109·6	+2·5	83·3	+2·7	96·5	+2·6	26·3	113·6	7th	72·7	31st	40·9
	Amraoti	1,215	28·559	+·026	29·702	28·627	11th	28·500	14ht	·127	91·3	109·7	+2·5	82·0	+2·9	95·9	+2·7	27·7	113·5	7th	73·3	31st	40·2
Central Provinces, West.	Khandwa	1,044	28·759	+·045	29·745	28·819	11th	28·702	14th	·117	88·6	108·1	+2·0	83·5	+3·3	95·8	+2·7	24·6	112·7	7th	78·1	31st	34·6
	Hoshangabad	1,000	28·758	+·024	29·695	28·324	11th	28·706	26th	·118	92·2	109·1	+1·6	83·2	+3·5	96·2	+2·6	25·9	113·6	7th	76·7	1st & 2nd.	36·9
	Nagpur	1,025	28·705	+·004	29·654	28·768	11th	28·646	14th	·122	96·1	112·2	+3·5	85·4	+4·3	98·8	+3·9	26·8	115·7	7th	80·1	31st	35·6
Central Provinces, Central	Chanda	634	29·090?	−·003?	29·649?	29·158	11th	29·025	13th	·133	94·9	113·8	+4·6	84·1	+2·6	99·0	+3·6	29·7	116·9	8th	77·0	3rd	39·9
	Seoni	2,033	27·741	+·016	29·649	27·800	11th	27·706	25th & 26th	·094	93·3	107·4	+4·2	80·3	+3·7	93·9	+4·0	27·1	111·3	9th	72·9	2nd	38·4
	Jubbulpore	1,327	28·404	+·006	29·652	28·470	11th	28·350	30th	·120	93·2	109·1	+4·2	81·4	+3·0	95·3	+3·6	27·7	113·0	30th	71·6	2nd	41·4
Central Provinces, East.	Saugor	1,762	27·992	+·022	29·659	28·062	11th	27·933	30th	·129	91·4	107·9	+3·2	80·2	+2·6	94·1	+2·9	27·7	112·4	8th	74·1	2nd	38·3
	Raipur	970	28·741?	−·010?	29·629?	28·816	5th	28·678	26th	·138	96·2	111·2	+4·7	85·6	+4·5	98·5	+4·6	25·6	113·5	3 days	78·5	2nd	35·0
	Sutna	1,040	28·654	+·002	29·627	28·740	12th	28·599	3 days	·141	94·4	109·6	+4·9	83·3	+5·2	96·5	+5·1	26·3	116·1	31st	76·1	3rd	40·0
Central India	Sambalpur	463	29·226	−·018	29·628	29·305	11th	29·143	17th	·162	92·2	109·4	+3·1	83·7	+2·7	96·6	+2·9	25·7	114·0	18th	72·2	9th	41·8
Hyderabad, North.	Aurangabad	?	27·999	?	?	28·053	31st	27·948	13th	·105	87·4	106·2	?	76·2	?	91·2	?	30·0	111·1	7th	73·0	11th	38·1
	Indur	?				Not recorded.					92·2	108·2	?	84·8	?	96·5	?	23·4	111·5	8th	79·2	31st	32·3
	Bidar	?	27·671	?	?	27·732	11th	27·601	14th	·131	87·1	98·0	?	80·5	?	89·3	?	17·5	101·5	31st	74·0	27th	27·5
Hyderabad, South.	Gulbarga	1,502	28·343	?	29·773	28·404	11th	28·270	14th	·134	85·9	105·8	?	80·1	?	92·9	?	25·7	110·8	8th	71·7	29th	35·1
	Raichur	1,309	28·526	?	29·762	28·576	23rd	28·467	13th	·109	86·8	105·0	?	80·9	?	93·0	?	24·1	109·5	1st	72·1	27th	37·4
	Hyderabad (Deccan).	1,690	28·127	+·015	29·728	28·184	5th	28·051	14th	·133	88·7	106·1	+3·1	81·9	+4·0	94·0	+3·6	24·2	109·4	1st	78·2	27th & 30th	31·2
	Secunderabad.	1,787	28·037	?	29·734	28·093	5th	27·961	14th	·132	87·3	107·4	?	80·2	?	93·8	?	27·2	112·3	8th	66·9	21st	45·4
	Khamamet	373	29·409	?	29·720	29·518	5th	29·329	17th	·189	91·7	109·9	?	85·4	?	97·7	?	24·5	114·2	21st	79·8	5th	34·4
X.—West Coast		...	...	+·046	...	...	...	...	...	...	...	90·3	+1·2	80·5	+1·6	85·4	+1·4	9·8	...	...	...	...	17·3
Konkan	Bombay	37	29·857	+·044	29·834	29·938	11th	29·818	28th	·120	85·7	91·4	+1·4	82·1	+1·7	86·8	+1·6	9·3	93·0	29th & 31st.	79·5	2nd & 29th.	13·5
	Ratnagiri	110	29·778	+·050	29·825	29·847	11th	29·724	28th	·123	86·7	92·5	+1·6	81·7	+2·7	87·1	+2·2	10·8	94·4	24th	78·9	29th	15·5
	Mormugao	60	29·841	?	29·836	29·916	11th	29·805	3rd	·111	85·7	91·3	?	82·0	?	86·7	?	9·3	95·0	20th	77·4	27th	17·6
	Goa	199	29·694	+·054	29·828	29·758	11th	29·647	28th	·111	84·8	88·1	?	82·8	?	85·5	?	5·3	89·5	9th	79·0	27th & 28th	10·5
	Karwar	44	29·857	+·046	29·833	29·920	11th	29·812	28th	·108	84·3	90·5	+0·8	81·2	+2·0	85·9	+1·4	9·3	92·3	3 days	75·5	27th	16·8
Malabar	Cochin	11	29·912	+·044	29·850	29·995	26th	29·871	4th	·124	82·3	90·3	+1·1	78·3	+1·1	84·3	+1·1	12·0	93·3	1st	72·2	31st	21·1
	Calicut	27	29·886	+·040	29·843	29·971	26th	29·845	3rd & 4th	·126	83·7	91·2	+1·4	78·8	+1·5	85·0	+1·5	12·4	93·9	1st & 2nd.	74·0	31st	19·9
	Mangalore	23	29·891	+·045	29·846	29·954	11th	29·853	5th	·101	82·9	90·5	+0·7	78·8	+0·4	84·7	+0·6	11·7	93·8	7th & 8th.	70·9	31st	22·9
	Trivandrum	198	29·725	?	29·853	29·828	26th	29·674	13th & 14th.	·154	81·3	86·6	?	78·4	?	82·5	?	8·2	91·0	1st & 2nd.	73·5	4th	17·5
XI.—South India		...	...	+·020	...	...	...	...	...	...	...	99·2	+3·1	78·6	+1·7	88·9	+2·5	20·4	...	...	...	...	34·4
Madras, South.	Pamban	37	29·820	?	29·783	29·888	11th	29·769	17th	·119	85·4	91·3	?	82·0	?	86·6	?	9·3	94·8	2nd	77·2	4th	17·6
	Tinnevelly	168	29·696	?	29·792	29·750	26th	29·641	14th	·109	87·3	100·6	?	80·3	?	90·5	?	20·3	104·5	14th & 29th	68·9	3rd	35·6
	Madura	447	29·403	+·015	29·781	29·445	5th	29·351	15th	·094	87·2	102·3	+2·1	80·0	+3·2	91·1	+2·7	22·3	105·5	6 days	73·0	31st	32·5

* Mean of 29 days.

I—*continued.*

in India, Burma, etc., in May 1896—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.	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 March to 31st May 1896.	Normal rainfall for period, 1st March to 31st May.	Variation from normal of period, 1st March to 31st May.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·49	0·99	−0·57	...	...	...	...	IX.—Deccan.	
4	...	...	...	...	...	6	14	7	18·0*	18·1	− 1	70	·660	3·3	5	4·36	+0·64	1·64	2·62	− 0·98	3·25	4·69	− 1·44	0·44	Belgaum .	BOMBAY, DECCAN.
...	3	1	1	...	...	...	4	22	10·3	10·0	+ 3	45	·536	3·0	2	2·18	−0·18	1·16	1·15	+ 0·01	1·21	2·06	− 0·85	0·95	Sholapur.	
...	1	...	...	...	...	6	18	6	16·5	14·2	+16	55	·589	2·5	3	2·00	+1·00	2·29	1·65	+ 0·64	4·42	2·24	+ 2·18	1·05	Poona.	
...	...	...	...	...	...	8	11	12	8·3	?	?	56	·623	2·3	2	3·10	−1·10	2·38	?	?	2·57	?	?	1·22	Bijapur.	
1	2	...	...	...	...	5	12	11	18·8	10·4	+81	43	·550	1·6	1	1·27	−0·27	0·19	0·95	− 0·76	0·19	1·08	− 0·89	0·19	Malegaon .	KHANDESH.
2	6	1	...	...	1	1	5	15	23·9	?	?	?	?	1·8	2	?	?	·057	?	?	1·05	?	?	0·32	Ahmednagar.	
...	...	...	...	...	...	1	16	14	12·6	8·6	+47	39	·563	0·8	1	0·91	+0·09	1·01	0·48	+0·53	1·05	1·19	− 0·14	1·01	Akola .	BERAR.
...	3	...	...	...	...	3	17	8	8·7	6·0	+45	40	·580	1·8	1	1·73	−0·73	0·22	0·75	− 0·53	0·22	1·40	− 1·18	0·22	Amraoti.	
...	...	...	...	...	...	...	13	18	12·8	9·1	+41	42	·557	0·8	0	1·09	−1·09	0	0·45	− 0·45	0	0·75	− 0·75	0	Khandwa .	CENTRAL PROVINCES, WEST.
1	...	...	...	...	1	7	21	1	6·8	3·8	+79	33	·491	0·8	0	1·18	−1·18	0	0·73	− 0·73	0	1·12	− 1·12	0	Hoshangabad.	
6	13	2	...	...	...	1	2	7	10·4	7·0	+49	34	·580	2·1	0	2·09	−2·09	0·03	0·80	− 0·77	0·32	1·75	− 1·43	0·03	Nagpur.	
...	4	1	12	8	2	...	...	4	5·9	4·9	+20	34	·557	0·5	0	?	?	0	0·89	− 0·89	0·06	2·76	− 2·70	0	Chanda .	CENTRAL PROVINCES, CENTRAL.
				Not	recor	ded.			?	4·6	?	25	·390	1·8	0	2·36	−2·36	0	0·76	− 0·76	0·05	1·81	− 1·76	0	Seoni.	
2	...	1*	...	2	1	6	14	5	4·2	4·5	−7	25	·394	1·0	0	1·45	−1·45	0·05	0·71	− 0·66	0·08	1·40	− 1·32	0·05	Jubbulpore.	
4	...	...	1	...	2	8	10	6	3·8†	4·4	−14	26	·385	0·7	0	1·27	−1·27	0·05	0·69	− 0·64	0·09	1·05	− 0·96	0·05	Saugor.	
...	5	1	2	...	3	10	4	6	9·5	7·4	+28	28	·477	1·5	1	2·91	−1·91	0·35	1·04	− 0·69	0·47	2·32	− 1·85	0·33	Raipur .	CENTRAL PROVINCES, EAST.
1	6	2	4	...	2	...	12	4	8·1	8·1	0	26	·415	1·1	0	1·64	−1·64	0	0·39	− 0·39	0·03	1·01	− 0·98	0	Sutna	CENTRAL INDIA.
...	...	...	2	12	9	8	...	...	4·9	3·0	+63	54	·808	3·1	1	?	?	0·29	2·05	− 1·76	1·82	3·76	− 1·94	0·29	Sambalpur.	
4	...	1	...	1	2	4	12	7	5·3	?	?	39	·490	0·8	0	?	?	0·04	0·75	− 0·71	0 11	0·99	− 0·88	0·04	Aurangabad	HYDERABAD, NORTH.
1	4	1	...	...	...	3	4	18	10·4	?	?	48	·730	2·7	0	?	?	0	0·33	− 0·33	1·02	0·91	+ 0·11	0	Indur.	
...	9	2	...	...	...	...	11	9	9·8	?	?	54	·681	1·4	1	?	?	0·11	1·07	− 0·96	0·87	2·24	− 1·37	0·11	Bidar.	
...	1	2	...	...	...	4	11	13	13·3	?	?	49	·591	3·6	2	?	?	1·28	1·39	− 0·11	1·28	2·31	− 1·03	0·70	Gulbarga.	HYDERABAD, SOUTH.
...	5	...	...	...	2	4	14	6	13·6	?	?	55	·703	2·5	0	?	?	0·05	?	?	0·05	?	?	0·05	Raichur.	
5	1	...	...	1	...	...	10	14	7·1	?	?	49	·658	2·2	0	?	?	0·07	1·15	− 1·08	0·21	2·57	− 2·36	0·04	Hyderabad (Deccan).	
...	...	...	...	1	1	...	5	10	14	8·8	7·4	+19	45	·584	2·3	2	?	?	0·81	?	?	0·92	?	?	0·55	Secunderabad,
2	3	...	...	8	8	1	3	6	8·5	?	?	56	·814	0·9	1	?	?	0·10	?	?	1·13	?	?	0·10	Khamamet.	
...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	5·60	6·0	+0·05	...	...	...	...	X.—West Coast.	
...	1	1	...	3	4	4	12	6	8·9	9·9	−10	73	·909	3·8	1	1·00	0	0·26	0·94	− 0·68	0·26	0·98	− 0·72	0·19	Bombay.	KONKAN.
1	3	...	2	4	2	3	6	10	7·2	11·2	−36	68	·869	5·5	2	1·64	+0·36	0·39	1·89	− 1·50	0·45	1·97	− 1·52	0·29	Ratnagiri.	
1	9	1	1	2	6	1	...	10	10·8	?	?	75	·930	5·0	5	?	?	1·66	?	?	1·53	?	?	0·40	Mormugao.*	
1	9	2	1	1	2	3	3	9	?	?	?	73	·869	5·3	4	?	?	1·75	2·81	−1·06	1·75	2·88	−1·13	1·03	Goa.	
3	8	2	...	...	...	6	1	11	7·0	?	?	75	·872	3·8	3	4·09	−1·09	2·71	3·85	−1·14	2·73	4·26	−1·53	1·16	Karwar.	
9	6	5	1	..	...	2	1	7	7·0	2·2	+218	81	·891	5·7	13	13·45	−0·45	13·65	13·30	+ 0·35	18·34	20·11	− 1·27	3·23	Cochin .	MALABAR.
1	2	3	5	1	...	4	2	13	16·2	?	?	78	·898	5·6	6	9·00	−3·00	5·97	8·05	− 2·08	7·99	11·74	− 3·75	2·50	Calicut.	
20	2	1	4	2	2	...	...	...	3·0	4·6	−35	79	·890	5·3	7	6·80	+0·20	12·17	7·67	+ 4·50	13·33	8·86	+ 4·47	4·09	Mangalore.	
5	12	2	1	...	...	...	...	11	6·8	?	?	80	·860	6·1	8	?	?	11·81	9·80	+2·01	13·85	15·95	−2·10	3·32	Trivandrum.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·18	2·69	−0·54	...	...	...	...	XI.—South India.	
1	...	...	...	4	11	15	...	...	13·6	?	?	80	·980	2·6	1	2·30	−1·30	0·23	2·21	− 1·98	0·61	7·13	− 6·52	0·90	Pamban .	MADRAS, SOUTH.
...	1	1	...	1	1	8	10	9	6·0	?	?	61	·796	4·9	4	3·80	+0·20	3·63	?	?	4·75	?	?	1·50	Tinnevelly.	
3	7	1	...	...	...	1	3	16	2·7	3·7	−27	61	·800	2·5	5	4·00	+1·00	2·64	2·87	− 0·23	3·64	5·36	− 1·72	0·64	Madura.	

* Mean of 30 days.

† Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 207 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	28·949	+·023	29·820	29·001	10th	28·908	14th	·093	85·3	103·6	+4·8	78·8	+3·4	91·2	+4·1	24·8	107·5	3 days	73·0	23rd	34·5
	Coimbatore	1,348	28·582	+·032	29·818	28·585	10th	28·491	13th	·094	80·9	98·3	+3·5	74·4	+0·9	86·4	+2·2	23·9	103·4	2nd	67·6	8th	35·8
Coorg	Mercara	3,781	26·230	+·042	?	26·289	11th	26·197	14th	·092	69·9	79·9	−1·0?	65·6	+1·1	72·8	+0·1	14·3	83·5	2nd & 6th,	61·7	31st	21·8
Mysore	Chitaldroog	2,405	27·505	?	29·816	27·561	11th	27·468	3rd & 13th	·093	78·2	94·9	?	72·0	?	83·5	?	22·9	99·7	8th	68·4	2nd	31·3
	Bangalore	3,021	26·920	+·032	29·819	26·977	10th	26·878	19th	·099	75·5	92·3	+1·1	69·8	+0·7	81·1	+0·9	22·5	97·3	19th	64·3	8th	33·0
	Hassan	3,091	26·871	?	29·856	26·928	11th	26·836	13th & 20th	·092	74·5	88·3	?	67·6	?	77·9	?	20·7	94·0	13th	63·1	2nd	30·9
	Mysore	2,518	27·420	?	29·844	27·480	11th	27·375	1st	·105	77·1	93·3	?	70·3	?	81·8	?	23·0	97·9	14th *	64·0	8th	33·9
Madras, East Coast, South.	Negapatam	31	29·811	+·015	29·770	29·861	5th	29·749	14th	·112	88·3	100·9	+4·8	81·8	+2·0	91·3	+3·4	19·1	106·8	18th	77·4	24th	29·4
	Cuddalore	12	29·810	?	29·751	29·880	5th	29·712	15th	·168	88·6	101·3	?	81·0	?	91·2	?	20·3	107·3	18th & 19th,	74·2	27th	33·1
	Trichinopoly	255	29·589	+·009	29·774	29·636	5th	29·535	16th	·101	87·1	106·1	+5·0	80·4	+2·1	93·2	+3·6	25·7	110·2	2nd	71·4	13th	38·8
	Madras	22	29·792	+·003	29·744	29·872	5th	29·710	16th	·162	89·8	101·4	+3·7	82·3	+1·5	91·9	+2·6	19·1	112·5	16th	76·5	5th	36·0
Madras, East Coast, Central.	Nellore	71	29·718	?	29·721	29·803	5th	29·645	16th	·158	91·2	107·7	?	83·1	?	95·4	?	24·6	114·8	19th	76·6	24th	38·2
	Masulipatam	15	29·769	+·014	29·718	29·859	4th	29·676	17th	·183	90·3	103·1	+3·9	82·7	+1·5	92·9	+2·7	20·4	115·2	20th	71·6	30th	43·6
Madras, Central	Cuddapah	433	29·398	?	29·763	29·443	11th	29·355	15th	·088	90·3	107·4	+2·3	83·4	+0·1	95·5	+1·2	24·0	111·3	3 days	68·5	24th	42·8
	Kurnool	923	28·912	+·024	29·764	28·956	11th	28·864	13th & 14th	·092	88·1	107·2	+2·9	82·4	+2·0	94·8	+2·5	24·8	113·3	1st	79·1	8th	34·2
	Bellary	1,475	28·387	+·042	29·794	28·434	11th	28·338	13th	·096	84·4	102·9	+0·6	77·6	+0·3	90·3	+0·5	25·3	107·2	2nd & 7th,	65·9	23rd	41·3
	Rajahmundry	112	Observations doubtful.								89·4	106·5	+4·0	83·6	+2·3	95·1	+3·2	22·9	116·0	21st	73·1	13th	42·9
Madras, East Coast, North.	Cocanada	26	29·753	+·015	29·714	29·848	4th	29·637	19th	·211	88·9	103·4	+6·5?	84·0	+1·8	93·7	+4·2?	19·4	113·5	28th	72·5	10th	41·0
	Vizagapatam	31	29·730	−·004	29·698	29·834	5th	29·613	18th	·221	88·3	96·7	+2·8	83·1	+3·3	89·9	+3·1	13·6	109·1	18th	73·4	10th	35·7
	Gopalpur	21	29·711	?	29·672	29·812	5th	29·591	17th	·221	85·2	91·2	?	80·6	?	86·0	?	10·6	98·2	7th	71·1	9th	27·1
XII.—Hill Stations		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baluchistan	Kachh	?	23·851	?	?	23·950	11th	23·770	19th	·180	74·2	92·2	?	? (a)	?	? (a)	?	?	94·0	11th & 28th	?	...	?
	Pishin	?	Not recorded.								?	95·9	?	49·4	?	72·6		46·5	105·9	17th	36·9	3rd	69·0
	Quetta	5,502	24·615	+·038	?	24·710	11th	24·500	18th	·210	71·2	85·3	+2·3	51·7	−0·2	68·5	+1·0	33·6	91·1	19th	41·9	4th	49·2
	Kalat	?	Not recorded.								69·7*	86·1	?	38·7*	?	62·4	?	47·4	97·7	16th	29·8	10th	67·9
	Chaman	4,311	25·760	?	?	25·789	2nd	25·544	18th	·245	82·1	94·4	?	?	?	?	?	?	102·0	19th	?	...	?
Punjab	Leh	11,503	19·775	?	?	19·904	5th & 6th	19·693	23rd	·211	48·8	65·1	?	38·4	?	51·8	?	26·7	76·1	22nd	31·4	1st	44·7
	Srinagar	5,204	24·879	?	?	25·056	11th	24·739	19th	·317	62·1	79·7	?	52·2	?	66·0	?	27·5	86·3	7th & 9th	47·2	1st	39·1
	Gilgit	?	24·686	?	?	24·830	11th	24·550	19th	·280	71·7	88·0	?	62·4	?	75·2	?	25·6	97·8	21st	53·3	11th	44·5
	Cherat	?	25·621	?	?	25·748	11th	25·529	17th	·219	78·8	92·2	?	?	?	?	?	?	99·5	8th	?	...	?
	Samana	?	23·714	?	?	23·880	5th & 6th	23·580	19th to 21st & 23rd,	·300	?	77·6	?	38·1	?	57·9	?	39·5	89·1	5th & 15th	20·0	1st to 6th	69·1
	Murree	6,344	23·826	+·044	?	23·914	11th	23·753	17th	·161	71·1	81·5	+5·6	62·0	+3·1	71·8	+3·4	19·5	88·7	31st	48·1	10th & 12th	40·6
	Poo	?	Not recorded.								?	71·5	?	18·3	?	59·9	?	23·2	78·2	21st	43·5	13th	34·7
	Simla	7,224	23·104	+·032	?	23·189	11th	22·992	18th	·197	67·3	76·6	+5·0	60·8	+3·4	68·7	+4·2	15·8	81·0	31st	50·1	11th	30·9
N.-W. Provinces	Chakrata	6,977	23·309	+·040	?	23·399	11th	23·243	19th	·156	64·9	74·3	+0·5	59·7	+3·9	67·0	+2·2	14·6	80·8	31st	47·2	11th	33·6
	Mussooree	6,705	23·515	?	?	23·608	6th	23·429	18th	·179	68·1	79·2	+3·6	61·3	+4·0	70·3	+3·8	17·9	85·8	31st	49·0	11th	36·8
	Ranikhet	6,069	24·072	+·031	?	24·194	11th	23·999	31st	·195	71·4	81·8	+4·9	64·3	+5·0	73·1	+5·0	17·5	87·2	2nd	52·5	11th	34·7
Bengal	Yatung	10,180?	Not recorded.								?	59·1	?	50·4	?	54·8	?	8·7	66·0	25th	38·9	31st	27·1
	Gnatong	?	19·258	?	?	19·373	11th	19·179	31st	·194	42·1	47·0	?	36·5	?	41·9	?	10·5	53·9	23rd	32·1	27th	21·8
	Darjeeling	7,421	22·956	+·014	?	23·097	11th	22·883	18th	·214	56·9	64·1	+1·4	52·3	+1·6	58·3	+1·5	11·8	68·1	11th	44·7	31st	23·4
	Gantok	?	24·334	?	?	24·526	6th	24·318	22nd	·208	61·9	71·1	?	49·4	?	60·2	?	21·7	77·2	22nd	43·2	29th	34·0

* Uncorrected.

(a) Mean of 30 days.

I—*continued.*

in India, Burma, etc., in May 1896—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.	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 March to 31st May 1895.	Normal rainfall for period from 1st March to 31st May.	Variation from normal of period, 1st March to 31st May.			
...	1	...	1	1	3	12	9	4	5·9	4·4	+34	66	·311	3·6	5	8·64	−3·64	4·52	5·20	− 0·68	4·74	7·66	− 2·92	2·08	Salem	MADRAS, SOUTH CENTRAL.
...	...	...	2	...	2	12	15	...	4·2	5·3	−21	82	·378	3·3	2	6·45	−4·45	1·15	2·61	− 1·46	1·28	4·91	− 3·63	0·84	Coimbatore.	
10	5	3	...	...	1	1	1	10	7·5	5·3	+42	84	·613	6·3	6	10·00	−4·00	6·49	6·59	− 0·10	6·94	10·18	− 3·24	3·26	Mercara	COORG.
...	...	...	...	...	...	10	17	4	11·2	?	?	70	·682	6·0	6	?	?	2·05	?	?	3·03	?	?	0·55	Chitaldroog.	MYSORE.
...	1	...	...	1	1	13	14	1	9·5	5·5	+ 73	75	·666	5·8	5	7·55	−2·55	4·81	4·02	+ 0·79	5·57	5·71	− 0·14	1·23	Bangalore.	
...	...	1	1	...	...	7	16	6	4·3	?	?	76	·652	5·9	7	?	?	5·34	?	?	6·73	?	?	1·45	Hassan.	
2	2	1	...	...	1	14	10	1	9·5	?	?	71	·662	5·5	8	?	?	2·92	?	?	4·76	?	?	0·73	Mysore.	
...	...	...	1	2	1	16	10	1	11·1	7·4	+50	67	·396	3·6	2	2·18	−0·18	0·59	1·94	− 1·25	1·09	2·83	− 1·74	0·30	Negapatam	MADRAS, EAST COAST, SOUTH.
...	...	...	...	2	7	11	5	6	2·4	?	?	71	·958	2·5	1	1·50	−0·50	0·11	?	?	0·11	?	?	0·11	Cuddalore.	
1	1	...	...	...	...	7	19	3	8·9	6·0	+48	59	·760	4·8	5	3·91	+1·09	1·72	3·04	− 1·32	1·85	5·12	− 3·27	0·51	Trichinopoly.	
...	1	...	...	...	7	12	9	2	7·9	9·2	−14	59	·838	3·7	0	1·45	−1·45	0	2·12	− 2·12	0	3·13	− 3·13	0	Madras.	
1	...	1	...	7	1	1	10	10	9·6	?	?	55	·797	7·0	1	2·10	−1·10	0·27	?	?	0·27	?	?	0·23	Nellore	MADRAS, EAST COAST, CENTRAL.
...	...	...	...	5	9	5	4	8	11·9	8·9	+34	75	1·061	5·4	1	2·73	−1·73	0·69	1·55	− 0·86	0·69	1·82	− 1·13	0·58	Masulipatam.	
...	...	...	...	...	...	10	8	13	?	?	?	53	·752	3·9	4	3·40	+0·60	3·06	1·60	+ 1·46	3·18	2·04	+ 1·14	2·15	Cuddapah.	MADRAS, CENTRAL.
...	2	...	...	1	...	3	10	15	?	?	?	51	·685	2·7	0	2·67	−2·67	0·16	1·16	− 1·00	0·85	2·35	− 1·50	0·08	Kurnool.	
5	1	3	...	...	...	1	13	8	8·5	8·4	+1	46	·545	6·4	4	3·36	+0·64	6·03	1·70	+ 4·33	6·37	2·50	+ 3·87	2·50	Bellary.	
5	...	...	1	2	11	7	5	...	?	?	?	64	·878	6·0	2	?	?	1·50	?	?	1·55	?	?	1·00	Rajahmundry.	
...	...	1	1	1	2	13	11	2	8·8	?	?	69	·936	4·5	0	3·60	−3·60	0·08	1·22	− 1·14	0·13	1·96	− 1·83	0·06	Cocanada.	MADRAS, EAST COAST, NORTH.
5	...	1	...	...	...	10	15	...	1·7	3·8	−55	72	·965	6·0	4	4·36	−0·36	0·99	2·62	− 1·63	2·30	3·50	− 1·20	0·52	Vizagapatam.	
...	1	...	3	1	11	15	...	...	18·5	13·3	+39	83	1·008	2·7	4	3·44	+0·56	1·13	2·55	− 1·42	1·72	3·99	− 2·27	0·50	Gopalpur.	
...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**XII.—Hill Stations.**	
8	6	2	3	...	1	2	7	2	3·1	?	?	49	·416	?	4	?	?	1·50	?	?	4·76	?	?	0·60	Kachh	BALUCHISTAN.
Not recorded.									?	?	?	?	?	?	0	?	?	0·05	?	?	1·74	?	?	0·03	Pishin.	
26	...	...	...	...	1	...	1	3	2·1	4·7	−55	48	·366	1·2	0	1·18	−1·18	0·04	0·41	− 0·37	2·37	3·31	− 0·94	0·01	Quetta.	
...	...	...	2	1	28	...	...	...	?	?	?	?	?	0	0	?	?	0	?	?	0·94‡	?	?	0	Kalat	
...	1	...	4	3	2	17	2	2	6·4	?	?	† 23	†·263	0·3	0	?	?	0	?	?	1·57	?	?	0	Chaman.	
...	1	2	2	...	2	5	16	3	3·3	?	?	38	·127	4·5	1	?	?	0·23	?	?	1·66	?	?	0·10	Leh	PUNJAB.
8	1	1	2	12	4	1	1	1	5·7	?	?	79	·444	2·3	2	?	?	2·22	?	?	5·92	?	?	1·20	Srinagar.	
Not recorded.									?	?	?	43	·325	3·5	1	?	?	0·66	?	?	1·82	?	?	0·50	Gilgit.	
9	14	4	...	...	1	1	1	1	15·9	?	?	27	·257	2·4	0	?	?	0	?	?	3·07	?	?	0	Cherat.	
...	...	9	5	7	...	...	1	...	?	?	?	?	?	2·1	2	?	?	1·27	?	?	5·56	?	?	0·90	Samana.§	
7	1	1	1	4	1	...	8	8	8·1	8·3	− 2	32	·238	2·4	2	5·55	−3·55	1·23	3·50	−2·27	6·64	10·55	− 3·91	1·04	Murree.	
25	...	...	...	1	1	3	1	...	?	?	?	?	?	1·9	1	?	?	0·59	?	?	7·78	?	?	0·49	Poo.	
16	9	4	...	...	...	1	...	1	4·8	2·9	+66	38	·248	2·3	2	6·18	−4·18	0·51	3·64	− ·313	1·10	7·78	− 6·68	0·16	Simla.	
13	3	4	...	6	5	...	...	...	13·2	6·0	+120	42	·250	0·1	6	?	?	2·26	2·62	− 0·36	4·30	6·49	− 2·19	0·91	Chakrata	N.-W. PROVINCES.
...	...	...	8	3	2	5	...	13	?	12·3	?	43	·300	2·2	3	4·55	−1·55	1·68	?	?	2·62	?	?	0·89	Mussooree.	
11	5	3	2	...	...	7	2	1	4·8	3·3	+45	47	·351	1·6	3	6·00	−3·00	1·34	2·71	− 1·37	2·03	6·06	− 4·03	0·70	Ranikhet.	
Not recorded.									?	?	?	?	?	?	17	?	?	4·90	?	?	18·20	?	?	0·77	Yatung	BENGAL.
6	...	1	4	6	2	1	6	5	5·9	?	?	84	·224	4·7	24	?·	?	16·99	?	?	34·79	?	?	2·44	Gnatong.	
...	1	5	4	2	2	4	9	4	6·7	6·2	+8	92	·427	?	14	13·29	+0·71	9·61	8·74	+ 0·87	12·48	14·90	− 2·42	2·78	Darjeeling.	
17	3	...	...	1	...	3	4	2	7·6*	?	?	86	·478	?	24	?	?	29·13	?	?	43·89	?	?	4·95	Gantok.¶	

* Mean of 25 days. Mean of 29 days. ‡ Rain from 1st to 19th March not available. § Wind direction of 22 days. ¶ Wind direction of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 207 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	26·006	+·051	?	26·078	11th	25·935	9th	·143	77·8	88·8	+0·2	71·3	+0·4	80·1	+0·3	17·5	93·2	7th	63·8	20th	29·4
	Pachmarhi	3,528	26·400	+·040	?	26·449	11th	26·357	17th	·092	83·9	97·1	+2·6	78·2	+3·6	87·7	+3·1	18·9	101·7	30th	73·2	31st	28·5
South India	Wellington	6,200	24·265	+·029	?	24·311	11th	24·234	14th	·077	70·3	79·2	+3·6	58·3	0	68·8	+1·8	20·9	82·7	22nd	54·1	28th	28·6
XIII.—Extra India.																							
Ceylon	Trincomalee	12	29·781	?	29·784	29·838	11th	29·716	16th	·122	83·5	92·6	?	79·6	?	86·1	?	13·0	97·0	2nd	75·0	3 days	22·0
	Colombo	40	29·880	+·026	29·845	29·936	11th	29·819	3rd	·117	82·8	88·7	?	79·0	?	83·9	?	9·7	92·0	10th	70·0	4th	22·0
	Galle	48	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Persia	Meshed	3,104			Not recorded.						68·7	?	?	58·6	?	?	?	?	?	...	47·1	2nd	?
	Resht	?			Not recorded.						?	70·8	?	57·7	?	64·2	?	13·1	81·9	31st	47·9	1st	34·0
	Teheran	?	25·959‡	?	?	26·180	1st	25·805	17th	·375	66·4	77·6	?	55·6	?	66·6	?	22·0	86·9	30th	42·4	2nd	44·5
			25·488§	?	?	25·650	1st	25·360	17th	·290													
	Ispahan	?	24·433	?	?	24·540	1st & 22nd	24·270	17th	·270	66·5	80·1	?	51·8	?	65·9	?	28·3	88·3	29th	44·3	1st	44·0
			24·706	?	?	24·820	22nd	24·510	3rd	·310													
	Bushire	14	29·831	+·067	29·804	29·966	9th	29·669	29th	·297	79·2	86·8	−3·0	74·0	−1·3	80·4	−2·2	12·8	105·5	31st	66·6	2nd	38·9
	Jask*	?	29·776	?	29·728	29·922	14th	29·650	18th	·272	83·8	92·1	?	77·3	?	84·7	?	14·8	107·2	10th	71·2	11th	36·0
Arabia	Muscat	?	29·778	?	?	29·908	11th	29·657	18th	·251	89·5	92·5	?	86·9	?	89·7	?	5·6	98·9	15th	82·0	8th	16·9
	Baghdad	220?	29·731	+·019	29·927	29·857	1st	29·539	28th	·318	74·0†	85·1‡	−5·9‡	67·2†	−0·5	76·2†	−3·2	17·9	92·8	28th	59·7	1st	33·1
	Aden	94	29·779	+·009	29·804	29·911	11th	29·671	31st	·240	85·5	93·6	−0·1	81·1	+0·4	87·4	+0·2	12·5	98·3	3 days	75·4	8th	22·9
	Perim	?	29·617	?	?	29·726	11th	29·522	5th	·204	85·6	91·9	?	82·3	?	87·1	?	9·6	96·3	28th	80·2	18th	16·1
Afghanistan	Kabul	?			Not recorded.						68·8	85·4	?	54·7	?	70·0	?	30·7	92·1	19th	46·8	3rd	45·3
Central Asia	Kashgar	?	25·638‡	?	?	26·026	9th	25·352	26th	·674	68·8‡	81·2	?	59·1§	?	70·1§	?	22·1	96·3	19th	45·3	3rd	51·0
Arabian Sea Islands.	Amini Devi	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Africa	Zanzibar	73	30·011	?	30·011	30·092	23rd	29·924	2nd	·168	77·7	82·9	?	76·2	?	79·6	?	6·7	86·9	8th	73·3	25th	13·6

* Not reduced to sea level. † Mean of 28 days. ‡ Mean of 29 days. § Mean of 30 days.

I—*concluded.*

in India, Burma, etc., in May 1896—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 March to 31st May 1895.	Normal rainfall for period from 1st March to 31st May.	Variation from normal of period 1st March to 31st May.			
...	1	...	...	...	...	21	7	2	14·1	9·4	+50	36	·322	1·0	0	1·45	−1·45	0	1·18	− 1·18	0	1·36	− 1·36	0	Mount Abu	CENTRAL INDIA.
...	...	...	...	...	...	4	18	9	13·7	6·8	+102	49	·571	1·5	0	2·09	−2·09	0·10	0·66	− 0·56	0·12	1·21	− 1·09	0·08	Pachmarhi.	
23	3	2	...	...	...	...	1	2	3·4	3·0	+13	56	·420	2·5	6	8·78	−2·78	1·99	3·95	− 1·96	3·13	9·54	− 6·41	0·49	Wellington.	SOUTH INDIA.
																									XIII.—Extra India.	
...	...	...	...	...	...	31	...	...	10·9	P	P	78§	·898§	2·5	3	P	P	2·23	2·46	−0·23	2·86	5·42	−2·56	1·20	Trincomalee	CEYLON.
...	...	...	...	4	3	15	7	2	9·7	8·5	+14	82	·923	5·5	9	P	P	9·52	11·79	−2·27	20·88	28·76	−7·88	2·43	Colombo.	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Galle.	
				Not recorded.					P	P	P	P	P	3·9	4	?	P	1·44	P	P	7·88	?	P	0·47	Meshed.	PERSIA.
				Not recorded.					P	P	?	79	·484	P	6	P	P	2·70	P	P	11·73	P	P	0·88	Resht.	
16	...	2	...	...	6	2	4	1	6·0	P	P	49	·313	4·1	3	P	P	0·78	P	P	4·76	P	P	0·31	Teheran.	
1	1	...	4	1	...	4	7	13	6·3	P	P	56	·362	2·7	1	P	P	0·21	P	P	2·32	P	P	0·21	Ispahan.	
1	4	4	2	5	...	1	...	14	10·5	8·9	+18	63	·629	2·5	0	P	P	0·05	P	P	1·28	P	P	0·05	Bushire.	
...	1	...	8	2	4	...	6	8	9·2	P	P	66	·781	1·1	0	P	P	0	P	P	2·20	P	P	0	Jask.††	
...	2	1	6	1	...	1	5	15	4·7	P	P	58	·790	0·6	0	P	P	0	P	P	1·54	P	P	0	Muscat	ARABIA.
10	11	1	1	1	2	1	2	2	3·8	?	?	68†	·569?†	0·6	0	P	P	0·05	P	P	4·18	?	P	0·03	Baghdad.	
7	1	...	17	...	3	2	1	...	9·3§	10·6	−12	74	·905	2·6	1	P	P	0·51	0·21	+0·30	0·51	2·03	−1·52	0·51	Aden.	
...	1	3	4	11	2	...	9	1	16·1	P	P	77	·942	2·5	1	P	P	0·74	?	P	0·91	P	P	0·74	Perim.	
...	8	2	10	2	3	...	6	...	P	P	P	P	P	0	2	P	P	0·82	P	P	12·27	P	P	0·50	Kabul	AFGHANISTAN.
26	...	2	...	...	...	...	...	1	2·1‡	P	P	44§	·303§	2·1§	1	P	P	0·22	P	P	0·92	?	P	0·16	Kashgar††.	CENTRAL ASIA.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Amini Devi	ARABIAN SEA ISLANDS.
...	...	...	...	2	19	10	...	...	6·8	P	P	88	·834	5·8	12	P	P	10·84	?	P	126·07	P	P	2·46	Zanzibar	AFRICA.

†† Wind observations of 29 days.

Tabl

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·826	29·735	·091	29·779	+·027	29·779	89·2	78·2	11·0	96·5	73·5	23·0	86·0	84·0	82·1	−0·1	75·6	81·6	79·0	78·
	Rangoon	...	·816	·705	·111	·765	+·007	·742	91·6	77·2	14·4	102·4	73·9	28·5	84·8	85·5	82·0	−1·0	74·3	78·6	79·1	77·
	Diamond Island	...	·820	·715	·105	·766	−·002	·742	88·4	79·4	9·0	92·5	72·8	19·7	85·5	85·0	82·8	−0·3	75·9	78·7	78·2	77·
	Cocos Island	111	·690	·606	·084	·646	?	·688	91·5	79·6	11·9	98·8	72·4	26·4	86·8	87·3	84·2	?	75·3	79·9	79·6	78·
	Akyab	...	·814	·696	·118	·759	−·002	·721	91·4	78·7	12·7	96·2	71·3	24·9	87·8	88·7	84·3	+1·0	76·1	82·2	82·7	80·
Assam.	Silchar	...	·722	·598	·124	·660	+·010	·715	88·9	73·1	15·8	96·4	63·8	32·6	81·4	86·4	80·1	+0·6	71·6	75·6	76·9	74·
	Sibsagar	...	·500	·374	·126	·436	+·010	·724	85·8	72·2	13·6	93·9	62·5	30·5	79·9	84·9	78·3	+1·0	71·4	76·2	78·1	75·
	Dhubri	...	·689	·566	·123	·623	+·020	·692	84·2	72·1	12·1	91·2	67·4	23·8	78·2	83·1	76·5	−1·1	70·4	74·5	76·6	73·
Bengal and Orissa.	Chittagong	...	·726	·612	·114	·670	−·002	·704	88·2	75·5	12·7	91·4	68·0	23·4	84·3	85·3	81·0	−0·1	73·7	78·7	79·1	77·
	Narayanganj	...	·754	·641	·113	·700	+·013	·674	89·9	75·3	14·6	94·3	66·5	27·8	84·2	86·5	82·1	−0·5	72·4	79·2	79·4	77·
	Calcutta (Alipore)	...	·719	·604	·115	·663	+·002	·629	94·5	77·6	16·9	99·3	70·4	28·9	88·8	91·4	85·7	+0·6	74·1	80·4	80·5	78·
	Saugor Island	...	·730	·616	·114	·675	+·004	·644	91·9	81·0	10·9	95·0	72·0	23·0	88·8	89·0	85·4	+0·3	77·2	82·9	82·9	81·
	Burdwan	...	·630	·496	·134	·566	−·001	·620	98·0	77·7	20·3	106·2	68·2	38·0	88·4	95·6	86·4	+0·4	73·9	78·8	80·5	77·
	Berhampore	...	·679	·544	·135	·615	+·012	·629	96·2	76·1	20·1	107·9	70·3	37·6	87·8	93·6	84·6	+0·1	71·9	78·9	80·5	77·
	False Point	...	·731	·612	·119	·674	−·004	·636	91·2	80·6	10·6	97·8	68·0	29·8	89·1	88·4	84·9	+1·2	77·2	83·0	83·1	81·
	Cuttack	...	·648	·509	·139	·589	−·013	·608	102·8	81·1	21·7	110·3	72·6	37·7	91·9	98·7	89·5	+1·8	75·8	80·9	81·4	79·
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·716	27·606	·110	27·665	−·022	·542	103·2	78·0	25·2	108·6	67·7	40·9	94·3	98·4	89·3	+4·1	65·2	72·7	71·6	69·
	Patna	...	29·522	29·391	·131	29·455	−·013	·585	99·6	77·3	22·3	109·3	71·2	38·1	89·9	97·5	87·5	+0·3	72·8	77·7	77·5	76·
	Darbhanga	...	·565	·438	·127	·500	−·004	·617	93·9	76·2	17·7	102·8	68·5	34·3	86·8	92·8	84·4	−0·1	72·1	76·5	78·2	75·
	Allahabad	...	·371	·248	·123	·310	−·014	·558	109·3	82·5	26·8	115·0	76·4	38·6	99·4	107·9	96·1	+4·2	69·1	74·4	73·8	72·
	Lucknow	...	·317	·182	·135	·246	−·027	·557	107·6	81·2	26·4	113·6	71·4	42·2	96·7	105·7	94·5	+3·7	68·9	76·0	75·9	73·
Upper Sub-Himalayas.	Dehra Dun	...	27·509	27·403	·106	27·446	−·023	·559	99·3	72·9	26·4	105·9	64·9	41·0	89·2	95·3	85·4	+3·0	60·8	67·3	68·4	65·
	Roorkee	...	28·789	28·669	·120	28·723	−·018	·542	104·9	75·9	29·0	111·1	68·4	42·7	95·1	102·9	90·2	+2·6	64·5	71·1	70·9	68·
	Meerut	...	·935	·817	·118	·868	−·015	·542	106·2	77·9	28·3	112·4	69·8	42·6	96·4	103·6	91·7	+3·5	66·6	72·0	71·9	70·
	Lahore	...	·946	·844	·102	·888	−·019	·527	107·9	78·8	29·1	114·1	72·1	42·0	97·3	107·0	93·4	+6·4	65·0	72·4	74·1	70·
	Ludhiana	...	·848	·736	·112	·785	−·028	·529	108·4	78·3	30·1	114·5	71·5	43·0	98·9	106·8	93·2	+5·5	65·2	74·4	76·1	71·
Indus Valley and N.-W. Rajputana.	Peshawar	...	·598	·490	·108	·537	−·012	·593	102·7	72·2	30·5	113·5	65·0	48·5	93·5	100·3	87·2	+4·3	60·8	69·7	70·7	67·
	Mooltan	...	29·225	29·127	·098	29·169	−·020	·538	111·7	81·1	30·6	117·7	73·1	44·6	100·0	109·4	96·1	+6·1	65·5	76·8	79·3	73·
	Jacobabad	...	·469	·342	·127	·399	−·012	·530	115·3	80·8	34·5	120·8	72·9	47·9	104·3	114·5	98·1	+4·3	65·0	75·4*	77·0*	72·
	Kurrachee	...	·768	·677	·091	·722	+·031	·683	92·8	79·8	13·0	96·2	77·1	19·1	89·4	89·2	84·5	+0·6	77·0	81·6	82·3	80·
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·313	28·202	·111	28·257	+·012	·586	108·2	80·8	27·4	112·7	70·9	41·8	97·7	106·3	94·2	+3·9	65·1	71·3	71·7	69·
	Ajmere	...	·156	·045	·111	·099	+·017	·603	105·7	83·7	22·0	110·2	72·1	38·1	95·8	104·3	94·4	+4·3	67·7	73·7	75·6	72·
	Deesa	...	29·337	29·192	·145	29·264	+·036	·666	108·9	77·8	31·1	112·3	72·0	40·3	93·6	107·4	92·8	+1·7	68·6†	75·3	73·1	72·
	Nowgong	...	28·946	28·818	·128	28·882	−·006	·556	110·2	83·7	26·5	115·1	77·5	37·6	102·4	108·2	96·8	+3·6	66·3	72·0	72·3	70·
	Agra	...	29·120	·998	·122	29·050	−·029	·539	108·9	83·8	25·1	113·8	74·1	39·7	101·3	106·7	96·2	+3·0	68·2	75·7	76·7	73·
Deccan.	Belgaum	...	27·381	27·277	·104	27·333	+·042	·729	93·6	69·5	24·1	102·3	66·2	36·1	84·9	85·2	78·3	+0·7	66·7	70·6	72·9	70·
	Sholapur	...	28·260	28·103	·157	28·184	+·034	·658	105·8	78·6	27·2	110·7	70·8	39·9	93·8	103·2	91·1	+1·9	67·6	71·3	72·0	70·
	Poona	...	·039	27·917	·122	27·986	+·040	·715	100·5	72·3	28·2	107·5	68·7	38·8	90·0	96·1	85·5	+1·1	66·4	70·5	72·1	69·
	Akola	...	·853	28·705	·148	28·778	+·019	·621	109·6	83·3	26·3	113·9	72·7	41·2	99·0	108·2	96·4	+2·7	66·6	74·1	73·4	71·
	Buldana	2,132	27·709	27·588	·121	27·648	+·031	·637	102·6	78·5	24·1	107·3	67·3	40·0	92·3	101·2	90·5	+1·8	64·3	69·5	68·1	67·

* Mean of 2 days. † Mean of 29 days.

II.

at 85 Stations in India, Burma, etc., for May 1896.

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.		
																								%	%						
·856	·991	·927	·925	−·017	89	80	80	83	− 1	8·3	8·5	8·4	+2·1	...	2	2	1	1	8	17	21	10	S 75° W	S 34° W	61	48	195	166	...	...	Port Blair	Burma Coast and Bay Islands.
·811	·896	·916	·874	+·006	87	76	76	80	+ 3	7·0	8·6	7·8	+1·1	...	3	4	3	5	16	15	10	6	S 38° W	S 19° W	40	59	109	119	...	...	Rangoon	
·852	·892	·877	·874	−·024	85	73	73	77	+ 5	7·6	7·4	7·5	+2·0	...	1	3	1	1	1	25	14	16	S 83° W	S 76° W	64	45	246*	162	...	...	Diamond Island	
·822	·933	·913	·889	?	82	74	71	76	?	6·9	6·3	6·6	?	...	11	2	...	4	10	23	8	2	S 54° W	?	44	?	?	?	19·12	4·75	Cocos Island.	
·879	1·029	1·042	·981	+·098	89	78	77	81	+ 4	6·4	5·5	5·9	+0·6	...	5	1	10	5	22	5	9	5	S 5° W	S 33° W	32	31	93	88	...	...	Akyab	
·758	·818	·800	·792	−·002	93	78	64	78	− 2	6·9	6·2	6·6	+0·4	36	3	1	4	1	2	1	8	6	N 59° W	N 75° E	14	10	76*	79	...	...	Silchar	Assam.
·764	·857	·878	·833	+·049	96	84	74	85	+ 3	8·2	6·7	7·4	−0·4	1	1	30	2	11	1	11	3	2	N 69° E	N 56° E	32	37	114*	66	...	...	Sibsagar	
·723	·810	·835	·789	+·002	91	84	74	83	+ 3	7·7	5·1	6·4	+1·8	6	8	22	16	2	4	1	2	1	N 58° E	N 70° E	56	21	210	168	...	...	Dhubri	
·813	·913	·918	·881	+·018	91	78	75	81	+ 1	6·2	5·2	5·7	+0·6	...	...	2	4	15	11	20	6	4	S 12° W	S	52	38	131*	153	...	...	Chittagong	Bengal and Orissa.
·764	·937	·916	·872	−·015	86	80	72	79	− 1	7·2	6·0	6·6	+1·3	...	...	6	9	27	15	2	2	1	S 43° E	S 19° E	68	60	200	149	...	...	Narayanganj	
·802	·928	·897	·876	−·020	84	68	61	71	− 5	4·7	4·2	4·5	+0·1	...	...	1	6	6	29	17	2	1	S 5° W	S 11° E	71	66	162	172	...	...	Calcutta (Alipore).	
·893	1·052	1·045	·997	+·012	84	77	77	79	− 1	6·1	5·9	6·0	+0·5	...	...	...	1	16	40	5	...	...	S 9° E	S 12° W	90	69	420	367	...	...	Saugor Island	
·794	·860	·843	·832	+·019	83	64	50	66	0	5·1	5·9	5·5	+1·5	1	1	2	9	10	21	17	1	...	S 7° E	S 9° E	61	52	153*	131	...	...	Burdwan	
·729	·872	·866	·822	+·020	81	67	56	68	− 3	4·7	4·8	4·8	−0·4	2	1	3	22	14	14	3	1	2	S 54° E	S 36° E	60	37	132*	132	...	...	Berhampore	
·895	1·051	1·063	1·003	+·042	85	76	79	80	− 3	5·6	5·1	5·4	+0·9	...	...	...	...	14	42	6	...	...	S 6° E	S 31° W	92	71	344*	324	...	...	False Point	
·828	·906	·841	·858	+·026	78	61	46	62	− 2	3·2	3·6	3·4	−0·5	...	2	4	1	3	22	27	3	...	S 23° W	S 5° W	68	61	129	125	...	...	Cuttack	
·469	·536	·443	·483	+·011	50	35	26	37	− 3	2·5	5·9	4·2	+0·3	1	13	3	5	4	10	7	7	12	N 61° W	S 77° W	19	15	238	210	...	...	Hazaribagh	
·750	·790	·675	·738	+·053	80	57	40	59	+ 4	1·4	1·0	1·2	−1·5	5	1	14	37	...	1	...	...	4	N 74° E	N 54° E	74	38	190*	118	...	...	Patna	Gangetic Plain and Chota Nagpur.
·738	·778	·773	·763	+·005	81	61	51	64	+ 4	1·9	1·3	1·6	−0·4	1	...	4	28	23	2	2	2	...	S 69° E	S 86° E	76	59	193	145	...	...	Darbhanga	
·502	·520	·379	·467	−·061	46	29	16	30	− 8	0·4	0·4	0·4	−1·2	3	8	9	9	2	...	2	10	19	N 18° W	N 8° E	42	20	154	99	...	...	Allahabad	
·548	·613	·497	·553	+·011	52	37	22	37	− 4	0·6	1·0	0·8	−1·1	...	6	4	15	8	...	3	14	12	N 7° W	N 15° E	14	15	94*	102	...	...	Lucknow	
·386	·398	·359	·381	?	48	29	23	33	?	2·4	3·6	3·0	+0·2	12	2	5	1	6	7	13	13	3	S 51° W	S 76° W	32	17	35	59	...	...	Dehra Dun	
·473	·466	·358	·432	+·017	53	29	18	33	− 2	0·3	0·9	0·6	−1·2	7	1	5	3	17	4	1	2	22	N 5° E	S 68° W	6	6	109	88	...	...	Roorkee	Upper Sub-Himalayan.
·507	·459	·359	·442	−·061	53	28	18	33	− 8	0·5	1·5	1·0	−0·8	13	...	1	8	7	...	8	17	8	S 74° W	N 32° W	24	24	62*	63	...	...	Meerut	
·437	·461	·401	·433	−·002	44	27	17	29	− 4	0·6	1·3	1·0	−1·3	2	6	5	12	6	8	6	10	7	S 17° E	N 7° E	3	21	73	79	...	...	Lahore	
·454	·523	·489	·489	+·008	47	29	21	32	−10	0·5	0·9	0·7	−1·5	5	1	17	...	12	1	7	2	17	N 9° E	N 57° W	18	10	91	56	...	...	Ludhiana	
·397	·433	·386	·405	−·020	51	29	21	34	− 6	1·9	3·2	2·6	−0·3	7	6	12	9	8	3	4	3	10	N 45° E	N 16° E	23	32	102*	118	...	...	Peshawar	
·424	·614	·597	·545	−·034	40	32	24	32	−10	0·1	0·3	0·2	−0·9	19	...	9	...	8	5	14	4	3	S 19° W	S 35° W	21	35	58*	68	...	...	Mooltan	Indus Valley and N.-W. Rajputana.
·416	·503*	·439*	·445*	−·005	39	23*	15*	25*	− 6	0·4	0·5	0·5	−0·7	14	8	2	2	9	9	4	6	8	S 57° W	S 61° E	9	17	127*	107	...	...	Jacobabad	
·894	·977	1·015	·962	?	88	71	74	77	?	2·7	3·2	3·0	+1·0	...	...	...	...	...	...	31	31	...	S 68° W	S 60° W	92	85	421*	420	...	...	Kurrachee	
·430	·439	·343	·401	−·024	41	25	15	27	− 4	1·6	3·0	2·3	+0·3	2.	...	...	1	1	1	20	29	8	S 78° W	N 50° W	77	50	151	159	...	...	Jeypore	
·477	·556	·534	·522	+·004	42	34	25	34	− 4	0·5	2·0	1·3	−0·3	...	...	...	...	1	1	13	44	3	S 81° W	S 60° W	89	63	186	181	...	...	Ajmere	E. Rajputana, C. India and Gujarat.
·578†	·634	·351	·522†	−·062	61†	40	15	36†	− 3	0·7	0·6	0·7	−0·8	...	...	...	...	...	...	13	45	4	S 84° W	S 55° W	93	76	341	321	...	...	Deesa	
·418	·381	·315	·371	−·036	37	19	13	23	− 8	1·8	3·7	2·8	−0·3	...	1	1	3	2	...	6	35	14	N 82° W	N 70° W	71	44	102*	81	...	...	Nowgong	
·487	·546	·516	·516	+·075	42	28	22	31	0	0·9	1·7	1·3	+0·1	...	...	1	...	9	...	20	1	31	N 86° W	N 72° W	48	30	201*	139	...	...	Agra	
·621	·575	·661	·622	+·026	86	49	56	64	+ 4	2·1	4·1	3·1	−0·4	...	4	3	...	1	...	10	28	14	N 79° W	S 38° W	72	73	428†	435	...	...	Belgaum	
·540	·487	·395	·474	+·010	55	31	19	35	− 1	2·0	5·1	3·6	−0·4	1	9	4	...	1	...	2	3	42	N 38° W	N 41° W	80	46	235*	242	...	...	Sholapur	Deccan.
·580	·504	·490	·525	+·015	73	37	30	46	+ 3	1·7	3·1	2·4	−0·6	1	1	...	...	...	...	5	28	27	N 72° W	N 56° W	86	66	447*	337	...	...	Poona	
·434	·511	·359	·435	+·037	39	28	15	27	0	0·7	2·3	1·5	−0·8	...	4	1	...	...	...	1	23	33	N 59° W	N 51° W	87	72	305*	208	...	—	Akola	
·426	·437	·276	·380	−·062	44	29	14	29	− 6	1·8	3·5	2·7	0	...	1	...	...	...	...	1	8	52	N 51° W	N 53° W	95	51	319*	284	0·43	0·42	Buldana	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85 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.
Deccan—*continued.*	Khandwa	...	28·758	28·613	·145	28·685	+·040	29·643	108·0	83·5	24·5	112·7	78·1	34·6	96·7	107·1	95·4	+3·0	67·2	72·3	70·9	70·1
	Hoshangabad	...	·755	·607	·148	·680	+·006	·593	109·2	83·2	26·0	113·4	76·7	36·7	99·6	107·8	95·7	+2·6	65·0	73·6	73·6	70·7
	Nagpur	...	·706	·570	·136	·637	+·003	·567	112·1	85·8	26·3	115·9	79·8	36·1	103·4	108·1	98·2	+4·0	66·6	77·6	78·1	74·1
	Do. (Sanitary Commr.'s Office)	...	·726	·587	·139	·656	?	·576	112·7	87·2	25·5	116·4	80·0	36·4	103·7	109·9	99·3	?	66·0	75·9	78·8	73·6
	Jubbulpore	...	·401	·269	·132	28·334	−·001	·553	109·1	81·2	27·9	113·0	71·6	41·4	100·8	106·6	94·4	+3·5	66·0	70·6	71·1	69·2
	Saugor	...	27·997	27·874	·123	27·935	+·013	·561	107·9	80·2	27·7	112·4	74·1	38·3	100·0	105·6	93·4	+3·8	61·4	69·8	69·6	66·9
	Raipur	...	28·753	28·624	·129	28·688	+·006	·547	111·2	85·6	25·6	113·5	78·5	35·0	103·0	108·3	98·0	+4·5	67·6	73·5	70·1	70·4
	Sutna	...	·659	·533	·126	·596	−·004	·542	109·8	83·2	26·6	116·1	75·9	40·2	101·9	106·6	95·9	+4·8	64·9	71·1	70·0	68·7
	Hyderabad (Deccan).	...	·124	27·996	·128	·060	?	·624	105·8	81·8	24·0	108·6	78·2	30·4	96·1	102·6	93·0	?	69·2	75·1	75·1	73·1
West-Coast.	Bombay	...	29·861	29·759	·102	29·808	+·042	·784	91·5	82·1	9·4	93·3	79·3	14·0	87·9	89·0	86·1	+1·4	76·9	79·6	80·1	78·9
	Ratnagiri	...	·780	·681	·099	·729	+·040	·774	92·6	81·6	11·0	94·4	79·1	15·3	89·8	89·7	86·3	+2·0	76·3	79·4	79·9	78·6
	Karwar	...	·868	·774	·094	·819	+·046	·794	90·4	81·0	9·4	92·5	75·5	17·0	87·4	88·5	85·1	+1·3	76·7	78·8	79·3	78·3
	Cochin	...	·921	·832	·089	·875	+·041	·811	90·0	78·3	11·7	93·0	72·3	20·7	85·7	87·9	83·5	+0·9	75·9	79·2	80·0	78·4
South India.	Salem	...	28·943	28·792	·151	28·880	+·006	·731	103·4	78·8	24·6	107·6	72·9	34·7	91·4	97·7	88·3	+3·7	74·4	77·9	77·7	76·7
	Mysore	...	27·421	27·301	·120	27·361	?	·746	93·1	70·3	22·8	97·9	64·2	33·7	82·7	89·7	80·9	?	64·7	71·0	70·9	68·9
	Mercara	...	26·242	26·160	·082	26·213	+·034	?	79·7	65·7	14·0	83·7	61·9	21·8	73·9	75·6	71·7	+0·2	63·6	67·3	69·1	66·7
	Bangalore	...	·924	·812	·112	·875	+·027	·726	92·2	69·8	22·4	97·3	64·5	32·8	81·9	88·8	80·1	+1·0	65·7	71·3	70·8	69·3
	Hassan	...	·874	·776	·098	·832	?	·765	88·1	67·6	20·5	94·0	63·1	30·9	80·7	83·9	76·8	?	65·8	70·1	71·0	69·0
	Chitaldroog	...	27·504	27·382	·122	27·444	?	·715	94·7	72·0	22·7	99·7	68·4	31·3	84·3	93·9	82·9	?	65·5	72·2	72·4	70·0
	Trichinopoly	...	29·595	29·441	·154	29·530	−·005	·708	105·9	80·4	25·5	110·0	71·2	38·8	93·8	103·1	91·1	+3·9	73·4	76·3	76·7	75·5
	Madras	...	·793	·685	·114	·749	+·014	·698	101·6	82·3	19·3	112·4	76·6	35·8	96·2	91·5	89·4	+2·2	?	80·1	80·9	79·9
	Bellary	...	28·392	28·239	·153	28·317	+·040	·690	102·6	77·3	25·3	107·2	65·7	41·5	90·9	100·3	89·0	+0·4	67·7	70·9	72·5	70·4
	Vizagapatam	...	29·734	29·607	·127	29·670	−·016	·637	96·6	83·1	13·5	109·3	73·2	36·1	92·4	92·1	88·7	?	78·1	82·0	81·3	80·5
	Cocanada	...	·753	·609	·144	·680	?	·641	103·3	84·0	19·3	113·3	72·3	41·0	94·7	98·1	92·4	?	77·2	80·7	82·2	80·0
Hill Station, Baluchistan.	Quetta	...	24·618	24·536	·082	24·568	+·027	?	85·5	52·0	33·5	91·3	42·0	49·3	79·5	83·1	68·2	+1·5	45·0	59·5	61·4	55·3
Hill Stations, Punjab.	Leh	11,503	19·769	19·691	·078	19·742	+·058	?	65·5	38·5	27·0	76·1	31·4	44·7	56·8	61·8	51·4	+3·9	?	40·9	43·8	?
	Srinagar	...	24·885	24·810	·075	24·839	?	?	79·8	52·2	27·6	86·8	47·0	39·8	67·3	77·2	65·4	?	50·7	60·0	66·5	59·1
	Murree	...	23·844	23·808	·036	23·818	+·038	?	81·8	62·0	19·8	92·6	48·1	44·5	75·4	78·4	71·5	+5·0	49·5	56·1	56·8	54·1
	Chamba	3,005	26·791?	26·711?	·080	26·764?	?	?	95·1	66·0	29·1	104·4	58·5	45·9	82·5	89·9	79·0	+4·0	56·0	62·5	63·3	60·6
	Kallang	10,087	20·810	20·774	·036	20·804	+·023	?	64·6	38·4	26·2	74·8	33·0	41·8	55·5	58·2	49·6	+2·3	35·6	44·4	45·0	41·7
	Simla (Ridge)	...	23·120	23·070	·050	23·086	+·029	?	76·9	60·8	16·1	83·1	50·1	33·0	71·0	74·1	68·5	+4·9	49·1	54·0	55·2	52·8
Hill Stations, N.W.P.	Chakrata	...	·318	·262	·056	·282	+·020	?	74·2	59·7	14·5	80·7	47·3	33·4	69·3	71·1	66·6	+2·1	48·7	52·3	53·3	51·4
	Ranikhet	...	24·083	24·008	·075	24·034	+·018	?	82·0	64·3	17·7	87·3	52·4	34·9	76·9	78·0	72·6	+5·1	53·6	60·2	60·7	58·2
Hill Station, Nepal.	Katmandu	4,388	25·512	25·450	·062	25·477	−·031	?	85·5	?	?	92·2	?	?	77·3	79·0	?	?	59·7	66·1	66·4	64·1
Hill Station, Bengal.	Darjeeling	...	22·968	22·897‡	·071	22·931‡	+·017	?	63·9§	52·3	11·6	67·9	44·6	23·3	59·2	60·4	57·4††	+1·5	51·5	57·4	57·9¶	55·6
Hill Stations, Central India.	Mount Abu	...	26·019	25·945	·074	25·981	+·024	?	88·8	71·3	17·5	93·2	64·0	29·2	80·9	87·4	79·7	+0·1	55·2‖	62·0†	63·9†	60·5†
	Pachmarhi	...	·409	26·309	·100	26·358	+·036	?	97·1	78·4	18·7	101·5	73·2	28·3	89·2	95·2	87·4	+3·3	?	72·3	74·0	?
	Chikalda	3,642	·307	·213	·094	·259	+·040	?	95·1	74·7	20·4	100·0	64·9	35·1	85·4	94·1	84·7	+1·9	60·9	65·6	67·2	64·6

† Mean of 24 days. ‡ Mean of 27 days. § Mean of 30 days. ‖ Mean of 29 days. ¶ Mean of 28 days. †† Mean of 26 days.

II—*continued.*

in India, Burma, etc., for May 1896—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 for the month.	Heaviest rainfall during the month.		
																								%	%						
·470	·489	·305	·421	—·065	41	28	13	28	− 6	0·8	1·4	1·1	−1·2	1	5	...	...	...	...	...	17	39	N 54° W	N 61° W	89	69	316	225	...	...	Khandwa	Deccan—*continued*.
·397	·506	·401	·435	—·022	35	27	17	26	− 5	0·2	3·4	1·8	−0·7	5	...	1	...	...	...	17	32	7	S 82° W	W	79	54	166	93	...	...	Hoshangabad.	
·421	·626	·590	·546	?	34	29	24	29	?	1·6	5·1	3·5	−0·4	2	16	7	1	2	1	4	10	19	N 33° W	N 41° W	55	44	256	168	...	...	Nagpur .	
·379	·545	·593	·506	?	29	25	23	26	?	0·9	5·3	3·1	?	5	16	1	...	1	5	9	18	7	N 71° W	?	47	?	78*	?	...	...	Do. (Sanitary Commr.'s Office)	
·457	·371	·317	·382	—·023	42	19	14	25	− 5	0·6	3·5	2·0	−1·1	2	3	3	...	2	1	6	26	19	N 74° W	N 62° W	68	44	103	104	...	...	Jubbulpore .	
·314	·351	·273	·313	—·052	30	18	12	20	− 8	1·2	2·7	2·0	+0·1	...	5	...	1	...	...	21	26	5	S 82° W	N 87° W	71	60	87	105	...	...	Saugor .	
·435	·430	·353	·406	—·065	36	21	15	24	− 9	0·8	3·7	2·2	−1·1	4	10	4	2	...	2	10	13	17	N 60° W	N 78° W	52	39	230*	190	...	...	Raipur .	
·389	·377	·277	·348	—·007	35	19	12	22	− 5	0·9	1·7	1·3	−1·0	...	13	1	5	1	3	...	19	20	N 48° W	N 50° W	58	52	202*	198	...	...	Sutna. .	
·561	·614	·527	·567	?	52	37	26	38	?	2·2	3·7	3·0	?	3	9	6	4	1	1	3	12	23	N 40° W	?	53	?	167*	?	...	...	Hyderabad (Deccan),	
·855	·899	·910	·888	+·007	78	68	67	71	− 3	3·0	2·2	2·6	−1·3	...	10	...	...	...	5	11	24	12	N 82° W	N 82° W	66	67	212	248	...	...	Bombay .	West Coast.
·838	·867	·891	·865	+·040	78	62	64	68	− 1	4·8	4·2	4·5	?	...	3	...	...	...	4	11	27	17	N 86° W	N 73° W	76	64	233	255	...	...	Ratnagiri .	
·861	·870	·878	·870	+·017	81	67	65	71	− 3	3·6	3·2	3·4	+0·2	...	1	...	...	...	1	22	10	28	N 85° W	N 69° W	73	81	168	?	...	...	Karwar .	
·865	·912	·919	·899	+·006	90	74	70	78	− 3	5·1	4·8	5·0	−0·7	3	3	3	1	1	1	3	22	25	N 64° W	W	69	49	167	?	...	...	Cochin .	
·793	·774	·673	·747	−·022	81	53	38	57	− 7	3·1	5·5	4·3	−0·3	...	4	9	2	1	5	16	15	10	N 89° W	S 50° W	39	61	145	100	...	...	Salem .	South India.
·545	·613	·523	·560	?	73	55	39	56	?	5·4	6·8	6·1	?	2	4	2	...	...	1	19	28	6	S 84° W	?	72	?	232*	?	...	...	Mysore .	
·569	·594	·636	·600	−·015	90	71	72	78	− 2	5·6	5·7	5·7	−1·0	6	10	1	...	...	3	4	19	19	N 62° W	N 68° W	63	65	180	113	...	...	Mercara .	
·587	·643	·549	·593	+·001	80	59	41	60	− 2	4·2	5·0	4·6	+0·2	...	2	2	2	1	2	14	25	14	N 89° W	S 71° W	66	72	199*	133	...	...	Bangalore .	
·613	·617	·612	·614	?	91	59	53	68	?	5·4	6·7	6·0	?	1	1	...	3	...	...	12	28	17	N 84° W	?	74	?	103*	?	...	...	Hassan .	
·552	·641	·539	·577	?	70	55	36	54	?	4·3	4·4	4·3	?	...	...	1	2	1	...	10	32	16	N 85° W	?	76	?	236*	?	...	...	Chitaldroog .	
·730	·672	·563	·655	—·083	71	42	27	47	−10	3·3	4·0	3·7	−1·8	6	2	3	...	1	2	16	28	4	S 80° W	S 82° W	64	59	214	145	...	...	Trichinopoly .	
?	·811	·914	·893	+·023	?	48	62	65	− 4	3·0	3·4	3·2	−0·7	...	2	1	4	29	6	8	9	3	S 17° E	S 15° E	47	66	189	220	...	...	Madras .	
·558	·508	·450	·505	—·065	60	35	23	39	− 4	5·9	7·5	6·7	+1·9	3	2	3	1	1	2	6	28	16	N 78° W	N 76° W	66	52	204	200	...	...	Bellary .	
·899	·955	·924	·926	+·018	80	63	62	68	− 1	5·2	4·3	4·8	+0·7	...	...	...	...	2	16	27	16	1	S 44° W	S 41° W	80	60	424	86	...	..	Vizagapatam .	
·849	·860	·889	·866	?	73	54	51	59	?	3·0	3·6	3·0	?	...	...	1	1	15	14	14	13	1	S 14° W	?	55	?	212*	?	...	...	Cocanada .	
·231	·305	·323	·286	+·006	59	29	28	39	− 3	1·4	3·1	2·2	+1·3	25	1	1	1	1	...	·3	12	18	N 69° W	N 69° W	42	51	52*	106	...	...	Quetta .	Hill Station, Baluchistan.
?	·120	·130	?	?	?	28	25	?	?	5·4	6·5	6·0	−0·4	...	3	6	3	1	4	15	24	6	S 83° W	S 72° W	50	25	78	75	...	...	Leh .	Hill Stations, Punjab.
·355	·440	·533	·443	?	90	66	59	72	?	1·8	3·8	2·8	?	9	9	7	4	11	4	4	5	9	N 23° E	?	10	?	101*	?	...	...	Srinagar .	
·228	·250	·238	·239	−·022	43	30	25	33	−11	1·5	3·2	2·4	−1·9	...	...	4	...	15	11	8	18	6	S 36° W	S 18° E	40	13	194*	193	...	...	Murree .	
·337	·328	·277	·317	−·021	53	31	21	35	− 9	2·8	5·6	4·2	−0·3	15	3	...	2	6	...	...	2	34	N 41° W	N 16° W	48	14	133*	119	0·89	0·31	Chamba .	
·185	·198	·169	·191	+·013	79	46	42	56	0	3·7	7·1	5·4	−0·8	...	...	1	2	2	21	18	14	4	S 39° W	S 61° W	66	70	53	54	2·28	0·83	Kailang .	
·230	·243	·242	·239	−·047	44	33	30	36	−11	2·2?	3·1	2·7	−1·2	11	21	7	1	...	6	5	7	4	N 21° W	S 66° W	34	51	113	?	...	...	Simla (Ridge).	Hill Stations, N. W. P.
·233	·219	·225	·226	−·048	48	33	31	37	−12	0·7	2·5	1·6	−2·1	5	3	2	...	20	29	1	...	2	S 19° E	S 63° W	64	29	325	147	...	...	Chakrata .	
·304	·349	·354	·336	+·011	52	39	37	43	− 8	1·7	1·6	1·7	−1·9	7	5	...	1	2	1	15	28	3	S 81° W	S 63° W	63	46	130*	87	...	...	Ranikhet .	
?	·516	·507	?	?	?	56	53	?	?	4·6	6·0	5·3	0	...	...	...	28	4	...	1	27	2	S 39° E	S 86° W	5	64	57	?	5·07	0·71	Katmandu .	Hill Station, Nepal.
·377	·457	·457‡	·430	+·031	95	90	87‡	91	+ 4	3·9	4·0	4·0	−3·3	...	3	8	4	4	2	6	22	9	N 73° W	S 79° W	36	46	162	149	...	...	Darjeeling .	Hill Station, Bengal.
·251‡	·321†	·317†	·296†	—·045	33‖	29†	24†	28†	− 7	0·5	0·6	0·6	−1·0	...	1	...	...	...	1	40	10	10	S 65° W	S 62° W	81	70	342*	231	...	...	Mount Abu .	Hill Stations, Central India.
?	·600	·599	?	?	?	44	36	?	?	1·2	3·3	2·5	−0·3	5	2	...	...	...	...	7	31	7	N 87° W	N 55° W	66	62	246	164	...	...	Pachmarhi .	
·379	·405	·357	·380	+·012	45	34	23	34	− 1	1·3	2·9	2·1	−0·6	10	30	2	...	...	...	...	...	20	N 16° W	N 37° W	76	63	324*(a)	226	0·79	0·79	Chikalda .	

* Corrected. (a) Mean of 20 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85 Stations

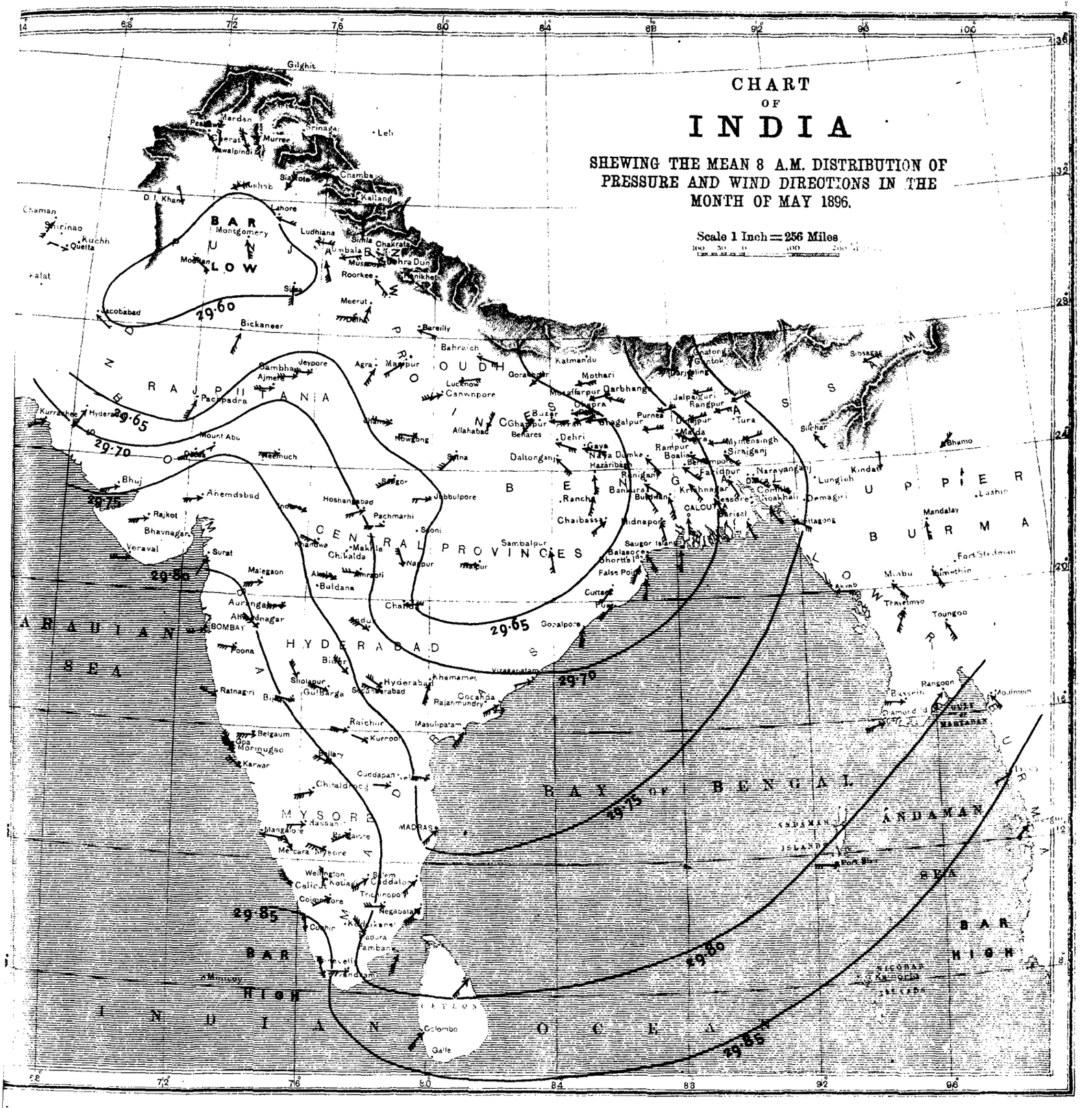
Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	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	...	24·268	24·194	·074	24·231	+·028	?	79·1	58·3	20·8	82·6	54·1	28·5	75·3	72·6	67·1	+1·3	55·0	61·6	61·5	59·4
Extra India.	Muscat	...	29·785	29·709	·076	29·747	?	?	92·1	86·9	5·2	98·9	82·0	16·9	90·9	91·0	89·3	?	72·4	78·0	79·1	76·5
	Aden	...	·793	·689	·104	·738	+·020	29·762	93·4	81·2	12·2	98·5	75·3	23·2	88·0	90·9	86·7	+0·9	73·0	79·3	77·3	76·5
	Perim	...	·635	·539	·096	·584	?	?	92·1	82·3	9·8	96·3	80·2	16·1	88·7	89·2	86·5	?	77·1	80·8	81·1	79·7
	Zanzibar	...	30·021	·935	·086	·978	+·007	·978	83·0	76·2	6·8	86·9	73·3	13·6	79·4	82·4	79·5	+1·6	73·5	75·9	76·9	75·4
	Port Victoria (Seychelles)	15	29·996	·912	·084	·954	?	·894	84·4	78·8	5·6	86·7	75·1	11·6	83·5	84·0	81·5	?	74·0	76·9	77·0	76·0
	Mauritius	181	?	?	?	·910	+·002	30·039	?	?	?	84·6	56·7	27·9	?	?	72·4	−0·1	?	?	?	?

II—*concluded.*

in India, Burma, etc., for May 1896—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.		
																								%	%						
·401	·407	·432	·413	−·029	82	47	55	61	−9	3·8	6·5	5·2	−0·5	4	3	6	5	16	13	5	...	4	S 50° E	N 88° E	29	24	79	70	...	...	Wellington	Hill Station, South India.
·613	·799	·841	·751	P	48	56	58	54	P	0·6	1·3	0·9	P	...	3	10	17	2	...	...	1	29	S 8° E	P	48	P	113	P	...	...	Muscat	Extra India.
·706	·888	·760	·785	−·065	67	67	53	62	−7	2·6	1·1	1·9	0	9	...	4	21	2	12	13	...	...	S 38° E	S 67° E	42	40	311	257	...	...	Aden	
·866	·947	·956	·923	P	78	70	70	73	P	1·2	1·3	1·2	P	...	3	...	16	23	4	1	8	7	S 55° E	P	37	P	383	P	...	...	Perim	
·789	·850	·853	·831	+·045	87	85	77	83	+2	4·5	5·1	4·7	−1·3	...	...	1	...	15	35	9	...	...	S 5° E	S 17° W	84	69	150	179	...	...	Zanzibar	
·776	·838	·837	·817	P	79	73	72	75	P	5·0	5·0	5·0	P	...	...	...	3	48	9	2	...	...	S 39° E	P	92	P	202	?	3·77	1·70	Port Victoria (Seychelles)	
P	P	P	·633	P	P	P	P	79	+3	P	P	P	?	P	P	P	P	P	?	?	?	?	P	P	P	P	271	242	13·55	6·35	Mauritius	

G. I. C. P. O.—No. 44 Meteor.—4-9-96.—385.



Fr. No. 3/6, Wr., 1.—Aug. 96—395.

Litho., S. I. C. Calcutta

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 „ „ „ „ „

376, Wr., I.—Aug. 96—396.

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.

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

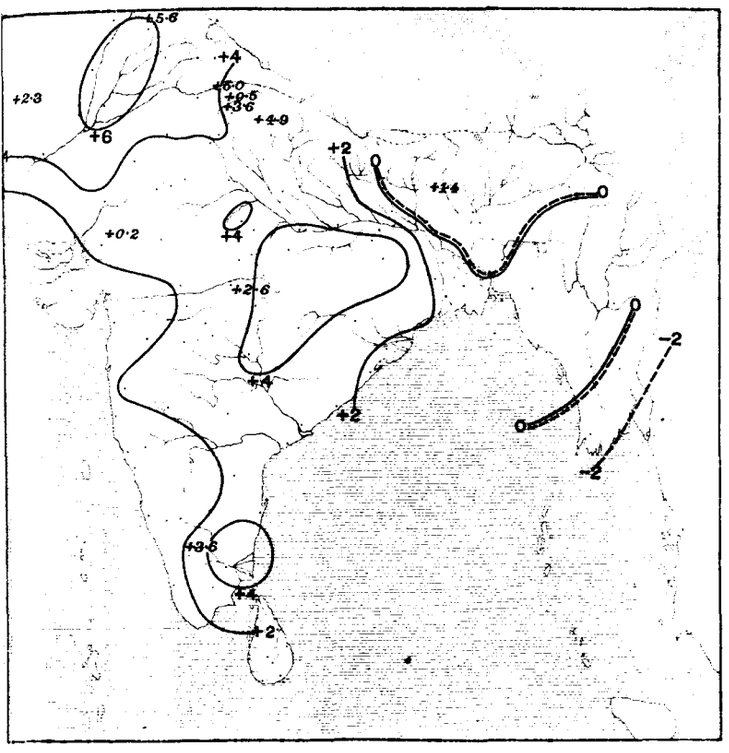
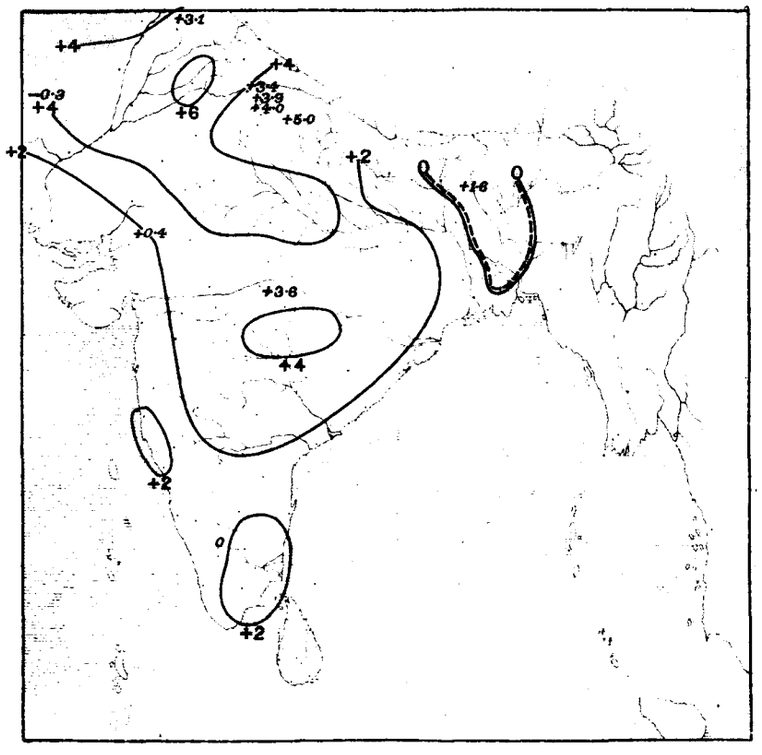


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

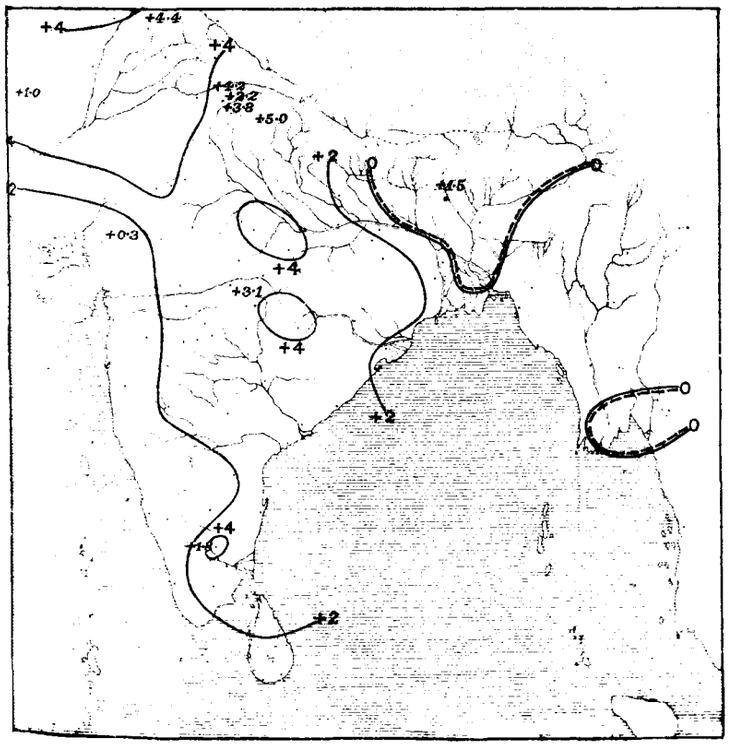
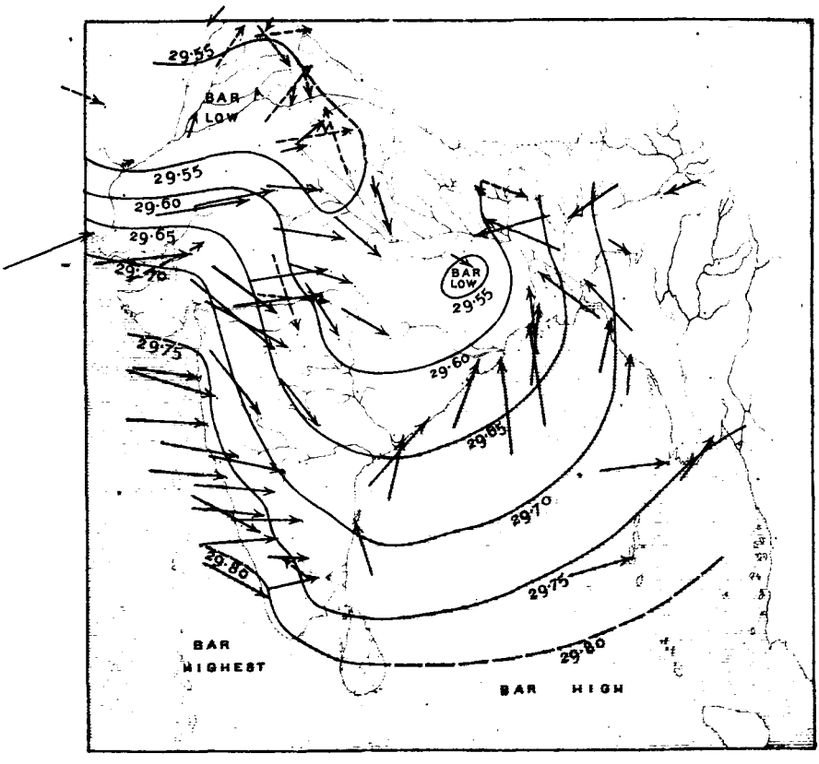


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF MAY 1896.



Wr. — Litho., S. I. O., Calcutta

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 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

Reg No 3 m, Wr, 1—Apr 96—395.

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

Explanation.

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

1. Tenasserim	17. North Bihar	33. Malabar	49. Central India. East
2. Lower Burma Deltaic	18. North Western Provinces, East	34. Madras, South Central	49a Do. do.
3. Central do.	19. South Oudh	35. Coorg	50. Rajputana East, Central India West
4. Upper do.	20. North do.	36. Mysore	51. West Rajputana
5. Arakan	21. North Western Provinces, Central	37. Konkan	52. East Coast, North
6. East Bengal	22. Do. do., West	38. Bombay Deccan	52(a). Do. do. (a)
7. Assam Surma	23. Do. do., East Submontane	39. Hyderabad, North	53. Hyderabad, South
8. Do. Hills	24. Do. do., West do.	40. Khandesh	54. Madras, Central
9. Do. Brahmaputra	25. Do. do. Hills	41. Berar	55. East Coast, Central
10. Deltaic Bengal	26. South East Punjab	42. Central Provinces, West	56. East Coast, South
11. Central do.	27. South do.	43. Do., Central	57. Madras, South
12. North do.	28. Central do.	44. Do., East	
13. Bengal Hills	29. Punjab Submontane	45. Gujarat	

No. 374, Wr. —Aug. 96 —395. Litho., ... Calcutta

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JUNE, 1896.

INTRODUCTION.

THIS Review of the weather in India during the month of June 1896 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 85 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, 1896.

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. 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 over 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 Upper Sind, the West and North Punjab and North-West Rajputana. The highest maximum temperatures of the year in that area are hence occasionally recorded in June or July.

The change from great heat and dryness of the air to moderate heat, excessive humidity and frequent rain is usually not completed over Northern India until the third or fourth week of June, by which time the south-west 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 on 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.

The following is a brief sketch of the chief features of the meteorology of the month:—

At the commencement of the month pressure was in general excess and temperature was largely above the normal in Upper India and largely below it in North-Eastern India, due to the occurrence of series of thunderstorms which gave fairly general rain in that area. No important change took place during the next three days. The following gives variation data of temperature in the hot area in Upper India from the 1st to the 4th:—

STATION OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	1st June.	2nd June.	3rd June.	4th June.
	°	°	°	°
Quetta	+7·0	+5·2	+5·1	+2·3
Punjab	+7·5	+5·0	−0·6	+1·4

and of the area of diminished temperature in North-Eastern India.

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	1st June.	2nd June.	3rd June.	4th June.
	°	°	°	°
Assam	−5·1	+0·2	0	+0·9
Bengal	−5·6	−0·2	−2·3	−2·6
Bihar	−5·9	−6·1	−4·4	−0·6
Chota Nagpur	+1·4	−3·9	−4·7	−0·7
North-Western Provinces and Oudh.	+2·7	−3·1	−6·2	−2·0

Pressure varied irregularly from day to day during the period from the 5th to the 11th, but was in considerable excess throughout in Northern and Central India and gradients were hence not so steep as usual. Bengal received numerous thundershowers daily which gave it moderate rain, and Malabar obtained unusually heavy rain, also accompanying thunderstorms, from the 5th to the 11th. The district of Malabar received an average of 10·83 inches during this period, and South Canara of 10·65 inches.

A shallow depression, the development of the normal hot weather depression, was shown in Sind on the morning of the 5th. It advanced slowly eastwards across the South Punjab on the 7th and 8th and filled up during the next 24 hours in the East Punjab. Local thunderstorms and duststorms occurred in Rajputana, the Punjab and western districts of the North-Western Provinces, the chief effect of which was to reduce temperature in Upper India to a moderate extent. Temperature, however, increased rapidly on the 9th and 10th, and was largely in excess on these dates in Upper India, as is shown by the following data:—

PROVINCE.	9TH. VARIATION FROM NORMAL OF			10TH. VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°	°	°	°
Baluchistan (Quetta)	+2·4	−4·3	−1·0	+3·8	−6·2	−1·2
Punjab	+4·4	+0·6	+2·5	+6·5	+1·4	+4·0
Sind	+10·3	+1·2	+5·8	+8·0	+0·1	+4·1
Rajputana	+6·6	+5·2	+5·9	+6·5	+7·5	+7·0

The 10th and 13th were the hottest days of the year in the South-West Punjab and Upper Sind. The following gives the highest maximum temperatures recorded at the meteorological stations in these two areas:—

STATION.	Highest maximum temperature recorded in June 1896.	Date on which recorded.	Highest maximum temperature recorded in June previous to 1896.	Year in which recorded.
	°	°	°	
Jacobabad	123·0	10th	123·7	1889
Montgomery	120·4	13th	121·4	1890
Mooltan	117·5	10th	120·3	1890 & 1892

Temperature was excessive from the 10th to the 14th, and the area of greatest excess of temperature was transferred northwards to the Norh Punjab.

The following gives temperature variation data of this period for North Western and Central India :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	11th June.	12th June.	13th June.	14th June.
	°	°	°	°
Baluchistan (Quetta) . . .	+3·9	+4·7	+7·3	+5·8
Punjab	+6·1	+6·5	+8·3	+9·0
North-Western Provinces and Oudh.	+3·1	+3·4	+5·4	+2·1
Sind and Rajputana . .	+4·2	+6·6	+6·5	+4·0
Central India and Gujarat .	+4·5	+5·2	+4·4	+1·8
Central Provinces and Berar .	+4·0	+3·4	+4·0	+2·4

The mean temperature of the 24 hours preceding 8 A.M. of the 14th at Peshawar was 13°·8 above the normal of the day, and at Rawalpindi 14°·2 above.

During this period of excessive temperature in North-Western India changes were in progress which preceded and initiated the advance of the monsoon currents across the west coast and up the Bay.

Pressure decreased between the 10th and 14th to the west of Ceylon and in the south of the Bay, and was on the 13th and 14th in considerable to large defect in the south-east of the Arabian Sea and the south of the Bay. Pressure was, on the other hand, notwithstanding the prevalence of excessive temperature in North-Western India throughout the whole period, in large excess in Northern India, and the gradients were hence unusually feeble. South-westerly winds, nevertheless, increased in the south of the Arabian Sea, and weather became more and more squally and rainy. Heavy general rain began on the West Ceylon and Malabar coasts on the 13th. The rainfall intensified on the 14th and following days and extended northwards along the west coast. The wave of rainfall accompanied the northward transfer of the area of low pressure along the west coast from Ceylon on the 13th to Kathiawar on the 18th. The trough of this low pressure wave was in the latitude of Karwar on the 15th and of Bombay on the 16th and the deficiency of pressure increased considerably in the trough during this period. Winds had increased considerably in strength, and on the 16th south-westerly winds of force 7 to 10 were experienced off the Bombay coast. A shallow depression and cyclonic storm of slight intensity formed on the 17th between the Kathiawar and Bombay coasts. It increased slowly in intensity on the 18th and advanced into Kathiawar on the 19th and was stationary during the next 24 hours. Very strong westerly gales prevailed along the west coast from Surat to Calicut, and heavy rain fell in the West Coast districts and West Ghats. The storm filled up on the 21st.

Whilst these changes were in progress in the West Coast districts, humid winds had extended into the interior, increasing humidity rapidly and giving much cloud and series of severe duststorms and thunderstorms over the greater part of the interior. The Central Provinces, Deccan, Central India and the North-Western Provinces received light to moderate rain during this period from the 15th to the 18th, and temperature was reduced considerably to largely below the normal in these areas. It was, on the other hand, excessive in Upper India and Baluchistan, as is shown by the following data :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	15th June.	16th June.	17th June.	18th June.	19th June.	20th June.
	°	°	°	°	°	°
Baluchistan (Quetta) .	−2·7	−0·6	−1·5	+1·2	+5·1	+4·8
Punjab . . .	−0·7	−2·5	+1·3	+3·5	+5·3	+6·6
Sind	+2·5	+4·1	+4·1	+9·3	+9·6	+9·1
Rajputana . . .	−0·8	−2·3	+0·3	+0·6	+2·1	+3·8

Pressure began to increase in the south of the Bay on the 16th and fell rapidly in the centre of the Bay. The area of greatest deficiency of pressure in the Bay was transferred northwards and lay over the east of the Bay between Port Blair and Diamond Island at 8 A.M. on the 16th. During the next 24 hours pressure began to rise in the Andaman Sea and fell briskly in the north of the Bay and a closed area of low pressure was shown between the Orissa and Arakan Coasts at 8 A.M. of the 17th. Strong southwesterly winds advanced northwards in the rear of this low pressure trough on the 17th and south-west winds of force 5 to 8 prevailed over the Bay to the south of Lat. 20° N. Weather was squally and threatening with more or less rain.

A rapid local increase of pressure occurred in the south and east of the Bay during the next 24 hours, bringing the depression at the head of the Bay into somewhat greater prominence. Winds had shifted to north at the Bengal coast stations, and a cyclonic circulation of moderate intensity was now established. The storm increased very rapidly in vigour during the day and began to move northwards. The centre crossed the coast during the night a little to the east of Saugor Island. The light vessels at the head of the Bay reported winds of force 9 and 10 and weather was very stormy with a very high sea over the north-west of the Bay. The storm centre was a little to the south of Calcutta at 8 A.M. of the 19th and advanced in a west-by-north direction during the next 48 hours through the southern districts of Chota Nagpur and the eastern districts of the Central Provinces and was in Baghelkhand, a little to the south of

Sutna at 8 A.M. of the 21st. The storm had given a heavy general burst of rain to North-Eastern India and the Central Provinces up to this date. It apparently advanced at a very variable rate during the next 48 hours in the same general direction across Central India and Rajputana on the 21st and 22nd and broke up on the 23rd in Upper Sind and the Baluchistan plateau. It advanced very rapidly across Rajputana and gave moderate showers to Rajputana on the 21st and 22nd and a fair burst of rain to the Baluchistan hills and plateau from the 23rd to the 25th.

During the period from the 21st to the 24th strong monsoon winds prevailed on the west coast, but they gave rain chiefly in the coast and hill districts of Western India.

The breaking up of the storm was followed by a strongish advance of humid winds across Rajputana and Central India. These winds gave moderate rain in those areas and in the western districts of the North-Western Provinces and heavy local downpours in the Naini Tal and Mussoorie hills. Several stations received rainfalls in 24 hours exceeding 10 inches, the most noteworthy being as follows:—

District.	Station.	Date.	Heaviest rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
DEHRA DUN	Bhogpur	27th	13·50
„	Raipur	„	10·50
NAINI TAL	Naini Tal	„	12·54
SAHARANPUR	Hardwar	„	10·22

The storm produced a large reduction of temperature in the areas through which it passed, more especially in the Central Provinces.

Whilst the previous storm was breaking up another storm was generated at the head of the Bay. It began to form on the 24th and was a well defined depression on the 26th. It intensified considerably on the 27th and passed north-westwards across the coast nearly midway between Saugor Island and Barisal about 5 P.M. and to the north of Calcutta about 5 A.M. of the 28th. Winds of force 10 to 11 and squalls of hurricane force were experienced by vessels at the head of the Bay during the night of the 27th. The centre was near Burdwan at 8 A.M. of the 28th. It passed through West Bengal and Chota Nagpur during the next 36 hours and was in Bundelkhand at 8 A.M. on the 30th. The depression filled up rapidly during the next 24 hours, recurving to north and gave a heavy downpour in the hill and sub-montane districts of the North-Western Provinces on the 1st of July. The storm gave moderate to heavy rain in South Bengal, Orissa, Chota Nagpur, South Bihar, the Central Provinces, Baghelkhand and Bundelkhand and a large part of the Central Provinces. Heavy local downpours occurred on the 29th and 30th in some parts of Rajputana. Thus the Kotah State registered an average of 6·15 inches on the 30th.

The only important feature of the temperature conditions of the period was the continued excess in Upper India. The following gives data for every second day for this period:—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	20th June.	22nd June.	24th June.	26th June.	28th June.	30th June.
	°	°	°	°	°	°
Baluchistan (Quetta)	+4·8	+1·5	+4·0	+2·5	—6·8	+0·5
Upper Sind	+8·2	+7·9	+0·1	—3·0	+3·0	+4·2
Punjab	+6·6	+3·8	+2·5	—1·2	—1·4	+2·2

Pressure.—The mean pressure of the Indian land area for the month of June was ·016″ below the normal. Relatively to this condition, pressure was in local excess in Northern India and the eastern half of the Peninsula. The excess was greatest in the sub-montane districts of Northern India, ranging between ·023″ at Dhubri and ·033″ at Bareilly. Pressure was locally in defect in Burma and in the western half of the Peninsula, North Bombay, Central India and Rajputana. The deficiency was greatest in the area of greatest excess in the month of May, that is, in the west coast districts from Kurrachee to Ratnagiri. It was absolutely greatest at Bhuj (—·036″), Rajkot (—·033″) and Bombay (—·032″). The vertical pressure anomalies were positive in Upper India, but were small in amount and of little importance.

The following table gives the mean pressure variations and anomalies of the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of June 1896 from normal.	Pressure anomaly, June 1896.
	″	″
Burma Coast and Bay Islands	—·019	—·003
Burma Inland	—·023	—·007
Assam	—·006	+·010
Bengal and Orissa	—·015	+·001
Gangetic Plain and Chota Nagpur	—·006	+·010
Upper Sub-Himalayas	+·007	+·023
Indus Valley and North-West Rajputana	—·030	—·014
East Rajputana, Central India and Gujarat	—·030	—·014
Deccan	—·020	—·004
West Coast	—·026	—·010
South India	—·010	+·006

Temperature:—The variations of the temperature conditions from the normal were chiefly determined by the rainfall distribution of the month. Temperature was more or less in excess in the Punjab, North Bengal, Assam, the Hyderabad Deccan and Coromandel Coast districts, in each of which areas the rainfall of the month was more or less in defect.

The mean maximum or day temperature of the month was in moderate to considerable excess in the West and Central Punjab and Sind. It was 4°·8 above the normal at Rawalpindi, 4°·4 at Mooltan and 3°·7 at Peshawar. It was in slight to mo lerate excess in Assam and North Bengal. The excess in that area was greatest at Jalpaiguri (+3°·1) and Dhubri (+2°·7). The day temperature was in slight excess in the greater part of the Peninsula south of Lat. 19° N. The excess at Negapatam averaged 2° for the month and at Madras 1°·7.

The mean day temperatures were below the normal over the remainder of India. The deficiency ranged between 2° and 4° in Orissa, Chota Nagpur and the greater part of the North-Western Provinces, and was absolutely greatest at Cuttack (—4°·1), Roorkee (—3°·1) and perhaps Delhi (—3°·6).

The mean minimum or night temperature of the month was above the normal over the whole of India with the exception of South Bengal, Orissa, Chota Nagpur, the Central Provinces and the greater part of the North-Western Provinces. The variations were small in amount over the whole area, except the Punjab and Sind, in which they ranged between 2° and 6°. The night temperature of the month was most largely in excess at Mooltan (6°), Rawalpindi (5°·5), Lahore (5°·2), Jacobabad (5°·1) and Peshawar (4°·8).

The mean temperature of the month was above the normal in three areas, *viz.*:—

(1) The Punjab, Sind and Rajputana. The excess ranged between 3° and 5½° in the North and West Punjab and Upper Sind and was greatest at Rawalpindi (+5°·3), Mooltan (+5°·2) and Peshawar (+4°·3).

(2) Burma, Assam and North Bengal. The excess was small except at Jalpaiguri (+2°·5) and Dhubri (+2°·3).

(3) The Peninsula south of Lat. 19° N. The variations were small in this area.

The mean temperature of the month was in defect, generally by small amounts, over the remainder of India. The deficiency was more than 2° at Cuttack (—3°·0), Sambalpur (—2°·8) and Allahabad (—2°·1).

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

Meteorological Provinces.	Variation from normal of		
	Mean maximum temperature, June 1896.	Mean minimum temperature, June 1896.	Mean daily temperature, June 1896.
	°	°	°
Burma Coast and Bay Islands .	+0·8	+0·7	+0·7
Burma Inland . . .	+1·2	+1·4	+1·3
Assam	+2·2	+1·1	+1·6
Bengal and Orissa . . .	—0·8	—0·3	—0·6
Gangetic Plain and Chota Nagpur.	—1·1	—0·5	—0·8
Upper Sub-Himalayas . .	—1·0	+1·4	+0·2
Indus Valley and North-West Rajputana.	+2·8	+3·5	+3·2
East Rajputana, Central India and Gujarat.	—1·0	+0·7	—0·1
Deccan	—0·5	0	—0·3
West Coast	+0·5	+0·9	+0·7
South India	+0·6	+1·1	+0·9

Winds.—Winds were stronger in Burma and at Port Blair and more westerly than usual. Winds were of normal strength and less easterly than usual in Bengal. Winds were remarkably steady in the Gangetic Plain. The trough of low pressure lay further south than usual and was defined by the stations of east wind steadiness, *viz.*, Hazaribagh, Sutna, Agra and (probably) Dera Ismail Khan. In consequence of the delay in the establishment of the monsoon the mean air movement at the west coast stations was generally in slight defect. Winds were, on the other hand, slightly stronger in the Deccan, the Central Provinces and Central India. Winds were more southerly than usual in the Konkan, the Central Provinces and Central India.

Humidity and Cloud.—The air was slightly drier than usual in Burma and Assam, due to somewhat higher temperature than usual. The humidity conditions were practically normal in Lower Bengal and Bihar. The air was considerably damper than usual in the North-Western Provinces, East Punjab, Rajputana, Central India and the Central Provinces, due chiefly to the very rapid extension of monsoon conditions to Upper India in the third week of the month. Humidity was most largely in excess at the hill stations, more especially Ranikhet (15 in excess) and Chakrata (11 in excess), and at Meerut and Deesa (each 11 in excess.) The air was generally slightly damper in the Bombay and Madras coast districts and in the Deccan and Mysore, but was slightly drier in South Madras.

There was less cloud than usual in Assam and the Punjab, but over the remainder of India cloud was in more or less general excess. The excess was most marked in Mysore, North Madras and the West Coast districts.

The following table gives variation data of the mean

aqueous vapour pressure, mean humidity and mean cloud amount of ten meteorological provinces:—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean aqueous vapour pressure.	Mean Humidity.	Mean cloud amount.
	"	%	
Burma Coast and Bay Islands	+·022	− 1	+0·9
Assam	+·019	− 5	−0·9
Bengal and Orissa	−·016	0	+4·5
Gangetic Plain and Chota Nagpur	+·025	+ 3	+0·5
Upper Sub-Himalayas	+·048	+ 7	+0·1
Indus Valley and North-West Rajputana.	+·071	− 1	0
East Rajputana, Central India and Gujarat.	+·067	+ 6	+0·4
Deccan	+·050	+ 4	+0·5
West Coast	+·027	+ 1	+1·0
South India	−·007	+ 1	+0·4

Rainfall.—The chief feature in the meteorology of the month was the delay in the establishment of the Bombay or west coast monsoon current. Malabar received heavy rain from thundershowers during the period from the 5th to the 11th. Burma and Bengal also obtained moderately heavy rain during the first twelve days of the month. The monsoon rains proper commenced on the Malabar Coast on the 13th and 14th. The wave of rainfall advanced rapidly along the coast as far as Kathiawar during the next four days. It also extended rapidly into the interior during the same period, and Berar, the Central Provinces, Central India, East Rajputana, the western districts of the North-Western Provinces, and the South-East Punjab received the first burst of monsoon rain before the 20th. A small storm formed in front of the advancing monsoon in the Arabian Sea. It passed into Kathiawar on the 19th and gave local rain on the 19th and 20th. The monsoon current advanced up the Bay during the period from the 14th to the 18th. A storm formed in front of the advancing current in the north-west angle. It crossed the Bengal Coast and advanced west by north across the head of the Peninsula and gave heavy rain to the broad belt of country through which it passed. A second storm formed before the previous storm had filled up. It advanced by a slightly more northerly track than the first storm from the Bengal Coast into Bundelkhand and the western districts of the North-Western Provinces. An important effect of these storms was to withdraw the humid currents and rain from Assam, North and East Bengal and North Bihar and to give excessive rain to South Bengal, Orissa, Chota Nagpur, the Central Provinces and Central India. They hence largely determined the distribution of the rainfall of the month in the interior of India.

The rainfall of the month was in moderate excess in Tenasserim and Lower Burma, and in moderate defect in Central and perhaps Upper Burma. It was in considerable defect in Arakan (24 per cent.) It was more or less considerably in excess in East, Deltaic and Central Bengal, Orissa, Chota Nagpor, South Bihar, the Central Provinces, Central India, Rajputana, Sind and the North-Western Provinces. It was in very large defect in North Bengal (67 per cent.), Assam (42 per cent.) and North Bihar (41 per cent.), The districts of Cooch Behar and Jalpaiguri received barely 20 per cent. of their normal fall. The rainfall of the month was very irregularly distributed in the Punjab, but was on the average of the whole province normal in amount.

The rainfall of the month was locally in considerable defect in the South Konkan. It was in marked excess in Kathiawar, Gujarat, Khandesh, the North Konkan, Bombay Deccan, Mysore, Coorg and Malabar, and in moderate excess in South and North Madras. The rainfall of the month was excessive in Coorg, and the downpour in that area and Malabar between the 18th and the 23rd was one of the heaviest of recent years during the commencement of the monsoon. One station (the Dunkeld Coffee Estate) received 53·75 inches in six days.

The rainfall of the month was, on the other hand, more or less in defect in the Coromandel Coast districts, the Madras Deccan and Hyderabad. The deficiency was not large absolutely but was considerable, relatively to the normal, in Hyderabad which received barely 50 per cent. of the normal, and the Coromandel Coast districts, which obtained an average of about 55 per cent. The following table gives data for the eleven meteorological provinces of the empire:—

METEOROLOGICAL PROVINCE.	RAINFALL.		
	Average actual, June 1896.	Average normal, June.	Variation from normal.*
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	31·44	25·98	+3·47
Burma Inland	9·53	10·20	−0·62
Assam	11·33	19·65	−8·32
Bengal and Orissa	14·35	13·08	+0·97
Gangetic Plain and Chota Nagpur	7·37	6·75	+0·62
Upper Sub-Himalayas	5·04	3·83	+1·36
Indus Valley and North-West Rajputana.	2·28	0·89	+1·28
East Rajputana, Central India and Gujarat.	6·04	4·32	+1·41
Deccan	8·52	6·89	+2·75
West Coast	29·24	28·45	+0·88
South India	4·75	4·56	+0·70

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

Atmospheric Pressure.

The mean pressure of the Indian area averaged ·016″ below the normal in June. It was ·013″ above the normal in May, and hence it had decreased ·029″ relatively to the normal pressure conditions of the period.

The pressure anomalies were generally opposite in character to those of the preceding month. This temporary change in June is the usual rule, more especially when the anomalies are large and marked in May, as was the case in May 1896.

Pressure was, relatively to the general condition, in excess to the east of a line joining Peshawar, Sirsa, Sutna, Secunderabad and Madras, except in South-East Bengal, Arakan and Burma where it was in very slight local defect. The anomalies were moderate in amount, ranging between ·020″ and ·035″, in the sub-montane districts of Northern India. The following gives data :—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Rawalpindi	+·012	+·028
Sialkot	+·013	+·029
Roorkee	+·013	+·029
Bareilly	+·017	+·033
Gorakhpur	+·008	+·024
Dhubri	+·007	+·023

Pressure was, relatively to the general condition, in defect to the west of the line defined above. The deficiency was greatest in the area characterised by greatest excess of pressure in May, including Lower Sind, Cutch, Kathiawar, Gujarat, the Konkan and Khandesh. The following gives data for the stations in this area at which the deficiency of pressure was greatest :—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Kurrachee	—·044	—·028
Bhuj	—·052	—·036
Rajkot	—·049	—·033
Malegaon	—·042	—·026
Bombay	—·048	—·032
Poona	—·038	—·022
Ratnagiri	—·038	—·022

Pressure was generally in excess at the lower hill stations in Northern India. It was, on the other hand, in slight defect at the most elevated stations (Leh and Kailang) and at Darjeeling and the Central India hill stations. The vertical pressure anomalies were generally positive in Northern India as is shown by the following data for eight pairs of stations :—

HILL STATION.	Variation of pressure from normal (a).	NEIGHBOURING PLAINS STATION.	Variation of pressure from normal (b).	Vertical pressure anomaly or (a)—(b).
	″		″	″
Quetta	+·002	Jacobabad	—·034	+·036
Murree	+·024	Peshawar	—·023	+·047
Leh	—·005	Lahore	—·010	+·005
Kailang	—·037	Lahore	—·010	—·027
Simla	+·013	Ludhiana	+·003	+·010
Darjeeling	—·003	Dhubri	+·007	—·010
Mount Abu	—·040	Deesa	—·036	—·004
Ranikhet	+·029	Bareilly	+·017	+·012

The anomalies of June 1896 resemble those of June 1895 almost as strikingly as those of May 1896 resemble those of the corresponding month of 1895.

The following gives a summary of the chief abnormal features of the pressure distribution :—

(1) Pressure was in defect in the Indian area by amounts averaging ·016.″

(2) Pressure was in relative excess in Northern India. The excess was most marked in the sub-montane districts, in which it ranged between ·02″ and ·035″ in amount.

(3) Pressure was in relative defect in the greater part of the Peninsula, Central India, Rajputana, North Bombay and Burma. The deficiency was greatest in the west coast districts from Kurrachee to Bombay, where it averaged ·03″ in amount.

(4) Pressure was relatively in excess or the vertical pressure anomalies were positive in the Himalayan area of Northern India.

Barometric depressions and cyclonic storms of the month.

Pressure at the commencement of the month was in slight defect in the North Punjab and in excess over the remainder of India. The excess was greatest in Kathiawar, Gujarat, Khandesh, the western districts of Central India, the Central Provinces and Berar in which it averaged ·11" and in North Bengal and North Bihar in which it was ·10". Pressure was changing very irregularly and weather was feebly unsettled and showery in Burma, Bengal, the Konkan and the West Deccan.

Pressure was lowest in Upper Sind and the South-West Punjab. The pressure changes of the next 48 hours brought the Upper Sind hot weather depression into somewhat greater prominence. Thunderstorms and dust-storms occurred in the Gangetic Plain, Rajputana and the Central Provinces on the 3rd and 4th, Bengal received moderate daily rain from series of thunderstorms during this period from the 1st to the 5th. Light to moderate unsteady winds obtained at this time in the north and east of the Arabian Sea, and light to moderate south-westerly winds in the Bay.

Strongish south-west winds were apparently advancing up the western half of the Arabian Sea, and winds were very light and unsteady in the equatorial belt. Thus the S. *John Davie* had variable winds in Lat. 4° N and Long. 63° E at 8 A.M. of the 4th and the mean air movement of Port Victoria, Seychelles, during the previous 24 hours, was only 7 miles per hour.

The depression in Sind was slightly less marked on the 6th, and the hot weather trough of low pressure stretched from Sind to Chota Nagpur and the eastern districts of the Central Provinces. Weather was slightly more disturbed, numerous thunderstorms having occurred during the previous 24 hours in Malabar and the Konkan, and also in the West Deccan and Central Provinces.

The chief features of the pressure conditions at this time were great irregularity in the changes from day to day and in different parts of India (a condition almost invariably associated with the occurrence of series of thunderstorms) and general excess over the whole area, more especially in North-Eastern India.

Thunderstorms gave moderate to heavy rain in Bengal and the west coast districts and light rain in the Central Provinces and western districts of the North-Western Provinces on the 7th.

A rapid fall of pressure in Upper India on the 7th brought the Sind depression into great prominence on the 8th and it advanced eastwards across North Rajputana and the South Punjab to the foot of the Upper India hills on the 9th. Thunderstorms occurred on the 8th and 9th in Bengal, the North-Western Provinces, the Central Provinces and Deccan.

Winds were practically unchanged during the period from 4th to the 9th in character and strength in the Arabian Sea, but weather was becoming more unsettled in the centre and south-west and the great majority of the vessels reported squally weather with more or less heavy rain.

Winds increased in strength in that area from the 10th to the 14th. Thus, on the 9th, out of 16 vessels to the south of Lat. 16° N four vessels had winds exceeding 5 in force and on the 12th out of 13 vessels three vessels reported winds exceeding 5. On the 13th six vessels out of 20 had winds of force exceeding 5 and ranging from 6 to 7.

During this period from the 10th to the 14th pressure was more or less in excess over nearly the whole of India. The following gives variation data for the larger provinces from the 10th to the 14th:—

PROVINCE.	VARIATION FROM NORMAL OF PRESSURE OF 24 HOURS PRECEDING 8 A.M OF				
	10th June.	11th June.	12th June.	13th June.	14th June.
	"	"	"	"	"
Burma	+·022	+·048	+·046	+·051	+·030
Bengal and Assam	+·053	+·118	+·142	+·141	+·107
North-Western Provinces and Oudh.	—·016	+·072	+·101	+·114	+·110
Punjab	—·048	+·047	+·062	+·065	+·049
Sind and Rajputana	—·006	+·064	+·112	+·111	+·067
Central India and Gujarat	—·002	+·038	+·102	+·096	+·055
Central Provinces and Berar	+·014	+·063	+·110	+·071	+·036
Bombay	—·028	+·001	+·046	+·029	—·038
Madras	—·011	+·023	+·046	+·011	—·034

The preceding data show that there was a large excess of pressure in Northern India, and hence that the general gradients favoring the advance of the monsoon currents were not only much feebler than usual but much below the normal of the month.

The marine data, on the other hand, establish that winds were increasing during the period in the south and centre of the Arabian Sea where weather was becoming more and more squally and rainy.

The pressure changes in Ceylon and Southern India were very significant and interesting at this time, more

especially as they were such as almost invariably accompany the advance of the monsoon proper. The following gives the variations of pressure at three stations in Ceylon and Malabar, and also at the Seychelles from the 7th to the 13th:—

Station.	Variation from normal of pressure of 24 hours preceding 8 A.M. of						
	7th June.	8th June.	9th June.	10th June.	11th June.	12th June.	13th June.
	"	"	"	"	"	"	"
Seychelles .	—·013	+·006	+·010	—·057	—·042	—·054	—·021
Colombo .	+·010	—·009	—·039	—·075	—·088	—·093	—·121
Cochin . .	+·001	+·061	+·033	—·023	—·014	—·027	—·043
Calicut . .	+·012	+·055	+·041	—·013	—·011	—·014	—·034

Hence during this period pressure had fallen steadily at Colombo and was in considerable defect on the 11th, 12th and 13th. During the whole of the period pressure was in more or less considerable excess in Northern India, where, as already stated, pressure on the 13th averaged about a tenth of an inch above the normal. In the south of the Bay and the Arabian Sea, as represented by Colombo, it was an eighth of an inch in defect. The total gradient over the Indian land area was hence nearly ·25″ less than the mean of the period and little more than half the normal monsoon gradient.

Heavy rain began to fall at Colombo on the 13th, and the rainfall rapidly extended northwards along the Malabar and Konkan coasts.

The following gives rainfall data from the 10th to the 18th for five stations, showing the character of the burst of the monsoon in 1896:—

Date.	Rainfall during 24 hours preceding 8 A.M. of date at				
	Colombo.	Cochin.	Calicut.	Karwar.	Bombay.
	Inches.	Inches.	Inches.	Inches.	Inches.
10th	0	1·31	0·37	1·08	0·02
11th	0	1·92	3·20	2·87	0
12th	0·08	0·09	0	0·13	0·85
13th	1·84	1·63	0·14	0·37	0·01
14th	1·07	0·72	0·02	3·45	0·02
15th	0·07	4·55	1·60	3·20	0·90
16th	0·04	1·14	1·26	4·91	1·32
17th	0·11	0·26	0·99	3·07	1·12
18th	0·02	0·46	1·02	3·54	2·69

The distribution of the rainfall is shown more satisfactorily by the average daily rainfalls in the Madras and Bombay districts of Malabar and the Koknan.

The following table gives data:—

Date.	Average actual rainfall of 24 hours preceding 8 A.M. of date at					
	Malabar.	South Canara.	North Canara.	Ratnagiri	Colaba.	Thana.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
10th . .	1·37	3·66	1·52	0·09	0·11	0·74
11th . .	1·35	2·02	0·97	0·33	0·04	0·20
12th . .	0·07	0·35	0·21	0·36	0·19	0·52
13th . .	0·48	0·45	0·46	0·26	0·21	0·01
14th . .	0·19	0·81	0·67	0·21	0·63	0·14
15th . .	3·66	2·88	1·27	0·51	0·53	0·46
16th . .	1·88	2·47	2·00	1·93	0·71	0·28
17th . .	1·49	4·06	2·20	3·53	1·81	0·17
18th . .	1·52	2·24	3·05	3·49	3·70	1·94

Pressure was, as already stated, at the commencement of the burst of the monsoon rains in considerable defect in the extreme south of India and Ceylon. The area of deficient pressure was gradually transferred northwards during the period from the 14th to the 18th. The following variation data for eight stations illustrate this movement:—

Station.	Variation from normal of pressure of 24 hours preceding 8 A.M. of				
	14th June.	15th June.	16th June.	17th June.	18th June.
	"	"	"	"	"
Colombo	—·114	—·117	—·099	—·108	—·043
Cochin	—·113	—·100	—·122	—·125	—·051
Calicut	—·125	—·116	—·123	—·117	—·046
Mangalore	—·100	—·138	—·140	—·130	—·093
Karwar	—·081	—·138	—·171	—·166	—·107
Ratnagiri	—·021	—·150	—·197	—·234	—·167
Bombay	+·006	—·118	—·216	—·238	—·232
Surat	+·037	—·130	—·193	—·231	—·214

The preceding data indicate clearly that the area of greatest deficiency of pressure which was in the latitude of Colombo on the 13th was off Malabar on the 15th, the Konkan on the 16th and 17th, and between the Bombay and Kathiawar coasts on the 18th.

The northward movement of this area of deficient pressure represents the advance of the monsoon current proper; and it was accompanied by a great increase in the strength of the winds in the south and centre of the

Arabian Sea and by the establishment of very squally weather. The following furnishes data indicating to some extent the character of this change. The data give the strongest winds and worst weather experienced on each day from the 15th to the 18th:—

DATE.	NAME OF VESSEL.	8 A.M. POSITION.		Barometer corrected.	WIND.		WEATHER.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
15th	S. S. *Setos* .	10 16	67 0	29·761	W by S	7 to 8	Rainy 4 P.M. squally.
16th	S. S. *Asia* .	12 22	55 53	·699	SSW	8	Clear and high beam sea 8 P.M. frequent brisk squalls.
17th	S. S. *Nadir* .	13 0	73 55	·582	W	10	Terrific squalls and blinding rain.
,,	S. S. *Nowshera*	14 47	73 48	·571	WSW	9	Frequent squalls of hurricane force, incessant rain and high sea.
18th	S. S. *Nadir* .	15 01	73 36	·572	W	7	Passing squalls. 6 A.M. terrific squalls and heavy rain.
,,	S. S. *Patna* .	16 06	73 23	·577	WbyS W	7	4 A.M. fierce squalls with heavy rain.
,,	S. S. *Vadala*	17 14	72 47	·365	SW by W	7	Hard squalls.

The preceding data indicate the increase in the strength of the winds and the northerly advance of the area of strong and increasing winds.

Hence during the period from the 14th to the 18th a rapid change occurred over the greater part of the Arabian Sea characterized by the advance of a belt of very deficient pressure and of strong and squally winds with much rain. There was a marked tendency on the 17th and 18th to the formation of a cyclonic storm in the area or belt of very deficient pressure off the Konkan and Kathiawar coasts. The area of most deficient pressure lay over Kathiawar on the 19th and 20th. It filled up rapidly on the 21st and was of little importance on the morning of the 22nd. Very steep gradients obtained along the Konkan coast on these dates, and winds of force 8 and 9 with fierce to hard squalls (occasionally of almost hurricane force) were experienced by several vessels.

The humid winds in the rear of this advancing trough of low pressure began to give rain in the Deccan and the Central Provinces on the 14th and 15th, and the rain extended into Central India and Rajputana on the 17th and 18th. The extension of these humid winds gave rise to much local disturbance, shown by the occurrence of series of severe thunderstorms and duststorms.

The preceding gives an account of the establishment of the southwest monsoon on the west coast of India. We have now to trace a similar series of changes in the Bay which resulted in the extension of south-west monsoon winds over that area.

It has been stated above that pressure decreased steadily in Ceylon and the south of the Bay and Southern India from the 10th to the 14th, and that a broad belt of very deficient pressure stretched across the south of the Bay and Ceylon, in which pressure on the 14th was upwards of a tenth of an inch below the normal.

Weather was fine with moderate winds in the north and centre of the Bay, but was showery and squally in the south.

Pressure gave way rapidly at Port Blair and probably over the whole of the centre and east of the Bay on the 15th and weather was more unsettled and squally than on the 14th. The following gives data for the 15th showing the extent of this area of squally weather:—

Hour.	NAME OF VESSEL.	8 A.M. POSITION.		Barometer corrected.	WIND.		WEATHER.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
8 A.M.	S.S. *Mirzapore* .	5 40	87 32	29·712	SSW	5	Overcast 4 A.M. frequent strong squalls.
,,	S. *Avon* . .	12 25	84 4	...	W	...	Much finer looking, 4 A.M. hard squalls. Thunder and lightning and heavy continuous rain.
,,	S.S. *Suisang* .	13 20	94 16	·650	SW	4	Noon, very heavy squall and much rain.
,,	S.S. *Pentakota* .	15 25	96 18	·42	WSW	5	Heavy rain squalls.
,,	S.S. *Malda* .	16 20	96 10	·46	SSW	4	Incessant heavy rain.
,,	S.S. *Aries* .	16 20	86 45	·579	Calm	0	Cloudy and smooth sea.
,,	S.S. *Pundua* .	20 20	88 55	·535	SbyW S	4	Fine and moderate sea.
,,	F. L. V. *Torch* .	Eastern Channel.		·542	SW	3	Fine and clear and smooth sea.

Squally weather had hence extended northwards in the eastern half of the Bay to Lat. 16° N; and south-west to west winds of force 4 to 6 obtained in the centre and south of the Bay.

Pressure decreased briskly at Port Blair and rapidly at Diamond Island during the next 24 hours and was at 8 A.M. of the 16th two-tenths of an inch below the normal in a broad belt stretching across the eastern half of the Bay between Port Blair and Diamond Island. Winds were increasing steadily at Port Blair and rain was falling in

increasing amounts. The following data contributed by eight vessels illustrate the general character of the weather in the Bay at 8 A.M. of this day:—

Hour.	Name of vessel.	8 A.M. position. Lat. N.	Long. E.	Barometer corrected.	Wind. Direction.	Force.	Weather.
		° ′	° ′	″			
8 A.M.	S.S. *Vortigern* .	753	88 42	29·610	SbyW W	5	Cloudy and heavy head sea.
,,	S.S. *Whitgift* .	1134	84 2	...	WSW	...	7-45 A.M. shift of wind from WNW with heavy thunder, lightning, and fierce squalls.
,,	S. *Avon* . .	1523	84 57	·466	W	...	Very hard squalls and heavy continuous rain.
,,	S.S. *Shahsada* .	16 9	94 4	·534	SSE	3	Cloudy and frequent rain squalls.
,,	S.S. *Gaekwar* .	1810	86 57	·470	...	4	Occasional showers; afternoon, frequent hard rain squalls with thunder and vivid lightning.
,,	S.S. *Alboin* .	2120	88 10	·496	...	...	4 A.M. heavy rain squalls.
,,	F. L. V. *Hesperus*	Mutlah		·500	SE	2	Drizzling with thunder and lightning.
,,	F. L. V. *Torch* .	Eastern Channel.		·500	SSW	3	Smooth sea. 7 A.M. thunder and lightning in N.W. and N.E.

The preceding data indicate that strong winds (force 5 to 6) had extended northwards up the east of the Bay to Lat. 18° or 19°N and that weather was becoming unsettled at the head of the Bay. It is important to notice that every vessel contributing marine data for the Bay area on this date had winds from southerly directions, and generally with more or less westing. There was hence no evidence of the establishment of a cyclonic storm at this stage. An advance of humid winds was evidently in progress up the Bay and weather was very squally with strong winds and much rain near the front of the advancing mass.

17th June.—Pressure was increasing in the south and centre of the Bay and had fallen briskly in the north of the Bay. The area of greatest deficiency of pressure was now transferred to the north of the Bay and covered the eastern half between Diamond Island and Akyab.

The following gives 8 A.M. meteorological data of the observing stations on the north coast of the Bay:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Wind. Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	″	″	″				Inch.	
Diamond Island.	29·509	+·004	—·206	SW	11	10	0·64	Sea rough.
Akyab . .	·432	—·071	—·211	NE	3	7	0·13	
Chittagong .	·435	—·067	—·167	E	4	8	0·09	
Saugor Island	·409	—·056	—·102	NE	8	8	...	Distant lightning.
False Point .	·398	—·052	—·128	N	7	9	0·25	
Puri . .	·391	—·069	?	N	7	6	0·67	Sea smooth.
Gopalpur .	·416	—·031	?	SW	6	10	0·02	Sea slight.

The data show that a shallow depression lay over the north of the Bay and that winds had shifted and their directions now indicated that a cyclonic circulation was established in that area. This is confirmed by the following data taken from the logs of ships which were in the north of the Bay at the time:—

Hour.	Name of vessel.	8 A.M. position. Lat. N.	Long. E.	Barometer corrected.	Wind. Direction.	Force.	Weather.
		° ′	° ′	″			
8 A.M.	S.S. *Roma* .	12 45	83 39	29·450	WSW	8	Heavy sea. 4 A.M. heavy rain squalls.
,,	S.S. *Maharaja* .	15 56	94 20	·531	WSW	6	Overcast and rough sea. 4 A.M. heavy squalls and rain.
,,	S. *Avon* . .	17 50	85 35	·420	WNW	6	Heavy continuous rain.
,,	S.S. *Suisang* .	18 20	89 56	·420	NW	...	Squally with heavy rain.
,,	S.S. *Kerbela* .	21 10	87 37	·401	SW	4	Cloudy and SW swell.
,,	S.S. *Gaekwar* .	21 10	87 50	...	E	4	Cloudy and smooth sea.
,,	S.S. *Clan Mackenzie.*	21 27	87 35	·389	N	4	4 A.M. squally with rain.
,,	F. L. V. *Torch* .	Eastern Channel.		·415	E to ESE	2	Squally and smooth sea.
,,	F. L. V. *Hesperus*	Mutlah		·421	Calm	0	Moderate SE swell.

The winds were increasing (vide S.S. *Roma*) in the centre of the Bay and squally weather had now extended over the north of the Bay.

Winds were apparently exceedingly variable at the head of the Bay as the three vessels, the S.S. *Gaekwar*, *Clan Mackenzie* and *Kerbela*, within a few miles of each other in the north-west angle, reported winds from north, east and south-west respectively at the same instant (8 A.M.)—an excellent illustration of the very variable winds which obtain in the north-west angle of the Bay during the generation of cyclonic storms to the south. Captain Beahan of the F. L. V. *Torch* thus describes the weather off the mouth of the Hooghly at this time:—

"Weather fine but with low banks and black clouds to the south-east with low sheet lightning to north-north-

west and west-north-west, sea smooth. Weather fine and very clear all round the horizon throughout the day."

The preceding has described as fully as the available data permit the circumstances of the origin of the cyclonic storm which formed in front of the first advance of the monsoon current up the Bay. The following gives a history of this storm:—

Cyclonic storm of the 17th to the 23rd June.—A shallow depression, the origin of which has been described above, was shown in the north-west angle of the Bay on the 17th. Pressure gave way very slightly in that area during the next 24 hours and increased rapidly in the centre and south of the Bay, and these changes brought the depression into somewhat greater prominence on the 18th.

The following gives 8 A.M. data of that date for six 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	
Diamond Island.	29·638	+·129	—·085	SSW	21	10	0·40	Sea falling.
Akyab . .	·495	+·063	—·159	SSE	9	10	3·22	Squally.
Chittagong .	·461	+·026	— 155	E	4	10	1·37	Distant lightning.
Saugor Island	·413	+·004	—·112	NNE	8	10	0·16	Sea smooth.
False Point .	·418	+·020	—·117	NNW	12	10	0·26	
Puri . .	·430	+·039	?	N	6	9	0·27	Threatening.

The centre of the depression was probably in about Lat. 20° 45′ N and Long. 89° E., where pressure was two-tenths of an inch below the normal. The following gives data of vessels in the north of the Bay:—

Hour.	Name of vessel.	8 A.M. position.		Barometer corrected.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	"			
8 A.M.	S.S. *Whitgift* .	17 55	85 36	...	WSW	...	4 A.M. hard squalls of wind and rain.
,,	S.S. *Maharaja* .	17 52	91 45	29·510	SW	6 to 7	Heavy squalls and rough SW sea.
,,	S.S. *Avon* .	18 25	86 30	·460	W	6	Deck constantly flooded and high sea 2 A.M. terrific squall and thunder and lightning.
,,	S.S. *Karagola* .	19 11	90 18	·432	SSW	2	Heavy S swell; midnight, heavy squalls of wind and rain.
,,	S.S. *Suisang* .	20 47	88 25	·400	NE	4	Thick rain; 4 P.M. heavy rain squalls.
,,	S.S. *Dunera* .	Saugor		·419	NE	5	Overcast; 4 A.M. frequent heavy squalls and lightning.

The preceding data establish that weather was much more rainy and squally than on the 17th. Captain Beahan thus describes the weather: A.M.—"Weather unsettled with squalls, wind east, force 3 to 6. Heavy black clouds to east and south, lightning all round. Sea confused. 4 A.M.—Weather and sea unchanged; wind N.E force 4. 5 A.M.—Weather squally with rain, wind north-east to east of force 2 to 4. 6 A.M.—Weather squally with passing showers, wind north-east to east, force 5 to 7; a southerly swell and a confused slight sea. Noon, weather and sea as above. 0·50 P.M.—N. E. squalls, force 6 to 5, with heavy passing showers. 4 P.M.—Sea smooth, weather moderating though still unsettled. Heavy clouds still hanging round."

The special observations that were taken in the storm area during the afternoon and evening of the 18th indicate that the storm increased considerably in intensity during the day, but that as frequently happens during the initial stages of cyclonic generation, weather moderated slightly in the storm area during the evening hours. They also establish that the centre began to advance in a north-north-west direction during the evening. The centre at 8 P.M. was probably a little to the north-west of its position, at 8 A.M., and at 2 A.M. of the 19th it was a few miles only to the south-east of Saugor Island in about Lat. 21½° N. and Long. 88¾° E.

19th June.—The meteorological observations taken at 8 A.M. of the 19th in the storm area show that pressure had decreased with great rapidity in South-West Bengal, and that the centre of the storm was crossing the coast a little to the east of Saugor Island. The following gives data defining the character and position of the storm 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	
Balasore .	29·287	—·132	—·236	NW	7	9	2·67	
Saugor Island	·207	—·206	—·331	NW	13	10	1·18	Sea slight.
Barisal . .	·301	—·132	—·273	SE	7	10	0·60	Gale of wind.
Jessore . .	·234	—·225	—·327	ESE	12	10	0·59	Strong wind.
Calcutta .	·181	—·253	—·356	NNE	9	10	1·25	
Midnapore .	·283	—·173	—·256	N	9	10	1·68	Drizzling rain.

Pressure was probably nearly four-tenths of an inch below the normal at the centre. Heavy rain had fallen in Orissa and West Bengal and moderate to light rain in South and East Bengal. The vessels in the north of the Bay experienced very rough weather during the night of the

18th and morning of the 19th. The following gives extracts from the logs of three vessels :—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer corrected.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
8 A.M.	S. *Avon* . .	17 59	86 38	29·520	WSW	...	Hard squalls, continuous rain and heavy lightning.
8 „	S.S. *Malda* .	18 12½	91 6	·550	WSW	9	Frequent heavy squalls and high sea.
Noon.	„ .	18 31½	90 43	...	WSW	7 to 9	Frequent heavy and violent squalls with high confused sea.
8 P.M.	„ .	...	...	...	WSW	7	Squalls less frequent and heavy beam sea.
Midnight.	„ .	...	...	...	WSW	...	Violent squalls and heavy beam sea.
8 A.M.	F. L. V. *Hesperus*	Mutlah.		·220	NW	8	Cyclonic winds and high SW sea.
11 „	„ .	...	...	·203	SW	10	Violent squalls at short intervals.
2 P.M.	„ .	...	...	·163	SW	10	Whole gale, squalls lessening in frequency.
6 „	„ .	...	...	·243	SW	8	Squalls taking off fast.

The centre of the storm at 8 A.M. was in Lat. 22° N. and Long. 88° 10′ E. The storm had intensified considerably, and winds of force 9 and 10 with violent to hurricane squalls were experienced near the centre.

The special observations taken at 2 P.M. show that the storm centre had advanced to Lat. 22° 20′ N. and Long. 87¾° E., or about 20 miles south-west of Calcutta. Very strong winds and squally weather prevailed during the afternoon in South-West Bengal and Orissa.

20th June.—Pressure had increased rapidly in South-West Bengal and fallen very rapidly in Chota Nagpur and the eastern districts of the Central Provinces. The following data show the position of the storm at 8 A.M. :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	″	″	″				Inches	
Sambalpur	29·186	—·227	—·347	WSW	14	10	5·04	
Midnapore .	·285	+·002	—·271	S	9	4	1·13	Continuous rain.
Chaibassa .	·156	—·188	?	SSE	3	10	3·08	
Ranchi . .	·207	—·200	—·329	ENE	19	10	0·82	Severe gale of wind.
Hazaribagh .	·243	—·166	—·298	ENE	22	10	0·65	Gale of wind.
Daltonganj .	·247	—·170	?	NNE	...	8	0·63	Drizzling.

The depression now lay over the southern districts of Chota Nagpur, the centre being in Lat. 22¾° N. and Long. 85° E. Pressure at the centre was about four-tenths of an inch below the normal, and hence the depression and intensity of the storm were as great as on the morning of the 19th. Very heavy rain had fallen in the eastern districts of the Central Provinces and heavy rain in Orissa and Chota Nagpur. The following gives the largest falls in the storm area during the previous 24 hours :—

District.	Station.	Heaviest rainfall in 24 hours.
		Inches.
Chittagong	Kutubdia	5·46
Bilaspur	Champa	6·55
Sambalpur	Sarangarh	7·35
Ditto	Bargarh	6·57
Ditto	Sambalpur	5·04

Monsoon winds obtained over the whole of the Bay and weather was squally with very strong winds and a high sea in the north. The Ship *Avon* in Lat. 18° 24′ N. and Long. 87° 26′ E. had terrific squalls and torrents of rain during the day, the S.S. *Malda* in Lat. 19° 55′ N. and Long. 88° 33′ E. had west-south-west winds, force 9, with frequent fierce squalls, and the S.S. *Kistna* in Lat. 21° 50′ N. and Long. 91° 40′ E. at 8 A.M. had hard squalls of wind and rain.

21st June.—Pressure had increased rapidly to very rapidly in South Bengal. Orissa, Chota Nagpur and the eastern districts of the Central Provinces, and fallen briskly in the central and northern districts and in Baghelkhand. The following 8 A.M. data show the position and character of the storm at that hour :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Remarks.
	″	″	″				Inches	
Jubbulpore .	29·280	—·073	—·278	NNW	4	10	2·85	
Raipur . .	·313	+·015	—·265	SW	5	10	4·70	
Sambalpur .	·337	+·151	—·206	S	17	10	3·53	Continuous rain.
Hazaribagh .	·392	+·149	—·162	SE	20	10	0·76	Gale of wind.
Allahabad .	·291	—·048	—·225	NE	23	9	0·02	Gale of wind.
Sutna . .	...	...	...	NE	18	10	0·23	
Nowgong .	·301	—·054	—·226	NE	8	7	...	

The data show that the central depression now covered Baghelkhand and the northern districts of the Central Provinces. The centre was at 8 A.M. in about Lat. 23½°

N. and Long. 80¾° E. The depression was now filling up and consisted of a large central area of nearly uniform pressure, the longest diameter of which was about 300 miles, and the shortest about 200 miles, in which pressure was between ·27″ and ·30″ in defect.

Heavy rain had fallen in the Central Provinces and moderate rain in Baghelkhand, Bengal and Chota Nagpur. The following gives the largest falls in the storm area during the previous 24 hours :—

District.	Station.	Heaviest rainfall in 24 hours.
		Inches.
Backergunge	Bhola	6·33
Chittagong	Kutubdia	6·03
Hoshangabad. . . .	Harda	9·96
Bhandara	Bhandara	8·18
Do.	Sakoli	6·60
Raipur	Drug	7·75
Sambalpur	Raigarh	7·32
Balaghat	Lanji	6·61
Nagpur	Ramtek	6·13

22nd June—Pressure had again increased rapidly in the rear of the storm and had fallen very slightly in the area to which it had advanced. The storm was now central in about Lat. 25° N. and Long. 78½° E. at 8 A.M. The following gives data of the storm area for 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 . .	29·302	—·007	—·261	WSW	6	10	1·58	
Nowgong .	·302	+·001	—·240	E	6	10	0·08	
Jhansi . .	·288	—·045	—·263	NE	12	9	0·05	Gale of wind.
Jeypore .	·386	+·008	—·159	NE	9	8		

Pressure was about three-tenths of an inch in defect in the central area, and the storm was hence of moderate intensity, although filling up. Very strong westerly winds prevailed on the Bombay and Kathiawar coasts and strong winds in the Central Provinces. Heavy rain had fallen in the northern districts of the Central Provinces and in Central India.

23rd June.—Pressure had increased very rapidly in the area covered by the storm on the previous day and had fallen slightly in Upper Sind. The depression had apparently been absorbed in the permanent hot weather depression in Upper Sind. An area of large and very uniform deficiency of pressure stretched between Jacobabad and Deesa. Pressure was lowest at Jacobabad, and a fairly well defined low pressure area lay over Sind. The following gives data for 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.			
		″	″				Inches	
Kurrachee .	29·390	+·063	—·150	WSW	14	10	0·01	
Hyderabad .	·350	+·048	—·150	WNW	9	10		
Deesa . .	·386	+·025	—·210	WSW	10	10	1·61	Thunderstorm.
Pachpadra .	·376	+·012	?	SW	15	10	2·34	Thunderstorm with rain.
Jacobabad .	·266	—·035	—·187	E	5	0		Dusthaze.
Mooltan .	·420	—·003	—·039	E	3	0		Ditto.

The storm broke up during the next 24 hours in the Baluchistan Plateau. Cutch, Kathiawar and West Rajputana had received moderate to heavy rain during the previous 24 hours. The indraught to the depression during the next 24 hours gave heavy rain in Lower Sind. The following gives the most noteworthy falls :—Kurrachee 6·8 inches and Shahbunder 5·46 inches.

Baluchistan received daily showers from the 22nd to the 24th, and the dispersion of the storm was followed by a strong advance of monsoon winds across Rajputana into the western districts of the North-Western Provinces. Heavy downpours were received in some parts of these areas during the next four days. The following gives data of the heaviest downpours :—

Date.	District or State.	Station.	Heaviest rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
22nd	Gwalior	Neemuch . . .	5·11
,,	Kota	Baran	3·52
,,	Bhopal	Sehore	3·52
,,	Do.	Narsinghgarh . . .	3·35
,,	Do.	Maksudangarh. . .	3·16
23rd	Sirohi	Erinpura	4·00
,,	Gwalior	Goona	3·36
,,	Jodhpore	Gudha	3·03
24th	Sirohi	Mount Abu . . .	2·55
,,	Kerowlee	Utgir	2·53

DATE.	DISTRICT OR STATE.	STATION.	Heavist rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
26th	Naini Tal	Satarganj	6 20
,,	Do.	Satina	5·40
27th	Dehra Dun . . .	Bhogpur	13·50
,,	Do.	Raipur	10·50
,,	Do.	Dehra	6·58
,,	Naini Tal	Naini Tal . . .	12·54
,,	Saharanpur . . .	Hardwar	10·22

The storm under discussion formed in the usual manner in front of the advance of the monsoon current up the Bay. It formed further east than usual, and the centre crossed the Bengal coast to the east of Saugor Island and advanced in a west by north track through Chota Nagpur, Baghelkhand and South Rajputana into Sind. The following gives data of its position at 8 A.M. of each day of its existence and its average rate of motion :—

DATE.	Hour.	POSITION OF CENTRE. Lat. N.	POSITION OF CENTRE. Long. E.	Distance passed over during interval.	Average velocity in miles per hour.
		° ′	° ′	Miles.	Miles.
18th . . .	8 A.M.	20 45	89 0		
19th . . .	2 A.M.	21 30	88 45	60	3
,, . . .	8 A.M	22 10	88 10	50	8
,, . . .	2 P.M.	22 20	87 45	50	8
20th . . .	8 A.M.	22 45	85 0	190	11
21st . . .	,,	23 30	80 45	290	12
22nd . . .	,,	25 0	78 30	150	6

Cyclonic storm of the 25th June to the 2nd July.—During the last two days of the existence of the previous storm pressure gave way briskly in Burma and Bengal and was in considerable defect over the greater part of that area on the morning of the 24th. It fell rapidly in the north of the Bay during the next 24 hours, and winds began to shift round to northerly directions at the head of the Bay. On the previous day westerly to south-westerly winds had prevailed over the whole of the Bay, except near the Arakan coast, where they ranged between south and south-east in direction.

The following table, giving marine data for the north of the Bay at 8 A.M. of the 25th, shows the meteorological conditions now obtaining in that area:—

Hour.	NAME OF VESSEL.	8 A.M. POSITION. Lat. N.	8 A.M. POSITION. Long. E.	Barometer corrected.	WIND. Direction.	WIND. Force.	WEATHER.
		° ′	° ′	″			
8 A.M.	S.S. *Chanda* .	19 31 *	85 24	29·414	SW	4	Light rain.
,,	S. *Rhine* . .	19 50	88 5	·407	W	...	Constant heavy rain and vivid lightning; 4 P.M., every appearance of a coming cyclone.
,,	S.S. *Africa* .	19 1	90 32	·444	W	5	Heavy rain and moderate sea. Noon, fierce rain squalls.
,,	S S. *Karagola* .	19 48	93 20	·396	SW	4	Occasional heavy, rain and heavy S. swell.
,,	S.S *Goalpara* .	21 8	89 26	·362	NE	4	Passing clouds. Noon, occasional rain.
,,	S.S. *Shahzada* .	21 20	88 30	·363	NE	4	Squally and S. W. swell.
,,	F. L. V. *Torch*	Eastern Channel		·358	N	7	Squally and high confused sea.
,,	F. L. V. *Hesperus*	Mutlah		·390	NW	4	Threatening and slight S. S. E. swell.

* Noon position.

The data show that strong monsoon winds, force 5 to 7, obtained to the south of Lat. 21° N. and that squally rainy weather prevailed in that area. The weather was squally with strong winds from the north at the entrance to the Hooghly in the morning and threatening with continuous rain squalls during the afternoon and evening.

26th June.—Pressure had fallen briskly to rapidly over nearly the whole of India during the previous 24 hours, but the fall was greatest at the head of the Bay and a depression lay immediately to the south of the Sunderbunds coast between Saugor Island and Chittagong. The following 8 A.M. data for the coast stations fix the position of the storm at that hour :—

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.	
Akyab . .	29·329	—·103	—·355	S	7	10	3·34	
Chittagong .	·267	—·150	—·379	E	4	7	1·85	Thunderstorm.
Barisal . .	·273	—·132	—·321	ENE	4	6	0·59	
Saugor Island .	·259	—·119	—·298	N	14	10	1·00	Sea slight.
F. L. V. *Torch* (Eastern Channel)	·220	—·138	?	NNW	7	...	...	Cyclonic weather and passing heavy rain squalls with high confused sea.
F.L.V. *Hesperus* (Mutlah).	·241	—·149	?	NW	5	3	?	Threatening and moderate S. swell.

Pressure was from three to four-tenths of an inch below the normal in the central depression. The character of the weather at the head of the Bay is shown 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 corrected.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
8 A.M.	S. *Rhine* . .	18 15	89 45	29·377	...	...	Constant heavy rain and very confused sea. 5 P.M. wind blowing hurricane force with squalls.
,,	S.S. *Asia* . .	18 31	87 2	·369	SW	7	Squally and heavy rain and high topping sea.
,,	S.S. *Vadala* .	16 50	86 16	·490	WSW	7 to 8	Thick, continuous rain squalls and high sea.
,,	S.S. *Kistna* .	21 23	90 36	·217	SE	6	Frequent rain and moderate sea.
,,	S.S. *Karagola* .	Akyab		·364	SE by E	5	Continuous rain and occasional heavy squalls.

The data when charted show that the centre of the storm was probably in about Lat. 21½° N. and Long. 89¾° E. Weather was very squally with heavy rain, and increasing winds in the storm area.

27th June.—Pressure had commenced to rise in Burma, but had fallen slightly to briskly in South Bengal and at the head of the Bay. The depression and storm at the head of the Bay had advanced in a north-westerly direction and had intensified slightly. The following gives 8 A.M. meteorological data of the coast stations at the head of the Bay :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Changelin past 24 hours.	Pressure. Variation from normal.	Wind. Diection at 8 A.M.	Wind. Averege hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.
	″	″	″				Inches
Akyab . . .	29·335	+·006	—·346	S	9	10	3·22
Chittagong . .	·245	—·022	—·399	ENE	10	10	0·03
Barisal . . .	·217	—·056	—·375	ENE	7	10	0·11
Dacca . . .	·263	—·024	—·339	ENE	7	7	0·12
Jessore . . .	·250	—·042	—·329	NNE	5	3	2·17
Calcutta . .	·248	—·038	—·309	N	8	4	1·25
Saugor Island . .	·231	—·028	—·324	NNW	24	10	0·25

The depression at the centre of the storm was hence nearly four-tenths of an inch, and the storm was hence of considerable intensity. The centre was in about Lat. 22° N. and Long. 89½° E. at 8 A.M., and hence sixty miles to the northwest of its position at 8 A.M. of the preceding day.

The following gives a summary of the meteorological data extracted from the logs of vessels in the storm area at the head of the Bay on this day :—

Hour	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer corrected.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
8 A.M.	S.S. *Ethiopia*.	17·42	91·12	29·492	SW by S	...	Frequent terrific squalls and heavy showers and sea moderating.
,,	S. *Rhine* .	17·40	90·10	·437	...	...	Noon, terrific gale with squalls of hurricane force and heavy rain.
,,	S.S. *Vadala* .	17·58	86·40	·405	W by S	6	Light continuous rain and high sea.
,,	S.S. *Karagola*	Akyab		·352	SSE	5	Dark and cloudy; noon, hard squalls of wind and rain.
,,	S.S. *Asia* .	20·40	88·0	·199	NW	6	Cloudy. 4 A.M. very heavy squalls and heavy rain; 10 P.M. whole gale and terrific squalls.
,,	F.L.V. *Torch*.	Eastern Channel.		·180	NW	9	Cyclonic winds and continuous heavy rain squalls and high confused sea.
,,	F.L.V. *Hesperus*.	Mutlah.		·146	NW	6	Dry squalls and high N.W. swell.

The strength and character of the south-west winds feeding into the depression are more clearly shown by the weather experienced during the day by the S.S. *Ethiopia* and the Ship *Rhine*. The following gives the whole of the information for the day :—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer corrected.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
4 A.M.	S.S. *Ethiopia*	...	...	...	WSW	...	Violent squalls with blinding rain and heavy sea.
8 ,,	Ditto .	17·42	91·12	29·492	SW by S	...	Throughout the watch frequent terrific squalls and heavy showers and moderating sea.
Noon.	Ditto .	17·40	91·9	...	SWbyW	...	General appearance of weather is very threatening with very heavy squalls and high and confused sea, and vessel labouring and pitching and taking large quantities of water.
4 P.M.	Ditto .	...	...	...	SWbyW	...	Wind and sea moderating and occasional rain squalls.

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer corrected.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
5-55 P.M.	S.S. *Ethiopia*	...	...	...	...	...	Weather assuming very threatening appearance to N.W. and sea becoming more confused, and squalls increasing in violence.
,,	Ditto	...	...	...	SW by S	...	Clearing overhead, wind more steady, ship labouring and pitching heavily.
Midnight.	Ditto	...	...	...	SSW	4	Weather clearing and very confused sea.
2 A.M.	S. *Rhine*	...	...	...	...	...	Wind blowing with increased violence with a perfect deluge of rain; sea in wild state.
10 ,,	Ditto	...	...	...	...	...	Wind not so violent.
Noon.	Ditto	17 40	90 10	...	...	...	Terrific gale with squalls of hurricane force, heavy rain; sea in a very confused state.
1 P.M.	Ditto	...	...	...	...	...	Blowing a terrific gale accompanied with heavy rain and squalls of terrific violence. Sea in a very confused state, causing ship to roll and labour in a most violent manner.
2 ,,	Ditto	...	...	...	...	...	Wind slightly decreasing and rain taking off.
4 ,,	Ditto	...	...	...	...	...	Experienced a squall of terrific force after which the weather improved, sky clearing and wind hauled to S.W. and settled to a steady gale.
8 ,,	Ditto	...	...	...	...	...	Sea running very high but not so confused, and ship making very much better weather.

The following is a description taken from reports sent by the Captains of the F. L. Vessels at the Eastern Channel and Mutlah stations:—

Mutlah station.—"There was a moderate south-west swell and sea with a westerly current of 5 knots per hour.

From sunrise to noon there was every indication of the wind backing. The wind also lulled and freshened as if the calm centre was approaching.

From 1 P.M. to 6 P.M. heavy rain squalls increased in force and frequency, and the sea and swell rose rapidly during the evening. The squalls blew with force 10 to 11 during the afternoon and followed one on top of another."

Eastern Channel.—"Weather was squally all day with wind from north and north-east and passing heavy rain squalls and high southerly swell and choppy and heavy easterly sea. Towards the afternoon the sea and wind began to increase, and from 8 P.M. to midnight it blew a very heavy gale from between north and north-west with continuous heavy rain squalls and very heavy swell.

The following gives the hourly observations taken on board the *Hesperus* at the Mutlah Station from noon to 10 P.M.:—

Hour.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer reduced to 32°F.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
Noon.	Mutlah.		29·147	NW	7	Over cast.
1 P.M.	...	...	·108	NW to WNW	6 to 7	Heavy rain.
2 ,,	...	...	·078	NW to WNW	7 to 9	Ditto.
3 ,,	...	...	·060	NW to WNW	8 to 9	Ditto.
4 ,,	...	...	·033	NW to WNW & W	9 to 10	Ditto.
5 ,,	...	...	·033	NW to WNW & W	9 to 10	Ditto.
6 ,,	...	...	·033	W to WSW	10 to 11	Ditto.
7 ,,	...	...	·083	W to WSW	10 to 11	"Rain in solid sheets" squalls in rapid succession and mountainous sea and swell.
8 ,,	...	...	·093	W to WSW	10 to 11	Ditto.
9 ,,	...	...	·133	W to WSW	10 to 11	Ditto.
10 ,,	...	...	·153	W to WSW	10 to 11	Ditto.

The data of the Mutlah Light ship indicate that the centre passed westwards to the north of the vessel, and was nearest to it at about 5 P.M. It was at that time advancing very slowly in a north-west direction and was probably in Lat. 22° N. and Long. 89° E.

The next position of the storm centre is given by the observations at the Alipore Observatory:—

Station.	Hour.	Date.	Pressure. 8 A.M., reduced to sea level and constant gravity at Lat. 45°.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles.	Cloud.	Rainfall.	Remarks.
			″				Inch.	
Calcutta (Alipore).	8 P.M.	27th	29·137	N	13	10	0·30	Gloomy.
,,	10 ,,	,,	29·137	NNW	18	10	0·20	Drizzling & squally.
,,	2 A.M.	28th	28·984	NW by N	18	10	0·28	Do.
,,	4 ,,	,,	28·930	WNW	20	10	...	Do.
,,	6 ,,	,,	28·940	WSW	15 to 16	10	0·93	Do.
,,	8 ,,	,,	29·022	SW	15 to 16	10	0·50	Do.
,,	10 ,,	,,	29·122	SW	26	10	0·23	Do.

The centre hence passed westwards a little to the north of Calcutta about 5 A.M. of the 28th and had hence advanced about 60 miles during the previous 12 hours.

28th June.—The previous observations show that the storm moved slowly in a north-westerly direction during the night, and that the centre was at 5 A.M. near to Calcutta. Pressure was about seven-tenths of an inch below the normal at 5 A.M. at Calcutta and the storm was hence of considerable intensity. The strongest winds recorded at various stations during the night were as follows:—

Mutlah .	Force	10 to 11.
Eastern Channel	„	10 to 11.
Saugor Island .	Velocity	40 miles per hour.
Dacca . .	„	31 miles „
Calcutta . .	„	20 miles „

The centre at 8 A.M. was near Burdwan. The following gives data for that hour at 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.	
Saugor Island.	29·216	—·015	—·335	SW	36	10	1·72	Sea very rough.
Calcutta .	29·025	—·223	—·528	SW	16	10	2·26	Squally.
Jessore . .	29·161	—·089	—·413	SE	20	10	0·75	Gale of wind.
Berhampore .	29·189	—·117	—·372	ENE	10	10	0·62	Do.
Burdwan .	28·974	—·329	—·587	N	12	10	2·96	Norwester.
Raniganj .	29·195	—·133	?	NNE	7	10	0·54	Dark, gloomy.
Midnapore .	29·184	—·113	—·370	SW	11	10	0·53	Raining.

The following gives pressure observations taken at Burdwan from 8 A.M. to 10 A.M.

Hour.	Pressure. Actual readings.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.
	"	"
8-0 A.M.	29·050	28·974
8-15 „	·034	·958
8-30 „	·020	·944
8-45 „	·010	·934
9-0 „	·008	·932
9-15 „	·010	·934
9-30 „	·020	·944
9-45 „	·030	·954
10-0 „	·032	·956

The preceding observations indicate that the storm passed close to Burdwan and was nearest at about 9 A.M. It had hence advanced about 50 miles during the previous four hours, and the storm as judged by the barometric depression, was as intense at 9 A.M. as at 5 A.M.

The following marine data show the character of the weather at the head of the Bay at 8 A.M.:—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer corrected.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	"			
8 A.M.	S. *Alcester* . .	18 9	86 4	...	WSW	9	Heavy squalls with rain.
„	S.S. *Vadala* .	19 40	88 0	29·283	WSW	9	Hard squalls and high sea.
„	S.S. *Arratoon Apcar.*	18 10	89 57	·503	SW	8	Heavy sea.
„	S.S. *Pentakota* .	Hooghly river		·038	SW	7	Incessant heavy gusts and thick rain.
„	S.S. *Asia* . .	20 2	88 14	·249	W	9	Heavy squalls and rain with confused sea.
„	F.L.V. *Hesperus* .	Mutlah.		·293	WSW	10	Whole gale and very high S. W. sea.
„	F.L.V. *Torch* .	Eastern Channel.		·258	SW	11	Very hard gale with blinding rain squalls and high confused sea.

The storm recurved slightly during the day, and advanced west-north westwards through West Bengal into Chota Nagpur.

The whole of East, South and Central Bengal and Orissa received general and moderately heavy rain during the day.

29th June.—Pressure had increased with great rapidity in South-West Bengal, and fallen slightly in Chota Nagpur and the eastern districts of the North-Western Provinces. The storm at 8 A.M. covered Chota Nagpur and the centre was about sixty miles west of Hazaribagh and near Daltonganj (Lat. 24° N Long. 84° E.), where pressure was about a quarter of an inch below the normal. The following gives 8 A.M. meteorological data of 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.	
Ranchi .	29·378	+·037	—·170	S	17	10	5·44	Continuous rain.
Hazaribagh	29·338	—·025	—·211	ESE	28	10	1·65	...
Gaya .	29·331	—·052	—·206	ENE	17	10	0·25	...
Dehri .	29·312	—·107	—·219	E	37	10	0·68	Severe gale of wind.
Benares .	29·368	—·063	—·158	NE	6	10	2·77	...
Daltonganj	29·157	—·254	?	SW	...	10	3·55	Overcast.

The depression had filled up considerably during the previous 24 hours and was only of moderate intensity. It had changed in character in the usual manner during its progress across a land surface, and now consisted of a large inner area of nearly uniform pressure and of deficiency of pressure (about 200 miles in diameter), and of an outer area of moderately steep gradients, more especially to the east and south.

Winds had fallen off very rapidly in South Bengal and were now only slightly above their normal strength. The strongest winds experienced by vessels in the north of the Bay, were of force 8, and moderate to heavy rain had fallen in Bengal and Chota Nagpur, and moderate rain in the eastern districts of the North-Western Provinces.

30th June.—Pressure had increased rapidly in Chota Nagpur and Bihar and fallen rapidly in the area included by the stations of Nowgong, Jhansi and Cawnpore, and which was now covered by the storm. 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.
Saugor . . .	29·426	—·090	—·128	WSW	5	10	4·90
Nowgong . . .	·294	—·194	—·247	N	5	10	2·87
Cawnpore . . .	·363	—·107	?	ESE	11	10	1·21
Jhansi . . .	·348	—·161	—·197	NNE	7	9	3·40

Pressure was a quarter of an inch below the normal in the inner area and the storm was, as on the 29th, of moderate intensity, and had concentrated to some extent. Strong cyclonic winds prevailed in the storm area, and strong easterly winds in the Gangetic Plain. Heavy rain had fallen in Baghelkhand, Bundelkhand, East Rajputana and the adjacent districts of the North-Western and Central Provinces.

1st July.—Pressure had increased rapidly in Bundelkhand and Baghelkhand and fallen briskly in East Rajputana. The depression had advanced in a north-westerly direction as on the previous day but less rapidly. It had continued to fill up and was now of slight intensity. The centre was at 8 A.M. as shown by the following observations, about fifty miles to the west of Agra, as is shown by the following 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.			
	"	"	"				Inch.	
Jhansi .	29·423	+·075	—·123	SW	12	8	0·82	...
Mainpuri .	·451	+·031	?	ESE	4	8	...	...
Agra .	·394	—·041	—·123	SE	16	10	...	Severe gale of wind.
Jeypore .	·409	—·093	—·140	N	4	10	...	...

Moderate to heavy rain had fallen in Central India and Rajputana and the adjacent districts of the North-Western Provinces.

The depression filled up during the next 24 hours at the foot of the Garhwal and Mussoorie Hills.

The storm formed at the head of the Bay under the usual conditions of cyclonic storm generation at the height of the rains It was generated quite at the head of the Bay, and somewhat further east than usual and hence crossed the coast well to the east of Saugor Island. The following table gives data of the position of the centre from day to day, and also of its daily rate of advance:—

Date.	Hour.	Position of centre.		Distance travelled during interval.	Average velocity in miles per hour.
		Lat. N.	Long. E.		
		° ′	° ′	Miles.	Miles.
26th June .	8 A.M.	21 30	89 45	...	...
27th " .	"	22 10	89 30	60	3
28th " .	"	23 0	88 0	110	5
29th " .	"	24 0	84 0	235	10
30th " .	"	25 25	79 45	325	14
1st July .	"	27 0	77 0	215	9

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

The information relating to the snowfall in the Himalayan area is always small for June, as it is very unusual for heavy snow to fall even on the higher ranges in that month. No information has been received from these districts for the present month (June 1896).

Summary of special Storm Reports.

As stated in the pressure section two cyclonic storms formed during the month at the head of the Bay. 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 received from various observing stations and the principal facts with reference to them are detailed below. The majority of these local disturbances were duststorms and thunderstorms, such as almost invariably accompany the advance and establishment of the south-west monsoon over the drier districts of Northern and Central India.

1st.—Duststorm at Jacobabad, 9.30 P.M. to 10 P.M.

2nd.—Duststorm at Khandwa at 5-30 P.M. Duststorm at Jubbulpore at 4 P.M. to 4-30 P.M. Greatest wind velocity during storm was 60 miles per hour. Thunderstorm at Allahabad in the early morning from 5 A.M. to 6 A.M. The strongest winds during the storm were of velocity 39 miles per hour.

3rd.—Hailstorm followed by heavy rain at Chakrata in early morning (2-30 A.M.) Thunderstorm at Khandwa at 3-30 P.M.

4th.—Duststorm at Jeypore from 5-5 P.M. to 5-35 P.M.

5th.—Duststorm at Delhi during the afternoon. The storm advanced from the east.
Duststorm at Jeypore at 2-25 P.M.

6th.—Duststorm at Jeypore at 2-5 P.M.
Thunderstorm at Delhi in the evening.
Thunderstorm at Poona from 3-48 A.M. to 4-30 A.M.

7th.—Thunderstorm with hail at Hyderabad from 3 P.M. to 4 P.M. The storm caused much destruction to trees and houses.

9th.—Duststorm at Khandwa at 11 P.M.
Duststorm at Allahabad at 5-15 P.M. to 6 P.M.

10th.—Severe thunderstorm with hail at Chikalda (at 2 A.M.)

11th.—Severe thundetstorm at Jubbulpore at 7 P.M.

13th.—Duststorm at Ajmere at 5-30 P.M. "The winds were very strong and blew down many trees." 2·1 inches of rain fell in about 1½ hours. Thunderstorm at Salem at 7-15 P.M.

14th.—Duststorm at Delhi at 7 A.M.

15th.—Duststorm at Allahabad from 4-30 P.M. to 5-4 P.M. The temperature fell from 95° 1 at 4-30 to 81°·0 at 4-45 P.M. The strongest gust of wind was of velocity 52 miles per hour as registered by a Dynes's pressure tube anemometer.

17th.—Duststorm at Allahabad from 5-10 P.M. to 6 P.M.

21st.—Thunderstorm at Pachpadra; 0·75 inch of rain is reported to have fallen in ten minutes during this storm.

22nd.—Duststorm at Jeypore at 3-45 P.M.

Reports of the following local storms were received from Political Agents.

5th.—Hailstorm in the Bahadran Tehsil of the Bickaneer State.—It began as a duststorm which was followed by a thunderstorm with hail and rain. The stones weighed from one to two tolas. Large number of trees were blown down by the force of the wind.

13th.—Hailstorm in the Agar Pargana, Prant Malwa. Gwalior State.—The storm did no injury to the crops.

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

Arabian Sea.—Exceedingly unsteady and irregular winds prevailed in the Arabian sea during the first five days of the month. Weather was fine during this period in the north and west, but was more or less unsettled with rain squalls over the remainder of the sea. The mean intensity of the air movement ranged between 2·9 on the 1st and 4·0 on the 5th. Moderate to fresh normal monsoon winds set in over the western half of the south of the sea on the 6th and began to intensify. Thus the S. S. *John Davie* in Lat. 7½° N. and Long. 64½° E. at 8 A.M. of the 6th experienced S. S. W. winds of force 4, and the S. S. *Kola* in Lat. 7½° N. and Long. 52½° E. at the same hour of the 7th had strong S. W. by S. winds. The humid winds strengthened and advanced northwards along the African coast during the next 48 hours, and on the morning of the 9th monsoon winds and weather were established as far north as Lat. 16½° N. over the west and centre of the sea. The strongest winds reported at 8 A.M. of the 9th were of force 7 in Lat. 13½° N and Long. 53½° E. Conditions changed considerably in the eastern half of the south of the sea during the next four days and a wave of strong humid winds advanced from the equatorial region. On the 14th monsoon conditions prevailed as far north as Lat. 9° N. over the south and south-east of the Arabian sea. The general strength of the winds over the Arabian sea at 8 A.M. of this day averaged 3·9 or 0·6 below the normal intensity of the air movement in June. The monsoon current continued to advance northwards during the day and on the morning of the 15th rainy squally weather extended as far north as Lat. 16° N. To the north of this parallel fine weather with light to moderate unsteady winds obtained. The mean strength of the winds was only 0·1 greater than on the 14th. Winds however increased very rapidly, more especially in the centre and west, during the day, and on the morning of the 16th averaged 4·8 in force.

The trough of the advancing monsoon low pressure wave was in Lat. 18° N. at 8 A.M. of this day. South-easterly and easterly winds now prevailed on the North Konkan and Kathiawar coasts, due to the indraught to an area of deficient pressure in front of the advancing monsoon current. Winds increased further in strength during the day, more especially off the South Konkan coast, but fell off in the north, south-east and south. The strongest winds reported at 8 A.M. of the 17th were of force 10 in Lat. 13° N. and Long. 74° E. Several vessels on this day experienced hard squalls and constant rain and one vessel, *viz.*, the S. S *Nowshera*, in Lat. 14¾° N. and Long. 73¾° at 8 A.M., had frequent squalls of hurricane force and incessant rain. A very high rough sea was running over the east, centre and west of the Arabian Sea. A storm was generated during the day between Kathiawar and Bombay. It intensified on the 18th and advanced into Kathiawar on the 19th. Very stormy weather prevailed over the centre and east of the sea from the 18th to the 23rd, vessels in this area experiencing whole gales, violent squalls, blinding rain and a high cross sea. Winds and weather during this period were worst on the 20th and 21st, when the mean intensity of the air movement was 6·0 for the whole of the Arabian Sea. Weather began to moderate on the 23rd and winds reverted to their normal monsoon directions on the Konkan and Kathiawar coasts, at the same time falling off in strength and on the morning of that day averaged 4·4 or 1·3 less than on the preceding day. A moderate to strong monsoon continued to prevail generally over the Arabian Sea during the remainder of the month. The strongest winds during this period were of force 9, and the mean wind force for the whole area ranged from 5·0 on the 24th to 4·4 on the 25th, 27th and 29th.

Bay of Bengal.—Except in the extreme north where they were very unsteady, though chiefly from easterly directions, ordinary winds of indraught to the land area prevailed along the coasts of the Bay during the first five days of the month. Moderate south-west winds obtained over the south, and very unsteady irregular winds over the centre. Weather was generally fine to showery. The mean air movement ranged between 3·4 and 3·9. Winds returned to their normal directions in the north of the Bay on the 6th. No change of importance occurred during the next seven days. On the 14th, however, contemporaneously with the advance of the monsoon proper over the south of the Arabian Sea, humid monsoon winds set in over the south of the Bay and began to work up the Bay at the rate of about 300 miles per diem On the morning of the 17th the whole of the Bay to the south of lat. 20° N. was occupied by monsoon winds. The air movement over the Bay at 8 A.M. of this day averaged 4·4 as compared with 3·4 on the 13th and 14th. To the north of Lat. 20° N., on the other hand, weather was cloudy with moderate easterly and northerly winds, and there was a strong tendency to the formation of a storm in the north-west of the Bay. It developed during the day, and on the morning of the 18th a fairly regular cyclonic circulation was exhibited over the north of the Bay. The storm intensified rapidly during the day, and marching along a northerly track passed inland across the Bengal coast to the east of Saugor Island. Winds increased rapidly, and on the morning of the 19th were of force 6 to 9. Weather was cyclonic with "hard squalls", continuous rain and a very high sea over the northern half of the Bay, and fine to showery with moderate to strong winds in the southern half. The mean air movement was 5·0 at 8 A.M. of the 19th.

Conditions remained unchanged during the next 24 hours, and on the morning of the 20th the mean intensity of the air movement was again 5·0. The strongest winds reported at 8 A.M. were of force 10. On the 21st winds began to take off in force and weather to moderate. At 8 A.M. of the 22nd, the strength of the winds had decreased to an average of 4·5 and the strongest winds did not exceed 7 in force.

The improvement in the weather conditions continued during the next 24 hours. On the morning of the 23rd winds of force 2 to 4 and cloudy weather prevailed in the north of the Bay. Winds had fallen off also in the south of the Bay. The mean strength of the winds was 4·0 at 8 A.M. of the 23rd and 3·6 at the same hour of the 24th.

This falling-off of the monsoon current was however only temporary, as winds began to increase again in force on the 25th and weather to become squally in the northern half of the Bay. Winds shifted round to cyclonic directions in the north of the Bay and a storm began to form. It intensified and crossed the coast on the morning of the 27th. It occasioned very heavy weather in the northern half of the Bay on the 27th and 28th, several vessels on these dates experiencing "terrific gales," "thick rain" and a high confused sea, and one vessel, *viz.*, the S. *Rhine*, in Lat. 17¾° N. and Long 90° E at 8 A.M. of the 27th had "a terrific gale with squalls of hurricane force" at noon. The mean wind force was 5·5 on the 26th and 5·2 on the 27th and 28th. Winds decreased rapidly during the next 48 hours, and at the end of the month averaged 3·3 in force, or 2·2 less than on the 26th, when they were strongest. Weather also improved rapidly, and at 8 A.M. of the 30th was generally fine with light to moderate winds in the northern half and moderate to strong winds in the remaining half.

The data for the equatorial belt are as usual very scanty. They however indicate that light to moderate unsteady irregular winds prevailed in this region during the first five days, and that the south-east trade winds increased in strength on the 6th and 7th blew freshly during the second week. This is confirmed by the wind data of the *Seychelles*, where the hourly wind velocity rose from an average of 7 miles on the 6th to 17 miles on the 15th. During the second fortnight moderate south-east trade

winds held more or less steadily over this region. It will be seen from the preceding account of the weather in the Indian Seas that the monsoon currents did not set in over he south of the Arabian Sea and Bay of Bengal until the 14th or about a fortnight later than usual. It is also noteworthy in connection with the origin of the monsoon that at the time of its advance the pressure gradients over the Indian area were very feeble and barely half their normal intensity in June. Another important feature was the extreme unsteadiness of the south-east trade winds and of the Bay current which fluctuated considerably in strength from day to day.

Temperature of the air.

The mean temperature conditions of the month were chiefly determined by the prolonged delay in the establishment of the south-west monsoon on the west coast, and by the rapid advance of the monsoon currents after their establishment in the coast districts to the Gangetic Plain and Central and Upper India.

The mean maximum or day temperature of the month was above the normal in three areas, *viz.*:—

(1) Burma, Assam and North Bengal.

(2) The greater part of the Peninsula south of Lat. 19°N.

(3) Baluchistan, Sind, the Punjab and the greater part of Rajputana.

The mean day temperature of the month was below the normal over the remainder of India. The deficiency exceeded 2° in a belt of country stretching from Orissa and West Bengal to the submontane districts of the North-Western Provinces. The deficiency was greatest at Cuttack (—4°·1), Delhi (—3°·6), Roorkee (—3°·1), Allahabad (—2°·8), Agra (—2°·7) and Meerut (—2°·6).

The variations were small in Burma and the Peninsula, but exceeded 2° in a part of Assam and North Bengal and over the greater part of the Punjab and Sind. Data are given for these two areas in the following table:—

Province.	Station.	Mean maximum temperature.		
		Actual, June 1896.	Normal, June.	Variation of actual from normal.
		°	°	°
Punjab	Rawalpindi	107·5	102·7	+4·8
	Mooltan	111·1	106·7	+4·4
Sind	Jacobabad	114·8	111·9	+2·9
	Hyderabad	106·1	103·2	+2·9
North Bengal	Jalpaiguri	90·6	87·5	+3·1
Assam	Dhubri	88·3	85·6	+2·7
	Silchar	91·1	88·7	+2·4

The highest maximum temperatures of the year were recorded in the second week of the month in Upper India. The greatest heat of the year in India is usually experienced in the fourth week of May, and hence occurred in the present year about a fortnight later than usual.

The following gives the actual maximum temperature recorded at the hottest stations:—

Station.	Highest maximum temperature recorded in June 1896.	Date on which recorded.	Highest maximum temperature recorded in June previous to 1896.	Year in which recorded.
	°		°	
Jacobabad	123·0	10th	123·7	1889
Khushab	120·4	13th	118·1	1891 and 1892
Montgomery	120·4	13th	121·4	1890
Mardan	119·9	14th and 22nd	115·4	1894
D. I. Khan	118·7	22nd	121·5	1882
Peshawar	118·0	13th & 14th	119·0	1880

These temperatures were hence almost as high as have been previously recorded.

The mean minimum or night temperature of the month was above the normal over the whole of Burma and of India, with the exception of South Bengal, Chota Nagpur, Orissa, the Central Provinces and eastern and submontane districts of the North-Western Provinces. The variations were small except in the Punjab and Sind, where the night temperature was considerably to largely above the normal. The following gives temperature data for this area:—

Station.	Mean minimum temperature.		
	Actual, June 1896.	Normal, June.	Variation of actual from normal.
	°	°	°
Mooltan	88·3	82·3	+6·0
Rawalpindi	80·2	74·7	+5·5
Lahore	85·0	79·8	+5·2
Jacobabad	88·6	83·5	+5·1
Peshawar	81·5	76·7	+4·8
Sirsa	86·7	82·8	+3·9
Ludhiana	83·0	80·1	+2·9
Hyderabad	83·9	81·5	+2·4

The mean temperature of the month was above the normal in three areas, *viz.*:—

(1). Burma, Assam and North Bengal.

(2). The Peninsula south of Lat. 19° N.

(3). The Punjab, Rajputana, Sind and Cutch.

The variations of the mean temperature conditions of the month in the first and second areas were generally small in amount and less than 2° at all stations except Jalpaiguri (+2°·5) and Dhubri (+2°·3).

Temperature was in considerable to large excess over the greater part of the Punjab and Sind, as is shown by the following comparative data:—

Station.	Mean daily temperature.		
	Actual, June 1896.	Normal, June.	Variation of actual from normal.
	°	°	°
Rawalpindi	93·8	88·5	+5·3
Mooltan	99·7	94·5	+5·2
Peshawar	95·4	91·1	+4·3
Jacobabad	101·7	97·7	+4·0
Lahore	95·9	92·7	+3·2
Hyderabad	95·0	92·3	+2·7

The mean temperature was in defect over the remainder of India. The deficiency was more than 2° in amount at Cuttack (−3°0), Sambulpur (−2°8) and Allahabad (−2°4).

The variations of the mean temperature conditions of the month at the hill stations in Northern India were similar in character to those at the neighbouring plain stations, but were generally smaller in amount. The following gives comparative data for seven hill stations:—

Station.	Variation from normal of		
	Mean maximum temperature, June 1896.	Mean minimum temperature, June 1896.	Mean temperature, June 1896.
	°	°	°
Quetta	+0·9	+1·6	+1·3
Mount Abu	−0·9	+0·6	−0·2
Murree	+1·8	+0·3	+1·1
Simla	−0·3	+1·0	+0·4
Mussooree	−0·9	+0·8	−0·1
Ranikhet	−1·1	−0·8	−1·0
Darjeeling	+0·2	+0·9	+0·6

A noteworthy feature of the temperature conditions was the large excess at the elevated hill stations of Leh and Kailang. The following gives data:—

Station.	Mean daily temperature.		
	Actual, June 1896.	Normal, June.	Variation of actual from normal.
	°	°	°
Leh	60·1	55·4	+4·7
Kailang	59·5	55·0	+4·5

The area of excessive temperature which included Sind and the Punjab, hence extended northwards into Thibet. It stretched westwards as far as Quetta and Aden, but in Persia temperature was on the average of the month below the normal to a moderate extent. The data in the table below illustrate these features:—

Station.	Mean daily temperature.		
	Actual, June 1896.	Normal, June.	Variation of actual from normal.
	°	°	°
Quetta	76·2	74·9	+1·3
Bushire	85·0	86·3	−1·3
Aden	90·3	88·5	+1·8
Baghdad	86·4	89·3	−2·9
Teheran	78·1	81·6	−3·5
Ispahan	77·7	78·5	−0·8

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

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	85·6	75·1	80·4	10·4	19·3	+0·3	+1·2	−0·9
	Lower Burma (Deltaic)	86·7	77·6	82·2	9·2	16·8	+1·0	+0·7	+0·3
	Central do.	91·0	77·1	84·1	14·0	23·0	+1·3	+1·3	0
	Upper do.	88·6	73·7	80·9	14·4	23·6	?	?	?
	Arakan	86·0	77·7	81·9	8·3	15·0	+0·1	−0·2	+0·3

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bengal and Assam	Eastern Bengal	86·1	75·7	80·9	10·4	21·7	−0·3	+0·1	−0·4
	Assam (Surma)	91·1	77·0	84·1	14·1	25·8	+2·4	+0·9	+1·5
	Do. (Brahmaputra)	89·7	77·7	83·6	12·1	22·6	+2·1	+1·2	+0·9
	Deltaic Bengal	90·3	77·9	84·1	12·4	24·0	−1·4	−1·3	−0·1
	Central do.	91·2	77·7	84·5	13·5	27·9	−1·6	−0·4	−1·2
	North do.	90·2	77·3	83·7	12·9	24·3	+2·1	+1·1	+1·0
	Bengal Hills	64·2	52·1	58·2	12·1	25·4	+0·2	+0·9	−0·7
	Orissa	89·6	78·6	84·2	11·0	23·5	−2·7	−1·5	−1·2
	Chota Nagpur	92·8	76·6	84·7	16·2	31·8	−2·1	−1·2	−0·9
	Bihar (South)	97·6	79·7	88·7	17·9	36·3	−0·9	−0·1	−0·8
	Do. (North)	94·1	78·8	86·5	15·3	30·3	+0·4	+0·8	−0·4
North-Western Provinces and Oudh.	North-Western Provinces (East)	99·1	81·2	90·2	17·9	37·3	−2·6	−1·4	−1·2
	Oudh (South)	99·3	81·6	90·5	17·7	30·0	−2·2	+0·1	−2·3
	Do. (North)	98·3	79·6	89·0	17·7	32·5	?	?	?
	North-Western Provinces (Central)	101·4	82·8	91·6	18·3	35·8	−1·0	+0·1	−1·1
	Do. do. (West)	100·5	82·6	91·6	17·9	34·2	−2·7	−0·2	−2·5
	Do. do. (Submontane East)	97·2	78·9	88·1	18·3	35·1	−0·5	−0·9	+0·4
	Do. do. (West)	95·9	77·6	86·8	18·3	35·3	−2·6	−0·2	−2·4
	Do. do. (Hills)	74·5	61·3	68·0	13·2	27·8	−1·8	+0·2	−2·0
Punjab	Punjab (South-East)	100·6	81·5	91·1	19·1	40·1	−3·6	−1·9	−1·7
	Do. (South)	100·9	82·2	91·5	18·7	37·0	?	?	?
	Do. (Central)	106·8	85·0	95·9	21·8	41·7	+1·2	+5·2	−4·0
	Do. (Submontane)	104·1	82·0	93·1	22·0	40·7	−0·6	+2·4	−3·0
	Do. (Hill Districts)	83·3	57·9	70·6	25·4	45·4	+0·8	+0·7	+0·1
	Do. (North)	109·3	81·5	95·4	27·7	47·3	+4·3	+5·2	−0·9
	Do. (West)	110·4	85·9	98·2	24·5	43·0	+4·4	+6·0	−1·6
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	84·2	75·0	79·6	9·2	16·2	+0·3	+0·5	−0·2
	Madras (South Central)	91·9	73·3	82·6	18·6	28·4	+1·3	+1·7	−0·4
	Coorg	71·8	64·4	68·1	7·4	19·3	−0·3	+1·2	−1·5
	Mysore	82·7	68·2	75·5	14·5	25·5	−0·8	+1·4	−2·2
	Konkan	86·4	78·5	82·4	8·0	16·0	+0·8	+1·2	−0·4
	Bombay Deccan	88·8	71·7	80·3	17·1	28·7	+0·1	+0·8	−0·7
	Hyderabad (North)	93·1	74·0	83·6	19·2	30·4	?	?	?
	Khandesh	90·1	73·3	81·8	16·8	31·6	−1·6	+0·1	−1·7
Central Provinces and Berar.	Berar	96·2	76·6	84·4	19·6	33·3	−0·9	−0·2	−0·7
	Central Provinces (West)	97·0	78·3	87·7	18·7	34·0	−0·7	−0·1	−0·6
	Do. (Central)	97·3	77·5	87·5	19·8	35·0	+0·3	0	+0·3
	Do. (East)	94·8	78·0	86·4	16·9	37·1	−2·2	−0·5	−1·7
Bombay (North)	Gujarat	94·9	80·9	87·9	14·0	28·5	?	?	?
	Kathiawar and Cutch	94·5	79·7	87·1	14·7	27·7	−0·5	+0·6	−1·1
	Sind	102·2	84·6	93·4	17·6	35·3	+2·9	+3·8	−0·9
	Baluchistan Hills	97·9	58·0	78·0	39·9	58·6	+0·9	+1·6	−0·7
Rajputana and Central India.	Central India (East)	98·4	79·9	89·2	18·5	36·5	−0·9	+0·8	−1·7
	Rajputana (East), and Central India (West).	101·2	81·6	91·4	19·6	36·0	−0·4	+1·1	−1·5
	Do. (West)	106·3	84·9	95·6	21·4	38·2	+1·9	+1·8	+0·1
Madras	East Coast (North)	93·7	80·5	87·1	13·2	30·3	+0·5	+0·7	−0·2
	Hyderabad (South)	95·7	76·4	86·1	19·3	22·8	+0·5	+1·9	−1·4
	Madras (Central)	97·3	78·1	87·7	19·2	29·9	+1·0	+0·8	+0·2
	East Coast (Central)	100·1	81·5	90·8	18·6	32·9	+0·1	+0·6	−0·5
	Do. (South)	99·5	80·7	90·1	18·9	27·4	+1·6	+1·6	0
	Madras (South)	95·2	79·4	87·3	15·9	26·7	−0·5	+1·3	−1·8

The following is a brief summary of the larger changes of the temperature conditions in India during the month.

At the commencement of the month temperature was in large excess in Upper India and in large defect in

Bengal, where the air was cooled by the numerous thunder storms of the period. The following gives the variation data of 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	+1·4	−0·4	+0·5
Bengal and Assam	−4·5	−4·9	−4·7
North-Western Provinces and Oudh	+1·7	+3·6	+2·7
Punjab	+7·6	+7·4	+7·5
Sind and Rajputana	+0·7	+1·7	+1·2
Central India and Gujarat	+0·6	+2·8	+1·7
Central Provinces and Berar	+1·1	+1·5	+1·3
Bombay	+1·2	+0·6	+0·9
Madras	+1·6	+1·3	+1·5

No change of importance occurred until the 5th, when numerous duststorms and thunderstorms occurred in Upper India and reduced temperature considerably. Temperature was more or less below the normal over nearly the whole of Northern India from the 6th to the 9th. The following gives variation data of the 24 hours preceding 8 A.M. of the 7th :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+2·4	+2·1	+2·3
Bengal and Assam	−3·1	−0·5	−1·8
North-Western Provinces and Oudh	−4·7	−3·8	−4·3
Punjab	−2·9	−1·3	−2·1
Sind and Rajputana	+1·3	−1·1	+0·1
Central India and Gujarat	+1·8	−0·4	+0·7
Central Provinces and Berar	−0·5	−3·3	−1·9
Bombay	+0·5	+0·6	+0·6
Madras	+1·5	−0·1	+0·7

Temperature increased rapidly in North-Western India on the 9th and 10th, and was more or less considerably in excess from the 10th to the 14th over the whole of North-Western and Central India. The following gives data for this period in illustration of those conditions :—

STATION OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	10th June.	11th June.	12th June.	13th June.	14th June.
	°	°	°	°	°
Quetta	−1·2	+3·9	+4·7	+7·3	+5·8
Simla	+4·0	+4·7	+5·7	+6·1	+6·6
Punjab	+4·0	+6·1	+6·5	+8·3	+9·0
Sind and Rajputana	+6·0	+4·2	+6·6	+6·5	+4·0
Central India and Gujarat	+4·2	+4·5	+5·2	+4·4	+1·8
North-Western Provinces and Oudh.	+2·3	+3·1	+3·4	+5·4	+2·1
Central Provinces and Berar	+1·3	+4·0	+3·4	+4·0	+2·4

The preceding data indicate that from the 10th to the 14th temperature was in considerable to large excess in North-Western and Central India, and that the excess was greatest in the Punjab, Sind and Rajputana. The excess was (as shown by the data for Simla and Quetta) slightly greater in the lowest strata of the atmosphere in Upper India than at the hill stations. Temperature was during the period in slight defect in Bengal and Assam, where series of thunderstorms occurred daily.

The following gives variation data for the 13th, illustrating the temperature conditions which obtained during this period :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+4·5	+1·7	+3·1
Bengal and Assam	+0·8	−1·3	−0·3
North-Western Provinces and Oudh	+4·6	+6·1	+5·4
Punjab	+9·6	+6·9	+8·3
Sind and Rajputana	+5·7	+7·2	+6·5
Central India and Gujarat	+4·6	+4·2	+4·4
Central Provinces and Berar	+6·9	+1·1	+4·0
Bombay	+2·9	+2·4	+2·7
Madras	+3·2	+0·4	+1·8

The changes of the temperature conditions during the next three days were large and irregular, due to the occurrence of series of duststorms and thunderstorms.

During the next five days from the 18th to the 22nd, whilst a storm was forming in the north of the Bay and advancing through Chota Nagpur and the Central Provinces,

temperature was in large excess in Upper India. The following data illustrate this feature :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	18th June.	19th June.	20th June.	21st June.	22nd June.
	°	°	°	°	°
Baluchistan (Quetta) . . .	+1·2	+5·1	+4·8	+2·3	+1·5
Punjab	+3·5	+5·3	+6·6	+8·5	+3·8
Sind and Rajputana . . .	+3·5	+4·6	+5·6	+6·0	+3·8

Temperature was during this period most largely in excess in the Indus Valley. The following gives data showing the largest variations from the 18th to the 22nd:—

Date.	STATION.	VARIATION FROM NORMAL OF		
		Mean Maximum tempearture of date.	Mean Minimum temperature of date.	Mean temperature of date.
		°	°	°
18th	Mooltan	+ 9·8	+10·5	+10·2
19th	Do.	+ 8·2	+12·1	+10·2
20th	Rawalpindi	+ 6·7	+15·2	+11·0
,,	Mooltan	+10·6	+ 8·2	+ 9·4
21st	Sialkot	+ 8·3	+15·0	+11·7
,,	Mooltan	+11·9	+11·5	+11·7
,,	Lahore	+ 8·5	+14·7	+11·6
,,	Rawalpindi	+10·4	+12·7	+11·6
22nd	Peshawar	+10·5	+14·3	+12·4
,,	Mooltan	+13·7	+ 8·9	+11·3
,,	Rawalpindi	+ 8·4	+13·0	+10·7

The temperature conditions during the last week of the month depended almost solely upon the rainfall distribution. Temperature was steadily above the normal in Madras, the Punjab and Bengal, where the rainfall was considerably less than the normal of the period. The following gives data for these areas :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF							
	23rd June.	24th June.	25th June.	26th June.	27th June.	28th June.	29th June.	30th June.
	°	°	°	°	°	°	°	°
Bengal . . .	+0·5	+1·3	+2·1	+1·4	+1·2	+0·4	−2·1	+0·6
Punjab . . .	+1·2	+2·5	−0·9	−1·2	+1·3	−1·4	−1·4	+2·2
Madras . . .	+1·2	+2·1	+1·7	+0·9	−1·6	+1·6	+2·0	+2·8

It was more or less considerably below the normal over the areas affected by the cyclonic storms of the period and more especially in Orissa, Chota Nagpur, South Bihar, the North-West Provinces, the Central Provinces, Berar and Central India. The following gives the variations of the mean temperature from the normal in these areas day by day from the 20ththe 30th:—

DATE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.			
	Central Provinces and Berar.	Central India and Gujarat.	North Western Provinces and Oudh.	Chota Nagpur and Bihar.
	°	°	°	°
20th June . . .	−4·3	+0·7	+1·2	−1·1
21st ,, . . .	−6·2	+0·4	−0·7	−3·8
22nd ,, . . .	−7·8	−2·4	−4·1	−2·9
23rd ,, . . .	−4·7	−5·1	−2·0	−0·2
24th ,, . . .	−2·2	−6·2	−0·8	+0·7
25th ,, . . .	−0·2	−3·8	−0·5	−1·3
26th ,, . . .	−0·6	−2·8	−0·4	+1·0
27th ,, . . .	+0·1	−1·9	−3·5	−3·9
28th ,, . . .	+0·4	−1·9	−3·9	−0·7
29th ,, . . .	−0·2	−2·0	−1·7	−2·5
30th ,, . . .	−1·3	−2·4	−1·4	−1·6

The following gives variation data of the Indian area for the 24 hours preceding 8 A.M. of the 30th, illustrating the temperature conditions obtaining at the end of the month in the Indian area :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature	Mean temperature.
	°	°	°
Burma	+1·0	+0·9	+1·0
Bengal and Assam	−0·5	+0·2	−0·2
N.-W. Provinces and Oudh . .	−2·7	0	−1·4
Punjab	−0·4	+4·8	+2·2
Sind and Rajputana . . .	−4·2	−0·8	−2·5
Central India and Gujarat . .	−4·2	−0·6	−2·4
Central Provinces and Berar . .	−3·5	+0·9	−1·3
Bombay	+2·0	+2·3	+2·2
Madras	+3·1	+2·5	+2·8

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

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF WEEK ENDING				
	6th June.	13th June.	20th June.	27th June.	For whole month.
	°	°	°	°	°
Burma	+1·1	+2·6	−0·1	−0·5	+0·8
Bengal and Assam . . .	−2·1	−0·4	+1·1	−0·1	−0·4
North Western Provinces and Oudh.	−1·8	+1·0	−1·9	−1·7	−1·4
Punjab	+2·2	+3·8	+3·2	+2·2	+2·4
Sind and Rajputana . . .	+2·4	+4·6	+2·8	−1·3	+1·8
Central India and Gujarat . .	+1·8	+3·6	−0·1	−3·1	−0·1
Central Provinces and Berar .	+0·6	+1·3	−0·9	−3·1	−0·5
Bombay	+0·7	+1·3	−0·2	−0·7	+0·5
Madras	+1·2	+1·9	−0·6	+0·6	+1·0

Winds.

Winds were stronger on the average of the month at Port Blair and Diamond Island, and were much more westerly in direction than usual at Port Blair and the Burma coast stations. The following gives data in illustration :—

STATION.	VELOCITY IN MILES PER DIEM.			WIND DIRECTION.		
	Mean actual, June 1896.	Mean normal, June.	Percentage variation.	Mean actual, June 1896.	Mean normal, June.	Westerly deflection.
				°	°	°
Port Blair . . .	269	227	+19	S 53° W	S 38° W	+15
Rangoon . . .	118	130	−9	S 32° W	S 19° W	+13
Diamond Island . .	320	207	+55	S 47° W	S 32° W	+15

Winds were slightly above their normal strength on the mean of the month in Bengal and were less easterly or more westerly than usual. The variations were, however, small and apparently of little importance. Winds were remarkably steady in the Gangetic Plain, easterly winds with more or less southing prevailing over the whole of Bihar and the North-Western Provinces. The following give comparative data for four stations in that area :—

STATION.	VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, June 1896.	Mean normal, June.	Variation from normal.	Mean actual, June 1896.	Mean normal, June.	Variation from normal.
Patna	201	106	+95	59	45	+14
Allahabad . . .	207	102	+105	34	12	+22
Lucknow . . .	?	102	?	55	17	+38
Roorkee . . .	98	94	+4	33	11	+22

Easterly winds prevailed to an unusual extent in the South-East Punjab, and the mean wind directions at the observing stations in that area were south-easterly instead of north-westerly. The following gives data for three stations in that area :—

STATION.	WIND DIRETCION.		STEADINESS.		
	Mean actual, June 1896.	Mean normal, June.	Mean actual, June 1895.	Mean normal, June.	Variation from normal.
Meerut	S 73° E	N 26° W	38	22	+16
Ludhiana	S 35° E	N 74° W	60	10	+50
Lahore	S 31° E	N 19° W	30	11	+19

Amongst the more noteworthy features of the air movement of the month were the unusual steadiness and abnormal westerly extension of the easterly winds of the month in Northern India.

The trough of low pressure and area of unsteady variable winds of the month was further south than usual. It was defined by the stations of Hazaribagh, Sutna, Agra and Mooltan (or perhaps Peshawar). The following gives comparative data of the mean wind direction and steadiness at each of these stations :—

STATION.	WIND DIRECTION.		STEADINESS.		
	Mean actual, June 1896.	Mean normal, June.	Mean actual, June 1896.	Mean normal, June.	Variation from normal.
Hazaribagh . . .	S 3° W	S 36° W	12	19	−7
Sutna	N 34° W	N 59° W	33	50	−17
Agra	N 70° E	N 60° W	7	28	−21
Mooltan	S 19° W	S 25° W	27	33	−6
Peshawar	N 23° E	N 44° E	12	32	−20

The following table gives comparative data of the mean air movement of the month in different provinces of Northern India :—

PROVINCE.	VELOCITY IN MILES PER DIEM.		
	Mean actual, June 1896.	Mean normal, June.	Variation from normal.
Burma Coast	219	169	+50
Bengal	184	181	+ 3
Chota Nagpur . . .	260	213	+47
Bihar	182	123	+59
N.-W. Provinces and Oudh .	96	75	+21
Punjab	94	86	+ 8

The Arabian Sea monsoon current set in fully on the Bombay coast on the 15th and 16th and blew strongly until the end of the month. The mean velocity of the winds at the west coast stations for June was below the normal in consequence of the considerable delay in the establishment of the monsoon. This is shown by the following data :—

STATION.	VELOCITY IN MILES PER DIEM.		
	Mean actual, June 1896.	Mean normal, June.	Percentage variation.
Cochin	153	?	?
Karwar	203	?	?
Ratnagiri	301	278	+ 8
Bombay	355	389	− 9
Kurrachee	392	447	−12

The average intensity of the winds varied somewhat irregularly from the normal in the Deccan, Central Provinces, Berar, Central India and Rajputana; but winds were, on the whole, slightly stronger than usual. The following gives data in illustration:—

PROVINCE.	VELOCITY IN MILES PER DIEM.			
	Mean actual, June 1896.	Mean normal, June.	Variation from normal.	Percentage variation.
Bombay Deccan	461	417	+44	+11
Madras Deccan	109	150	−41	−27
Central Provinces	205	166	+39	+23
Berar	236	234	+ 2	+ 1
Central India	178	174	+ 4	+ 2
Rajputana	227	263	−36	−14

Winds were on the average of the month more southerly and less westerly than usual at the west coast stations, as is shown by the following data:—

STATION.	WIND DIRECTION.		
	Actual, June 1896.	Normal, June.	Southerly deflection.
Bombay	° S 51° W	° S 63° W	° +12
Ratnagiri	S 43° W	S 53° W	+10
Karwar	S 65° W	S 76° W	+11

The mean wind directions of the month at the stations in the Central Provinces and Deccan, directly under the influence of the Bombay current, had generally a much stronger southerly element than usual, of which the following gives a few examples:—

STATION.	WIND DIRECTION.		
	Actual, June 1896.	Normal, June.	Southerly deflection.
Nagpur	° S 47° W	° N 76° W	° +57
Jubbulpore	S 71° W	N 80° W	+29
Sholapur	S 73° W	N 86° W	+21
Mercara	S 76° W	N 81° W	+23
Bellary	S 75° W	S 86° W	+11

The winds were, on the other hand, less southerly and more westerly than usual in Rajputana.

The mean wind direction at Wellington was very unusual. It was S. 38° W., the normal being N. 88° W. A similar but much smaller deflection was shown at Pachmarhi, where the mean wind direction was S 77° W., the normal being N. 71° W. It is noteworthy that the mean wind directions at these stations in June 1895 showed similar deflections of nearly equal amount.

Winds were stronger and steadier at the Himalayan stations, more especially at the more westerly stations, as, for example, Murree, where the mean percentage of steadiness was 48 or 36 above the normal.

The mean wind direction of the month at Zanzibar was S 5° E. and at the Seychelles S. 29° E. Winds were very steady at the former station, but were less steady at the latter station than they were in June 1894, and hence the lower air current in the western half of the equatorial belt was probably somewhat less steady than usual during the greater part, if not the whole, of the month.

Humidity and Cloud.

The air contained slightly more aqueous vapour than usual in Lower Burma and Assam, but the mean humidity of the month was below the normal in consequence of the increased temperature which prevailed during the greater part of the month. The following gives data:—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, June 1896.	Average normal, June.	Variation from normal.	Average actual, June 1896.	Average normal, June.	Variation from normal.
	"	"	"	%	%	
Burma	·924	·903	+·021	86	87	−1
Assam	·925	·906	+·019	81	86	−5

The amount of aqueous vapour was in very slight defect in Bengal, Orissa and Bihar; but the humidity percentages for the month at stations in these areas were normal in amount as is shown by the following data:—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, June 1896.	Average normal, June.	Variation from normal.	Average actual, June 1896.	Average normal, June.	Variation from normal.
	"	"	"	%	%	
Bengal	·929	·947	−·018	83	84	−1
Orissa	·918	·930	−·012	81	78	+3
Bihar	·885	·894	−·009	72	74	−2

The air was much damper than usual on the mean of the month in the large area including the North-Western Provinces, East Punjab, Rajputana, Central India, the Central Provinces and Berar. The following gives comparative data for this large area of increased humidity:—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, June 1896.	Average normal, June.	Variation from normal.	Average actual, June 1896.	Average normal, June.	Variation from normal.
	"	"	"	%	%	
North-Western Provinces and Oudh.	·787	·741	+·046	59	51	+8
East Punjab	·714	·620	+·094	47	42	+5
Rajputana	·758	·694	+·064	57	51	+6
Central India	·738	·676	+·062	56	50	+6
Berar	·751	·680	+·071?	66	62	+4
Central Provinces	·742	·700	+·042	64	59	+5

The mean humidity of the month was most largely above the normal at Meerut and Deesa (each +11) and Agra and Akola (each +9).

The following gives comparative data for four hill stations in Northern and Central India, establishing that at the hill stations the feature of increased dampness was even more marked than at the adjacent plains stations:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, June 1896.	Average normal, June.	Variation from normal.	Average actual, June 1896.	Average normal, June.	Variation from normal.
	"	"	"	%	%	
Ranikhet	·553	·460	+·093	79	64	+15
Chakrata	·465	·406	+·059	76	65	+11
Chamba	·567	·465	+·102	54	47	+7
Pachmarhi	·706	·597	+·109	76	66	+10

The air was, so far as can be judged from the returns, slightly drier than usual at Quetta and probably Leh:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, June 1896.	Average normal, June.	Variation from normal.	Average actual, June 1896.	Average normal, June.	Variation from normal.
	"	"	"	%	%	
Quetta	·363	·375	—·012	40	42	—2
Leh	·164	·169	—·005	32	38	—6

The mean absolute humidity of the month was normal in the Deccan and Mysore and in slight excess at the west coast and Madras coast stations.

The relative humidity was also in excess, more especially in the Deccan, but the variations were in no case large. Comparative data are given in the following table:—

PROVINCE.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, June 1896.	Average normal, June.	Variation from normal.	Average actual, June 1896.	Average normal, June.	Variation from normal.
	"	"	"	%	%	
West Coast	·894	·867	+·027	84	83	+1
Deccan and Mysore	·658	·650	+·008	69	65	+4
Madras Coast	·874	·840	+·034	67	66	+1

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

(1) Slight excess of aqueous vapour and slight deficiency in the mean humidity of the month in Burma and Assam.

(2) Slight deficiency of aqueous vapour in Orissa, Bengal and Bihar, and normal humidity.

(3) General moderate to considerable excess of humidity, both absolute and relative, in the North-Western Provinces, East Punjab, Rajputana, Central India, Berar and the Central Provinces. The excess in the mean relative humidity of the month was most marked at the Upper India hill stations.

(4) Slight excess in the mean humidity of the month in the Deccan and west coast districts.

The air was slightly drier than usual in the West and North Punjab. The driest period of the month in that area was from the 1st to the 10th. The lowest humidity recorded at any station was 9 per cent. at 4 P.M. of the 7th and 10 A.M. of the 8th at Peshawar.

The mean cloud amount of the month was normal or in slight excess in Burma, Bengal, Chota Nagpur and Bihar and (probably) in slight defect in Assam. Comparative data are given below:—

PROVINCE.	MEAN CLOUD AMOUNT.		
	Actual, June 1896.	Normal, June.	Variation from normal.
Burma	8·6	7·9	+0·7
Bengal	8·0	7·6	+0·4
Chota Nagpur	8·5	7·3	+1·2
Bihar	5·4	5·4	0
Assam	6·9	7·8	—0·9

Cloud was more or less in excess over the whole area of increased humidity in Central and North-Western India, as is indicated by the following mean data :—

PROVINCE.	MEAN CLOUD AMOUNT.		
	Actual, June 1896.	Normal, June.	Variation from normal.
North-Western Provinces and Oudh	4·6	3·9	+0·7
Rajputana	4·9	4·3	+0·6
Central India	5·7	5·3	+0·4
Berar	7·1	6·4	+0·7
Central Provinces	6·6	6·1	+0·5

There was less cloud than usual in the Punjab. The mean cloud amount of the month was most largely in defect at Lahore (—1·3).

There was also much more cloud than usual over the greater part of the Peninsula, including the west coast districts, the Deccan and Mysore and North Madras :—

DIVISION.	MEAN CLOUD AMOUNT.		
	Actual, June 1896.	Normal, June.	Variation from normal.
West Coast	8·3	7·3	+1·0
Deccan	8·2	7·6	+0·6
Mysore	7·2	5·8	+1·4
North Madras (Vizagapatam)	7·4	6·0	+1·4

The mean cloud amount of the month was 1·9 below the normal at Trichinopoly and 0·4 at Madras, thus indicating that cloud was in general defect in South Madras.

There was much more cloud than usual at all the hill stations except Leh, Kailang, Murree and (perhaps) Darjeeling, where the mean cloud of the month was in marked defect. The following gives comparative data for six stations :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, June 1896.	Normal, June.	Variation from normal.
Leh	3·8	5·0	—1·2
Kailang	4·7	5·6	—0·9
Murree	3·4	3·8	—0·4
Ranikhet	6·5	5·4	+1·1
Pachmarhi	7·5	6·6	+0·9
Wellington	8·6	7·5	+1·1

The chief abnormal features of the cloud distribution of the month were :—

(1) Cloud was in slight to moderate excess in Burma and North-East India and in slight defect in Assam.

(2) It was in moderate excess over the whole of North-Western and Central India and the Central Provinces, except the Punjab, where it was in slight to moderate defect.

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

(4) It was in slight to moderate defect in South and Central Madras.

Rainfall.

The conditions under which the south-west monsoon rains of 1896 were initiated, have been stated in the previous sections of this Review.

The Malabar coast districts received heavy thundershowers daily from the 5th to the 11th of June. General rain commenced simultaneously in Malabar and the Konkan on the 13th, and increased in intensity for some days. The Malabar coast districts received a very heavy burst of rain from the 15th to the 23rd, and the Konkan a moderately heavy burst from the 16th to the end of the month.

The monsoon wave of rainfall advanced rapidly along the west coast between the 14th and 17th, and the whole of the west coast districts south of Surat had general heavy rain from the 17th to the end of the month. Humid winds extended from the west coast rapidly into the interior, and gave the first burst of monsoon rain to Berar, the Central Provinces, East Rajputana, and the western districts of the North-Western Provinces between the 16th and 20th.

A small cyclonic storm formed on the 17th and 18th in front of the advancing monsoon between the Bombay and Kathiawar coasts. It passed into Kathiawar on the 19th and filled up in that area during the next 36 hours. The storm gave moderate to heavy rain in Kathiawar and Gujarat.

Burma and Bengal received moderate rain, chiefly from thunderstorms, during the first ten days of the month. The south-west monsoon currents advanced northwards up the Bay between the 14th and 18th concurrently with their march along the west coast. A storm, formed in the north-west angle of the Bay on the 17th and 18th. It marched along a west-by-north track across the head of the Peninsula and gave heavy rain to the broad belt of country over which it passed, including South Bengal

Orissa, Chota Nagpur, South Bihar, the Central Provinces, Central India, Rajputana and Lower Sind.

The breaking up of this storm was followed by an advance of humid winds across Rajputana which gave heavy rain to the hill and submontane districts of the North-Western Provinces.

A second storm formed at the head of the Bay on the 25th and 26th. It advanced in a west-north-westerly direction through West Bengal and Chota Nagpur into Bundelkhund and the western districts of the North-Western Provinces, where it broke up on the 1st August. It gave heavy rain to the areas through which it passed. Local heavy downpours were received in some parts of Rajputana outside the storm area on the 30th. The Kotah State had a heavy downpour on that day, averaging 6·15 inches.

The dates of the commencement of the monsoon rains in 1896 in the different provinces of India are as follows:—

PROVINCE.	Date of commencement of the monsoon rains.
Malabar	13th.
Konkan	14th, 15th.
Kathiawar	22nd.
Central Provinces	17th.
Central India	21st.
Rajputana	21st.
Bengal	18th.
Chota Nagpur	19th.
Bihar	19th.
North-Western Provinces	20th.
Punjab	22nd.

The distribution of the rainfall of the month was largely determined:—

1st.—By the delay in the establishment of the monsoon currents, more specially the Bombay branch

2nd.—By the relative weakness of the Bengal current, compared with the Bombay current.

3rd.—By the unusually rapid advance of both currents towards Upper India.

4th.—By the tracks of the two cyclonic storms of the month.

The conditions were similar to those which obtained in June 1895, with the exception that the monsoon currents were not so strong in June 1896 as in that month. The general character of the distribution of the rainfall in these two months in India was hence very similar. The chief features in June 1896 were—

(1) large deficiency in Arakan, Assam, North Bengal and perhaps Upper Burma;

(2) moderate to large excess in Orissa, the Central Provinces, Central India, the North-Western Provinces, the Bombay Deccan, Khandesh, Kathiawar, Sind and Rajputana;

(3) rainfall practically normal in amount or in slight to moderate defect over the remainder of India.

The following table gives comparative rainfall data of June 1896 of the 58 meteorological districts of India. In the case of Bengal, the North-Western Provinces, the Punjab, Rajputana, Central India, Madras 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 these 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.	NUMBER OF RAINY DAYS.		RAINFALL.		
		Average actual, June 1896.	Average normal, June.	Average actual, June 1896.	Average normal, June.	Variation from normal.
				Inches.	Inches.	Inches.
BURMA	Tenasserim*	?	?	49·41	41·18	+ 8·23
	Lower Burma (Deltaic)*	?	?	23·06	19·45	+ 3·61
	Central do.*	?	?	9·09	12·12	— 3·03
	Upper do.*	?	?	10·26	?	?
	Arakan*	?	?	40·27	52·87	—12·60

Province.	Division.	Number of rainy days. Average actual, June 1896.	Number of rainy days. Average normal, June.	Rainfall. Average actual, June 1896.	Rainfall. Average normal, June.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Bengal and Assam	Eastern Bengal	17·8	16·7	18·40	17·98	+ 0·42
	Assam (Surma)*	P	P	18·37	25·62	— 7·25
	Do. (Hill tracts)*	P	P	16·46	34·78	—18·32
	Do. (Brahmaputra)*	P	P	10·08	16·36	— 6·28
	Deltaic Bengal	15·2	12·8	13·81	10·69	+ 3·12
	Central do.	12·3	12·0	11·45	10·14	+ 1·31
	North do.	10·6	15·8	7·06	21·14	—14·08
	Bengal Hills	16·8	20·5	15·45	27·22	—11·77
	Orissa	14·6	10·3	14·93	9·20	+ 5·73
	Chota Nagpur	12·9	10·2	12·48	8·39	+ 4·09
	Bihar (South)	8·3	7·3	7·03	6·14	+ 0·89
	Do. (North)	7·7	9·6	5·49	9·20	— 3·71
North-Western Provinces and Oudh.	North-Western Provinces (East)	8·6	5·1	5·59	4·29	+ 1·30
	Oudh (South)	6·9	4·6	4·04	4·39	— 0·35
	Do. (North)	7·6	5·6	5·65	4·93	+ 0·72
	North-Western Provinces (Central)	5·8	4·4	4·26	3·53	+ 0·73
	Do. do. (West)	4·5	3·2	2·61	2·35	+ 0·26
	Do. do. (Submontane East)	6·9	6·2	4·74	5·54	— 0·80
	Do. do. (do. West)	8·1	5·5	7·29	5·16	+ 2·13
	Do. do. (Hills)	14·2	10·5	12·26	7·53	+ 4·73
Punjab	Punjab (South-East)	3·6	3·0	1·86	2·49	— 0·63
	Do. (South)	2·4	2·2	1·00	1·62	— 0·62
	Do. (Central)	2·2	2·2	1·21	1·54	— 0·33
	Do. (Submontane)	4·7	3·0	3·29	2·25	+ 1·04
	Do. (Hill Districts)	8·2	6·9	8·24	4·78	+ 3·46
	Do. (North)	1·9	1·6	0·99	0·89	+ 0·10
	Do. (West)	1·1	1·3	0·57	0·67	— 0·10
Bombay and Malabar Coast Districts, Madras.	Malabar Coast	26·1	24·8	46·48	37·30	+ 9·18
	Travancore	21·6	P	22·56	P	P
	Madras (South Central)	5·5	3·8	3·09	2·03	+ 1·06
	Coorg	22·1	P	45·97	P	P
	Mysore*	P	P	8·39	4·98	+ 3·41
	Konkan*	P	P	30·74	35·11	— 4·37
	Bombay Deccan*	P	P	9·32	5·94	+ 3·38
	Khandesh*	P	P	7·76	5·38	+ 2·38
Central Provinces and Berar.	Berar*	P	P	5·89	7·24	— 1·35
	Central Provinces (West)*	P	P	8·97	7·95	+ 1·02
	Do. do. (Central)*	P	P	9·88	9·33	+ 0·55
	Do. do. (East)*	P	P	15·63	9·66	+ 5·97
Bombay (North)	Gujarat*	P	P	8·82	8·58	+ 0·24
	Kathiawar*	P	P	6·81	4·19	+ 2·62
	Sind*	P	P	3·12	0·54	+ 2·58
	Baluchistan Hills	1·7	P	1·08	0·07	+ 1·01
Rajputana and Central India.	Central India (East)	8·6	P	6·97	6·02	+ 0·95
	Rajputana (East), Central India (West)	5·1	P	3·41	3·07	+ 0·34
	Rajputana (West)	4·0	P	2·77	1·57	+ 1·20
Madras	East Coast (North)	8·2	6·7	5·21	4·88	+ 0·33
	Ditto (do.) (a)	14·0	11·1	9·95	10·41	— 0·46
	Hyderabad (South)*	P	P	2·48	4·58	— 2·10
	Madras (Central)	4·3	4·8	2·03	2·63	— 0·60
	East Coast (Central)	2·1	3·1	0·95	1·65	— 0·70
	Ditto (South)	2·2	3·8	1·28	2·27	— 0·99
	Madras (South)	2·7	2·2	1·59	1·06	+ 0·53

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

Assam received moderate rain, chiefly from thunderstorms, during the first ten days of the month. The rainfall was heaviest in Cachar and lightest in the Kamrup and Darrang districts. A short break set in on the 11th. Cachar received moderate rain again from the 4th to the 17th and the Assam Valley local showers chiefly on the

17th and 18th. Little or no rain fell on the 19th. The whole province received a moderate burst from the 21st to the 28th and again on the 30th. The rainfall throughout the month was less frequent and lighter than usual This is most strikingly shown by the rainfall of the stations in the Naga and Khasia Hills. The following gives comparative data for these stations :—

STATION.	RAINFALL.			
	Actual, June 1896	*Normal*, June.	Variation *from* normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cherra Punji	35·21	104·93	—69·72	—66
Jowai	11·63	75·02	—63·39	—84
Kohima	8·73	13·97	— 5·24	—38
Wokha	12·92	?	?	?

On only one day of the month did the rainfall exceed four inches at Cherra Punji, *viz.*, on the 8th when 8·15 inches were recorded.

The following gives a statement of the rainfall in each of the plains districts of Assam :—

DISTRICT.	RAINFALL.			
	Average actual, June 1896.	Average normal, June.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cachar	14·15	19·17	—5·02	—26
Sylhet	17·85	26·77	—8·92	—33
Goalpara	7·57	26·09	—18·52	—71
Kamrup	5·64	15·47	—9·83	—64
Darrang	6·81	13·22	—6·41	—48
Nowgong	6·48	12·99	—6·51	—50
Sibsagar	10·63	12·22	—1·59	—13
Lakhimpur	13·14	16·83	—3·69	—22

Bengal obtained frequent rain from the 1st to the 13th, due chiefly to series of thunderstorms and nor'westers The days of most general rain in this period were the 1st, the 3rd, the 7th, 8th, 9th, 10th and 11th and the 13th. The rainfall was heavy and general in South-West Bengal on the 7th, the 11th and the 13th, and in East Bengal on the 7th, 8th and 10th. Light to moderate local showers were received in Bihar, chiefly on the 2nd and 5th, and in Orissa and Chota Nagpur on the 7th, 8th, 9th and 13th.

A short break followed until the 18th, when a cyclonic storm which formed in the north-west angle of the Bay in front of the advancing monsoon gave general rain to the province. The influx of humid winds extended over the whole province and gave moderate to heavy rain until the 22nd. The burst of rain was heavy in Orissa, South and East Bengal and Chota Nagpur, moderate in North Bengal and light in Bihar.

The following gives rainfalls in 24 hours exceeding 5 inches in amount registered during the burst :—

District.	Station.	Date.	Heaviest rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
CUTTACK	Jagatsingpur	18th	5·07
,,	Pal Lahara	19th	8·50
,,	Cuttack	,,	5·36
,,	False Point	,,	5·21
BALASORE	Bhadrak	,,	6·45
CHITTAGONG	Kutubdia	20th	5·46
,,	,,	21st	6·03

The heaviest falls were received in North and Central Orissa and the southern districts of Chota Nagpur. A short break or period of light showers followed, during which the second storm of the month was forming. It followed a more northerly track than the previous storm, and gave a heavier burst of rain than that storm. The following gives the most noteworthy falls during this period of general rain in Bengal from the 24th to the 30th :—

District.	Station.	Date.	Heaviest rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
CHITTAGONG	Cox Bazar	24th	5·50
DARJEELING	Darjeeling	26th	8·91
SHAHABAD	Mohaniah	,,	7·22
PATNA	Bihar	,,	7·37

The heaviest falls during this advance of humid winds were hence received in the Sikkim hills and in South Bihar, more especially the Shahabad and Patna districts.

The following gives comparative data of the rainfall of the month for the nine divisions of the province :—

Division.	Number of rainy days.		Rainfall.		
	Average actual, June 1896.	Variation from normal.	Average actual, June 1896.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Bengal East . .	17·8	+ 1·1	18·40	+ 0·42	+ 2
,, Deltaic . .	15·2	+ 2·4	13·81	+ 3·12	+29
,, Central . .	12·3	+ 0·3	11·45	+ 1·31	+13
,, North . .	10·6	— 5·2	7·06	— 14·08	—67
,, Hills . .	16·8	— 3·7	15·45	— 11·77	—43
Orissa . . .	14·6	+ 4·3	14·93	+ 5·73	+62
Chota Nagpur . .	12·9	+ 2·7	12·48	+ 4·09	+49
Bihar South . .	8·3	+ 1·0	7·03	+ 0·89	+14
,, North . .	7·7	— 1·9	5·49	— 3·71	—40

The rainfall was hence in moderate to considerable general excess in South-West or Deltaic Bengal, Orissa and Chota Nagpur. It was more than 50 per cent. in excess in the districts for which data are given below :—

Division.	District.	Rainfall.		
		Average actual, June 1896.	Average normal, June.	Percentage variation from normal.
		Inches.	Inches.	
South-West Bengal . . .	Burdwan . . .	14·22	9·18	+55
	Hooghly . . .	14·95	9·70	+54
	Calcutta . . .	16·42	10·74	+53
	24 Parganas . .	16·20	10·75	+51
Bihar . . .	Gaya . . .	8·80	5·79	+52
Orissa . . .	Balasore . . .	16·28	8·83	+84
	Cuttack . . .	15·60	10·14	+54
Chota Nagpur .	Singbhum . . .	14·98	8·83	+70
	Palamau . . .	9·81	6·24	+57

The rainfall of the month was practically normal over the greater part of South Bihar and Central and East Bengal, but was in large defect in North Bihar, North Bengal and Sikkim. It was more than 33 per cent. below the normal of the month in the districts for which data are given below :—

Division.	District.	Rainfall.		
		Average actual, June 1896.	Average normal, June.	Percentage variation from normal.
		Inches.	Inches.	
North Bengal .	Cooch Behar . .	5·47	30·83	—82
	Jalpaiguri . . .	5·56	28·09	—80
	Rangpur . . .	8·08	19·26	—58
	Dinajpur . . .	9·42	15·32	—38
North Bihar .	Purnea . . .	5·01	1··57	—60
	Saran . . .	2·80	6·89	—59
	Champaran . .	4·20	9·94	—58
	Darbhanga . .	4·46	7·76	—43

The area of very deficient rainfall hence included the submontane districts of North Bengal and North Bihar, and the deficiency increased eastwards and was, absolutely and relatively to the normal, greatest in Jalpaiguri and Cooch Behar which received less than 20 per cent. of the normal fall of the month.

Numerous thundershowers were received in the North-Western Provinces from the 1st to the 7th. The total rainfall due to these disturbances was slight to moderate in amount and very irregularly distributed.

The whole province obtained a moderate burst of rain from the 15th to the 18th during the establishment of the monsoon on the west coast. This, like the preceding, was chiefly due to local thunderstorms, and was very irregularly distributed and moderate in amount.

The passage of the first storm of the month across Central India gave a brief period of rainfall from the 20th to the 22nd. The fall during this period was generally small in amount and of little importance.

The breaking up of this storm on the 23rd and 24th in Sind was followed by a strong influx of monsoon winds from the Bombay coast to North-Western India which gave heavy general rain over the province. The rainfall was exceptionally heavy in the western districts and in the Naini Tal hill district. The following gives data of the heaviest downpours :—

District.	Station.	Date.	Heaviest rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Saharanpur . .	Hardwar . . .	27th	10·22
Dehra Dun . .	Bhogpur . . .	,,	13·50
,,	Raipur	,,	10·50
,,	Dehra	,,	6·58
Naini Tal . .	Naini Tal . . .	26th	12·54
,,	Kailpuri . . .	27th	6·50
,,	Satarganj . . .	,,	6·20
,,	Ramnagar . . .	,,	5·85
,,	Haldwani . . .	,,	5·25

The following gives comparative data of the rainfall of the month in the eight rainfall divisions of the province :—

DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Average actual, June 1896.	Variation from normal.	Average actual, June 1896.	Average normal, June.	Percentage variation from normal.
			Inches.	Inches.	
North-Western Provinces (East) . .	8·6	+ 3·5	5·59	4·29	+30
„ (Central) .	5·8	+ 1·4	4·26	3·53	+21
„ (West) . .	4·5	+ 1·3	2·61	2·35	+11
„ (Submontane East) . .	6·9	+ 0·7	4·74	5·54	—14
„ (Submontane West) . .	8·1	+ 2·6	7·29	5·16	+41
„ (Hills) . .	14·2	+ 3·7	12·26	7·53	+63
Oudh (South) .	6·9	+ 2·3	4·04	4·39	—8
„ (North) .	7·6	+ 2·0	5·65	4·93	+15

The rainfall of the month was hence normal in South Oudh, and in slight defect in the eastern submontane districts. It was in slight to large excess over the remainder of the province. The excess was greatest in the western submontane and hill districts which received the heavy downpour on the 26th and 27th noted above.

The rainfall of the month was scanty in the Punjab. There were three periods of more or less general rain.

The first period was from the 1st to the 7th. The central, submontane and hill districts received light to moderate rain, chiefly from thunderstorms or duststorms.

The second period extended from the 15th to 18th. The rainfall during this period was very light and almost restricted to the hill districts.

During the third period, extending from the 22nd to the end of the month, the submontane and hill districts obtained moderate and fairly general rain. Local showers were received in the remainder of the province, but the amounts were small, except in the Delhi, Gurgaon and Rohtak districts, which obtained moderate rain on the 28th and 29th. The rainfall of the month was more or less below the average over a considerable part of the province. The following gives comparative data for each district :—

DISTRICT.	RAINFALL.			Percentage variation from normal.
	Average actual, June 1896.	Average normal, June.	Variation from normal.	
	Inches.	Inches.	Inches.	
Hissar	0·67	1·75	—1·08	—62
Ferozepore	0·69	1·45	—0·76	—52
Montgomery	0·11	0·92	—0·81	—88
Gurgaon	1·62	2·17	—0·55	—25
Rohtak	1·79	2·12	—0·33	—16
Delhi	2·81	2·99	—0·18	—6
Karnal	1·78	3·04	—1·26	—41
Lahore	1·06	1·65	—0·59	—36
Umballa	4·19	3·62	+0·57	+16
Ludhiana	2·34	2·20	+0·14	+6
Jullundur	3·34	2·33	+1·01	+43
Hoshiarpur	4·72	2·76	+1·96	+71
Gurdaspur	5·59	3·32	+2·27	+68
Amritsar	1·36	2·24	—0·88	—39
Simla	8·57	4·99	+3·58	+72
Kangra	8·04	4·63	+3·41	+74
Gujranwalla	0·94	1·52	—0·58	—38
Sialkot	1·68	2·43	—0·75	—31
Gujarat	1·66	1·88	—0·22	—12
Jhelum	1·80	1·28	+0·52	+41
Rawalpindi	2·24	1·23	+1·01	+82
Peshawar	0·17	0·30	—0·13	—43
Hazara	1·46	1·91	—0·45	—24
Kohat	1·11	0·91	+0·20	+22
Banu	0·55	0·68	—0·13	—19
Shahpur	1·20	0·88	+0·32	+36
Jhang	0·78	0·85	—0·07	—8
D. I. Khan	0·52	0·39	+ 0·13	+33
D. G. Khan	0·54	0·64	—0·10	—16
Muzaffargarh	0	0·41	—0·41	—100
Mooltan	0·14	0·43	—0·29	—67

The statement shows that the rainfall of the month was in excess in 12 out of 31 districts. It was more than 33 per cent. in excess in nine districts, *viz.*, Hoshiarpur, Gurdaspur, Simla, Kangra, Rawalpindi, Jhelum, Shahpur, Jullundur and Dera Ismail Khan. It was more than 33 per cent. below the normal in ten districts, *viz.*, Muzaffurgarh, which had no rain, Montgomery (88 per cent. in defect), Mooltan (67 per cent.), Hissar (62 per cent.), Ferozepore (52 per cent.), Peshawar (43 per cent.), Amritsar (39 per cent.), Karnal (41 per cent.), Gujaranwalla (38 per cent.) and Lahore (36 per cent.).

The Baluchistan hills and plateau received a moderate burst of rain from the 23rd to the 26th.

The following gives the average daily rainfall during this period:—

Date.	Average actual rainfall of 24 hours preceding 8 A.M. of date.	Heaviest fall.	Station at which recorded.
	Inch.	Inches.	
23rd . .	0·19	2·91	Hirok.
24th . .	0·16	1·20	Mangi.
25th . .	0·36	2·25	Mach.
26th . .	0·17	1·60	Harnai.
TOTAL .	0·88		

Local showers, chiefly accompanying thunderstorms, were received in Rajputana on the 4th, 5th and 6th and again from the 13th to the 16th.

Fairly general rain, the first burst of the monsoon, was received between the 20th and the 24th in the western and central states. No rain fell in Ulwar and Bhurtpore during this period. The following gives falls exceeding 3 inches in 24 hours during this period:—

STATE.	STATION.	Date.	Heaviest rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jodhpore . . .	Chotan	22nd	3·70
Ditto	Jalor	,,	3·30
Ditto	Gudha	23rd	3·03
Kotah	Baran	22nd	3·52
Sirohi	Erinpura	23rd	4·00

The rainfall during the period was heaviest and most general in Jodhpore, Oodeypur and Kotah.

Weather was fine from the 25th to the 28th. More or less general rain was received from the 28th to the 30th. The rainfall during this period was light in Ulwar and Bhurtpore, and light to moderate in the western states of Jodhpore, Jeysulmere and Bikaneer, but was exceptionally heavy in Kotah, Kerowlee and some parts of Jeypore. Lalsot in the Jeypore state received a fall of 8 inches on the 29th and Mandrael in Kerowlee of 6·88 inches on the same days.

The following gives data of the rainfall in the Kotah state on the 30th:—

STATION.	Rainfall in 24 hours preceding 8 A.M. of 30th June.
	Inches.
Atroo	10·85
Khanpur	10·33
Kotah	7.04
Mandana	6·43
Sangod	6·20
Baran	6·00
Etawah	5·60
Sultanpur	5·50
Mangrol	3·01
Indargarh	0·56

The Kotah state, as shown by the return of its ten rainfall stations, hence received an average of 6·15 inches. Its average total rainfall for the month is about 3 inches. It hence obtained nearly double the normal fall of the month in one day.

The following gives comparative data for the larger states:—

STATE.	RAINFALL.			
	Average actual, June 1896.	Average normal, June.	Variation from normal.	Percentage variation from normal
	Inches.	Inches.	Inches.	
Jodhpore	2·92	1·63	+1·29	+ 79
Jeypore	2·85	2·64	+0·21	+ 8
Ajmere	4·57	2·18	+2·39	+110
Bhurtpore	1·91	1·83	+0·08	+ 4
Ulwar	1·36	3·36	—2·00	— 60
Kotah	10·27	3·34	+6·93	+207
Kerowlee	7·45	2·91	+4·54	+156
Oodeypur	7·03	3·49	+3·54	+101
Dholpur	2·21	?	?	?
Sirohi	8·74	3·51	+5·23	+149

The western states of Central India received local moderate thundershowers daily from the 1st to the 12th, and the eastern states very light showers from the 1st to the 7th. General rain fell from the 14th to the 17th, the 20th to the 23rd, and the 28th to the 30th. The falls in the first of these periods were very moderate in amount. Bhopal and Gwalior obtained heavy rainfall during the second period from the 20th to 23rd, and a large number of stations received falls ranging between 3 and 4 inches in

24 hours. The largest fall recorded during the period was 5·11 inches at Neemuch on the 22nd.

The rainfall during the last period from the 28th to the 30th was very heavy in Baghelkhand, Bundelkhand and Bhopal. The following gives the largest amounts recorded :—

STATE.	STATION.	Date	Heaviest rainfall during 24 hours preceding 8 A.M. of date
			Inches
Bundelkhand	Bijawar	28th	8·03
,,	Orchha	30th	9·15
,,	Panna	,,	7·20
,,	Datia	,,	4·90
Gawalior	Isagarh	,,	4·38
Bhopal	Biaora	,,	5·32

The following gives comparative data for the larger divisions or states.

STATE.	RAINFALL.			
	Average actual, June 1896.	Average normal, June.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Rewah	8·92	7·43	+1·49	+20
Bundelkhand	8·09	4·84	+3·25	+67
Gwalior	5·36	4·59	+0·77	+17
Bhopal	7·86	6·62	+1·24	+19
Indore	4·65	6·79	—2·14	—32
Rutlam	4·10	5·64	—1·54	—27
Nagode	10·48	4·92	+5·56	+113
Maihar	8·60	6·13	+2·47	+40

The Central Provinces received occasional thundershowers during the first ten days of the month. Little or no rain fell during the next week. On the 17th general rain, due to the advance of the monsoon currents from the west coast, commenced. The first storm of the month which formed in the Bay and advanced across the eastern and northern districts of the Central Provinces on the 20th and 21st gave a heavy burst of rain on those days (registered on the mornings of the 21st and 22nd).

The following table gives the rainfalls in 24 hours exceeding 5 inches and shows the distribution and locality of the heavier rainfall accompanying the storm in this area :—

District.	Station.	Date.	Heaviest rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
BILASPUR	Janjgir	21st	9·98
HOSHANGABAD	Harda	,,	9·96
BHANDARA	Bhandara	,,	8·18
,,	Sakoli	,,	6·60
RAIPUR	Drug	,,	7·75
SAMBALPUR	Raigarh	,,	7·32
BALAGHAT	Langi	,,	6·61
NAGPUR	Ramtek	,,	6·13
NARSINGHPUR	Gadarwara	22nd	9·03
,,	Mohpani	,,	5·32
HOSHANGABAD	Sohagpur	,,	5·53

Fine weather with some light local showers obtained from the 23rd to the 26th, when the second storm of the month began to affect the province and gave general rain from the 26th to the end of the month. This burst of rain was not as heavy as the previous, except in the northern districts including Damoh, Saugor and Jubbulpore, where some very heavy falls were received. The following gives the most noteworthy falls :—

District.	Station.	Date.	Heaviest rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
DAMOH	Damoh	29th	6·15
,,	Hatta	30th	10·60
JUBBULPORE	Marwaral	,,	7·15
SAUGOR	Banda	,,	6·36
,,	Khurai	,,	5·68

The following table gives a summary of the rainfall data of the month for the three rainfall divisions of the province :—

DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Average actual, June 1896.	Variation from normal.	Average actual, June 1896	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Central Provinces (East).	11·6	+2·6	15·71	+7·52	+92
Ditto (Central)	9·4	+0·3	11·03	+2·81	+34
Ditto (West)	9·5	+0·7	10·05	+2·56	+34

The monsoon rains commenced in a very unusual manner on the Bombay coast. They were preceded by a

period of showery weather extending from the commencement of the month to the 13th. The falls during this period were generally light and accompanied thunderstorms. The first burst of the monsoon rains proper occurred in North Kanara and Ratnagiri on the 15th, in Kolaba and Thana on the 16th and 17th, in Surat and Broach on the 20th and in Kathiawar on the 22nd. This initial burst of rain was not so heavy as usually occurs at the commencement of the monsoon. The following gives average data of the rainfall in the coast districts from the 16th to the 23rd :—

DISTRICT.	AVERAGE ACTUAL RAINFALL DURING 24 HOURS PRECEDING 8 A.M. OF								Total rainfall of period 16th to 23rd June 1896.
	16th.	17th.	18th.	19th.	20th.	21st.	22nd.	23rd.	
	Inches.	Inches	Inches	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
North Kanara .	2·00	2·20	3·05	1·98	1·54	1·99	1·56	1·83	16·15
Ratnagiri . .	1·93	3·53	3·49	2·03	2·99	1·01	0·45	0·42	15·85
Kolaba .. .	0·71	1·81	3·70	2·50	3·73	5·63	4·69	2·85	25·62
Thana . .	0·28	0·17	1·94	2·56	1·62	3·04	5·25	3·53	18·39
Surat . .	0·52	0·36	0·48	0·31	1·09	1·59	2·91	0·95	8·21
Broach . .	0·74	0·28	1·19	0·12	0·42	0·67	0·21	0·71	4·34

Rainfalls exceeding 10 inches in 24 hours were recorded at the following stations during this period :—

DATE.	District.	Station.	Heaviest rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
20th .	Satara . . .	Malcolmpeth . .	10·05
22nd .	Kolaba . . .	Matheran . . .	11·66
23rd .	Ditto . . .	Panuel . . .	10·09

Rain fell steadily throughout the remainder of the month in the North Kanara, Ratnagiri, Kolaba and Thana districts.

The Bombay Deccan districts received occasional thundershowers during the first week of the month and light moderate daily rain from the 16th to the end of the month. The rainfall of the month was in moderate excess in the Dharwar, Belgaum, Satara and Sholapur districts, but was very scanty in Bijapur which received an average of 2·12 inches, the normal fall being 3·6 inches. The rainfall of the month was very irregularly distributed in the Poona, Ahmednagar, Nasik and Khandesh districts and was on the whole in large excess. The following data indicate the great irregularity of the rainfall in three of these districts :—

DISTRICT.	STATION.	RAINFALL.			
		Actual, June 1896.	Normal, June.	Variation from normal.	Percentage variation from normal.
		Inches.	Inches.	Inches.	
Poona . .	Khed . . .	10·53	4·02	+6·51	+162
Ditto . .	Poona . . .	8·86	4·35	+4·51	+104
Ditto . .	Ghoda . . .	6·08	5·46	+0·62	+ 11
Ditto . .	Indapur . . .	5·71	5·04	+0·67	+ 13
Ahmednagar .	Parner . . .	14·17	4·22	+9·95	+236
Ditto . .	Shevgaon . . .	12·89	4·62	+8·27	+179
Ditto . .	Karjat . . .	5·35	4·22	+1·13	+ 27
Nasik . .	Nasik . . .	12·17	5·53	+6·64	+120
Ditto . .	Malegaon . . .	6·22	5·12	+1·10	+ 21

Gujarat, Kathiawar and Cutch received a few light showers between the 8th and 12th and again from the 14th to the 19th, and moderate general rain from the 22nd to the 27th, when a short break set in. Sind had a few showers of little importance on the 23rd and 24th:

The following table gives comparative data of the rainfall of the month in the six divisions of the Bombay Presidency :—

DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.			
	Average actual, June 1896.	Average normal, June.	Average actual, June 1896.	Average normal, June.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	Inches.	
Konkan . . .	21·1	19·2	29·58	26·87	+2·71	+10
Bombay Deccan . .	11·8	5·8	9·04	5·81	+3·23	+56
Khandesh . . .	12·3	7·6	8·44	5·69	+2·75	+48
Gujarat . . .	10·8	6·6	8·28	6·26	+2·02	+32
Kathiawar . . .	5·0	3·6	7·00	3·26	+3·74	+115
Sind	0·6	?	0·60	0·21	+0·39	+186

The preceding data indicate that the rainfall of the month was in excess in all divisions and that the excess was, absolutely as well as relatively to the normal, greatest in Kathiawar, which received more than double its normal amount. It was also large in the Deccan and Khandesh districts, where the excess was practically 50 per cent.

Travancore received daily rain throughout the month. The rainfall was heavy on the 14th and 15th on which dates the advance of the monsoon proper across the west coast occurred, and again on the 21st and 22nd and the 25th and 26th. The rainfall of the month was more or less considerably in excess in the whole state.

The rainfall of the month was exceptionally heavy in Coorg, due chiefly to a very heavy downpour from the 18th to the 23rd. The following gives details of this downpour at the stations where it was heaviest :—

STATION.	RAINFALL DURING 24 HOURS PRECEDING 8 A.M. OF DATE.						Total of period
	18th.	19th.	20th.	21st.	22nd.	23rd.	
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
Mercara	1·75	3·92	7·00	5·82	5·27	5·23	28·99
Virajpet	2·00	5·36	9·00	13·10	4·81	8·36	42·63
Padinalknad	3·75	9·15	8·10	3·75	5·25	3·10	33·10
Gonikopal	1·90	2·78	6·41	13·02	5·97	9·39	39·47
Dunkeld Estate	4·30	7·66	7·76	12·15	10·81	11·03	53·71

The above is a remarkable example of the excessively heavy downpours on the Western Ghâts which frequently accompany the first advance of the monsoon across the Malabar and Konkan Coasts.

The rainfall in the Madras Presidency was even more unequally distributed than usual.

The Malabar coast districts received frequent heavy showers from the 5th to the 11th. The average total rainfall of the Malabar district for this period was 10·83 inches and of the South Canara district 10·65 inches.

The monsoon rains proper commenced on the 15th and held steadily during the remainder of the month. The following gives the average daily rainfall in these districts from the 15th to the 23rd (a period of nine days) :—

DATE.	AVERAGE RAINFALL DURING 24 HOURS PRECEDING 8 A.M. OF DATE.	
	Malabar.	South Canara.
	Inches.	Inches.
15th June 1896	3·66	2·88
16th „ „	1·88	2·47
17th „ „	1·49	4·06
18th „ „	1·52	2·24
19th „ „	1·88	1·91
20th „ „	2·24	1·54
21st „ „	1·75	0·62
22nd „ „	1·77	1·33
23rd „ „	4·58	3·08
TOTAL OF PERIOD	20·77	20·13
TOTAL FOR SAME PERIOD IN 1895	24·75	25·95

giving an average daily fall of over two inches in those two districts during this period. The heaviest falls in 24 hours were 10·91 inches at Vayitri and 8·26 inches at Manantoddy, both on the 21st. The data illustrate clearly the character of the rainfall accompanying the monsoon proper in the West Coast districts, as distinguished from the rainfall in May, due to local thunderstorms. Although the monsoon rains commenced on the Malabar Coast nearly a fortnight later than usual, the rainfall of the month in the Malabar division was in moderate excess, *viz.*, 9·18 inches, or 25 per cent. above the normal.

The South and South Central divisions of Madras received occasional showers, local in character, during the month, and chiefly from the 3rd to the 5th and the 11th to the 15th. The East Coast, South and Central divisions, and the Deccan districts obtained occasional showers which gave fairly general rain, more especially on the 3rd, the 11th to the 15th, the 19th and the 26th and 27th. The rainfall of the month was scanty in all these districts and below the small normal of the month. The deficiency was most marked in the Tanjore, Chingleput and North and South Arcot districts.

The Northern Coast districts received frequent general rain, more especially on the 6th, 9th, 13th, 14th, the 18th to the 21st, and the 25th to the 28th. The rainfall of the second and third periods occurred during the initiation and development of the two cyclonic storms of the month in the north of the Bay. The rainfall of the month was in moderate excess in this division, and more especially in the Ganjam and Vizagapatam districts. The following gives comparative data for the 22 Collectorates of the Presidency :—

DISTRICT.	NO. OF RAINY DAYS.		RAINFALL.		
	Average actual, June 1896.	Average normal, June.	Average actual, June 1895.	Average normal, June.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam	11·6	6·4	7·03	4·76	+2·27
Vizagapatam	10·3	8·1	6·60	5·91	+0·69
Godavari	5·0	5·9	3·12	4·54	−1·42
Kistna	5·7	5·9	4·11	4·23	−0·12
Nellore	2·1	3·1	0·95	1·65	−0·70
Chingleput	1·4	4·8	0·50	3·10	−2·60
Madras	2·0	4·7	1·49	2·07	−0·58
North Arcot	3·2	4·5	1·82	2·86	−1·04
South Arcot	2·7	4·0	1·21	2·16	−0·95
Tanjore	1·7	3·2	1·24	1·97	−0·73
Trichinopoly	2·3	2·1	1·29	1·21	+0·08
Madura	2·6	2·3	1·60	1·21	+0·39
Tinnevelly	2·9	2·0	1·57	0·87	+0·70
Malabar	25·9	23·9	46·22	32·01	+14·21
South Canara	26·3	26·2	46·96	44·96	+2·00
Salem	4·9	4·4	2·82	2·54	+0·28
Coimbatore	6·2	3·0	3·47	1·42	+2·05
Nilgiris	19·3	13·8	20·59	10·64	+9·95
Cuddapah	3·1	4·4	1·53	2·30	−0·77
Anantapur	4·5	4·4	2·69	2·32	+0·37
Bellary	5·1	5·2	1·88	2·89	−1·01
Kurnool	4·6	5·5	2·16	3·08	−0·92

Table

Abstract of Observations taken at 8 A.M. at 206

Number of District.	Meteorological Province or District.	Station.	Elevation of barometer cistern above sea level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.		...	...	−·019	...	...	...	...	...	...	...	86·5	+0·8	76·8	+0·7	81·7	+0·7	9·7	...	...	...	...	17·7
1	Tenasserim and Bay Islands.	Port Blair	61	29·747	?	29·739	29·851	1st	29·579	16th	·272	82·4	85·8	?	78·7	?	82·3	?	7·1	90·6	11th	76·0	17th & 25th.	14·6
		Mergui	96	29·781	?	29·809	29·868	2nd	29·704	26th	·164	79·5	86·4	?	74·9	?	80·6	?	11·5	94·9	2nd	72·6	18th	22·3
		Tavoy	26	29·860	?	29·817	29·931	3rd	29·744	2 days	·187	78·7	85·7	?	74·8	?	80·3	?	10·9	91·7	8th	72·2	30th	19·5
		Moulmein	94	29·729	?	29·762	29·814	6th	29·595	16th	·219	77·6	84·6	+0·3	75·7	+1·2	80·2	+0·8	8·9	90·0	2 days	73·8	2 days	16·2
2	Lower Burma	Rangoon	41	29·747	−·013	29·725	29·853	7th	29·579	17th	·274	79·9	87·5	+1·3	77·2	+0·8	82·4	+1·1	10·3	92·2	8th	74·9	20th	17·3
		Bassein	27	29·741	−·017	29·703	29·852	7th	29·547	16th	·305	80·3	86·8	+0·7	76·7	+0·5	81·8	+0·6	10·1	92·2	2 days	73·8	24th	18·4
		Diamond Island.	41	29·726	−·020	29·702	29·832	2 days	29·529	16th	·303	82·4	85·9	?	78·8	?	82·5	?	7·1	89·6	13th	74·9	2 days	14·7
5	Arakan	Akyab	20	29·677	−·024	29·640	29·829	7th	29·366	26th	·463	80·5	86·0	+0·1	77·7	−0·2	81·9	−0·1	8·3	90·2	1st	75·2	15th	15·0
6	Central Burma	Toungoo	183	29·574	−·020	29·699	29·693	7th	29·388	17th	·305	79·6	89·8	+1·4	76·3	+1·1	83·1	+1·3	13·5	95·7	6th	74·7	19th	21·0
	II.—Burma Inland.		...	...	−·023	...	...	...	...	...	...	...	89·1	+1·2	74·3	+1·4	81·5	+1·3	14·4	...	...	...	...	23·8
3	Central Burma	Thayetmyo	134	29·588	−·023	29·664	29·722	5th	29·384	26th	·338	81·2	92·2	+1·2	77·8	+1·4	85·0	+1·3	14·4	101·1	13th	76·1	4 days	25·0
4	Upper Burma	Minbu	?	29·547	?	?	29·674	5th	29·339	26th	·335	81·5	92·9	?	78·6	?	85·8	?	14·3	99·6	2 days	76·1	18th	23·5
		Yamethin	645	29·080	?	29·673	29·209	7th	28·898	26th	·311	80·0	92·1	?	?	?	?	?	?	97·0	22rd	?	...	?
		Taunggyi	?				Not recorded.					68·4	77·7	?	63·9	?	70·8	?	13·8	84·2	1st	60·0	3rd	24·2
		Mandalay	249	29·464	?	29·662	29·611	3rd	29·263	26th	·348	82·2	93·0	?	78·1	?	85·6	?	14·9	97·0	29th	71·1	3rd	25·9
		Kindat	?	29·319	?	?	29·470	5th	29·085	26th	·385	79·9	89·4	?	76·5	?	83·0	?	12·9	93·3	2 days	71·5	15th	21·8
		Lashio	?	27·018	?	?	27·181	1st	26·904	15th & 26th	·277	74·6	84·7	?	69·4	?	77·1	?	15·3	87·5	1st	66·0	2nd	21·5
		Bhamo	?	29·325	?	?	29·482	5th	29·135	26th	·347	79·2	90·4	?	75·5	?	83·0	?	14·9	95·6	28th	70·8	5th	24·8
	III.—Assam.		...	...	−·006	...	...	...	...	...	...	...	90·2	+2·2	77·4	+1·1	83·8	+1·6	12·7	...	...	...	...	23·6
7	Surma	Silchar	104	29·574	−·012	29·630	29·728	2nd	29·267	27th	·461	81·5	91·1	+2·4	77·0	+0·9	84·1	+1·7	14·1	96·1	28th	70·3	1st	25·1
9	Brahmaputra	Sibsagar	333	29·342	−·014	29·630	29·518	5th	29·080	26th	·438	81·1	91·1	+1·4	77·0	+0·4	84·1	+0·9	14·1	97·2	20th	72·5	1st	24·7
		Dhubri	115	29·536	+·007	29·605	29·669	6th	29·267	27th	·402	81·0*	88·3	+2·7	78·3*	+1·9	83·1*	+2·3	10·0	93·2	17th	72·8	1st	20·4
	IV.—Bengal and Orissa.		..	...	−·015	...	...	...	...	...	...	...	89·3	−0·8	77·3	−0·3	83·3	−0·6	12·0	...	...	...	...	24·4
6	East Bengal	Chittagong	87	29·566	−·032	29·601	29·709	6th	29·212	27th	·497	81·1	86·6	+0·4	76·8	+0·3	81·7	+0·4	9·8	91·7	26th	72·1	1st	19·6
		Lungleh	?				Not recorded.					70·3	77·5	?	66·7	?	72·1	?	10·8	82·8	18th	64·1	1st & 2nd	18·4
		Noakhali	43	29·594	?	29·584	29·734	5th	29·276	27th	·458	81·7	86·1	−0·5	77·2	−0·1	81·7	−0·3	8·9	92·0	18th	69·8	1st	22·2
		Comilla	36	29·606	?	29·590	29·750	5th	29·313	27th	·437	80·7	87·8	?	76·0	?	81·9	?	11·8	93·8	19th	67·8	1st	26·0
		Sirajganj	49	29·572	?	29·571	29·738	12th	29·289	27th	·449	80·1	87·1	?	76·0	?	81·6	?	11·1	91·3	3 days	68·7	1st	22·6
		Narayanganj	26	29·598	−·021	29·572	29·765	5th	29·289	27th	·476	81·9	88·0	−1·0	78·1	−0·2	83·1	−0·6	9·9	92·1	2 days	72·2	1st	19·9
		Barisal	13	29·599	−·027	29·557	29·757	2 days	29·255	27th	·502	83·0	88·6	−0·4	77·9	+0·1	83·2	−0·2	10·7	93·8	18th	71·4	3rd	22·4
		Mymensingh	59	29·584	−·009	29·594	29·740	12th	29·297	27th	·443	80·4	86·9	−0·3	76·7	+0·2	81·8	−0·1	10·2	92·7	28th	70·6	1st	22·1
10	Deltaic Bengal	Faridpur	46	29·582	?	29·575	29·736	3rd	29·282	28th	·454	81·2	88·5	?	76·4	?	82·5	?	12·1	92·3	26th	70·9	1st	21·4
		Jessore	33	29·560	−·031	29·539	29·724	2 days	29·183	28th	·541	83·1	90·9	−0·7	77·7	−1·2	84·3	−1·0	13·2	94·5	2 days	73·3	1st	21·2
		Calcutta	21	29·559	−·025	29·525	29·734	4th	29·056	28th	·678	82·6	89·8	−1·5	77·5	−1·3	83·6	−1·4	12·3	93·9	10th	72·7	1st	21·2
		Saugor Island	25	29·558	−·024	29·527	29·724	4th	29·239	19th	·485	83·8	88·7	−2·0	80·4	−1·5	84·7	−1·8	8·3	92·9	11th	71·0	1st	21·9
		Krishnagar	47	29·547	?	29·542	29·726	4th	29·042	28th	·684	82·3	91·4	−1·8	77·4	−1·1	84·5	−1·5	14·0	98·2	10th	70·7	11th	27·5
		Midnapore	149	29·442	?	29·537	29·619	4th	29·091	28th	·528	83·0	92·4	?	77·9	?	85·2	?	14·5	100·8	10th	70·2	1st	30·6

* Mean of 29 days.

I.

stations in India, Burma, etc., in June, 1896.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.							Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of district.
Calm.	N.	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 1896.	Normal rainfall for period, 1st June to 30th June.	Variation from normal of period, 1st June to 30th June.				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31·44	25·98	+3·47	...	...	...	...	I.—Burma Coast and Bay Islands.		
3	1	...	...	...	5	14	6	1	9·1	10·0	− 9	88	·976	8·6	19	?	?	16·79	18·79	−2·00	16·79	18·79	− 2·00	2·83	Port Blair .	Tenasserim and Bay Islands.	1
...	4	...	...	...	7	9	4	6	1·9	1·9	0	90	·911	5·6	23	?	?	25·30	31·44	+3·86	25·30	31·44	+ 3·86	5·00	Mergui .		
22	...	...	...	...	1	4	2	1	2·0	?	?	92	·904	7·4	25	?	?	47·42	?	?	47·42	?	?	4·56	Tavoy.		
...	...	1	1	3	19	3	...	3	3·9	3·4	+ 15	92	·878	9·7	26	27·00	−1·00	43·71	35·72	+12·99	43·71	35·72	+12·99	4·92	Moulmein.		
...	...	...	...	3	8	11	7	1	5·0	5·3	− 6	92	·942	8·5	23	23·27	−0·27	18·39	17·51	+0·88	18·39	17·51	+ 0·88	2·44	Rangoon .	Lower Burma.	2
3	...	...	...	4	15	8	...	...	5·5	4·0	+ 38	92	·953	7·4	26	24·82	+1·18	28·39	22·56	+5·83	28·39	22·56	+ 5·83	5·23	Bassein.		
1	...	...	...	...	3	24	1	1	11·9	8·5	+ 40	82	·882	8·8	18	21·73	−3·73	25·88	23·20	+2·68	25·88	23·20	+ 2·68	4·93	Diamond Island.		
...	3	5	8	2	10	1	1	...	4·3	3·9	+ 10	93	·974	9·4	25	23·09	+1·91	50·03	43·99	+6·04	50·03	43·99	+ 6·04	7·00	Akyab. .	Arakan.	5
...	...	...	...	23	6	1	...	...	6·5	4·8	+ 35	90	·923	9·6	21	20·91	+0·09	12·08	14·61	−2·53	12·08	14·61	− 2·53	2·84	Toungoo .	Central Burma.	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9·53	10·20	−0·62	...	...	...	...	II.—Burma Inland.		
...	...	...	1	8	20	1	...	...	7·7	8·2	− 6	80	·844	9·0	11	15·00	−4·00	4·02	6·94	−2·92	4·02	6·94	− 2·92	0·78	Thayetmyo .	Central Burma.	3
...	...	1	2	15	10	1	1	...	14·5	?	?	80	·861	7·7	9	?	?	3·01	?	?	3·01	?	?	0·92	Minbu .	Upper Burma.	
...	1	...	1	19	9	...	...	...	10·5	?	?	82	·844	4·2	9	?	?	4·60	?	?	4·60	?	?	1·34	Yamethin.		
6	...	...	...	12	...	12	...	...	?	?	?	86	·603	9·0	17	?	?	10·64	?	?	10·64	?	?	2·09	Taunggyi.		
...	2	...	...	1	13	14	...	...	8·6	?	?	80	·876	8·0	9	?	?	13·64	?	?	13·64	?	?	4·62	Mandalay.		
27	...	...	...	1	1	...	...	1	0·9	?	?	90	·926	8·7	19	?	?	15·14	13·46	+1·68	15·14	13·46	+ 1·68	3·53	Kindat.		
			Not	rec	orde	d.			?	?	?	87	·744	9·1	22	?	?	9·20	?	?	9·20	?	?	1·10	Lashio.		
14	...	4	...	3	...	7	...	2	2·5	?	?	91	·906	6·3	21	?	?	15·99	?	?	15·99	?	?	2·34	Bhamo.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11·33	19·65	−8·32	...	...	...	...	III.—Assam.		
25	1	1	2	...	...	1	...	...	4·2	3·1	+ 35	86	·918	9·0	17	21·33	−4·33	14·95	20·73	−5·78	14·95	20·73	− 5·78	2·42	Silchar .	Surma.	7
2	1	8	5	2	4	7	1	...	4·9	2·6	+ 88	89	·938	8·9	15	16·70	−1·70	14·04	13·69	+0·35	14·04	13·69	+ 0·35	2·05	Sibsagar .	Brahmaputra.	8
3	...	4	7	1	...	1	...	...	8·5*	4·9	+ 73	89	·943	8·3	9	17·87	−8·87	5·01	24·53	−19·52	5·01	24·53	−19·52	1·29	Dhubri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14·35	13·08	+0·97	...	...	...	...	IV.—Bengal and Orissa.		
...	...	3	10	11	5	1	...	...	6·3	6·9	− 9	87	·923	7·8	19	16·62	+2·38	15·93	22·69	−6·76	15·93	22·69	− 6·76	1·95	Chittagong .	East Bengal.	6
			Not	rec	orde	d.			?	?	?	90	·668	?	27	?	?	19·28	?	?	19·28	?	?	1·95	Lungleh.		
...	...	1	12	13	3	1	...	...	6·7	?	?	88	·959	6·0	20	18·35	+1·65	19·46	24·19	−4·73	19·46	24·19	− 4·73	2·86	Noakhali.		
...	...	...	11	8	11	...	...	...	5·8	?	?	92	·967	7·9	24	17·30	+6·70	17·78	17·65	+0·13	17·78	17·65	+ 0·13	4·35	Comilla.		
20	...	...	3	3	2	2	...	...	1·9	?	?	89	·920	8·7	14	13·09	+0·91	15·72	11·12	+4·60	15·72	11·12	+ 4·60	3·63	Sirajganj.		
2	...	3	6	11	7	1	...	...	8·0	7·2	+ 11	90	·980	8·8	18	15·08	+2·92	16·70	13·06	+3·64	16·70	13·06	+ 3·64	3·29	Narayanganj.		
15	...	3	1	4	6	1	...	...	3·3	?	?	87	·981	9·0	17	16·88	+0·12	17·48	16·02	+1·46	17·48	16·02	+ 1·46	2·46	Barisal.		
7	...	3	9	9	2	...	...	...	3·3	?	?	89	·927	7·2	20	18·42	+1·58	18·98	18·18	+0·80	18·98	18·18	+ 0·80	4·65	Mymensingh.		
...	...	1	5	5	5	...	...	14	3·9	?	?	93	1·022	6·1	18	14·12	+3·88	10·93	12·38	−1·45	10·93	12·38	− 1·45	1·60	Faridpur .	Deltaic Bengal.	10
5	1	3	4	8	6	1	1	1	4·6	4·9	− 6	87	·983	7·8	15	14·54	+0·46	16·56	12·50	+4·06	16·56	12·50	+ 4·06	5·48	Jessore.		
2	3	1	2	4	10	5	2	1	5·6	6·2	− 10	86	·956	6·7	15	12·77	+2·23	16·42	10·74	+5·68	16·42	10·74	+ 5·68	2·82	Calcutta.		
...	3	3	2	1	9	10	1	1	18·7	14·6	+ 28	85	·985	8·7	11	12·19	−1·19	12·12	9·84	+2·28	12·12	9·84	+ 2·28	1·92	Sangor Island.		
...	...	2	10	3	10	2	2	1	6·6	?	?	80	·880	6·5	12	12·15	−0·15	9·35	9·33	+0·02	9·35	9·33	+ 0·02	1·45	Krishnagar.		
...	5	1	...	6	15	1	...	2	6·1	?	?	83	·941	4·3	16	11·35	+4·65	12·19	9·42	+2·77	12·19	9·42	+ 2·77	2·24	Midnapore.		

Table

Abstract of Observations taken at 8 A.M. at 206 stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A. M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·262	?	29·509	29·428	4th	28·908	28th	·520	82·6	92·8	?	77·6	?	85·3	?	15·2	101·6	10th	72·1	3rd	29·5
		Raniganj	334	29·257	?	29·538	29·433	3rd	28·915	28th	·518	81·9	92·8	?	77·7	?	85·3	?	15·1	104·7	10th	70·9	3rd	33·8
		Burdwan	107	29·477	−·014	29·530	29·662	4th	28·921	28th	741	83·3	91·9	−2·2	78·5	−1·0	85·3	−1·6	13·4	99·2	10th	73·2	3rd	26·0
		Naya Dumka	489	29·098	?	29·541	29·264	3rd	28·817	28th	·447	82·4*	91·7*	?	77·1	?	84·5*	?	14·6	100·0	10th	71·8	1st & 3rd	28·2
		Berhampore	67	29·534	−·007	29·549	29·704	5th	29 175	28th	·529	81·9	90·6	−2·0	77·9	−0·6	84·3	−1·3	12·7	99·1	10th	72·3	2 days	26·8
		Rampur Boalia.	70	29·536	?	29·555	29·699	3rd & 5th.	29·233	28th	466	81·5	89·1	?	77·0†	?	83·0†	?	12·1	95·1	9th	69·6	1st	25·5
		Malda	72	29·521	?	29·544	29·692	12th	29·274	27th	·418	82·8	92·0	−0·4	78·1	−0·3	85·1	−0·4	13·9	98·1	17th	70·0	3rd	28·1
		Bogra	61	29·554	?	29·567	29·712	12th	29·287	27th	·425	81·2	88·7	−0·6	77·4	+0·4	83·0	−0·1	11·3	94·2	24th	69·2	1st	25·0
12	North Bengal	Dinajpur	123	29·499	−·001	29·576	29·670	5th	29·244	27th	·426	80·7	90·2	+1·0	77·4	+0·4	83·8	+0·7	12·8	94·8	17th	69·7	1st	25·1
		Rangpur	123	29·517	−·003	29·594	29·677	5th	29·252	27th	·425	81·6	89·8	+1·4	77·8	+2·1	83·8	+1·8	12·0	94·7	17th	71·7	1st	23·0
		Jalpaiguri	284	29·362	−·001	29·603	29·529	5th	29·115	27th	·414	81·7	90·6	+3·1	76·6	+1·8	83·6	+2·5	14·0	94·9	3 days	70·1	1st	24·8
14	Orissa	Balasore	56	29·530	−·013	29·522	29·691	4th	29·277	20th	·414	82·8	? 91·1	?−1·5	77·3	−1·3	? 84·3	?−1·4	13·8	101·0	1st	70·9	1st	30·1
		False Point.	21	29·586	−·011	29·549	29·740	7th	29·325	26th	·415	83·4	88·4	−2·4	78·7	−1·5	83·5	−2·0	9·7	91·5	13th	70·6	4th	20·9
		Cuttack	80	29·519	−·013	29·541	29·664	4th	29·250	20th	·414	82·1	91·8	−4·1	78·4	−1·8	85·2	−3·0	13·4	99·7	1st	74·2	2nd	25·5
		Shortt's Island.	?	29·571	?	?	29·738	5th & 11th.	29·294	20th	·444	84·0	89·1	?	79·6	?	84·4	?	9·5	94·3	3rd	72·4	19th	21·9
		Puri	20	29·597	?	29·560	29·743	11th	29·346	20th	·397	82·4	87·6	?	79·1	?	83·4	?	8·5	90·7	3 days	71·6	4th	19·1
	V.—Gangetic Plain and Chota Nagpur.		...	...	−·006	...	...	...	...	...	...	...	96·3	−1·1	79·3	−0·5	87·8	−0·8	17·0	...	...	...	...	33·2
15	Chota Nagpur	Hazaribagh.	2,007	27·591	−·019	29·522	27·770	3rd	27·309	20th	·461	79·4	90·8	−1·7	74·5	−1·4	82·7	−1·6	16·3	100·2	1st	67·8	2nd	32·4
		Ranchi	2,128	27·481	−·009	29·531	27·641	4th	27·167	20th	·474	78·3	89·4	−2·4	73·3	−1·4	81·3	−1·9	16·1	101·2	1st	67·9	3rd	33·3
		Daltonganj	730?	28·833	?	29·508	29·023	2nd	28·574	29th	·449	83·9	96·1	?	80·0	?	88·0	?	16·1	105·3	16th	75·0	3 days	30·3
		Chaibassa	760	28·810	?	29·511	28·973	4th	28·457	20th	·516	83·6	94·9	−2·1	78·6	−0·9	86·7	−1·5	16·3	105·5	1st	74·5	24th	31·0
16	South Bihar	Gaya	375	29·197	?	29·522	29·361	5th	28·963	20th	·398	85·2	98·1	−1·8	79·8	+0·3	89·0	−0·8	18·3	107·1	10th	69·8	2nd	37·3
		Dehri	351	29·208	−·008	29·509	29·371	5th	29·000	20th	·371	85·5	99·0	−0·9	79·6	−1·2	89·6	−1·1	19·4	108·9	4th	70·5	22nd	38·4
		Patna	183	29·394	−·010	29·527	29·564	5th	29·198	20th	·366	85·0	96·6	0	79·6	−0·5	88·1	−0·3	17·0	104·5	16th	69·7	2nd	34·8
		Arrah	190	29·394	?	29·534	29·571	5th	29·201	20th	·370	85·6	98·0	?	80·2	?	89·1	?	17·8	106·4	16th	70·0	2nd	36·4
		Buxar	239	29·321	−·004	29·512	29·497	5th	29·135	21st	362	84·7	96·1	−0·9	79·3	−1·0	87·7	−1·0	16·8	104·5	10th & 13th.	69·8	2nd	34·7
17	North Bihar	Purnea	125	29·494	?	29·562	29·663	5th	29·249	27th	·414	82·8	92·6	+0·3	78·1	+1·2	85·4	+0·8	14·5	101·3	17th	70·2	1st	31·1
		Bhagalpur	160	29·429	?	29·541	29·602	5th	29·214	26th	·388	84·2	93·3	?	78·7‡	?	86·2‡	?	14·6	101·8	15th	71·6	1st	30·2
		Darbhanga	166	29·428	−·005	29·546	29·620	5th	29·226	26th	·394	83·4	92·8	+0·5	79·3	+0·3	86·0	+0·4	13·5	100·0	16th	72·5	1st	27·5
		Muzaffarpur	178	29·410	?	29·541	29·588	5th	29·211	26th	·377	83·4	93·5	?	78·6	?	86·1	?	14·7	101·7	16th	73·7	5th	28·0
		Motihari	224	29·371	?	29·550	29·561	5th	29·154	26th	·407	84·7	95·0	+1·3	78·2	+1·0	86·7	+1·2	16·8	102·5	16th	71·8	1st & 5th	30·7
		Chapra	181	29·395	?	29·528	29·574	5th	29·220	20th	·354	85·4	97·7	?	80·0	?	88·8	?	17·7	106·3	16th	72·1	2nd	34·2
18	N.-W. Provinces (East).	Benares	267	29·295	−·001	29·514	29·476	5th	29·088	21st	·388	85·6	98·6	−2·4	80·9	−1·4	89·8	−1·9	17·7	109·8	10th	74·5	2nd	35·3
		Allahabad	309	29·243	−·012	29·502	29·417	5th	29·031	21st	·386	86·9	99·6	−2·8	81·5	−1·4	90·6	−2·1	18·1	111·6	10th	72·3	2nd	39·3
23	N.-W. Provinces (East, Sub-montane), South Oudh	Gorakpur	256	29·322	+·008	29·532	29·510	4th	29·086	26th	·424	85·1	97·2	−0·5	78·9	−0·9	88·1	−0·7	18·3	102·8	3 days	67·7	4th	35·1
19	South Oudh	Lucknow	368	29·192	−·002	29·514	29·360	5th	28·993	26th	·367	86·8	99·3	−2·2	81·6	+0·1	90·5	−1·1	17·7	107·3	9th	77·3	3 days	30·0
20	North Oudh	Bahraich	403	29·174	?	29·533	29·345	4th	28·946	26th	·399	85·8	98·3	?	79·6	?	89·0	?	18·7	104·5	3 days	72·0	5th	32·5
21	N.-W. Provinces (Central),	Cawnpore	416	29·135	?	29·499	29·302	4th	28·971	26th	·331	87·2	100·7	?	81·9	?	91·3	?	18·8	111·5	10th	78·0	30th	33·5
		Mainpuri	516	29·043	?	29·509	29·198	3rd	28·865	26th	·333	87·0	100·2	?	82·4	?	90·3	?	17·8	109·2	1st & 11th.	75·0	6th	34·2

* Mean of 29 days. † Mean of 25 days. ‡ Mean of 27 days.

I—*continued.*

in India, Burma, etc., in June, 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.							Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of district.
Calm.	N.	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.	Norma. number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st to 30th June 1896.	Normal rainfall for period, 1st to 30th June.	Variation from normal of period, 1st to 30th June.				
16	1	1	3	5	1	...	3	...	3·8	P	P	82	·911	6·6	12	12·08	−0·08	11·04	9·96	+1·08	11·04	9·96	+1·08	3·05	Bankura .	Central Bengal.	11
9	1	2	5	5	4	2	...	2	3·7	P	P	84	·911	6·1	13	11·65	+1·35	12·15	9·27	+2·88	12·15	9·27	+2·88	2·01	Raniganj.		
1	3	1	2	3	3	7	2	3	5·3	4·9	+ 8	80	·913	7·2	16	12·38	+3·62	17·14	8·92	+8·22	17·14	8·92	+8·22	3·53	Burdwan.		
...	1	2	8	8	5	3	1	2	3·5	P	P	79	·881	6·1	13	12·13	+0·87	18·16	9·22	+8·94	18·16	9·22	+8·94	3·40	Naya Dumka.		
...	1	1	13	5	6	1	1	2	5·0	5·5	− 9	87	·946	7·9	13	11·88	+1·12	11·32	9·38	+1·94	11·32	9·38	+1·94	2·45	Berhampore.		
8	1	3	7	7	2	1	1	...	5·4	P	P	90	·969	5·4	15	12·15	+2·85	11·45	9·91	+1·54	11·45	9·91	+1·54	1·55	Rampore Boalia.		
...	2	3	5	4	8	6	1	1	4·3	P	P	86	·959	5·2	12	11·96	+0·04	6·92	10·34	−3·42	6·92	10·34	−3·42	1·32	Malda.		
6	...	1	9	12	1	...	1	...	3·1	P	P	88	·935	6·4	17	14·23	+2·77	13·10	13·56	−0·46	13·10	13·56	−0·46	4·15	Bogra.		
2	1	4	16	4	2	...	...	1	3·2	P	P	89	·924	7·2	12	14·08	−2·08	9·25	15·49	−6·24	9·25	15·49	−6·24	1·75	Dinajpur .	North Bengal.	12
4	...	6	9	6	2	2	...	1	2·5	P	P	88	·953	7·2	16	15·38	+0·62	9·56	18·62	−9·06	9·56	18·62	−9·06	3·00	Rangpur.		
...	3	6	14	6	1	...	...	...	3·3	P	P	88	·950	1·9	13	19·00	−6·00	4·64	26·42	−21·78	4·64	26·42	−21·78	0·77	Jalpaiguri.		
1	1	1	2	...	4	17	2	2	7·8	P	P	83	·934	5·4	15	10·81	+4·19	22·09	9·07	+13·02	22·09	9·07	+13·02	5·25	Balasore .	Orissa.	14
1	2	...	...	...	4	14	6	3	14·3	11·5	+24	83	·946	8·2	13	9·32	+3·68	16·24	9·37	+6·87	16·24	9·37	+6·87	5·21	False Point.		
6	...	...	...	...	1	16	6	1	5·0	4·0	+25	82	·895	7·0	16	11·54	+4·46	18·33	11·53	+6·80	18·33	11·53	+6·80	4·46	Cuttack.		
...	2	...	...	...	5	15	5	3	20·1	P	P	85	·995	5·9	10	P	P	17·71	P	P	17·71	P	P	5·03	Shortt's Island.		
5	2	...	...	...	1	16	6	...	17·6	P	P	87	·971	6·4	13	8·04	+4·96	12·36	8·06	+4·30	12·36	8·06	+4·30	2·63	Puri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·37	6·75	+0·62	...	...	...	...	V.—Gangetic Plain and Chota Nagpur.		
...	2	1	3	6	10	1	3	4	11·6	8·9	+30	75	·744	6·9	15	10·92	+4·08	12·96	7·63	+5·33	12·96	7·63	+5·33	5·64	Hazaribagh	Chota Nagpur.	15
2	...	3	1	4	7	6	3	4	9·3	P	P	81	·781	6·3	16	12·50	+3·50	13·90	8·48	+5·42	13·90	8·48	+5·42	5·44	Ranchi.		
...	...	2	9	2	6	10	1	...	P	P	P	71	·817	4·9	14	82·7	+5·73	10·80	6·03	+4·77	10·80	6·03	+4·77	3·55	Daltonganj.		
3	...	...	...	1	5	10	5	6	2·7	P	P	77	·881	6·7	15	11·46	+3·54	13·27	8·53	+4·74	13·27	8·53	+4·74	3·45	Chaibassa.		
9	...	3	7	2	2	3	4	...	7·0	3·4	+106	69	·819	4·6	13	8·04	+4·96	9·07	6·56	+2·51	9·07	6·56	+2·51	2·62	Gaya . .	South Bihar.	16
9	1	2	9	3	...	4	2	...	15·4*	P	P	71	·852	5·1	9	7·92	+1·08	5·21	5·91	−0·70	5·21	5·91	−0·70	2·16	Dehri.		
1	...	2	18	3	1	...	5	....	3·5	4·2	+102	73	·875	5·5	9	7·85	+1·15	7·40	7·34	+0·06	7·40	7·34	+0·06	3·74	Patna.		
...	1	9	9	3	3	...	4	1	4·5	P	P	74	·900	4·3	10	8·15	+1·85	5·82	6·14	−0·32	5·82	6·14	−0·32	1·51	Arrah.		
...	2	4	16	2	...	1	5	...	8·1	P	P	74	·879	5·1	12	7·88	+4·12	8·64	5·20	+3·44	8·64	5·20	+3·44	3·65	Buxar.		
...	1	6	17	3	1	...	1	1	6·4	3·3	+ 94	82	·920	7·3	8	11·48	−3·48	2·72	10·71	−7·99	2·72	10·71	−7·99	0·67	Purnea .	North Bihar.	17
...	...	8	10	6	1	...	3	2	6·9	P	P	79	·927	6·0	12	9·69	+2·31	7·84	7·54	+0·30	7·84	7·54	+0·30	1·52	Bhagalpur.		
...	...	3	11	11	2	1	1	1	6·8	5·7	+21	81	·920	4·9	7	8·64	−1·64	6·06	7·56	−1·50	6·06	7·56	−1·50	1·74	Darbhanga.		
2	...	2	13	10	...	1	1	1	7·6	P	P	83	·954	3·3	10	8·00	+2·00	9·45	7·65	+1·80	9·45	7·65	+1·80	4·25	Muzaffarpur.		
...	...	12	14	2	1	...	1	...	9·5	P	P	78	·921	5·0	6	9·57	−3·57	6·71	9·18	−2·47	6·71	9·18	−2·47	4·18	Motihari.		
4	...	1	17	4	...	1	2	1	6·8	P	P	75	·907	4·4	7	7·42	−0·42	4·30	6·28	−1·98	4·30	6·28	−1·98	1·51	Chapra.		
2	1	4	10	2	2	2	6	1	6·4	5·1	+25	72	·888	4·9	11	4·64	+6·36	8·05	5·13	+2·92	8·05	5·13	+2·92	2·77	Benares .	N.-W. Provinces (East).	18
4	...	4	12	2	2	1	4	1	8·7	3·8	+129	68	·851	5·9	10	4·73	+5·27	4·91	5·69	−0·78	4·91	5·69	−0·78	1·18	Allahabad.		
1	1	9	13	1	...	...	3	2	3·8	3·6	+ 6	76	·916	4·5	7	7·00	0	4·46	9·68	−5·22	4·46	9·68	−5·22	1·03	Gorakhpur .	N.-W. Provinces (East, Submontane).	23
1	2	6	14	2	1	1	3	...	3·9†	4·2	− 7	70	·889	7·1	7	5·64	+1·36	4·40	5·43	−1·03	4·40	5·43	−1·03	1·84	Lucknow .	South Oudh.	19
3	...	1	10	9	1	1	1	3	3·8	P	P	72	·893	4·3	7	P	P	10·39	5·64	+4·75	10·39	5·64	+4·75	3·68	Bahraich .	North Oudh.	20
...	1	4	9	10	1	1	3	1	6·9	P	P	69	·877	3·9	5	4·30	−0·70	2·82	3·09	−0·27	2·82	3·09	−0·27	1·21	Cawnpore .	N.-W. Provinces (Central) .	21
14	...	1	10	1	2	...	2	...	1·3	P	P	65	·827	6·0	5	P	P	2·89	3·00	−0·11	2·89	3·00	−0·11	0·89	Mainpuri.		

† Mean of 16 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Number of district.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.							Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas		...	...	+·007	...	...	...	...	...	...	...	101·3	−1·0	80·8	+1·4	91·1	+0·2	20·6	...	...	...	...	38·9
24	N.-W. Provinces West (Submontane).	Bareilly	568	29·005	+·017	29·530	29·187	5th	28·786	26th	·401	84·6	98·2†	−2·5	79·6	−0·3	89·1	−1·4	18·6	104·9	1st	71·1	2nd	33·8
		Dehra Dun	2,233	27·400	−·002	29·552	27·563	5th	27·165	26th	·398	79·0	91·1	−2·3	74·5	−0·1	82·8	−1·2	16·6	101·0	1st	64·5	5th	36·5
		Roorkee	887	28·687	+·013	29·527	28·859	14th	28·454	26th	·405	85·2	98·4*	−3·1	78·6	−0·3	88·5	−1·7	19·8	106·7	3 days	71·1	14th & 28th	35·6
22	N.-W. P. West	Meerut	738	28·820	+·004	29·512	28·979	3rd	28·604	27th	·375	85·9	98·8	−2·6	80·8	0	89·8	−1·3	18·0	108·5	13th	73·9	7th	34·6
26	South-East Punjab.	Delhi	718	28·833	−·001	29·502	29·006	3rd	28·631	27th	·375	87·4	100·6	−3·6	81·5	−1·9	91·1	−2·8	19·1	111·0	13th	70·9	15th	40·1
28	Central Punjab.	Lahore	702	28·821	+·001	29·476	29·030	6th	28·573	27th	·457	90·5	106·8	+1·2	85·0	+5·2	95·9	+3·2	21·8	117·3	13th	75·6	16th	41·7
27	South Punjab	Patiala	?	28·734	?	?	28·891	7th	28·462	26th	·429	88·1	100·9	?	82·2	?	91·5	?	18·7	111·0	11th	74·0	7th	37·0
29	Punjab Submontane.	Ludhiana	812	28·732	+·003	29·495	28·899	6th	28·495	27th	·404	89·6	104·3	−1·5	83·0	+2·9	93·7	+0·7	21·3	114·8	14th	75·6	3rd & 7th	39·2
		Sialkot	830	28·711	+·013	29·494	28·931	5th	28·444	27th	·487	89·5	105·9	+0·3	81·9	+1·8	93·9	+1·1	24·0	117·0	14th	72·1	5th	44·9
		Umballa	892	28·673	?	29·513	28·818	3rd	28·446	27th	·372	85·8	102·0	?	81·2	?	91·6	?	20·8	111·9	15th	74·0	3rd & 6th	37·9
31	North Punjab	Rawalpindi	1,643	27·899	+·012	29·469	28·123	6th	27·656	26th & 27th.	·467	89·9	107·5	+4·8	80·2	+5·5	93·8	+5·3	27·3	117·0	13th	70·2	3rd	46·8
	VII.—Indus Valley and North-West Rajputana.		...	...	−·030	...	...	...	...	...	...	...	106·3	+2·8	84·5	+3·5	95·3	+3·2	21·9	...	...	...	...	39·9
31	North Punjab	Peshawar	1,110	28·420	−·023	29·431	28·654	6th	28·152	26th	·502	91·7	109·2	+3·7	81·5	+4·8	95·4	+4·3	27·7	118·0	13th & 14th.	73·9	7th	44·1
		Mardan	?				Not recorded.					89·5	111·1	?	82·9	?	97·0	?	28·2	119·8	14th & 22nd.	69·0	9th	50·9
32	West Punjab	Khushab	612	28·883	?	29·449	29·119	6th	28·638	26th	·481	91·0	109·0	?	84·7	?	96·9	?	24·3	120·4	13th	73·0	15th	47·4
		Montgomery	558	28·936	?	29·443	29·155	6th	28·698	27th	·457	95·6	111·6	?	86·3	?	99·0	?	25·3	120·4	13th	78·0	9th	42·4
		D. I. Khan (Tel. Office).	594?	28·903	−·016	29·428	29·150	6th	28·655	27th	·495	92·9	109·9	?	84·4	?	97·2	?	25·5	118·7	22nd	74·5	9th	44·2
		Mooltan	420	29·061	−·024	29·437	29·271	6th	28·803	27th	·468	93·3	111·1	+4·4	88·3	+6·0	99·7	+5·2	22·8	119·5	22nd	81·6	8th	37·9
27	South Punjab	Sirsa	662	28·862	−·015	29·469	29·030	6th	28·639	27th	·391	93·1	?	?	86·7	+3·9	?	?	?	?	...	75·4	6th	?
47	Sind	Jacobabad	186	29·279	−·039	29·420	29·446	4th & 6th.	29·017	27th	·429	95·9	114·8	+2·9	88·6	+5·1	101·7	+4·0	26·2	123·0	10th	79·6	6th	43·4
		Hyderabad	96	29·428	?	29·474	29·598	13th	29·182	27th	·416	89·7	106·1	+2·9	83·9	+2·4	95·0	+2·7	22·2	116·2	9th	76·0	24th	40·2
		Kurrachee Telegraph.	12	29·540	−·044	29·502	29·736	1st	29·288	20th	·448	87·7	94·6	?	83·0	?	88·8	?	11·6	105·4	18th	76·0	24th	29·4
		Kurrachee Hospital.	49	29·505	?	?	29·695	1st	29·259	20th	·436	86·7	93·3	?	82·9	?	88·1	?	10·4	103·0	18th	74·7	24th	28·3
46	Kathiawar and Cutch.	Bhuj	395	29·184	−·052	29·526	29·394	1st	28·936	20th	·358	85·7	98·1	+0·9	80·5	+0·7	89·3	+0·8	17·6	107·6	19th	72·9	24th	34·7
51	West Rajputana	Bickaneer	771*	28·756	?	29·473	28·899	2nd	28·540	27th	·359	92·8	107·9	+1·9	86·7	+1·8	97·3	+1·9	21·2	115·4	9th	79·0	22nd	36·4
		Pachpadra	380	29·136	?	29·465	29·269	1st	29·031	21st	·238	86·6	104·6	?	83·1	?	93·9	?	21·5	116·0	9th	76·0	24th & 25th.	40·0
	VIII.—East Rajputana, Central India, and Gujarat.		...	...	−·030	...	...	...	...	...	...	...	98·3	−1·0	81·0	+0·7	89·7	−0·1	17·3	...	...	...	...	33·1
50	Rajputana, East	Jeypore	1,431	28·163	−·019	29·522	28·315	3rd	27·985	27th	·330	87·7	102·4	−0·4	81·9	+1·8	92·1	+0·7	20·5	111·5	14th	74·9	18th	36·6
		Sambhar	1,254	28·317	−·022	29·507	28·471	3rd	28·138	27th	·333	88·1	102·7	+1·0	82·5	+0·9	92·6	+1·0	20·2	111·0	13th	75·4	7th	35·6
		Ajmere	1,611	27·990	−·028	29·533	28·131	3rd	27·809	27th	·322	86·3	99·4	−0·9	81·6	+1·6	90·5	+0·4	17·8	108·9	12th	73·6	14th	35·3
		Deesa	466	29·141	−·036	29·556	29·345	1st	28·923	21st	·422	85·4	100·2	−1·4	80·5	0	90·4	−0·7	19·7	111·5	8th	75·0	16th	36·5
46	Kathiawar	Rajkot	429	29·184	−·049	29·560	29·398	1st	28·879	20th	·519	84·2	98·1	−1·8	77·7	+0·4	88·0	−0·7	20·4	105·9	6th & 9th.	71·8	14th	34·1
		Veraval†	?	29·610	?	29·570	29·827	1st	29·235	20th	·592	84·1	87·2	?	81·0	?	84·1	?	6·2	91·6	3rd	77·3	5 days	14·3
49	Central India	Nowgong	757	28·797	−·036	29·495	28·955	3rd	28·583	30th	·372	88·4	101·5	−1·0	83·6	+0·9	92·6	−0·1	17·9	114·1	10th	74·0	7th	40·1
		Indore	1,823	27·828	−·023	29·578	28·001	1st	27·627	21st	·374	81·2	95·1	?	76·3	?	85·7	?	18·8	105·0	9th & 12th	71·6	14th	33·4
		Neemuch	1,630	28·002	?	29·566	28·174	1st	27·813	22nd	·361	83·5	97·7	−0·7	77·9	+0·7	87·8	0	19·8	107·0	5th	73·1	25th	33·9
45	Gujarat	Surat	39	29·605	?	29·583	29·815	1st	29·366	20th	·449	85·0	91·3?	?	81·3	?	86·3?	?	10·0	98·2	8th	74·5	14th & 17th.	23·7
		Ahmedabad	164	29·447	?	29·556	29·662	1st	29·196	21st	·466	85·5	98·4	?	80·4	?	89·4	?	18·0	107·3	8th & 9th.	74·1	16th	33·2
	N.-W. P. (West)	Agra	555	28·988	−·020	29·490	29·152	3rd	28·801	27th	·351	90·3	102·1	−2·7	84·9	+0·1	93·5	−1·3	17·2	112·0	13th	78·2	16th & 17th.	33·8
21	N.-W.P., Central	Jhansi	858	28·705	−·033	29·500	28·852	7th	28·483	22nd	·369	89·1	102·2	−1·0	84·0	+0·1	93·1	−0·5	18·2	113·7	10th & 13th.	73·9	7th	39·8

* Mean of 29 days.

† Mean of 28 days.

I—*continued.*

in India, Burma, etc., in June 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.							Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of district.
Calm.	N.	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 1896.	Normal rainfall for period, 1st June to 30th June.	Variation from normal of period, 1st June to 30th June.			
...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	5·04	3·83	+1·36	...	...	...	...	VI.—Upper Sub-Himalayas.	
4	3	...	...	21	1	...	...	1	4·7	4·9	− 4	68	·802	4·0	6	4·91	+1·09	5·28	5·67	−0·39	5·28	5·67	−0·39	2·65	Bareilly .	N.-W. Provinces West Submontane.	24
26	...	...	1	2	...	1	...	...	1·2	1·6	− 25	76	·746	5·9	13	9·91	+4·09	17·79	9·25	+8·54	17·79	9·25	+8·54	6·19	Debra Dun.		
11	...	1	1	14	2	...	...	1	4·1	3·9	+ 5	69	·757	4·2	7	5·64	+1·36	7·03	4·71	+2·32	7·03	4·71	+2·32	3·79	Roorkee.		
6	...	...	12	10	...	...	1	1	2·1	2·6	− 19	64	·777	4·3	9	3·64	+5·36	3·98	2·44	+1·54	3·98	2·44	+1·54	1·48	Meerut.	N.-W. Provinces West.	22
1	...	1	10	13	...	1	3	1	4·5	4·9	− 8	63	·802	5·7	9	4·00	+5·00	5·40	3·35	+2·05	5·40	3·35	+2·05	1·60	Delhi .	South-East Punjab.	26
5	2	1	4	12	4	...	1	1	3·8	3·5	+ 9	53	·737	2·8	1	2·73	−1·73	0·91	1·84	−0·93	0·91	1·84	−0·93	0·74	Lahore.	Central Punjab.	28
3	...	9	2	...	5	8	...	1	(a)4·5	?	?	65	·851	3·7	5	?	?	4·57	?	?	4·57	?	?	2·85	Patiala‖ .	South Punjab.	27
8	...	2	...	16	3	1	...	...	3·7	2·4	+ 54	59	·803	3·7	3	3·64	− 0·64	1·30	2·41	−1·11	1·30	2·41	−1·11	0·56	Ludhiana.	Punjab, Submontane.	29
4	2	6	7	7	4	...	...	...	3·5	2·4	+ 46	61	·812	2·2	5	3·73	+1·27	1·75	3·08	−1·33	1·75	3·08	−1·33	0·67	Sialkot.		
9	...	...	10	9	1	...	1	...	2·0	?	?	66	·793	3·2	8	?	?	4·31	3·83	+0·48	4·31	3·83	+0·48	1·10	Umballa .		
5	3	3	6	5	4	2	...	2	4·0	2·6	+ 54	44	·606	3·3	3	3·55	− 0·55	3·10	1·71	+1·39	3·10	1·71	+1·39	2·03	Rawalpindi.	North Punjab.	31
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·28	0·89	+1·28	...	...	...	...	VII.—Indus Valley and North-West Rajputana.		
7	9	1	1	...	2	...	3	7	4·4	4·3	+ 2	43	·637	1·3	0	0·73	− 0·73	0	0·35	−0·35	0	0·35	−0·35	0	Peshawar .	North Punjab.	31
Not recorded.									?	?	?	?	?	?	0	?	?	0	?	?	0	?	?	0	Mardan.		
2	...	9	14	1	2	1	...	1	6·6	?	?	48	·600	0·5	3	1·20	+ 1·80	1·42	0·70	+0·72	1·42	0·70	+0·72	1·00	Khushab .	West Punjab.	32
2	1	3	2	6	6	9	1	...	10·1	?	?	44	·726	1·1	1	2·00	−1·00	0·17	1·29	−1·12	0·17	1·29	−1·12	0·14	Montgomery.		
28	...	1	...	...	1	...	...	...	0·8	2·4	− 67	53	·799	0·5	1	0·91	+ 0·09	0·17	0·54	−0·37	0·17	0·54	−0·37	0·17	D. I. Khan (Tel. Office).		
9	...	2	1	5	5	8	...	...	3·6	3·8	− 5	54	·836	0	0	1·45	− 1·45	0	0·59	−0·59	0	0·59	−0·59	0	Mooltan.		
3	1	1	3	9	2	3	6	2	11·1	5·2	+113	46	·697	5·8	0	3·18	− 3·18	0·13	1·91	−1·78	0·13	1·91	−1·78	0·07	Sirsa.	South Punjab.	27
7	1	1	7	7	7	...	...	...	5·9	4·7	+ 26	48	·806	0·8	0	0·09	− 0·09	0·05	0·12	−0·07	0·05	0·12	−0·07	0·05	Jacobabad .	Sind . . .	47
...	...	...	...	2	5	22	...	1	20·2	15·2	+ 33	60	·821	3·9	2	0·45	+ 1·55	2·03	0·33	+1·70	2·03	0·33	+1·70	1·93	Hyderabad.		
2	...	...	1	...	1	12	14	...	13·4	18·5	− 28	78	1·024	6·2	2	0·18	+ 1·82	7·30	0·52	+6·78	7·30	0·52	+6·78	6·80	Kurrachee Telegraph.		
...	3	1	...	1	...	...	15	9	16·0	?	?	83	1·051	4·6	2	?	?	3·65	?	?	3·65	?	?	3·00	Kurrachee Hospital. ¶		
...	...	2	1	1	2	4	16	4	18·6	16·1	+ 15	72	·910	4·3	4	?	?	6·57	1·94	+4·63	6·57	1·94	+4·63	3·45	Bhuj.	Kathiawar and Cutch.	46
...	...	2	1	3	8	14	2	...	9·2	7·8	+ 19	63*	·975*	2·7	4	?	?	1·62	1·66	−0·04	1·62	1·66	−0·04	0·88	Bikaneer .	West Rajputana.	51
1	...	...	...	...	4	25	...	...	15·0	12·0	+ 25	%	1·011	7·4	5	?	?	6·56	0·69	+5·87	6·56	0·69	+5·87	2·45	Pachpadra.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6·04	4·32	+1·41	...	...	...	...	VIII.—East Rajputana Central India, and Gujarat.		
2	1	2	3	2	...	5	10	5	6·3	7·3	− 14	58	·740	4·6	4	3·70	+ 0·30	2·48	2·49	−0·01	2·48	2·49	−0·01	0·75	Jeypore .	East Rajputana.	50
2	...	...	3	3	2	2	17	1	10·1	11·2	− 10	63	·829	4·6	5	3·10	+ 1·90	2·60	1·40	+1·20	2·60	1·40	+1·20	1·50	Sambhar.		
2	...	2	2	2	1	7	14	...	7·5	8·3	− 9	65	·807	3·5	7	3·73	+ 3·27	5·66	2·28	+3·38	5·66	2·28	+3·38	2·10	Ajmere.		
...	...	...	...	3	6	8	12	1	14·7	16·8	− 13	73	·879	5·6	9	2·18	+ 6·82	5·27	2·16	+3·11	5·27	2·16	+3·11	1·61	Deesa.		
2	2	...	1	2	2	7	11	3	12·8	15·6	− 18	76	·881	6·8	7	5·27	+ 1·73	12·18	4·73	+7·45	12·18	4·73	+7·45	4·22	Rajkot. .	Kathiawar.	46
2	2	1	1	2	5	1	7	...	12·5	?	?	54	·987	8·7	8	?	?	9·86	?	?	9·86	?	?	3·66	Veraval.‡		
3	2	3	2	...	5	1	12	2	5·3	4·4	+ 20	61	·794	4·9	7	5·91	+ 2·09	5·97	5·83	+0·14	5·97	5·83	+0·14	2·87	Nowgong .	Central India.	49
2	1	2	...	1	...	4	15	5	6·3	7·0	− 3	72	·773	5·8	8	8·27	− 0·27	4·65	6·79	−2·14	4·65	6·79	−2·14	1·63	Indore.		
...	2	...	1	...	...	6	17	4	7·4§	14·2	− 48	70	·794	5·6	6	5·09	+ 0·91	7·90	4·27	+3·63	7·90	4·27	+3·63	4·78	Neemuch.		
1	...	...	...	...	3	18	3	5	?	15·6	?	77	·926	7·1	12	8·18	+ 3·82	6·48	10·12	−3·64	6·48	10·12	−3·64	1·73	Surat .	Gujarat.	45
3	...	1	...	3	1	12	4	6	6·7	?	?	75	·901	7·9	9	?	?	5·64	?	?	5·64	?	?	1·94	Ahmedabad.		
4	...	2	...	12	...	10	2	...	7·0	5·7	+ 23	57	·790	4·1	2	3·64	− 1·64	1·95	2·54	−0·59	1·95	2·54	−0·59	1·31	Agra .	N.-W. P. (West).	23
2	2	8	2	...	1	6	4	5	6·0	5·8	+ 3	57	·752	3·4	9	6·09	+ 2·91	7·87	4·89	+2·98	7·87	4·89	+2·98	3·40	Jhansi.	N.-W.P., Central	22

§ Mean of 26 days. (a) Mean of 23 days. ‖ Wind observation of 28 days. ‡ " 21 " ¶ " 29 "

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Number of district.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	IX.—Deccan .	...	...	...	−·020	...	...	...	...	...	...	...	94·4	−0·5	75·9	0	85·2	−0·3	18·5	...	...	...	...	32·9
38	Bombay, Deccan .	Belgaum .	2,524	27·247	−·020	29·694	27·379	1st	27·088	17th	·291	73·2	81·5	+0·8	68·8	+1·0	75·2	+0·9	12·7	92·2	1st	65·8	4th	26·4
		Sholapur .	1,590	28·138	−·029	29·666	28·279	1st	27·954	17th	·325	79·7	93·6	−0·7	73·8	+1·2	83·7	+0·3	19·8	100·2	6th	71·5	23rd	28·7
		Poona .	1,840	27·874	−·038	29·648	28·038	1st	27·690	20th	·348	78·1	88·8	+0·3	72·8	+0·2	80·8	+0·3	16·0	96·0	14th	70·4	21st	25·6
		Bijapur .	1,946	27·805	?	29·682	27·953	1st	27·627	17th	·326	77·3	91·2	?	71·3	?	81·3	?	19·9	97·7	1st	63·5	22nd	34·2
40	Khandesh . .	Malegaon .	1,430	28·239	−·042	25·610	28·435	1st	28·057	21st	·378	80·9	92·9	−1·6	74·8	+0·1	83·9	−0·8	18·1	102·3	1st & 12th.	71·2	2nd	31·1
		Ahmednagar	2,152	27·569	?	29·647	27·738	1st	27·378	20th	·360	77·0	87·3	?	71·8	?	79·6	?	15·5	100·4	1st	68·4	1st	32·0
41	Berar . .	Akola .	930	28·720	−·030	29·589	28·885	1st	28·521	21st	·364	82·9	97·2	−0·3	77·4	+0·1	87·3	−0·1	19·8	105·7	12th	73·7	21st	32·0
		Amraoti .	1,215	28·435	−·019	29·598	28·577	1st	28·215	21st	·362	79·8	35·2	−1·5	75·8	−0·5	85·5	−1·0	19·4	105·3	2nd	70·8	6th	34·5
42	Central Provinces, (West).	Khandwa .	1,044	28·599	−·027	29·590	28·770	1st	28·388	21st	·382	82·9	96·3	−1·0	78·4	+0·3	87·4	−0·4	17·9	106·2	6th & 12th.	74·1	7th	32·1
		Hoshangabad	1,000	28·608	−·028	29·557	28·770	1st	28·383	21st	·387	83·1	97·3	−0·7	78·4	−0·6	87·9	−0·7	18·9	108·5	9th	73·7	24th	34·8
		Nagpur .	1,025	28·601	−·019	29·572	28·739	12th	28·363	21st	·376	82·5	97·4	−0·3	78·2	+0·1	87·8	−0·1	19·2	108·7	1st & 13th.	73·6	23rd & 24th.	35·1
43	Central Provinces, (Central).	Chanda .	634	29·003?	−·021?	29·575?	29·128	2nd	28·811	21st	·317	83·4	97·6	−0·1	78·7	−0·6	88·1	−0·4	18·9	107·4	4th	72·0	9th & 22nd.	35·4
		Seoni .	2,033	27·608	−·021	29·558	27·744	4th	27·355	21st	·389	79·9	98·3?†	+3·4?†	75·1?	−0·2?	87·0?†	?	23·2	105·2	8 days	70·9	30th	34·3
		Jubbulpur .	1,327	28·273	−·020	29·538	28·426	7th	28·019	21st	·407	83·9	96·3	−0·4	78·4	+0·1	87·4	−0·2	17·9	109·0	3rd	72·6	30th	36·4
		Saugor‡ .	1,807	27·789	−·029	29·520	27·933	3rd	27·561	22nd	·372	82·5	96·9	−1·6	77·8	+0·8	87·4	−0·4	19·1	107·3	5 days	73·6	30th	33·7
49	Central India .	Sutna .	1,040	28·571*	+·037?*	29·549*	28·687	3rd	28·439	17th	·248	86·8	99·3	?	81·9	?	90·6	?	17·4	114·6	1st	76·1	24th & 30th.	38·5
44	Central Provinces, (East.)	Raipur .	970	28·645	−·007	29·556	28·773	7th	28·384	20th	·389	82·4	95·1	−1·6	77·7	−0·5	86·4	−1·1	17·4	109·5	1st	72·6	17th	36·9
		Sambalpur .	463	29·119	−·009	29·529	29·248	5th & 7th	28·776	20th	·472	86·3	94·5	−2·8	78·2	−2·7	86·4	−2·8	16·3	110·5	1st	73·2	7th & 11th.	37·3
39	Hyderabad, (North).	Aurangabad.	?	27·852	?	?	28·051	1st	27·677	20th	·374	79·3	92·0	?	72·7	?	82·4	?	19·3	101·4	1st	67·4	1st	34·0
		Indur . .	?				Not recorded.					81·6	95·4	?	77·1	?	86·2	?	18·3	102·8	6th	73·8	14th	29·0
		Bidar . .	?	27·559	?	?	27·687	1st	27·386	17th	·301	76·6	92·0	?	72·1	?	82·1	?	19·9	97·5	2nd & 11th.	69·2	13th & 14th.	28·3
53	Hyderabad (South).	Gulbarga .	1,502	28·223	?	29·671	28·346	1st	28·051	17th	·295	79·4	94·3	?	74·4	?	84·3	?	19·9	99·2	11th	69·0	6th	30·2
		Raichur .	1,309	28·433	?	29·680	28·554	1st	28·251	17th	·303	81·2	96·1	?	76·1§	?	86·2§	?	20·0	100·1	13th	60·7	18th	39·4
		Hyderabad (Deccan).	1,690	28·027	−·014	29·649	28·146	1st	27·856	17th	·290	80·2	93·8	+0·5	75·9	+1·9	84·9	+1·2	17·9	100·4	2nd	73·2	7th & 8th.	27·2
		Secunderabad	1,787	27·942	?	29·660	28·052	1st	27·771	17th	·281	79·3	95·2	?	74·4	?	84·8	?	20·8	102·7	1st & 6th.	68·4	8th	34·3
		Khamamet .	373	29·321	?	29·634	29·412	3rd	29·156	17th	·256	86·2	99·2	?	81·1	?	90·2	?	18·1	108·7	2nd	75·8	9th	32·9
	X.—West Coast . .	...	...	...	−·026	...	...	...	...	...	...	...	85·4	+0·5	76·9	+0·9	81·2	+0·7	8·5	...	...	...	...	16·1
37	Konkan . .	Bombay .	37	29·664	−·048	29·640	29·843	1st	29·420	19th	·423	82·7	87·8	+0·5	79·8	+0·5	83·8	+0·5	8·0	93·5	1st	75·0	21st	15·5
		Ratnagiri .	110	29·623	−·038	29·671	29·760	1st	29·418	17th	·342	82·3	87·6	+1·4	78·4	+1·7	83·0	+1·6	9·2	93·4	1st	75·9	3 days	17·5
		Mormugao .	60	29·717	?	29·712	29·840	3rd	29·546	17th	·294	82·1	86·8	?	78·0	?	82·4	?	8·8	91·0	7th	74·4	2nd & 26th.	16·6
		Goa . .	199	29·568	−·020	29·703	29·691	3rd	29·396	17th	·295	81·3	84·2	?	79·3	?	81·8	?	4·9	89·0	2nd	77·0	3 days	12·0
		Karwar .	44	29·715	−·025	29·721	29·853	1st	29·593	16th	·260	81·1	85·4	+0·5	77·0	+1·3	81·2	+0·9	8·4	89·3	1st & 2nd.	74·0	18th	15·3
33	Malabar . .	Cochin .	11	29·865	−·012	29·803	29·940	23rd	29·752	17th	·188	78·8	85·2	+0·7	74·9	+0·5	80·1	+0·6	10·3	88·7	3rd & 4th.	71·7	27th	17·0
		Calicut .	27	29·827	−·016	29·784	29·923	23rd	29·718	14th	·205	78·7	83·8	−0·1	75·3	+1·0	79·6	+0·5	8·5	88·8	2nd	72·0	11th	16·8
		Mangalore .	65	29·766	−·021	29·764	29·846	24th	29·649	15th	·197	79·0	84·6	+0·2	74·9	+0·1	79·8	+0·2	9·7	88·8	2nd	72·4	11th & 27th.	16·4
		Trivandrum.	198	29·680	?	29·810	29·762	5th	29·584	15th	·178	77·8	83·1	?	74·7	?	78·9	?	8·4	86·0	3 days	71·5	15th	14·5
	XI.—South India . .	...	...	...	−·010	...	...	...	...	...	...	...	92·9	+0·6	76·7	+1·1	84·8	+0·9	16·2	...	...	...	...	23·0
57	Madras, (South).	Pamban .	37	29·771	?	29·735	29·843	3rd	29·663	17th	·180	84·0	90·4	?	80·4	?	85·4	?	10·0	95·3	7th	76·7	15th	18·6
		Tinnevelly .	168	29·648	?	29·745	29·721	3rd	29·522	15th	·199	85·6	97·1	?	79·7	?	88·4	?	17·4	103·4	2nd	71·9	22nd	31·5
		Madura . .	447	29·345	−·019	29·724	29·430	3rd	29·218	17th	·212	84·8	98·2	−0·5	78·0	+1·3	88·1	+0·4	20·2	104·5	12th	74·5	7th & 27th.	30·0

* Mean of 18 days. † Mean of 23 days. ‡ Saugor observations for 29 days. § Mean of 2 days.

I—*continued.*

in India, Burma, etc., in June 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.							Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of district.
Calm.	N.	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 to 30th June 1896.	Normal rainfall for period, 1st to 30th June.	Variation from normal of period 1st to 30th June.			
...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·52	6·89	+2·75	...	...	...	...	IX.—Deccan.		
1	...	...	...	1	2	9	13	4	22·2*	24·3	− 9	87	·710	7·9	18	12·27	+5·73	16·38	6·59	+9·79	16·38	6·59	+9·79	2·07	Belgaum .	Bombay, Deccan.	38
1	...	...	1	...	1	15	5	7	16·9	12·2	+39	68	·696	7·2	4	7·82	−3·82	3·19	5·01	−1·82	3·19	5·01	−1·82	1·16	Sholapore.		
...	1	3	...	...	1	9	13	3	16·3	16·0	+ 2	77	·745	7·6	14	7·18	+6·82	6·08	4·73	+1·35	6·08	4·73	+1·35	1·37	Poona.		
...	1	...	...	...	...	10	14	5	10·8	?	?	80	·743	5·6	6	6·30	−0·30	1·96	?	?	1·96	?	?	0·43	Bijapur.		
...	2	...	...	...	1	10	13	4	15·8	11·9	+ 33	83	·871	6·8	12	7·82	+4·18	6·22	4·72	+1·50	6·22	4·72	+1·50	0·89	Malegaon .	Khandesh.	40
...	7	...	...	3	3	9	5	3	22·1	?	?	85	·791	6·9	15	?	?	7·97	?	?	7·97	?	?	1·08	Ahmednagar.		
1	...	...	...	...	1	10	3	5	9·6	8·9	+ 8	77	·853	5·9	9	8·55	+0·45	6·46	5·47	+0·99	6·46	5·47	+0·99	2·42	Akola .	Berar.	41
...	...	...	...	1	2	7	19	1	9·1	7·4	+ 23	79	·793	6·2	12	10·36	+1·64	11·94	6·84	+5·10	11·94	6·84	+5·10	2·03	Amraoti.		
...	...	...	...	...	2	5	17	6	10·4	9·2	+ 13	71	·782	6·4	10	7·91	+2·09	8·39	6·05	+2·34	8·39	6·05	+2·34	3·10	Khandwa .	Central Provinces, West.	42
4	...	...	...	...	1	17	8	...	6·3	4·6	+ 37	74	·821	6·7	10	10·09	−0·09	11·02	8·20	+2·82	11·02	8·20	+2·82	3·97	Hoshangabad		
9	...	...	...	1	5	9	5	1	11·1	7·6	+ 46	75	·812	7·2	11	12·73	−1·73	11·96	8·74	+3·22	11·96	8·74	+3·22	3·11	Nagpur.		
...	...	1	1	2	8	9	7	2	6·3	6·3	0	70	·797	5·3	12	?	?	9·51	7·85	+1·66	9·51	7·85	+1·66	2·81	Chanda .	Central Provinces, Central.	43
Not recorded.									?	5·7	?	67	·736	6·0	15	13·00	+2·00	13·60	10·57	+3·03	13·60	10·57	+3·03	3·26	Seoni.		
1	1	...	...	3	4	10	9	2	5·2	5·3	− 2	68	·763	6·2	12	11·18	+0·82	15·07	9·10	+5·97	15·07	9·10	+5·97	3·69	Jubbulpore.		
1	...	2	...	2	1	5	15	3	4·7¶	5·2	− 10	67	·718	4·8	10	9·73	+0·27	10·93	7·40	+3·53	10·93	7·40	+3·53	4·90	Saugor.‡		
3	4	2	3	2	3	3	7	3	9·5	9·6	− 1	63	·772	5·3	10	5·91	+4·09	7·16	6·54	+0·62	7·16	6·54	+0·62	3·53	Sutna.	Central India.	49
1	...	...	...	1	6	19	3	...	11·2	8·7	+ 29	72	·778	5·9	14	11·55	+2·45	12·71	8·92	+3·79	12·71	8·92	+3·79	4·70	Raipur.	Central Provinces, East.	44
...	...	1	...	4	15	7	1	2	6·6	3·4	+ 94	78	·862	6·7	17	?	?	22·90	11·13	+11·77	22·90	11·13	+11·77	5·04	Sambalpore.		
5	1	1	1	...	4	12	5	1	8·5	?	?	76	·760	8·2	11	?	?	8·75	6·34	+2·41	8·75	6·34	+2·41	3·30	Aurangabad.	Hyderabad (North).	39
1	1	1	...	...	1	6	14	6	11·5	?	?	80	·865	6·5	13	?	?	6·73	4·60	+2·13	6·73	4·60	+2·13	1·75	Indur.		
...	1	1	1	...	...	12	12	3	12·8	?	?	84	·771	5·5	8	?	?	2·20	6·30	−4·10	2·20	6·30	−4·10	0·51	Bidar.		
1	1	1	...	...	...	13	10	4	9·4	?	?	74	·743	7·1	8	?	?	6·23	4·82	+1·41	6·23	4·82	+1·41	2·64	Gulbarga .	Hyderabad (South).	53
...	1	...	...	...	...	11	16	2	17·2	?	?	70	·752	4·8	2	?	?	0·64	?	?	0·64	?	?	0·43	Raichur.		
3	1	...	...	1	...	...	19	6	9·2	?	?	72	·745	5·7	7	?	?	5·20	4·85	+0·35	5·20	4·85	+0·35	1·32	Hyderabad (Deccan), Secunderabad		
..	...	...	1	...	...	15	10	4	10·5	12·3	− 15	68	·690	5·9	7	?	?	4·66	?	?	4·66	?	?	1·40			
9	...	...	...	3	2	8	4	4	8·8	?	?	64	·808	1·4	6	?	?	3·71	?	?	3·71	?	?	1·07	Khamamet.		
...	..	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	29·24	28·45	+0·88	...	...	...	...	X.—West Coast.		
...	3	1	2	7	4	7	5	1	14·7	16·2	− 9	85	·957	8·8	18	14·82	+3·18	27·79	19·37	+8·42	27·79	19·37	+8·42	5·75	Bombay .	Konkan.	37
...	1	4	5	4	4	8	3	1	9·4	12·0	− 22	86	·947	8·2	23	21·45	+1·55	16·31	31·26	−14·95	16·31	31·26	−14·95	2·20	Ratnagiri.		
...	1	...	2	2	5	3	3	13	14·4†	?	?	86	·947	7·1	24	?	?	29·52	?	?	29·52	?	?	6·40	Mormugao.‡		
1	...	5	3	1	2	13	3	2	?	?	?	85	·907	8·6	22	?	?	23·28	30·09	−6·81	23·28	30·09	−6·81	5·42	Goa.		
2	2	...	...	...	...	12	10	4	8·6	?	?	84	·885	7·6	28	24·36	+3·64	35·46	37·24	−1·78	35·46	37·24	−1·78	4·91	Karwar.		
7	3	3	...	...	1	6	6	4	6·4	2·1	+205	87	·866	8·8	25	24·80	+0·20	29·34	28·41	+0·93	29·34	28·41	+0·93	4·55	Cochin .	Malabar.	33
1	1	3	3	4	3	5	3	8	13·9	?	?	88	·859	7·6	25	25·00	0	41·11	33·22	+8·89	41·11	33·22	+8·89	6·09	Calicut.		
6	...	1	3	3	1	6	8	2	3·6	3·7	− 3	89	·886	8·6	29	25·60	+3·40	45·75	35·03	+10·72	45·75	35·03	+10·72	4·22	Mangalore.		
4	14	...	...	...	...	1	4	7	6·9	?	?	86	·822	8·7	22	?	?	14·57	12·95	+1·62	14·57	12·95	+1·62	4·55	Trivandrum.		
..	...	...	...	..	..	...	...	...	...	...	...	...	...	...	...	...	...	4·75	4·56	+0·70	..	...	...	...	XI.—South India.		
...	1	...	...	..	4	20	3	2	15·4	?	?	77	·906	2·8	0	0·30	−0·30	0·08	0·04	+0·04	0·08	0·04	+0·04	0·06	Pamban .	Madras (South).	57
...	3	1	...	...	1	7	5	13	9·3	?	?	68	·835	6·4	1	1·60	−0·60	0·34	?	?	0·34	?	?	0·21	Tinnevelly.		
1	3	...	...	...	2	12	15	7	2·7	4·8	− 44	62	·753	4·2	2	2·00	0	0·60	1·50	−0·90	0·60	1·50	−0·90	0·25	Madura.		

* Mean of 29 days. † Mean of 25 days. ‡ Wind observation of 29 days. ¶ Mean of 28 days

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
24	Madras, South Central.	Salem	940	28·889	−·014	29·766	28·967	23rd	28·757	17th	·210	80·9	95·6	+1·3	75·2	+1·7	85·4	+1·5	20·4	101·4	12th	73·0	4 days.	28·4
		Coimbatore	1,348	28·465	−·014	29·757	28·538	23rd	28·333	17th	·205	77·7	88·2	−1·6	71·4	?	79·8	?	16·8	96·9	12th	68·6	11th & 15th.	28·3
25	Coorg	Mercara	3,781	26·140	−·018	?	26·210	1st	26·036	17th	·174	66·2	71·8	−0·2	64·4	+1·2	68·1	+0·5	7·4	81·5	2nd	62·2	16th	19·3
26	Mysore	Chitaldroog	2,465	27·398	?	29·718	27·492	2nd	27·257	17th	·235	74·5	85·0	?	69·7	?	77·4	?	15·3	92·1	5th & 15th,	66·9	1st	25·2
		Bangalore	3,021	26·834	−·025	29·745	26·916	2nd	26·710	17th	·206	72·0	83·8	−0·8	68·0	+1·4	75·9	+0·3	15·8	92·3	2nd	65·8	14th & 27th,	26·5
		Hassan	3,091	26·776	?	29·768	26·852	1st	29·653	17th	·199	71·4	78·4	?	66·4	?	72·4	?	12·0	86·7	2nd	63·7	11th	23·0
		Mysore	2,518	27·340	?	29·771	27·419	23rd	27·219	17th	·200	74·0	83·6	?	68·7	?	76·1	?	14·9	93·9	2nd	66·5	11th	27·4
56	Madras, East Coast, South.	Negapatam	31	29·760	−·009	29·720	29·840	23rd	29·640	17th	·200	86·7	98·6	+2·0	80·6	+1·8	89·6	+1·9	18·0	103·2	10th	76·4	14th	26·8
		Cuddalore	12	29·766	?	29·707	29·843	23rd	29·652	17th	·191	87·0	100·0	?	80·8	?	90·4	?	19·2	104·3	3 days	78·2	1st	26·1
		Trichinopoly	255	29·537	−·018	29·723	29·609	23rd	29·408	17th	·201	84·4	99·5	+1·0	79·1	+1·1	89·3	+1·1	20·4	105·2	12th	76·4	3 days	28·8
		Madras	22	29·740	−·010	29·692	29·827	2nd	29·617	17th	·210	87·7	100·0	+1·7	82·1	+1·8	91·1	+1·8	17·9	103·0	5 days	75·0	16th	28·0
55	Madras, East-Coast, Central.	Nellore	71	29·657	?	29·661	29·762	2nd	29·511	17th	·251	88·8	102·6	?	82·3	?	92·5	?	20·3	108·8	1st	77·6	18th	31·2
		Masulipatam	15	29·698	+·012	29·647	29·825	9th	29·543	17th	·282	86·0	97·6	+0·1	80·7	+0·6	89·1	+0·4	16·9	109·7	2nd	75·1	9th	34·6
54	Madras, Central	Cuddapah	423	29·320	?	29·688	29·417	2nd	29·169	17th	·248	86·3	100·3	+1·6	80·6	+0·6	90·5	+1·1	19·7	105·2	2nd	75·8	9th & 12th,	29·4
		Kurnool	923	28·816	−·026	29·675	28·923	1st	28·655	17th	·268	82·7	97·9	+2·4	77·6	+1·3	87·8	+1·9	20·3	103·3	2nd	71·9	29th	31·4
		Bellary	1,475	28·290	?	29·700	28·403	1st	28·131	17th	·272	81·2	93·7	−1·0	76·0	+0·5	84·9	−0·3	17·7	100·7	2nd	71·9	1st	28·8
52	Madras, East-Coast, North	Rajahmundry	112				Not recorded.					85·5	97·2	−0·1	80·2	+0·1	88·7	0	17·0	110·3	2nd	73·1	3rd	37·2
		Cocanada	26	29·661	+·013	29·622	29·764	3rd & 4th,	29·502	17th	·262	86·1	96·4	+2·2	81·5	+0·6	89·0	+1·4	14·9	108·0	2nd	72·5	13th	35·5
		Vizagapatam	31	29·624	+·003	29·592	29·742	2nd	29·439	20th	·303	84·9	92·9	−0·7	81·2	+1·5	87·1	+0·4	11·7	101·7	24th	76·4	26th	25·3
		Gopalpur	21	29·602	?	29·563	29·743	4th	29·355	20th	·388	82·8	88·1	?	79·1	?	83·6	?	9·0	97·7	17th	74·6	2nd	23·1
	XII.—Hill Stations.																							
48	Baluchistan	Kachh	?	23·726	?	?	23·850	6th	23·550	27th	·300	75·9 (a)	90·9 (a)	?	?	?	?	?	?	98·0 (a)	23rd	?	...	?
		Pishin	?				Not recorded.					?	104·2	?	56·9 (a)	?	80·6	?	47·3	111·9	13th & 19th.	48·9 (a)	3 days	63·0
		Quetta	5,502	24·479	+·002	?	24·617	6th	24·265	27th	·352	76·8 (a)	91·5	+0·9	60·8 (a)	+1·6	76·2	+1·3	30·7	96·6	23rd	48·9 (a)	7th	47·7
		Kalat	?				Not recorded					74·0 (a)	94·1	?	47·3 (a)	?	70·7	?	46·8	100·3	30th	33·4 (a)	7th	66·9
		Chaman	4,311	25·466	?	?	25·682	5th	25·229	26th	·453	83·7	101·7	?	67·1	?	84·4	?	34·6	109·0	21st	52·1	11th & 13th,	56·9
30	Punjab	Leh	11,503	19·682	?	?	19·813	12th	19·475	27th	·338	56·4	75·7	?	46·5	?	61·1	?	29·2	88·2	22nd	38·2	6th	50·0
		Srinagar	5,204	24·718	?	?	24·900	6th	24·442	26th	·458	71·4	88·2	?	60·7	?	74·5	?	27·5	94·9	14th	51·2	3rd & 6th.	43·7
		Gilgit	?	24·524	?	?	24·730	2nd	24·210	26th	·520	82·1	99·5	?	71·5	?	85·5	?	28·0	109·2	26th	55·7	6th	53·5
		Samana	?	23·583	?	?	23·780	12th	23 380	27th	·400	?	81·6	?	43·3	?	62·4	?	38·3	91·1	13th	42·0	12 days.	49·1
		Cherat	?	25·500	?	?	25·672	6th	25·264	27th	·408	83·7	99·6	?	?	?	?	?	?	110·0	22nd	?	...	?
		Murree	6,344	23·744	+·024	?	23·868	6th	23·519	27th	·349	72·6	83·8	+1·8	64·7	+0·3	74·3	+1·1	19·1	94·7	22nd	46·1	6th	48·6
		Poo	?				Not recorded.					?	78·3*	?	56·8	?	68·0*	?	22·5	88·3	21st	46·4	8th	41·9
		Simla	7,224	23·019	+·013	?	23·130	13th	22·803	26th	·327	66·4	75·0	−0·3	61·6	+1·0	63·3	+0·4	13·4	84·4	14th	53·3	7th	31·1
25	N.-W. Provinces.	Chakrata	6,877	23·221	+·024	?	23·334	13th	22·998	26th	·336	64·3	71·6	−3·3	60·4	+0·7	66·0	−1·3	11·2	76·7	1st	53·8	8th	22·9
		Mussooree	6,705	23·419	?	?	23·532	13th	23·197	26th	·335	66·1	75·1	−0·9	61·3	+0·8	68 2	−0·1	13·8	84 3	1st	53·9	3rd & 8th	30·4
		Ranikhet	6,069	23·985	+·029	?	24·093	13th	23·764	26th	·329	66·7	76·9	−1·1	62·3*	−0·9	69·7*	−1·0	14·6	86·1	1st	56 0	3rd & 9th	30·1
13	Bengal	Yatung	10,4809	?	?	?	Not recorded.					?	63·3	?	55·7	?	59·5	?	7·6	69·0	15th & 18th,	50·9	1st & 2nd	18·1
		Gnatong	?	19·245	?	?	19·341	13th	19·129	27th	·212	48·9	53·7	?	42·3	?	48·1	?	11·4	64·3	14th	34·1	1st	30·2
		Darjeeling	7,421	22·883	−·003	?	22·983	13th	22·726	27th	·257	60·5	65·4	+0·2	56·2	+0·9	60·8	+0·6	9·2	72·1	16th	50·7	1st	21·4
		Gantok	5,660	24·346	?	?	24·427	1st & 2nd.	24·210	25th	·217	66·6	74·5	?	54·2	?	64·4	?	28·3	80·2	15th	48·2	1st	32·0

(a) Uncorrected.

* Mean of 28 days.

1—*continued.*

in India, Burma, etc., in June 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8A.M.		Mean cloud amount.	Rainfall.									Station.	Meteorological Province or District.	Number of 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 1896.	Normal rainfall for period, 1st June to 30th June.	Variation from normal of period, 1st to 30th June.	Heaviest rainfall during month.			
...	1	1	...	...	4	19	4	1	7·6	4·9	+ 55	73	·774	5·7	7	6·00	+1·00	2·07	3·68	−1·61	2·07	3·68	−1·61	0·55	Salem . .	Madras, South, Central.	36
...	...	...	...	...	...	...	30	...	6·8	7·7	− 12	81	·775	6·7	13	4·55	+8·45	4·18	1·43	+2·75	4·18	1·43	+2·75	0·73	Coimbatore.		
5	1	...	...	...	2	6	11	5	9·6	9·0	+ 7	94	·614	9·3	23	25·00	−2·00	48·59	25·71	+22·88	48·59	25·71	+22·88	7·03	Mercara .	Coorg.	35
...	...	...	...	1	1	12	14	2	12·5	?	?	81	·695	8·0	11	?	?	3·58	?	?	3·58	?	?	0·52	Chitaldroog .	Mysore.	36
...	...	...	...	...	...	14	15	1	12·0	8·4	+ 43	82	·647	7·9	6	5·91	+0·09	2·16	3·45	−1·29	2·16	3·45	−1·29	0·47	Bangalore		
...	1	...	...	...	1	10	14	4	5·5	?	?	85	·650	9·0	19	?	?	9·10	?	?	9·10	?	?	1·56	Hassan.		
...	...	1	...	...	...	16	12	1	15·1	?	?	79	·656	8·3	9	?	?	5·74	?	?	5·74	?	?	1·77	Mysore.		
1	...	...	...	...	...	19	7	3	11·4	8·3	+ 37	64	·814	4·8	2	3·09	−1·09	1·14	1·74	−0·60	1·14	1·74	−0·60	1·04	Negapatam .	Madras, East-Coast, South.	56
...	...	2	...	...	4	10	8	6	3·1	?	?	70	·906	4·2	0	3·30	−3·30	0·09	?	?	0·09	?	?	0·06	Cuddalore.		
...	...	...	...	...	...	10	18	2	10·2	9·2	+ 11	60	·711	6·2	1	2·00	−1·00	0·25	1·62	−1·37	0·25	1·62	−1·37	0·18	Trichinopoly.		
...	...	...	...	...	3	15	9	3	7·9	9·0	− 12	62	·822	5·9	2	4·18	−2·18	1·49	2·11	−0·62	1·49	2·11	−0·62	1·15	Madras.		
8	...	...	...	1	2	...	12	7	9·8	?	?	59	·802	8·4	3	3·10	−0·10	1·16	?	?	1·16	?	?	0·58	Nellore .	Madras, East Coast, Central.	55
1	1	...	...	...	5	4	10	9	11·6	9·4	+ 23	79	·982	7·8	8	7·00	+1·00	4·52	5·52	−1·00	4·52	5·52	−1·00	1·50	Masulipatam.		
...	...	...	...	...	...	6	15	9	?	?	?	61	·767	6·7	3	5·50	−2·50	3·37	4·11	−0·74	3·37	4·11	−0·74	1·96	Cuddapah .	Madras, Central.	54
3	...	...	...	...	...	3	17	7	?	?	?	62	·698	6·3	6	5·50	+0·50	1·20	3·95	−2·75	1·20	3·95	−2·75	0·31	Kurnool.		
1	...	...	...	1	...	12	14	2	10·0	10·5	− 5	55	·592	8·2	3	3·64	−0·64	0·83	1·85	−1·02	0·82	1·85	−1·02	0·25	Bellary.		
1	...	...	...	...	7	5	17	...	?	?	?	70	·862	7·0	8	6·60	+1·40	7·17	5·79	+1·38	7·17	5·79	+1·38	2·55	Rajahmundry	Madras, East-Coast, North.	52
...	1	...	...	...	1	14	14	...	8·6	?	?	70	·879	5·8	6	6·00	0	3·59	5·37	−1·78	3·59	5·37	−1·78	1·62	Cocanada.		
17	...	...	...	...	...	7	6	...	3·1	3·8	− 18	77	·928	7·8	6	6·64	−0·64	2·85	3·49	−0·64	2·85	3·49	−0·64	0·98	Vizagapatam.		
3	...	1	...	...	8	16	2	...	16·2	11·6	+ 40	88	·981	4·8	13	7·44	+5·56	5·19	6·09	−0·90	5·19	6·09	−0·90	0·91	Gopalpur.		
XII.—Hill Stations.																											
		Not	recorded.						3·0	?	?	521	·461‡	?	3	?	?	0·70	?	?	0·70	?	?	0·30	Kachh .	Baluchistan.	8
		Not	recorded.						?	?	?	?	?	?	1	?	?	0·15	?	?	0·15	?	?	0·11	Pishin.		
25	...	...	...	...	2	2	1	...	1·9	4·7	− 60	52	·486	1·2	4	0·36	+3·64	1·14	0·12	+1·02	1·14	0·12	+1·02	0·74	Quetta.		
...	...	...	...	...	30	...	...	...	?	?	?	?	?	?	3	?	?	2·47	?	?	2·47	?	?	2·00	Kalat.		
...	4	2	6	4	6	5	1	2	10·2	?	?	26	·327	8·0	1	?	?	0·60	?	?	0·60	?	?	0·60	Chaman.		
...	...	1	...	...	2	?	24	2	2·8	2·4	+ 17	39	·186	2·6	0	?	?	0	?	?	0	?	?	0	Leh . .	Punjab.	30
8	2	3	4	4	3	1	2	3	5·0	?	?	81	·642	2·5	2	?	?	1·38	?	?	1·38	?	?	0·98	Srinagar.		
		Not	recorded.						?	?	?	34	·349	2·2	2	?	?	0·52	?	?	0·52	?	?	0·24	Gilgit.		
		Not	recorded.						?	?	?	?	?	2·9	5	?	?	3·68	?	?	3·68	?	?	1·75	Samana.		
11	7	1	...	6	3	...	1	1	6·2	?	?	42	·470	2·0	0	?	?	0	?	?	0	?	?	0	Cherat.		
10	...	3	1	8	1	...	3	4	7·9	6·6	+ 20	54	·418	3·7	8	4·55	+3·45	4·48	2·87	+1·61	4·48	2·87	+ 1·61	1·47	Murree.		
26	...	1	...	...	...	1	2	...	?	?	?	?	?	4·1	0	?	?	0·04	?	?	0·04	?	?	0·04	Poo.		
11	5	4	2	...	4	3	...	1	3·5	2·3	+ 52	69	·441	6·1	10	10·00	0	9·42	6·79	+ 2·63	9·42	6·79	+ 2·63	2·16	Simla.		
10	3	1	...	6	10	...	...	...	12·4	5·7	+118	78	·467	1·6	16	?	?	11·14	6·91	+ 4·23	11·14	6·91	+ 4·23	2·82	Chakrata .	North-Western Provinces.	25
...	2	2	10	...	1	3	4	8	?	10·9	?	81	·522	5·9	13	10·20	+2·80	16·23	8·70	+7·53	16·23	8·70	+ 7·53	3·28	Mussooree.		
6	4	10	1	1	...	2	4	2	3·6	3·2	+ 13	84*	·550*	7·1	18	9·12	+8·88	10·84	5·94	+4·90	10·84	5·94	+ 4·90	2·36	Ranikhet.		
		Not	recorded.						?	?	?	?	?	?	14	?	?	5·31	?	?	5·31	?	?	0·94	Yatung.	Bengal.	13
5	...	2	5	9	2	1	3	3	4·9	?	?	81	·280	3·9	23	?	?	17·20	?	?	17·20	?	?	3·34	Gnatong.		
...	1	4	6	5	3	3	6	2	4·7	4·7	0	95	·504	?	17	21·04	−4·04	32·71	23·69	+9·02	32·71	23·69	+ 9·02	8·91	Darjeeling.		
18	...	1	...	3	1	4	4	3	?	?	?	89	·585	?	19	?	?	18·69	?	?	18·69	?	?	2·80	Gantok. (a)		

‡ Mean of 29 days.

(a) Winds of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Meteorological Province or District.	Stations.	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	25·829	−·040	?	26·008	12th	25·644	27th	·364	73·7	82·4	−0·9	68·6	+0·6	75·5	−0·2	13·8	91·2	9th	63·8	29th & 30th.	27·4
	Pachmarhi .	3,528	26·237	−·013	?	26·38[illegible]	1st	26·000	21st	·385	75·6	86·0	+0·4	71·9	+0·2	79·0	+0·3	14·1	96·7	3rd & 5th	66·2	28th	30·5
SOUTH INDIA .	Wellington .	6,200	24·173	−·020	?	24·24[illegible]	2nd	24·061	17th	·182	65·0	72·3	+0·5	57·6	−0·6	65·0	−0·1	14·7	77·2	3rd	54·1	21st & 27th.	23·1
XIII.—Extra India.																							
CEYLON . .	Trincomalee.	12	29·787	?	29·726	29·863	3rd	29·685	17th	·178	83·1	91·9	?	79·2	?	85·5	?	12·7	97·0	7th	76·0	13th	21·0
	Colombo .	40	29·834	−·030	29·800	29·903	5th	29·742	13th	·161	80·8	85·7	?	77·4	?	81·6	?	8·3	88·0	3 days	73·0	5th	15·0
PERSIA . .	Meshed .	3,104				Not recorded.					76·7	?	?	63·3	?	?	?	?	?	...	54·8	14th & 15th.	?
	Resht .	?				Not recorded.					72·9	80·6	?	66·3	?	73·5	?	14·3	90·2	15th	60·3	12th	29·9
	Teheran .	?	25·848	?	?	26·100	13th	25·655	17th	·445	77·3	91·8	?	64·4	?	78·1	?	27·4	100·8	9th	54·1	3rd	46·7
			25·417	?	?	25·630	13th	25·260	17th	·370													
	Ispahan .	?	24·314	?	?	24·570	5th	24·160	28th	·410	76·7	93·7	?	61·8	?	77·7	?	31·9	97·9	11th	51·3	3rd	46·6
			24·623	?	?	24·850	5th	24·490	25th & 27th.	·360													
	Bushire .	14	29·567	−·010	29·540	29·769	5th	29·402	27th	·367	84·2	89·8	−2·5	80·1	−0·1	85·0	−1·3	9·7	98·5	8th	73·5	5th	25·0
	Jask .	?	29·537	?	29·489	29·742	5th	29·342	20th	·400	90·2	95·9	?	84·4	?	90·2	?	11·5	104·7	7th & 20th.	79·2	8th	25·5
ARABIA . .	Muscat .	?	29·539	?	?	29·750	5th	29·366	22nd	·384	90·5	93·6	?	88·4	?	91·0	?	5·2	104·2	21st	84·0	1st	20·2
	Baghdad .	220?	29·553	?	29·745	29·760	8th	29·355	27th	·405	82·5†	97·3†	?	75·5†	?	86·4†	?	21·8	102·7	14th	68·2	3rd	34·5
	Aden . .	94	29·618	−·044	29·642	29·720	4th	29·499	16th	·221	88·0	96·6	+2·6	84·0	+1·0	90·3	+1·8	12·6	100·8	3rd	78·8	30th	22·0
	Perim . .	?	29·531	?	?	29·632	29th	29·423	16th	·209	88·7	96·7	?	84·6*	?	90·6*	?	12·1	103·3	15th	82·8	5th	20·5
AFGHANISTAN .	Kabul . .	?				Not received					76·4	91·8	?	59·0	?	75·4	?	32·8	100·1	23rd	52·0	17th	48·1
CENTRAL ASIA .	Kashgar .	?	25·651	?	?	25·840	12th	25·480	26th	·360	77·1	89·3	?	66·2	?	77·8	?	23·1	100·1	23rd	54·4	7th	45·7
ARABIAN SEA ISLANDS.	Amini Devi.	15	...	...	...	...	...	...	Not received.		...	...	...	...	...	...	...	...	..	...	...	...	...
AFRICA . .	Zanzibar .	73	30·055	?	30·055	30·150	29th	29·992	17th	·158	76·2	82·4	?	75·3	?	78·8	?	7·1	85·0	16th	71·9	25th	13·1

* Mean of 27 days.

† Mean of 28 days.

I—*concluded.*

in India, Burma, etc., in June 1896—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 30th June 1896.	Normal rainfall for period, 1st June to 30th June.	Variation from normal of period, 1st June to 30th June.	Heaviest rainfall during month.		
...	2	4	...	3	...	17	3	1	10·8	10·1	+ 7	76	·612	5·6	14	6·70	+7·30	12·69	6·13	+6·56	12·69	6·13	+6·56	2·55	Mount Abu.	Central India.
7	1	...	...	...	1	8	9	4	15·2	7·7	+97	79	·686	7·3	15	11·64	+3·36	14·79	9·80	+4·99	14·79	9·80	+4·99	3·37	Pachmarhi.	
6	1	...	...	1	3	12	4	3	5·1	5·1	0	74	·459	7·8	13	7·22	+5·78	5·26	3·73	+1·53	5·26	3·73	+1·53	0·70	Wellington.	South India.
																									XIII.—Extra India.	
1	...	...	...	...	...	29	...	...	13·7	?	?	77	·369‡	3·2	1	?	?	0·33	1·21	−0·88	0·33	1·21	−0·88	0·17	Trincomalee	Ceylon.
...	1	...	...	3	3	12	8	3	10·7	10·2	+ 5	85	·894	6·4	11	?	?	8·37	7·24	+1·13	8·37	7·24	+1·13	1·84	Colombo.	
			Not	rec	orde	d.			?	?	?	?	?	2·3	2	?	?	1·00	?	?	1·00	?	?	0·71	Meshed.	Persia.
			Not	rec	orde	d.			?	?	?	73	·587	?	6	?	?	1·78	?	?	1·78	?	?	0·40	Resht.	
17	...	1	...	1	5	5	1	...	3·8	?	?	34	·312	1·4	0	?	?	0	?	?	0	?	?	0	Teheran.	
...	3	2	2	...	...	2	6	15	4·4	?	?	50	·465	0	0	?	?	0	?	?	0	?	?	0	Ispahan.	
...	3	1	...	2	...	2	1	21	13·3	10·8	+23	67	·783	0	0	?	?	0	?	?	0	?	?	0	Bushire.	
1	1	...	13	6	1	...	3	5	10·9	?	?	67	·949	1·1	0	?	?	0	?	?	0	?	?	0	Jask.	
...	2	3	10	4	...	...	2	9	4·2	?	?	74	1·041	1·8	0	?	?	0	?	?	0	?	?	0	Muscat.	Arabia.
1	17	2	1	...	...	...	1	8	5·8	?	?	48†	·534†	0	0	?	?	0	?	?	0	?	?	0	Baghdad.	
5	...	...	2	1	7	13	2	...	10·3‡	7·6	+36	69	·903	4·3	0	?	?	0	0·01	−0·01	0	0·01	−0·01	0	Aden.	
1	4	1	...	...	2	7	10	5	14·8	?	?	64	·863	2·8	0	?	?	0	?	?	0	?	?	0	Perim.	
...	8	...	13	...	...	...	9	...	?	?	?	?	?	0	0	?	?	0	?	?	0	?	?	0	Kabul.	Afghanistan.
24	1	1	...	...	...	...	...	3	3·4	?	?	36‡	·329‡	3·3	1	?	?	0·15	?	?	0·15	?	?	0·13	Kashgar (a).	Central Asia.
...	...	...	...	...	...	...	...	...	...	...	...	...	Not	receiv	ed.	...	...	...	...	...	...	...	...	...	Amini Devi.	Arabian Sea Islands.
...	...	...	...	1	17	12	...	...	7·7	?	?	83	·753	5·4	2	?	?	0·48	?	?	0·48	?	?	0·13	Zanzibar.	Africa.

‡ Mean of 29 days.

(a) Wind observation of 29 days.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·760	29·678	·082	29·715	−·010	29·707	85·7	78·7	7·0	90·6	76·0	14·6	83·9	83·4	81·2	+0·4	76·4	80·0	79·5	78·6
	Rangoon	...	·753	·665	·088	·719	−·019	·697	87·2	77·2	10·0	92·3	75·1	17·2	82·8	82·2	80·1	+0·8	75·3	79·3	78·6	77·7
	Diamond Island	...	·733	·657	·076	·691	−·028	·667	85·9	78·8	7·1	89·6	74·8	14·8	84·2	83·2	81·1	+1·9	76·1	79·0	78·5	77·9
	Cocos Island	111	·608	·539	·069	·570	?	·611	87·2	78·5	8·7	93·0	74·8	18·2	84·5	84·0	81·6	?	75·9	80·3	79·8	78·7
	Akyab	...	·691	·597	·094	·647	−·030	·610	85·7	77·9	7·8	89·2	75·4	13·8	82·5	83·5	80·9	−0·4	75·8	80·0	80·6	78·8
Assam.	Silchar	...	·572	·447	·125	·520	−·019	·573	91·5	77·0	14·5	96·2	70·3	25·9	84·9	88·1	83·0	+1·4	75·3	79·4	80·2	78·3
	Sibsagar	...	·317	·206	·141	·279	−·023	·561	91·2	77·0	14·2	97·0	72·4	24·6	84·9	90·2	83·2	+1·7	75·7	80·0	82·4	79·4
	Dhubri	...	·536	·417	·119	·485	−·006	·553	88·6	*78·3	10·3*	93·2	72·8	20·4	83·4	86·9	*82·2	+2·9	76·1	79·1	80·2	78·5
Bengal and Orissa.	Chittagong	...	·580	·478	·102	·535	−·032	·569	86·6	76·8	9·8	91·8	72·1	19·7	83·4	83·7	80·7	+0·2	75·6	79·2	79·4	78·1
	Narayanganj	...	·607	·504	·103	·563	−·019	·537	88·5	78·1	10·4	92·4	72·1	20·3	84·0	85·5	82·8	−0·3	75·6	80·2	80·4	78·7
	Calcutta (Alipore)	...	·563	·481	·082	·528	−·018	·494	89·7	77·1	12·6	93·9	72·7	21·2	85·1	85·5	83·0	−1·7	75·6	79·9	79·7	78·4
	Saugor Island	...	·565	·480	·085	·529	−·019	·497	89·0	80·4	8·6	92·9	71·2	21·7	85·6	86·7	83·6	−1·2	77·5	81·3	81·6	80·1
	Burdwan	...	·478	·390	·088	·441	−·013	·494	91·9	78·6	13·3	99·4	73·0	26·4	85·6	87·5	83·4	−1·9	76·5	79·2	79·4	78·4
	Berhampore	...	·534	·429	·105	·489	−·008	·503	90·9	77·9	13·0	98·9	72·3	26·6	85·1	88·7	83·2	−1·6	75·9	79·6	80·7	78·7
	False Point	..	·585	·500	·085	·547	−·017	·508	88·2	*78·7	*9·5	91·5	70·4	21·1	85·8	85·2	*82·2	−1·8	76·3	80·3	80·4	79·0
	Cuttack	...	·522	·422	·100	·481	−·020	·502	91·6	78·4	13·2	99·4	74·4	25·0	85·6	87·9	83·8	−2·0	76·1	78·9	79·7	78·2
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·595	27·504	·091	27·559	−·018	·470	90·4	74·5	15·9	99·9	67·8	32·1	83·6	84·1	80·5	−1·7	69·4	74·4	74·5	72·8
	Patna	...	29·393	29·277	·116	29·341	−·008	·472	96·7	79·6	17·1	104·4	69·6	34·8	89·8	92·7	86·2	−1·0	76·6	79·5	79·6	78·6
	Darbhanga	...	·430	·309	·121	·376	−·007	·491	93·3	79·2	14·1	100·2	72·5	27·7	88·0	91·5	84·8	+0·2	76·6	80·3	80·6	79·2
	Allahabad	...	·248	·129	·119	·191	−·011	·444	99·6	81·6	18·0	111·6	72·2	39·4	91·3	96·7	89·3	−1·6	75·7	79·2	79·5	78·1
	Lucknow	...	·201	·077	·124	·140	−·011	·456	99·1	81·6	17·5	107·3	77·3	30·0	90·4	96·4	90·1	−1·5	76·2	79·3	80·1	78·5
Upper Sub-Himalayas.	Dehra Dun	...	27·415	27·319	·096	27·357	+·005	·493	90·4	74·4	16·0	98·3	64·4	33·9	83·2	86·4	81·6	−2·3	70·0	74·6	75·7	73·4
	Roorkee	...	28·684	28·576	·108	28·625	+·012	·452	97·3	78·6	18·7	106·7	70·9	35·8	89·4	94·9	87·6	−2·2	72·8	76·7	77·8	75·8
	Meerut	...	·825	·710	·115	·759	0	·439	98·7	80·8	17·9	108·7	73·7	35·0	90·1	95·8	89·2	−1·9	75·7	77·5	78·4	77·2
	Lahore	...	·823	·709	·114	·760	−·010	·398	106·8	85·0	21·8	117·0	75·6	41·4	96·7	104·8	95·0	+4·0	73·4	78·7	79·9	77·3
	Ludhiana	...	·737	·623	·114	·674	−·006	·421	103·9	83·0	20·9	114·7	75·8	38·9	93·8	102·2	92·9	+1·5	73·6	78·5	79·3	77·1
Indus Valley and N.W. Rajputana.	Peshawar	...	·417	·310	·107	·358	−·023	·397	109·0	81·7	27·3	118·0	74·2	43·8	98·8	106·2	94·2	+4·6	68·7	75·2	76·3	73·4
	Mooltan	...	29·063	·971	·092	29·011	−·026	·377	110·9	88·2	22·7	119·5	81·6	37·9	100·9	108·7	98·6	+4·5	75·5	82·5	84·7	80·9
	Jacobabad	...	·291	29·168	·123	·224	−·033	·356	114·6	88·6	26·0	122·9	79·5	43·4	103·9	113·1	100·8	+4·0	74·8	82·0	83 1	80·0
	Kurrachee	...	·538	·464	·074	·502	−·054	·464	94·6	83·2	11·4	105·5	75·9	29·6	91·2	91·0	87·7	+0 8	80·2	83·5	83·2	82·3
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·166	28·061	·105	28·114	−·017	·453	101·9	81·9	20·0	111·7	74·8	36·9	93·2	98·5	91·0	+0·3	72·9	76·7	76·7	75·4
	Ajmere	...	27·994	27·887	·107	27·947	−·035	·465	99·0	81·6	17·4	108·9	73·6	35·3	90·9	96·8	89·0	+0·7	73·9	78·3	79·3	77·2
	Deesa	...	29·138	29·020	·118	29·084	−·039	·490	99·5	80·5	19·0	111·6	75·0	36·6	90·1	97·1	88·8	−1·2	75·3	79·1	79·2	77·9
	Nuwgong	...	28·794	28·692	·102	28·747	−·031	·432	100·4	83·6	16·	113·8	74·0	39·8	92·8	97·9	91·1	−0·3	75·4	78·3	78·3	77·3
	Agra	...	·994	·877	·117	·929	−·025	·422	101·7	84·9	16·8	112·4	78·3	34·1	94·7	99·3	92·9	−1·7	76·1	79·3	79·7	78·4
Deccan.	Belgaum	...	27·254	27·177	·077	27·220	−·029	·647	81·0	68·9	12·1	90·0	65·9	24·1	76·3	76·3	73·3	+0·9	67·5	71·3	71·1	70·0
	Sholapur	...	28·136	28·021	·115	28·089	−·028	·589	93·7	73·8	19·9	100·4	71·4	29·0	84·4	90·9	82·1	+0·5	70·7	73·4	73·8	72·6
	Poona	...	27·875	27·796	·079	27·843	−·033	·598	88·5	72·8	15·7	96·1	70·4	25·7	82·0	83·0	79·0	−0·3	70·7	73·9	73·9	72·8
	Akola	...	28·717	28·590	·127	28·659	−·031	·519	97·2	77·4	19·8	106·1	73·9	32·2	88·7	93·9	85·6	+0·1	73·9	78·6	80·1	77·6
	Buldana	2,132	27·559	27·456	·103	27·513	−·027	·535	91·1	72·9	18·2	99·3	69·5	29·8	83·4	88·0	80·3	−0·3	69·1	73·7	73·3	72·1
	Khandwa	...	28·605	28·481	·124	28·548	−·020	·524	95·5	76·4	17·1	106·2	74·1	32·1	87·4	92·4	86·0	−0·9	73·1	76·6	76·5	75·4

*Mean of 29 days.

II.

85 Stations in India, Burma, etc., for June 1896.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·882	·973	·960	·938	+·025	90	84	83	86	0	8·6	8·8	8·7	+1·5	...	1	...	...	2	12	24	18	3	S. 53° W.	S. 38° W.	75	82	269	227	...	...	Port Blair .	Burma Coast and Bay Islands.
·852	·957	·933	·914	+·012	91	85	85	87	−2	8·1	9·0	8·6	−0·1	...	1	...	...	4	20	25	8	2	S. 32° W.	S. 19° W.	75	71	118	130	...	...	Rangoon .	
·863	·923	·913	·900	+·010	88	79	80	82	−5	8·3	8·8	8·6	+0·8	...	...	...	...	2	6	41	10	1	S 47° W.	S. 32° W.	87	75	320*	207	...	...	Diamond Island, Cocos Island	
·861	·980	·964	·935	?	88	83	83	85	?	8·1	8·3	8·2	?	...	...	...	...	2	23	31	4	...	S. 28° W.	?	84	?	?	?	14·92	1·58		
·868	·994	1·009	·957	+·041	91	89	88	89	+3	8·7	8·6	8·7	+1·4	...	3	3	9	7	22	6	8	2	S. 6° E.	S. 2° E.	42	58	105	96	...	...	Akyab .	
·856	·935	·929	·907	0	92	78	71	80	−5	8·6	7·8	8·2	+0·4	32	2	3	4	1	1	5	9	3	N. 83° W.	N. 58° E.	13	9	98*	72	...	...	Silchar .	Assam.
·874	·963	1·007	·948	+·031	94	80	71	82	−2	8·0	4·3	6·1	−2·3	...	3	17	7	5	4	19	2	3	S. 53° E.	S. 77° E.	10	11	120*	62	...	...	Sibsagar .	
·874	·963	1·007	·948	+·031	94	80	71	82	−2	8·0	4·3	6·1	−2·3	...	3	17	7	5	4	19	2	3	S. 53° E.	S. 77° E.	10	11	120*	62	...	...	Sibsagar .	
·881*	·940	·941	·921	+·025	91*	82	74	81	−7	7·8	5·2	6·5	−0·8	?	?	?	?	?	?	?	?	?	?	S. 84° E.	?	23	?	116	...	...	Dhubri .	
·870	·941	·950	·920	+·072	94	82	82	86	0	8·6	7·5	8·1	+0·6	2	1	3	3	15	12	16	6	2	S. 6° W.	S. 31° E.	50	56	152*	166	...	...	Chittagong	
·857	·983	·974	·988	−·033	88	84	80	84	−3	8·9	8·3	8·6	+1·0	...	...	4	10	23	17	4	2	...	S. 36° E.	S. 16° E.	68	75	191	172	...	...	Narayanganj	Bengal and Orissa.
·870	·954	·938	·921	−·050	93	79	77	83	0	7·2	8·3	7·8	+0·7	2	6	4	5	8	16	17	1	1	S. 1° W.	S. 4° E.	40	59	133	146	...	...	Calcutta (Alipore), Saugor Island	
·903	1·014	1·013	·978	−·018	87	83	80	83	0	8·6	8·1	8·4	+0·9	1	3	3	1	8	22	14	4	4	S. 15° W.	S. 15° W.	52	69	330	350	...	...		
·888	·912	·899	·900	−·029	91	75	70	79	+2	7·7	7·8	7·8	+0·5	1	5	5	6	12	12	14	3	2	S. 10° E.	S. 20° E.	35	58	128*	118	...	...	Burdwan .	
·872	·941	·941	·918	−·018	91	78	70	80	−3	7·3	7·0	7·1	−1·1	1	4	52	20	12	9	5	2	2	S. 64° E.	S. 33° E.	47	48	120*	133	...	...	Berhampore	
·889*	·961	·977	·942	−·028	90*	78	81	83	0	7·6	8·0	7·8	+0·9	...	...	...	1	5	21	17	14	2	S. 33° W.	S. 45° W.	70	63	374*	288	...	...	False Point	
·875	·898	·908	·894	+·004	90	74	70	78	+5	6·3	7·3	6·8	+0·1	3	1	1	1	1	11	21	19	2	S. 54° W.	S. 31° W.	67	53	119	96	...	...	Cuttack .	
·856	·738	·734	·709	+·024	77	66	65	69	+4	7·4	9·5	8·5	+1·2	1	6	4	9	6	14	4	8	8	S. 3° W.	S. 36° W.	12	19	260	213	...	...	Hazaribagh	Gangetic Plain and Chota Nagpur.
·877	·873	·841	·864	−·010	87	63	56	69	0	5·8	6·2	6·0	−0·1	2	...	9	29	10	2	1	5	2	S. 87° E.	N. 73° E.	59	45	201*	106	...	...	Patna .	
·883	·933	·901	·906	−·007	88	71	62	74	−3	4·9	4·7	4·8	+0·1	...	1	9	24	19	2	2	2	0	S. 76° E.	S. 89° E.	68	71	162	139	...	...	Darbhanga	
·813	·837	·776	·809	+·046	76	58	48	61	+6	5·8	4·9	5·4	+0·8	2	3	13	19	6	...	3	9	5	N. 62° E.	N. 2° E.	34	12	207	102	...	...	Allahabad .	
·833	·855	·808	·832	+·072	77	61	49	62	+7	5·8	4·7	5·3	+0·6	1	5	13	24	7	1	3	1	5	N. 73° E.	N. 51° E.	55	17	?	102	...	...	Lucknow .	
·683	·751	·759	·731	?	80	67	62	70	?	4·5	6·4	5·4	+1·2	11	...	3	4	19	11	8	4	...	S. 19° E.	S. 66° W.	50	12	26	39	...	...	Dehra Dun	
·724	·754	·726	·735	+·098	75	56	46	59	+8	3·5	3·0	3·3	+0·2	21	...	4	4	20	2	4	2	3	S. 45° E.	S. 4° E.	33	11	98	94	...	...	Roorkee .	Upper Sub-Himalayas.
·825	·776	·740	·780	+·095	79	57	47	61	+11	4·6	3·7	4·2	+1·0	22	...	4	13	15	...	1	2	3	S. 73° E.	N. 26° W.	38	22	54*	64	...	...	Meerut .	
·675	·744	·691	·703	+·095	57	44	33	44	+6	2·0	1·8	1·9	−1·3	4	4	3	8	18	7	5	8	3	S. 31° E.	N. 19° W.	30	11	90	85	...	...	Lahore .	
·709	·771	·695	·725	+·092	64	51	36	50	+3	2·5	2·5	2·6	−0·5	6	...	3	1	37	2	7	2	2	S. 35° E.	N. 74° W.	60	10	90	60	...	...	Ludhiana .	
·553	·590	·534	·559	+·050	50	33	24	36	−1	0·6	2·5	1·6	−0·4	10	6	10	7	4	5	6	4	8	N. 23° E.	N. 44° E.	12	32	107*	112	...	...	Peshawar .	
·720	·868	·874	·821	+·077	54	44	36	45	−3	0	0·8	0·4	−0·5	17	2	8	1	5	6	19	2	...	S. 19° W.	S. 25° W.	27	33	87*	87	...	...	Mooltan .	Indus Valley and N.-W. Rajputana.
·691	·803	·738	·747	+·079	52	38	27	39	−1	0·3	0·9	0·6	−0·2	8	5	4	10	11	17	2	2	1	S. 43° E.	S. 31° E.	40	46	160*	117	...	...	Jacobabad .	
·992	1·047	1·035	1·025	+·076	87	72	71	77	+3	5·2	5·4	5·3	+1·0	...	...	...	1	1	2	28	27	1	S. 65° W.	S. 58° W.	85	85	392*	447	...	...	Kurrachee .	
·999	·713	·651	·688	+·018	65	47	38	50	0	4·4	6·2	5·3	+1·0	1	3	6	8	2	...	11	18	11	N. 74° W.	N. 60° W.	35	47	148	178	...	...	Jeypore .	
·746	·813	·782	·780	+·098	70	58	48	59	+8	3·5	4·8	4·2	+0·8	3	1	4	3	7	1	12	27	2	S. 70° W.	S. 61° W.	45	68	182	208	...	...	Ajmere .	E. Rajputana, Central India, and Gujarat.
·811	·850	·758	·806	+·075	78	62	47	63	+11	4·7	5·5	5·1	+0·1	...	...	2	...	5	9	20	22	2	S. 54° W.	S. 36° W.	67	72	351	403	...	...	Deesa .	
·772	·775	·708	·752	+·035	69	53	44	55	+3	4·7	7·3	6·0	+0·1	...	7	4	9	...	2	5	25	8	N. 66° W.	N. 72° W.	40	43	128*	107	...	...	Nowgong .	
·788	·794	·754	·779	+·109	67	51	43	54	+9	3·9	3·5	3·7	+0·2	...	...	15	...	8	...	11	...	16	N. 70° E.	N. 60° W.	7	28	214*	138	...	...	Agra .	
·657	·707	·697	·687	+·023	93	79	78	83	+1	8·6	8·5	8·6	+0·7	...	3	1	...	...	4	20	22	6	S. 76° W.	S. 73° W.	73	86	553†	583	..	...	Belgaum .	Deccan.
·713	·685	·623	·674	+·050	86	58	44	62	+2	7·4	7·3	7·4	+0·2	1	2	...	...	...	2	27	15	13	S. 73° W.	N. 86° W.	74	66	385*	293	...	...	Sholapur .	
·726	·738	·727	·730	+·045	90	68	65	74	+4	7·5	8·3	7·9	+0·4	...	...	2	...	4	...	18	26	10	S. 79° W.	S. 79° W.	70	73	445*	375	...	...	Poona .	
·794	·815	·816	·828	+·143	85	63	54	67	+9	5·8	7·2	6·5	0	...	1	1	1	2	1	13	26	15	N. 89° W.	N. 71° W.	71	71	233*	215	...	...	Akola .	
·668	·712	·638	·673	−·002	88	63	51	65	−1	6·9	8·2	7·6	+1·3	1	6	1	...	...	...	20	9	23	N. 77° W.	N. 75° W.	66	65	239*	253	6·53	1·46	Buldana .	
·748	·779	·716	·748	+·031	78	62	54	65	+5	6·5	6·9	6·7	+0·6	...	1	1	...	2	...	15	23	18	N. 87° W.	N. 77° W.	73	71	249	228	...	...	Khandwa .	

* Corrected. † Mean of 25 days.

Table

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

Meteorological Province.	Station.	Elevation of bar cistern above sea-level in feet	Pressure.						Temperature of air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S.L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Deccan—*contd.*	Hoshangabad	...	28·612	28·482	·130	28·552	−·034	29·493	96·3	78·4	17·9	108·3	73·9	34·4	88·0	94·6	86·7	−1·0	73·9	77·4	77·8	76·4
	Nagpur	...	·601	·475	·126	·543	−·020	·500	97·1	78·2	18·9	108·7	73·7	35·0	86·8	92·7	85·6	−0·2	72·4	77·6	78·9	76·3
	Do. (Sanitary Commr.'s Office).	...	·625	·503	·122	·569	?	·513	97·4	78·6	18·8	109·9	74·0	35·9	88·4	94·0	87·2	?	72·4	76·8	78·7	76·0
	Jubbulpore	...	·273	·156	·117	·219	−·025	·466	95·3	78·4	16·9	109·0	72·7	36·3	87·9	91·7	85·8	−0·3	73·0	76·0	76·0	75·0
	Saugor	...	27·796	27·688	·108	27·747	−·038	·444	96·1	78·2	17·9	107·3	73·2	34·1	89·5	92·5	86·1	+0·4	69·2	74·5	74·3	72·7
	Raipur	...	28·670	28·539	·131	28·610	+·007	·500	94·3	77·8	16·5	108·1	72·6	35·5	86·9	88·2	83·6	−2·1	73·1	76·7	77·3	75·7
	Sutna	...			Not recorded.				98·2	81·9	16·3	110·8	76·1	34·7	90·9	94·3	88·7	−0·7	73·2	77·2	76·7	75·7
	Hyderabad (Deccan.)	...	·029	27·913	·116	27·978	?	·573	93·8	76·0	17·8	100·7	73·0	27·7	85·0	90·6	84·1	?	72·0	74·8	75·6	74·1
West Coast.	Bombay	...	29·667	29·586	·081	29·626	−·043	·602	87·6	79·6	8·0	92·9	75·0	17·9	84·2	85·4	83·3	+0·1	76·2	79·8	80·1	78·7
	Ratnagiri	...	·633	·557	·076	·594	−·038	·640	87·4	78·3	9·1	92·8	75·3	17·3	84·4	83·9	82·2	+1·3	75·6	79·9	79·8	78·4
	Karwar	...	·756	·683	·072	·719	−·028	·694	85·3	76·8	8·5	89·3	73·8	15·5	82·6	83·2	80·7	+1·0	74·5	77·8	78·0	76·8
	Cochin	...	·874	·810	·064	·841	−·014	·778	85·0	75·0	10·0	88·9	71·9	17·0	81·2	80·9	79·2	−0·1	73·5	77·3	77·1	76·0
South India.	Salem	...	28·883	28·764	·119	28·837	−·028	·897	95·4	75·2	20·2	101·4	72·8	28·6	86·7	90·8	83·5	+1·1	72·8	76·3	77·4	75·5
	Mysore	...	27·345	27·262	·083	27·304	?	·719	83·3	68·7	14·6	94·1	66·5	27·6	78·0	79·5	75·1	?	63·8	70·4	70·4	68·2
	Mercara	...	26·155	26·097	·058	26·139	−·019	?	71·5	64·3	7·2	81·3	62·3	19·0	68·3	67·8	67·0	+0·4	63·2	66·5	66·3	65·3
	Bangalore	...	·839	·747	·092	·804	−·029	·681	84·2	67·7	16·5	92·8	65·7	27·1	76·6	81·4	75·3	+0·6	66·0	69·6	70·3	68·6
	Hassan	...	·784	·715	·069	·761	?	·732	78·1	66·4	11·7	86·7	63·7	23·0	74·6	74·3	71·3	?	64·9	69·1	69·0	67·7
	Chitaldroog	...	27·403	27·311	·092	27·366	?	·667	84·9	69·7	15·2	92·1	66·9	25·2	78·6	81·7	76·5	?	65·6	71·7	72·2	69·8
	Trichinopoly	...	29·544	29·424	·120	29·497	−·019	·678	99·3	79·1	20·2	105·3	76·2	29·1	90·4	94·9	87·5	+0·9	72·2	74·8	75·6	74·2
	Madras	...	·736	·617	·126	·686	−·015	·635	99·9	82·0	17·9	103·3	74·8	28·5	93·3	93·6	88·9	+1·7	?	79·7	80·0	79·0
	Bellary	...	28·288	28·179	·119	28·248	−·018	·638	93·5	75·9	17·6	100·6	71·9	28·7	85·8	89·4	82·8	0	68·3	70·8	71·7	70·3
	Vizagapatam	...	29·630	29·531	·099	29·585	−·002	·552	92·8	80·8	12·0	101·6	75·2	26·4	88·3	88·9	86·1	−1·5	76·8	80·0	79·8	78·8
	Cocanada	...	·657	·542	·115	·604	?	·565	96·4	81·4	15·0	108·0	72·5	35·5	90·3	92·5	88·0	?	76·1	78·8	79·5	78·1
Hill Station, Baluchistan.	Quetta	...	24·481	24·392	·089	24·430	−·002	?	91·7	66·8	30·9	96·6	49·3	47·3	83·7	88·2	75·4	+1·0	52·2	64·4	64·7	60·4
Hill Stations, Punjab.	Leh	...	19·676	19·579	·097	19·634	−·005	?	76·2	46·5	29·7	88·2	38·2	50·0	65·3	72·9	60·1	+4·7	?	47·2	50·5	?
	Srinagar	...	24·730	24·634	·096	24·675	?	?	88·5	66·6	27·9	94·9	51·0	43·9	76·4	87·2	74·2	?	59·2	69·4	77·1	68·6
	Murree	...	23·755	23·718	·037	23·729	+·013	?	83·2	?	?	94·5	?	?	76·6	80·6	?	?	?	62·7	63·9	?
	Chamba	3,005	26·664	26·570	·094	26·629	−·013	?	93·4	71·8	21·6	101·1	61·9	39·2	84·0	90·2	81·2	+1·1	65·6	69·8	71·3	68·9
	Kailang	10,087	20·696	20·626	·070	20·673	−·037	?	74·9	47·0	27·9	84·2	36·5	47·7	64·6	71·5	59·5	+4·5	43·3	52·2	53·2	49·6
Hill Stations, N.W.P.	Simla (Ridge)	...	23·025	22·972	·053	22·992	+·007	?	74·6	61·4	13·2	84·4	53·3	31·1	69·3	72·4	68·0	+0·5	56·4	61·0	62·6	60·0
	Chakrata	...	·221	23·165	·056	23·186	−·004	?	71·0	60·4	10·6	75·9	52·6	22·3	66·4	68·0	65·4	−1·9	57·0	60·5	61·7	59·7
	Ranikhet	...	·990	·916	·074	·941	+·005	?	76·2	62·3	13·9	82·3	55·9	26·4	70·2	73·1	69·2	−1·6	60·2	65·1	66·4	63·9
Hill Station, Nepal.	Katmandu	4,388	25·437	25·388	·049	25·411	+·011	?	84·2	67·5†	16·7†	90·8	61·7	29·1	78·4	77·4	74·0	−1·1	65·0	70·4	69·9	68·4
Hill Station, Bengal.	Darjeeling	...	22·892	22·831*	·062*	22·859*	0	?	65·7	56·2	9·5	71·9	50·6	21·3	62·4	62·1*	60·0*	+0·2	55·8	61·2	60·9*	59·3
Hill Stations, Central India.	Mount Abu	...	25·844	25·770	·074	25·812	−·050	?	81·8	68·5	13·3	91·2	63·8	27·4	76·4	78·8	74·7	−0·9	64·7	69·3	70·6	68·2
	Pachmarhi	...	26·247	26·155	·092	26·206	−·024	?	85·2	71·9	13·3	96·7	66·2	30·5	78·4	83·8	77·9	−0·3	68·9	71·8	74·0	71·6
	Chikalda	3,642	·154	·070	·084	·117	−·011	?	82·3	68·4	13·9	91·7	63·9	27·8	75·0	79·1	74·3	−1·1	66·0	69·7	70·4	68·7

* Mean of 27 days.

† Mean of 25 days.

II—*continued.*

at 85 Stations in India, Burma, etc., for June 1896—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 for the month.	Heaviest rainfall during the month.		
.782	.809	.742	.778	+.034	81	63	50	65	+ 5	6·4	7·2	6·8	+0·8	3	1	...	1	...	1	34	16	4	S. 63° W.	S. 88° W.	78	71	147	114	...	...	Hoshangabad	Deccan—*contd.*
.722	.837	.818	.792	+.079	75	67	56	66	+ 5	7·1	7·7	7·4	+0·2	...	1	...	1	2	16	21	13	6	S. 47° W.	N. 76° W.	67	52	271	183	...	...	Nagpur .	
.719	.780	.795	.765	?	74	60	52	62	?	6·9	7·9	7·4	?	2	4	1	1	2	14	15	19	2	S. 55° W.	?	57	?	72*	?	...	...	Do. (Sanitary Commr.'s Office).	
.744	.747	.703	.731	+.044	78	60	53	64	+ 5	6·5	7·7	7·1	+0·7	3	1	2	1	4	5	18	15	11	S. 71° W.	N. 80° W.	53	54	124	126	...	...	Jubbulpore .	
.605	.667	.619	.630	+.018	65	52	45	54	+ 2	5·7	5·9	5·6	+1·4	...	1	...	...	...	...	17	35	7	S. 83° W.	S. 82° W.	87	63	128	126	...	...	Saugor .	
.754	.783	.792	.776	+.049	80	64	62	69	+ 7	5·3	6·1	5·7	−0·8	1	1	...	1	2	9	33	10	3	S. 47° W.	S. 74° W.	75	66	312*	220	...	...	Raipur .	
.711	.763	.697	.724	+.088	68	56	48	57	+ 8	4·7	5·9	5·3	+0·6	...	7	8	9	2	3	1	18	12	N. 34° W.	N. 59° W.	33	50	227*	241	...	...	Sutna .	
.736	.738	.700	.725	?	82	62	51	65	?	5·9	7·1	6·5	?	3	2	3	1	2	2	3	33	11	N. 81° W.	?	65	?	224*	?	...	...	Hyderabad (Deccan.)	
.856	.961	.956	.924	−.003	85	82	79	82	0	8·4	8·8	8·6	+0·7	...	1	2	3	2	12	20	16	4	S. 51° W.	S. 63° W.	59	66	355	389	...	...	Bombay .	West Coast.
.852	.960	.965	.925	+.078	88	81	83	84	+ 4	8·1	8·7	8·4	+1·8	1	1	...	...	1	16	28	10	3	S. 43° W.	S. 53° W.	76	66	301	278	...	...	Ratnagiri .	
.825	.889	.892	.869	+.027	89	80	79	83	− 1	7·7	7·7	7·7	+0·5	...	1	1	...	...	...	37	17	4	S. 65° W.	S. 76° W.	92	76	203	?	...	...	Karwar .	
.806	.887	.881	.858	+.004	93	83	84	87	− 1	8·3	8·8	8·5	+0·9	13	1	3	2	1	...	6	22	12	N. 77° W.	S. 75° W.	52	42	153	?	...	...	Cochin .	
.777	.770	.757	.768	+.004	89	60	54	68	− 2	5·7	7·8	6·8	+1·0	1	3	1	...	1	5	28	17	4	S. 63° W.	S. 58° W.	72	82	181	113	...	...	Salem .	
.532	.651	.632	.605	?	76	69	65	70	?	7·9	7·9	7·9	?	3	...	...	...	...	1	25	27	4	S. 72° W.	?	84	?	363*	?	...	...	Mysore .	
.573	.632	.630	.612	+.011	94	92	92	93	0	9·2	9·5	9·4	0	4	3	...	...	...	4	17	28	4	S. 76° W.	N. 81° W.	73	86	234	198	...	...	Mercara .	
.622	.639	.612	.624	+.007	92	70	58	73	− 1	7·1	7·3	7·2	+1·4	...	2	1	...	...	2	26	26	3	S. 71° W.	S. 71° W.	80	90	291*	202	...	...	Bangalore .	South India
.601	.650	.650	.634	?	92	76	77	82	?	8·6	8·7	8·7	?	...	1	...	...	...	1	19	29	10	S. 83° W.	?	84	?	133*	?	...	...	Hassan .	
.580	.690	.664	.645	?	80	72	64	72	?	7·7	3·5	8·1	?	...	1	...	1	1	2	20	27	8	S. 77° W.	?	77	?	265*	?	...	...	Chitaldroog .	
.699	.655	.628	.661	−.051	70	46	39	52	− 5	4·6	6·0	5·3	−1·9	...	1	...	1	3	...	23	29	3	S. 71° W.	N. 87° W.	73	84	245	228	...	...	Trichinopoly .	
?	.836	.841	.858	+.059	?	53	54	63	− 1	5·5	6·4	6·0	−0·4	...	2	1	5	10	1	18	19	4	S. 55° W.	S. 36° W.	45	58	192	213	...	...	Madras .	
.597	.568	.558	.574	−.084	67	46	42	52	+14	8·5	8·8	8·7	+1·2	2	2	...	...	...	3	22	25	6	S. 75° W.	S. 86° W	77	80	244	256	...	...	Bellary .	
.867	.908	.896	.890	+.008	81	67	66	71	+ 3	7·5	7·2	7·4	+1·4	3	...	...	...	...	13	20	24	...	S. 55° W.	S. 58° W.	72	63	26	87	...	..	Vizagapatam.	
.832	.833	.833	.833	?	78	59	56	64	?	5·8	6·5	6·2	?	...	...	1	1	5	9	17	23	4	S. 57° W.	?	65	?	211*	?	...	...	Cocanada .	
.313	.410	.365	.363	−.012	56	35	29	40	− 2	1·4	2·6	2·0	+1·0	30	1	...	...	1	6	4	10	8	S. 81° W.	N. 69° W.	30	43	48*	101	...	...	Quetta .	Hill Station, Baluchistan.
?	.171	.181	?	?	?	27	24	?	?	3·2	4·3	3·8	−1·2	...	...	4	1	1	3	14	31	6	S. 81° W.	S. 84° W.	68	26	65	57	...	...	Leh.	
.500	.647	.826	.658	?	92	70	63	75	?	2·0	2·3	2·2	?	15	10	5	2	8	8	1	3	8	N. 21° E.	?	8	?	94*	?	...	...	Srinagar,	Hill Stations Punjab,
?	.431	.427	?	?	?	50	42	?	?	2·3	4·4	3·4	−0·4	1	1	1	...	25	11	9	5	7	S. 4° E.	S. 2° W.	48	12	195*	158	...	...	Murree.	
.572	.571	.557	.567	+.102	72	50	41	54	+ 7	4·6	5·1‡	4·8	+0·5	13	6	...	...	2	...	...	2	37	N. 41° W.	N. 27° W.	68	25	147*	123	2·16	0·43	Chamba.	
.256	.291	.252	.268	+.030	77	47	34	53	0	4·2	5·1	4·7	−0·9	...	2	...	...	4	19	14	14	7	S. 47° W.	S. 66° W.	60	67	57	47	0·68	0·37	Kailang.	
.408	.455	.469	.444	+.031	75	66	60	67	+ 4	6·2	7·0	6·6	+0·7	13	15	7	...	...	6	6	7	6	N. 37° W.	S. 76° W	28	40	84	?	...	...	Simla (Ridge).	
.436	.470	.490	.465	+.059	83	73	72	76	+11	3·8a	6·1‡	5·0	−0·1	5	3	...	1	2	49	...	...	...	S. 3° E.	S. 73° W.	80	50	287	110	...	...	Chakrata.	Hill Stations, N.W.P.
.505	.567	.586	.553	+.093	89	76	73	79	+15	6·7	6·2	6·5	+1·1	13	6	3	4	1	6	6	15	6	N. 85° W.	S. 65° W.	30	49	85*	83	...	...	Ranikhet.	
.611†	.655	.647	.638	+.012	90†	67	70	76	+ 1	6·2	7·0	6·6	+0·9	...	...	...	35	1	...	1	23	...	S. 84° E.	S. 87° W.	20	53	41	?	6·28	1·49	Katmandu.†	Hill Station, Nepal.
.445	.534	.526*	.502	+.011	98	94	94*	95	0	9·3c	7·9d	8·6	−0·1	...	4	13	8	6	4	6	10	6	N. 31° E.	S. 88° E.	11	5	114	113	...	...	Darjeeling.	Hill Station, Bengal.
.572	.638	.644	.618	+.050	82	72	66	74	+ 7	5·6	5·9	5·8	+0·5	1	4	6	2	4	...	34	6	3	S. 54° W.	S. 42° W.	47	74	311*	242	...	...	Mount Abu.	Hill Stations, Central India.
.674	.707	.737	.706	+.109	87	75	67	76	+10	7·3	7·6	7·5	+0·9	12	1	1	...	1	4	13	22	6	S. 77° W.	N. 71° W	59	63	332*	185	...	...	Pachmarhi.	
.614	.665	.644	.641	+.044	89	78	67	78	+ 6	6·8	7·6	7·2	+0·4	21	10	...	...	...	4	5	3	17	N. 52° W.	N. 45° W.	39	62	254*	233	9·41	1·35	Chikalda.	

a Mean of 19 days. b Mean of 18 days. ‡ Mean of 29 days. c Mean of 4 days. d Mean of 8 days. * Corrected.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to 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, S. India.	Wellington . .	...	24·180	24·119	·061	24·150	−·015	?	72·2	57·6	14·6	77·3	54·1	23·2	68·2	67·0	63·6	−0·2	55·4	61·6	61·4	59·5
Extra India.	Muscat . .	...	29·540	29·474	·066	29·507	?	?	93·6	88·4	5·2	102·3	84·0	18·3	92·0	92·5	90·7	?	79·3	83·7	83·7	82·2
	Aden . . .	...	·629	·514	·115	·568	−·034	29·590	96·4	84·0	12·4	100·7	78·6	22·1	91·3	92·7	89·3	+1·7	73·3	80·5	77·9	77·2
	Perim . . .	...	·534	·428	·106	·477	?	?	96·9	84·6*	12·3*	103·3	82·8	20·5	92·3	93·3	89·6*	?	75·0	79·6	80·6	78·4
	Zanzibar . .	...	30·067	·984	·083	30·026	−·009	1·026	82·5	75·3	7·2	85·0	71·9	13·1	77·8	81·7	78·7	+1·3	71·6	73·3	73·4	72·8
	Port Victoria (Seychelles).	15	29·982	·905	·077	29·944	?	·882	82·5	76·8	5·7	84·0	72·7	11·3	81·1	81·8	79·5	?	72·3	75·2	75·4	74·3
	Mauritius . .	181	?	?	?	·974	−·011	1·105	?	?	?	81·7	52·9	28·8	?	?	68·9	−0·7		?	?	?

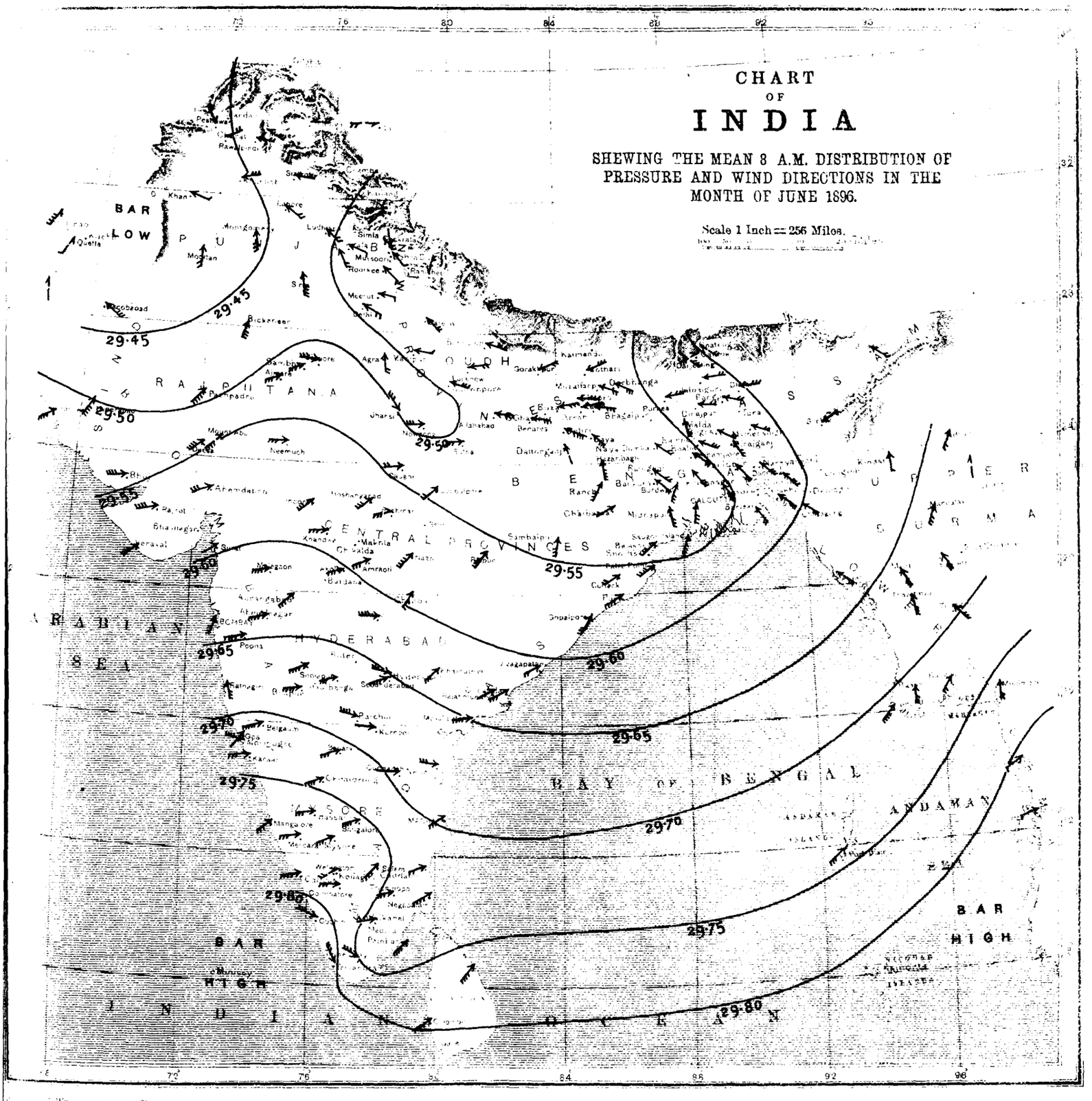
*. Mean of 27 days.

II—*concluded.*

85 Stations in India, Burma, etc., for June 1896—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.		
																									%	%						
·418	·485	·489	·464	+·024	88	70	74	77	+2	8·0	9·1	8·6	+1·1	3	2	1	1	5	8	34	2	4	S. 38° W.	N. 88° W.	63	52	126	123	...	...	Wellington,	Hill Station, S. India.
·393	1·055	1·043	·997	?	67	72	70	70	?	1·7	2·3	2·0	?	...	2	10	18	2	1	...	2	25	N. 15° E.	?	42	?	101	?	...	...	Muscat,	Extra India.
·679	·899	·758	·779	−·082	59	62	50	57	−1	2·6	2·2	2·4	+1·2	1	...	1	2	6	24	24	2	...	S. 15° W.	S. 2° E.	77	68	254	209	...	...	Aden,	
·749	·845	·878	·824	?	63	57	56	59	?	1·4	2·4	1·9	?	1	4	2	3	3	...	4	19	21	N. 62° W.	?	62	?	355	?	...	...	Perim,	
·725	·762	·713	·733	+·025	83	80	66	76	−	4·1	4·5	4·3	−0·5	...	...	...	...	16	31	10	...	...	S. 5° E.	S. 10° W.	89	73	187	198	...	...	Zanzibar,	
·734	·795	·796	·775	?	80	75	73	76	?	5·9	6·5	6·2	?	...	...	...	4	34	17	4	...	1	S. 29° E.	?	84	?	247	?	5·60	2·30	Port Victoria (Seychelles),	
?	?	?	·544	?	?	?	?	77	+3	?	?	?	?			Not recorded.							?	?	?	?	264	252	1·12	0·23	Mauritius.	

G. I. C. P. O.—No. 59 Meteor.—6-11-96.—385.



Explanation.

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

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

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

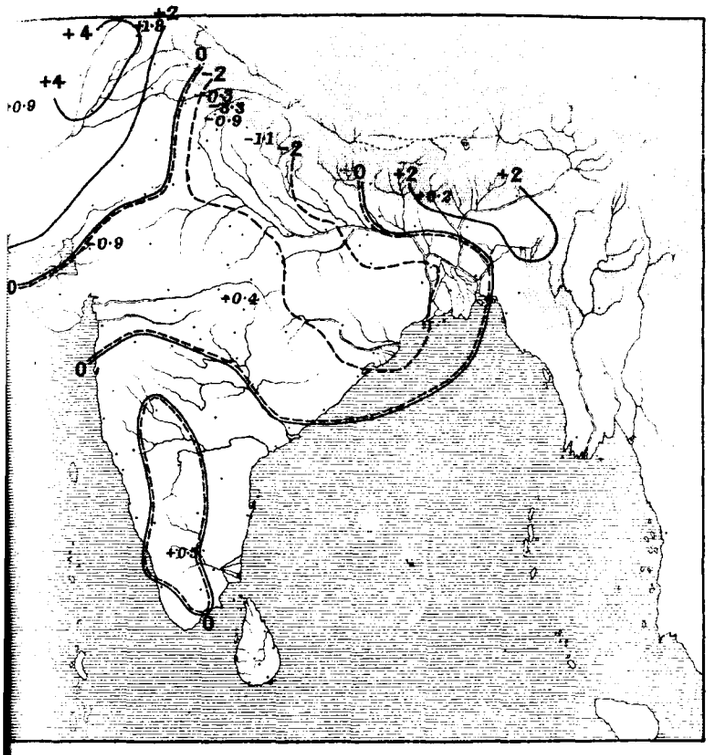
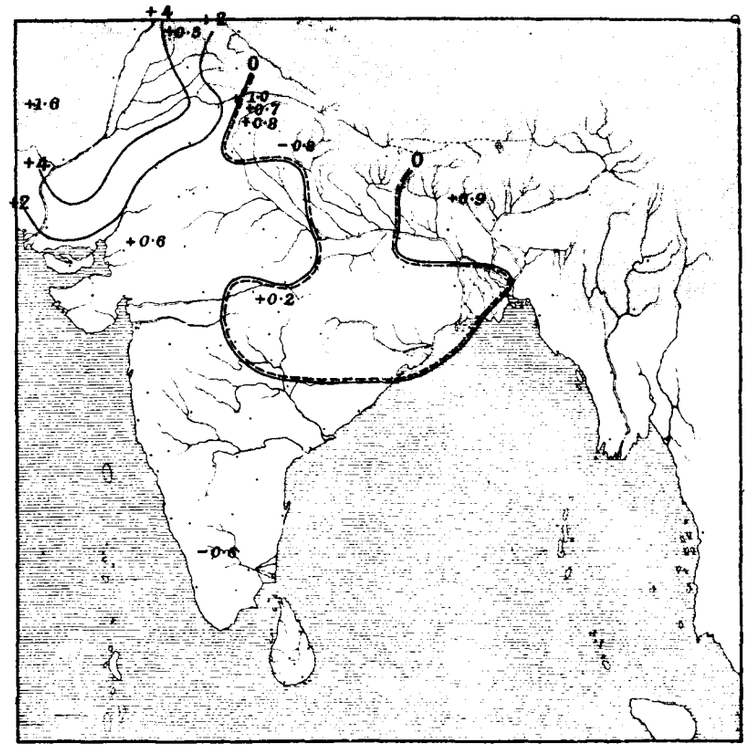


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.

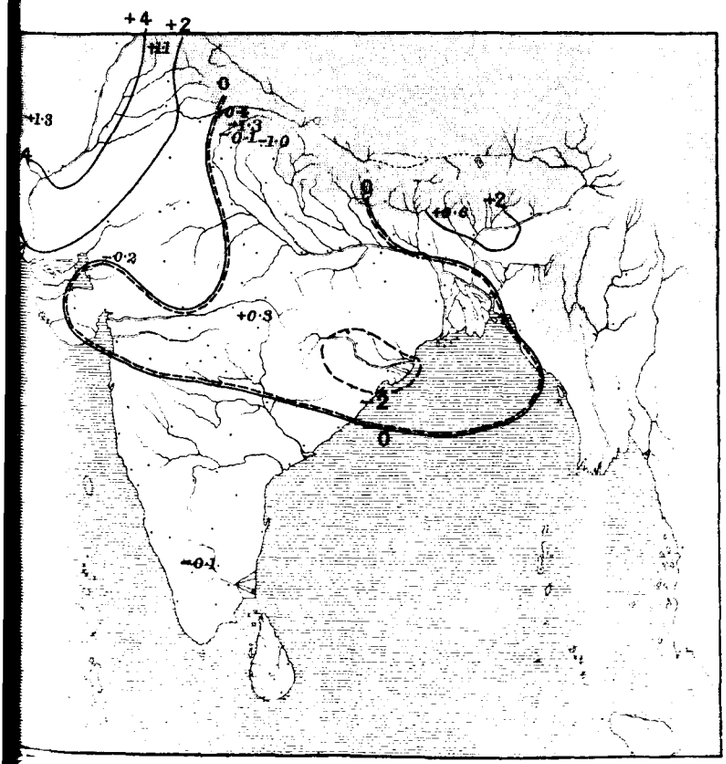


Explanation.

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.

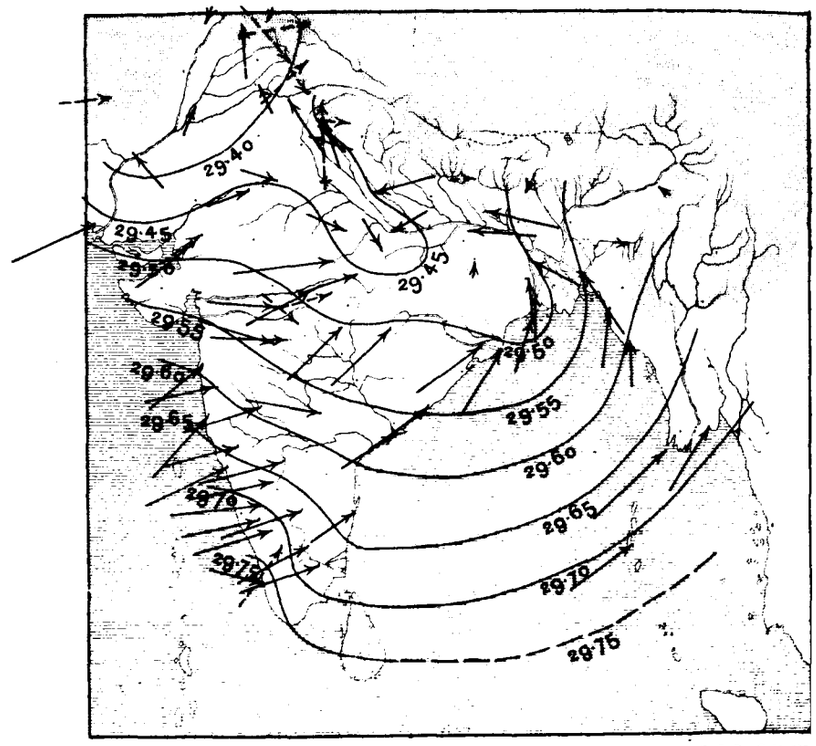
Continuous lines indicate that the mean minimum of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers, Double lines are the lines of no variation, the broken line facing the area of deficient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

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



455, Wr., I.—Sept. 96—395

CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF JUNE 1896.

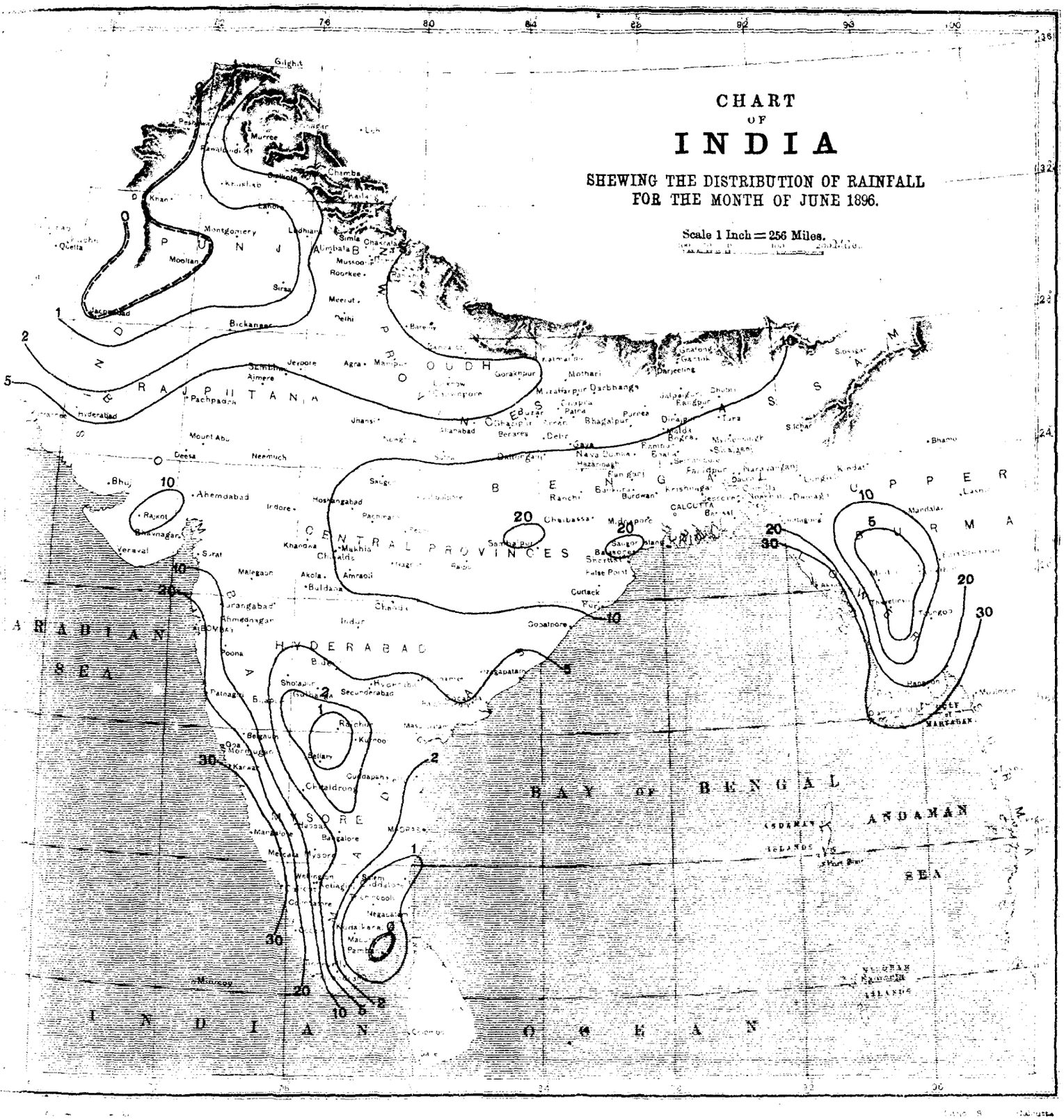


Litho., S. I. O., Calcutta

Explanation.

Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°). The isobars are given for each twentieth of an inch. The arrows show the directions of the resultants of the wind recorded at 10 and 16 hours, and by their



Explanation.

The Chart shows the distribution of the rainfall of the month by means of isohyetic lines or lines of equal amounts of rain. The [illegible] used in the preparation of this Chart are the rainfall returns of all the observatories in India (182 in number), except those at the [illegible] 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 [illegible] shows the area of no rainfall.

No 456, Wr., I.—Sept. 96—395.

Explanation.

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

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The name of the district 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 red figures.

1. Tenasserim	17. North Bihar	33. Malabar	49. Central India. East
2. Lower Burma Deltaic	18. North Western Provinces, East	34. Madras, South Central	49a Do. do.
3. Central do.	19. South Oudh	35. Coorg	50. Rajputana East, Central India West
4. Upper do.	20. North do.	36. Mysore	51. West Rajputana
5. Arakan	21. North Western Provinces, Central	37 Konkan	52. East Coast, North
6. East Bengal	22. Do. do., West	38. Bombay Deccan	52(a). Do. do. (a)
7. Assam Surma	23. Do. do., East Submontane	39 Hyderabad, North	53. Hyderabad, South
8. Do. Hills	24. Do. do., West do.	40. Khandesh	54. Madras, Central
9. Do. Brahmaputra	25. Do. do. Hills	41. Berar	55. East Coast, Central
10. Deltaic Bengal	26. South East Punjab	42. Central Provinces, West	56. East Coast, South
11. Central do.	27. South do.	43. Do., Central	57. Madras, South
12. North do.	28. Central do.	44. Do., East	
13. Bengal Hills	29. Punjab, Submontane	45. Gujarat	
14. Orissa	30. Do. Hills	46. Kathiawar	
15. Chota Nagpur	31. North Punjab	47. Sind	

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JULY, 1896.

INTRODUCTION.

THIS review of the weather in India during the month of July 1896 is based on observations taken daily at 8 A.M. at 207 stations and on additional observations taken at 10 A.M and 4 P.M. at 85 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, 1896.

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 or Central India.

At the commencement of the month under review both branches of the monsoon current were feebler than usual. Weather was showery in the west coast districts, Lower Burma and Bengal, and moderate rain was falling in Rajputana and Central India. A residual depression, the continuation of a cyclonic storm, which was the chief feature of the meteorology of the last few days of the previous month, lay over Agra and the neighbouring districts. It filled up and disappeared during the next 24 hours. Temperature was in considerable to large defect in Central India, Rajputana and the North-Western Provinces which had received light to heavy rain during the preceding 24 hours. It was in excess over the remainder of India, and more especially so in the Madras coast districts and the Punjab. The mean temperature of the previous 24 hours averaged 3½° above the normal in each of these two areas.

The pressure changes of the next 48 hours transferred the trough of low pressure northwards to the submontane districts of the Gangetic Plain. Dry weather set in for a short period in the North-Western Provinces. Bengal received a moderate and general burst of rain on the 4th and 5th and again on the 7th and 8th. A shallow depression was shown in that area on the 9th, the formation of which was evidently due to the rainfall in that area.

The period from the 1st to the 9th was characterized by excessive temperature in the Madras Presidency and more especially in the coast districts. The following gives variation data of the mean temperature for every second day from the 1st to the 9th at six stations in that area :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.				
	1st.	3rd.	5th.	7th.	9th.
	°	°	°	°	°
Masulipatam . .	+6·1	+5·2	+5·2	+4·6	+4·6
Madras . . .	+5·0	+5·3	+5·7	+4·4	+0·9
Negapatam . .	+4·4	+5·6	+4·2	+5·2	+1·3
Trichinopoly . .	+0·5	+3·2	+2·3	+4·0	+4·8
Salem . . .	+2·3	+1·5	+3·5	+3·2	+6·6
Madura . . .	+3·3	+3·6	+0·6	+4·5	+3·4

The excess was chiefly in the day temperature as is shown by the following variations of that element at the stations for which data are given in the preceding table :—

STATION.	VARIATION FROM NORMAL OF MAXIMUM TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.				
	1st.	3rd.	5th.	7th.	9th.
	°	°	°	°	°
Masulipatam . .	+8·5	+8·5	+8·9	+2·8	+8·4
Madras . . .	+6·3	+6·7	+7·6	+5·0	+2·8
Negapatam . .	+4·5	+7·2	+5·5	+6·6	+5·3
Trichinopoly . .	—1·3	+3·5	+3·8	+3·9	+8·5
Salem . . .	+2·3	+0·9	+5·1	+3·5	+7·4
Madura . . .	+2·9	+3·9	—0·1	+4·9	+7·3

Very high day temperatures were registered during this period, in one case higher than have been previously recorded in the month of July, as is shown by the following data :—

STATION.	Highest maximum temperature recorded in July 1896.	Date on which recorded.	Highest maximum temperature recorded in July previous to 1896.	Year in which recorded.
	°		°	
Madura . . .	104·0	9th	105·3	1884
Tinnevelly . . .	100·3	,,	100·3	1892, 93 & 94
Trichinopoly . .	105·2	,,	104·6	1877
Negapatam . .	102·7	6th and 16th	103·2	1894
Madras . . .	105·5	6th	105·7	1875

During the same period temperature changed irregularly in Rajputana, Central India, the North-Western Provinces and the Punjab, but was in moderate excess on the 8th and 9th over nearly the whole of North-Western India.

Meanwhile winds were increasing on the west coast and rain was falling in larger amounts in that area. In consequence of the peculiar pressure conditions, *viz.*, a large and persistent excess of pressure in North Bombay and Central India and an equally persistent deficiency of pressure in Assam, East Bengal and Burma, the Bombay current was determined eastwards across the Peninsula and hence there was much greater interaction than usual between the two branches of the monsoon current. This gave rise during the remainder of the month to a series of cyclonic storms characterized by several remarkable features.

The shallow depression which formed in Bengal on the 9th was slightly more pronounced on the 11th. It was at 8 A.M. central a little to the north of Calcutta and began to march westwards during the day. It passed through the southern districts of Chota Nagpur on the 12th and the eastern districts of the Central Provinces on the 13th, into the central districts of the same area on the 14th. It intensified slightly on the 14th and the indraught to it increased considerably the winds on the Bombay coast. General rain fell in the West Coast districts and the Deccan on the 14th and 15th and moderate rain in Berar and the Central Provinces. The depression was nearly stationary on the 15th, having shifted slightly northwards. It filled up during the next 24 hours. The storm hence determined a moderate burst of rain to South Bengal, Orissa, Chota Nagpur, the Central Provinces, North Bombay, the Deccan and West Coast districts. It was noteworthy for its action in increasing the Bombay current and for its failure to advance beyond the central districts of the Central Provinces.

Little or no rain had fallen in North-Western India during the existence of this storm. Temperature increased rapidly in Upper India from the 7th to the 10th and was in large excess from the 10th to the 14th. The following gives data for this period:—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.					
	10th.	11th.	12th.	13th.	14th.	15th.
	°	°	°	°	°	°
Punjab . . .	+5·1	+6·6	+8·5	+10·0	+6·8	−0·5
North-Western Provinces and Oudh.	+2·9	+4·5	+4·6	+ 4·0	+0·1	−1·1
Sind and Rajputana .	+0·2	+0·9	+3·0	+ 4·4	+4·8	+3·3
Central India . .	+2·2	+3·4	+4·2	+ 5·7	+3·6	+3·2
Bihar . . .	−0·1	−0·7	+0·4	+ 0·3	+0·6	+0·2

The highest temperatures of the month in the Punjab, Sind and Rajputana were registered during this period, but they were not so high as have been occasionally recorded in July. The following gives data:—

STATION.	Highest maximum temperature recorded in July 1896.	Date on which recorded.	Highest maximum temperature recorded in July previous to 1896.	Year in which recorded.
	°		°	
Jacobabad . .	115·1	1st	119·5	1878
Mardan . . .	114·9	13th and 14th	112·9	1895
Peshawar . .	113·5	14th	117·0	1892
Montgomery . .	112·4	1st and 15th	120·4	1891
Mooltan . . .	112·9	22nd	116·8	1891
Rawalpindi . .	112·0	14th	114·0	1876 and 1882.

The breaking up of the storm in the Central Provinces on the 15th was accompanied by an extension of humid winds to Upper India and Central India. Rajputana, the Punjab and North-Western Provinces received fairly general rain from the 15th to the 19th and temperature was hence reduced below the normal in these areas.

Large pressure changes during the 19th and 20th transferred the low pressure belt or trough northwards to the submontane districts of the Gangetic Plain and also established steep gradients for monsoon winds in the Peninsula. Pressure was in local deficiency in Burma and North-Eastern India, and in considerable to large excess in Western India on the 21st. General and heavy rain fell in Bengal and Bihar on the 20th and 21st, and a depression began to form at the head of the Bay on the 21st. It was well defined on the 22nd, when it was a cyclonic storm of moderate intensity. It began to move westwards in the early morning of the 23rd, and passed through the Central Provinces on the 24th and 25th into the western districts of Central India on the 26th and filled up in Gujarat and South-West Rajputana on the 27th. Its advance through the Central Provinces was accompanied by a great increase in the strength of the winds on the Konkan and Kathiawar coasts and by a heavy downpour of rain in the Colaba, Thana and Broach districts, and more especially in the neighbouring West Ghats. Khandesh, Berar, the Central Provinces, Gujarat and Kathiawar received a heavy burst of rain from the storm which gave rise to serious floods in the Tapti, Nerbudda and other rivers of these districts.

The following gives seven examples of the excessive rain of the period:—

District.	Station.	RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF DATE.				Total of period.
		23rd.	24th.	25th.	26th.	
		Inches.	Inches.	Inches.	Inches	Inches.
Colaba . .	Matheran . .	6·96	11·39	7·70	5·15	31·20
Thana . .	Mokhada . .	3·05	3·85	13·20	8·00	28·10
Satara . .	Malcolmpeth .	5·60	14·35	17·75	16·65	54·35
Poona . .	Lanoli . . .	4·66	8·38	14·90	10·62	38·56
Nasik . .	Trimbak . .	4·18	2·04	6·98	9·12	22·32
Do. . .	Igatpuri . .	2·15	1·60	10·40	5·95	20·10
Broach . .	Broach . . .	0·19	0·28	9·10	19·82	29·39

Little or no rain fell over the greater part of Northern India during the existence of this storm, and hence temperature remained generally more or less considerably in excess throughout the period as is shown by the following data:—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.				
	21st.	22nd.	23rd.	24th.	25th.
	°	°	°	°	°
Punjab	+6·2	+6·5	+2·8	+1·8	+4·5
Sind and Rajputana . . .	−1·6	−0·2	+2·7	+4·9	+5·5
North-Western Provinces and Oudh.	−0·3	−2·2	−0·5	+1·6	+4·5
Bihar	0	−1·0	+0·4	+2·8	+3·4
Bengal	−0·7	−0·4	+1·4	+1·8	+2·2

Whilst the previous storm was advancing through the Central Provinces the third storm of the month formed at the head of the Bay, due apparently to the interaction of the strong westerly winds blowing across the Peninsula and the winds of the Bay current. It began to form on the afternoon of the 25th and developed rapidly on the 26th into an unusually deep and severe cyclonic storm. Hurricane winds were experienced by the F. L. V. *Hesperus* in the north-west angle of the Bay on the night of the 26th.

The storm centre advanced westwards on the morning of the 27th to the neighbourhood of Saugor Island and Balasore; into the eastern districts of the Central Provinces on the 28th and into the central districts on the 29th, where it filled up during the next 48 hours. It gave a heavy burst of rain to the Central Provinces, Berar and Khandesh, and, as in the case of the previous storm, increased the influx of monsoon winds on the Bombay coast, so that the Colaba, Thana, Broach and Surat districts received a heavy downpour of rain on the 28th, 29th and 30th. The following gives data showing the character of this downpour:—

DATE.	District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
28th . .	Kolaba . .	Matheran . . .	10·83
29th . .	,, . . .	Ditto . . .	14·25
,, . .	Satara . . .	Malcolmpeth . .	14·10
,, . .	Poona . . .	Lanoli	11·60
30th . .	Broach . . .	Broach . . .	10·06
,, . .	Kolaba . . .	Matheran . . .	11·70
,, . .	Thana . . .	Murbad . . .	7·93
,, . .	Satara . . .	Malcolmpeth . .	18·05
,, . .	Poona . . .	Lanoli	10·30
,, . .	Nasik	Trimbak . . .	7·50

Little or no rain fell in Northern India during the existence of the storm, and temperature was even more excessive than during the previous storm period. The following gives data in illustration:—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.					
	26th.	27th.	28th.	29th.	30th.	31st.
	°	°	°	°	°	°
Punjab . . .	+4·2	+2·9	+3·3	+5·6	+6·0	−1·9
Sind and Rajputana .	+6·7	+6·1	+6·2	+5·3	+3·7	+2·1
North-Western Provinces and Oudh.	+3·6	+5·4	+6·0	+7·4	+4·0	+2·5
Bihar	+4·5	+4·5	+6·1	+5·4	+2·9	+3·5

The highest temperatures of the month in the North Western Provinces and Bihar were registered during this period. The most noteworthy were:—

STATION.	Highest maximum temperature recorded in July 1896.	Variation from normal.	Date on which recorded.
	°	°	
Bahraich . . .	104·5	?	29th
Mainpuri . . .	104·3	?	30th
Bareilly . . .	102·4	+11·2	30th
Gaya	98·5	+9·4	28th
Darbhanga . . .	97·0	+8·6	28th

Pressure.—The mean pressure of the Indian land area for the month was ·010″ lower than the normal. Pressure was in local defect, relatively to the general condition, in North-Eastern India, Burma and the north of the Bay. The deficiency was large and ranged between ·03″ and ·04″ in the coast districts of Orissa, South Bengal and Arakan, and was absolutely greatest at Saugor Island (−·042″). Pressure was in local excess both in North-Western India and in the Peninsula. The excess was small in amount over the greater part of the area, but was moderate in amount in two areas. The first included the greater part of Rajputana and Kathiawar and the western states of Central India, in which the excess ranged between ·02″ at Indore and ·032″ at Deesa. The second area included the West Coast districts, south of Ratnagiri, in which pressure ranged between ·02″ and ·033″ in local excess. Pressure was in moderate excess at the hill stations in North India, and the vertical anomalies were hence positive and were slight to moderate in amount.

The following table gives the mean pressure variations and anomalies of the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Burma Coast and Bay Islands	—·029	—·019
Burma Inland	—·045	—·035
Assam	—·028	—·018
Bengal and Orissa	—·037	—·027
Gangetic Plain and Chota Nagpur	—·017	—·007
Upper Sub-Himalayas	—·008	+·002
Indus Valley and North-West Rajputana	+·004	+·014
East Rajputana, Central India and Gujarat	+·007	+·017
Deccan	—·008	+·002
West Coast	+·017	+·027
South India	+·002	+·012

Temperature.—The mean temperature conditions were, as usual in July, determined by the rainfall distribution. The rainfall of the month was normal in Southern India and in moderate to large excess in the Central Provinces, Berar, Bombay and the North Deccan, and more or less in defect over the whole of Northern India, the deficiency on the whole being greatest in the submontane districts. The rainfall was, however, much below the normal during the first three weeks of the month, and the excess in the Central Provinces and neighbouring areas was due to the heavy rainfall accompanying the two storms of the last ten days of the month.

The mean maximum or day temperature was above the normal over the whole of India with local exceptions of no importance. The excess was small in amount except in two areas. The first included the greater part of the Madras Presidency. Temperature in that area was most largely in excess at Negapatam (+3°·5), Rajahmundry (+3°·0), Cuddapah (+2°·6), and perhaps Cocanada (+4°·0). The second area included the Punjab and the greater part of Rajputana and the North-Western Provinces. The excess in this area was 3°·5 or more in amount at Sirsa (+4°·1), Agra (+3°·9), Mooltan (+3°·6), Rawalpindi (+3°·8) and Lahore (+3°·5). These stations hence define the area of greatest excess of day temperature during the month.

The mean night temperature of the month was above the normal over the whole of India. The excess was generally somewhat smaller in amount than that of the day temperature and was more than 2° in a part of South Madras, including the stations of Madras, Salem, Trichinopoly and Negapatam, and in the Punjab. The excess was absolutely greatest at Lahore (+4°·8), Rawalpindi and Ludhiana (each +2°·8), Sirsa (+2°·7) and Madras (+2°·6).

The mean temperature of the month was in slight to moderate excess over the whole of India. The chief feature of the mean temperature conditions was the increased temperature over North and East Rajputana and the Punjab and over the Madras coast districts south of Vizagapatam. The excess was more than 3° at the following stations:—Lahore (+4°·2), Sirsa (+3°·4) and Rawalpindi (+3°·3). The mean temperature of the month at the Upper India hill stations was in slight to moderate excess.

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, July 1896.	Mean minimum temperature, July 1896.	Mean daily temperature, July 1896.
	°	°	°
Burma Coast and Bay Islands	+0·3	+0·6	+0·5
Burma Inland	+0·2	+1·4	+0·8
Assam	+0·9	+0·9	+1·0
Bengal and Orissa	+1·0	+1·0	+1·0
Gangetic Plain and Chota Nagpur	+1·2	+0·9	+1·1
Upper Sub-Himalayas	+2·5	+2·0	+2·3
Indus Valley and North-West Rajputana.	+2·0	+1·7	+1·9
East Rajputana, Central India and Gujarat.	+1·4	+0·9	+1·2
Deccan	+1·1	+1·0	+1·0
West Coast	+1·0	+1·3	+1·2
South India	+1·6	+1·7	+1·7

Winds.—The monsoon current was stronger than usual in the centre and perhaps the south of the Bay, judging from the mean velocity of the winds at the Burma coast stations and at Port Blair, and was slightly weaker at the head of the Bay. Winds were more westerly than usual at Port Blair and the Burma coast stations. They were much more easterly than usual, on the mean of the month, in the interior of Bengal due to the diversion of the Bay current to a larger extent than usual towards Central India and the Central Provinces. Winds were very light and unsteady in the western half of the North-Western Provinces and in the East Punjab.

The Bombay current was, on the whole, stronger than usual. It was below its normal strength from the 1st to the 14th, but was very vigorous during the second fortnight of the month. This was in part due to the abnormal pressure conditions of the period and in part to the effect of the cyclonic storms of the last ten days of the month. Winds were more westerly than usual in Central India and Rajputana. Winds were abnormally strong in the Deccan and Southern India on the average of the month and somewhat more directly from the west than usual.

Humidity and Cloud.—Conditions were normal in Lower Burma. The air was slightly drier than usual in Bengal, the Gangetic Plain, the Punjab, Sind and East Rajputana. The mean humidity of the month was most largely in defect in these areas at Ludhiana (—8) and Allahabad (—5). The air was slightly damper in the Central Provinces, the Bombay Deccan and South Rajputana. The air was unusually dry over nearly the whole of Southern India, and more especially so at Bangalore, where humidity was 14 in defect and at Trichinopoly where it was 10 in defect. Cloud was in slight to moderate excess in Burma, Bengal, South Bihar, Chota Nagpur and Orissa. The excess was greatest in Chota Nagpur (+0·7) and Orissa and Burma (each +0·6). It was more or less in considerable defect in the North-Western Provinces, Punjab, Sind Rajputana and Central India, and in slight to moderate excess in the Central Provinces and Deccan. The deficiency was greatest at the hill stations. Cloud was in considerable to largish excess in Southern India, more especially at Bangalore (+2·5), Wellington (+1·3) and Salem (+1.2).

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 1896:—

Meteorological Province.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
	"		
Burma Coast and Bay Islands	+·019	+ 1	+1·0
Assam	+·042	0	—0·5
Bengal and Orissa	+·012	— 1	+0·4
Gangetic Plain and Chota Nagpur.	+·016	— 2	—0·1
Upper Sub-Himalayas	—·004	— 4	—1·4
Indus Valley and North-West Rajputana.	+·023	— 1	—0·4
East Rajputana, Central India and Gujarat.	+·043	0	—0·9
Deccan	+·022	0	0
West Coast	+·012	— 1	+0·7
South India	+·015	— 6	+0·8

Rainfall.—The Arabian sea current was slightly weaker than usual during the first half of the month, and the rainfall of the period was light in North-Western and Central India. It blew strongly during the second fortnight, but was directed chiefly to the Deccan, Central India, the Central Provinces and Orissa. The Bay branch of the current was stronger than usual throughout the greater part of the month, but was very unsteady and was largely determined to Burma. A series of three storms formed in the Bay during the month. The first, which was a feeble depression, formed in South Bengal on the 10th and passed into the Central Provinces. It occasioned a heavy burst of rain on the Bombay coast and adjacent hills on the 14th and 15th. Upper and Central India and the North-Western Provinces received moderate rain from the 15th to the 18th. The second storm, which was a deeper depression, formed at the head of the Bay on the 21st and 22nd and advanced across the head of the Peninsula to Gujarat. It occasioned a heavy downpour of rain in the Central Provinces, Berar and Khandesh, and unusually heavy rain in the Kolaba, Thana, Broach and Surat districts of Bombay and the greater part of Gujarat on the 24th and 25th. The third storm originated on the 26th and 27th and passed into the Central Provinces on the 29th and 30th. It gave exceptionally heavy rain to the same districts as the previous storm from the 27th to the 30th. The monsoon currents were hence diverted largely to the storm areas during the last ten days of the month and little or no rain fell in the Punjab, Rajputana and the North-Western Provinces and only moderate showers were received in East and North Bengal and Assam. The rainfall of the month was hence very irregularly distributed. It was very scanty and more or less below the normal over the whole of the Punjab, the North-Western Provinces, Sind, Central India, and the greater part of South and Central Madras. The deficiency was 40 per cent. and upwards in amount in Sind (76 per cent.), Madras South-Central (64 per cent.), Oudh (45 per cent.), the Central Punjab (45 per cent.), the South Punjab (43 per cent.) and the Submon-

tane Punjab (40 per cent.). The rainfall of the month was practically normal or in slight defect in Burma, Bengal and Assam. It was, on the other hand, in moderate excess in Orissa, Chota Nagpur, Gujarat and the Konkan, in large excess in the eastern districts of the Central Provinces and the Bombay Deccan, and in very large excess in Khandesh, which received more than double the normal fall of the month. Over the remainder of the country, the rainfall of the month varied but little from the normal.

The following table gives the rainfall data of the month for the eleven meteorological provinces of India :—

Meteorological Province.	Rainfall.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.*
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	36·63	29·51	+4·44
Burma Inland	7·37	9·46	—2·72
Assam	14·64	17·46	—2·82
Bengal and Orissa	13·32	14·37	—1·39
Gangetic Plain and Chota Nagpur.	11·44	12·37	—0·93
Upper Sub-Himalayas	6·77	11·49	—4·68
Indus Valley and North-West Rajputana.	1·60	2·89	—1·17
East Rajputana, Central India and Gujarat.	10·50	10·92	+0·17
Deccan	12·69	12·37	+2·28
West Coast	21·59	28·67	—5·76
South India	5·57	6·25	+0·14

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

Atmospheric Pressure.

The mean pressure of the Indian land area averaged ·010″ below the normal.

Relatively to this general condition, pressure was in slight local excess in the Punjab, Rajputana, Central India, North Bombay and the greater part of the Peninsula. The positive anomalies were more than ·02″ in two areas for which data are given below :—

Area.	Station.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
		″	″
Rajputana and Kathiawar.	Deesa	+·022	+·032
	Neemuch	+·020	+·030
	Rajkot	+·018	+·028
	Jaypore	+·014	+·024
	Sambhar	+·015	+·025
	Ajmere	+·013	+·023
Malabar, Konkan and adjacent districts.	Cochin	+·023	+·033
	Coimbatore	+·019	+·029
	Calicut	+·019	+·029
	Mangalore	+·014	+·024
	Karwar	+·022	+·032
	Belgaum	+·018	+·028
	Ratnagiri	+·020	+·030

The excess in the first area was the continuation of a prominent feature in the meteorology of the months of April and May, and in the second area of a similar feature in the month of May.

Pressure was, relatively to the general condition, in local defect over the remainder of India. The deficiency was large and marked in South Bengal, Assam, Arakan and the north of the Bay, and was associated with the formation of a remarkable series of storms in the latter half of Juy.

The following gives data for stations at which the deficiency was more than ·03″ :—

Station.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Saugor Island	—·052	—·042
Chittagong	—·049	—·039
Akyab	—·048	—·038
Dacca	—·041	—·031
Jessore	—·047	—·037
Calcutta	—·042	—·032
False Point	—·043	—·033

The mean pressure of the month at the hill stations in Northern India was generally in slight excess, but by variable amounts. The vertical pressure anomalies of the month were generally small in amount and were negative

in the case of Kailang and positive in the case of the remaining stations, as is shown below :—

HILL STATION.	Variation of pressure from normal. (*a*)	NEIGHBOURING PLAIN STATION.	Variation of pressure from normal. (*b*)	Vertical pressure anomaly or (*a*)—(*b*).
	"		"	"
Leh . . .	—·005	Lahore . .	—·010	+·005
Murree . . .	+·027	Peshawar .	0	+·027
Simla . . .	+·020	Ludhiana .	—·009	+·029

HILL STATION.	Variation of pressure from normal. (*a*)	NEIGHBOURING PLAIN STATION.	Variation of pressure from normal. (*b*)	Vertical pressure anomaly or (*a*)—(*b*).
	"		"	"
Kailang . . .	—·021	Lahore . .	—·010	—·011
Chakrata . .	+·026	Roorkee . .	—·019	+·045
Ranikhet . .	+·018	Bareilly . .	—·008	+·026
Darjeeling . .	—·008	Dhubri . .	—·020	+·012
Quetta . . .	+·013	Jacobabad .	+·008	+·005

Barometric depressions and cyclonic storms of the month.

At the commencement of the month the only feature of importance in the pressure distribution was a residual depression in Upper India. The storm of which this was the continuation was fully described in the June Weather Review. The depression filled up on the 1st, and a brisk to rapid increase of pressure in Upper India on that day gave an approximately normal distribution on the 2nd. There was a slight local deficiency of pressure in the north-east of the Bay and Burma, and a local excess in the Central Provinces and Central India.

Pressure decreased generally on the 3rd and 4th and increased again on the 5th and 6th and weather was of the ordinary monsoon character, except that the rainfall was light in the interior, and was moderate in Bengal and the west coast districts.

Pressure fell slightly on the 7th and increased considerably on the 8th when it was in general excess, and the local high pressure area in Cutch, Gujarat and South-West Rajputana (a very persistent feature of the month) was very strongly marked.

Pressure gave way considerably on the 9th and 10th. The trough of low pressure was shifted northwards by these changes to the submontane districts of the Gangetic Plain over which westerly winds, with fine dry weather, generally obtained. Steepish gradients now prevailed in the Indian area, and the Bombay current was chiefly determined across the Peninsula, thus giving rise to much greater interaction than usual with the Bay current in Bengal and the north of the Bay. As usual under these circumstances a depression formed. It was of feeble intensity throughout and of little importance except for its influence on the rainfall distribution. The following is a brief account of this feeble storm :—

Feeble cyclonic storm of the 11th to the 15th July.—The first indications of the formation of this depression were shown on the 10th, on which day moderately heavy rain was falling in Chota Nagpur. Pressure gave way very slightly in South Bengal during the day, and a very shallow depression lay over South-West Bengal on the morning of the 11th. Heavy rain had again fallen in Chota Nagpur and moderate general rain over the whole of South-West Bengal. Pressure increased briskly in Assam and Upper Burma and fell slightly in Chota Nagpur during the next 24 hours, and the depression was central near Chaibassa at 8 A.M. of the 12th. Pressure increased briskly in Bengal and decreased slightly in the Central Provinces, and the depression on the morning of the 13th covered the greater part of the Central Provinces but was very ill defined. Rain had fallen over the eastern and central districts of the Central Provinces during the previous 24 hours.

Pressure decreased rapidly in Berar and briskly in the western districts of the Central Provinces during the 13th and the depression intensified to some extent and was central near Chanda at 8 A.M. of the 14th. A small and shallow depression was also shown over the coast districts of Ganjam and the North Circars, which was, perhaps, an independent but very feeble disturbance developed during the previous 24 hours off that coast. The increasing indraught from the Bombay coast to the double disturbance had given general moderate rain during the day to the whole of the Deccan, North Madras and the Central Provinces.

Pressure increased rapidly in the Circars during the day and the depression in that area either filled up or was absorbed into the deeper depression in the Central Provinces. This depression advanced slightly northwards and lay over the central and northern districts of the Central Provinces at 8 A.M. of the 15th. It was now filling up and pressure at the centre (probably near Pachmarhi) was less than a tenth of an inch below the normal. General rain due to the indraught to the storm area from the Arabian Sea had fallen during the previous 24 hours in Gujarat, Kathiawar, Khandesh, Berar and the Central Provinces. The depression filled up during the day and pressure on the morning of the 16th was in general excess. The excess was greatest in Bengal and the West Punjab, where it ranged between ·10″ and ·15″ in amount.

The disappearance of the depression was accompanied and followed by an advance of humid winds across Central India and Rajputana to the East Punjab and North-Western Provinces, and these areas received general rain on the 16th and three following days. A shallow stationary depression was shown in the south-western and central districts of the North-West Provinces on the 18th and 19th. It filled up on the 20th. Hence during the period from the 16th to the 20th the East Punjab, the North-Western Provinces and Bengal received a moderate and general burst of rain. Pressure decreased on the 19th and 20th in Northern India and increased in the Peninsula. The trough of low pressure covered the submontane districts, and the Bombay current was hence chiefly directed eastwards across the head of the Peninsula towards the north of the Bay and Bengal. Pressure was in large excess in the Peninsula and in considerable defect in East Bengal, the abnormal gradient between the west coast and east Bengal being nearly ·25″ on the 21st. Heavy rain fell in Bengal and Chota Nagpur on the 20th and 21st, and on the latter day the first indication of the formation of a depression and cyclonic storm at the head of the Bay was shown. The following gives a history of this storm :—

Cyclonic storm of the 22nd to the 27th July.—As stated above, the pressure conditions were very abnormal on the 20th and 21st, and the Bombay current was diverted from Upper India and determined by the pressure conditions to North-Eastern India and the north of the Bay.

The Bay current was also unusually strong at this time. The mean force of the winds in the Bay at 8 A.M. on the 21st, as indicated by the data of 18 vessels, was 5·2, and eight vessels reported winds of force 6 to 7. Weather was squally with much rain, more especially in the north of the Bay. Winds were light and irregular in Bengal, and weather was unsettled with heavy rain and series of thunderstorms. Pressure was falling rapidly in the north-west angle of the Bay and a closed low pressure area formed during the night. The weather at the entrance to the Hoogly is thus described by Captain Beahan of the F. L. V. *Torch* :—

"Heavy southerly swell and a choppy confused sea from the west-south-west and a moderate to fresh westerly gale with continuous passing rain squalls. The upper clouds appeared throughout the day to be stationary, and the lower (Fracto-cumulus) moving slowly from west to east."

22nd July.—Pressure had given way rapidly during the previous 24 hours, and a depression of moderate intensity now lay over the head of the Bay. The centre of the depression at 8 A.M. was near Saugor Island in about Lat. 21½°N. and Long. 88¾°E. The following gives data fixing the position of the storm centre at that hour :—

Station or Vessel.	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 at 8 A.M.	Rainfall.	Remarks.
	"	"	"				Inches	
Barisal .	29·387	—·097	—·153	ESE	1	10		
Calcutta .	·350	—·119	—·164	NE	5	10	2·70	
Saugor Island.	·321	—·155	—·190	N	14	10	2·60	Sea slight.
F. L. V. *Torch.*	·309	—·169	?	W	*6	10		Fresh westerly gale with light rain and high cross sea.
F. L. V. *Hesperus.*	·295	—·140	?	W	*7	10		Threatening and high southerly swell.

*Force.

Strong south-west winds obtained in the southern half of the Bay and south-westerly to westerly gales with very squally weather in the north, more especially off the Arakan coast. The S. S. *Argus* in Lat. 21°N., Long. 88°E., at 8 A.M. had west-south-west winds, force 8, and heavy squalls during the day, and the weather was briefly described in the following terms in the logs of vessels in the north and east of the Bay :—"continuous rain," "continuous heavy rain," "heavy rain squalls," "heavy rain," and "squally with rain."

The storm intensified during the day without shifting its position as is shown by the following observations recorded at 2 P.M. and 8 P.M. of the 22nd and 2 A.M. of the 23rd :—

Date and hour.	Station or Vessel.	Pressure. Reduced to sea-level and constant gravity at Lat. 45°.	Pressure. Change since 8 A.M.	Wind. Direction.	Wind. Velocity in miles per hour.	Cloud.	Rainfall.	Remarks.
		"	"				Inches	
22nd 2 P.M.	Barisal .	29·330	—·057	E	4	8		Drizzling rain.
"	Saugor Island.	·257	—·064	ESE	4	10	1·06	Sea smooth, dark gloomy weather, wind variable, drizzling rain, with heavier rain at intervals.
"	F. L. V. *Hesperus.*	·235	—·060	W	*5	9		Drizzling rain. High swell.
8 P.M.	Barisal .	·373	—·014	SE	5	10		Drizzling rain.
"	Saugor Island.	·283	—·038	ENE	2	10		Wind variable.
"	F. L. V. *Hesperus.*	·255	—·040	WSW	*5	...		Drizzling rain.
23rd 2 A.M.	Barisal .	·369	—·018	ESE	2	10		Drizzling rain.
"	Calcutta	·301	—·049	ENE	8	10		Overcast.
"	Saugor Island.	·256	—·065	S	3	10		Threatening.

*Force.

The preceding data indicate that winds were very light and variable at Saugor Island, the station nearest to the centre throughout the day.

The weather at the Eastern Channel station, about 4 miles to the south of Saugor Island, is thus described by Captain Beahan:—

"During the early morning fresh westerly gale and very high southerly swell and heavy confused south-west and west seas with light rain squalls. At noon the wind fell light in a heavy rain shower which lasted till 4 P. M., after which the wind freshened to a moderate gale from the south-west. Weather was very wild and threatening during the *night*."

The preceding data have hence established that the depression was practically stationary from 8 P. M. of the 22nd to 2 A. M. of the 23rd. The centre was near and to the east of Saugor Island during the day, and winds at that station were throughout variable and very light. Moderate to heavy rain fell during the day in South-West Bengal, Chota Nagpur and Orissa.

23rd July.—Pressure was unchanged in Burma, but had fallen rapidly in Bihar, Chota Nagpur, Orissa, and the Central Provinces. The following data fix the position of the storm centre at 8 A.M.:—

Station or Vessel.	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 at 8 A.M.	Rainfall.	Remarks.
	"	"	"				Inches	
FalsePoint	29·320	—·094	—·216	SW	20	10	0·80	Drizzling.
F. L. V. *Torch.*	·303	—·006	?	SW	*5	8	...	Very high confused sea and passing misty rain showers.
Saugor Island.	·310	—·011	—·204	S	5	10	1·09	Sea slight.
Calcutta .	·346	—·004	—·171	E	9	10	1·06	
Balasore .	·282	—·087	—·220	NE	2	8	1·18	
Chaibassa	·325	—·081	?	NW	4	10	2·31	
Cuttack .	·306	—·136	—·222	WSW	8	8	2·66	

* Force.

The preceding data indicate that the storm centre was a little to the east of Balasore in Lat. 21½°N. and had hence commenced to advance in a westerly direction. Moderately heavy rain had fallen in South-West Bengal, Orissa, and Chota Nagpur, the largest amounts being recorded in North Orissa. The following gives data of the heaviest falls:—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
Balasore. . . .	Bhadrak	7·74
	Chandbali	6·35
Singhbhum . . .	Baharagura . . .	6·50
	Chakardharpur . . .	5·39
Bankura	Raipur	5·92

The rainfall was hence heaviest in front of the advancing depression.

The weather in the Bay was practically unchanged. South-westerly to westerly winds obtained and weather was squally with strong westerly winds in the north and north-east of the Bay. The squalls were most severe off the Arakan and Pegu coasts. "Hard squalls with dense, blinding rain" and "sharp rain squalls" were experienced by vessels in that area during the day.

24th July.—Pressure had fallen briskly in the Central Provinces and had increased less rapidly than usual in Bengal and Burma or in the area covered by the storm on the 23rd. The depression at 8 A.M. of the 24th was hence shown as a broad belt of low pressure stretching from the central districts of the Central Provinces to the Orissa coast. Winds were irregular in the eastern half of this area. A well-defined cyclonic circulation, on the other hand, obtained in the western half as is shown by the following 8 A.M. data:—

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 at 8 A.M.	Rainfall.	Remarks.
	"	"	"				Inches	
Nagpur . .	29·383	—·090	—·204	WNW	10	10	4·36	Continuous rain.
Raipur . .	·424	—·009	—·128	SW	12	10	7·40	Continuous rain.
Sutna . .	...	...	...	NNE	4	6	0·28	
Jubbulpore .	·387	—·070	—·143	NNE	4	10	1·42	
Seoni . .	·383	—·073	—·169	...	...	10	2·96	Continuous rain.

The preceding data indicate that there was a well-marked cyclonic storm covering the central districts of the Central Provinces, and it is hence certain that this was the continuation of the storm of the previous day in Orissa and South-West Bengal. The centre of the storm at

8 A.M. was in about Lat. 21½°N. and Long. 80°E. Conditions in the north of the Bay were very abnormal, and a second storm originated in that area during the next 48 hours, the history of the origin and march of which is given separately later on.

Heavy rain had fallen in the Central Provinces during the previous 24 hours. The largest falls were recorded in Sambalpur and Bilaspur, but they were in no way exceptional. The indraught to the storm area had increased the winds on the Bombay and Kathiawar coasts, where strong monsoon winds were blowing. Heavy rain was hence falling in the coast districts and the West Ghâts. The following gives the largest amounts recorded during the previous 24 hours :—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
Ratnagiri	Mandangad	5·57
	Dapoli	5·40
	Khed	5·40
Kolaba	Matheran	11·39
	Roha	7·82
Kolaba	Mahad	7·78
	Karjat	6·02
	Mangaon	5·53
	Uran	5·07
Thana	Bhiwndi	4·28
	Murbad	4·22
	Mokhada	3·85
	Bassein	3·72
	Kalyan	3·70
Satara	Malcolmpeth	14·35
	Medha	5·02
Poona	Lanoli	8·38

25th July.—Pressure had increased slightly in North-Eastern India and had fallen rapidly in Berar, Khandesh, and the western states of Central India. The depression had advanced slowly in a west-north-westerly direction during the previous 24 hours and was at 8 A.M. central near Khandwa in Lat. 22°N., Long. 77°E. The following gives 8 A.M. data of stations in the storm area :—

Station.	Pressure.			Wind.		Cloud at 8 A.M.	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	
Malegaon	29·412	—·117	—·226	WSW	11	10	4·18	Continuous rain.
Amraoti	·400	—·050	—·209	WSW	8	10	1·32	
Akola	·376	—·099	—·234	SW	7	8	2·24	Continuous rain.
Nagpur	·397	+·014	—·191	S	8	10	0·67	Overcast with rain.
Pachmarhi	...	—·030	—·160	Calm	9	10	1·43	Foggy.
Hoshangabad	·368	—·059	—·189	NE	2	10	2·30	Continuous rain.
Indore	·381	—·152	—·180	NE	6	8	1·96	Thunder.
Khandwa	·371	—·130	—·221	NW	7	10	4·04	Continuous rain.

The barometric depression at the centre was about ·25" in amount. The cyclonic circulation was very vigorous in the storm area, and winds had increased considerably on the Bombay and Kathiawar coasts and were blowing with the force of a gale at the Konkan coast stations. The wind velocity at 8 A.M. at Bombay was 44 miles per hour and at Marmugao 36 miles per hour.

Heavy general rain had fallen in the storm area in the Central Provinces, Khandesh, Berar and moderate rain in Central India.

The following gives the heaviest falls, exceeding 6 inches, in these areas during the previous 24 hours :—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
Khandesh	Bhadgaon	9·23
	Chalisgaon	8·42
	Pachora	8·15
	Erandol	6·32
Nasik	Igatpuri	10·40
	Peint	7·70
	Trimbak	6·98

The most noteworthy feature of the weather of the previous 24 hours was the excessive rainfall in the coast districts between Surat and Bombay and in the adjacent hills.

The following gives the largest falls (exceeding 8 inches) :—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
Kolaba	Karjat	10·05
	Khalapur	9·76
Thana	Bhiwndi	13·29
	Mokhada	13·20
	Kalyan	11·03
	Bassein	11·00
	Murbad	8·70
Satara	Malcolmpeth	17·75
Poona	Lanoli	14·90
Broach	Vagra	12·00
	Broach	9·10
	Ankleshvar	8·15

The rainfall of the previous 24 hours was hence heaviest in the Colaba, Thana and Broach districts, Thana being the centre of the heaviest downpour.

26th July.—Pressure had increased briskly to rapidly in the Central Provinces and was unchanged in Sind and Kathiawar. The depression had advanced slowly in a west-by-north direction during the previous 24 hours and commenced to fill up. The following data indicate the position of the storm at 8 A.M. :—

Station.	Pressure.			Wind.		Cloud at 8 A.M.	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	
Ahmedabad	29·427	—·004	?	NNW	5	10	2·30	Continuous rain. Gale.
Malegaon	·474	+·062	—·154	WSW	16	7	6·24	
Khandwa	·425	+·054	—·175	SW	12	9	0·09	
Indore	·421	+·040	—·170	SSE	4	10	0·66	
Neemuch	·429	—·015	—·122	NE	12	10	0·85	Drizzling.

The data indicate that the storm was central between Indore and Ahmedabad in about Lat. 22½°N. and Long. 74½°E., and that the barometric depression had decreased to ·20". Very steep gradients obtained on the Konkan coasts and winds were blowing with the force of a gale at Bombay and Veraval (averaging 35 miles per hour in velocity during previous 24 hours at the former station).

Heavy rain had fallen in the districts over which the storm had passed, but the chief feature of the storm was the excessive precipitation in the Nasik, Broach and Surat districts and the adjacent hill districts. The following gives the most noteworthy rainfalls of the previous 24 hours (exceeding 10 inches) :—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
Nasik	Point	13·45
Khandesh	Navapur	12·78
Surat Agency	Bansda	11·80
Broach	Broach	19·82
"	Ankleshvar	15·58
"	Hansot	12·87
"	Ilav	10·10
Rewa Kantha	Rajpipla	13·61
Satara	Malcolmpeth	16·65
Poona	Lanoli	10·62

The two last stations are on the crest of the West Ghâts and their rainfall indicates the character of the precipitation on the West Ghâts at this period. The excessive rainfall in the Broach, Surat and Nasik districts and in Rewa Kantha States gave rise to serious floods, brief accounts of which will be found in an Appendix.

27th July.—Pressure had increased briskly to rapidly in Gujarat, Central India, Khandeish and Berar. The depression had continued to advance in a west-by-north direction but had almost completely filled up. The residual depression lay over Kathiawar and Gujarat at 8 A.M. Winds were irregular in direction in that area and indicated that the cyclonic circulation was rapidly breaking up. Winds had decreased slightly in strength on the Bombay and Kathiawar coasts. Moderate rain had fallen in the Konkan coast districts and in Gujarat, Kathiawar and Sind.

The largest amount recorded was 5·83 inches at Ilav in the Broach district.

The depression filled up completely during the day and ceased to affect the weather in Western India.

The storm originated during a period when strong monsoon winds obtained in both sea areas and when the current from the Bombay coast was determined to North-Eastern India and the north of the Bay, and there was hence probably much interaction between the two currents in Bengal, Chota Nagpur and the north-west of the Bay.

The following data gives the position of the storm

centre at 8 A.M. of each day from the 22nd to the 23rd and its mean daily rate of advance :—

DATE.	POSITION OF CENTRE A 8 A.M.		Distance travelled during previous 24 hours.	Average hourly rate of motion.
	Lat. N.	Long. E.		
	° ′	° ′		
22nd . .	21 30	88 40	...	...
23rd . .	21 30	87 0	120	5
24th . .	21 30	80 0	460	19
25th . .	22 0	77 0	210	9
26th . .	22 45	74 30	160	7

The most noteworthy feature of the storm was the strong stormy winds (intensified monsoon winds) it occasioned on the Bombay and Kathiawar coasts and the adjacent part of the Arabian Sea and the excessive precipitation it gave to the coast districts of Thana, Colaba, Broach, Surat and the adjacent West ghâts.

Winds of force 7 to 9 were experienced by vessels off the Bombay and Kathiawar coasts on the 25th, 26th and 27th.

The character of the weather near the Kathiawar is shown very clearly by the following extracts from the log of the mail steamer *Dwarka* which left on the 25th for Kurrachee :—

Date and hour.	NAME OF VESSEL.	8 A.M. POSITION		Barometer.	WIND.		WEATHER.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
25th 2-45 P.M.	S.S. *Dwarka*	2-45 P.M. left Bombay		...	...	...	Very heavy sea and strong gale with heavy squalls and much rain.
8 P.M.	,, .	...	...	...	W	9	Strong gale with hurricane squalls and very heavy sea.
25th, Midnight.	,, .	...	...	...	W	9	Ditto.
26th, 8A.M.	,, .	...	...	...	W	9	Strong gale and very high sea.
,, 8 P.M.	,, .	...	...	...	W	9	Ditto.
27th, 2A.M.	,, .	...	...	...	W by N	8	Gale moderating.
,, 8 ,,	,, .	...	...	...	W	6	Strong breeze and hazy.
,, 2 P.M.	,, .	Arrived Kurrachee.			...	...	

As already noted, another storm began to form on the 24th and 25th, whilst the previous storm was passing westwards along the head of the Peninsula. The following gives a history of this storm :—

Cyclonic storm of the 26th to the 30th July :—

It has been pointed out above that the advance of the previous storm from the head of the Bay to the Central Provinces was not accompanied by the usual rapid rise of pressure in Burma and Bengal. A slight tendency was shown on the 24th to the establishment of a low pressure area at the head of the Bay. Winds shifted during the next 24 hours in that area into cyclonic directions as is shown by the following data :—

STATION OR VESSEL.	WIND DIRECTION AT 8 A.M.			MEAN WIND VELOCITY IN MILES PER HOUR DURING 24 HOURS PRECEDING 8 A.M. OF		
	23rd.	24th.	25th.	23rd.	24th.	25th.
Diamond Island . .	SW	SW	SW	22	21	21
Akyab . . .	W	SSE	SSE	4	3	4
Chittagong . . .	SSE	ENE	ENE	7	7	6
Barisal . . .	Calm.	ENE	E	3	3	3
F. L. V. *Hesperus** .	SW	NE	NW	4*	1*	1*
Saugor Island . .	S	NE	NE	5	13	8
F. L. V. *Torch** . .	SW	NE	W	3*	2*	5*
False Point. . .	SW	W	WSW	20	12	8

* Force in Beaufort notation.

Very strong westerly winds obtained during this period in the Deccan, as is shown by the following data :—

STATION.	MEAN WIND VELOCITY IN MILES PER HOUR DURING 24 HOURS PRECEDING 8 A.M. OF			Mean normal wind velocity in miles per hour.
	23rd.	24th.	25th.	
Poona	24	23	19	17
Belgaum	36	38	37	28
Sholapur	17	15	17	13
Hyderabad (Deccan) .	15	15	15	?
Raichur . . .	25	24	29	?
Khamamet . . .	12	11	12	?

Strong squally winds obtained in the Bay, as is shown by the following data of the 25th:—

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.	S.S. *Pundua*	Rangoon		29·652	...	...	4 P.M. blowing hard with rain.
8 A.M.	S.S. *Lalpoora*	16·25	96·45	·687	SW	...	Heavy rain and passing squalls.
8 A.M.	S.S. *Roma*	10·45	80·08	·755	S by W	6 to 7	Fine weather and moderate sea, Noon, strong gale and heavy rain squalls.
8 A.M.	*City of Agra*	18·54	87·36	·455	SW	6	High sea; 4 P.M. heavy rain squalls.

The weather in the north-west angle of the Bay is thus described by Captain Beahan of the F. L. V. *Torch*:—"A very heavy southerly swell and confused cross sea from the west-south-west with continuous light rain and a fresh west-south-west breeze. During the night heavy lightning to north and east."

The F. L. V. *Hesperus* at the Mutlah station had south-west to west-south-west winds during nearly the whole of the day.

The wind directions at these stations and Saugor Island indicate a marked tendency to the concentration of the storm during the day about a centre near Saugor Island.

26th July.—Pressure had fallen briskly to rapidly in South Bengal and the north of the Bay, and a closed area of low pressure was now shown in that region. The following 8 A.M. data establish that the centre was near Saugor Island at that hour:—

Station or Vessel.	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 at 8 A.M.	Rainfall.	Remarks.
	″	″	″				Inches	
False Point	29·424	—·005	—·122	W	10	10	0·11	
F. L. V. *Torch*	·215	—·174	?	NW	8*	10	...	Cyclonic.
F. L. V. *Hesperus.*	·109	—·226	?	NNW	10*	10	...	Cyclonic.
Barisal	·390	—·061	—·158	NE	2	9	...	
Calcutta	·364	—·068	—·161	NE	5	10	0·10	
Saugor Island	·340	—·071	—·184	N	11	10	2·23	

* Force.

The depression was hence central near the Mutlah station or about 50 miles east-south-east of Saugor Island.

The storm had developed with unusual rapidity, and pressure at the centre (in Lat. 21½° N., long. 89½° E.) was at least three-tenths below the normal. Winds had increase at the Mutlah station from force 2 at 4 P.M. of the 25th to force 10 at 8 A.M. of the 26th (or in sixteen hours) and from force 4 to force 8 at the Eastern Channel station during the same interval. The weather was cyclonic with unusually heavy rain in the north-west of the Bay.

Little or no rain had fallen in Bengal during the previous 24 hours, and only light to moderate rain in Orissa.

The development of the storm during the day is shown very fully by the following observations taken on board the light vessels and at Saugor Island:—

Mutlah station (*F. L. V. Hesperus*).—The following observations were recorded by Captain Woolward during the storm:—

Hour.	Barometer. Actual corrected and reduced to 32°F.	Barometer. Reduced to sea level and constant gravity at Lat. 45.	Wind. Direction.	Wind. Force.
	″	″		
1 A.M.	29·292	29·235	WSW	6 to 7
3 „	·242	·185	Calm to SW	0 to 11
6 „	·112	·055	W to WNW	7 to 10
8 „	·162	·105	NNW to NW	7 to 10
10 „	·212	·155	NNW	10 to 6
Noon	·192	·135	WNW to NNW	10 to 11
2 P.M.	·212	·155	WNW to NNW	10 to 11
4 „	·142	·085	WNW to NW	7 to 10
5 „	·082	·025	W	11
6 „	·102	·045	W	11
8 „	·202	·145	W to WSW	9 to 11
9 „	·222	·165	WSW	12
Midnight	·242	·185	W	7 to 9

The preceding data indicate that the storm was stationary and central near the Mutlah station until 5 or 6 P.M., at which hour the wind began to veer from the north of west to the south of west. The centre hence passed north-westwards or west-north-westwards immediately to the north of the Mutlah station about 6 P.M. The strongest winds (from W.S.W.) were experienced at 9 P.M. when they were of hurricane force.

The following is Captain Woolward's description of the weather experienced during the day at the Mutlah station:—

"Shortly after midnight much low lightning to east and frequent and short sharp squalls. This continued up till 3 hours, when for 16 minutes a calm, then a fierce squall from S.W., and after this squall the wind force was only 5 to 6, but when wind hauled round in squalls it increased suddenly,

Rain commenced to fall in solid uninterrupted mass shortly after midnight, and the squalls only gave movement to rain but did not increase the amount. During this time there has been a very high S.W. sea and swell with a 4 knot south current.

During these hours impossible to see far from ship owing to sheet-like rain.

From nine hours each squall was preceded by a flash of lightning. The nature of the squalls was prolonged and they occurred at longish intervals. High north-south swell with high sea from wind direction.

Just before noon rain so solid that darkness is like evening time, or last stages of twilight. South current 5 knots during these hours.

During these hours it was impossible to give cloud description as rain was coming down solid, but at 15 hours, for a few minutes, the sun came out of a little blue patch in which was a little cirrus. Whether this slight show of the sun makes the pallium banks more ugly I cannot say but for ink-black banks to west, north-west and north those seen at this time could not be uglier, more so as white patches of cumulus are in front of this pallium. Occasional flashes of lightning in the north-west. From 13 to 16 hours the sea was a boiling pot, and the confused swell very high. A very curious sight was this sea at this time; in fact what with the darkness caused by the fearful rain, and this sea one could not really help but wonder at it. Description is out of the question for me. The current running south about 5 knots per hour duri ng this time.

From 19 to 22 hours, prolonged squalls at short intervals and much lightning and heavy thunder. One squall at 21 hours was of full hurricane force, after which the rain ceased and sky cleared; also the thunder and lightning ceased. From 20 to 22 hours I think it rained in a solid mass. The rainfall during this time prevented cloud observations. A fearful sea was running at this time.

South current 5 knots throughout. Amount of rain since 1 hour to 22 hours 16 inches measured in a 5-inch Casella gauge slung in gimbals, and no sprays added to this total as I tasted for saltness."

The description of the storm is exceedingly interesting, as it shows most clearly the intense rainfall which almost invariably accompanies the formation of the deeper cyclonic storms of the rains in the north-west angle of the Bay. Captain Woolward's measurement of the rainfall is the first that I have received from a ship involved in a cyclone, and the amount (16 inches in 21 hours) fully confirms his description of the torrential character of the rainfall.

Eastern Channel (F. L. V. Torch).—The following gives observation recorded by Captain Beahan of the F. L. V. *Torch* :—

Hour.	Barometer. Actual corrected and reduced to 32°F.	Barometer. Reduced to sea level and constant gravity at Lat. 45°.	Wind. Direction.	Wind. Force.	Humidity.	Weather.
	"	"				
8 A.M.	29·272	29·215	NW	8	96	Cyclonic weather and torrential rain throughout.
10 „	·316	·259	NW	9	96	
Noon	·276	·219	NNW	8	100	
2 P.M.	·256	·199	NW	9	100	
4 „	·206	·149	NW	9	96	
5 „	·216	·159	NW	9	96	
6 „	·241	·184	NW	9	100	
8 „	·256	·199	W	10	100	
9 „	·286	·229	W	10	100	
Midnight	·296	·239	W	9	100	

The preceding observations agree fully with those of the F. L. V. *Torch* and indicate that the storm intensified until about 4 P.M. and began to advance in a north-west direction and that the strongest winds were experienced about three hours later than the lowest barometer. Captain Beahan describes the weather during the day as follows :—

"Commenced with a hard squall from the west-north-west with heavy thunder and lightning and very heavy southerly swell and confused west-south-west sea. Daylight, wind and sea increasing heavy continuous rain.

8 A.M.—Blowing a heavy gale from the north-west; southerly swell very heavy, S.W. sea high and confused and blinding rain coming down in continuous torrents.

NOON.—Wind and weather the same. Sunset—Wind and weather the same. High south swell and confused sea more quick and toppy, looking very wild to the north, west and southward.

8 P.M.—Much lightning to the south. Wind veered from N.W. to west and increased in force to 10. Thunder and lightning continuous and the rain falling in torrents, this weather lasting till midnight.

I attach hourly observations of the barometer taken during the day. Lowest reading of aneroid barometer at 9 P.M. 29·24". 27th—Commenced with a heavy westerly gale; sea from the southward very heavy, and W.S.W. and west confused sea, and high blinding passing continuous rain squalls. This weather lasted up to 4 A.M., there was much lightning from south round by east to north.

The weather moderated fast after 4 A.M."

Saugor Island.—The following gives the observations taken at Saugor Island during the night of the 26th and 27th :—

Hour.	Barometer corrected to 32°, to constant gravity Lat. 45° and to sea level.	Wind. Direction.	Wind. Hourly velocity during interval.	Weather.
	"			
8 P.M.	29·290	NW	20	Very ugly threatening weather.
2 A.M.	29·154	NNW	29	Squally with heavy rain, thunder and lightning.
5 A.M.	29·058	NW	...	Squally, wind rising and becoming more westerly and heavy rain.
7·17 A.M.	29·046	SSW	...	Wind becoming more southerly and blowing a gale; hard squalls and heavy rain.
8 A.M.	29·063	S	...	Sea very rough.

The preceding data indicate that the storm centre passed westwards very near to Saugor Island (and probably to the north) about 7 A.M. Pressure at the centre was almost certainly below 29·00" and hence at least ·60" below the normal.

27th July.—Pressure had decreased with unusual rapidity during the previous 24 hours in the north-west angle of the Bay, South-West Bengal and Orissa, and the cyclo-

nic storm in that area was now of considerable intensity. The following data define its position at 8 A.M. :—

Station or Vessel.	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 at 8 A.M.	Rainfall.	Remarks.
	"	"	"				Inches	
F. L. V. *Torch.*	29·194	—·021	?	SW	7*	10	...	Moderate gale and high sea.
F. L. V. *Hesperus.*	·215	+·106	?	SW	7*	3	...	High south-west swell throughout, 16 inches rain from 1 hour yesterday to 22 hours.
Saugor Island.	·063	—·277	—·472	S	26	10	6·62	Sea very rough.
Calcutta .	·245	—·119	—·291	E	10	10	0·21	Squally.
Midnapur.	·247	—·166	—·291	N	7	10	1·36	Raining.
Balasore .	·233	—·177	—·289	WNW	5	10	3·41	Continuous rain.

* Force.

The centre at 8 A.M. was a little to the west of Saugor Island, where pressure was ·47" below the normal. Very steep gradients obtained in the central area where cyclonic winds of unusual intensity prevailed. The wind velocity at Saugor Island at 8 A.M. was 64 miles per hour.

The following extracts from the logs of vessels indicate the character of the weather obtaining on the morning of the 27th in the north of the Bay :—

Hour.	Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	"			
8	S.S. *Palamcotta*	10·52	97·21	29·724	W by S	9	Hard squalls; noon, heavy rain.
„	S.S. *Pundua* .	17·34	91·24	·501	W	9	Constant rain with hard squalls and high sea.
„	S.S. *Clan Forbes*	14·4	85·2	·625	WSW	6	High confused sea, midnight, frequent squalls.
„	S.S. *Clan Macintosh.*	20·35	88·5	?	WNW	6	High sea and violent squalls and rain.
„	S.S. *Rajpootana*	Eastern	Channel.	?	SE	5	Heavy squalls of wind and rain.

Moderate to heavy rain had fallen during the 24 hours ending 8 A.M. of the 27th in South-West Bengal, Orissa and Chota Nagpur. The largest reported fall was 6·62 inches at Saugor Island.

Strong monsoon winds continued on the Bombay coast and general rain had fallen in the west coast districts, Gujarat, Berar and the Central Provinces.

The additional observations recorded at stations indicate that the storm advanced rapidly westward during the day through North Orissa and the southern districts of Chota Nagpur.

A noteworthy feature of the storm was the rapidity with which the winds went down as the storm passed inland. This is fully shown by the following data extracted from the observations recorded on board the light vessels at the entrance to the Hooghly :—

Date.	Hour.	Strength. F. L. V. *Hesperus.*	Strength. F. L. V. *Torch.*
27th . . .	4 A.M. . . .	6 to 8	9
„ . . .	8 „ . . .	7	7
„ . . .	Noon . . .	4	...
„ . . .	4 P.M. . . .	3 to 4	4
„ . . .	8 „ . . .	3 to 4	...
28th . . .	Midnight . .	3 to 4	...
„ . . .	4 A.M. . . .	Calm	...
„ . . .	8 „ . . .	1	3
„ . . .	Noon . . .	1	...
„ . . .	4 P.M. . . .	1	2
„ . . .	8 „ . . .	1	...
29th . . .	Midnight . .	2	...
„ . . .	4 A.M. . . .	4 to 2	...
„ . . .	8 „ . . .	2	2

28th July.—Pressure had increased very rapidly in the north-west angle of the Bay and fallen rapidly in the Central Provinces. The depression had advanced about 290 miles westwards during the previous 24 hours and was central a little to the west of Sambalpur in Lat. 21½° N. and Long 83½° E.

Pressure was a third of an inch below the normal at the centre and the depression had hence commenced to fill up rapidly. The following gives 8 A.M. data of 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 at 8 A.M.	Rainfall.	Remarks.
	"	"	"				Inches	
Chaibassa .	29·285	—·039	?	SE	6	10	1·44	Drizzling.
Sambalpur	·222	—·174	—·331	SE	7	10	4·23	
Raipur .	·313	—·143	—·260	W	13	10	3·89	

Very heavy rain had fallen in the Central Provinces. The following gives the largest amounts for the previous 24 hours :—

DISTRICT.	STATION.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
Sambalpur	Bargarh	8·94
Raipur	Drug	5·50
„	Simga	4·15
Balaghat	Behir	5·35
„	Burha	4·40
Betul	Shahpur	8·00

Winds were strong on the Burma coast and in the storm area and were increasing on the Bombay coast. They had fallen off in a remarkable extent at the head of the Bay. Thus at Saugor Island the air movement at 8 A.M. was only 4 miles per hour, and Balasore and Cuttack recorded calms at that hour. Winds were, on the other hand, unusually strong over the whole of the Peninsula.

The following comparison indicates the abnormal strength of the air movement across the Deccan and Southern India.

STATION.	Actual mean wind velocity past 24 hours (miles per hour). (*a*)	Normal mean wind velocity in July (miles per hour). (*b*)	Ratio of (*a*) to (*b*).
Bombay	27	19	1·4
Poona	30	17	1·8
Sholapur	21	13	1·6
Bellary	18	12	1·5
Madras	13	8	1·6
Salem	12	4	3·0
Trichinopoly	20	10	2·0

The pressure conditions were, it may be noted, very unusual. Pressure had been in large defect in Burma for some days previously, a condition which in part at least explains the persistent strong westerly winds in the Peninsula. Pressure usually rises rapidly in Burma when storms pass westwards from the Bay into Orissa. This large rise had, as already pointed out, not occurred in the case of the preceding storms. Similarly in the case of the present storm the advance of the storm during the previous 24 hours had accompanied a considerable fall of pressure in Burma and pressure was almost as largely in defect in Central Burma at 8 A.M. of the 28th as in the storm area in the Central Provinces.

29th July.—Pressure had increased slightly to briskly in the eastern districts of the Central Provinces and had fallen briskly in the central and western districts of that area and also in North Bombay, Berar and Central India. The cyclonic storm had advanced about 250 miles in a westerly direction and was now (at 8 A.M.) central near Seoni, but was very faintly indicated, as it had filled up very rapidly during the previous 24 hours. The following gives data of the storm araa at 8 A.M.

STATION.	PRESSURE.			WIND.		Cloud at 8 A.M.	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	
Amraoti	29·361	—·087	—·264	W	14	10	3·65	Raining.
Nagpur	·303	—·076	—·294	WNW	15	8	3·98	
Raipur	·343	+·030	—·225	Calm	8	9	1·11	
Seoni	·327	—·052	—·238	?	?	6	3·36	'Severe nor' wester.
Jubbulpore	·300	—·074	—·240	NE	5	6	1·25	

Winds were moderate in the storm area and the cyclonic circulation was not well defined. The wind at Raipur had fallen to a calm. This was due to pressure having fallen slightly at the head of the Bay over which a shallow depression was shown. Winds were, as on the 28th, very strong in the Deccan and West Coast districts and were increasing in intensity.

Heavy rain had fallen in the central and western districts of the Central Provinces. The most noteworthy falls were :—

DISTRICT.	STATION.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
Narsinghpur	Mohpani	7·78
Nagpur	Katol	6·05
Hoshangabad	Harda	7·01
„	Seoni	5·09
Betul	Chicholi	6·47

The indraught to the advancing storm had produced a large increase in the rainfall of the Bombay coast districts.

The following gives the most noteworthy falls of the previous 24 hours.

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
Kolaba	Matheran . . .	14·25
„	Karjat	9·95
„	Khalapur . . .	8·00
Satara	Malcolmpeth . .	14·10
Poona	Lanoli	11·60

The downpour was hence excessive in the West Ghâts.

30th July.—Pressure had increased slightly to briskly in Burma, Bengal, the Gangetic Plain, the Deccan and North Madras. It had fallen locally in North Bombay and the central districts of the Central Provinces.

The pressure changes were small and irregular in the area affected by the storm and the position of the storm at 8 A.M. is hence doubtful. So far as can be judged from the observations, it had continued to fill up and had shifted slightly in a northerly direction. The probable position of the residual depression is indicated by the following observations :—

Station.	Pressure.			Wind.		Cloud at 8 A.M.	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 .	29·331	+·028	—·269	WSW	12	10	1·05	Thunderstorm.
Raipur .	·323	—·020	—·246	SW	5	10	0·19	
Seoni .	·312	—·015	—·254	Calm	...	8	0·40	
Jubbulpore.	·296	—·004	—·251	Calm	2	9	0·40	
Sutna .	...	...	...	E	6	8	0·21	
Saugor .	·330	+·006	—·204	ENE	4	10	0·46	Distant lightning.

The centre of the depression was hence near Jubbulpore. Pressure was on the 30th, as on the previous day, in very large defect in the north of the Bay and in Burma, and there was a tendency to the establishment of a depression at the head of the Bay. The chief feature of the pressure distribution was hence a large elongated area of low pressure stretching from the Central Provinces to the north-west angle of the Bay. The residual depression in the Central Provinces at the western extremity of this area filled up slowly during the next 24 hours, whilst a depression formed at the eastern extremity on the 31st and initiated a storm similar in character to those of the last ten days of July described above.

The indraught to the storm area gave very strong westerly winds in the Bombay coast districts, Kathiawar and Gujarat, and excessive downpours were received over a large part of that area on the 30th and 31st.

The following give the most noteworthy :—

Date.	District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
30th . . .	Nasik . . .	Peint . .	12·92
„ . . .	Poona . . .	Lanoli . .	10·30
„ . . .	Satara . . .	Malcolmpeth .	18·05
„ . . .	Kolaba . . .	Matheran . .	11·70
„ . . .	Broach . . .	Broach . .	10·06
31st . . .	„ . . .	„ . .	11·11
„ . . .	Satara . . .	Malcolmpeth .	17·81
„ . . .	Thana . . .	Kalyan . .	7·22

The present storm resembled in all its more important features the preceding storm. It originated under similar conditions in a persistent low pressure area at the head of the Bay during a period of abnormally strong westerly winds in the Deccan and Peninsula, and advanced along a westerly path into the Central Provinces, where it filled up. A deluge of rain fell in the Bombay coast districts, and very heavy rain in Berar and the Central Provinces, which gave rise to serious floods in the lower basins of the Tapti and Nerbudda.

Amongst the more noteworthy features of the present storm were :—

1st.—The rapidity of its formation and the increase in the wind from force 2 to 10 near the centre in less than 16 hours.

2nd.—The intensity of the rainfall in the inner storm area during its formation.

3rd.—The rapidity with which the winds fell off in the north-west angle of the Bay, when the storm advanced inland.

The following gives data of the position of the centre and its rate of advance from the 26th to the 30th :—

Date.	Hour.	Position of centre.		Distance travelled during interval.	Average hourly rate of motion during interval.
		Lat. N.	Long. E.		
		°	° ′		
26th . . .	8 A.M.	21 15	89 30	...	...
„	6 P.M.	21 25	88 50	40	4
27th . . .	8 A.M.	21 30	87 50	70	5
28th . . .	„	21 30	83 30	290	12
29th . . .	„	21 45	80 0	250	10
30th . . .	„	22 30	79 0	100	4

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

Summary of the reports of snowfall in the North-Western Himalayas in May, June and July 1896.—None have been received from any district, except Kulu and Almora.

Kulu.—There were very light falls of snow on three days during the month of May on the highest passes and peaks. The weather was unusually hot during the month, and all the passes were open for laden animals.

Almora District.—According to the report for the period, 15th April to 15th May, the last received from the Commissioner of the Kumaon Division, about a foot of snow fell on the higher passes of Malla Johar. No snow is reported to have been received in Mallas Byans, Chandans, Darma and Danpur. The weather during the period was hotter and the snowfall on the higher elevations was less than during the same period in the preceding year.

Yatung.—Mr. Hobson, Collector of Customs, Yatung, writing on the 12th May, says: "On Saturday last the Chumolari peaks (24,000 feet in height) were, with the exception of the summit of the highest peak of all, entirely clear of snow. I was astonished as when I last looked at them through field-glasses, they were all pearly white and covered with snow."

Summary of the snowfall information.—The reports are very few in number. As no reports have been received from officers on the north-west frontier, it is almost certain no snow has fallen on the higher elevations in Afghanistan.

The Kulu and Almora reports indicate that there were occasional light local falls on the higher elevations in the North-Western Himalayas during the month of May. The non-receipt of reports for the months of June and July is almost certainly due to the fact that there has been little or no snow on the higher elevations. This is confirmed by the appearance of the snows as seen from Simla.

It was stated in the memorandum published in the *Gazette of India* that, although the snowfall of the early winter months was perhaps somewhat heavier than usual in the Kashmir and perhaps the Punjab Himalayas, it melted much more rapidly than usual in March, April and May; and hence in the beginning of June the snow accumulation was probably somewhat less than usual. As the months of June and July have been characterized by an unusual amount of fine, dry sunny weather in Upper India, the accumulation on the higher elevations of the Kashmir and Punjab Himalayas is very considerably below the normal for the period.

Summary of Special Storm Reports.

The following gives a statement of the chief local storms of which reports were received during the month:—

2nd.—Thunderstorm at Simla during the early morning.

4th.—Thunderstorms at Simla (at 10 A.M.) and Allahabad (at 9 P.M.)

6th.—Severe dust storm at Jacobabad at 3 A.M.

12th—Thunderstorm at Allahabad from 4-40 P.M. to 5-45 P.M.

23rd.—Thunderstorm at Simla from 1-30 A.M. to 2-15 A.M.

„ Thunderstorm at Allahabad from 1 P.M. to 3 P.M.

26th.—Severe dust storm at Jacobabad at 2-45 P.M.

27th.—Severe thunderstorm at Allahabad from 7 P.M. to 9-30 P.M.

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

Arabian Sea.—The monsoon current was remarkably unsteady and was feebler than usual during the first fifteen days of the month over this area. Except in the neighbourhood of the coasts, where it was more or less rainy with occasional squalls, weather was generally fine. The air movement was feeblest during this period on the 9th, a day typical of the period, when the winds averaged 3·7 in force or fully 20 per cent. below the normal intensity of the month. The monsoon current blew freshly during the next three days, but fell off again in strength on the 19th, at 8 A.M. of which day the strength of the current averaged 4·2. No change occurred during the next four days, the monsoon current remaining below its normal intensity. A storm marched westwards across the head of the Peninsula from the Bay from the 24th to the 26th. The monsoon current intensified considerably in the Arabian Sea under its influence during this period and was strongest on the 25th, when it was 25 per cent. above its normal strength in July. Stormy weather prevailed off the Kathiawar and Bombay coasts on this day, several vessels

experiencing winds of force 7 to 9, "violent squalls," heavy rain and a high sea. One vessel, *viz.*, the S.S. *Dwarka*, experienced squalls of hurricane force in the evening off the Kathiawar coast. With the dispersion of the storm the monsoon current fell off again in strength and at 8 A.M of the 29th it had a mean intensity of only 4·7. Another storm advanced into the Central Provinces from the Bay on this day and hence the wind began to increase again in force in the Arabian Sea and averaged 5·2 on the 30th and 31st. The strongest winds on these two days were of force 9, experienced in the centre and west of the sea.

Bay of Bengal.—A moderate monsoon prevailed generally over the Bay during the first five days of the month except in the extreme north where light irregular airs obtained. The air movement for the whole Bay area averaged 3·7 during this period. Ordinary monsoon winds and weather were experienced generally over the Bay during the next seven days. On the 13th a feeble cyclonic circulation was developed off the Orissa and Ganjam coasts. The centre of the depression passed inland on the morning of the 14th. Slightly stronger winds than usual obtained on these two days in the Bay. The monsoon current decreased rather rapidly in strength on the 15th and was very feeble on the 16th and 17th. It was weakest on the 17th when the mean intensity of the air movement as recorded on board 20 vessels was only 3·1 or 0·9 below the normal. The strongest winds recorded on this day were of force 6. The current in the Bay strengthened rapidly during the next 48 hours and on the morning of the 19th was blowing with a mean force of 4·5 as compared with 3·1 on the 17th. Winds ranged in force from 2 to 8 on this day and were strongest in the south of the Bay where they varied between 5 and 8 in force. Showery squally weather obtained generally over the Bay at 8 A.M. of this day. Winds increased further in strength during the day and on the morning of the 20th averaged 4·8 in force. This increase in the strength of the monsoon current is shown clearly by the data of Port Blair where the average hourly velocity rose from 7 miles on the 17th to 18 miles on the 20th. A fresh to strong and increasing monsoon obtained generally over the Bay during the next 24 hours. Rainy, squally weather prevailed generally over the Bay on the morning of the 21st, except in the south where it was fine to showery. On the other hand, weather was most unsettled on this day in the north of the Bay where winds (more westerly than usual) of force 6 to 7 and thick continuous rain prevailed. The mean air movement at 8 A.M. of the 21st was 0·4 greater than at the corresponding hour of the previous day. A storm formed over the area of heavy continuous rainfall at the head of the Bay during the next 24 hours. On the morning of the 22nd a well marked cyclonic circulation existed over the north of the Bay. Weather was very disturbed in that area with gales of force 7 to 8 and heavy squalls. The air movement averaged 6·1 or 50 percent. above the normal of the month. With the passage inland of the storm on the morning of the 23rd winds fell off unusually rapidly in force, and on the morning of the 24th light north-east airs, force 1 to 3, prevailed in the north of the Bay to the north of latitude 16° N. Weather, however, continued squally in that area. The mean air movement at 8 A.M. of this day was 4·4 or 1·4 less than on the previous day. There was a tendency to the formation of a storm at the head of the Bay on this day. It developed during the next 48 hours and on the morning of the 26th a well-defined storm and cyclonic circulation was shown at the head of the Bay. Westerly gales, force 9 to 10, and torrential rain now prevailed in the storm area. The air movement averaged 5·4 in force. The storm developed with unusual rapidity during the day and was of great intensity on the morning of the 27th. It occasioned very stormy weather over the head of the Bay, the light vessels experiencing torrential rain and hurricane winds. The air movement had increased to 6·1 at 8 A.M. of the 27th. With the advance inland of the storm the winds and weather moderated with remarkable rapidity in the north of the Bay, and on the morning of the 28th light airs of force 1 to 3 prevailed at the head of the Bay. The mean intensity of the air movement had decreased to 5·4 at 8 A.M. of the 28th.

During the last three days of the month a moderate monsoon obtained over the north of the Bay, a heavy monsoon in the centre (force 7 to 9), and a fresh to strong monsoon over the remainder of the Bay.

It is noteworthy that the winds and weather over the south and centre of the Bay were almost unaffected by the two storms of the period from the 22nd to the 29th, thus showing that they were very concentrated disturbances. This is strikingly shown by the data of Port Blair where the average hourly velocity during this period ranged between 10 and 3 miles.

From the preceding account of the weather in the Arabian Sea and Bay of Bengal it will be seen that the monsoon currents were stronger during the second than during the first half of the month. The Bay current was about 15 per cent. stronger than usual in July, while the Bombay current was only a trifle weaker than usual. At the same time the winds were more directly from the west than usual in the east of the sea during the greater part of the month.

The information for the Equatorial Belt is meagre, but it suffices to indicate that moderate to strong south-east trade winds prevailed over this region during the greater part of the month and that they were stronger in the last half than during the first half of the month. They were strongest during the period from the 22nd to the 25th when winds of force 6 to 8 were experienced.

Temperature of the Air.

The variations of the mean temperature conditions of the month from the normal were mainly determined by the abnormal distribution of the rainfall of the month.

The mean maximum or day temperature of the month was below the normal locally at the following stations:—Rangoon, Diamond Island, Akyab, Sibsagar, Bhuj, False Point, Sambalpur, and Coimbatore. The variations at these stations were small in all cases except perhaps Coimbatore (—2°·1).

The mean maximum or day temperature of the month was above the normal over the remainder of India. The excess was more than 2° in amount in two large areas. The first included the Punjab, Rajputana, and the greater part of the North-Western Provinces and the second the greater part of the Madras Presidency. The day temperature was upwards of 3° in excess at the stations in the first area for which data are given below:—

Station.	Mean maximum temperature.		
	Actual, July 1896.	Normal, July.	Variation of actual from normal.
	°	°	°
Sirsa	104·1	100·0	+4·1
Agra	96·9	93·0	+3·9
Rawalpindi	101·2	97·4	+3·8
Mooltan	106·8	103·2	+3·6
Lahore	102·1	98·6	+3·5
Jeypore	95·0	91·7	+3·3
Bickaneer	103·2	100·1	+3·1

The excess was hence greatest in the area of largest deficiency of rainfall (relatively to the normal), including the greater part of the South and Central Punjab, East Rajputana and the adjacent districts of the North-Western Provinces.

The hottest period of the month in this area was from the 10th to the 14th and the highest temperatures of the month in Upper India were generally reported during this period. The following gives data for the hottest stations:—

Station.	Highest maximum temperature recorded in July 1896.	Date on which recorded.	Highest maximum temperature recorded in July previous to 1896.	Year in which recorded.
	°		°	
Jacobabad	115·1	1st	119·5	1878
Mardan	114·9	13th & 14th	112·9	1895
Peshawar	113·5	14th	117·0	1892
Montgomery	112·4	1st & 15th	120·4	1891
Mooltan	112·9	22nd	116·8	1891

The preceding data indicate that the maximum temperatures of the month in the Punjab and Upper Sind were not so high as have been occasionally recorded in July in that area in previous years.

The following gives variation data of the mean maximum temperature of the month for the hottest area in Madras:—

Station.	Mean maximum temperature.		
	Actual, July 1896.	Normal, July.	Variation of actual from normal.
	°	°	°
Cocanada	92·2	88·2	+4·0
Negapatam	98·4	94·9	+3·5
Rajahmundry	91·8	88·8	+3·0
Cuddapah	96·5	93·9	+2·6
Madras	97·9	95·6	+2·3
Salem	94·8	92·6	+2·2

The maximum temperatures of the month were regis-

tered in this area during this period from the 3rd to the 10th. The following gives the most noteworthy :—

STATION.	Highest maximum temperature recorded in July 1896.	Date on which recorded.	Highest maximum temperature recorded in July previous to 1896.	Year in which recorded.
	°		°	
Madras . . .	105·5	6th	105·7	1875
Trichinopoly . .	105·2	9th	104·6	1877
Nellore . . .	104·3	1st & 6th	105·3	1894 & 1895
Cuddalore . . .	104·3	2nd	105·4	1895
Madura . . .	104·0	9th	105·3	1884
Rajahmundry . .	103·1	2nd & 3rd	100·9	1885
Negapatam . . .	102·7	6th & 16th	103·2	1894
Cocanada . . .	102·6	1st.	101·3	1895

The mean minimum or night temperature of the month was above the normal at all stations with perhaps the exception of Sambalpur.

The variations were less than 2° in amount except locally at Secunderabad (+2°·6), Karwar (+2°·3) and in a part of the Punjab and of Madras. The following gives comparative data for stations in these two areas :—

PROVINCE.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, July 1896.	Normal, July.	Variation of actual from normal.
		°	°	°
Punjab . . .	Lahore . . .	85·2	80·4	+4·8
,, . . .	Rawalpindi . .	79·5	76·7	+2·8
,, . . .	Ludhiana . .	82·8	80·0	+2·8
,, . . .	Sirsa . . .	84·0	81·3	+2·7
,, . . .	Sialkot . . .	81·5	79·2	+2·3
,, . . .	Peshawar . .	81·3	79·2	+2·1
Madras . . .	Madras . . .	81·2	78·6	+2·6
,, . . .	Salem . . .	74·8	72·3	+2·5
,, . . .	Trichinopoly . .	79·8	77·4	+2·4
,, . . .	Negapatam . .	80·0	77·7	+2·3

The mean temperature of the month was below the normal locally at Akyab (—0°·1), Bhuj (—0°·1), Sambalpur (—0°·5) and Coimbatore (—0°·8) and was in excess at all other stations in India. The variations were generally small in amount but exceeded 2° in two areas, one including the Punjab and North-East Rajputana and the second the coast districts of Madras.

The following gives comparative data for these two areas :—

PROVINCE.	STATION.	MEAN DAILY TEMPERATURE.		
		Actual, July 1896.	Normal, July.	Variation of actual from normal.
		°	°	°
Punjab and East Rajputana.	Lahore . . .	93·7	89·5	+4·2
,, .	Sirsa . . .	94·0	90·6	+3·4
,, .	Rawalpindi . .	90·4	87·1	+3·3
,, .	Ludhiana . .	91·6	89·0	+2·6
,, .	Sialkot . . .	90·8	88·4	+2·4
,, .	Agra . . .	89·0	86·6	+2·4
,, .	Peshawar . .	93·3	91·0	+2·3
,, .	Jeypore . .	86·6	84·3	+2·3
Madras . . .	Negapatam . .	89·3	86·4	+2·9
,, . . .	Cocanada . .	85·9	83·2	+2·7
,, . .	Madras . .	89·5	87·0	+2·5
,, . . .	Salem . . .	84·8	82·4	+2·4
,, . . .	Rajahmundry .	85·3	83·0	+2·3

The mean temperature of the month at the hill stations was as largely in excess as at the neighbouring plain stations. The following gives comparative data for seven stations :—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, July 1896.	Normal, July.	Variation of actual from normal.
	°	°	°
Quetta	79·0	78·9	+0·1
Leh	63·0	61·4	+1·6
Murree	71·8	69·9	+1·9
Simla	65·8	64·9	+0·9
Mussooree	67·1	65·1	+2·0
Ranikhet	70·6	68·2	+2·4
Darjeeling	63·3	62·1	+1·2

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

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Burma	Tenasserim	83·6	74·4	79·0	9·2	16·7	+0·4	+1·1	−0·7
	Lower Burma (Deltaic)	84·7	76·7	80·7	8·0	17·3	+0·1	+0·6	−0·5
	Central do.	88·4	76·4	82·4	12·0	18·3	+0·8	+0·9	−0·1
	Upper do.	88·1	74·4	81·2	13·7	20·8	+0·3	+1·5	−1·2
	Arakan	84·2	77·7	81·0	6·5	15·5	−0·4	+0·3	−0·7
Bengal and Assam	Eastern Bengal	87·0	77·4	82·2	9·6	16·7	+1·4	+1·2	+0·2
	Assam (Surma)	92·1	78·3	85·2	13·8	27·8	+2·1	+1·2	+0·9
	Do. (Brahmaputra)	89·4	79·1	84·3	10·4	20·3	+0·3	+0·8	−0·5
	Deltaic Bengal	89·6	79·6	84·7	10·0	15·3	+0·5	+0·7	−0·2
	Central do.	90·9	79·7	85·3	11·2	17·2	+1·4	+1·2	+0·2
	North do.	90·7	79·5	85·1	11·2	21·0	+2·0	+1·4	+0·6
	Bengal Hills	66·6	54·1	60·3	12·6	22·5	+1·3	+1·1	+0·2
	Orissa	88·7	79·3	84·0	9·4	18·8	0	+0·3	−0·3
	Chota Nagpur	87·4	76·3	81·8	11·1	19·3	+0·5	+1·0	−0·5
	Bihar (South)	91·7	80·2	86·0	11·5	21·6	+0·8	+1·0	−0·2
	Do. (North)	91·6	80·4	86·0	11·2	21·8	+1·3	+1·4	−0·1
North-Western Provinces and Oudh.	North-Western Provinces (East)	93·0	80·1	86·6	12·9	23·2	+1·6	+0·7	−0·9
	Oudh (South)	94·1	80·3	87·2	13·8	30·0	+2·1	+1·0	+1·1
	Do. (North)	94·8	86·2	87·5	14·6	29·5	?	?	?
	North-Western Provinces (Central)	94·9	80·2	87·7	14·7	27·0	+2·1	+1·2	+0·9
	Do. do. (West)	95·8	80·8	88·3	15·1	28·7	+2·9	+0·9	+2·(
	Do. do. (Submontane East)	93·0	79·6	86·3	13·4	26·6	+2·4	0	+2·
	Do. do. (do. West)	91·3	77·5	84·4	13·8	26·5	+1·6	+0·6	+1·(
	Do. do. (Hills)	72·8	62·0	67·6	10.8	20·4	+1·7	+1·3	+0·4
Punjab	Punjab (South-East)	94·7	80·3	87·6	14·4	30·8	?	?	?
	Do. (South)	100·0	82·0	91·0	18·0	32·4	+4·1	+2·7	+1·4
	Do. (Central)	102·1	85·2	93·7	16·9	34·0	+3·5	+4·8	−1·3
	Do. (Submontane)	99·1	81·7	90·5	17·4	33·5	+2·5	+2·6	−0·1
	Do. (Hill Districts)	83·9	60·7	72·3	23·2	42·2	+2·8	−0·1	+2·9
	Do. (North)	104·3	81·1	92·7	23·2	41·4	+3·2	+2·5	+0·7
	Do. (West)	105·4	84·0	94·7	21·4	37·9	?	?	?
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	83·8	75·0	79·4	8·7	13·9	+1·3	+1·0	+0·3
	Madras (South Central)	90·4	73·0	81·7	17·4	24·9	+0·1	+1·6	−1·5
	Coorg	69·0	63·5	66·2	5·5	10·3	+0·3	+1·3	−1·0
	Mysore	79·9	67·0	73·5	12·9	21·9	+0·7	+1·0	−0·3
	Konkan	84·1	77·3	80·7	6·8	15·9	+0·7	+1·6	−0·9
	Bombay Deccan	83·5	70·3	76·9	13·2	21·1	+0·3	+0·5	−0·2
	Hyderabad (North)	86·6	71·9	79·3	14·7	26·1	?	?	?
	Khandesh	85·2	72·3	78·8	12·9	21·9	+0·8	+0·7	+0·1
Central Provinces and Berar.	Berar	89·1	74·9	82·0	14·2	25·5	+1·6	+1·3	+0·3
	Central Provinces (West)	88·1	76·0	82·1	12·1	23·0	+1·3	+1·2	+0·1
	Do. (Central)	86·7	74·8	80·8	12·0	22·8	+1·3	+0·8	+0·5
	Do. (East)	87·0	76·3	81·7	10·7	21·8	+0·2	+0·4	−0·2
Bombay (North)	Gujarat	88·4	78·6	83·5	9·8	19·4	−1·6	+1·7	−3·3
	Kathiawar and Cutch	88·1	78·1	83·1	10·0	20·5	+0·2	+0·5	−0·3
	Sind	98·2	83·0	90·6	15·2	24·7	+1·3	+1·8	−0·5
	Baluchistan Hills	100·2	63·6	81·8	36·5	51·2	+1·4	−1·3	+2·7
Rajputana and Central India.	Central India (East)	88·3	76·1	82·3	12·2	23·0	+1·9	+1·0	+0·9
	Rajputana (East), Central India (West)	93·0	78·4	85·7	14·6	26·6	+2·1	+0·9	+1·2
	Do. (West)	100·1	81·7	90·9	18·5	32·1	+3·1	+1·1	+2·0
Madras	East Coast (North)	90·9	79·2	85·1	11·7	24·8	+2·7	+1·8	+0·9
	Hyderabad (South)	89·7	74·3	82·0	15·4	27·2	+1·4	+2·6	−1·2
	Madras (Central)	93·1	76·4	84·8	16·7	28·8	+2·3	+1·2	+1·1
	East Coast (Central)	95·8	79·7	87·8	16·1	29·7	+1·8	+1·1	+0·7
	Do. (South)	98·4	80·3	89·3	18·1	29·5	+2·4	+2·4	0
	Madras (South)	94·0	78·9	86·5	15·1	26·3	0	+1·6	−1·6

The following gives a summary of the more important features of the temperature conditions which obtained during the month:—

At the commencement of the month temperature was more or less above the normal with the exception of the North-Western Provinces, Rajputana, Central India and the greater part of the Central Provinces. The following gives variation data for the 24 hours preceding 8 A.M. of the 1st:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL.		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	—1·4	+0·6	—0·4
Bengal and Assam	+2·1	+1·9	+2·0
North-Western Provinces and Oudh	—2·3	—1·0	—1·7
Punjab	+2·4	+4·5	+3·5
Sind and Rajputana	—2·4	—0·3	—1·4
Central India and Gujarat	—8·0	—1·0	—4·5
Central Provinces and Berar	—2·1	+0·7	—0·7
Bombay	+2·0	+1·3	+1·7
Madras	+4·8	+1·9	+3·4

The area of deficient temperature was transferred slowly northwards and westwards to the Punjab and Baluchistan on the 5th, 6th and 7th. Temperature was more or less considerably in excess over the whole of North-Eastern and Central India and the Peninsula during this period. The excess was most marked in the Madras Coast districts and culminated in a very hot period on the 9th and 10th. The following gives variation data of the mean temperature at five stations in that area from the 1st to the 11th:—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.										
	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.
	°	°	°	°	°	°	°	°	°	°	°
Cocanada	+0·8	+8·8	+5·8	—2·4	+4·3	+6·0	+0·6	+6·2	+9·4	+8·9	+9·4
Masulipatam	+6·1	+7·6	+5·2	+1·4	+5·2	+6·3	+4·6	+6·2	+4·6	+4·1	+6·9
Madras	+5·0	+5·2	+5·3	+4·5	+5·7	+6·4	+4·4	+3·8	+0·9	+2·0	+4·6
Negapatam	+4·4	+5·5	+5·6	+4·6	+4·2	+5·8	+5·2	+5·0	+1·3	+0·7	+1·9
Trichinopoly	+0·5	+2·9	+3·2	+2·9	+2·3	+4·1	+4·0	+3·7	+4·8	+2·5	+0·4

The excess was slightly greater in the day than in the night temperature.

The following gives variation data for the 24 hours preceding 8 A.M. of the 10th, showing the temperature conditions obtaining at the end of this period:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+2·1	+1·3	+1·7
Bengal and Assam	+0·8	+0·9	+0·9
North-Western Provinces and Oudh	+4·2	+1·6	+2·9
Punjab	+4·8	+5·4	+5·1
Sind and Rajputana	+1·0	—0·7	+0·2
Central India and Gujarat	+2·6	+0·6	+1·6
Central Provinces and Berar	+6·7	+0·6	+3·7
Bombay	+3·4	+1·8	+2·6
Madras	+4·6	+1·8	+3·2

Temperature increased very rapidly in Upper India on the 10th and 11th and was largely above the normal on the 12th, 13th and 14th, the hottest period of the month in the North and West Punjab. The following data for four stations illustrate this feature:—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.		
	12th.	13th.	14th.
	°	°	°
Lahore	+10·0	+12·0	+9·1
Rawalpindi	+11·8	+13·6	+12·2
Peshawar	+7·1	+7·4	+9·7
Sialkot	+8·3	+12·5	+7·9

The following gives variation data for the 14th:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·8	+1·2	+1·5
Bengal and Assam	—0·2	+0·4	+0·1
North-Western Provinces and Oudh	—0·6	+0·7	+0·1
Punjab	+8·9	+4·6	+6·8
Sind and Rajputana	+5·8	+3·8	+4·8
Central India and Gujarat	+5·7	+2·7	+4·2
Central Provinces and Berar	+3·7	+2·9	+3·3
Bombay	—0·2	+1·2	+0·5
Madras	—2·9	+0·5	—1·2

Temperature decreased considerably on the 15th and 16th over nearly the whole of India and the variations were moderate in amount during the next three days. The following gives variation data for the 19th and the change in temperature in the various provinces between the 14th and 19th:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF			Change of temperature from 14th to 19th.
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.	
	°	°	°	°
Burma	+1·5	+0·7	+1·1	—0·4
Bengal and Assam . .	—1·4	—0·2	—0·8	—0·9
North-Western Provinces and Oudh.	—1·2	—1·6	—1·4	—1·5
Punjab	+3·0	+3·2	+3·1	—3·7
Sind and Rajputana .	+2·6	+2·2	+2·4	—2·4
Central India and Gujarat	+0·1	+0·4	+0·3	—3·9
Central Provinces and Berar.	+2·0	+0·5	+1·3	—2·0
Bombay . . .	+1·7	+0·8	+1·3	+0·8
Madras	—3·1	+0·6	—1·3	—0·1

The temperature conditions of the remainder of the month were determined by the distribution of the rainfall accompanying the two storms of the last ten days of the month. These storms advanced from the Orissa Coast across the head of the Peninsula and gave heavy rain to Orissa, the Central Provinces, Berar, Khandesh, Gujarat, Kathiawar and Central India. Temperature was hence more or less below the normal in these areas during the remainder of the month. The following gives variation data for each second day from the 20th to the 30th:—

AREA.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.					
	20th.	22nd.	24th.	26th.	28th.	30th.
	°	°	°	°	°	°
Orissa . . .	+0·5	—3·1	—0·9	—0·7	—2·6	—0·6
Central Provinces and Berar.	+0·2	0	—0·9	—0·1	—1·6	—0·7
Khandesh . . .	+0·4	+0·5	—1·0	—4·3	+0·6	—3·0
Kathiawar . . .	+0·5	—0·1	+0·4	—7·4	—3·6	—1·6
Central India and Gujarat.	—1·0	—1·4	+0·8	+2·0	+0·1	+1·8

Temperature was in considerable to large excess throughout the whole period in Northern India where the rainfall was very scanty as is shown by the following data:—

AREA.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF DATE.					
	20th.	22nd.	24th.	26th.	28th.	30th.
	°	°	°	°	°	°
Bengal . . .	+0·7	—0·2	+1·7	+3·0	+2·8	+1·8
Bihar	0	—1·0	+2·7	+4·4	+6·1	+2·8
Chota Nagpur . .	+1·9	—3·2	—0·2	+1·2	—0·7	0
North-Western Provinces and Oudh.	—0·3	—2·2	+1·6	+3·6	+6·0	+4·0
Sind and Rajputana .	+0·2	—0·2	+4·9	+6·7	+6·2	+3·7
Punjab . . .	+4·1	+6·5	+1·8	+4·2	+3·3	+6·0

Temperature was also above the normal in the southern half of the Peninsula but to a much smaller extent than in Northern India. The following table giving variation data for the 24 hours preceding 8 A.M. of the 30th illustrates the temperature conditions obtaining in the Indian area at the end of the month:—

POLITICAL AREA OR PROVINCE.	VARIATION FORM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	—1·5	—0·3	—0·9
Bengal and Assam	+2·0	+1·6	+1·8
North-Western Provinces and Oudh .	+8·1	—0·2	+4·0
Punjab	+7·7	+4·3	+6·0
Sind and Rajputana	+7·7	—0.4	+3·7
Central India and Gujarat . . .	+2·7	+0·9	+1·8
Central Provinces and Berar . .	—1·9	+0·2	—0·9
Bombay	—2·8	+0·3	—1·3
Madras	—4·0	+0·3	—1·9

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

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE FOR WEEK ENDING					
	4th July.	11th July.	18th July.	25th July.	1st August.	For whole month.
	°	°	°	°	°	°
Burma . . .	+0·9	+1·7	+1·1	—0·1	—0·9	+0·6
Bengal and Assam .	+0·5	+0·8	+0·3	+0·4	+2·4	+1·0
North-Western Provinces and Oudh.	—0·9	+1·7	—0·2	+0·2	+4·7	+1·4
Punjab . . .	+0·9	+1·6	+2·1	+4·1	+3·2	+3·0
Sind and Rajputana .	—2·0	+0·1	+2·9	+2·0	+4·6	+1·9
Central India and Gujarat.	—2·4	+1·3	+2·7	0	+0·5	+0·9
Central Provinces and Berar.	+0·8	+1·9	+2·6	—0·1	—0·7	+1·1
Bombay . . .	+1·7	+1·9	+1·2	+0·6	—0·8	+0·8
Madras . . .	+2·5	+3·9	+2·0	—0·4	—0·3	+1·7

Winds.

The Bay monsoon current in the centre of the Bay was stronger than usual and was of normal strength at the head of the Bay on the mean of the month, as is established by the following data :—

STATION.	VELOCITY IN MILES PER DIEM.		
	Mean actual, July 1896.	Mean normal, July.	Variation from normal.
Port Blair	376	254	+122
Diamond Island	402	210	+192
Akyab	103	96	+ 7
Saugor Island	321	341	— 20
False Point	267	268	— 1

Winds were normal in strength in the interior of Bengal and Orissa. They were slightly stronger in Central Bihar, Chota Nagpur, Assam and the eastern districts of the North-Western Provinces. The following gives comparative data of the strength of the winds in those areas in July 1896 :—

PROVINCE.	VELOCITY IN MILES PER DIEM.			
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Percentage variation from normal.
Bengal	178	172	+ 6	+ 3
Assam	104	77	+27	+35
Central Bihar	100	91	+ 9	+10
Chota Nagpur	224	203	+21	+10
Orissa	178	174	+ 4	+ 2
North-Western Provinces, Central.	158	103	+55	+53

Hence the Bengal current, so far as is indicated by the strength of the winds in its usual area of extension in July, was stronger than usual, more especially in the centre and north-east of the Bay and in East Bengal.

Winds were more westerly than usual at Port Blair and the Burma Coast stations :—

STATION.	WIND DIRECTION.		
	Mean actual, July 1896.	Mean normal, July.	Westerly deflection.
Port Blair	S 58° W	S 44° W	+14°
Diamond Island	S 49° W	S 41° W	+ 8°
Rangoon	S 45° W	S 31° W	+14°

As might be expected from the abnormal features of the pressure distribution and of the tracks of the storms across the head of the Peninsula winds were much more easterly than usual in the interior of Bengal. This is fully shown by the following data :—

STATION.	WIND DIRECTION.		
	Mean actual, July 1896.	Mean normal, July	Easterly deflection.
	°	°	°
Saugor Island	S 1 E	S 24 W	+25
Narayanganj	S 28 E	S 19 E	+ 9
Calcutta	S 30 E	S 11 E	+19
Burdwan	S 37 E	S 26 E	+11
Berhampore	S 51 E	S 41 E	+10

The data indicate a mean easterly deflection of the winds of the month of about 15°.

Winds were approximately normal in steadiness in Bihar and the eastern districts of the North-Western Provinces. They were exceedingly unsteady in the western districts of the North-Western Provinces and the East Punjab as is shown by the following data :—

STATION.	VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, July 1896.	Mean normal, July.	Percentage variation.	Actual percentage, July 1896.	Normal percentage, July.	Variation from normal.
				%	%	
Roorkee	56	71	—21	5	33	—28
Meerut	47	57	—18	19	23	— 4
Lahore	97	80	+21	11	34	—23
Peshawar	97	111	—13	24	50	—26

The monsoon trough of low pressure lay further north than usual on the mean of the month. The position of its axis was defined approximately by the stations for which data are given below :—

STATION.	STEADINESS.			WIND DIRECTION.	
	Actual percentage, July 1896.	Normal percentage, July.	Variation from normal.	Mean actual, July 1896.	Mean normal, July.
	%	%			
Hazaribagh	23	19	+ 4	N 34° W	S 16° E
Allahabad	16	7	+ 9	N 21° W	N 84° E
Meerut	19	23	— 4	N 70° W	S 86° E
Roorkee	5	33	—28	S 41° W	S 39° E
Lahore	11	34	—23	N 75° W	S 84° E

The Bombay current was, on the mean of the month, slightly stronger and much more steady than usual. The following gives data for three stations :—

STATION.	VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, July 1896.	Mean normal, July.	Percentage variation.	Actual percentage, July 1896.	Normal percentage, July.	Variation from normal.
				%	%	
Kurrachee . . .	383	436	—12	92	83	+ 9
Bombay . . .	489	456	+ 7	89	84	+ 5
Ratnagiri . . .	363	313	+16	93	77	+16

The data of the following inland stations at which the exposure of the anemometer is peculiarly favourable confirm the inferences drawn from the data of the coast stations :—

STATION.	VELOCITY IN MILES PER DIEM.			
	Mean actual, July 1896.	Mean normal, July.	Variation from normal.	Percentage variation.
Belgaum	708	669	+ 39	+ 6
Poona	522	400	+122	+31

One of the more noteworthy features of the air movement was the unusual strength of the winds in South India and the Deccan. The following gives the most noteworthy examples :—

STATION.	VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, July 1896.	Mean normal, July.	Variation from normal.	Actual percentage, July 1896.	Normal percentage, July.	Variation from normal.
				%	%	
Trichinopoly . .	310	239	+ 71	85	81	+4
Salem . . .	211	106	+105	79	82	—3
Bellary . . .	332	281	+ 51	92	89	+3
Bangalore . . .	336	206	+130	90	91	—1

The unusual strength of the air movement was exhibited almost as largely at the hill stations in the Central Provinces and Southern India as is shown by the following data :—

STATION.	VELOCITY IN MILES PER DIEM.		
	Mean actual, July 1896.	Mean normal, July.	Percentage variation.
Wellington	145	127	+14
Chikalda	318	230	+38
Pachmarhi	360	227	+59

The westerly winds of the month were hence unusually vigorous over the whole of Southern India, the Deccan and the Central Provinces. Mean data for the different provinces in this area are given in the following table :—

DIVISION.	VELOCITY IN MILES PER DIEM.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.
West Coast	426	385	+41
Bombay Deccan	550	456	+94
Berar	261	211	+50
Central Provinces	191	172	+19
Southern India	261	173	+88

The same causes which contributed to the great increase of the air movement to the south of the tracks of the larger storms of the month tended to diminish it in the areas to the north, more especially in Central India and Rajputana. The following gives comparative data for these two provinces :—

DIVISION.	VELOCITY IN MILES PER DIEM.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.
Central India	139	166	—27
Rajputana	200	220	—20

Winds were somewhat more westerly and less southerly in and near the west coast districts north of Ratnagiri, as is shown by the following data :—

STATION.	WIND DIRECTION.		
	Mean actual, July 1896.	Mean normal, July.	Westerly deflection.
	°	°	°
Kurrachee	S 66 W	S 62 W	+ 4
Bombay	S 80 W	S 75 W	+ 5
Deesa	S 70 W	S 40 W	+30

In the Deccan the mean winds were on the whole slightly less westerly than usual, but the differences were small and apparently of little significauce.

In Central India and Rajputana winds were much more westerly than usual due chiefly to the influence of the storms of the month. The following gives three examples :—

STATION.	WIND DIRECTION.		
	Mean actual, July 1896.	Mean normal, July.	Westerly deflection.
	°	°	°
Deesa	S 70 W	S 40 W	+30
Jeypore	N 72 W	N 58 W	+14
Agra	S 78 W	N 63 E	Large

Winds in Southern India were on the whole more westerly than usual. The following data illustrate these features :—

STATION.	WIND DIRECTION.		
	Mean actual, July 1896.	Mean normal, July.	Westerly deflection.
	°	°	°
Mercara	N 83 W	N 79 W	+ 4
Bangalore	S 75 W	S 71 W	+ 4
Madras	S 74 W	S 46 W	+28

The winds of the month at the hill stations in Northern India were considerably stronger than usual. The following are examples :—

STATION.	VELOCITY IN MILES PER DIEM.		
	Mean actual, July 1896.	Mean normal, July.	Variation from normal.
Darjeeling	94	63	+31
Ranikhet	89	51	+38
Chakrata	228	118	+110

The increased air movement extended as far into the interior as Leh and Kailang at which stations the mean winds were about 25 per cent. stronger than usual.

The mean wind direction at Zanzibar was S 8° E (slightly more easterly than usual) and at the Seychelles S 29° E or 7° more easterly than the mean winds in July 1894. Winds were steadier at both stations in July 1896 than in July 1894.

The following summarizes the chief features of the air movement over India during the month :—

(1) The Bay monsoon current was almost certainly stronger on the average of the whole month than usual.

(2) Winds were considerably stronger and much more westerly than usual at Port Blair and the Burma Coast stations.

(3) Winds were of normal strength in Bengal and more easterly than usual at the inland stations, indicating that the movement of the monsoon current was determined by the storms of the month more largely than usual.

(4) Winds were unsteady in the western half of the Gangetic Plain and East Punjab.

(5) The Bombay monsoon current was somewhat above its normal strength on the Bombay and Kathiawar Coasts and in Chota Nagpur and the Central Provinces.

(6) Winds were remarkably strong in Southern India and the Deccan, and were more westerly than usual in the former area, more specially during the second half of the month.

(7) Winds were more westerly than usual in Rajputana and Central India.

(8) Winds were considerably stronger at the hill stations, more especially at Darjeeling, Ranikhet and Chakrata.

(9) The axis of the trough of low pressure lay on the average of the month somewhat further north than usual, stretching from Chota Nagpur to Upper Sind and the South-West Punjab.

Humidity and Cloud.

The mean humidity conditions of the month were normal at Port Blair and in Lower Burma. The amount of aqueous vapour present in the air was as large as usual in Bengal and the Gangetic Plain, but in consequence of the increased temperature relative humidity was slightly lower than usual. The deficiency was greatest at Allahabad (—5) and Berhampore (—4). The air was drier than usual both absolutely and relatively, in the Punjab, more especially at Ludhiana where the mean humidity percentage of the month was 8 below the normal. The conditions in

Sind and East Rajputana (as represented by Jeypore) were similar to those which obtained in the Gangetic Plain, *viz.*, slightly increased absolute humidity and decreased relative humidity.

The following gives comparative data for Northern India:—

Division.	Absolute humidity.			Relative humidity.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Average actual, July 1896.	Average normal, July.	Variation from normal.
	"	"	"	%	%	
Bengal	·975	·964	+·011	85	86	—1
Bihar	1·000	·964	+·036	82	83	—1
Chota Nagpur	·810	·818	—·008	82	85	—3
North Western Provinces and Oudh.	·923	·912	+·011	74	77	—3
Punjab	·816	·822	—·006	57	61	—4
Rajputana, East	·872	·851	+·021	72	76	—4

The air was generally slightly damper than usual in South Rajputana, the Central Provinces and the Bombay Deccan, as is shown by the following data:—

Division.	Absolute humidity.			Relative humidity.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Average actual, July 1896.	Average normal, July.	Variation from normal.
	"	"	"	%	%	
Rajputana, South	·884	·828	+·056	79	74	+ 5
Central Provinces	·834	·807	+·027	81	81	0
Bombay Deccan	·694	·675	+·019	81	79	+ 2

The air was unusually dry in the Madras Deccan and Southern India, due to a slight extent to a deficiency of aqueous vapour, but mainly to the excessive temperature which obtained in that area during the greater part of the month. The following gives data for four representative stations:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, July 1896.	Normal, July.	Variation from normal.	Actual, July 1896.	Normal, July.	Variation from normal.
	"	"	"	%	%	
Bangalore	·591	·607	—·016	63	77	—14
Trichinopoly	·621	·698	—·077	48	58	—10
Salem	·717	·754	—·037	63	71	— 8
Madras	·801	·784	+·017	61	67	— 6

The air was somewhat drier than usual at the hill stations in Northern India, slightly damper at Mount Abu and Chikalda and of normal humidity at Wellington.

The air was unusually dry at Aden where the mean humidity of the month was 10 below the normal.

The chief local features of the humidity conditions of the month were as follows:—

(1) Normal conditions in Burma.

(2) Slight deficiency over the whole of Northern India, chiefly due to the increased temperature of the month. The deficiency was most marked in the East Punjab and the adjacent districts of the North-Western Provinces. It was small in amount in the Upper India hill districts.

(3) Slight excess in the north and centre of the Peninsula, including the Bombay coast districts.

(4) Moderately large deficiency in South and Central Madras and Mysore. The deficiency was most pronounced in Mysore.

The variations of the mean cloud amount from the normal differed considerably in character from those of the absolute and relative humidities.

There was more cloud than usual in the Bay Islands, Burma, Bengal, South Bihar, Chota Nagpur and Orissa, The excess was greatest in absolute amount in that area at Port Blair (+2·0) and Saugor Island and Diamond Island (each +1·3). The following table gives comparative data:—

Division.	Mean cloud amount.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.
Burma	9·1	8·5	+ 0·6
Bengal	8·4	8·1	+ ·3
North Bihar	6·3	6·3	0
South Bihar	8·3	8·1	+ 0·2
Chota Nagpur	9·8	9·1	+ 0·7
Orissa	8·5	7·9	+ 0·6

Cloud was, on the other hand, in considerable to large defect in the North-Western Provinces, the Punjab, Sind, Rajputana and Central India. The deficiency was 1·5 or more in amount at Roorkee (—2·1) and Dehra (—1·5). Relatively to the normal amount the deficiency was greatest at Jacobabad (48 per cent.) and

Roorkee (32 per cent.). Comparative data for the month for the above area are given in the following table:—

PROVINCE.	MEAN CLOUD AMOUNT.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.
North-Western Provinces and Oudh	6·1	7·3	−1·2
Punjab	3·3	3·9	−0·6
Sind	4·1	4·8	−0·7
Rajputana	6·4	7·3	−0·9
Central India	7·0	7·9	−0·9

The amount of cloud was less than usual at the hill stations in Northern and Central India, but was normal at Quetta. The deficiency was greatest at Darjeeling (—2·6), Mount Abu (—2·2), Ranikhet (—2·1) and Kailang (—1·0). The decreased cloud amount at the hill stations was one of the more important conditions of the meteorology of the month.

Cloud was on the average of the month generally in excess in the Peninsula. The excess was large at Bangalore (+2·5), Ratnagiri (+1·6), Salem (+1·2) and Wellington (+1·3). The following gives the chief features of the mean cloud distribution of the month:—

(1) Cloud was in slight to moderate excess in Burma, Bengal, Orissa and Chota Nagpur and normal in North Bihar.

(2) Cloud was more or less below the normal in the North-Western Provinces, the Punjab, Sind and Rajputana. The deficiency was on the whole most marked at the hill stations, more especially Darjeeling, Ranikhet and Mount Abu.

(3) Cloud was generally in slight excess in Central India and the Peninsula, the excess being, on the whole, greatest in the area of decreased humidity in Souhern India, including Mysore and the Nilgiris.

Rainfall.

The distribution of rainfall of the month is 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 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 57 meteorological divisions from the normal.

The Bombay branch of the monsoon current was somewhat weaker than usual during the first fortnight of the month, and the rainfall was more or less deficient in North-Western and Central India during this period. The Bengal current, judging from the mean strength of the winds at the coast stations, was stronger than usual, but was unsteady and was largely determined to Burma.

The first storm of the month formed in South Bengal on the 10th. It was throughout a feeble storm and marched in a westerly direction through Chota Nagpur on the 12th, into the eastern districts of the Central Provinces on the 13th, and intensified slightly in the central districts of the Central Provinces on the 14th and filled up slowly in that area on the 15th and 16th. It gave moderate rain to South Bengal, Orissa, Chota Nagpur, the Central Provinces and Berar, and the intensified monsoon winds on the west coast gave a heavy burst of rain on the 14th and 15th, to the west coast districts and adjacent hills. The breaking up of this storm was followed by an advance of humid winds to Upper and Central India. Rajputana, the Punjab and North-Western Provinces received moderate to heavy rain from the 15th to the 18th or 19th.

The second storm of the month formed at the head of the Bay on the 21st and 22nd, and advanced through Orissa, the southern districts of Chota Nagpur and the Central Provinces to Gujarat. It gave a heavy downpour to the Central Provinces, Berar and Khandesh on the 24th and 25th, and the intensified monsoon winds on the West Coast gave exceptionally heavy rain to the Colaba, Thana, Broach and Surat districts of Bombay and also to the greater part of Gujarat.

The third storm of the month formed on the 26th and 27th and followed the same track as the previous storm to the central districts of the Central Provinces where it filled up on the 29th and 30th. Orissa, the Central Provinces, Berar and Khandesh received heavy rain during the advance of the storm and the Thana, Kolaba, North Kanara, Broach and Surat districts and the greater part of Gujarat and Kathiawar obtained a very heavy downpour from the 27th to the 30th.

During the period from the 21st to the 30th the indraught to the storm areas deprived the greater part of Northern India of rain, and the Punjab, Rajputana and the Gangetic Plain hence received little or no rain, and North and East Bengal and Assam only light to moderate rain.

The rainfall of the month was hence more or less in excess in the areas affected by the three storms of the month, including Orissa, the Central Provinces, Khandesh, North Bombay, Gujarat and Kathiawar. It was generally in slight defect in Southern India and in moderate to large defect in Northern India.

The rainfall of the month was more or less in defect in the following areas:—

(1) Assam.

(2) Bengal and Bihar.

(3) The North-Western Provinces, the Punjab, Rajputana (East) and Central India. The deficiency was on the whole greatest in the submontane districts of Northern India. The Punjab received only 71 per cent. of the normal, and Sind 24 per cent.

(4) South and Central Madras and Hyderabad.

It was in large excess in Gujarat, Khandesh, the Konkan, Bombay Deccan, Orissa, and the eastern districts of the Central Provinces. It was practically normal in the remainder of India, but somewhat irregularly distributed.

The following table gives mean actual, mean normal and variation data for 57 meteorological divisions or districts into which India is divided, in the same form as in previous months, and has been prepared in exactly the same manner as hitherto:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, July 1896.	Average normal, July.	Average actual, July 1896.	Average normal, July.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	44·37	46·56	−2·19
	Lower Burma (Deltaic)*	?	?	28·49	23·00	+5·49
	Central do.*	?	?	13·57	14·23	−0·66
	Upper do.*	?	?	4·91	?	?
	Arakan*	?	?	55·29	47·50	+7·79
Bengal and Assam	Eastern Bengal	16·2	18·4	13·17	18·01	−4·84
	Assam (Surma)*	?	?	18·03	20·96	−2·93
	Do. (Hill Tracts)	?	?	26·77	28·26	−1·49
	Do. (Brahmaputra)*	?	?	14·05	14·72	−0·67
	Deltaic Bengal	16·0	16·4	11·84	11·81	+0·03
	Central do.	14·2	16·1	10·62	12·35	−1·73
	North do.	15·5	16·7	18·02	19·68	−1·66
	Bengal Hills	21·7	24·1	26·25	35·47	−9·22
	Orissa	17·1	14·2	15·07	11·67	+3·40
	Chota Nagpur	18·4	17·2	17·04	14·14	+2·90
	Bihar (South)	12·0	14·0	9·61	12·25	−2·64
	Do. (North)	12·1	14·5	11·30	13·75	−2·45
North-Western Provinces and Oudh.	North-Western Provinces (East)	11·9	13·3	8·36	11·83	−3·47
	Oudh (South)	8·5	12·3	5·88	10·75	−4·87
	Do. (North)	8·1	12·1	6·40	11·69	−5·29
	North-Western Provinces (Central)	9·7	12·3	7·85	11·79	−3·94
	Do. do. (West)	6·0	9·5	9·62	8·85	+0·77
	Do. do. (Submontane East)	9·4	13·2	7·61	12·50	−4·89
	Do. do. (do. West)	10·2	12·7	10·18	14·67	−4·49
	Do. do. (Hills)	13·8	18·5	12·05	17·06	−5·01
Punjab	Punjab (South-East)	6·6	7·8	7·30	7·68	−0·38
	Do. (South)	4·9	5·1	2·77	4·87	−2·10
	Do. (Central)	4·8	5·5	2·74	4·99	−2·25
	Do. (Submontane)	7·5	8·4	5·54	9·20	−3·66
	Do. (Hill Districts)	13·8	15·1	11·94	16·68	−4·74
	Do. (North)	5·2	4·8	3·38	4·17	−0·79
	Do. (West)	2·9	3·0	2·07	2·57	−0·50
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	28·6	26·8	38·39	34·42	+3·97
	Travancore	19·4	?	16·31	?	?
	Madras (South-Central)	2·4	3·9	0·85	2·36	−1·51
	Coorg	26·0	?	45·78	?	?
	Mysore*	?	?	7·51	7·39	+0·12
	Konkan	28·1	26·8	51·91	40·04	+11·87
	Bombay Deccan	14·2	12·2	13·46	9·39	+4·07
	Khandesh	13·7	11·1	16·61	7·66	+8·95
Central Provinces and Berar.	Berar*	?	?	9·17	10·75	−1·58
	Central Provinces (West)	14·4	15·4	14·86	13·81	+1·05
	Do. (Central)	18·3	17·1	17·51	18·02	−0·51
	Do. (East)	19·4	15·0	24·36	16·07	+8·29
Bombay (North)	Gujarat	18·9	17·1	23·91	18·46	+5·45
	Kathiawar	13·1	11·5	11·53	11·27	+0·26
	Sind	1·3	?	0·45	1·86	−1·41
	Baluchistan Hills	1·0	?	0·51	0·53	+0·01
Rajputana and Central India.	Central India (East)	13·1	?	10·88	14·89	−4·01
	Rajputana (East) and Central India (West)	7·4	?	7·96	9·88	−1·92
	Rajputana (West)	5·0	?	3·91	3·33	+0·58
Madras	East Coast (North)	10·9	9·9	7·18	6·75	+0·43
	Do. (do.) (a)	18·5	19·7	13·44	15·38	−1·94
	Hyderabad (South)*	?	?	3·75	4·82	−1·07
	Madras (Central)	5·0	6·2	2·09	3·15	−1·06
	East Coast (Central)	5·3	4·9	2·79	2·45	+0·34
	East Coast (South)	2·6	4·7	1·30	3·00	−1·70
	Madras (South)	2·4	2·1	1·09	1·08	+0·01

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

Daily rain fell during the month in Arakan, Lower and Central Burma. The falls were generally moderate in amount, and the largest fall in 24 hours in Lower Burma was 8·28 inches at Thayetchaung in the Tavoy District, and in Arakan 14·90 inches at Sandoway in the Sandoway District. Little or no rain fell in the greater part of Upper Burma during the first three weeks of the month, and light to moderate showers from the 22nd to the 31st.

The following table gives a summary of the rainfall data as published in the *Burma Gazette*:—

Division.	Number of rainy days.		Rainfall.		
	Average actual, July 1896.	Average normal, July.	Average actual, July 1896.	Average normal, July.	Variation from normal.
			Inches.		
Tenasserim . .	29·3	?	50·01	?	?
Lower Burma . .	27·7	?	29·16	?	?
Central Do. . .	21·3	?	12·95	?	?
Upper Do. . .	8·1	?	5·62	?	?
Arakan. . . .	27·9	?	63·11	?	?

Rain fell daily in Assam from the 1st to the 21st, a general break obtained during the remainder of the month and the rainfall of this period was restricted to some local showers.

The rainfall of the month does not differ to any large extent from the normal. The following gives comparative data deduced from the rainfall information for the month published in the *Assam Gazette*:—

Division.	Number of rainy days.		Rainfall.		
	Average actual, July 1896.	Average normal, July.	Average actual, July 1896.	Average normal, July.	Variation from normal.
			Inches.	Inches.	Inches.
Assam (Surma) . .	18·3	20·5	15·59	19·00	—3·41
Brahmaputra Valley .	16·5	16·9	16 00	16·03	—0·03
Assam Hill District .	18·4	21·2	24·85	23·18	+1·67

The distribution of the rainfall of the month was determined to a greater extent than usual by the tracks of the storms of the month. The storms were not only more numerous than usual, but the accompanying rainfall was more concentrated and localized, and hence occurred over a narrower belt of country than is usually the case. As the three storms of the month all advanced westwards through Orissa and Chota Nagpur into the Central Provinces, South-West Bengal, Orissa and Chota Nagpur received more abundant rain than usual, and East, Central and North Bengal and Bihar obtained less frequent and lighter rain.

South Bengal, Orissa and Chota Nagpur received practically daily rain throughout the month. Heavy rain fell in these areas during the passage of the storms of the last ten days of the month, and more especially on the 22nd and 23rd and the 27th. The following gives the rainfalls in 24 hours (over six inches) during this period:—

Date.	District.	Station.	Rainfall in 24 hours preceding 8 A. M. of date.
			Inches.
22nd .	Balasore . . .	Bhadrak . . .	7·74
,, .	,, . . .	Chandbali . . .	6·35
,, .	Singhbhum . .	Baharagura . . .	6·50
27th .	Howrah . . .	Saugor Island . .	6·62

North, East and Central Bengal obtained light to moderate daily rain from the 1st to the 21st or 22nd when a break set in which lasted until the 30th. Moderate rain fell in these areas on the 30th and 31st.

Bihar obtained rain chiefly during two periods, *viz.*, the 3rd to the 13th and again from the 17th to the 22nd. A well marked break lasted from the 23rd to the 31st, during which period dry weather with lightly clouded skies generally obtained.

The following gives comparative data for the three divisions of the province in which the average total rainfall of the month was above the normal:—

Division.	Number of rainy days.			Rainfall.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Average actual, July 1896.	Average normal July.	Variation from normal.
				Inches.	Inches.	Inches.
Deltaic Bengal . .	16·0	16·4	— 0·4	11·84	11·81	+ 0·03
Orissa	17·1	14·2	+ 2·9	15·07	11·67	+ 3·40
Chota Nagpur . .	18·4	17·2	+ 1·2	17·04	14·14	+2 90

The excess was greatest, absolutely as well as relatively to the normal, in Orissa (29 per cent.).

In the following table are given comparative data for the six divisions in which the rainfall was below the normal:—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Average actual, July 1896.	Averge normal, July.	Variation from normal.
				Inches.	Inches.	Inches.
Eastern Bengal . .	16·2	18·4	—2·2	13·17	18·01	—4·84
Central „ . .	14·2	16·1	—1·9	10·62	12·35	—1·73
North „ . .	15·5	16·7	—1·2	18·02	19·68	—1·66
Bengal Hills . .	21·7	24·1	—2·4	26·25	35·47	—9·22
Bihar (South) . .	12·0	14·0	—2·0	9·61	12·25	—2·64
„ (North) . .	12·1	14·5	—2·4	11·30	13·75	—2·45

The percentage variations differed very considerably from district to district in this large area of deficient rainfall. They exceeded 33 per cent. in the districts for which data are given below:—

DISTRICT.	RAINFALL.		
	Average actual, July 1896.	Average normal July.	Percentage variation from normal.
	Inches.	Inches.	
Dinajpur	6·58	14·29	—53
Dacca	7·42	13·31	—44
Faridpur	6·62	11·93	—44
Chittagong	16·91	29·80	—44
Birbhum	7·63	12·57	—39
Pabna	6·75	11·13	—39
Nadia	6·69	10·51	—36
South Lushai Hills	12·00	18·58	—35
Palamau	8·72	13·53	—35

The deficiency was hence most marked in the district of Dinajpur in North Bengal.

The rainfall of the month was unusually scanty in the North-Western Provinces. Little or no rain fell in the plains districts from the 1st to the 3rd. Light to moderate rain was received in all districts from the 4th to the 9th. The western and central districts obtained occasional light showers during this period and the remainder of the province moderate rain. A break in the rains, the second of the month, set in on the 10th and 11th and lasted until the 13th. General rain was received from the 15th to the 22nd or 23rd. This burst of rain was light in Oudh, moderate in the eastern division and moderately heavy in the western, central and sub-montane districts. The following falls in 24 hours exceeding 5 inches during this period indicate roughly the areas of heaviest rain:—

DATE.	District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
13th .	Dehra Dun . .	Chakrata . . .	5·45
14th .	Agra . . .	Itimadpur . .	5·13
„ .	Muzaffarnagar . .	Kandhla . . .	6·00
15th .	Aligarh . . .	Balanpur . . .	12·00
„ .	Bulandshahr . .	Dayanatpur . .	8·80
„ .	„ . .	Bulandshahr . .	5·43
„ .	„ . .	Sikandarabad . .	5·36
„ .	Meerut . . .	Mawana . . .	5·10
16th .	Lucknow . . .	Malihabad . .	5·04
„ .	Shahjahanpur . .	Shajahanpur . .	9·30
„ .	Moradabad . .	Sambhal . . .	5·85
„ .	Garhwal . . .	Kotdwara . . .	5·81
18th .	Bahraich . . .	Nanpara . . .	5·40
„ .	Jhansi . . .	Pachwara . . .	5·58
19th .	Jalaun . . .	Kalpi . . .	5·21
30th .	Bareilly . . .	Choreli . . .	5·40

A break, the third of the month, commenced on the 23rd and lasted until practically the end of the month. Local showers were received on the 30th and 31st, chiefly in the western districts. This break in the rains was due to the influence of the cyclonic storms of the period.

The following gives data for the districts in the North-Western Provinces (nine in number) in which the rainfall of the month was in very large defect (by amounts ranging between 50 and 75 per cent. of the normal):—

DISTRICT.	RAINFALL.			
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Rai Bareilly . .	2·40	9·59	—7·19	—75
Gonda . . .	4·25	11·82	—7·57	—64
Sultanpur . . .	4·49	11·84	—7·35	—62
Azamgarh . . .	4·61	11·57	—6·96	—60
Jalaun . . .	5·65	12·18	—6·53	—54
Farukhabad . .	5·05	10·76	—5·71	—53
Sitapur . . .	5·38	11·11	—5·73	—52
Hardoi . . .	5·62	11·69	—6·07	—52
Banda . . .	6·99	14·33	—7·34	—51

The average rainfall of the month was in large defect (by amounts ranging between 33 and 50 per cent.) in twenty districts, as is shown below :—

District.	Rainfall.			
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Fyzabad	5·78	11·39	—5·61	—49
Bara Banki	5·40	10·62	—5·22	—49
Ghazipur	5·44	10·49	—5·05	—48
Etawah	5·46	10·55	—5·09	—48
Cawnpore	5·84	10·87	—5·03	—46
Mirzapur	7·29	12·76	—5·47	—43
Basti	7·82	13·59	—5·77	—42
Moradabad	7·66	13·12	—5·46	—42
Pilibhit	9·67	16·34	—6·67	—41
Bareilly	8·95	15·05	—6·10	—41
Fatehpur	6·71	10·99	—4·28	—39
Dehra Dun	17·66	29·11	—11·45	—39
Agra	6·08	9·74	—3·66	—38
Naini Tal	11·34	18·07	—6·73	—37
Mainpuri	6·81	10·79	—3·98	—37
Bahraich	8·49	13·38	—4·89	—37
Shahjahanpur	7·98	12·41	—4·43	—36
Unao	6·71	10·56	—3·85	—36
Ballia	7·58	11·41	—3·83	—33
Etah	6·46	9·62	—3·16	—33

The rainfall of the month was in excess in four districts for which comparative data are given below :—

District.	Rainfall.			
	Average actual, July 1896.	Average normal July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Bulandshahr	13·03	8·45	+4·58	+54
Aligarh	11·00	8·25	+2·75	+33
Meerut	10·12	8·63	+1·49	+17
Muzaffarnagar	10·33	9·12	+1·21	+13

The rainfall of the month was normal or in moderate defect in the remaining fifteen districts of the province.

The following gives comparative data of the eight meteorological divisions of the province :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Average actual, July 1896.	Average normal, July	Variation from normal.
				Inches.	Inches.	Inches.
North-Western Provinces (East).	11·9	13·3	—1·4	8·36	11·83	—3·47
Oudh (South)	8·5	12·3	—3·8	5·88	10·75	—4·87
„ (North)	8·1	12·1	—4·0	6·40	11·69	—5·29
North-Western Provinces (Central).	9·7	12·3	—2·6	7·85	11·79	—3·94
North-Western Provinces (West).	6·0	9·5	—3·5	9·62	8·85	+0·77
North-Western Provinces (Submontane East).	9·4	13·2	—3·8	7·61	12·50	—4·89
North-Western Provinces (Sub-montane West).	10·2	12·7	—2·5	10·18	14·67	—4·49
North-Western Provinces (Hills).	13·8	18·5	—4·7	12·05	17·06	—5·01

The rainfall of the month was not only lighter than usual in the Punjab but was very irregularly distributed. The greater part of the rainfall occurred as local showers accompanying thunderstorms and there were only three brief periods of general rainfall over the whole province.

These periods were :—

1st.—The 2nd to the 6th. The whole of the province with the exception of the south-western districts received light to moderate shower during this period.

2nd.—The 14th to the 17th. Moderate to heavy rain was received in all divisions except parts of the southern and western divisions including Ferozepore, Dera Ismail Khan and Mooltan. The districts of Gurgaon and Delhi received a heavy downpour on the 15th and 16th. The heaviest falls were :—

Date.	District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
15th	Gurgaon	Firozpur	5·79
„	„	Sohna	5·50
„	Delhi	Ballabgarh	6·25
16th	Gurgaon	Nuh	7·66
„	„	Hattin	5·00
„	Delhi	Ballabgarh	8·55

The following gives average data of the rainfall of the period in these two districts :—

STATION.	Actual rainfall in 24 hours preceding 8 A.M. of date.				Total of period.
	14th	15th	16th	17th	
	Inches.	Inches.	Inches.	Inches.	Inches.
Gurgaon . . .	0·41	3·51	3·00	0·37	7·29
Delhi . . .	0·17	3·21	3·95	1·01	8·34

3rd.—The 30th and 31st when the southern and sub-montane districts obtained moderate rain.

The rainfall of the month was in local excess in the districts of Delhi and Gurgaon, due chiefly to the heavy fall of the 15th and 16th and also in Montgomery. The following gives comparative data :—

DISTRICT.	RAINFALL.			
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Delhi	9·18	7·80	+1·38	+18
Gurgaon . . .	8·81	8·29	+0·52	+ 6
Montgomery . .	3·93	2·95	+0·98	+33

The rainfall was more or less in defect over the remainder of the province. The deficiency was large and marked in the districts for which data are given below :—

DISTRICT.	RAINFALL.			
	Average actual July 1896.	Average Normal, July.	Variation from Normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Muzaffargarh . .	0·25	2·31	—2·06	—89
Ferozepore . . .	1·05	5·03	—3·98	—79
Lahore . . .	1·97	4·86	—2·89	—59
Amritsar . . .	2·72	6·35	—3·63	—57
Dera Ghazi Khan . .	0·91	1·96	—1·05	—54
Gujrat . . .	2·93	6·23	—3·30	—53
Karnal . . .	3·89	7·80	—3·91	—50
Jullundur . . .	4·57	8·27	—3·70	—45
Mooltan . . .	0·84	1·53	—0·69	—45
Ludhiana	4·56	8·06	—3·50	—43
Jhelum	2·74	4·17	—1·43	—34

British Baluchistan received some light local thundershowers during the period from the 25th to the 27th. The rainfall of the month was on the average of the whole area small in amount and considerably less than the normal of the period.

Kashmir obtained occasional showers, chiefly from the 1st to the 6th, the 14th to the 17th and the 21st to the 28th. The rainfall of the month was considerably below the normal but comparative data cannot be given as normals are not yet available.

The only periods of general rain in Rajputana were from the 1st to the 7th, the 14th to the 20th and the 29th to the end of the month. The falls were light during the first and third periods; but heavy downpours were received in the eastern and central states during the second period. The following amounts exceeding 4 inches were received during these periods :—

State.	Station.	Date.	Rainfall in 24 hours preceding 8 A.M. of date.
Ajmere . . .	Sawar	1st	13·00
,,	Kekri	,,	7·00
Shahpoora . . .	Shahpura . . .	,,	7·35
Bhopal . . .	Khilchipur . . .	,,	5·85
,, . . .	Maksudangarh . .	,,	5·15
Gwalior . . .	Goona . . .	,,	6·57
Ajmere . . .	Jassakhera . . .	2nd	4·80
,, . . .	Todgarh . . .	,,	4·23
Ulwar . . .	Ramgarh . . .	14th	5·00
,, . . .	Gobindgarh . .	,,	4·75
Bhurtpore . . .	Deeg	,,	6·03
,, . . .	,,	15th	11·12
,, . . .	Kumber. . . .	,,	8·21
,, . . .	Kaman . . .	16th	6·64
Bundelkhand . .	Orchha . . .	18th	6·50
Kotah	Etawah	19th	5·67
Bundelkhand . .	Chhatarpur . .	20th	7·01
,,	Datia	21st	6·35
Gwalior . . .	Jhabua . . .	24th	5·20
,,	Sirdarpur . . .	30th	5·63
Kotah	Kotah . . .	31st	7·12
Bhopal . . .	Narsinghgarh . .	,,	5·30

The following is a comparative statement of the rainfall of the month in the larger states :—

State.	Rainfall. Average actual, July 1896.	Average normal, July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Jodhpore	4·11	3·46	+0·65	+19
Jeypore	5·73	8·62	−2·89	−34
Ulwar	8·15	10·26	−2·11	−21
Bhurtpore	8·89	8·88	+0·01	0
Dholpur	6·77	?	?	?
Kotah	10·03	9·88	+0·15	+2
Ajmere Merwara	8·64	7·17	+1·47	+21
Oodeypore	10·86	9·74	+1·12	+11
Sirohee	9·50	11·52	−2·02	−18

Central India received fairly general rain during two periods, *viz.*, the 1st to the 5th and the 15th to the end of the month. The daily falls were generally moderate in amount and the rainfall of the month was hence generally in moderate to large defect. The following gives comparative data for the more important states :—

State or Division.	Rainfall. Average actual, July 1896.	Average normal, July.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Indore	9·67	10·23	−0·56	−5
Rutlam	14·40	11·30	+3·10	+27
Bhopal Agency	11·46	18·12	−6·66	−37
Gwalior	9·68	11·08	−1·40	−13
Nagode	5·12	17·16	−12·04	−70
Maihar	13·81	16·46	−2·65	−16
Rewah	9·72	19·13	−9·41	−49
Bundelkhand	13·40	15·70	−2·30	−15

The following gives a statement of the periods of rainfall in the Central Provinces and Berar. The first period was from the 1st to the 8th. Light to moderate showers were received during this period. An almost complete break set in on the 9th and lasted until the 12th.

The second period of rainfall was from the 13th to the 21st, when light to moderate daily showers were received in all districts.

The third period was from the 22nd to the end of the month. Moderate to heavy rain fell during this period due to the passage of two storms from the Bay across the provinces.

The rainfall was very heavy and general on the 22nd, 23rd, 24th, 28th and 29th, and contributed to give heavy floods in the Tapti and Nerbudda rivers.

The following gives the average rainfall in the three divisions of the Central Provinces and in Berar during these two period :—

Division.	Average actual rainfall in 24 hours preceding 8 A.M. of date. 22nd.	23rd.	24th.	Total of period.	Average actual rainfall in 24 hours preceding 8 A.M. of date. 28th.	29th.	Total of period.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Central Provinces (East).	1·81	2·55	2·92	7·28	3·06	1·03	4·09
,, (Central)	0·47	0·53	1·80	2·80	1·45	1·45	2·90
,, (West)	0·16	0·30	2·58	3·04	0·98	3·46	4·44
Berar	0·37	0·59	0·46	1·42	0·93	3·23	4·16

The rainfall was heaviest in the eastern districts during the first storm, and in the eastern and western divisions and Berar during the second storm. The rainfall of the month was in considerable excess in the three districts for which data are given below :—

District.	Rainfall. Average actual, July 1896.	Average normal, July.	Variation from normal.
	Inches.	Inches.	Inches.
Sambalpur	29·95	17·94	+12·01
Bilaspur	22·37	15·82	+6·55
Raipur	21·76	14·58	+7·18

It was, on the other hand, in moderate defect in the districts bordering on Bundelkhand and Baghelkhand for which data are given below:—

District.	Rainfall. Average actual, July 1896.	Average normal, July.	Variation from normal.
	Inches.	Inches.	Inches.
Saugor	10·27	16·19	−5·92
Damoh	14·93	17·24	−2·31
Jubbulpore	17·42	18·85	−1·43

The rainfall of the month did not differ to any important extent from the normal in the remaining districts but was generally in slight excess.

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

Division.	Number of rainy days.			Rainfall.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Average actual, July 1896.	Average normal, July.	Variation from normal.
				Inches.	Inches.	Inches.
Central Provinces (East)	19·4	15·0	+4·4	24·36	16·07	+8·29
Ditto (Central)	18·3	17·1	+1·2	17·51	18·02	−0·51
Ditto (West)	14·4	15·4	−1·0	14·86	13·81	+1·05
Berar	12·6	?	?	11·17	?	?

The rainfall of the month was in considerable excess in the Bombay Presidency. There were three periods of very heavy downpour, more especially on the West Ghâts, due to the advance of storms across the Central Provinces increasing temporarily the inflow of the monsoon currents. These periods were the 14th and 15th, the 24th to 26th and the 28th to the 30th. Data of the heaviest falls have been given in the pressure section and need not be repeated. The following gives mean rainfall data of the coast districts for each of these periods:—

First period, the 14th and 15th—

District.	Average actual rainfall in 24 hours preceding 8 A.M. of date.		Total of period.
	14th.	15th.	
	Inches.	Inches.	Inches.
North Kanara	1·95	1·23	3·18
Ratnagiri	3·84	2·92	6·76
Kolaba	3·97	5·48	9·45
Thana	2·04	4·97	7·01
Broach	0·01	1·27	1·28
Surat	0·19	1·58	1·77

Second period, the 24th to 26th—

District.	Average actual rainfall in 24 hours preceding 8 A.M. of date.			Total of period.
	24th.	25th.	26th.	
	Inches.	Inches.	Inches.	Inches.
North Kanara	1·64	2·57	3·67	7·88
Ratnagiri	2·57	3·18	2·14	7·89
Kolaba	5·40	6·63	3·57	15·60
Thana	2·73	8·04	2·70	13·47
Broach	0·24	6·37	10·62	17·23
Surat	0·57	4·44	5·96	10·97

Third period, the 28th to 30th—

District.	Average actual rainfall in 24 hours preceding 8 A.M. of date.			Total of period.
	28th.	29th.	30th.	
	Inches.	Inches.	Inches.	Inches.
North Kanara	1·44	2·74	3·61	7·79
Ratnagiri	0·87	2·10	3·04	6·01
Kolaba	3·26	7·27	6·42	16·95
Thana	1·83	4·49	5·31	11·63
Broach	0·19	0·51	4·76	5·46
Surat	0·66	0·27	3·23	4·16

The excessive rainfall on the West Ghâts is shown clearly by the following comparative data for four hill stations:—

District.	Station.	Rainfall.		
		Actual, July 1896.	Normal, July.	Variation from normal.
		Inches.	Inches.	Inches.
Satara	Malcolmpeth	191·61	?	?
Kolaba	Matheran	142·57	84·78	+57·79
Poona	Lanoli	119·46	66·24	+53·22
Nasik	Igatpuri	79·35	48·36	+30·99

The following gives comparative data for the six coast districts from North Canara to Surat:—

District.	Rainfall.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.
	Inches.	Inches.	Inches.
North Kanara	35·21	35·48	−0·27
Ratnagiri	42·59	41·33	+1·26
Kolaba	79·75	48 78	+30·97
Thana	57·87	35·19	+22·68
Broach	32·33	17·13	+15·20
Surat	33·09	25·51	+7·58

One of the more noteworthy features of the month was the excessive rain in a part of the Broach district. This is shown by the following comparative data of that district:—

STATION.	RAINFALL.		
	Actual, July 1896.	Normal, July.	Variation from normal.
	Inches.	Inches.	Inches.
Broach	48·69	19·47	+29·22
Ankleshvar	42·70	17·39	+25·31
Vagra	29·38	13·52	+15·86
Amod	19·48	17·65	+ 1·83
Jambusar	19·27	17·61	+ 1·66

The rainfall at Broach was nearly three times the normal fall of the month, whilst at the two stations of Amod and Jambusar the rainfall of the month was practically normal. The excessive rain in the Broach district was hence very local in its extension and is an example of the very great irregularity of the local distribution of rainfall in India even during the strongest bursts of the monsoon.

The Deccan districts received on the whole more frequent rain than usual. The rainfall was especially heavy in the districts at the eastern base of the West Ghâts and more especially in Khandesh, Ahmednagar and Poona. The chief periods of rainfall were the 14th and 15th and from the 23rd to the end of the month. The rainfall of the month was more or less above the normal over the whole area except locally in the Bijapur and Belgaum districts, as is shown by the following comparative data :—

DISTRICT.	RAINFALL.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.
	Inches.	Inches.	Inches.
Dharwar	6·86	4·85	+ 2·01
Belgaum	14·28	15·53	— 1·52
Satara	26·72	12·92	+13·80
Poona	20·62	15·38	+ 5·24
Ahmednagar	6·35	3·60	+ 2·75
Sholapur	4·02	3·67	+ 0·35
Nasik	26·27	11·19	+15·08
Khandesh	15·59	5·05	+10·54
Bijapur	1·85	3·16	— 1·31

Ahmedabad, the Panch Mehals and Kathiawar obtained moderate rain from the 1st to the 5th and daily rain from the 15th to the end of the month. These districts had very heavy rain on the 25th, 26th and 27th and moderately heavy rain on the 30th and 31st. The total rainfall of the month was in slight excess in Kathiawar. Sind received a few light showers on the 27th, but the rainfall of this province was below the small average total of the month.

The following gives comparative data of the rainfall of the six divisions of the Bombay Presidency during the month :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Average actual, July 1896.	Average normal, July.	Variation from normal.	Average actual, July 1896.	Average normal, July.	Variation from normal.
				Inches.	Inches.	Inches.
Konkan	28·1	26·8	+1·3	51·91	40·04	+11·87
Bombay Deccan	14·2	12·2	+2·0	13·46	9·39	+ 4·07
Khandesh	13·7	11·1	+2·6	16·61	7·66	+ 8·95
Gujarat	18·9	17·1	+1·8	23·91	18·46	+ 5·45
Kathiawar	13·1	11·5	+1·6	11·53	11·27	+ 0·26
Sind	1·3	?	?	0·45	1·86	— 1·41

The Malabar coast districts of the Madras Presidency obtained daily rain throughout the month. The rainfall was very heavy from the 1st to the 6th and from the 24th to the end of the month. Daily averages exceeding 4 inches were received in the Malabar district on the 26th (5·06 inches) and in the South Canara district on the same day (4·49 inches). The largest amount registered for 24 hours was 13·75 inches on the 26th at Vayitri in Malabar. The rainfall of the month of this division was in moderate excess averaging 12 per cent.

The southern districts including Tinnevelly, Madura and Trichinopoly received some light local showers, chiefly during the last week of the month, but the rainfall was generally very slight and considerably below the small normal of the period in the last two districts. The rainfall of the month in the Coromandel Coast districts was very scanty. Showers which gave fairly general rain were received on the 9th and from the 18th to the 20th. The rainfall of the month was hence in moderate to considerable defect, more especially in Chingleput, North and South Arcot and Tanjore. The northern coast districts received general rain on the 3rd and 4th, the 13th to the 15th, the 22nd and 23rd and the 27th and 28th, the first and third periods coinciding with the formation of the cyclonic storms of the month. The rainfall of the month was in moderate excess in the Ganjam and Godavari districts and in slight defect in Vizagapatam.

The Deccan districts obtained rain, chiefly during two short periods, *viz.*, the 14th and 15th and the 22nd to the 30th. The rainfall was irregularly distributed but was generally in moderate defect. The following table gives

a summary of the rainfall data for each district or collectorate of the Madras Presidency:—

DISTRICT.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Average actual, July 1896.	Average normal, July.	Average actual, July 1896.	Average normal, July.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam	12·9	10·2	8·49	7·12	+1·37
Vizagapatam	11·9	12·3	7·56	8·58	—1·02
Godavari	11·1	8·9	7·24	6·13	+1·11
Kistna	6·7	8·3	5·46	5·30	+0·16
Nellore	5·3	4·9	2·79	2·45	+0·34
Chingleput	4·2	6·3	1·76	3·70	—1·94
Madras	5·0	6·9	2·05	3·78	—1·73
North Arcot	3·6	5·1	1·68	3·06	—1·38
South Arcot	3·0	5·0	0·68	3·37	—2·69
Tanjore	2·8	3·9	1·28	2·53	—1·25
Trichinopoly	0·7	2·9	0·54	2·35	—1·81
Madura	2·1	2·4	0·85	1·37	—0·52
Tinnevelly	2·7	1·6	1·41	0·69	+0·72
Malabar	27·9	25·6	36·82	29·02	+7·80
South Canara	29·7	28·4	41·17	42·23	—1·06
Salem	2·1	4·5	0·69	2·97	—2·28
Coimbatore	2·9	3·3	1·11	1·64	—0·53
Nilgiris	15·8	16·1	19·06	13·56	+5·50
Cuddapah	4·1	5·6	1·65	2·95	—1·30
Anantapur	4·0	4·9	1·31	2·32	—1·01
Bellary	6·4	6·4	2·92	2·62	+0·30
Kurnool	5·7	7·2	2·56	4·47	—1·91

Appendix.

The following notes and extracts from newspapers respecting the floods in parts of the Bombay Presidency, due to the heavy rainfall accompanying the cyclonic storm of the last ten days of the month have been received from the Bombay Meteorological Office and are given *in extenso*:—

In consequence of the excessively heavy rain on the 25th and 26th July 1896 there were heavy floods in the rivers Tapti and Nerbudda. The flood-water began to subside a little on the 28th and 29th, but owing to a heavy rainfall on the 30th, the rivers rose again and the railway traffic was again interrupted. The rainfall on the 3rd August was again heavy in the Central Provinces, and there was a heavy flood in the river Nerbudda on the 5th of August 1896.

The first flood in the river Tapti was caused by heavy rain in Khandesh and in Gujarat, and the second flood in the same river by heavy rain in Berar, Khandesh and Gujarat. The first flood in the river Nerbudda was caused by local heavy rain in Gujarat the second by heavy rain at stations in the basin of that river, in the Central Provinces, Central India and Gujarat, and the third flood by heavy rain in the Central Provinces.

The following extracts from English and Vernacular newspapers give accounts of the floods:—

Bulsar, 25th July.—The weather here is quite cyclonic. It is raining incessantly day and night, and very high winds blow throughout the whole time. The rivers are flooded and the roads and streets are submerged in water. The damage to property is great.

Navsari, 26th July.—Exceptionally heavy rain has fallen here. The Purna river has overflowed and the streets are flooded with water. The floods have caused much damage in the surrounding villages.

Broach, 26th July.—While the cholera epidemic is raging here we are troubled by the rise of water in the Nerbudda. The water has risen by about 18 or 19 feet; but that would not have been so alarming were it not accompanied by excessive downpours and severe storms near Panoli, a few miles from Broach.

30th July.—The incessant rain has mitigated all the chances of the subsidence of the floods in the Nerbudda, at least for a day or two, but even if the flood does not subside at once, people will think themselves fortunate if it does not rise still more. There has been again a serious breach between here and Chamargaum.

Broach, 5th August.—There is a heavy flood in the river Nerbudda, the railway bridge is a few feet higher than the level of the river and the water is yet rising. All the lower parts of the city below the fort are under water. Boats are plying in the Katorpore Bazar and Dandia Bazar road to Custom-House, and Latter is submerged under water.

Surat, 26th July.—The stormy weather which has prevailed during the past week culminated in a heavy downpour on Friday evening. More than 12 inches of rain has fallen within 24 hours, which beats all the previous records of rainfall. The average downpour of the season comes to 40 inches, and, therefore, the fall of nearly 12 inches in 24 hours was disastrous. The crops have been washed away and the low-lying parts are under water. Such a heavy fall in one day is almost unprecedented in Surat. The water in the Tapti River has risen 41 feet.

Surat, 30th July.—Just as we were rejoicing at the signs of the subsidence of the floods, we have been again alarmed by reports of anticipated heavy floods. Communication with villages on the other side of the Tapti is again interrupted, and we have had continuous and heavy showers. The sluice at Mukai Bridge is closed, so the rain water is not allowed to pass into the river, and the consequence is that the low-lying streets are knee-deep in water. Although we had a little

break in the morning the weather is most threatening. The effects of the storm are severely felt in the villages and also in the city itself. The cattle will have to starve as in many places fodder is destroyed. The crops have been ruined and labourers, being unable to get any work, have to starve. The anticipations that heavy floods will visit Surat are realised. The Rander Road is washed away, and the Hope Bridge, which is the means of communication to villages on the other side of the Tapti, is in danger. The floods have covered several miles of land and rendered roads impassable; in fact, there has been an actual sea of water. One may turn his eyes wherever he likes and he will see nothing but water. The Tapti has risen very high. Large pieces of timber, woods, trees, and occasionally dead cattle are seen floating on the surface of the water.

Surat.—From a report submitted by the Municipal Secretary to the Collector of Surat, it appears that on Sunday last, a telegram was received from Bhusawal, intimating that there was a flood in the Gyrna river, which was likely to extend to the Tapti. The flood in the latter was chiefly due to the heavy rain of Friday last Heavy rain fell in the city on Friday and Saturday last, which led to the apprehensions of a flood. The timber merchants of Dastipura were accordingly warned on Saturday evening to take measures for the protection of their goods; and so were the shopkeepers of the Variavu Bhagal. Twelve khalasees were employed to keep the city sluices open. At midnight, on Saturday, the water rose to 84 feet, and continued rising till midnight of the following day, when it reached 98 feet. It then lowered, and on Tuesday morning last it fell to 80 feet. When the flood water rose to 98 feet at midnight on Monday, the rain water in the Meka Khady was 89 feet high. In the lower parts of Sagrampura, the water was 10 feet in some places, and two boats were employed there, while in Dhastipura, Saiyadpura, and Variavu Bazar, three boats were employed for the convenience of the residents. They rendered valuable assistance. A special statement shows that the flood waters in Surat rose as follows in different years:—in 1872 to 93¾ feet; in 1873 to 92 feet; in 1876 to 96¾ feet; in 1882 to 87 feet; in 1883 to 100¼ feet; in 1884 to 98¼ feet; in 1894 to 97¾ feet; and in the present year to 98 feet. No large building in the city has been dislodged this month although several trees have tumbled down in the roads. Damage has been done to the Maka Pool and Chaddia Kooee sluices.

Baroda, 26th July.—It has poured in Baroda for the last two days. The Gaekwar's Dabhoi Railway line is unsafe for traffic owing to the overflowing of the Jambooa river between Vishwamitri and Chundode.

Baroda, 30th July.—At last the rains have made their appearance. For almost a fortnight the people were continuously complaining of the intense and depressing heat owing to the absence of rain. The sky, which was quite blue for some days, was on the 24th covered with huge black clouds and very heavy rain commenced falling accompanied by a cyclonic gale, which lasted fully four hours. Then lighter rain with a very heavy thunderstorm ensued, which uprooted many trees in the town and blew down the tiles and roofs of houses. Since the 24th the rain has not abated and people are now complaining of the excessive rain. Lightning and thunder have been a very prominent feature of the weather.

Bhavnagar, 27th July.—The sultry weather for the past few days here culminated in a heavy downpour on the night of the 25th. Early on the morning of the 26th rain began to fall gently and gradually increased in volume and towards noon came down in torrents. The roads were knee-deep in water. The rain was accompanied by a gale during the course of which several houses in Dhedwada collapsed while the roofing of several presses was blown away to a considerable distance.

Khandesh, 31st July.—The recent floods have caused considerable damage to property throughout the whole district. The town of Dhulia is situated on the bank of the river Panjra, the waters of which began to rise at 10 o'clock Sunday morning, the 25th July. The river gradually rose till 5 in the evening when it began to subside and again rose at 8 o'clock at night and continued so till 11 o'clock. The floods occurred during the daytime and consequently no life was lost, but many houses have been damaged. The huts of the mochees in the village of Devpur on the opposite bank near the bridge have been swept away. Forty-three huts have been totally destroyed and 176 persons rendered houseless.

This river has caused damage of about one lakh of rupees in the town of Malegaon; Mehunbare, a village seven miles distant from Chalesgaon, has been inundated, and all the houses in the village, with the exception of about 15 to 20, have been swept away. About 300 to 400 houses, it is said, have been destroyed. The river extended to about a mile from its course. In the village of Bahal 82 houses have been swept away. Bhadgaun has suffered the most. About 700 to 800 houses have been destroyed; 125 houses in the village of Kurange have been swept away. Nachan-khada has been half destroyed, and no trace is to be found of the two villages of Girad and Titur. About 2,000 houses have been carried away by the floods.

Rise of the river Titur.—The waters of this river entered Chalisgaon and destroyed about 56 houses. The rivers Girna and Titur have done great damage in the talukas of Chalisgaon and Pachora. Nothing is known of the Tapti as yet which is in flood.

Poona, 31st July.—Owing to the flood in the city nearly 50 houses have fallen down. Three trains left to-day for Bombay by direct route; one train came *viâ* Dhond which brought Wednesday's mail. Two other trains detained at Dixal left for Poona at three o'clock and were expected to arrive late this evening. The trains were detained owing to the Bheema bridge not being considered safe for traffic. Heavy rain continues to fall on the Ghauts. Heavy water is lying in the streets and along the sides of the line.

At Dhond the floods have been great. The river has risen so high that a very large portion of the village is reported to have been swept away. In some places the unhappy villagers had the utmost difficulty in saving themselves from the flood. The temple near the bank escaped without injury.

The telegraph lines at Sholapur and beyond are reported to be quite submerged everywhere. In the district the telegraph officials are busy.

Floods are also reported at Cuttack and have interrupted the direct route from Calcutta to Madras.

Poona, 30th July.—There has been a heavy and continuous downpour of rain since Monday night. The trains which left Poona on Tuesday night returned to-day to Poona owing to the line being again broken near Waugni. Trains were again running *viâ* Dhond and Manmar. The whole country around Poona is flooded. The river has risen greatly, doing considerable damage to property. The rain shows no signs of abating.

Poona, 31st July.—Heavy rain is still falling. The river rose last night higher than was ever known before, swept away the wood-work of Holkar's bridge and did great damage to the sapper's workshops, out-houses, and a large portion of the boat-houses collapsed. All the riverside bangalows are under water. Trains for Bombay have been cancelled by both routs owing to the subsidence of the line at the Beema Bridge. The overland mails and passengers for England only left Poona *viâ* Dhond. The lower portion of the city is flooded, and many huts have been destroyed.

Konkan, 27th July.—The excessively heavy downfalls of rain that occurred towards the close of last week have caused large tracks of land in the Konkan district below the Ghâts to be flooded, and as a

result the waters from several rivers and rivulets in their endeavour to force an escape to the sea-board have submerged the surrounding country and caused breaches on the Great Indian Peninsula Railway south-east line, between Badlapur and Waugni, and on the Bombay Baroda and Central India Railway between Virar and Saphala. The damage to the former line consists of about four hundred yards of the embankment together with the ballast having been scoured away by the force of the rushing water some short distance beyond Badiapur, it being stated that on Saturday morning the waters at this point had risen to a height of some 16 feet.

In regard to the country between Kalyan and Coorla, it may be generally described as being more or less inundated. On Saturday the Kalyan station yard was many feet under water, and the residence of Mr. Brand, the Station-Master, and Messrs. Hayter and Hannah, his assistants, flooded out, the rooms being nearly totally submerged and the contents damaged.

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.		...	...	−·029	...	...	...	...	...	...	...	84·7	+0·3	76·0	+0·6	80·4	+0·5	8·7	...	...	...	...	16·9
1	Tenasserim and Bay Islands.	Port Blair	61	29·752	?	29·744	29·897	19th	29·626	28th	·271	81·2	85·3	?	77·8	?	81·5	?	7·5	88·6	9th	74·1	1st	14·5
		Mergui	96	29·763	?	29·792	29·910	19th	29·655	29th	·255	78·5	84·3	?	74·1	?	79·2	?	10·2	90·6	3rd	71·1	31st	19·5
		Tavoy	26	29·850	?	29·807	29·973	18th	29·737	27th	·236	77·1	83·3	?	74·0	?	78·7	?	9·3	88·2	2 days	71·7	2nd	16·5
		Moulmein	94	29·723	−·007	29·755	29·886	18th	29·565	27th	·321	77·6	83·1	+0·4	75·0	+1·1	79·1	+0·8	8·1	87·5	13th	73·3	2 days	14·2
2	Lower Burma	Rangoon	41	29·735	−·025	29·712	29·902	18th	29·559	28th	·343	78·5	84·7	−0·3	76·4	+0·7	80·6	+0·2	8·3	89·7	10th	73·9	30th	15·8
		Bassein	27	29·730	−·027	29·692	29·902	18th	29·558	28th	·344	78·9	85·2	+0·4	76·2	+0·5	80·7	+0·5	9·0	95·7	4th	73·3	30th	22·4
		Diamond Island	41	29·717	−·034	29·693	29·867	19th	29·547	28th	·320	80·4	84·2	−0·3	77·5	?	80·9	?	6·7	87·6	9th	73·9	2 days	13·7
5	Arakan	Akyab	20	29·650	−·043	29·613	29·822	18th	29·440	28th	·382	79·7	84·2	−0·4	77·7	+0·3	81·0	−0·1	6·5	90·2	13th	74·7	17th	15·5
3	Central Burma.	Toungoo	182	29·559	−·035	29·685	29·737	18th	29·352	28th	·385	78·3	87·9	+1·5	75·5	+0·6	81·7	+1·1	12·4	94·2	13th	74·2	5 days	20·0
	II.—Burma, Inland		...	...	−·045	...	...	...	...	...	...	...	88·2	+0·2	74·8	+1·4	81·5	+0·8	134	...	...	...	...	20·2
3	Central Burma.	Thayetmyo	134	29·569	−·045	29·644	29·755	18th	29·351	28th	·404	80·5	88·9	+0·1	77·3	+1·2	83·1	+0·7	11·6	92·1	6th & 17th	75·6	19th	16·5
4	Upper Burma.	Minbu	?	29·528	?	?	29·703	18th	29·309	28th	·394	80·8	91·6	?	77·9	?	84·8	?	13·7	97·1	10th	76·6	19th	20·5
		Yamethin	645	29·067	?	29·653	29·194	18th	28·841	28th	·353	79·6	91·9	?	?	?	?	?	?	99·0	31st	?	...	?
		Taunggyi	?				Not recorded.					68·3	76·9	?	64·7	?	70·8	?	12·2	10·2	3 days	63·0	19th	17·2
		Mandalay	249	29·437	?	29·633	29·596	18th	29·248	28th	·348	83·4	96·1	?	79·5	?	87·8	?	16·6	100·6	13th	77·1	30th	23·5
		Kindat	?	29·280	?	?	29·417	18th	29·107	28th	·310	80·3	89·5	+0·3	78·0	+1·5	83·8	+0·9	11·5	93·1	3 days	75·5	2 days	17·8
		Lashio	?	26·980	?	?	27·083	17th	26·845	28th	·238	73·9	84·9	?	70·3	?	77·6	?	14·6	91·5	25th & 26th	67·5	24th	24·0
		Bhamo	?	29·240	?	?	29·406	13th	29·086	28th	·320	79·4	89·3	?	75·7	?	82·5	?	13·6	94·6	3 days	72·8	2 days	21·8
	III.—Assam		...	...	−·028	...	...	...	...	...	...	...	90·3	+0·9	78·8	+0·9	84·6	+1·0	11·5	...	...	...	...	22·8
7	Surma	Silchar	104	29·532	−·035	29·587	29·696	18th	29·364	28th	·332	82·1	92·1	+2·1	78·3	+1·2	85·2	+1·7	13·8	103·6	28th	75·8	14th	27·8
9	Brahmaputra	Sibsagar	333	29·282	?	29·569	29·398	13th	29·084	28th	·314	82·0	90·5	−0·3	79·2	+1·2	84·9	+0·5	11·3	97·7	2 days	76·0	25th	21·7
		Dhubri	115	29·497	−·020	29·556	29·630	18th	29·300	28th	·330	81·5	88·3	+0·9	79·0	+0·4	83·7	+0·7	9·3	94·7	28th	75·8	2 days	18·9
	IV.—Bengal and Orissa		...	...	−·037	...	...	...	...	...	...	...	89·2	+1·0	79·0	+1·0	84·1	+1·0	10·3	...	...	...	...	17·5
6	East Bengal	Chittagong	37	29·533	−·049	29·567	29·738	18th	29·334	28th	·404	81·4	86·5	+1·0	77·6	+1·2	82·1	+1·1	8·9	90·7	26th	75·1	18th	15·6
		Lungleh	?				Not recorded.					70·5	77·1	?	67·6	?	72·4	?	9·5	81·3	26th	66·3	16th	15·0
		Noakhali	92	29·561	?	29·551	29·727	18th	29·382	28th	·345	82·0	86·4	?	78·2	?	82·3	?	8·2	89·5	26th	75·8	16th	13·7
		Comilla	36	29·569	?	29·553	29·729	17th & 18th	29·393	28th	·336	81·5	88·7	?	77·5	?	83·1	?	11·2	93·3	26th	74·8	2 days	18·5
		Sirajganj	49	29·530	?	29·529	29·676	17th	29·353	28th	·323	82·5	90·0	?	79·2*	?	84·6*	?	10·8	98·8	19th	74·7	19th	24·1
		Narayanganj	26	29·561	−·041	29·534	29·721	18th	29·374	28th	·347	82·8	89·2	+0·9	80·2	+1·0	84·7	+1·0	9·0	92·6	3rd	77·7	19th	14·9
		Barisal	13	29·565	?	29·523	29·730	15th	29·382	28th	·348	82·8	88·2	+1·6	79·3	+1·2	83·8	+1·4	8·9	90·8	2 days	76·9	3 days	13·9
		Mymensingh	59	29·539	−·035	29·549	29·681	17th	29·358	28th	·323	82·9	89·5	+2·0	79·5	+1·5	84·5	+1·8	10·0	95·7	26th	77·5	3 days	18·2
10	Deltaic Bengal.	Faridpur	46	29·545	?	29·538	29·700	18th	29·360	30th	·340	82·5	89·3	?	79·4	?	84·4	?	9·9	91·8	6th	76·4	7th	15·4
		Jessore	33	29·529	−·047	29·509	29·691	18th	29·345	27th	·346	83·3	90·2	+0·8	79·7	+0·6	85·0	+0·7	10·5	92·5	3 days	77·3	21st	15·2
		Calcutta	21	29·529	−·042	29·496	29·685	18th	29·278	27th	·407	82·7	88·3	+0·3	79·4	+1·0	83·9	+0·7	8·9	91·9	2nd	77·7	22nd	14·2
		Saugor Island	25	29·513	−·052	29·482	29·687	18th	29·096	27th	·591	83·4	88·2	+0·4	80·8	+0·4	84·5	+0·4	7·4	90·9	3 days	78·5	3 days	12·4
		Krishnagar	47	29·519	?	29·514	29·668	18th	29·326	27th	·342	83·5	91·0	?	79·3	?	85·2	?	11·7	93·3	6th	77·7	21st	15·6
		Midnapore	149	29·403	?	29·398	29·551	18th	29·153	27th	·398	83·3	90·8	?	79·2	?	85·0	?	11·6	96·3	3rd	77·1	2 days	19·2

* Mean of 30 days.

I.

in India, Burma, etc., in July 1896.

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 1896.	Normal rainfall for period, from 1st June to 31st July.	Variation from normal of period, from 1st June to 31st July.	Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36·63	29·51	+4·44	...	...	...	...	I.—Burma Coast and Bay Islands.		
1	1	...	...	...	4	13	10	2	9·5	11·0	− 14	87	·928	9·4	16	?	?	17·29	15·98	+ 1·41	34·18	34·77	− 0·59	2·35	Port Blair .	TENASSERIM AND BAY ISLANDS.	1
...	2	...	...	...	6	8	8	7	2·2	1·8	+ 22	92	·900	5·1	29	?	?	31·68	31·99	− 0·31	66·98	63·43	+ 3·55	3·05	Mergui,		
19	...	...	...	...	1	8	1	2	2·3	?	?	93	·866	8·8	31	?	?	58·12	?	?	105·54	?	?	6·23	Tavoy.		
					Not recorded.				?	3·8	?	93	·879	9·4	30	27·75	+2·25	43·08	45·82	+ 2·26	96·79	81·54	+15·25	6·70	Moulmein.		
...	...	...	...	...	8	14	8	1	5·6	5·5	+ 2	93	·917	9·0	27	25·36	+1·64	18·02	21·68	− 3·66	36·41	39·19	− 2·78	2·52	Rangoon .	LOWER BURMA.	2
4	...	...	...	2	9	15	1	...	6·3	4·0	+ 58	94	·920	8·0	26	27·00	−1·00	35·33	24·88	+10·45	63·72	47·44	+16·28	4·36	Bassein,		
...	1	...	...	2	2	22	4	...	15·4	8·9	+ 73	86	·893	9·3	28	24·00	+4·00	38·26	26·28	+11·98	64·14	49·48	+14·66	6·74	Diamond Island.		
...	1	...	10	4	11	1	3	1	4·2	3·8	+ 10	95	·970	9·0	28	27·55	+0·45	66·68	51·54	+15·14	116·71	95·53	+21·18	7·77	Akyab .	ARAKAN.	5
...	...	...	...	19	12	...	...	...	7·0	4·8	+ 46	92	·919	9·1	24	25·09	−1·09	16·16	17·91	− 1·75	28·24	32·52	− 4·28	2·31	Toungoo .	CENTRAL BURMA.	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·37	9·46	−2·72	...	...	...	...	II.—Burma, Inland.		
...	...	...	...	9	22	...	...	...	6·7	6·7	0	83	·858	9·4	16	15·91	+0·09	5·77	6·83	− 1·06	9·79	13·77	− 3·98	0·85	Thayetmyo.	CENTRAL BURMA.	3
...	...	...	7	16	8	...	...	...	15·3	?	?	81	·860	8·1	7	?	?	3·28	?	?	6·29	?	?	0·94	Minbu .	UPPER BURMA.	4
1	...	...	...	19	11	...	...	...	10·8	?	?	81	·827	4·2	7	?	?	2·72	?	?	7·32	?	?	1·10	Yamethin.		
...	...	...	...	7	12	11	1	...	?	?	?	88	·615	10·0	18	?	?	14·47	?	?	25·11	?	?	5·26	Taunggyi.		
...	1	...	...	2	21	7	...	...	11·2	?	?	73	·835	7·3	3	?	?	1·14	?	?	14·78	?	?	0·32	Mandalay.		
23	...	...	...	...	8	...	...	...	0·9	?	?	92	·955	8·5	15	?	?	7·70	12·08	− 4·38	22·84	25·54	− 2·70	1·75	Kindat.		
				Not	recorded.				?	?	?	89	·745	9·2	17	?	?	10·82	?	?	20·02	?	?	2·16	Lashio.		
19	2	3	...	2	...	...	...	5	2·0	?	?	93	·928	7·9	19	?	?	13·05	?	?	29·04	?	?	3·59	Bhamo.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14·64	17·46	−2·82	...	...	...	...	III.—Assam.		
26	1	...	1	...	1	...	1	1	3·1	3·1	0	89	·969	8·8	19	22·79	−3·79	12·47	19·10	− 6·63	27·42	39·82	−12·41	1·54	Silchar .	SURMA.	7
...	1	5	6	3	6	9	1	...	6·5	2·8	+136	93	1·015	7·5	19	19·04	−0·04	17·90	17·10	+ 0·80	31·89	30·79	+ 1·10	2·20	Sibsagar .	BRAHMAPUTRA.	9
7	3	8	2	1	4	6	...	...	4·1	3·9	+ 5	91	·976	7·5	13	16·13	−3·13	13·54	16·17	− 2·63	18·55	40·70	−22·15	3·36	Dhubri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13·32	14·37	−1·39	...	...	...	...	IV.—Bengal and Orissa.		
...	...	2	5	16	7	1	...	...	7·5	7·2	+ 4	87	·933	7·0	16	19·81	−3·81	18·72	23·20	− 4·48	34·65	45·89	−11·24	5·10	Chittagong	EAST BENGAL.	6
				Not	recorded.				?	?	?	94	·706	?	26	?	?	24·41	?	?	43·69	?	?	6·25	Lungleh.		
...	...	1	10	14	3	3	...	...	7·4	?	?	90	·983	5·6	20	20·12	−0·12	23·97	23·74	+ 0·23	43·93	47·93	− 4·50	3·63	Noakhali.		
...	...	...	7	2	22	...	...	...	7·1	?	?	93	·999	7·4	20	19·22	+0·78	12·26	16·38	− 4·12	30·04	34·03	− 3·99	1·95	Comilla.		
11	...	...	3	6	8	3	...	...	2·6	?	?	90	·985	8·8	7	14·23	−7·23	6·51	11·50	− 4·99	22·23	22·62	− 0·39	3·06	Sirajganj.		
...	...	...	7	15	6	2	...	1	9·6	7·3	+ 32	89	1·004	8·2	13	18·31	−5·31	10·08	13·78	− 3·70	26·78	26·84	− 0·06	1·71	Narayanganj.		
16	...	1	4	4	4	2	...	...	3·3	?	?	87	·985	9·6	14	20·50	−6·50	12·42	15·76	− 3·34	29·90	31·78	− 1·88	5·40	Barisal.		
2	...	1	10	13	5	...	...	...	3·3	?	?	88	·992	7·0	15	19·27	−4·27	14·91	15·56	− 0·65	33·89	33·74	+ 0·15	2·65	Mymensingh		
7	...	...	8	5	11	...	...	...	1·8	?	?	91	1·013	7·3	13	17·16	−4·16	7·85	12·21	− 4·36	18·78	24·59	− 5·81	2·48	Faridpur .	DELTAIC BENGAL.	10
2	...	...	5	13	7	2	2	...	4·5	4·6	− 2	90	1·025	7·7	18	17·39	+0·61	12·24	11·21	+ 1·03	28·80	23·71	+ 5·09	3·78	Jessore.		
3	...	3	8	2	6	5	4	...	5·1	5·3	− 4	88	·987	7·9	19	18·04	+0·96	12·08	12·46	− 0·38	28·50	23·20	+ 5·30	2·70	Calcutta.		
...	2		2	1	8	12	2	1	14·2	14·2	0	88	1·011	9·1	18	17·00	+1·00	18·75	15·34	+ 3·41	30·87	25·18	+ 5·69	6·62	Saugor Island.		
...	...		9	3	9	2	4	1	5·9	?	?	81	·929	7·3	16	15·92	+0·08	5·61	10·62	− 5·01	14·96	19·95	− 4·99	0·91	Krishnagar.		
4	3	7	2	1	8	6	...	...	3·8	?	?	86	·980	4·2	17	15·65	+1·35	11·07	11·63	− 0·56	23·26	21·05	+ 2·21	1·38	Midnapore.		

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·233	?	29·479	29·377	18th	29·043	29th	·334	82·0	90·8	?	78·8	?	84·8	?	12·0	95·1	2nd	77·1	2 days	18·0
		Raniganj	334	29·224	?	29·503	29·358	18th	29·045	29th	·313	82·4	91·1	?	79·1	?	85·1	?	12·0	96·2	3rd	77·8	7 days	18·4
		Burdwan	107	29·451	−·031	29·505	29·594	18th	29·244	27th	·350	83·4	91·2	+1·0	80·3	+0·9	85·7	+1·0	10·9	94·2	4th	78·2	21st	16·0
		Naya Dumka	489	29·061	?	29·502	29·194	18th	28·892	28th	·302	83·0	90·5	?	79·0	?	84·8	?	11·5	95·0	27th	77·7	3 days	17·3
		Berhampore	67	29·500	−·029	29·515	29·636	17th	29·320	29th	·316	83·0	90·7	+1·3	79·9	+1·2	85·3	+1·3	10·8	93·2	26th	77·3	26th	15·9
		Rampur Boalia.	70	29·495	?	29·514	29·634	15th	29·323	28th	·311	83·6	90·4	?	80·1	?	85·3	?	10·3	92·1	5 days	77·6	20th	14·5
		Malda	72	29·480	?	29·503	29·614	13th	29·302	28th	·312	84·0	91·8	?	80·2	?	86·0	?	11·6	96·6	27th	76·0	7th	20·6
		Bogra	61	29·515	?	29·528	29·657	17th	29·344	28th	·313	83·5	90·4	+1·9	79·8	+1·6	85·1	+1·8	10·6	94·2	26th	77·2	19th	17·0
12	North Bengal	Dinajpur	123	29·455	−·028	29·532	29·591	13th	29·279	28th	·312	82·8	91·0	+1·9	79·9	+1·0	85·5	+1·5	11·1	96·8	27th	76·7	7th	20·1
		Rangpur	123	29·473	?	29·550	29·609	18th	29·289	28th	·320	83·5	90·7	?	80·2	?	85·5	?	10·5	97·2	28th	76·7	2 days	20·5
		Jalpaiguri	284	29·312	−·023	29·552	29·451	18th	29·128	28th	·323	81·4	90·3	+2·0	78·3	+1·7	84·3	+1·9	12·0	97·4	2 days	75·1	19th	22·3
17	North Bihar	Purnea	125	29·445	−·022	29·523	29·594	13th	29·261	28th	·333	82·7	91·0	+0·8	79·9	+1·4	85·5	+1·1	11·1	96·7	27th	74·2	4th	22·5
14	Orissa	Balasore	56	29·493	−·035	29·485	29·653	18th	29·241	27th	·412	82·5	88·6	+0·2	78·9	+0·6	83·8	+0·4	9·7	94·4	2nd	75·7	2 days	18·7
		False Point	21	29·546	−·043	29·508	29·691	18th	29·322	28th	·369	82·0	87·4	−0·2	78·6	+0·2	83·0	0	8·8	92·5	2nd	74·6	2 days	17·9
		Cuttack	80	29·481	−·040	29·503	29·624	18th	29·253	28th	·371	81·3	89·9	+0·1	78·7	+0·2	84·3	+0·2	11·2	96·2	3rd	75·2	2 days	21·0
		Shortt's Island	?	29·526	?	?	29·677	19th	29·253	27th	·424	83·3	89·1	?	80·1	?	84·6	?	9·0	95·0	11th	76·2	22nd	18·8
		Puri	20	29·558	?	29·521	29·699	20th	29·320	28th	·379	82·5	88·4	?	80·1	?	84·2	?	8·3	93·2	10th	75·6	22nd	17·6
	V.—Gangetic Plain and Chota Nagpur.		...	...	−·017	...	...	...	...	...	...	...	91·7	+1·2	79·5	+0·9	85·6	+1·1	12·2	...	...	...	...	22·8
15	Chota Nagpur	Hazaribagh	2,007	27·572	−·026	29·510	27·692	18th	27·395	28th	·297	77·5	85·4	+0·9	74·8	+1·3	80·1	+1·1	10·6	90·2	3rd & 27th	71·3	22nd	18·9
		Ranchi	2,128	27·463	−·009	29·518	27·580	18th	27·283	28th & 29th	·297	76·7	84·1	+0·4	73·7	+1·2	78·9	+0·8	10·4	89·2	3rd	71·4	10th	17·8
		Daltonganj	730?	28·830	?	29·508	28·953	18th	28·642	29th	·311	81·9	90·5	?	78·7	?	84·6	?	11·8	96·3	3rd	74·6	22nd	21·7
		Chaibassa	760	28·784	?	29·489	28·915	18th	28·580	28th	·335	80·5	89·4	+0·2	77·8	+0·5	83·6	+0·4	11·6	93·4	4 days	74·5	27th	18·9
16	South Bihar	Gaya	375	29·184	−·016	29·510	29·304	18th	29·004	28th	·300	82·9	91·9	+0·5	79·3	+0·7	85·6	+0·6	12·6	98·5	28th	75·3	2 days	23·2
		Dehri	351	29·194	?	29·496	29·310	18th	29·028	28th	·282	84·4	91·5*	?	80·6	?	86·1*	?	10·9	97·3	4th	76·5	22nd	20·8
		Patna	183	29·367	−·030	29·501	29·494	13th	29·193	28th	·291	84·5	91·4	+1·1	80·9	+1·2	86·2	+1·2	10·5	96·5	2nd & 28th	76·7	7th	19·8
		Arrah	190	29·373	?	29·512	29·490	18th	29·203	28th	·287	84·3	92·2	?	80·5	?	86·4	?	11·7	98·4	2 days	77·0	2 days	21·4
		Buxar	239	29·307	?	29·499	29·419	18th	29·108	28th	·311	83·9	91·4	?	79·6	?	85·5	?	11·8	97·5	29th	74·8	2 days	22·7
17	North Bihar	Bhagalpur	160	29·395	0	29·506	29·519	13th	29·218	28th	·301	84·7	92·2	?	80·5	?	86·4	?	11·7	97·2	27th	78·2	19th	19·0
		Darbhanga	166	29·391	−·028	29·509	29·520	13th	29·202	28th	·318	84·0	91·1	+1·8	81·1	+1·3	86·1	+1·6	10·0	97·0	2 days	77·5	18th	19·5
		Muzaffarpur	178	29·379	?	29·509	29·507	18th	29·195	28th	·312	83·3	91·2	?	80·4	?	85·8	?	10·8	97·7	2 days	74·2	7th	23·5
		Motihari	224	29·334	?	29·513	29·463	13th	29·151	28th	·312	84·3	92·0	?	79·8	?	85·9	?	12·2	99·0	28th	73·8	18th	25·2
		Chapra	181	29·371	?	29·504	29·490	13th	29·203	28th	·287	84·2	92·2	?	80·6	?	86·4	?	11·6	99·3	28th	77·1	7th	22·2
18	N.-W. Prov., East	Benares	267	29·282	−·004	29·503	29·407	18th	29·113	29th	·294	83·8	92·4	+1·0	80·5	+0·9	86·5	+1·0	11·9	97·3	28th	75·7	22nd	21·6
		Allahabad	309	29·237	−·006	29·498	29·366	18th	29·068	29th	·298	84·7	93·5	+2·1	79·7	+0·5	86·6	+1·3	13·8	99·6	28th	73·8	22nd & 24th	24·8
23	N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·291	−·011	29·503	29·403	18th	29·121	28th	·282	84·3	93·0	+2·1	79·6	0	86·3	+1·1	13·4	101·3	28th	74·7	5th	26·6
19	South Oudh	Lucknow	368	29·169	−·017	29·492	29·272	18th	29·003	29th	·269	85·0	94·1	+2·1	80·3	+1·0	87·2	+1·6	13·8	102·3	29th	72·3	8th	30·0
20	North Oudh	Bahraich	403	29·140	?	29·498	29·249	18th	28·969	29th	·280	85·0	94·8	?	80·2	?	87·5	?	14·6	104·5	29th	75·0	12th	29·5
21	N.-W. Prov. (Central).	Cawnpore	416	29·118	?	29·483	29·224	18th	28·954	29th	·270	85·9	96·0	?	80·6	?	88·3	?	15·4	102·4	29th	76·5	21st	25·9
		Mainpuri	516	29·027	?	29·493	29·118	13th	28·873	29th	·245	85·4	96·0	?	80·8*	?	88·5*	?	15·2	104·3	30th	77·5	3 days	26·8

* Mean of 30 days.

I--*continued.*

in India, Burma, etc., in July 1896—continued.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.		Mean cloud amount.	RAINFALL.							Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	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 1896.	Normal rainfall for period, from 1st June to 31st July.	Variation from normal of period, from 1st June to 31st July.				
12	2	3	8	2	...	1	3	...	2·8	P	P	87	·957	7·7	21	17·23	+ 3·77	20·48	12·68	+ 7·80	31·52	22·64	+ 8·88	2·65	Bankura .	CENTRAL BENGAL	11
9	...	2	7	5	2	3	2	1	3·4	P	P	87	·969	6·9	21	16·46	+ 4·54	9·70	13·22	− 3·52	21·85	22·49	− 0·64	1·33	Raniganj.		
1	1	3	7	3	5	6	4	1	4·8	4·3	+12	84	·959	8·5	15	16·27	− 1·27	7·06	11·71	− 4·65	24·20	20·63	+ 3·57	1·65	Burdwan.		
1	2	1	9	7	4	4	2	1	2·6	P	P	84	·952	6·6	18	18·66	− 0·66	12·39	13·71	− 1·32	30·55	22·93	+ 7·62	3·00	Naya Dumka		
2	...	1	10	4	10	4	...	...	4·3	5·0	−14	90	1·016	8·9	13	16·71	− 3·71	6·89	10·71	− 3·82	18·21	20·09	− 1·88	0·99	Berhampore.		
6	1	3	5	8	7	1	...	...	5·8	P	P	90	1·038	6·7	10	15·03	− 5·03	7·54	11·59	− 4·05	18·99	21·50	− 2·51	3·35	Rampur Boalia.		
...	2	1	3	7	10	4	3	1	2·9	P	P	88	1·017	5·0	12	15·73	− 3·73	13·44	11·95	+ 1·49	20·36	22·29	− 1·93	4·52	Malda.		
5	...	...	1	18	6	1	...	...	3·3	P	P	89	1·024	6·7	17	15·84	+ 1·16	11·80	13·49	− 1·69	24·90	27·05	− 2·15	2·53	Bogra.		
4	1	3	11	9	2	...	...	1	1·7	P	P	89	·992	7·1	12	16·26	− 4·26	7·09	14·38	− 7·29	16·24	29·87	−13·53	2·20	Dinajpur .	NORTH BENGAL.	12
5	...	2	6	9	4	5	...	...	2·3	P	P	88	1·003	8·1	15	15·19	− 0·19	12·44	16·30	− 3·86	22·00	34·92	−12·92	3·75	Rangpur.		
...	2	9	7	6	3	1	2	1	2·1	P	P	90	·963	4·8	22	20·07	+ 1·93	35·53	29·24	+ 6·29	40·17	55·66	−15·49	6·92	Jalpaiguri.		
4	1	7	11	5	2	...	1	...	4·0	2·9	+38	88	·980	8·5	17	17·00	0	10·04	15·12	− 5·08	12·76	26·08	−13·32	1·86	Purnea .	NORTH BIHAR.	17
7	...	2	2	...	2	14	3	1	3·9	P	P	87	·975	5·2	21	15·08	+ 5·92	19·39	13·04	+ 6·35	41·48	22·11	+19·37	3·41	Balasore .	ORISSA.	14
1	...	...	1	1	4	6	17	1	11·3	10·5	+ 8	88	·960	8·6	18	14·77	+ 3·23	18·12	13·41	+ 4·71	34·36	22·78	+11·58	3·30	False Point.		
9	...	...	1	1	...	8	11	1	3·6	3·2	+13	85	·908	8·0	19	16·35	+ 2·65	11·91	12·91	− 1·00	30·24	24·44	+ 5·80	2·66	Cuttack.		
...	...	...	1	2	4	15	8	1	17·5	P	P	84	·967	6·7	11	P	P	12·27	P	P	29·98	P	P	2·70	Shortt's Island.		
11	...	1	...	...	...	15	4	...	15·0	P	P	86	·957	6·8	11	13·04	− 2·04	6·09	9·80	− 3·71	18·45	17·86	+ 0·59	1·49	Puri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11·44	12·37	− 0·93	...	...	...	...	V.—Gangetic Plain and Chota Nagpur.		
3	2	2	7	2	2	1	8	4	9·5	8·4	+ 13	86	·814	9·7	22	18·88	+ 3·12	20·21	14·16	+ 6·05	33·17	21·79	+11·38	4·19	Hazaribagh.	CHOTA NAGPUR	15
3	...	4	6	...	3	3	6	6	10·1	P	P	90	·817	7·7	23	19·34	+ 3·66	28·94	14·30	+14·64	42·84	22·78	+20·06	3·50	Ranchi.		
...	2	...	9	2	4	7	6	1	6·3	P	P	83	·906	5·3	14	16·57	− 2·57	8·56	12·92	− 4·36	19·36	18·95	+ 0·41	1·59	Daltonganj.		
3	...	...	...	5	1	11	9	2	2·5	P	P	88	·822	9·5	26	16·76	+ 9·24	25·94	13·48	+12·46	39·21	22·01	+17·20	3·83	Chaibassa.		
11	...	4	7	...	1	2	6	...	4·7	2·9	+ 62	84	·945	6·9	13	15·69	− 2·69	10·38	13·10	− 2·22	19·95	19·66	+ 0·29	3·04	Gaya .	SOUTH BIHAR.	16
3	1	...	8	4	2	6	6	1	11·5	P	P	82	·965	7·8	14	14·62	− 0·62	6·56	11·73	− 5·17	11·77	17·64	− 5·87	1·24	Dehri.		
3	...	3	11	4	3	1	5	1	4·2	3·6	+ 17	86	1·009	8·3	16	13·96	+ 2·04	9·57	11·75	− 2·18	16·97	19·09	− 2·12	2·17	Patna.		
...	...	5	10	1	2	5	6	2	2·0	P	?	87*	·973*	6·7	11	15·03	− 4·03	9·44	12·11	− 2·67	15·26	18·25	− 2·99	3·01	Arrah.		
4	...	4	10	2	...	2	7	2	4·3	P	P	84	·980	6·6	13	14·07	− 1·07	8·68	11·68	− 3·00	17·32	16·88	+ 0·44	1·75	Buxar.		
3	1	8	8	6	1	3	1	...	4·3	P	P	84	·998	7·7	10	15·61	− 5·61	5·50	12·73	− 7·23	13·34	20·27	− 6·93	1·53	Bhagalpur.	NORTH BIHAR.	17
1	3	14	8	...	...	...	1	4	3·8	5·0	− 24	87	1·006	6·8	10	14·20	− 4·20	10·64	12·39	− 1·75	16·13	19·95	− 3·82	4·59	Darbhanga.		
2	...	2	11	9	...	2	3	2	4·2	P	P	88	1·000	5·5	11	14·34	− 3·34	20·89	12·46	+ 8·43	30·34	20·11	+10·23	·65	Muzaffarpu		
2	...	12	11	2	...	2	2	...	5·9	P	P	86	1·016	5·5	12	12·60	− 0·60	10·61	13·39	− 2·78	17·32	22·57	− 5·25	1·94	Motihari.		
6	...	2	9	6	1	3	2	2	4·1	P	P	86	1·002	6·5	9	14·15	− 5·15	8·06	12·06	− 4·00	12·36	18·24	− 5·88	1·82	Chapra.		
5	1	1	8	2	...		11	1	5·2	4·8	+ 10	84	·994	7·3	11	14·27	− 3·27	8·33	10·74	− 1·91	16·88	15·87	+ ·01	2·42	Benares .	N.-W. PROV., EAST.	18
5	1	3	8	1	2	2	5	4	6·5	4·0	+ 63	83	·982	7·0	16	14·18	+ 1·82	7·56	12·33	− 4·77	12·47	18·02	− 5·55	1·87	Allahabad.		
3	3	8	8	1	3	1	3	1	1·6	2·8	− 43	85	·995	5·3	12	13·91	− 1·91	9·71	13·67	− 3·96	14·17	23·35	− 9·18	2·16	Gorakhpur	N.-W. PROVINCES (EAST SUB-MONTANE).	23
...	2	3	8	4	3	2	6	3	P	3·9	P	82	·980	7·0	11	13·64	− 2·64	14·16	11·25	+ 2·91	18·56	16·88	+ 1·88	4·68	Lucknow	SOUTH OUDH.	19
8	1	1	9	5	2	2	2	1	1·9	P	P	81	·977	4·3	8	P	P	4·68	12·49	− 7·81	15·07	18·13	− 3·06	1·55	Bahraich	NORTH OUDH.	20
3	1	1	9	4	1	3	5	4	5·6	P	P	82	1·009	4·2	11	12·10	− 1·10	5·34	9·99	− 4·65	8·16	13·08	− 4·92	1·20	Cawnpore	N.-W. PROV. (CENTRAL).	21
18	...	...	4	1	...	...		...	0·8	P	P	77	·945	6·0	7	P	P	5·43	11·07	− 5·64	8·32	14·07	− 5·75	2·19	Mainpuri.		

Tabl

Abstract of Observations taken at 8 A.M. at 207 Station

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas.		...	...	−·008	...	...	...	...	...	...	...	97·0	+2·5	80·6	+2·0	88·8	+2·3	16·4	...	...	...	...	31·4
24	N.-W. Provinces, West (Sub-montane).	Bareilly	568	28·971	−·008	29·497	29·072	13th	28·816	28th	·256	83·7	93·9	+2·1	79·6	+0·9	86·8	+1·5	14·3	102·4	3 days	75·1	8th	27·3
		Dehra Dun	2,233	27·357	−·017	29·522	27·479	18th	27·244	28th	·235	77·9	87·0	+1·7	74·5	+0·4	80·8	+1·1	12·5	94·0	29th	71·0	19th	23·0
		Roorkee	887	28·653	−·019	29·496	28·767	18th	28·511	28th	·256	83·0	93·0	+1·0	78·5	+0·4	85·7	+0·7	14·5	100·7	8th	71·6	26th	29·1
22	N.-W. P., West.	Meerut	738	28·797	−·008	29·491	28·919	18th	28·653	28th	·266	84·6	94·7	+1·8	80·4	+0·3	87·6	+1·3	14·3	102·0	13th	75·9	17th & 30th.	26·1
26	South-East Punjab.	Delhi	718	28·815	−·008	29·487	28·932	18th	28·676	28th	·256	85·2	94·7	+0·8	80·3	?	87·6	?	14·4	104·2	12th & 13th.	73·4	16th	30·8
28	Central Punjab.	Lahore	702	28·808	−·003	29·465	28·935	17th	28·654	30th	·281	88·6	102·1	+3·5	85·2	+4·3	93·7	+4·2	16·9	109·1	13th	75·1	6th	34·0
27	South Punjab	Sirsa	662	28·857	−·001	29·471	28·971	18th	28·730	29th & 30th	·241	88·8	104·1	+4·1	84·0	+2·7	94·0	+3·4	20·1	110·3	29th	77·4	5th & 6th.	32·9
		Patiala	?	28·720	?	?	28·849	18th	28·589	28th	·260	85·2	95·8	?	80·0	?	87·9	?	15·8	104·2	6th	72·4	31st	31·8
29	Punjab (Sub-montane).	Ludhiana	812	28·715	−·009	29·480	28·844	18th	28·584	30th	·260	87·4	100·3	+2·4	82·8	+2·8	91·6	+2·6	17·5	106·0	13th & 26th.	75·6	16th	30·4
		Sialkot	830	28·691	+·002	29·477	28·814	17th	28·536	29th	·278	87·1	100·0	+2·5	81·5	+2·3	90·8	+2·4	18·5	108·8	13th	71·1	6th	37·7
		Umballa	892	28·643	?	29·484	28·778	18th	28·504	29th	·274	84·9	97·0	?	80·9	?	89·0	?	16·1	107·0	26th	74·5	31st	32·5
31	North Punjab	Rawalpindi	1,648	27·883	?	29·468	28·022	17th	27·743	30th	·279	85·6	101·2	+3·8	79·5	+2·3	90·4	+3·3	21·7	112·0	14th	71·2	6th	40·8
	VII.—Indus Valley and North-West Rajputana.		...	...	+·004	...	...	...	...	...	...	...	102·2	+2·0	82·9	+1·7	92·6	+1·9	19·2	...	...	...	...	33·7
31	North Punjab	Peshawar	1,110	28·416	0	29·432	28·582	17th	28·254	30th	·328	89·0	105·2	+2·5	81·3	+2·1	93·3	+2·3	23·9	113·5	14th	72·9	17th	40·6
		Mardan	?			Not recorded.						89·9	106·4	?	82·5	?	91·4	?	23·9	114·9	13th & 14th.	72·0	17th	42·9
32	West Punjab	Khushab	612	28·882	?	29·452	29·045	17th	28·716	30th	·329	88·8	104·3	?	83·8	?	94·1	?	20·5	111·4	13th	73·0	6th & 27th	38·4
		Montgomery	558	28·939	?	29·450	29·074	17th	28·793	29th	·281	91·2	107·0	?	84·0	?	95·5	?	23·0	112·4	1st & 15th	69·5	16th	42·9
		D. I. Khan (Tel. Office).	594	28·909	+·011	29·436	29·056	17th	28·723	30th	·333	89·8	104·5	?	84·2	?	94·3	?	20·3	110·2	15th	76·0	4th	34·2
		D. I. Khan (Jail).	?			Not recorded.						90·5	105·7	?	84·0	?	94·9	?	21·7	111·1	2nd & 15th	74·3	4th	36·7
		Mooltan	420	29·057	−·007	29·435	29·172	17th	28·916	29th	·256	90·9	106·8	+3·6	?	?	?	?	?	112·9	2nd	?	...	?
47	Sind	Jacobabad	196	29·294	+·008	29·437	29·413	18th	29·172	30th	·241	90·1	109·2	+1·8	85·6	+1·7	97·4	+1·8	23·6	115·1	1st	74·6	6th	40·5
		Hyderabad	96	29·439	?	29·484	29·555	18th	29·322	29th	·233	86·8	99·4	+0·7	82·3	+1·8	90·9	+1·3	17·1	105·2	27th	79·0	28th	26·2
		Kurrachee (Tel. Office).	12	29·556	+·008	29·518	29·674	8th	29·426	29th	·248	85·8	92·9	?	82·1	?	87·5	?	10·8	97·3	16th	79·5	22nd	17·8
		Kurrachee (Hospital).	49	29·522	?	?	29·643	20th	29·390	29th	·253	84·9	91·1	?	82·0	?	86·5	?	9·1	94·1	16th	79·8	2 days	14·3
51	West Rajputana	Bickaneer	771	28·767	?	29·491	28·890	18th	28·642	30th	·248	88·2	103·2	+3·1	83·6	+1·1	93·4	+2·1	19·6	109·0	14th & 29th.	76·0	29th	33·0
		Pachpadra	380	29·090	?	29·421	29·336	10th	28·942	29th	·394	82·4	97·1	?	79·8	?	88·4	?	17·3	104·7	15th	73·5	17th	31·2
	VIII.—East Rajputana, Central India and Gujarat.		...	...	+·007	...	...	...	...	...	...	...	90·5	+1·4	78·0	+0·9	84·3	+1·2	12·5	...	...	...	...	24·2
50	East Rajputana	Jeypore	1,431	28·163	+·014	29·536	28·281	18th	28·009	29th	·272	83·2	95·0	+3·3	78·2	+1·3	86·6	+2·3	16·8	103·0	30th	74·9	2nd	28·1
		Sambhar	1,254	28·320	+·015	29·523	28·440	18th	28·187	30th	·253	83·4	94·8	+2·9	79·2	+1·1	87·0	+2·0	15·6	102·0	30th	74·4	2nd & 30th.	27·6
		Ajmere	1,611	27·993	+·013	29·553	28·117	18th	27·850	29th	·267	81·1	90·7*	?	78·5	+1·8	84·6*	?	12·2	97·4	28th	74·1	2nd	23·3
		Deesa	466	29·154	+·022	29·574	29·286	20th	29·004	30th	·282	80·7	91·4	+0·1	77·7	+0·2	84·5	+0·2	13·7	101·4	15th	74·0	26th	27·4
46	Kathiawar and Cutch.	Bhuj	395	29·203	+·008	29·548	29·328	20th	29·065	29th	·263	81·9	89·8	−0·3	78·3	+0·2	84·1	−0·1	11·5	97·5	15th	74·4	27th	23·1
		Rajkot	429	29·214	+·018	29·594	29·355	20th	29·064	30th	·291	80·7	90·7	+0·6	76·4	+0·8	83·6	+0·7	14·3	99·9	14th	73·7	27th	26·2
		Veraval	?	29·652	?	29·612	29·799	20th	29·506	30th	·293	81·4	83·8	?	79·7	?	81·7	?	4·1	87·1	3 days	74·8	28th	12·3
49	Central India	Nowgong	757	28·805	−·010	29·511	28·911	18th	28·628	29th	·283	82·4	89·8	?	78·6	+0·5	84·2	?	11·2	98·0	13th	74·0	8th	24·0
		Indore	1,823	27·828	+·010	29·596	27·963	18th	27·638	25th	·325	76·2	86·2	+2·2	73·3	+1·0	79·8	+1·6	12·9	92·7	12th	70·1	30th	22·6
		Neemuch	1,630	28·00	+·026	29·579	28·124	20th	27·833	29th	·291	78·2	88·1	+1·1	74·4	+0·6	81·3	+0·9	13·7	94·8	14th	70·6	30th	24·2
45	Gujarat	Surat	36	29·6[illegible]	−·009	29·607	29·793	20th	29·426	25th	·367	81·0	85·5	−1·6	78·8	+1·7	82·2	+0·1	6·7	89·6	8th	75·0	26th	14·6
		Ahmedabad†	164	29·465	?	29·575	29·619	20th	29·280	30th	·339	81·7	91·2	?	78·4*	?	84·6*	?	12·8	99·2	15th	75·1	27th	24·1
22	N.-W. P., West	Agra	555	28·984	−·009	29·491	29·086	8th	28·824	29th	·262	86·1	96·9	+3·9	81·1	+0·9	89·0	+2·4	15·8	107·0	13th	75·8	16th	31·2
21	N.-W. P., Central.	Jhansi	858	28·709	−·0[illegible]	29·514	28·810	8th	28·541	29th	·269	83·9	92·8	+2·1	79·3	+1·2	86·2	+1·7	13·5	102·6	13th	73·4	22nd	28·2

* Mean of 30 days.

I—*continued.*

in India, Burma, etc., in July 1896—continued.

WIND DIRECTION. NUMBER OF WINDS FROM									WIND VELOCITY.			HYGROMETRY, 8 A.M.			RAINFALL.																STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour.	Normal.	Percentage variation.	Mean humidity.	Mean vapour tension.	Mean cloud amount.	Number of rainy days.	Normal number of rainy days.	Variation.	Rainfall of month.	Normal rainfall of month.	Variation from normal.	Total rainfall from 1st June to 31st July 1896	Normal rainfall for period from 1st June to 31st July.	Variation from norma of period from 1st June to 31st July.	Heaviest rainfall during month.								
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6·77	11·49	−4·68	...	...	...	...	VI.—Upper Sub-Himalayas.		
10	...	1	...	7	1	8	...	4	2·9	4·1	−29	80	·932	5·8	8	13·45	−5·45	7·30	16·18	−8·88	12·58	21·85	−9·27	4·04	Bareilly .	N.-W. PROVINCES, WEST (SUB-MONTANE).	29
24	...	1	3	2	...	...	...	1	0·9	1·2	−25	87	·826	6·9	16	21·27	−5·27	14·21	29·25	−15·04	32·00	38·50	−6·50	2·56	Dehra Dun		
21	...	...	...	6	1	1	2	...	2·5	2·9	−14	81	·910	4·6	11	11·82	−0·82	10·52	12·45	−1·93	17·55	17·16	+0·39	2·41	Roorkee.		
20	...	1	2	2	1	...	4		1·8	2·3	−22	75	·881	5·5	7	10·18	−3·18	10·73	9·54	+1·19	4·71	11·98	+2·73	2·98	Meerut .	N.-W. PROVINCES, WEST.	22
7	...	1	3	5	1	2	9	3	3·1	4·5	−31	73	·879	6·6	6	8·64	−2·64	9·01	9·22	−0·21	14·41	12·57	+1·84	3·15	Delhi .	SOUTH-EAST PUNJAB.	26
4	2	1	4	7	2	3	6	2	4·0	3·3	−21	65	·883	4·0	6	6·45	−0·45	2·66	6·67	−4·01	3·57	8·51	−4·94	1·47	Lahore .	CENTRAL PUNJAB.	28
2	...	1	3	7	2	4	11	1	10·8	4·8	+125	63	·849	6·0	4	5·55	−1·55	0·79	4·58	−3·79	0·92	6·99	−5·57	0·20	Sirsa .	SOUTH PUNJAB.	27
3	1	14	1	3	5	3	1	...	4·3	?	?	80	·963	4·5	8	?	?	6·41	?	?	10·98	?	?	2·83	Patiala.		
5	1	1	2	15	1	3	3	...	3·2	2·0	+60	69	·884	5·1	4	9·36	−5·36	2·80	10·33	−7·53	4·10	12·74	−8·64	1·67	Ludhiana .	PUNJAB (SUB-MONTANE).	29
1	2	5	6	7	5	1	1	3	3·6	2·5	−44	74	·945	3·0	8	8·45	−0·45	5·45	8·52	−3·07	7·20	11·60	−4·40	2·44	Sialkot.		
19	...	...	4	2	1	...	2	3	1·3	?	?	78	·935	3·4	7	?	?	6·10	10·86	−4·76	10·41	14·69	−4·28	3·51	Umballa.		
7	6	2	5	4	3	...	...	4	3·5	2·1	−67	67	·812	3·4	10	8·64	+1·36	5·28	8·75	−3·47	8·38	10·46	−2·08	1·12	Rawalpindi	NORTH PUNJAB.	31
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·60	2·89	−1·17	...	...	...	...	VII.—Indus Valley and North-West Rajputana.		
6	9	1	3	...	...	2	...	10	4·1	4·4	− 7	59	·813	2·7	2	1·91	+0·09	0·35	1·79	−1·44	0·35	2·14	−1·79	0·22	Peshawar .	NORTH PUNJAB.	31
Not recorded.									?	?	?	?	?	?	5	?	?	2·06	?	?	2·06	?	?	0·60	Mardan.		
...	1	10	10	4	2	3	1	...	6·5	?	?	67	·893	2·1	5	3·20	+1·80	2·23	2·86	−0·63	3·65	3·56	+0·09	0·74	Khushab .	WEST PUNJAB.	32
3	2	1	2	6	8	7	2	...	8·2	?	?	61	·883	1·8	4	3·60	+0·40	4·74	3·06	+1·68	4·91	4·35	+0·56	1·61	Montgomery		
28	1	2	...	...	...	...	...	...	0·8	2·4	−67	68	·949	1·4	0	3·64	−3·64	0·01	2·87	−2·86	0·18	3·41	−3·23	0·01	D. I. Khan (Tel. Office).		
Not recorded.									?	?	?	68	·976	?	0	?	?	0	?	?	0	?	?	0	D. I. Khan (Jail).		
8	...	2	...	3	6	10	2	...	3·8	3·4	+12	65	·928	1·3	2	2·82	−0·82	0·52	2·94	−2·42	0·52	3·53	−3·01	0·29	Mooltan.		
5	...	...	3	12	10	...	1	...	8·4	5·3	+58	64	·889	1·6	2	1·45	+0·55	1·56	1·28	+0·28	1·61	1·40	+0·21	1·25	Jacobabad .	SIND.	47
...	...	...	..	...	6	24	1	...	24·0	13·9	+73	67	·836	5·4	1	3·18	−2·18	0·45	2·67	−2·22	2·48	3·00	−0·52	0·45	Hyderabad.		
...	...	...	...	...	...	16	15	...	12·9	17·8	−28	83	1·022	7·2	0	3·64	−3·64	0·06	3·47	−3·41	7·36	3·99	+3·37	0·03	Kurrachee. (Tel. Office)		
...	2	1	...	...	1	...	22	5	13·4	?	?	82	·983	6·8	0	?	?	0·03	?	?	3·68	?	?	0·03	Kurrachee (Hospital)		
...	1	1	...	1	9	15	2	2	8·1	6·7	+21	76‡	·982‡	4·6	6	?	?	4·35	3·67	+0·68	5·97	5·33	+0·64	1·40	Bickaneer .	WEST RAJPUTANA.	51
1	...	...	...	2	6	22	...	...	20·6	9·8	+110	94	·939	9·5	8	?	?	2·75	2·64	+0·11	9·31	3·33	+5·98	0·95	Pachpadra.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10·50	10·92	+0·17	...	...	...	...	VIII.—East Rajputana, Central India and Gujarat.		
3	3	3	1	1	...	7	8	5	5·4	6·2	−13	78	·876	6·0	8	12·90	−4·90	3·22	9·37	−6·15	5·70	11·86	−6·16	0·66	Jeypore .	EAST RAJPUTANA.	50
1	5	1	3	...	1	1	16	3	8·2	9·1	−10	76	·862	6·3	6	10·20	−4·20	4·74	7·83	−3·09	7·34	9·23	−1·89	1·20	Sambhar.		
3	...	4	...	...	...	2	20	2	8·2†	6·9	+19	83	·870	6·1	10	10·27	−0·27	9·85	7·29	+2·56	15·51	9·57	+5·94	3·25	Ajmere.		
...	...	1	...	...	2	17	8	3	12·0	14·5	−17	88	·910	8·2	11	10·73	+0·27	9·50	10·99	−1·49	14·77	13·15	+1·62	2·54	Deesa.		
...	...	...	...	...	...	9	21	1	13·5	16·6	+11	80	·860	7·1	7	?	?	7·36	6·94	+0·42	13·93	8·88	+5·05	2·85	Bhuj .	KATHIAWAR AND CUTCH.	46
...	...	...	...	...	...	12	18	1	14·8	14·5	+ 2	84	·874	8·9	11	12·91	−1·91	15·48	13·46	+2·02	27·66	18·19	+9·47	5·65	Rajkot .		
...	...	...	...	...	...	4	26	1	16·9	?	?	87	·930	9·5	12	?	?	4·69	?	?	14·55	?	?	1·51	Veraval.		
...	1	3	4	1	1	3	18	...	4·5	4·2	+ 7	85	·887	6·7	17	15·73	+1·27	16·65	14·41	+2·24	22·62	20·24	+2·38	4·22	Nowgong .	CENTRAL INDIA.	43
1	3	2	...	...	1	6	15	3	6·9	6·8	+ 1	86	·770	9·3	11	13·73	−2·73	9·67	8·51	+1·16	14·32	15·30	−0·98	3·65	Indore.		
...	1	3	1	...	...	8	17	1	10·0	12·2	−18	83	·801	6·8	8	11·73	−3·73	9·04	9·89	−0·85	16·94	14·16	+2·78	2·75	Neemuch.		
...	...	...	...	...	...	...	31	...	...	?	15·7	?	83	·939	9·1	23	16·45	+6·55	28·74	18·28	+10·46	35·22	28·40	+6·82	5·75	Surat .	GUJARAT.	45
1	1	...	...	...	...	...	18	4	6	4·9§	?	?	86	·920	9·5	17	?	?	9·23	?	?	14·87	?	?	2·30	Ahmedabad		
1	...	2	...	7	...	15	...	6	6·4	5·0	+28	75	·935	6·1	9	13·00	−4·00	5·43	11·50	−6·07	7·38	14·04	−6·66	1·53	Agra . .	N.-W. P., WEST.	22
6	1	3	1	2	...	7	5	6	3·7	4·1	−10	76	·881	4·4	14	14·36	−0·36	13·49	12·60	+0·89	21·27	17·49	+3·78	2·14	Jhansi .	N.-W. P., CENTRAL.	21

† Mean of 29 days. ‡ Mean of 20 days. § Wind observations of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	IX.—Deccan	. . .	...	...	−·008	...	...	...	...	...	...	...	87·1	+1·1	73·9	+1·0	80·5	+1·0	13·3	...	...	...	...	23·8
38	Bombay, Deccan	Belgaum .	2,524	27·282	+·018	29·745	27·436	20th	27·150	29th	·286	70·6	76·0	+0·4	67·8	+0·9	71·9	+0·7	8·2	79·2	3 days	65·8	3 days	13·4
		Sholapur .	1,590	28·163	−·003	29·694	28·316	20th	27·997	29th	·319	77·7	88·7	0	71·8	+0·5	80·3	+0·3	16·9	94·7	1st	70·0	3 days	24·7
		Poona . .	1,840	27·901	+·005	29·689	28·060	20th	27·739	25th & 30th	·321	74·5	82·4	+0·6	70·9	+0·2	76·7	+0·4	11·5	88·5	10th	68·9	26th & 30th.	19·6
		Bijapur . .	1,946	27·823	?	29·708	27·970	20th	27·660	29th	·310	75·6	86·9	P	70·6	P	78·8	?	16·3	92·7	10th	66·0	25th.	26·7
40	Khandesh .	Malegaon .	1,430	28·251	−·001	29·628	28·408	20th	28·029	25th	·379	78·8	87·6	+0·8	73·7	+0·7	80·7	+0·8	13·9	94·4	13th	71·2	15th	23·2
		Ahmednagar .	2,152	27·586	P	29·675	27·742	20th	27·403	25th	·339	74·7	82·7	P	70·8	P	76·8	P	11·9	88·9	7th	68·4	15th	20·5
41	Berar . .	Akola . .	930	28·719	−·015	29·596	28·871	20th	28·500	29th	·371	79·2	89·5	+1·4	75·1	+1·1	82·3	+1·3	14·4	97·8	11th	72·2	28th & 29th	25·6
		Amraoti .	1,215	28·429	?	29·596	28·578	20th	28·192	29th	·386	77·4	88·6	+1·8	74·6	+1·5	81·6	+1·7	14·0	96·7	10th & 12th.	71·3	30th	25·4
42	Central Provinces, West.	Khandwa .	1,044	28·597	−·003	29·597	28·752	20th	28·379	25th	·373	78·5	87·3	+0·3	76·1	+1·2	81·7	+0·8	11·2	96·7	14th	73·1	24th	23·6
		Hoshangabad.	1,006	28·605	−·005	29·562	28·745	18th	28·367	30th	·378	78·9	87·5	+1·3	75·7	+0·8	81·6	+1·1	11·8	94·4	13th	72·7	1st	21·7
		Nagpur . .	1,025	28·581	−·027	29·557	28·729	18th	28·333	29th	·396	79·4	89·5	+2·3	76·3	+1·6	82·9	+2·0	13·2	97·3	3rd & 12th.	73·6	26th	23·7
43	Central Provinces, Central.	Chanda . .	634	28·992	−·030	29·570	29·145	20th	28·753	29th	·392	79·5	88·3	+0·7	76·0	+0·5	82·2	+0·6	12·3	98·9	3rd	72·5	30th	26·4
		Seoni . .	2,033	27·594	−·014	29·555	27·723	18th	27·367	30th	·356	76·6	85·3	+1·8	73·2	+0·8	79·3	+1·3	12·1	90·7	11th	71·4	7th	19·3
		Jubbulpore .	1,327	28·282	−·010	29·538	28·396	18th	28·035	30th	·361	79·2	86·9	+1·3	75·1	+0·6	81·0	+1·0	11·8	92·5	13th & 15th.	70·6	8th	21·9
		Saugor . .	1,807	27·792	+·003	29·538	27·920	18th.	27·596	30th	·324	77·8	86·4	+1·5	74·7	+1·2	80·6	+1·4	11·7	96·3	10th	72·6	7th	23·7
49	Central India .	Sutna . .	1,040				Not recorded.					81·7	89·1	+2·3	78·2	+1·5	83·7	+1·9	10·9	97·0	13th	76·0	1st	21·0
44	Central Provinces, East.	Raipur . .	970	28·617*	−·019*	29·534*	28·754	20th	28·394	28th	·360	79·1	86·9	+0·8	75·8	+1·2	81·4	+1·0	11·1	96·4	3rd	72·6	22nd	23·8
		Sambalpur .	486	29·094	−·025	29·505	29·223	19th	28·813	28th	·410	79·9	87·0	−0·4	76·8	−0·5	81·9	−0·5	10·2	93·0	3rd	73·2	24th	19·8
39	Hyderabad, North.	Aurangabad .	P	27·858	P	?	27·987	20th	27·682	30th	·305	76·6	86·8	P	71·2	P	79·0	P	15·6	96·1	11th	68·1	27th	28·0
		Indur . .	P				Not recorded.					77·1	87·3	P	74·3	P	80·8	P	13·0	96·2	1st	71·3	15th	24·9
		Bidar . .	P	27·568	P	P	27·724	20th	27·393	29th	·331	74·1	85·8	P	70·3	P	78·1	P	15·5	93·5	2nd	68·2	26th	25·3
53	Hyderabad, South.	Gulbarga .	1,502	28·241	P	29·692	28·399	20th	28·068	29th	·331	73·7	88·9	P	72·4	P	80·7	P	16·5	97·0	2nd	70·2	30th	26·8
		Raichur . .	1,309	28·453	P	29·710	28·610	20th	28·280	29th	·330	78·0	90·8	P	73·6	P	82·3	P	17·2	98·1	1st & 3rd.	70·6	27th & 31st.	27·5
		Hyderabad (Deccan).	1,690	28·033	+·005	29·666	28·200	20th	27·833	29th	·367	76·7	87·6	+1·4	73·8	+2·6	80·7	+2·0	13·8	95·4	2nd	70·2	30th	25·2
		Secunderabad.	1,787	27·943	P	29·673	28·112	20th	27·744	29th	·368	76·0	89·2	P	72·7	P	81·0	P	16·5	97·2	3 days	68·4	31st	28·8
		Khamamet .	373	29·325	P	29·641	29·504	20th	29·152	29th	·352	82·4	92·1	P	78·9	P	85·5	P	13·2	100·8	2nd	73·3	30th	27·5
	X.—West Coast	. .	...	...	+·017	...	...	...	...	...	...	...	84·0	+1·0	76·3	+1·3	80·1	+1·2	7·6	...	...	...	...	15·1
3	Konkan . .	Bombay .	37	29·705	+·004	29·682	29·869	20th	29·535	30th	·334	81·0	84·4	+0·2	77·8	+0·5	81·1	+0·4	6·6	87·5	7th	75·0	21st & 25th.	12·5
		Ratnagiri .	110	29·682	+·020	29·730	29·841	20th	29·549	30th	·292	80·6	84·5	+0·8	77·3	+2·0	80·9	+1·4	7·2	86·9	10th	71·9	26th	15·0
		Mormugao .	60	29·773	P	29·769	29·934	20th	29·654	29th	·280	81·3	84·8	P	77·6	P	81·2	P	7·2	88·0	3 days	73·4	30th	14·6
		Goa . .	199	29·618	+·016	29·754	29·791	20th	29·496	29th	·295	80·4†	82·8†	P	77·1*	P	79·9*	P	5·7	87·0	10th	63·0	11th	24·0
		Karwar . .	44	29·807	+·022	29·783	29·957	20th	29·689	29th	·268	80·5	84·1	+1·1	76·9	+2·3	80·5	+1·7	7·2	86·7	10th	73·5	30th	13·2
33	Malabar . .	Cochin . .	11	29·921	+·023	29·859	30·056	21st	29·825	30th	·231	77·8	84·4	+1·1	74·5	+0·6	79·5	+0·9	9·9	87·2	6th & 7th.	71·2	26th	16·1
		Calicut . .	27	29·888	+·019	29·844	30·021	21st	29·790	30th	·231	77·7	83·6	+1·5	75·0	+1·5	79·3	+1·5	8·6	85·8	5th & 6th.	72·0	27th	13·7
		Mangalore .	65	29·827	+·014	29·825	29·958	21st	29·724	29th	·234	78·9	84·0	+1·3	75·0	+0·9	79·5	+1·1	9·0	86·8	11th & 21st.	72·4	26th & 30th	14·4
		Trivandrum .	198	29·735	P	29·865	29·870	21st	29·655	29th	·215	77·8	83·0	P	75·6	P	79·3	P	7·4	84·5	4 days	73·0	26th & 27th	11·5
	XI.—South India	. .	...	...	+·002	...	...	...	...	...	...	...	90·4	+1·6	75·7	+1·7	83·1	+1·7	14·7	...	...	...	...	25·6
57	Madras, South.	Pamban .	37	29·822	P	29·785	29·961	21st	29·738	14th	·223	83·4	89·5	P	79·8	P	84·7	P	9·7	93·3	4 days	75·2	28th	18·3
		Tinnevelly .	168	29·701	P	29·798	29·848	21st	29·624	13th	·224	84·4	95·2	P	79·1	P	87·2	P	16·1	100·3	9th	71·9	23rd	28·4
		Madura .	447	29·391	+·009	29·771	29·540	20th & 21st	29·301	29th	·239	84·0	97·3	0	77·8	+1·6	87·6	+0·8	19·5	104·0	9th	71·6	26th	32·4

* Mean of 28 days. † Mean of 30 days.

I—*continued.*

in India, Burma, etc., in July 1896—continued.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.		Mean cloud amount.	RAINFALL.							Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of Districts.
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 1896.	Normal rainfall for period, from 1st June to 31st July.	Variation from normal of period, from 1st June to 31st July.				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12·69	12·37	+2·28	...	...	...	...	IX.—Deccan.		
...	...	...	...	...	...	15	16	...	30·4	27·9	+ 9	92	·689	9·1	28	22·91	+3·09	24·11	15·37	+ 8·74	40·49	21·96	+18·53	4·30	Belgaum .	BOMBAY, DECCAN.	38
...	...	...	...	...	...	14	10	1	18·6‡	12·3	+51	73	·691	8·2	11	9·45	+1·55	4·38	4·29	+ 0·09	7·57	9·30	— 1·73	0·80	Sholapur §		
...	...	...	...	...	...	10	19	2	19·0	16·9	+12	86	·733	9·0	17	12·73	+4·27	13 08	6·87	+ 6·21	19·16	11·60	+ 7·56	2·83	Poona.		
...	...	...	...	...	...	14	16	1	13·9	P	P	79	·706	8·5	4	6·40	−2·40	2·59	P	P	4·55	P	P	1·01	Bijapur.		
...	...	...	...	...	...	15	15	1	21·0	11·8	+78	81	·785	7·7	9	8·55	+0·45	14·61	4·75	+ 9·86	20·83	9·47	+11·36	6·21	Malegaon .	KHANDESH.	40
...	...	...	...	1	2	8	18	2	30·8	P	P	90	·771	8·5	9	P	P	5·93	P	P	13·90	P	P	2·09	Ahmednagar.		
...	...	...	...	...	...	7	16	8	12·1	8·4	+44	80	·789	7·6	11	13·18	−2·18	15·02	10·81	+ 4·21	21·48	16·28	+ 5·20	4·90	Akola .	BERAR.	41
...	1	...	...	...	...	5	22	3	11·9	7·6	+57	85	·794	7·4	10	12·73	−2·73	8·90	10·62	− 1·72	20·84	17·46	+ 3·38	3·65	Amraoti.		
...	...	...	...	...	...	4	20	7	11·3	8·4	+35	83	·805	8·1	13	11·91	+1·09	14·76	8·82	+ 5·94	23·15	14·87	+ 8·28	4·04	Khandwa .	CENTRAL PROVINCES, WEST.	42
1	...	1	1	...	2	14	12	...	4·9	4·5	+9	87	·854	8·5	16	17·27	−1·27	13·30	17·59	− 4·29	24·32	25·79	− 1·47	2·57	Hoshangabad.		
5	...	...	1	...	4	8	10	3	10·8	7·9	+37	85	·846	8·0	17	17·64	−0·64	17·97	14·73	+ 3·24	29·93	23·47	+ 6·46	4·36	Nagpur.		
...	...	2	...	...	1	11	16	1	7·3	6·2	+18	82	·825	7·7	22	P	P	21·50	18·88	+ 2·62	31·01	26·73	+ 4·28	2·95	Chanda .	CENTRAL PROVINCES, CENTRAL.	43
				Not	recorded.				P	6·2	P	87	·801	6·0	16	18·64	−2·64	16·81	18·15	− 1·34	30·41	28·72	+ 1·69	3·36	Seoni.		
2	...	2	1	3	1	10	11	1	4·6	5·0	−8	87	·864	8·1	20	19·27	+0·73	21·93	20·80	+ 1·13	37·00	29·90	+ 7·10	3·85	Jubbulpore.		
1	...	3	2	2	...	3	18	2	4·5	5·1	−12	88	·836	6·2	16	15·64	+0·36	11·43	15·10	− 3·67	22·36	22·50	− 0·14	2·07	Saugor.		
...	1	2	4	2	2	3	15	2	8·4	9·4	−11	83	·887	6·5	16	15·73	+0·27	8·20	15·17	− 6·97	15·36	21·71	− 6·35	1·30	Sutna	CENTRAL INDIA.	49
3	...	2	...	1	4	20	1	...	11·6	11·6	0	87	·858	7·5	19	16·36	+2·64	20·48	16·47	+ 4·01	33·19	25·39	+ 7·80	7·10	Raipur .	CENTRAL PROVINCES, EAST.	44
...	...	2	1	4	7	5	2	...	5·8	3·6	+61	89	·912	8·7	24	P	P	37·31	22·16	+15·15	60·21	33·29	+26·92	6·47	Sambalpur .		
...	...	...	...	...	1	14	13	3	8·3	P	P	82	·745	9·1	11	P	P	12·84	7·37	+ 5·47	21 59	13·71	+ 7·88	3·64	Aurangabad	HYDERABAD, NORTH.	39
1	...	...	...	...	...	6	18	6	16·8	P	P	83	·772	7·7	14	P	P	14·08	10·64	+ 3·44	20·81	15·24	+ 5·57	4·48	Indur.		
...	...	...	...	...	...	9	18	4	16·6	P	P	88	·743	6·6	9	P	P	7·43	9·29	− 1·86	9·63	15·59	− 5·96	4·03	Bidar.		
...	...	...	...	...	...	11	18	2	15·8	P	P	78	·721	8·4	8	P	P	5·92	4·89	+ 1·03	12·15	9·71	+ 2·44	3·15	Gulbarga.	HYDERABAD, SOUTH.	53
...	...	...	...	...	1	10	17	3	20·5	P	P	77	·739	6·8	8	P	P	4·71	P	P	5·35	P	P	1·21	Raichur.		
...	...	...	...	...	...	...	24	5	12·7	P	P	78	·715	7·9	6	P	P	3·50	6·90	− 3·40	8·70	11·75	− 3·05	1·47	Hyderabad (Deccan) ¶		
...	...	...	...	...	...	3	27	1	17·3	13·3	+30	73	·660	7·3	7	P	P	3·57	P	P	8·23	P	P	1·60	Secunderabad.		
5	...	...	...	...	...	9	12	5	9·5	P	P	71	·776	3·8	12	P	P	5·59	P	P	9·30	P	P	1·29	Khamamet.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21·59	28 67	—5·76	...	...	...	...	X.—West Coast.		
...	...	...	...	1	...	10	19	1	20·3	19·1	+ 6	86	·923	9·1	25	21·91	+3·09	36·33	27·17	+ 9·16	64·12	46·54	+17·58	3·86	Bombay.	KONKAN.	37
...	...	...	...	...	4	19	8	...	12·3	13·7	−10	88	·920	9·0	27	26·36	+0·64	23·82	35·51	−11·69	40·13	66·77	−26·64	4·40	Ratnagiri.		
...	1	...	...	...	...	1	14	15	16·8	P	P	86	·926	7·0	25	P	P	10·96	P	P	40·48	P	P	2·12	Mormugao.		
1	...	...	...	...	...	14	16	...	?	P	P	86†	·893†	9·2	26	P	P	14·34	33·70	−19·36	37·62	63·79	−26·17	2·10	Goa.		
...	...	...	...	...	...	17	11	2	8·8	P	P	83	·850	7·5	26	27·45	−1·45	19·87	38·97	−19·10	55·33	76·21	−20·88	3·11	Karwar.		
8	3	4	...	...	...	3	9	4	6·5	2·0	+225	88	·853	8·6	28	23·91	+4·09	29·63	21·51	+ 8·12	58·97	49·92	+ 9·05	5·23	Cochin .	MALABAR.	33
2	3	4	2	3	1	3	2	11	12·2	P	P	90	·849	8·5	28	26·63	+1·37	25·16	29·35	− 4·19	66·27	62·57	+ 3·70	3·01	Calicut.		
4	1	...	...	...	...		14	8	3·8	3·2	+19	89	·886	8·8	29	28·10	+0·90	28·44	36·09	− 7·65	74·19	71·12	+ 3·07	2·63	Mangalore.		
...	20	...	...	...	...	2	1	8	9·1	P	P	85	·816	8·8	10	P	P	5·72	7·08	− 1·36	20·29	20·03	+ 0·26	1·51	Trivandrum.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5·57	6·25	+0·14	...	...	...	...	XI.—South India.		
3	...	...	...	...	3	16	9	...	14·0†	P	P	80	·917	3·1	0	1·30	−1·30	0·02	0·71	− 0·69	0·10	0·75	− 0·65	0·02	Pamban .	MADRAS, SOUTH.	57
...	1	...	...	...	1	7	13	9	10·8	P	P	60	·710	6·6	2	0·90	+1·10	1·01	P	P	1·35	P	P	0·67	Tinnevelly.		
...	1	1	...	...	..	13	4	12	2·8	4·6	−39	61	·722	6·5	3	1·45	+1·55	1·44	2·28	− 0·84	2·04	3·78	− 1·74	0·62	Madura.		

‡ Mean of 24 days.

§ Wind observations of 25 days.

¶ Wind observations of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
34	Madras, South Central.	Salem	940	28·925	+·009	29·805	29·073	20th	28·805	29th	·268	79·8	94·8	+2·2	74·8	+2·5	84·8	+2·4	20·0	99·4	2nd & 9th.	72·5	20th	26·9
		Coimbatore	1,348	28·511	+·019	29·808	28·641	21st	28·392	29th	·249	76·6	85·9	−2·1	71·2	+0·6	78·6	−0·8	14·7	91·4	7th	68·6	26th & 30th.	22·8
35	Coorg	Mercara	3,781	26·192	+·023	?	26·323	20th	26·087	29th	·236	64·8	69·0	+0·3	63·5	+1·3	66·2	+0·8	5·5	71·5	3rd & 14th.	61·2	6th	10·3
36	Mysore	Chitaldroog	2,405	27·430	?	29·760	27·566	20th	27·293	29th	·273	72·5	80·7	?	68·6	?	74·7	?	12·1	87·1	8th	63·9	25th	23·2
		Bangalore	3,021	26·866	+·003	29·790	26·996	20th & 21st.	26·736	29th	·260	70·2	82·5	+0·7	66·6	+1·0	74·6	+0·9	15·9	88·8	9th	64·3	21st	24·5
		Hassan	3,091	26·815	?	29·821	26·944	20th	26·703	29th	·241	69·9	75·2	?	65·4	?	70·3	?	9·8	80·9	9th	63·9	25th	17·0
		Mysore	2,518	27·382	?	29·824	27·514	21st	27·274	29th	·240	72·7	81·3	?	67·4	?	74·4	?	13·9	87·9	9th	65·0	21st	22·9
56	Madras, East Coast, South.	Negapatam	31	29·802	+·015	29·761	29·947	20th	29·699	29th	·248	85·8	98·4	+3·5	80·0	+2·3	89·3	+2·9	18·4	102·7	6th & 16th.	74·9	9th	27·8
		Cuddalore	12	29·799	?	29·740	29·959	20th	29·685	29th	·274	85·3	98·8	?	80·2	?	89·5	?	18·6	104·3	2nd	73·2	9th	31·1
		Trichinopoly	255	29·577	+·003	29·763	29·721	21st	29·487	29th	·234	84·0	98·3	+1·3	79·8	+2·4	89·0	+1·9	18·5	105·2	9th	77·3	20th	27·9
		Madras	22	29·768	0	29·721	29·934	20th	29·646	29th	·288	85·0	97·9	+2·3	81·2	+2·6	89·5	+2·5	16·7	105·5	6th	74·5	20th	31·0
55	Madras, East Coast, Central.	Nellore	71	29·681	?	29·685	29·844	20th	29·533	29th	·311	85·5	97·7	?	80·4	?	89·1	?	17·3	104·3	1st & 6th.	74·1	20th	30·2
		Masulipatam	15	29·697	−·005	29·647	29·872	20th	29·529	29th	·343	83·5	93·8	+1·8	79·0	+1·1	86·4	+1·5	14·8	102·2	2nd	73·1	30th	29·1
54	Madras, Central	Cuddapah	433	29·348	?	29·718	29·501	21st	29·197	29th	·304	83·4	96·5	+2·6	78·6	+1·1	87·6	+1·9	17·9	103·2	6th	72·2	10th	31·0
		Kurnool	923	28·941	−·003	29·707	29·004	20th	28·670	29th	·334	79·3	92·5	+2·0	75·4	+1·2	84·0	+1·6	17·1	100·2	5th	70·4	29th	29·8
		Bellary	1,475	28·315	+·006	29·731	28·463	20th	28·168	29th	·295	79·6	90·3	?	75·5	+1·2	82·9	?	14·8	95·7	8th	70·2	1st	25·5
		Rajahmundry	112			Not	record	ed.				82·5	91·8	+3·0	78·9	+1·6	85·3	+2·3	12·9	103·1	2nd & 3rd.	75·1	20th & 23rd.	28·0
52	Madras, East Coast, North.	Cocanada	26	29·639	−·013	29·600	29·840	20th	29·459	29th	·381	82·6	92·2	+4·0	79·6	+1·4	85·9	+2·7	12·6	102·6	1st	75·0	20th	27·6
		Vizagapatam	31	29·583	−·043	29·552	29·766	20th	29·368	28th	·398	83·1	92·2	+1·2	79·6	+2·4	85·9	+1·8	12·6	100·2	6th	75·9	22nd	24·3
		Gopalpur	21	29·561	?	29·522	29·713	20th	29·323	28th	·390	82·5	87·4	?	78·6	?	83·1	?	8·8	94·2	10th	75·1	1st	19·1
	XII.—Hill Stations		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
48	Baluchistan	Kachh	?	23·687*	?	?	23·780	18th	23·600	29th	·180	80·8*	93·0*	?	?	?	?	?	?	98·0	3 days	?	...	?
		Pishin	?			Not	recorded.					?	105·1	?	61·3	?	83·2	?	43·8	110·9	16th	50·9	8th	60·0
		Quetta	5,502	24·438	+·013	?	24·538	18th	24·355	30th	·183	78·0	94·0	+1·4	64·0	−1·3	79·0	+0·1	30·0	98·1	14th & 15th.	51·9	7th & 8th.	46·2
		Kalat	?			Not	recorded.					75·9	97·4	?	51·7	?	74·6	?	45·7	102·1	4th	42·6	9th	59·5
		Chaman	4,311	25·392	?	?	25·529	18th	25·322	25th	·207	86·5	103·7	?	77·2	?	90·5	?	26·5	109·0	3 days	70·1	7th.	38·9
30	Punjab	Leh	11,503	19·642	?	?	19·756	20th	19·554	6th	·202	59·1	79·9	?	50·6†	?	65·4†		29·3	86·2	14th & 21st.	40·7	7th	45·5
		Srinagar	5,204	24·682	?	?	24·773	18th	24·573	30th	·200	73·1	88·9	?	65·2	?	77·1	?	23·7	97·9	22nd	56·7	6th & 7th.	41·2
		Gilgit	?	24·453	?	?	24·610	6th	24·350	1st & 22nd.	·260	83·0	99·8	?	74·4	?	87·1	?	25·4	111·8	22nd	60·3	6th	51·5
		Samana	?	23·524?	?	?	23·580	13th	23·480	5 days	·100	?	85·0	?	51·1	?	68·0	?	33·9	99·2	21st	40·0	4 days	59·2
		Cherat	?	25·483	?	?	25·581	17th	25·360	30th	·221	79·8	89·0	?	?	?	?	?	?	102·5	11th & 13th.	?	...	?
		Murree	6,344	23·722?	+·027	?	23·803?	18th	23·620	30th	·183?	69·1?	81·1?	+4·1	62·4?	−0·3	71·8?	+1·9	18·7?	86·7	13th & 14th.	51·1	5th	35·6
		Poo	?			Not	recorded.					?	82·0*	?	60·4*	?	71·2*	?	21·6	94·8	21st	52·9	7th	41·9
		Simla	7,224	22·992	+·020	?	23·062	18th	22·910	30th	·152	64·1	70·8	+1·5	60·8	+0·2	65·8	+0·9	10·0	77·4	29th	57·1	16th	20·3
25	N.-W. Provinces	Chakrata	6,977	23·197	+·026	?	23·288	27th	23·131	4th	·157	63·9	69·5	−0·4	60·7	+0·6	65·1	+0·1	8·8	76·2	30th	57·3	7th	18·9
		Mussooree	6,705	23·390	?	?	23·464	13th	23·314	28th	·150	65·5	72·1	+2·2	61·0	+1·7	67·1	+2·0	11·1	79·3	30th	59·9	4 days	19·4
		Ranikhet	6,069	23·957	+·018	?	24·038	13th	23·885	28th	·153	68·6	76·8	+3·2	64·4	+1·5	70·6	+2·4	12·4	83·0	29th & 30th.	60·0	9th	23·0
13	Bengal	Yatung	10,180?			Not	recorded.					?	65·2	?	56·5	?	60·8	?	8·7	73·0	25th & 29th.	52·9	18th	20·1
		Gnatong	?	19·256	?	?	19·319	13th	19·201	29th	·118	51·1	56·5	?	45·4	?	50·9	?	11·1	61·9	21st	43·6	14th	18·3
		Darjeeling	7,421	22·869	−·008	?	22·973	13th	22·770	28th	·203	63·1	68·1	+1·3	58·5	+1·1	63·3	+1·2	9·6	75·1	24th	56·7	15th	18·4
		Gantok	5,660	24·319	?	?	24·418	19th	24·210	22nd & 27th.	·208	68·4	76·6	?	55·8	?	66·2	?	20·8	86·8	26th	53·8	3rd	33·0

* Mean of 30 days.

† Mean of 28 days.

I—*continued.*

in India, Burma, etc., in July 1896—continued.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.		Mean cloud amount.	RAINFALL.									Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of Districts.
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 1896.	Normal rainfall for period, from 1st June to 31st July.	Variation from normal of period, from 1st June to 31st July.				
1	...	...	...	...	7	18	5	...	8·7	4·7	+85	75	·769	7·1	5	6·91	−1·91	1·93	3·96	− 2·03	4·00	7·64	− 3·64	0·84	Salem .	MADRAS, SOUTH, CENTRAL.	34
...	...	...	...	...	...	...	31	...	7·6	8·2	− 7	87	·807	6·9	9	4·36	+4·64	3·12	1·23	+ 1·89	7·30	2·66	+ 4·64	0·55	Coimbatore.		
3	1	...	...	...	...	1	19	7	11·9	11·3	+ 5	97	·602	9·9	31	29·30	+1·71	56·96	42·50	+14·46	105·55	68·21	+37·34	7·86	Mercara .	COORG.	35
...	...	...	...	...	...	11	19	1	15·4	?	?	83	·678	9·5	9	?	?	4·21	?	?	7·79	?	?	1·10	Chitaldroog.	MYSORE.	36
...	...	...	...	...	...	17	14	...	14·1	8·6	+64	82	·610	9·2	7	9·00	−2·00	1·67	4·59	− 2·92	3·83	8·04	− 4·21	0·39	Bangalore.		
...	...	...	...	...	...	7	20	4	5·8	?	?	86	·630	9·7	16	?	?	7·92	?	?	17·02	?	?	1·35	Hassan.		
...	...	...	...	...	...	14	17	...	16·1	?	?	80	·639	8·7	4	?	?	2·50	?	?	8·24	?	?	0·81	Mysore.		
...	...	...	...	...	...	15	13	3	11·0	7·1	+55	63	·784	5·1	1	3·64	−2·64	0·35	2·27	− 1·92	1·49	4·01	− 2·52	0·19	Negapatam	MADRAS, EAST COAST, SOUTH.	56
...	...	...	...	...	5	9	11	6	3·5	?	?	74	·897	5·3	4	5·60	−1·60	0·84	?	?	0·93	?	?	0·30	Cuddalore.		
...	...	...	...	...	...	11	16	4	12·9	9·9	+30	58	·674	7·5	1	2·18	−1·18	0·15	1·50	− 1·35	0·40	3·12	− 2·72	0·15	Trichinopoly.		
...	...	...	...	...	3	9	17	2	8·5	8·3	+ 2	67	·799	7·9	5	7·00	−2·00	2·05	3·87	− 1·82	3·54	5·98	− 2·44	0·55	Madras.		
7	...	...	...	...	1	4	11	8	12·8	?	?	65	·781	9·5	6	4·70	+1·30	2·90	?	?	4·06	?	?	0·89	Nellore .	MADRAS, EAST COAST, CENTRAL.	55
...	...	...	...	...	...	2	9	20	14·5	9·7	+49	75	·851	8·6	7	9·36	−2·36	6·41	5·71	+ 0·70	10·93	11·23	− 0·30	2·25	Masulipatam.		
...	...	...	...	...	...	4	9	18	?	?	?	65	·746	8·2	5	6·00	−1·00	1·67	3·90	− 2·23	5·04	8·01	− 2·97	0·42	Cuddapah.	MADRAS, CENTRAL.	54
...	...	...	...	...	...	6	21	4	?	?	?	70	·692	8·5	9	9·83	−0·83	4·61	4·91	− 0·30	5·81	8·86	− 3·05	1·07	Kurnool.		
...	...	...	...	...	...	9	20	2	13·8	11·6	+19	64	·648	8·4	1	3·91	−2·91	0·64	1·98	− 1·34	1·47	3·83	− 2·36	0·53	Bellary.		
1	...	...	...	...	...	5	25	...	?	?	?	73	·803	7·5	14	10·10	+3·90	3·94	7·22	− 3·28	11·11	13·01	− 1·90	0·80	Rajahmundry.	MADRAS, EAST COAST, NORTH.	52
...	...	...	...	...	...	12	17	2	10·1	?	?	74	·827	7·0	10	10·00	0	5·91	6·67	− 0·76	9·50	12·04	− 2·54	2·45	Cocanada.		
14	...	...	...	...	1	10	6	...	1·5	4·0	−63	77	·871	8·9	7	10·18	−3·18	7·13	5·09	+ 2·04	9·98	8·58	+ 1·40	3·39	Vizagapatam.		
5	...	2	...	...	5	17	2	...	13·5	11·3	+19	89	·988	4·9	15	11·33	+3·67	10·62	7·90	+ 2·72	15·81	13·99	+ 1·82	2·25	Gopalpur.		
...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**XII.—Hill Stations.**		
...	2	1	7	1	...	1	10	1	4·5†	?	?	55*	·573*	?	0	?	?	0	?	?	0·70	?	?	0	Kachh§ .	BALUCHISTAN	48
						Not recorded.			?	?	?	?	?	?	0	?	?	0	?	?	0·15	?	?	0	Pishin.		
20	...	1	...	...	5	4	1	...	2·7	5·1	−47	61	·592	1·1	0	1·36	−1·36	0·02	1·21	− 1·19	1·16	1·33	− 0·17	0·02	Quetta.		
...	...	...	...	1	30	...	...	...	?	?	?	?	?	?	1	?	?	0·28	?	?	2·75	?	?	0·23	Kalat		
...	...	...	2	8	4	13	2	2	15·9	?	?	25	·310	0·5	0	?	?	0	?	?	0·60	?	?	0	Chaman.		
...	1	1	...	...	1	2	26	...	2·4	1·9	+26	50	·252	2·9	0	?	?	0·03	?	?	0·03	?	?	0·03	Leh .	PUNJAB.	30
7	3	3	...	10	3	1	...	4	6·2	?	?	81	·674	3·5	6	?	?	2·02	?	?	3·40	?	?	0·96	Srinagar.		
			Not recorded.						?	?	?	39	·420	3·1	3	?	?	0·82	?	?	1·34	?	?	0·41	Gilgit.		
...	...	2	8	2	1	...	...	...	?	?	?	?	?	3·1	6	?	?	4·52	?	?	8·20	?	?	1·50	Samana.‡		
20	3	...	...	...	8	...	...	...	7·6	?	?	65	·620	2·4	3	?	?	1·75	?	?	1·75	?	?	0·82	Cherat.		
5	1	2	2	8	6	1	1	4	8·9?	5·7	+56	71?	·516?	5·4?	13?	12·00	+1·00	8·96?	11·25	− 2·29	13·44?	14·12	− 0·68	1·88	Murree.		
23	...	...	2	...	...	2	1	2	?	?	?	?	?	0·9	0	?	?	0	?	?	0·04	?	?	0	Poo.		
16	6	4	1	...	3	1	...	...	2·0	1·6	+25	87	·522	7·7	13	19·27	−6·27	10·81	17·55	− 6·74	20·23	24·34	− 4·11	2·45	Simla.		
17	6	...	...	1	7	...	...	...	9·4	4·6	+104	90	·537	0·7	19	?	?	21·71	19·42	+ 2·29	32·85	26·33	+ 6·52	4·15	Chakrata .	N.-W. PROVINCES.	25
...	2	6	5	2	1	1	8	6	?	8·7	?	92	·579	7·1	18	21·91	−3·91	22·16	29·49	− 7·33	38·39	38·19	+ 0·20	6·03	Mussooree.		
5	...	3	5	...	2	7	2	7	3·2	2·1	+52	85	·596	6·7	13	19·18	−6·18	8·84	13·28	− 4·44	19·68	19·22	+ 0·46	2·07	Ranikhet.		
			Not recorded.						?	?	?	?	?	?	21	?	?	7·14	?	?	12·45	?	?	0·78	Yatong .	BENGAL.	13
3	1	1	5	7	2	1	5	6	5·0	?	?	82	·297	5·5	23	?	?	19·63	?	?	36·83	?	?	1·85	Gnatong.		
1	2	6	8	3	2	4	3	2	4·0	2·6	+54	93	·535	?	21	26·15	−5·15	17·12	32·45	−15·33	49·87	56·14	− 6·27	3·07	Darjeeling.		
15	1	1	...	...	2	4	3	1	?	?	?	90	·625	?	30	?	?	22·52	?	?	41·21	?	?	1·93	Gantok.¶		

† Mean of 29 days.

§ Wind direction of 23 days.

¶ Wind direction of 27 days.
‡ Do. of 13 ,,

Table

Abstract of Observations taken at 8 A.M. at 207 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	25·822	0	?	25·933	18th	25·691	29th	·242	68·6	74·8	+0·2	65·5	0	70·2	+0·1	9·3	81·2	15th & 16th.	61·9	2nd	19·3
	Pachmarhi	3,523	26·220	+·001	?	26·345	8th & 18th	26·016	30th	·329	70·4	76·5	+1·1	68·5	+0·7	72·5	+0·9	8·0	82·2	13th	66·2	1st & 22nd.	16·0
SOUTH INDIA	Wellington	6,200	24·200	+·005	?	24·318	20th	24·093	29th	·225	62·7	70·1	−0·7	57·6	−0·5	63·9	−0·6	12·5	75·2	9th	54·1	28th	21·1
XIII.—Extra India.																							
CEYLON	Trincomalee	12	29·836	?	29·775	29·983	20th	29·762	29th	·221	81·8	91·3	?	78·2	?	34·8	?	13·1	97·0	7th	74·0	13th	23·0
	Colombo	40	29·889	+·010	29·855	·0·018	21st	29·826	29th	·192	80·6	86·5	?	78·1	?	82·3	?	8·4	88·5	6th & 7th.	73·5	25th	15·0
PERSIA	Meshed	3,104			Not recorded.						81·9	?	?	67·0	?	?	?	?	?	...	61·8	6th & 29th	?
	Resht	?			Not recorded.						75·6	82·2	?	70·2	?	76·2	?	12·0	89·1	17th & 24th.	64·1	1st	25·0
	Teheran*	?	25·781 / 25·374‡	?	?	26·005 / 25·560	3rd	25·635 / 25·250	23rd	·370 / ·310	82·8*	98·3	?	70·7*	?	84·6*	?	27·6*	107·4	18th	58·1	1st	49·3
	Ispahan	?	24·239 / 24·591	?	?	24·430 / 24·750	3rd	24·110 / 24·480	23rd	·320 / ·270	82·6	99·8	?	69·4	?	84·6	?	30·4	105·2	17th	62·3	1st	42·9
	Bushire	14	29·502	+·024	29·475	29·597	9th	29·422	29th	·175	88·4	92·6	−3·0	84·6	+0·5	88·6	−1·3	8·0	97·0	30th	77·9	1st	19·1
	Jask	?	29·530	?	29·483	29·661	8th	29·403	29th	·258	90·1	96·2	?	85·5	?	90·9	?	10·7	102·2	6th	79·2	10th	23·0
ARABIA	Muscat	?	29·519	?	?	29·630	8th	29·373	29th	·257	90·6	92·7	?	88·6	?	90·7	?	4·1	99·3	23rd	84·4	20th	14·9
	Baghdad	220?	29·467	+·021	29·656	29·600	9th	29·383	29th	·217	85·9	103·4	−3·4	79·0	+0·2	91·2	−1·6	24·4	109·7	2nd	74·3	10th	35·4
	Aden	94	29·652	+·026	29·676	29·732	21st	29·527	29th	·205	87·3	95·1	+2·6	83·4	+2·1	89·3	+2·4	11·7	102·3	30th	77·4	2nd	24·9
	Perim	?	29·546	?	?	29·630	21st	29·405	6th	·215	90·5	97·0	?	85·8*	?	91·4*	?	11·2*	100·5	18th & 23rd	83·1	9th	17·4
AFGHANISTAN	Kabul	?			Not recorded.						77·8	95·4	?	62·0	?	78·7	?	33·4	112·1	18th	55·6	6th	56·5
	Kashgar	?	25·464†	?	?	25·555	19th	25·304	27th	·251	80·6*	92·3*	?	68·1†	?	80·2†	?	24·2†	102·6	21st	56·1	7th	46·5
AFRICA	Zanzibar	23	30·124	?	30·124	30·200	21st	30·047	8th	·153	74·7	80·6	?	73·2	?	76·9	?	7·4	82·4	1st	70·8	5th & 23rd.	11·6

* Mean of 30 days. † Mean of 29 days. ‡ Barometer uncorrected.

I—*concluded.*

in India, Burma, etc., in July 1896—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 1896.	Normal rainfall for period, from 1st June to 31st July.	Variation from normal of period, from 1st June to 31st July.			
...	4	4	...	...	...	18	5	...	12·3	10·5	+17	95	·660	8·8	19	16·73	+2·27	13·99	24·42	−10·43	26·68	30·55	− 3·87	2·67	Mount Abu	CENTRAL INDIA.
5	...	...	1	...	...	9	14	2	17·5	9·5	+84	91	·681	8·8	26	23·09	+2·91	23·78	26·69	− 2·91	38·57	36·49	+ 2·08	4·73	Pachmarhi.	
4	...	...	...	1	3	18	3	2	6·1	5·8	+5	72	·418	9·1	10	6·75	+3·25	3·80	3·75	− 0·05	9·06	7·48	+ 1·58	0·96	Wellington.	SOUTH INDIA.
XIII.—Extra India.																										
...	...	...	...	...	...	31	...	...	14·1	?	?	82	·893	3·5	2	?	?	1·82	?	?	2·15	?	?	0·90	Trincomalee	CEYLON.
...	...	...	...	...	3	14	11	3	10·3	9·0	+14	85	·888	6·9	4	?	?	2·54	5·55	−3·01	10·91	12·79	−1·88	1·24	Colombo.	
				Not recorded.					?	?	?	43	·474	0	0	?	?	0·09	?	?	1·09	?	?	0·09	Meshed.	PERSIA.
				Not recorded.					?	?	?	81	·714	?	5	?	?	3·31	?	?	5·09	?	?	1·15	Resht.	
17	...	...	...	...	2	8	1	1	3·1†	?	?	34*	·371*	0·6*	0	?	?	0	?	?	0	?	?	0	Teheran.§	
4	1	1	6	...	...	2	8	9	5·0	?	?	47	·526	0·1	0	?	?	0	?	?	0	?	?	0	Ispahan.	
...	5	1	...	1	1	...	1	22	10·7	9·2	+16	69	·933	0	0	?	?	0	0	0	0	0	0	0	Bushire.	
...	1	...	18	6	2	1	1	2	11·2	?	?	73	10·42	2·4	0	?	?	0	?	?	0	?	?	0	Jask.	
...	1	4	11	8	...	1	3	3	4·2	?	?	73	10·47	1·3	0	?	?	0	?	?	0	?	?	0	Muscat	ARABIA.
1	21	...	...	...	...	...	...	9	4·3	?	?	45	·553	0	0	?	?	0	?	?	0	?	?	0	Baghdad.	
3	...	3	1	3	5	15	1	...	10·8	9·4	+15	67	·860	4·2	0	?	?	0·01	0	+0·01	0·01	0·01	0	0·01	Aden.	
4	1	...	2	...	...	14	8	2	14·2	?	?	57	·808	2·4	0	?	?	0	?	?	0	?	?	0	Perim.	
...	7	...	16	...	2	...	6	...	?	?	?	45	·439	0	0	?	?	0	?	?	0	?	?	0	Kabul	AFGHANISTAN.
27	...	1	...	...	...	...	...	1	3·4‖	?	?	39†	·394†	2·6*	0	?	?	0·07	?	?	0·22	?	?	0·06	Kashgar§	
...	...	...	...	2	16	13	...	...	7·5	?	?	83	·713	4·0	3	?	?	0·83	?	?	1·31	?	?	0·50	Zanzibar	AFRICA.

§ Wind observation for 29 days.

‖ 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.	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	...	29·763	29·690	·073	29·734	−·012	29·725	85·1	77·8	7·3	88·6	74·1	14·5	83·2	82·9	80·4	+0·2	75·4	79·2	78·8	77·8
	Rangoon	...	·746	·668	·078	·713	−·024	·691	85·1	76·3	8·8	89·5	73·9	15·6	80·9	80·0	78·7	+0·6	74·5	78·3	77·3	76·7
	Diamond Island	...	·730	·655	·075	·700	−·038	·676	84·1	77·3	6·8	87·5	73·8	13·7	81·6	80·8	79·4	+1·1	75·5	78·1	77·1	76·9
	Cocos Island	111	·611	·538	·073	·582	?	·624	86·5	77·8	8·7	91·3	74·0	17·3	83·8	82·6	80·7	?	75·8	79·7	78·8	78·1
	Akyab	...	·666	·576	·090	·624	−·048	·587	84·2	77·7	6·5	90·3	73·7	15·6	81·0	82·3	80·1	+0·1	76·1	79·5	80·2	78·6
Assam.	Silchar	...	·527	·408	·119	·478	−·048	·530	92·4	78·3	14·1	103·8	75·8	28·0	85·7	89·6	84·4	+2·2	77·0	80·5	81·6	79·7
	Sibsagar	...	·287	·159	·128	·225	−·061	·506	90·6	79·2	11·4	97·6	76·2	21·4	85·1	89·0	83·9	+0·7	78·0	81·7	83·6	81·1
	Dhubri	...	·487	·378	·109	·441	−·028	·509	88·2	79·0	9·2	94·7	76·0	18·7	83·6	85·9	82·4	+0·8	77·3	80·4	81·4	79·7
Bengal and Orissa.	Chittagong	...	·542	·447	·095	·502	−·057	·536	86·8	77·6	9·2	90·7	75·1	15·6	83·7	83·8	81·0	+1·0	76·3	79·5	79·8	78·5
	Narayanganj	...	·568	·475	·093	·531	−·034	·504	89·1	80·2	8·9	92·7	77·5	15·2	85·3	86·2	84·2	+1·0	77·4	81·4	81·3	80·0
	Calcutta (Alipore)	...	·536	·449	·087	·499	−·039	·465	88·4	79·3	9·1	91·9	77·5	14·4	85·0	84·6	83·5	+0·5	78·1	80·6	80·6	79·8
	Saugor Island	...	·525	·445	·080	·491	−·046	·460	88·2	80·7	7·5	90·9	78·3	12·6	85·5	85·8	83·4	+0·6	78·5	81·6	81·6	80·6
	Burdwan	...	·460	·363	·097	·419	−·028	·471	91·1	80·3	10·8	93·4	78·2	15·2	85·6	87·4	84·3	+0·4	78·6	80·5	81·1	80·1
	Berhampore	...	·500	·403	·097	·459	−·029	·473	90·6	79·9	10·7	93·0	77·3	15·7	86·8	87·6	84·0	+0·6	78·2	81·9	81·6	80·5
	False Point	...	·547	·467	·080	·512	−·050	·474	87·3	78·6	8·7	92·5	74·7	17·8	84·1	83·9	81·6	−0·2	77·0	79·7	80·0	78·9
	Cuttack	...	·485	·396	·089	·449	−·046	·471	89·6	78·7	10·9	96·0	75·0	21·0	84·2	86·0	82·4	−0·1	76·8	78·9	79·8	78·5
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·578	27·493	·085	27·544	−·025	·464	85·3	74·8	10·5	90·4	71·3	19·1	80·5	82·3	79·0	+0·8	72·8	75·3	76·3	74·8
	Patna	...	29·374	29·267	·107	29·327	−·028	·459	91·2	80·9	10·3	96·3	76·6	19·7	86·6	88·9	84·8	+0·6	79·1	81·4	82·3	80·9
	Darbhanga	...	·398	·291	·107	·351	−·029	·468	90·9	81·1	9·8	97·0	77·5	19·5	86·8	89·1	84·9	+1·0	79·2	81·8	82·2	81·1
	Allahabad	...	·241	·139	·102	·192	−·017	·449	93·5	79·7	13·8	99·6	74·6	25·0	87·9	90·4	85·5	+1·0	77·0	81·4	81·3	79·9
	Lucknow	...	·174	·077	·097	·129	−·027	·445	94·4	80·2	14·2	102·2	72·1	30·1	88·5	92·2	86·5	+0·9	77·9	81·3	81·9	80·4
Upper Sub-Himalayas.	Dehra Dun	...	27·380	27·296	·084	27·331	−·019	·472	87·3	74·6	12·7	94·0	70·9	23·1	81·1	85·0	80·1	+0·4	72·3	76·2	77·8	75·4
	Roorkee	...	28·662	28·563	·099	28·610	−·012	·441	93·1	78·5	14·6	100·3	71·7	28·6	86·3	91·3	85·0	+0·4	75·7	79·4	80·6	78·6
	Meerut	...	·805	·707	·098	·753	−·014	·439	94·5	80·4	14·1	101·9	75·9	26·0	87·7	92·3	86·9	+1·5	77·7	79·3	80·6	79·2
	Lahore	...	·813	·716	·097	·763	−·010	·408	102·1	85·2	16·9	109·6	75·3	34·3	93·0	100·6	92·9	+4·9	77·6	80·8	82·0	80·1
	Ludhiana	...	·727	·618	·109	·671	−·013	·424	99·8	82·6	17·2	106·0	75·4	30·6	90·9	97·1	90·1	+2·8	76·8	79·5	80·2	78·8
Indus Valley and N.-W. Rajputana.	Peshawar	...	·418	·297	·121	·357	−·002	·404	104·9	81·4	23·5	113·5	73·1	40·4	94·4	101·6	91·9	+2·3	73·6	79·0	79·1	77·2
	Mooltan	...	29·069	·977	·092	29·022	0	·392	106·7	?	?	112·9	?	?	96·9	104·1	?	?	77·7	83·4	85·2	82·1
	Jacobabad	...	·307	29·178	·129	·241	+·008	·377	109·0	85·4	23·6	113·8	74·6	39·2	96·9	107·1	96·3	+1·8	77·9	81·5	82·7	80·7
	Kurrachee	...	·558	·488	·070	·528	+·005	·490	92·8	82·1	10·7	97·1	79·6	17·5	89·2	89·3	86·1	?	79·5	83·0	83·3	81·9
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·169	28·077	·092	28·124	+·006	·480	94·8	78·2	16·6	102·9	74·9	28·0	87·0	92·1	85·2	+1·4	75·5	78·8	80·0	78·1
	Ajmere	...	·001	27·913	·088	27·952	+·001	·490	90·8	78·5	12·3	97·6	73·9	23·7	84·7	89·4	83·3	+1·4	74·4	78·4	80·0	77·6
	Deesa	...	29·157	29·056	·101	29·108	+·017	·522	91·3	77·6	13·7	101·3	74·0	27·3	84·1	89·3	83·9	+0·1	75·6	78·8	79·4	78·0
	Nowgong	...	28·805	28·715	·090	28·761	−·015	·459	90·2	78·5	11·7	98·0	74·0	24·0	85·7	88·7	83·5	+0·9	76·6	80·3	80·4	79·1
	Agra	...	·988	·835	·093	·940	−·010	·440	96·8	81·1	15·7	107·0	75·8	31·2	90·0	93·5	88·7	+1·8	77·7	81·3	81·7	80·2
Deccan.	Belgaum	...	27·202	27·224	·068	27·258	+·015	·708	75·9	67·8	8·1	79·5	65·7	13·8	72·3	72·2	70·7	+0·6	66·4	70·0	69·7	68·7
	Sholapur	...	28·160§	28·063†	·097	28·121	0	·637†	88·4†	71·8†	16·6	?	?	?	81·9§	83·3†	77·7‡	−0·2	69·5†	72·5§	73·0†	71·7‡
	Poona	...	27·907	27·840	·067	27·875	+·001	·651	82·0	70·8	11·2	88·4	68·9	19·5	77·4	77·7	75·1	+0·1	69·6	72·4	71·7	71·2
	Akola	...	28·719	28·614	·105	28·666	−·025	·538	89·4	75·0	14·4	98·0	72·1	25·9	83·3	86·5	81·5	+1·3	72·7	75·9	76·6	75·1
	Buldana	2,132	27·563	27·476	·087	27·519	−·010	·567	83·4	71·2	12·2	91·1	69·5	21·6	78·4	80·6	76·6	+0·4	68·9	72·3	73·0	71·4

* Corrected. † Mean of 24 days. ‡ Mean of 23 days.

II.

at 85 Stations in India, Burma, etc., for July 1896.

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.		
																									%	%						
·851	·947	·934	·911	+·015	90	83	83	85	0	9·2	9·1	9·2	+2·0	1	...	...	1	...	9	27	21	3	S 58° W	S 44° W	79	89	376	254	...	...	Port Blair	Burma Coast and Bay Islands.
·831	·933	·904	·889	+·004	92	89	88	90	0	9·3	9·0	9·2	+0·3	...	...	...	...	3	13	30	14	2	S 45° W	S 31° W	79	73	133	131	...	...	Rangoon	
·859	·918	·886	·888	+·011	92	85	84	87	− 1	8·8	9·3	9·1	+1·3	...	...	...	...	2	4	44	12	...	S 49° W	S 41° W	89	80	402*	210	...	...	Diamond Island	
·865	·963	·937	·922	?	91	83	84	86	?	8·0	8·2	8·1	?	...	...	...	...	...	10	45	7	...	S 43° W	?	92	?	?	?	13·12	1·95	Cocos Island.	
·882	·992	1·007	·960	+·047	93	94	91	93	+ 4	9·1	8·6	8·9	+0·3	...	1	1	3	7	40	6	4	...	S 1° E	S 4° E	76	68	103	96	...	...	Akyab	
·911	·972	·972	·952	+·020	94	79	72	82	− 3	8·5	7·3	7·9	0	34	2	2	6	4	1	2	5	6	N 11° W	N 6° W	3	3	76*	72	...	...	Silchar	Assam.
·947	1·040	1·086	1·024	+·075	95	86	80	87	+ 3	6·9	5·7	6·3	?	..	3	17	2	3	12	18	2	2	S	S 18° W	18	15	118*	65	...	...	Sibsagar	
·915	·999	1·014‖	·976	+·031	92	87	82	87	+ 1	7·3	8·0	7·7	+0·8	10	5	14	10	3	7	11	2	...	S 81° E	S 70° E	19	22	118*	94	...	...	Dhubri	
·890	·953	·968	·937	+·025	94	83	84	87	0	8·1	8·8	8·5	+0·9	...	...	1	4	23	18	12	4	...	S 11° E	S 40° E	69	63	180*	172	...	...	Chittagong	
·906	1·023	1·001	·977	−·003	88	84	80	84	− 3	8·1	7·5	7·8	−0·1	...	...	...	9	28	17	8	...	...	S 28° E	S 19° E	79	80	232	173	...	...	Narayanganj	Bengal and Orissa.
·947	·988	·991	·975	+·002	94	82	84	87	0	8·1	8·9	8·5	+0·3	...	1	5	13	14	13	10	4	2	S 30° E	S 11° E	45	65	122	123	...	...	Calcutta (Alipore)	
·948	1·031	1·025	1·001	−·001	90	84	83	86	0	9·3	9·3	9·3	+1·3	...	3	2	3	13	24	10	5	2	S 1° E	S 24° W	53	59	321	341	...	...	Saugor Island	
·959	·974	·978	·970	+·015	92	79	75	82	− 1	8·5	8·9	8·7	+0·4	7	2	7	13	8	13	8	4	...	S 37° E	S 26° E	35	47	112*	100	...	...	Burdwan	
·944	1·023	·999	·989	+·027	92	80	77	83	− 4	7·8	7·8	7·8	−1·0	3	2	5	18	12	15	4	2	1	S 51° E	S 41° E	52	51	102*	121	...	...	Berhampore	
·908	·960	·976	·948	+·011	93	82	84	86	+ 1	9·1	8·7	8·9	+0·8	1	...	...	2	2	17	13	27	...	S 50° W	S 59° W	69	64	267*	268	...	...	False Point	
·901	·920	·934	·918	+·018	92	79	75	82	+ 2	7·8	8·2	8·0	+0·3	5	...	1	1	1	4	21	21	8	S 71° W	S 44° W	66	52	89	79	...	...	Cuttack	
·784	·816	·831	·810	−·008	91	79	76	82	− 3	9·7	9·8	9·8	+0·7	3	6	6	15	3	6	...	10	13	N 34° W	S 16° E	23	19	224	203	...	...	Hazaribagh	
·972	1·005	1·018	·998	+·038	92	80	75	82	0	8·5	8·1	8·3	+0·2	9	1	6	21	11	4	1	6	3	S 78° E	N 85° E	40	41	100*	91	...	...	Patna	Ganogtic Plain and Chota Nagpur.
·974	1·020	1·011	1·002	+·033	91	80	74	82	− 1	6·8	5·8	6·3	0	7	1	4	23	17	4	2	3	1	S 69° E	S 82° E	56	58	9[illegible]	123	...	...	Darbhanga	
·893	·990	·951	·945	−·013	88	76	68	77	− 5	7·3	6·8	7·1	−0·7	5	2	7	16	1	1	5	14	11	N 21° W	N 84° E	16	7	158	103	...	...	Allahabad	
·930	·976	·950	·952	+·030	90	73	64	76	− 1	7·2	7·1	7·2	−0·5	7	5	11	13	3	4	4	6	9	N 37° E	N 85° E	20	18	?	94	...	...	Lucknow	
·766	·844	·862	·824	?	90	80	72	81	?	6·5	6·0	6·3	−1·5	6	6	4	7	16	10	4	...	6	S 52° E	S 37° W	30	10	24	29	...	...	Dehra Dun	
·851	·914	·905	·891	+·017	87	74	63	75	− 2	5·2	3·5	4·4	−2·1	31	...	1	...	12	2	3	...	13	S 41° W	S 39° E	5	33	56	71	...	...	Roorkee	Upper Sub-Himalayas.
·916	·890	·887	·898	+·009	88	69	60	72	− 2	5·5	5·2	5·4	−1·4	30	...	3	4	2	...	4	10	9	N 70° W	S 86° E	19	23	47*	57	...	...	Meerut	
·849	·888	·844	·860	−·005	71	58	44	58	− 3	4·0	3·2	3·6	−0·8	4	12	1	8	8	6	3	16	4	N 75° W	S 84° E	11	34	97	80	...	...	Lahore	
·846	·853	·809	·836	−·036	77	60	48	62	− 8	4·8	4·8	4·8	−1·3	5	3	17	1	24	1	3	6	2	S 80° E	S 46° E	34	25	79	49	...	...	Ludhiana	
·736	·804	·717	·752	+·022	69	50	37	52	− 1	2·2	3·8	3·0	+0·3	1	7	12	11	1	3	7	8	12	N 4° W	N 50° E	24	50	97*	111	...	...	Peshawar	
?	·961	·956	?	?	?	55	44	?	?	1·3	2·2	1·8	−0·4	15	...	4	...	2	11	25	5	...	S 34° W	S 25° W	53	33	93*	75	...	...	Mooltan	Indus Valley and N.-W. Rajputana.
·855	·869	·787	·837	+·023	70	50	34	51	− 1	1·6	0·8	1·2	−1·1	5	1	...	6	29	21	...	...	...	S 33° E	S 45° E	78	56	197*	125	...	...	Jacobabad	
·974	1·050	1·063	1·029	?	89	76	77	80	?	6·9	6·9	6·9	−0·3	...	...	...	...	...	1	31	30	...	S 66° W	S 62° W	92	83	383*	436	...	...	Kurrachee	
·853	·886	·877	·872	+·021	88	69	59	72	− 4	6·4	7·0	6·7	−0·8	...	5	12	2	1	...	15	19	8	N 72° W	N 58° W	40	27	128	141	...	...	Jeypore	
·802	·895	·908	·868	+·080	82	75	67	75	+ 4	5·6	5·1	5·4	−0·8	3	...	10	1	3	1	6	32	6	N 83° W	S 62° W	50	64	182¶	173	...	...	Ajmere	E. Rajputana, C. India and Gujarat.
·863	·918	·872	·884	+·056	91	79	65	79	+ 5	7·8	6·2	7·0	−1·1	...	3	1	...	...	1	33	18	6	S 70° W	S 40° W	77	75	289	347	...	...	Deesa	
·891	·966	·930	·929	+·055	91	79	71	80	+ 1	7·0	8·0	7·5	−1·1	3	1	2	14	1	...	4	32	5	N 84° W	S 78° W	35	40	97*	99	...	...	Nowgong	
·907	·953	·926	·929	+·014	85	68	61	71	− 4	6·0	5·8	5·9	−0·7	...	1	6	...	12	...	22	...	21	S 78° W	N 63° E	29	13	131*	119	...	...	Agra	
·634	·707	·695	·678	+·009	93	89	88	90	+ 1	8·7	8·9	8·8	−0·2	...	...	...	..	...	...	30	24	...	S 65° W	S 70° W	92	90	708	669	...	...	Belgaum††	
·693†	·682§	·683†	·688‡	+·029	89†	63§	61†	71‡	+ 3	8·7†	9·3‡	9·0	+0·7	...	...	...	...	...	...	26	18	5	S 70° W	S 80° W	87	81	420†	300	...	...	Sholapur	Deccan.
·711	·734	·705	·716	+·019	94	79	75	83	+ 3	8·9	8·9	8·9	−0·1	...	...	...	...	...	...	15	46	1	S 80° W	S 79° W	93	85	522*	400	...	...	Poona	
·774	·792	·783	·782	+·016	89	71	65	75	− 1	8·8	8·5	8·7	+0·1	...	2	...	...	...	...	7	39	14	N 81° W	N 74° W	72	77	288*	200	...	...	Akola	
·679	·717	·720	·705	−·010	89	74	71	78	− 2	8·9	8·4	8·7	+0·6	...	...	...	...	...	...	21	18	23	N 74° W	N 32° W	79	73	234*	221	11·09	3·00	Buldana	

§ Mean of 25 days. ¶ Mean of 21 days. †† Wind observations of 27 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85 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	...	28·605	28·505	·100	28·555	−·005	29·544	87·5	76·1	11·4	96·7	73·1	23·6	81·3	85·5	80·9	+1·2	72·9	75·5	76·5	75·0
	Hoshangabad	...	·614	·511	·103	·563	−·015	·516	87·8	75·8	12·0	94·4	72·9	21·5	81·7	85·0	80·7	+1·2	74·1	77·1	78·3	76·5
	Nagpur	...	·590	·483	·107	·537	−·024	·503	88·9	76·4	12·5	97·3	73·7	23·6	82·5	85·2	81·7	+1·7	72·8	76·9	77·6	75·8
	Do. (Sanitary Commr.'s Office)	...	·622	·514	·109	·569	P	·526	89·3	76·4	12·9	97·4	73·5	23·9	83·2	85·7	82·0	P	72·8	76·5	78·0	75·8
	Jubbulpore	...	·267	·169	·098	·218	−·015	·481	87·1	75·2	11·9	92·6	70·7	21·9	81·7	85·0	80·2	+1·1	73·8	77·2	78·3	76·4
	Saugor	...	27·799	27·708	·091	27·754	−·009	·482	86·7	74·6	12·1	96·1	72·6	23·5	81·0	83·2	79·4	+1·8	72·3	76·2	76·7	75·1
	Raipur	...	28·647	28·543	·104	28·595	−·013	·493	86·7	76·0	10·7	96·4	72·6	23·8	82·1	84·0	80·7	+1·1	73·8	76·8	77·7	76·1
	Sutna	...	P	P	P	?	?	P	89·5	78·3	11·2	97·0	75·9	21·1	85·1	85·5	82·6	+1·2	75·4	78·6	78·1	77·4
	Hyderabad (Deccan)	...	·039	27·934	·105	27·992	P	·603	87·1	73·7	13·4	95·6	70·3	25·3	80·4	85·0	79·9	P	70·6	73·0	74·5	72·7
West Coast.	Bombay	...	29·713	29·644	·069	29·677	+·009	·654	84·2	77·6	6·6	87·6	75·1	12·5	81·9	81·0	80·6	−0·3	75·0	78·3	77·8	77·0
	Ratnagiri	...	·694	·623	·071	·656	+·012	·705	84·3	77·2	7·1	86·7	71·9	14·8	82·0	81·9	80·6	+1·0	74·8	78·9	78·7	77·5
	Karwar	...	·821	·750	·071	·783	+·019	·759	84·0	76·8	7·2	87·0	73·7	13·3	81·8	81·6	80·3	+1·8	73·8	77·0	76·6	75·8
	Cochin	...	·932	·863	·069	·896	+·025	·833	84·5	74·6	9·9	87·5	71·3	16·2	80·3	81·2	79·2	+0·7	73·0	76·7	77·3	75·7
South India.	Salem	...	28·919	28·801	·118	28·872	−·004	·734	94·7	74·8	19·9	99·4	72·6	26·8	86·2	91·1	83·0	+2·4	71·9	75·1	75·4	74·1
	Mysore	...	27·388	27·312	·076	27·350	P	·779	81·1	67·4	13·7	87·8	65·1	22·7	76·3	77·4	73·3	P	62·6	69·4	69·0	67·0
	Mercara	...	26·202	26·140	·062	26·183	+·019	?	68·9	63·6	5·3	71·4	61·1	10·3	65·6	65·5	65·4	+0·5	62·8	65·0	64·8	64·2
	Bangalore	...	·871	·787	·084	·840	−·002	·735	82·2	66·5	15·7	89·0	64·2	24·8	75·2	78·3	73·4	+0·7	64·8	67·9	68·3	67·0
	Hassan	...	·824	·762	·062	·804	P	·794	74·9	65·4	9·5	80·9	63·9	17·0	72·4	72·0	69·5	P	64·2	68·2	67·5	66·6
	Chitaldroog	...	27·436	27·364	·072	27·409	P	·730	80·4	68·7	11·7	87·0	64·1	22·9	76·0	77·3	73·8	P	65·0	70·1	70·2	68·4
	Trichinopoly	...	29·583	29·467	·116	29·537	+·007	·719	98·2	79·8	18·4	104·9	77·5	27·4	90·7	94·2	87·2	+1·8	70·8	74·1	75·0	73·3
	Madras	...	·768	·650	·118	·719	−·003	·668	97·6	80·9	16·7	105·5	74·4	31·1	89·5	93·6	87·8	+2·5	P	77·7	78·4	77·4
	Bellary	...	28·322	28·222	·100	28·281	0	·680	90·1	75·5	14·6	95·9	71·7	24·2	83·6	86·5	80·9	+0·3	69·5	72·1	72·9	71·5
	Vizagapatam	...	29·587	29·492	·095	29·546	−·047	·514	92·0	73·6	12·4	100·1	75·9	24·2	87·1	88·1	84·6	P	75·5	78·7	79·0	77·8
	Cocanada	...	·641	·541	·100	·597	P	·559	91·8	79·5	12·3	102·1	75·0	27·1	86·2	89·7	85·2	P	74·9	77·3	78·1	76·8
Hill Stations, Baluchistan.	Quetta	...	24·436	24·350	·086	24·391	+·008	P	94·0	64·0	30·0	98·3	52·0	46·3	85·5	91·2	78·3	+0·1	57·0	67·5	67·3	63·9
Hill Stations, Punjab.	Leh	...	19·631	19·532	·099	19·591	−·005	P	79·9	50·7	29·2	86·2	40·7	45·5	67·5	76·0	63·0	+1·6	?	52·0	55·7	P
	Srinagar	...	24·684	24·600	·084	24·640	P	P	88·7	65·2	23·5	97·7	56·6	41·1	78·5	87·6	76·7	P	63·6	70·0	78·9	70·8
	Murree	...	...	...	...	...	...	P	...	Untrustworthy.		...	...	...	...	...	...	...	...	...	...	...
	Chamba	3,005	26·643	26·561	·082	26·606	+·001	P	88·6	72·6	16·0	95·3	66·8	28·5	81·3	85·6	79·5	+1·4	69·4	73·3	74·8	72·5
	Kailang	10,087	20·659	20·594	·065	20·630	−·021	P	75·4	50·8	24·6	83·3	41·1	42·2	66·0	70·8	61·5	0	48·7	57·5	56·4	54·2
	Simla (Ridge)	...	23·002	22·957	·045	22·978	+·012	P	70·8	60·5	10·3	77·4	57·1	20·3	66·4	68·5	65·3	+0·9	58·4	63·2	64·6	62·0
Hill Stations, N.W.P.	Chakrata	...	·201	23·149	·052	23·173	+·014	P	69·4	60·7	8·7	76·2	57·3	18·9	65·9	66·6	64·6	+0·1	59·6	63·4	65·0	62·7
	Ranikhet	...	·962	·900	·062	·923	+·005	P	76·7	64·3	12·4	83·2	59·9	23·3	72·0	73·5	69·9	+1·8	62·1	67·0	68·4	65·8
Hill Station, Nepal.	Katmandu	4,388	25·408	25·369	·039	25·391	−·001	P	85·0	69·3	15·7	91·2	66·3	24·9	78·9	79·9	76·0	0	67·9	72·3	73·1	71·1
Hill Station, Bengal.	Darjeeling	...	22·875	22·809¶	·066	22·845¶	−·016	P	68·1	58·6	9·5	75·3	56·6	18·7	65·1	65·1¶	62·5¶	+1·5	58·0	62·7	62·8¶	61·2
Hill Stations, Central India.	Mount Abu	...	25·836	25·771	·065	25·805	−·008	P	74·9	65·6	9·3	81·2	61·9	19·3	70·8	173·1	69·7	+0·1	65·0	68·7	70·8	68·2
	Pachmarhi	...	26·230	26·153	·077	26·192	0	P	76·6	68·5	8·1	82·2	66·3	15·9	72·0	74·7	72·6	+1·1	67·7	69·5	70·9	69·4
	Chikalda	3,642	·131	·060	·071	·095	−·007	P	74·4	66·6	7·8	81·1	64·8	16·3	69·6	73·2	70·7	+0·9	66·0	68·4	70·2	68·2

* Corrected.

II—*continued.*

in India, Burma, etc., for July 1896—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 for the month.	Heaviest rainfall during the month.	Station.	
																									%	%					
·773	·813	·803	·796	+·015	86	77	68	77	0	8·7	8·4	8·6	+0·7	...	...	1	1	...	...	6	32	22	N 76° W	N 83° W	82	80	268	210	...	...	Khandwa	Deccan—*continued.*
·822	·876	·885	·861	+·029	92	81	75	83	0	8·5	8·1	8·3	+0·1	6	...	2	2	...	4	24	22	2	S 64° W	S 76° W	66	77	122	110	...	...	Hoshangabad	
·765	·856	·853	·825	+·013	84	78	72	78	− 2	8·5	8·9	8·7	0	5	1	2	1	...	5	20	20	8	S 73° W	N 88° W	63	69	259	189	...	...	Nagpur	
·763	·832	·864	·820	?	84	75	72	77	?	8·7	9·0	8·9	?	7	5	...	1	...	9	15	22	3	S 69° W	?	58	?	64	?	...	...	Do. (Sanitary Commr.'s Office)	
·819	·878	·887	·861	+·044	94	81	75	83	+ 1	8·1	8·2	8·2	−0·5	...	2	7	2	3	3	15	23	7	S 83° W	N 87° W	48	65	111	117	...	...	Jubbulpore	
·766	·844	·837	·816	+·045	89	80	75	81	+ 2	6·7	6·8	6·8	+0·4	...	...	11	5	2	...	5	30	9	N 70° W	S 72° W	43	70	106	123	...	...	Saugor	
·806	·859	·866	·844	+·017	90	79	76	82	0	7·3	7·4	7·4	−1·0	4	3	5	...	...	9	28	10	3	S 55° W	S 68° W	56	77	281*	280	...	...	Raipur	
·844	·895	·873	·871	+·037	87	74	72	78	− 1	6·3	6·5	6·4	−0·7	1	3	5	3	3	2	3	25	12	N 68° W	N 81° W	39	45	180*	232	...	...	Sutna	
·709	·722	·722	·718	?	85	70	62	72	?	8·1	7·6	7·9	?	...	...	...	...	...	...	...	53	5	N 87° W	?	98	?	308*	?	...	...	Hyderabad (Deccan)	
·834	·919	·909	·887	−·024	88	85	86	86	− 1	8·8	9·5	9·2	+0·1	...	...	...	1	...	...	16	42	3	S 80° W	S 75° W	89	84	489	456	...	...	Bombay	West Co. &c.
·831	·949	·941	·907	+·049	89	87	86	87	+ 2	9·1	9·2	9·2	+1·6	...	...	...	...	...	4	49	8	1	S 49° W	S 55° W	93	77	363	313	...	...	Ratnagiri	
·794	·864	·852	·837	+·007	86	80	79	81	− 6	7·4	8·7	8·1	+0·4	...	1	...	...	1	...	29	25	6	S 72° W	S 74° W	83	80	212	?	...	...	Karwar	
·795	·874	·886	·852	+·016	93	84	84	87	− 1	8·0	7·9	8·0	+0·7	9	1	1	1	...	...	4	23	23	N 69° W	S 88° W	69	51	164	?	...	...	Cochin	
·745	·728	·677	·717	−·037	86	58	46	63	− 8	6·5	8·1	7·3	+1·2	...	3	...	...	...	3	31	20	5	S 68° W	S 59° W	79	82	211	106	...	...	Salem	
·510	·632	·605	·582	?	76	70	65	70	?	9·1	9·2	9·2	?	...	...	...	...	...	...	22	37	3	S 76° W	?	90	?	390*	?	...	...	Mysore	South India.
·562	·613	·606	·594	+·015	95	97	96	96	0	9·9	9·7	9·8	0	4	1	...	...	...	...	5	39	13	N 83° W	N 79° W	84	91	286	247	...	...	Mercara	
·595	·602	·577	·591	−·016	59	69	61	63	−14	8·9	8·8	8·9	+2·5	...	...	...	...	...	...	24	34	4	S 75° W	S 71° W	90	91	336*	206	...	...	Bangalore	
·590	·614	·619	·618	?	91	81	79	85	?	9·5	9·7	9·6	?	...	...	...	...	...	...	14	41	7	S 85° W	?	90	?	140*	?	...	...	Hassan	
·572	·665	·651	·629	?	81	74	71	75	?	9·4	8·8	9·1	?	...	...	...	...	...	...	23	33	6	S 77° W	?	89	?	322*	?	...	...	Chitaldroog	
·633	·621	·608	·621	−·077	62	43	38	48	−10	5·4	7·1	6·3	−1·3	...	...	...	...	1	...	24	30	7	S 76° W	N 87° W	85	81	310	239	...	...	Trichinopoly	
?	·789	·768	·801	+·017	?	57	50	61	− 6	7·4	8·5	8·0	+0·9	...	...	1	2	3	2	21	20	11	S 74° W	S 46° W	65	65	203	195	...	...	Madras	
·647	·647	·641	·645	−·017	73	56	52	60	− 3	8·7	9·1	8·9	+0·7	...	...	...	...	...	...	20	39	3	S 78° W	S 88° W	92	89	332	281	...	...	Bellary	
·832	·874	·874	·860	+·008	82	69	66	72	+ 1	8·2	8·5	8·4	+1·5	4	1	1	1	1	5	24	25	...	S 62° W	S 74° W	72	74	36	94	...	...	Vizagapatam	
·804	·821	·806	·810	?	80	67	60	69	?	6·5	7·8	7·2	?	...	1	...	...	...	1	21	31	8	S 80° W	?	84	?	247*	?	...	...	Cocanada	
·404	·490	·423	·439	−·022	65	40	30	45	− 3	1·2	2·3	1·8	+0·3	24	...	1	...	1	6	16	13	1	S 55° W	W	47	34	63*	107	...	...	Quetta	Hill Station, Baluchistan.
?	·259	·269	?	?	?	38	30	?	?	3·9	4·5	4·2	−0·9	3	2	...	1	...	2	23	31	...	S 71° W	S 80° W	79	36	59	48	...	...	Leh	Hill Stations, Punjab.
·576	·649	·897	·707	?	92	66	69	76	?	3·2	2·7	3·0	?	3	3	6	3	10	4	4	8	21	N 54° W	?	23	?	111*	?	...	...	Srinagar	
...	...	...	...	...	...	...	...	Unt	rust w	orth	y.	...	...	...	...	...	...	...	...	...	...	...	...	S 15° E	...	14	...	137	...	...	Murree	
·687	·732	·744	·721	−·017	85	69	62	72	− 6	5·7	6·6	6·2	−0·7	19	2	1	...	...	...	1	5	34	N 48° W	N 39° W	63	35	129*	97	5·82	1·70	Chamba	
·329	·404	·334	·356	−·009	88	62	44	65	0	5·3	5·5	5·4	−1·0	...	2	...	...	3	8	13	13	23	S 88° W	S 83° W	58	63	56	44	2·65	1·26	Kailang	
·472	·547	·572	·530	−·015	89	84	82	85	− 3	8·9	8·7	8·8	−0·1	23	16	11	1	2	5	3	...	1	N 25° E	S 63° W	29	25	49	?	...	...	Simla (Ridge)	
·502	·561	·605	·556	+·046	94	88	92	91	− 1	8·2	10·0	9·1	+0·3	7	4	3	...	4	42	1	1	...	S 5° E	S 71° W	64	42	228	118	...	...	Chakrata	Hill Stations, Stations, N. W. P.
·536	·612	·634	·594	+·013	90	79	78	82	− 6	6·2	7·0	6·6	−2·1	16	3	4	1	4	4	10	11	7	S 79° W	S 65° W	27	25	89*	51	...	...	Ranikhet	
·669	·718	·737	·708	+·021	93	74	73	80	+ 1	6·1	7·3	6·7	+0·3	...	2	...	28	1	...	1	25	5	N 7° W	S 75° W	6	38	24	?	20·48	2·70	Katmandu	Hill Station, Nepal.
·476	·546	·548¶	·523	+·004	96	89	89¶	91	− 4	4·9†	7·4‡	6·2	−2·6	4	3	11	11	5	3	6	8	5	N 62° E	N 88° E	12	43	94	63	...	...	Darjeeling	Hill Station, Bengal.
·615	·680	·729	·675	+·047	97	90	90	92	+ 4	6·8	6·3	6·6	−2·2	...	4	8	1	...	9	34	4	2	S 46° W	S 49° W	51	66	292*	265	...	...	Mount Abu	Hill Stations, Central India.
·670	·694	·715	·693	+·021	96	88	84	89	− 1	8·8	8·3	8·6	−0·2	11	1	1	...	...	1	15	27	6	S 82° W	N 80° W	68	75	360*	227	...	...	Pachmarhi	
·636	·653	·703	·674	+·020	97	94	87	93	+ 1	9·2	7·8	8·5	−0·6	2	24	...	...	...	1	4	4	27	N 34° W	N 57° W	76	68	318*	230	23·26	6·34	Chikalda	

† Mean of 10 days. ‡ Mean of 8 days. ¶ Mean of 25 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85 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	...	24·208	24·148	·060	24·178	+·010	?	69·8	57·7	12·1	75·3	54·3	21·0	65·8	65·1	62·6	−0·6	53·9	58·2	58·9	57·3
Extra Ind.A.	Muscat	...	29·524	29·452	·072	29·488	?	?	92·2	68·6	3·6	99·3	84·4	14·9	91·4	91·0	90·1	?	79·8	84·3	84·2	82·8
	Aden	...	·662	·533	·129	·595	+·037	29·618	94·3	83·4	10·9	99·7	77·3	22·4	90·8	92·1	88·3	+2·4	73·4	79·2	77·0	76·5
	Perim	...	·550	·438	·112	·491	?	?	97·0	85·8	11·2	100·5	83·1	17·4	93·7	94·3	90·7	?	75·8	79·3	79·1	78·1
	Zanzibar	...	30·134	30·057	·077	30·096	+·020	30·096	80·6	73·2	7·4	82·2	70·8	11·4	76·3	79·3	76·6	−0·3	69·9	72·0	71·7	71·2
	Port Victoria (Seychelles)	15	30·056	29·984	·072	·020	?	29·959	81·2	76·0	5·2	82·5	74·5	8·0	79·7	80·6	78·5	?	70·5	72·9	73·2	72·2
	Mauritius	181	?	?	?	·024	+·023	30·156	?	?	?	31·5	49·9	31·6	?	?	67·1	−1·2	?	?	?	?

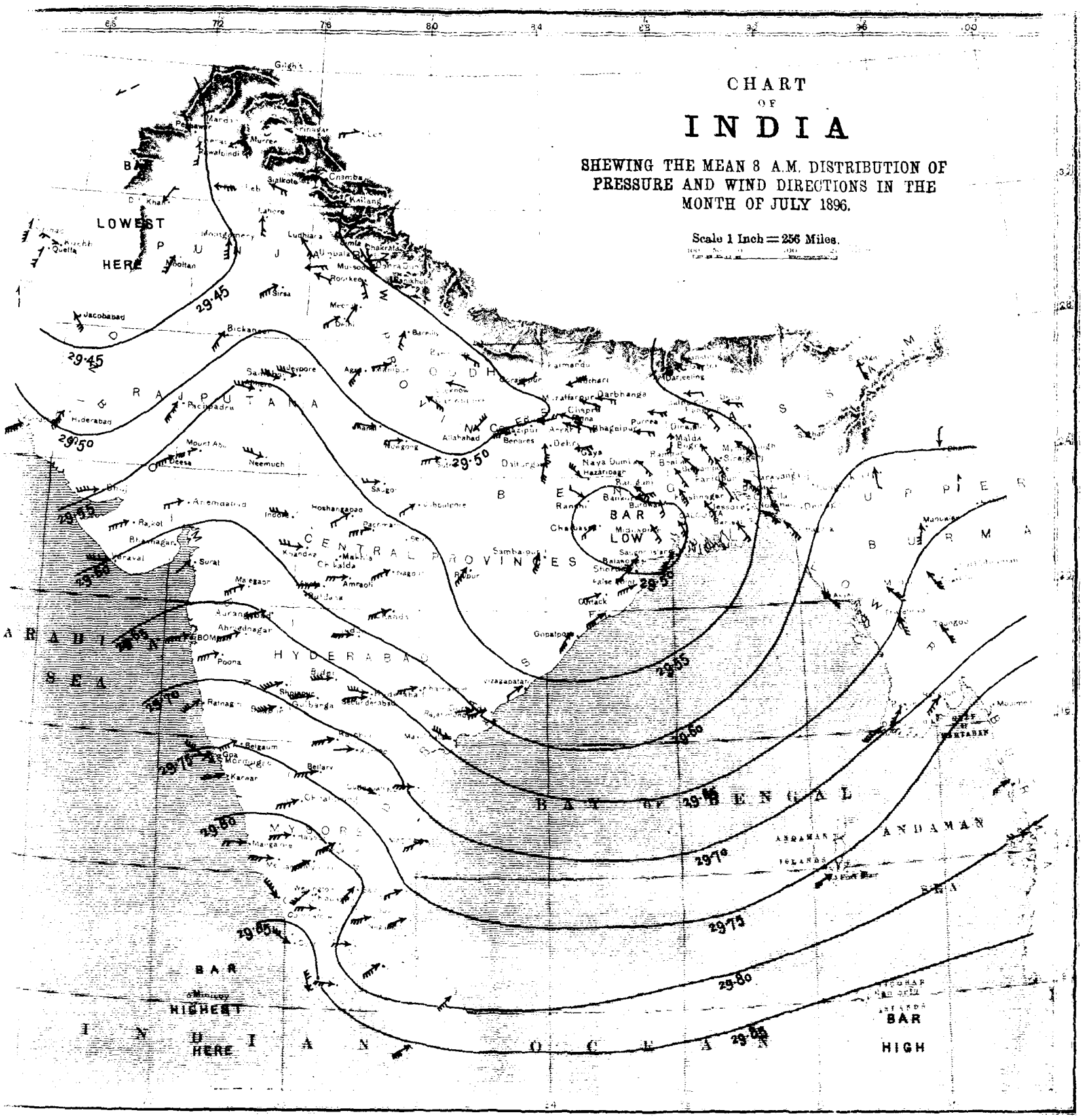
II—*concluded.*

in India, Burma, etc., for July 1896—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.		
																								%	%						
·380	·436	·436	·417	−·006	80	69	71	73	0	8·9	9·1	9·0	+1·3	4	...	...	...	2	5	37	8	5	S 52° W	N 82° W	74	69	145	127	...	...	Wellington	Hill Station, South India.
·905	1·084	1·084	1·024	?	67	74	75	72	?	1·4	0·5	1·0	?	...	3	17	25	4	...	1	...	12	N 57° E	?	60	?	100	?	...	...	Muscat	Extra India.
·693	·846	·730	·756	−·052	61	59	49	56	−10	2·3	2·0	2·2	−0·1	2	...	...	...	7	25	26	2	...	S 17° W	S 11° E	82	73	231	250	...	...	Aden	
·766	·808	·791	·788	?	62	51	50	54	?	2·0	2·6	2·3	?	...	4	...	3	5	...	4	23	23	N 69° W	?	61	?	346	?	...	...	Perim	
·686	·729	·671	·695	+·005	84	80	67	77	−1	3·8	5·0	4·4	−0·4	...	...	...	...	20	32	10	...	...	S 8° E	S 2° W	87	64	175*	191	...	...	Zanzibar	
·676	·721	·717	·705	?	75	71	69	72	?	5·0	4·7	4·9	?	...	...	...	...	43	14	5	...	...	S 29° E	?	89	?	292	?	1·51	0·40	Port Victoria (Seychelles).	
?	?	?	·495	?	?	?	?	74	+1	?	?	?	?			Not recorded.							?	?	?	?	274	284	1·82	0·27	Mauritius	

G. I. C. P. O.—No. 44 Meteor.—9-12-96.—385.

* Corrected.

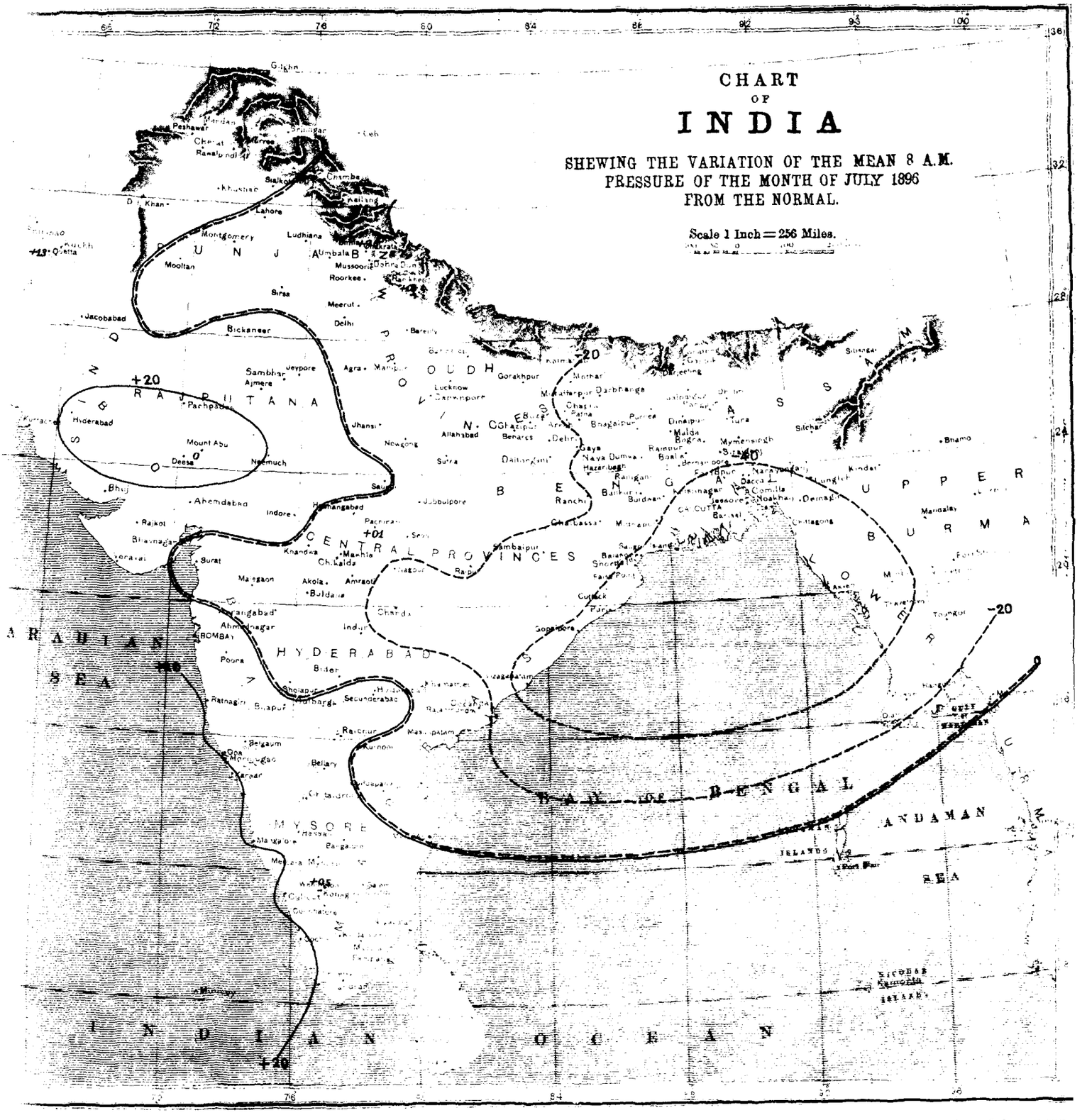


Explanation.

The lines of the above Chart represent isobars or lines of equal barometric pressure, and the numbers attached indicate the barometric ...re 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 ...bservations, and by comparison with the ordinary or normal distribution of pressure as given in the Charts of the Bay of Bengal, ...ared by Mr Dallas, 1st Assistant Meteorological Reporter to the Government of India, and published by the Meteorological Depart-...t. 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 close 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.

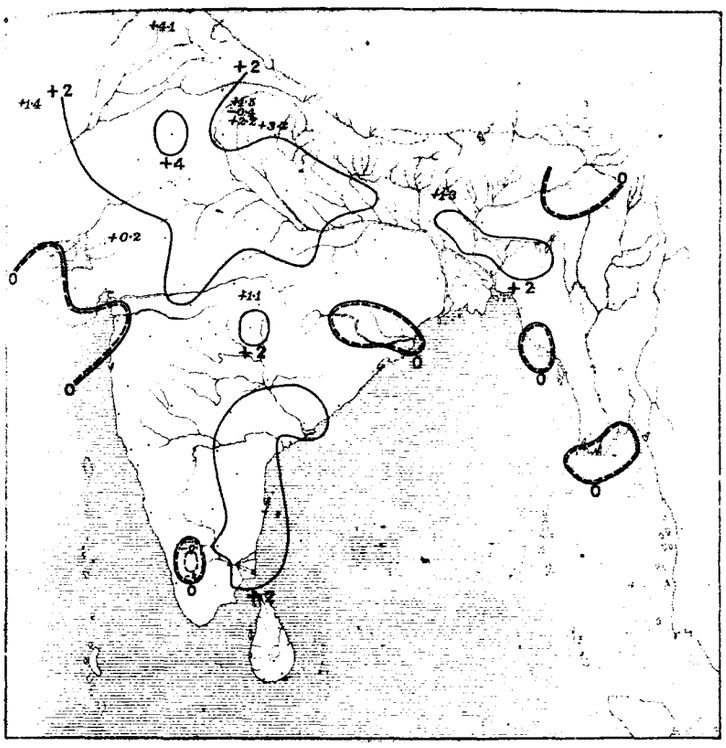
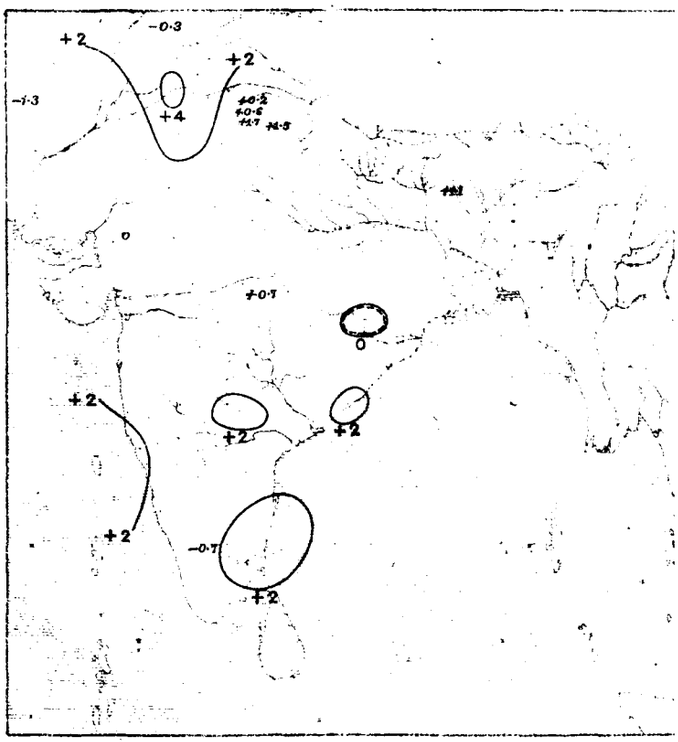


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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 wa excess by amounts indicated by the attached numbers. Broken or d lines that it was in defect by the amounts indicated by the atta numbers, Double lines are the lines of no variation, the broken line fa the area of deficient temperature.

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

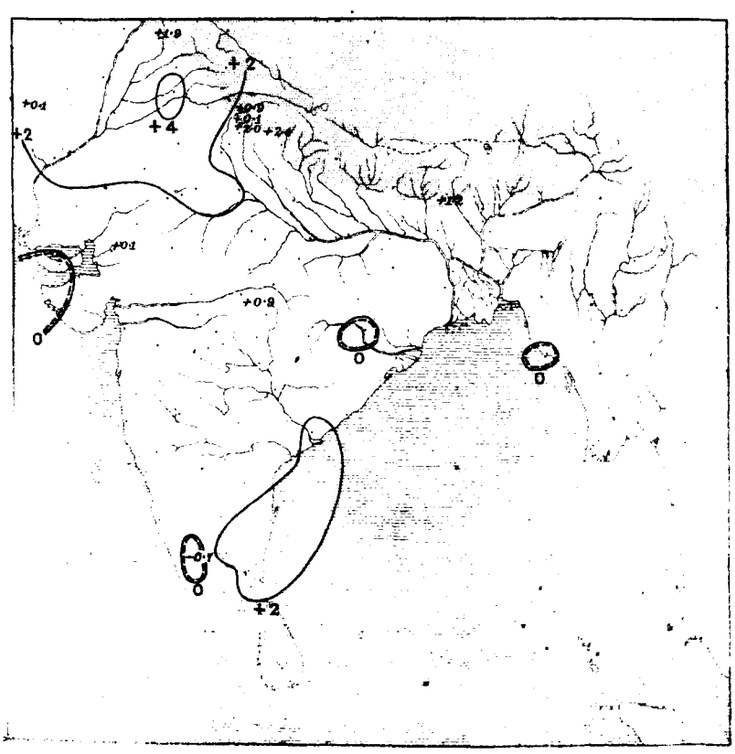
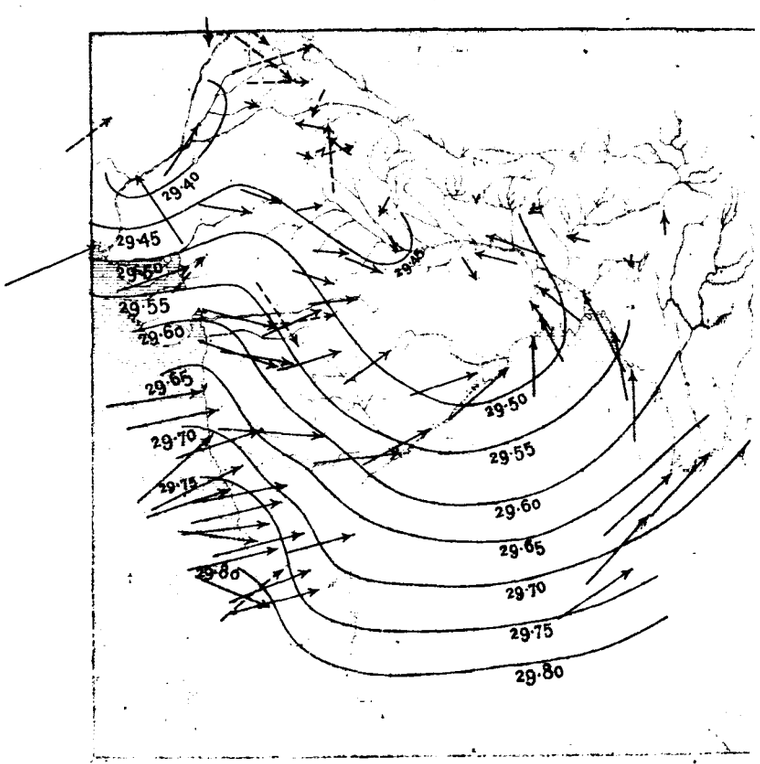


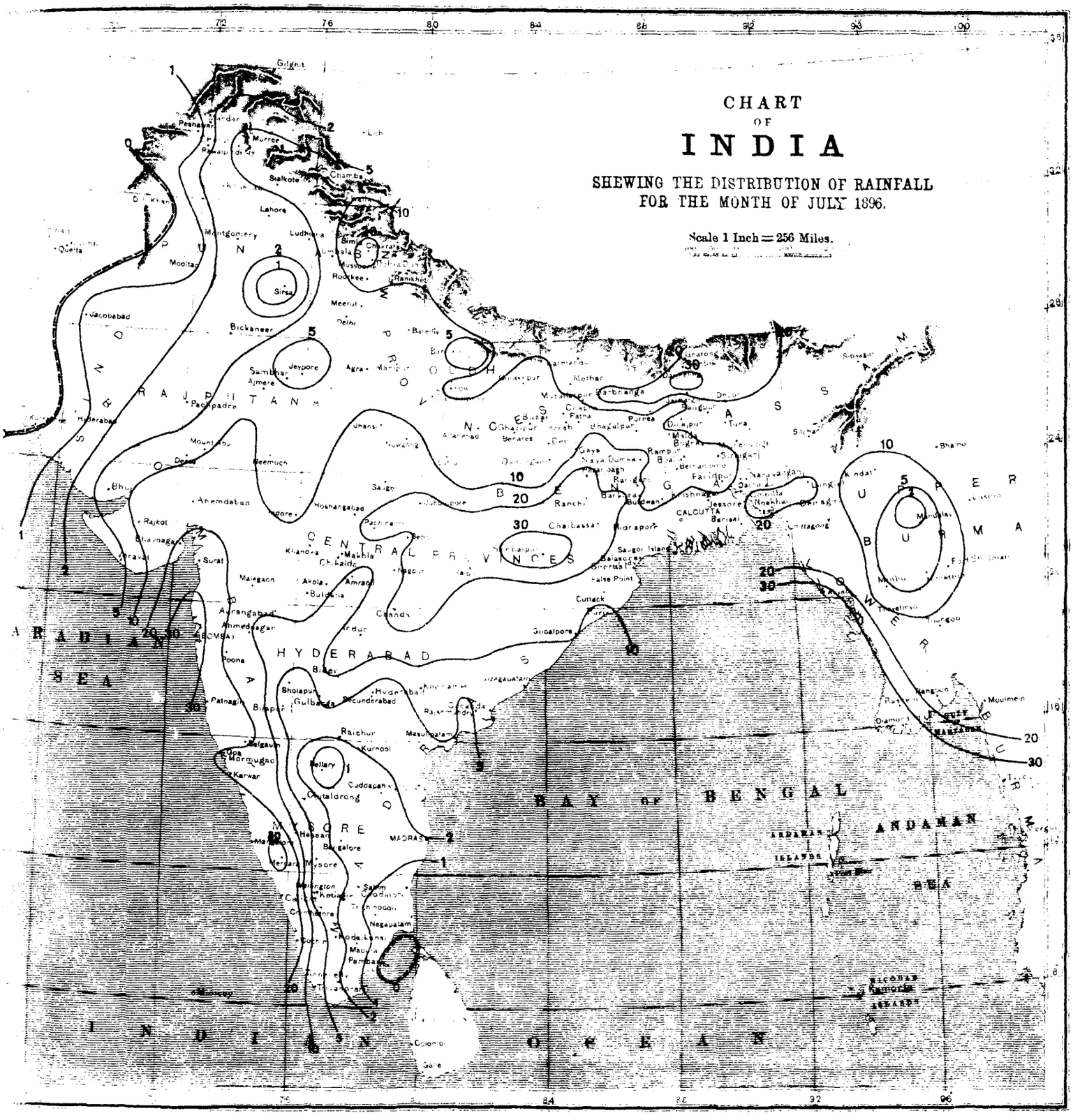
CHART SHEWING THE MEAN DISTRIBUTION OF PRESSU AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF JULY 1896.



Explanation.

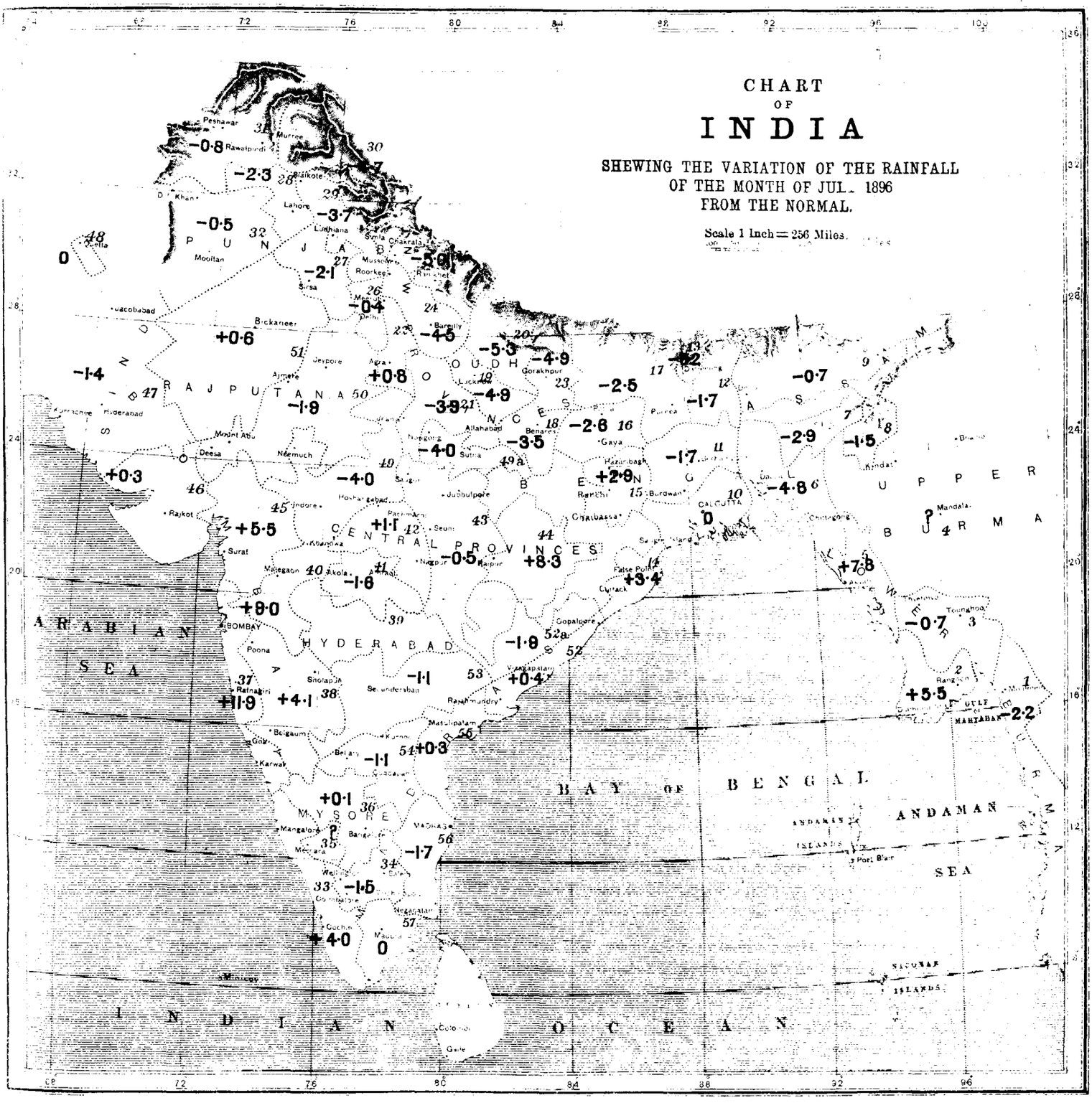
Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of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

The Chart is prepared in the same manner as the Monthly Charts have hitherto appeared in the Annual Report, the only alteration being that pressures are reduced to constant gravity (45°). The i are given for each twentieth of an inch. The arrows show the dire of the resultants of the wind recorded at 10 and 16 hours, and by lengths the percentage of the observations expressing the numerical of the resultant; a length of $\frac{1}{20}$th of an inch being equal to 100 per c



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 Stations over 3,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of [an inch] from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.



Explanation.

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

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

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, AUGUST, 1896.

INTRODUCTION.

THIS review of the weather in India during the month of August 1896 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 85 stations. In the rainfall summary the rainfall data of the meteorological observatories and the weekly rainfall telegrams received during the month from the district officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the Review, are utilized. A summary of the weather in the Bay of Bengal and the Arabian Sea, derived from information extracted from the logs of vessels entering the ports of Calcutta and Bombay is also given.

Summary of the chief features of the weather in India during the month of August, 1896.

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 general rain in practically all districts. August is sometimes the month of the greatest extension of the monsoon currents and some parts of Upper India usually obtain more rain in August than in July. On the whole, the monsoon currents in August are generally not so strong as in July, and there are also more frequent breaks in the rains in August. Hence the rainfall in India is usually smaller in amount in August than in July.

The variations in the rainfall of August in different years are in part due to variations in the strength of the current from year to year, and in part to the occurrence and line of advance of small cyclonic storms which generally form in the Bay of Bengal, and then march west-north-westwards towards Central and Upper India. These small storms usually pass along the trough of low pressure, which is an important feature in the meteorology of the south-west monsoon period. This trough of low pressure in August generally runs from Orissa in a west-north-westerly direction towards the South-West Punjab or Sind, but its position varies from year to year, and hence the direction of advance of these cyclonic storms also varies.

At the commencement of the month, temperature was higher than usual in Northern India and was in defect in the Peninsula, more especially in the northern districts.

A cyclonic storm, the fifth of a series characterized by the same features, began to form at the head of the Bay on the 31st of July. It developed rapidly on the 1st and was of moderate intensity on the afternoon of the 2nd, when it began to advance westwards. The centre passed near Saugor Island at 2 A.M. of the 2nd, and crossed the North Orissa hills during the next six hours and was nearly midway between Chaibassa and Balasore at 8 A.M. It marched rapidly westwards and was near Jubbulpore on the morning of the 3rd. The storm now began to fill up and was of feeble intensity on the morning of

the 4th. The centre at 8 A.M. was near Neemuch. The storm was absorbed into the permanent depression of the rainy season in Upper India during the next 24 hours.

The storm gave a heavy burst of rain to the districts through which it passed and the increased indraught across the west coast to the storm area on the 3rd and 4th gave heavy rain in the Konkan and Gujarat and the neighbouring hill districts. The following gives a statement of the rainfall due to the storm :—

AREA.	AVERAGE ACTUAL RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF					
	1st August.	2nd August.	3rd August.	4th August.	5th August.	Total of period.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Orissa	0·71	2·80	0·39	0·06	0·37	4·33
Chota Nagpur . .	0·47	0·52	0·36	0·33	0·39	2·07
Central Provinces (East)	0·69	1·35	1·53	0·26	0·57	4·40
Berar	0·13	0·19	0·91	0·45	0·21	1·89
Gujarat . . .	1·06	0·22	0·39	2·07	0·34	4·08
Kathiawar . . .	0·51	0·15	0·66	1·42	0·59	3·33
Cutch	1·27	0·09	0·04	1·18	0·81	3·39

The rainfall accompanying the storm produced a considerable reduction of temperature in the area over which it passed, and temperature was more or less considerably below the normal over the greater part of India on the 3rd, 4th and 5th.

The disappearance of the storm was followed by an extension or advance of humid winds into Upper India. Rajputana, the Punjab and western districts of the North-Western Provinces hence obtained a moderate burst of rain from the 5th to the 8th.

Pressure gave way briskly to rapidly on the 8th and 9th in Northern India, and the Bombay current was diverted from Upper India and determined across the Peninsula which hence received moderate rain on these two days. The chief effect of this change, however, was to contribute towards the complement of actions necessary to the formation of a cyclonic storm, the second of the month and the sixth of the series. This storm and depression formed slowly on the 10th, 11th and 12th, and was of moderate intensity on the morning of the 13th, when it lay over the north-west of the Bay. It began to move westwards on the afternoon of that day, and the centre was near Sambalpur on the morning of the 14th, near Hoshangabad on the morning of the 15th, and a little to the north of Bhuj at 8 A.M. of the 16th. The depression was during the later stages of its existence a deeper and better defined storm than the preceding storm.

It merged into the Sind depression during the next 24 hours. It gave on the whole somewhat less rain than the preceding storm. The rainfall was, however, distributed over the same areas as in the case of the previous storm, *viz.*, Orissa, Chota Nagpur, the Central Provinces Berar, Central India, Gujarat, Kathiawar, Cutch and Lower Sind.

Temperature remained steadily in excess in Northern India during the existence of this storm, as is shown by the following data :—

AREA.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	11th August.	12th August.	13th August.	14th August.	15th August.	16th August.
	°	°	°	°	°	°
Bengal . . .	+1·9	+2·6	+1·9	—0·6	+0·2	+0·1
Bihar	+3·6	+4·2	+5·1	+1·8	+0·1	+1·4
Chota Nagpur	+2·2	+2·2	+2·7	+0·6	—0·9	+0·3
North Western Provinces and Oudh.	+0·7	+1·0	+2·4	+1·5	+2·5	+2·3
Punjab . . .	—1·9	0	+2·7	+2·3	+3·2	+3·3
Sind and Rajputana .	+0·8	+2·3	+2·7	+2·8	+2·1	+3·7

Temperature was during this period in defect over the Peninsula, the deficiency being large in the Central Provinces, Berar and the North Deccan.

The dispersion of this storm was followed by an advance of humid winds from the west coast to Upper India. The North-Western Provinces and South-East Punjab received a moderate burst of rain on the 17th, 18th and 19th. The Bombay current now began to fall off in strength and was comparatively feeble during the remainder of the month. A partial break in the rains obtained in the Central Provinces, Deccan and North Bombay for some days *viz.*, from the 16th to the 24th.

Large and rapid changes of pressure occurred during the next two or three days which considerably modified the distribution of pressure and displaced the central portion of the trough of low pressure to the submontane districts of the North-Western Provinces. A shallow depression which formed at the head of the Bay and in South Bengal on the 19th and 20th hence advanced in a north-westerly direction into Bihar where it filled up on the 23rd. The storm was throughout of slight intensity but gave a moderate burst of rain to Bengal, Orissa and Chota Nagpur and heavy and opportune rain to Bihar.

This storm reduced temperature largely in North-Eastern India. Temperature, on the other hand, increased

in the Peninsula and was in considerable excess in the Madras coast districts from the 22nd to the end of the month. The following gives variation data for every second day at four stations :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	22nd August.	24th August.	26th August.	28th August.	30th August.
	°	°	°	°	°
Cocanada . . .	+2·9	+4·1	−2·6	+2·7	+4·5
Masulipatam . .	+3·2	+4·3	−2·1	+2·0	+3·5
Madras . . .	+0·8	+0·7	−0·9	+2·8	+2·1
Negapatam . .	+2·6	+4·1	+3·6	+1·8	+6·1

A depression of very slight intensity formed on the 24th and 25th in the north-west of the Bay. It crossed the Orissa coast on the night of the 25th, and passed into the eastern districts of the Central Provinces on the 26th, and the central districts on the 27th, and filled up during the next 24 hours. It gave moderate rain to South Bengal, Orissa, and the Central Provinces between the 24th and 27th. Central India and the western districts of the North-Western Provinces had light to moderate showers during the next 48 hours, after which fine dry weather set in over the whole of North-Western and Central India and the North Deccan. Weather was showery on the 29th, 30th, and 31st in Burma, North-Eastern India and the Malabar and Konkan divisions, but the rainfall was light and sporadic. Temperature increased during this period over the interior and was in considerable to large excess at the end of the month. Thus the mean temperature of the 24 hours preceding 8 A.M. of the 31st was between 4° and 5° in excess in Madras and the Punjab, 3° in the North-Western Provinces and 2° in Bengal and Rajputana.

Pressure.—The mean pressure of the Indian area was ·005″ above the normal. Pressure was in local defect in Burma and the whole of North-Eastern India as well as in the North-Western Provinces and the North Madras Coast districts. The deficiency was considerable in amount in South Bengal, Orissa, the eastern districts of the Central Provinces, Ganjam and the north of the Bay. It was most marked at Sambalpur (—·057″) and Saugor Island and Cuttack (each—·051″). Pressure was in local excess over the remainder of India but the anomalies were small except in the southern half of the Peninsula in which they ranged between ·020″ and ·034″. They were absolutely greatest at Negapatam (+·034″) and Cochin, Mangalore, Karwar and Ratnagiri (each +·033″). The vertical pressure anomalies in Northern India were positive but small in amount.

The following table gives variation data for the eleven meteorological divisions of the Empire :—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of August 1896 from normal.	Pressure anomaly, August 1896.
	Inch.	Inch.
Burma Coast and Bay Islands . . .	—·003	—·008
Burma Inland	—·020	—·025
Assam	—·006	—·011
Bengal and Orissa	—·022	—·027
Gangetic Plain and Chota Nagpur .	—·011	—·016
Upper Sub-Himalayas	+·006	+·001
Indus Valley and North-West Rajputana .	+·020	+·015
East Rajputana, Central India and Gujarat .	+·016	+·011
Deccan	+·006	+·001
West Coast	+·035	+·030
South India	+·022	+·017

Temperature.—The mean maximum or day temperature of the month was above the normal in Northern India and South Madras, and below it elsewhere. It was more than 2° in excess in North Bengal, North Bihar, the North-Western Provinces and the South-West Punjab. The excess was absolutely greatest at Agra (+3°·6), Mooltan (+3°·5), Bareilly (+3°·1) and Negapatam (+3°·3). The mean day temperature was upwards of 2° below the normal in the greater part of the Central Provinces, Berar, Kathiawar, Cutch and perhaps Gujarat. The deficiency was greatest at Rajkot (—3°·2) and Bhuj, Chanda and Nagpur (each —3°·0).

The mean minimum or night temperature was above the normal over the whole area except Berar, the Central Provinces, North Bombay and Central India. The variations were in almost all cases small in amount and only exceeded 2° at Lahore (+3°·3), Sialkot and Mooltan (each +2°·2).

The mean temperature of the month was higher than usual in Northern India, Upper and Central Burma and South Madras. As usual in the rains, the variations were not large, but they exceeded 2° in three areas, *viz.*, the Central Punjab, North Bengal and a portion of South Madras including the stations of Trichinopoly and Negapatam. The excess was absolutely greatest at Mooltan (+2°·9), Sialkot (+2°·5) and Lahore (+2°·4). The mean

temperature of the month was below the normal over the remainder of India, generally by small amounts. The deficiency was more than 2° in amount at two stations only, *viz.*, Bhuj and Rajkot (each —2°·1). The following table gives comparative temperature variation data of the month for the eleven meteorological provinces :—

Meteorological Province.	Variation from normal of		
	Mean maximum temperature, August 1896.	Mean minimum temperature, August 1896.	Mean daily temperature, August 1896.
	°	°	°
Burma Coast and Bay Islands	—0·9	+0·2	—0·4
Burma Inland	—0·4	+1·1	+0·4
Assam	+1·2	+0·5	+0·9
Bengal and Orissa	+1·4	+0·9	+1·2
Gangetic Plain and Chota Nagpur	+1·5	+1·1	+1·3
Upper Sub-Himalayas	+1·1	+1·0	+1·0
Indus Valley and North West Rajputana.	+1·8	+1·3	+1·6
East Rajputana, Central India and Gujarat.	—0·7	+0·6	0
Deccan	—1·6	—0·1	—0·8
West Coast	—0·2	+0·1	—0·1
South India	+0·2	+0·4	+0·3

Winds.—The mean air movement of the month was very similar in its general features to that of August 1895. Winds were stronger at Port Blair and the Burma Coast stations and were much more westerly than usual.

The Bay current, as estimated by the strength of the winds at the Bengal and Orissa coast stations, was slightly below its normal strength. The mean winds of the month at the Bengal stations were much more easterly than usual due to the persistent deflection of the monsoon current to the head of the peninsula and its diversion from Assam and North and East Bengal. Winds were very unsteady and irregular in direction in Chota Nagpur, South Bihar and the eastern districts of the North-Western Provinces and were more northerly than usual. The trough of low pressure lay slightly further south than usual.

The Bombay current was strong during the first fortnight and feeble in the last week of the month. Winds were on the mean of the month of normal strength at the West Coast stations, but were very vigorous in Berar, the Central Provinces and the Deccan The increased strength of the winds was as marked at the hill stations as at the plains stations in these areas Winds were more easterly than usual at Zanzibar and the Seychelles as was also the case in August 1895.

Humidity and Cloud.—The air was slightly damper in Burma and Arakan and was somewhat drier than usual in Bengal, Bihar, Chota Nagpur, and the eastern districts of the North-Western Provinces. The variations were small in these areas. The mean humidity of the month was in moderate excess in the South and East Punjab, the western districts of the North-Western Provinces, Rajputana, Central India, Berar and the Central Provinces.

The excess was greatest at Deesa and Jubbulpore (each 7 above) and Ajmere, Nowgong and Akola (each 6 above). The air was very slightly drier in the West Coast districts and was abnormally dry in South Madras. The mean humidity of the month was 12 below the normal at Trichinopoly and 5 at Salem and Bellary.

Skies were more clouded than usual over the greater part of the country. The excess was most marked in Burma and the Central Provinces. There was less cloud than usual in three areas, all characterized by a large deficiency of rainfall, *viz.*, Bengal, the South, East and North Punjab and Kashmir, and South Madras.

The deficiency was absolutely greatest at Trichinopoly where the mean cloud amount of the month was only 5·5 or 2·1 below the normal.

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 :—

Meteorolooical Province.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
	Inch.		
Burma Coast and Bay Islands	+·012	+1	+1·2
Assam	+·026	0	+0·6
Bengal and Orissa	+·005	—2	0
Gangetic Plain and Chota Nagpur	+·024	—1	+0·5
Upper Sub-Himalayas	+·028	+2	—0·2
Indus Valley and North-West Rajputana.	+·027	—2	+0·5
East Rajputana, Central India and Gujarat.	+·053	+3	0
Deccan	+.019	+4	+0 6
West Coast	—·008	0	+0·7
South India	—·023	—2	+0·5

Rainfall.—The distribution of the rainfall of the month was mainly determined by the tracks of the

cyclonic storms of the month. The first two storms of the month advanced across the head of the Peninsula from North Orissa to Sind and gave heavy rain to the broad belt affected by them, including South-West Bengal, Orissa, Chota Nagpur, the Central Provinces, Berar, the North Deccan, Central India, Gujarat, Kathiawar, Cutch, and South West Rajputana. The first storm gave rain from the 1st to the 5th, and the second from the 11th to the 16th. After the disappearance of each of these two storms humid winds advanced across Rajputana to the East Punjab and North-Western Provinces and gave a moderate but brief burst of rain to these areas from the 5th to the 8th and the 17th to the 19th. The Deccan obtained moderate general rain also during the intervals following the two storms. The third storm of the month formed at the head of the Bay on the 19th, and marched north-westward across Bengal into Bihar, where it filled up on the 23rd. It gave a general and moderately heavy burst of rain to Bengal, Chota Nagpur and Bihar. The falls were heaviest in Bihar.

A feeble storm formed in the north-west of the Bay immediately after the dispersion of the previous disturbance and advanced along a more southerly track across the South Orissa coast into the Central Provinces. It gave moderate rain to Orissa and the Central Provinces, and its disappearance was followed by a brief and final burst of monsoon rain in Central India and the North-Western Provinces. The monsoon rains terminated unusually early in Upper India, *i. e.*, the Punjab and Rajputana on the 24th, and in Central India and the North-Western Province on the 29th.

The Bombay current gave little rain to North-Western India during the last ten days of the month.

The rainfall of the month was more irregularly distributed than usual. It was on the whole in slight defect in the Punjab, in moderate defect in the North-Western Provinces and in considerable to large defect in Bengal and Assam. The following districts in Bengal received less than 50 per cent. of the normal amount: Bogra (73 per cent. in defect), Tippera (72 per cent.), Jalpaiguri (69 per cent.), Mymensingh, Dinajpur and Cooch Behar (each 68 per cent.) Nadia (64 per cent.), South Lushai Hills (60 per cent.), Birbhum (57 per cent.), Pubna (55 per cent.), Furnea (53 per cent.), Chittagong (52 per cent.) and Khulna (51 per cent).

The rainfall of the month was practically normal in Central India, Berar and Orissa, but was in large excess in the Central Provinces. It was in moderate excess in the Deccan and North Madras. It was in considerable defect in the southern districts of Madras, but was on the other hand in large excess in Malabar and Coorg and in moderate excess in Mysore.

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

Meteorological Province.	Rainfall.		
	Average actual, August 1896.	Average normal August.	Variation from normal.
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	33·84	25·86	+4·45*
Burma Inland	8·54	9·78	−2·70*
Assam	12·27	16·54	−4·27
Bengal and Orissa	8 84	13·63	−5·24*
Gangetic Plain and Chota Nagpur	10·02	11·61	−1·59
Upper Sub-Himalayas	10·66	11·15	−0·03*
Indus Valley and North-West Rajputana.	1·94	2·23	−0·40*
East Rajputana, Central India and Gujarat	7·85	8·46	−0·83*
Deccan	10·90	9·91	+2·57*
West Coast	26·14	17·00	+8·99*
South India	4·95	6·31	−0·86*

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

Atmospheric Pressure.

The mean pressure of the Indian land area was ·005" above the normal. Relatively to this condition, pressure was in defect to the east and north of a line joining Roorkee, Agra, Saugor, Nagpur, Cocanada and Diamond Island, and in excess over the remainder of India.

The deficiency was moderately large over a part of the

former area including South Bengal, Orissa and Ganjam. The following gives data for the stations, the negative anomalies at which exceeded ·03″ in amount:—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Chittagong	—·031	—·036
Jessore	—·028	—·033
Calcutta	—·028	—·033
Saugor Island	—·046	—·051
False Point	—·037	—·042
Cuttack	—·046	—·051
Sambalpur	—·052	—·057
Vizagapatam	—·029	—·034

The positive anomalies exceeded ·02″ in the Peninsula to the south of a line joining Bombay and Nellore, and were greater than ·03″ at the following stations on the Konkan and Malabar coasts:—

STATION.	Variation of mean 8 A.M. pressure of month from normal.	Pressure anomaly.
	″	″
Ratnagiri	+·038	+·033
Goa	+·037	+·032
Karwar	+·038	+·033
Mangalore	+·038	+·033
Mercara	+·037	+·032
Calicut	+·037	+·032
Cochin	+·038	+·033
Negapatam	+·039	+·034

Pressure was in excess at the hill stations, and by larger amounts than at the neighbouring plain stations. The vertical pressure anomalies were hence positive, but were generally small in amount, as is shown by the following data for six pairs of stations:—

HILL STATION.	Variation of pressure from normal (*a*)	NEIGHBOURING PLAIN STATION.	Variation of pressure from normal (*b*)	Vertical pressure anomaly or (*a*)—(*b*).
	″		″	″
Leh	—·011	Lahore	+·003	—·014
Murree	+·024?	Peshawar	+·023	·+001?
Simla	+·019	Ludhiana	+ 004	+·015
Chakrata	+·023	Roorkee	+ 002	+·021
Ranikhet	+·027	Bareilly	+·015?	+·012?
Quetta	+·017	Jacobabad	+·021	—·004

The chief abnormal features of the mean distribution of pressure of the month were as follows:—

(1) Pressure was in very slight excess on the average in the whole Indian area.

(2) Pressure was in local defect in North-Eastern India and Burma. The deficiency was large in South Bengal and Orissa.

(3) Pressure was in local excess in North-West, West and South India. The excess was large in the Konkan and Malabar coasts

(4) The vertical pressure anomalies in Northern India were positive but small in amount.

Barometric Depressions and cyclonic storms of the month.

It was stated in the July monthly review that a depression and storm began to form on the 30th at the head of the Bay and that it was a fairly well-marked disturbance on the 31st. The following gives a history of this storm.

Cyclonic storm of the 1st to the 5th August:—

This storm, like the storms in the preceding month, formed at the head of the Bay, but further to the eastwards than is usual during the rains. Pressure had given way briskly to rapidly at the head of the Bay during the 24 hours preceding 8 A.M. of the 1st

The following gives data for that hour for observing stations within the storm area :—

STATION OR VESSEL.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
F. L. V. *Hesperus.*	29·300	—·060	?	ENE	2 (force)	5	...	
Barisal .	·381	—·044	—·179	E	4	9	0·12	
Calcutta .	·332	—·068	—·198	NE	5	10	0·47	
Saugor Island.	·299	—·081	—·233	NE	7	10	0·12	
Balasore .	·330	—·042	—·188	NNE	2	7	0·87	
F. L. V. *Torch.*	·307	—·070	?	NE	5 (force)	8	...	Sea rough.
False Point.	·360	—·032	—·188	NW	11	10	1·74	Continuous rain.

These observations show that the centre of the depression was to the east-south-east of Saugor Island at a distance of not more than 70 miles.

The following gives similar data for 4 P.M. which establish that the depression was practically unchanged in position :—

STATION. OR VESSEL.	PRESSURE.		WIND.		Cloud.	Rainfall since 8 A.M.	WEATHER.
	4 P.M. reduced to sea level and constant gravity at Lat. 45°.	Change since 8 A.M.	Direction at 4 P.M.	Average hourly velocity in miles.			
	"	"				Inches	
F. L. V. *Hesperus.*	29·162	—·138	E	3 (force)	4	...	Passing clouds.
Calcutta .	·245	—·087	ENE	14	8	0·21	Do.
Saugor Island.	·210	—·089	ENE	17	8	0·01	
F. L. V. *Torch.*	·185	—·122	E	4 (force)	10	...	Sea rough.
False Point.	·241	—·119	W	10	10	3·20	Dark.

The storm intensified considerably during the night and began to move in a west-by-north direction. The following observations recorded at 2 A.M. of the 2nd fix the position of the storm centre at that hour :—

STATION OR VESSEL.	PRESSURE.		WIND.		Cloud.	Rainfall.	WEATHER.
	2 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change since 8 A.M.	Direction at 2 A.M.	Average hourly velocity in miles.			
	"	"				Inches	
F. L. V. *Hesperus.*	29·205	—·095	SSW	7 to 9 (force)	?	?	Squally with rain and high south swell.
Calcutta .	·246	—·086	E	11	10	0·20	Drizzling.
Saugor Island.	·103	—·196	SSW	14	10	0·15	Sea rough.
Balasore .	·213	—·117	NNW	2	9	0·03	Dark gloomy weather, drizzling rain.
Gopalpur .	·328	—·049	WSW	36	10	1·50	Overcast with rain, weather stormy with heavy squalls and rain, wind direction very steady.

The depression at the centre had hence probably increased from one to two tenths of an inch during the day. The centre at 2 A.M. was near to Saugor Island and a few miles to the west or west-south-west. The observer notes that the wind shifted from a northerly direction to S. S. W. at 0-15 A.M.

Captain Beahan of the F. L. V. *Torch* describes the weather at the entrance to the Hooghly on this day as follows: "Light winds from north-east and east all day, but hauling round by north to W S.W. during the night. Heavy southerly swell and passing squalls with heavy lightning to the south-west."

Captain Woolward of the F.L.V. *Hesperus* took a series of hourly observations throughout the day. The following gives a summary :—

HOUR.	NAME OF VESSEL.	Position.	Barometer reduced to 32° F. to sea-level and gravity.	WIND.		WEATHER.
				Direction.	Force.	
8 A. M.	F. L. V. *Hesperus.*	Mutlah.	29·300	ENE	2	High south swell, usual tides.
Noon.	"	"	·223	E	3	High south swell.
2 P. M.	"	"	·194	E	3	Do.
4 "	"	"	·162	E	3	Do.
6 "	"	"	·126	Calm	0	Do.
7 "	"	"	·166	S	1	Faint lightning to NNE and moderate occasional lightning to SW and high S swell.
8 "	"	"	·166	S	1	Do. do.
9 "	"	"	·186	S	1	Do. do.
10 "	"	"	·186	S	10	Do. and sudden sharp short squalls with little rain.
Midnight.	"	"	·206	S	8 to 9	Do.

Captain Woolward also notes that "at 1 P.M. the cloud assumed a pale yellow colour over the northern half of the heavens, and this with the black pallium cloud to south-west caused the sky to present a curious appearance. The wind at 4 P.M. suddenly dropped calm for half an hour, but there was no confused sea nor bright spot in the sky to indicate that the centre of the cyclone was passing over us. The sky at 6 P.M. was coloured more or less pale yellow. There was a high southerly swell during the evening and faint lightning to north-north-east and moderate lightning to south-west."

The preceding observations indicate that there was apparently a tendency to the formation of a calm centre during the afternoon and evening. The area of light airs and calms representing the calm centre lay over the Mutlah station from 4 to 4-30 P.M. This gives us the position of the centre at that hour as about Lat. 21½°N and Long. 88¾°E.

The 2 A.M. observations given above show that the centre at that hour was near Saugor Island. It hence advanced about 70 miles in a west-north-west direction during the interval between 4 P.M. of the 1st and 2 A.M. of the 2nd. This inference is confirmed by the remarks in the observations recorded by Captain Beahan at the Eastern Channel station. He states that the wind was from north-east and east during the day, but that after sunset it shifted through north to west-south-west.

The various observations given above indicate that over the whole of the northern half of the depression area winds were very light and the rainfall moderate in amount. The character of the weather in the north of the Bay on the 1st is indicated by the following data giving summary of observations recorded on board ships :—

Hour.	Name of Vessel.	8 A. M. Position. Lat. N.	8 A. M. Position. Long. E.	Barometer corrected.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
8 A. M.	S. S. *Nevasa* .	15 10	85 53	29·546	SW	7	High sea and occasional hard squalls.
,,	S. *Manydown* .	18 48	87 47	·336	SW	7	High cross sea and heavy continuous rain.
,,	S.S. *Clan Cameron.*	18 43	87 53	...	SW	8	High sea and drizzling.
,,	Barque *Cornuvia.*	19 29	87 52	·405	SW	6	Heavy sea and heavy rain.
,,	S. *Hilston.*	20 28	87 15	...	Var	1	Thick with rain.
,,	S. S. *Nerbudda.*	20 50	88 30	·322	WNW	4 to 2	Rough sea and fine and cloudy.

The preceding data establish that over the centre and north of the Bay intensified monsoon winds (force 6 to 8) prevailed, and that weather was unsettled and gloomy with frequent showers or continuous heavy rain.

2nd August.—Pressure had increased over the whole of India except in Orissa and the neighbouring districts of Chota Nagpur and of the Central Provinces. The rise was brisk to rapid in Burma and East Bengal. The depression had advanced somewhat rapidly between 2 A.M. and 8 A.M., and was at the latter hour central nearly midway between Balasore and Chaibassa in Lat. 21°50′N and Long. 86°E, and had hence advanced about 120 miles during the preceding six hours. The following gives 8 A.M. observations taken at stations within the storm area :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours	Cloud.	Rainfall.	Weather
	″	″	″				Inches	
Cuttack .	29·285	—·051	—·255	SSW	4	10	2·95	
Saugor Island.	·283	—·016	—·245	SE	17	10	0·22	Sea rough.
Calcutta .	·353	+·021	—·173	E	12	10	0·64	
Balasore .	·230	—·100	—·284	Calm	3	9	0·23	
Midnapore .	·289	—·061	—·243	NE	7	10	0·80	Dark, gloomy.
Chaibassa .	·226	—·119	?	N	5	10	0·74	Raining.
Sambalpur .	·300	—·063	—·272	SW	6	10	4·12	

Weather had improved slightly in the north of the Bay, but was still squally with very strong winds (force 6 to 10) and frequent rain. Heavy rain had fallen in Orissa and the Sambalpur district and moderate rain in South-West Bengal, Orissa, Chota Nagpur and the eastern districts of the Central Provinces. The following gives the largest falls during the previous 24 hours :—

District.	Station.	Rainfall in past 24 hours.
		Inches.
Sambalpur	Bargarh	6·38
Cuttack	False Point . . .	5·32
,, ...	Banki . .	5·30
Puri	Pipli	9·65
,, ...	Puri	7·39
,, ...	Khurda . . .	5·95

3rd August.—Pressure had increased very rapidly in Orissa and fallen rapidly in the central and northern districts of the Central Provinces. The storm area lay over these districts at 8 A.M., and was central a little to the east-south-east of Jubbulpore in Lat. 23°N and Long. 80½°E. It had hence advanced about 380 miles during the previous 24 hours. The following gives 8 A.M. observations recorded at 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.	Weather.
	"	"	"				Inches	
Raipur	29·427	—·026	—·137	SW	21	10	5·65	Continuous rain.
Sutna	?	?	?	NNE	9	10	0·70	...
Jubbulpore	·308	—·190	—·230	NE	6	10	3·12	Continuous rain.
Saugor	·359	—·139	—·181	NE	4	8	1·88	...
Pachmarhi	?	—·141	—·185	WSW	21	10	5·76	...
Seoni	·360	—·130	—·204	...	...	10	5·60	...
Nagpur	·420	—·099	—·175	SW	20	10	2·59	Continuous rain.

South and East Bengal, Orissa and Chota Nagpur had received moderate rain during the day and the Central Provinces moderately heavy rain. The following gives the largest falls which were all recorded in the Central Provinces:—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of the 3rd August.
		Inches.
Bhandara	Sakoli	6·30
"	Tirora	5·70
Balaghat	Burha	5·07
Narsinghpur	Mohpani	7·32
Seoni	Seoni	5·60

Moderately heavy rain had fallen in Berar and the West Coast districts and the indraught to the storm area was increasing on the Kathiawar, Gujarat and Konkan coasts.

4th August.—Pressure had increased briskly to very rapidly in the Central Provinces and had fallen slightly in Rajputana and Central India. The central depression at 8 A.M. was very faintly indicated by the observations, but lay over the area defined by the stations of Ajmere, Neemuch and Deesa. The following gives 8 A.M. data for the storm area:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches.	
Khandwa	29·537	—·058	—·077	SW	13	10	3·07	...
Neemuch	·480	—·008	—·100	W	9	10	2·75	...
Jeypore	·482	—·021	—·075	NE	8	9	0·35	Drizzling.
Ajmere	·484	—·036	—·070	NE	5	8	1·46	...
Deesa	·458	—·065	—·113	WNW	12	10	3·54	Raining.

Pressure was now barely a tenth of an inch below the normal in the storm area and the depression had hence filled up rapidly during the previous 24 hours. The centre of the disturbance at 8 A.M. was in about Lat. 25°N and Long. 74¾°E. Heavy rain had fallen in the western and central states of Central India and moderate rain in the Central Provinces and Rajputana.

5th August.—Pressure had increased briskly to rapidly over the whole of North-Western and Central India and there was no trace of the storm. A shallow depression lay over Sind on the morning of this day and it is hence most probable the storm had continued to advance west-north-westwards during the previous 24 hours and been absorbed into the Sind permanent low pressure area of the rains.

The increased indraught to the storm area across the Kathiawar and Bombay Coasts had given a moderate burst of rain in the west coast districts, more especially to the Broach, Ahmedabad and Kaira districts during the previous 48 hours.

This storm, like the storms of the preceding month, originated at the head of the Bay, but somewhat further east than usual. It formed under similar conditions to the preceding storms, the chief being the prevalence of strong westerly winds over the Peninsula and of strong south-westerly to south-easterly winds in the centre and east of the Bay. The storm was of moderate intensity on the

1st and began to march west-north-westward on the evening of that day. The following table gives the position of the storm centre at different periods from the 1st to the 4th and its rate of advance :—

Date.	Hour.	Position of Centre.		Distance travelled during interval.	Average hourly rate of motion.
		Lat. N.	Long. E.		
		° ′	° ′	Miles.	Miles.
1st August 1896. .	8 A.M.	21 15	88 45		
2nd ,, ,, . .	2 A.M.	21 30	87 45	70	4
2nd ,, ,, . .	8 A.M.	21 50	86 0	120	20
3rd ,, ,, . .	,,	23 0	80 30	380	16
4th ,, ,, . .	,,	25 0	74 45	390	16

The precipitation accompanying the storm was not so heavy as in the storms of July. Orissa, South-West Bengal, Chota-Nagpur, the Central Provinces, Berar and Central India obtained a moderately heavy burst of rain. The following gives the mean daily rainfall in these areas during the storm :—

Area.	Average actual rainfall in 24 hours preceding 8 A.M. of				
	1st August.	2nd August.	3rd August.	4th August.	5th August.
	Inches.	Inches.	Inches.	Inches.	Inch.
Bengal (S. W.) .	0·17	0·26	0·61	0·66	0·14
Orissa . . .	0·71	2·80	0·39	0·06	0·37
Chota Nagpur . .	0·47	0·52	0·36	0·33	0·39
Central Provinces (East).	0.69	1·35	1·53	0·26	0·57
Berar . . .	0.13	0·19	0·91	0·45	0·21
Bhopal . . .	1·18	1·61	2·11	1·50	0·16
Gwalior . . .	0·34	0·65	1·54	0·58	0·08
Kotah . . .	1·12	0·42	0·47	0·43	0·06

Pressure increased briskly to rapidly on the 5th over nearly the whole of Northern and Central India and was in general excess on the morning of the 6th, the excess ranging between ·10″ and ·15″ in the Gangetic Plain and Bengal.

An advance of humid winds across Rajputana followed the dispersion of the previous storm and gave a moderate burst of rain to the East and South Punjab on the 6th and 7th.

Pressure fell rapidly over the whole of Northern India and more especially in Upper India on the 8th and 9th, and steepish gradients were established on the 9th. Winds increased on the west coast and general rain fell in the west coast districts and the greater part of the interior.

A slight tendency began to be shown on the 9th and 10th to the establishment of a low pressure area at the eastern extremity of the trough of low pressure which stretched from the western districts of the North-Western Provinces to the Orissa Coast. Light to moderate southerly winds obtained on the 10th in the north of the Bay and moderate to strong south-westerly to westerly winds in the centre of the Bay. Pressure gave way briskly in Burma and the north of the Bay during the next 24 hours, and on the morning of the 11th a shallow depression and feeble cyclonic circulation was in existence in the north-west of the Bay. It developed into a storm of moderate intensity which formed the chief feature of the weather of the next five days. The following is a history of this storm :—

Cyclonic storm of the 12th to the 16th August.—As already stated a shallow depression lay over the north-west of the Bay on the morning of the 11th. The following data extracted from the logs of ships show the character of the depression at this stage :—

Hour.	Name of vessel.	8 A.M. Position.		Barometer corrected.	Wind.		Weather.
		Lat. N.	Long. E.		Direction.	Force.	
		° ′	° ′	″			
8 A.M.	S.S. *Chyebassa*	14 23	85 13	29·650	WSW	9	Hard squalls and high sea.
,,	S.S. *Arratoon Apcar.*	17 9	91 20	·604	SW	4	Squally with heavy rain.
,,	S.S. *Landaura.*	17 6	85 55	·582	W	4	Dull and occasional light showers with moderate sea.
,,	S.S. *Inchbarra.*	18 51	86 2	·528	WNW	5	Heavy passing squalls and incessant rain with moderate sea.
,,	S.S. *Kangra*	19 9	87 48	·538	NW	2	Occasional light rain squalls and slight following sea.
,,	S.S. *Golconda*	21 2	87 38	·547	Var.	1	Fine and passing showers.
,,	F.L.V. *Torch*	Eastern Channel		·539	ESE	4	Unsettled and squally with heavy S. swell.
,,	F.L.V. *Hesperus.*	Mutlah.		·540	SE	2	Fine and clear with high S. swell.

The data show that in the area in which the storm was forming winds were light and variable and that strong monsoon winds with much rain obtained in the centre of the Bay and hence at a considerable distance from the area of disturbance.

Captain Beahan describes the weather as follows:—"Weather fine during the early part of the day with a gentle south-east breeze and a long swell from the southward. During the latter part the wind ranged between E. N. E. and E S. E."

12th August.—Pressure had given way over the whole Indian area. The fall was rapid at the head of the Bay and the depression was more clearly defined than on the 12th. The following data extracted from the logs of vessels define its position and character at 8 A.M.:—

Hour.	Name of vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer corrected.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
8 A.M.	S.S. *City of Edinburgh.*	15 11	85 12	29·582	SW	6	Heavy squalls and high following sea.
...	S.S. *Netherby Hall.*	16 53	86 32	·474	W	9	Dark, rainy and high sea.
...	S.S. *Ras Elba* .	17 24	86 42	...	WSW	6	Heavy rain.
...	S.S. *Maroa* .	18 10	87 8	...	SW	4	Frequent rain squalls.
...	S.S. *Africa* .	19 12	90 10	·456	SW	4	Passing clouds and moderate sea 4 P.M. frequent hard squalls and heavy rain.
...	S.S. *Arratoon Apcar.*	20 15	88 49	·434	WSW	2	Heavy squalls with rain.
...	F.L.V. *Hesperus*	Mutlah.		·440	E	2	Fine and clear with high southerly swell.
...	F.L.V. *Torch* .	Eastern Channel.		·433	E	4	Squally with heavy swell.
...	S.S. *Landaura*	20 17	87 40	·446	NE by NW	2	Dull and occasional light rain with moderate swell.
...	S.S. *Inchbarra*	21 20	87 55	·439	NNE	2	Clear; noon, passing showers.

The preceding data indicate in the first place that strong monsoon winds with squally rainy weather obtained over the centre of the Bay and also that a feeble cyclonic circulation was established in the north-west angle of the Bay the centre of which was in Lat. 20¾° N. and Long. 88° to 88½° E. Winds were light in the north-west angle but weather was threatening and showery with much lightning. Captain Beahan describes the weather at the Eastern Channel Station as follows:—

"During the early morning lightning from south-west to north-west, weather unsettled and cyclonic looking, wind ranged between north-east and east during the day. There was much lightning during the night between west and south-south-west."

Weather was fine with little or no rain in Bengal but was showery in Orissa.

13th August.—Pressure had fallen locally in the north-west angle of the Bay but had risen elsewhere. It had increased rapidly in Burma and steep gradients now obtained in the east of the Bay. The observations taken on board ships show that the depression was unchanged in position, the centre being in about Lat. 20¾° N and Long. 88° E. The following gives data for north and centre of the Bay:—

Hour.	Name of vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer corrected.	Wind. Direction.	Wind. Force.	Weather.
		° ′	° ′	″			
8 A.M.	S.S. *Queen Cristina.*	14 45	85 7	...	WSW	9	Heavy squalls and heavy rain with tremendous high sea.
...	S.S. *Clan Graham.*	17 52	87 15	29·510	SW	6	Heavy squalls and much rain with high sea.
...	S.S. *City of Edinburgh.*	18 1	86 57	·472	WSW	6	Overcast and heavy rain squalls.
...	S.S. *Madura* .	16 22	93 24	·718	SW	6	High sea, 1-30 P.M. violent wind and rain squalls.
...	S.S. *Netherby Hall.*	19 47	87 44	·424	NW	5	Squally with heavy rain.
...	S.S. *Ras Elba* .	20 14	88 33	...	Var.	2	Rain squalls.
...	F.L.V. *Hesperus*	Mutlah .		·401	SE	2	Ugly with very high Swell.
...	F.L.V. *Torch* .	Eastern Channel.		·416	NE	4	Squally with heavy southerly swell.

The observations taken on board the first five vessels named above show that weather and winds were unchanged in the centre of the Bay. The data of the S.S *Netherby Hall* and *Ras Elba* and the Light vessels indicate that the cyclonic circulation in the interior of the depression was stronger than on the previous day but was still feeble. Weather was now squally with moderate rain. The following gives the weather as experienced at the Eastern Channel Station:

"There was much lightning in the early morning between west-north-west and south. The weather was unsettled and threatening and with a very heavy southerly swell. The wind was light and unsteady, hauling between NNE and E up to noon, after which it became

squally and by 4 P.M. the wind had hauled to south and increased considerably in force."

The following gives 8 A.M. data of the coast stations at the head of the Bay:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Chittagong.	29·562	+·043	—·120	ESE	6	8	2·57	Distant lightning.
Saugor Island.	·405	—·018	—·196	NE	9	9	0·06	Sea slight.
Balasore .	·418	—·019	—·169	NE	4	4	0·89	Showery.
False Point.	·412	—·005	—·189	NW	7	10	1·12	Showery.
Gopalpur .	·474	+·037	?	SW	12	6	2·30	Showery.

The preceding data indicate that weather was showery with light winds at the Bengal and Orissa Coast Stations.

The storm began to advance westwards during the afternoon. The following data fix its position at 4 P.M. as established by the following observations at that hour:—

STATION OR VESSEL.	PRESSURE.		WIND.		Cloud.	Rainfall since 8 A.M.	WEATHER.
	4 P.M. reduced to sea level and constant gravity at Lat. 45°.	Change since 8 A.M.	Direction at 8 A.M.	Average hourly velocity in miles.			
	"	"				Inches.	
F.L.V. *Hesperus.*	29·301	—·100	E	7 (force)	10	...	Passing squalls.
F.L.V. *Torch*	·308	—·108	S	5 (force)	10	...	Squally.
Saugor Island.	·306	—·099	ENE	19	10	0·33	
False Point.	·312	—·100	W	7	10	2·60	Overcast.

The data show that pressure was very uniform over the area represented by these stations and hence it is not possible to fix the centre exactly. It was probably in about Lat. 21½° N and Long. 87½° E to 87¾° E.

Moderate rain had fallen in South Bengal during the previous 24 hours and moderately heavy rain in Orissa.

14th August—Pressure had increased briskly in the north-east of the Bay and East Bengal and had fallen slightly to briskly in the Central Provinces. These changes were chiefly due to the westerly advance of the storm into the eastern districts of the Central Provinces. The following observations define its position at 8 A.M:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly in velocity during past 24 hours.			
	"	"	"				Inches	
Cuttack .	29·448	+·025	—·161	SSW	5	6	0·82	Showery.
Chaibassa .	·410	—·046	?	ESE	6	10	1·30	Overcast.
Sambalpur .	·406	—·079	—·203	SSW	7	10	3·46	Ovecast.
Jubbulpore.	·519	—·056	—·095	N	4	10	2·70	Showery.
Chanda .	·521	—·044	—·135	WNW	9	10	1·28	Continuous rain.
Raipur .	·479	—·043	—·142	SW	9	10	3·81	...

The centre of the depression was a little to the west of Sambalpur in Lat. 22° N and Long. 83½° E and had advanced during the previous 24 hours at an average rate of nearly 13 miles per hour.

Winds were of moderate intensity in the storm area. They were unchanged in strength over the centre of the Bay and were slightly stronger at the head of the Bay where southerly winds of force 4 to 5 with showery weather now obtained.

Moderate general rain had fallen in South Bengal, Orissa and Chota Nagpur. Heavy general rain had been received in the eastern and central districts of the Central Provinces.

15th August.—Pressure had increased rapidly in Orissa and the eastern districts of the Central Provinces and had fallen briskly to rapidly in the western districts of the Central Provinces and Central India. The following data define the position of the storm at 8 A.M:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly in velocity during past 24 hours.			
	"	"	"				Inches	
Pachmarhi .	?	—·052	—·131	SW	10	9	0·93	Showery.
Jubbulpore.	29·499	—·020	—·110	SSW	2	10	0·77	Showery.
Sutna .	?	?	?	E	12	8	0·31	Gale.
Saugor .	·473	—·072	—·120	ENE	5	8	1·17	
Neemuch .	·548	—·095	—·081	NE	7	10	1·74	Showery.
Indore .	·516	—·125	—·143	NW	7	10	0·87	Showery.

The storm now consisted of a large area of nearly uniform deficiency of pressure which stretched from Jubbulpore to Surat. The centre was probably near Hoshangabad in about Lat. 22½°N and Long. 77¾°E.

Easterly winds of moderate intensity had extended westwards over the Gangetic Plain but were giving little rain. The Central Provinces, Berar, Central India and Rajputana had received moderate general rain and the increasing winds of indraught on the North Bombay and Konkan Coasts had given heavy rain in the coast and neighbouring hill districts.

16th August.—Pressure had increased briskly in the Central Provinces and had fallen rapidly in Cutch and Kathiawar, and the depression now lay over these areas. The following data fix its position at that hour:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average velocity in miles hourly during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches	
Veraval	29·548	—·073	?	W	24	10	0·50	Sea tremendous.
Surat	·538	—·040	—·151	SW	...	10	1·65	Gentle wind.
Ahmedabad	·461	—·064	?	S	4	10	3·36	Continuous rain for upwards of 12 hours.
Deesa	·457	—·103	—·183	ESE	11	10	2·76	
Rajkot	·471	—·140	—·199	SW	15	10	4·11	Continuous rain.
Bhuj	·468	—·105	—·157	W	15	10	1·45	Continuous rain.
Hyderabad (Sind)	·475	—·071	—·067	SW	11	10	0·03	Fine.
Kurrachee	·501	—·089	—·099	WSW	12	10		

The centre of the depression was in about Lat. 24°N. and Long. 70¾°E.

Little or no rain had been received in Bengal and the Central Provinces, Central India and the Gangetic plain during the previous 24 hours, but heavy rain had fallen in Gujarat, Kathiawar, Cutch and South-West Rajputana. The following gives some of the more noteworthy falls:—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
		Inches.
Kathiawar	Dhrangadhra	8·00
,,	Morvi	5·97
Mahi Kantha	Sadra	7·88
Ahmedabad	Viramgam	7·81
,,	Parantij	6·60
Kaira	Nadiad	7·06

17th August.—Pressure had increased briskly to rapidly in the area covered by the storm on the previous day and the depression had filled up as it advanced westwards towards the Baluchistan Hills. Light to moderate showers had fallen in Lower Sind.

The present storm formed under the same conditions and followed the same track as the previous storm of the month and the storms of July. The following data give the position of the centre and its average rate of motion:—

Date.	Position of centre at 8 A.M. Lat. N.		Position of centre at 8 A.M. Long. E.		Distance travelled during interval.	Average hourly rate of motion.
	°	′	°	′	Miles.	Miles.
13th	20	45	88	0	...	...
14th	22	0	83	30	300	13
15th	22	30	77	45	380	16
16th	24	0	70	45	475	20

The storm was of moderate intensity and less vigorous than its predecessor. The following gives a summary of the rainfall in the area covered by the storm for comparison with the corresponding data of the previous storm:—

Area.	Average actual rainfall in 24 hours preceding 8 A.M. of date. 12th August.	13th August.	14th August.	15th August.	16th August.
	Inches.	Inches.	Inches.	Inches.	Inches.
Orissa	0·83	1·12	1·79	0·08	0·36
Chota Nagpur	0·19	0·28	0·69	0·50	0·19
Central Provinces (East)	1·10	0·97	1·11	0·37	0·99
Ditto (Central)	1·76	1·23	1·08	1·05	1·25
Ditto (West)	0·82	1·07	0·51	0·92	1·80
Central India (West)	0·18	0·45	0·95	0·86	0·17
Gujarat	0·34	0·28	0·27	1·03	2·87
Kathiawar	0·10	0·12	0·13	1·36	1·98
Cutch	0·05	...	0·10	0·07	1·71
Lower Sind	0·02	...	...	...	0·53

A feeble advance of humid monsoon winds into Upper India followed the dispersion of the storm. It gave moderate to heavy rain in the South and East Punjab and the North-Western Provinces on the 18th, 19th and 20th. The Bombay current fell off rapidly in strength during this

period and fine weather set in on the 19th and 20th over Central India, the Central Provinces and the Konkan. Large and rapid changes of pressure occurred during this period which considerably modified the distribution, transferring the trough of low pressure northwards to the foot of the hills in the North-Western Provinces. A depression began to form in South Bengal and at the head of the Bay on the 19th. The following gives a history of this storm :—

Cyclonic storm of the 19th to the 23rd August.—Pressure gave way locally at the head of the Bay and in Burma on the 17th and 18th and a shallow depression was shown in South Bengal on the morning of the 19th. The following data shows its position at 8 A.M. of that date :—

Station or vessel.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average velocity in miles hourly in past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
F. L. V. *Torch.*	29·496	—·098	?	Var.	3(force)	10	...	Passing showers and much thunder and lightning.
F. L. V *Hesperus* .	·482	—·018		NW	3(force)	2	...	Rainbow and moderate S.W.swell.
False Point.	29·545	+·002	—·056	W	14	7	...	Distant lightning.
Saugor Island .	·471	—·035	—·127	WNW	8	9	0·70	Sea smooth.
Calcutta .	·513	+·002	—·089	Calm.	2	9	1·08	Distant lightning.
Jessore .	·525	—·004	—·093	SE	2	8	...	
Barisal .	·520	—·006	—·105	ESE	1	9	...	Fine.
Chittagong.	·553	—·022	—·123	SSE	7	10		

The depression lay over the head of the Bay, and the air movement was feeble and unsteady in the central area. Moderate to strong south-west winds with squally weather obtained in the centre and south of the Bay.

20th August.—Pressure had increased over the whole of Northern India, the Bay and Burma. The rise was greatest in Burma and Arakan. The depression at the head of the Bay was practically unchanged in position and character, but gradients were slightly steeper in the east of the Bay. Moderate to strong south-west winds with showery squally weather obtained in the centre and east of the Bay. The following gives 8 A.M. meteorological data of the area of depression :—

Station or vessel.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average velocity in miles hourly in during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
F. L. V. *Torch.*	29·502	+·006	?	W	2 (force)	10	...	Passing showers and moderate S. swell.
F. L. V. *Hesperus.*	·501	+·019	?	SW	1 (force)	5	...	Cloudy.
False Point.	·564	+·019	—·041	W	11	10	0·38	Thunderstorm.
Saugor Island	·508	+·037	—·092	NNW	7	10	0·19	Sea smooth.
Calcutta .	·528	+·015	—·075	ENE	2	10	0·12	Distant lightning.
Jessore .	·536	+·011	—·083	E	2	10	0·20	Drizzling..
Barisal .	·538	+·018	—·088	ESE	1	10	0·06	Raining.
Chittagong.	·608	+·055	—·074	ESE	6	10	...	Distant lightning.

The data indicate that the storm was of very slight intensity. The area of depression covered South Bengal and was central to the east of Saugor Island in about Lat. 21½°N and Long. 89°E. The air movement in the depression area was very feeble. Moderate rain had fallen in South and Central Bengal, North Orissa, Chota Nagpur and Bihar.

21st August.—Pressure had increased over the whole of India with the exception of West Bengal, Chota Nagpur and Bihar where it had fallen slightly, due to the advance of the depression into West Bengal. The storm was well defined and winds had increased considerably in South Bengal. The position of the storm at 8 A.M. is given by the following observations :—

Station or vessel.	Pressure. 8 A. M. reduced to sea level and constant gravity at Lat 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A. M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"					
F. L. V. *Torch.*	29·603	+·101	?	SW	4 force	7	...	Cloudy and moderate S. swell.
F. L. V. *Hesperus.*	·584	+·083	?	W	4 force	7	...	Cloudy and moderate S. W. sea.
False Point.	·640	+·076	+·028	W	11	9	...	

STATION.	PRESSURE. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A.M.	WIND. Average hourly velocity in miles during past 24 hours	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Sangor Island.	29·575	+·067	−·030	SW	14	9	5·04	Sea rough.
Calcutta	·544	+·016	−·063	SSW	3	10	0·99	Showery.
Berhampore.	·541	−·022	−·084	SE	4	10	1·84	Showery.
Burdwan	·480	−·073	−·136	SE	4	10	1·27	Strong wind.
Purnea .	·577	−·012	−·047	E	4	10	1·57	Continuous rain.
Patna .	·594	−·016	−·017	ENE	2	10	0·96	Showery.
Hazaribagh.	·582	−·032	−·033	N	12	10	0·88	Overcast with rain.
Chaibassa	·573	+·014	?	WSW	2	10	3·20	Raining

The centre at 8 A.M. was a few miles to the west-south-west of Burdwan where pressure was ·14" below the normal. Winds were light to moderate at the head of the Bay. According to reports received from seven vessels in the north-west of the Bay three had winds of force 2, one of force 5 and three of force 4. The indraught to the storm area was hence unusually feeble. Winds were of moderate intensity in the storm area. Moderately heavy and general rain had fallen over the whole of Bengal, Bihar and Chota Nagpur, the largest falls during the previous 24 hours being registered in Chota Nagpur. The following gives the most noteworthy.

District.	Station.	Rainfall during 24 hours preceding 8 A. M. of the 21st August.
		Inches.
Singhbhum	Ghatsila	7·50
"	Baharagura . . .	5·02
Shahabad	Monaharpur . . .	5·35
Midnapore	Midnapore	7·95
"	Garhbeta	5·80
Bankura	Bishnupur	5·08
Howrah	Sangor Island . . .	5·04

22nd August.—The storm had continued to advance in a north westerly direction and was at 8 A.M. in Bihar, and central between Patna and Gaya as is shown by the following observations:—

STATION.	PRESSURE. 8 A. M. reduced to sea level and constant gravity at Lat. 45°.	PRESSURE. Change in past 24 hours.	PRESSURE. Variation from normal.	WIND. Direction at 8 A. M.	WIND. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	WEATHER.
	"	"	"				Inches	
Benares .	29·590	−·045	−·009	NW	2	10	2·22	Gloomy.
Hazaribagh	·571	−·011	−·053	W	16	10	1·24	Drizzling.
Gaya .	·553	−·045	−·057	W	7	10	1·77	Raining.
Patna .	·531	−·063	−·088	ENE	3	10	4·41	Raining.
Darbhanga.	·543	−·056	−·088	ENE	6	10	3·02	Heavy rain.
Purnea .	·577	0	−·052	E	6	10	1·78	Drizzling.

The centre was at 8 A.M. a few miles south-west of Patna in Lat. 25½°N and Long. 85°E. The depression had filled up to a slight extent. Moderately strong cyclonic winds obtained in the storm area and light unsteady airs and calms in the North Western Provinces. Winds were stronger in the north of the Bay than on the 21st and weather was fine with passing clouds.

Light to moderate rain had been received in Bengal and Chota Nagpur and heavy rain over the whole of Bihar. The largest amounts recorded at 8 A.M. were as follows:—

District.	Station.	Rainfall during 24 hours preceding 8 A. M. of the 22nd August.
		Inches.
Patna	Patna	4·41
"	Bihar	4·36
"	Bikram	4·36
"	Hilsa	4·41
Gaya	Nawada	4·80
"	Jahanabad	4·39
Saran	Siwan	4·07
Monghyr	Monghyr	4·65
"	Jamalpur	4·33
"	Gogri	4·25
Bhagalpur	Bangaon	5·30
"	Madhipura . . .	4·37

23rd August.—Pressure had increased in North Eastern India during the previous 24 hours. The storm had continued to decrease in intensity and had advanced into Central and North Bihar where it was now shown as a very shallow depression. The following gives 8 A.M. data :—

STATION.	PRESSURE			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Gaya .	29·567	+·014	—·041	SSW	7	7	0·12	Showery.
Patna .	·572	+·041	—·046	SE	5	10	2·14	Showery.
Darbhanga.	·590	+·047	—·041	ESE	9	10	1·95	Showery.
Gorakhpur.	·606	+·013	—·009	ENE	2	8	2·11	
Benares .	·566	—·024	—·036	NW	5	10	1·38	Drizzling.

The centre of the depression was a little to the west of Patna and it had hence been nearly stationary during the previous 24 hours. The western districts of Bengal and the eastern districts of the North-Western Provinces had had light to moderate showers and Bihar general moderate to heavy rain. The following gives the heaviest falls recorded at 8 A. M. :—

District.	Station.	Rainfall during 24 hours preceding 8 A.M of the 23rd August.
		Inches.
Saran	Ekma	5·10
"	Amnour	5·00
Patna	Bikram	5·00
Champaran	Motihari	4·37
Sonthal Parganas . .	Deoghur	4·05

The disturbance filled up completely during the next 24 hours, but Bengal, Bihar and the eastern districts of the North-Western Provinces received light showers of slight importance during the day.

The storm was of slight intensity throughout. It formed at the head of the Bay to the east of Saugor Island and advanced in a north-westerly direction into Bihar where it filled up slowly after having given that province a heavy burst of rain when it was urgently required for the rice and other crops. The following gives a summary of the rainfall due to the storm :—

DIVISION.	AVERAGE ACTUAL RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF DATE.				Total of period.
	20th August.	21st August.	22nd August.	23rd August.	
	Inch.	Inches.	Inches.	Inches.	Inches.
Bengal (South West) . . .	0·45	1·39	0·24	0·65	2·73
Orissa	0·69	0·12	0·04	0·25	1·10
Chota Nagpur	0·85	1·90	0·60	0·27	3·62
Bihar (South)	0·83	1·51	2·50	0·84	5·68
Bihar (North)	0·90	0·71	1·93	1·58	5·12

The path and rate of advance of the storm centre is given by the following data :—

DATE.	HOUR.	POSITION OF CENTRE.		Distance travelled during interval.	Average hourly rate of motion.
		Lat. N.	Long. E.		
		° ′	° ′	Miles.	Miles.
20th . . .	8 A.M.	21 30	89 0	...	...
21st . . .	"	23 0	87 25	155	6
22nd . . .	"	25 15	85 0	230	10

Immediately after the preceding storm disappeared, a fourth depression began to form at the head of the Bay. The following gives a brief history of the cyclonic storm of the 25th to 28th August. Winds were very light in the north of the Bay on the 24th but were shifting to easterly directions and pressure was giving way locally. A shallow depression was shown on the morning of the 25th in the north-west angle of the Bay. The following gives 8 A.M. observations showing the character of the depression at that hour :—

STATION OR VESSEL.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inch.	
F. L. V. *Torch.*	29·577	—·073	?	E	5 (force)	6	...	Passing light rain squalls and S. swell.
F. L. V. *Hesperus.*	·580	—·060	?	ESE	3 (force)	4	...	Cloudy with rainbow and slight south-east swell.
Saugor Island.	·607	—·044	—·018	ENE	9	9	0·31	Sea smooth.
Balasore .	·617	—·024	+·007	NNE	3	3	...	Fine.
False Point.	·603	—·043	—·030	N	4	10	0·86	Showery.
Gopalpur	·612	—·020	?	NW	5	6	...	

Moderate to strong south-west winds obtained over the centre and south of the Bay (force 4 to 7) and weather was squally with frequent showers. The centre of the depression was probably in about Lat. 20°N. and Long. 87½°E. Fine weather with little or no rain had obtained during the preceding 24 hours over Bengal and Orissa.

26th August.—The shallow depression had advanced east-wards during the previous 24 hours and at 8 A.M. covered Orissa and the eastern districts of the Central Provinces, as is shown by the following data:—

Station or vessel.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average velocity hourly in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inches.	
F. L. F. *Torch.*	29·637	+·060	?	S	5 (force)	6	...	Passing showers and slight sea
F. L. V. *Hesperus.*	·622	+·042	?	S	3 (force)	4	...	Moderate S. swell
Saugor Island.	·630	+·023	—·008	SE	15	9	0·04	Sea slight.
Balasore.	·615	—·002	—·008	Calm.	6	3	0·23	
False Point.	·600	—·003	—·043	S	5	2	1·77	Showery.
Gopalpur	·590	—·022	?	SSW	8	3	1·46	

The depression was hence of very slight intensity and was central in about Lat. 21¼°N. and Long. 84½°E. Light to moderate rain had been received in West Bengal, Orissa and the Central Provinces.

27th August.—The depression had drifted in a west-north-west direction into the central districts of the Central Provinces, as is shown by the following data:—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average velocity hourly in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	"	"	"				Inch.	
Gopalpur	29·634	+·044	?	W	17	1	...	
False Point.	·628	+·028	—·021	SSW	10	6	...	Fine.
Saugor Island.	·640	+·010	—·007	SSE	13	9	0·09	Fine.
Raipur .	·619	+·006	—·029	SW	6	10	0·49	Fine.
Sambalpur	·629	+·065	—·040	SW	6	9	0·32	

The centre of the feeble residual disturbance at 8 A.M. was in about Lat. 23° N. and Long. 82°. Little or no rain had fallen in Bengal, Orissa and Chota Nagpur. Berar and the western and central districts of the Central Provinces had, on the other hand, obtained moderate rain.

The depression filled up during the next 24 hours. The increased indraught set up on the west coast by the depression gave a short burst of rain on the 28th and 29th to the northern districts of the Central Provinces, Baghelkhand, Bundelkhand, the western districts of the North-West Provinces and the South-East Punjab. Pressure increased rapidly over the whole Indian area on the 30th and 31st, and fine weather set in over nearly the whole of the country. Burma, Bengal and the west coast districts, on the other hand, received light local showers.

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

No snowfall reports were received for this month.

Summary of Special Storm Reports.

The following gives a statement of the chief local storms of which reports were received during the month:—

4th.—Severe duststorm at Jacobabad from 5 P.M. to 5-30 P.M. The recorded velocity of the wind at 5-10 P.M. was 55·8 miles per hour. A large number of trees were blown down in the station.

9th.—Severe thunderstorm at Salem from 2-15 P.M. to 3-50 P.M.

27th.—Thunderstorm at Simla from 3 P.M. to 4 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 conditions obtained generally over the Arabian Sea. As is ordinarily the case, the winds were strongest in the neighbourhood of Socotra, where they ranged in force between 7 and 9. From this region they decreased in all directions and were of force 1 to 4 in the extreme south-east, where they were lightest. The mean intensity of the air movement was 4·7 at 8 A.M. of the 1st. Winds increased more especially along the Indian coast and averaged 5·2 on the 2nd and 3rd. A decreasing monsoon obtained until the 7th, at 8 A.M. of which day the mean strength of the winds over the Arabian Sea had diminished to 2·9. Winds increased rapidly during the day, more especially in the east of the sea, and were blowing with an average force of 4·0 at 8. A. M. of the 8th.

Conditions remained unchanged during the next five days. Important changes occurred over the land from the 14th to the 16th. The second cyclonic storm of the month marched across the head of the Peninsula from the Bay to Sind during these three days. The air movement increased in strength during this period along the Sind, Kathiawar and Konkan coasts, where winds of force 4 to 9, violent squalls, heavy rain and a high sea were experienced. Thus the *S.S. Dwarka* in Lat. 20½° N. and Long. 70° E. at 8 A. M. of the 16th experienced gales of wind force 9, a very heavy sea and frequent violent squalls and rain. The mean air movement ranged from 4·2 on the 14th to 5·0 on the 16th. A moderate to fresh monsoon obtained generally over the sea during the next five days. On the morning of the 21st the monsoon current was blowing with an average force of 4·4. Winds decreased rather rapidly during the next three days and on the morning of the 25th their average intensity was only 3·0. The strongest winds experienced at 8 A. M. of this day were of force 5. No change of any significance occurred during the remaining six days of the month, except in the east of the sea where there was a strong tendency for the winds to become unsteady. This was most marked on the 31st when all the seven vessels in this region reported winds from different quarters. The air movement averaged only 2·8 at 8 A. M. of this day, or 1·5 below its normal intensity in August.

Bay of Bengal.—At the commencement of the month winds were feebly cyclonic in the north of the Bay and a cyclonic whirl was in the process of development in the north-west angle of the Bay. Strong monsoon winds prevailed over the centre, east and west of the Bay and moderate winds in the south of the Bay. Weather was more or less squally and rainy over the Bay, except in the south, where it was fine. The mean intensity of the air movement for the whole of the Bay was 4·4. The storm intensified considerably during the day, and moving in a west-north-west direction crossed the North Orissa coast in the early morning of the 2nd. Gales of wind, force 8 to 10, heavy squalls and heavy rain obtained at the head of the Bay on the morning of the 2nd. The mean wind force as recorded on board 23 vessels was 5·1. Conditions improved rapidly during the next 48 hours so much so that on the morning of the 4th, sixteen vessels out of the twenty-two in the various parts of the Bay reported fine weather. The mean intensity of the air movemeent at 8 A. M. of this day was only 3·9 and the strongest winds experienced were of force 5. A decreasing monsoon prevailed generally during the next two days, the average strength of the winds for the whole of the Bay diminishing to 3·4 at 8 A. M. of the 6th. The monsoon current was very unsteady during the next four days. Winds were very unsteady during this period from the 7th to the 10th in the north of the Bay.

Important changes occurred over this area of unsteady winds during the next 48 hours. Winds strengthened considerably over the Bay to the south of Lat. 17°N. and more especially over the centre and on the morning of the 12th were blowing with an average force of 4·3 Weather was disturbed with heavy to hard squalls over the area of increasing winds. The strongest winds experienced were of force 9 in Lat. 17°N. and Long. 86½°E. As invariably happens under such combination of conditions, a depression was developed over the area of light unsteady winds in the north of the Bay during the day, and on the morning of the 13th a well-defined cyclonic circulation was exhibited over that region. Very unsettled weather prevailed over the Bay during the next 24 hours. The mean wind force at 8 A. M. of the 14th was 4·4. A fairly steady moderate to fresh monsoon prevailed generally over the Bay until the 17th, at 8 A. M. of which day the average strength of the current was 4·2. Winds decreased in strength and became unsteady in the north of the Bay during the next 48 hours, while they increased over the remainder of the Bay, more especially in the centre. A cyclonic storm formed in the area of light unsteady winds on the 19th and 20th. It developed slightly during the day and passed inland during the night. It was a feeble disturbance and did not affect the weather over the Bay to any large extent. The strongest winds in the depression area did not exceed 6 in force. A moderate monsoon obtained on the 22nd and 23rd. On the 24th winds fell off again in the north of the Bay and became very unsteady. On the morning of the 25th an irregular cyclonic circulation was established over that region. The depression however failed to

develop and passed inland as a shallow diffused low pressure area during the next 24 hours. The strongest winds in the depression were only of force 6. The monsoon current decreased steadily in strength during the remainder of the month, and at the end of the month was very feeble, its average strength being only 3·3 or 0·7 below the normal strength in August.

From the preceding account of the weather in the Indian Seas it will be seen that the monsoon current was very unsteady in the Bay, though on the mean of the month very slightly stronger than the normal. The Arabian Sea branch of the current was of normal intensity during the first three weeks of the month and very feeble during the last week. It was in fact at least 20 per cent. weaker than usual during the period from the 22nd to the 31st.

It is noteworthy that the monsoon currents were slightly stronger than in the corresponding periods of the last two years.

The data for the Equatorial Belt indicate that conditions were fairly normal over the greater part of that area. Winds were slightly most easterly than usual at the Seychelles and Zanzibar. They were stronger and steadier at the Seychelles than in August 1895.

Temperature of the Air.

The variations of the mean temperature conditions of the month from the normal were similar to those of the preceding month. This was mainly due to the similarity of the rainfall distribution of the two months and to two of the three storms of the month following the same general track as that of the storms of July.

The mean maximum or day temperature of the month was higher than usual in Bengal, the Gangetic Plain, the Punjab, Sind and North Rajputana and also in South Madras. The excess was more than 2° in three areas for which data are given below :—

Area.	Station.	Mean maximum temperature. Actual, August 1896.	Normal, August.	Variation of actual from normal.
		°	°	°
South-West Punjab and North Rajputana.	Mooltan	103·7	100·2	+3·5
	Sialkot	96·9	94·1	+2·8
	Bickaneer	98·4	96·3	+2·1
Gangetic Plain and North Bengal.	Agra	94·0	90·4	+3·6
	Bareilly	93·3	90·2	+3·1
	Bogra	90·8	87·9	+2·9
	Jalpaiguri	90·5	87·8	+2·7
	Barisal	88·8	86·3	+2·5
	Darbhanga	90·9	88·4	+2·5
	Dhubri	89·0	86·5	+2·5
	Benares	91·8	89·7	+2·1
	Allahabad	91·8	89·7	+2·1
	Gorakhpur	92·0	90·0	+2·0
South Madras	Negapatam	96·1	92·8	+3·3
	Trichinopoly	98·5	96·0	+2·5
	Cuddapah	94·8	92·7	+2·1

The mean maximum temperature of the month was below the normal in the remainder of India and Burma. The deficiency was moderately large in the greater part of the Central Provinces, Berar, Gujarat, Kathiawar and Cutch and locally at Poona. The following gives data for this area :—

Province.	Station.	Mean maximum temperature. Actual, August 1896.	Normal, August.	Variation of actual from normal.
		°	°	°
Kathiawar and Cutch	Rajkot	85·5	88·7	—3·2
	Bhuj	85·5	88·5	—3·0
Gujarat	Surat	84·5	86·9	—2·4
Berar	Amraoti	83·7	86·4	—2·7
	Akola	84·7	87·1	—2·4
Central Provinces	Nagpur	84·3	87·3	—3·0
	Chanda	84·8	87·8	—3·0
	Khandwa	82·9	85·7	—2·8
	Hoshangabad	83·1	85·2	—2·1
	Seoni	81·3	83·3	—2·0
Bombay Deccan	Poona	79·5	81·7	—2·2
Hyderabad Deccan	Hyderabad	84·1	86·1	—2·0

The mean minimum or night temperature of the month was above the normal in Burma, and the whole of India except the Central Provinces, Berar, Gujarat, Kathiawar, Cutch and the North Deccan. The variations were in almost all cases small in amount. They exceeded 2° at

stations in the South and Central Punjab as is shown by the following data :—

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, August 1896.	Normal, August.	Variation of actual from normal.
	°	°	°
Lahore	82·3	79·0	+3·3
Sialkot	79·6	77·4	+2·2
Mooltan	84·2	82·0	+2·2

The mean temperature of the month was above the normal over the whole of Northern India, South Madras and Upper and Central Burma and below it over the remainder of the Indian area. The variations were nowhere large in amount, but slightly exceeded 2° in four areas for which data are given below :—

PROVINCE.	STATION.	MEAN DAILY TEMPERATURE.		
		Actual, August 1896.	Normal, August.	Variation of actual from normal.
		°	°	°
South and Central Punjab.	Mooltan	94·0	91·1	+2·9
	Sialkot	88·2	85·7	+2·5
	Lahore	89·8	87·4	+2·4
North Bengal	Jalpaiguri	84·1	81·9	+2·2
	Bogra	85·1	82·9	+2·2
South Madras	Negapatam	87·1	84·9	+2·2
	Trichinopoly	88·3	86·2	+2·1
Cutch and Kathiawar	Bhuj	80·3	82·4	—2·1
	Rajkot	79·6	81·7	—2·1

The variations of the temperature conditions of the month at the hill stations were generally similar to those of the neighbouring plain districts but smaller in amount. The following gives comparative data for six stations :—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, August 1896.	Normal, August.	Variation of actual from normal.
	°	°	°
Murree	69·0?	67·5	+1·5?
Simla	63·7	63·6	+0·1
Ranikhet	68·1	67·2	+0·9
Darjeeling	61·8	61·4	+0·4
Mount Abu	67·2	68·2	—1·0
Wellington	63·8	64·1	—0·3

A noteworthy feature of the month was the unusually low temperature at Aden, Quetta, Kailang, and perhaps Leh. The following gives data :—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, August 1896.	Normal, August.	Variation actual from normal.
	°	°	°
Quetta	75·9	76·3	—0·4
Kailang	59·8	60·6	—0·8
Aden	84·5	86·3	—1·8

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

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	81·9	73·4	77·7	8·5	15·5	—0·6	0	—1·6
	Lower Burma (Deltaic)	83·3	75·6	79·4	7·7	14·0	—1·3	+0·1	—1·4
	Central do.	87·6	76·4	82·0	11·2	18·8	0	+0·9	—0·9
	Upper do.	87·4	63·9	80·6	13·5	20·7	—0·6	+1·2	—1·8
	Arakan	84·5	77·3	80·9	7·2	14·0	+0·1	+0·1	0
BENGAL AND ASSAM	Eastern Bengal	86·7	76·9	81·9	9·8	15·3	+1·5	+1·1	+0·4
	Assam (Surma)	91·1	77·2	84·2	13·9	23·8	+1·9	+0·5	+1·4
	Do. (Brahmaputra)	89·0	78·5	83·8	10·5	18·3	+0·9	+0·5	+0·4
	Deltaic Bengal	89·2	79·1	84·1	10·1	16·1	+1·1	+0·5	+0·6
	Central do.	90·1	79·0	84·6	11·1	17·4	+1·8	+0·9	+0·9
	North do.	90·8	78·6	84·7	12·2	18·6	+2·6	+1·1	+1·5
	Bengal Hills	65·2	52·9	59·1	12·3	19·9	0	+0·8	—0·8
	Orissa	88·1	79·1	83·6	9·0	17·3	+0·2	+0·5	—0·3
	Chota Nagpur	86·5	75·8	81·2	10·7	17·7	+0·5	+1·2	—0·7
	Bihar (South)	91·3	79·9	85·6	11·4	20·4	+1·7	+0·9	+0·8
	Do. (North)	91·6	80·0	85·8	11·6	18·7	+2·2	+1·8	+0·4

Province	Division.	Actual Temperature. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Variation from normal of Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
North-Western Provinces and Oudh.	North-Western Provinces (East)	91·8	79·8	85·8	12·0	20·7	+2·1	+1·2	+0·9
	Oudh (South)	92·4	79·5	85·9	12·9	23·5	+1·8	+1·0	+0·8
	Do. (North)	91·6	78·4	85·1	13·2	23·9	?	?	?
	North-Western Provinces (Central)	91·5	78·8	85·2	12·7	22·1	+1·1	+0·9	+0·2
	Do. do. (Do. West)	93·0	79·4	86·2	13·7	25·2	+2·5	+0·9	+1·6
	Do. do. (Submontane East)	92·0	79·2	85·6	12·8	23·1	+2·0	+0·3	+1·7
	Do. do. (Do. West)	89·3	75·9	82·6	13·4	26·1	+1·1	−0·2	+1·3
	Do. do. (Hills)	70·2	61·3	65·8	8·9	15·8	+0·1	+0·9	−0·8
Punjab	Punjab (South-East)	91·9	79·3	85·6	12·6	23·8	+0·3	+0·2	+0·1
	Do. (South)	95·5	80·2	87·9	15·3	27·9	+1·4	+1·9	−0·5
	Do. (Central)	97·5	82·3	89·8	15·2	31·0	+1·4	+3·3	−1·9
	Do. (Submontane)	93·5	78·9	86·2	14·6	27·5	+0·5	+1·5	−1·0
	Do. (Hill Districts)	78·3	58·8	68·6	21·2	32·7	+1·9	−0·3	+2·2
	Do. (North)	99·7	76·9	87·8	22·7	34·5	+1·8	+0·7	+1·1
	Do. (West)	102·3	82·4	92·3	19·9	34·7	+3·5	+2·2	+1·3
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	82·7	74·0	78·4	8·8	14·9	+0·1	−0·1	+0·2
	Madras (South Central)	90·1	71·7	80·9	18·5	25·4	+0·2	+0·5	−0·3
	Coorg	68·1	62·5	65·3	5·6	12·8	−2·4	+0·4	−2·8
	Mysore	79·3	65·8	72·6	13·5	20·7	−0·3	0	−0·3
	Konkan	82·2	75·5	78·9	6·7	12·1	−0·4	+0·3	−0·7
	Bombay Deccan	81·7	68·4	75·1	13·3	23·1	−1·6	−0·4	−1·2
	Hyderabad (North)	83·5	70·0	76·8	13·5	23·6	?	?	?
	Khandesh	83·4	69·9	76·7	13·5	25·2	−0·7	−0·1	−0·6
Central Provinces and Berar.	Berar	84·2	72·6	78·4	11·6	20·9	−2·6	−0·3	−2·3
	Central Provinces (West)	83·4	73·9	78·7	9·5	20·9	−2·6	−0·2	−2·4
	Do. (Central)	83·4	73·2	78·3	10·3	19·1	−1·5	−0·2	−1·3
	Do. (East)	85·9	75·9	80·9	10·0	16·8	−1·0	−0·2	−0·8
Bombay (North)	Gujarat	85·4	77·3	81·4	8·2	15·3	−2·4	+2·0	−4·4
	Kathiawar and Cutch	84·1	75·2	70·7	8·8	15·6	−3·1	−1·0	−2·1
	Sind	94·2	80·3	87·3	14·0	22·9	+1·0	+1·5	−0·5
	Baluchistan Hills	93·5	58·7	76·1	34·8	51·5	−0·5	−0·2	−0·3
Rajputana and Central India.	Central India (East)	85·1	74·6	79·8	10·5	18·3	−0·2	+0·6	−0·8
	Rajputana (East), and Central India (West).	88·4	76·1	82·3	12·4	20·7	−0·3	+0·9	−1·2
	Do. (West)	95·2	78·9	87·1	16·3	26·3	+2·1	+0·9	+1·2
Madras	East Coast (North)	88·5	78·3	83·4	10·3	20·2	−0·4	+0·3	−0·7
	Hyderabad (South)	86·4	72·0	79·2	14·4	24·9	−2·0	+1·0	−3·0
	Madras (Central)	91·6	74·4	83·1	17·2	25·9	+0·7	0	+0·7
	East Coast (Central)	92·1	77·6	84·9	14·5	25·2	−1·2	+0·3	−1·5
	Do. (South)	96·2	77·5	86·9	18·7	27·8	+1·9	+0·6	+1·3
	Madras (South)	93·4	78·0	85·7	15·4	24·3	+0·4	+1·2	−0·8

A brief account of the larger changes of the temperature conditions in India during the month is given below.

Temperature at the beginning of the month was in general excess in Northern India, and in defect in the

Peninsula. The following gives temperature variations for the 24 hours preceding 8 A.M. of the 1st :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	—2·1	—0·2	—1·2
Bengal and Assam	+1·8	+1·1	+1·5
N.-W. Provinces and Oudh	+6·4	+1·1	+3·8
Punjab	+2·2	+2·1	+2·2
Sind and Rajputana	+3·0	+1·7	+2·4
Central India and Gujarat	—3·4	+0·1	—1·7
Central Provinces and Berar	—0·8	+0·5	—0·2
Bombay	—1·5	+0·3	—0·6
Madras	—1·8	+0·9	—0·5

The rainfall accompanying the advance of the first storm of the month across the head of the Peninsula produced a general reduction of temperature, largest in amount in the broad belt covered by the storm in its progress. The following gives data for the period 2nd to the 5th for that area illustrating this feature :—

AREA.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	2nd August.	3rd August.	4th August	5th August.
	°	°	°	°
Orissa	—3·4	—3·5	—1·4	—0·1
Chota Nagpur	0	—3·0	—2·6	+0·2
Central Provinces and Berar	—3·0	—3·2	—3·9	—0·7
Central India	+0·3	+0·6	—1·8	—3·8
Gujarat, Kathiawar and Cutch	—2·6	—2·6	—3·1	—6·5

The Punjab had a moderate burst of rain from the 2nd to the 4th. This caused a moderate temporary reduction of temperature as is shown below :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	1st August.	2nd August.	3rd August.	4th August.	5th August.	6th August.
	°	°	°	°	°	°
Punjab	+2·2	+0·5	—4·9	—2·1	—0·3	+1·6

Temperature increased rapidly on the 6th, 7th and 8th, and the temperature conditions on the 9th were very similar to those of the 1st, as is shown by the following statement :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF			Variation from normal of mean temperature of 24 hours preceding 8 A.M. of 1st August.
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.	
	°	°	°	°
Burma	—1·0	—0·7	—0·9	—1·2
Bengal and Assam	+2·7	+1·2	+2·0	+1·5
N.-W. Provinces and Oudh.	+3·8	+0·4	+2·1	+3·8
Punjab	—1·4	+1·9	+0·3	+2·2
Sind and Rajputana	—0·8	+0·2	—0·3	+2·4
Central India and Gujarat	+1·1	+0·8	+1·0	—1·7
Central Provinces and Berar.	—1·2	+0·6	—0·3	—0·2
Bombay	—2·8	—0·7	—1·8	—0·6
Madras	—3·0	—0·4	—1·7	—0·5

The temperature changes were very irregular during the next week but the larger features re-established on the 8th and 9th were persistent throughout this period, *viz.*, increased temperature in Northern India and decreased temperature in the Peninsula. The following gives mean variation data for the 16th for comparison with those of the 9th :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	0	+0·5	+0·3
Bengal and Assam	+0·4	+0·6	+0·5
N.-W. Provinces and Oudh	+2·7	+1·8	+2·3
Punjab	+2·5	+4·0	+3·3
Sind and Rajputana	+3·1	+4·2	+3·7
Central India and Gujarat.	—2·7	+0·7	—1·0
Central Provinces and Berar	—2·2	+0·4	—0·9
Bombay	—3·2	0	—1·6
Madras	—2·8	+0·9	—1·0

The second storm of the month passed across the head of the Peninsula, but its effect in reducing temperature during its advance was slight.

The changes of the temperature conditions were irregular, but generally of small importance from the 17th to the

20th. Temperature was throughout in slight to large excess in the Punjab, Bengal and the Madras coast districts as is shown by the following data:—

Area.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	17th August.	18th August.	19th August.	20th August.
	°	°	°	
Punjab	+3·9	+5·5	+5·5	+1·3
Bengal	+1·4	+1·8	+2·6	+2·6
Madras Coast	+2·2	+2·5	+3·2	+3·0

The third storm of the month which formed at the head of the Bay on the 19th and 20th and advanced during the next three days across West Bengal into Bihar, gave a general burst of rain in North-Eastern India which reduced temperature considerably. The following statement gives variation data for that area from the 20th to the 24th:—

Area.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	20th August.	21st August.	22nd August.	23rd August.	24th August.
	°	°	°	°	°
Orissa	+1·2	−2·4	+1·2	+2·5	+3·6
Bengal	+2·6	+0·1	−0·5	+0·6	+1·3
Chota Nagpur	+0·4	−2·9	−3·6	+0·4	+2·4
South Bihar	−0·3	−1·5	−4·7	−3·4	−0·1
North Bihar	+2·9	−0·2	−1·5	−3·1	−0·2

Temperature increased generally on the 23rd and 24th, and was more or less in excess on the 25th over the whole of India as is shown by the variation data for the 24 hours preceding 8 A.M. of that day:—

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

The Central Provinces and Berar received moderate rain from the 27th to the 29th, and temperature was in moderate to considerable defect in those areas during that period:—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	27th August.	28th August.	29th August.	30th August.	31st August.
	°	°	°	°	°
Central Provinces	−1·7	−3·4	−2·8	−2·0	0
Berar	−6·3	−5·4	−3·7	−0·2	+1·3
Central India	+2·5	−1·2	−1·1	+0·2	+1·4

Temperature was throughout this period from the 27th to the end of the month in general excess over the remainder of India and in Burma. The excess was large and marked in the Punjab and the Madras coast districts, and was chiefly exhibited in the day temperature. The two following tables give the variations of the maximum and minimum temperatures from the normal in these two areas:—

Area.	Variation from normal of mean maximum temperature of 24 hours preceding 8 A.M. of				
	27th August.	28th August.	29th August.	30th August.	31st August.
	°	°	°	°	°
Punjab	+5·3	+6·5	+7·9	+6·0	+5·9
Madras Coast	+1·7	+4·4	+5·7	+5·7	+7·0

Area.	Variation from normal of mean minimum temperature of 24 hours preceding 8 A.M. of				
	27th August.	28th August.	29th August.	30th August.	31st August.
	°	°	°	°	°
Punjab	+2·9	+2·9	+3·4	+2·4	+2·5
Madras Coast	+1·1	+0·8	+1·7	+2·6	+3·1

Temperature increased over the whole area on the 30th and 31st and was in general excess on the 31st as is

shown by the following variation data for the 24 hours preceding 8 A.M. of that date :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·5	+2·2	+1·4
Bengal and Assam	+2·0	+1·8	+1·9
N.-W. Provinces and Oudh	+4·4	+1·7	+3·1
Punjab	+5·9	+2·5	+4·2
Sind and Rajputana	+3·0	+0·3	+1·7
Central India and Gujarat	+0·9	+0·2	+0·6
Central Provinces and Berar	−0·1	+0·2	+0·1
Bombay	+2·1	−0·2	+1·0
Madras	+6·2	+2·8	+4·5

The following table gives variation data of the mean temperature, week by week, during the month and of the whole month. The data are taken from the weekly weather reviews published in the *Gazette of India* :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M OF				
	8th August.	15th August.	22nd August.	29th August.	For whole month.
	°	°	°	°	°
Burma	−0·4	−0·8	+0·2	+0·3	−0·2
Bengal and Assam	+0·3	+1·8	+0·8	+1·7	+1·2
N.-W. Provinces and Oudh	+1·0	+1·2	+0·1	+1·3	+1·2
Punjab	−1·2	+1·0	+2·1	+3·0	+1·5
Sind and Rajputana	−0·9	+1·5	+0·4	+2·6	+1·0
Central India and Gujarat	−1·3	+0·3	−1·3	+0·1	−0·6
Central Provinces and Berar	−1·5	−1·6	−0·6	−0·9	−1·1
Bombay	−0·4	−1·5	+0·2	+0·1	−0·4
Madras	−1·0	−1·7	+1·5	+1·7	+0·3

Winds.

Winds were on the average of the month stronger and steadier and more westerly than usual at Port Blair and the Burma coast stations. The following gives data in illustration :—

STATION.	VELOCITY IN MILES PER DIEM.			WIND DIRECTION.		
	Mean actual, August 1896.	Mean normal, August.	Percentage variation from normal.	Mean actual, August 1896.	Mean normal, August.	Westerly deflection.
						°
Port Blair	403	228	+ 77	S61°W	S43°W	+18
Diamond Island	330	164	+101	S58°W	S44°W	+14
Rangoon	99	113	−12	S53°W	S34°W	+19

The abnormal features of the air movement in this area were similar in character to those which obtained in August 1895.

The monsoon current was approximately of normal velocity in Bengal and the Gangetic Plain. The following gives comparative data :—

AREA.	VELOCITY IN MILES PER DIEM.			
	Mean actual, August 1896.	Mean normal, August.	Variation from normal.	Percentage variation from normal.
Bengal Coast	246	269	−23	− 9
„ Inland	132	115	+17	+15
Bihar	131	97	+34	+35
Chota-Nagpur	206	180	+26	+14
N.-W. Provinces and Oudh	80	76	+ 4	+ 5

Winds were in August 1896, as in the preceding month, much more easterly than usual in Bengal, more especially South Bengal. This was a result of the same general conditions and actions which determined the advance of the first two storms of the month along the same track as was followed by the storms of the preceding month. In the following table are given data showing the amount of

the easterly deflection in the mean winds of the month and corresponding data of the last month for six stations:—

STATION.	WIND DIRECTION.			WIND DIRECTION.		
	Mean actual, July 1896.	Mean normal, July.	Increased easting.	Mean actual, August 1896.	Mean normal, August.	Increased easting.
			°			°
Saugor Island	S 1°E	S24°W	+25	S 9°E	S17°W	+26
Calcutta	S30°E	S11°E	+19	S49°E	S17°E	+32
Dacca	S28°E	S19°E	+ 9	S35°E	S14°E	+21
Burdwan	S37°E	S26°E	+11	S61°E	S27°E	+34
Berhampore	S51°E	S41°E	+10	S59°E	S40°E	+19

The mean position of the trough of low pressure during the month was (as in August 1895 and in July 1896) somewhat further south than usual more especially in its eastern half. The following table gives data showing the unsteadiness or variability of the winds at the stations nearest the axis of the trough :—

STATION.	WIND DIRECTION.		STEADINESS.		
	Mean actual, August 1896.	Mean normal, August.	Mean actual percentage, August 1896.	Mean normal percentage, August.	Variation from normal.
Hazaribagh	N 67°E	S 50°W	32	7	+25
Allahabad	N 21°E	N 40°E	24	4	+20
Agra	N 74°W	S 22°E	24	10	+14
Meerut	S 22°W	N 80°E	18	5	+13
Lahore	N 60°W	S 83°E	5	27	—22
Peshawar	N 16°W	N 40°E	16	55	—39

Northerly winds prevailed to an unusual extent in South Bihar, Chota Nagpur, the North-Western Provinces and the eastern districts of the Punjab, and the mean wind directions at all stations in that area had a strong northerly component. The following gives mean wind direction data for six stations :—

STATION.	WIND DIRECTION.	
	Mean actual, August 1896.	Mean normal, August.
Hazaribagh	N 67°E	S 50°W
Patna	N 86°E	S 19°E
Allahabad	N 21°E	N 40°E
Lucknow	N 64°E	S 77°E
Roorkee	N 37°W	S 36°E
Lahore	N 60°W	S 83°E

The Bombay monsoon current was of normal strength, as judged by the mean velocity of the winds at the west coast stations. Winds at the interior stations under the influence of that current only were considerably stronger than usual especially, in the Deccan.

The following table gives the mean daily wind velocity at eleven stations :—

STATION.	VELOCITY IN MILES PER DIEM.			
	Mean actual, August 1896.	Mean normal, August.	Variation from normal.	Percentage variation from normal.
Coast—				
Kurrachee	353	409	—56	—11
Bombay	359	384	—25	— 7
Ratnagiri	240	242	— 2	— 1
Interior—				
Deesa	272	288	—16	— 6
Sholapur	332	279	+53	+19
Belgaum	521	497	+24	+ 5
Akola	233	194	+39	+20
Khandwa	244	192	+52	+27
Nagpur	233	144	+89	+62
Bellary	271	262	+ 9	+ 3
Trichinopoly	211	198	+13	+ 7

The preceding table gives data for stations under the sole influence of the Bombay current during the month. The data establish that the current was slightly weaker at the coast stations and considerably stronger at the interior stations. The data for all the hill stations in Central and Southern India show that the winds at those stations were considerably above their normal strength during the month, *e.g.* :—

HILL STATION.	VELOCITY IN MILES PER DIEM.			
	Mean actual, August 1896.	Mean normal, August.	Variation from normal.	Percentage variation from normal.
Mount Abu	278	254	+ 24	+ 9
Pachmarhi	347	179	+168	+94
Chikalda	366	256	+110	+43
Mercara	266	199	+ 67	+34
Wellington	110	87	+ 23	+26

What relations these opposite variations in the strength of the winds at the coast and the hill stations bear to

the abnormal features in the monsoon current can as yet only be conjectured.

Winds were less westerly than usual at the Konkan and Malabar coast stations :—

STATION.	WIND DIRECTION.	
	Mean actual, August 1896.	Mean normal, August.
Bombay	S 77°W	S 81°W
Karwar	N 84°W	W
Cochin	N 61°W	N 85°W

The mean wind directions at the west coast stations and in Mysore, the Deccan and the Central Provinces differed little from the normal. They were, as might be expected from the conditions of the month, slightly less westerly and more northerly than usual.

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 55°W, the normal being S 40° W.

It is interesting to note in connection with the meteorology of the month in India that winds were steadier than usual at Zanzibar, and were also somewhat more easterly than usual at the Seychelles and Zanzibar as was also the case in August 1895.

Humidity and Cloud.

The air was, on the mean of the month, of normal humidity at Port Blair and very slightly damper than usual in Burma and Arakan. It was, on the other hand, somewhat drier than usual in Bengal, Bihar, Chota Nagpur, and the eastern districts of the North-Western Provinces. The decreased humidity in these areas was solely a temperature effect as the air contained a slightly larger amount of aqueous vapour than usual. The following table gives comparative data for this area of decreased humidity :—

DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Average actual, August 1896.	Average normal, August.	Variation from normal.
	"	"	"	%	%	
Assam	·956	·930	+·026	85	85	0
Bengal	·958	·956	+·002	85	87	—2
Orissa	·932	·920	+·012	84	83	+1
Chota Nagpur . .	·818	·802	+·016	84	85	—1
Bihar	·980	·958	+·022	82	84	—2
North-Western Provinces (East).	·964	·947	+·017	80	83	—3

The air was damper, both absolutely and relatively, over the large area including the South and East Punjab, the western districts of the North-Western Provinces, Rajputana, Central India, the Central Provinces and Berar.

In the following table are given comparative data for this area of increased humidity in August 1896 :—

DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Average actual, August 1896.	Average normal, August.	Variation from normal.
	"	"	"	%	%	
Punjab (East) . .	·898	·870	+·028	71	68	+3
North-Western Provinces (West).	·896	·865	+·028	78	76	+2
Rajputana . .	·846	·797	+·049	80	76	+4
Central India . .	·917	·843	+·074	85	80	+5
Berar . . .	·731	·724	+·007	81	78	+3
Central Provinces .	·820	·798	+·022	86	82	+4

The excess in the mean relative humidity was more than 5 at the stations for which data are given below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, August 1896.	Normal, August.	Variation from normal.	Actual, August 1896.	Normal, August 1896.	Variation from normal.
	"	"	"	%	%	
Deesa	·849	·797	+·052	82	75	+7
Jubbulpore . .	·858	·808	+·050	89	82	+7
Ajmere . . .	·860	·779	+·081	82	76	+6
Nowgong . . .	·945	·857	+·088	86	80	+6
Akola	·774	·747	+·027	81	75	+6

The air was slightly drier than usual in the west coast districts and over the greater part of South and Central Madras and the South Deccan. The deficiency was marked in the areas represented by the stations for which data are given below :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, August 1896.	Normal, August.	Variation from normal.	Actual, August 1896.	Normal, August.	Variation from normal.
	"	"	"	%	%	
Trichinopoly . .	·623	·716	—·093	49	61	—12
Salem . . .	·720	·762	—·042	69	74	— 5
Bellary . . .	·614	·667	—·053	59	64	— 5
Wellington . .	·421	·439	—·018	73	77	— 4

The mean humidity of the month was on the whole in slight excess at the hill stations in Northern and Central India. The following gives data for five stations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMILITY.		
	Actual, August 1896.	Normal, August.	Variation from normal.	Actual, August 1896.	Normal, August.	Variation from normal.
	"	"	"	%	%	
Quetta . . .	·390	·394	—·004	46	46	0
Simla . . .	·527	·535	—·008	91	91	0
Ranikhet . . .	·592	·570	+·022	88	87	+1
Darjeeling . .	·524	·505	+·019	96	94	+2
Mount Abu . .	·632	·603	+·029	96	90	+6

The following summarizes the chief abnormal features of the mean hygrometric conditions of the month :—

(1) Humidity was on the mean of the month in slight excess in Burma and Arakan.

(2) It was normal or in slight to moderate defect in Assam, Bengal, Bihar, Chota Nagpur and the eastern and southern districts of the North-Western Provinces and also in the North and West Punjab.

(3) The air was damper in the East Punjab, the western districts of the North-Western Provinces and adjacent hills, Rajputana, Central India, Berar and the Central Provinces.

(4) The air was slightly drier in the Konkan and Malabar coast districts and much drier in the interior districts of Madras represented by the stations of Trichinopoly, Salem and Bellary.

The variations in the amount of cloud differed considerably in their distribution from those of the humidity of the air stratum near the earth's surface. Cloud was in excess in the Bay Islands, Burma, Assam, East Bengal, Orissa, Chota Nagpur, South Bihar and the eastern and central districts of the North-Western Provinces. The excess was large at Port Blair (+2·0) and in Lower Burma more especially at Diamond Island (+1·9). The following gives comparative data for these areas :—

AREA.	MEAN CLOUD AMOUNT.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.
Burma	9·1	8·1	+1·0
Assam	8·3	7·7	+0·6
Bengal (East)	8·1	7·6	+0·5
Orissa	7·7	7·5	+0·2
Chota Nagpur	9·8	8·8	+1·0
Bihar (South)	8·7	8·1	+0·6
North-Western Provinces (East) .	8·3	7·5	+0·8
Oudh, South	7·9	7·5	+0·4

There was less cloud than usual in South and Central Bengal and in the western districts of the North-Western Provinces. The following gives data for five representative stations :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, August 1896.	Normal, August.	Variation from normal.
Calcutta	7·8	8·2	—0·4
Burdwan	7·6	8·3	—0·7
Berhampore	8·0	8·8	—0·8
Meerut	5·6	6·4	—0·8
Roorkee	6·1	6·2	—0·1

The variations were irregular and generally small in amount in the Punjab, Upper Sind, Rajputana and Central India.

Cloud was in large excess in Berar, the Central Provinces and the west coast districts as is shown by the following statement :—

AREA.	MEAN CLOUD AMOUNT.		
	Average actual, August 1896.	Average normal, August	Variation from normal.
Berar	8·5	7·9	+0·6
Central Provinces	8·5	7·6	+0·9
West Coast	8·0	7·3	+0·7

The mean amount of cloud was normal in the Bombay Deccan, and was considerably to largely above the normal in the Madras Deccan and the north and central coast districts and Mysore.

The following gives mean data:—

Area.	Mean cloud amount.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.
Bombay Deccan	8·6	8·5	+0·1
Madras „	8·5	6·9	+1·6
Madras (Coast)	7·4	6·5	+0·9
Mysore	8·0	6·3	+1·7

Cloud was, on the other hand, in large defect in South India as represented by Trichinopoly (—2·1) and Wellington (—0·2). There was less cloud than usual at Leh, Murree, Chamba and Kailang, but more at Simla, Chakrata and Ranikhet. The deficiency was very large at Murree where the mean cloud amount of the month was only 4·9 or 1·6 below the normal.

The following gives a brief summary of the chief features of the cloud distribution of the month:—

(1) There was a large excess of amount of cloud over by far the greater part of the country. The excess was large in Lower Burma and the Central Provinces.

(2) There was a local deficiency of cloud in four areas:—South Bengal, the East Punjab and adjacent district of the North-Western Provinces, the North Punjab and Kashmir Hills and South Madras. The deficiency was absolutely greatest at Trichinopoly (—2·1), Mount Abu (—1·9), Murree (—1·6).

Rainfall.

The rainfall in August is generally heavy over the greater part of India, for the rain bearing currents which are fully established in July are maintained throughout the whole of August, though their strength in August is usually not so great as in July. In August also there is a 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 precipitation in August is, however, very similar to that in July. The areas of heaviest rainfall are the west coast districts of the Peninsula, Arakan, Lower Pegu, Tenasserim, Assam, the Sikkim-Himalayas, South-East Bengal and parts of Central Bengal and of the Central Provinces. On the other hand, the rainfall is light and scanty in Central Burma, the southern districts of Madras, including Tinnevelly, Madura and parts of Coimbatore and Salem, Upper Sind and the West Punjab. The normal rainfall in August varies from average amounts of thirty-eight inches in Tenasserim and thirty-two inches in Arakan to about two inches in Sind, the West Punjab and South Madras.

The distribution of the rainfall in August was mainly dependent on the following factors:—

(1) The Bengal current was moderately strong throughout the whole month,

(2) The Bombay current was strong during the first three weeks, but feeble during the last ten days of the month.

(3) The tracks of the cyclonic storms of the month.

The first and second storms of the month were of moderate intensity and advanced along the same westerly course as the storms of July. They hence gave moderate to heavy rain along a wide belt of country including Orissa, Chota Nagpur, the Central Provinces, Central India South-West Rajputana, Gujarat, Kathiawar and Cutch. The third storm of the month was of slight intensity. It advanced from the Bengal Coast to Central and North Bihar, and gave an unusually favourable and timely burst of rain to Bihar and Bengal. The fourth storm was of very slight intensity and advanced from the north-west of the Bay to the central districts of the Central Provinces. The chief periods of most general rain were determined by the four cyclonic storms of the month and were as follows:—

(1) From the 1st to the 5th. South-West Bengal, Chota Nagpur, Orissa, the Central Provinces, Berar, the North Deccan, Gujarat and Central India, Kathiawar, Cutch and Lower Sind obtained moderate to heavy rain during this period from the first storm of the month. Its disappearance was followed by an advance of humid winds to Upper India on the 6th and 7th, on which days Rajputana, the East Punjab and the western districts of the North Western Provinces obtained moderate rain.

(2) From the 12th to the 17th. Moderate to heavy rainfall was received during the progress of the second storm in South Bengal, Chota Nagpur, Orissa, the Central Provinces, Central India, North Bombay, the Konkan, Gujarat, Kathiawar, Cutch and Lower Sind. The North-Western Provinces obtained a moderately heavy burst on the 19th and 20th after the disappearance of the storm.

(3) From the 20th to the 23rd. Bengal, Orissa, Bihar and Chota Nagpur obtained a general burst of rain during this period. The rainfall was heavy in Bihar.

(4) From the 26th to the 29th. Orissa, the Central Provinces, Berar, Baghelkhand and Bundhelkhand obtained moderate rain from the fourth depression of the month.

Southern India obtained moderate rain in the interval between the first and second disturbances.

The preceding remarks have stated the chief periods during 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 give a summary of the most important features of the rainfall of the month:—

(1) Rainfall was in slight to moderately large excess over Arakan and Burma.

(2) It was in moderate to large defect in Assam, Bengal, Bihar and Chota Nagpur and in slight excess in Orissa.

(3) The rainfall of the month was very irregularly distributed in the North-Western Provinces but was generally in defect.

(4) The total rainfall of the month was in large excess in the Central Provinces, normal in Berar and in moderate to considerable defect in Central India and Rajputana.

(5) Rainfall was irregularly distributed in the Deccan and Southern India. It was in large excess in Malabar and practically normal in Mysore and Madras, except the southern districts where it was in moderate to considerable defect.

The following table gives comparative rainfall data of the month for the 58 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 cases of Burma, Assam, Berar, Mysore, the Central Provinces, Bombay and Hyderabad, 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 1896.	Average normal, August.	Average actual, August 1896.	Average normal, August.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	53·15	36·80	+16·35
	Lower Burma (Deltaic)*	?	?	29·19	20·19	+ 9·00
	Central do.*	?	?	15·02	12·87	+ 2·15
	Upper do.*	?	?	6·04	?	?
	Arakan*	?	?	53·72	30·39	+23·33
Bengal and Assam	Eastern Bengal	12·9	17·9	7·26	16·10	— 8·84
	Assam (Surma)*	?	?	18·09	25·08	— 6·99
	Do. (Hill tracts)*	?	?	15·67	26·72	—11·05
	Do. (Brahmaputra)*	?	?	12·99	13·96	— 0·97
	Deltaic Bengal	14·7	15·9	8·35	12·19	— 3·84
	Central do.	11·5	14·9	7·35	11·34	— 3·99
	North do.	9·4	15·9	7·39	16·78	— 9·39
	Bengal Hills	20·9	22·4	22·27	27·98	— 5·71
	Orissa	16·5	15·1	15·62	11·98	+ 3·64
	Chota Nagpur	17·1	16·5	12·64	13·78	— 1·14
	Bihar (South)	8·7	13·4	9·63	11·81	— 2·18
	Do. (North)	8·7	14·0	8·28	12·62	— 4·34
North-Western Provinces and Oudh.	North-Western Provinces (East)	10·9	12·5	8·27	10·79	— 2·52
	Oudh (South)	10·2	12·4	6·98	10·47	— 3·49
	Do. (North)	13·4	11·7	15·98	10·44	+ 5·54
	North-Western Provinces (Central)	9·2	11·8	6·20	10·55	— 4·35
	Do. do. (West)	6·0	9·3	4·27	7·70	— 3·43
	Do. do. (Submontane East)	9·1	12·2	10·39	10·78	— 0·39
	Do. do. (do. West)	11·8	12·2	14·89	13·11	+ 1·78
	Do. do. (Hills)	15·0	18·5	17·91	16·52	+ 1·39
Punjab	Punjab (South-East)	4·6	7·4	4·24	5·91	— 1·67
	Do. (South)	5·3	4·8	3·68	4·13	— 0·45
	Do. (Central)	4·7	5·1	4·53	4·75	— 0·22
	Do. (Submontane)	8·6	7·9	8·56	8·25	+ 0·31
	Do. (Hill Districts)	12·8	15·3	17·55	16·67	+ 0·88
	Do. (North)	5·0	5·4	4·56	4·78	— 0·22
	Do. (West)	2·5	2·8	1·77	2·07	— 0·30
Bombay and Malabar Coast Districts, Madras.	Malabar Coast	26·5	21·8	33·65	20·13	+13·52
	Travancore	14·9	?	10·38	?	?
	Madras (South Central)	5·4	5·6	1·96	3·49	— 1·53
	Coorg	2·7	?	22·75	?	?
	Mysore*	?	?	5·37	5·14	+ 0·23
	Konkan*	?	?	38·34	23·28	+15·06
	Bombay Deccan*	?	?	8·93	4·85	+ 4·08
	Khandesh*	?	?	3·46	4·79	— 1·33
Central Provinces and Berar.	Berar*	?	?	7·53	6·93	+ 0·60
	Central Provinces (West)*	?	?	14·64	9·12	+ 5·52
	Do. do. (Central)*	?	?	21·42	12·67	+ 8·75
	Do. do. (East)*	?	?	22·13	12·04	+ 10·09
Bombay (North)	Gujarat*	?	?	12·82	9·40	+ 3·42
	Kathiawar*	?	?	5·64	3·82	+ 1·82
	Sind*	?	?	1·69	1·50	+ 0·19
	Baluchistan Hills	1·6	?	0·79	0·43	+ 0·36

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

Province.	Division.	Number of rainy days. Average actual, August 1896.	Number of rainy days. Average normal, August.	Rainfall. Average actual, August 1896.	Rainfall. Average normal, August.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Rajputana and Central India.	Central India (East)	12·3	?	10·97	12·37	— 1·40
	Rajputana (East), Central India (West)	8·1	?	6·32	9·73	— 3·41
	Rajputana (West)	3·8	?	2·83	4·48	— 1·65
Madras	East Coast (North)	11·9	10·0	8·32	7·08	+ 1·24
	Do. (do.) (a)	27·0	17·7	26·75	12·75	+14·00
	Hyderabad (South)*	?	?	6·83	5·85	+ 0·98
	Madras (Central)	7·0	5·9	3·50	4·30	— 0·80
	East Coast (Central)	8·8	5·2	5·29	3·06	+ 2·23
	Do. (South)	7·2	7·4	3·74	5·16	— 1·42
	Madras (South)	1·7	3·3	0·55	2·02	— 1·47

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

Arakan, Tenasserim and Lower Burma received steady daily rain during the month. The Northern districts obtained frequent rain but the rainfall was very scanty in a large part of Upper Burma including the districts of Yamethin, Meiktila, Magwe, Minbu, Pakokku, Myingyan and Sagaing for which data are given below:—

District.	Rainfall. Average actual August 1896.	Rainfall. Average normal August.	Rainfall. Variation from normal.
	Inches.		
Yamethin	3·29	?	?
Meiktila	2·22	?	?
Magwe	3·33	?	?
Minbu	2·42	?	?
Pakokku	3·88	?	?
Myingyan	2·03	?	?
Sagaing	2·82	?	?

Normal averages for these districts are not yet available as sufficient data have not yet been collected to give satisfactory normals. The rainfall of the month was almost certainly in considerable to large defect in these districts.

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

Divisions.	Rainy Days. Average actual, August 1896.	Rainy Days. Average normal, August.	Rainfall. Average actual, August 1896.	Rainfall. Average normal, August.	Rainfall. Variation from normal.
Tenasserim	29·0	?	49·59	?	?
Lower Burma	27·5	?	26·20	?	?
Central Do.	18·9	?	11·66	?	?
Upper Do.	8·0	?	5·40	?	?
Arakan	27·8	?	49·86	?	?

The rainfall of the month was very deficient in Assam. Cachar received moderate general rain from the 1st to the 10th during which the Assam Valley obtained light daily showers more or less local in character.

Light occasional showers only fell during the next five days. This was followed by a period of somewhat heavier and more general rain, more especially in Cachar, extending from the 16th to the 23rd. Light local showers were received during the next six days.

General and heavy rain commenced on the 30th. The heaviest fall in 24 hours at Cherrapunji was 5·63 inches registered on the 31st. The total rainfall of the month at that station was only 39·71 inches or barely 54 per cent. of the normal.

Similarly Jowai received a total of only 12·70 inches or 31 per cent. of its average amount.

The following gives comparative data of the rainfall of the month in the plain districts.

District.	Rainfall. Average actual, August 1896.	Rainfall. Average normal, August.	Rainfall. Variation from normal.
	Inches.	Inches.	Inches.
Cachar	21·95	17·97	+3·98
Sylhet	15·21	23·09	—7·88
Goalpara	9·16	12·23	—3·07
Kamrup	9·96	11·61	—1·65
Darrang	12·72	11·46	+1·26
Nowgong	12·28	14·64	—2·36
Sibsagar	18·68	14·26	+4·42
Lakhimpur	16·16	17 44	—1·28

Rain was received during the month in Bengal, chiefly in connection with the cyclonic storms, and its distribution in different parts of the province depended upon their distance from the tracks of the storms. Orissa, Chota

Nagpur, South-West and East Bengal received moderate and fairly general rain from the 1st to the 5th. Occasional showers fell in Bihar and North Bengal but the amounts were small and of little importance.

East and South-West Bengal received moderate showers on the 8th, 9th and 10th. A partial break in the rains obtained over the remainder of the province from the 6th to the 10th or 11th.

The second storm of the month gave a moderate burst of rain from the 13th to the 15th in Orissa, South-West and East Bengal and Chota Nagpur, and light local showers in Bihar and North Bengal.

The heaviest and most general burst of rain was received from the third storm of the month which advanced from the Bengal Coast to North Bihar. It gave moderate rain to South-West Bengal and Chota Nagpur from the 20th to the 23rd and heavy rain in Bihar during the same period, but more especially on the 22nd and 23rd. The following gives a statement showing the distribution of the rainfall during the period:—

Division.	Average actual rainfall of 24 hours preceding 8 A.M. of date				
	20th	21st	22nd	23rd	Total of period.
	Inch.	Inches.	Inches.	Inches.	Inches.
Bengal (South-West)	0·45	1·39	0·24	0·65	2·73
Orissa	0·69	0·12	0·04	0·25	1·10
Chota Nagpur	0·85	1·90	0·60	0·27	3·62
Bihar (South)	0·83	1·51	2·50	0·84	5·68
Bihar (North)	0·90	0·71	1·93	1·58	5·12

Light occasional showers were received during the remainder of the month, but a partial break in the rains obtained generally. It was most pronounced in Bihar and South Bengal.

The following gives a summary of the rainfall data of the month published in the *Calcutta Gazette* for the nine divisions of the province :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Average actual, August 1896.	Average normal, August.	Variation from normal.
				Inches.	Inches.	Inches.
Eastern Bengal	12·9	17·9	−5·0	7·26	16·10	−8·84
Deltaic „	14·7	15·9	−1·2	8·35	12·19	−3·84
Central „	11·5	14·9	−3·4	7·35	11·34	−3·99
North „	9·4	15·9	−6·5	7·39	16·78	−9·39
Bengal Hills	20·9	22·4	−1·5	22·27	27·98	−5·71
Orissa	16·5	15·1	+1·4	15·62	11·98	+3·64
Chota Nagpur	17·1	16·5	+0·6	12·64	13·78	−1·14
Bihar (South)	8·7	13·4	−4·7	9·63	11·81	−2·18
„ (North)	8·7	14·0	−5·3	8·28	12·62	−4·34

The preceding data indicate that the rainfall was below the normal in all divisions except Orissa, and that it was in serious defect in North Bihar and North and East Bengal. The deficiency was more than 38 per cent. in the districts for which data are given below :—

Division.	District.	Rainfall.			
		Average actual, August 1896.	Average normal, August.	Variation from normal.	Percentage variation from normal.
		Inches.	Inches.	Inches	
North Bihar	Purnea	7·15	15·29	− 8·14	−53
	Bhagalpur	6·86	11·67	− 4·81	−41
North Bengal	Bogra	3·25	11·90	− 8·65	−73
	Jalpaiguri	8·08	25·82	−17·74	−69
	Dinajpur	3·99	12·53	− 8·54	−68
	Cooch Behar	7·03	21·90	−14·87	−68
	Pubna	5·01	11·17	− 6·16	−55
	Rangpur	6·33	12·37	− 6·04	−49
East Bengal	Tippera	4·18	15·02	−10·84	−72
	Mymensingh	4·82	15·20	−10·38	−68
	South Lushai Hills	7·30	18·03	−10·73	−60
	Chittagong	10·72	22·25	−11·53	−52
	Dacca	6·61	12·26	− 5·65	−46
	Faridpur	6·47	11·70	− 5·23	−45
	Backergunge	9·39	15·30	− 5·91	−39

The deficiency was hence large in all these districts. It was more than 50 per cent. in two areas. The first included Purnea, Dinajpur, Jalpaiguri, Bogra, Cooch Behar and Pubna in North Bengal and North Bihar and the second a part of East Bengal, including the Tippera, Mymensingh and Chittagong districts. The deficiency was mainly due to the diversion of the humid currents westwards caused by the indraught to the storms of the month.

Rain was received in the North-Western Provinces chiefly during two periods, *viz.*, from the 1st to the 12th and from the 18th to the 24th. The rainfall of the first period was very irregularly distributed and was due chiefly to light local showers. It was especially scanty in the north-east and central divisions and in a part of the western division including the Agra, Muttra and Aligarh districts and in the greater part of Oudh. The hill districts received a very

heavy downpour on the 9th and 10th. The following large amounts were recorded during this period :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Dehra Dun	Raipur	9th	5·65
,,	Rajpur	,,	5·60
Naini Tal	Ramnagar	,,	6·90
,,	Kathgadom	,,	5·50
Dehra Dun	Dehra (Leper Asylum)	10th	10·71
,,	Raipur	,,	10·00
,,	Mussooree	,,	9·60
,,	Dehra	,,	8·48
,,	Rajpur	,,	8·30
,,	Ambari	,,	7·20
,,	Chakrata	,,	5·65

A well marked break obtained over the province from the 13th to the 17th. The rainfall during the second period was light and sporadic over a large part of the province but was heavy in the south-east division and also in the sub-montane and hill districts. The following gives the most noteworthy falls :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Bareilly	Nawabganj	19th	10·20
,,	Choreli	,,	6·50
Pilibhit	Pilibhit	,,	8·13
,,	Puranpur	,,	5·70
,,	Bisalpur	,,	5·60
Naini Tal	Ramnagar	,,	6·20
,,	Haldwani	,,	5·40
,,	Satina	20th	5·50
Bareilly	Pandhera	,,	7·00
,,	Baheri	,,	5·50
Pilibhit	Bisalpur	,,	5·55

The rainfall during this period was especially scanty in the western and central divisions.

The following is a summary of the published rainfall data for the month :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Average actual, August 1896.	Average normal, August.	Variation from normal.
				Inches.	Inches.	Inches.
North-Western Provinces (East).	10·9	12·5	—1·6	8·27	10·79	—2·52
Oudh (South)	10·2	12·4	—2·2	6·98	10·47	—3·49
,, (North)	13·4	11·7	+1·7	15·98	10·44	+5·54
North-Western Provinces (Central).	9·2	11·8	—2·6	6·20	10·55	—4·35
North-Western Provinces (West).	6·0	9·3	—3·3	4·27	7·70	—3·43
North-Western Provinces (Submontane East).	9·1	12·2	—3·1	10·39	10·78	—0·39
North-Western Provinces (Submontane West).	11·8	12·2	—0·4	14·89	13·11	+1·78
North-Western Provinces (Hills).	15·0	18·5	—3·5	17·91	16·52	+1·39

The table shows that the rainfall of the month was in slight to moderate excess in the submontane and hill districts and was in considerable to large defect in South Oudh (33 per cent.), the central division of the North-Western Provinces (41 per cent,) and the western division (45 per cent.).

The following table gives comparative data for all districts in which the rainfall of the month was more than 33 per cent. below the normal :—

District.	Rainfall.			
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Mainpuri	3·21	10·88	—7·67	—70
Etawah	3·30	10·22	—6·92	—68
Agra	2·77	8·28	—5·51	—67
Muttra	3·02	7·17	—4·15	—58
Banda	5·45	12·12	—6·67	—55
Lucknow	5·06	10·68	—5·62	—53
Farukhabad	4·71	9·96	—5·25	—53
Muzaffarnagar	4·26	8·08	—3·82	—47
Hardoi	5·47	10·06	—4·59	—46
Jaunpur	6·71	11·92	—5·21	—44
Meerut	4·45	7·97	—3·52	—44
Cawnpore	5·62	9·89	—4·27	—43
Unao	6·25	10·47	—4·22	—40
Fatehpur	5·95	9·92	—3·97	—40
Azamgarh	6·66	11·17	—4·51	—40
Rai Bareli	6·65	10·63	—3·98	—37
Allahabad	6·51	9·88	—3·37	—34
Jalaun	6·61	10·07	—3·46	—34

The rainfall of the month in the Punjab differed little from the normal in all divisions except the South-east where it was in marked defect. The following gives a statement of the chief periods of rainfall in the province :—

1st.—The 2nd and 3rd. The Submontane and Central divisions had moderate rain and the hill districts heavy rain.

2nd.—The 6th and 7th, during which the Central Submontane and North-west divisions had moderate but fairly general rain.

3rd.—The 9th, 10th and 11th. The Hill and Submontane divisions obtained heavy to moderate rain. The Umballa district received a heavy downpour on the 10th when 8·6 inches were registered at Umballa City. The following large amounts were recorded at stations in Kangra during this period :—

Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
		Inches.
Kangra	9th	5·26
Dharmsala	,,	5·90
Kangra	10th	7·93
Palampur	,,	6·76
Hamirpur	,,	5·21

4th.—The 19th to the 22nd. Heavy rain was received during this period in the hill districts and in the Submontane and North-west divisions, and local showers over the remainder of the province.

Fine dry weather prevailed during the remainder of the month. The following gives comparative data of the rainfall of the month in the seven divisions of the province :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Average actual, August 1896.	Average normal, August.	Variation from normal.
				Inches.	Inches.	Inches.
Punjab (South-East)	4·6	7·4	—2·8	4·24	5·91	—1·67
,, (South)	5·3	4·8	+0·5	3·68	4·13	—0·45
,, (Central)	4·7	5·1	—0·4	4·53	4·75	—0·22
,, (Submontane)	8·6	7·9	+0·7	8·56	8·25	+0·31
,, (Hill Districts)	12·8	15·3	—2·5	17·55	16·67	+0·88
,, (North)	5·0	5·4	—0·4	4·56	4·78	—0·22
,, (West)	2·5	2·8	—0·3	1·77	2·07	—0·30

The rainfall was in marked defect in parts of the Southern and Central Divisions and more especially in the districts for which data are given below :—

District.	Rainfall.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.
	Inches.	Inches.	Inches.
Delhi	4·87	6·55	—1·68
Rohtak	2·91	5·04	—2·13
Gurgaon	3·36	6·88	—3·52
Hissar	3·34	4·05	—0·71

An important feature of the rainfall was the unusual irregularity of its distribution, stations in the same district showing in one case large excess and in another equally large deficiency. The following gives a few examples :—

District.	Station.	Rainfall.		
		Actual, August 1896.	Normal, August.	Variation from normal.
		Inches.	Inches.	Inches.
Amritsar	Amritsar Jail Hospital	10·19	6·93	+ 3·26
	Khara	2·40	4·73	— 2·33
Simla	Kasauli	21·07	18·87	+ 2·20
	Kotkhai	4·96	12·04	— 7·08
Kangra	Kangra	33·80	22·14	+11·66
	Plach	6·22	9·71	— 3·49
Lahore	Sharakpur	6·03	3·62	+ 2·41
	Kasur	0·30	3·15	— 2·85
Ferozepore	Zira	6·07	5·43	+ 0·64
	Ferozepore	0·54	4·51	— 3·97
Hissar	Sirsa	6·68	3·30	+ 3·38
	Fatahabad	0·72	3·89	— 3·17

The above are only a few selected examples showing this irregularity of the rainfall distribution which was one of the more noteworthy features of the meteorology of the month in the Punjab.

British Baluchistan received light local showers on the 4th, 5th and 6th and on the 11th, but the rainfall of the month was everywhere scanty and below the small average of the month. The Kashmir Valley and Jummoo had moderate showers on the 1st and 2nd, the 10th and 11th and the 19th to the 22nd. The rainfall was unusually scanty in the valley.

Rajputana obtained rain chiefly during two periods. The first period was from the 1st to the 7th, when the rainfall was general and due to the first storm of the month, and to the influx of humid winds into Upper India which followed the disappearance of that storm. The rainfall was heaviest and most general in the central and south-western states including Jeypore, Ajmere, Kotah, Oodeypore and Sirohi. It was scanty in the eastern states, more especially Dholpur and Ulwar.

The second period of rainfall was from the 11th to the 15th. The rainfall during this period was light and sporadic in Jodhpur, Jeysulmere, Bickaneer, Ulwar, Bhurtpore and Dholpur, and was heavy in Kotah, Ajmere, Oodeypore and Sirohi.

A few local showers were received during the remainder of the month, but the rains practically ceased on the 17th or 18th of the month. The following gives comparative data of the rainfall of the month in the larger states :—

STATE.	RAINFALL.			
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Jeysulmere	1·53	2·39	−0·86	−36
Jodhpur	3·03	4·87	−1·84	−38
Bickaneer	0·97	3·47	−2·50	−72
Ajmere	6·83	6·75	+0·08	+ 1
Oodeypore	10·52	8·68	+1·84	+21
Jeypore	5·65	9·44	−3·79	−40
Ulwar	4·82	10·57	−5·75	−54
Bhurtpur	3·84	8·29	−4·45	−54
Dholpur	2·90	?	?	?
Kerowlee	4·66	11·06	−6·40	−58
Kotah	9·48	10·49	−1·01	−10

Central India (more especially Bhopal and Gwalior) received heavy rain from the 1st to the 4th. Falls exceeding three inches were registered at a large number of stations in Bhopal and Gwalior on the 3rd. This burst of heavy rain was followed by a period of showery weather until the 12th, when Central India received a moderate burst of rain during the period from the 13th to the 16th from the second storm of the month. It was heaviest in the Bhopal State. Occasional showers were received during the next ten days, and moderate rain from the 26th to the 28th, due to the fourth disturbance of the month. The rainfall during the period was moderately heavy in Bhopal and light to moderate in the remaining states

The following table gives comparative data for the larger states :—

STATE.	RAINFALL.			
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Bhopal	15·08	12·85	+2·23	+17
Gwalior	7·94	10·38	−2·44	−22
Rewah	12·83	14·93	−2·10	−15
Bundelkhand	11·18	13·70	−2·52	−18

The Central Provinces received unusually frequent and heavy rain during the month. The rainfall occurred chiefly during the passage of three storms across the province. The following states the chief periods of rainfall and its distribution :—

1st.—From the 2nd to the 4th, during which period the first storm of the month crossed the province from east to west. The following gives the heaviest rainfall on each day :—

DISTRICT.	STATION.	DATE.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Sambalpur	Bargarh	2nd	6·38
Do.	Sambalpur	,,	4·12
Do.	Sarangarh	3rd	4·88
Do.	Bargarh	,,	4·25
Balaghat	Burha	,,	5·07
Do.	Bihar	,,	4·81
Bhandara	Sakoli	,,	6·30
Do.	Tirora	,,	5·70
Hoshangabad	Pachmarhi	,,	5·36
Seoni	Seoni	,,	5·60
Narsinghpur	Mohpani	,,	7·32
Do.	Gadarwara	,,	4·76
Nimar	Khandwa	4th	3·07

Weather was showery over the whole province during the interval between the passage of this storm and of the second storm of the month through the province.

2nd.—The second period of general rain was from the 11th to the 15th when more or less heavy

rain fell in all districts. The most noteworthy falls during this burst were :—

DISTRICT.	STATION.	DATE.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Jubbulpore	Bijeraghogarh	11th	5·85
Narsinghpur	Narsinghpur	,,	6·04
Hoshangabad	Pachmarhi	13th	7·50
Do.	Hoshangabad	,,	4·00

Falls exceeding three inches in 24 hours were registered at a large number of stations.

A partial break in the rains (with light occasional showers) prevailed from the 16th to the 24th or 25th. Sambalpur district received heavy local rain on the 18th. A fall of 9·9 inches was registered at Raigarh on that day.

3rd.—The third period of general rain extended from the 25th to the 28th and was due to the fourth disturbance and storm of the month. The following gives the largest falls exceeding 5 inches :—

DISTRICT.	STATION.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Chanda	Armori	25th	5·50
Nagpur	Umrer	26th	5·22
Hoshangabad	Harda	27th	5·02
Jubbulpore	Sihora	,,	5·08
Chanda	Chanda	,,	5·47
Bhandara	Tirora	,,	5·56

A few showers of little importance were received on the 30th and 31st chiefly, in the eastern districts.

The following is a summary of the rainfall data of the Central Provinces and Berar for the month :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Average actual, August 1896.	Average normal, August.	Variation from normal.
				Inches.	Inches.	Inches.
Central Provinces (East).	17·7	12·9	+4·8	22·24	12·53	+9·71
Ditto (Central)	18·2	14·1	+4·1	21·36	12·86	+8·50
Ditto (West)	15·6	12·8	+2·8	16·44	9·87	+6·57
Berar	13·1	?	?	6·92	?	?

The rainfall of the month was more or less considerably above the normal over the greater part of the Bombay Presidency chiefly due to the direct and indirect influence of the first and second storms of the month.

The Konkan division received daily rain throughout the month. The rainfall was very heavy during the first fortnight of the month and more specially on the 14th, 15th and 16th. The following large amounts were recorded during this period :—

Date.	District.	Station.	Rainfall in 24 hours preceding 8 A.M. of date.
			Inches.
14th	Kolaba	Matheran	6·53
,,	Ratnagiri.	Chiplun	6·12
15th	,,	Dapoli	10·41
,,	,,	Chiplun	10·00
,,	,,	Khed	8·50
,,	,,	Sangameshvar	7·25
,,	,,	Guhagar.	6·77
,,	Kolaba	Matheran	9·17
,,	,,	Pen	6·90
,,	,,	Khalapur	6·25
,,	,,	Karjat	6·16
,,	,,	Mahad	6·08

The mean rainfall of this division for the month was 37·43 inches, 12·42 inches or very nearly 50 per cent. above the normal.

Rain fell in moderate amounts daily in the Deccan districts and Khandesh from the 1st to the 23rd when a break set in which lasted until the end of the month. The rainfall was very irregularly distributed and was below the normal of the month in the Sholapur, Ahmednagar and Bijapur districts and above it in the remaining districts. Data are given below :—

DISTRICT.	RAINFALL.		
	Average actual, August 1896.	Average normal, August.	Variation from normal.
	Inches.	Inches.	Inches.
Dharwar	5·09	4·00	+1·09
Bijapur	1·67	5·19	—3·52
Belgaum	11·74	7·36	+4·38
Satara	17·52	6·40	+11·12
Sholapur	1·85	5·37	—3·52
Poona	11.40	8·82	+2·58
Ahmednagar	2·05	3·77	—1·72
Nasik	9·80	7·97	+1·83
Khandesh	4·45	3·88	+0·37

The Gujarat and Kathiawar divisions obtained daily rain from the 1st to the 19th and light showers from the 20th to the 23rd and the 28th to the 30th. The Kaira, Ahmedabad and Mahi Kantha districts had very heavy rain on the 15th and 16th due to the second cyclonic storm of the month. Falls exceeding 5 inches in 24

hours were received at a large number of stations during this period in that area. The rainfall of the month was in large excess in both divisions by amounts averaging 38 per cent. for Gujarat and 43 per cent. for Kathiawar. Cutch and Sind obtained light to moderate showers during two periods, *viz.*, from the 1st to the 6th and the 16th to the 19th.

The following is a comparative statement of the rainfall data of the presidency as published in the Bombay Government Gazette :—

Division.	Rainy Days.		Rainfall.		
	Average actual, August 1896.	Average normal, August.	Average actual, August 1896.	Average normal, August.	Variation from normal.
Konkan . . .	26·6	23·8	37·43	25·01	+12·42
Bombay Deccan .	12·8	9·9	9·10	6·14	+2·96
Khandesh . . .	10·3	8·6	5·48	5·99	—0·51
Gujarat . . .	14·8	13·6	12·81	9·28	+3·53
Kathiawar . .	10·8	7·4	8·98	6.28	+2·70
Sind	1·8	?	2·14	1·94	+0·20

The Malabar coast districts received unusually abundant rain. General and heavy rain fell daily from the 1st to the 19th and from the 23rd to the 29th. The Canara District received falls averaging more than three inches on the 3rd (3·03 inches), the 10th (3·32 inches), the 13th (4·22 inches) and the 14th (3·27 inches).

The average total rainfall of the Malabar district was 26·04 inches (58 per cent. above the normal) and of the South Canara district 47·18 inches or 21·75 inches above the normal. The rainfall of the month was hence in very large excess.

The northern coast districts had more frequent and heavier rain than usual. The periods of most general rain were the 1st and 2nd, the 12th to the 14th and the 24th to the 26th. The rainfall of the month was in excess over the whole area by amounts ranging from ·02 inch in Kistna to 2·33 inches (30 per cent.) in Ganjam.

The Coromandel coast districts (including the divisions of East Coast, South and East Coast, Central) had moderately heavy rain during the period from the 7th to the 14th and light local showers from the 20th to the 26th. North Arcot received an average of 1·17 inches on the 7th and Chingleput of 1·24 inches on the 8th.

The Southern Division including the Madura and Tinnevelly districts and the Coimbatore district received a few local showers of little importance and the rainfall of the month was very scanty and in considerable defect. The Salem district obtained moderate rain during the same two periods as the Coromandel coast districts, but the rainfall of the month was in moderate defect also in this district.

The Central Division obtained moderate rain from the 7th to the 14th and light showers on the 24th and 26th. The rainfall of the month was in slight defect in the Kurnool, Cuddapah and Bellary districts and in considerable defect in the Anantapur district.

The following gives a summary of the rainfall data for the eight divisions of the Presidency :—

Division.	Number of rainy days.			Rainfall.			
	Average actual, August 1896.	Average normal, August.	Variation from normal.	Average actual, August 1896.	Average normal, August.	Variation from normal.	Percentage variation from normal.
				Inches.	Inches.	Inches.	
Madras, East Coast (North)	11·9	10·0	+1·9	8·32	7·08	+ 1·24	+ 18
,, ,, (,, a)	27·0	17·7	+9·3	26·75	12·75	+14·00	+110
,, Central . . .	7·0	5·9	+1·1	3·50	4·30	— 0·80	— 19
,, East Coast (Central)	8·8	5·2	+3·6	5·29	3·06	+ 2·23	+ 73
,, ,, (South)	7·2	7·4	—0·2	3·74	5·16	— 1·42	— 28
,, South . . .	1·7	3·3	—1·6	0·55	2·02	— 1·47	— 73
,, South Central .	5·4	5·6	—0·2	1·96	3·49	— 1·53	— 44
Malabar	26·5	21·8	+4·7	33·65	20·13	+13·52	+ 67

The following table gives a comparative statement of the rainfall of the month in each Collectorate of the Presidency :—

District.	Number of rainy days.		Rainfall.		
	Average actual, August 1896.	Average normal, August.	Average actual, August 1895.	Average normal, August.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam	12·5	11·1	10·02	7·69	+2·33
Vizagapatam	13·9	12·5	10·59	9·26	+1·33
Godavari	11·4	8·3	7·25	5·77	+1·48
Kistna	9·8	8·6	5·86	5·84	+0·02
Nellore	8·8	5·2	5·29	3·06	+2·23
Chingleput	10·5	8·3	6·32	5·12	+1·20
Madras	13·0	8·2	6·11	4·48	+1·63
North Arcot	7·9	7·6	4·25	5·43	—1·18
South Arcot	5·9	8·2	2·99	6·04	—3·05
Tanjore	4·7	6·6	1·94	4·61	—2·67
Trichinopoly	3·3	5·9	1·69	4·34	—2·65
Madura	2·3	4·3	0·81	2·75	—1·94
Tinnevelly	0·8	2·0	0·21	1·02	—0·81
Malabar	24·9	19·6	26·04	16·45	+9·59
South Canara	29·3	24·8	47·18	25·43	+21·75
Salem	7·1	6·9	2·64	4·58	—1·94
Coimbatore	3·2	4·0	1·02	2·19	—1·17
Nilgiris	16·0	14·5	10·64	9·10	+1·54
Cuddapah	7·0	6·2	3·70	4·37	—0·67
Anantapur	4·9	5·7	2·20	3·98	—1·78
Bellary	6·5	6·4	3·38	3·67	—0·29
Kurnool	9·2	4·7	4·56	5·27	—0·71

Table

Abstract of Observations taken at 8 A.M. at 206

Number of Districts.	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.		...	...	−·003	...	...	...	...	...	...	...	83·5	−0·9	75·3	+0·2	79·4	−0·4	8·1	...	...	...	...	14·8
1	Tenasserim Bay Islands.	Port Blair	61	29·803	?	29·795	29·867	31st	29·746	1st	·121	81·2	84·6	?	78·0	?	81·3	?	6·6	86·6	5 days	74·4	22nd	12·2
		Mergui	96	29·821	?	29·849	29·912	15th	29·745	29th	·167	77·2	82·8	?	73·3	?	78·1	?	9·5	87·4	16th	71·5	9th	15·9
		Tavoy	26	29·896	?	29·853	29·974	8th	29·837	17th	·137	75·9	81·4	?	73·0	?	77·2	?	8·4	87·2	2 days	70·7	13th	16·5
		Moulmein	94	29·770	+·014	29·803	29·847	7th	29·710	29th	·137	76·4	81·6	−1·6	73·9	0	77·8	−0·8	7·7	85·5	5th	71·3	2 days	14·2
2	Lower Burma	Rangoon	41	29·788	0	29·766	29·864	14th	29·713	12th	·151	77·4	83·5	−1·4	75·5	−0·2	79·5	−0·8	8·0	88·2	31st	73·4	13th	14·8
		Bassein	27	29·786	−·004	29·749	29·862	31st	29·702	1st	·160	77·9	83·2	−1·2	75·4	−0·2	79·3	−0·7	7·8	89·7	28th	73·8	3 days	15·9
		Diamond Island	41	29·775	−·004	29·751	29·853	31st	29·681	1st	·172	79·8	83·1	−1·3	75·8	+0·6	79·5	−0·4	7·3	85·6	16th	73·4	23rd	12·2
5	Arakan	Akyab	20	29·716	−·024	29·679	29·791	26th	29·516	1st	·275	79·5	84·5	+0·1	77·3	+0·1	80·9	+0·1	7·2	89·2	25th	75·2	4th	14·0
3	Central Burma	Toungoo	183	29·617	−·001	29·743	29·694	14th	29·531	19th	·163	78·3	86·4	+0·1	75·8	+0·9	81·1	+0·5	10·6	91·7	28th	73·2	2 days	18·5
	II.—Burma Inland		...	...	−·020	...	...	...	...	...	...	...	87·5	−0·4	74·3	+1·1	80·9	+0·4	13·3	...	...	...	...	20·5
8	Central Burma	Thayetmyo	134	29·629	−·020	29·704	29·697	14th	29·540	1st	·157	80·0	88·7	−0·1	76·9	+0·9	82·8	+0·4	11·8	92·1	3 days	73·1	3rd	19·0
4	Upper Burma	Minbu	?	29·588	?	?	29·664	14th	29·513	19th	·151	80·3	91·2	?	77·5	?	84·4	?	13·7	95·6	31st	75·1	13th	20·5
		Yamethin	645	29·124	?	29·720	29·193	14th	29·013	12th	·180	79·1	91·1	?	?	?	?	?	?	91·0	22nd	?	...	?
		Taunggyi	?			Not recorded.						68·9	76·5	?	64·1	?	70·3	?	12·4	80·7	28th	61·5	16th	19·2
		Mandalay	249	29·499	?	29·696	29·563	6th	29·425	1st	·138	82·5	95·6	?	78·8	?	87·2	?	16·8	100·1	2 days	76·1	14th	24·0
		Kindat	?	29·356	?	?	29·420	14th	29·276	19th	·144	79·7	88·2	−0·6	77·3	+1·2	82·8	+0·3	10·9	92·8	8th	73·5	11th	19·3
		Lashio	?	26·985	?	?	27·077	31st	26·905	9th	·172	73·5	83·5	?	69·5	?	76·5	?	14·0	88·5	30th	66·0	12th	22·5
		Bhamo	?	29·353	?	?	29·446	6th	29·288	18th	·158	78·8	89·1	?	75·9	?	82·5	?	13·2	92·6	18th	73·8	14th	18·8
	III.—Assam		...	...	−·006	...	...	...	...	...	...	...	89·7	+1·2	78·1	+0·5	83·9	+0·9	11·6	...	...	...	...	20·1
7	Assam (Surma)	Silchar	104	29·611	−·005	29·667	29·694	26th	29·422	1st	·272	81·3	91·1	+1·9	77·2	+0·5	84·2	+1·2	13·9	99·1	2nd	75·3	7 days	23·8
9	Brahmaputra	Sibsagar	333	29·372	−·012	29·661	29·449	7th	29·216	12th	·233	79·9	89·0	−0·8	77·6	−0·2	83·3	−0·5	11·4	95·7	1st	74·5	5th	21·2
		Dhubri	115	29·567	−·001	29·636	29·651	6th	29·402	1st	·249	81·8	89·0	+2·5	79·4	+1·2	84·2	+1·9	9·6	92·2	20th	76·8	14th	15·4
	IV.—Bengal and Orissa		...	...	−·022	...	...	...	...	...	...	...	88·8	+1·4	78·5	+0·9	83·7	+1·2	10·3	...	...	...	...	16·7
6	East Bengal	Chitagong	87	29·608	−·031	29·643	29·700	31st	29·494	1st	·296	80·9	86·9	+1·7	76·9	+0·9	81·9	+1·3	10·0	89·7	12th	75·1	2 days	13·6
		Lungleh	?			Not recorded.						70·1	77·3	?	66·8	?	72·1	?	10·5	79·9	1st	64·7	4th	15·2
		Noakhali	43	29·632	?	29·622	29·721	7th	29·437	1st	·284	81·0	85·9	+0·7	78·0	+0·9	82·0	+0·8	7·9	89·0	25th	74·8	3rd	14·2
		Comilla	36	29·647	?	29·631	29·732	6th	29·458	1st	·274	81·3	89·2	?	77·0	?	83·1	?	12·2	92·3	2nd & 25th.	74·8	14th	17·5
		Sirajganj	49	29·608	?	29·607	29·694	6th	29·428	1st	·266	81·6	88·2	?	78·9	?	83·7	?	9·3	91·3	3 days	76·7	4 days	14·6
		Narayanganj	26	29·640	−·014	29·614	29·736	6th	29·450	1st	·286	82·2	88·4	+0·7	79·7	+0·8	84·1	+0·8	8·7	92·1	25th	76·2	14th	15·9
		Barisal	13	29·638	−·022	29·596	29·734	31st	29·423	1st	·311	83·1*	88·8*	+2·5	79·3*	+1·4	84·0*	+2·0	9·5*	92·8	25th	77·9	16th	14·9
		Mymensingh	59	29·620	−·006	29·630	29·705	7th	29·447	1st	·258	82·1	89·2	+2·0	78·9	+1·3	84·1	+1·7	10·3	93·2	25th	77·5	4 days	15·7
10	Deltaic Bengal	Faridpur	46	29·620	?	29·614	29·717	6th	29·438	1st	·279	82·1	88·8	?	78·9	?	83·9	?	9·9	90·8	5 days	75·9	5th	14·9
		Jessore	33	29·603	−·028	29·583	29·700	6th	29·392	1st	·308	82·8	89·7	+1·0	79·1	+0·4	84·4	+0·7	10·6	94·0	30th	76·3	4th	17·7
		Calcutta	21	29·601	−·028	29·568	29·707	7th	29·366	1st	·341	82·0	87·6	+0·5	78·6	+0·5	83·1	+0·5	9·0	89·9	4 days	75·7	4th	14·2
		Saugor Island	25	29·583	−·046	29·552	29·700	31st	29·315	2nd	·385	83·0	88·3	+1·1	80·2	+0·6	84·3	+0·9	8·1	91·4	2 days	78·0	2nd	13·4
		Krishnagar	47	29·592	?	29·587	29·696	7th	29·397	1st	·299	82·9	90·8	+1·9	78·7	+0·6	84·7	+1·3	12·1	94·8	20th	75·2	4th & 5th.	19·6
		Midnapore	149	29·468	?	29·563	29·578	31st	29·195	2nd	·383	82·6	89·9	?	78·9	?	84·4	?	11·0	92·8	29th & 30th.	76·1	21st	16·7

* Mean of 25 days.

I.

Stations in India, Burma, etc., in August 1896.

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 1896.	Normal rainfall for period, from 1st June to 31st August.	Variation from normal of period, from 1st June to 31st August.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	33·84	25·86	+4·65	...	...	...	...	**I.—Burma Coast and Bay Islands.**		
...	...	...	...	1	2	15	13	...	16·8	9·6	+75	87	·923	8·6	20	P	P	14·54	15·20	− 0·66	48·72	49·97	− 1·25	2·27	Port Blair	Tenasserim Bay Islands.	1
...	6	...	...	...	1	4	10	10	1·5	1·6	− 6	94	·884	6·3	28	P	P	38·30	28·85	+ 9·45	105·28	92·28	+13·00	3·67	Mergui		
30	...	...	...	...	...	1	...	...	1·2	P	P	94	·850	9·4	30	P	P	60·48	P	P	166·02	?	P	7·29	Tavoy.		
...	...	...	...	4	13	5	3	...	4·5	3·2	+41	93	·847	10·0	30	26·18	+ 3·82	50·92	38·96	+11·96	147·71	120·50	+27·21	7·12	Moulmein.		
...	...	...	...	...	5	15	8	3	4·3	4·7	− 9	95	·904	9·5	30	22·73	+ 7·27	28·32	18·19	+10·13	64·73	57·38	+ 7·35	4·17	Rangoon	Lower Burma.	2
6	...	...	...	1	15	5	1	3	5·6	3·4	+65	93	·895	8·2	29	25·27	+ 3·73	27·96	23·25	+ 4·71	91·68	70·69	+20·99	3·71	Bassein.		
...	...	...	...	...	...	23	8	...	12·6	6·7	+88	88	·886	9·4	27	22·10	+ 4·90	27·44	22·69	+ 4·75	91·58	72·17	+19·41	2·51	Diamond Island.		
...	1	...	4	4	17	3	2	...	4·8	3·2	+50	95	·957	9·1	27	26·09	+ 0·91	38·15	41·26	− 3·11	154·86	136·79	+18·07	3·82	Akyab	Arakan.	5
1	...	...	1	19	10	...	...	...	6·6	3·9	+69	92	·896	9·5	28	23·91	+ 4·09	18·49	18·50	− 0·01	46·73	51·02	− 4·29	3·02	Toungoo.	Central Burma.	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·54	9·78	−2·70	...	...	...	...	**II.—Burma Inland.**		
...	...	...	...	6	25	...	...	...	5·5	5·9	− 7	84	·852	10·0	12	12·36	− 0·36	6·10	6·57	− 0·47	15·89	20·34	− 4·45	1·49	Thayetmyo.	Central Burma.	3
...	...	...	3	18	10	...	...	...	14·7	P	P	81	·846	7·2	8	P	P	3·50	P	P	9·79	P	P	1·20	Minbu.	Upper Burma.	4
1	...	...	1	17	12	...	...	...	10·1	P	P	83	·821	3·4	6	P	P	2·62	P	P	9·94	?	P	0·95	Yamethin.		
2	...	...	...	6	10	10	2	1	P	P	P	87	·609	10·0	20	P	P	15·69	P	P	40·80	?	P	2·15	Taunggyi.		
1	...	...	...	2	13	15	...	...	9·1	P	P	75	·832	6·6	6	P	P	2·03	P	P	16·81	P	?	0·45	Mandalay		
25	...	...	...	2	4	...	...	...	0·8	P	P	93	·946	5·3	15	P	P	8·05	12·98	− 4·93	30·89	38·52	− 7·63	2·15	Kindat.		
				Not	recorded.				P	P	P	92	·754	10·0	22	P	P	17·06	P	P	37·08	?	?	2·67	Lashio.		
23	...	...	...	3	1	3	...	1	1·6	P	P	93	·909	8·0	18	P	P	13·23	P	P	42·27	P	?	2·58	Bhamo.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12·27	16·54	−4·27	...	...	...	...	**III.—Assam.**		
27	...	...	...	1	1	1	...	1	2·8	3·0	− 7	89	·949	8·9	23	21·82	+ 1·18	15·21	19·66	− 4·45	42·63	59·49	−16·86	2·65	Silchar	Surma	7
1	..	9	4	1	7	6	3	...	3·7	2·7	+37	95	·972	9·2	21	17·78	+ 3·22	17·54	16·19	+ 1·35	49·43	46·98	+ 2·45	2·77	Sibsagar	Brahmaputra.	9
4	2	6	5	2	6	5	...	1	4·9	3·2	+53	90	·970	8·5	8	14·47	− 6·47	4·05	13·76	− 9·71	22·60	54·46	−31·86	1·22	Dhubri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	8·84	13·63	−5·24	...	...	...	...	**IV.—Bengal and Orissa.**		
1	...	1	8	15	6	...	...	...	7·2	6·1	+18	86	·905	8·0	5	18·42	−13·42	6·47	19·76	−14·29	40·12	65·65	−25·53	2·57	Chittagong	East Bengal.	
				Not	recorded.				?	P	P	94	·697	P	27	P	P	20·54	P	P	64·23	P	P	2·26	Lungleh.		
...	...	...	5	18	6	2	...	...	7·7	P	P	91	·966	5·4	25	23·01	+ 1·96	20·62	24·99	− 4·37	64·05	72·92	− 8·87	3·75	Noakhali.		
...	...	...	9	3	19	...	...	...	6·9	P	P	92	·985	7·3	5	17·67	−12·67	2·88	16·40	−13·52	32·92	50·43	−17·51	0·87	Comilla.		
14	...	...	1	13	2	1	...	...	2·7	P	P	90	·966	9·7	9	13·85	− 4·85	4·00	10·93	− 6·93	26·23	33·55	− 7·32	0·88	Sirajganj.		
...	...	1	6	19	4	1	...	...	10·6	6·0	+77	89	·985	8·4	17	17·38	− 0·38	6·06	12·32	− 6·26	32·84	39·16	− 6·32	1·21	Narayanganj.		
17	...	...	4	5	4	1	...	...	2·4	P	P	86*	·976*	9·0	14	18·77	− 4·77	6·44	12·53	− 6·09	36·34	44·31	− 7·97	1·25	Barisal.		
3	...	...	11	16	1	...	...	...	3·7	P	P	88	·966	7·4	9	19·19	−10·19	3·70	14·46	−10·76	37·59	48·20	−10·61	0·95	Mymensingh.		
6	...	...	3	14	8	...	...	...	3·7	P	P	89	·978	6·5	15	15·96	− 0·96	6·51	12·23	− 5·72	25·29	36·82	−11·53	1·25	Faridpur	Deltaic Bengal	10
2	...	...	5	17	5	2	...	...	3·9	4·1	− 5	89	1·000	7·3	13	17·12	− 4·12	7·00	11·35	− 4·35	35·80	35·06	+ 0·74	1·72	Jessore.		
1	...	3	9	9	6	3	...	...	3·8	5·3	−28	89	·979	8·1	21	18·12	+ 2·88	11·02	12·95	− 1·93	39·52	36·15	+ 3·37	1·22	Calcutta.		
...	1	5	2	7	6	8	1	1	12·3	12·4	0	88	·994	9·0	17	16·81	+ 0·19	11·86	15·22	− 3·36	42·73	40·40	+ 2·33	1·11	Saugor Island.		
...	...	...	12	12	6	1	...	...	5·4	P	P	86†	·995†	6·8	13	14·12	− 1·12	6·61	10·54	− 3·93	21·57	30·49	− 8·92	1·50	Krishnagar.		
9	5	5	1	3	7	1	...	...	2·1	P	P	89	·989	4·8	19	15·85	+ 3·15	14·20	12·33	+ 1·87	37·46	33·38	+ 4·08	7·39	Midnapore.		

† Mean of 19 days.

Tab

Abstract of Observations taken at 8 A.M. at 206 Statio

Number of Districts.	Meteorological Province or District.	Station.	Elevation of barometer above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range
11	Central Bengal.	Bankura	298	29·293	P	29·540	29·401	7th	29·065	2nd	·336	81·9	89·2	P	78·6	P	83·9	P	10·6	92·1	3 days	76·6	3 days	15
		Raniganj	334	29·294	P	29·575	29·396	7th	29·087	2nd	·309	81·4	90·2	P	78·6	P	84·4	P	11·6	93·7	30th	76·4	5th	17
		Burdwan	107	29·525	−·021	29·578	29·635	7th	29·311	1st	·324	82·8	90·2	+1·0	79·7	+0·8	85·0	+0·9	10·5	93·2	30th	76·2	4th	17
		Naya Dumka	489	29·131	P	29·575	29·229	7th	28·958	1st	·271	81·7	88·8	P	77·9	P	83·3	P	10·9	92·0	13th	74·3	3rd	17
		Berhampore	67	29·575	−·014	29·590	29·687	7th	29·396	1st	·291	82·2	90·0	+1·5	79·1	+0·6	84·6	+1·1	10·9	93·7	19th	76·8	23rd	16
		Rampur Boalia	70	29·571	P	29·590	29·670	7th	29·392	1st	·278	83·0	89·7	P	79·6	P	84·7	P	10·1	93·1	30th	77·1	4th	16
		Malda	72	29·560	P	29·583	29·659	6th	29·401	1st	·258	83·8	92·1	P	79·4	P	85·8	P	12·7	97·6	20th	75·5	30th	22
		Bogra	61	29·593	P	29·605	29·679	7th	29·425	1st	·254	82·8	90·8	+2·9	79·4	+1·4	85·1	+2·2	11·4	94·2	31st	77·7	2 days	16
12	North Bengal	Dinajpur	123	29·536	−·004	29·613	29·627	7th	29·378	1st	·249	82·7	91·2	+2·5	78·9	+0·5	85·1	+1·5	12·3	95·3	20th	76·7	22nd	18
		Rangpur	123	29·553	P	29·629	29·636	7th	29·390	1st	·246	83·4	90·7	P	79·1	P	84·9	P	11·6	94·2	13th	77·2	22nd	17
		Jalpaiguri	284	29·394	+·002	29·635	29·473	6th	29·238	1st	·235	81·7	90·5	+2·7	77·8	+1·7	84·1	+2·2	12·7	94·4	26th	74·1	10th	20
17	North Bihar	Purnea	125	29·521	−·002	29·599	29·614	6th	29·358	1st	·256	82·8	91·0	+1·8	79·9	+2·0	35·4	+1·9	11·1	94·7	13th	77·2	22nd	17
14	Orissa	Balasore	56	29·559	−·032	29·551	29·673	31st	29·240	2nd	·433	82·2	88·2	+0·9	78·8	+1·0	83·5	+1·0	9·4	91·4	3 days	76·7	3 days	19
		False Point	21	29·602	−·037	29·565	29·720	31st	29·326	2nd	·394	82·0	87·2	+0·2	78·4	+0·2	82·8	+0·2	8·8	92·0	24th	71·6	14th	20
		Cuttack	80	29·533	−·046	29·556	29·662	31st	29·263	2nd	·399	81·2	88·9	−0·4	78·5	+0·3	83·7	−0·1	10·4	94·2	31st	75·2	3rd	19
		Shortt's Island	P	29·590	P	?	29·698	30th	29·308	2nd	·390	83·5	88·5	P	80·3	P	84·4	P	8·2	93·1	30th	77·4	3rd	15
		Puri	20	29·609	P	29·572	29·743	31st	29·353	2nd	·390	82·3	87·8	P	79·6	P	83·7	P	8·2	92·7	30th & 31st.	76·1	2nd	16
	V.—Gangetic Plain and Chota Nagpur.		...	...	−·011	...	...	...	...	...	...	...	90·7	+1·5	79·0	+1·1	84·9	+1·3	11·8	...	...	...	...	20
15	Chota Nagpur	Hazaribagh	2,007	27·625	−·024	29·569	27·732	31st	27·440	2nd	·292	76·9	84·4	+0·8	74·1	+1·2	79·3	+1·0	10·3	88·2	13th & 29th.	71·3	4th	16
		Ranchi	2,128	27·516	−·011	29·576	27·632	31st	27·298	2nd	·334	76·4	83·8	+0·9	73·3	+1·3	78·5	+1·1	10·5	88·2	30th	69·9	4th	18
		Daltonganj	730?	28·890	P	29·570	29·013	31st	28·703	1st	·310	81·2	89·2	P	78·2	P	83·7	P	11·0	94·3	8th	75·0	21st	19
		Chaibassa	760	28·838*	P	29·544*	28·958	31st	28·521	2nd	·437	80·8	88·5	−0·1	77·7	+1·1	83·1	+0·5	10·8	91·9	25th	75·5	4 days	16
16	South Bihar	Gaya	375	29·242	−·012	29·570	29·334	31st	29·080	1st	·254	82·6	91·4	+1·3	79·2	+0·7	85·3	+1·0	12·2	97·0	13th	75·3	23rd	21
		Dehri	351	P	P	P	P		?	...	P	*83·6	90·2*	P	80·1*	P	85·2*	P	10·1	95·8	13th	77·0	3 days	18
		Patna	183	29·436	−·017	29·570	29·531	6th	29·264	1st	·267	84·3	91·3	+2·0	80·6	+1·1	86·0	+1·6	10·7	96·5	13th	76·7	23rd	19
		Arrah	190	29·434	P	29·574	29·516	6th	29·275	1st	·241	84·0	92·2	P	80·2	P	86·2	P	12·0	96·4	14th	76·5	23rd	19
		Buxar	239	29·375	P	29·567	29·461	25th	29·234	1st	·227	83·4	91·4	P	79·2	P	85·3	P	12·2	96·5	9th	74·8	22nd & 23rd.	21
17	North Bihar	Bhagalpur	160	29·465	P	29·577	29·559	7th	29·301	1st	·258	84·2	92·3	P	80·1	P	86·2	P	12·2	97·2	31st	73·2	4 days	19
		Darbhanga	166	29·465	−·017	29·583	29·558	6th	29·297	1st	·261	83·4	90·9	+2·5	80·6	+1·5	85·8	+2·0	10·3	95·0	20th	77·5	23rd	17
		Muzaffarpur	178	29·454	P	29·585	29·546	6th	29·288	1st	·258	83·0	91·1	P	79·8	P	85·5	P	11·3	93·7	6 days	77·2	23rd	16
		Motihari	224	29·412	P	29·592	29·503	6th	29·245	1st	·258	83·8	91·7	P	79·1	P	85·5	P	12·6	97·0	13th	75·9	23rd	21
		Chapra	181	29·439	P	29·572	29·522	6th	29·275	1st	·247	83·7	92·6	P	80·6	P	86·6	P	12·0	97·8	13th	77·1	22nd	20
18	N.-W. P. East	Benares	267	29·348	−·003	29·568	29·440	31st	29·174	1st	·266	82·9	91·8	+2·1	79·8	+1·0	85·8	+1·6	12·0	97·2	13th	75·7	22nd	21
		Allahabad	309	29·305	−·006	29·567	29·399	31st	29·126	1st	·273	83·8	91·8	+2·1	79·8	+1·3	85·8	+1·7	12·0	96·6	31st	76·8	23rd	19
23	N.-W. P. (East Submontane).	Gorakhpur	256	29·364	−·001	29·577	29·455	6th	29·221	1st	·234	83·9	92·0	+2·0	79·2	+0·3	85·6	+1·2	12·8	98·3	8th & 14th.	75·2	23rd & 24th.	23
19	South Oudh	Lucknow	368	29·244	−·005	29·568	29·326	6th	29·080	1st	·246	84·0	92·4	+1·8	79·5†	+1·0	85·9	+1·4†	12·9	98·8	1st	75·3	14th	23
20	North Oudh	Bahraich	403	29·217	P	29·579	29·308	25th	29·071	1st	·237	82·5	91·6	P	78·4	P	85·1	P	13·2	98·4	1st & 2nd.	74·5	9th	20
21	N.-W. Provinces (Central).	Cawnpore	416	29·200	P	29·566	29·288	30th	29·028	1st	·260	83·7	92·0	P	79·5	P	85·8	P	12·5	99·4	3rd	75·5	24th	23
		Mainpuri	516	29·112	P	29·582	29·195	31st	28·949	1st	·246	83·4	93·0	P	79·4	?	86·2	P	13·6	99·8	1st	76·5	14th	23

* Mean of 30 days. † Mean of 29 days.

1—*continued.*

in India, Burma, etc., in August 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
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 1896.	Normal rainfall for period from 1st June to 31st August	Variation from normal of period from 1st June to 31st August.				
20	...	1	8	2	...	...	...	...	2·2	P	P	88	·963	7·5	20	16·77	+ 3·23	9·08	12·89	− 3·81	40·60	35·53	+ 5·07	1·96	Bankura .	Central Bengal.	11
9	1	2	12	4	1	1	...	1	3·2	P	P	91	·968	7·2	12	16·23	− 4·23	6·58	13·23	− 6·65	28·43	35·72	− 7·29	1·69	Raniganj.		
...	1	3	13	6	5	2	1	...	4·0	3·6	+11	84	·949	8·6	16	16·91	− 0·91	10·18	11·37	− 1·19	34·38	32·00	+ 2·38	2·59	Burdwan.		
2	2	1	13	10	3	...	...	...	2·5	P	P	87	·931	8·2	15	18·20	− 3·20	9·11	13·63	− 4·52	39·66	36·56	+ 3·10	3·40	Naya Dumka		
1	...	2	12	8	8	...	...	...	3·5	4·2	−17	90	·985	8·1	11	16·35	− 5·35	7·43	11·77	− 4·34	25·64	31·86	− 6·22	2·28	Berhampore.		
9	...	2	9	7	4	...	...	...	4·3	P	P	92	1·035	5·8	10	15·19	− 5·19	4·74	11·01	− 6·27	23·73	32·51	− 8·78	2·50	Rampur Boalia.		
...	...	1	3	15	11	...	1	...	3·1	P	P	86	·893	4·6	10	14·31	− 4·31	6·68	10·35	− 3·67	27·04	32·64	− 5·60	3·40	Malda.		
3	...	...	10	18	...	...	...	...	3·6	P	P	88	·983	7·3	9	16·08	− 7·08	2·80	11·97	− 9·17	27·70	39·02	−11·32	0·83	Bogra.		
2	...	3	13	7	4	1	...	1	4·8	P	P	86	·969	6·9	11	15·96	− 4·96	3·88	12·56	− 8·68	20·22	42·43	−22·21	1·16	Dinajpur .	North Bengal.	12
...	...	3	8	9	8	3	...	...	2·2	P	P	86	·988	8·3	7	13·50	− 6·50	3·21	12·41	− 9·20	25·21	47·33	−22·12	1·28	Rangpur.		
...	2	7	11	5	5	...	1	...	3·3	P	P	88	·957	3·4	9	19·04	−10·04	4·50	25·74	−21·24	44·67	81·40	−36·73	1·36	Jalpaiguri.		
4	...	4	15	6	2	...	...	...	4·8	2·3	+109	87	·977	8·7	9	17·16	− 8·16	3·52	13·90	− 5·38	21·28	39·73	−18·45	2·10	Purnea .	North Bihar.	17
11	2	3	2	...	2	8	3	...	2·9	P	P	89	·983	5·2	15	16·00	− 1·00	10·19	11·99	− 1·80	51·67	34·10	+17·57	2·22	Balasore .	Orissa.	14
5	1	2	...	1	3	5	12	2	3·3	9·5	−13	88	·962	7·9	11	16·00	− 5·00	16·60	13·56	+ 3·04	50·84	36·34	+14·50	5·32	False Point.		
11	1	...	1	...	1	5	9	3	3·0	2·6	+15	86	·912	7·4	18	16·15	+ 1·85	13·90	12·37	+ 1·53	44·14	36·81	+ 7·33	2·95	Cuttack.		
2	1	2	1	2	2	13	7	1	20·8	P	P	84	·963	7·0	14	P	P	10·23	P	P	40·21	P	P	2·13	Shortt's Island.		
16	1	...	...	...	...	9	2	3	11·5	P	P	88	·974	6·6	15	13·27	+ 1·73	19·37	10·38	+ 8·99	37·82	28·24	+ 9·58	7·39	Puri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10·02	11·61	−1·59	...	...	...	...	V.—Gangetic Plain and Chota Nagpur.		
...	2	1	10	4	6	...	4	4	3·5	7·5	+13	89	·822	9·3	19	17·69	+ 1·31	18·83	13·11	+ 5·72	52·00	34·90	+17·10	4·35	Hazaribagh.	Chota Nagpur	15
4	1	4	6	2	2	3	2	7	3·4	P	P	91	·824	5·9	18	17·69	+ 0·31	9·01	13·34	− 4·33	51·85	36·62	+15·23	1·36	Ranchi.		
...	...	4	9	3	1	7	6	1	6·0	P	P	86	·917	5·2	11	15·77	− 4·77	11·37	12·36	− 0·99	30·73	31·31	− 0·58	2·18	Daltonganj.		
2	2	1	1	3	3	11	7	1	1·9	P	P	87	·924	9·2	19	16·73	+ 2·27	15·16	13·04	+ 2·12	54·37	35·05	+19·32	3·20	Chaibassa.		
3	...	5	8	3	1	3	7	1	7·3	2·6	+181	84	·943	7·1	9	14·04	− 5·04	5·25	12·50	− 7·25	25·54	32·16	− 6·62	1·77	Gaya .	South Bihar	16
1	1	2	10	5	2	2	4	3	12·2*	P	P	86*	·986*	7·5*	11	14·08	− 3·08	13·10	12·62	+ 0·48	24·87	30·26	− 5·39	5·30	Dehri.		
1	...	3	18	4	2	1	1	1	6·5	3·2	+103	85	1·001	9·0	8	13·27	− 5·27	11·57	11·30	+ 0·27	28·54	30·39	− 1·85	4·41	Patna.		
1	3	3	9	7	...	3	2	3	1·4	P	P	87	1·009	5·8	8	13·31	− 5·31	7·46	11·51	− 4·05	22·72	29·76	− 7·04	3·00	Arrah.		
3	1	4	15	2	1	...	5	...	5·2	P	P	85	·968	6·8	8	13·38	− 5·38	7·39	11·33	− 3·94	24·71	28·21	− 3·50	2·47	Buxar.		
2	...	3	9	12	3	...	2	...	4·9	P	P	82	·965	7·2	8	13·62	− 5·62	4·53	10·80	− 5·87	18·27	31·07	−12·80	1·84	Bhagalpur.	North Bihar.	17
1	1	3	15	10	1	...	...	...	4·5	4·4	+2	86	·985	6·2	11	14·20	− 3·20	9·15	12·47	− 3·32	25·28	32·42	− 7·14	3·02	Darbhanga.		
4	...	3	14	10	...	...	...	...	5·4	P	P	87	·982	5·8	10	13·31	− 3·31	10·58	10·28	+ 0·30	40·92	30·39	+10·53	3·35	Muzaffarpur.		
1	...	9	13	5	1	...	1	1	7·0	P	P	84	·977	6·0	7	13·25	− 6·25	9·78	12·19	− 2·41	27·10	34·76	− 7·66	4·37	Motihari.		
10	1	...	11	7	...	...	1	1	3·5	P	P	85	·977	6·4	7	12·65	− 5·65	70·9	10·37	− 3·28	19·45	28·71	− 9·26	2·80	Chapra.		
4	2	5	12	...	...	2	4	2	4·4	4·2	+ 5	86	·971	7·3	12	14·27	− 2·27	9·81	11·83	− 2·02	26·69	27·70	− 1·01	2·25	Benares .	N.-W. P. East	18
3	2	4	8	2	...	1	8	3	5·8	3·5	+66	86	·989	8·1	11	13·91	− 2·91	7·40	11·10	− 3·70	19·87	29·12	− 9·25	1·75	Allahabad.		
...	4	8	13	...	1	...	3	2	1·7	2·3	−26	85	·978	5·5	12	13·55	− 1·55	17·16	11·93	+ 5·23	31·33	35·28	− 3·95	6·03	Gorakhpur .	N.-W. P. (East Submontane).	23
6	2	7	6	2	3	2	1	2	2·0	3·0	−33	86	·990	7·5	10	12·36	− 2·36	6·38	11·78	− 5·40	24·94	28·46	− 3·52	1·44	Lucknow .	South Oudh.	19
15	...	1	7	7	...	1	...	...	1·8	P	P	86	·957	3·8	14	P	P	20·78	9·50	+11·28	35·85	27·63	+ 8·22	5·05	Bahraich .	North Oudh.	20
2	...	3	9	3	1	...	11	2	4·4	P	P	85	·976	5·7	12	11·70	+ 0·30	4·07	10·21	− 6·14	12·23	23·29	−11·06	0·62	Cawnpore .	N.-W. Provinces (Central).	21
21	1	...	4	...	...	...	5	...	0·7	P	P	81	·927	7·2	9	P	P	4·21	9·84	− 5·63	12·53	23·91	−11·38	1·15	Mainpuri.		

* Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Number of Districts.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas		...	...	+·006	...	...	...	...	...	...	...	93·0	+1·1	78·5	+1·0	85·7	+1·0	14·6	...	...	...	...	27·5
24	N.-W. Provinces, West (Submontane).	Bareilly	568	29·053	?	29·582	29·143	7th	28·915	1st	·228	81·9	93·3†	+3·1?	78·3	+0·3	85·7*	+1·7?	15·0	103·9	14th	74·6	19th	29·3
		Dehra Dun	2,233	27·432	−·002	29·600	27·524	25th	27·340	18th	·184	75·8	84·7	+0·8	72·9	−0·3	78·8	+0·3	11·8	91·0	1st	68·0	22nd	23·0
		Roorkee	887	28·730	+·002	29·580	28·832	27th	28·624	1st	·208	80·7	90·0	−0·7	77·0	−0·1	83·5	−0·4	13·0	97·2	1st	72·1	22nd	25·1
22	N.-W. P., West	Meerut	738	28·876	+·009	29·575	28·985	25th	28·757	1st	·228	82·6	92·0	+1·3	78·8	+0·6	85·4	+1·0	13·2	99·5	1st	72·9	22nd	26·6
26	South-East Punjab.	Delhi	718	28·895	+·010	29·571	29·013	25th	28·742	1st	·271	83·7	91·9	+0·3	79·3	+0·2	85·6	+0·3	12·6	99·2	31st	75·4	3rd	23·8
28	Central Punjab,	Lahore	702	28·886	+·007	29·549	28·975	31st	28·749	1st	·226	86·2	97·5	+1·4	82·3	+3·3	89·8	+2·4	15·2	104·6	29th	73·6	21st	31·0
27	South Punjab	Sirsa	662	28·932	+·006	29·552	29·041	31st	28·802	1st	·239	85·4	98·9	+1·4	81·4	+1·9	90·1	+1·7	17·5	106·8	28th	76·3	3rd	30·5
		Patiala	?	28·792	?	?	28·885	24th & 25th.	28·653	1st	·232	83·6	92·1	?	79·0*	?	85·7*	?	13·1	99·2	29th	74·0	20th & 22nd.	25·2
29	Punjab (Submontane).	Ludhiana	812	28·791	+·004	29·565	28·881	7th	28·648	1st	·236	83·3	93·4	−1·8	79·4	+0·7	86·4	−0·6	14·0	100·5	29th & 31st.	74·1	20th	26·4
		Sialkot	830	28·699	+·011	29·560	28·855	24th	28·636	1st	·219	85·4	96·9	+2·8	79·6	+2·2	88·2	+2·5	17·3	104·2	2nd	73·1	3 days	31·1
		Umballa	892	28·722	?	29·572	28·826	27th	28·590	1st	·236	81·1	90·2	?	77·6	?	83·9	?	12·6	95·5	30th	70·5	30th	25·0
21	North Punjab	Rawalpindi	1,643	27·955	?	29·554	28·062	7th	27·815	19th	·247	81·6	95·4	+1·9	75·9	+0·8	85·7	+1·4	19·5	102·1	29th	69·7	20th	32·4
	VII.—Indus Valley and N.-W. Rajputana.		...	...	+·020	...	...	...	...	...	...	...	98·6	+1·8	80·4	+1·3	89·4	+1·6	18·2	...	...	...	...	29·9
31	North Punjab	Peshawar	1,110	28·504	+·023	29·529	28·615	24th	28·324	19th	·291	86·2	100·6	+1·6	78·3	+0·6	89·5	+1·1	22·3	107·0	3 days	71·9	26th	35·1
		Mardan	?				Not recorded.					86·5	103·0*	?	76·6	?	88·3*	?	26·4	106·0	28th	70·0	2nd	36·0
32	West Punjab	Khushab	612	28·964	?	29·539	29·059	7th	28·820	19th	·239	86·8	100·9	?	82·0	?	91·5	?	18·9	108·4	19th	70·5	21st	37·9
		Montgomery	558	29·018	?	29·534	29·136	31st	28·876	2nd	·260	88·5	102·5	?	81·7	?	92·1	?	20·8	107·9	3 days	74·0	21st	33·9
		D. I. Khan (Tel.)	594	28·992	?	29·525	29·106	24th	28·835	2nd	·271	87·0	101·7	?	82·1	?	91·9	?	19·6	106·2	4 days	73·5	21st	32·7
		D. I. Khan (Jail).	?				Not recorded.					87·4	102·7	?	81·8	?	92·2	?	20·9	109·1	28th	72·8	21st	36·3
		Mooltan	420	29·147	+·007	29·529	29·267	31st	28·993	2nd	·274	88·3	103·7	+3·5	84·2	+2·2	94·0	+2·9	19·5	108·9	18th	76·0	21st	32·9
47	Sind	Jacobabad	186	29·382	+·021	29·527	29·518	31st	29·249	1st	·269	87·8	104·8	+1·2	83·1	+1·8	94·0	+1·5	21·7	110·8	1st	78·1	28th	32·7
		Hyderabad	96	29·510	+·029	29·558	29·659	31st	29·373	1st	·286	83·7	96·1	+0·8	79·7	+1·2	87·9	+1·0	16·4	103·7	31st	77·0	3 days	26·7
		Kurrachee (Tel.)	12	29·629	?	29·591	29·793	31st	29·493	1st	·300	82·5	88·8	?	79·2	?	84·0	?	9·6	92·3	1st	76·0	17th & 18th.	16·3
		Do. (Hospl.)	49	29·585	?	?	29·741	27th	29·446	1st	·295	81·5	87·2	?	79·0	?	83·1	?	8·2	91·9	5th	75·9	17th & 18th.	16·0
51	West Rajputana	Bickaneer*	771	28·854	?	29·585	28·996	31st	28·717	1st	·279	85·6	98·4	+2·1	81·3	+0·9	89·9	+1·5	17·1	104·6	28th	76·5	8th	28·1
		Pachpadra	380	?	?	?	?	...	?	...	?	79·9	91·9	?	76·5	?	84·2	?	15·4	98·5	28th	74·0	4 days	24·5
	VIII.—East Rajputana, Central India and Gujarat.		...	...	+·016	...	...	...	...	...	...	...	86·6	−0·7	75·9	+0·6	81·3	0	10·7	...	...	...	...	19·2
50	East Rajputana	Jeypore	1,431	28·236	+·023	29·623	28·378	31st	28·082	1st	·296	79·5	90·4	+0·5	76·2	+1·2	83·3	+0·9	14·2	97·5	29th	74·0	3 days	23·5
		Sambhar	1,254	28·393	+·022	29·604	28·534	31st	28·250	1st	·284	80·5	90·5	+1·3	77·2	+1·4	83·9	+1·4	13·3	97·5	26th	74·9	19th	22·6
		Ajmere	1,611	28·064	+·020	29·637	28·199	31st	27·914	1st	·285	77·8	86·0	−1·5	75·4	+0·9	80·7	−0·3	10·6	90·4	27th	72·6	19th	17·8
		Deesa	466	29·226	?	29·649	29·382	31st	29·037	16th	·345	78·2	86·8	−1·5	75·5	+0·1	81·2	−0·7	11·3	92·3	27th	73·5	5th	18·8
46	Kathiawar and Cutch.	Bhuj	395	29·271	?	29·620	29·426	31st	29·118	16th	·308	78·5	85·5	−3·0	75·1	−1·1	80·3	−2·1	10·4	89·4	15th	71·9	25th	17·5
		Rajkot	429	29·287	+·017	29·671	29·438	31st	29·090	16th	·348	77·9	85·5	−3·2	73·6	−0·9	79·6	−2·1	11·9	90·4	26th	71·3	30th	19·1
		Veraval	?	29·727	?	29·687	29·858	31st	29·588	16th	·270	78·7	81·2	?	77·0	?	79·1	?	4·2	84·1	28th	73·8	4th	10·3
49	Central India	Nowgong	757	28·876	0	29·588	29·002	31st	28·670	3rd	·332	80·4	87·8	?−0·5	77·9	+1·2	82·9	+0·4?	9·9	92·5	28th	75·0	23rd	17·5
		Indore	1,823	27·900	+·021	29·682	28·059	31st	27·719	3rd	·340	73·4	81·4	−1·2	71·0	−0·2	76·2	−0·7	10·4	87·7	26th	68·6	28th & 29th.	19·1
		Neemuch	1,630	28·072	+·032	29·665	28·224	31st	27·893	4th	·331	75·0	83·5	−1·0	72·3	0	77·9	−0·5	11·2	88·8	26th	70·1	31st	18·7
45	Gujarat	Surat	39	29·708	?	29·690	29·850	31st	29·559	16th	·291	80·1	84·5	−2·4	78·2	+2·0	81·4	−0·2	6·3	87·5	26th	74·5	30th	13·0
		Ahmedabad	164	29·542	?	29·653	29·697	31st	29·350	16th	·347	79·1	86·3	?	76·3	?	81·3	?	10·0	90·2	31st	72·6	5th	27·6
22	N.-W. P., West	Agra	555	29·062	+·003	29·572	29·166	31st	28·900	1st	·266	84·5	94·0	+3·6	79·9	+1·2	87·0	+2·4	14·1	100·5	31st	76·7	3rd	23·8
21	N.-W.P., Central	Jhansi	858	28·780	+·005	29·592	28·910	31st	28·610	3rd	·300	80·9	89·5	+1·1	77·6	+0·9	83·6	+1·0	11·9	94·6	1st & 2nd,	75·4	5th & 12th.	19·2

* Mean of 30 days. † Mean of 22 days.

I—*continued.*

in India, Burma, etc., in August 1896—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, Sa.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 of month.	Total rainfall from 1st June to 31st August 1896.	Normal rainfall for period from 1st June to 31st August.	Variation from normal of period from 1st June to 31st August.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10·66	11·15	−0·03	...	...	...	...	VI.—Upper Sub-Himalayas.		
12	...	4	...	9	...	3	...	3	1·9	3·6	− 47	84	·921	5·5	10	12·18	−2·18	10·96	14·51	− 3·55	23·54	36·36	−12·82	4·70	Bareilly .	N.-W. Provinces, West (Submontane),	24
26	1	...	...	2	1	...	1	...	1·1	1·1	0	91	·806	8·2	20	21·30	−1·30	38·14	30·00	+ 8·14	70·14	68·50	+ 1·64	11·62	Dehra Dun.		
18	...	2	2	7	1	...	...	1	1·9*	2·5	− 24	87	·906	6·9	12	11·64	+ 0·36	15·60	13·59	+ 2·01	33·15	30·75	+ 2·40	3·06	Roorkee.		
15	...	...	2	7	...	1	5	1	2·0	2·1	− 5	80	·891	6·0	10	11·36	−1·36	5·48	10·59	− 5·11	20·19	22·57	− 2·38	2·31	Meerut.	N.-W. P., West	22
6	...	...	7	4	...	2	9	3	3·9	4·1	− 5	77	·890	6·7	5	9·82	−4·82	6·35	9·35	− 3·00	20·76	21·92	− 1·16	2·30	Delhi .	South-East Punjab,	26
7	...	...	3	11	5	1	2	2	3·0	2·9	+ 3	75	·926	3·3	6	6·45	−0·45	3·73	5·83	− 2·10	7·30	14·34	− 7·04	1·50	Lahore.	Central Punjab,	28
2	...	...	1	4	3	5	12	4	7·4	4·6	+ 61	71	·862	5·4	8	5·55	+2·45	7·57	4·11	+ 3·46	8·49	10·60	− 2·11	2·36	Sirsa.	South Punjab,	27
14	...	5	...	...	10	2	...	...	2·0	P	P	85	·986	4·5	11	P	P	5·55	P	P	16·53	P	P	1·61	Patiala.		
15	1	2	...	10	1	1	1	...	1·5	1·4	+ 7	82	·937	5·8	7	7·82	−0·82	8·25	6·94	+ 1·31	12·35	19·68	− 7·33	2·12	Ludhiana.	Punjab (Submontane),	29
8	3	3	7	7	3	...	...	...	2·5	2·3	+ 9	81	·992	2·8	8	9·27	−1·27	4·50	10·87	− 6·37	11·70	22·47	−10·77	1·33	Sialkot .		
22	...	...	1	3	1	...	1	3	1·0	P	P	92	·973	4·9	11	P	P	12·26	7·75	+ 4·51	22·66	22·44	+ 0·22	9·01	Umballa .		
8	4	2	11	3	1	...	2	...	2·4	1·6	+ 50	76	·823	4·1	10	9·91	+0·09	9·55	9·16	+ 0·39	17·93	19·62	− 1·69	2·45	Rawalpindi.	North Punjab.	31
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·94	2·23	−0·40				...	VII.—Indus Valley and N.-W Rajputana.		
6	9	2	2	3	...	...	1	8	3·8	4·0	− 5	65	·806	2·9	1	1·82	−0·82	0·10	2·70	− 2·60	0·45	4·84	− 4·39	0·10	Peshawar .	North Punjab,	31
Not recorded.									P	P	P	66	·845	0·2	2	P	P	1·05	P	P	3·11	P	P	0·65	Mardan.		
1	1	7	16	1	3	1	1	...	5·9	P	P	68	·881	1·9	2	2·70	−0·70	4·60	2·01	+ 2·59	8·25	5·57	+ 2·68	4·40	Khushab.	West Punjab.	32
1	1	2	2	4	12	7	2	...	7·7	P	P	64	·855	2·2	3	3·20	−0·20	2·75	2·34	+ 0·41	7·66	6·69	+ 0·97	1·30	Montgomery.		
31	...	...	...	...	...	...	...	...	0·2	2·1	− 90	73	·943	1·8	1	2·27	−1·27	0·63	1·43	− 0·80	0·81	4·84	− 4·03	0·60	D. I. Khan (Tel.)		
Not recorded.									P	P	P	69	·897	0·6	0	P	P	0	P	P	0	P	P	0	D. I. Khan (Jail).		
11	...	...	1	8	6	4	1	...	3·7	3·2	+ 16	70	·920	1·4	1	2·00	−1·00	0·54	1·58	− 1·04	1·06	5·11	− 4·05	0·32	Mooltan.		
3	2	...	3	8	14	1	...	...	5·9	4·0	+ 48	68	·901	1·9	2	1·64	+0·36	0·24	1·27	− 1·03	1·85	2·67	− 0·82	0·14	Jacobabad	Sind,	47
1	...	1	...	1	4	24	...	...	21·0	13·8	+ 52	70	·806	4·7	2	3·36	−1·16	0·60	2·51	− 1·91	3·08	5·51	− 2·43	0·38	Hyderabad.		
...	...	...	1	...	...	14	15	1	11·6	17·2	− 33	87	·968	9·1	3	2·36	+0·64	4·51	1·55	+ 2·96	11·87	5·54	+ 6·33	2·20	Kurrachee. (Tel.)		
...	2	...	...	...	1	2	23	3	13·8	P	P	86	·921	4·7	3	P	P	5·84	P	P	9·52	P	P	3·40	Do. (Hospl.)	West Rajputana.	51
1	...	1	1	...	9	16	2	...	7·9	6·2	+ 27	79	·965	5·0	2	P	P	0·97	3·12	− 2·15	6·94	8·45	− 1·51	0·77	Bickaneer*		
1	...	...	...	1	6	23	...	...	14·9	9·7	+ 54	86	·880	9·0	7	P	P	3·40	3·78	− 0·38	12·71	7·11	+ 5·60	2·00	Pachpadra.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·85	8·46	−0·83				...	VIII.—East Rajputana, C. India and Gujarat.		
2	3	3	1	...	1	7	11	3	4·5	5·5	− 18	82	·832	7·2	13	11·50	+1·50	5·60	10·07	− 4·47	11·30	21·93	−10·63	1·33	Jeypore .	East Rajputana,	50
...	1	2	2	1	...	1	22	2	7·5	8·1	− 7	80	·830	6·5	8	10·50	−2·50	2·40	7·88	− 5·48	9·74	17·11	− 7·37	0·43	Sambhar.		
...	...	2	...	1	...	4	23	1	7·2	5·5	+ 31	87	·826	6·1	6	9·82	−3·82	8·44	7·63	+ 0·81	23·95	17·20	+ 6·75	3·20	Ajmere.		
...	...	...	...	1	1	15	13	1	11·2	12·0	− 7	91	·879	8·8	12	10·09	+1·91	10·27	7·60	+ 2·67	25·02	20·75	+ 4·29	3·54	Deesa.		
...	...	...	...	...	...	16	14	1	14·7	14·9	− 1	86	·848	6·8	5	P	P	5·14	2·70	+ 2·44	19·07	11·58	+ 7·49	1·76	Bhuj.	Kathiawar and Cutch,	46
...	...	...	...	...	1	17	13	...	10·6	11·6	− 9	88	·847	8·6	10	7·82	+2·18	10·60	4·98	+ 5·62	38·26	23·17	+15·09	4·11	Rajkot.		
...	...	...	...	...	1	10	20	...	11·3	P	P	89	·871	8·5	8	P	P	2·08	P	P	16·63	P	P	0·50	Veraval.		
...	2	2	2	1	1	1	20	2	2·2	3·4	− 35	90	·932	7·9	11	14·09	−3·09	7·23	14·23	− 6·35	30·50	34·47	− 3·97	1·56	Nowgong .	Central India,	49
...	1	1	...	...	1	4	16	8	6·0	6·1	− 2	89	·736	9·4	11	10·45	+0·55	12·34	7·83	+ 4·51	26·66	23·13	+ 3·53	4·66	Indore.		
...	1	1	...	...	...	8	20	1	11·0	11·9	− 8	88	·766	7·8	11	11·00	0	10·74	10·55	+ 0·19	27·68	24·71	+ 2·97	2·75	Neemuch.		
4	...	...	...	...	2	20	5	...	P	13·6	P	86	·890	8·5	11	12·82	−1·82	5·60	7·89	− 2·29	40·82	36·29	+ 4·53	1·80	Surat .	Gujarat.	45
2	...	...	...	...	2	15	6	6	3·8	P	P	88	·874	8·1	17	P	P	16·20	P	P	31·07	P	P	3·36	Ahmedabad.		
1	...	3	...	6	...	11	...	10	5·7	4·4	+ 30	78	·921	6·6	4	10·73	−6·73	3·31	7·67	−4·36	10·69	21·71	−11·02	1·60	Agra . .	N.-W. P., West.	22
11	...	4	...	...	...	3	6	7	1·5	3·9	− 62	84	·891	5·0	13	14·45	−1·45	9·27	12·50	− 3·23	30·54	29·99	+ 0·55	1·32	Jhansi.	N.-W.P., Central,	21

* Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Number of Districts.	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 .	...	...	...	+·006	...	...	...	...	...	...	...	84·1	−1·6	72·0	−0·1	78·1	−0·8	12·2	...	...	...	...	21·7
36	Bombay (Deccan)	Belgaum .	2,524	27·326	+·028	29·798	27·406	31st	27·240	1st	·166	69·6	74·9	−1·2	66·4	+0·2	70·7	−0·5	8·5	79·2	31st	63·4	28th	15·8
		Sholapur .	1,590	28·218	+·023	29·765	28·325	31st	28·103	3rd	·222	75·1	87·1	−1·3	69·4	−1·0	78·3	−1·2	17·7	94·7	31st	66·1	28th	28·6
		Poona .	1,840	27·962	+·018	29·760	28·071	31st	27·836	3rd	·235	73·0	79·5	−2·2	69·1	−0·4	74·3	−1·3	10·4	85·5	26th	64·9	29th	20·6
		Bijapur .	1,946	27·876	P	29·773	27·975	31st	27·780	3rd	·195	73·4	85·2	P	68·5	P	76·9	P	16·7	91·7	26th	64·5	28th	27·2
40	Khandesh . .	Malegaon .	1,430	28·322	+·016	29·708	28·461	31st	28·180	3rd	·281	76·5	85·4	−0·7	71·3	−0·1	78·4	−0·4	14·1	91·9	31st	67·3	25th & 30th.	24·6
		Ahmednagar .	2,152	27·645	P	29·744	27·764	31st	27·513	3rd	·251	73·2	81·3	P	68·5	P	75·0	P	12·8	?87·3	31st	61·5	30th	25·8
41	Berar . . .	Akola . .	930	28·793	+·008	29·679	28·926	31st	28·628	3rd	·298	76·4	84·7	−2·4	73·1	−0·1	78·9	−1·3	11·6	90·5	31st	70·7	27th & 29th.	19·8
		Amraoti .	1,215	28·494	+·009	29·673	28·626	31st	28·285	3rd	·341	74·5	83·7	−2·7	72·1	−0·4	77·9	−1·6	11·6	91·7	25th	69·8	5th	21·9
42	Central Provinces (West).	Khandwa .	1,044	28·672	+·017	29·680	28·821	31st	28·473	3rd	·348	76·0	82·9	−2·8	73·7	−0·1	78·3	−1·5	9·2	88·7	25th	71·6	5th & 29th	17·1
		Hoshangabad .	1,006	28·681	+·014	29·650	28·830	31st	28·415	3rd	·415	76·1	83·1	−2·1	73·7	−0·1	78·4	−1·1	9·4	89·3	23rd	69·8	4th	19·5
		Nagpur . .	1,025	28·650	—·008	29·636	28·788	31st	28·437	3rd	·351	76·5	84·3	−3·0	74·5	−0·1	79·5	−1·6	9·8	92·3	26th	72·1	28th	20·2
	Central Provinces (Central).	Chanda . .	634	?29·072	P	29·653	29·210	31st	28·916	3rd	·294	77·1	84·8	−3·0	74·4	−0·7	79·6	−1·9	10·4	92·0	24th	71·0	24th	21·0
		Seoni . .	2,033	27·650	—·004	29·623	27·787	31st	27·398	3rd	·389	74·5	81·3	−2·0	71·5	−0·2	76·4	−1·1	9·8	86·2	8th	65·9	4th	20·3
		Jubbulpore .	1,327	28·326	−·002	29·611	28·469	31st	28·044	3rd	·425	76·7	84·2	−0·6	73·8	−0·1	79·0	−0·4	10·4	88·4	26th & 31st.	70·6	4th	17·8
		Saugor . .	1,807	27·851	+·007	29·609	27·999	31st	27·619	3rd	·380	75·4	83·3	−0·2	72·9	+0·4	78·1	+0·1	10·4	87·8	27th	70·6	4th	17·2
49	Central India .	Sutna . .	1,040	28·622‡	P	29·621‡	28·698	31st	28·562	16th	·136	80·0	87·5	+1·8	77·1	+1·4	82·3	+1·6	10·4	91·4	28th	73·6	4th	17·8
44	Central Provinces (East).	Raipur . .	970	28·678	—·014	29·601	28·818	31st	28·484	1st	·334	77·2	85·0	−1·2	74·7	−0·1	79·9	−0·7	10·3	89·3	3 days	72·1	2nd & 3rd.	17·2
		Sambalpur .	486	29·135	—·052	29·569	29·277	31st	28·870	2nd	·407	79·9	86·7	−0·8	77·0	−0·3	81·9	−0·6	9·7	90·5	26th	74·2	3rd	16·3
39	Hyderabad (North).	Aurangabad .	P	27·920	P	?	28·034	31st	27·783	3rd	·251	73·9	83·7	P	68·9	P	76·3	P	14·8	91·2	31st	64·4	29th	26·8
		Indur . .	P				Not rec	orded.				76·0	84·3	P	72·7	P	78·5	P	11·6	91·1	31st	70·9	26th	20·2
		Bidar . .	P	27·622	P	?	27·725	31st	27·394	3rd	·331	72·4	82·5	P	68·4	P	75·5	P	14·1	89·5	31st	65·7	3 days	23·8
43	Hyderabad (South).	Gulbarga .	1,502	28·300	P	29·760	28·391	31st	28·188	1st	·203	74·5	86·6	P	70·3	P	78·4	P	16·3	94·7	31st	66·4	18th	28·3
		Raichur .	1,309	28·508	P	29·772	28·587	31st	28·399	1st	·188	76·3	88·3	P	71·6	P	80·0	P	16·7	95·1	31st	67·1	29th	28·0
		Hyderabad (Deccan).	1,690	28·092	+·024	29·736	28·187	31st	27·970	1st	·217	74·5	84·1	−2·0	71·7	+1·0	77·9	−0·5	12·4	90·9	6th	69·7	10th & 18th.	21·2
		Secunderabad .	1,787	28·001	P	29·743	28·095	31st	27·879	1st	·216	73·7	85·0	P	70·6	P	77·8	P	14·4	92·6	6th	68·4	10th & 28th.	24·2
		Khamamet .	373	29·388	P	29·706	29·476	31st	29·218	1st	·258	79·1	87·9	P	75·7	P	81·8	P	12·2	95·9	31st	73·3	7th & 20th.	22·6
	X.—West Coast . .		...	...	+·035	...	...		...	...	...	...	82·4	−0·2	74·8	+0·1	78·6	−0·1	7·6	...	...	...	...	12·9
37	Konkan .	Bombay .	37	29·774	+·022	29·751	29·887	31st	29·645	3rd	·242	79·2	83·5	−0·4	76·6	−0·1	80·1	−0·3	6·9	86·0	25th & 26th.	75·0	3 days	11·0
		Ratnagiri .	110	29·739	+·038	29·787	29·824	31st	29·650	4th	·174	78·5	83·0	−0·4	75·3	+0·5	79·1	+0·1	7·7	84·9	3 days	72·9	27th	12·0
		Mormugao .	60	29·824	P	29·819	29·902	27th	29·744	1st	·158	78·5	82·3	P	75·2	P	78·8	P	7·1	85·0	6th	72·4	10th	12·6
		Goa . .	199	29·670	+·037	29·807	29·747	27th & 31st	29·596	3rd & 4th	·151	77·9	80·3	P	75·9	P	78·1	P	4·4	82·0	23rd	74·0	28th	8·0
		Karwar . .	44	29·850	+·038	29·826	29·924	27th	29·781	2nd & 4th	·143	77·5	81·6	−0·5	74·5	+0·4	78·1	−0·1	7·1	84·2	3 days	71·5	28th	12·7
38	Malabar . .	Cochin . .	11	29·944	+·038	29·882	29·996	27th	29·801	12th	·095	77·4	83·9	+0·7	74·0	−0·1	79·0	+0·3	9·9	87·7	18th & 22nd.	72·2	6th & 13th.	15·5
		Calicut . .	27	29·915	+·037	29·872	29·972	27th	29·867	2nd	·105	76·8	82·5	−0·2	73·9	+0·2	78·2	0	8·6	86·8	22nd	72·0	3rd	14·8
		Mangalore .	65	29·868	+·038	29·866	29·926	27th	29·805	2nd	·121	76·1	82·1	−0·3	73·4	−0·4	77·7	−0·4	8·7	84·8	5 days	70·9	14th	13·9
		Trivandrum .	198	29·754	P	29·884	29·806	27th	29·717	1st & 12th	·089	77·1	82·4	P	74·6	P	78·5	P	7·8	88·5	28th	73·0	5 days	15·5
	XI.—South India . .		...	...	+·022	...	...	...	...	...	...	...	88·8	+0·2	74·1	+0·4	81·5	+0·3	14·7	...	...	...	...	23·4
57	Madras (South) .	Pamban . .	37	29·860	P	29·823	29·895	15th	29·803	1st	·092	82·9	88·0	P	78·7	P	83·3	P	9·3	91·8	21st	74·2	3rd	17·6
		Tinnevelly .	168	29·729	P	29·826	29·782	27th	29·679	12th	·103	83·7	95·2	P	78·6	P	86·9	P	16·6	100·3	31st	74·9	1st	25·4
		Madura . .	447	29·427	+·031	29·809	29·474	27th	29·368	1st	·106	82·9	96·9	+0·4	76·7	+1·2	86·8	+0·8	20·2	102·0	19th & 31st.	72·0	20th	30·0

‡ Mean of 16 days.

I—*continued.*

in India, Burma, etc, in August 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
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 1896.	Normal rainfall for period from 1st June to 31st August.	Variation from normal of period from 1st June to 31st August.				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10·90	9·91	+2·57	...	...	...	...	IX.—Deccan.		
...	...	...	...	...	...	12	19	...	21·6†	20·7	+ 4	93	·671	8·6	22	17·64	+ 4·36	15·64	8·74	+ 6·90	56·13	30·70	+25·43	2·08	Belgaum	Bombay (Deccan).	38
...	...	...	...	...	...	12	15	4	14·8	11·0	+ 35	78	·676	7·4	8	11·27	— 3·27	2·33	7·39	— 5·06	9·90	16·69	—6·79	0·61	Sholapur.		
...	...	...	...	...	...	10	20	1	15·9	14·0	+ 14	86	·704	8·9	14	7·82	+ 6·18	6·68	3·22	+ 3·46	25·84	14·82	+11·02	1·35	Poona.		
...	...	...	...	...	...	9	16	6	12·1	?	?	85	·706	7·5	5	7·00	— 2·00	1·16	?	?	5·71	?	?	0·31	Bijapur.		
...	...	...	...	...	...	13	17	1	17·0	10·0	+ 70	85	·770	7·1	2	6·91	— 4·91	1·59	4·07	— 2·48	22·42	13·54	+8·88	1·06	Malegaon.	Khandesh.	40
...	...	...	...	...	1	10	16	4	25·5	?	?	86	·702	7·7	4	?	?	0·96	?	?	14·86	?	?	0·48	Ahmednagar.		
1	...	...	...	...	...	4	15	11	9·8	7·9	+ 24	85	·769	7·4	11	9·73	+ 1·27	3·67	7·44	— 3·77	25·15	23·72	+1·43	0·66	Akola	Berar.	41
...	...	...	...	...	...	6	21	4	9·3	6·1	+ 52	92	·790	7·2	11	9·73	+ 1·27	8·46	6·80	+ 1·66	29·30	24·26	+5·04	1·98	Amraoti.		
...	...	...	...	...	...	6	16	9	9·6	7·6	+ 26	88	·780	8·5	13	9·61	+ 3·39	10·51	7·14	+ 3·37	33·66	22·01	+11·65	3·07	Khandwa	Central Provinces (West).	42
1	...	1	...	...	...	19	9	1	4·9	3·4	+ 44	92	·838	9·3	18	15·09	+ 2·91	17·82	14·52	+ 3·30	42·14	40·31	+1·83	4·00	Hoshangabad.		
10	1	...	...	...	3	6	10	1	10·0*	6·0	+ 67	88	·805	9·0	17	12·82	+ 4·18	18·33	10·25	+ 8·08	48·26	33·72	+14·54	5·02	Nagpur.		
...	...	...	...	1	2	5	18	5	7·0	5·4	+ 30	87	·815	8·5	18	?	?	21·62	13·87	+10·75	55·63	40·60	+15·03	5·47	Chanda	Central Provinces (Central).	8
				Not	rec	orded.			?	4·8	?	91	·784	7·3	13	17·73	— 4·73	15·66	12·90	+ 2·76	46·07	41·62	+4·45	5·60	Seoni.		
...	2	1	...	...	2	5	15	6	4·5	4·6	— 2	93	·853	9·4	25	16·00	+ 9·00	27·98	16·12	+11·86	62·98	46·02	+16·96	3·37	Jubbulpore.		
7	...	2	2	...	...	1	15	4	4·5	4·3	+ 5	92	·806	7·5	14	14·55	— 0·55	14·70	13·53	+ 1·17	37·06	36·03	+1·03	3·80	Saugor.		
2	3	4	3	...	2	2	10	5	6·3	7·9	— 20	88	·900	7·4	17	13·45	+ 3·55	11·19	12·07	— 0·88	26·55	33·78	—7·23	2·22	Sutna	Central India	49
7	...	...	...	...	3	20	1	...	10·8	7·3	+ 48	92	·852	8·6	22	14·45	+ 7·55	26·62	12·66	+13·96	59·81	38·05	+21·76	5·65	Raipur	Central Provinces (East).	44
...	2	2	...	...	8	17	1	1	5·2	3·0	+ 73	90	·913	8·1	15	?	?	19·06	17·09	+ 1·97	79·27	50·38	+28·89	4·12	Sambalpur.		
4	...	...	...	...	...	9	14	4	5·5	?	?	86	·721	8·7	11	?	?	4·90	5·56	— 0·66	26·49	19·27	+7·22	1·35	Aurangabad.	Hyderabad (North).	30
...	1	...	...	...	...	2	16	12	13·2	?	?	84	·749	7·3	15	?	?	8·46	10·19	— 1·73	29·27	25·43	+3·84	1·77	Indur.		
...	...	...	...	...	...	7	15	9	11·8	?	?	89	·712	6·1	12	?	?	8·01	9·85	— 1·84	17·64	25·44	—7·80	1·87	Bidar.		
1	...	...	...	...	...	11	12	7	15·3	?	?	83	·705	7·1	6	?	?	5·02	6·43	— 1·41	17·17	16·14	+1·03	2·34	Gulbarga	Hyderabad (South).	53
...	...	...	...	...	4	6	20	1	17·0	?	?	79	·730	4·9	9	?	?	3·57	?	?	8·92	?	?	0·90	Raichur.		
...	...	...	...	...	...	...	27	4	9·9	?	?	82	·700	6·7	12	?	?	10·78	8·17	+ 2·61	19·48	19·92	—0·44	1·62	Hyderabad (Deccan).		
...	...	...	...	...	...	3	23	5	12·9	10·0	+ 29	78	·653	6·9	14	?	?	9·04	?	?	17·27	?	?	1·60	Secunderabad.		
2	2	...	...	...	1	7	11	8	8·2	?	?	83	·832	5·7	13	?	?	6·53	?	?	15·83	?	?	1·45	Khamamet.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26·14	17·00	+8·99	...	..	...	...	X.—West Coast.		
...	...	...	...	...	1	10	20	...	15·4	15·8	— 2	88	·883	9·3	23	19·64	+ 3·36	21·11	11·43	+ 9·68	85·23	57·97	+27·26	4·15	Bombay	Konkan.	37
2	...	...	...	1	4	16	8	...	8·2	10·3	— 20	90	·877	8·4	27	24·36	+ 2·64	26·12	24·65	+ 1·47	66·25	91·42	—25·17	3·80	Ratnagiri.		
...	1	...	...	...	...	2	24	4	12·0	?	?	91	·901	7·2	27	?	?	27·37	?	?	57·85	?	?	4·37	Mormugao.		
1	1	...	2	...	1	9	15	4	?	?	?	90	·862	9·0	27	?	?	30·81	20·32	+10·49	68·43	84·11	—15·68	3·60	Goa.		
1	3	1	...	...	1	5	17	3	5·4	?	?	88	·824	8·5	30	23·36	+ 6·64	41·70	24·45	+17·25	97·03	100·66	—3·63	7·00	Karwar.		
12	5	7	1	1	1	1	2	1	4·3	?	?	88	·835	7·4	23	17·91	+ 5·09	20·82	13·31	+ 7·51	70·79	63·23	+16·56	2·49	Cochin	Malabar.	33
4	5	7	1	4	1	1	...	8	9·7	?	?	90	·823	6·7	23	17·88	+ 5·12	26·53	15·82	+10·71	92·80	78·39	+14·41	4·00	Calicut.		
13	1	...	3	2	...	1	6	5	2·4	2·9	— 17	94	·846	9·0	29	23·90	+ 5·10	37·36	21·13	+16·23	111·55	92·25	+19·30	4·05	Mangalore.		
2	18	...	...	...	...	...	3	8	6·8	?	?	85	·795	6·3	7	?	?	3·47	4·91	—1·44	23·76	24·94	—1·18	1·61	Trivandrum		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4·95	6·31	—0·36	...	...	...	...	XI.—South India.		
1	1	...	...	1	8	14	5	1	12·7	?	?	76	·853	2·9	0	0·30	— 0·30	0	0·23	—0·23	0·10	0·98	—0·88	0	Pamban	Madras (South).	57
...	...	...	...	1	...	4	16	10	9·2	?	?	62	·723	4·5	1	1·00	0	0·14	?	?	1·49	?	?	0·11	Tinnevelly.		
2	9	...	...	...	...	3	2	15	2·3	3·7	— 24	64	·727	4·0	3	5·36	— 2·36	1·82	4·00	—2·18	3·86	7·78	—3·92	0·98	Madura.		

* Mean of 30 days. † Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 206 Stations

Number of Districts.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
24	Madras (South Central).	Salem	940	28·965	+·031	29·850	29·016	27th	28·884	1st	·132	78·3	93·3	+1·9	73·3	+1·5	83·3	+1·7	20·0	98·4	31st	71·0	28th	27·4
		Coimbatore	1,348	28·538	+·029	29·841	28·578	15th	28·476	1st	·102	75·0	86·9	−1·6	70·0	−0·6	78·5	−1·1	16·9	91·4	24th	68·1	21st	23·3
35	Coorg	Mercara	3,781	26·215	+·037	?	26·279	27th	26·147	2nd	·132	64·8	68·1	−2·4	62·5	+0·4	65·3	−1·0	5·6	73·0	31st	60·2	14th	12·8
38	Mysore	Chitaldroog	2,405	27·473	P	29·816	27·532	27th	27·395	1st	·137	71·1	79·1	P	67·5	P	73·3	P	11·6	85·1	31st	66·4	28th	18·7
		Bangalore	3,021	26·901	+·020	29·835	26·954	27th	26·824	1st	·130	69·1	81·4	−0·3	65·5	0	73·5	−0·2	15·9	86·8	31st	63·3	28th	23·5
		Hassan	3,091	26·850	P	29·864	26·896	27th	26·776	1st	·120	69·2	75·5	P	64·5	P	70·0	P	11·0	80·2	31st	62·2	20th	18·0
		Mysore	2,518	27·415	P	29·865	27·468	27th	27·346	1st	·122	71·6	81·2	P	65·7	P	73·5	P	15·5	86·4	31st	61·0	21st & 22nd	22·4
56	Madras (East Coast, South).	Negapatam	31	29·844	+·039	29·804	29·884	27th	29·779	1st	·105	83·3	96·1†	+3·3	78·1	+1·1	87·1†	+2·2	18·0	103·7	31st	74·9	11th	28·8
		Cuddalore	12	29·842	P	29·783	29·891	27th	29·768	1st	·123	83·1	96·7	P	77·7	P	87·2	P	19·0	101·3	5th & 19th,	73·2	8th	28·1
		Trichinopoly	255	29·617	+·027	29·805	29·673	27th	29·547	1st	·126	82·7	98·5	+2·5	77·9	+1·6	88·3	+2·1	20·6	102·1	31st	73·4	8th	28·7
		Madras	22	29·820	+·028	29·773	29·866	21st	29·741	1st	·125	81·9	93·5	−0·2	76·6	−0·7	85·0	−0·5	16·9	98·5	29th	73·5	8th	25·0
55	Madras (East Coast, Central).	Nellore	71	29·735	P	29·740	29·798	21st	29·640	1st	·158	82·6	94·1	P	77·4	P	85·8	P	16·7	99·8	31st	74·1	4 days	25·7
		Masulipatam	15	29·755	+·016	29·705	29·836	31st	29·634	1st	·202	81·5	90·1	−1·2	77·8	+0·3	84·0	−0·5	12·3	98·2	31st	73·6	7th	24·6
54	Madras (Central)	Cuddapah	433	29·401	P	29·774	29·466	30th	29·306	1st	·160	81·5	94·8	+2·1	76·7	+0·2	85·8	+1·2	18·1	100·2	30th & 31st,	72·7	13th	27·5
		Kurnool	923	28·892	P	29·764	28·961	30th	28·779	1st	·182	77·1	89·7	+0·6	72·8	−0·7	81·3	−0·1	16·9	95·2	31st	69·9	28th	25·3
		Bellary	1,475	28·367	+·030	29·788	28·439	31st	28·266	1st	·173	78·5	90·3	−0·5	73·8	+0·4	82·1	−0·1	16·5	96·2	31st	71·2	20th	25·0
52	Madras (East Coast, North).	Rajahmundry	112			Not recorded.						80·1	88·2	−1·3	77·4	+0·2	82·8	−0·6	10·8	94·8	31st	74·1	13th	20·7
		Cocanada	26	29·695	+·006	29·656	29·783	21st	29·555	1st	·228	80·7	88·7	+0·4	78·4	−0·1	83·6	+0·2	10·3	95·6	31st	75·0	12th & 13th	20·6
		Vizagapatam	31	29·637	−·029	29·606	29·733	31st	29·459	1st	·274	81·9	90·7	−0·4	78·3	+0·9	84·5	+0·3	12·4	96·7	28th & 29th,	74·9	2nd	21·8
		Gopalpur	21	29·616	P	29·577	29·732	31st	29·415	2nd	·317	82·3	86·4	P	78·9	P	82·7	P	7·5	92·2	19th	74·6	2nd	17·6
	XII.—Hill Stations.																							
48	Baluchistan	Kachh	P	23·734 (a)	P	?	23·850	27th	23·620	2nd	·230	75·1 (a)	90·5 (a)	P	58·2*	P	74·4*	P	32·3	95·0	10th & 13th	46·9	29th	48·1
		Pishin	?			Not recorded.						?	100·3	P	56·3	P	78·3	P	44·0	105·9	1st	44·9	30th	61·0
		Quetta	5,502	24·492	+·017	?	24·613	27th	24·375	1st	·238	74·8	90·2	−0·5	61·7	−0·2	75·9	−0·4	28·5	96·1	2nd	51·9	26th	44·2
		Kalat*	?			Not recorded.						67·9	87·8	P	45·8	P	66·8	P	42·0	100·5	1st	36·8	27th	63·7
		Chaman	4,311	25·473	P	P	25·630	31st	25·325	4th	·305	82·5	98·9	P	71·6	P	85·2	P	27·3	105·5	2nd	65·1	3 days	40·4
30	Punjab	Leh	11,503	19·660	P	P	19·743	26th	19·573	1st	·170	57·1	77·6	P	50·5	P	64·0	P	27·1	87·2	10th	42·7	24th	44·1
		Srinagar	5,204	24·730	P	P	24·838	31st	24·598	19th	·240	68·8	86·8	P	61·4	P	74·1	P	25·4	92·4	18th	52·7	28th & 31st	39·7
		Gilgit	P	24·478	P	P	24·710	31st	24·330	1st, 2nd, 9th & 19th.	·380	79·7	96·0	P	72·9	?	84·4	P	23·1	106·1	19th	60·7	31st	45·9
		Samana	?	23·525?	P	P	25·580?	7 days	23·480?	10 days	·100	?	81·5	P	62·1	P	71·8	P	19·4	90·1	19th & 29th,	57·1	22nd & 23rd	33·0
		Cherat	P	25·543	P	P	25·639	25th	25·420	19th	·219	75·6	80·8	P	P	P	P	P	P	88·4	1st & 13th	P	...	P
		Murree	6,344	23·758?	+·024?	P	23·872?	25th	23·651	18th	·221?	66·3?	77·4?	+3·3?	60·5?	−0·4?	69·0?	+1·5?	16·9?	87·2?	29th	55·1?	2nd	32·3
		Poo	P			Not recorded.						P	78·9	P	59·0	P	68·9	P	19·9	83·6	18th	51·4	23rd	32·2
		Simla	7,224	23·034	+·019	?	23·111	25th	22·954	1st & 9th.	·157	62·1	67·8	+0·4	59·5	−0·2	63·7	+0·1	18·3	70·7	1st & 14th	56·1	20th	14·1
25	North-Western Provinces.	Chakrata	6,977	23·235	+·023	?	23·318	25th	23·159	9th	·159	62·5	67·6	−1·6	60·3	+0·9	64·0	−0·4	7·3	71·2	1st & 26th	57·3	20th & 22nd	13·8
		Mussooree	6,705	23·425	P	?	23·502	7th & 27th	23·344	18th	·158	63·6	69·7	+0·9	60·9	+1·1	65·3	+1·0	8·8	74·3	1st	58·4	22nd	15·7
		Ranikhet	6,069	24·003	+·027	?	24·073	27th	23·928	18th	·145	66·4	73·3	+0·9	62·8	+0·8	68·1	+0·9	10·5	77·5	1st & 15th	60·0	22nd	17·5
3	Bengal	Yatung	10,480?			Not recorded.						P	64·2	P	55·5	P	59·8	P	8·7	69·5	12th	51·4	20th	18·8
		Gnatong	P	19·291	P	P	19·350	25th	19·228	1st	·122	49·9	55·6	P	44·1	P	49·9	P	11·5	58·9	15th	41·1	7th	17·8
		Darjeeling	7,421	22·914	+·001	P	22·977	6th	22·825	1st	·152	61·1	66·0	0	57·5	+0·8	61·8	+0·4	8·5	71·1	20th	55·7	29th	15·3
		Gantok	5,660	24·312	P	P	24·418	6th	24·212	1st & 12th	·2	66·8	74·9	P	54·6	P	64·7	P	20·3	80·2	10th & 26th,	52·0	29th & 30th	28·9

(a) Uncorrected. * Mean of 29 days. † Mean of 3 days.

I—*continued.*

in India, Burma, etc., in August 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	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 1896.	Normal rainfall for period from 1st June to 31st Aug.	Variation from normal of period from 1st June to 31st August.				
...	...	...	...	...	4	21	4	2	6·2	4·2	+ 48	77	·753	5·8	11	11·78	— 0·78	4·97	7·66	— 2·69	8·97	15·30	— 6·33	1·23	Salem	Madras (South Central).	34
...	3	...	...	...	...	5	23	...	5·2	7·4	— 30	85	·743	6·0	2	2·91	— 0·91	0·65	1·19	— 0·54	7·95	3·85	+ 4·10	0·27	Coimbatore.		
...	1	...	...	...	...	1	20	9	11·1	8·9	+ 25	96	·579	9·7	30	26·30	+ 4·70	31·02	26·25	+ 4·77	136·63	94·46	+42·17	2·99	Mercara	Coorg.	35
...	...	...	...	...	...	12	17	2	13·1	?	?	86	·655	9·3	12	?	?	4·35	?	?	12·14	?	?	0·80	Chitaldroog	Mysore.	36
...	...	...	...	...	...	15	14	2	11·4	7·6	+ 50	87	·619	8·2	7	10·73	— 3·73	3·21	5·80	— 2·59	7·04	13 84	— 6·80	0·82	Bangalore.		
...	...	...	...	...	...	4	24	3	4·8	?	?	86	·614	9·0	13	?	?	3·91	?	?	20·93	?	?	0·58	Hassan.		
...	...	...	...	...	...	14	16	1	13·5	?	?	82	·634	7·7	11	?	?	3·03	?	?	11·30	?	?	0 55	Mysore.		
2	...	...	...	...	1	15	11	2	8·8	5·7	+ 54	71	·815	6·0	5	5·91	— 0·91	2·03	3·84	— 1·81	3·52	7·85	— 4·33	0·77	Negapatam	Madras (East Coast, South).	56
...	...	...	...	...	3	6	12	10	2·8	?	?	74	·832	4·5	4	8·00	— 4·00	2·72	?	?	3·65	?	?	1·03	Cuddalore.		
...	...	...	...	...	...	7	21	3	9·0	8·2	+ 10	61	·684	6·3	1	5·36	— 4·36	0·48	4·67	— 4·19	0·88	7·79	— 6·91	0·34	Trichinopoly.		
...	...	...	...	...	3	13	12	3	6·2	7·3	— 15	75	·815	6·3	13	8·27	+ 4·73	6·11	4·56	+ 1·55	9·65	10·54	— 0·89	1·06	Madras.		
12	...	...	...	...	...	2	14	3	9·0	?	?	74	·811	9·2	10	5·50	+ 4·50	7·15	?	?	11·21	?	?	2·12	Nellore	Madras (East Coast, Central).	55
1	...	...	...	...	...	1	13	16	12·3	7·8	+ 58	83	·891	7·5	10	9·00	+ 1·00	5·39	7·04	— 1·65	16·32	18·27	— 1·95	1·18	Masulipatam		
...	...	...	...	...	...	10	15	6	?	?	?	71	·760	7·5	12	7·90	+ 4·10	5·73	6·38	— 0·65	10·77	14·39	— 3·62	1·83	Cuddapah	Madras (Central)	54
1	...	...	...	...	...	5	22	3	?	?	?	75	·695	6·9	13	9·33	+ 3·67	6·12	5·85	+ 0·27	11·93	14·71	— 2·78	1·30	Kurnool.		
...	...	...	...	...	...	1	30	...	11·5	10·7	+ 7	64	·626	8·0	2	4·55	— 2·55	0·61	2·58	— 1·97	2·08	6·41	— 4·33	0·28	Bellary.		
2	...	...	...	...	...	...	26	3	?	?	?	79	·812	7·7	11	9·10	+ 1·90	6·62	7·35	— 0·73	17·73	20·36	— 2·63	1·70	Rajahmundry	Madras (East Coast, North).	52
...	...	...	...	...	...	13	17	1	9·7	?	?	78	·809	6·9	10	9·10	+ 0·90	4·25	5·71	— 1·46	13·75	17·75	— 4·00	1·10	Cocanada.		
9	...	...	...	...	...	6	16	...	2·8	2·9	— 3	82	·886	8·1	9	10·64	— 1·64	3·16	5·89	— 2·73	13·14	14·47	— 1·33	0·69	Vizagapatam.		
5	2	...	...	1	1	15	3	4	11·5	9·1	+ 26	86	·937	4·9	10	11·44	— 1·44	10·49	8·21	+ 2·26	26·30	22·20	+ 4·10	3·60	Gopalpur.		
																									XII.—Hill Stations.		
...	4	...	3	1	2	...	4	...	3·0	?	?	55	·471	?	1	?	?	1·15	?	?	1·85	?	?	1·15	Kachh. (d)	Baluchistan.	48
			Not	rec	orde	d.			?	?	?	?	?	?	?	?	?	?	?	?	0·15	?	?	?	Pishin. (e)		
23	...	...	...	...	5	2	1	...	1·8	4·5	— 60	63	·545	0·6	2	0·91	+ 1·09	1·36	0·70	+ 0·66	2·52	2·03	+ 0·49	1·24	Quetta.		
...	...	...	...	...	29	...	...	...	?	?	?	53	·399	?	1	?	?	1·30	?	?	4·05	?	?	1·30	Kalat.*(c)		
...	...	...	...	4	4	18	5	...	18·2	?	?	23	·259	1·0	0	?	?	0	?	?	0·60	?	?	0	Chaman.		
...	1	...	...	1	1	6	19	3	2·0	1·6	+ 25	59	·272	4·2	0	?	?	0·12	?	?	0·15	?	?	0·07	Leh	Punjab.	30
6	2	1	2	13	4	...	1	2	5·5	?	?	86	·621	3·5	3	?	?	1·40	?	?	4·80	?	?	0·51	Srinagar.		
			Not	rec	orde	d.			?	?	?	43	·429	4·1	1	?	?	0·25	?	?	1·59	?	?	0·15	Gilgit.		
...	1	6	6	3	1	...	...	...	?	?	?	?	?	4·2	8	?	?	8·06	?	?	16·26	?	?	3·50	Samana. (b)		
19	3	1	1	5	1	...	...	1	9·9	?	?	83	·734	2·7	10	?	?	4·46	?	?	6·21	?	?	1·38	Cherat.		
4	1	2	3	6	2	...	8	5	6·6?	4·8	+ 38	73?	·466?	4·1?	9	15·64	— 6·64	8·19?	14·28	— 6·09?	21·63?	28·40	— 6·77	1·49?	Murree.		
23	...	...	...	...	1	...	7	...	?	?	?	?	?	6·4	2	?	?	0·80	?	?	0·84	?	?	0·40	Poo.		
16	4	3	1	3	3	1	...	...	1·6	1·6	0	92	·517	8·7	17	19·45	— 2·45	15·15	17·98	— 2·83	35·38	42·32	— 6·94	3·38	Simla.		
20	3	1	...	...	6	...	...	1	8·6	4·3	+100	95	·539	0	16	?	?	17·37	18·59	— 1·22	50·22	44·92	+ 5·30	5·24	Chakrata	North-Western Provinces.	25
...	2	2	6	4	2	3	5	7	?	8·1	?	96	·565	7·6	19	22·18	— 3·18	32·86	30·90	+ 1·96	71·25	69·09	+ 2·16	9·26	Mussooree.		
16	1	2	2	...	...	2	6	2	2·3	1·9	+ 21	91	·583	7·7	16	17·82	— 1·82	15·93	13·91	+ 2·02	35·61	33·13	+ 2·48	2·46	Ranikhet.		
			Not	rec	orde	d.			?	?	?	?	?	?	16	?	?	7·07	?	?	19·52	?	?	1·37	Yatung	Bengal.	13
1	2	3	4	3	...	3	6	9	2·5	?	?	87	·312	6·2	28	?	?	30·42	?	?	67·25	?	?	3·00	Gnatong.		
3	1	3	13	4	1	2	3	1	3·8	3·4	+ 12	96	·518	?	23	24·35	−1·35	20·86	25·61	— 4·75	70·72	81·75	−11·03	3·50	Darjeeling.		
22	1	1	...	...	...	1	3	1	?	?	?	90	·594	?	24	?	?	23·13	?	?	64·34	?	?	3·30	Gantok. (c)		

* Mean of 29 days. (c) Wind observation of 29 days. (b) Wind observations of 17 days. (e) Total rainfall for June and July only.
(d) „ „ 14 „

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 of month.	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	25·876	+·007	P	26·013	31st	25·721	4th	·292	65·7	70·2	−1·7	64·2	−0·2	67·2	−1·0	6·0	74·1	25th	61·9	18th	12·2
	Pachmarhi	3,528	26·280	+·006	P	26·435	31st	26·036	3rd	·399	68·1	73·2	−1·6	66·6	−0·3	69·9	−1·0	6·6	79·2	25th	63·2	4th	16·0
South India	Wellington	6,200	24·211	+·008	P	24·249	31st	24·139	1st	·110	63·6	70·9	+0·1	56·6	−0·6	63·8	−0·3	14·3	75·2	18th	50·2	21st	25·0
XIII.—Extra India.																							
Ceylon	Trincomalee	12	29·872	P	29·810	29·905	15th	29·828	12th	·077	81·3	91·6	P	77·7	P	84·7	P	13·9	96·5	20th	73·0	7th	23·5
	Colombo	40	29·916	+·030	29·882	29·965	27th	29·870	29th	·095	80·3	85·4	P	77·2	P	81·3	P	8·2	88·0	16th	73·5	4th	14·5
Persia	Meshed	3,104			Not recorded.						77·4	P	P	61·8	P	P	P	P	P	P	56·3	16th	P
	Teheran	P	25·923*	P	P	26·100	31st	25·675	1st	·425	80·6*	95·9*	P	68·9*	P	82·5*	P	27·0	102·9	2nd	61·5	30th	41·4
		P	25·466*	P	P	25·620	31st	25·280	1st	·340													
	Ispahan	P	24·341	P	P	24·540	31st	24·130	1st & 5th	·410	76·9	96·2	P	62·6	P	79·4	P	33·6	103·3	3rd	54·0	21st	49·1
		P	24·698	P	P	24·870	31st	24·490	1st & 5th	·380													
	Bushire	14	29·570	+·026	29·543	29·721	31st	29·425	3rd	·296	91·1	96·8	+0·3	83·7	+0·1	90·2	+0·2	13·1	109·5	15th & 23rd	78·9	27th	30·1
	Jask	P	29·618	P	29·570	29·810	31st	29·466	1st	·344	89·6	95·2	P	85·1	P	90·2	P	10·1	103·2	21st	81·2	25th	22·1
Arabia	Muscat	20	29·614	P	29·581	29·786	31st	29·442	1st	·344	84·2	86·8	P	82·6	P	84·7	P	4·2	95·3	20th	78·1	9th	17·2
	Baghdad*	220?	29·474	−·036	29·662	29·623	31st	29·320	13th	·302	87·9	106·8	−1·0	79·4	+1·2	93·1	+0·1	27·4	113·9	21st	69·3	8th	44·5
	Aden	94	29·670	+·020	29·695	29·790	27th	29·559	11th	·231	82·4	91·7	−0·2	77·1	−3·4	84·5	−1·8	14·6	97·3	25th	73·9	10th	23·8
	Perim	P	29·589	P	P	29·706	27th	29·503	13th	·203	86·7	94·7	P	83·2†	P	88·8†	P	11·5	99·1	5th & 22nd	73·2	24th	25·9
Afghanistan	Kabul	P			Not recorded.						71·6	92·3	P	59·5	P	75·9	P	32·8	102·1	2nd	53·0	16th	49·1
Central Asia	Kashgar	P	25·719	P	?	25·870	25th	25·519	1st	·351	74·0	86·9	?	64·1	P	75·5	?	22·8	94·9	9th	56·3	31st	38·6
Africa	Zanzibar	23	30·106	P	30·106	30·176	27th	30·021	13th	·155	74·4	80·2	P	72·2	P	76·2	P	8·0	82·1	28th & 29th	70·3	19th & 29th	11·8

* Mean of 20 days. † Mean of 29 days.

I—*concluded.*

in India, Burma, etc., in August 1896—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 31st August 1896.	Normal rainfall for period from 1st June to 31st August.	Variation from normal of period from 1st June to 31st August.	Heaviest rainfall during month.		
1	...	2	...	1	1	23	3	...	11·5	10·3	+ 7	99	·624	9·3	22	18·50	+3·50	23·19	22·39	+ 0·80	49·87	52·94	−3·07	4·95	Mount Abu	Central India.
1	...	...	...	...	...	11	14	5	16·7	7·5	+123	94	·648	9·5	24	21·18	+2·82	34·54	19·74	+14·80	73·11	56·23	+16·88	5·76	Pachmarhi.	
10	...	1	...	4	2	7	6	1	4·7	3·8	+ 24	69	·414	6·0	8	10·89	−2·89	2·46	4·19	− 1·73	11·52	11·67	−0·15	0·72	Wellington*	South India.
																									XIII.—Extra India.	
...	...	...	...	...	...	31	...	...	12·3	?	?	76	·856	2·7	4	?	?	4·86	4·61	+0·25	7·01	8·34	−1·33	1·80	Trincomalee	Ceylon.
...	...	...	...	2	2	15	12	...	10·4	8·7	+20	83	·877	6·2	13	?	?	6·63	4·19	+2·44	17·54	16·98	+0·56	1·40	Colombo .	
			Not	rec	orded.				?	?	?	45	·428	0·6	0	?	?	0	?	?	1·09	?	?	0	Meshed .	Persia.
19	...	...	...	...	6	4	1	...	2·3‖	?	?	32*	·327*	0·8*	0	?	?	0	?	?	0	?	?	0	Teheran. (a)	
3	1	6	7	1	...	1	6	6	4·3	?	?	48	·451	0·8	0	?	?	0	?	?	0	?	?	0	Ispahan.	
2	4	1	5	8	...	5	...	6	7·4	7·8	−5	67	·962	6·1	0	?	?	0	0		0	0	0	0	Bushire.	
...	2	...	20	5	1	...	1	2	10·2	?	?	73	1·011	2·3	0	?	?	0	?	?	0	?	?	0	Jask.	
...	...	1	15	7	5	1	2	...	4·4	?	?	81	·952	1·9	0	?	?	0	?	?	0	?	?	0	Muscat .	Arabia.
8	9	5	1	...	...	1	...	6	1·5	?	?	44	·579	0·2	0	?	?	0	?	?	0	?	?	0	Baghdad.*(a)	
8	...	...	2	2	10	7	2	...	*11·3	10·8	+9	67	·735	4·7	0	?	?	0	0·21	−0·21	·01	0·22	−0·21	0	Aden.	
2	2	1	3	...	...	5	15	3	14·1	?	?	69	·877	3·4	2	?	?	2·09	?	?	2·09	?	?	1·66	Perim.	
...	6	2	14	...	1	...	8	...	?	?	?	56	·445	0	0	?	?	0	?	?	0	?	?	0	Kabul .	Afghanistan.
25	1	...	...	...	...	...	1	1	3·2	?	?	52	·426	4·5	2	?	?	0·42	?	?	0·64	?	?	0·19	Kashgar§ .	Central Asia.
...	...	...	...	6	16	9	...	...	5·7	?	?	89	·760	5·6	11	?	?	4·52	?	?	5·83	?	?	0·93	Zanzibar .	Africa.

* Mean of 30 days. ‖ Mean of 27 days. § Wind observation of 28 days.
(a) „ „ „ 30 „

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85

Meteorological Province.	Station.	Elevation of bar. cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·814	29·736	·078	29·771	+·023	29·763	84·7	78·0	6·7	88·0	74·4	13·6	82·8	82·8	80·5	+ 0·6	75·5	78·7	78·7	77·6
	Rangoon	...	·800	·713	·087	·763	+·006	·741	83·9	75·5	8·4	88·7	73·6	15·1	80·2	78·9	77·8	− 0·5	74·0	78·0	76·9	76·3
	Diamond Island	...	·789	·712	·077	·747	−·002	·723	83·1	75·8	7·3	85·7	73·4	12·3	80·4	79·6	78·2	− 0·3	74·3	77·4	76·4	76·0
	Cocos Island	111	·719	·641†	·075	·677	P	·720	84·7†	76·6†	8·1	88·9	73·3	15·6	81·4	81·9†	79·7†	P	74·8†	78·6	78·5†	77·3
	Akyab	...	·734	·646	·088	·694	−·018	·657	84·7	77·3	7·4	89·1	75·0	14·1	81·9	82·1	79·9	− 0·4	75·5	80·2	80·2	78·6
Assam.	Silchar	...	·613	·485	·128	·558	−·017	·612	91·3	77·2	14·1	99·1	75·2	23·9	84·9	87·8	83·6	+ 1·2	76·1	79·9	80·6	78·9
	Sibsagar	...	·374	·237	·137	·306	−·026	·590	88·8	77·5	11·3	94·7	74·3	20·4	83·0	87·0	81·3	− 0·7	76·8	80·2	81·8	79·6
	Dhubri	...	·580	·458	·122	·524	−·009	·592	88·7	79·4	9·3	92·2	76·6	15·6	84·2	86·4	82·6	+ 2·0	77·2	80·4	81·1	79·6
Bengal and Orissa.	Chittagong	...	·621	·517	·104	·576	−·029	·611	86·9	76·9	10·0	90·0	75·1	14·9	83·8	83·2	80·6	+ 0·9	75·3	79·1	79·2	78·0
	Narayangunge	...	·652	·546	·106	·605	−·011	·579	88·4	79·7	8·7	92·1	76·2	15·9	84·5	86·1	83·7	+ 1·0	77·1	80·4	81·0	79·5
	Calcutta (Alipore)	...	·612	·519	·093	·571	−·025	·537	87·6	78·7	8·9	89·8	75·6	14·2	84·1	85·1	83·1	+ 0·7	77·6	80·2	80·5	79·5
	Saugor Island	...	·598	·509	·089	·559	−·042	·528	88·4	80·2	8·2	91·6	78·2	13·4	85·1	86·4	83·4	+ 1·0	78·2	81·1	81·5	80·3
	Burdwan	...	·533	·431	·102	·489	−·018	·543	90·3	79·8	10·5	93·4	76·2	17·2	85·4	87·8	84·0	+ 0·6	78·2	80·1	80·9	79·7
	Berhampore	...	·580	·473	·107	·534	−·016	·548	90·0	79·1	10·9	93·7	76·8	16·9	85·5	87·7	83·6	+ 0·4	77·6	80·7	81·0	79·8
	False Point	...	·611	·521	·090	·571	−·042	·533	87·3	78·4	8·9	91·9	71·6	20·3	84·5	85·3	82·0	+ 0·5	76·9	80·0	80·4	79·1
	Cuttack	...	·546	·454	·092	·507	−·044	·529	88·3	78·5	10·4	94·4	75·4	19·0	84·0	85·4	82·4	− 0·2	76·8	78·7	79·5	78·3
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·639	·551	·088	·597	−·023	·523	84·6	74·0	10·6	88·2	71·3	16·9	80·0	81·9	78·2	+ 1·0	72·8	75·4	76·1	74·8
	Patna	...	29·446	·336	·110	·396	−·021	·529	91·3	80·6	10·7	96·3	76·6	19·7	86·7	88·6	84·8	+ 1·2	79·0	81·5	81·4	80·6
	Darbhanga	...	·479	·370	·109	·430	−·011	·546	90·8	80·6	10·2	94·9	77·7	17·2	86·8	88·3	84·6	+ 1·8	78·7	81·1	81·4	80·4
	Allahabad	...	·314	·211	·103	·266	−·009	·525	91·9	79·8	12·1	96·5	76·6	19·9	87·2	89·2	84·6	+ 1·3	77·5	81·5	81·6	80·2
	Lucknow	...	·256	·160	·096	·209	−·009	·529	92·1	79·5¶	12·6	98·4	75·5	22·9	86·5	88·5	85·2¶	+ 1·2	77·9	80·5	81·3	79·9
Upper Sub-Himalayas.	Dehra Dun	...	27·459	27·382	·077	27·414	+·008	·575	84·6	72·9	11·7	89·0	67·8	21·2	78·9	80·9	77·2	− 0·4	71·2	75·1	76·3	74·2
	Roorkee	...	28·747	28·651	·096	28·695	+·007	·534	89·9	77·0	12·9	93·9	72·1	21·8	84·0	88·5	82·5	− 0·8	75·4	78·7	80·4	78·2
	Meerut	...	·896	·797	·099	·840	+·007	·530	91·8	78·8	13·0	96·5	72·9	23·6	85·4	90·2	84·7	+ 0·7	77·0	78·4	80·0	78·5
	Lahore	...	·901	·811	·090	·849	+·003	·500	97·4	82·3	15·1	104·5	73·7	30·8	90·5	95·9	89·1	+ 2·7	77·8	80·5	81·6	79·9
	Ludhiana	...	·809	·713	·096	·755	+·007	·519	93·5	79·4	14·1	100·4	74·0	26·4	87·0	91·1	85·5	− 0·6	77·0	79·6	80·1	78·9
Indus Valley and N.W. Rajputana.	Peshawar	...	·516	·402	·114	·452	+·022	·509	100·7	78·4	22·3	107·0	72·3	34·7	91·5	98·0	88·6	+ 1·3	72·7	78·6	79·3	76·9
	Mooltan	...	29·161	29·075	·086	29·111	+·014	·484	103·5	84·2	19·3	108·9	76·0	32·9	94·5	100·2	92·7	+ 3·0	77·3	82·3	83·5	81·0
	Jacobabad	...	·395	·289	·106	·335	+·017	·473	104·6	83·1	21·5	109·3	78·1	31·2	94·5	102·4	93·0	+ 1·6	77·4	81·4	82·7	80·5
	Kurrachee	...	·640	·571	·069	·608	−·003	·570	88·7	79·2	9·5	91·5	75·9	15·6	85·0	85·7	82·9	+ 1·0	76·6	81·0	81·6	79·7
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·250	28·162	·088	28·205	+·019	·575	90·6	76·3	14·3	97·5	73·9	23·6	83·8	87·3	81·9	+ 0·6	74·6	76·7	77·5	76·2
	Ajmere	...	·080	27·993	·087	·034	+·014	·589	86·0	75·4	10·6	90·4	72·6	17·8	81·2	85·0	80·0	+ 0·3	72·9	77·1	79·0	76·3
	Deesa	...	29·237	29·148	·089	29·190	+·017	·608	87·2	75·4	11·8	92·2	73·7	18·5	81·4	84·6	80·4	− 1·1	74·2	77·0	77·5	76·2
	Nowgong	...	28·882	28·789	·093	28·837	−·003	·541	87·8	77·9	9·9	92·8	75·0	17·8	83·3	86·0	82·1	+ 0·3	76·7	79·4	80·6	78·9
	Agra	...	29·075	·974	·101	29·022	−·005	·525	94·2	79·9	14·3	101·0	76·6	24·4	88·6	91·3	86·6	+ 1·8	77·1	80·7	81·3	79·7
Deccan.	Belgaum	...	27·338	27·267	·071	27·302	+·027	·763	75·1	66·4	8·7	79·1	63·2	15·9	71·7	71·3	69·2	− 0·4	65·7	69·1	68·8	67·9
	Sholapur	...	28·224	28·112	·112	28·175	+·023	·698	87·4	69·5	17·9	94·8	66·2	28·6	80·0	83·4	76·8	− 1·4	68·0	71·4	71·9	70·4
	Poona	...	27·368	27·902	·066	27·936	+·021	·720	79·7	69·1	10·6	85·4	64·9	20·5	75·9	76·4	72·6	− 1·0	68·0	71·1	71·2	70·1
	Akola	...	28·808	28·708	·100	28·756	+·014	·637	85·1	73·1	12·0	91·9	70·9	21·0	79·9	82·7	78·8	− 0·8	71·8	74·4	75·3	73·8
	Buldana	2,132	27·635	27·547	·088	27·589	+·015	·650	80·4	69·2	11·2	86·5	66·7	19·8	76·5	78·7	74·8	− 0·6	67·5	71·1	72·3	70·3
	Khandwa	...	28·687	28·593	·094	28·638	+·022	·637	82·8	73·7	9·1	88·7	71·6	17·1	78·7	81·5	77·4	− 1·0	71·6	74·2	75·2	73·7

¶ Mean of 29 days

† Mean of 30 days.

II.

Stations in India, Burma, etc., for August, 1896.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Provinces.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·851	·927	·925	·901	+·007	89	83	83	85	−1	8·9	9·2	9·1	+2·0	...	...	...	...	...	6	30	25	1	S. 61° W.	S. 43° W.	87	82	403	228	...	...	Port Blair.	Burma Coast and Bay Islands.
·823	·932	·899	·885	−·004	93	91	91	92	+1	9·2	9·7	9·5	+0·6	...	...	1	...	...	14	26	17	4	S. 53° W.	S. 34° W.	76	66	99	113	...	...	Rangoon.	
·830	·903	·871	·868	−·008	93	87	86	89	+1	9·2	9·5	9·4	+1·9	...	...	...	...	...	1	44	14	3	S. 58° W.	S. 44° W.	90	78	330*	164	...	...	Diamond Island.	
·840†	·942	·930†	·904	P	92†	88	85†	88	P	8·2	8·5	8·4	P	...	...	...	...	...	6	40	15	...	S. 52° W.	P	90	P	P	P	17·94	2·72	Cocos Island	
·862	1·008	1·008	·959	+·053	92	92	91	92	+4	8·6	8·3	8·5	+0·4	...	...	...	4	5	18	3	2	...	S. 4° E.	S. 1° E.	87	62	128	81	...	...	Akyab.	
·890	·954	·950	·931	+·010	95	80	73	83	−2	8·5	7·8	8·2	+0·3	40	...	...	3	...	2	3	9	5	S. 87° W.	S. 63° W.	20	7	69*	69	...	...	Silchar.	Assam.
·914	·996	1·015	·975	+·032	97	83	79	88	+4	8·5	6·5	7·5	P	2	4	17	8	1	13	13	4	...	S. 47° E.	S. 30° W.	16	12	91*	53	...	...	Sibsagar.	
·966	·987	·992	·962	+·036	90	84	79	84	−3	7·9	8·6	8·3	+0·9	8	4	7	9	7	12	11	1	3	S. 31° E.	S. 57° E.	26	20	123*	78	...	...	Dhubri.	
·877	·929	·943	·916	+·012	95	80	83	86	−2	8·3	7·7	8·0	+0·6	...	...	...	1	23	24	11	2	1	S. 4° W.	S. 32° E.	76	55	176*	146	...	...	Chittagong	Bengaland Orissa.
·899	·986	·992	·959	−·012	89	83	79	84	−3	8·2	7·9	8·1	+0·3	...	...	1	4	39	15	2	...	1	S. 35° E.	S. 14° E.	84	72	255	151	...	...	Narayangunge.	
·936	·981	·980	·966	−·002	95	84	81	87	−1	8·0	7·5	7·8	−0·4	...	...	4	20	19	10	8	...	1	S. 49° E.	S. 17° E.	63	57	89	122	...	...	Calcutta (Alipore).	
·939	1·010	1·011	·987	−·006	91	84	80	85	−2	8·8	8·0	8·4	+0·8	...	...	3	7	14	20	12	4	2	S. 9° E.	S. 17° W.	56	54	294	299	...	...	Saugor Island.	
·948	·960	·964	·957	+·010	93	79	73	82	−2	7·7	7·4	7·6	−0·7	2	3	6	20	14	9	6	2	...	S. 61° E.	S. 27° E.	52	48	98*	84	...	...	Burdwan.	
·930	·986	·970	·962	+·010	93	80	75	83	−4	8·0	8·0	8·0	−0·8	5	4	2	20	17	11	2	1	...	S. 59° E.	S. 40° E.	60	45	84*	101	...	...	Berhampore.	
·905	·967	·973	·948	+·016	93	82	80	85	0	8·4	7·7	8·0	+0·2	2	...	1	4	6	16	10	19	4	S. 40° W.	S. 57° W.	50	53	198*	238	...	...	False Point.	
·900	·912	·932	·915	+·008	92	78	77	82	+1	7·5	7·3	7·4	+0·1	7	1	5	6	1	3	15	18	6	S. 77° W.	S. 44° W.	40	45	72	62	...	...	Cuttack.	
·797	·826	·830	·813	+·016	94	81	77	84	−1	9·9	9·6	9·8	+1·0	3	4	8	21	6	4	1	5	10	N. 67° E.	S. 50° W.	32	7	206	180	...	...	Hazaribagh	Gangetic Plain and Chota Nagpur.
·971	1·006	·977	·985	+·030	93	79	73	82	−1	8·8	8·6	8·7	+0·6	3	1	14	28	9	3	...	2	2	N. 86° E.	S. 19° E.	66	34	153*	83	...	...	Patna.	
·956	·986	·981	·975	+·014	91	78	74	81	−3	6·3	5·6	6·0	−0·1	7	2	6	27	18	1	...	1	...	S. 80° E.	S. 82° E.	71	60	108	110	...	...	Darbhanga.	
·913	1·001	·978	·964	+·017	90	78	72	80	−3	8·4	8·1	8·3	+0·8	8	3	9	17	2	...	2	11	10	N. 21° E.	N. 40° E.	28	4	140	93	...	...	Allahabad.	
·934¶	·965	·960	·953	+·041	93¶	77	70	80	+1	8·0	7·7	7·9	+0·4	4	8	10	14	5	6	5	4	6	N. 64° E.	S. 77° E.	23	12	50*	72	...	...	Lucknow.	
·742	·826	·849	·806	P	92	84	81	86	P	7·5	7·8	7·7	+0·2	6	12	3	6	12	9	4	3	7	S. 78° E.	S. 43° W.	10	10	27	26	...	...	Dehra Dun	Upper Sub-Himalayas.
·861	·911	·931	·901	+·040	92	78	70	80	+3	6·5	5·6	6·1	−0·1	20	2	5	...	12	2	2	3	16	N. 37° W.	S. 36° E.	10	27	42	60	...	...	Roorkee.	
·906	·878	·887	·890	+·016	92	72	63	76	0	6·2	5·0	5·6	−0·8	18	...	2	4	15	...	6	13	4	S. 22° W.	N. 80° E.	18	5	58*	50	...	...	Meerut.	
·895	·907	·886	·896	+·029	81	64	54	66	+2	2·7	3·7	3·2	−0·5	3	6	2	11	9	6	2	12	11	N. 60° W.	S. 83° E.	5	27	72	69	...	...	Lahore.	
·901	·917	·879	·899	+·027	90	72	62	75	+3	6·3	5·6	6·0	+0·4	26	1	7	1	18	1	4	...	4	S. 59° E.	S. 66° E.	24	10	39	34	...	...	Ludhiana.	
·737	·821	·767	·775	−·001	75	56	43	58	−3	2·2	4·7	3·5	+0·7	8	8	7	9	2	5	6	6	11	N. 16° W.	N. 40° E.	16	55	93*	94	...	...	Peshawar.	Indus Valley and N.-W. Rajputana.
·848	·940	·926	·905	+·022	72	58	49	60	−3	1·5	2·4	2·0	−0·2	14	...	1	2	11	11	21	2	...	S. 11° W.	S. 19° W.	53	22	90*	70	...	...	Mooltan.	
·867	·901	·854	·874	+·059	76	56	42	58	+1	1·8	2·2	2·0	−0·3	7	2	2	9	20	21	1	...	...	S. 36° E.	S. 50° E.	65	54	142*	94	...	...	Jacobabad.	
·883	1·007	1·028	·973	P	89	84	83	85	P	8·9	8·0	8·5	+1·7	...	...	1	...	2	1	28	28	2	S. 71° W.	S. 63° W.	98	84	353*	409	...	...	Kurrachee.	
·837	·830	·820	·829	+·015	92	72	64	76	−2	6·9	7·9	7·4	+0·2	1	4	8	2	...	3	17	18	9	N. 88° W.	N. 58° W.	47	40	111	127	...	...	Jeypore.	East Rajputana, Central India and Gujarat.
·779	·883	·917	·860	+·081	88	83	76	82	+6	5·8	5·4	5·6	−0·6	2	1	2	2	2	...	11	40	2	S. 83° W.	S. 70° W.	72	56	175	138	...	...	Ajmere.	
·832	·867	·849	·849	+·052	94	81	72	82	+7	9·1	7·6	8·4	+0·4	...	...	...	...	2	2	32	23	3	S. 63° W.	S. 47° W.	84	72	272	288	...	...	Deesa.	
·906	·956	·973	·945	+·088	95	84	79	86	+6	7·9	8·4	8·2	−0·2	2	6	5	6	1	...	3	32	7	N. 68° W.	S. 82° W.	50	38	52*	81	...	...	Nowgong.	
·896	·945	·934	·925	+·029	88	70	65	74	−2	6·2	6·6	6·4	0	...	...	10	...	11	...	16	2	23	N. 74° W.	S. 22° E.	24	10	160*	157	...	...	Agra.	
·625	·682	·675	·661	+·006	96	88	88	91	+2	8·5	9·0	8·8	+0·3	...	...	...	...	...	...	28	29	1	S. 69° W.	S. 79° W.	91	89	521	497	...	...	Belgaum.	Deccan.
·670	·662	·643	·658	+·002	93	65	58	72	+3	8·1	8·7	8·4	+0·1	...	...	...	...	...	...	20	30	12	S. 84° W.	N. 89° W.	85	79	332*	279	...	...	Sholapur.	
·673	·705	·702	·693	+·011	94	79	77	84	+5	8·7	8·5	8·6	−0·1	...	...	...	...	...	...	17	44	1	S. 79° W.	S. 84° W.	93	82	435*	340	...	...	Poona.	
·764	·778	·780	·774	+·027	94	77	71	81	+6	8·5	7·9	8·2	0	...	2	...	...	...	...	7	39	14	N. 87° W.	N. 71° W.	83	80	233*	194	...	...	Akola.	
·655	·695	·713	·688	−·013	91	76	73	80	−1	8·3	8·7	8·8	+1·2	...	...	...	...	...	...	9	26	27	N. 76° W.	N. 65° W.	85	72	171	199	4·17	0·89	Buldana.	
·752	·790	·797	·780	+·017	90	81	75	82	+4	8·6	8·5	8·6	+1·2	...	...	1	...	...	...	8	24	29	N. 73° W.	N. 80° W.	84	80	244	192	...	...	Khandwa.	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L., and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Deccan—*contd.*	Hoshangabad	...	28·693	28·600	·093	28·645	+·010	29·607	83·3	73·7	9·6	89·1	70·0	19·1	78·9	81·0	77·4	− 1·0	72·8	75·8	76·7	75·1
	Nagpur	...	665	·568	·097	·615	+·003	·591	84·7	74·5	10·2	92·3	71·9	20·4	79·2	81·6	79·1	− 1·2	71·5	75·1	76·5	74·4
	Nagpur (Sanitary Commissioner's Office)	...	·685	·585	·100	·633	?	·598	85·9	74·5	11·4	94·4	72·2	22·2	80·5	82·8	79·4	?	71·4	75·8	77·1	74·8
	Jubbulpore	...	·336	·245	·091	·289	−·005	·562	84·2	74·0	10·2	88·6	70·4	18·2	79·3	81·2	77·8	−0·2	73·3	76·3	77·4	75·7
	Saugor	...	27·857	27·759	·098	27·811	−·011	·554	83·4	72·8	10·6	87·7	70·6	17·1	78·2	81·5	77·0	+0·5	71·3	74·8	75·7	73·9
	Raipur	...	28·694	28·597	·097	28·644	−·068	·546	85·0	74·7	10·3	89·3	72·2	17·1	80·6	82·4	79·5	−0·5	73·3	76·7	77·0	75·7
	Sutna	...	?	?	?	?	?	?	87·5	77·1	10·4	91·2	73·6	17·6	83·3	84·6	81·1	+0·9	75·3¶	78·4	78·6¶	77·4
	Hyderabad (Deccan)	...	28·099	27·990†	·109	28·049	?	·674†	84·3	71·7	12·6	91·0	69·5	21·5	77·9	82·5†	77·6†	?	69·3	72·0	73·7†	71·7
West Coast.	Bombay	...	29·786	29·718	·068	29·749	+·022	·726	83·6	76·6	7·0	86·1	75·0	11·1	80·7	80·8	79·5	−0·4	74·0	77·3	77·0	76·1
	Ratnagiri	...	·756	·682	·074	·716	+·036	·763	83·0	75·3	7·7	84·9	72·9	12·0	79·8	80·3	78·6	−0·2	73·3	76·9	77·1	75·8
	Karwar	...	·867	·791	·076	·826	+·042	·802	81·7	74·4	7·3	84·2	71·5	12·7	79·1	79·6	77·6	−0·2	72·7	75·5	75·5	74·6
	Cochin	...	·958	·882	·076	·917	+·041	·854	84·0	74·0	10·0	87·7	72·1	15·6	79·5	81·0	78·4	−0·3	72·9	75·6	76·4	75·0
Southern India.	Salem	...	28·966	28·831	·135	28·913	+·025	·781	93·4	73·2	20·2	98·2	71·1	27·1	83·7	88·3	80·8	+1·2	71·1	74·5	75·1	73·6
	Mysore	...	27·421	27·330	·091	27·376	?	·808	81·6	65·8	15·8	88·7	63·8	24·9	76·3	77·1	72·6	?	61·7	69·1	69·6	66·3
	Mercara	...	26·226	26·151	·075	26·203	+·031	?	68·1	62·5	5·6	73·4	60·3	13·1	65·7	65·1	64·6	−0·9	61·8	64·6	64·3	63·6
	Bangalore	...	·906	·810	·096	·870	+·014	·771	81·7	65·5	16·2	89·2	63·2	26·0	74·6	77·9	72·7	−0·2	64·6	68·0	68·7	67·1
	Hassan	...	·859	·784	·075	·834	?	·824	75·9	64·5	11·4	82·1	62·2	19·9	72·6	72·7	69·4	?	63·4	67·6	67·6	66·2
	Chitaldroog	...	27·481	27·392	·089	27·446	?	·775	79·4	67·5	11·9	85·7	66·5	19·2	74·2	76·4	72·7	?	64·0	69·4	70·1	67·8
	Trichinopoly	...	29·624	29·487	·137	29·570	+·026	·751	98·7	78·0	20·7	103·3	73·4	29·9	90·5	95·0	86·2	+2·4	70·6	74·0	75·0	73·2
	Madras	...	·822	·697	·125	·769	+·022	·719	93·5	76·7	16·8	98·2	73·5	24·7	86·4	87·5	83·3	−0·9	?	77·0	78·0	76·8
	Bellary	...	29·374	28·262	·112	28·327	+·028	·729	90·5	73·3	16·7	96·2	71·0	25·2	82·8	86·9	80·7	−0·3	68·7	70·9	71·9	70·5
	Vizagapatam	...	29·645	29·542	·103	29·599	−·035	·567	90·6	78·3	12·3	96·9	74·9	22·0	86·2	86·8	83·6	?	75·6	78·8	79·0	77·8
	Cocanada	...	·703	·595	·108	·654	?	·616	88·8	78·3	10·5	95·6	75·0	20·6	83·6	87·2	83·2	?	74·2	76·2	77·2	75·9
Hill Stations, Baluchistan.	Quetta	...	24·495	24·415	·080	24·453	+·016	?	89·9	61·7	28·2	95·9	51·7	44·2	81·6	86·0	74·8	−0·7	55·6	64·0	64·3	61·3
Hill Stations, Punjab.	Leh	...	19·656	19·552	·104	19·614	−·011	?	77·2	50·5	26·7	87·2	42·6	44·6	65·3	73·4	62·6	+1·7	?	52·1	55·6	?
	Srinagar	...	24·737	24·648	·089	24·691	?	?	86·6	61·3	25·3	92·4	52·7	39·7	75·7	84·2	73·4	?	60·2	67·7	74·1	67·3
	Murree	...	23·766	23·735	·031	23·748	+·007	?	77·2	59·9	17·3	86·9	49·1	37·8	69·7	72·1†	67·3†	+0·7	?	66·2	68·3†	?
	Chamba	3,005	26·708	26·637	·071	26·675	+·015	?	84·9	70·2	14·7	89·0	65·0	24·0	78·9	81·7	76·2	+0·2	68·3	72·4	74·3	71·7
	Kallang	10,087	20·697	20·652	·045	20·677	+ ·012	?	74·1	49·8	24·3	79·3	44·1	35·2	65·2	68·0	59·8	−0·8	47·9	56·7	56·2	53·6
	Simla (Ridge)	...	23·050	23·002	·048	23·024	+·017	?	67·7	59·5	8·2	70·7	56·1	14·6	64·4	65·1	63·1	0	58·3¶	62·3	63·2	61·3
Hill Station, N.W.P.	Chakrata	...	·250	·197	·053	·222	+·022	?	67·4	60·3	7·1	71·0	57·3	13·7	64·5	64·5	63·3	−0·1	59·5¶	63·1	63·6	62·1
	Ranikhet	...	24·017	·951	·066	·970	+·022	?	73·1	62·8	10·3	77·3	60·0	17·3	69·1	70·3	67·3	+0·4	61·8	65·8	67·0	64·9
Hill Station, Nepal.	Katmandu	4,388	25·452	25·411	·041	25·435	−·003	?	83·2	69·1	14·1	87·4	66·3	21·1	77·3	78·1	74·9	−0·6	67·7	71·7	72·6	70·7
Hill Station, Bengal.	Darjeeling	...	22·831†	22·856‡	·075	22·896‖	−·003	?	66·0†	57·5	8·5	71·2	55·7	15·5	62·8†	63·4§	61·1‡	+0·5	57·6	61·9†	62·2§	60·6
Hill Stations Central India.	Mount Abu	...	25·892	25·832	·060	25·860	−·002	?	70·2	64·2	6·0	74·3	61·3	12·4	67·2	68·9	66·8	−1·2	63·8	66·5	67·5	65·9
	Pachmarhi	...	26·295	26·222	·073	26·257	+·013	?	73·2	66·6	6·6	79·2	63·4	15·8	69·5	71·7	68·8	−0·8	66·3	67·8	69·2	67·8
	Chikalda	3,642	·193	·120	·073	·155	+·014	?	70·3	64·9	5·4	76·2	62·9	13·3	67·3	69·3	66·6	−1·1	64·5	66·6	67·9	66·4

¶ Mean of 29 days. † Mean of 30 days. ‡ Mean of 26 days. § Mean of 27 days. ‖ Mean of 25 days.

II—*continued.*

Stations in India, Burma, etc., for August 1896—continued.

Vapour Tension.					Humidity.					Cloud.				Wind Directions.										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Prov.
														Number of winds from								Mean wind direction.	Normal mean wind direction of month.								
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.			Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·797	·855	·868	·840	+·030	96	87	83	89	+ 5	9·0	9·0	9·0	+1·4	5	...	...	...	...	3	30	21	3	S. 63° W.	S. 79° W	79	73	120	85	...	...	Hoshangabad.	Deccan—*contd.*
·736	·821	·851	·803	+·008	86	83	80	83	+ 4	8·7	8·7	8·7	+0·2	6	...	...	...	...	2	17	29	8	S. 80° W	N. 76° W.	76	62	233	144	...	...	Nagpur.	
·731	·835	·860	·809	?	85	80	77	81	?	8·8	8·6	8·7	?	11	5	...	...	...	8	10	24	4	S. 78° W.	?	55	?	63*	?	...	...	Do. (Sanitary Commissioner's Office).	
·812	·867	·894	·858	+·050	97	87	84	89	+ 7	8·8	9·1	9·0	+0·7	2	1	3	...	1	2	14	25	14	N. 89° W.	N. 84° W.	68	64	107	107	...	...	Jubbulpore.	
·750	816¶	·819	·795	+·010	93	84¶	77	85	+ 2	7·7	7·0	7·4	+1·3	...	...	4	2	1	1	8	32	14	N. 83° W.	S. 78° W.	69	66	105	104	...	...	Saugor.	
·802	·870	·857	·843	+·017	93	83	78	85	+ 3	8·5	7·8	8·2	+0·3	11	4	1	1	...	6	28	8	3	S. 56° W.	S. 76° W.	55	64	258*	187	...	...	Raipur.	
·856¶	·907	904¶	·889	+·060	92¶	80	76¶	83	+ 4	6·7	7·2	7·0	+0·1	1	10	6	4	...	3	1	24	13	N. 53° W.	N. 70° W.	52	39	163*	191	...	...	Sutna.	
·688	·713	·724†	·708	?	88	75	67†	77	?	6·8	6·6†	6·7	?	1	1	...	...	..	...	...	52	7	N. 84° W.	?	94		250*	?	...	...	Hyderabad (Deccan).	
·807	·894	·877	·859	−·022	88	86	84	86	− 1	8·2	9·3	8·8	0	...	...	...	...	...	2	16	43	1	S. 77° W.	S. 81° W.	90	81	359	384	...	...	Bombay.	West Coast.
·796	·888	·890	·858	+·011	91	88	86	88	+ 3	8·2	7·9	8·1	+1·1	...	...	...	...	1	8	36	17	...	S. 51° W.	S. 63° W.	87	61	240	242	...	...	Ratnagiri.	
·783	·838	·832	·817	−·016	92	84	82	86	− 2	8·1	8·5	8·3	+1·2	...	8	...	...	...	...	11	37	6	N. 84° W.	W.	79	79	128	?	...	...	Karwar.	
·796	·836	·851	·828	−·003	95	83	80	86	− 1	6·6	7·0	6·8	+0·4	14	3	2	...	...	...	4	15	24	N. 61° W.	N. 85° W.	61	59	109	?	...	...	Cochin.	
·735	·732	·693	·720	−·042	90	64	54	69	− 5	5·2	7·7	6·5	+0·5	2	2	...	...	1	7	30	14	6	S. 59° W.	S. 60° W.	72	80	147	94	...	...	Salem.	South India.
·501	·623	·632	·585	?	79	69	69	72	?	7·9	8·6	8·3	?	1	...	...	...	...	...	19	39	3	S. 78° W.	?	90	?	319*	?	...	...	Mysore.	
·544	·599	·593	·579	−·001	96	91	95	95	+ 1	9·5	9·5	9·5	+0·1	...	1	...	...	...	...	5	34	22	N. 76° W.	N. 73° W.	89	88	266	199	...	...	Mercara.	
·598	·611	·596	·602	−·006	95	71	64	77	0	8·1	7·9	8·0	+1·7	...	...	...	...	...	...	22	35	5	S. 77° W.	S. 78° W.	90	91	271*	181	...	...	Bangalore.	
·572	·620	·617	·603	?	93	77	77	82	?	8·9	9·1	9·0	?	...	...	...	...	...	...	8	46	8	W.	?	78	?	113*	?	...	...	Hassan.	
·554	·661	·657	·624	?	92	78	73	78	?	8·8	8·6	8·7	?	...	...	...	...	...	...	23	35	4	S. 76° W.	?	90	?	272*	?	...	...	Chitaldroog	
·653	·617	·599	·623	−·093	68	43	37	49	−12	5·1	5·8	5·5	−2·1	1	...	...	...	1	1	20	32	7	S. 78° W.	N. 80° W.	84	82	211	198	...	...	Trichinopoly	
?	·804	·831	·838	+·032	?	64	65	74	+ 3	5·8	7·8	6·8	+0·3	...	1	1	5	10	3	16	21	5	S. 55° W.	S. 40° W.	45	58	146	172	...	...	Madras.	
·640	·607	·596	614	−·053	77	54	47	59	− 5	8·7	9·2	9·0	+1·4	...	...	...	...	..	...	4	57	1	S. 88° W.	N. 86° W.	97	87	271	262	...	...	Bellary.	
·850	·886	·888	·875	+·001	88	72	71	76	+ 4	7·7	8·1	7·9	+1·4	1	1	...	...	...	5	25	29	1	S. 65° W.	S. 74° W.	84	64	67	70	...	...	Vizagapatam	
·793	·808	·80.	·801	?	82	71	63	72	?	6·2	6·6	6·4	?	...	1	...	...	...	...	21	35	5	S. 79° W.	?	67	?	230*	?	...	...	Cocanada.	
·287	·419	·373	·395	+·001	69	38	32	46	0	0·9	2·6	1·8	+0·4	30	...	...	...	1	9	14	6	2	S. 42° W.	N. 78° W.	40	42	42*	97	...	...	Quetta.	Hill Station, Baluchistan.
?	·278	·289	?	?	?	45	36	?	?	4·5	5·1	4·8	−0·3	...	2	...	1	...	8	31	19	1	S. 56° W.	S. 72° W.	79	31	49	38	...	...	Leh.	Hill Station, Punjab.
·516	·588	·732	·612	?	94	66	63	74	?	3·3	4·8	4·1	?	2	8	9	3	9	5	...	10	16	N. 22° W.	?	24	?	98*	?	...	...	Srinagar.	
?	·615	·661†	?	?	?	85	84†	?	?	5·1	4·7	4·9	−1·6	...	2	3	3	13	9	9	16	6	S. 37° W.	S. 4° E.	32	12	174*	119	...	...	Murree.	
·671	·723	·764	·719	−·023	91	73	71	78	− 5	5·8	6·3	6·1	−0·9	21	5	...	1	...	...	...	4	31	N. 43° W.	N. 33° W.	60	33	108*	81	10·26	3·75	Chamba.	
·321	·388	·351	·353	−·009	89	63	52	63	0	5·5	6·3	5·9	−0·5	...	4	1	...	5	15	9	15	13	S. 67° W.	S. 80° W.	47	61	49	35	2·50	1·14	Kailang.	
·477¶	·541	·563	·527¶	−·008	93¶	89	91	91¶	0	9·2	9·8	9·5	+0·8	40	8	6	...	...	6	2	...	...	N. 27° E.	S. 77° W.	8	28	41	?	...	...	Simla (Ridge).	Hill Stations, N. W. P.
·503¶	·565	·580	·549	+·008	96¶	93	95	95	+ 3	10·0	10·0	10·0	+1·2	13	1	...	...	2	44	1	...	1	S.	S. 73° W.	71	43	207	103	...	...	Chakrata.	
·544	·600	·632	·592	+·022	95	85	85	88	+ 1	8·9	8·7	8·8	+0·2	31	3	1	...	...	1	9	12	5	S. 89° W.	S. 59° W.	34	33	62*	51	...	...	Ranikhet.	
·665	·712	·740	·706	+·032	93	76	77	82	+ 2	7·2	7·3	7·3	+0·5	4	...	2	23	4	...	5	17	7	E.	S. 79° W.	3	26	22	?	10·02	1·10	Katmandu.	Hill Station, Nepal.
·475	·546†	·556§	·524	+·019	98	95†	94§	96	+ 2	9·5	8·4	9·0	+0·3	1	1	6	21	8	3	3	12	2	S. 74. E.	N. 84° E.	27	32	95	81	...	...	Darjeeling.	Hill Station, Bengal.
·589	·645	·661	·632	+·029	98	96	94	96	+ 6	5·9	7·5	6·7	−1·9	...	...	4	...	2	...	48	5	3	S 51° W.	S. 58° W.	71	72	278*	254	...	..	Mount Abu	Hill Stations, C. India.
·646	·662	687	·665	+·003	99	92	89	93	+ 3	9·3	8·4	8·9	+0·4	3	1	...	...	...	1	18	30	9	S. 83 W.	N. 80° W.	81	72	347*	179	...	...	Pachmarhi.	
·606	·646	·669	·610	−·003	98	96	93	96	+ 2	9·4	8·8	9·1	+0·2	4	30	...	...	...	...	2	1	25	N. 19° W.	N. 41° W.	96	72	366*	256	23·92	3·40	Chikalda.	

* Corrected

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 8

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L., and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Hill Station, S. India.	Wellington . .	...	24·225	24·161	·064	24·193	+·007	P	71·2	56·6	14·6	75·4	50·2	25·2	67·3	66·0	62·6	0	53·7	59·6	59·8	57·7
Extra India.	Muscat . .	...	29·625	29·553	·072	29·589	P	P	86·2	82·6	3·6	95·3	78·1	17·2	85·0	85·5	84·2	P	77·0	80·2	80·3	79·2
	Aden . . .	...	·680	·545	·135	·610	+·021	29·634	90·6	77·1	13·5	97·5	73·9	23·6	86·6	86·9	82·9	−2·1	71·6	75·5	74·7	73·9
	Perim . . .	...	·592†	·469	·123	·528	P	P	94·5	83·2¶	11·3	99·1	73·2	25·9	89·9†	91·9	88·2	P	75·7	79·7†	80·1	78·1
	Zanzibar . .	...	30·118¶	30·022§	·096	30·070	+·013	30·068‡	80·0§	72·2	7·8	81·7	70·8	10·9	76·2¶	79·1	75·9	−0·7	70·3	73·0¶	73·4§	72·2
	Port Victoria (Seychelles).	15	·040	29·961	·079	·001	P	29·939	80·9	76·2	4·7	82·0	74·9	7·1	79·8	80·3	78·4	?	71·1	73·1	73·5	72·6
	Mauritius . .	181	P	P	?	·050	+·047	30·182	P	P	P	89·1	51·6	28·5	P	P	67·6	−1·3	P	P	P	P

¶ Mean of 28 days. † Mean of 30 days. ‡ Mean of 26 days. § Mean of 27 days.

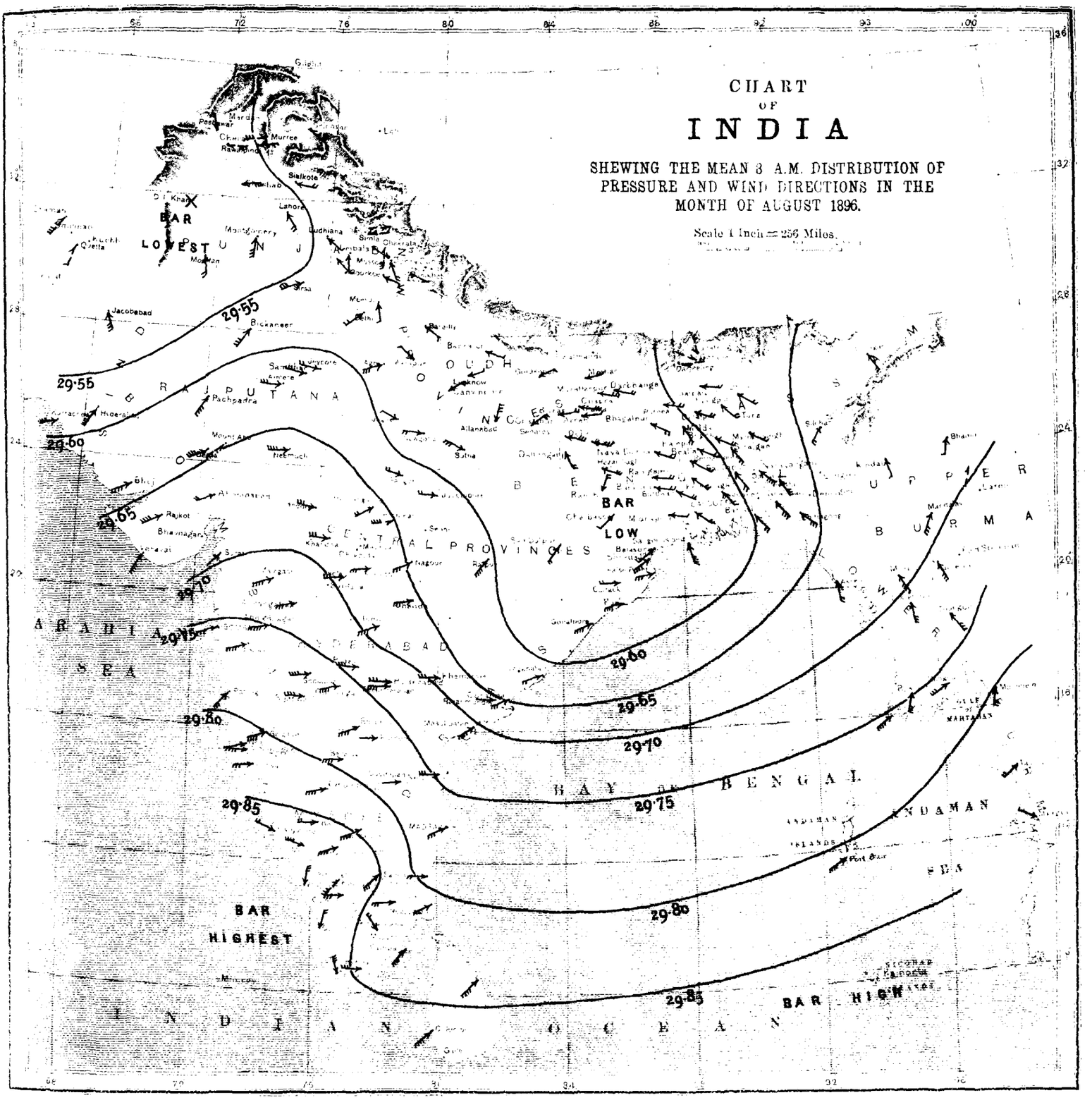
II—*concluded.*

Stations in India, Burma, etc., for August 1896—concluded.

Vapour tension.					Humidity.					Cloud.				Wind direction.										Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Proviences.
														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.		
																								%	%						
·386	·427	·450	·421	−·018	84	65	70	73	−4	6·5	8·2	7·4	−0·2	3	2	1	...	5	9	28	7	6	S. 46° W.	S. 81° W.	61	46	110	87	...	...	Wellington,	Hill Station, S. India.
·857	·969	·964	·930	P	77	81	79	79	P	2·2	1·6	1·9	P	...	1	16	23	9	5	1	1	6	N. 82° E.	P	56	P	106	P	...	...	Muscat.	Extra India.
·704	·734	·696	·711	−·086	76	58	55	63	− 3	2·8	3·1	3·0	+1·3	...	...	...	...	9	24	28	1	...	S. 16° W.	S. 12° E.	84	69	283	268	...	...	Aden.	
·786¶	·879†	·873	·846	P	69¶	63†	59	64	P	2·7†	3·1	2·9	P	1	3	2	6	5	...	6	23	15	N. 75° W.	P	46	?	332	P	...	...	Perim.	
·717	·771¶	·747§	·745	+·055	91	85¶	75§	84	+ 8	5·5¶	4·4§	5·0	+0·3	...	...	...	1	21	25	9	...	...	S. 12° E.	S. 6° W.	76	59	136*	153	...	...	Zanzibar.	
·685	·726	·737	·716	P	76	71	72	73	P	6·5	6·3	6·4	P	...	...	...	...	48	13	1	...	...	S. 35° E.	P	93	P	357	P	...	...	Port Victoria (Seychelles).	
P	P	P	·472	P	P	P	P	71	− 2	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	300	295	2·08	0·61	Mauritius.	

* Corrected.

G. I. C. P. O.—No. 85 Meteor.—28-12-96.—385.

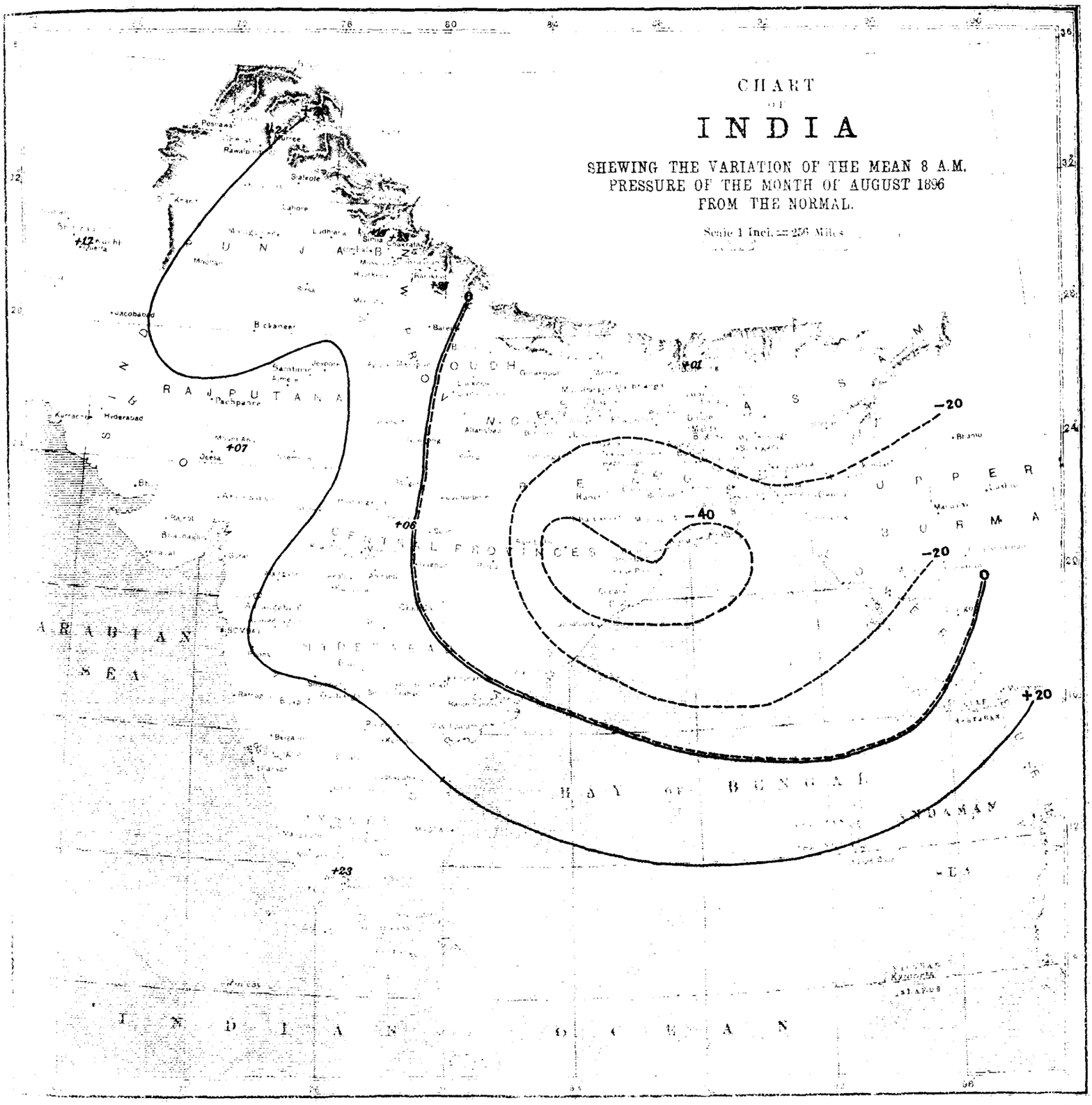


Explanation.

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

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

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

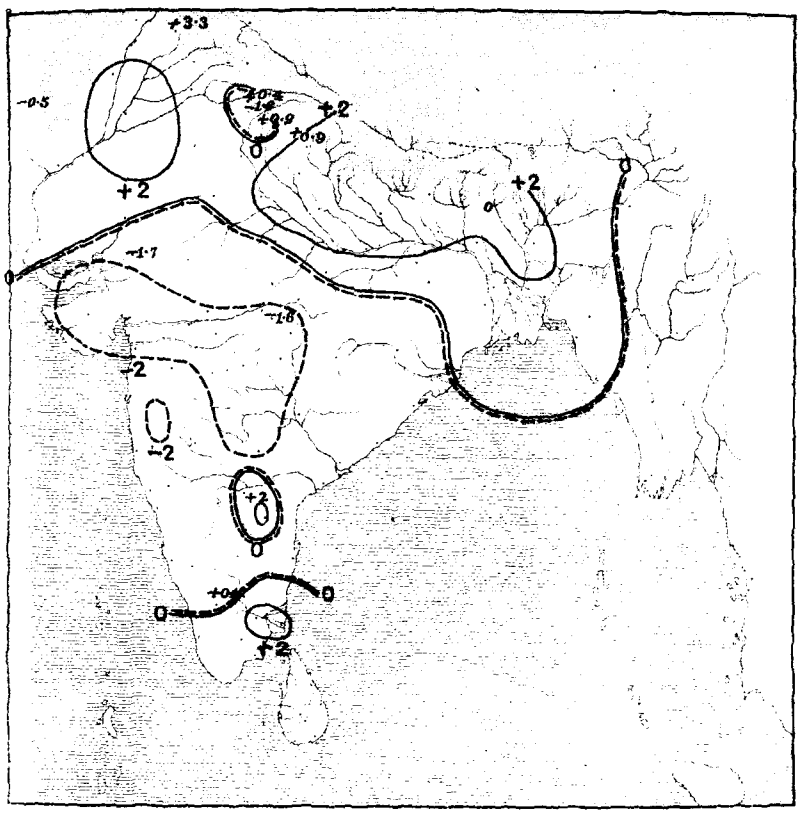
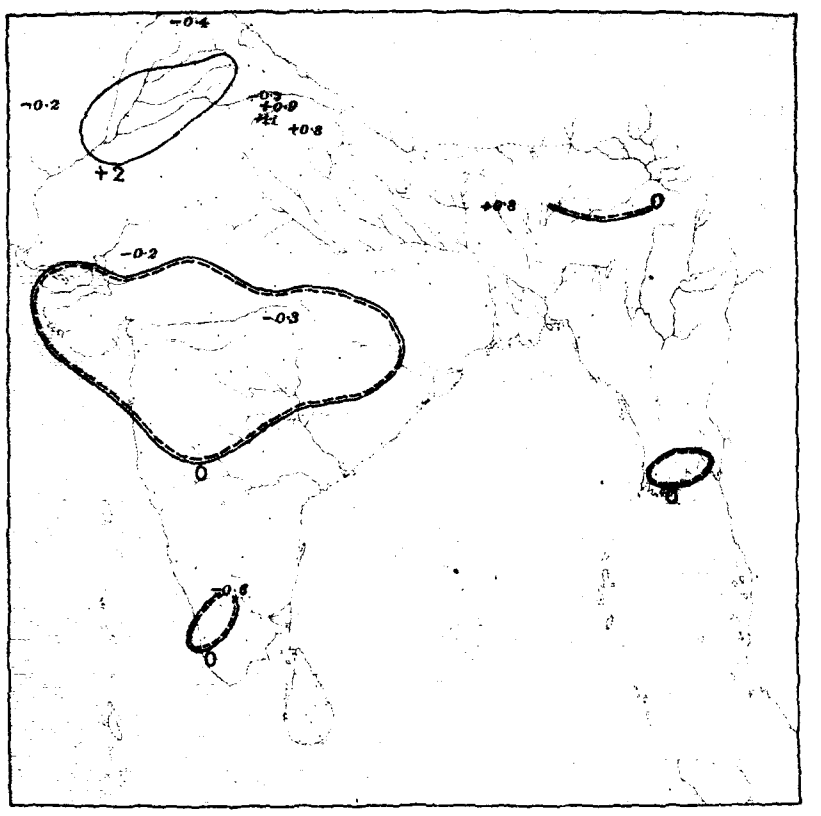


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

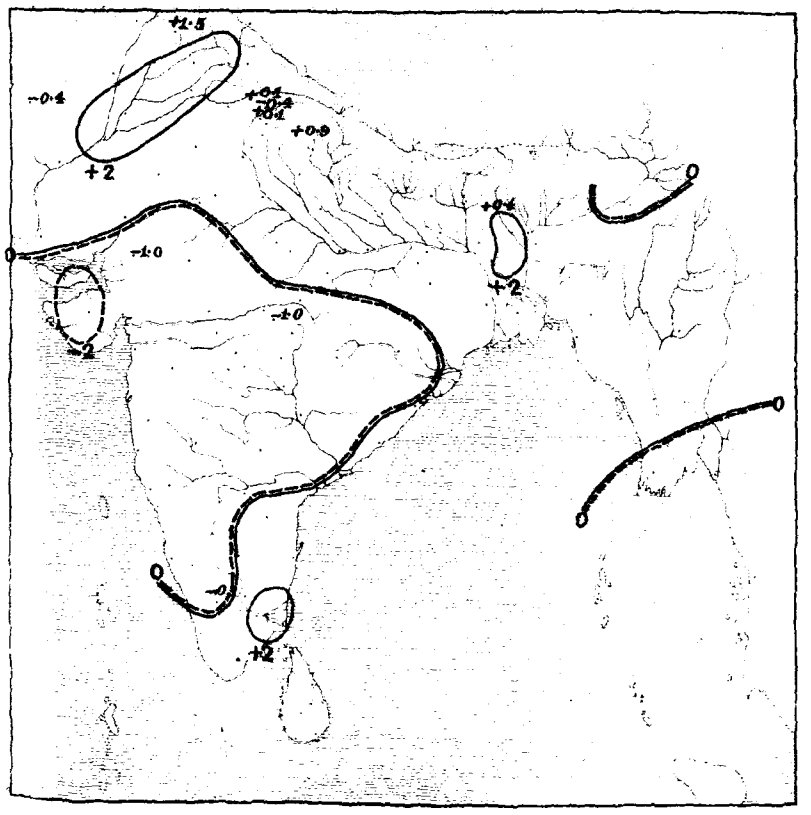
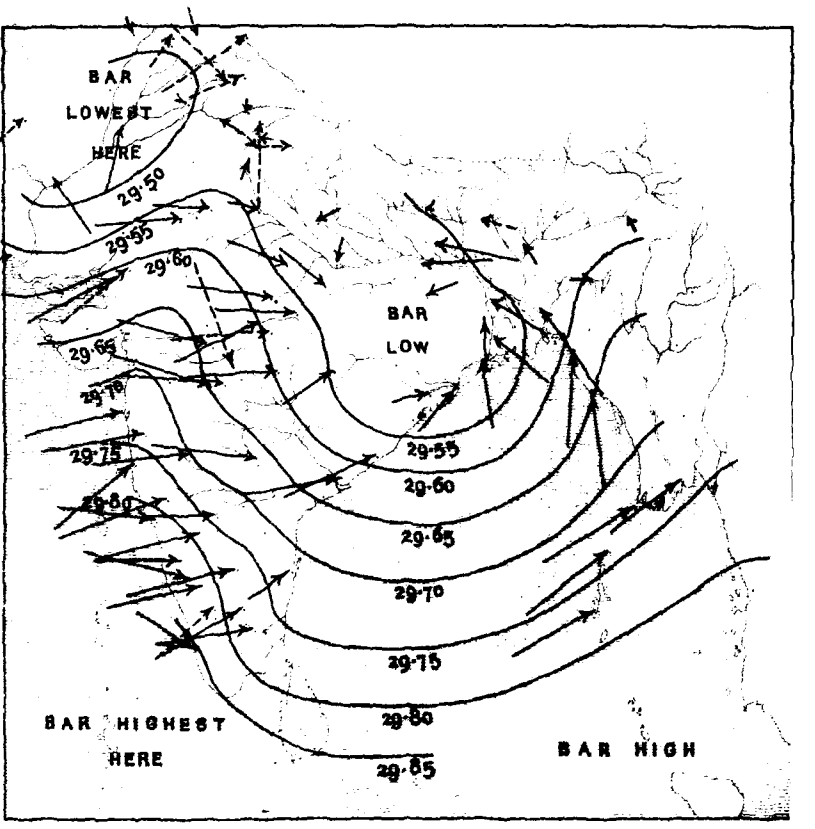


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF AUGUST 1896.



Zinco, S. I. O.

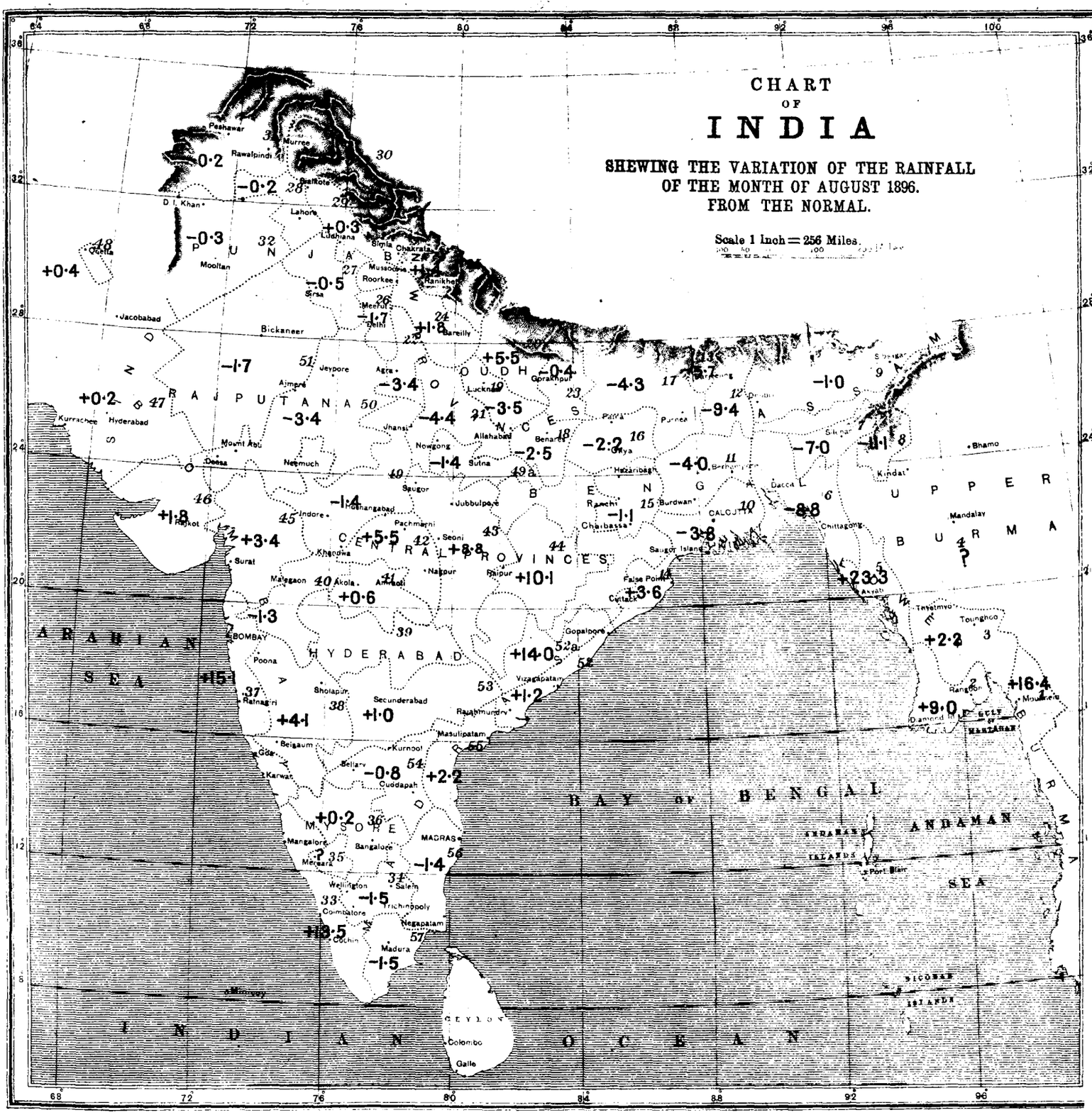
Explanation.

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 $\frac{1}{20}$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), 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.



Regd. No. 603, Wr., I.—Nov 96.—395. Simco., S. I. O., Calc

Explanation.

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

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

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, SEPTEMBER, 1896.

INTRODUCTION.

THIS Review of the weather in India during the month of September 1896 is based on observations taken daily at 8 A.M. at 208 stations and on additional observations taken at 10 A.M. and 4 P.M. at 85 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, 1896.

The principal meteorological features of the month of September in normal years are the retreat of the south-west monsoon from Upper India and the occasional occurrence of more or less severe cyclonic storms over the Bay of Bengal. The time of the withdrawal of the monsoon currents from Upper India apparently depends largely on the general strength of the monsoon during the whole period of its prevalence, but usually occurs during the third or fourth week of the month. The withdrawal from Central and Upper India of the Bombay and Bengal branches of the south-west monsoon air currents occurs fairly simultaneously, and is followed by fine dry weather in that region but Bengal and Burma continue to receive moderate general rain from the Bay current, and the Konkan, Malabar, the Deccan and Southern India from the Arabian Sea current. As mentioned above, the cyclonic storms of this period are sometimes of considerable severity, and give heavy and general rainfall. Their course is as a rule, west-north-west from the north of the Bay across the Orissa coast and the central parts of the country, and they are frequently remarkable for their long vitality, and for their tendency to recurve in the Central Provinces or Central India from west to north.

The following gives a brief account of the more important features of the meteorology of India during the month :—

Pressure at the commencement of the month was in considerable excess in the Central Provinces and in considerable to large defect in the submontane districts of the Gangetic Plain, in Bengal and Upper Assam. The trough of low pressure lay at the foot of the hills in Northern India and, as usual with this distribution, dry westerly winds prevailed in the Gangetic Plain. The Bay current was feeble and was determined to Bengal and Burma, and these areas were hence receiving moderate rain. These conditions continued until the 6th and Assam, Bengal and Burma obtained moderate rain during the whole of this period.

In consequence of the unusual dryness of the air and prevalence of clear skies temperature was more or less above the normal over the whole of India with the exception of Bengal and Burma. It was most largely in excess in the Punjab, North-Western Provinces and Madras. The fol-

LIBRARY
1897
WEATHER BUREAU.

lowing gives the variation of the mean temperature from the normal in these areas from the 1st to 6th :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	1st September.	2nd September.	3rd September.	4th September.	5th September.	6th September.
	°	°	°	°	°	°
Punjab . . .	+4·4	+3·6	+3·8	+5·1	+4·3	+4·0
North-Western Provinces and Oudh.	+3·6	+3·5	+3·4	+4·3	+4·3	+3·2
Madras . . .	+4·3	+3·1	+2·7	+2·8	+2·6	+2·2

The area of deficient pressure in North-Eastern India extended southwards on the 7th and 8th over the north-east of the Bay and a short break in the rains commenced on the 7th in Bengal, whilst showery weather continued in Lower Burma. Weather was squally at this time in the south and centre of the Bay. The squally weather extended northwards and a depression formed on the 11th and 12th in the north-east of the Bay, the centre of which on the 12th was in about Lat. 19½°N. and Long. 90°E.

During this period temperature was steadily above the normal over nearly the whole country, but the excess was, as during the first week of the month, most pronounced in the Punjab, North-Western Provinces and Madras. The following gives variaton data for the period :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of					
	7th September.	8th September.	9th September.	10th September.	11th September.	12th September.
	°	°	°	°	°	°
Punjab . . .	+4·0	+3·5	+3·5	+4·0	+3·6	+4·1
North-Western Provinces.	+3·5	+3·2	+2·4	+3·1	+3·3	+4·0
Madras . . .	+2·4	+1·4	+2·3	+2·5	+1·5	+0·1

The storm in the north of the Bay developed slightly on the 13th and rather rapidly on the 14th and was of moderate intensity on the morning of the 15th, when winds of force 7 to 9 and very heavy rain were experienced in the storm area. It began to drift in a north-westerly direction on the 13th and the centre crossed the coast some distance to the west of Saugor Island on the afternoon of the 16th. It recurved rather rapidly and passed northwards through Chota Nagpur on the 17th and north-eastwards through the Sonthal Perganas on the 18th, into Central and North Bengal on the 19th. It gave a moderately heavy burst of rain to the districts through which it passed on the 16th, 17th and 18th and an extremely heavy downpour in North Bengal on the 17th and 18th. Several stations in the districts of Cooch Behar, Rangpur, Jalpaiguri and Dinajpur had falls in 24 hours ranging between 10 and 15 inches.

A shallow residual depression lay over North and Central Bengal on the 20th. It disappeared during the next 24 hours and fine dry weather set in on the 21st over Bengal which lasted during the remainder of the month. The storm gave a general and favourable burst of rain to the whole of Orissa, Chota Nagpur, Bihar and Bengal, and temperature was reduced largely below the normal in those areas from the 14th to the 21st. Temperature during the period from the 13th to the 21st differed to no mportant extent from the normal in the northern half of the Peninsula and was in steady excess in the Punjab, North-Western Provinces, Rajputana and Madras as is shown by the following data :—

Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	13th September.	15th September.	17th September.	19th September.	21st September.
	°	°	°	°	°
Punjab . . .	+5·0	+4·8	+3·1	+4·1	+1·2
North-Western Provinces.	+3·8	+3·4	+1·5	+3·1	+2·9
Rajputana . . .	+1·4	+3·3	+2·9	+1·9	+2·1
Madras . . .	+0·8	+2·1	+2·9	+3·9	+3·0

The excess was most pronounced during the first half of the period in North-Western India and during the second half in Madras.

A feeble disturbance apparently of the cold weather type gave light thundershowers in the East Punjab and adjacent hills on the 21st and reduced temperature considerably in the Punjab for a brief period (from the 21st to the 24th).

Pressure conditions changed very considerably during the next three or four days. Gradients decreased considerably over the land area on the 22nd and 23rd, and the area of low pressure hitherto in Bengal and the north of the Bay extended southwards over the Bay. At the same time northerly winds set in over the north of the Bay and advanced southwards as far as Lat. 15°N. on the 27th. Fine dry weather with light airs obtained in the north of the Bay. Weather became showery in the southern half of the Peninsula which received light to moderate showers daily during the remainder of the month. The pressure changes and southerly movement of the low pressure area of the period were such as usually occur in the middle of October and precede the so-called burst of the north-east monsoon. There was, however, little strength in the monsoon current, and the rainfall in Southern India during this period was general but very moderate in amount.

Temperature was in moderate excess in North-Western and Western India during the period from the 25th to the 30th and was below the normal to a slight extent in Madras due to rainfall and in Bengal due to the unusually low night temperatures occasioned by rapid night radiation in an unusually dry atmosphere.

Pressure.—The mean pressure in the Indian area averaged ·021″ above the normal and hence was in excess by almost the same amount as in September 1895 (+·017″).

The variations of the mean conditions from the normal were unusually large and indicated the presence of very abnormal features in the meteorology of the month.

Pressure was in large excess in Central India and the northern half of the Peninsula. The positive anomalies were more than ·06″ in amount at Indore and Hoshangabad (each +·065″) and Neemuch and Khandwa (each +·061). Pressure was on the other hand in moderate to considerable defect in Malabar and Ceylon and in Bengal, Bihar and Assam. The deficiency was most pronounced in the area represented by the following stations:—Colombo (—·044″), Calicut (—·039″), Sibsagar (—·053″), Dhubri (—·043″) and Dinajpur (—·039″). The trough of low pressure lay at the foot of the hills in Northern India during the greater part of the month, and the weakness of the monsoon currents and the abnormal distribution of the rainfall of the month were directly related to the strongly marked pressure features of the month. The vertical pressure anomalies were small in amount and apparently of little significance. The following table gives the mean pressure variations and anomalies of the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of September 1896 from normal.	Pressure anomaly, September 1896.
	″	″
Burma Coast and Bay Islands	+·004	—·017
Burma Inland	?	?
Assam	—·020	—·041
Bengal and Orissa	—·004	—·025
Gangetic Plain and Chota Nagpur	+·011	—·010
Upper Sub-Himalayas	+·006	—·015
Indus Valley and North-West Rajputana	+·021	0
East Rajputana, Central India and Gujarat	+·051	+·030
Deccan	+·060	+·039
West Coast	+·014	—·007
South India	+·019	—·002

Temperature was in consequence of the abnormal conditions more or less considerably above the normal over nearly the whole area.

The mean maximum or day temperature was above the normal over the whole of India with the exception of Assam, East Bengal and Upper Burma where it was in slight defect. It was in large excess in the interior of India, more especially in three areas. In the first of these areas which included the North West Provinces and the adjacent districts of Rajputana and Central India it ranged between 4° and 8° above the normal. The excess was absolutely greatest at Allahabad (+8°·3), Agra (+8°·1) and Lucknow (+6°·6). The second area comprised the greater part of the Deccan in which the day temperature was from 3° to 7° above the normal. The excess was greatest at Sholapur (+6°·7). The third area was East Bengal, in which the mean day temperature was 4° above the normal.

The mean minimum temperature was generally above the normal, but in most cases by amounts not exceeding 2°. The excess ranged between 2° and 5° in the East and South Punjab, the centre of this area of high night temperature being Lahore where it averaged 4°·7 above the normal mean of the month. It was also more than 2° in excess at Secunderabad (+3°·2) and Cuddapah (+2°·3). The night temperature was in slight defect in the submontane districts of the North-Western Provinces, Lower Sind, Kathiawar, Gujarat, Rajputana, Khandesh and Berar—mainly as a result of the unusual dryness of the month and rapid radiation at night.

The mean temperature of the month was normal in Burma and Bengal and more or less in excess over the remainder of India. The excess was considerable (*i.e.*, over 3°) in two largish areas. The first included the North-Western Provinces and the South and East Punjab and the second, the greater part of the Deccan. In the first area the excess was greatest at Allahabad (+4°·7) and Agra (+4°·8) and in the second area at Sholapur (+4°·1). The following table gives comparative temperature variation data of the month for the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, September 1896.	Mean minimum temperature, September 1896.	Mean daily temperature, September 1896.
	°	°	
Burma Coast and Bay Islands	—0°·1	+0°·6	+0°·4
Burma Inland	—0°·9	+1°·2	+0°·2
Assam	—0°·9	+0°·2	—0°·3
Bengal and Orissa	+1°·1	+0°·2	+0°·7
Gangetic Plain and Chota Nagpur	+3°·9	+0°·3	+2°·1
Upper Sub-Himalayas	+4°·0	+1°·0	+2°·6
Indus Valley and North-West Rajputana.	+1°·2	+0°·4	+0°·8
East Rajputana, Central India and Gujarat.	+2°·8	—0°·4	+1°·2
Deccan	+4°·0	—0°·4	+1°·8
West Coast	+2°·3	+1°·0	+1°·7
South India	+2°·1	+1°·3	+1°·7

Winds were much more westerly and stronger than usual in September at Port Blair and Diamond Island. They were also much less easterly or more westerly in Bengal, Orissa and Chota Nagpur due to the feebleness of the monsoon influence during the greater part of the month. Abnormal dry westerly winds obtained during the month over the whole of the Gangetic Plain and the area of greatest variability and unsteadiness of the air movement which usually lies over the North-Western Provinces in September was in West Bengal and Bihar in September 1896. Winds were approximately normal in direction in Sind but were abnormal in Central India and Rajputana where they contained a strong northerly component. Westerly winds with an unusual amount of northing prevailed in Berar, the Central Provinces and the Deccan and on the Konkan coast. Winds were very irregular in the Upper India hill districts. They were more easterly than usual at Zanzibar and the Seychelles.

The chief abnormal features of the air circulation closely resembled those of the coresponding period of 1895 and were due to the same cause, *viz.*, the very early withdrawal of the monsoon currents.

Humidity and Cloud.—One of the most noteworthy features of the meteorology of the month was the abnormal dryness of the air in North-Western and Central India, a result of the very early withdrawal of the monsoon currents. The amount of vapour present in the air was much less than usual in September in the Gangetic Plain, the Punjab, Rajputana, Central India and the northern districts of the Central Provinces. As temperature was largely above the normal in these areas, the relative humidity was very largely in defect and at two stations was upwards of 20 in defect. The deficiency was greatest at Allahabad (—26). Humidity was almost as largely below the normal in the Deccan as in Northern India and was in considerable defect at the Konkan and Malabar coast stations. The deficiency in these areas was most pronounced at Sholapur (—18) and Bellary (—13).

The humidity conditions were practically normal in Burma and at Port Blair and in Assam.

There was more cloud than usual in Burma and East Bengal and also in the Madras coast districts. Over the remainder of India skies were much less clouded than usual and the mean cloud amount was largely below the normal over the whole of the dry area in the interior including the North-Western Provinces, Rajputana, Central India, Berar, the Central Provinces and North Deccan. Skies were practically free from cloud during the month in Baluchistan, Upper Sind, the Punjab and the western districts of the North Western Provinces.

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

Meteorological Province.	Variation from normal of		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
	"	%	
Burma Coast and Bay Islands .	+·029	0	+0·8
Assam	+·014	0	+0·4
Bengal and Orissa . . .	—·015	— 4	+0·9
Gangetic Plain and Chota Nagpur.	—·091	—13	—1·8
Upper Sub-Himalayas . .	—·106	—12	—2·2
Indus Valley and North-West Rajputana.	—·052	— 5	—0·2
East Rajputana, Central India and Gujarat.	—·089	—11	—1·6
Deccan	—·091	—13	—2·1
West Coast	—·003	— 5	—1·0
South India	—·005	— 3	+0·3

Rainfall.—September 1896 was an abnormally dry month over the greater part of the interior of India due to the weakness of the monsoon currents in the Indian seas, and their early withdrawal from the whole of North Western and Central India in the third and fourth weeks of August. Bengal and Burma received light to moderate rain in the first week of the month. During a short break lasting from the 7th to the 12th or 13th a storm formed in the north of the Bay. This storm passed by a curved path to North Bengal and gave general rain to the whole of Burma, Orissa, Chota Nagpur, Bihar, Bengal and Assam.

The rainfall was specially heavy in North Bengal on the 17th and 18th. The North Western Provinces, the Central Provinces, and Central India received showers during the same period but the rainfall was light and sporadic in these areas. Lower Burma continued to receive daily rain during the remainder of the month. Fine dry weather extended from the Gangetic Plain to Bengal on the 23rd and the monsoon current was on the 25th and 26th diverted in part to the southern half of the Peninsula, which hence received light to moderate daily rain from the 25th to the end of the month. Burma (more especially the coast districts) received heavier rain than usual. The northern and eastern districts of Bengal obtained larger amounts than usual due to the heavy rainfall accompanying the cyclonic storm of the month. Over the remainder of India rainfall was in general defect. The deficiency was large in the West Coast districts and the large area including the Deccan, the Central Provinces, Central India, the North Western Provinces, Rajputana and the Punjab over by far the greater part of which the rainfall of the month was less than 20 per cent. of the normal.

The following table gives comparative rainfall data of the eleven meteorological provinces of the Empire :—

METEOROLOGICAL PROVINCE.	RAINFALL. Average actual, September 1896.	Average normal, September.	Variation from normal.*
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	21·33	20·02	+0·05
Burma Inland	8·20	9·48	+5·14
Assam	12·37	13·31	—0·34
Bengal and Orissa	11·12	10·86	+0·16
Gangetic Plain and Chota Nagpur.	2·69	7·47	—4·79
Upper Sub-Himalayas	0·56	5·07	—4·40
Indus Valley and North-West Rajputana.	0·10	0·78	—0·67
East Rajputana, Central India and Gujarat.	0·65	5·10	—4·45
Deccan	1·64	7·99	—6·59
West Coast	2·96	9·64	—6·69
South India	3·99	5·29	—1·25

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

Atmospheric Pressure.

The mean pressure of the Indian land area for the month of September 1896 was ·021″ higher than usual and hence ·004″ in greater excess than in September 1895 when the mean pressure of the whole area was ·017″ above the normal.

Pressure was, relatively to the general condition, in defect, or the pressure anomalies were negative, in the Peninsula south of Lat. 15°N. and in Bengal, Assam, Burma, the Bay of Bengal, the Punjab and the greater part of the North-Western Provinces. The negative anomalies were more than ·020″ in amount in Assam, Bengal, Bihar, Malabar and Ceylon and exceeded ·030″ at the stations for which data are given below :—

STATION.	Variation of mean 8 A. M. pressure of month from normal.	Pressure anomaly.
	″	″
Chittagong	—·015	—·036
Barisal	—·015	—·036
Mymensingh	—·011	—·032
Saugor Island	—·011	—·032
Burdwan	—·011	—·032
Berhampore	—·015	—·036
Dinajpur	—·018	—·039
Purnea	—·016	—·037
Darbhanga	—·016	—·037
Dhubri	—·022	—·043
Sibsagar	—·032	—·053
Cochin	—·017	—·038
Calicut	—·018	—·039
Colombo	—·023	—·044

The negative anomalies giving the local deficiency of pressure were hence unusually large in the Assam Valley and Ceylon where they exceeded ·04″.

Pressure was in local excess generally in the remainder of the Indian area including Sind, Rajputana, Cutch, Kathiawar, Central India, the Central Provinces, the Deccan and the Konkan. The positive anomalies were very large in the central districts of this area including the Central Provinces, Berar, Khandesh and Central India and exceeded ·05″ at the stations for which data are given below :—

STATION.	Variation of mean 8 A. M. pressure of month from normal.	Pressure anomaly.
	″	″
Neemuch	+·082	+·061
Indore	+·086	+·065
Hoshangabad	+·086	+·065
Khandwa	+·082	+·061
Amraoti	+·077	+·056
Seoni	+·074	+·053
Akola	+·072	+·051

The increased pressure in Central India and the North Deccan not only absolutely, but more especially relatively to the south of the Peninsula, was directly related to the early withdrawal of the monsoon currents from Upper India.

The variations of pressure from the normal at the hill stations differed little from those at the neighbouring plain stations, and the vertical pressure anomalies were hence

small and of little importance. The following gives data for six pairs of stations:—

HILL STATION.	Variation of pressure from normal (a)	NEIGHBOURING PLAIN STATION.	Variation of pressure from normal (b).	Vertical pressure anomaly or (a)—(b).
	"		"	"
Quetta . .	+·016	Jacobabad .	+·015	+·001
Murree . .	+·010	Peshawar .	+·008	+·002
Leh . . .	—·017	Lahore . .	+·003	—·020
Simla .	+·009	Ludhiana . .	—·002	+·011
Darjeeling . .	—·041	Dhubri . .	—·022	—·019
Mount Abu . .	+·033	Deesa . .	+·061	—·028

Barometric depressions and cyclonic storms of the month.

At the commencement of the month pressure was in considerable defect in the submontane districts of the North-Western Provinces and of Bihar and in North and East Bengal and was in moderate excess in the Central Provinces and the western districts of Central India. The trough of low pressure lay much further north than usual in the submontane districts of the Gangetic Plain where dry westerly winds hence prevailed. Moderate south-westerly winds obtained on the Bengal Coast and were giving light to moderate rain in Bengal. The pressure changes were generally small and unimportant on the 2nd and 3rd and Bengal and Lower Burma continued to receive moderate rain. Pressure increased on the 4th and 5th, more especially in Northern India, and the rainfall decreased in North-Eastern India and was light and sporadic on these days. Pressure decreased generally on the 6th and 7th and the distribution of pressure on the 7th was similar to that of the 1st except that the deficiency in North-Eastern India was somewhat less marked in amount.

Light local showers fell in some parts of Bengal, of Burma and the Peninsula on the 8th and fine dry weather with clear or lightly clouded skies obtained elsewhere. Pressure began to give way on the 9th in the north-east of the Bay and a depression commenced to form which developed slowly and formed the chief feature of the weather of the next ten days. The following gives a history of this feeble depression and cyclonic storm.

Cyclonic storm of the 12th to the 19th September.—As stated above pressure began to give way in the north-east of the Bay on the 9th. Pressure was in excess over the whole of India except Bengal and Burma on that day and the excess was very large in Central India and the Deccan. The persistent excess of pressure in that area was one of the more prominent features of the pressure distribution during the storm.

The air movement in the Bay on the 9th was normal. Winds generally ranged between west and south-west and were light in force. Weather was fine in the north and showery in the centre and south.

Pressure was unchanged in India on the 10th but had again fallen slightly during the previous 24 hours in Burma and the north-east of the Bay and the tendency to the establishment of a low pressure area was more pronounced. The following observations taken on board vessels in the Bay at 8 A.M. indicate clearly the character of the weather in that area:—

NAME OF VESSEL.	8 A.M. POSITION		Barometer corrected.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	"			
S.S. *Eyculla* . .	8 51	89 26	29·866	S	4	Slight sea and cloudy.
S.S. *Hardwick Hall* .	9 4	83 35	...	SSW	4	Sea smooth and cloudy.
S. S. *Shirby* . .	15 5	92 44	...	W by N	6	Frequent heavy rain squalls.
S.S. *Nerbudda* . .	16 14	93 41	·713	W	4	Fine 4 A. M. heavy squall of wind and rain.
S.S. *Kasara* . .	19 4	93 38	·661	NW	2	Smooth sea overcast and *rainy*.
S.S. *City of Vienna* .	14 58	85 42	·732	W	4	Overcast.
F. L. V. *Torch* . .	Eastern Channel.		·655	WNW	2	Smooth sea, overcast.
F. L. V. *Hesperus*. .	Mutlah .		·653	W	1	Overcast.

The preceding information shows that light variable winds with fine to showery weather and a smooth sea obtained to the north of Lat. 18°N. and that weather was slightly unsettled and squally with much rain in the centre of the Bay and more especially near the Burma Coast.

Pressure gave way generally during the next two days over the whole Indian area, but this fall was somewhat greater in Bengal and Burma and the north of the Bay than elsewhere, thus intensifying the depression. Weather was

showery in Burma and in Southern India but was fine and dry over the whole of Northern and Central India.

During this period winds shifted *slowly into cyclonic* directions in the north of the Bay so that on the 12th a fairly well-marked cyclonic circulation with its centre in about Lat. 19½°N. and Long 90¼°E. was established. The following gives data, for this area, extracted from the logs of vessels :—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer Corrected.	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *Byculla* .	12 54	94 55	29·746	SW	2	8 P.M., heavy squalls of wind and rain.
S.S. *Africa* . .	Rangoon		·675	...	...	Noon, fierce rain squalls.
S.S. *Coconada* .	16 44	96 17	·686	S	2	Thick rainy. Noon, stiff squalls of rain.
S.S. *Avala* . .	13 40	84 54	·689	WSW	5	Overcast, 5 A.M., heavy squalls from N. and heavy rain.
S.S. *Ellora* . .	19 57	86 33	·590	W	2	Fine and cloudy Midnight, heavy rain squalls.
S.S. *Nerbudda* .	21 10	88 10	·588	N	4	Overcast and heavy rain.
S.S. *Catherine Apcar.*	20 0	88 22	·573	N	5	Overcast and rainy.
S.S. *Pindari* .	Saugor*		·593	NW	4	Overcast.
F. L. V. *Torch* .	Eastern Channel		·503	NE	5	Moderate south swell, drizzling rain, thunder.
F. L. V. *Hesperus.*	Mutlah.		·591	NE	3	Squally with rain, thunder and lightning.

* Noon position.

A comparison of the preceding data with the corresponding data of the 10th indicates clearly the changes in the weather which had occurred in the interval. Weather was unchanged in the south of the Bay where it was showery with moderate west-south-west winds. It was now very squally with heavy rain off the Burma Coast. Skies had clouded over in the north of the Bay and rainy squally weather had extended northwards as far as the Bengal Coast. The wind data indicate that a cyclonic circulation of feeble intensity was now established.

13th September :—Pressure was unchanged or was rising over the whole of the Peninsula, North Western India and Burma, but had fallen to a slight extent locally in Bengal and the north of the Bay. The depression was now shown as a closed area in the chart of the day. The centre was in about the same position as on the 12th and the storm was hence as yet stationary and was developing very slowly. Moderate rain had fallen in Burma and light showers in South Bengal and Orissa where skies were now overcast.

The following gives a summary of the 8 A.M. observations taken on board ships in the storm area :—

Name of Vessel.	8 A.M. Position. Lat. N.	Long. E.	Barometer corrected	Wind. Direction.	Force.	Weather.
	° ′	° ′	″			
S.S. *Byculla* .	15 32	97 8	29·720	Var.	2	Heavy rain.
S.S. *Africa* .	Gulf of	Martaban.	·734	...	...	Noon, frequent rain squalls.
S.S. *Coconada* .	15 18	94 51	·670	SW	5	Heavy head sea and fine 7-30 P.M., heavy rain squalls.
S.S. *Avala* .	17 28	86 25	·589	WNW	6	Cloudy, 8 P.M., heavy rain squalls.
S.S. *Kut Sang* .	19 32	89 26	·503	WNW	5	Squally with heavy rain.
S.S. *Katoria* .	Chitta	gong.	·556	...	...	11 P.M., heavy squall with rain.
S.S. *Hardwick Hall.*	20 11	87 42	...	NW	...	Incessant heavy rain and squally.
S.S. *Matiana* .	20 12*	87 49	·583	WSW	5	Midnight, continuous rain.
S S. *Ellora* .	21 10	87 46	·563	S	4	Squally with rain.
F. L. V. *Torch* .	Eastern	Channel	·555	NNW	5	Squally and drizzling rain.
F. L. V. *Hesperus*	Mutlah		·543	WNW	3	Squally with rain.

* Noon position.

The cyclonic circulation, in the storm area, was, so far as is indicated by the data, of moderate intensity and the only feature of importance in the storm area was the heavy and almost continuous rainfall near the Bengal and Arakan Coasts. The weather at the Sandheads during the day is thus described by Captain Beahan of the F.L.V. *Torch* :—

"0. A.M.—Weather very unsettled with lightning all round the horizon and at intervals very heavy rain.

0·55 A.M.—A very heavy southerly squall with heavy rain and very vivid lightning all round and heavy peals of thunder. Force of wind 6 to 8.

4 A.M.—Unsettled and squally weather, moderate south-west sea vivid sheet and forked lightning to south, south-west and west.

10 A.M.—Weather unsettled, squally and wet.

4 P.M.—Weather unsettled and cloudy.

8 P.M.—Unsettled, sea rough, much lightning to north-west and north, windsnorth, force 3 to 4."

The centre of the storm at 8 A.M. was in about Lat. 19½° to 20°N. and Long. 90°E.

14th September.—Pressure had increased briskly in Burma and fallen briskly in the north-west angle of the Bay. Skies were now clouded over in Chota Nagpur, Bihar and North Bengal and light to moderate rain had

fallen over the whole of Burma and North-Eastern India. Weather was also showery in Malabar and the Konkan and fine elsewhere.

The following gives 8 A.M. observations recorded on board vessels in the storm area :—

Name of Vessel.	8 A.M. Position.		Barometer corrected.	Wind.		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Kut Sang* . .	16 30	92 0	29·683	SW	5	Fine and clear, 8 P.M., squally and drizzling rain.
S.S. *Lindula* . .	16 25	93 26	·697	S	5	Moderate sea and cloudy, 4 A.M., passing showers.
S.S. *Madura* . .	16 36	92 55	·683	SW	5	High sea and cloud with showers.
S.S. *Matiana* . .	16 54	86 36	·606	W	2	Overcast, 4 A.M., squally.
S.S. *Kateria* . .	20 26	92 20	·620	SSE	...	Rain with very heavy squalls.
S.S. *Kasara* . .	21 27	91 9	·598	SSE	6	Rising sea and overcast, noon, showery.
S.S. *Avala* . .	20 23	87 50	·489	NNW	7	Frequent squalls and heavy rain.
F. L. V. *Torch* . .	Eastern Channel		·495	ENE	6	Threatening.
F. L. V. *Hesperus* .	Mutlah		·518	NNE	5	Slight N.E. sea and cloudy.

Weather and winds were unchanged in the southern half of the Bay. Winds were moderate off the Burma Coast, and weather had improved considerably, but was still showery and squally.

The data indicate that winds were slightly stronger in the storm area but did not exceed force 6 to 7. The squalls were heavier and more severe than on the 13th at the head of the Bay and weather very unsettled. The centre of the storm at 8 A.M. was in about Lat. 20° to 20¼°N. and Long. 88¾°E. It had commenced to move and was drifting very slowly in a north-westerly direction. The following gives Captain Beahan's description of the weather at the Sandheads .—

A.M.—Squally threatening weather, rough sea and passing showers.

8 A.M.—Threatening suspicious weather, heavy dark clouds all round the horizon and squally and drizzling rain.

10 A.M.—Weather very suspicious and heavy dark clouds to N.N.E. and E. to S.E. and drizzling rain with heavy north-easterly, easterly and south-easterly swell.

4 P.M.—Weather cyclonic in appearance and squally with heavy dark clouds and rough sea.

15th September.—Pressure had increased briskly to rapidly in Burma and the submontane districts of Northern India and had fallen briskly to rapidly in the north-west of the Bay. Elsewhere the pressure changes were small and unimportant. The cyclonic storm had developed considerably during the previous 24 hours and was now a well marked depression. Light local showers had been received in Burma and moderate rain in North-Eastern India, heaviest in Orissa and Chota Nagpur. The following gives the largest amounts recorded at 8 A.M. in these two areas :—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of 15th.
		Inches.
Balasore	Chandbali	10·30
	Bhadrak	3·10
	Balasore	3·02
Manbhum	Pandra	3·50
Cuttack	Kendrapara	3·44
	Jajpur	3·05

The following gives 8 A.M. observations taken on boardships at the head of the Bay :—

Name of Vessel.	8 A.M. Position.		Barometer corrected.	Wind.		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Coconada* .	19 0	90 23	29·608	SW	4	Fine. Midnight, cloudy.
S.S. *Clan Buchanan.*	17 29	84 57	·651	SW	4	Moderate sea and fine.
S.S. *Vasna* . .	18 35	86 23	·609	SW by W	4	Moderate sea and cloudy. Midnight, squally looking.
S.S. *Madura* .	19 38	89 42	·593	WSW	6	Moderate high sea and squally.
S.S. *Katoria* .	20 0	93 10	·719	SE	5	Squally.
F. L. V. *Torch* .	Eastern Channel.		·411	ESE	9	Squally with misty drizzling.
F. L. V. *Hesperus*	Mutlah.		·435	S	7	High south sea and passing squalls.

Weather had improved over the whole of the north and centre of the Bay, except in the north-west angle which was now covered by the storm. Winds of force 7 to 9 were experienced near the centre during the morning. The centre at 8 A.M. was near and a little to the south-south-west of the Eastern Channel light ship in about Lat. 20¾°N. and Long. 88°E. The storm had hence advanced slowly in a west-north-west direction during the previous 24 hours. Observations recorded during the day on board the light vessel indicate that the storm

began to recurve to north and that with its advance weather improved rapidly in the north-west angle. This is clearly shown by the weather observations recorded on board the F. L. V. *Torch* given below :—

0 A. M.—Weather cyclonic in appearance, squally with passing showers, lightning in west, rough S.E. sea, wind E., force 5.

4 A.M.—Weather the same as at 0 A.M., wind S.E., force 5 with heavy S.S.E , south and south-westerly high and confused sea.

6 A.M.—Wind unsteady veering from S.E. to S.S.E., force 5 to 7, and squally with misty drizzling rain, squalls coming up from S.S.E., high and confused sea running from S.S.E., S. and S.W.

8 A.M.—Wind and weather the same as at 6 A.M., but at 7 A.M. the wind became more southerly and was accompanied with hard squalls and misty drizzling rain.

10 A.M.—Weather as at 8 A.M. Wind south, force 7 to 8, moderate gale, the wind veering to S.S.W. during squalls with high and confused sea, misty drizzling rain.

4 P.M.—Weather clearing high S., S.S.W. and S.W. sea.

16th September.—Pressure was unchanged except in the areas directly affected by the advance of the storm. It had increased rapidly in the north-west of the Bay and fallen briskly in Bihar and Chota Nagpur. The following gives 8 A.M. observations recorded in the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Balasore .	29·548	+·079	—·114	SSW	4	9	0·43	Cloudy.
Calcutta .	·580	+·058	—·107	ESE	7	8	1·28	Showery.
Burdwan .	·569	—·012	—·129	E	8	10	0·73	
Midnapore .	·543	+·043	—·149	S	5	10	0·36	
Hazaribagh .	·533	—·082	—·160	NNW	14	10	3·07	Continuous rain for upwards of 12 hours.
Chaibassa .	·519	—·014	?	WSW	3	10	3·20	Ditto.

The data indicate that the central depression now lay over West Bengal and Chota Nagpur. The depression in this area was not large and probably did not exceed ·20″ at the centre. The cyclonic circulation had decreased considerably in strength, and winds were somewhat irregular and of moderate intensity in the storm area. The centre of the depression at 8 A.M. was in about Lat. 23° N. and Long. 86° 40′ E. Moderate to heavy rain had fallen in Chota Nagpur and West Bengal and light to moderate rain in Burma, Assam and North and East Bengal and Orissa. The following gives the heaviest falls during the preceding 24 hours :—

District.	Station.	Rainfall in 24 hours preceding 8 A.M. of the 16th September.
		Inches.
Hazaribagh	Pachamba	7·06
	Barhi	3·13
	Hazaribagh	3·07
Manbhum	Barabhum	4·32
	Gobindpur	3·65
Singhbhum	Kalikapur	3·70
	Chaibassa	3·20
Purnea	Gondwara	4·79
Monghyr	Chakai Bamda	3·98
Gaya	Rajauli	4·31
Sonthal Parganas	Madhupur	3·62
	Sarwan	3·56
	Barkope	3·55

17th September.—The pressure changes were small in amount over the whole of India except in North and Central Bengal. The depression was unchanged in character but was recurving and had advanced very slowly in a northerly direction. The following gives 8 A.M. data of the storm area :—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Saugor Island	29·548	+·007	—·129	SW	17	10	0·13	Sea slight.
Calcutta .	·549	—·031	—·136	SSE	4	10	1·67	Showery.
Burdwan .	·534	—·035	—·161	SW	6	10	2·03	Continuous rain.
Berhampore .	·528	—·067	—·169	SE	6	10	0·81	Showery.
Bankura .	·508	—·015	?	SW	5	9	1·00	Dark gloomy.
Hazaribagh .	·565	+·032	—·134	NNW	10	10	0·33	Drizzling.
Chaibassa .	·543	+·024	?	WSW	3	10	0·85	Showery.
Midnapore .	·551	+·008	—·139	Calm	2	4	0·14	

The storm centre at 8 A.M. was in about Lat. 23½° N. and Long. 87° E. Moderate to heavy rain had fallen in North Bengal and Bihar and slight rain in the remainder

of the province and in Assam and Burma. The following gives falls exceeding 5 inches recorded at 8 A.M :—

DISTRICT.	STATION.	Rainfall in 24 hours preceding 8 A.M. of 17th.
		Inches.
Bhagalpur	Bangaon	6·20
,,	Madhipura	5·23
Monghyr	Gogri	14·15
,,	Jamalpore	8·70
,,	Chakai Bamda	7·30
,,	Monghyr	7·14
,,	Gidhour	5·18
Purnea	Kishanganj	5·42
,,	Forbesganj	5·32
Sonthal Parganas	Barharwa	6·25
,, ,,	Sahibganj	5·50
Darjeeling	Mungpoo	5·67

The rainfall had been excessive during the previous 24 hours in the Monghyr district.

18th September.—The barometric changes were again small over the whole of India with the exception of Bengal where pressure had increased briskly to rapidly and the depression was hence filling up. The following data show its position at 8 A.M :—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	"	"	"				Inches	
Dacca	29·654	+·018	—·051	SE	16	8	0·23	
Mymensing	·669	+·020	—·042	ESE	9	9	1·42	Showery.
Dhubri	·696	+·015	—·050	NNE	20	10	7·65	Continuous rain.
Dinajpur	·656	+·061	—·048	NE	14	10	8·00	Continuous rain.
Jalpaiguri	·662	+·021	—·073	NNE	5	7	6·40	Showery.
Purnea	·654	+·091	—·044	NNE	10	10	4·73	Continuous rain.
Patna	·695	+·093	+·006	SE	6	10	0·03	Showery.
Berhampore	·615	+·087	—·081	SSW	8	10	0·12	Showery.

The data indicate that the storm was now in Central Bengal and that very strong winds were blowing in the eastern and northern quadrants of the depression. Easterly winds obtained in South and West Bihar and the northern districts of Chota Nagpur, thus showing that the influence of the storm in the western quadrants extended to a very slight distance from the centre. The position of the centre at A.M. as indicated by the observations was in about Lat. 24¾° N. and Long. 87¾° or 88° E. and the storm had hence advanced about 100 miles in a north-easterly direction during the previous 24 hours. The chief feature of the storm was the heavy downpours it was giving to the northern districts of North Bengal. The following gives the most noteworthy falls during the 24 hours preceding 8 A.M. of the 18th :—

DISTRICT.	STATION.	Rainfall in 24 hours preceding 8 A.M. of 18th.
		Inches.
Rangpur	Rangpur	14·84
,,	Kurigram	10·00
,,	Bagdogra	7·76
,,	Peerganj	7·06
Cooch Behar	Dinhatta	14·35
,,	Cooch Behar	10·51
,,	Mickliganj	7·06
Dinajpur	Setabganj	10·30
,,	Dinajpur	7·98
Purnea	Kishanganj	8·06
Darjeeling	Darjeeling	6·41
Jalpaiguri	Jalpaiguri	6·63
Bogra	Pauchbibi	5·80

The storm continued to fill up during the day and a slight residual depression lay over Bengal on the morning of the 19th, the centre of which was in about Lat. 24° 50′ N. and Long. 88¼°. Winds were feeble and irregular and the cyclonic circulation had practically broken up. Moderate rain had fallen in North Bengal. Skies cleared during the day and fine dry weather set in on the 20th.

The storm formed slowly on the 12th, 13th and 14th. Its march was chiefly determined by the abnormal pressure conditions, the most important of which were the low and deficient pressure over Bengal and excessive pressure in Central India and the Deccan. The storm advanced first in a north-westerly direction and when it reached land it recurved rapidly to north-east and passed through West Bengal into Central and North Bengal and broke up in

North Bengal on the 19th and 20th. The following data define its path and average rate of motion throughout:—

Date.	Position of centre at 8 A.M.				Distance travelled during interval.	Average hourly rate of motion.
	Lat. N.		Long. E.			
	°	′	°	′	Miles.	Miles.
13th	20	0	90	0	...	...
14th	20	15	88	45	70	3
15th	20	45	88	0	70	3
16th	23	0	86	40	180	7½
17th	23	30	87	0	50	2
18th	24	45	87	45	100	4
19th	24	50	88	30	50	2

The storm gave a moderate to heavy burst of rain to the whole of Bengal and the only noteworthy feature was the heavy downpour it gave to North Bengal when it was breaking up near the hills. The following gives a summary of the rainfall during the period from the 14th to the 19th:—

Division.	Average actual rainfall of 24 hours preceding 8 A.M. of						Total average rainfall of period 14th to 19th September.
	14th September.	15th September.	16th September.	17th September.	18th September.	19th September.	
	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inches.
Orissa	1·68	1·54	0·20	0·15	0·11	0·27	3·95
South-West Bengal	1·07	1·17	0·66	0·55	0·15	0·10	3·70
East Bengal	1·14	0·58	0·26	0·77	0·52	0·60	3·87
North Bengal	0·22	0·90	1·15	1·84	4·71	0·86	9·68
Bihar (South)	0·32	0·90	1·03	2·14	0·59	0·05	5·03
Bihar (North)	0·24	0·59	0·63	2·06	1·38	0·10	5·00

A very slight disturbance affected the Persian area and Upper India from the 19th to the 22nd. Pressure gave way briskly on the 19th and 20th in Persia. Fine clear weather, however, held steadily in that area. Although pressure was increasing in Upper India on these days, weather was slightly unsettled and skies were more or less clouded on the morning of the 21st in the Punjab and adjacent Himalayas. Light local showers fell in Upper India on the 20th and the 21st, the chief effect of which was to produce a large temporary reduction of temperature. Pressure increased in Upper India on the 21st and was in considerable to large excess on the 22nd over the whole of North-Western, Central and Western India.

Fine clear weather set in over Bengal on the 23rd and weather was fine over the whole Indian land area except Lower Burma where it was cloudy and showery. The pressure changes of the next week were such as usually occur in the middle of October and accompany the establishment of the so-called north-east monsoon on the Madras coast.

The pressure changes were as a rule small in amount but tended to diminish gradients over the land area, and to give rise to slightly lower pressure in the Bay than elsewhere.

As a result of these changes a very shallow closed area of low pressure lay over the Bay on the 25th and 26th. Winds which were westerly over the north of the Bay on the 23rd and 24th shifted to northerly directions to the north of Lat. 18° N. on the 25th. North-easterly winds on the 27th were blowing as far south as Lat. 15° N. in the west of the Bay and winds had shifted to south-east at Port Blair. These changes indicated the withdrawal of the monsoon current from Bengal and the north of the Bay, and its deflection over the centre of the Bay towards the Peninsula. Burma received light showers during the remainder of the month and the Peninsula south of Lat. 12° N. moderate rain daily.

The following gives a brief summary of the rainfall in the eight divisions of Madras and in Coorg day by day from the 25th to the 30th:—

Division.	Average actual rainfall of 24 hours preceding 8 A.M. of						Total of period.
	25th September.	26th September.	27th September.	28th September.	29th September.	30th September.	
	Inch.	Inch.	Inches.	Inches.	Inches.	Inch.	Inches.
East Coast (North)	0·20	0·22	0·14	0·28	0·19	0·07	1·10
,, ,, (Central)	0·23	0·28	0·38	1·18	0·50	0·22	2·79
,, ,, (South)	0·28	0·38	0·47	0·61	0·38	0·54	2·66
Madras, South	0·10	0·22	0·80	0·18	0·20	0·65	2·15
Malabar Coast	0	0·16	0·46	0·69	0·51	0·52	2·34
Madras, South-Central	0·62	0·84	0·37	0·58	0·32	0·27	3·00
Madras Hills	0·36	0·79	0·82	1·40	1·50	0·36	5·23
Coorg	0·23	0·82	1·19	1·21	0·43	0·33	4·21
Madras, Central	0·14	0·49	0·11	0·23	0·14	0·07	1·18

Pressure at the end of the month was very uniform over the whole land and sea area but was slightly lower in the Bay (more especially in the south-west than elsewhere). The chief feature was a large excess of pressure over the

greater part of the area. The following gives variation data for the 30th illustrating this feature :—

Meteorological Province.	Variation of mean 8 A.M. pressure of September 1896 from normal.
	"
Burma	+·084
Bengal and Assam	+·124
North-Western Provinces and Oudh	+·111
Punjab	+·089
Sind and Rajputana	+·102
Central India and Gujarat	+·089
Central Provinces and Berar	+·120
Bombay	+·055
Madras	+·069

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

I.—Kashmir and Punjab Himalayas.

(1) *Chamba.*—The following is an extract from a letter received from Lieutenant-Colonel J. Hutchinson, Commissioner, Lahore Division, and dated 27th September, giving an account of the snow accumulation in the Pangi Valley :—

"I have just returned from a trip to the Pangi Valley some nine marches direct north of Dalhousie. I crossed by the Sach Pass. Possibly what I noticed regarding the remains of last year's snow may be of interest. Though the fall in the lower hills was less than usual, the fall on the higher hills was far heavier than has been known for many years. This heavy fall was at a height of 12,000 feet and upwards. On the north side of the range this is specially noticeable even now from the resulting avalanches which were very heavy and have done much damage in the forests. Even in September, last year's snow brought down by avalanches was lying in the ravines at a height of 7,500 feet and was many feet in depth. All the inhabitants of the valley talked of the severe winter.

"Heavy snow fell last month (22nd) on the higher ranges and already the hills show more snow than I have ever seen at this time of the year. This is peculiar as we have had less rain than usual at Dalhousie. The natives predict an early and severe winter."

(2) *Simla Hill districts.*—The following report on the snowfall in the Upper Sutlej Valley at and near Kilba has been received from the Conservator of Forests, Bushahr Division :—

"On the 21st September for the first time this year, a light snowfall occurred above 10,000 feet. There was a sudden change in the weather which was cold at the time of the storm although the wind was still blowing from the south. On the 22nd September there was a heavy snowfall above 10,000 feet, while on the lower slopes nearly half an inch of snow was registered. The wind shifted to the north during the storm and the weather was quite wintry. On the 24th there was more snow while the wind continued to blow from the north.

"On the 3rd October a little snow fell above 10,000 feet. On the 4th a heavy snowfall occurred, the snow line descending to 9,500 feet, while on the lower slopes 0·80 inch of rain was recorded. On the 5th there was a light fall of snow above 10,000 feet.

"The usual cloudy weather prevailed during the snowstorms which are reported to have been general throughout Bushahr. In the intervals the weather was cold and the sky overcast by drifting clouds which settled towards the evening along the upper slopes. Since the last fall of snow the weather has been very fine and the snow line on the southern slopes has retreated to 12,000 feet.

"The depth of snow on the Bulder into Spitti, the Rupen Pass into the Palios Valley (15,000 feet), is said to be between 3 and 4 feet deep.

"During the snowfalls the weather was colder than usual at this time of year and owing to the rainfall the humidity of the lower valleys was also unusual.

"A large portion of the buckwheat crops was harvested in time but all that remained uncut was injured by cold and damp.

"The people say that the snowfall descended lower than in previous years at this season."

The height of the snow line on the hills opposite Kilba at different periods during the interval from the 21st September to the 5th October as given below, is taken from the same report :—

Date.	Elevation of snow line.	Character of snowfall during intermediate period.
21st September 1896	10,000 feet.	Slight.
22nd ditto	9,500 ,,	Moderate.
24th ditto	10,000 ,,	Slight.
3rd October 1896	10,000 ,,	Moderate.
4th ditto	9,500 ,,	Ditto.
5th ditto	10,000 ,,	Slight.

II.—Sikkim Himalayas.

Yatung (Thibet).—Mr. H. E. Hobson, Chinese Commissioner of Customs, sends the following account of

the snowfall on the neighbouring mountains in September:—

"Snow fell last night (the 15th) on the peaks above the Jalap Pass, the first fall of the season. The first fall occurred last year on the 5th October. Heavy rain fell at Yatung on the 16th and 17th and snow on the neighbouring mountains. All the higher peaks are again covered with snow."

Summary of special storm reports.

The number of local storms during the month was not large. 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 following gives a statement of the chief local storms, of which reports were received during the month:—

12th.—Thunderstorm at Salem from 4 P.M. to 5 P.M.

14th.—Thunderstorm at Simla from 3 P.M. to 4-20 P.M.

15th.—Duststorm at Benares at 2-30 P.M. Very severe sandstorm at Kashan in Persia at 9 P.M.

20th.—Thunderstorm at Simla from 1-5 P.M. to 1-50 P.M.

21st.—Duststorm at Jeypore at 3-5 P.M.
Sandstorm at Kashan in Persia at 6 P.M.

29th.—Severe thunderstorm at Bushire from 2-10 P.M. to 3-10 P.M.

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

Arabian Sea.—Light to moderate unsteady winds prevailed generally over the Arabian Sea throughout the month except along the Sind and Kathiawar coasts where normal westerly winds held steadily. Weather was fine except in the east and south-east where showers were of occasional occurrence. There was a tendency to the establishment of north-east winds over the northern half of the sea during the last week of the month which became marked towards the end of the month.

The air movement was very feeble over this area, the mean wind force ranging between 2·2 and 3·4.

Bay of Bengal.—Ordinary monsoon winds of force 2 to 5 prevailed over the Bay during the first four days of the month. Weather was generally fine except in the east and centre where showers were of occasional occurrence. The mean air movement ranged from 3·2 on the 1st to 2·8 on the 4th. No important change occurred during the next 24 hours except in the north of the Bay to the north of Latitude 19° N. where winds fell off in strength and became unsteady. Winds increased slightly in strength to the south of the parallel of 19° N. on the 5th and 6th. The wind force for all parts of the Bay averaged 3·5 at 8 A.M. of the 7th. An increasing monsoon obtained generally over the Bay during the next three days. On the morning of the 10th winds of force 4 to 6 prevailed over the Bay to the south of Latitude 17° N. and light westerly airs to the north of that parallel. Weather continued fine in the south and north but had become unsettled over the intervening region and more especially over the centre of the sea where heavy squalls were of frequent occurrence. The mean intensity of the winds at 8 A.M. of the 10th was 4·1 or 0·4 above the normal. Winds increased further in force during the next 24 hours and squally weather extended northwards up the east of the Bay. At 8 A.M. of the 11th very squally rainy weather obtained over the centre and east of the Bay as far north as Latitude 19° N. The mean wind force as derived from the data of 18 vessels was 4·4 or 1·0 above the normal of the month. There was on this day a tendency to the establishment of a cyclonic circulation off the Arakan coast. It developed slowly on the 12th and 13th, and on the morning of the 14th a well-defined depression and cyclonic circulation was shown over the north of the Bay. Winds had increased over the centre and north of the Bay and the strongest winds experienced at 8 A.M. of this day were of force 7. A gale prevailed at Port Blair, the hourly velocity during the preceding 48 hours averaging 23 miles at that station. Weather was unsettled with heavy rain and squalls over the centre, east and north of the Bay but was unaffected over the south and west. The storm intensified somewhat during the day. The strongest winds at 8 A.M. of the 15th were of force 9 and the mean wind force for the whole of the Bay was 4·5. The storm crossed the North Orissa coast in the evening and with its passage inland winds and weather moderated very rapidly. On the morning of the 17th, 14 vessels out of 17 in the Bay experienced fine weather. The mean air movement at 8 A.M. of this day had diminished to 3·6. The falling off of the winds is shown strikingly by the data of Port Blair where the average hourly velocity decreased from 20 miles on the 15th to 8 miles on the 17th. Light unsteady winds set

in over the north of the Bay on the 18th and continued until the end of the month. On the other hand ordinary monsoon conditions continued to prevail over the remainder of the Bay until the 23rd when conditions began to alter rapidly and the winds to become unsteady. During the remainder of the month very unsteady variable winds obtained generally over the Bay except in the neighbourhood of Ceylon where moderate monsoon winds continued. The air movement was exceedingly light over the Bay during this period, the mean intensity of the winds ranging from 2·6 on the 24th to 2·3 on the 30th.

Equatorial Belt.—The information for this region is even less than usual. It however indicates that moderate to strong south-east trade winds obtained over this area from the 1st to the 8th and again from the 28th to the 30th, and exceedingly feeble and irregular winds during the intervening period. The character of the air movement over the western half of the Belt during the period from the 9th to the 27th is shown strikingly by the experiences of the S.S. *Pongola* which crossed this area from south to north during the second week of the month. She experienced light airs in Lat. 1½° S and Long. 62½° E on the 9th, light northerly airs force 2 in Lat. 1½° S and Long. 66½° E on the 10th, light SSE airs near the line in Long. 70½° E on the 11th, a calm in Long. 74° E. on the 12th, light S W airs in Lat. 2° N and Long. 77° E. on the 13th, and light westerly airs in Lat. 4¾° N and Long. 79¾° E. on the 14th.

From the preceding account of the weather in the Indian seas it is evident that conditions were very abnormal over the Arabian Sea where winds were not only exceedingly unsteady but were also very light, being at least 20 per cent. below their normal intensity in September.

In the Bay, on the other hand, conditions were approximately normal until the 18th when the monsoon current withdrew quickly from the north of the Bay. Feeble monsoon conditions, however, continued over the remainder of the Bay up till the 23rd, when the pressure distribution altered rapidly and the monsoon current retreated southward from the centre and south of the Bay. Light irregular winds prevailed generally over the Bay during the remainder of the month. Hence the most important features of the meteorology of the Indian Seas in September were, the extreme weakness of the south-east trades over the west and centre of the Equatorial Belt and the very early withdrawal of the monsoon current from the Arabian Sea.

Temperature of the Air.

The mean temperature conditions of the month varied to a larger extent from the normal than is usually the case in September, due chiefly to the early termination of the rains in North-Western India.

The mean maximum or day temperature of the month was above the normal over the whole of India with the exception of East Bengal and Upper Assam (and perhaps Upper Burma). It was also in defect locally at Bhuj (—0°·4) and Madura (—0°·6). The deficiency in East Bengal, Assam and Upper Burma was generally small in amount but exceeded 1° at Sibsagar (—1°·7) and perhaps Kindat (—1°·9).

The normal means for Kindat are not very reliable in consequence of the doubtful character of the earlier observations for some years at that station.

The mean maximum temperature of the month was more than 2° above the normal over the greater part of India and exceeded 4° in three areas, one including the East Punjab, the second the North-Western Provinces, East Rajputana and West Bihar, and the third the greater part of the Deccan. The following gives data for the provinces in which the mean excess was over 2°:—

Province.	Mean maximum temperature.		
	Actual, September 1896.	Normal, September.	Variation of actual from normal.
	°	°	
Punjab	99·0	95·5	+3·5
Rajputana	94·7	91·6	+3·1
North-Western Provinces	96·6	90·9	+5·7
Central India	90·9	87·5	+3·4
Berar	93·5	88·0	+5·5
Chota Nagpur	89·0	86·5	+2·5
Central Provinces	90·7	87·7	+3·0
Bombay	87·9	83·9	+4·0

The excess was more than 6° in amount at the stations for which data are given below :—

Province.	Station.	Mean maximum temperature.		
		Actual, September 1896.	Normal, September.	Variation of actual from normal.
		°	°	°
North-Western Provinces and Oudh	Allahabad	99·1	90·8	+8·3
,,	Agra	100·4	92·3	+8·1
,,	Lucknow	98·3	91·7	+6·6
,,	Jhansi	97·1	90·9	+6·2
Deccan	Sholapur	94·7	88·0	+6·7

A noteworthy feature of the month was the great excess in the day temperature in the North-Western Provinces and the Central Deccan. Abnormally high maximum temperatures were registered in these areas though the absolute maxima are not quite so high as have been previously recorded in September. This is shown fully by the following data :—

Station.	Highest maximum temperature recorded in September 1896.	Date on which recorded.	Highest maximum temperature recorded in September previous to 1896.	Year in which recorded.
	°		°	
Hyderabad	106·7	30th	108·4	1878
Jacobabad	106·4	30th	115·3	1877
Dera Ismail Khan	104·2	4th & 13th	110·5	1888
Montgomery	105·9	16th	...	...
Khushab	105·3	10th	...	...
Umballa	105·5	5th	...	...
Agra	103·0	5th & 29th	107·7	1877
Lucknow	102·3	30th	105·8	1877
Allahabad	102·1	25th & 26th	105·5	1877
Jhansi	102·1	30th	106·5	1877

The day temperature was also in excess at the hill stations in Northern and Central India, but by considerably smaller amounts than at the neighbouring plain stations.

The mean minimum or night temperature of the month was generally above the normal. It was locally in slight defect in Upper Assam, the sub-montane districts of the North-Western Provinces and Bihar, Lower Sind, Cutch, Kathiawar, West Rajputana, Baluchistan, Central India, Berar, Khandesh and the northern and central districts of the Central Provinces. The variations were much smaller, as a rule, than those of the day temperature, but exceeded 2° at the stations for which comparative data are given below :—

Province.	Station.	Mean minimum temperature.		
		Actual, September 1896.	Normal, September	Variation of actual from normal.
		°	°	°
Baluchistan	Quetta	47·8	50·3	—2·5
Punjab	Lahore	77·6	72·9	+4·7
	Sirsa	77·7	74·9	+2·8
	Sialkot	75·5	73·3	+2·2
Central India	Indore	68·0	70·1	—2·1
Bombay	Rajkot	70·3	72·6	—2·3
Deccan	Hyderabad	73·6	70·4	+3·2
	Cuddapah	78·2	75·9	+2·3

The variation for Diamond Island given in Table I is doubtful.

The mean temperature of the month was above the normal over the whole of India with the exception of three areas, *viz.*, Upper Assam and Upper Burma, Baluchistan and Cutch and Kathiawar. The deficiency exceeded 1° at Quetta (—1°·2) and probably over the whole of Baluchistan and Afghanistan. The mean temperature was more than 2° above the normal in two large areas. The first included the Punjab (excepting the Western Districts) and North-Western Provinces, and the second the Deccan. The following gives data for the stations in these two areas at which the mean temperature was more than 3° above the normal :—

Province.	Station.	Mean daily temperature.		
		Actual, September 1896.	Normal, September.	Variation of actual from normal.
		°	°	°
North-Western Provinces and Oudh.	Agra	89·1	84·3	+4·8
,,	Allahabad	88·5	83·8	+4·7
,,	Jhansi	87·0	83·1	+3·9
,,	Lucknow	87·6	84·0	+3·6
,,	Sutna	83·8	80·7	+3·1

PROVINCE.	STATION.	MEAN DAILY TEMPERATURE. Actual, September 1896.	Normal, September.	Variation of actual from normal.
		°	°	°
Punjab	Lahore	88·8	84·9	+3·9
,,	Sialkot	87·5	84·3	+3·2
,,	Delhi	87·9	84·6	+3·3
,,	Rawalpindi	84·3	81·1	+3·2
,,	Sirsa	89·6	86·5	+3·1
Deccan	Sholapur	83·2	79·1	+4·1
,,	Cuddapah	87·4	84·2	+3·2
,,	Kurnool	84·7	81·2	+3·5
,,	Bellary	84·8	81·7	+3·1

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

(1) Increased day and night temperatures over nearly the whole of Northern and Central India. The increase was most strongly shown in two areas, the first including the South and East Punjab and the North-West Provinces in which the mean temperature of the month was from 2° to 5° higher than the normal, and the second the Deccan and Central Provinces in which the mean temperature of the month ranged between 2° and 4° above the normal.

(2) Decreased temperature both by day and night in Baluchistan.

(3) Decreased day and night temperatures to a slight extent in Upper Assam and Upper Burma.

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 56 Meteorological Divisions into which India is divided :—

PROVINCE.	DIVISION.	ACTUAL TEMPERATURE. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	VARIATION FROM NORMAL OF MONTH OF Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
BURMA	Tenasserim	84·9	74·4	79·7	10·5	19·3	—0·1	+1·2	—1·3
	Lower Burma (Deltaic)	85·3	76·6	81·0	8·7	15·1	+0·1	+0·2	—0·1
	Central do.	89·3	77·1	83·2	12·2	18·8	+0·1	+1·6	—1·5
	Upper do.	87·0	73·1	80·1	13·9	23·1	—1·9	+1·2	—3·1
	Arakan	86·2	77·7	82·0	8·5	15·0	—0·4	—0·3	—0·1
BENGAL AND ASSAM	Eastern Bengal	86·3	76·1	81·2	10·2	18·9	+0·3	+0·2	+0·1
	Assam (Surma)	90·2	76·2	83·2	14·1	23·1	?	?	?
	Do. (Brahmaputra)	86·4	76·5	81·5	9·9	18·6	—0·9	+0·2	—1·1
	Deltaic Bengal	90·0	78·3	84·2	11·7	19·9	+1·1	+0·2	+0·9
	Central do.	90·8	77·9	84·4	12·9	22·1	+1·5	+0·2	+1·3
	North do.	88·9	76·3	82·5	12·6	23·3	+1·1	—0·1	+1·2
	Bengal Hills	63·6	49·6	56·6	14·0	26·4	—0·2	0	—0·2
	Orissa	90·0	78·7	84·4	11·3	19·5	+1·7	+0·1	+1·6
	Chota Nagpur	89·0	74·0	81·5	15·0	22·6	+2·5	+0·7	+1·8
	Bihar (South)	93·1	78·3	85·7	14·8	23·8	+2·2	—0·1	+2·3
	Do. (North)	91·8	77·7	84·7	14·2	24·4	+1·9	+0·2	+1·7
NORTH-WESTERN PROVINCES AND OUDH.	North-Western Provinces (East)	97·4	77·5	87·5	19·9	29·2	+6·6	+0·4	+6·2
	Oudh (South)	98·3	76·9	87·6	21·4	33·0	+6·6	+0·6	+6·0
	Do. (North)	95·4	76·0	85·7	19·4	29·4	?	?	?
	North-Western Provinces (Central)	99·0	76·5	87·8	22·5	35·5	+6·2	+1·6	+4·6
	Do. do. (West)	98·8	76·4	87·6	22·4	30·9	+6·8	+0·9	+5·9
	Do. do. (Submontane East)	94·9	77·3	86·1	17·6	25·6	+4·5	—0·6	+5·1
	Do. do. (do. West)	92·2	71·9	82·1	20·2	28·9	+3·6	—1·3	+4·9
	Do. do. (Hills)	71·1	58·4	64·8	12·7	20·6	+1·3	+0·2	+1·1
PUNJAB	Punjab (South-East)	98·5	77·4	87·9	21·1	31·8	+5·9	+0·7	+5·2
	Do. (South)	99·1	76·6	87·8	22·6	33·0	+3·3	+2·8	+0·5
	Do. (Central)	99·8	77·6	88·8	22·2	37·0	+3·1	+4·7	—1·6
	Do. (Submontane)	98·0	75·2	86·6	22·8	34·0	+3·8	+1·8	+2·0
	Do. (Hill Districts)	77·7	56·8	67·3	20·9	37·3	+0·4	—1·9	+2·3
	Do. (North)	97·7	70·5	84·1	27·2	44·2	+3·2	+1·5	+1·7
	Do. (West)	100·9	76·5	88·7	24·4	37·3	+1·6	+1·1	+0·5

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	86·0	75·4	80·7	10·6	14·2	+2·2	+0·8	+1·4
	Madras (South Central)	91·0	72·1	81·6	18·9	27·1	+0·5	+1·2	−0·7
	Coorg	74·9	62·6	68·8	12·3	18·3	+2·5	+0·9	+1·6
	Mysore	83·8	66·3	75·1	17·5	25·8	+1·6	+1·4	+0·2
	Konkan	85·2	75·9	80·6	9·3	16·4	+2·4	+1·0	+1·4
	Bombay Deccan	89·9	68·0	79·0	21·8	30·5	+5·4	−0·5	+5·9
	Hyderabad (North)	89·7	70·8	80·2	19·0	27·9	?	?	?
	Khandesh	88·6	66·1	77·4	22·5	35·3	+4·3	−2·0	+6·3
Central Provinces and Berar.	Berar	93·5	72·0	82·7	21·5	33·7	+5·5	−0·1	+5·6
	Central Provinces (West)	91·4	72·2	81·8	19·1	30·1	+3·3	−1·0	+4·3
	Do. (Central)	90·1	71·2	80·6	18·9	31·4	+3·3	−1·0	+4·3
	Do. (East)	90·6	76·1	83·3	14·5	19·8	+2·3	+0·2	+2·1
Bombay (North)	Gujarat	90·9	76·0	83·5	14·9	28·2	−0·7	+1·3	−2·0
	Kathiawar and Cutch	89·8	73·6	81·7	16·2	31·7	+0·8	+2·1	−1·3
	Sind	94·5	76·7	85·6	17·8	30·3	+0·4	+0·5	−0·1
	Baluchistan Hills	89·5	50·8	70·2	38·8	48·1	+0·1	−2·5	+2·6
Rajputana and Central India.	Central India (East)	90·9	71·6	81·3	19·3	31·7	+3·4	−0·9	+4·3
	Rajputana (East), Central India (West)	94·5	72·9	83·7	21·6	34·2	+2·7	−0·4	+3·1
	Do. (West)	99·2	75·8	87·5	23·5	36·1	+2·1	−1·0	+3·1
Madras	East Coast (North)	91·8	78·4	85·1	13·4	22·2	+2·7	+0·8	+1·9
	Hyderabad (South)	91·5	73·7	82·6	17·8	25·2	+2·8	+3·2	−0·4
	Madras (Central)	95·4	75·9	85·6	19·5	27·9	+4·6	+1·9	+2·7
	East Coast (Central)	93·9	77·7	85·8	16·2	26·9	+0·5	+0·3	+0·2
	Do. (South)	95·3	77·4	86·4	17·9	28·8	+1·8	+1·0	+0·8
	Madras (South)	94·3	78·1	86·3	16·2	24·5	−0·6	+0·6	−1·2

The following is a summary of the chief features of the temperature conditions during the month.

At the commencement of the month temperature was in general excess as is shown by the following variation data for the 24 hours preceding 8 A. M. of the 1st :—

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

The preceding data indicate that the excess was most pronounced in the Punjab and the North-Western Provinces and in Madras and was more marked in the day than the night temperature.

Weather was showery in Burma and Bengal during the first eight days of the month, and the temperature conditions varied slightly from day to day but did not depart to any considerable extent from the normal. The chief feature of this period was the steady large excess in the two areas characterized by excessive temperature on the 1st. The following gives temperature data for every second day from the 2nd to the 10th in these two areas :—

Area.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	2nd September.	4th September.	6th September.	8th September.	10th September.
	°	°	°	°	°
Punjab	+3·6	+5·1	+4·0	+3·5	+4·0
North-Western Provinces.	+3·5	+4·3	+3·2	+3·2	+3·1
Madras	+3·1	+2·8	+2·2	+1·4	+2·5

The following gives temperature variation data for the 24 hours preceding 8 A. M. of the 11th indicating the general character of the condition at that period :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF			Difference of the mean temperature of the 1st and 11th.
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.	
	°	°	°	°
Burma	+1·1	+1·8	+1·5	—0·7
Bengal and Assam . .	+4·5	+1·8	+3·2	+1·6
North-Western Provinces and Oudh.	+6·1	+0·4	+3·3	—0·3
Punjab	+5·1	+2·0	+3·6	—0·8
Sind and Rajputana .	+1·4	—0·4	+0·5	—0·3
Central India and Gujarat	+0·6	—1·1	—0·3	—0·6
Central Provinces and Berar.	+3·5	—1·3	+1·1	+0·6
Bombay . . .	+3·0	+0·6	+1·8	+0·8
Madras	+1·9	+1·1	+1·5	—2·8

The data in the last column show that the variations from the normal temperature distribution were practically the same on the 11th as on the 1st.

A storm formed in the Bay during the next two days. It advanced slowly into North Eastern India and was the most important feature of the weather between the 13th and 19th. It gave moderate to heavy general rain in Burma and North Eastern India. This reduced and maintained temperature considerably below the normal from the 13th to the 20th in Burma and Bengal as is shown by the following data :—

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF							
	13th Sept.	14th Sept.	15th Sept.	16th Sept.	17th Sept.	18th Sept.	19th Sept.	20th Sept.
	°	°	°	°	°	°	°	°
Burma . . .	—1·5	—1·1	—0·3	—1·5	—0·6	+0·6	—0·8	+0·5
Assam . . .	+0·2	+0·5	—0·9	—3·6	—1·9	—4·2	—3·0	—2·7
Bengal . . .	+1·2	—0·4	—2·3	—2·5	—1·4	—3·9	—3·8	—1·5
Orissa	—1·4	—4·7	—3·1	—1·4	—0·2	+1·7	+1·6	+1·2
Chota Nagpur . .	+1·9	+0·7	—2·0	—4·0	—2·7	—4·4	—1·1	+0·1
Bihar . . .	+3·4	+2·9	—2·0	—3·7	—7·6	—8·8	—7·6	—3·8

Temperature was during this period more or less in excess over the remainder of India. During the first part of this period temperature was in large excess in the Punjab and the North-Western Provinces and in the latter half it was in large excess in the Punjab and Madras as is shown by the following variation data :—

DIVISION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF							
	13th Sept.	14th Sept.	15th Sept.	16th Sept.	17th Sept.	18th Sept.	19th Sept.	20th Sept.
	°	°	°	°	°	°	°	°
Punjab . . .	+5·0	+4·5	+4·8	+3·3	+3·1	+4·6	+4·1	+4·9
North-Western Provinces and Oudh.	+3·8	+3·8	+3·4	+1·7	+1·5	+2·8	+3·1	+3·4
Madras . . .	+0·8	+1·7	+2·1	+2·1	+2·9	+3·5	+3·9	+3·1

Temperature increased rapidly on the 19th and 20th and was in general excess on the 21st as is shown by the following comparative data for the 24 hours preceding 8 A.M. of that day :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·5	+1·7	+1·1
Bengal and Assam	+0·5	+0·6	+0·6
North-Western Provinces and Oudh	+5·9	—0·2	+2·9
Punjab	+3·8	—1·5	+1·2
Sind and Rajputana	+1·4	+1·1	+1·3
Central India and Gujarat . .	+1·3	+0·3	+0·8
Central Provinces and Berar . .	+3·0	+0·7	+1·9
Bombay	+3·1	—0·1	+1·5
Madras	+3·6	+2·4	+3·0

Burma received light to moderate showers during the remainder of the month and the Peninsula to the south of Lat. 16°N. moderate daily rain from the 26th to the end of the month. Practically no rain fell over the remainder of India. Temperature was reduced below the normal in the rainfall area covering the southern half of the Peninsula as is shown by the following data for four typical stations :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	25th. Sept.	26th Sept.	27th Sept.	28th Sept.	29th Sept.	30th Sept.
	°	°	°	°	°	°
Madras . . .	+0·8	—2·3	—7·0	—3·8	—3·7	—4·0
Negapatam . .	+0·2	+1·0	—1·2	—2·3	—3·6	—4·2
Trichinopoly . .	+1·9	—2·1	—4·2	—3·8	—2·4	—4·1
Bangalore . . .	+1·8	—1·3	+1·8	—2·0	—1·6	—2·0

The Punjab and Kashmir received light showers from the 19th to the 22nd during this period, which reduced temperature considerably below the normal from the 21st to the 26th. The chief feature of the period was the excessive temperature in the Deccan, Central Provinces, North-Western Provinces and Bihar. This is shown most conveniently by the variation data of the following representative stations :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of									Mean variation of period 22nd to 30th.
	22nd Sept.	23rd Sept.	24th Sept.	25th Sept.	26th Sept.	27th Sept.	28th Sept.	29th Sept.	30th Sept.	
	°	°	°	°	°	°	°	°	°	°
Patna	+2·4	+2·0	0	+2·1	+2·2	+2·0	+0·4	+0·8	+0·8	+1·4
Allahabad	+6·7	+3·9	+3·6	+4·0	+4·0	+3·5	+4·1	+3·2	+4·0	+4·1
Amraoti	+4·6	+3·1	+4·5	+4·0	+4·1	+4·2	+5·7	+6·6	+5·5	+4·7
Nagpur	+2·1	+3·9	+2·4	+2·3	+1·5	+1·6	+2·6	+2·7	+2·4	+2·4
Hyderabad	+5·3	+1·2	+4·7	+4·7	+2·9	+4·7	+3·9	0	+1·8	+3·2
Bellary	+5·2	+4·3	+1·9	+4·8	+3·5	+0·6	+2·1	−1·3	+1·0	+2·5

Temperature at the end of the month was in slight to moderate defect in Bengal and Madras and in excess over the remainder of India; the excess being marked in Bombay, the Central Provinces, Central India and Rajputana as is shown by the following comparative data :—

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

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

Political area or Province.	Variation from normal of mean temperature for week ending					
	5th Sept.	12th Sept.	19th Sept.	26th Sept.	3rd Oct.	whole month.
	°	°	°	°	°	°
Burma	+0·9	+0·8	−0·7	+0·4	+1·8	+0·4
Bengal and Assam	+1·7	+2·5	−1·9	+1·0	+0·7	+0·8
North-Western Provinces and Oudh.	+3·5	+3·2	+2·9	+1·7	+3·1	+2·8
Punjab	+4·2	+3·8	+4·2	−0·2	+2·0	+2·8
Sind and Rajputana	+0·9	+0·5	+1·5	+0·2	+4·0	+1·0
Central India and Gujarat.	+0·1	−0·1	+0·3	+0·4	+3·7	+0·5
Central Provinces and Berar.	+0·3	+1·4	+1·2	+1·9	+3·0	+1·5
Bombay	+1·0	+1·5	+0·9	+2·3	+3·2	+1·7
Madras	+3·3	+1·8	+2·4	+1·9	−1·0	+1·7

Winds.

The mean winds of the month at Port Blair and Diamond Island were in September, as in August, much more westerly than usual. They were considerably stronger and were less steady than usual at Port Blair but were steadier at Diamond Island. The following gives data :—

Station.	Velocity in miles per diem.			Wind Direction.	
	Mean actual, September 1896.	Mean normal, September.	Percentage variation from normal.	Mean actual, September 1896.	Mean normal, September.
Port Blair	259	214	+21	S 64° W	S 43° W
Diamond Island	268	155	+73	S 55° W	S 39° W

Winds were on the whole of normal strength but less steady than usual in Bengal. The most noteworthy feature of the air movement was the abnormal westing of the winds, as is shown by the following data :—

Station.	Wind Direction.		
	Mean actual, September 1896.	Mean normal, September.	Increased westing.
	°	°	°
Chittagong	S 1 W	S 29 E	+ 30
Calcutta	S 50 W	S 27 E	+ 77
Burdwan	S 74 W	S 31 E	+105
Saugor Island	S 38 W	S 4 W	+ 34

Winds were also much more westerly than usual at False Point and Cuttack.

A noteworthy and important feature of the month was the early withdrawal of the easterly monsoon winds from the whole of the Gangetic Plain. The mean winds of the month were hence from westerly directions in Bihar as well as the North-Western Provinces and were almost opposite in direction to the normal winds of the month. The following gives comparative data of the mean wind direction of the month and its variation from the normal for four representative stations :—

Station.	Wind Direction.	
	Mean actual, September 1896.	Mean normal, September.
	°	°
Hazaribagh	N 44 W	S 64 E
Patna	N 60 W	S 77 E
Allahabad	N 65 W	N 42 E
Roorkee	N 45 W	S 6 E

Dry westerly land winds in fact obtained during the month over the whole of the Gangetic Plain. Winds were hence much more steadier than usual and the mean wind velocity was above the normal. The following gives comparative data in illustration.

Division.	Velocity in miles per diem.			Steadiness.		
	Mean actual, September 1896.	Mean normal, September.	Percentage, variation from normal.	Actual percentage, September 1896.	Normal percentage, September.	Variation from normal.
Chota Nagpur	197	169	+17	63	21	+42
Bihar	81	84	— 4	22	48	—26
North-Western Provinces and Oudh.	101	62	+63	60	14	+46
Punjab	63	54	+17	40	29	+11

Winds were least steady in West Bengal instead of in the North-Western Provinces as is usually the case in September. The following gives data for the stations where winds were most variable :—

Station.	Wind Direction.		Steadiness.		
	Mean actual, September 1896.	Mean normal, September.	Actual percentage, September 1896.	Normal percentage, September.	Variation from normal.
	°	°			
Darbhanga	N 66 W	S 86 E	12	54	—42
Burdwan	S 74 W	S 31 E	28	38	—10
Berhampore	S 48 W	S 41 E	33	36	— 3

The following table gives comparative data of the mean air movement of the month in Burma and Northern India :—

Station and Province.	Velocity in miles per diem.		
	Mean actual, September 1896.	Mean normal, September.	Percentage variation.
Port Blair	259	214	+21
Burma	133	106	+25
Bengal	118	121	— 2
Orissa	101	127	—20
Bihar	81	84	— 4
Chota Nagpur	197	169	+17
North-Western Provinces	101	62	+63
East Punjab	49	40	+23

Winds were practically normal in direction but stronger and steadier than usual in Sind. In Rajputana and Central India the mean winds of the month contained a strongish northerly element, which in some cases replaced a normal southerly component.

Winds were also more northerly and less westerly in Berar, the Central Provinces and Deccan. They were on the whole slightly weaker than usual, but were of normal steadiness. The following gives four examples illustrating the northerly deflection of the air movement in this area :—

Station.	Wind Direction.		
	Mean actual, September 1896.	Mean normal, September.	Northerly deflection.
	°	°	°
Khandwa	N 42 W	N 69 W	27
Sholapur	N 25 W	N 73 W	48
Nagpur	N 50 W	N 54 W	4
Raipur	N 66 W	S 69 W	45

Winds were on the other hand slightly less northerly than usual at Pachmarhi and Chikalda.

The mean winds of the month were also more northerly than usual at the west coast stations and the deflection was as marked as in the Deccan area, as is shown by the following data :—

Station.	Wind direction. Mean actual, September 1896.	Mean normal, September.	Northerly deflection.
			°
Bombay	N 73° W	S 89° W	18
Ratnagiri	N 73° W	S 88° W	19
Karwar	N 64° W	N 86° W	22

The data show that the mean deflection was almost the same in amount at these stations and averaged 20°. A similar deviation of the mean air movement of the month from the normal obtained in September 1895 when it averaged 25° in amount. Winds were considerably below their normal strength (about 25 per cent.) at Bombay and Ratnagiri.

Westerly winds held throughout the month in Mysore and Southern India generally but were much less steady than usual as is shown by the following :—

Station.	Steadiness. Actual percentage September 1896.	Normal percentage, September.	Variation from normal.
Bangalore	53	88	—35
Trichinopoly	38	77	—39
Salem	42	77	—35
Madras	26	53	—27

The following table gives comparative data of the strength of the air movement in Western and Southern India :—

Province.	Velocity in miles per diem. Mean actual, September 1896.	Mean normal, September.	Percentage variation from normal.
Rajputana	165	147	+12
Central India	115	106	+ 8
Central Provinces	102	104	— 2
Berar	159	170	— 6
West Coast	179	231	—23
Deccan	251	250	0
East Coast	69	102	—32

Winds were slightly stronger and much steadier than usual at the Upper India hill stations; but their mean directions varied very irregularly from the normal as is shown by the following examples :—

Station.	Wind Direction. Mean actual, September 1896.	Mean normal, September.
Murree	S 34° W	S 52° E
Simla	N 1° W	S 78° W
Chakrata	S 2° E	S 74° W
Darjeeling	N 58° E	S 72° E

Winds were even steadier than usual at Zanzibar, but less steady at the Seychelles and were on the mean of the month more easterly than usual in direction as is shown by the following data :—

Station.	Wind direction. Mean actual, September 1896.	Mean normal, September.	Velocity in miles per diem. Mean actual, September 1896.	Mean normal September.	Steadiness. Actual percentage, September 1896.	Normal percentage, September.
Zanzibar	S 7° E	S 12° W	122	118	64	46
Seychelles	S 46° E	S 40° E	301	277	82	94

Humidity and Cloud.

The mean humidity conditions of the month differed very slightly from the normal at Port Blair and in Burma and Assam. The mean aqueous vapour pressure was very slightly higher than usual, whilst the mean humidity percentage was in equally slight defect due to the increased temperature.

Over the whole of Northern and Central India, including Bengal, the Gangetic Plain, the Punjab, Rajputana, Central India and the northern districts of the Central Provinces, both the absolute and relative humidities were below the normal. The deficiency increased from the coast districts into the interior and was absolutely greatest

in Rajputana, Central India, the South-East Punjab, the North-Western Provinces and the Central Provinces. The following gives comparative data for this area of increased dryness of the air in September :—

DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Average normal, September.	Variation from normal.
	"	"	"	%	%	
Bengal . . .	·927	·946	—·019	82	86	— 4
Chota Nagpur . .	·704	·760	—·056	72	81	— 9
Bihar	·879	·926	—·047	74	82	— 8
North-Western Provinces and Oudh.	·660	·807	—·147	54	73	—19
Punjab . . .	·629	·713	—·084	51	60	— 9
Rajputana . .	·635	·697	—·062	58	65	— 7
Central India . .	·682	·779	—·097	60	73	—13
Central Provinces (North).	·657	·748	—·091	65	77	—12

The mean humidity of the month in this area was more than 15 in defect at a large number of stations including Allahabad (—26), Agra (—22), Meerut (—17), Buldana (—18) and Lucknow and Sutna each (—16). The following gives comparative data for these five stations in which the increased dryness was most pronounced :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Average normal, September.	Variation from normal.
	"	"	"	%	%	
Allahabad . . .	·697	·892	—·195	54	80	—26
Agra	·604	·785	—·181	45	67	—22
Meerut . . .	·615	·756	—·141	52	69	—17
Lucknow . . .	·726	·835	—·109	57	73	—16
Sutna	·653	·766	—·113	57	73	—16
Buldana . . .	·559	·683	—·124	60	78	—18

The air was slightly damper than usual in the Coromandel coast districts, but was abnormally dry over the whole of the interior of the Peninsula and in the west coast districts. The following table gives comparative data for six divisions :—

DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Average normal September.	Variation from normal.
	"	"	"	%	%	
West Coast . . .	·836	·839	—·003	80	85	— 5
Central Provinces .	·679	·766	—·087	64	76	—12
Bombay Deccan . .	·381	·679	—·079	65	78	—13
Madras Deccan . .	·596	·634	—·038	64	71	—13
Do. Coast . .	·881	·847	+·034	76	73	+ 3
Do. South . .	·730	·742	—·012	66	69	— 3

The following gives data for the stations in these areas where the mean humidity of the month was 10 or more below the normal :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Average normal, September.	Variation from normal.
	"	"	"	%	%	
Sholapur . . .	·551	·663	—·112	52	70	—18
Bellary . . .	·565	·669	—·104	52	65	—13
Bangalore . . .	·627	·599	+·028	76	88	—12
Poona . . .	·592	·672	—·080	66	77	—11

The air was considerably drier than usual in the Konkan. Thus the mean relative humidity at Bombay was 9 below the normal and at Karwar 5 below it.

The air was much drier than usual at the Himalayan hill stations. The following gives data for four stations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Average normal, September.	Variation from normal.
	"	"	"	%	%	
Leh	·158	·165	—·007	38	41	— 3
Murree . . .	·395	·415	—·020	64	64	0
Simla . . .	·379	·446	—·067	70	78	— 8
Ranikhet . . .	·451	·508	—·057	68	80	—12

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

(1) Normal or slightly decreased humidity in Burma and Assam.

(2) Large deficiency of aqueous vapour and abnormal dryness of the air in Northern and Central India, the Central Provinces and the Deccan.

(3) Slight to moderate deficiency of aqueous vapour and humidity in the west coast districts.

(4) Slightly increased humidity in the east coast districts.

Cloud.—As the larger variations of the humidity conditions and cloud amount were due to the same causes, *viz.*, the weakness of the monsoon currents and their very early withdrawal from Upper India, they were similar in general character over the greater part of India.

There was somewhat more cloud than usual at Port Blair and in Lower Burma, Arakan, East Bengal and Cachar. The following gives data for a representative station in each area :—

Station.	Mean cloud amount.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.
Port Blair	8·3	7·0	+1·3
Diamond Island	8·0	6·9	+1·1
Akyab	7·5	7·0	+0·5
Narayanganj	8·0	6·8	+1·2
Silchar	8·5	7·1	+1·4

There was less cloud than usual over nearly the whole of Northern and Central India, as is shown by the following comparative data :—

Division.	Mean cloud amount.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.
Bengal	8·0	7·1	+0·9
Bihar	4·0	6·2	—2·2
Chota Nagpur	7·5	7·9	—0·4
North-Western Provinces and Oudh	1·9	4·5	—2·6
Punjab	1·1	1·7	—0·6
Rajputana	2·9	3·8	—0·9
Central India	2·4	5·4	—3·0

The deficiency was in actual amount greatest at Roorkee (—3·3), Meerut (—3·1) and Nowgong (—3·0).

Skies over a portion of the area including Sind, the greater part of the Punjab and the western districts of the North-Western Provinces were practically free from cloud during the whole month. The following gives comparative data for stations at which the mean cloud was less than 1 :—

Station.	Mean cloud amount.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.
Jacobabad	0	0·6	—0·6
Mooltan	0	0·9	—0·9
Lahore	0·3	1·4	—1·1
Roorkee	0·5	3·8	—3·3
Meerut	0·6	3·7	—3·1

The mean cloud amount of the month was also in large defect over the whole of the interior of the Peninsula and in the Konkan. It was more than 2 below the normal at stations for which data are given below :—

Station.	Mean cloud amount.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.
Belgaum	4·9	7·5	—2·6
Sholapur	5·9	8·1	—2·2
Akola	4·0	6·5	—2·5
Nagpur	4·4	7·2	—2·8
Hoshangabad	3·3	5·8	—2·5
Bombay	4·5	7·4	—2·9

There was on the other hand more cloud than usual in South Madras and the Coromandel Coast districts but the excess was nowhere large and was of little significance.

The following gives comparative data for the Peninsula :—

Division.	Mean cloud amount.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.
Berar	4·8	6·4	—1·6
Central Provinces	3·8	6·0	—2·2
Deccan	6·4	7·3	—0·9
West Coast	5·1	6·1	—1·0
East Coast	6·8	5·9	+0·9
Southern India	5·9	6·3	—0·4

There was less cloud than usual at the hill stations in Upper and Central India. The deficiency was most marked at Ranikhet (—3·7), Pachmarhi (—2·6) and Chikalda (—2·4).

It is noteworthy that the cloud amount was almost as

largely in defect at Zanzibar as in Northern India. The following gives data:—

STATION.	MEAN CLOUD AMOUNT.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.
Zanzibar	2·7	5·0	— 2·3

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

(1) There was somewhat more cloud than usual in Lower Burma, Arakan and East Bengal.

(2) The mean cloud amount was very largely in defect over the whole of Northern and Central India and the Deccan area. The mean amount of cloud was least in Baluchistan, Sind, the Punjab and the western districts of the North-Western Provinces where skies were practically clear during the month. The deficiency was greatest in the North-Western Provinces.

(3) Cloud was in considerable defect in the west coast districts.

(4) It was in slight excess in South Madras and the Coromandel Coast districts.

Rainfall.

The Bombay monsoon current was unusually weak during the month. It withdrew from the Punjab and North-West Rajputana at the end of August and these areas received practically no rain in September. The western districts of the North-Western Provinces, the South East districts of Rajputana and the greater part of Central India received moderate rain during the first fortnight of the month, when the monsoon current withdrew and dry weather set in. The rains of 1895 hence terminated unusually early over the whole of North-Western India.

The Bay current was approximately of normal strength, but was very unsteady and the distribution of the rainfall of the month was largely dependent upon the character and track of the cyclonic storms which formed in that area during the month.

The following gives a very brief statement of the periods of most general rainfall:—

1st.—From the 1st to the 6th when Burma and Bengal received moderate daily rain and the Central Provinces and the Bombay coast had light showers.

2nd.—From the 14th to the 20th when Burma and Bengal received heavy rain from the cyclonic storm of the month, showers were also received in the North-Western Provinces, Central India and the Central Provinces during this period. The Deccan and Southern India had light to moderate rain during this period.

3rd.—The 21st and 22nd when Bengal received frequent light to moderate showers.

4th.—The 25th to the 30th when Burma and Bengal began to obtain showers. Southern India, Malabar, the Konkan and the Deccan also received numerous light to moderate showers during this period.

The rainfall of the month was in more or less general defect over nearly the whole of Northern and Central India, Berar, the Central Provinces, the Deccan and the Konkan and Malabar divisions (*i.e.* the west coast districts) or over by far the greater part of India, and was in excess only over South India, Tenasserim, Arakan, East and North Bengal and Lower Burma.

The deficiency averaged more than 85 per cent. in the following divisions:—

South Oudh and Sind (98 per cent.), North-Western Provinces, West (96 per cent.), North Oudh, North Western Provinces (Central), Central Provinces (West), and Central India, East (each 93 per cent.), North-Western Provinces (Submontane West) and Punjab, South-East (each 92 per cent.), Khandesh (90 per cent.), North-Western Provinces (East) and Kathiawar (each 89 per cent.), North-Western Provinces, Hills (88 per cent.), North-Western Provinces, Submontane East (87 per cent.) and Rajputana East and Central India, West (86 per cent.)

The following table gives comparative rainfall data of the month for the 57 meteorological divisions of India:—

PROVINCE.	DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
		Average actual, September 1896.	Average normal, September	Average actual, September 1896.	Average normal, September.	Variation from normal.
				Inches.	Inches.	Inches.
BURMA . . .	Tenasserim*	?	?	29·20	22·19	+7·01
	Lower Burma (Deltaic)*	?	?	20·64	12·98	+7·66
	Central do.*	?	?	7·33	8·81	−1·48
	Upper do.*	?	?	7·40	?	?
	Arakan*	?	?	20·76	19·03	+1·73

Province.	Division.	Number of rainy days. Average actual, September 1896.	Number of rainy days. Average normal, September.	Rainfall. Average actual, September 1896.	Rainfall. Average normal, September.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Bengal and Assam	Eastern Bengal	14·1	12·8	13·23	10·97	+2·26
	Assam (Surma)*	?	?	17·47	17·73	−0·26
	Do. (Hill Tracts)*	?	?	19·30	20·44	−1·14
	Do. (Brahmaputra)*	?	?	8·23	9·84	−1·61
	Deltaic Bengal	10·7	11·8	8·01	8·50	−0·49
	Central do.	9·0	11·6	7·89	9·39	−1·50
	North do.	12·3	12·5	18·52	15·38	+3·14
	Bengal Hills	15·6	16·9	20·15	19·03	+1·12
	Orissa	10·1	12·7	8·81	10·70	−1·89
	Chota Nagpur	5·0	11·5	4·99	8·42	−3·43
	Bihar (South)	4·1	9·0	5·59	6·99	−1·40
	Do. (North)	5·3	9·4	6·25	9·60	−3·35
North-Western Provinces and Oudh.	North-Western Provinces (East)	1·6	8·1	0·75	6·89	−6·14
	Oudh (South)	0·4	7·4	0·11	6·52	−6·41
	Do. (North)	0·8	7·2	0·53	7·22	−6·69
	North-Western Provinces (Central)	0·9	6·5	0·38	5·50	−5·12
	Do. do. (West)	0·6	4·8	0·20	4·62	−4·42
	Do. do. (Submontane East)	2·1	7·9	1·04	7·91	−6·87
	Do. do. (do. West)	1·0	6·1	0·56	7·11	−6·55
	Do. do. (Hills)	1·8	7·6	0·93	7·78	−6·85
Punjab	Punjab (South-East)	0·7	4·1	0·35	4·20	−3·85
	Do. (South)	1·3	2·9	0·49	2·38	−1·89
	Do. (Central)	1·3	2·5	0·54	2·33	−1·79
	Do. (Submontane)	1·6	3·7	0·57	3·76	−3·19
	Do. (Hill Districts)	3·1	7·4	1·52	6·40	−4·88
	Do. (North)	2·4	2·7	1·21	1·94	−0·73
	Do. (West)	0·6	1·2	0·32	1·09	−0·77
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	8·4	14·4	4·47	10·20	−5·73
	Travancore	4·5	?	3·05	?	?
	Madras (South-Central)	9·5	6·3	8·13	4·32	+3·81
	Coorg	10·7	?	6·11	?	?
	Mysore*	?	?	4·44	4·91	−0·47
	Konkan	6·8	16·7	3·05	14·97	−11·92
	Bombay Deccan	2·3	8·4	1·20	5·53	−4·33
	Khandesh	2·0	9·2	0·69	7·07	−6·38
Central Provinces and Berar.	Berar*	?	?	0·38	6·23	−5·85
	Central Provinces (West)	2·0	9·5	0·61	8·83	−8·22
	Do. (Central)	2·7	9 8	1·29	7·95	−6·66
	Do. (East)	4·9	9·5	3·14	7·62	−4·48
Bombay (North)	Gujarat	4·4	8·3	1·75	8·03	−6·28
	Kathiawar	1·5	4·4	0·51	4·70	−4·19
	Sind	0	?	0·01	0·49	−0·48
	Baluchistan Hills	0·2	?	0·08	0·06	+0·02
Rajputana and Central India.	Central India (East)	0·1	?	0·44	6·56	−6·12
	Rajputana (East) and Central India (West)	1·2	?	0·51	3·64	−3·13
	Rajputana (West)	0·3	?	0·14	1·35	−1·21
Madras	East Coast (North)	8·4	9·2	5·03	7·00	−1·97
	Do. (do.) (a)	16·5	12·4	7·88	8·63	−0·75
	Hyderabad (South)*	?	?	2·35	4·33	−1·98
	Madras (Central)	4·3	7·2	2·38	5·36	−2·98
	East Coast (Central)	8·4	5·5	5·88	3·61	+2·27
	East Coast (South)	7·2	6·4	5·77	4·86	+0·91
	Madras (South)	5·7	3·8	4·35	2·23	+2·12

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

The discussion in the wind section has shown that the Bay monsoon current was diverted more largely than usual to Tenasserim and Lower Burma.

This is confirmed by the rainfall of the month. The coast districts, Arakan, Burma and Tenasserim received practically daily rain throughout the month and Central

and Upper Burma during three periods, *viz.*, the 10th to the 17th, the 23rd to the 25th, and the 28th to the 30th. The rainfall of the month on the Shan Hills was reported to be exceptionally heavy.

The following table gives comparative data for the five divisions of Burma:—

Division.	Number of rainy days.			Rainfall.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Average normal, September.	Variation from normal.
				Inches.	Inches.	Inches.
Tenasserim . .	?	?	?	29·20	22·19	+7·01
Lower Burma (Deltaic)	?	?	?	20·64	12·98	+7·66
Central „ . . .	?	?	?	7·33	8·81	—1·48
Upper „ . . .	?	?	?	7·40	?	?
Arakan . . .	?	?	?	20·76	19·03	+1·73

The rainfall of the month was in slight excess (9 per cent.) in Arakan and in largish excess (31 per cent.) in Tenasserim.

The chief feature of the rainfall of the month was the very large excess in Lower Burma which received an average of 7·66 inches or nearly 60 per cent. above the normal. The rainfall of the month was scanty in the central districts including Minbu, Yamethin and Mandalay.

Assam obtained rain chiefly during the same periods as Bengal, *viz.*, from the 1st to the 7th and the 15th to the 21st. The rainfall of the month was practically normal in Cachar and Silchar and was in moderate defect in the Assam valley districts. The following gives data for the three divisions of the province:—

Division.	Number of rainy days.		Rainfall.		
	Mean actual, September 1896.	Variation from normal.	Mean actual, September 1896.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Assam (Surma). .	?	?	17·47	—0·26	— 1
„ (Brahmaputra)	?	?	8·23	—1·61	—16
„ (Hill tracts) .	?	?	19·30	—1·14	— 6

The rainfall of the month was very irregularly distributed in Assam as is shown by the comparative data for the eight districts in the table given below:—

District.	Rainfall.			
	Average actual, September 1896.	Average normal, September.	Variation from normal	Percentage variation.
	Inches.	Inches.	Inches.	
Cachar	17·17	12·41	+ 4·76	+38
Sylhet	13·03	19·93	— 6·90	—35
Goalpara	22·22	12·01	+10·21	+85
Kamrup	6·39	8·30	— 1·91	—23
Darrang	10·31	8·21	+ 2·10	+26
Nowgong	11·38	11·54	— 0·16	—1
Sibsagar	7·69	10·07	— 2·38	—24
Lakhimpur	12·26	14·04	— 1·78	—13

Bengal received moderate rain during the month, the rainfall occurring chiefly in two periods. The first period was from the 1st to the 7th. The rainfall was light to moderate in South and East Bengal and Orissa and moderately heavy in North Bengal. Practically no rain fell during this period in Bihar and Chota Nagpur. The whole province received a general burst of rain from the 14th to the 20th due to the passage of the cyclonic storm of the month across it. The rainfall was very heavy in North Bengal and some parts of Bihar including the Bhagalpore and Monghyr districts on the 17th and 18th. Details have been given in the pressure section and need not be repeated. Practically no rain was received in Bihar or Chota Nagpur during the remainder of the month. Local showers fell in Bengal (more especially the northern districts) from the 20th to the 23rd and again from the 28th to the 30th (chiefly in the southern and eastern districts).

The following table gives a summary of the rainfall data of the month in the nine divisions of the provinces:—

Division.	Number of rainy days.			Rainfall.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Average normal, September.	Variation from normal.
				Inches.	Inches.	Inches.
Eastern Bengal . .	14·1	12·8	+1·3	13·23	10·97	+2·26
Deltaic „ . .	10·7	11·8	—1·1	8·01	8·50	—0·49
Central „ . .	9·0	11·6	—2·6	7·89	9·39	—1·50
North „ . .	12·3	12·5	—0·2	18·52	15·38	+3·14
Bengal Hills . .	15·6	16·9	—1·3	20·15	19·03	+1·12
Orissa	10·1	12·7	—2·6	8·81	10·70	—1·89
Chota Nagpur . .	5·0	11·5	—6·5	4·99	8·42	—3·43
Bihar (South) . .	4·1	9·0	—4·9	5·59	6·99	—1·40
„ (North) . .	5·3	9·4	—4·1	6·25	9·60	—3·35

The rainfall of the month was chiefly received during the storm of the third week of the month and was hence not very favourable, although the divisional mean totals did not differ largely from the normal. The mean rainfall was in slight to moderate excess in the Northern and Eastern divisions of Bengal and in moderate defect in the remaining divisions.

The rainfall of the month was more irregularly distributed than usual. The following gives data for the districts which received less than 50 per cent. of the normal fall :—

District.	Rainfall.			
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Saran	1·35	7·55	—6·20	—82
Champaran	2·56	9·81	—7·25	—74
Lohardaga	3·08	9·37	—6·29	—67
Muzaffarpur	3·15	7·97	—4·82	—60
Shahabad	2·83	6·89	—4·06	—59
Gaya	3·25	6·69	—3·44	—51

The rainfall of the month was hence very scanty in these districts. The percentage deficiency was absolutely greatest in the districts of Saran and Champaran in North Bihar bordering on the North-Western Provinces.

The North-Western Provinces obtained occasional light to moderate showers during the cyclonic disturbance of the month, *i. e.*, from the 14th to the 20th. The falls were very local and very irregularly distributed and the total fall diminished in amount westward. Falls slightly exceeding 2 inches were recorded at four or five stations.

The rainfall of the month was very scanty and in very large and serious defect over the whole area. It was in many cases too light to be of any agricultural value and the rains entirely ceased in the North-Western Provinces as a whole in the last week of August or a month before their proper date.

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.		
	Average actual, September 1896.	Variation from normal.	Average actual, September 1896.	Average normal, September.	Percentage variation from normal.
			Inches.	Inches.	
Oudh, North	0·8	—6·4	0·53	7·22	—93
„ South	0·4	—7·0	0·11	6·52	—98
N.-W.-P. (East)	1·6	—6·5	0·75	6·89	—89
„ (Central)	0·9	—5·6	0·38	5·50	—93
„ (Submontane East.)	2·1	—5·8	1·04	7·91	—87
N.-W.-P. (Submontane West)	1·0	—5·1	0·56	7·11	—92
N.-W.-P. (West)	0·6	—4·2	0·20	4·62	—96
„ (Hills)	1·8	—5·8	0·93	7·78	—88

In the Punjab some local showers were received chiefly in the hill districts, during the third week of the month and in the northern districts on the 25th and 26th. Over by far the greater part of the Province no rain fell at all and hence the monsoon rains in this area terminated at the end of August.

The following comparative statement shows the extent of failure of the rains in this area in September :—

Division.	Rainy days.			Rainfall.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Average normal, September.	Variation from normal.
				Inches.	Inches.	Inches.
Punjab (South-East)	0·7	4·1	—3·4	0·35	4·20	—3·85
„ (South)	1·3	2·9	—1·6	0·49	2·38	—1·89
„ (Central)	1·3	2·5	—1·2	0·54	2·33	—1·79
„ (Submontane)	1·6	3·7	—2·1	0·57	3·76	—3·19
„ (Hill Districts)	3·1	7·4	—4·3	1·52	6·40	—4·88
„ (North)	2·4	2·7	—0·3	1·21	1·94	—0·73
„ (West)	0·6	1·2	—0·6	0·32	1·09	—0·77

Baluchistan was, like the Punjab, practically rainless. Some local showers of no importance fell on the 27th 28th, 29th and 30th.

Rajputana received a few light local showers of little or no importance between the 14th and 17th and the 20th and the 23rd and the rainfall in that area as in the greater part of the Punjab and Sind was practically *nil*. The rainfall of the month was scanty over the whole area

and largely below the normal as is shown by the following comparative statement for the larger states :—

STATE.	RAINFALL.			
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Ulwar	0·38	4·94	−4·56	−92
Bhurtpore	0·46	4·25	−3·79	−89
Dholpur	0·38	?	?	?
Kerowlee	0·12	4·52	−4·40	−97
Tonk	1·72	2·71	−0·99	−37
Deoli	0·99	4·53	−3·54	−78
Kotah	0·38	4·77	−4·39	−90
Ajmere Merwara	0·39	2·88	−2·49	−86
Oodeypore	0·32	5·16	−4·84	−96
Sirohee	1·35	4·23	−2·88	−68

Central India obtained light to moderate showers, very local in their distribution, between the 11th and 20th.

The rainfall of the month was as largely below the normal as in Rajputana. The following gives comparative data for the larger states or divisions :—

DISTRICT.	RAINFALL.			
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Percentage variation.
	Inch.	Inches.	Inches.	
Bundlekhand	0·28	6·39	−6·11	−96
Rewah	0·68	6·43	−5·75	−89
Gwalior	0·43	6·19	−5·76	−93
Bhopal	0·09	8·79	−8·70	−99

The rainfall of the month in the Central Provinces occurred during two periods. Light to moderate showers from the 1st to the 6th gave a very irregularly distributed rainfall. The fall during this period was lightest in the western districts, and was moderate in amount in the eastern districts. The second period of rainfall extended from the 13th to the 23rd. The Eastern and Central districts received moderate and fairly general rain, and the western light, local showers. The rainfall of the month was in large general defect over the whole area, the deficiency being on the whole most marked in the Western districts. It was even more scanty in Berar than in these districts.

The following table gives a summary of the rainfall data of the month ;—

DIVISION.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Average actual, September 1896.	Variation from normal.	Average actual, September. 1896.	Variation from normal.	Percentage variation from normal.
			Inches.	Inches.	
Central Provinces (East)	4·9	−4·6	3·14	7·62	−59
„ (Central)	2·7	−7·1	1·29	7·95	−84
„ (West)	2·0	−7·5	0·61	8·83	−93
Berar	?	?	0·38	6·23	−46

The Bombay Presidency received much less rain than usual in September 1896. The Konkan districts obtained light to moderate showers from the 1st to the 3rd, the 12th to the 16th and again from the 26th to the 30th. The rainfall of the month was in large defect as the whole division obtained an average of only 3·05 inches or 11·92 inches (80 per cent.) below the normal. The rainfall was most largely in defect in the districts of Colaba and Thana for which data are given below :—

DISTRICT.	RAINFALL.			
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Percentage variation.
	Inches.	Inches.	Inches.	
Kolaba	3·06	19·66	−16·60	−84
Thana	2·56	14·64	−12·08	−83

The rainfall of the month was very scanty in the Deccan districts and Khandesh as they had dry weather during the whole month except from the 26th to the 30th, when light to moderate showers were received. Dharwar and Satara had the largest amounts. The rainfall of the month was practically *nil* in Khandesh. The following gives comparative rainfall data for the nine districts in this area :—

DISTRICT.	RAINFALL.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.
	Inches.	Inches.	Inches.
Dharwar	1·71	3·88	−2·17
Bijapur	1·46	5·58	−4·12
Belgaum	0·84	4·52	−3·68
Satara	1·28	4·83	−3·55
Sholapur	0·57	7·86	−7·29
Poona	0·83	7·50	−6·67
Ahmednagar	0·44	6·19	−5·75
Nasik	1·41	8·04	−6·63
Khandesh	0·37	4·49	−4·12

Gujarat, Kathiawar and Cutch obtained occasional showers during the first three weeks of the month when fine dry weather with clear skies set in. The largest amounts were received in the Surat district and the rainfall of the month diminished northwards and was very scanty in Cutch. No rain fell in Sind during the month. The following table gives comparative data of the rainfall of the month in the six divisions of the Presidency :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Average normal, September.	Variation from normal.
				Inches.	Inches.	Inches.
Konkan . . .	6·8	16·7	—9·9	3·05	14·97	—11·92
Bombay Deccan . .	2·3	8·4	—6·1	1·20	5·53	— 4·33
Khandesh . . .	2·0	9·2	—7·2	0·69	7·07	— 6·38
Gujarat . . .	4·4	8·3	—3·9	1·75	8·03	— 6·28
Kathiawar . . .	1·5	4·4	—2·9	0·51	4·70	— 4·19
Sind	0	?	?	0·01	0·49	— 0·48

The northern districts of Madras including Ganjam and the Circars had less rain than usual. They received light to moderate rain from the 1st to the 11th and again from the 20th to the 28th. The rainfall of the month averaged 5·03 inches in these districts or 28 per cent. below the normal of the month.

The Central and South-East Coast divisions and the south division obtained occasional light showers of little importance during the first fortnight of the month and a moderate, general burst of rain from the 23rd to the 30th. The rainfall during this period was abnormal in character as it resembled in its distribution the rainfall which usually accompanies the commencement of the so-called north-east monsoon in October. The following gives average district rainfalls exceeding one inch in this area during this period :—

District.	Date.	Rainfall of 24 hours preceding 8 A.M. of date.
		Inches.
South Arcot	23rd	1·22
Salem	25th	1·07
,, ...	26th	1·14
Anantapur	,,	1·22
Trichinopoly	,,	1·02
Cochin State	,,	1·22
Pudukota State	27th	1·23
Coorg	27th	1·19
,, ...	28th	1·21
Nellore	,,	1·18
Madras	,,	1·70
Nilgiris	,,	1·40
,, ...	29th	1·50
Madras	30th	1·31

The rainfall of the month was in moderate excess over the whole of this area due to the unusual rainfall of the last week of the month.

The Central or Deccan districts shared in the general rain of the last week of the month. The rainfall of the month averaged only 2·38 inches or less than 45 per cent. of the normal fall of the month.

The Malabar Coast districts and Coorg obtained much less rain than usual. A complete break obtained from the 1st to the 10th, and again from the 21st to the 25th Moderate rain was received from the 11th to the 20th and again from the 27th to the 30th. The average daily rainfall in no case exceeded one inch. The mean total rainfall of the month for this division was only 4·47 inches or 44 per cent. of the normal of the month. The following table gives comparative data for the eight divisions of the Presidency :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, September 1896.	Average normal, September.	Variation from normal.	Average actual, September 1896.	Averge normal, September.	Variation from normal.
				Inches.	Inches.	Inches.
Madras (South-Central).	9·5	6·3	+3·2	8·13	4·32	+3·81
Malabar Coast . .	8·4	14·4	—6·0	4·47	10·20	—5·73
Madras, East Coast (North).	8·4	9·2	—0·8	5·03	7·00	—1·97
Madras, East Coast (North). (a)	16·5	12·4	+4·1	7·88	8·63	—0·75
Madras, (Central) .	4·3	7·2	—2·9	2·38	5·36	—2·98
,, East Coast (Central)	8·4	5·5	+2·9	5·88	3·61	+2·27
,, East Coast (South).	7·2	6·4	+0·8	5·77	4·86	+0·91
,, (South) .	5·7	3·8	+1·9	4·35	2·23	+2·12

The distribution of the rainfall of the month is shown more fully by the following comparative data of the 22 Collectorates of the Presidency:—

DISTRICT.	NUMBER OF RAINY DAYS.		RAINFALL.		
	Actual, September 1896.	Normal, September.	Actual, September 1896.	Normal, September.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam	7·2	10·0	4·41	6·84	—2·43
Vizagapatam	11·3	9·9	6·34	7·40	—1·06
Godavari	7·0	8·2	4·03	6·94	—2·91
Kistna	8·2	8·0	5·45	5·79	—0·34
Nellore	8·4	5·5	5·88	3·61	+2·27
Chingleput	7·1	6·4	4·96	4·93	+0·03
Madras	7·0	7·1	5·97	4·75	+1·22
North Arcot	9·2	6·8	7·53	5·45	+2·08
South Arcot	8·3	6·7	7·21	5·23	+1·98
Tanjore	5·3	5·8	3·51	4·27	—0·76
Trichinopoly	7·5	5·9	7·13	4·20	+2·93
Madura	7·3	4·8	5·38	2·92	+2·46
Tinnevelly	3·7	2·4	2·96	1·29	+1·67
Malabar	7·5	13·6	3·50	9·15	—5·65
South Canara	10·0	15·6	6·20	11·72	—5·52
Salem	10·6	7·6	9·97	5·50	+4·47
Coimbatore	7·8	4·8	5·61	2·92	+2·69
Nilgiris	15·0	13·7	10·59	8·51	+2·08
Cuddapah	5·6	6·7	2·93	5·14	—2·21
Anantapur	3·7	7·2	2·52	5·46	—2·94
Bellary	2·6	7·7	1·32	5·13	—3·81
Kurnool	4·8	7·3	2·57	5·77	—3·20

Table

Abstract of Observations taken at 8 A.M. at 208

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.										
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.		...	...	+·004	...	...	...	...	...	...	...	85·7	−0·1	76·2	+0·6	81·0	+0·4	9·5	...	...	...	...	17·1
1	Tenasserim and Bay Islands.	Port Blair	61	29·831	?	29·823	29·900	30th	29·744	13th	·156	81·0	85·6	?	77·4	?	81·5	?	8·2	89·6	30th	73·9	12th	15·7
		Mergui	96	29·841	?	29·870	29·885	28th	29·759	14th	·126	78·7	85·6	?	73·9	?	79·7	?	11·7	91·9	15th	72·1	16th	19·8
		Tavoy	26	29·908	?	29·863	29·982	30th	29·826	12th	·156	77·8	84·8	?	74·1	?	79·5	?	10·7	91·2	29th	70·7	13th	20·5
		Moulmein	94	29·786	+·014	29·829	29·903	30th	29·695	11th	·208	77·9	84·4	−0·1	75·3	+1·2	79·9	+0·6	9·1	90·5	30th	72·8	2 days	17·7
2	Lower Burma	Rangoon	41	29·826	+·006	29·804	29·951	29th	29·697	12th	·254	78·6	85·8	+0·3	75·9	0	80·9	+0·2	9·9	90·2	30th	73·4	28th	16·8
		Bassein	27	29·824	+·001	29·787	29·944	30th	29·684	12th	·260	79·2	85·1	−0·2	75·8	+0·3	80·5	+0·1	9·3	89·7	30th	73·8	16th	15·9
		Diamond Island.	41	29·816	+·008	29·792	29·934	30th	29·670	12th	·264	81·7	85·0	+0·2	78·2	?	81·6	+1·6	6·8	87·6	2 days	74·9	17th	12·7
5	Arakan	Akyab	20	29·791	−·007	29·754	29·963	28th	29·595	13th	·368	80·4	86·2	−0·4	77·7	−0·3	82·0	−0·1	8·5	90·2	13th	74·2	16th	16·0
3	Central Burma	Toungoo	183	29·662	+·003	29·788	29·780	28th	29·518	12th	·262	79·2	88·6	0	77·4	+2·0	83·0	+1·0	11·2	93·7	30th	75·2	2 days	18·5
	II.—Burma Inland.		...	...	?	...	...	...	...	...	...	...	87·4	−0·9	73·6	+1·2	80·5	+0·2	13·7	...	...	...	...	22·4
3	Central Burma	Thayetmyo	134	?29·679	?	?29·755	29·819	30th	29·540	12th	·279	80·8	89·9	+0·2	76·8	+1·1	83·4	+0·7	13·1	94·1	30th	75·1	30th	19·0
4	Upper Burma	Minbu	?	29·646	?	?	29·802	30th	29·485	11th	·317	80·1	92·4	?	77·3	?	84·9	?	15·1	98·1	28th	74·6	28th	23·5
		Yamethin	645	?29·183	?	?29·780	29·341	30th	29·058	12th	·283	79·5	93·0	?	?	?	?	?	?	100·0	28th	?	...	?
		Taunggyi	?				Not recorded.					69·2	76·3	?	63·5	?	69·9	?	12·8	80·1	29th	57·5	30th	22·6
		Mandalay	248	29·561	?	29·758	29·740	28th	29·438	2nd	·302	81·4	93·6	?	78·6	?	86·1	?	15·0	99·0	9th	75·1	2 days	23·9
		Kindat	?	29·424	?	?	29·609	30th	29·294	2nd	·315	78·2	87·3	−1·9	76·0	+1·2	81·7	−0·4	11·3	93·3	11th	72·5	2 days	20·8
		Lashio	?	27·068	?	?	27·256	29th	26·914	4th	·342	72·4	83·7	?	68·4	?	76·1	?	15·3	88·5	21st	63·0	29th	25·5
		Bhamo	?	29·431	?	?	29·589	28th	29·298	2nd	·291	78·5	88·5	?	74·9	?	81·7	?	13·6	93·1	10th	71·8	30th	21·3
	III.—Assam.		...	...	−·020	...	...	...	...	...	...	...	88·3	−0·9	76·3	+0·2	82·3	−0·3	12·0	...	...	...	...	20·8
7	Surma	Silchar	104	29·688	−·006	29·744	29·890	28th	29·503	13th	·387	80·0	90·2	?	76·7	+0·4	83·5	+0·5	13·5	97·6	22nd	72·3	26th	25·3
		Salonah	?	†29·551	?	?	29·753	28th	29·373	8th	·380	80·4†	90·2†	?	75·6†	?	82·9†	?	14·6	93·9	8th	73·1	26th	20·8
9	Brahmaputra	Sibsagar	333	29·444	−·032	29·735	29·646	30th	29·293	1st	·353	78·6	86·9	−1·7	76·2	−0·3	81·6	−1·0	10·7	90·7	6th	73·0	16th	17·7
		Dhubri	115	29·650	−·022	29·720	29·877	30th	29·503	2nd	·374	78·7	85·8	0	76·7‡	+0·7	81·3‡	+0·4	9·1	90·2	3 days	70·8	18th	19·4
	IV.—Bengal and Orissa.		...	...	−·004	...	...	...	...	...	...	...	89·1	+1·1	77·5	+0·2	83·3	+0·7	11·7	...	...	...	...	20·6
6	East Bengal	Chittagong	87	29·699	−·015	29·734	29·896	28th	29·520	13th	·376	80·6	86·8	+0·2	76·6	+0·4	81·7	+0·3	10·2	91·7	11th	75·1	5 days	16·6
		Lungleh	?				Not recorded.					69·5	76·0	?	66·7	?	71·4	?	9·3	80·6	13th	65·0	2nd	15·6
		Noakhali	43	29·727	?	29·717	29·931	28th	29·566	13th	·365	81·7	86·6	?	77·8	?	82·2	?	8·8	92·0	11th	73·8	12th	18·2
		Comilla	36	29·736	?	29·720	29·946	28th	29·573	13th	·373	81·2	89·0	?	76·6	?	82·8	?	12·4	93·8	12th	71·3	15th	22·5
		Sirajganj	49	29·699	?	29·698	29·934	29th	29·555	13th	·379	80·5	87·5	?	77·4	?	82·5	?	10·1	93·8	12th	74·7	14th	19·1
		Narayanganj	26	29·738	−·007	29·712	29·954	28th	29·583	13th	·371	81·9	88·5	0	78·8	+0·1	83·7	+0·1	9·7	94·1	12th	74·2	14th	19·9
		Barisal	13	29·742	−·015	29·700	29·956	30th	29·588	13th	·368	82·6	89·1	+1·6	78·1	+0·4	83·6	+1·0	11·0	94·3	11th	74·4	30th	19·9
		Mymensingh	59	29·704	−·011	29·714	29·923	28th	29·555	13th	·368	80·3	87·3	−0·3	76·9	−0·2	82·1	−0·3	10·4	92·7	12th	73·6	15th	19·1
10	Deltaic Bengal	Faridpur	46	29·722	?	29·716	29·939	28th	29·571	13th	·368	81·7	89·3	?	77·9	?	83·6	?	11·4	94·3	9th	75·4	2nd	18·9
		Jessore	33	29·714	?	29·694	29·939	30th	29·573	17th	·366	82·4	90·4	+1·3	78·1	−0·3	84·3	+0·5	12·3	96·0	9th	75·3	3rd	20·7
		Calcutta	21	29·728	−·003	29·695	29·946	30th	29·555	15th	·391	81·9	88·3	+0·9	77·9	+0·1	83·1	+0·5	10·4	92·9	11th	72·7	30th	20·2
		Saugor Island	25	29·713	−·011	29·682	29·935	29th	29·478	15th	·457	83·1	89·0	+1·2	80·2	+0·8	84·7	+1·1	8·8	91·9	2 days	75·0	27th	16·9
		Krishnagar	47	29·702	?	29·697	29·925	30th	29·550	17th	·375	82·6	91·6	?	77·6	?	84·6	?	14·0	96·2	11th	74·7	30th	21·5
		Midnapore	149	29·601	?	29·697	29·814	30th	29·404	15th	·410	82·3	91·5	?	78·0	?	84·7	?	13·5	96·3	8th	75·1	6th & 18th	21·2

† Mean of 25 days. ‡ Mean of 26 days.

I.

stations in India, Burma, etc., in September, 1896.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.							Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	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 September 1896.	Normal rainfall for period, 1st June to 30th September.	Variation from normal of period, 1st June to 30th September.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21·33	20·02	+0·05	...	...	...	...	I.—Burma Coast and Bay Islands.		
4	...	1	1	2	...	10	11	1	10·8	?	?	89	·944	8·0	18	?	?	15·06	19·56	−4·50	63·78	69·53	− 5·75	3·69	Port Blair .	Tenasserim and Bay Islands.	1
...	5	...	...	...	4	9	5	7	1·5	?	?	91	·895	4·7	26	?	?	28·11	26·24	+1·87	133·39	118·52	+14·87	3·20	Mergui .		
24	...	...	...	...	...	4	1	1	1·0	?	?	93	·879	7·1	26	?	?	30·52	?	?	196·54	?	?	6·95	Tavoy.		
...	3	3	1	5	9	2	3	4	3·2	2·8	+ 14	93	·877	8·9	27	22·36	+4·64	30·06	28·85	+1·21	177·72	149·35	+28·37	3·31	Moulmein.		
...	1	2	1	2	7	10	6	1	2·2	3·8	− 42	93	·908	8·0	23	19·55	+3·45	21·47	16·04	+5·43	86·20	73·42	+12·78	3·58	Rangoon .	Lower Burma.	2
10	...	...	...	5	5	6	2	2	4·2	3·4	+ 24	93	·913	6·9	21	21·27	−0·27	24·24	16·00	+8·24	115·92	86·69	+29·23	3·46	Bassein.		
1	1	2	1	...	1	19	5	...	10·3	6·8	+ 51	85	·905	7·3	15	18·90	−3·90	6·20	19·19	−12·99	97·78	91·36	+ 6·42	1·34	Diamond Island.		
...	1	4	14	3	8	...	...	...	3·1	3·0	+ 3	94	·971	8·4	20	17·73	+2·27	27·46	22·04	+5·42	182·32	158·83	+23·49	4·64	Akyab. .	Arakan.	5
3	1	...	...	15	10	...	...	1	6·8	2·8	+135	90	·882	7·8	20	17·55	+2·45	8·89	12·21	−3·32	55·62	63·23	− 7·61	1·91	Toungoo .	Central Burma.	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8·29	9·48	+5·14	...	...	...	...	II.—Burma Inland.		
...	...	...	...	10	18	...	...	2	4·9	4·7	+ 4	80	·836	8·6	10	13·36	−3·36	8·20	6·23	+1·97	24·09	26·57	− 2·48	5·03	Thayetmyo .	Central Burma.	3
2	...	1	4	14	8	...	...	1	11·3	?	?	82	·843	7·1	11	?	?	4·14	?	?	13·93	?	?	1·63	Minbu .	Upper Burma.	4
3	...	1	...	11	15	...	...	...	6·9	?	?	82	·821	3·0	8	?	?	3·77	?	?	13·71	?	?	1·46	Yamethin.		
7	...	...	...	4	7	7	4	1	?	?	?	86	·609	9·3	18	?	?	8·78	?	?	49·58	?	?	2·14	Taunggyi.		
...	1	...	...	1	17	11	...	...	7·0	?	?	80	·854	7·2	9	?	?	4·52	?	?	21·33	?	?	1·90	Mandalay.		
28	...	1	...	...	1	...	...	...	1·5	?	?	94	·950	5·0	16	?	?	21·03	12·72	+8·31	51·92	51·24	+ 0·68	8·51	Kindat.		
				Not	rec	orded.			?	?	?	92	·735	9·1	13	?	?	6·81	?	?	43·89	?	?	1·44	Lashio.		
24	...	1	...	...	1	3	1	...	0·3	?	?	94	·897	6·4	11	?	?	8·32	?	?	50·59	?	?	2·48	Bhamo.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12·37	13·31	−0·34	...	...	...	...	III.—Assam.		
29	...	...	1	...	...	...	...	...	1·9	2·7	− 30	91	·929	8·9	16	15·85	+0·15	14·62	14·35	+0·27	57·25	73·84	−16·59	2·50	Silchar .	Surma.	7
7	1	10	3	1	...	2	...	1	Not	record	ed.	90†	·932†	7·1†	21	?	?	10·56	?	?	10·56	?	?	1·40	Salonah* .		
4	...	7	3	5	4	4	3	...	3·0	2·5	+ 20	95	·930	8·9	11	14·67	−3·67	4·65	12·22	−7·57	54·08	59·20	−5·12	0·84	Sibsagar .	Brahmaputra.	9
5	4	7	4	...	5	4	1	...	5·1	3·2	+ 59	93	·914	8·4	12	12·13	−0·13	19·64	13·35	+6·29	42·24	67·81	−25·57	7·65	Dhubri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11·12	10·36	+0·16	...	...	...	...	IV.—Bengal and Orissa.		
...	1	8	5	10	5	...	...	1	4·7	4·5	+ 4	89	·927	8·0	13	13·76	−0·76	8·79	·12·91	−4·12	48·91	69·46	−20·55	1·89	Chittagong .	East Bengal.	6
				Not	rec	orded.			?	?	?	95	·684	?	20	?	?	21·09	?	?	85·32	?	?	3·10	Lungleh.		
...	1	3	9	8	3	3	...	3	4·7	?	?	91	·994	4·6	16	15·42	+0·58	15·18	15·77	−0·59	79·23	88·69	− 9·46	3·43	Noakhali.		
4	...	...	11	4	11	...	...	...	4·8	?	?	94	·996	¶7·4	14	13·12	+0·88	16·10	10·51	+5·59	49·02	60·94	−11·92	5·23	Comilla.		
13	1	...	...	6	2	8	...	...	2·4	?	?	92	·959	8·7	12	11·31	+0·69	7·19	9·10	−1·91	33·42	42·65	− 9·23	1·34	Sirajganj.		
...	...	1	3	11	6	5	2	2	5·6	4·6	+ 22	90	·982	8·0	15	11·61	+3·39	10·91	8·51	+2·40	43·75	45·30	− 1·55	1·73	Narayanganj.		
24	...	...	1	2	2	1	...	...	1·0	?	?	89	·996	7·6	18	14·61	+3·39	15·74	10·79	+4·95	52·08	55·21	− 3·13	2·15	Barisal.		
7	...	4	9	8	...	1	...	1	1·9	?	?	92	·949	7·7	19	14·84	+4·16	20·25	12·94	+7·31	57·84	61·14	− 3·30	3·60	Mymensingh.		
18	...	...	...	4	6	1	1	...	2·7	?	?	89	·978	6·4	12	11·76	+0·24	13·65	8·95	+4·70	38·94	45·77	− 6·83	4·78	Faridpur .	Deltaic Bengal.	10
19	...	...	1	3	1	4	2	...	1·9	3·4	− 47	90	·989	6·7	12	11·96	+0·04	8·43	8·09	+0·34	44·23	43·52	+ 0·71	1·62	Jessore.		
7	...	2	2	3	2	6	7	1	2·9	4·5	− 36	88	·952	7·0	10	13·73	−3·73	9·05	9·33	−0·28	48·57	45·48	+ 3·09	1·67	Calcutta.		
1	1	2	2	2	2	7	8	5	9·7	10·1	− 4	86	·981	8·8	9	13·53	−4·53	8·59	11·23	−2·64	51·32	51·63	− 0·31	4·30	Saugor Island.		
...	...	...	4	1	7	4	11	3	4·5	?	?	86	·960	6·1	9	10·34	−1·34	5·98	7·31	−1·33	27·55	37·80	−10·25	2·18	Krishnagar.		
14	3	1	...	...	4	4	1	3	1·1	?	?	85	·933	4·3	9	12·07	−3·07	4·27	7·66	−3·39	41·73	41·04	+ 0·69	1·15	Midnapore.		

* Wind observations of 25 days.

¶ Mean of 29 days.

Table

Abstract of Observations taken at 8 A.M. at 208 stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A. M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·423	?	29·671	29·638	29th	29·260	17th	·378	81·8	91·9	?	77·8	?	84·9	?	14·1	96·6	11th	74·6	18th & 19th	22·0
		Raniganj	334	29·415	?	29·697	29·630	30th	29·235	17th	·395	81·5	92·1	?	77·2	?	84·7	?	14·9	97·2	12th	72·9	19th	24·3
		Burdwan	99	29·648	−·011	29·697	29·865	30th	29·488	17th	·377	82·5	91·1	+1·6	78·8	+0·1	85·0	+0·9	12·3	96·2	12th	74·2	3rd	22·0
		Naya Dumka	489	29·236	?	29·682	29·450	30th	29·056	17th	·394	82·3	90·5	?	76·7	?	83·7	?	13·8	96·5	11th	71·8	19th	24·7
		Berhampore	67	29·676	−·015	29·691	29·905	29th	29·513	17th	·392	81·5	90·1	+1·3	78·3	−0·1	84·2	+0·6	11·8	95·2	11th	74·8	2 days	20·4
		Rampur Boalia.	70	29·670	?	29·689	29·895	30th	29·522	17th	·373	82·6	90·1	?	78·5	?	84·3	?	11·6	95·1	9th & 11th	75·1	3 days	20·0
		Malda	72	29·659	?	29·683	29·883	30th	29·527	2nd	·356	82·7	90·6	?	77·9	?	84·3	?	12·7	96·6	13th	74·0	19th	22·6
		Bogra	61	29·675	?	29·688	29·897	29th	29·550	13th	·347	82·0	89·6	+1·6	77·9	+0·7	83·8	+1·2	11·7	95·2	2 days	74·7	29th	20·5
12	North Bengal	Dinajpur	123	29·618	−·018	29·696	29·852	30th	29·485	1st	·367	80·9	89·7	+1·2	77·1	−0·4	83·4	+0·4	12·6	95·3	12th	70·7	18th	24·6
		Rangpur	123	29·634	?	29·712	29·865	29th	29·491	2nd	·374	80·3	88·7*	?	76·2*	?	82·3†	?	12·5	94·2	3rd	70·7	18th & 19th	23·5
		Jalpaiguri	284	29·447	?	29·689	29·652	30th	29·319	2nd	·333	79·1*	88·2	+0·9	75·5	+0·2	81·9	+0·7	12·7	91·9	2 days	70·1	3 days	21·8
17	North Bihar	Purnea	125	29·612	−·016	29·691	29·854	30th	29·474	2nd	·380	81·8	90·1	+1·2	77·8	+0·5	83·9	+0·9	12·3	94·7	2 days	70·2	18th	24·5
14	Orissa	Balasore	56	29·704	+·020	29·696	29·927	30th	29·477	15th	·450	82·2	90·1	+2·5	77·3	+0·3	84·0	+1·4	12·3	93·4	2 days	74·8	2 days	18·6
		False Point.	21	29·746	+·023	29·709	29·963	30th	29·557	15th	·406	82·0	89·1	+1·3	77·6	−0·4	83·4	+0·5	11·5	94·0	10th	74·1	14th	19·9
		Cuttack	80	29·683	+·023	29·706	29·897	30th	29·514	15th	·383	81·2	91·2	+1·4	78·3	+0·4	84·8	+0·9	12·9	95·2	24th	75·2	14th	20·0
		Shortt's Island.	?	29·741	?	?	29·961	30th	29·568	15th	·393	83·6	89·8	?	80·2	?	85·0	?	9·6	94·2	5th	75·4	17th	18·8
		Puri	20	29·760	?	29·723	29·963	30th	29·606	15th	·357	83·1	89·9	?	79·7	?	84·8	?	10·2	94·2	27th	74·0	14th	20·2
	V.—Gangetic Plain and Chota Nagpur.		...	...	+·011	...	...	...	...	...	...	...	93·6	+3·9	76·8	+0·3	85·2	+2·1	16·8	...	...	...	...	26·4
15	Chota Nagpur	Hazaribagh.	2,007	27·759	+·014	29·712	27·953	30th	27·578	16th	·375	77·3	86·0	+1·6	72·6	+0·5	79·3	+1·1	13·4	89·2	5 days	68·3	18th	20·9
		Ranchi	2,128	27·654	+·033	29·720	27·841	30th	27·470	16th	·371	77·7	86·3	+3·1	72·0	+1·2	79·2	+2·2	14·3	89·7	10th	68·4	25th & 30th.	21·3
		Daltonganj	730?	29·042	?	29·729	29·237	30th	28·903	16th	·334	79·4	92·0	?	75·2	?	83·6	?	16·8	96·3	25th	68·5	29th	27·8
		Chaibassa	760	28·994	?	29·702	29·192	30th	28·808	16th	·384	81·6	91·5	+2·8	76·2	+0·5	83·9	+1·7	15·3	93·9	5th	73·5	30th	20·4
16	South Bihar	Gaya	375	29·373	+·015	29·702	29·573	30th	29·238	16th	·335	82·9	93·0	+2·2	78·0	+0·1	85·5	+1·2	15·0	98·0	26th	72·8	2 days	25·2
		Dehri	351	?	?	?	?	...	?	...	?	83·9	93·2	?	78·6*	?	85·9*	?	14·6	96·3	12th & 26th.	74·0	26th	22·3
		Patna	183	29·558	−·002	29·693	29·767	30th	29·422	2nd	·345	84·5	92·4	+2·2	78·8	−0·3	85·6	+1·0	13·6	96·5	4 days	73·2	19th	23·3
		Arrah	190	29·563	?	29·705	29·778	28th	29·424	2nd	·354	82·9	93·7	?	77·9	?	85·8	?	15·8	97·9	11th	74·0	4 days	23·9
		Buxar	239	29·502	?	29·696	29·692	29th	29·377	2nd	·315	83·3	93·1	?	78·0	?	85·6	?	15·1	96·5	4 days	72·3	19th	24·2
17	North Bihar	Bhagalpur	160	29·567	?	29·680	29·794	30th	29·434	2nd	·360	83·6§	90·9§	?	77·6§	?	84·3§	?	13·3	97·7	13th	71·6	18th	26·1
		Darbhanga	166	29·569	−·016	29·688	29·794	30th	29·410	2nd	·384	82·6	90·8	+2·6	78·6	−0·2	84·7	+1·2	12·2	95·5	13th	74·5	3 days	21·0
		Muzaffarpur	178	29·558	?	29·689	29·780	28th	29·422	2nd	·358	82·0	91·4	?	77·7	?	84·6	?	13·7	95·2	14th	72·2	19th	23·0
		Motihari	224	29·514	?	29·695	29·733	28th	29·352	2nd	·381	82·3	92·5	?	75·7	?	84·1	?	16·8	97·0	14th	67·8	24th	29·2
		Chapra	181	29·561*	?	29·698*	29·770	30th	29·412	2nd	·358	84·2‡	95·1‡	?	78·5‡	?	86·8‡	?	16·6	96·8	8th	74·1	24th & 28th.	22·7
18	N. W. Provinces (East).	Benares	267	29·483	+·025	29·705	29·672	28th	29·359	2nd	·313	82·6	95·7	+4·8	77·1	−0·4	86·4	+2·2	18·6	99·8	22nd	71·3	26th	28·5
		Allahabad	309	29·444	+·024	29·706	29·617	28th	29·323	2nd	·294	84·6	99·1	+8·3	77·9	+1·1	88·5	+4·7	21·2	102·1	25th & 26th.	72·3	25th & 26th.	29·8
22	N.-W. Provinces (East, Sub-montane).	Gorakhpur	256	29·467	−·006	29·680	29·683	28th	29·311	2nd	·372	83·8	94·9	+4·5	77·3	−0·6	86·1	+2·0	17·6	97·8	13th & 14th.	72·2	26th	25·6
19	South Oudh	Lucknow	368	29·367	+·008	29·693	29·551	28th	29·227	2nd	·324	84·3	98·3	+6·6	76·9	+0·6	87·6	+3·6	21·4	102·3	30th	69·3	28th	33·0
20	North Oudh	Bahraich	403	29·318	?	29·680	29·526	28th	29·173	2nd	·353	82·9	95·4	?	76·0	?	85·7	?	19·4	98·4	30th	69·0	24th	29·4
21	N.-W. Provinces (Central).	Cawnpore	416	29·318	?	29·686	29·495	28th	29·189	2nd	·306	84·4	99·9	?	76·8	?	88·4	?	23·1	102·4	14th	60·5	27th	41·9
		Mainpuri	516	29·235	?	29·708	29·407	28th	29·112	2nd	·295	83·2	100·0	?	75·8	?	87·9	?	24·2	102·8	3 days	68·0	26th	34·8

‡ Mean of 18 days. † Mean of 28 days. * Mean of 29 days. § Mean of 26 days.

I—*continued.*

in India, Burma, etc., in September, 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	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 September 1896.	Normal rainfall for period 1st June to 30th September.	Variation from normal of period, 1st June to 30th September.				
22	...	...	1	...	1	1	3	2	1·7	P	P	84	·907	5·3	10	12·69	−2·69	6·14	8·03	−1·89	46·74	43·56	+3·18	1·88	Bankura .	Central Bengal.	11
11	1	1	1	1	1	4	5	5	2·6	P	P	84	·893	4·4	7	11·76	−4·76	5·45	7·33	−1·88	33·88	43·05	−9·17	1·91	Raniganj.		
5	1	...	2	2	2	10	4	4	3·1	3·1	0	82	·911	6·7	8	12·19	−4·19	9 33	8·04	+1·29	43·71	40·04	+3·67	2·54	Bordwan.		
7	1	2	1	2	3	2	6	6	1·5	P	P	79	·867	6·6	7	13·32	−6·32	8·99	9·53	−0·54	48·65	46·09	+2·56	4·20	Naya Dumka.		
2	1	1	3	3	4	13	2	1	3·4	3·7	− 9	90	·967	6·9	12	12·61	−0·61	9·47	10·13	−0·66	35·11	41·99	−6·88	1·93	Berhampore.		
13	...	2	1	1	5	6	2	...	3·6	P	P	97	1·083	4·9	12	12·12	−0·12	7·01	10·38	−3·37	30·74	42·89	−12·15	1·17	Rampore Boalia.		
...	2	1	3	4	4	7	7	2	2·3	P	P	85¶	·950¶	4·0	11	11·35	−0·35	14 94	10·85	+4·09	41·98	43·49	−1·51	4·43	Malda.		
13	...	1	...	8	6	2	..	...	1·7	P	P	90	·974	6·1	12	12·04	−0·04	8·62	10·88	−2·26	36·32	49·90	−13·58	1·60	Bogra.		
...	2	7	4	9	1	6	1	...	5·1	P	P	89	·938	6·9	11	12·31	−1·31	18·35	11·39	+6·96	38·57	53·82	−15·25	8·00	Dinajpur .	North Bengal.	12
7	...	5	2	3	7	5	1	...	2·3	P	P	89	·925	6·8*	15	13 04	+1·96	28·18	13·72	+14·46	53·39	61·05	−7·66	14·84	Rangpur.		
...	5	10	9	5	1	...	...	...	3·9	P	P	91*	·904*	4·3	15	15·04	−0·04	17·93	22·37	−4·44	62·60	103·77	−41·17	6·40	Jalpaiguri.		
3	2	6	5	3	1	...	7	3	4·5	2·0	+125	86	·922	6·4	7	11·16	−4·16	11·48	13·28	−1·80	32·76	53·01	−20·25	4·73	Purnea .	North Bihar.	17
17	2	2	...	...	2	6	...	1	1·6	P	P	89	·978	4·5	11	14·00	−3·00	8·93	12·95	−4·02	60·60	47·05	+13·55	2·76	Balasore .	Orissa.	14
...	1	..	1	1	...	4	14	9	5·8	7·9	−27	87	·955	7·7	10	13 23	−3·23	7·24	11·56	−4·32	58·08	47·90	+10·18	2·44	False Point.		
3	...	2	1	...	...	2	16	6	2·7	2·4	+13	82	·870	6·2	14	13·15	+0·85	8·22	11·07	−2·85	52·36	47·88	+4·48	1·48	Cuttack.		
...	1	...	1	1	1	5	15	6	13·9	P	P	82	·944	7·0	5	P	P	4·05	P	P	44·26	P	P	1·43	Shortt's Island.		
15	5	...	...	...	1	1	4	4	3·5	P	P	83	·915	5·7	7	13·11	−6·11	5·12	10·36	−5·24	42·94	38·60	+4·34	1·74	Puri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	2·69	7·47	−4·79	...	...	...	...	V.—Gangetic Plain and Chota Nagpur.		
1	3	1	2	1	1	2	9	10	3·3	7·0	+19	77	·722	6·6	6	12·35	−6·35	5·27	8·76	−3·49	57·27	43 66	+13·61	3·07	Hazaribagh	Chota Nagpur.	15
3	...	1	...	...	1	1	7	17	6·2	P	P	76	·712	2·9	5	14·50	−9·50	3·95	9·62	−5·67	55·80	46·24	+ 9·56	1·54	Ranchi.		
...	...	1	1	1	3	11	10	3	5·0	P	P	79	·798	2·1	4	10·73	−6·73	4·25	7·79	−3·54	34·98	39·10	− 4·12	2·03	Daltonganj.		
2	1	...	...	...	..	15	12	...	1·6	P	P	80	·866	5·4	8	12·31	−4·31	7·37	8·05	−0·68	61·74	43·10	+18·64	3·20	Chaibassa.		
9	1	1	2	...	...	11	6	...	6·9	2·3	+200	72	·810	3 8	4	9·31	−5·31	2·03	6 89	−4·86	27·57	39·05	−11·48	0·86	Gaya . .	South Bihar.	16
...	1	1	...	1	5	14	6	2	7·2	P	P	71	·820	3·6	3	10·07	−7·07	1·50	6·81	−5·31	26·37	37·07	−10·70	0·72	Dehri.		
...	...	2	5	4	2	...	17	...	3·7	2·9	+28	75	·882	4·0	3	9 65	−6·65	3·42	7·40	−3·98	31·96	37·79	− 5·83	2·60	Patna.		
4	...	2	2	2	3	5	12	...	1·7	P	P	80	·903	1·9	3	9·81	−6·81	3·44	7·19	−3·75	26·16	36·95	−10·79	2·25	Arrah.		
...	...	1	6	2	2	1	15	3	3·3	P	P	73	·827	3·1	5	9·19	−4·19	2·66	7·17	−4·51	27·37	35·38	− 8·01	1·63	Buxar.		
3	...	4	2	3	1	5	9	3	4·5	P	P	79s	·899	4·9	6	9·42	−3·42	9·01	7·37	+1·64	27·28	38·44	−11·16	4·88	Bhagalpur.	North Bihar.	17
5	1	4	5	2	...	2	8	3	3·0	3·6	− 17	83	·912	3·5	6	9·16	−3·16	5 90	8·94	−3·04	31·18	41·36	−10·18	1·67	Darbhanga.		
7	...	2	3	1	...	2	8	7	3·0	P	P	82	·903	2·4	3	8·96	−5·96	2·26	8·92	−6·66	43·18	39·31	+ 3·87	1·52	Muzaffarpur.		
...	...	4	6	3	...	6	8	3	5·4	P	P	81	·895	3·3	3	9·04	−6·04	1·74	9·45	−7·71	28·84	44·21	−15·37	0·84	Motihari.		
5	...	1	4	4	2	4	7	3	2·4	P	P	74½	·874½	3·1	5	8·38	−3·38	2·27	6·94	−4·67	21·72	35·65	−13·93	0·90	Chapra.		
3	1	2	2	...	2	2	16	2	4·8	3·9	+23	71	·801	3·0	1	8·91	−7·91	0·19	6·59	−6·40	26·88	34·29	− 7·41	0·10	Benares .	N.-W. Provinces (East).	18
5	1	...	1	...	...	2	13	8	7·0	2·9	+141	63	·738	2·6	0	7·73	−7·73	0·06	6·05	−5·99	19·93	35·17	−15·24	0·06	Allahabad.		
1	7	3	...	2	3	1	9	4	2·2	2·1	+ 5	74	·850	2·5	0	8·55	−8·55	0·13	8·56	−8·43	31·46	43·84	−12·38	0·09	Gorakhpur .	N.-W. Provinces (East, Submontane).	23
...	2	2	2	2	1	4	10	7	2·7	2·8	− 4	66	·774	3·3	0	7·55	−7·55	0·01	6·27	−6·26	24·95	34·73	− 9·78	0·01	Lucknow .	South Oudh.	19
5	1	...	4	4	1	5	5	2	1·6	P	P	73	·830	0·3	1	P	P	0·11	7·45	−7·34	35·96	35·08	+ 0·88	0·11	Bahraich .	North Oudh.	20
1	...	1	2	2	...	1	12	11	6·1	P	P	64	·750	0·6	1	6·80	−5·80	0·67	4·57	−3·90	12·90	27·86	−14·96	0·63	Cawnpore .	N.-W. Provinces (Central) .	21
13	...	...	...	...	...	3	13	1	1·2	P	P	58	·664	2·9	1	P	P	0·15	6·09	−5·94	12·68	30·00	−17·32	0·10	Mainpuri.		

¶ Mean of 24 days.

Table

Abstract of Observations taken at 8 A.M. at 208 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure during month.	Date.	Lowest pressure during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas		...	...	+·006	...	...	...	...	...	...	...	96·8	+4·0	74·6	+1·0	85·7	+2·6	22·2	...	...	...	...	33·8
24	N.-W. Provinces West (Submontane).	Bareilly	568	29·161	+·014	29·694	29·353	28th	29·020	2nd	·333	81·0	95·3†	+5·0	74·8	−1·1	85·0	+2·0	20·5	97·5	3 days	68·7	25th,	28·8
		Dehra Dun	2,233	27·525	−·008	29·705	27·729	30th	27·384	2nd	·345	74·7	87·0	+2·7	69·2	−1·1	78·2	+0·8	17·8	89·0	4 days	62·5	26th	26·5
		Roorkee	887	28·832	−·007	29·689	29·038	30th	28·688	12th	·350	78·6	94·2	+3·0	71·8	−1·8	83·0	+0·6	22·4	96·2	15th	61·8	3 days	31·4
22	N.-W. P. West	Meerut	738	28·993	+·014	29·698	29·181	30th	28·867	2nd	·314	80·7	97·1	+5·5	75·1	+0·4	86·1	+3·0	22·0	99·5	15th	69·0	23rd	30·5
26	South-East Punjab.	Delhi	718	29·015	+·010	29·695	29·187	30th	28·877	12th	·310	83·3	98·5	+5·9	77·4	+0·7	87·9	+3·3	21·1	100·2	15th	68·4	26th	31·8
28	Central Punjab.	Lahore	702	29·012	+·007	29·683	29·222	28th	28·864	12th	·358	82·7	99·8	+3·1	77·6	+4·7	88·8	+3·9	22·2	103·6	12th	66·6	21st	37·0
27	South Punjab	Sirsa	662	29·061	+·010	29·687	29·249	29th	28·914	12th	·335	83·5	101·5	+3·3	77·7	+2·8	89·6	+3·1	23·8	104·3	3 days	69 4	22nd	34·9
		Patiala	?	28·910	?	?	29·109	30th	28·762	12th	·347	81·9	96·7	?	75·4	?	86·0	?	21·3	100·0	13th	68·9	4 days	31·1
29	Punjab Submontane.	Ludhiana	812	28·909	−·002	29·692	29·116	28th	28·762	12th	·354	81·6	98·2	+3·4	76·2	+1·3	87·2	+2·4	22·0	101·5	4th & 5th	68·0	22nd	33·5
		Sialkot	830	28·885	+·010	29·685	29·097	28th	28·730	12th	·367	82·2	99·5	+4·2	75·5	+2·2	87·5	+3·2	24·0	104·2	4th & 13th	66·2	22nd	38·0
		Umballa	892	28·830	?	29·687	29·038	28th	28·684	12th	·354	79·2	96·3	?	74·0	?	85·1	?	22·3	105·5	5th	65·0	24th	40·5
31	North Punjab	Rawalpindi	1,643	28·075	+·016	29·689	28·313	28th	27·917	12th	·396	79·1	97·8	+4·3	70·7	+2·0	84·3	+3·2	27·1	103·1	10th	62·1	24th	41·0
	VII.—Indus Valley and North-West Rajputana.		...	...	+·021	...	...	...	...	...	...	...	99·0	+1·2	75·4	+0·4	87·2	+0·8	23·6	...	...	...	...	37·3
31	North Punjab	Peshawar	1,110	28·639	+·008	29·681	28·909	28th	28·475	12th	·434	80·4	97·4	+1·7	70·8	+0·9	84·2	+1·3	26·6	104·0	13th	61·5	28th	42·5
		Mardan	?	28·701	?	?	28·992	28th	28·533	12th	·459	85·0	97·5	?	69·9	?	83·7	?	27·6	105·2	7th	55·0	28th	50·2
32	West Punjab	Khushab	612	29·089	?	29·670	29·331	28th	28·929	12th	·402	83·2	100·9	?	77·7	?	89·3	?	23·2	105·3	10th	65·5	21st	39·8
		Montgomery	558	29·152	?	29·673	29·375	28th	28·996	12th	·379	85·5	102·4	?	77·0	?	89·7	?	25·4	105·9	16th	67·0	22nd	38·9
		D. I. Khan (Tel. Office).	594	29·130	?	29·670	29·401	28th	28·960	12th	·441	82·2	99·5	?	74·8	?	87·2	?	24·7	104·2	4th & 13th	67·5	21st	36·7
		Ditto Jail	?				Not recorded.					82·5	100·4	?	74·5	?	87·5	?	25·9	105·5	4th	64·8	21st	40·7
		Mooltan	420	29·282	+·003	29·670	29·516	29th	29·121	12th	·395	82·7	101·3	+1·6	78·5	+1·1	89·9	+1·4	22·8	103·4	6th & 16th	73·0	21st	30·4
47	Sind	Jacobabad	186	29·522	+·015	29·669	29·754	29th	29·382	12th	·372	82·4	103·1	+0·1	77·2	+1·3	90·2	+0·7	25·9	106·4	30th	72·1	24th	34·3
		Hyderabad	96	29·663	+·048	29·712	29·878	29th	29·534	12th	·344	82·4	97·8	+0·6	75·9	−0·3	86·9	+0·2	21·9	106·7	30th	71·5	23rd & 24th.	35·2
		Kurrachee	12	29·792	+·029	29·754	29·981	29th	29·668	2nd	·313	81·2	89·1	?	76·6	?	82·9	?	12·5	97·3	30th	70·5	29th	26·8
51	West Rajputana	Bickaneer	771	28·998†	?	29·736†	29·168	29th	28·863	12th	·305	83·8	100·0	+2·1	78·1	−1·0	89·1	+0·6	21·9	104·1	28th	74·0	3rd	30·1
		Pachpadra	380	?	?	?	?	...	?	...	?	75·6	98·4	?	73·4	?	85·9	?	25·0	109·0	30th	67·0	25th	42·0
	VIII.—East Rajputana, Central India, and Gujarat.		...	...	+·051	...	...	...	...	...	...	...	92·6	+2·8	73·6	−0·4	83·1	+1·2	19·1	...	...	...	...	31·7
50	Rajputana East	Jeypore	1,431	28·383	+·043	29·775	28·534	29th	28·265	12th	·269	80·4	97·1	+4·3	71·8	−0·7	84·5	+1·8	25·3	103·5	30th	68·5	26th	35·0
		Sambhar	1,254	28·539	+·044	29·756	28·690	28th	28·416	12th	·274	80·4	95·2	+3·6	74·3	+0·4	84·8	+2·0	20·9	101·0	30th.	69·5	22nd & 23rd.	31·5
		Ajmere	1,611	28·214	+·054	29·795	28·368	28th	28·104	12th	·264	78·0	91·9	+1·5	73·2	+0·3	82·6	+0·9	18·7	100·4	30th	68·1	25th	32·3
		Deesa	466	29·385	+·061	29·811	29·498	28th	29·280	2nd	·218	79·5	93·6	+1·3	72·1	−1·6	82·8	−0·2	21·5	104·9	30th	67·0	3 days	37·9
		Bhuj	395	29·428	+·036	29·779	29·558	28th	29·327	2nd	·231	79·7	91·3	−0·4	72·9	−1·8	82·1	−1·1	18·4	102·6	30th	67·9	25th	34·7
46	Kathiawar and Cutch.	Rajkot	429	29·436	+·057	29·821	29·532	28th	29·338	2nd	·194	79·2	92·9	+2·0	70·3	−2·3	81·6	−0·2	22·6	102·4	30th	67·8	3 days	34·6
		Veraval	?	29·861	?	29·821	29·916	23rd	29·779	2nd	·137	80·8	85·1	?	77·5	?	81·3	?	7·6	98·1	30th	72·3	25th	25·8
49	Central India	Nowgong	757	29·026	+·041	29·743	29·163	30th	28·926	2nd	·237	79·5	93·7	+3·2	74·4	−0·4	84·1	+1·1	19·3	98·0	30th	68·0	26th & 27th	30·0
		Indore	1,823	28·053	+·086	29·840	28·149	29th & 30th	27·968	2nd	·181	74·4	87·5	+2·7	68·0	−2·1	77·8	+0·3	19·5	96·2	30th	63·6	27th	32·6
		Neemuch	1,630	28·227	+·082	29·822	28·346	30th	28·126	2nd & 12th.	·220	77·2	89·4	+2·0	69·2	−1·4	79·3	+0·3	20·2	98·8	30th	66·2	27th	32·6
45	Gujarat	Surat	39	29·846	+·047	29·827	29·910	22nd	29·746	2nd	·164	80·1	87·6	−0·7	76·7	+1·3	82·2	+0·3	10·9	99·2	29th	74·0	2nd	25·2
		Ahmedabad	164	29·703‡	?	29·815§	29·771	28th & 29th	29·601	2nd	·170	81·1¶	94·2¶	?	75·3¶	?	84·8¶	?	18·9	105·3	30th	74·1	3 days	31·2
22	N.-W. P. (West)	Agra	555	29·197	+·021	29·709	29·365	30th	29·077	12th	·288	85·3	100·4	+8·1	77·7	+1·4	89·1	+4·8	22·7	103·0	5th & 29th,	71·8	25th	31·2
21	N.-W.P., Central	Jhansi	858	28·930	+·041	29·742	29·086	28th	28·826	12th	·260	83·1	97·1	+6·2	76·8	+1·6	87·0	+3·9	20·3	102·1	30th	72·4	26th	29·7

† Mean of 29 days.
‡ ,, 28 ,,

¶ Mean of 21 days.
§ ,, 25 ,,

I—*continued.*

in India, Burma, etc., in September, 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	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 September 1896.	Normal rainfall for period, 1st June to 30th September	Variation from normal of period, 1st June to 30th September.				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·66	5·07	−4·40	...	...	...	...	VI.—Upper Sub-Himalayas.		
9	...	3	1	...	...	4	2	11	2·7	3·0	− 10	70	·733	1·1	1	6·73	− 5·73	0·96	8·00	−7·04	24·50	44·36	−19·86	0·89	Bareilly .	N.-W. Provinces West Sub-montane.	24
25	1	...	...	1	2	1	...	...	1·1	1·1	0	76	·655	2·1	2	10·30	− 8·30	1·73	10·38	−8·65	71·87	78·88	−7·01	1·49	Dehra Dun.		
11	1	...	2	5	1	...	1	9	2·7	2·0	+ 35	72	·702	0·7	0	5·55	− 5·55	0·05	7·17	−7·12	33·20	37·92	−4·72	0·05	Roorkee.		
9	...	...	...	...	...	3	18	...	3·1	2·1	+ 48	61	·632	0·8	0	4·55	− 4·55	0·06	5·74	−5·68	20·25	28 31	−8·06	0·06	Meerut. .	N.-W. P. West.	22
4	...	...	1	...	...	3	19	3	5·0	3·8	+ 32	53	·606	2·1	0	4·09	− 4·09	0	4·23	−4·23	20·76	26·15	−5·39	0	Delhi . .	South-East Punjab.	26
3	1	3	3	3	1	2	12	2	2·7	2·0	+ 35	58	·645	0·6	1	2·55	− 1·55	0·14	2·49	−2·35	7·44	16·83	−9·39	0·14	Lahore.	Central Punjab.	28
3	...	...	...	1	2	6	15	3	9·0	3·6	+150	54	·632	0·9	2	2·73	− 0·73	0·43	1·79	−1·36	8·92	12·39	−3·47	0·25	Sirsa.	South Punjab.	27
8	3	4	...	...	10	2	1	2	2·7	?	?	68‡	·751‡	1·2	2	?	?	0·60	?	?	17·13	?	?	0·34	Patiala .		
14	...	2	...	4	...	1	5	4	1·4	1·1	+ 27	63	·683	2·7	1	3·36	− 2·36	1·14	4·38	−3·24	13·49	24·06	−10·57	1·05	Ludhiana .	Punjab, Submontane.	29
8	6	5	7	1	...	1	...	2	2·5	1·6	+ 56	60	·666	1·8	4	2·82	+ 1·18	0·61	3·11	−2·50	12·31	25·58	−13·27	0·17	Sialkot.		
17	...	...	...	1	...	...	7	5	1·7	?	?	71	·705	0·7	2	?	?	0·55	5·31	−4·76	23·22	27·75	−4·53	0·31	Umballa.		
19	3	1	4	1	2	...	...	...	2·6	1·3	+100	62	·631	1·7	3	4·27	− 1·27	1·64	3·13	−1·49	19·57	22·75	−3·18	0·55	Rawalpindi.	North Punjab.	31
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·10	0·78	−0·67	...	...	...	...	VII.—Indus Valley and North-West Rajputana.		
13	6	1	1	2	...	...	2	5	3·1	3·1	0	54	·563	1·2	0	1·82	− 1·82	0	0·64	−0·64	0·45	5·48	−5·03	0	Peshawar .	North Punjab.	
				Not	rec	orded.			?	?	?	57	·685	1·2	1	?	?	0·20	?	?	3·31	?	?	0·20	Mardan.		
4	1	5	8	1	3	2	6	...	3·5	?	?	53	·600	0·6	1	1·60	− 0·60	0·21	1·41	−1·20	8·46	6·98	+1·48	0·21	Khushab .	West Punjab.	32
1	...	2	2	3	4	15	3	...	8·0	?	?	54	·660	0	0	1·40	− 1·40	0·09	1·03	−0·94	7·75	7·72	+0·03	0·09	Montgomery.		
29	...	1	...	...	...	...	...	...	0·2	1·7	− 88	70	·776	0·1	1	0·73	+ 0·27	0·65	0·23	+0·42	1·46	5·07	−3·61	0·63	D. I. Khan (Tel. Office).		
				Not	rec	orded.			?	?	?	64	·714	0	0	?	?	0	?	?	0	?	?	0	Ditto Jail		
7	...	1	...	6	6	10	...	...	3·5	2·8	− 25	67	·746	0	1?	0·55	+ 0·45?	0·10?	0·42	−0·32	1·16	5·53	−4·37	0·10?	Mooltan.		
6	1	...	6	11	6	...	...	...	4·9	3·1	+ 58	67	·739	0·2	0	0·18	− 0·18	0	0·06	−0·06	1·85	2·73	−0·88	0	Jacobabad .	Sind . . .	47
2	...	...	...	...	2	26	...	...	20·8	12·5	+ 66	63	·667	0·6	0	0·80	− 0·80	0	0·52	−0·52	3·08	6·03	−2·95	0	Hyderabad.		
...	1	...	...	...	...	13	15	1	13·0	14·9	− 13	86	·916	5·6	0	0·82	− 0·82	0	0·54	−0·54	11·87	6·08	+5·79	0	Kurrachee		
...	...	...	...	...	8	19	1	2	8·1	5·6	+ 44	61†	·696†	0·5	0	?	?	0	1·19	−1·19	6·94	9·64	−2·70	0	Bickaneer .	West Rajputana.	51
4	...	1	...	5	8	11	...	1	14·4	6·1	+136	73	·718	2·4	0	?	?	0	1·72	−1·72	12·71	8·83	+3·88	0	Pachpadra.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·65	5·10	−4·45	...	...	...	...	VIII.—East Rajputana, Central India, and Gujarat.		
2	1	...	...	...	...	4	17	6	4·6	5·2	− 12	59	·614	1·5	1	5·00	− 4·00	0·15	4·40	−4·25	11·45	26·33	−14·88	0·14	Jeypore .	East Rajputana.	50
2	...	1	...	...	1	1	23	2	7·3	7·2	+ 1	63	·638	1·1	3	3·50	− 0·50	2·95	3·33	−0·38	12·69	20·44	−7·75	1·16	Sambhar.		
2	...	1	...	...	...	2	24	1	7·5‡	5·0	+ 50	72	·692	1·6	1	3·18	− 2·18	0·41	2·53	−2·12	24·36	19·73	+4·63	0·39	Ajmere.		
...	1	...	4	...	...	15	9	1	8·6†	8·5	+ 1	75	·758	3·9	0	3·73	− 3·73	0·10	4·83	−4·73	25·14	25·58	−0·44	0·04	Deesa.		
...	3	...	...	...	2	8	15	2	13·2	11·3	+ 17	72	·740	4·0	1	?	?	0·31	1·96	−1·65	19·38	13·54	+5·84	0·30	Bhuj . .	Kathiawar and Cutch.	46
...	2	2	...	...	1	12	10	3	8·5	8·5	0	75	·742	3·6	0	5·73	− 5·73	0·10	4·25	−4·15	38·38	27·42	+10·94	0·05	Rajkot.		
1	3	1	...	...	...	5	18	2	9·2	?	?	79	·824	5·7	2	?	?	0·34	?	?	16·97	?	?	0·21	Veraval.		
7	...	...	...	...	...	3	20	...	1·7	2·4	− 29	71	·729	2·9	3	6·91	− 3·91	0·71	6·32	−5·61	31·21	40·79	−9·58	0·32	Nowgong .	Central India.	49
1	1	3	2	...	...	...	13	10	3·4	4·8	− 29	78	·667	5·3	1	8·91	− 7·91	0 32	8·48	−8·16	26·98	31·61	−4·63	0·21	Indore.		
...	3	1	...	...	1	9	14	2	10·8	10·2	+ 6	73	·685	2·6	1	6·91	− 5·91	1·28	5·35	−4·07	28·96	30·06	−1·10	1·25	Neemuch.		
13	...	...	...	...	2	11	4	...	?	9·2	?	81	·839	6·0	3	7·55	− 4·55	1·22	8·07	−6·85	42·04	44·36	−2·32	0·55	Surat . .	Gujarat.	45
...	1	3	...	...	...	7	7	7	4·4¶	?	?	74§	·775§	4·8§	2	?	?	0·97	?	?	32·04	?	?	0·57	Ahmedabad.		
1	...	2	...	...	...	18	...	9	7·0	4·1	+ 71	51	·617	1·1	1	5·45	− 4·45	0·20	4·91	−4·71	10·89	26·62	−15·73	0·18	Agra . .	N.-W. P. (West).	22
3	...	...	...	...	...	8	11	8	2·9	3·2	− 9	58	·661	0·9	0	7·00	− 7·00	0·06	6·80	−6·74	30·60	36·79	−6·19	0·06	Jhansi . .	N.-W.P., Central.	21

Table

Abstract of Observations taken at 8 A.M. at 208 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	IX.—Deccan .	...	...	...	+·060	...	...	...	...	...	...	...	90·7	+4·0	71·4	—0·4	81·1	+1·8	19·3	...	...	...	...	29·1
38	Bombay, Deccan .	Belgaum .	2,524	27·387	+·040	29·858	27·435	30th	27·338	2nd	·097	70·8	83·6	+5·1	63·9	−1·3	73·8	+1·9	19·7	88·2	3 days	60·4	19th	27·8
		Sholapur .	1,590	28·305	+·051	29·847	28·374	30th	28·248	2nd	·126	78·1	94·7	+6·7	71·7	+1·5	83·2	+4·1	23·0	97·2	4 days	68·0	12th & 27th.	29·2
		Poona .	1,840	28·063	+·048	29·859	28·130	30th	27·986	2nd	·144	75·1	88·3	+4·5	66·9	−1·3	77·6	+1·4	21·4	96·0	29th & 30th.	62·9	17th	33·1
		Bijapur .	1,946	27·952	?	29·845	28·021	30th	27·905	2nd	·116	76·0	92·8	?	69·6	?	81·2	?	23·2	97·7	22nd	66·0	17th	31·7
40	Khandesh . .	Malegaon .	1,480	28·456	+·068	29·845	28·545	30th	28·370	2nd	·175	78·1	91·4	+4·3	67·9	−2·0	79·7	+1·2	23·5	99·4	30th	65·8	3 days	33·6
		Ahmednagar	2,152	27·752	?	29·851	27·840	30th	27·680	2nd	·160	75·3	85·8*	?	64·3*	?	75·0*	?	21·5	94·9	27th & 28th.	58·0	18th	36·9
41	Berar . .	Akola .	930	28·330	+·072	29·813	29·031	30th	28·850	2nd	·181	79·6	93·6	+5·5	72·0	−0·4	82·9	+2·6	21·8	100·8	28th & 29th.	64·8	27th	36·0
		Amraoti .	1,215	28·036	+·077	29·811	28·761	30th	28·563	2nd	·198	78·8	93·1	+5·4	71·9	+0·2	82·5	+2·8	21·2	98·2	3 days	66·8	14th	31·4
42	Central Provinces, (West).	Khandwa .	1,044	28·818	+·062	29·828	28·909	30th	28·740	2nd	·169	77·3	90·8	+3·4	71·4	−1·5	81·1	+1·0	19·4	99·2	29th & 30th.	65·6	27th	33·6
		Hoshangabad	1,006	28·839	+·086	29·814	28·956	30th	28·761	12th	·195	77·0	90·3	+2·3	71·8	−1·4	81·1	+0·5	18·5	96·4	29th & 30th.	66·8	26th & 27th.	29·6
		Nagpur .	1,025	28·800	+·065	29·782	28·940	30th	28·709	16th	·231	80·2	93·0	+4·2	73·5	−0·1	83·3	+2·1	19·5	96·3	28th	69·1	14th	27·2
43	Central Provinces, (Central).	Chanda .	634	29·173?	?	29·754?	29·340	30th	29·087	13th	·253	80·0	92·4	+3·6	73·7	−0·5	83·1	?	18·7	95·4	27th & 28th.	65·1	27th	30·3
		Seoni .	2,033	27·809	+·074	29·783	27·945	30th	27·718	16th	·227	77·3	88·0	+2·7	68·8	−1·8	78·4	+0·5	19·2	98·2	28th	62·9	26th	35·3
		Jubbulpur .	1,327	28·491	+·067	29·780	28·624	30th	28·397	16th	·227	77·9	90·5	+3·5	71·3	−1·5	80·9	+1·0	19·2	94·5	28th	63·7	26th	30·8
		Saugor .	1,807	28·011	+·057	29·774	28·134	30th	27·909	2nd	·225	76·9	89·3	+3·3	71·0	0	80·1	+1·7	18·3	96·3	30th	67·1	26th	29·2
49	Central India .	Sutna .	1,040	28·726	+·034	29·727	28·878	30th	28·626	12th	·252	81·2	92·9	+5·7	74·7	+0·4	83·8	+3·1	18·2	97·5	27th & 28th.	67·6	26th & 27th.	29·9
44	Central Provinces, (East.)	Raipur .	970	28·827	+·055	29·749	28·982	30th	28·708	15th	·274	80·1	91·2	+3·7	75·4	+0·9	83·3	+2·3	15·8	93·4	26th & 30th.	72·1	27th	21·3
		Sambalpur .	486	29·297	+·020	29·733	29·473	30th	29·144	15th	·329	81·1	89·9	+0·9	76·7	−0·5	83·3	+0·2	13·2	92·0	4 days	72·2	5th	19·8
39	Hyderabad, (North).	Aurangabad.	?	28·043	?	?	28·124	30th	27·997	2nd & 13th.	·127	77·4	91·3	?	68·3	?	79·8	?	23·0	98·0	29th	65·0	18th	33·0
		Indur . .	?				Not recorded.					79·2	90·3	?	73·6	?	81·9	?	16·7	92·9	27th & 28th.	67·1	27th	25·8
		Bidar . .	?	27·718	?	?	27·808	30th	27·652	2nd	·156	75·3	87·6	?	70·4	?	79·0	?	17·2	90·5	22nd & 23rd.	65·7	8th	24·8
53	Hyderabad (South).	Gulbarga .	1,502	28·373	?	29·827	28·474	30th	28·321	2nd	·153	78·3	92·9	?	72·9	?	82·9	?	20·0	96·0	4th	69·9	27th	26·1
		Raichur .	1,309	28·567	?	29·826	28·641	30th	28·531	2nd	·110	78·9	92·6	?	74·4	?	83·6	?	18·2	97·1	5th	71·6	21st	25·5
		Hyderabad (Deccan), Secunderabad	1,690	28·177	+·061	29·815	28·279	30th	28·118	2nd	·161	78·2	89·1	+2·8	73·6	+3·2	81·4	+3·0	15·5	92·9	28th	69·7	8th	22·2
			1,787	28·087	?	29·821	28·191	30th	28·025	2nd	·166	81·2	90·1	?	72·2	?	81·2	?	17·9	94·6	22nd	67·9	8th	26·7
		Khamamet .	373	29·473	?	29·791	29·601	30th	29·400	16th	·201	81·2	92·7	?	75·5	?	84·1	?	17·2	96·9	19th	72·3	5th & 8th.	24·6
	X.—West Coast . .		...	...	+·014	...	...	...	...	...	...	...	85·5	+2·3	75·7	+1·0	80·6	+1·7	9·9	...	...	...	...	15·4
37	Konkan . .	Bombay .	37	29·878	+·048	29·855	29·920	30th	29·794	2nd	·126	80·2	86·5	+2·2	77·6	+1·3	82·1	+1·8	8·9	91·0	30th	75·0	14th & 18th.	16·0
		Ratnagiri .	110	29·797	+·041	29·846	29·831	22nd	29·746	2nd	·085	80·0	86·7	+2·8	75·0	+0·8	80·9	+1·8	11·7	94·4	30th	72·9	3 days	21·5
		Mormugao .	60	29·870	?	29·865	29·906	22nd	29·825	2nd	·081	79·7	85·0	?	75·4	?	80·2	?	9·6	88·0	30th	72·4	15th & 16th.	15·6
		Goa . .	199	29·714	+·024	29·850	29·746	20th	29·671	29th	·075	79·3	83·0	?	77·2	?	80·1	?	5·8	85·0	12th & 30th.	75·0	3rd	10·0
		Karwar .	44	29·879	+·021	29·855	29·913	10th	29·829	2nd	·084	76·8	84·7	+2·1	74·3	+0·8	79·5	+1·5	10·4	90·2	30th	71·5	17th & 28th.	18·7
33	Malabar . .	Cochin .	11	29·919	−·017	29·857	29·957	10th	29·862	28th	·095	79·8	86·8	+2·5	75·6	+1·4	81·2	+2·0	11·2	88·2	4 days	74·2	5 days	14·0
		Calicut .	27	29·894	−·018	29·851	29·935	10th	29·838	28th	·097	79·0	86·1	+1·9	75·0	+1·1	80·6	+1·5	11·1	88·3	13th	73·5	17th & 24th.	14·8
		Mangalore .	65	29·866	−·002	29·864	29·899	10th	29·822	28th	·077	78·6	85·3	+2·1	74·6	+0·8	80·0	+1·5	10·7	87·3	22nd	72·4	14th & 17th.	14·9
		Trivandrum .	198	29·727	?	29·857	29·777	10th	29·663	3rd	·114	79·7	85·7	?	76·2	?	81·0	?	9·5	87·0	5th & 24th.	74·0	13th	13·0
	XI.—South India . .		...	...	+·019	...	...	...	...	...	...	...	91·2	+2·1	74·4	+1·1	82·8	+1·7	16·7	...	...	...	...	25·6
57	Madras, (South).	Pamban .	37	29·855	?	29·819	29·897	10th	29·815	2nd	·082	83·0	89·2	?	79·5	?	84·4	?	9·7	91·3	25th	75·7	30th	15·6
		Tinnevelly .	168	29·727	?	29·824	29·805	30th	29·682	2nd	·123	84·3	98·6	?	79·2	?	89·0	?	19·4	102·4	21st	75·4	30th	27·0
		Madura .	447	29·438	+·009	29·821	29·506	30th	29·402	26th & 27th	·104	81·8	95·2	−0·6	75·7	+0·6	85·5	0	19·5	101·0	1st	70·0	20th	31·0

* Mean of 28 days.

I—*continued.*

in India, Burma, etc., in September, 1896—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.	Normal rainfall for period, 1st June to 30th September.	Variation from normal of period 1st June to 30th September.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·64	7·99	—6·59	...	...	...	...	**IX.—Deccan.**		
8	2	...	1	1	...	2	11	5	13·4	16·7	−20	84	·633	4·8	3	10·18	−7·18	1·12	4·64	−3·52	57·25	35·34	+21·91	0·60	Belgaum .	Bombay, Deccan.	38
1	4	1	2	2	...	...	3	17	11·0	9·9	+11	63	·603	4·7	0	9·73	−9·73	0·09	8·16	−8·07	9·99	24·85	−14·86	0·09	Sholapore.		
2	...	1	1	2	...	2	14	8	11·7	11·4	+ 3	73	·632	5·1	2	8·18	−6·18	1·01	5·21	−4·20	26·85	20·03	+6·82	0·84	Poona.		
...	...	...	2	2	...	1	14	11	7·8	?	?	72	·653	5·1	2	8·60	−6·60	1·07	?	?	6·78	?	?	0·65	Bijapur.		
3	2	1	...	...	...	3	11	10	11·4	7·6	+50	71	·678	4·0	1	8·64	−7·64	0·32	6·92	−6·60	22·74	20·46	+2·28	0·22	Malegaon .	Khandesh.	40
1	6	4	1	4	...	2	4	8	15·9	?	?	72	·630	3·6	3	?	?	0·83	?	?	15·69	?	?	0·53	Ahmednagar.		
5	...	...	...	1	...	...	9	15	7·1	5·8	+22	68	·677	1·9	1	10·18	−9·18	0·20	7·22	−7·02	25·35	30·94	−5·59	0·11	Akola . .	Berar.	41
...	1	3	2	...	...	5	13	6	5·1	4·4	+16	70	·684	2·7	0	5·27	−8·27	0·31	6·94	−6·63	29·61	31·20	−1·59	0·09	Amraoti.		
2	...	...	...	2	...	2	18	6	6·6	6·2	+ 6	73	·680	2·3	0	7·55	−7·55	0	7·56	−7·56	33·66	29·57	+4·09	0	Khandwa .	Central Provinces, (West).	42
7	...	...	1	...	...	8	14	...	1·5	2·5	−40	77	·713	3·5	1	10·18	−9·18	0·17	11·61	−11·44	42 31	51·92	−9·61	0·17	Hoshangabad		
22	1	...	...	...	...	...	3	4	4·2‡	4·9	−14	71	·729	4·2	5	10·64	−5·64	2·30	10·13	−7·83	50·56	43·85	+6·71	0·73	Nagpur.		
3	4	2	2	1	...	2	9	7	2·6	4·1	−37	77	·797	2·7	7	?	?	3·89	10·75	−6·86	59·52	51·35	+8·17	1·30	Chanda .	Central Provinces, (Central).	43
...	4	5	...	1	1	3	1	11	2·9†	3·9	−26	72	·683	2·3	2	11·73	−9·73	0·75	10·45	−9·70	46·82	52·07	−5·25	0·11	Seoni.		
4	...	...	...	2	2	7	11	4	2·8	3·4	−18	76	·729	3·0	2	9·36	−7·36	0·37	8·77	−8·40	65·35	54·79	+10·56	0·12	Jubbulpore.		
8	...	...	...	...	...	3	15	4	4·8	3·3	+45	71	·647	2·0	0	8·64	−8·64	0·07	8·19	−8·12	37·13	44·22	−7·09	0·05	Saugor.		
1	5	...	...	...	...	1	21	2	9·6	6·5	+48	64	·682	1·8	3	8·36	−5·36	0·72	6·96	−6·24	27·27	40·74	−13·47	0·32	Sutna.	Central India.	49
9	2	1	...	...	3	8	6	1	5·8	5·9	− 2	79	·802	4·2	5	10·45	−5·45	3·47	8·46	−4·99	63·28	46·51	+16·77	1·95	Raipur.	Central Provinces, East.	44
...	2	4	1	1	8	12	1	1	4·6	2·2	+109	84	·883	5·5	10	?	?	4·74	10·07	−5·33	84·01	60·45	+23·56	1·12	Sambalpore.		
15	...	...	...	...	...	2	11	2	3·2	?	?	67	·622	2·9	2	?	?	0·81	7·44	−6·63	27·30	26·71	+0·59	0·45	Aurangabad.	Hyderabad (North).	39
2	13	...	1	...	2	1	1	10	6·2	?	?	78	·779	5·4	4	?	?	1·17	6·91	−5·74	30·44	32·34	−1·90	0·56	Indur.		
...	14	2	2	1	1	1	3	6	6·8	?	?	83	·725	3·7	6	?	?	3·85	8·94	−5·09	21·49	34·38	−12·89	1·12	Bidar.		
3	4	4	3	...	...	2	4	10	10·7	?	?	66	·650	6·1	5	?	?	1·71	6·44	−4·73	18·88	22·58	−3·70	0·53	Gulbarga .	Hyderabad (South).	35
...	4	1	3	...	..	3	17	2	10·0	?	?	70	·692	4·3	7	?	?	5·01	?	?	13·93	?	?	1·72	Raichur.		
11	...	...	...	1	...	...	11	7	4·9	?	?	77	·749	4·9	4	?	?	2·26	5·99	−3·73	21·74	25·91	−4·17	0·81	Hyderabad (Deccan), Secunderabad		
5	1	1	2	1	...	...	9	11	5·9	7·0	−16	71	·670	5·8	3	?	?	2·42	?	?	19·69	?	?	1·02			
24	...	...	...	...	...	...	2	4	4·7	?	?	82	·877	2·6	7	?	?	3·89	?	?	19·72	?	?	1·24	Khamamet.		
...	..	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	2·96	9·64	—6·69	...	...	...	...	**X.—West Coast.**		
...	1	4	5	4	2	1	10	3	8·3	11·7	−29	83	·869	5·3	5	14 18	−9·18	1·62	11·81	−10·19	86·85	69·78	+17·07	0·59	Bombay .	Konkan.	37
2	5	6	5	3	...	2	2	5	4·6	8·2	−44	82	·843	5·3	6	16·09	−10·09	3·16	13·18	−10·02	69·43	104·60	−35·19	1·16	Ratnagiri.		
3	2	...	1	1	...	2	4	17	6·8	?	?	86	·875	2·8	9	?	?	3·06	?	?	70·91	?	?	0·49	Mormugao.		
5	3	9	11	1	...	...	1	...	?	?	?	85	·949	5·4	6	?	?	2·09	8·57	−6·48	70·52	92·68	−22·16	0·71	Goa.		
3	6	5	2	1	...	...	3	10	3·7	?	?	89	·815	3·7	7	16·09	−9·09	2·99	13·75	−10·76	100·02	114·41	−14·39	1·33	Karwar.		
8	11	7	...	1	...	...	...	3	4·7	?	?	84	·868	5·5	10	13·73	−3·73	4·07	9·38	−5·31	83·86	72·61	+11·25	0·89	Cochin .	Malabar.	3
7	1	2	2	4	2	1	...	11	9·3‡	?	?	85	·834	5·2	8	10·13	−2·13	3·39	6·16	−2·77	96·19	84·55	+11·64	0·78	Calicut.		
1	5	5	12	5	...	1	...	1	2·8	2·4	+16	86	·838	6·2	8	16·60	−8·60	4·15	10·14	−5·99	115·70	102·39	+13·31	0·89	Mangalore.		
2	22	...	1	...	...	...	1	4	6·3	?	?	78	·798	5·3	2	?	?	2·10	4·13	−2·03	25·86	29·07	−3·21	1·30	Trivandrum.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·99	5·29	—1·25	...	...	...	...	**XI.—South India.**		
...	1	2	...	6	5	11	3	2	11·3	?	?	78	·886	3·8	2	1·80	+0·20	1·96	1·44	+0·51	2·05	2·42	−0·37	0·92	Pamban .	Madras (South).	57
...	4	1	...	...	1	6	7	11	5·3	?	?	64	·750	5·7	2	1·90	+0·10	1·80	?	?	3·29	?	?	1·49	Tinnevelly.		
2	11	5	...	1	...	...	...	11	3·1	3·4	− 9	69	·754	4·9	7	6·09	+0·91	7·25	4·23	+3·02	11·11	12·01	−0·90	2·37	Madura.		

‡ Mean of 29 days. † Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 208 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
34	Madras, South Central.	Salem	940	28·977	+·004	29·862	29·034	30th	28·940	26th	·094	78·5	92·1	+0·7	73·0	+1·7	82·6	+1·2	19·1	98·9	22nd	69·5	25th	29·4
		Coimbatore	1,348	28·547	+·003	29·846	28·612	30th	28·505	27th	·107	76·7	89 8	+0·3	71·1	+0·6	80·5	+0·5	18·7	93·4	22nd	68·6	27th	24·8
35	Coorg	Mercara	3,781	26·224	+·012	?	26·259	30th	26·191	28th	·068	66·2	74·9	+2·5	62·6	+0·9	68·8	+1·7	12·3	79·0	4 days	60·7	24th	18·3
36	Mysore	Chitaldroog	2,405	27·518	?	29·857	27·552	30th	27·481	1st	·071	72·5	85·8	?	67·7	?	76·8	?	18·1	90·6	22nd	65·9	12th	24·7
		Bangalore	3,021	26·924	+·006	29·850	26·965	30th	26·896	2nd	·069	71·2	83·5	+1·6	66·4	+1·4	75·0	+1·5	17·1	89·3	1st	63·3	15th & 17th.	26·0
		Hassan	3,091	26·868	?	29·879	26·916	30th	26·835	1st	·081	70·2	80·9	?	64·4	?	72·7	?	16·5	84·6	7th	62·1	19th	22·5
		Mysore	2,518	27·421	?	29·867	27·460	30th	27·393	3rd	·067	73·0	84·8	?	66·7	?	75·8	?	18·1	90·0	2nd	63·0	16th	27·0
56	Madras, East Coast, South.	Negapatam	31	29·849	+·002	29·809	29·917	30th	29·789	24th	·128	83·8	95·3	+3·1	78·2	+1·9	86·8	+2·5	17·1	100·2	18th	71·9	23rd	28·3
		Cuddalore	12	29·860	?	29·801	29·937	30th	29·820	17th	·117	83·2	95·1	?	77·6	?	86·4	?	17·5	100·3	5 days	72·2	23rd	28·1
		Trichinopoly	255	29·628	+·003	29·816	29·700	30th	29·591	26th	·109	81·7	97·4	+2·1	76·4	+0·9	86·9	+1·5	21·0	103·1	1st	71·4	9th	31·7
		Madras	22	29·848	+·016	29·801	29·953	29th	29·807	2nd & 17th	·146	82·2	93·3	+0·1	77·3	+0·2	85·3	+0·2	16·0	99·5	17th	72·5	22nd	27·0
55	Madras, East-Coast, Central.	Nellore	71	29·779	?	29·784	29·896	29th	29·722	1st	·164	83·2	96·0	?	77·7	?	86·9	?	18·3	102·8	19th & 20th	73·1	9th & 11th.	29·7
		Masulipatam	15	29·828	+·047	29·778	29·957	29th	29·750	14th	·207	82·5	91·8	+0·5	77·7	+0·3	84·7	+0·4	14·1	97·1	17th & 19th	73·1	7th	24·0
54	Madras, Central	Cuddapah	433	29·444	?	29·817	29·526	30th	29·408	3rd	·118	83·6	96·5	+4·0	78·2	+2·3	87·4	+3·2	18·3	102·2	21st	72·8	22nd	28·4
		Kurnool	923	28·945	?	29·814	29·021	29th	28·909	2nd & 3rd	·112	79·7	94·2	+4·9	75·2	+2·0	84·7	+3·5	19·0	98·7	7th	71·4	9th	27·3
		Bellary	1,475	28·417	+·032	29·839	28·473	30th	28·377	1st	·096	79·3	95·4	+4·8	74·2	+1·4	84·8	+3·1	21·2	99·2	10th	71·2	29th	28·0
52	Madras, East-Coast, North	Rajahmundry	112				Not recorded.					82·6	93·2	+3·0	77·7	+0·7	85·5	+1·9	15·5	97·0	17th & 18th	74·1	26th	22 9
		Cocanada	26	29·800	+·057	29·761	29·942	29th & 30th.	29·714	14th	·228	82·4	92·6	+4·1	78·8	+0·6	85·7	+2·4	13·8	98·6	18th	75·5	12th	23·1
		Vizagapatam	31	29·764	+·034	29·733	29·926	30th	29·655	14th	·271	83·6	92·0	+1·1	78·5	+1·2	85·3	+1·2	13·5	97·2	17th	75·4	26th	21·8
		Gopalpur	21	29·763	?	29·724	29·948	30th	29·615	15th	·333	83·0	89·3	?	78·4	?	83·9	?	10·9	93·2	11th & 12th	72·1	27th & 28th	21·1
	XII.—Hill Stations.																							
48	Baluchistan	Kach	?	23·839 (b)	?	?	24·000	28th, 29th & 30th	23·750	1st & 12th	·250	70·3 (b)	82·8 (b)	?	not recd.	?	?	?	?	88·0	6th	?	...	?
		Pishin	?				Not recorded.					?	92·0	?	41·5	?	66·7	?	50·5	99·0	1st	38·9	21st, 22nd & 23rd.	60·1
		Quetta	5,502	24·609	+·016	?	24·799	29th	24·507	12th	·292	65·4	85·4	+0·1	47·8‡	−2·5	66·6	−1·2	37·8	89·1	16th	42·9	22nd	46·2
		Kalat (c)	?				Not recorded.					61·7	85·9	?	36·3	?	61·1	?	49·6	91·7	18th	29·2	21st	62·5
		Chaman	4,311	25·633	?	?	25·835	30th	25·534	12th	·301	76·2	91·2	?	63·2	?	77·2	?	28·0	96·0	16th	58 1	21st	37·9
30	Punjab	Leh	11,503	19·713	?	?	19·900	29th	19·606	2nd	·294	49·3	70·1	?	41·8	?	55·9	?	28·3	78·0	10th	32·8	28th	45·2
		Skardu	?				Not recorded.					58·3*	76·6†	?	53·5*	?	64·9†	?	23·1	88·5	15th	41·5	29th	47·0
		Srinagar	5,204	24·861	?	?	25·132	28th	24·716	12th	·416	59·1	80·6	?	51·2	?	65·9	?	29·4	88·3	3 days	42·2	23rd	46·6
		Gilgit	?	24·613	?	?	24·850	28th	24·470	12th & 17th	·380	68·6	86·2	?	63·1	?	74·6	?	23·1	98·2	15th	50·5	27th	47·7
		Samana	?	23·607	?	?	23·830	29th	23·530	7 days	·300	Not recd.	75·8	?	58·2	?	67·0	?	17·6	90·1	7th	50·1	4 days	40·0
		Cherat	?	25·621	?	?	25·849	28th	25·517	12th	·332	75·4	89·1	?	67·2	?	78·2	?	21·9	95·4	3 days.	57·1	25th	38·3
		Murree	6,344	23·828	+·010	?	23·989	28th	23·738	12th	·251	63·7	74·6	+0·7	56·2	−2·6	65·4	−1·0	18·4	80·1	3 days	44·6	25th	35·5
		Poo	?				Not recorded.					?	73·4	?	50·4	?	61·9	?	23·0	81·0	10th	41·5	23rd	39·5
		Simla	7,224	23·105	+·009	?	23·267	28th	23·004	2nd	·263	60·1	67·8	+0·1	56·0	−1·1	61·9	−0·5	11·8	70·7	13th	51·8	21st	18·9
25	N.-W. Provinces.	Chakrata	6,977	23·297	+·010	?	23·457	28th & 30th	23·186	2nd	·271	61·1	68·4	−0·6	56·9	−0·3	62·7	−0·5	11·5	70·2	5th & 11th.	50·3	22nd	19·9
		Mussooree	6,705	23·490	?	?	23·660	28th	23·370	2nd	·290	61·9	69·7	+1·6	57·9	+0·4	63·8	+1·0	11·8	72·3	9th	53·0	22nd	19·3
		Ranikhet	6,069	24·073	+·015	?	24·243	30th	23·950	2nd	·293	65·4	75·2	+2·8	60·4	+0·4	67·8	+1·6	14·8	78·0	6th	55·5	21st	22·5
		Yatung	10,480?				Not recorded.					?	62·3	?	49·8	?	56·0	?	12·5	70·0	3rd	39·9	18th & 28th.	30·1
13	Bengal	Gnatong	?	19·306	?	?	19·405	29th	19·186	14th	·219	47·7	53·5	?	41·3	?	47·4	?	12·2	57·9	7th	32·6	27th	25·3
		Darjeeling	7,421	22·958	−·041	?	23·115	30th	22·865	2nd	·250	59·1	64·6	−0·2	55·1	0	59·9	−0·1	9·5	68·6	1st	50·7	2 days	17·9
		Gantok	5,660?	24·403	?	?	24·527	27th, 28th & 29th.	24·216	1st	·311	65·8	73·3	?	52·2	?	63·0	?	21·6	79·4	21st	47·2	18th	32·2

(b) Uncorrected. (c) Mean of 18 days. * Mean of 23 days. † Mean of 22 days. ‡ Mean of 29 days.

I—*continued.*

in India, Burma, etc., in September 1896—continued.

Wind Direction, Number of winds from									Wind Velocity.			Hygrometry, 8A.M.		Mean cloud amount.	Rainfall.									Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of 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 September, 1896.	Normal rainfall for period, 1st June to 30th September.	Variation from normal of period, 1st June to 30th September.				
4	1	...	1	...	4	12	6	2	4·3	3·7	+ 16	80	·791	5·6	14	6·91	+7·09	6·76	5·63	+1·13	15·73	20·93	−5·20	1·44	Salem . .	Madras, South, Central.	4
...	...	...	...	...	...	...	30	...	3·9	6·6	− 41	84	·776	4·8	4	2·18	+1·82	3·03	1·13	+1·90	10·98	4·98	+6·00	1·63	Coimbatore.		
6	4	2	1	1	...	1	3	12	7·6	7·9	− 4	86	·566	8·1	12	17·10	−5·10	5·84	10·98	−5·14	142·47	105·44	+37·03	1·95	Mercara .	Coorg.	35
1	...	...	2	1	...	5	17	4	9·4	?	?	79	·629	8·4	4	?	?	2·33	?	?	14·47	?	?	1·58	Chitaldroog .	Mysore.	38
...	...	1	3	1	...	7	13	5	6·6	6·7	− 2	84	·640	8·1	14	8·36	+5·64	7·77	4·72	+3·05	14·78	18·56	−3·78	2·50	Bangalore		
1	...	3	1	1	...	1	14	9	3·0	?	?	81	·598	8·4	9	?	?	4·62	?	?	25·55	?	?	1·13	Hassan.		
13	1	3	2	...	...	2	7	2	6·0	?	?	81	·650	7·5	6	?	?	7·13	?	?	18·48	?	?	2·49	Mysore.		
1	...	1	...	...	1	17	7	3	8·2	5·2	+ 58	82	·950	5·1	3	6·36	−3·36	1·24	2·04	−1·80	4·76	10·89	−6·13	0·48	Negapatam .	Madras, East Coast, South.	56
...	2	...	...	...	6	5	9	8	2·1	?	?	73	·833	4·6	4	6·40	−2·40	2·29	?	?	5·94	?	?	0·78	Cuddalore.		
12	...	...	...	...	...	3	8	7	4·1	7·1	− 42	71	·758	5·7	6	4·91	+1·09	3·61	3·21	+0·40	4·49	11·00	−6·51	1·21	Trichinopoly.		
3	2	1	...	...	6	7	9	2	4·8	6·5	− 26	78	·865	6·0	7	6·45	+0·55	5·97	4·69	+1·28	15·62	15·23	+0·39	1·70	Madras.		
14	...	...	...	2	1	...	7	6	6·1	?	?	78	·877	8·7	7	5·30	+1·70	4·89	?	?	16·10	?	?	1·84	Nellore .	Madras, East Coast, Central.	55
6	2	1	1	1	2	2	8	7	6·4	6·4	0	82	·905	6·5	11	8·80	+2·20	6·58	5·70	+0·88	22·90	23·95	−1·05	2·15	Masulipatam.		
...	1	3	...	...	...	4	9	13	?	?	?	68	·772	6·9	6	6·70	−0·70	3·70	5·48	−1·78	14·47	19·87	−5·40	1·66	Cuddapah .	Madras, Central.	54
11	...	...	...	...	...	2	12	5	?	?	?	69	·694	7·1	7	7·83	−0·83	2·37	6·54	−4·17	14·30	21·25	−6·95	0·62	Kurnool.		
3	...	2	...	...	...	...	13	12	7·8	9·3	− 16	59	·593	6·9	0	6·27	−6·27	0·09	4·09	−4·00	2·17	10·50	−8·33	0·05	Bellary.		
7	5	...	...	...	...	...	15	3	?	?	?	74	·827	6·5	6	8·60	−2·60	2·69	7·61	−4·92	20·42	27·94	−7·52	1·30	Rajahmundry	Madras, East Coast, North.	52
...	4	1	1	1	...	7	14	2	6·3	?	?	77	·861	6·6	5	9·10	−4·10	2·88	5·73	−2·85	16·63	23·48	−6·85	1·03	Cocanada.		
27	1	...	...	...	...	...	1	1	1·1	2·2	− 50	78	·909	7·4	4	10·91	−6·91	1·59	8·27	−6·68	14·73	22·74	−8·01	0·49	Vizagapatam.		
6	8	1	...	...	1	3	1	10	6·3	7·2	− 13	84	·941	3·9	9	9·33	−0·33	5·44	7·44	−2·00	31·74	29·63	+2·11	1·49	Gopalpur.		
																									XII.—Hill Stations.		
14	2	...	5	...	...	2	7	...	3·5	?	?	37	·267	0	1	?	?	0·21	?	?	2·06	?	?	0·19	Kach .	Baluchistan.	48
			Not	rec	orde	d.			?	?	?	?	?	?	0	?	?	0	?	?	0·15	?	?	0	Pishin.		
25	...	...	...	...	2	...	3	...	1·5	3·5	− 6	54	·343	0·1	0	0·55	−0·55	0·02	0·16	−0·14	2·54	2·19	+0·35	0·02	Quetta.		
...	...	1	2	...	12	...	1	2	?	?	?	43	·236	0	0	?	?	0	?	?	4·05	?	?	0	Kalat.		
...	1	1	2	7	4	11	1	3	10·4§	?	?	22	·200	0·7	0	?	?	0	?	?	0·60	?	?	0	Chaman.		
...	3	...	1	1	5	4	13	3	2·6	?	?	51	·178	4·4	0	?	?	0	?	?	0·15	?	?	0	Leh . .	Punjab.	30
4	2	4	1	1	1	2	7	1	7·3*	?	?	64*	·307*	4·8*	0	?	?	0·06	?	?	0·06(f)	?	?	0·05	Skardu.		
6	...	1	4	14	1	1	2	1	5·7	?	?	86	·431	3·2	5	?	?	1·28	?	?	6·08	?	?	0·42	Srinagar.		
			Not	rec	orde	d.			?	?	?	48	·321	3·8	2	?	?	0·49	?	?	2·08	?	?	0·23	Gilgit.		
			Im	perf	ect				?	?	?	?	?	2·6	1	?	?	0·44	?	?	16·70	?	?	0·25	Samana.		
7	4	2	...	7	...	6	1	3	9·1	?	?	47	·413	1·0	1	?	?	0·58	?	?	6·79	?	?	0·41	Cherat.		
4	3	2	...	5	3	2	9	2	6·4	5·4	+ 19	65	·389	2·7	8	6·55	+1·45	5·09	6·16	−1·07	26·72	34·56	− 7·84	1·71	Murree.		
19	1	...	...	...	...	3	6	1	?	?	?	?	?	2·4	0	?	?	0·11	?	?	0·95	?	?	0·09	Poo.		
11	13	6	...	...	...	...	...	...	3·5	1·7	+106	71	·374	3·0	3	8·36	−5·36	2·20	6·56	−4·36	37·58	48·88	−11·30	1·24	Simla.		
23	3	2	...	...	1	...	...	1	10·0	4·7	+113	77	·418	0·5	5	?	?	2·61	6·92	−4·31	52·83	51·84	+ 0·99	1·23	Chakrata .	North-Western Provinces.	25
...	3	1	5	1	...	1	5	14	?	8·1	?	77	·433	2·6	1	10·09	−9·09	0·79	10·34	−9·55	72·04	79·43	− 7·39	0·68	Mussooree.		
13	...	1	1	...	...	5	8	2	3·7	1·9	+ 95	71	·441	1·3	2	7·73	−5·73	0·51	8·02	−7·51	36·12	41·15	− 5·03	0·27	Ranikhet.		
			Not	rec	orde	d.			?	?	?		?	?	10	?	?	7·61	?	?	27·13	?	?	3·70	Yatung.	Bengal.	13
5	...	...	5	8	1	1	1	1	4·0	?	?	83	·275	5·5	18	?	?	14·02	?	?	75·65	?	?	2·96	Gnatong.		
4	1	3	17	3	...	1	1	...	3·3	3·0	+ 10	93	·473	?	18	18·04	−0·04	26·15	17·31	+8·84	96·87	99·06	− 2·19	6·41	Darjeeling.		
5	...	...	...	1	3	4	8	4	Not	record	ed.	88	·563	Not recorded	16	?	?	17·45	?	?	31·79	?	?	2·91	Gantok. (a)		

§ Mean of 26 days. (f) Total rainfall since 8th September to date. (a) Wind observations of 25 days.

Table

Abstract of Observations taken at 8 A.M. at 208 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	26·015	+·033	?	26·177	29th	25·906	12th	·271	67·2	73·0	−2·4	62·7	−2·1	67·9	−2·3	10·3	84·7	30th	60·4	12th	24·3
	Pachmarhi .	3,528	26·137	+·083	?	26·563	30th	26·357	2nd & 12th	·206	71·6	79·4	+2·4	64·6	−1·6	72·0	+0·4	14·8	85·2	29th & 30th	57·7	26th	27·5
SOUTH INDIA .	Wellington .	6,200	24·247	+·019	?	24·284	10th	24·217	27th	·067	63·4	72·0	+1·0	56·4	+0·7	62·2	+0·9	15·6	74·2	3rd & 4th	51·7	17th	22·5
XIII.—Extra India.																							
CEYLON . .	Trincomalee.	12	29·881	?	29·819	29·916	30th	29·832	2nd	·114	81·8	91·6	?	77·6	?	84·6	?	14·0	96·0	8th	74·0	29th	22·0
	Colombo .	40	29·893	−·023	29·859	29·946	10th	29·840	3rd	·106	81·1	86·7	?	77·1	?	81·9	?	9·6	89·0	27th	73·0	10th	16·0
PERSIA . .	Meshed .	3,104				Not recorded.					67·0	?	?	54·5	?	?	?	?	?	?	44·9	27th	?
	Resht . .					Not recorded.					‡74·5	81·3	?	70·6	?	76·2	?	11·2	90·5	1st	64·2	30th	26·3
	Teheran .	?	26·014*	?	?	26·200*	18th & 30th	25·845	23rd	·355	77·2	90·8	?	65·2	?	78·0	?	25·6	97·0	15th	57·8	30th	39·2
			25·528*	?	?	25·690*	30th	25·390	23rd	·300													
	Ispahan .	?	24·444	?	?	24·550	20th & 30th	24·330	23rd	·220	72·5	91·5	?	56·5	?	74·0	?	35·0	96·9	12th	46·9	29th	50·0
			24·784	?	?	24·890	20th	24·670	23rd	·220													
	Bushire .	14	29·734	+·009	29·707	29·985	30th	29·608	13th	·377	89·0	96·0	+1·8	82·5	+3·7	89·3	+2·8	13·5	99·5	12th	73·5	30th	26·0
	Jask . .	?	29·782	?	29·734	30·012	29th	29·634	12th	·378	86·3	93·0	?	80·9	?	87·0	?	12·1	101·8	14th	75·2	29th	26·6
ARABIA . .	Muscat .	20	29·768	?	29·735	30·000	29th	29·642	12th	·358	85·5	87·5	?	83·7	?	85·6	?	3·8	93·3	13th	81·5	15th	11·8
	Baghdad .	220?	29·646	−·027	29·839	29·785	29th	29·496	2nd & 8th	·289	81·3	101·2	+0·3	75·0	+3·9	88·1	+2·1	26·2	108·5	7th	65·3	28th	43·2
	Aden . .	94	29·733	−·015	29·757	29·851	30th	29·612	2nd	·239	86·2	93·9†	+0·6	83·2	+1·1	88·8†	+0·9	10·7	97·8	18th	76·4	1st & 2nd.	21·4
	Perim . .	?	29·620	?	?	29·725	30th	29·496	2nd	·229	86·9	94·5	?	84·1	?	89·3	?	10·4	98·7	13th	79·8	6th	15·9
AFGHANISTAN .	Kabul . .	?				Not recorded.					57·8	86·1	?	50·6	?	68·4	?	35·5	94·1	11th	44·6	27th	49·5
CENTRAL ASIA .	Kashgar(a) .	?	25·824	?	?	26·073	29th	25·581	25th	·492	62·4	79·6	?	55·9	?	67·8	?	23·7	89·0	17th	41·8	27th	47·2
AFRICA . .	Zanzibar .	23	30·061	?	30·061	30·109	1st	30·008	29th	·101	75·7	82·(	?	73·2	?	77·6	?	8·8	84·4	14th	71·4	4th	13·0

† Mean of 29 days. * Aneroid uncorrected. ‡ 9 A.M.

I—*concluded.*

in India, Burma, etc., in September 1896—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 June to 30th September 1896.	Normal rainfall for period, 1st June to 30th September.	Variation from normal of period, 1st June to 30th September.	Heaviest rainfall during month.	Station.	Meteorological Province or District.
1	...	3	1	...	...	23	2	...	10·1	7·3	+38	81	·517	5·1	8	7·40	+0·60	3·94	10·71	−6·77	53·81	63·65	−9·84	1·27	Mount Abu.	Central India.
9	...	1	...	...	...	4	11	5	10·2	5·6	+82	71	·537	4·4	2	12·55	−10·55	0·66	15·97	−15·31	73·77	72·20	+1·57	0·23	Pachmarhi.	
22	2	2	...	1	1	1	...	1	2·5	3·5	−29	79	·467	6·5	14	9·22	+4·78	3·07	4·49	+3·58	19·59	16·16	+3·43	1·59	Wellington.	South India.
																									XIII.—Extra India.	
2	...	...	...	...	2	26	...	...	6·1	?	?	80	·878	2·6	8	?	?	6·84	4·39	+2·45	13·85	12·73	+1·12	3·30	Trincomalee	Ceylon.
...	...	...	...	9	6	8	7	...	9·2	8·7	+ 6	84	·892	6·3	13	?	?	4·71	5·29	−0·58	22·25	22·27	−0·02	0·76	Colombo.	
				Not recorded.					?	?	?	47	·315	0·8	0	?	?	0	?	?	1·09	?	?	0	Meshed	Persia.
				Not recorded.					?	?	?	84	·719	?	12	?	?	6·15	?	?	11·27	?	?	2·60	Resht.	
17	1	6	1	...	2	2	1	...	3·4	?	?	34	·310	0·7	0	?	?	0·05	?	?	0·05	?	?	0·05	Teheran.	
1	...	5	9	1	...	1	5	8	3·6	?	?	55	·440	0·6	0	?	?	0	?	?	0	?	?	0	Ispahan.	
2	9	3	4	11	...	...	...	1	7·9	7·7	+ 3	67	·920	0	0	?	?	0	?	?	0	?	?	0	Bushire.	
...	1	...	24	2	2	...	...	1	10·1	?	?	74	·934	1·6	0	?	?	0	?	?	0	?	?	0	Jask.	
...	2	1	7	9	1	2	4	4	3·5	?	?	78	·962	0·1	0	?	?	0	?	?	0	?	?	0	Muscat	Arabia.
10	13	1	...	1	...	...	...	5	1·3	?	?	51	·543	0	0	?	?	0	?	?	0	?	?	0	Baghdad.	
1	...	...	16	4	1	7	...	1	9·5†	8·5	+12	75	·933	5·7	0	?	?	0	0·21	−0·21	0·01	0·43	−0·42	0	Aden.	
3	1	2	9	8	...	3	4	...	11·2	?	?	76	·973	2·2	0	?	?	0	?	?	0	?	?	0	Perim.	
...	4	3	10	...	2	...	11	...	?	?	?	63	·307	0	0	?	?	0	?	?	0	?	?	0	Kabul	Afghanistan.
24	1	1	...	...	...	...	...	...	2·2	?	?	55	·309	4·1	2	?	?	0·37	?	?	1·01	?	?	0·26	Kashgar (*a*).	Central Asia.
...	...	...	...	5	17	8	...	...	5·1	?	?	83	·738	5·6	3	?	?	1·33	?	?	7·16	?	?	0·67	Zanzibar	Africa.

(*a*) Wind observations of 26 days.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.									Temperature, wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·843	29·750	·093	29·799	+·018	29·790	85·6	77·4	8·2	89·6	73·9	15·7	83·7	82·2	80·3	+0·8	75·3	79·6	78·4	77·8
	Rangoon	...	·834	·730	·104	·783	+·006	·761	86·0	76·1	9·9	91·0	73·2	17·8	81·2	80·8	79·0	+0·3	74·6	78·5	77·8	77·0
	Diamond Island	...	·828	·731	·097	·782	+·003	·757	85·1	78·4	6·7	87·8	74·8	13·0	82·9	81·9	80·6	+1·9	75·9	78·7	77·5	74·0
	Cocos Island	111	·753	·663	·090	·710	?	·752	87·2	78·0	9·2	89·9	73·1	16·8	83·6	84·0	81·4	?	75·3	79·4	79·2	78·0
	Akyab	...	·806	·695	·111	·755	−·009	·717	86·3	77·8	8·5	90·2	74·4	15·8	83·1	84·0	81·3	−0·2	76·0	80·7	81·5	79·4
Assam.	Silchar	...	·692	·570	·122	·636	−·010	·690	90·3	76·7	13·6	97·4	72·3	25·1	84·0	86·4	82·1	+0·6	75·5	79·6	80·0	78·4
	Sibsagar	...	·453	·329	·124	·392	−·037	·679	86·9	76·3	10·6	90·5	72·8	17·7	81·9	85·4	80·1	−0·7	75·6	78·8	80·5	78·3
	Dhubri	...	·662	·538	·124	·606	−·027	·675	85·7	76·7†	9·0	90·3	71·0	19·3	81·1	84·3	79·6†	+0·5	74·9	78·2	79·0	77·4
Bengal and Orissa.	Chittagong	...	·709	·594	·115	·656	−·020	·690	87·0	76·6	10·4	91·7	74·9	16·8	83·5	84·4	81·0	+0·5	75·8	79·1	79·6	78·2
	Narayanganj	...	·748	·636	·112	·697	−·009	·671	88·4	78·8	9·6	94·1	74·2	19·9	84·1	85·5	83·2	+0·3	76·2	80·2	80·1	78·8
	Calcutta (Alipore)	...	·740	·638	·102	·691	+·005	·658	88·3	77·8	10·5	93·0	72·7	20·3	84·6	85·5	82·9	+0·6	75·9	79·5	79·9	78·5
	Saugor Island	...	·727	·619	·108	·675	−·008	·644	89·0	80·2	8·8	91·9	75·0	16·9	85·3	86·7	83·6	+1·0	77·6	80·7	81·4	79·9
	Burdwan	...	·659	·551	·108	·608	−·007	·657	91·0	78·8	12·2	96·3	74·2	22·1	85·4	88·6	84·0	+0·5	76·4	79·2	79·4	78·3
	Berhampore	...	·686	·582	·104	·637	−·009	·652	90·0	78·3	11·7	95·2	74·8	20·4	85·6	87·0	83·1	+0·1	75·9	80·3	80·1	78·8
	False Point	...	·756	·653	·103	·707	+·019	·669	88·9	77·6	11·3	94·0	73·9	20·1	85·8	85·3	82·1	+0·3	76·3	80·0	80·7	79·0
	Cuttack	...	·694	·586	·108	·644	+·023	·666	91·3	78·3	13·0	95·4	75·0	20·4	84·9	87·5	83·5	+1·0	75·7	78·4	79·4	77·8
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·774	27·681	·093	27·732	+·021	·660	86·1	72·6	13·5	89·2	68·3	20·9	81·6	84·0	78·5	+1·6	70·0	73·3	73·4	72·2
	Patna	...	29·569	29·456	·113	29·518	+·001	·651	92·4	78·8	13·6	96·6	73·2	23·4	87·7	90·4	84·6	+1·1	75·5	79·4	79·3	78·1
	Darbhanga	...	·587	·472	·115	·535	−·008	·652	91·0	78·7	12·3	95·9	74·7	21·2	86·8	89·8	84·1	+1·4	76·7	79·5	79·6	78·6
	Allahabad	...	·454	·332	·122	·396	+·020	·652	99·1	77·9	21·2	102·0	72·3	29·7	91·1	97·6	87·7	+4·6	71·9	77·0	76·9	75·2
	Lucknow	...	·377	·265	·112	·324	−·001	·641	98·5	77·0	21·5	102·3	69·4	32·9	91·1	95·7	87·0	+3·1	72·8‡	76·7	77·6	75·7
Upper Sub-Himalayan.	Dehra Dun	...	27·556	27·462	·094	27·501	−·006	·660	87·1	69·3	17·8	89·3	62·7	26·6	80·6	83·6	77·0	−0·1	65·9	71·8	72·8	70·2
	Roorkee	...	28·848	28·741	·107	28·788	−·009	·623	94·3	71·9	22·4	96·3	64·9	31·4	86·5	93·1	82·5	+0·5	69·1	74·2	74·7	72·7
	Meerut	...	29·012	·903	·109	·949	+·009	·637	97·1	75·2	21·9	99·3	68·8	30·5	88·2	95·1	85·6	+2·7	69·4	73·4	74·3	72·4
	Lahore	...	·026	·930	·096	·972	+·003	·625	99·8	77·6	22·2	103·6	66·8	36·8	89·8	99·0	88·3	+4·8	69·6	74·5	76·4	73·5
	Ludhiana	...	28·930	·824	·106	·871	−·004	·634	98·0	76·2	21·8	101·4	68·1	33·3	88·6	96·3	86·5	+2·9	70·6	74·9	76·1	73·9
Indus Valley and N.-W. Rajputana.	Peshawar	...	·645	·534	·111	·584	+·001	·654	97·2	71·0	26·2	104·0	61·5	42·5	87·5	93·7	83·0	+1·2	63·7	71·2	72·7	69·2
	Mooltan	...	29·296	29·201	·095	29·243	+·008	·620	101·5	78·5	23·0	105·4	73·0	32·4	91·1	99·3	89·3	+2·3	69·5	76·7	78·9	75·0
	Jacobabad	...	·537	·418	·119	·471	+·010	·611	103·2	77·2	26·0	107·4	72·0	35·4	90·7	101·5	89·6	+1·3	71·6	76·7	78·4	75·6
	Kurrachee	...	·800	·725	·075	·764	+·024	·726	89·8	77·3	12·5	107·9	70·7	37·2	85·2	86·1	82·4	?	74·8	79·9	80·6	78·4
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·396	28·290	·106	28·339	+·044	·701	97·3	71·6	25·7	103·5	68·3	35·2	88·0	94·2	83·1	+1·1	66·9	71·8	72·0	70·2
	Ajmere	...	·226	·130	·096	·176	+·051	·721	92·3	73·2	19·1	100·4	68·1	32·3	84·6	91·5	82·1	+0·5	68·0	74·3	75·9	72·7
	Deesa	...	29·390	29·276	·114	29·332	+·054	·747	94·1	72·1	22·0	106·2	66·9	39·3	86·0	92·4	82·1	+0·3	69·2	74·0	73·8	72·4
	Nowgong	...	·033	28·929	·104	28·983	+·039	·683	94·0	74·4	19·6	98·2	68·0	30·2	86·3	93·2	83·5	+1·6	70·8	75·8	76·3	74·3
	Agra	...	·210	29·097	·113	29·148	+·007	·648	100·5	77·8	22·7	103·0	72·0	31·0	92·9	97·3	88·7	+5·3	69·1	74·9	75·4	73·1
Deccan.	Belgaum	...	27·389	27·291	·098	27·338	+·023	·770	83·8	63·9	19·9	88·3	60·3	28·0	76·7	78·5	72·1	+1·7	63·3	68·8	69·7	67·3
	Sholapur	...	28·300	28·152	·148	28·237	+·030	·743	95·0	71·7	23·3	98·4	67·8	30·6	84·9	92·4	82·0	+4·4	66·4	70·7	71·0	69·4
	Poona	...	·064	27·954	·110	·014	+·040	·780	88·7	66·9	21·8	96·0	62·9	33·1	80·8	84·7	76·0	+1·6	65·2	70·0	70·6	68·6
	Akola	...	·931	28·800	·131	·866	+·054	·736	94·2	72·0	22·2	101·2	64·8	36·4	86·1	92·0	82·5	+2·7	68·2	74·2	73·8	72·0
	Buldana	2,132	27·760	27·648	·112	27·705	+·061	·751	87·8	69·1	18·7	95·1	66·9	28·2	81·0	86·0	77·9	+2·2	64·8	69·9	69·5	68·1
	Khandwa	...	28·827	28·709	·118	28·769	+·072	·759	91·2	71·4	19·8	100·2	65·6	34·6	83·8	90·2	80·4	+1·3	67·7	73·0	73·5	71·4

†Mean of 28 days. ‡ Mean of 26 days.

II.

85 Stations in India, Burma, etc., for September 1896.

Vapour Tension.					Humidity.					Cloud.				Wind Direction, Number of winds from										Wind Steadiness,		Wind Velocity		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·851	·963	·923	·912	+·020	90	83	84	86	−2	8·2	8·4	8·3	+1·3	...	...	...	...	8	3	19	24	6	S. 64° W.	S. 43° W.	67	73	259	214	...	...	Port Blair .	Burma Coast and Bay Islands.
·841	·941	·918	·900	+·005	93	89	88	90	+1	8·4	8·4	8·4	+0·3	...	1	2	1	6	18	21	9	...	S. 27° W.	S. 18° W.	67	49	55	91	...	...	Rangoon .	
·861	·927	·886	·891	+·017	89	82	81	84	−3	7·7	8·2	8·0	+1·1	...	1	2	2	1	2	37	14	1	S 55° W.	S. 39° W.	75	58	268*	155	...	...	Diamond Island,	
·843	·951	·939	·911	?	88	82	81	84	?	5·5	5·7	5·6	?	...	...	2	5	3	4	32	14	...	S. 46° W.	?	65	?	?	?	9·65	3·27	Cocos Island	
·878	1·020	1·046	·981	+·073	92	90	89	90	+5	7·9	7·0	7·5	+0·5	...	1	2	8	8	32	2	6	1	S. 11° E.	S. 9° E.	60	41	75	72	...	...	Akyab .	
·869	·953	·941	·921	+·018	94	82	73	83	−1	8·8	8·1	8·5	+1·4	41	2	1	2	1	2	6	3	2	S. 62° W.	S. 89° W.	10	2	45*	61	...	...	Silchar .	Assam.
·880	·946	·977	·934	+·017	97	87	80	88	+2	7·3	6·0	6·7	−1·3	2	3	20	4	9	7	10	4	1	S. 78° E.	N. 73° E.	22	18	68*	58	...	...	Sibsagar .	
·843†	·932	·925	·900	+·007	92†	88	78	86	−1	7·7	7·3	7·5	+1·0	2	5	13	9	3	11	16	1	...	S. 38° E.	S. 66° E.	22	28	127*	77	...	...	Dhubri .	
·886	·935	·949	·923	+·009	96	82	81	86	−5	8·1	8·2	8·2	+1·6	1	2	4	3	15	13	13	4	5	S. 1° W.	S. 29° E.	40	31	112*	109	...	...	Chittagong .	Bengal and Orissa.
·870	·980	·959	·936	−·028	88	84	79	84	−2	7·8	8·1	8·0	+1·2	...	4	2	5	21	11	8	4	5	S. 20° E.	S. 11° E.	40	57	134	112	...	...	Narayanganj	
·873	·943	·950	·922	−·034	92	80	78	83	−4	7·6	9·0	8·3	+1·1	2	2	2	4	8	3	21	14	4	S. 50° W.	S. 27° E.	45	43	72	101	...	...	Calcutta (Alipore),	
·913	·989	1·002	·968	−·011	88	81	79	83	−3	9·0	9·2	9·1	+2·3	...	4	1	3	5	17	14	10	6	S. 38° W.	S. 4° W.	45	48	235	241	...	...	Sangor Island	
·878	·916	·886	·893	−·037	89	75	66	77	−5	7·0	7·6	7·3	−0·1	4	4	5	4	3	6	16	8	10	S. 74° W.	S. 31° E.	28	38	73*	72	...	...	Burdwan .	
·864	·965	·936	·922	−·013	89	79	74	81	−5	6·2	7·9	7·1	−1·0	8	3	1	5	5	10	9	15	4	S. 48° W.	S. 41° E.	33	36	81*	88	...	...	Berhampore	
·887	·947	·981	·938	+·011	94	76	79	83	−1	8·1	8·4	8·3	+1·5	2	1	...	2	4	11	11	21	8	S. 63° W.	S. 25° W.	55	36	139*	198	...	...	False Point	
·832	·881	·893	·879	−·020	89	74	69	77	−4	6·0	7·4	6·7	+0·2	10	4	4	3	...	1	5	17	16	N. 63° W.	S. 10° W.	48	20	63	56	...	...	Cuttack .	
·703	·719	·691	·704	−·056	88	67	61	72	−9	7·0	7·9	7·5	−0·4	5	12	3	3	...	...	1	17	19	N. 44° W.	S. 64° E.	63	21	197	169	...	...	Hazaribagh .	Gangetic Plain and Chota Nagpur.
·841	·895	·854	·863	−·051	85	69	61	72	−8	4·2	5·2	4·7	−2·3	5	...	8	7	3	1	3	20	13	N. 60° W.	S. 77° E.	32	42	89*	74	...	...	Patna .	
·894	·913	·876	·894	−·042	91	72	63	75	−8	3·4	3·1	3·3	−2·1	7	1	3	11	8	1	2	16	11	N. 66° W.	S. 86° E.	12	54	73	93	...	...	Darbhanga .	
·704	·738	·650	·697	−·195	73	51	37	54	−26	2·5	4·0	3·3	−1·9	...	3	3	4	1	...	2	28	18	N. 65° W.	N. 42° E.	66	11	165	79	...	...	Allahabad .	
·741‡	·729	·707	·726	−·109	78‡	50	43	57	−16	2·5	3·7	3·1	−2·3	...	9	2	...	3	...	6	18	22	N. 60° W.	N. 1° E.	67	14	67*	68	...	...	Lucknow .	
·599	·675	·674	·649	?	83	61	58	68	?	1·4	2·5	2·0	−2·7	8	3	...	1	11	11	8	11	7	S. 38° W.	N. 80° W.	35	18	30	27	...	...	Dehra Dun .	
·681	·681	·616	·659	−·107	87	54	40	60	−12	0·5	0·5	0·5	−3·3	9	1	2	...	8	1	2	...	37	N. 45° W.	S. 6° E.	48	9	61	49	...	...	Roorkee .	Upper Sub-Himalayas.
·646	·628	·572	·615	−·141	74	47	34	52	−17	0·5	0·6	0·6	−3·1	9	...	...	1	...	...	1	43	6	N. 86° W.	N. 34° W.	78	17	83*	49	...	...	Meerut .	
·624	·653	·607	·628	−·086	65	46	33	48	−8	0·1	0·5	0·3	−1·1	3	3	3	2	4	3	3	30	9	N. 84° W.	N. 60° E.	53	13	64	50	...	...	Lahore .	
·678	·685	·630	·664	−·090	76	51	37	55	−10	2·3	1·5	1·9	−0·9	23	3	3	1	2	...	3	7	18	N. 50° W.	N. 40° W.	38	13	34	29	...	...	Ludhiana .	
·502	·565	·548	·538	−·051	66	44	36	49	−5	0·6	3·8	2·2	+0·6	9	5	12	10	4	3	8	4	5	N. 56° E.	N. 39° E.	17	55	74*	75	...	...	Peshawar .	Indus Valley and N.W. Rajputana.
·606	·733	·717	·685	−·110	62	50	38	50	−11	0	0	0	−0·9	17	...	1	1	9	12	18	2	...	S. 12° W.	S. 32° W	52	33	81*	61	...	...	Mooltan .	
701	·733	·662	·700	+·006	75	51	33	53	0	0	0	0	−0·6	7	...	...	9	28	15	1	...	...	S. 38° E.	S. 36° E.	75	41	119*	69	...	...	Jacobabad .	
·832	·954	·978	·921	?	89	79	79	83	?	4·5	3·2	3·9	0	...	1	...	...	...	...	27	31	1	S. 71° W.	S. 62° W.	90	83	388*	360	...	...	Kurrachee .	
·603	·582	·510	·565	−·110	77	44	32	51	−13	1·8	4·3	3·1	−0·4	1	1	2	...	...	...	20	31	5	S. 80° W.	N. 31° W.	80	45	108	118	...	...	Jeypore .	E. Rajputana, Central India, and Gujarat.
·625	·720	·701	·682	−·007	76	61	48	62	−4	1·6	2·7	2·2	−1·0	...	1	1	...	...	...	5	50	3	N. 89° W.	S. 80° W.	90	44	185	120	...	...	Ajmere .	
·683	·681	·587	·657	−·069	86	56	40	62	−4	4·1	2·4	3·3	−1·4	...	...	5	3	...	2	23	25	2	S. 71° W.	S. 65° W.	67	50	203	203	...	...	Deesa .	
·712	·751	·684	·711	−·080	83	60	45	63	−10	2·1	3·1	2·6	−3·0	6	1	...	1	...	...	3	44	5	N. 87° W.	N. 67° W.	82	28	39*	57	...	...	Nowgong .	
·599	·626	·587	·604	−·181	62	41	33	45	−22	0·8	2·6	1·7	−2·0	...	...	2	...	1	...	25	...	32	N. 82° W.	N. 26° W.	65	13	196*	99	...	...	Agra .	
·577	·607	·617	·600	−·046	97	66	64	76	−9	4·9	4·9	4·9	−2·6	...	5	2	4	3	...	13	21	12	N. 83° W.	N. 84° W.	52	82	320	374	..	...	Belgaum .	Deccan.
·585	·578	·490	·551	−·112	75	49	33	52	−18	4·6	7·2	5·9	−2·2	2	7	11	3	1	...	2	5	29	N 25° W.	N. 73°W.	61	68	254*	238	...	...	Sholapur .	
·604	·599	·572	·592	−·080	92	57	49	66	−11	5·7	6·7	6·2	−1·5	1	...	4	4	1	...	4	30	16	N. 74° W.	N. 89° W.	64	70	313*	260	...	...	Poona .	
·643	·685	·590	·639	−·096	82	55	40	59	−14	3·1	4·9	4·0	−2·5	4	5	4	3	1	...	1	13	29	N. 46° W.	N. 66° W.	64	66	169*	144	...	...	Akola .	
·564	·594	·518	·557	−·126	80	57	43	60	−18	5·1	6·1	5·6	−0·7	2	1	9	1	1	...	...	5	41	N. 36° W.	N. 48° W.	73	64	149	195	0·15	0·10	Buldana .	
·636	·678	·618	·644	−·094	82	60	45	62	−12	3·5	3·2	3·4	−1·9	...	...	10	...	2	...	1	9	38	N. 42° W.	N. 69° W.	70	66	159	148	...	...	Khandwa .	

* Corrected.

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.
Deccan—*contd.*	Hoshangabad	...	28·847	28·727	·120	28·788	+·075	29·742	90·6	71·8	18·8	96·8	66·6	30·2	83·8	89·7	80·3	+0·7	68·8	74·3	74·5	72·5
	Nagpur	...	·807	·680	·127	·745	+·067	·710	93·2	73·5	19·7	96·1	69·3	26·8	85·6	90·2	82·6	+2·2	68·6	75·0	74·5	72·7
	Do. (Sanitary Commr.'s Office).	...	·803‡	·684‡	·119	·745‡	?	·701‡	93·1†	73·6†	19·5	97·5	71·5	26·0	86·5‡	90·6‡	82·6†	?	68·7†	76·0‡	75·9‡	73·5
	Jubbulpore	...	·501	·385	·116	·444	+·065	·709	90·8	71·3	19·5	95·6	63·9	31·7	83·2	89·6	80·0	+1·4	69·5	74·7	74·7	73·0
	Saugor	...	·023	27·921	·102	27·973	+·061	·706	89·7	70·8	18·9	96·3	66·9	29·4	82·7	87·4	79·0	+1·8	66·1	71·6	71·7	69·8
	Raipur	...	·637	28·720	·117	28·780	+·048	·676	91·5	75·4	16·1	93·6	72·2	21·4	85·5	88·7	82·8	+2·3	72·4	76·1	75·4	74·6
	Sutna	...	·738	·632	·106	·687	+·032	·671	93·0	74·7	18·3	97·5	67·6	29·9	87·8	91·3	82·8	+2·5	69·8	74·1	73·5	72·5
	Hyderabad (Deccan.)	...	·182	·060	·122	·126	?	·740	89·2	73·6	15·6	93·1	69·7	23·4	82·6	86·8	80·8	?	70·7	74·6	75·7	73·7
West Coast.	Bombay	...	29·885	29·788	·097	29·834	+·049	·811	86·6	77·6	9·0	90·9	75·0	15·9	83·1	84·5	81·6	+1·9	73·8	77·4	77·5	76·2
	Ratnagiri	...	·809	·712	·097	·757	+·033	·885	86·6	75·0	11·6	94·2	73·0	21·2	83·8	83·8	80·1	+1·5	72·9	77·3	77·7	75·9
	Karwar	...	·890	·796	·094	·840	+·022	·816	84·8	74·3	10·5	90·5	71·5	19·0	81·4	82·4	78·9	+1·2	72·7	75·8	76·3	75·0
	Cochin	...	·929	·846	·083	·885	−·007	·822	86·8	75·6	11·2	88·2	74·1	14·1	83·3	83·4	80·4	+1·5	74·6	77·8	77·7	76·7
South India.	Salem	...	28·977	28·838	·139	28·921	−·001	·789	91·7	73·0	18·7	98·9	69·7	29·2	83·4	88·3	80·1	+1·0	71·6	75·5	76·8	74·6
	Mysore	...	27·427	27·311	·116	27·369	?	·787	84·8	66·7	18·1	89·8	62·9	26·9	78·0	80·7	74·7	?	61·9	70·1	70·8	67·6
	Mercara	...	26·235	26·143	·092	26·202	+·009	?	74·9	62·6	12·3	79·2	60·9	18·3	70·1	69·7	67·4	+1·4	61·3	65·4	66·4	64·4
	Bangalore	...	·928	·817	·111	·884	0	·774	83·2	66·4	16·8	88·6	63·2	25·4	76·8	79·7	73·9	+1·2	65·4	69·7	69·9	68·3
	Hassan	...	·873	·777	·096	·836	?	·806	80·8	64·4	16·4	84·6	62·1	22·5	75·7	76·7	71·6	?	63·6	68·1	69·2	67·0
	Chitaldroog	...	27·521	27·399	·122	27·469	?	·778	85·8	67·7	18·1	90·8	66·0	24·8	77·3	83·5	76·2	?	63·4	69·3	70·0	67·6
	Trichinopoly	...	29·634	29·495	·139	29·578	+·011	·760	96·9	76·4	20·5	101·1	71·3	29·8	89·2	93·6	84·4	+1·5	71·7	75·2	76·3	74·4
	Madras	...	·853	·733	·120	·801	+·027	·752	93·0	77·2	15·8	99·6	72·7	26·9	86·8	87·3	83·6	−0·2	?	78·2	78·9	78·0
	Bellary	...	28·424	28·278	·146	28·360	+·026	·754	95·1	74·2	20·9	99·2	71·0	28·2	84·4	92·1	83·2	+3·1	68·3	70·3	71·4	70·0
	Vizagapatam	...	29·776	29·668	·108	29·722	+·031	·692	92·1	78·6	13·5	97·0	75·6	21·4	88·2	87·7	84·3	?	75·8	79·5	79·1	78·1
	Cocanada	...	·805	·688	·117	·749	?	·710	92·3	78·8	13·5	98·6	75·5	23·1	86·9	89·2	84·8	?	74·6	78·4	78·1	77·0
Hill Station, Baluchistan.	Quetta	...	24·617	24·540	·077	24·570	+·017	?	85·1	47·8	37·3	88·9	43·0	45·9	76·6	83·2	65·9	−1·0	40·7	56·8	58·0	51·8
Hill Stations, Punjab.	Leh	...	19·710	19·611	·099	19·669	−·017	?	69·7	41·8	27·9	78·0	32·8	45·2	59·1	65·9	55·3	+0·1	35·7	43·8	46·7	42·1
	Srinagar	...	24·873	24·775	·098	24·816	?	?	79·9	51·2	28·7	88·8	42·2	46·6	67·5	77·5	65·0	?	50·3	58·8	68·2	59·1
	Murree	...	23·844	23·814	·030	23·821	−·005	?	75·0	56·0	19·0	80·1	44·6	35·5	68·7	70·8	64·3	−1·2	50·0	59·0	61·7	56·9
	Chamba	3,005	26·833	26·749	·084	26·799	−·001	?	86·4	63·7	22·7	91·7	56·6	35·1	75·8	82·2	73·1	+0·1	60·4	65·8	68·7	65·0
	Kailang	10,087	20·755	20·702	·053	20·737	−·011	?	69·2	41·0	28·2	75·8	31·5	44·3	60·5	61·3	52·2	−1·7	38·2	48·8	47·2	44·7
	Simla (Ridge)	...	23·125	23·081	·044	23·096	+·011	?	67·7	55·8	11·9	70·7	51·8	18·9	62·8	64·7	60·9	−0·1	51·7	56·3	57·4	55·2
Hill Stations, N.W.P.	Chakrata	...	·317	·264	·052	·282	+·008	?	68·3	56·9	11·4	70·1	50·3	19·8	64·4	63·9	61·3	−0·4	53·3	58·3	59·1	56·9
	Ranikhet	...	24·088	24·024	·064	24·042	+·012	?	75·1	60·3	14·8	78·0	55·4	22·6	70·2	71·1	66·5	+0·9	56·4	61·9	62·0	60·1
Hill Station, Nepal.	Katmandu	4,388	25·497	25·453	·044	25·479	−·062	?	83·5	64·8	18·7	86·8	57·4	29·4	76·5	79·1	73·1	−0·8	63·6	69·0	70·4	67·7
Hill Station, Bengal.	Darjeeling	...	22·981	22·898	·083	22·944	−·024	?	64·5	55·1	9·4	67·8	50·7	17·1	60·9	62·0	59·1	+0·6	55·3	59·7	60·3	58·4
Hill Stations, Central India.	Mount Abu	...	26·031	25·963	·068	25·996	+·027	?	73·6	62·6	11·0	86·8	60·4	26·4	70·0	72·4	67·8	−1·6	59·6	63·5	65·0	62·7
	Pachmarhi	...	·451	26·363	·088	26·408	+·088	?	79·6	64·6	15·0	85·9	57·8	28·1	75·3	78·3	71·3	+0·8	62·2	66·2	67·8	65·4
	Chikalda	3,642	·335	·245	·090	·291	+·072	?	77·6	64·5	13·1	84·8	62·0	22·8	72·4	76·0	70·1	+1·1	61·7	66·4	67·8	65·3

‡ Mean of 20 days.

† Mean of 19 days.

I—*continued.*

at 85 Stations in India, Burma, etc., for September 1896—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 for the month.	Heaviest rainfall during the month.		
																									%	%						
·671	·734	·666	·690	−·096	86	64	39	63	−15	2·7	3·8	3·3	−2·5	25	2	1	...	...	...	9	19	4	S. 88° W.	N. 86° W.	45	50	34	59	...	...	Hoshangabad	Deccan—*contd.*
·640	·736	·660	·679	−·089	77	60	47	61	−14	3·3	5·4	4·4	−2·8	20	4	3	2	...	...	...	14	17	N. 50° W.	N. 54° W.	47	37	100	118	...	...	Nagpur	
·643†	·768‡	·710‡	·707	?	78†	60‡	49‡	62	?	4·4‡	6·4‡	5·4‡	?	10	3	1	1	...	1	4	15	4	N. 82° W.	?	66	?	34†*	?	...	...	Do. (Sanitary Commr.'s Office).	
·702	·754	·676	·711	−·060	91	66	49	69	− 8	3·2	4·4	3·8	−2·3	4	...	3	2	1	1	6	27	16	N. 79° W	N. 69° W.	63	34	68	78	...	...	Jubbulpore	
·587	·638	·584	·603	−·122	78	59	46	61	−15	2·3	3·4	2·9	−1·5	5	6	1	...	...	...	11	32	5	N. 87° W.	N. 77° W.	72	43	113	80	...	...	Saugor	
·757	·777	·701	·746	−·058	86	64	53	68	−10	3·7	5·9	4·8	−1·9	12	6	8	1	1	6	12	2	12	N. 66° W.	S 69° W	22	29	138*	141	...	...	Raipur	
·676	·675	·608	·653	−·113	78	52	42	57	−16	1·3	2·8	2·1	−2·9	...	7	1	...	...	...	2	32	18	N. 67° W	N. 55° W.	82	31	190*	155	...	...	Sutna	
·717	·758	·757	·744	?	86	68	60	71	?	5·0	6·1	5·6	?	14	4	3	5	5	...	...	17	12	N. 53° W.	?	30	?	104*	?	...	...	Hyderabad (Deccan).	
·785	·864	·852	·834	−·034	83	76	72	77	− 9	4·9	4·0	4·5	−2·9	...	3	3	4	3	1	3	29	14	N. 73° W.	S. 89° W.	51	55	199	273	...	...	Bombay	West Coast.
·782	·848	·870	·833	−·002	90	73	75	80	− 4	5·0	5·7	5·4	−0·3	3	3	...	2	1	...	10	18	23	N. 73° W.	S. 88° W.	67	55	158	188	...	...	Ratnagiri	
·787	·919	·827	·811	−·010	93	77	75	81	− 5	4·1	4·4	4·3	−1·6	...	...	1	...	...	...	2	23	34	N. 64° W.	N. 86° W.	89	78	90	?	...	...	Karwar	
·844	·880	·873	·866	+·034	95	77	76	83	− 2	4·9	7·3	6·1	+0·8	7	1	2	...	...	...	2	16	32	N. 59° W	N. 82° W.	75	61	113*	?	...	...	Cochin	
·756	·779	·770	·768	+·010	93	68	59	73	0	5·5	7·0	6·3	+0·9	8	1	2	4	4	3	18	13	7	S. 63° W.	S. 68° W.	42	77	101	84	...	...	Salem	South India.
·498	·638	·633	·590	?	76	67	61	68	?	7·9	8·0	8·0	?	14	2	5	5	...	1	8	14	11	N. 71° W.	?	33	?	148*	?	...	...	Mysore	
·529	·572	·612	·571	−·003	93	78	85	85	+ 1	7·4	8·3	7·9	−0·7	5	5	1	3	2	2	12	10	20	N. 74° W.	N. 72° W.	48	84	178	173	...	...	Mercara	
·617	·646	·619	·627	+·028	95	70	62	76	−12	7·4	6·7	7·1	+1·1	...	2	4	5	1	1	10	22	15	N. 78° W.	S. 82° W.	53	88	181	161	...	...	Bangalore	
·578	·600	·628	·602	?	95	68	69	77	?	8·1	8·7	8·4	?	...	2	4	4	2	...	3	31	14	N. 72° W.	?	60	?	83	?	...	...	Hassan	
·532	·618	·567	·572	?	78	66	50	65	?	7·9	7·2	7·6	?	...	...	2	4	3	...	7	29	15	N. 83° W.	?	63	?	197*	?	...	...	Chitaldroog	
·714	·685	·676	·692	−·034	79	50	44	58	− 6	4·5	6·3	5·4	−1·6	25	...	2	...	2	1	4	11	15	N. 73° W.	N. 78° W.	38	77	98	168	...	...	Trichinopoly	
?	·853	·879	·886	+·071	?	68	69	78	+ 5	5·7	6·5	6·1	0	...	3	3	5	16	5	10	10	6	S. 11° W.	S. 36° W	26	53	111	154	...	...	Madras	
·621	·565	·509	·565	−·104	74	48	34	52	−13	7·3	8·5	7·9	+0·5	3	...	3	3	1	...	1	24	25	N. 63° W.	N. 78° W	68	74	185	219	...	...	Bellary	
·856	·890	·882	·876	−·006	88	67	67	74	+ 1	7·0	8·0	7·5	+1·8	7	3	2	...	4	10	8	21	5	S. 68° W.	S. 60° W.	47	48	27	50	...	..	Vizagapatam	
·803	·859	·814	·825	?	81	67	60	69	?	5·6	6·6	6·1	?	1	2	5	7	5	1	15	18	6	S. 71° W.	?	33	?	153*	?	...	...	Cocanada	
·182	·258	·220	·220	−·034	56	28	20	35	− 4	0·1	0·9	0·5	+0·1	31	...	...	...	...	2	1	12	14	N. 72° W.	N. 56° W.	38	50	34*	76	...	...	Quetta	Hill Station, Baluchistan.
·159	·156	·159	·158	−·007	60	31	24	38	− 3	4·4	4·9	4·7	+0·8	...	2	...	3	1	13	24	16	1	S. 47° W.	S. 59° W.	68	32	63	40	...	...	Leh	Hill Stations Punjab.
·358	·393	·600	·450	?	95	61	64	73	?	3·1	4·7	3·9	?	...	2	9	4	8	5	1	10	21	N. 39° W.	?	25	?	107*	?	...	...	Srinagar	
·301	·422	·461	·395	−·020	69	61	62	64	0	2·3	4·1	3·2	−0·1	2	2	1	2	8	17	9	16	3	S. 34° W.	S. 52° E.	48	8	154*	130	...	...	Murree	
·483	·520	·550	·518	−·033	83	59	50	64	− 4	3·0	5·2	4·1	+1·0	26	...	...	...	1	...	...	5	28	N. 52° W.	N. 11° W.	52	13	118*	105	0·83	0·52	Chamba	
·211	·249	·207	·222	+·006	81	47	39	56	+ 2	3·6	6·0	4·8	+0·4	...	3	...	1	4	26	8	10	8	S. 34° W.	S. 57° W.	52	63	51	36	0·25	0·09	Kailang	
·346	·390	·402	·379	−·067	77	68	65	70	− 8	3·7	4·5	4·1	−1·3	19	25	5	1	...	4	3	2	1	N. 1° W.	S. 78° W	38	30	82	?	...	...	Simla (Ridge)	
·374	·429	·456	·420	−·048	80	71	76	76	− 7	6·1	8·0	7·1	+0·7	5	2	1	...	1	51	...	...	...	S. 2° E.	S. 74° W.	82	36	238	113	...	...	Chakrata	Hill Station, Stations, N.W.P.
·418	·470	·466	·451	−·057	79	63	61	68	−12	2·4	1·9	2·2	−3·7	14	1	1	...	...	1	15	22	6	S. 81° W.	S. 52° W.	62	39	99*	51	...	...	Ranikhet	
·579	·622	·644	·615	−·010	94	68	65	76	− 2	5·1	6·1	5·6	−0·5	1	...	1	25	...	...	1	29	3	N. 71° W.	S. 88° W.	10	32	23	?	3·33	1·10	Katmandu†	Hill Station, Stations, Nepal.
·440	·504	·509	·484	+·007	99	93	91	94	0	8·8	8·9	8·9	+0·7	10	3	9	18	2	...	4	8	4	N. 58° E.	S. 72° E.	25	12	80	73	...	...	Darjeeling	Hill Station, Bengal.
·490	·514	·534	·509	−·030	85	74	70	76	+ 1	5·1	2·8	4·0	−1·4	...	1	4	...	5	6	40	4	...	S. 37° W.	S. 67° W.	71	27	239*	173	...	...	Mount Abu	Hill Stations, Central India.
·535	·539	·561	·545	−·083	87	63	59	70	−12	4·3	4·8	4·6	−2·6	10	2	5	2	1	...	8	20	12	N. 75° W.	N. 58° W.	48	45	212*	134	...	...	Pachmarhi	Bengal.
·520	·582	·588	·564	−·066	86	76	67	76	−12	5·1	4·7	4·9	−2·4	9	40	3	...	...	...	1	...	7	N. 37° W.	N. 22° W.	78	65	288*	230	0·28	0·17	Chikalda	

* Corrected.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to 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, S. India.	Wellington . .	...	24·234	24·166	·068	24·201	+·006	?	71·8	56·4	15·4	74·1	51·5	22·6	67·9	66·6	62·8	+0·7	55·2	61·5	61·6	59·4
Extra India.	Muscat . .	...	29·781	29·709	·072	29·745	?	29·712	87·6	83·7	3·9	93·3	81·5	11·8	86·6	87·1	85·6	?	78·2	81·2	82·1	80·5
	Aden . . .	...	·744	·629	·115	·680	—·009	·703	94·0	83·3	10·7	97·7	76·3	21·4	89·6	91·0	87·9	+0·9	74·6	80·1	78·4	77·7
	Perim . . .	...	·631	·509	·122	·564	?	?	94·6	84·1	10·5	98·7	79·8	18·9	90·3	90·8	88·4	?	77·1	81·4	81·5	80·0
	Zanzibar . .	...	30·066‡	·973‡	·093	30·020‡	+·008	30·018†	82·2‡	73·2	9·0	84·4	71·4	13·0	77·4‡	81·5‡	77·7‡	0	70·1	72·9‡	72·6‡	71·9
	Port Victoria (Seychelles).	15	·018	·933	·085	29·976	?	29·914	81·8	76·6	5·2	83·4	67·9	15·5	80·5	80·9	79·0	?	72·0	74·8	75·0	73·9
	Mauritius . .	181	?	?	?	·990	—·004	30·121	?	?	?	84·8	52·4	32·4	?	?	70·2	+0·1	?	?	?	?

‡ Mean of 26 days. † Mean of 23 days.

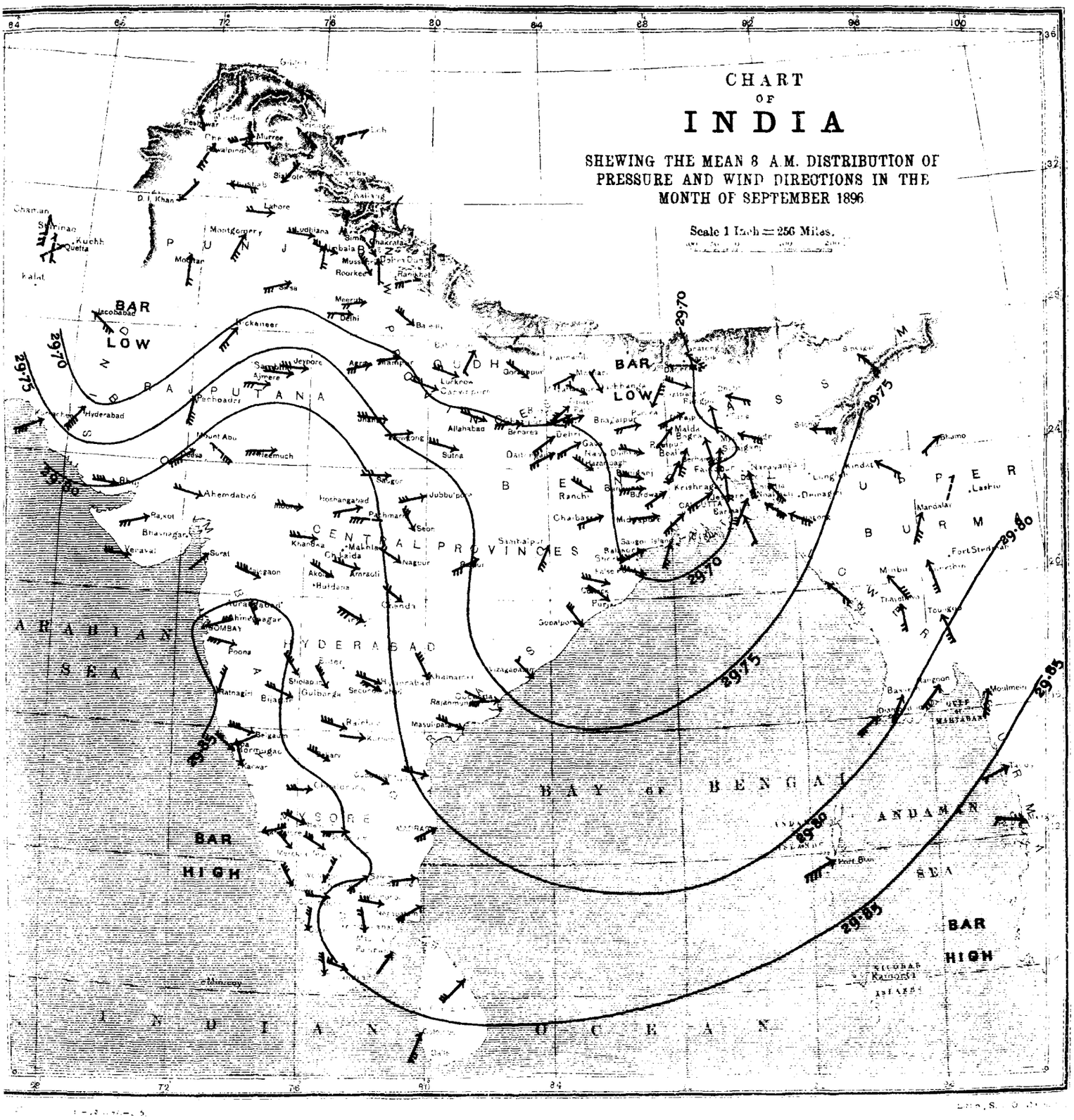
II—*concluded.*

85 Stations in India, Burma, etc., for September 1896—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.		
																								%	%						
·427	·480	·498	·468	+·040	94	70	76	80	+3	7·7	9·5	8·6	+1·7	7	2	2	...	20	15	5	5	3	S. 10° E.	S. 79° W.	47	33	56	72	...	...	Wellington.	Hill Station, S. India.
·893	·996	1·028	·972	?	77	79	80	79	?	0·4	0·4	0·4	?	...	4	13	25	2	1	1	1	13	N. 52° E.	?	52	?	85	?	...	...	Muscat.	Extra India.
·792	·903	·805	·817	−·037	65	65	55	62	−5	4·1	3·6	3·9	+1·6	...	...	...	20	9	13	16	2	...	S. 24° E.	S. 31° E.	55	51	255	214	...	...	Aden.	
·840	·955	·958	·918	?	72	67	66	68	?	1·6	3·4	2·5	?	...	4	8	24	10	...	1	4	8	N. 74° E.	?	47	?	290	?	...	...	Perim.	
·699	·751‡	·682‡	·711	−·009	85	80‡	63‡	76	−1	3·9‡	2·4‡	3·1§	−1·9	...	2	2	...	16	20	11	...	1	S. 7° E.	S. 12° W.	64	46	112†*	118	...	...	Zanzibar.	
·726	·786	·789	·767	?	79	76	75	77	?	6·5	6·1	6·3	?	1	2	...	6	43	6	1	...	1	S. 46° E.	?	82	?	301	?	...	...	Port Victoria (Seychelles).	
?	?	?	·522	?	?	?	?	73	−1	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	271	285	1·15	0·48	Mauritius.	

* Corrected. § Mean of 29 days.

G. I. C. P. O.—No. 56 Meteor.—14-I-97.—385.—Boto.



Explanation.

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

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

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

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

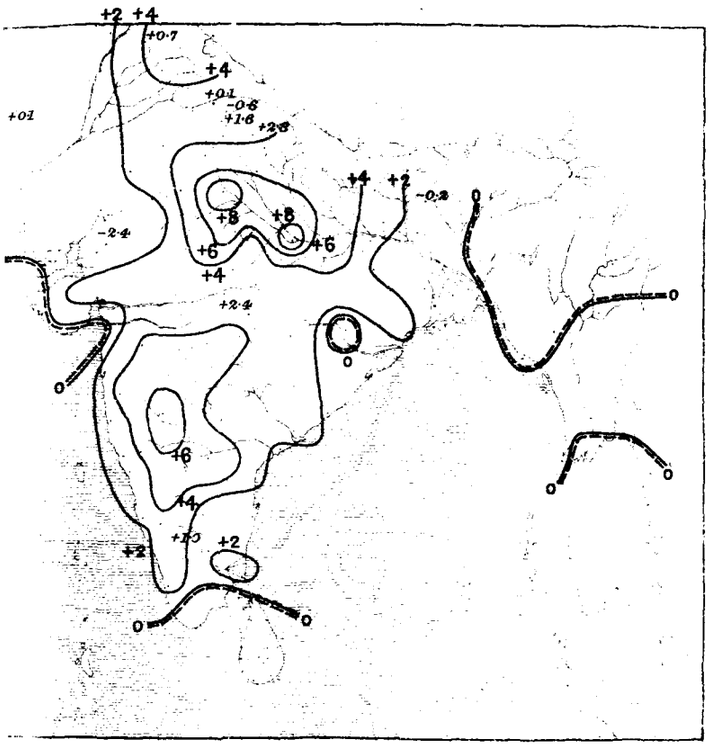
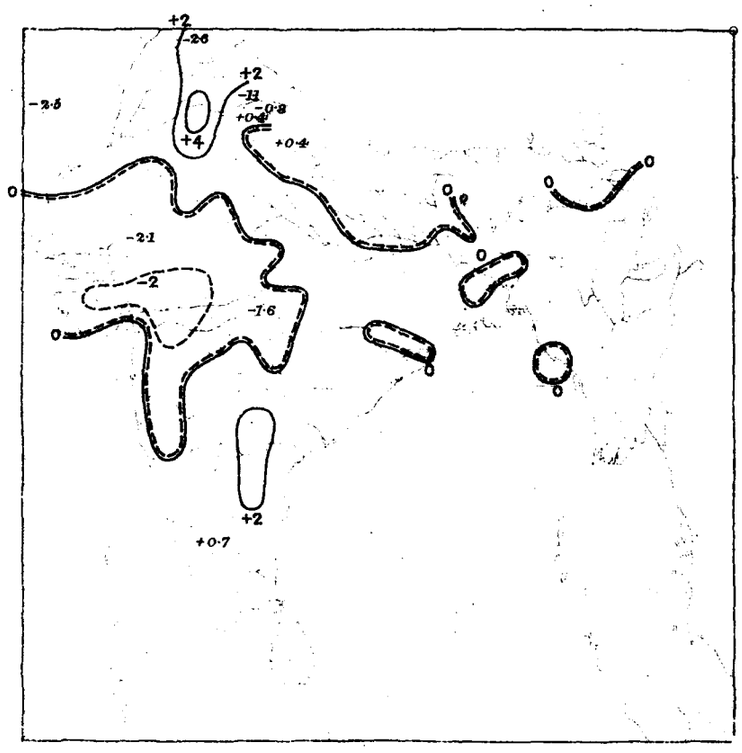


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



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.

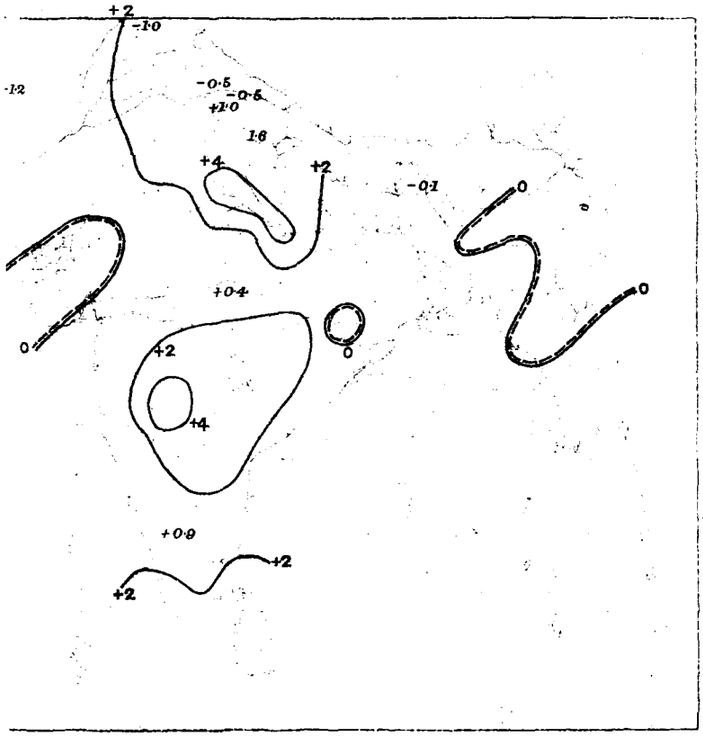
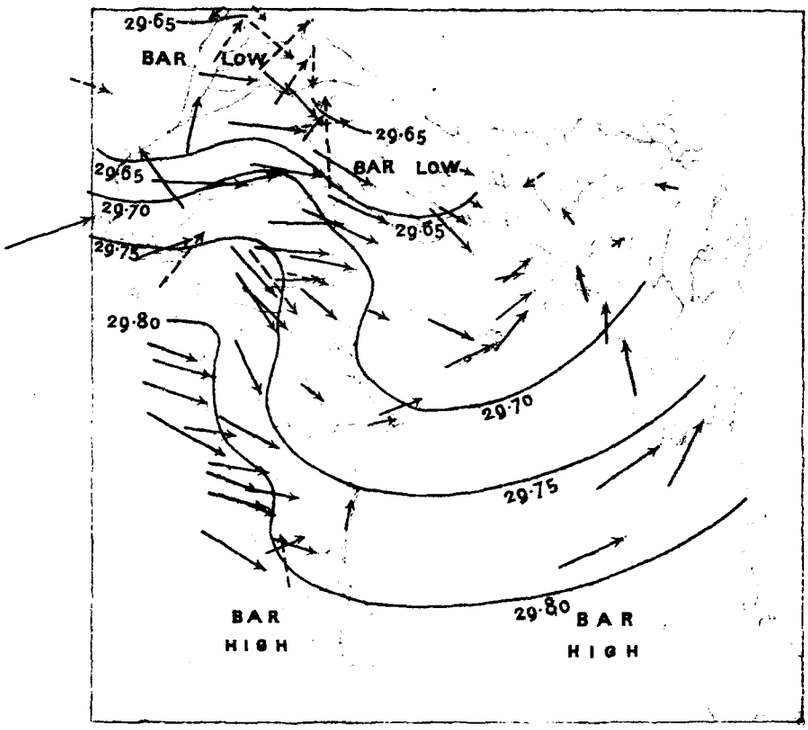


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF SEPTEMBER 1896.



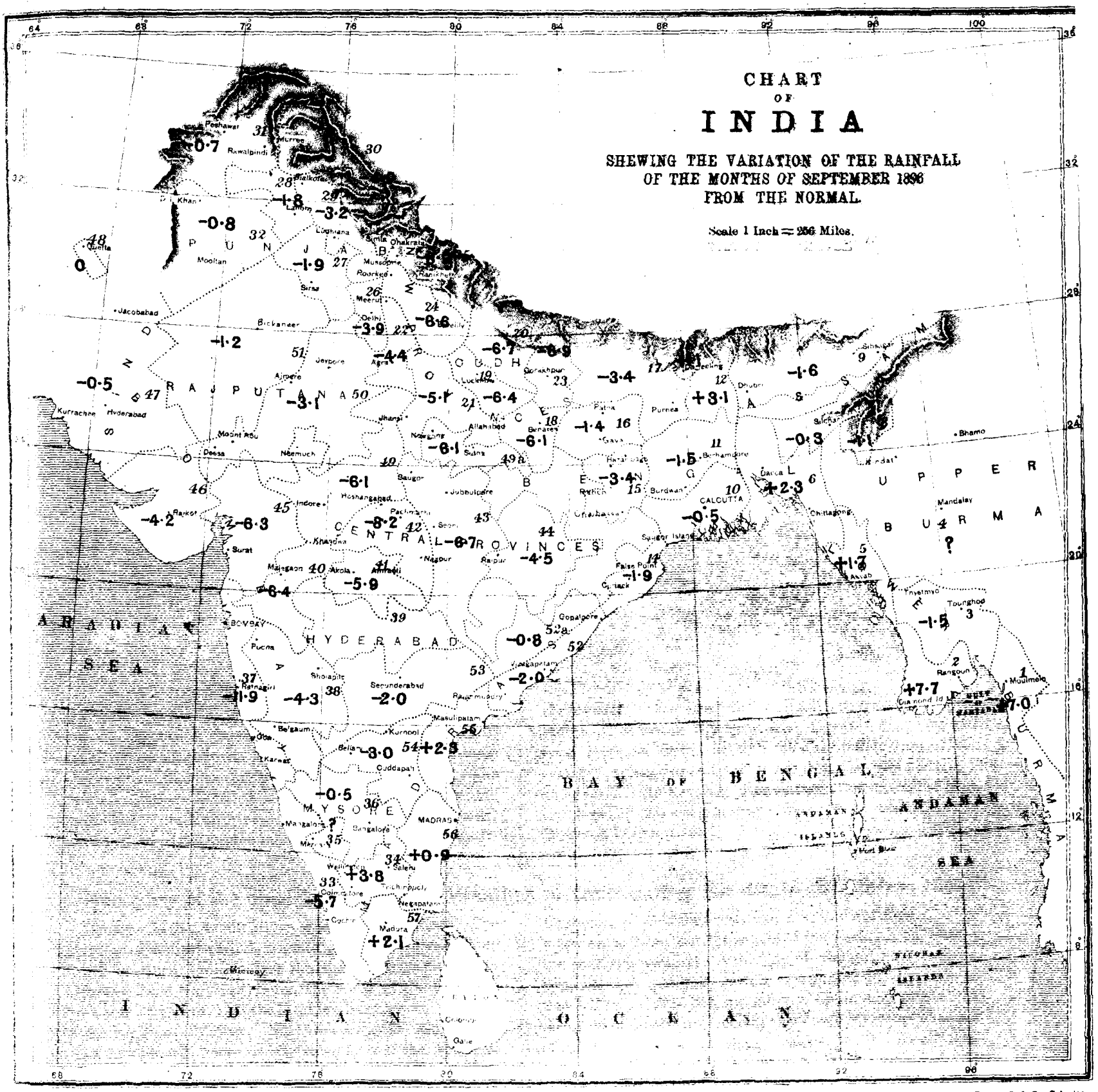
Explanation.

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 agreeing the numerical value

Explanation.

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



No. 603, Wr., 1.-Nov. 96.—395

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 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

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

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, OCTOBER, 1896.

INTRODUCTION.

THIS review of the weather in India during the month of October 1896 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 85 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 the District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments that had been received up to the date of the publication of the review. 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, 1896.

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 portions 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 hence 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.

October 1896 was characterized by unusually fine weather over the whole Indian land and sea areas, and the Bay of Bengal was remarkably free from cyclonic storms. No rain fell over by far the greater part of the country, and the chief features of the meteorology of the month were the unusually high temperature and abnormal dryness of the air which prevailed over nearly the whole of the interior steadily throughout the month.

At the commencement of the month both temperature and pressure were more or less considerably in excess over North-Western and Central India and the Deccan. Temperature was most largely in excess in Central India (by amounts averaging 5°) and pressure in the Deccan and the Circars. Weather was showery in Southern India from the 1st to the 4th, and temperature was hence in slight to moderate defect in the Madras coast districts. A very shallow depression appeared in Upper Sind on the 30th of September and passed very slowly eastwards on the 1st, 2nd and 3rd across the South Punjab and North Rajputana. The disturbance gave cloudy weather but practically no rain in the Punjab. Moderate snow was, however, received on the Afghan mountains and the higher elevations of the Kashmir-Himalayas. A cool wave advanced from Baluchistan across the frontier districts on the 3rd and gradually extended over the whole of Northern India during the next four days and reduced temperature temporarily below the normal. The following comparison of the temperature variations of the 3rd and 7th illustrates roughly the effect of this cool wave in reducing temperature :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		Change of temperature from 3rd to 7th October.
	3rd October.	7th October.	
	°	°	°
Punjab	+1·7	—0·9	—2·6
Sind and Rajputana	+5·4	—3·9	—9·3
Central India and Gujarat	+4·9	—0·6	—5·5
North-Western Provinces	+4·6	—1·1	—5·7
Bihar and Chota Nagpur	+3·7	—1·7	—5·4
Bengal	+1·0	—0·1	—1·1
Central Provinces and Berar	+4·6	—0·6	—5·2

Pressure gave way locally in Burma relatively to the remainder of the Indian area on the 2nd, 3rd and 4th, and a shallow depression was shown in that area on the 4th. It increased very slightly in intensity on the 5th and 6th, during which period it was practically stationary. As north-east monsoon winds were established generally over the Bay, there were no humid winds of indraught to the depression, and it hence failed to develop into a cyclonic storm. It gradually filled up during the next 72 hours, and was of little or no importance throughout its existence. The period from the 5th to 8th was practically rainless over the whole of India, but some light showers occurred on the 7th and 8th in the Deccan and Mysore, and temperature during the period from the 5th to 8th was in considerable to large excess in that area as is shown by variation data of the following four stations :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	5th October.	6th October.	7th October.	8th October.
	°	°	°	°
Sholapur	+5·8	+8·7	+6·4	+2·6
Bellary	+5·1	+5·8	+8·0	+5·4
Hyderabad (Deccan)	+5·2	+6·1	+5·7	+1·8
Bangalore	—0·6	+1·3	+3·3	+2·2

The disappearance of the Burma depression was followed by showery weather in Southern India from the 9th to the 11th or 12th. Temperature increased rapidly in Northern India and was above the normal (generally by small amounts) on the 12th.

A very shallow depression crossed the frontier from Baluchistan on the 11th. It advanced eastwards across the South Punjab on the 12th and filled up during the next 24 hours. It gave some light showers of hail and snow on the hills. A cool wave affected Upper India from the 11th to the 14th, but it was too feeble to advance beyond the Punjab and North-West Rajputana.

Temperature increased rapidly on the 13th and 14th in the interior of India, and was in moderate to large excess in Rajputana, Central India, Berar, the Central Provinces and the Deccan from the 14th to the 20th. The following gives variation data of the mean temperature from the normal during this period :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	14th October.	15th October.	16th October.	17th October.	18th October.	19th October.	20th October.
	°	°	°	°	°	°	°
Rajputana .	+1·4	+0·7	+2·4	+2·9	+3·0	+0·9	+1·4
Central India .	+2·5	+2·4	+2·6	+2·7	+3·4	+2·6	+2·4
Central Provinces and Berar	+2·3	+3·0	+3·0	+2·4	+2·3	+2·5	+3·3
Deccan . .	+3·5	+3·3	+3·0	+3·7	+4·0	+4·4	+4·6

The day temperature was very largely in excess and the night temperature generally considerably below the normal during this period, more especially in Bengal and the Gangetic Plain. The following gives the variations of the night temperature from the normal during this period :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN NIGHT OR MINIMUM TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	14th October.	15th October.	16th October.	17th October.	18th October.	19th October.	20th October.
	°	°	°	°	°	°	°
Bengal . .	—1·3	—2·1	—2·3	—2·5	—2·4	—3·1	—3·9
Chota Nagpur .	—2·3	—1·9	—2·2	—1·8	—1·9	—2·5	—3·0
Bihar . .	—3·9	—3·6	—2·4	—2·7	—4·0	—4·2	—3·8
North-Western Provinces.	—2·9	—3·6	—4·4	—4·0	—4·1	—4·5	—3·1

Weather was slightly disturbed and showery with numerous thunderstorms in Burma during the period from the 14th to the 19th.

A shallow depression, the third of the month, advanced from Baluchistan to Sind on the 21st and marched in the same direction as the previous two storms across the South Punjab and filled up on the 23rd. It gave light snow showers on the higher elevations in Kashmir. A feeble cool wave reduced temperature in Upper India on the 22nd and 23rd.

Weather was showery in Lower Burma on the 21st and 22nd, when dry weather set in and prevailed over that area as well as in Southern India until the 26th. The chief feature of the period, from the 20th to the 26th, was excessive temperature in the interior of India, including Rajputana, the North-Western Provinces, Central India, Berar, the Deccan and the Central Provinces. This is fully shown by the following data for the period :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	20th October.	21st October.	22nd October.	23rd October.	24th October.	25th October.	26th October.
	°	°	°	°	°	°	°
Rajputana .	+1·4	+2·8	+4·5	+6·0	+4·0	+5·5	+4·8
Central India .	+2·4	+1·5	+2·6	+3·1	+4·1	+4·6	+4·6
North-Western Provinces.	+0·8	+0·4	+2·3	+2·6	+4·1	+3·8	+5·3
Central Provinces and Berar.	+3·3	+3·8	+3·5	+3·6	+4·2	+5·1	+6·0
Deccan . .	+4·6	+4·4	+4·0	+3·8	+3·3	+3·9	+4·1

Presssure was increasing at that time in Northern India relatively to Southern India, and moderate gradients for north-east winds obtained in the Bay from the 27th to the end of the month. Southern India hence received light to moderate showers from the 27th to the 30th.

Temperature was excessive during this period over the interior as is shown by the following data :—

DISTRICT.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	27th October.	28th October.	29th October.	30th October.
	°	°	°	°
Bengal	+1·8	+2·6	+2·1	+2·4
Bihar	+2·2	+2·7	+4·0	+4·4
Chota Nagpur	+5·5	+3·9	+4·8	+6·9
North-Western Provinces and Oudh.	+4·3	+5·1	+5·8	+5·5
Rajputana	+3·8	+4·0	+3·3	+2·0
Central India	+5·3	+5·6	+5·3	+6·0
Central Provinces and Berar .	+5·9	+6·1	+6·3	+5·9
Bombay Coast	+2·7	+2·2	+1·6	+3·6
Deccan	+3·4	+4·1	+4·2	+3·9

A noteworthy feature of this period was that the night temperature was almost as largely above the normal as the day temperature over a large part of that area.

The following comparative data for the 29th illustrate this feature:—

DISTRICT.	VARIATION FROM NORMAL OF MEAN		
	Maximum temperature.	Minimum temperature.	Daily temperature.
	°	°	°
Bengal	+4·0	+0·2	+2·1
Bihar	+6·0	+1·9	+4·0
Chota Nagpur	+7·4	+2·2	+4·8
North-Western Provinces and Oudh	+6·8	+4·8	+5·8
Rajputana	+4·2	+4·2	+4·2
Central India	+7·3	+3·3	+5·3
Central Provinces and Berar	+7·9	+4·7	+6·3
Bombay Coast	+1·8	+1·4	+1·6
Deccan	+7·2	+1·2	+4·2

Pressure.—As is usual in October, the mean distribution of pressure in October 1896 was very uniform. Pressure was very slightly lower in the Bay than elsewhere, but the total range of the mean pressure of the month over India was about ·09″.

The mean pressure of the month of the whole land area averaged ·040″ above the normal, and was hence in large excess. Relatively to this general condition pressure was in local defect in Northern India and Burma. The local deficiency slightly exceeded ·02″ in Orissa, the Submontane districts of the Gangetic Plain and in Central Burma. Pressure was in relative excess in Central India and the Peninsula. The excess was large and marked in the Madras Coast districts from Gopalpur to Madras and the adjacent districts of the interior. It was more than ·04″ in amount at Cocanada (+·048″) and Masulipatam (+·047″). The vertical pressure anomalies were generally negative, but were very small in amount and of little significance. The following table gives pressure variation data for the eleven meteorological provinces of the empire:—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of October 1896 from normal.	Pressure anomaly, October 1896.
	″	″
Burma Coast and Bay Islands	+·023	—·017
Burma Inland	+·004	—·036
Assam	+·036	—·004
Bengal and Orissa	+·038	—·002
Gangetic Plain and Chota Nagpur	+·026	—·014
Upper Sub-Himalayas	+·022	—·018
Indus Valley and North-West Rajputana	+·041	+·001
East Rajputana, Central India and Gujarat	+·036	—·004
Deccan	+·052	+·012
West Coast	+·046	+·006
South India	+·061	+·021

Temperature.—In consequence of the very early termination of the monsoon rains in India and the prevalence of unusually fine and dry weather, the variations of the mean temperature conditions of the month from the normal were unusually large. The day temperature was more or less in excess over the whole of India, and the night temperature (due to excessive radiation) was below the normal over a large part of India. The diurnal range was hence much greater than usual. The excess was greatest in the eastern districts of the North-Western Provinces, where it averaged about 11° above the normal.

The mean day or maximum temperature was above the normal over the whole of India with perhaps two or three local exceptions. The excess was large over the whole of the interior and ranged between 7° and 9° over the large area, including the Deccan, Khandesh, Berar, the Central Provinces, and the greater part of Central India and the eastern half of the North-Western Provinces. It was absolutely greatest at Allahabad (+9°·2), Poona (+8°·6), Khandwa (+8°·5) and Akola (+8°·4).

The mean night or minimum temperature of the month was in slight to moderate excess in Lower Burma, the western half of the Peninsula, the Punjab, East Rajputana and the adjacent districts of the North-Western Provinces. The excess was slightly above 2° in Berar and the Konkan and the North and East Punjab, and was absolutely greatest at Jhansi (+3°·9) and Lahore (+3°·7).

The mean minimum temperature of the month was below the normal over the remainder of India. The deficiency was most marked in Central Bengal, North Bihar, the eastern districts of the North-Western Provinces and the Central Provinces. It was apparently greatest at Benares (—4°·3) and Sambalpur (—4°·2).

The mean temperature of the month was below the normal in Baluchistan and the Indus Valley districts and Upper Assam, and locally at a few stations in Bengal and perhaps at Madura. It was above the normal over the remainder of India and in Burma. The excess was more than 2° over the greater part of the interior and the west coast districts, and was more than 4° in amount in an area, including the greater part of the Deccan represented by the stations for which data are given below:—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, October 1896.	Normal, October.	Variation of actual from normal.
	°	°	°
Amraoti	83·6	78·4	+5·2
Malegaon	82·4	77·4	+5·0
Poona	81·9	76·9	+5·0
Khandwa	82·7	78·0	+4·7
Akola	82·5	78·1	+4·4
Sholapur	82·7	78·5	+4·2
Bellary	84·2	80·1	+4·1

Temperature at the lower hill stations in Upper India was slightly higher than usual. It was below the normal at Leh (—0°·3), Kailang (—1°·6) and Darjeeling (—0°·2) and also at Quetta (—2°·5). The following table gives comparative mean temperature data of the month 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	+0·1	+0·4	+0·3
Burma Inland	+0·8	0	+0·4
Assam	+0·9	—1·3	—0·2
Bengal and Orissa	+2·6	—1·3	+0·6
Gangetic Plain and Chota Nagpur	+5·9	—1·9	+2·0
Upper Sub-Himalayas	+2·4	+0·5	+1·4
Indus Valley and North-West Rajputana.	+1·1	—0·6	+0·3
East Rajputana, Central India, and Gujarat.	+4·6	+0·8	+2·7
Deccan	+7·0	—0·1	+3·5
West Coast	+2·7	+1·8	+2·3
South India	+3·2	—0·2	+1·5

Winds.—Were on the mean of the month more westerly than usual in Lower Burma and at Port Blair, due to the early withdrawal of the monsoon. They were remarkably steady and somewhat stronger than usual in Bengal, and contained an abnormal westerly component. The mean winds of the month had a strong westerly element in the Gangetic Plain, Rajputana and Central India, and were on the whole stronger and steadier than usual. Very variable winds, on the other hand, prevailed in the Punjab. There was an abnormal preponderance of northerly winds at the Himalayan hill stations, where the air movement was even steadier and stronger than usual. Winds were, on the whole, feebler than usual in the Peninsula, more especially in the coast districts. They were more easterly than usual in the interior of the Peninsula.

The air movement was in fact very abnormal over the greater part of the country, and such as usually prevails in the second half of November and in December.

Humidity and Cloud.—The mean humidity conditions of the month were practically normal at Port Blair and in Lower Burma, and also in the Coromandel coast districts. Over the whole of the remainder of India the air was unusually dry and humidity was more or less considerably below the normal. In fact over the greater part of the interior themonth was the driest on record for the season of year.

The mean humidity was most largely in defect in those districts of the interior which usually receive light to moderate rain during a part or the whole of the month, but which received no rain in October 1896, and included Bihar, Chota Nagpur, the eastern districts of the North-Western Provinces, Central India, Berar, the Central Provinces and the Deccan. Over the whole of this area the mean humidity of the month was more than 10 below the normal. The deficiency was more than 20 at stations for which data are given below:—

Station.	Absolute humidity.			Relative humidity.		
	Actual, October 1896.	Normal, October.	Variation from normal.	Actual, October 1896.	Normal, October.	Variation from normal.
	"	"	"	%	%	
Allahabad	·406	·630	—·224	39	68	—29
Hazaribagh	·393	·545	—·152	42	65	—23
Saugor	·326	·507	—·181	31	57	—26
Khandwa	·393	·543	—·150	36	58	—22
Sutna	·350	·515	—·165	35	57	—22
Pachmarhi	·320	·448	—·128	42	63	—21

The air was much drier than usual at the lower hill stations in Upper India, but was damper at Leh and Kailang, chiefly due to the presence of a larger amount of vapour in the air.

The air was somewhat drier than usual in the Konkan and much drier in the Deccan and Mysore, more especially at Bellary (—23).

There was more cloud than usual in two areas. The first included Lower Burma and the south-east of the Bay and Andaman Sea, and the second Baluchistan, Sind and the Punjab. Cloud was in large excess at Leh and Kailang and over the Kashmir-Himalayas. Cloud was more or less considerably in defect over the whole of India excepting the districts named above. The deficiency was very large over the greater part of the area and the mean cloud amount was less than, (*i.e.*, skies were practically clear) throughout the month in the large area, including West Bengal, Chota Nagpur, Bihar, the eastern districts of the North-Western Provinces and Central India, the greater part of the Central Provinces and the Konkan.

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	+·019	0	+0·7
Assam	—·023	— 3	—1·4
Bengal and Orissa	—·077	—10	—2·6
Gangetic Plain and Chota Nagpur	—·141	—19	—2·6
Upper Sub-Himalayas	—·089	—10	+0·7
Indus Valley and North-West Rajputana.	—·081	— 8	+1·1
East Rajputana, Central India and Gujarat.	—·097	—12	—1·2
Deccan	—·141	—19	—2·3
West Coast	+·031	— 4	—1·4
South India	—·059	—10	—1·8

Rainfall.—The most important feature of the month was the scantiness of the rainfall. Practically no rain fell over Deltaic and Central Bengal, Orissa, Chota Nagpur, Bihar, the North-Western Provinces, Rajputana, Central India, Berar, the Central Provinces, and a large part of the Deccan and the Punjab. The rainfall of the month was more or less considerably in defect over the remainder of India, except in South Madras and in Burma. Burma received its normal amount and the South Madras divisions 21 per cent. above the normal. The deficiency was not only large but serious in those districts, which usually receive moderately heavy rain in October, including North-Eastern India and the greater part of the Peninsula, and was greatest absolutely in Bengal, Bihar, North Madras, Central India, Mysore, Konkan, Khandesh and Berar. It was absolutely greatest in the Madras coast districts and Orissa, in which it ranged between 5 and 9 inches.

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

METEOROLOGICAL PROVINCE.	RAINFALL.		
	Mean actual, October 1896.	Mean normal, October.	Variation from normal. *
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	7·96	9·40	—1·61
Burma Inland	2·33	5·57	—2·61
Assam	1·69	5·00	—3·30
Bengal and Orissa	0·30	5·16	—4·91
Gangetic Plain and Chota Nagpur	0·01	2·55	—2·54
Upper Sub-Himalayas	0·12	0·46	—0·34
Indus Valley and North-West Rajputana.	0·06	0·04	+0·02
East Rajputana, Central India and Gujarat.	0·03	0·65	—0·61
Deccan	0·19	2·96	—2·74
West Coast	3·23	7·90	—4·34
South India	3·38	7·94	—4·34

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

Atmospheric Pressure.

The mean pressure of the Indian land area was ·040″ above the normal, and was hence in unusually large excess.

Pressure was relatively to the general condition in local defect or the anomalies were negative in Northern India (except East Bengal) and Burma. The local deficiency was generally small in amount, but exceeded ·02″ in three smallish areas, for which data are given below :—

AREA.	STATION.	Variation of mean 8 A.M. pressure of October 1896 from normal.	Pressure anomaly, October 1896.
		"	"
Burma	Rangoon	+·011	—·029
	Toungoo	+·015	—·025
	Thayetmyo	+·004	—·036
North Bihar	Darbhanga	+·016	—·024
	Patna	+·017	—·023
North-Western Provinces and South-East Punjab.	Gorakhpur	+·017	—·023
	Roorkee	+·010	—·030
	Meerut	+·016	—·024
	Sirsa	+·018	—·022
	Delhi	+·018	—·022

Pressure was in excess relatively to the general condition over the remainder of India. The excess was largish

in amount in a part of Madras and the Deccan defined by the stations, for which data are given below :—

STATION.	Variation of mean 8 A. M. pressure of month from normal.	Pressure anomaly.
	″	″
Cocanada	+·088	+·048
Masulipatam	+·087	+·047
Hyderabad (Deccan)	+·074	+·034
Vizagapatam	+·071	+·031
Madras	+·063	+·023

The mean pressure of the month was very uniform over the land area and was very slightly lower in the Bay, Bengal and the Gangetic Plain than elsewhere. The total range of the mean 8 A.M. pressure of the month was only ·09″ and of the mean pressure (deduced from the 10 and 16 hours readings) about ·10″.

Pressure was in slight excess at the hill stations, but by smaller amounts than at the neighbouring plains stations, and hence the vertical anomalies were negative and generally small in amount. They were large in the Sikkim. Himalayas as represented by the station of Darjeeling. The following gives data for eight pairs of stations :—

HILL STATION.	Variation of pressure from normal. (*a*)	Neighbouring plain station.	Variation of pressure from normal. (*b*).	Vertical pressure anomaly or (*a*)—(*b*).
	″		″	″
Leh . . .	+·027	Lahore . .	+·027	0
Murree . . .	+·032	Rawalpindi .	+·043	—·011
Simla . . .	+·027	Ludhiana . .	+·021	+·006
Chakrata . .	+·047	Roorkee . .	+·010	+·037
Darjeeling . .	+·007	Dhubri . .	+·029	—·022
Quetta . . .	+·043	Jacobabad . .	+·049	—·006
Mount Abu . .	+·033	Deesa . .	+·046	—·013
Wellington . .	+·041	Coimbatore. .	+·050	—·009

The chief abnormal features of the pressure conditions were similar to those of the preceding month. The mean pressure of the whole area was in somewhat greater excess in October than in September. Relatively to the general conditions pressure was locally in defect in Northern India and Burma, and in excess in Central and Western India and the Peninsula in both months, the only important difference being that the area of greatest excess of pressure was transferred from the Central Provinces Berar and Central India south-eastwards into the Circars, Hyderabad and the North Coromandel coast districts. These pressure conditions in October were as unfavourable to the occurrence of rain in the northern and central districts of the Peninsula as the conditions which obtained in September.

The chief features of the pressure distribution of October 1896 were :—

(1) Large general excess of pressure in the Indian area averaging ·040″ in amount.

(2) The mean pressure of the month was very uniform in amount over the greater part of the area. It was slightly lower in the Bay and Bengal than elsewhere.

(3) Relatively to the general conditions pressure was locally in slight to moderate defect in Northern India and Burma. The deficiency was greatest in Lower and Central Burma. Pressure was locally in slight to largish excess in the Peninsula. These conditions almost invariably accompany an early withdrawal of the monsoon currents from Northern India.

(4) The vertical pressure anomalies were small in amount and generally negative, but were of little significance.

Barometric depressions of the month.

Pressure at the commencement was above the normal over nearly the whole of India. The excess was greatest in the Deccan and the Circars. Southern India, (*i.e.*, the Peninsula to the south of Latitude 14°N) obtained light to moderate showers on the 1st, 2nd and 3rd.

Weather was very feebly disturbed during this period in Upper India, and a very shallow depression advanced eastwards from Sind on the 1st, across North Rajputana on the 2nd and 3rd and disappeared during the next 24 hours. The disturbance gave snow on the Afghan hills, and probably also on the Kashmir mountains on the 2nd and 3rd, and light showers on the East Punjab on the 3rd and 4th.

A rapid increase of pressure occurred in Upper India on the 3rd, and pressure was on the morning of the 4th in large excess in the Indus Valley frontier districts.

Fine dry weather prevailed in India generally during the next four days from the 5th to the 8th, and very dry westerly winds obtained in the Gangetic Plain.

Pressure gave way on the 5th in Burma and the north-east of the Bay, and a shallow depression lay over Lower Burma on the 5th. Fine clear dry weather held in the

Andaman sea, and hence, in the absence of a humid current in the south-east and centre of the Bay, the depression failed to develop and gave no rain to Burma. It filled up on the 8th, and pressure was on the 9th in slight excess in the Peninsula and in slight defect in Burma and normal elsewhere. The pressure changes were small in amount on the 9th, 10th and 11th, and fine dry weather prevailed over the whole area, except in South India and Burma. Lower Burma had light sporadic showers on the 9th, 10th and 11th, and Southern India from the 9th to the 12th.

Pressure increased considerably on the 12th, and was in moderate to large general excess on the 13th and 14th, the excess being most pronounced in the Deccan and Madras. A very feeble depression of no importance passed eastwards across the South Punjab and North Rajputana on the 12th and 13th.

The pressure changes during the next four days were almost, without exception, small in amount and of little importance. The chief feature of the pressure distribution during this period was its uniformity. Burma received moderate daily showers, chiefly during thunderstorms, from the 14th to the 19th.

Pressure increased slightly to briskly over the whole Indian area on the 19th, and was very steady during the next three days.

Southern India obtained light local showers during this period, and fine dry weather continued over the remainder of India. Pressure was as before in general excess, the excess being most pronounced in Upper Burma, the Deccan and Madras.

A very shallow depression drifted across the South Punjab on the 21st, 22nd and 23rd. It gave some showers of hail in the lower ranges of the Punjab and Kashmir-Himalayas, and moderate snow on the higher ranges.

The pressure changes were of little significance during the remainder of the month, and were of the oscillatory character usual in fine weather in India.

Pressure was more or less in excess during this period and as hitherto the excess was largest in amount in the Deccan and Madras coast districts. The Coromandel coast districts obtained light to moderate showers from the 26th to the 29th. They were confined to a very narrow belt along the sea coast. Fine dry weather obtained over the whole of India at the end of the month.

Between the 12th and 15th of the month a small but apparently concentrated cyclonic storm passed westward up the Gulf of Aden. It gave hard cyclonic gales to the various vessels which encountered the storm and caused the loss with all on board of the S.S. *Tuna* off the Somali coast on the 14th. Details of the storm will be found in the marine reports of the above dates.

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

I.—THE AFGHAN MOUNTAIN DISTRICTS.

Kurrum district.—Snow first fell on the higher ranges on the 2nd October, hail having fallen for some days previously, except on the north slopes of the hills, snow soon melted. The snowfall was local and confined to the Sufed Koh range.

Up to the end of October the snowfall was not sufficient, except during the storms of the first week of the month, to close any of the passes.

II.—PUNJAB HIMALAYAS.

Kailang.—There was light to moderate snow on the higher mountains on the 15th, 21st and 26th. The fall was apparently small in amount.

Chitral.—Colonel Davidson, writing from Drosh, Chitral, on the 2nd October, says "that during the last few days there has been rain every day in the valley, and on the hills frequent snowfalls. It is rather early in the season to get snow so low and so frequently, and the weather is very cold."

Upper Sutlej Valley (Bushahr).—There were three falls of snow in the Upper Sutlej Valley during the second-half of October. The first two falls were light and descended to an elevation of about 10,000 feet. The third fall, which occurred on the 29th, gave between two and three feet of snow down to elevation of about 10,000 feet. It is estimated that the snow on Chencil pass from the Pabor Valley to the Rupin Valley was about three feet, and on the Rupin over the range to the Sanghi Valley from four to five feet. As far as can be observed the snow storms extended along the higher slopes of the Upper Sutlej Valley as far as Hattu.

Summary of special Storm Reports.

Cyclonic storms are of occasional occurrence in October and are sometimes of exceptional intensity. One was generated in the Bay during the month, but was of slight 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 the only storm of which a special report was received:—

3rd—Hailstorm in the Nohar Tahsil of the Bickaneer State. The storm came from west. The largest stones weighed one tola.

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

Arabian Sea.—Except in the extreme south, where moderate westerly winds prevailed, winds were very unsteady, though chiefly from northerly directions, over the Arabian sea during the first seven days of the month. Weather was more or less disturbed with occasional squalls and showers in the region of westerly winds but was practically fine over the remainder of the sea. The mean air movement ranged from 2·5 on the 3rd to 3·1 on the 7th. On the 8th westerly winds, force 4 to 6, prevailed over the Arabian Sea as far north as Lat. 12° N., and light to moderate unsteady northerly winds in the remaining parts of the sea. Weather was generally fine to cloudy in the morning but became unsettled with heavy rain to the east and south-east of Socotra in the afternoon. Thus the S.S. *Hispania* in Lat. 11¼° N. and Long. 60¾° E. experienced overcast weather at 8 A.M. and constant rain at 4 P.M. No important change occurred during the next two days, except that the winds strengthened and weather became more disturbed in the neighbourhood of Socotra. On the 12th, strong east-north-east winds, force 5 to 7, prevailed to the north of Socotra, and probably southerly winds to the south and east, and weather was squally over that area. Unfortunately the information for this region is very limited, but it shows that a storm formed rapidly near and to the north or north-east of Socotra during the next 24 hours, and marching westwards lay over the entrance to the Gulf of Aden in about Lat. 12° to 13° N. and Long. 49½° E. at 8 A.M. of the 13th. The strongest winds at 8 A.M. of this day were of force 8 in Lat. 14° N. and Long. 50° E. The storm continued to march slowly westwards during the next 24 hours, intensifying at the same time, and at 8 A.M. of the 14th was central in about Lat. 12° N. and Long. 45° to 46° E. It was occasioning severe gales of wind and squalls of hurricane force and a very high sea over the Gulf. The S.S. *Chancellor* (probably nearest to the centre) in Lat. 12° 29′ N. and Long. 45°21′ E. had northerly gales of force 9 with terrific squalls, and it was blowing a cyclone on board at 9 A.M. The S.S. *Sumatra* in Lat. 12°30′ N. and Long. 47¾° E. at the same hour, had south-east by east gales of force 9, continuous heavy rain and a strong cyclonic gale with squalls of hurricane force at 4 A.M. The S.S. *Tuna* foundered with all on board off the Somali coast on this day.

The storm was probably a very concentrated disturbance, as its effect on the weather was confined to a very small area. This is confirmed by the observations of Aden, where pressure increased slightly to briskly from the 12th to the 15th and weather remained fine, although the wind increased from an average of 10 miles an hour on the 12th to 16 miles on the 14th. The storm continued to march westwards and probably passed into Abyssinia.

Weather improved rapidly in its rear, and on the 15th was fine over the Gulf of Aden with light airs and calms. Weather was unaffected in the Arabian Sea during the existence of the storm. North-easterly winds set in over that area on the 13th and 14th and held more or less steadily during the remainder of the month.

Bay of Bengal.—Exceedingly unsteady and variable winds obtained during the first sixteen days of the month over the north and west of the Bay, north-westerly to westerly winds over the centre and ordinary south-west winds over the south. The air movement ranged in force between 2 and 5 in the region of south-westerly winds and thence decreased in all directions and was lightest in the north of the Bay, where light airs of force 1 prevailed. Weather was fine during this period in the area of light unsteady airs, but was disturbed with frequent squalls and rain over the centre and south.

Winds fell off considerably in strength in the centre and south on the 17th and 18th, and became unsteady. Very unsteady airs prevailed over the Bay during the next six days. The mean air movement for the whole of the Bay was only 1·3 on the 22nd, 1·9 on the 23rd and 1·5 on the 24th. There was a tendency during this period to the establishment of northerly winds over the north and centre which became marked on the 25th. Fairly steady northerly winds obtained generally over the Bay as far south as Lat. 6° or 7° N. during the remainder of the month. Except in the south and centre, where showers were of occasional occurrence, weather was fine over the Bay during the second half of the month.

Equatorial Belt.—Conditions were as abnormal in the Equatorial Belt as in the Bay of Bengal and Arabian Sea. Moderate to strong south-east trade winds obtained over this region during the first seven days and very unsteady light winds during the next eighteen days. The most noteworthy feature of this period, from the 8th to the 25th, was the occasional extension of northerly winds right across the Equator as far south as Lat. 5° S., thus showing the extreme weakness of the trade current. This is confirmed by the data of the Seychelles, where light northerly winds (average hourly velocity 4 miles) obtained on nine days during the period from the 9th to the 23rd. Moderate easterly winds prevailed over the Belt during the remainder of the month.

From the preceding account of the weather in the Indian Seas, it will be seen that weather was unusually quiet, more especially in the Bay of Bengal, which was remarkably free from cyclonic disturbances. The meteorology of the Indian Seas was in fact very abnormal and was characterized by the very early withdrawal of the monsoon currents and the consequent establishment of the so-called north-east monsoon at least four to five weeks before the normal date. Another noteworthy feature was the extreme weakness and unsteadiness of the south-east trade winds in Equatorial regions.

Temperature of the Air.

The mean temperature conditions of the month were very abnormal in consequence of the early withdrawal of the monsoon from North-Western India in August, and from Central India, the Deccan and North-Eastern India in September, and of the very scanty rainfall over the whole Indian area.

The mean maximum or day temperature of the month was above the normal at all stations with the exception of Peshawar, Lahore, Sibsagar, and perhaps Moulmein, Diamond Island and Madura. The excess was more than 2° over nearly the whole of India and was more than 5° over the large area including the North-Western Provinces, Central India, Khandesh, Berar, the Central Provinces and the Deccan. It was more than 7° in amount at stations for which comparative data are given below:—

STATION.	MEAN MAXIMUM TEMPERATURE		
	Actual, October 1896.	Normal, October.	Variation of actual from normal.
	°	°	°
Allahabad	99·1	89·9	+9·2
Poona	96·1	87·5	+8·6
Khandwa	98·4	89·9	+8·5
Akola	98·5	90·1	+8·4
Sholapur	97·1	89·1	+8·0
Amraoti	97·2	89·4	+7·8
Sutna	95·0	87·4	+7·6
Benares	97·5	89·9	+7·6
Malegaon	97·2	89·6	+7·6
Cuddapah	97·3	89·9	+7·4
Indore	94·4	87·1	+7·3
Kurnool	96·5	89·3	+7·2
Jubbulpore	94·0	86·8	+7·2

One of the most remarkable features of the meteorology of the month was hence the abnormally high day temperature over the whole of the interior, and more especially in the area represented by the stations for which data are given above.

The mean minimum or night temperature of the month was higher than usual over Lower Burma, the western half of the Peninsula and a part of the Punjab and Rajputana. The excess was more than 2° in the area represented by the stations for which data are given below:—

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, October 1896.	Normal, October.	Variation of actual from normal.
	°	°	°
Surat	74·2	70·5	+3·7
Bombay	78·7	76·2	+2·5
Amraoti	70·0	67·5	+2·5
Ratnagiri	75·9	73·5	+2·4
Malegaon	67·6	65·3	+2·3
Jhansi	71·4	67·5	+3·9
Lahore	63·5	59·8	+3·7
Sialkot	64·3	61·7	+2·6
Rawalpindi	58·3	55·9	+2·4
Sirsa	64·6	62·5	+2·1

The mean night temperature was below the normal over the remainder of India. The deficiency was moderate to considerable in amount in parts of Bengal, the North-Western Provinces, and the eastern districts of the Central Provinces, and was more than 3° in amount

at the stations for which comparative data are given in the following table :—

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual, October 1896.	Normal, October.	Variation of actual from normal.
	°	°	°
Benares	64·4	68·7	—4·3
Sambalpur	68·0	72·2	—4·2
Jessore	71·4	74·9	—3·5
Berhampore	71·2	74·5	—3·3
Gorakhpur	67·1	70·2	—3·1

The data for one or two of these stations, more especially Sambalpur and Benares, are not very satisfactory.

The mean temperature of the month was, with a few local exceptions, above the normal. The excess was more than 2° in amount over the greater part of the interior, including the Deccan, West Coast districts, Berar, North Bombay, the Central Provinces, Central India, Rajputana and the greater part of the North-Western Provinces.

The mean temperature of the month was more than 4° above the normal at the following stations in Berar, the Deccan and Central India :—

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, October 1896.	Normal, October.	Variation of actual from normal.
	°	°	°
Amraoti	83·6	78·4	+5·2
Malegaon	82·4	77·4	+5·0
Poona	81·9	76·9	+5·0
Khandwa	82·7	78·0	+4·7
Akola	82·5	78·1	+4·4
Sholapur	82·7	78·5	+4·2
Bellary	84·2	80·1	+4·1

The highest maximum temperatures were generally registered during the first week of the month and the lowest minimum temperatures during the second week of the month. The absolute maximum temperatures recorded at many stations were higher than have been previously registered in the month of October, and it was hence the hottest October on record. The following gives data in illustration of this feature :—

STATION.	Highest maximum temperature recorded in October 1896.	Date on which recorded.	Highest maximum temperature recorded in October previous to 1896.	Year in which recorded.
	°		°	
Allahabad	105·1	3rd	106·7	1877
Mooltan	105·4	1st and 2nd	105·4	1895
Hyderabad	110·2	2nd	109·2	1895
Kurrachee	107·9	1st	105·7	1886
Jeypore	103·5	1st and 2nd	101·1	1885
Deesa	106 4	1st	106·9	1895
Agra	106·0	3rd	107·7	1877
Sholapur	101·2	7th	95·9	1888
Poona	97·5	4th, 5th, 6th and 7th.	94·0	1891
Malegaon	99·9	3rd	96·0	1885 and 1887.
Akola	102·3	5th and 6th	98·7	1877
Khandwa	100·7	2nd, 3rd and 5th	98·6	1877
Jubbulpore	98·0	4th	95·7	1877
Secunderabad	97·7	5th and 6th	94·6	1877
Bellary	102·2	7th	99·3	1876

The preceding data indicate that at several of these stations maximum temperatures were recorded which were from 3° to 5° higher than have been previously observed in the month of October. Both the day and night temperatures, and hence also the mean temperature, varied slightly, but irregularly, from the normal at the hill stations in the Punjab and Kashmir Himalayas. Temperature was below the normal at Quetta, Murree, Leh and Kailang.

STATION.	MEAN DAILY TEMPERATURE.		
	Actual, October 1896.	Normal, October.	Variation of actual from normal.
	°	°	°
Quetta	54·5	57·0	—2·5
Leh	41·8	42·1	—0·3
Kailang	40·8	42·4	—1·6
Murree	59·9	61·4	—1·5
Simla	56·9	56·7	+0·2
Ranikhet	63·5	61·6	+1·9
Darjeeling	55·1	54·9	+0·2

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

Province.	Division.	Actual Temperature.					Variation from normal of month of		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	
Burma	Tenasserim	87·5	74·3	80·9	13·2	19·5	−0·3	+0·9	−1·2
	Lower Burma (Deltaic)	87·3	77·2	82·3	10·1	17·1	+0·4	+1·0	−0·6
	Central do.	91·6	75·9	83·8	15·7	26·0	?	?	?
	Upper do.	88·2	67·6	77·9	20·6	33·3	+0·8	0	+0·8
	Arakan	86·8	75·5	81·2	11·3	20·5	−1·1	−1·3	+0·2
Bengal and Assam	Eastern Bengal	87·2	71·8	79·5	15·4	23·7	+1·8	−0·6	+2·4
	Assam (Surma)	90·9	71·0	81·0	19·9	28·7	+2·1	−1·4	+3·5
	Do. (Brahmaputra)	85·3	70·8	78·0	14·6	24·1	+0·3	−1·2	+1·5
	Deltaic Bengal	90·9	72·6	81·8	18·3	26·5	+2·3	−1·2	+3·5
	Central do.	91·9	70·6	81·2	22·5	28·9	+3·5	−2·2	+5·7
	North do.	88·3	71·0	79·5	17·6	26·3	+1·5	0	+1·5
	Bengal Hills	58·1	43·5	50·8	14·6	26·7	0	+0·5	−0·5
	Orissa	91·5	73·6	82·6	17·9	25·2	+3·5	−2·6	+6·1
	Chota Nagpur	89·2	65·4	77·3	26·3	31·6	+4·8	−1·0	+5·8
	Bihar (South)	95·1	69·5	82·3	25·5	34·4	+5·5	−1·5	+7·0
	Do. (North)	91·8	69·3	80·6	22·5	32·6	+3·4	−1·5	+4·9
North-Western Provinces and Oudh.	North-Western Provinces (East)	98·3	65·2	81·8	33·1	42·8	+8·4	−3·0	+11·4
	Oudh (South)	97·2	63·6	80·4	33·6	46·1	+6·3	−2·1	+8·4
	Do. (North)	95·2	64·8	80·0	30·4	40·4	?	?	?
	North-Western Provinces (Central)	99·0	66·9	83·0	32·1	43·3	+6·9	+3·9	+3·0
	Do. do. (West)	96·4	65·5	81·0	30·9	43·8	+4·9	+0·3	+4·6
	Do. do. (Submontane East)	94·5	67·1	80·8	27·4	35·0	+5·8	−3·1	+8·9
	Do. do. (do. West)	90·7	60·6	75·7	30·1	41·9	+4·1	−1·9	+6·0
	Do. do. (Hills)	67·9	53·4	60·7	14·5	26·1	+1·4	+1·5	−0·1
Punjab	Punjab (South-East)	95·0	67·1	81·1	27·9	38·8	+3·2	−0·9	+4·1
	Do. (South)	97·1	64·6	80·8	32·5	50·5	+1·2	+2·1	−0·9
	Do. (Central)	93·0	63·5	78·3	29·5	47·9	−0·2	+3·7	−3·9
	Do. (Submontane)	93·4	63·3	78·3	30·1	44·2	+1·0	+1·4	−0·4
	Do. (Hill Districts)	63·8	43·5	53·6	20·5	37·5	−0·2	−1·1	+0·9
	Do. (North)	88·6	58·0	73·3	30·6	46·0	+1·4	+0·9	+0·5
	Do. (West)	94·8	62·7	78·8	32·1	50·2	+1·8	−0·3	+2·1
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	87·3	75·5	81·4	11·8	18·0	+3·0	+1·5	+1·5
	Madras (South Central)	90·3	70·8	80·6	19·5	29·9	+0·9	+0·7	+0·2
	Coorg	77·8	63·1	70·5	14·7	21·3	+2·4	+1·0	+1·4
	Mysore	85·3	66·1	75·7	19·2	26·3	+3·4	+0·1	+3·3
	Konkan	88·4	76·9	82·7	11·5	21·3	+2·4	+2·2	+0·2
	Bombay Deccan	94·4	67·7	81·0	26·7	35·2	+7·6	+4·2	+3·4
	Hyderabad (North)	93·6	67·7	80·7	25·9	35·0	?	?	?
	Khandesh	96·0	66·1	81·1	29·9	40·4	+7·6	+2·3	+5·3
Central Provinces and Berar.	Berar	97·9	68·2	83·1	29·7	39·7	+8·1	+1·5	+6·6
	Central Provinces (West)	96·3	67·2	81·8	29·1	38·5	+6·8	+0·1	+6·7
	Do. (Central)	94·1	63·9	79·1	30·2	39·9	+7·1	−1·2	+8·3
	Do. (East)	92·9	68·5	80·8	24·4	33·0	+4·6	−2·5	+7·1
Bombay (North)	Gujarat	97·2	73·6	85·4	23·6	31·2	+2·0	+3·7	−1·7
	Kathiawar and Cutch	96·0	70·9	83·5	25·1	38·3	+3·1	−0·1	+3·2
	Sind	96·9	67·6	82·3	29·3	50·3	+1·2	−0·9	+2·1
	Baluchistan Hills	73·4	38·4	55·9	35·1	54·3	−3·6	−1·4	−2·2
Rajputana and Central India.	Central India (East)	94·7	65·4	80·1	29·3	39·6	+6·7	+0·1	+6·6
	Rajputana (East), Central India (West)	97·3	64·9	81·1	32·5	44·3	+4·3	+0·1	+4·2
	Do. (West)	97·6	71·2	84·4	26·4	43·6	+2·0	−1·3	+3·3
Madras	East Coast (North)	92·3	72·8	82·6	19·5	29·3	+4·9	−1·9	+6·8
	Hyderabad (South)	94·8	68·8	81·8	26·0	35·0	+6·9	−1·0	+7·9
	Madras (Central)	96·7	72·8	84·3	25·0	35·4	+7·2	+0·6	+6·6
	East Coast (Central)	92·1	74·7	83·4	17·4	27·9	+2·4	−0·6	+3·0
	Do. (South)	90·3	75·1	82·7	15·2	28·0	+1·3	+0·2	+1·1
	Madras (South)	89·5	75·7	82·6	13·8	23·6	−1·8	+0·1	−1·9

At the commencement of the month temperature was above the normal over the whole of India except the Madras Coast districts and Assam. The excess was most marked in Central India. The following gives temperature variation data for the 24 hours preceding 8 A.M. of the 1st :—

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

No change of importance occurred in the temperature conditions until the 4th, when a cool wave appeared in the north-west frontier and extended eastwards across Northern India during the next four days. The following data illustrate the progress of the wave :—

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

Temperature was in moderate to large excess in the Deccan and Madras during this period. The following data for the 8th indicate the conditions which obtained at that time :—

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

Temperature increased in Northern India and decreased in the Peninsula on the 9th and 10th, and the variations from the normal conditions were small and unimportant during the next three days, *i.e.*, the 11th to the 13th.

Temperature increased on the 13th and 14th, and was in considerable excess in the area including Central India, Rajputana and the Central Provinces. A very feeble cool wave affected the frontier districts on the 16th and 17th. It slightly displaced southwards the area of greatest excess of temperature. The following gives data for that area from the 14th to the 17th :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	14th October.	15th October.	16th October.	17th October.
	°	°	°	°
Central India	+2·5	+2·4	+2·6	+2·7
Rajputana	+1·4	+0·7	+2·4	+2·9
Central Provinces and Berar	+2·3	+3·0	+3·0	+2·4

A noteworthy feature of the temperature conditions in Northern and Central India after the eastward march of the cool wave across Northern India was the contrast between the day and night temperature conditions, the maximum temperature being as largely in excess as the minimum temperature was in defect.

As a consequence the daily range of temperature was much greater than usual and was at many stations from 10° to 15° above the normal of the period.

The following gives comparative data for the 10th, 14th

and 18th for the provinces in which these features were most marked :—

PROVINCE.	VARIATION FROM NORMAL OF MAXIMUM TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			VARIATION FROM NORMAL OF MINIMUM TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	10th October.	14th October.	18th October	10th October.	14th October.	18th October.
	°	°	°	°	°	°
Central Provinces and Berar.	+4·5	+5·8	+5·8	—6·5	—1·3	—1·2
Central India and Gujarat.	+3·5	+4·1	+5·3	—3·7	—1·3	+0·4
North-Western Provinces and Oudh.	+4·8	+6·7	+5·8	—5·3	—2·9	—4·1
Sind and Rajputana .	+2·3	+2·9	+2·5	—1·0	—2·6	—2·1
Punjab . . .	+3·3	+2·1	+1·9	—2·9	—0·6	—1·6
Bengal and Assam .	+2·4	+3·3	+2·7	—2·8	—1·8	—2·5

Temperature continued in steady excess over nearly the whole of India during the remainder of the month. The area of greatest excess of temperature from the 18th to the 24th covered Central India, Rajputana, the North-Western Provinces, Berar, the Central Provinces and the Deccan. The following table gives data showing the average excess in these areas during this period :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	18th October.	19th October.	20th October.	21st October.	22nd October.	23rd October.	24th October.
	°	°	°	°	°	°	
North-Western Provinces and Oudh.	+0·9	+0·3	+0·8	+0·4	+2·3	+2·6	+4·1
Sind and Rajputana .	+0·2	+0·4	+1·3	+3·9	+4·5	+4·3	+3·4
Central India and Gujarat.	+2·9	+2·4	+1·9	+1·5	+2·3	+2·4	+3·3
Central Provinces and Berar.	+2·3	+2·5	+3·3	+3·8	+3·5	+3·6	+4·2
Deccan . . .	+4·0	+4·4	+4·6	+4·4	+4·0	+3·8	+3·3

Temperature increased over the whole of India during this period and was considerably above the normal on the 21st and following days. The conditions obtaining at this time are indicated by the variation data for the 23rd given in the following table :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	—0·5	+0·6	+0·1
Bengal and Assam . . .	+1·8	—1·7	+0·1
N.-W. Provinces and Oudh .	+4·2	+1·0	+2·6
Punjab	+1·5	+4·6	+3·1
Sind and Rajputana . .	+4·2	+4·3	+4·3
Central India and Gujarat .	+4·5	+0·3	+2·4
Central Provinces and Berar .	+6·8	+0·3	+3·6
Bombay	+3·2	+3·0	+3·1
Madras	+4·0	—2·9	+0·6

No important change occurred in the temperature conditions during the remainder of the month. Temperature was, as shewn in the following table, as largely in excess in Rajputana, Central India, Berar, the Central Provinces and the Deccan as during the preceding week :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	25th	26th	27th	28th	29th	30th
	°	°	°	°	°	°
North-Western Provinces and Oudh.	+3·8	+5·3	+4·3	+5·1	+5·8	+5·5
Rajputana . .	+4·8	+3·8	+3·8	+4·0	+3·3	+2·0
Central India . .	+4·6	+4·6	+5·3	+5·6	+5·3	+6·0
Central Provinces and Berar.	+5·1	+6·0	+5·9	+6·1	+6·3	+5·9
Deccan . . .	+3·9	+4·1	+3·4	+4·1	+4·2	+3·9

A feeble cool wave advanced from Baluchistan on the 28th extending into the Indus Valley frontier districts on the 29th. It only affected Upper India. The following table giving temperature variation data for the 24 hours preceding 8 A.M. of the 31st illustrates the conditions obtaining at the end of the month :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·3	—0·2	+0·6
Bengal and Assam . . .	+5·3	+0·7	+3·0
N.-W. Provinces and Oudh .	+5·8	+1·1	+3·5
Punjab	—1·0	+1·2	+0·1
Sind and Rajputana . .	+0·2	0	+0·1
Central India and Gujarat .	+4·9	+1·6	+3·3
Central Provinces and Berar .	+8·3	+3·3	+5·8
Bombay	+4·9	+2·3	+3·6
Madras	+4·9	—1·5	+7.1

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

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF WEEK ENDING.				
	10th October.	17th October.	24th October.	31st October.	For whole month.
	°	°	°	°	
Burma	+2·6	+0·2	—1·0	+0·6	+0·8
Bengal and Assam . .	+0·7	+0·4	0	+2·1	+0·8
North-Western Provinces and Oudh.	+0·9	+1·0	+1·6	+4·8	+2·3
Punjab	—1·3	+1·2	+2·1	+2·3	+1·2
Sind and Rajputana . .	—2·1	+0·6	+2·6	+2·5	+1·3
Central India and Gujarat .	+0·5	+1·2	+2·4	+4·3	+2·4
Central Provinces and Berar .	+1·5	+1 8	+3·3	+5·9	+3·1
Bombay	+3·3	+2·4	+3·1	+3·5	+3·1
Madras	+2·2	+1·6	+1·5	+1·5	+1·6

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. October 1896 was marked by the abnormal prevalence of dry land winds over the whole of Northern and Central India, and by the easterly extension of north-east winds over the north and centre of the Bay. The air movement was in fact such as usually obtains in the latter half of November and in December.

Winds were slightly weaker than usual at Port Blair and Rangoon and were very abnormal in direction in Burma and the Andamans. The chief feature was the abnormal and strongly marked westerly component. The westerly set of the winds had been a very persistent feature throughout the monsoon in the east of the Bay, but was even more marked in October than during the preceding three months.

The following gives data for three stations :—

STATION.	WIND DIRECTION.	
	Mean actual, October 1896.	Mean Normal, October.
Port Blair	S 77° W	S 5° W
Rangoon	S 22° W	S 37° E
Diamond Island	N 52° W	S 59° E

The large and abnormal westing in the winds at Port Blair was evidently due to the retreat of the monsoon winds from the north of the Bay much earlier than usual in this month.

Winds were also much steadier than usual over the whole of Chota Nagpur, Rajputana, Central India and the Gangetic Plain, and were on the whole slightly stronger. North-westerly winds obtained during the month over the whole area. The westerly element of the wind direction was stronger than usual, more especially in Rajputana and Central India. The following gives comparative data for four stations:—

STATION.	STEADINESS.			WIND DIRECTION.	
	Actual percentage, October 1896.	Normal percentage, October.	Variation from normal.	Mean actual, October 1896.	*Mean* normal, October.
Hazaribagh . .	64	34	+ 30	N 35° W	N 42° W
Allahabad. . .	61	13	+ 48	N 69° W	N 42° W
Jeypore . . .	66	37	+ 29	N 82° W	N 4° W
Nowgong . . .	61	35	+ 26	N 86° W	N 42 W

Winds were remarkably steady in Bengal and were slightly stronger than usual. They had a very strong abnormal westerly component, and the direction of the mean air movement in Bengal was similar to that which prevailed in Burma. It was, however, in part due to different causes and more especially to the strength of the movement down the Gangetic Plain. The following data illustrate the unusual steadiness and westerly deflection of the winds of the month in Bengal :—

STATION.	STEADINESS.			WIND DIRECTION.	
	Actual percentage, October 1896.	Normal percentage, October.	Variation from normal.	Mean actual, October 1896.	Mean normal, October.
Chittagong . .	52	14	+ 38	N 11° W	N 10° W
Saugor Island .	66	13	+ 53	S 64° W	N 10° E
Calcutta . . .	76	11	+ 65	S 74° W	N 48° W
Berhampore . .	58	16	+ 42	S 71° W	N 12° W

Winds were of normal steadiness but were very variable and irregular in direction in the Punjab as is shown by the following statement:—

STATION.	STEADINESS.			WIND DIRECTION.	
	Actual percentage, October 1896.	Normal percentage, October.	Variation from normal.	Mean actual, October 1896.	Mean normal, October.
Ludhiana . . .	26	24	+ 2	N 3° E	N 40° W
Peshawar . . .	27	35	— 8	S 89° E	N 54° E
Mooltan . . .	18	21	— 3	S 43° E	S 70° W

The following gives comparative data of steadiness and of the mean velocity of the air movement in different districts of Northern India during the month:—

PROVINCE OR DIVISION.	VELOCITY IN MILES PER DIEM.				STEADINESS.		
	Mean actual, October 1896.	Mean normal, October.	Variation from normal.	Percentage variation from normal.	Actual percentage, October 1896.	Normal percentage, October.	Variation from normal.
Bengal . .	79	76	+ 3	+ 4	55	15	+40
Chota Nagpur.	141	119	+22	+18	63	34	+29
Bihar . .	42	50	— 8	—16	21	4	+17
N.-W. Provinces and Oudh	51	45	+ 6	+13	41	27	+14
Punjab . .	46	42	+ 4	+10	25	23	+ 2
Rajputana .	99	103	— 4	— 4	50	25	+25
Central India .	58	70	—12	—17	70	41	+29

Winds were as unsteady at Murree as in the East Punjab, but were very steady at Leh, Kailang, Chakrata and Ranikhet. They were somewhat variable at Darjeeling, where the percentage of steadiness was 22, but to a less extent than usual in October at that station, as the normal percentage of steadiness is only 5.

The chief feature of the air movement at the hill stations was the abnormal preponderance of northerly winds. The following gives mean direction data for stations at which this feature was most strongly exhibited:—

STATION.	WIND DIRECTION.	
	Mean actual, October 1896.	Mean normal, October.
Murree	S 10° W	S 30° E
Simla	S 26° W	N 87° W
Darjeeling	N 89° W	S 3° E

Winds were stronger than usual at the Himalayan stations. The following gives data for four typical stations:—

STATION.	STEADINESS.			VELOCITY IN MILES PER DIEM.			
	Actual percentage, October 1896.	Normal percentage, October.	Variation from normal.	Mean actual, October 1896.	Mean normal, October.	Variation from normal.	Percentage variation from normal.
Leh . .	64	34	+30	60	45	+15	+33
Murree . .	22	10	+12	195	145	+50	+34
Chakrata .	53	30	+23	250	120	+130	+108
Darjeeling .	22	5	+17	118	62	+56	+90

The increased air movement at the hill stations stands in marked contrast to the conditions in Upper India. It is noteworthy that similar variations from the normal air movement of the month obtained in October 1895.

North-easterly winds, with a feebler easterly element than usual, prevailed in the Central Provinces and the Deccan. Winds were less steady and feebler than usual in these areas including Berar, as is shown by the following data:—

DIVISION.	STEADINESS.			VELOCITY IN MILES PER DIEM.			
	Actual percentage, October 1896.	Normal percentage, October.	Variation from normal.	Mean actual, October 1896.	Mean normal, October.	Variation from normal.	Percentage, variation from normal.
Berar . .	45	42	+ 3	72	100	—28	—28
Central Provinces.	19	34	—15	60	67	— 7	—10
Bombay Deccan	32	40	— 8	196	193	+ 3	+ 2
Madras Deccan	60	12	+48	121	100	+21	+21

Winds were more variable than usual at Bombay. They were of slightly below their normal strength at the Konkan and Malabar Coast stations.

Winds at most stations in the interior of Madras and in Coorg varied irregularly in steadiness from the normal. The following data illustrate the variability of the winds in this area:—

STATION.	STEADINESS.		
	Actual percentage, October 1896.	Normal percentage, October.	Variation from normal.
Mercara	26	24	+ 2
Salem	19	39	—20
Trichinopoly	23	33	—10

Winds were, on the other hand, much less variable and unsteady at the Madras coast stations than usual.

Thus at Madras the percentage was 81, or 71 above the normal (10 per cent.)

North-east winds prevailed over nearly the whole of the Peninsula. The following data for four stations illustrate this feature of the air movement of the month:—

Station.	Wind direction.	
	Mean actual, October 1896.	Mean normal, October.
Vizagapatam	S 6° W	S 65° E
Madras	N 67° E	N 35° E
Bangalore	N 60° E	N 16° W
Bellary	S 88° E	N 24° E

The following table gives comparative data of the air movement in the Peninsula:—

Division.	Steadiness.			Velocity in miles per diem.		
	Actual percentage, October 1896.	Normal percentage, October.	Variation from normal.	Mean actual, October 1896.	Mean normal, October.	Variation from normal.
Berar	45	42	+ 3	72	100	—28
Central Provinces	19	34	—15	60	67	— 7
West coast	62	38	+24	149	200	—51
Deccan and Mysore	43	28	+15	166	156	+10
Madras coast	59	14	+45	57	83	—26

The following gives a comparison of the direction and velocity of the air movement of the month at Zanzibar and the Seychelles with October 1895:—

Station.	Wind direction.		Steadiness.		Velocity in miles per diem.	
	Mean actual, October 1895.	Mean actual, October 1896.	Actual, October 1895.	Actual, October 1896.	Mean actual, October 1895.	Mean actual, October 1896.
Zanzibar	S 2° W	S 1° E	39	51	99	96
Seychelles	S 31° W	S 53° E	87	53	240	153

Winds were hence much more easterly at these stations than in the corresponding month of 1895.

Humidity and Cloud.

One of the most noteworthy features of the month due to the very early withdrawal of the monsoon currents from Northern India was the excessive dryness of the air over the whole of Northern and Central India. In this respect it resembled October 1895, but the variations from the normal conditions were much larger and more pronounced in October 1896.

The amount of aqueous vapour present in the air was more or less largely below the normal over the whole of Extra Tropical India, including Bengal, the Gangetic Plain, the Punjab, Rajputana, Central India and the Central Provinces. As the temperature of the month was also more or less in excess in these areas the mean humidity percentage was very largely below the normal at all stations in this area of deficient aqueous vapour, but the variations varied considerably from station to station, due chiefly to local conditions. The following gives comparative data for nine stations, where the mean relative humidity was upwards of 15 below the normal:—

Station.	Absolute humidity.			Relative humidity.		
	Average actual, October 1896.	Average normal, October.	Variation from normal.	Average actual, October 1896.	Average normal, October.	Variation from normal.
	"	"	"	%	%	
Agra	·374	·492	—·118	34	49	—15
Allahabad	·406	·630	—·224	39	68	—29
Hazaribagh	·393	·545	—·152	42	65	—23
Sutna	·350	·515	—·165	35	57	—22
Jeypore	·293	·422	—·129	28	45	—17
Khandwa	·393	·543	—·150	36	58	—22
Hoshangabad	·449	·597	—·148	44	63	—19
Saugor	·326	·507	—·181	31	57	—26
Raipur	·469	·641	—·172	46	66	—20

The following gives comparative data for the various provinces in this large area of decreased humidity :—

DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Average actual, October 1896.	Average normal, October.	Variation from normal.	Average actual, October 1896.	Average normal, October.	Variation from normal.
	"	"	"	%	%	
Bengal . . .	·765	·833	—·068	71	81	—10
Assam	·771	·794	—·023	79	82	— 3
Chota Nagpur . .	·393	·545	—·152	42	65	—23
Bihar	·639	·733	—·094	61	74	—13
North-Western Provinces and Oudh.	·387	·529	—·142	41	58	—17
Punjab . . .	·370	·456	—·086	42	51	— 9
Rajputana . . .	·361	·443	—·082	35	45	—10
Central India . .	·383	·526	—·143	39	58	—19
Central Provinces .	·432	·573	—·141	42	61	—19
Berar	·366	·557	—·191	34	61	—27

The preceding data indicate that, on the whole, the deficiency was most marked in Chota Nagpur, the eastern districts of the North-Western Provinces, the Central Provinces and Central India. These areas usually receive moderate rain during a part or the whole of the month.

The decreased humidity was almost as conspicuous a feature at the lower hill stations as at the plain stations in North-Western and Central India. The following gives data for three typical stations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1896.	Normal, October.	Variation from normal.	Actual, October 1896.	Normal, October.	Variation from normal.
				%	%	
Simla	·203	·256	—·053	45	52	— 7
Ranikhet . . .	·263	·328	—·065	46	61	—15
Chikalda . . .	·346	·473	—·127	38	64	—26

The humidity data of Leh and Kailang for this month show that the air was considerably damper at these elevated stations, thus indicating that the abnormal conditions prevailing in India did not extend to the middle and higher elevations of the Himalayan area.

The mean humidity of the month at Leh was 14 in excess and at Kailang 12 in excess.

The air was slightly drier than usual in the West Coast districts, due solely to increased temperature, as is shown by the following data for Bombay and Karwar :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1896.	Normal, October.	Variation from normal.	Actual, October 1896.	Normal, October.	Variation from normal.
	"	"	"	%	%	
Bombay . . .	·851	·843	+·008	74	80	—6
Karwar . . .	·847	·818	+·029	79	84	—5

The mean absolute and relative humidities of the month were almost as largely below the normal in the Deccan and Mysore as in Northern India. The humidity conditions of the month were practically normal in the Coromandel coast districts. The following gives mean variation data for the former divisions :—

DIVISION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1896.	Normal, October.	Variation from normal.	Actual, October 1896.	Normal, October.	Variation from normal.
	"	"	"	%	%	
Bombay Deccan . .	·494	·571	—·077	55	66	—11
Madras Deccan . .	·453	·629	—·176	41	64	—23
Mysore . . .	·532	·591	—·059	64	76	—12

The mean humidity percentage of Wellington was 7 below the normal.

Humidity was in slight defect in Burma and at Port Blair (due to increased temperature) as is shown by the following data :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, October 1896.	Normal, October.	Variation from normal.	Actual, October 1896.	Normal, October.	Variation from normal.
	"	"	"	%	%	
Port Blair . . .	·922	·908	+·014	84	86	—2
Rangoon . . .	·915	·891	+·024	86	85	+1
Diamond Island . .	·874	·871	+·003	81	84	—3

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

(1) Decreased humidity over Burma, the whole of Northern and Central India, the Central Provinces, Berar, the Deccan and the West Coast districts. The deficiency was large and marked over nearly the whole area, and

more especially in Chota Nagpur, the eastern districts of the North-Western Provinces, and the Central Provinces. The mean humidity was more than 20 below the normal at several stations in these areas.

(2) Decreased humidity at the lower hill stations up to the level of Simla and increased humidity at the elevated stations of Leh and Kailang.

(3) Humidity normal or slightly in excess in the Madras coast districts.

The variations of the cloud amount were similar in character to those of the humidity at the majority of stations, a deficiency in one element accompanying a deficiency in the other element of observation and *vice versa*.

The mean cloud amount was much larger than usual in Lower Burma and at Port Blair. The following gives data in illustration :—

STATION OR PROVINCE.	MEAN CLOUD AMOUNT.		
	Actual, October 1896.	Normal, October.	Variation from normal.
Port Blair	7·3	5·8	+1·5
Lower Burma	7·0	5·7	+1·3

There was less cloud than usual in Bengal, the Gangetic Plain, Rajputana and Central India, and at the majority of the hill stations in Upper India. The following gives comparative data for this area :—

DIVISION.	MEAN CLOUD AMOUNT.		
	Actual, October 1896.	Normal, October.	Variation from normal.
Bengal	1·6	4·3	—2·7
Orissa	2·1	4·5	—2·4
Chota Nagpur	0·2	4·3	—4·1
Bihar	0·3	3·2	—2·9
Assam	3·3	4·7	—1·4
North-Western Provinces and Oudh	0·6	1·1	—0·5

The deficiency was largest in amount at Berhampore, where it averaged 4·3 and at Hazaribagh (4·1).

There was somewhat more cloud than usual in the Punjab, Baluchistan and Sind, in all of which districts the air was considerably drier than usual. The following gives comparative data for this area of slightly increased cloud (accompanying a large deficiency of aqueous vapour present in the lowest air strata) :—

DIVISION.	MEAN CLOUD AMOUNT.		
	Actual, October 1896.	Normal, October.	Variation from normal.
Baluchistan (Quetta)	1·9	0·4	+1·5
Punjab	2·3	0·9	+1·4
Sind	1·4	0·7	+0·7

The mean cloud amount of the month was as largely below the normal in Berar, the Central Provinces, the Deccan and Mysore as in Northern India generally. The following table gives data in illustration :—

DIVISION.	MEAN CLOUD AMOUNT.		
	Actual, October 1896.	Normal, October.	Variation from normal.
Berar	1·4	3·6	—2·2
Central Provinces	0·8	2·8	—2·0
Deccan	3·0	5·7	—2·7
Mysore	3·5	5·8	—2·3

Cloud was in large defect at the Konkan coast stations, and in slight excess in Malabar. The following gives data for four stations in these two areas :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, October 1896.	Normal, October.	Variation from normal.
Bombay	0·8	4·2	—3·4
Ratnagiri	2·3	3·1	—0·8
Karwar	2·6	4·5	—1·9
Cochin	6·3	5·8	+0·5

Skies were practically clear throughout the month in West Bengal, Chota Nagpur, Bihar, the greater part of the North-Western Provinces, Rajputana, Central India, the greater part of the Central Provinces, and the North Konkan (as represented by Bombay).

Skies were also less clouded than usual in October over South Madras and the Madras coast districts.

The following gives comparative data for four representative stations in this area:—

Station.	Mean cloud amount.		
	Actual, October 1896.	Normal, October.	Variation from normal.
Vizagapatam	2·3	4·6	—2·3
Madras	4·4	6·1	—1·7
Trichinopoly	5·3	7·5	—2·2
Salem	5·2	5·6	—0·4

The following is a brief summary of the mean distribution of cloud in October 1896:—

(1) Cloud was in moderate excess at Port Blair and in Burma.

(2) It was in slight to moderate excess in Sind, Baluchistan and the Punjab.

(3) Cloud was more or less largely in defect over the remainder of India, the deficiency being as marked in the Deccan as in the Gangetic Plain.

(4) It was in slight excess in the Kashmir Himalayas, in largish excess in Sikkim and in large excess at the high level stations of Leh and Kailang, probably representative of the conditions obtaining in the Central Himalayan area and Thibet.

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 two inches, and diminishes in amount westwards to the Indus Valley, for which it is less than two-tenths of an inch. In the North and Central Deccan, the Central Provinces, Bengal and the greater part of Burma, the average rainfall ranges between two and five inches, whilst in Lower Burma and the Peninsula south of Lat. 13°N., it ranges between five and thirteen inches, and is greatest in amount in the Madras coast districts from Vizagapatam to Cuddalore.

The chief features of the rainfall distribution of the month of October 1896 were as follows:—

(1) The rainfall of the month was normal in Burma and in slight excess in South Madras.

(2) It was more or less in considerable defect over the whole of the remainder of India, more particularly in North-East India and the greater part of the Peninsula, where the October rainfall is ordinarily heavy.

(3) No rain fell over nearly the whole of Sind, Rajputana, the North-Western Provinces, Orissa, North Madras, the Central Provinces and Berar, the greater part of the Punjab, Bengal, Central India, Bihar and Chota Nagpur.

The following table gives mean actual, mean normal, and variation rainfall data for the 57 meteorological divisions or districts into which India is divided, in the same form as in the previous month, and has been prepared in the same manner as hitherto:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, October 1896.	Average normal, October.	Average actual, October 1896.	Average normal, October.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	9·25	8·94	+ 0·31
	Lower Burma (Deltaic)*	?	?	8·04	7·80	+ 0·24
	Central do.*	?	?	4·91	5·13	— 0·22
	Upper do.*	?	?	2·71	?	?
	Arakan*	?	?	5·01	8·58	— 3·57
Bengal and Assam	Eastern Bengal	0·9	5·9	0·54	5·54	— 5·00
	Assam (Surma)*	?	?	0·56	5·53	— 4·97
	Do. (Hill tracts)*	?	?	1·64	5·81	— 4·17
	Do. (Brahmaputra)*	?	?	1·21	3·32	— 2·11
	Deltaic Bengal	0·2	5·5	0·09	4·51	— 4·42
	Central do.	0·1	4·4	0·05	3·52	— 3·47
	North do.	2·0	4·1	1·69	4·54	— 2·85
	Bengal Hills	4·7	5·9	2·33	6·16	— 3·83
	Orissa	0·1	6·7	0·09	5·85	— 5·76
	Chota Nagpur	0	4·0	0	2·92	— 2·92
	Bihar (South)	0	2·8	0·01	2·60	— 2·59
	Do. (North)	0·2	2·7	0·06	2·79	— 2·73

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

Province.	Division.	Number of rainy days. Average actual, October 1896.	Number of rainy days. Average normal, October.	Rainfall. Average actual, October 1896.	Rainfall. Average normal, October.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
North-Western Provinces and Oudh.	North-Western Provinces (East)	0	2·0	0	2·16	— 2·16
	Oudh (South)	0	1·6	0·02	1·60	— 1·58
	Do. (North)	0	1·5	0·02	1·61	— 1·59
	North-Western Provinces (Central)	0	1·2	0·01	1·04	— 1·03
	Do. do. (West)	0	0·6	0	0·51	— 0·51
	Do. do. (Submontane East)	0	2·1	0	2·87	— 2·87
	Do. do. (do. West)	0·2	0·9	0·05	0·83	— 0·78
	Do. do. (Hills)	0·5	1·6	0·13	1·48	— 1·35
Punjab	Punjab (South-East)	0·3	0·5	0·08	0·36	— 0·28
	Do. (South)	0·6	0·5	0·17	0·21	— 0·04
	Do. (Central)	0·2	0·6	0·10	0·49	— 0·39
	Do. (Submontane)	0·5	0·6	0·11	0·38	— 0·27
	Do. (Hill Districts)	2·5	1·2	0·65	0·88	— 0·23
	Do. (North)	0·6	0·9	0·17	0·48	— 0·31
	Do. (West)	0·2	0·3	0·08	0·12	— 0·04
Bombay and Malabar Coast Districts, Madras.	Malabar Coast	8·4	12·0	6·19	10·04	— 3·85
	Travancore	13·8	?	8·77	?	?
	Madras (South Central)	6·5	8·2	4·53	5·92	— 1·39
	Coorg	7·9	?	4·66	?	?
	Mysore*	?	?	2·08	5·67	— 3·59
	Konkan	2·0	7·6	1·08	5·52	— 4·44
	Bombay Deccan	1·6	7·3	0·81	5·00	— 4·19
	Khandesh	0·5	5·6	0·24	3·61	— 3·37
Central Provinces and Berar.	Berar*	?	?	0·03	2·32	— 2·29
	Central Provinces (West)*	?	?	0	1·73	— 1·73
	Do. do. (Central)*	?	?	0	1·37	— 1·37
	Do. do. (East)*	?	?	0	1·49	— 1·49
Bombay (North)	Gujarat	0	2·3	0	1·36	— 1·36
	Kathiawar	0	0·8	0	0·69	— 0·69
	Sind	0	?	0	0·03	— 0·03
	Baluchistan Hills	0·2	?	0·4	0·05	— 0·01
Rajputana and Central India.	Central India (East)	0	?	0	1·66	— 1·66
	Rajputana (East), and Central India (West)	0·1	?	0·03	0·50	— 0·47
	Rajputana (West)	0·1	?	0·02	0·08	— 0·06
Madras	East Coast (North)	0·4	7·6	0·16	7·12	— 6·96
	Do. (do.) (a)	0	6·7	0	4·76	— 4·76
	Hyderabad (South)*	?	?	0·01	2·09	— 2·08
	Madras (Central)	1·1	6·6	0·36	5·21	— 4·85
	East Coast (Central)	2·4	8·4	1·23	9·75	— 8·52
	Do. (South)	6·0	9·2	4·03	8·34	— 4·31
	Madras (South)	10·6	7·8	7·31	6·04	+ 1·27

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

No rain was received over by far the greater part of the province of Bengal including the whole of South-west Bengal and the greater part of Central and North Bengal, Bihar, Orissa and Chota Nagpur.

East Bengal received showers on the 1st, and Dinajpur, Jalpaiguri, Darjeeling and Cooch Behar occasional showers throughout the month, but chiefly from the 1st to the 3rd, 22nd to the 25th and the 28th to the 30th. The following gives comparative data for the four districts :—

District.	Rainfall. Average actual, October 1896.	Rainfall. Average normal, October.	Rainfall. Variation from normal.
	Inches.	Inches.	Inches.
Dinajpur	0·72	4·51	—3·79
Jalpaiguri	2·14	4·83	—2·69
Darjeeling	1·20	4·72	—3·52
Cooch Behar	2·66	5·54	—2·85

The rainfall of the month was in serious defect over the whole province as is shown by the following statement :—

Division.	Number of rainy days. Average actual, October 1896.	Number of rainy days. Average normal, October.	Number of rainy days. Variation from normal.	Rainfall. Average actual, October 1896.	Rainfall. Average normal, October.	Rainfall. Variation from normal.
				Inches.	Inches.	Inches.
Eastern Bengal	0·9	5·9	—5·0	0·54	5·54	—5·00
Deltaic ,,	0·2	5·5	—5·3	0·09	4·51	—4·42
Central ,,	0·1	4·4	—4·3	0·05	3·52	—3·47
North ,,	2·0	4·1	—2·1	1·69	4·54	—2·85
Bengal Hills	4·7	5·9	—1·2	2·33	6·16	—3·83
Orissa	0·1	6·7	—6·6	0·09	5·85	—5·76
Chota Nagpur	0	4·0	—4·0	0	2·92	—2·92
Bihar (South)	0	2·8	—2·8	0·01	2·60	—2·59
,, (North)	0·2	2·7	—2·5	0·06	2·79	—2·73

The North-Western Provinces was practically rainless during the month. The only division which received an average exceeding a tenth of an inch was the hill division in which the total fall in the month averaged only 0·13 inch, the normal being 1·48 inches.

Light showers were received during the first week of the month in the Punjab. The rainfall due to these showers was heaviest and most general in the hill districts. The hill districts also received light showers on the 23rd, 24th and 28th. The rainfall of the month was hence very scanty and of little value and was everywhere in considerable to large defect. The following gives comparative data of the seven divisions for the month :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, October 1896.	Average normal, October.	Variation from normal.	Average actual, October 1896.	Average normal, October.	Variation from normal.
				Inch.	Inch.	Inch.
Punjab (South-East) .	0·3	0·5	—0·2	0·08	0·36	—0·28
„ (South) . .	0·6	0·5	+0·1	0·17	0·21	—0·04
„ (Central) . .	0·2	0·6	—0·4	0·10	0·49	—0·39
„ (Submontane) .	0·5	0·6	—0·1	0·11	0·38	—0·27
„ (Hill Districts) .	2·5	1·2	+1·3	0·65	0·88	—0·23
„ (North) . .	0·6	0·9	—0·3	0·17	0·48	—0·31
„ (West) . .	0·2	0·3	—0·1	0·08	0·12	—0·04

Light showers of no importance were received in British Baluchistan on the 24th, 25th and 26th. No rain fell during the remainder of the month.

There were three periods of disturbance and rain in Kashmir, *viz.*, from 1st to the 4th, the 21st to the 23rd and the 27th to the 30th. The rainfall was moderate in amount in the first period and very light in the second and third.

Ulwar and Jeypore obtained some local showers on the 23rd; with this exception no rain fell in Rajputana or in Central India.

No rain was received in Sind, Kathiawar, Gujarat and the district of Khandesh of the Bombay Presidency during the month. The North Deccan districts of Nasik, Ahmednagar, Poona and Sholapur had light to moderate local showers during the first week. In the South Deccan districts including Belgaum, Bijapur and Dharwar, showers fell during three periods, the 1st and 2nd, the 7th and 9th and the 22nd to the 24th. North Kanara and Ratnagiri obtained light showers during the same periods, and Kolhapur and Thana during the first period.

The rainfall was very deficient over the whole province as is shown by the following comparative data for the six meteorological and rainfall divisions of the Province :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, October 1896.	Average normal, October.	Variation from normal.	Average actual, October 1896.	Average normal, October.	Variation from normal.
				Inches.	Inches.	Inches.
Konkan . . .	2·0	7·6	—5·6	1·08	5·52	—4·44
Bombay Deccan . .	1·6	7·3	—5·7	0·81	5·00	—4·19
Khandesh . .	0·5	5·6	—5·1	0·24	3·61	—3·37
Gujarat . . .	0	2·3	—2·3	0	1·36	—1·36
Kathiawar . . .	0	0·8	—0·8	0	0·69	—0·69
Sind	0	?	?	0	0·03	—0·03

Light to moderate rain was received in Southern India from the 1st to the 4th, the 9th to the 12th, the 17th to the 22nd and the 27th to the 30th. The falls were generally light or moderate except in Madras (South), where the rainfall of the month was slightly in excess of its normal amount. Practically no rain fell in Ganjam, the Circars and Central Madras.

With the exception of South Madras, where it was in slight excess, the rainfall of the month was in considerable to large defect over the whole of the Presidency, but particularly so in the Ganjam and Vizagapatam districts.

The following gives comparative data for each of the 22 Collectorates of the Presidency :—

District.	No. of rainy days.		Rainfall.		
	Actual, October 1896.	Normal, October.	Actual, October 1896.	Normal, October.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam . . .	0·4	7·5	0·07	7·87	—7·80
Vizagapatam . .	0·1	7·4	0·05	6·47	—6·42
Godavari . . .	0·3	7·8	0·24	7·57	—7·33
Kistna . . .	0·9	7·5	0·33	6·21	—5·88
Nellore . . .	2·4	8·4	1·23	9·75	—8·52
Chingleput . .	4·4	9·3	2·28	9·89	—7·61
Madras . . .	5·0	10·0	2·97	10·99	—8·02
North Arcot . .	3·1	8·3	1·32	7·23	—5·91
South Arcot . .	5·2	9·4	3·18	8·79	—5·61
Tanjore . . .	9·2	10·1	6·63	8·92	—2·29
Trichinopoly . .	8·8	9·3	6·43	6·91	—0·48
Madura . . .	11·2	8·0	7·74	6·34	+1·40
Tinnevelly . . .	9·8	6·8	6·74	5·63	+1·11
Malabar . . .	9·0	12·1	6·73	9·48	—2·75
South Canara . .	7·2	11·8	5·23	10·84	—5·61
Salem . . .	5·5	8·6	4·16	6·26	—2·10
Coimbatore . .	7·8	7·8	5·03	5·50	—0·47
Nilgiris . . .	8·7	12·1	5·96	9·24	—3·28
Cuddapah . . .	1·3	7·0	0·40	6·53	—6·13
Anantapur . .	1·5	6·3	0·43	5·46	—5·03
Bellary . . .	1·2	6·3	0·45	4·76	—4·31
Kurnool . . .	0·5	6·0	0·17	5·27	—5·10

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.		...	...	+·023	...	...	...	...	...	...	...	87·7	+0·1	76·0	+0·4	81·9	+0·3	11·7	...	...	...	...	18·7
1	Tenasserim and Bay Islands.	Port Blair	61	29·893	?	29·885	29·980	19th	29·726	6th	·254	81·6	87·6	?	77·6	?	82·6	?	10·0	90·5	28th	75·2	21st	15·3
		Mergui	96	29·887	?	29·915	30·008	17th	29·738	6th	·270	79·8	87·0	?	73·8	?	80·4	?	13·2	90·4	31st	71·0	28th	19·4
		Tavoy	26	29·957	?	29·914	30·052	17th	29·739	6th	·313	78·2	87·6	?	73·7	?	80·7	?	13·9	90·7	3 days	71·2	31st	19·5
		Moulmein	94	29·877	+·031	29·909	29·989	17th	29·629	6th	·360	78·2	87·9	−0·3	75·3	+0·9	81·6	+0·3	12·6	91·5	6th	71·8	1st	19·7
2	Lower Burma	Rangoon	41	29·904	+·011	29·882	29·990	26th	29·671	6th	·319	79·4	88·5	+1·3	76·3	+0·7	82·4	+1·0	12·2	93·7	6th	72·9	21st	20·8
		Bassein	27	29·920	+·020	29·882	30·024	26th	29·695	6th	·329	79·7	87·5	+0·5	76·2	+1·2	81·9	+0·9	11·3	91·2	7th	73·8	26th	17·4
		Diamond Island	41	29·903	+·025	29·879	29·988	26th	29·684	6th	·304	82·4	85·8	−0·6	79·1	?	82·5	?	6·7	87·6	3 days	74·4	15th	13·2
5	Arakan	Akyab	20	29·930	+·033	29·893	30·026	25th	29·731	6th	·295	79·6	86·8	−1·1	75·5	−1·3	81·2	−1·2	11·3	89·2	3 days	68·7	31st	20·5
3	Central Burma.	Toungoo	183	29·759	+·015	29·886	29·846	25th	29·516	6th	·330	79·3	90·8	+1·1	76·6	?	83·7	?	14·2	96·7	6th	74·2	21st	22·5
	II.—Burma Inland		...	...	+·004	...	...	...	...	...	...	...	88·8	+0·8	68·7	0	78·7	+0·4	20·1	...	...	...	...	32·8
3	Central Burma, Upper Burma.	Thayetmyo	134	29·796	+·004	29·873	29·908	26th	29·569	6th	·339	80·6	92·4	?	75·2	?	83·8	?	17·2	100·1	6th	70·6	26th	29·5
		Minbu	?	29·777	?	?	29·889	26th	29·564	6th	·325	80·4	94·1	?	76·0	?	85·1	?	18·1	99·6	7th	71·6	28th	28·0
		Yamethin	645	29·320?	?	?29·919	29·422	15th	29·085	6th	·337	80·4	95·3	?	?	?	?	?	?	101·5	7th	?	...	?
		Taunggyi	?			Not	recorde	d.				70·5	78·0	?	58·2	?	68·1	?	19·8	81·7	7th	50·0	20th	31·7
		Mandalay	249	29·681?	?	?29·881	29·787	26th	29·466	6th	·321	80·1	92·9	?	73·8?	?	83·4?	?	19·1	98·5	6th	67·1	3 days	31·4
		Kindat	?	29·587	?	?	26·691	27th	29·397	6th	·294	74·7	85·2	+0·8	71·2	0	79·7	+0·4	17·0	92·3	10th	65·5	31st	26·8
		Lashio	?	27·189	?	?	27·312	25th	27·048	6th	·264	68·0	85·3	?	59·5	?	72·4	?	25·8	91·5	8th	45·1	8th	46·4
		Bhamo	?	29·579	?	?	29·703	25th	29·387	6th	·316	76·2	90·4	?	66·8	?	78·6	?	23·6	93·6	13th	57·9	30th	35·7
	III.—Assam		...	...	+·036	...	...	...	...	...	...	...	87·2	+0·9	70·8	−1·3	79·0	−0·2	16·3	...	...	...	...	25·6
7	Surma	Silchar	104	29·865?	+·052?	29·922	29·980	26th	29·664	7th	·316	77·2	90·9	+2·1	71·0	−1·4	81·0	+0·4	19·9	94·0	7th	65·3	24th	28·7
9	Brahmaputra	Sibsagar	333	29·646	+·028	29·914	29·783	25th	29·473	7th	·310	72·5	84·3	−0·8	69·3	−1·6	76·8	−1·2	15·0	90·2	7th	64·5	31st	25·7
		Dhubri	115	29·844	+·029	29·916	29·978	26th	29·674	7th	·304	76·0	86·3	+1·3	72·2	−0·8	79·2	+0·3	14·1	90·2	8th	67·8	25th	22·4
	IV.—Bengal and Orissa		...	...	+·038	...	...	...	...	...	...	...	90·0	+2·6	71·8	−1·3	80·9	+0·6	18·3	...	...	...	...	26·3
6	East Bengal	Chittagong	87	29·860	+·031	29·896	29·962	25th	29·665	6th	·297	78·0	87·5	+1·1	71·6	−2·1	79·5	−0·5	15·9	91·2	2 days	64·6	25th	26·6
		Lungleh	?			Not	recorde	d.				67·5	75·5	?	63·5	?	69·5	?	12·0	80·9	9th	57·6	30th	23·3
		Noakhali	43	29·899	?	29·890	30·008	26th	29·717	6th	·291	83·3	87·4*	?	72·5*	?	80·0*	?	14·9	89·5	3 days	66·9	21st & 22nd.	22·6
		Comilla	36	29·907	?	29·891	30·011	27th	29·738	6th	·273	79·7	89·5	?	71·9	?	80·7	?	17·6	91·8	9th & 10th.	64·9	21st	26·9
		Sirajganj	49	29·891	?	29·890	30·001	25th	29·722	6th	·279	77·9	89·3	?	72·2	?	80·8	?	17·1	91·3	3 days	66·7	19th	24·6
		Narayanganj	26	29·921	+·041	29·895	30·033	26th	29·742	6th	·291	81·3	89·7	+1·7	75·6	+0·5	82·6?	+1·1?	14·1	91·1	5 days	71·2	21st	19·9
		Barisal	13	29·930	+·043	29·888	30·051	26th	29·750	6th	·301	81·5	90·1	+2·6	74·0	−0·4	82·1	+1·1	16·1	92·3	7th	70·9	3 days	21·4
		Mymensingh	59	29·887	+·043	29·898	30·003	26th	29·709	6th	·294	79·0	88·7	+1·9	72·9	−0·2	80·8	+0·9	15·8	90·7	10th	66·6	22nd	24·1
10	Deltaic Bengal	Faridpur	46	29·909	?	29·903	30·015	26th	29·738	6th	·277	79·3	90·0	?	73·2	?	81·6	?	16·8	91·8	7th & 31st	69·4	3 days	22·4
		Jessore	33	29·912	+·032	29·892	30·015	25th	29·749	6th	·266	80·1	91·2	+2·6	71·4	−3·5	81·3	−0·5	19·8	95·5	10th	64·3	20th	31·2
		Calcutta	21	29·930	+·040	29·897	30·036	2 days	29·764	6th	·272	79·2	88·8	+2·2	73·0	−1·4	80·9	+0·4	15·8	91·9	6th	69·2	21st	22·7
		Saugor Island	25	29·915	+·033	29·884	30·020	25th	29·741	6th	·279	82·1	89·0	+2·2	77·4	+1·3	83·2	+1·8	11·6	91·4	2 days	71·5	21st	19·9
		Krishnagar	47	29·904	?	29·900	30·008	26th	29·741	6th	·267	80·0	92·7	?	69·7	?	81·2	?	23·0	94·3	5th & 6th.	63·2	20th	31·1
		Midnapore	149	29·799	?	29·897	29·894	26th	29·648	6th	·246	79·4	93·8	?	70·7	?	82·3	?	23·1	96·8	30th	65·2	10th	31·6

* Mean of 30 days.

I.

in India, Burma, etc., in October 1896.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.		Mean cloud amount.	RAINFALL.									Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	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 Oct. to 31st Oct. 1896.	Normal rainfall for period, from 1st Oct. to 31st Oct.	Variation from normal of period, from 1st Oct. to 31st Oct.				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7·96	9·40	—1·61	...	...	...	...	I.—Burma Coast and Bay Islands.		
11	2	2	...	1	3	3	5	4	4·3	6·4	− 33	88	·951	5·3	9	?	?	9·02	12·17	− 3·15	9·02	12·17	− 3·15	3·80	Port Blair .	TENASSERIM AND BAY ISLANDS.	1
...	8	3	2	2	3	3	1	9	1·8	1·5	+ 20	87	·885	3·8	15	?	?	13·58	13·54	+ 0·04	13·58	13·54	+ 0·04	3·02	Mergui,		
28	...	...	...	...	...	1	2	...	1·1	?	?	89	·859	3·0	12	?	?	9·29	?	?	9·29	?	?	1·84	Tavoy.		
...	2	4	6	...	9	4	5	1	2·1	1·7	+ 24	92	·899	7·4	10	11·55	−1·55	6·11	8·10	− 1·99	6·11	8·10	− 1·99	1·45	Moulmein.		
...	4	6	3	2	3	6	5	2	1·4	3·2	− 56	94	·936	6·3	11	9·09	+1·91	8·81	6·74	+ 2·07	8·81	6·74	+ 2·07	2·26	Rangoon .	LOWER BURMA.	
7	2	3	...	4	2	...	3	10	4·0	2·5	+ 60	91	·928	5·4	13	12·18	+0·82	6·66	8·21	− 1·55	6·66	8·21	− 1·55	1·54	Bassein.		
1	6	5	2	...	1	4	3	9	8·9	6·4	+ 39	82	·904	5·8	11	11·60	−0·60	6·02	9·22	− 3·20	6·02	9·22	− 3·20	1·99	Diamond Island.		
...	4	21	4	...	1	...	...	1	2·6	2·3	+ 13	90	·851	4·6	5	8·64	−3·64	3·27	10·44	− 7·17	3·27	10·44	− 7·17	1·58	Akyab .	ARAKAN.	5
1	9	3	2	4	7	1	...	4	3·3	1·8	+ 83	89	·894	5·2	8	10·55	−2·55	8·86	6·76	+ 2·10	8·86	6·76	+ 2·10	2·77	Toungoo .	CENTRAL BURMA.	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·33	5·57	—2·61	...	...	...	...	II.—Burma, Inland.		
...	4	2	...	6	9	7	...	3	3·5	3·1	+ 13	82	·856	6·3	6	7·91	−1·91	2·15	4·24	− 2·09	2·15	4·24	− 2·09	0·52	Thayetmyo.	CENTRAL BURMA.	3
2	3	1	2	4	3	1	5	10	6·4	?	?	77	·812	4·0	1	?	?	0·53	?	?	0·53	?	?	0·47	Minbu .	UPPER BURMA.	4
19	1	...	...	5	3	1	...	2	2·8	?	?	81	·828	3·1	6	?	?	1·61	?	?	1·61	?	?	0·43	Yamethin.		
7	1	2	1	5	...	4	4	7	?	?	?	79	·591	8·4	9	?	?	6·25	?	?	6·25	?	?	2·39	Taunggyi.		
...	7	2	2	3	5	7	1	4	2·8	?	?	79	·809	1·7	5	?	?	3·78	?	?	3·78	?	?	2·15	Mandalay.		
28	3	...	...	...	...	...	...	...	1·0	?	?	93	·799	4·4	3	?	?	3·78	6·90	− 3·12	3·78	6·90	− 3·12	3·57	Kindat.		
				Not recorded.					?	?	?	90	·625	5·0	2	?	?	0·47	?	?	0·47	?	?	0·21	Lashio.		
9	3	10	2	1	...	3	2	1	1·7	?	?	82	·739	0·7	0	?	?	0·07	?	?	0·07	?	?	0·07	Bhamo.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·69	5·00	—3·30	...	...	...	...	III.—Assam.		
30	1	...	...	...	...	...	...	...	1·4	2·1	− 33	85	·796	3·7	2	7·75	−5·75	0·62	6·65	− 6·03	0·62	6·65	− 6·03	0·33	Silchar .	SURMA.	7
10	...	9	4	6	1	1	...	...	2·0	2·0	0	98	·764	?	8	7·30	+0·70	2·34	4·84	− 2·50	2·34	4·84	− 2·50	0·30	Sibsagar .	BRAHMAPUTRA.	9
3	2	14	10	...	...	2	...	...	3·6	2·9	+ 24	89	·794	2·3	2	3·93	−1·93	2·12	3·50	− 1·38	2·12	3·50	− 1·38	1·19	Dhubri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·30	5·16	−4·91	...	...	...	...	IV.—Bengal and Orissa.		
1	5	19	2	1	...	...	...	3	2·1	3·0	− 30	83	·846	2·9	2	7·00	−5·00	1·78	6·24	− 4·46	1·78	6·24	− 4·46	0·98	Chittagong	EAST BENGAL	6
				Not recorded.					?	?	?	87	·595	?	4	?	?	2·33	?	?	2·33	?	?	1·20	Lungleh.		
...	6	9	4	1	2	1	1	7	1·9	?	?	87	·894	1·2	2	7·31	−5·31	0·92	7·70	− 6·78	0·92	7·70	− 6·78	0·74	Noakhali.		
9	7	2	4	2	4	3	...	...	1·4	?	?	89	·904	2·2	2	5·83	−3·83	0·39	5·20	− 4·81	0·39	5·20	− 4·81	0·21	Comilla.		
19	1	...	...	...	3	7	...	1	1·2	?	?	87	·828	0·7	1	4·88	−3·88	0·10	4·23	− 4·13	0·10	4·23	− 4·13	0·10	Sirajganj.		
5	3	...	2	4	4	4	5	5	2·1	2·3	− 9	81	·874	1·7	0	5·46	−5·46	0·04	4·42	− 4·38	0·04	4·42	− 4·38	0·03	Narayanganj.		
28	...	...	...	...	1	2	...	...	0·2	?	?	83	·898	0·3	0	6·23	−6·23	0	5·61	− 5·61	0	5·61	− 5·61	0	Barisal.		
10	3	4	8	5	1	...	...	...	1·1	?	?	86	·850	?	0	5·77	−5·77	0	5·62	− 5·62	0	5·62	− 5·62	0	Mymensingh.		
25	...	...	...	...	2	3	1	...	1·1	?	?	85	·859	1·1	0	5·23	−5·23	0·05	4·09	− 4·04	0·05	4·09	− 4·04	0·05	Faridpur .	DELTAIC BENGAL.	10
16	...	...	...	...	2	7	2	4	2·2	2·1	+ 5	82	·839	1·4	0	5·92	−5·92	0·03	4·55	− 4·52	0·03	4·55	− 4·52	0·03	Jessore.		
5	...	...	...	...	...	12	9	5	2·8	3·2	− 13	81	·814	0·6	0	6·04	−6·04	0	4·39	− 4·39	0	4·39	− 4·39	0	Calcutta.		
...	1	1	..	...	4	9	8	8	3·5	6·5	+ 31	78	·859	2·3	0	8·15	−8·15	0·02	9·14	− 9·12	0·02	9·14	− 9·12	0·02	Saugor Island.		
...	2	...	...	1	8	6	12	2	2·3	?	?	77	·789	0·8	0	5·35	−5·35	0	4·22	− 4·22	0	4·22	− 4·22	0	Krishnagar.		
15	6	...	...	...	3	6	...	1	0·2	?	?	69	·690	0·4	0	5·15	−5·15	0	4·30	− 4·30	0	4·30	− 4·30	0	Midnapore.		

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·624	?	29·878	29·723	26th	29·491	7th	·232	77·3	93·5	?	70·1	?	81·8	?	23·4	96·1	31st	65·7	29th	30·4
		Raniganj	334	29·614	?	29·904	29·717	26th	29·478	6th	·239	75·4	93·7	?	69·0	?	81·3	?	24·7	96·2	30th	64·0	29th	32·2
		Burdwan	99	29·853	+·038	29·900	29·956	25th	29·692	6th	·264	80·3	93·0	+4·3	72·1	−2·6	82·6	+0·9	20·9	95·9	20th	67·3	29th	28·6
		Naya Dumka	489	29·429	?	29·683	29·524	26th	29·304	7th	·220	78·5	91·6‡	?	68·9	?	80·1‡	?	22·7	94·0	31st	63·5	20th	30·5
		Berhampore	67	29·878	+·027	29·894	29·987	26th	29·713	6th	·274	78·5	90·7	+3·0	71·3	−3·2	81·0	−0·1	19·4	93·2	2 days	66·2	29th	27·0
		Rampur Boalia.	70	29·868	?	29·888	29·979	26th	29·709	6th	·270	79·5	91·2	?	71·8	?	81·5	?	19·4	94·1	4th	67·6	21st	26·5
		Malda	72	29·859	?	29·884	29·990	26th	29·694	6th	·296	78·1	91·0	?	69·9	?	80·5	?	21·1	94·1	3rd	64·0	31st	30·1
		Bogra	61	29·870	?	29·884	29·978	26th	29·711	6th	·267	78·9	90·1	+3·2	71·7	−0·6	80·9	+1·3	18·4	92·2	2 days	66·2	30th	25·0
12	North Bengal	Dinajpur	123	29·813	+·029	29·892	29·931	26th	29·644	6th	·287	77·7	89·6	+2·2	70·9	−1·2	80·3	+0·5	18·7	92·8	6th	63·3	31st	29·5
		Rangpur*	123	29·852	?	29·933	29·958	25th	29·665	6th	·293	77·4	88·2	?	70·7	?	79·5	?	17·5	91·7	4 days	66·7	30th & 31st.	25·0
		Jalpaiguri	284	29·659†	+·030	29·906†	29·766	26th	29·503	5th	·263	75·2	87·1	+0·8	70·4	+1·2	78·8	+1·0	16·7	90·9	5th	66·6	25th	24·3
17	North Bihar	Purnea	125	29·815	+·029	29·897	29·926	26th	29·654	6th	·272	76·1	90·1	+2·6	70·4	−0·8	80·2	+0·9	19·7	94·2	6th	62·8	31st	31·4
14	Orissa	Balasore	56	29·902	+·049	29·895	30·001	25th	29·749	6th	·252	77·5	91·8	+4·0	70·5	−2·6	81·2	+0·7	21·3	95·4	6th	64·7	29th	30·7
		False Point	21	29·944	+·058	29·907	30·055	25th	29·770	6th	·285	80·1	90·5	+3·2	71·4	−3·3	80·9	−0·1	19·1	94·0	16th	68·0	3 days	26·0
		Cuttack	80	29·878	+·050	29·902	29·981	25th	29·710	6th	·271	77·3	93·3	+3·4	72·7	−1·8	83·1	+0·8	20·6	96·2	3 days	68·7	3 days	27·5
		Shortt's Island	?	29·944	?	?	30·054	26th	29·790	8th	·264	82·7	90·6	?	77·8	?	84·2	?	12·8	93·0	2nd & 6th.	75·4	10th	17·6
		Puri	20	29·950	?	29·913	30·049	25th	29·787	6th	·262	81·0	91·5	?	75·8	?	83·7	?	15·7	96·7	7th	72·6	10th	24·1
	V.—Gangetic Plain and Chota Nagpur.		...	...	+·026	...	...	...	...	...	...	...	94·0	+5·9	67·1	−1·9	80·6	+2·0	26·9	...	...	...	...	36·3
15	Chota Nagpur	Hazaribagh	2,007	27·927	+·030	29·895	28·007	26th	27·812	7th	·195	76·2	87·9	+4·8	67·1	+0·3	77·5	+2·6	20·8	91·7	4th	64·3	22nd	27·4
		Ranchi	2,128	27·825	+·054	29·909	27·912	26th	27·711	7th	·201	76·5	87·8	+5·1	65·7	+0·3	76·8	+2·7	22·1	91·7	4th	60·5	10th	31·2
		Daltonganj	730?	29·223	?	29·929	29·312	26th	29·098	5th	·214	71·0	88·3	?	62·1	?	75·2	?	26·2	93·3	2nd & 4th.	58·5	19th & 20th	34·8
		Chaibassa	760	29·189	?	29·911	29·295	25th	29·057	6th	·238	75·6	92·7	+4·6	66·6	−3·7	79·6	+0·5	26·1	95·9	6th	63·0	4 days	32·9
16	South Bihar	Gaya	375	29·559	+·026	29·898	29·644	27th	29·431	5th	·213	77·9	95·6	+6·3	69·6	−1·3	82·6	+2·5	26·0	99·5	3 days	65·7	21st	33·8
		Dehri	351			Not recorded.						76·5	95·7	?	70·7	?	83·2	?	25·0	100·4	4th	67·0	9th & 21st.	33·4
		Patna	183	29·750	+·017	29·888	29·858	25th	29·615	5th	·243	80·3	93·0	+4·7	70·9	−1·6	81·9	+1·6	22·1	98·0	6th	65·3	20th	32·7
		Arrah	190	29·751	?	29·897	29·839	26th	29·622	5th	·217	76·7	95·1	?	67·5	?	81·4	?	27·6	99·4	6th	62·0	20th	37·4
		Buxar‡	239	29·685‡	?	29·882‡	29·776	26th	29·559	6th	·217	79·5‡	96·0‡	?	69·0‡	?	82·6‡	?	27·0	100·5	5th	65·3	26th	34·7
17	North Bihar	Bhagalpur	160	29·768	?	29·882	29·880	26th	29·637	7th	·243	80·3	92·6	?	70·1	?	81·4	?	22·5	95·2	3rd & 5th.	65·1	29th	30·1
		Darbhanga	166	29·768	+·016	29·891	29·883	25th	29·620	6th	·263	76·8	90·5	+4·2	71·3	−2·1	80·9	+1·1	19·2	94·0	5th	65·4	31st	28·6
		Muzaffarpur	178	29·756	?	29·892	29·872	26th	29·619	6th	·253	76·4	90·9	?	69·2	?	80·1	?	21·7	94·7	6th	61·8	20th	32·9
		Motihari	224	29·713	?	29·899	29·828	26th	29·559	6th	·269	76·0	92·2	?	66·5‡	?	79·4‡	?	25·7	96·5	6th	59·8	30th	36·7
		Chapra	181	29·751	?	29·890	29·846	25th	29·622	5th	·224	77·2	94·6	?	68·5	?	81·7	?	26·1	98·8	6th	63·1	9th	35·7
18	N.-W. Prov., East	Benares	267	29·667	+·029	29·896	29·758	26th	29·541	2nd	·217	75·3	97·5	+7·6	64·4	−4·3	81·0	+1·7	33·1	102·8	3rd & 5th.	60·5	21st	42·3
		Allahabad	309	29·622	+·024	29·890	29·717	25th	29·483	2nd	·234	78·7	99·1	+9·2	66·0	−1·6	82·6	+3·8	33·1	105·1	3rd	61·9	21st & 22nd.	43·2
23	N.-W. Provinces (East Sub-montane).	Gorakhpur	256	29·660	+·017	29·879	29·753	21st	29·512	6th	·241	76·9	94·5	+5·8	67·1	−3·1	80·8	+1·4	27·4	97·3	3 days	62·3	21st	35·0
19	South Oudh	Lucknow	368	29·558	+·025	29·892	29·652		29·432	2nd	·220	77·6	97·2	+6·3	63·6	−2·1	80·4	+2·1	33·6	103·8	3rd	57·7	21st	46·1
20	North Oudh	Bahraich	403	29·521	?	29·892	29·615	21st	29·371	6th	·244	75·6	95·2	?	64·8	?	80·0	?	30·4	99·4	1st	59·0	19th	40·4
21	N.-W. Prov. (Central).	Cawnpore	416	29·505	?	29·882	29·598	25th	29·373	2nd	·225	78·3	98·8	?	64·7	?	81·8	?	34·1	104·9	3rd	59·5	11th	45·4
		Mainpuri	516	29·414	?	29·901	29·515	26th	29·270	2nd	·245	74·7	98·9	?	64·5	?	81·7	?	34·4	105·3	2nd	58·6	31st	46·7

* Mean of 26 days. † Mean of 27 days. ‡ Mean of 30 days.

I—*continued.*

in India, Burma, etc., in October 1896—continued.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.		Mean cloud amount.	RAINFALL.								Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	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 31st October 1896.	Normal rainfall for period, from 1st October to 31st October.	Variation from normal of period from 1st October to 31st October.				
23	...	...	...	...	1	...	5	2	1·0	?	?	70	·660	0·2	0	5·19	− 5·19	0	3·82	− 3·82	0	3·82	− 3·82	0	Bankura	CENTRAL BENGAL	11
20	?	...	...	...	1	2	2	5	1·2	?	?	71	·630	0	0	4·35	− 4·35	0	3·31	− 3·31	0	3·31	− 3·31	0	Raniganj.		
2	3	2	...	...	2	6	12	4	1·8	2·1	−14	71	·745	0·7	0	4·27	− 4·27	0	3·61	− 3·61	0	3·61	− 3·61	0	Burdwan.		
15	2	1	1	...	3	2	2	5	1·1	?	?	65	·633	0·3	0	4·88	− 4·88	0	4·22	− 4·22	0	4·22	− 4·22	0	Naya Dumka.		
11	1	...	...	...	5	11	1	2	1·8	2·1	−14	80	·772	0·2	0	5·43	− 5·43	0	3·83	− 3·83	0	3·83	− 3·83	0	Berhampore.		
19	...	...	...	...	4	6	2	...	3·1	?	?	88	·906	0·1	0	5·19	− 5·19	0	4·11	− 4·11	0	4·11	− 4·11	0	Rampur Boalia.		
...	2	...	2	4	6	6	7	4	1·6§	?	?	81	·764	0·4	0	4·62	− 4·62	0	4·42	− 4·42	0	4·42	− 4·42	0	Malda.		
25	...	1	1	2	1	...	1	...	1·1	?	?	84	·838	0·5	0	5·00	− 5·00	0	3·74	− 3·74	0	3·74	− 3·74	0	Bogra.		
2	...	6	7	2	7	1	4	2	2·6	?	?	84	·800	1·4	1	3·46	− 2·46	0·99	4·55	− 3·56	0·99	4·55	− 3·56	0·99	Dinajpur .	NORTH BENGAL.	12
6	...	3	8	3	4	1	1	...	0·9	?	?	86	·804	1·2	3	4·00	− 1·00	1·04	5·44	− 4·40	1·04	5·44	− 4·40	0·59	Rangpur.*		
...	5	15	9	1	...	...	...	1	2·1	?	?	90	·785	1·5	4	4·81	− 0·81	1·57	5·32	− 3·75	1·57	5·32	− 3·75	0·54	Jalpaiguri.		
6	...	9	8	1	2	1	3	1	2·0	1·4	+43	85	·765	1·2	0	3·46	− 3·46	0	3·57	− 3·57	0	3·57	− 3·57	0	Purnea .	NORTH BIHAR.	17
10	3	...	...	...	3	10	1	4	1·7	?	?	85	·812	0·7	0	6·74	− 6·74	0	6·13	− 6·13	0	6·13	− 6·13	0	Balasore .	ORISSA.	14
5	3	...	...	...	...	4	10	9	3·3	6·1	−46	80	·827	1·7	0	7·92	− 7·92	0·05	9·19	− 9·14	0·05	9·19	− 9·14	0·05	False Point.		
10	3	...	1	...	..	6	8	3	1·2	1·9	−37	76	·717	0·9	0	6·38	− 6·38	0	5·64	− 5·64	0	5·64	− 5·64	0	Cuttack.		
...	2	1	...	...	2	6	9	11	11·8	?	?	71	·801	0·4	0	?	?	0	?	?	0	?	?	0	Shortt's Island.		
10	13	...	...	...	...	1	2	5	7·8	?	?	73	·779	0·5	0	8·62	− 8·62	0	8·90	− 8·90	0	8·90	− 8·90	0	Puri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·01	...	− 2·54	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**		
1	1	...	1	...	1	7	13	7	5·9	5·0	+ 18	49	·454	0	0	4·69	− 4·69	0	3·41	− 3·41	0	3·41	− 3·41	0	Hazaribagh.	CHOTA NAGPUR.	15
4	...	1	...	...	2	12	8	4	4·7	?	?	49	·447	0	0	4·73	− 4·73	0	2·95	− 2·95	0	2·95	− 2·95	0	Ranchi.		
...	...	1	3	1	4	17	4	1	2·9	?	?	64	·492	0	0	3·19	− 3·19	0	2·50	− 2·50	0	2·50	− 2·50	0	Daltonganj.		
7	...	...	...	...	1	13	9	1	0·8	?	?	74	·662	0	0	4·46	− 4·46	0	2·72	− 2·72	0	2·72	− 2·72	0	Chaibassa.		
19	...	...	...	...	5	6	1	...	3·2	1·5	+113	55	·527	0	0	2·96	− 2·96	0	2·27	− 2·27	0	2·27	− 2·27	0	Gaya .	SOUTH BIHAR.	16
...	...	...	...	...	16	15	...	...	5·5	?	?	65	·593	0	0	2·77	− 2·77	0	2·63	− 2·63	0	2·63	− 2·63	0	Dehri.		
20	...	1	3	5	6	5	8	1	2·0	1·9	+ 5	62	·643	0·2	0	3·19	− 3·19	0	3·25	− 3·25	0	3·25	− 3·25	0	Patna.		
16	1	...	1	1	3	5	3	1	0·4	?	?	69	·643	0	0	3·62	− 3·62	0	2·99	− 2·99	0	2·99	− 2·99	0	Arrah.		
2	...	...	4	2	1	7	13	1	?	?	?	52†	·526†	0	0	3·04	− 3·04	0	3·26	− 3·26	0	3·26	− 3·26	0	Buxar.†		
20	...	1	1	2	3	1	2	1	0·9	?	?	66	·688	0·7	0	3·12	− 3·12	0	2·80	− 2·80	0	2·80	− 2·80	0	Bhagalpur.	NORTH BIHAR.	17
12	...	...	8	8	1	...	1	1	1·4	2·2	− 36	79	·725	0·8	1	3·08	− 2·08	0·17	2·84	− 2·67	0·17	2·84	− 2·67	0·17	Darbhanga.		
11	...	2	5	3	...	...	5	5	1·4	?	?	84	·720	0·9	0	2·81	− 2·81	0	3·11	− 3·11	0	3·11	− 3·11	0	Muzaffarpur		
2	2	11	11	1	1	...	1	2	4·0	?	?	82	·734	0·7	0	2·58	− 2·58	0	3·39	− 3·39	0	3·39	− 3·39	0	Motihari.		
12	...	...	2	3	3	7	2	2	1·5	?	?	67	·631	0	0	2·85	− 2·85	0	3·08	− 3·08	0	3·08	− 3·08	0	Chapra.		
14	1	...	...	...	2	7	6	1	2·9	2·6	+ 12	58	·511	0	0	2·45	− 2·45	0	2·30	− 2·30	0	2·30	− 2·30	0	Benares .	N.-W. PROV., EAST.	18
11	...	...	1	...	...	2	13	4	2·6	1·6	+ 63	45	·444	0	0	1·64	− 1·64	0	1·83	− 1·83	0	1·83	− 1·83	0	Allahabad.		
10	5	6	1	1	1	1	4	2	1·2	1·3	− 8	70	·647	0·3	0	2·64	− 2·64	0	3·77	− 3·77	0	3·77	− 3·77	0	Gorakhpur	N.-W. PROVINCES (EAST SUB-MONTANE).	23
18	6	1	...	...	1	...	2	3	1·4	1·9	− 26	54	·519	0·1	0	1·36	− 1·36	0	0·83	− 0·83		0·83	− 0·83	0	Lucknow .	SOUTH OUDH.	19
17	...	2	5	4	...	−	2	1	0·8	?	?	70	·634	0	0	?	?	0	1·69	− 1·69	0	1·69	− 1·69	0	Bahraich .	NORTH OUDH.	20
3	2	2	2	1	2	4	10	5	3·1	?	?	46	·451	0	0	1·60	− 1·60	0	1·08	− 1·08		1·08	− 1·08	0	Cawnpore .	N.-W. PROV. (CENTRAL).	21
28	...	...	...	1	...	...	1	1	0·4	?	?	45	·390	0·5	0	?	?	0	0·82	− 0·82	0	0·82	− 0·82	0	Mainpuri.		

§ Mean of 22 days.

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.									Temperature of Air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas.	...	...	+·022	...	...	...	...	...	...	...	...	94·5	+2·4	62·6	+0·5	77·7	+1·4	30·2	...	...	...	...	44·0
24	N.-W. Provinces, West (Sub-montane).	Bareilly	568	29·347	+·024	29·894	29·445	26th	29·218	6th	·227	72·7	94·5	+5·3	63·2	−2·0	78·9	+1·7	31·3	99·0	3rd	55·7	31st	43·3
		Dehra Dun	2,233	27·695?	+·007?	29·920	27·776	24th & 26th	27·563	7th	·213	67·4	85·5	+3·8	59·6	−1·2	72·6?	+1·3?	25·9	89·0	3 days	53·0	31st	36·0
		Roorkee	887	29·019	+·010	29·902	29·113	26th	28·886	7th	·227	68·0	92·1	+3·0	59·1	−2·4	75·6	+0·3	33·0	96·2	2nd & 3rd	49·8	31st	46·4
22	N.-W. P., West.	Meerut	738	29·170	+·016	29·896	29·272	26th	29·030	2nd	·242	69·4	94·1	+4·1	62·7	0	78·4	+2·1	31·4	99·5	3rd	56·0	31st	43·5
26	South-East Punjab.	Delhi	718	29·193	+·018	29·889	29·320	26th	29·040	2nd	·280	75·4	95·0	+3·2	67·1	−0·9	81·1	+1·2	27·9	99·2	1st & 2nd	60·4	13th	38·8
28	Central Punjab.	Lahore	702	29·209	+·025	29·903	29·343	25th & 26th	29·044	2nd	·299	70·3	93·0	−0·2	63·5	+3·7	78·3	+1·8	29·5	100·6	1st	52·7	31st	47·9
27	South Punjab	Sirsa	662	29·246	+·018	29·890	29·380	26th	29·071	2nd	·309	73·5	97·1	+1·2	64·6	+2·1	80·8	+1·7	32·5	105·8	3rd	55·3	31st	50·5
		Patiala	?	29·094	?	?	29·216	26th	28·950	2nd	·266	73·3	93·2	?	63·0	?	78·1	?	30·2	99·0	3rd	53·4	31st	45·6
29	Punjab (Sub-montane).	Ludhiana	812	29·101	+·021	29·905	29·231	26th	28·953	2nd	·278	71·0	92·7	+0·8	63·7	+0·2	78·2	+0·5	29·0	99·0	2nd	53·3	31st	45·7
		Sialkot	830	29·088	+·038	29·912	29·233	24th	28·926	2nd	·307	71·4	93·1	+1·1	64·3	+2·6	78·7	+1·9	28·8	99·6	1st	58·2	30th	41·4
		Umballa	892	29·012	?	29·895	29·130	26th	28·882	7th	·248	68·0	94·3	?	61·9	?	78·1	?	32·4	99·5	2nd	54·0	31st	45·5
31	North Punjab	Rawalpindi	1,643	28·277	+·043	29·943	28·405	25th	28·142	2nd & 6th	·263	67·0	89·3	+1·3	58·3	+2·4	73·8	+1·9	31·0	96·1	12th	52·6	25th	43·5
	VII.—Indus Valley and North-West Rajputana.	...	...	+·041	...	...	...	...	...	...	...	...	95·2	+1·1	65·3	−0·6	80·3	+0·3	29·3	...	...	...	...	48·9
31	North Punjab	Peshawar	1,110	28·865	+·044	29·944	29·006	25th	28·719	2nd	·287	68·0	87·9	−0·5	57·7	+0·4	72·8	−0·1	30·2	95·5	10th	47·0	31st	48·5
32	West Punjab	Khushab	612	29·306	?	29·906	29·455	25th	29·152	2nd	·303	71·6	93·8	?	63·0	?	78·5	?	30·8	100·3	1st	51·0	31st	49·3
		Montgomery	558	29·359	?	29·898	29·504	25th	29·187	2nd	·317	74·5	96·2	?	62·7	?	79·4	?	33·5	103·4	2nd	53·0	30th	50·4
		D. I. Khan (Tel. Office).	594	29·368	+·042	29·927	29·534	25th	29·218	7th	·316	70·5	92·4	?	60·9	?	76·7	?	31·5	100·7	9th	49·0	31st	51·7
		Mooltan	420	29·503	+·028	29·907	29·658	26th	29·332	2nd	·326	70·3	96·8	+1·8	64·3	−0·3	80·6	+0·8	32·5	105·4	1st & 2nd	55·9	30th & 31st	49·5
47	Sind	Jacobabad	186	29·753	+·049	29·905	29·898	26th	29·574	2nd	·324	74·5	98·5	+0·5	62·4	−0·7	80·5	−0·1	36·1	107·9	2nd	51·0	31st	56·9
		Hyderabad	96	29·867	?	29·917	29·991	26th	29·692	2nd	·299	79·0	99·2	+1·8	69·6	−1·0	84·4	+0·4	29·6	110·2	2nd	61·0	31 t	49·2
		Kurrachee (Tel. Office).	12	29·961	+·040	29·923	30·087	26th	29·829	2nd	·258	78·2	93·0	?	70·9	?	82·0	?	22·1	107·9	1st	63·0	14th	44·9
		Kurrachee (Hospital).	49	29·919	?	?	30·056	27th	29·780	2nd	·276	76·3	90·4	?	70·4	?	80·4	?	20·0	103·9	1st	62·8	14th	41·1
51	West Rajputana	Bickaneer	771	29·163	?	29·912	29·298	26th	29·001	2nd	·297	79·0	97·6†	+2·0	71·2	−1·3	84·4†	+0·4	26·4	105·6	1st & 2nd	62·0	31st	43·6
		Pachpadra	380	29·557	?	29·907	29·659	26th	29·383	2nd	·271	70·7	101.3	?	65·4	?	83·4	?	35·9	109·5	1st & 2nd	57·1	31st	52·4
	VIII.—East Rajputana, Central India and Gujarat.	...	...	+·036	...	...	...	...	...	...	...	...	96·7	+4·6	68·0	+0·8	82·4	+2·7	28·7	...	...	...	...	39·7
50	East Rajputana	Jeypore	1,431	28·530	+·028	29·940	28·645	26th	28·399	2nd	·246	76·7	97·3	+4·1	65·8	+1·3	81·5	+2·7	31·5	103·5	1st & 2nd	60·1	7th	43·4
		Sambhar	1,254	28·688	+·025	29·923	28·801	26th	28·547	2nd	·254	75·7	95·9	+4·3	65·2	+0·5	80·6	+2·4	30·7	101·5	1st & 2nd	58·8	31st	42·7
		Ajmere	1,611	28·357	+·031	29·964	28·464	26th	28·233	2nd	·231	72·3	95·4	+4·0	63·3	+0·3	79·4	+2·2	32·1	100·4	2nd	56·7	3 days	43·7
		Deesa	466	29·509	+·046	29·935	29·597	26th	29·408	2nd	·189	80·0	100·6	+4·6	65·1	−1·8	82·9	+1·4	35·5	106·4	1st	59·1	31st	47·3
46	Kathiawar and Cutch.	Bhuj	395	29·567	?	29·919	29·658	26th	29·462	2nd	·196	79·9	98·9	+3·2	70·4	−0·8	84·7	+1·2	28·5	105.1	2nd	65·9	31st	39·2
		Rajkot	429	29·547	+·041	29·933	29·625	26th	29·441	7th	·184	79·6	98·2	+3·0	69·1	+0·7	83·7	+1·9	29·1	104·4	2nd	62·4	31st	42·0
		Veraval	?	29·957	?	29·917	30·028	26th	29·849	6th	·179	80·9	90·8	?	73·2	?	82·0	?	17·6	99·1	28th	65·3	31st	33·8
49	Central India	Nowgong	757	29·181	+·020	29·912	29·294	26th	29·064	2nd	·230	73·4	95·3	?	64·5	−0·6	79·9	+2·2	30·8	100·0	3rd	60·0	21st	40·0
		Indore	1,823	28·162	+·053	29·944	28·251	26th	28·086	6th & 7th	·165	77·9	94·4	+7·3	63·6	−0·1	79·0	+3·6	30·8	97·6	3rd	58·6	8th	39·0
		Neemuch	1,630	28·355	+·056	29·950	28·447	26th	28·249	2nd	·198	79·8	95·1	+5·2	65·3	+0·7	80·2	+3·0	29·8	99·8	1st	59·8	31st	40·0
45	Gujarat	Surat	39	29·939	+·040	29·921	30·011	26th	29·821	6th	·190	79·2	94·3	+2·0	74·2	+3·7	84·2	+2·9	20·1	97·2	6th & 7th	70·5	31st	26·7
		Ahmedabad	164	29·803?	?	29·915?	29·879	26th	29·712	7th	·167	81·4	100·1†	?	73·0†	?	86·6†	?	27·1	102·8	1st	67·1	30th & 31st	35·7
22	N.-W. P., West	Agra	555	29·377	+·020	29·900	29·490	26th	29·229	2nd	·261	78·4	98·6	+5·7	68·3	+0·5	83·5	+3·1	30·3	106·0	3rd	61·9	31st	44·1
21	N.-W. P., Central.	Jhansi	858	29·092	+·039	29·914	29·206	26th	28·972	2nd	·234	81·1	99·3	+6·9	71·4	+3·9	85·4	+5·4	27·9	105·1	2nd	67·4	1th & 16th	37·7

† Mean of 30 days.

I—*continued.*

in India, Burma, etc., in October 1896—continued.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.		Mean cloud amount.	RAINFALL.								Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	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 31st October 1896.	Normal rainfall for period from 1st October to 31st October.	Variation from normal of period from 1st October to 31st October 1896.				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·12	0·46	−0·34	...	...	...	...	VI.—Upper Sub-Himalayas.		
16	...	5	...	...	...	1	1	8	1·1	1·9	−42	61	·497	0	0	0·91	−0·91	0	1·15	−1·15	0	1·15	−1·15	0	Bareilly .	N.-W. PROVINCES, WEST (SUB-MONTANE).	24
28	...	...	1	2	...	...	...	...	1·1	1·7	−35	59	·402	2·1	0	1·20	−1·20	0	0·99	−0·99	0	0·99	−0·99	0	Dehra Dun		
28	...	1	1	...	...	...	...	1	0·9†	1·4	−36	64	·446	1·2	0	0·55	−0·55	0·04	0·43	−0·39	0·04	0·43	−0·39	0·04	Roorkee.		
23	...	...	1	...	...	...	7	...	1·1	1·4	−21	55	·398	0·9	0	0·45	−0·45	0	0·42	−0·42	0	0·42	−0·42	0	Meerut .	N.-W. PROVINCES, WEST.	22
11	1	1	1	1	...	2	11	3	2·6	2·4	+ 8	38	·338	1·5	0	0·18	−0·18	0	0·08	−0·08	0	0·08	−0·08	0	Delhi .	SOUTH-EAST PUNJAB.	26
12	...	3	6	1	1	...	5	3	2·1	1·6	+31	52	·385	2·1	0	0·45	−0·45	0·02	0·26	−0·24	0·02	0·26	−0·24	0·02	Lahore .	CENTRAL PUNJAB	28
6	2	1	2	4	4	4	4	4	5·5	2·5	+120	39	·321	1·6	1	0·64	+0·36	0·20	0·14	+0·06	0·20	0·14	+0·06	0·20	Sirsa .	SOUTH PUNJAB.	27
25	1	...	1	...	2	1	...	...	1·5	?	?	67	·549	0·5	0	?	?	0·06	?	?	0·06	?	?	0·06	Patiala.‡		
16	2	3	...	4	1	...	2	3	1·5	0·9	+67	60	·459	1·9	1	0·55	+0·45	0·34	0·40	−0·06	0·34	0·40	−0·06	0·34	Ludhiana .	PUNJAB (SUB-MONTANE).	29
12	8	7	2	...	...	...	...	2	2·1	1·4	+50	52	·395	1·5	2	0·82	+1·18	0·31	0·31	0	0·31	0·31	0	0·12	Sialkot.		
22	...	...	1	1	1	...	3	3	1·1	?	?	62	·430	0·7	0	?	?	0·12	0·31	−0·19	0·12	0·31	−0·19	0·07	Umballa.		
19	5	2	1	...	1	1	1	1	2·4	1·2	+100	59	·401	2·1	1	1·45	−0·45	0·30	0·55	−0·25	0·30	0·55	−0·25	0·25	Rawalpindi	NORTH PUNJAB.	31
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·06	0·04	+0·02	...	...	...	...	VII.—Indus Valley and North-West Rajputana.		
14	1	...	...	1	4	6	3	2	2·9	2·5	+16	53	·365	2·2	0	0·27	−0·27	0	0·11	−0·11	0	0·11	−0·11	0	Peshawar .	NORTH PUNJAB.	31
11	2	6	7	1	...	1	2	1	2·7	?	?	36	·284	1·3	0	0·20	−0·20	0	0·07	−0·07	0	0·07	−0·07	0	Khushab .	WEST PUNJAB.	32
16	1	2	4	4	3	...	...	1	2·8	?	?	47	·402	2·1	1	0·10	+0·90	0·30	0·06	+0·24	0·30	0·06	+0·24	0·30	Montgomery		
31	...	...	...	...	...	...	...	...	0·1	1·2	−92	58	·437	1·7	1	0·09	+0·91	0·34?	0·05	+0·29?	0·34?	0·05	+0·29?	0·30?	D. I. Khan (Tel. Office). Mooltan.		
17	...	4	...	8	...	2	...	...	1·1	2·0	−45	54	·404	2·0	0	0	0	0	0	0	0	0	0	0			
16	9	2	2	...	...	...	...	2	3·2	2·2	+45	39	·326	1·5	0	0	0	0	0	0	0	0	0	0	Jacobabad .	SIND.	47
5	5	...	..	...	7	10	...	4	8·7	7·8	+12	50	·492	1·1	0	0	0	0	0	0	0	0	0	0	Hyderabad.		
4	2	2	7	...	1	3	8	4	6·2	9·7	−36	77	·739	1·5	0	0	0	0	0	0	0	0	0	0	Kurrachee (Tel. Office)		
...	2	6	4	...	1	...	14	4	9·8	?	?	83	·757	3·6	0	?	?	0		?	0	?	?	0	Kurrachee (Hospital)		
2	...	1	2	3	7	9	2	5	5·3	4·0	+33	46	·461	1·0	0	?	?	0	0·10	−0·10	0	0·10	−0·10	0	Bickaneer .	WEST RAJPUTANA.	51
...	6	2	1	1	5	9	3	4	5·1	3·7	+38	47	·355	?	0	?	?	0	0·05	−0·05	0	0·05	−0·05	0	Pachpadra.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·03	0·65	−0·61	...	...	...	...	VIII.—East Rajputana, Central India and Gujarat.		
11	2	2	...	...	...	1	1	14	3·2	3·7	−14	41	·388	0·5	1	0·90	+0·10	0·20	0·30	−0·10	0·20	0·30	−0·10	0·20	Jeypore .	EAST RAJPUTANA.	50
22	1	1	...	...	...	...	6	1	3·2	4·7	−32	47	·418	0·5	1	0·50	+0·50	0·20	0·17	+0·03	0·20	0·17	+0·03	0·20	Sambhar.		
18	1	...	...	2	1	4	5	...	2·8	2·6	+ 8	55	·436	0·5	0	0·64	−0·64	0	0·31	−0·31	0	0·31	−0·31	0	Ajmere.		
...	1	7	9	1	6	2	4	1	6·1	8·7	− 9	44	·455	0·1	0	0·45	−0·45	0	0·35	−0·35	0	0·35	−0·35	0	Deesa.		
1	6	1	...	...	...	1	16	6	6·9	6·0	+15	57	·580	0·4	0	?	?	0	0·35	−0·35	0	0·35	−0·35	0	Bhuj .	KATHIAWAR AND CUTCH.	46
8	3	4	...	...	...	...	5	11	4·5	5·6	−20	67	·675	1·3	0	1·27	−1·27	0	0·45	−0·45	0	0·45	−0·45	0	Rajkot .		
3	15	3	...	...	...	...	2	8	6·2	?	?	64	·669	1·5	0	?	?	0	?	?	0	?	?	0	Veraval.		
19	...	...	...	...	1	6	5	...	1·6	1·5	+ 7	57	·473	0	0	1·82	−1·82	0	1·17	−1·17	0	1·17	−1·17	0	Nowgong .	CENTRAL INDIA.	49
9	5	10	1	...	...	...	1	5	1·8	2·3	−22	47	·448	0·2	0	3·09	−3·09	0	1·45	−1·45	0	1·45	−1·45	0	Indore.		
...	11	7	1	...	...	1	3	8	6·1	7·9	−23	38	·392	0	0	1·09	−1·09	0	0·49	−0·49	0	0·49	−0·49	0	Neemuch.		
13	2	4	...	...	1	5	6	...	?	5·1	?	72	·726	1·2	0	3·00	−3·00	0	1·53	−1·53	0	1·53	−1·53	0	Surat .	GUJARAT.	45
...	10	1	1	1	...	2	3	13	3·1	?	?	51	·541	0·2	0	?	?	0	?	?	0	?	?	0	Ahmedabad		
1	...	2	...	1	...	10	...	17	4·4	3·0	+47	39	·381	0·3	0	0·45	−0·45	0	0·47	−0·47	0	0·47	−0·47	0	Agra . .	N.-W. P., WEST.	22
13	...	...	...	...	...	9	6	3	1·7	2·6	−35	36	·384	0·1	0	1·27	−1·27	0	0·70	−0·70	0	0·70	−0·70	0	Jhansi .	N.-W. P., CENTRAL.	21

‡ Wind observations of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 207 Stations.

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	IX.—Deccan . . .		...	...	+·052	...	...	...	...	...	...	...	94·8	+7·0	67·3	−0·1	81·1	+3·5	27·5	...	...	...	...	36·9
38	Bombay, Deccan	Belgaum .	2,524	27·458	+·061	29·918	27·526	27th	27·362	6th	·164	74·6	88·7	+6·3	65·3	+0·3	77·0	+3·3	23·4	92·2	5th	60·9	28th	31·3
		Sholapur .	1,590	28·392	+·058	29·931	28·467	26th	28·271	6th	·196	81·1	97·1	+8·0	68·3	+0·4	82·7	+4·2	28·8	101·2	7th	62·1	12th	39·1
		Poona . .	1,840	28·151	+·051	29·943	28·227	27th	28·039	6th	·188	77·9	96·1	+8·6	67·7	+1·3	81·9	+5·0	28·4	97·5	4 days	62·9	31st	34·6
		Bijapur . .	1,946	28·034	?	29·919	28·111	26th	27·924	6th	·187	79·9	95·5	?	69·5	?	82·5	?	26·0	98·7	7th	63·0	11th & 27th	35·7
40	Khandesh .	Malegaon .	1,430	28·557	+·052	29·942	28·639	26th	28·455	6th	·184	81·3	97·2	+7·6	67·6	+2·3	82·4	+5·0	29·6	99·9	3rd	59·4	8th	40·5
		Ahmednagar .	2,152	27·851	?	29·937	27·924	27th	27·734	6th	·190	80·4	94·7	?	64·6	?	79·7	?	30·1	97·3	4th	57·0	12th	40·3
41	Berar . .	Akola . .	930	29·041	+·048	29·929	29·128	26th	28·937	6th	·191	79·1	98·5	+8·4	66·4	+0·4	82·5	+4·4	32·1	102·3	5th & 6th,	59·0	11th	43·3
		Amraoti .	1,215	28·761	+·059	29·935	28·853	26th	28·656	6th	·197	81·5	97·2	+7·8	70·0	+2·5	83·6	+5·2	27·2	101·3	4th & 5th.	65·3	31st	36·0
42	Central Provinces, West.	Khandwa .	1,044	28·933	+·060	29·946	29·017	26th	28·847	6th	·170	78·1	98·4	+8·5	66·9	+0·8	82·7	+4·7	31·5	100·7	3 days	59·6	8th	41·1
		Hoshangabad.	1,006	28·965	+·052	29·950	29·060	26th	28·875	2nd	·185	74·5	94·8	+5·7	66·1	−0·9	80·4	+2·4	28·7	97·4	2nd & 3rd.	59·8	8th & 9th,	37·6
		Nagpur . .	1,025	28·940	+·055	29·933	29·036	26th	28·833	6th	·203	77·7	95·7	+6·3	68·6	+0·3	82·2	+3·3	27·1	99·3	5th	62·6	13th	36·7
43	Central Provinces, Central.	Chanda . .	634	29·323?	+·043?	29·907?	29·391	26th	29·235	6th	·156	77·6	95·4	+6·0	65·7	?	80·6	?	29·7	98·9	4th	59·1	10th & 11th.	39·8
		Seoni . .	2,033	27·950	+·061	29·936	28·053	26th	27·866	6th	·187	76·9	92·9	+6·9	64·2	−0·1	78·6	+3·4	28·7	96·2	3 days	58·5	9th	37·7
		Jubbulpore .	1,327	28·634	+·044	29·943	28·726	26th	28·546	6th	·180	72·9	94·0	+7·2	61·9	−2·3	78·0	+2·5	32·1	98·0	4th	55·9	10th	42·1
		Saugor . .	1,807	28·141?	+·029?	29·904?	28·248	26th	28·049	2nd	·199	79·2	93·8	+7·0	68·5?	?	81·2?	?	25·3	97·8	2nd & 3rd	59·1	8th	38·7
49	Central India .	Sutna . .	1,040	28·896	+·028	29·913	28·990	25th & 26th	28·786	2nd	·204	76·1	95·0	+7·6	65·2	−0·4	80·1	+3·6	29·8	100·5	3rd	60·2	11th	40·3
44	Central Provinces, East.	Raipur . .	970	28·993	+·053	29·928	29·086	26th	28·882	5th	·204	76·7	93·9	+6·1	69·0	−0·8	81·5	+2·7	24·9	97·9	4th	64·7	10th & 22nd,	33·2
		Sambalpur .	486	29·481	+·051	29·924	29·572	25th	29·347	5th	·225	77·3	91·8	+2·1	68·0	−4·2	80·0	−0·6	23·8	97·0	22nd	64·2	3 days	32·8
39	Hyderabad, North.	Aurangabad .	?	28·131	?	?	28·213	27th	28·007	1st	·206	82·7	96·6	?	67·5‡	?	82·0‡	?	29·1	99·6	2nd	61·6	8th	38·0
		Indur . .	?			Not recorded.						80·0	93·6	?	66·2	?	79·9	?	27·4	96·7	7th	60·1	11th	36·6
		Bidar . .	?	27·822	?	?	27·899	27th	27·715	6th	·184	79·5	90·6	?	69·5	?	80·1	?	21·1	94·5	7th	64·2	11th	30·3
53	Hyderabad, South.	Gulbarga .	1,502	28·494	?	29·950	28·650	21st	28·366	6th	·284	79·7	96·1	?	67·7	?	81·9	?	28·4	99·7	7th	59·9	18th	39·8
		Raichur . .	1,309	28·664	?	29·921	28·747	27th	28·553	6th	·194	81·4	95·0	?	73·0	?	84·0	?	22·0	97·1	6th & 7th,	67·6	27th	29·5
		Hyderabad (Deccan).	1,690	28·293	+·074	29·943	28·369	25th	28·177	6th	·192	76·2	93·7	+6·8	66·8	−1·0	80·3	+3·0	26·9	98·4	6th	62·2	11th	36·2
		Secunderabad.	1,787	28·203	?	29·952	28·276	27th	28·089	6th	·187	75·3	93·8	?	67·0	?	80·4	?	26·8	97·7	5th & 6th,	64·0	5 days	33·7
		Khamamet .	373	29·609	?	29·929	29·692	26th	29·464	6th	·228	80·8	95·4	?	69·7	?	82·6	?	25·7	98·8	7th	63·2	10th	35·6
	X.—West Coast . .		...	...	+·046	...	...	...	...	...	...	...	87·9	+2·7	76·2	+1·8	82·1	+2·3	11·7	...	...	...	...	19·8
37	Konkan . .	Bombay .	37	29·947	+·052	29·924	30·014	27th	29·822	6th	·192	81·4	90·2	+2·9	78·7	+2·5	84·5	+2·7	11·5	95·0	30th	76·5	31st	18·5
		Ratnagiri .	110	29·857	+·063	29·906	29·919	27th	29·752	6th	·167	82·4	89·7	+1·5	75·9	+2·4	82·6	+2·0	13·8	96·4	30th & 31st,	72·9	29th	23·5
		Mormugao .	60	29·925	?	29·920	29·983	28th	29·824	6th	·159	81·1	88·9	?	77·1	?	83·0	?	11·8	92·0	3 days	73·4	5th & 29th,	18·6
		Goa* . .	199	29·766	+·052	29·903	29·838	22nd	29·667	6th	·171	81·3	85·3	?	77·9	?	81·6	?	7·4	88·0	3 days	63·0?	2nd	25·0
		Karwar . .	44	29·936	+·056	29·912	29·999	22nd	29·843	6th	·156	77·5	87·8	+2·7	74·7	+1·6	81·3	+2·2	13·1	91·3	3 days	70·5	29th & 30th	20·8
33	Malabar . .	Cochin . .	11	29·967	+·033	29·905	30·040	22nd	29·883	3rd	·157	80·6	88·5	+2·8	75·6	+1·2	82·1	+2·0	12·9	90·8	11th	70·7	28th	20·1
		Calicut . .	27	29·947	+·031	29·904	30·031	22nd	29·855	3rd	·176	80·8	88·3	+2·5	75·8	+1·7	82·1	+2·1	12·5	91·3	19th	72·5	22nd	18·8
		Mangalore .	65	29·916	+·038	29·914	29·984	22nd	29·829	3rd	·155	81·2	88·8	+3·7	75·7	+1·6	82·3	+2·7	13·1	91·8	30th	72·4	22nd	19·4
		Trivandrum .	198	29·784	?	29·913	29·849	13th	29·693	3rd	·156	78·5	83·6	?	74·8	?	79·2	?	8·8	85·5	6th	72·0	24th	13·5
57	XI.—South India . .		...	...	+·061	...	...	...	...	...	...	...	90·1	+3·2	71·8	−0·2	81·0	+1·5	18·3	...	...	...	...	28·2
	Madras, South.	Pamban .	37	29·935	?	29·899	30·013	22nd	29·835	6th	·178	81·8	87·2	?	77·0	?	82·1	?	10·2	90·3	13th	71·7	16th	18·6
		Tinnevelly .	168	29·811	?	29·910	29·882	22nd	29·719	6th	·163	80·4	91·3	?	76·2	?	83·8	?	15·1	100·3	9th	72·9	22nd	27·4
		Madura .	447	29·520	+·056	29·907	29·593	21st	29·426	7th	·167	79·5	89·9	−1·8	73·9	+0·1	81·9	−0·9	16·0	94·9	8th & 9th,	70·0	12th	21·9

* Mean of 30 days. ‡ Mean of 28 days.

I—*continued.*

in India, Burma, etc., in October 1896—continued.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.		MEAN CLOUD AMOUNT.	RAINFALL.									RAINFALL. Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour.	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 31st October 1896.	Normal rainfall for period, from 1st October to 31st October.	Variation from normal of period, from 1st October to 31st October.				
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·19	2·96	—2·74	...	...	...	...	IX.—Deccan.		
14	1	2	3	4	1	...	3	3	8·9	10·5	−15	73	·619	0·7	4	8·09	−4·09	2·50	6·39	− 3·89	2·50	6·39	− 3·89	1·04	Belgaum .	BOMBAY, DECCAN.	38
8	1	4	3	13	...	...	...	2	8·3	7·4	+12	42	·445	1·2	1	5·91	−4·91	0·44	5·10	− 4·66	0·44	5·10	− 4·66	0·39	Sholapur.		
12	...	2	7	3	...	2	1	4	7·4	5·8	+28	59	·564	1·0	1	6·18	−5·18	0·15	4·80	− 4·65	0·15	4·80	− 4·65	0·10	Poona.		
5	...	...	8	5	...	4	7	2	5·1	P	P	64	·660	1·1	1	7·70	−6·70	0·13	P	P	0·13	P	P	0·12	Bijapur.		
4	2	1	...	1	...	3	6	14	7·6	4·5	+69	71	·752	1·4	0	4·18	−4·18	0·10	2·84	− 2·74	0·10	2·84	− 2·74	0·08	Malegaon .	KHANDESH.	40
7	6	6	3	7	2	...	...	...	9·7	P	P	61	·640	0·5	0	P	P	0·06	P	P	0·06	P	P	0·06	Ahmednagar.		
11	1	3	5	4	1	1	4	1	2·6	3·3	−21	44	·444	0·1	0	4·09	−4·09	0	3·50	− 3·50	0	3·50	− 3·50	0	Akola .	BERAR.	41
...	4	3	6	1	3	6	7	1	3·3	2·9	+14	42	·456	0·3	1	4·09	−3·09	0·18	2·88	− 2·70	0·18	2·88	− 2·70	0·18	Amraoti.		
15	...	1	...	6	1	6	2	...	3·2	2·9	+10	44	·433	0·1	0	3·27	−3·27	0	1·73	− 1·73	0	1·73	− 1·73	0	Khandwa .	CENTRAL PROVINCES, WEST.	42
26	1	1	1	...	1	1	...	...	0·2	1·5	−87	56	·481	0	0	3·18	−3·18	0	1·82	− 1·82	0	1·82	− 1·82	0	Hoshangabad.		
31	...	...	...	...	...	...	...	...	1·4	3·7	−62	57	·547	0·5	0	3·55	−3·55	0	2·95	− 2·95	0	2·95	− 2·95	0	Nagpur.		
9	4	7	7	4	...	...	...	...	1·2	2·3	−48	63	·606	0·1	0	P	P	0	2·24	− 2·24	0	2·24	− 2·24	0	Chanda .	CENTRAL PROVINCES, CENTRAL.	43
...	3	1	1	1	4	10	7	4	2·7	3·1	- 13	54	·508	0	0	3·55	−3·55	0	2·36	− 2·36	0	2·36	− 2·36	0	Seoni.		
4	1	...	...	14	10	1	1	...	1·5	2·1	−29	61	·500	0·1	0	2·45	−2·45	0	2·07	− 2·07	0	2·07	− 2·07	0	Jubbulpore.		
13	2	1	1	1	3	4	6	...	2·8	2·7	+ 4	34	·340	0·7	0	2·91	−2·91	0	1·45	− 1·45	0	1·45	− 1·45	0	Saugor.		
1	8	...	...	...	...	...	8	14	4·5	4·3	+ 5	42	·389	0	0	2·09	−2·09	0	2·37	− 2·37	0	2·37	− 2·37	0	Sutna	CENTRAL INDIA.	49
21	1	...	...	...	3	4	2	...	3·1	3·8	−18	58	·538	0·4	0	3·82	−3·82	0	2·29	− 2·29	0	2·29	− 2·29	0	Raipur .	CENTRAL PROVINCES, EAST.	44
...	2	15	2	2	2	2	1	5	3·2	2·0	+60	73	·687	0·2	0	P	P	0	2·04	− 2·04	0	2·04	− 2·04	0	Sambalpur.		
25	...	2	1	2	...	1	...	...	2·9	P	P	40	·444	0·8	2	P	P	0·29	2·96	− 2·67	0·29	2·96	− 2·67	0·18	Aurangabad	HYDERABAD, NORTH.	39
14	7	...	1	1	2	3	3	...	4·1	P	P	62	·637	0·5	0	P	P	0	2·63	− 2·63	0	2·63	− 2·63	0	Indur.		
...	...	2	7	7	7	7	1	...	6·8	P	P	64	·647	0·2	1	P	P	0·63	3·65	− 3·02	0·63	3·65	− 3·02	0·63	Bidar.		
14	...	2	4	4	3	3	...	1	9·4	P	P	48	·489	1·3	1	P	P	0·24	3·06	− 2·82	0·24	3·06	− 2·82	0·24	Gulbarga.	HYDERABAD, SOUTH.	53
...	...	2	23	3	2	...	1	...	8·5	P	P	53	·566	0·7	0	P	P	0	P	P	0	P	P	0	Raichur.		
28	1	...	...	...	...	...	2	...	3·3	P	P	63	·574	0·5	1	P	P	0·11	3·08	− 2·97	0·11	3·08	− 2·97	0·11	Hyderabad (Deccan).		
20	...	...	8	...	...	...	1	2	4·2	3·8	+11	59	·520	0·6	0	P	P	0·04	P	P	0·04	P	P	0·03	Secunderabad.		
31	...	...	...	...	...	...	...	...	4·1	P	P	70	·742	0·1	1	P	P	0·20	P	P	0·20	P	P	0·20	Khamamet.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·23	·0	—4·34	...	...	...	...	X.—West Coast.		
...	2	13	10	3	1	...	...	2	7·7	9·8	−21	81	·876	0·9	0	3·45	−3·45	0	2·47	− 2·47	0	2·47	− 2·47	0	Bombay.	KONKAN.	37
1	2	4	10	8	1	...	1	4	4·4	7·7	−43	77	·850	2·5	1	5·91	−4·91	0·22	4·28	− 4·06	0·22	4·28	− 4·06	0·17	Ratnagiri.		
3	3	2	11	1	...	2	3	6	5·8	P	P	86	·920	1·9	2	P	P	0·59	P	P	0·59	P	P	0·37	Mormugao.		
4	2	7	14	...	...	2	1	...	P	P	P	81	·861	2·6	2	P	P	1·53	5·97	− 4·44	1·53	5·97	− 4·44	0·91	Goa.*		
1	4	14	8	...	...	...	3	1	3·1	P	P	89	·840	1·8	3	9·09	−6·09	2·48	7·68	− 5·20	2·48	7·68	− 5·20	1·10	Karwar.		
7	8	11	3	...	1	1	...	...	3·8	P	P	83	·877	5·0	11	15·09	−4·09	10·38	14·01	− 3·63	10·38	14·01	− 3·63	3·96	Cochin .	MALABAR.	33
2	1	8	10	7	1	1	...	1	8·4	P	P	82	·863	3·8	9	10·44	−1·44	6·36	10·17	− 3·81	6·36	10·17	− 3·81	1·97	Calicut.		
1	1	2	16	9	1	...	1	...	2·7	2·7	0	81	·867	2·8	5	9·90	−4·90	3·56	7·82	− 4·26	3·56	7·82	− 4·26	1·64	Mangalore.		
20	5	1	3	...	1	...	...	1	2·7	P	P	86	·841	6·4	14	P	P	3·92	10·76	− 6·84	3·92	10·76	− 6·84	0·65	Trivandrum.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·38	7·94	—4·34	...	...	...	...	XI.—South India.		
1	1	6	6	5	2	4	3	3	9·3	P	P	80	·906	4·3	14	7·50	+6 50	13·44	6·86	+ 6·58	13·44	6·86	+ 6·58	2·28	Pamban .	MADRAS, SOUTH.	57
1	3	2	1	1	1	3	7	12	2·7	P	P	79	·821	4·9	7	7·30	−0·30	3·97	P	P	3·97	P	P	1·91	Tinnevelly.		
4	11	6	1	1	...	...	...	8	2·7	2·9	− 7	77	·775	4·0	13	9·73	+3·27	9·22	8·21	+ 1·01	9·22	8·21	+ 1·01	1·90	Madura.		

Table

Abstract of Observations taken at 8 A.M. at 207 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
34	Madras, South Central.	Salem	940	29·060	+·057	29·917	29·126	22nd	28·970	6th	·156	78·8	91·0	+1·7	71·2	+0·7	81·1	+1·2	19·8	94·4	8th & 14th.	65·4	24th	29·0
		Coimbatore	1,348	28·627	+·050	29·929	28·697	22nd	28·522	6th	·175	76·7	89·5	+1·5	70·4	?	80·0	?	19·1	96·9	17th	66·1	22nd	30·8
35	Coorg	Mercara	3,781	26·289	+·057	?	26·348	22nd	26·212	6th	·136	68·3	77·8	+2·4	63·1	+1·0	70·5	+1·7	14·7	81·0	7th	59·7	24th	21·3
36	Mysore	Chitaldroog	2,405	27·592	?	29·917	27·654	27th	27·500	6th	·154	76·8	88·2	?	68·7	?	78·5	?	19·5	90·1	3 days	63·9	25th	26·2
		Bangalore	3,021	26·999	+·043	29·926	27·052	21st,	26·909	6th	·143	72·2	84·4	+3·4	65·0	+0·1	74·7	+1·8	19·4	87·3	8th	61·4	23rd & 24th.	25·9
		Hassan	3,091	26·940	?	29·946	26·997	22nd	26·859	6th	·138	72·5	82·9	?	63·9	?	73·4	?	19·0	85·8	30h	57·6	31st	28·2
		Mysore	2,518	27·495	?	29·942	27·545	22nd & 26th	27·414	2nd	·131	73·5	85·7	?	66·7	?	76·2	?	19·0	87·9	8th	63·0	31st	24·9
56	Madras, East Coast, South.	Negapatam	31	29·940	+·058	29·100	30·023	21st	29·835	6th	·188	82·2	88·5	+0·6	76·7	+1·1	82·6	+0·9	11·8	97·2	8th	71·9	21st	25·3
		Cuddalore	12	29·957	?	29·898	30·023	19th & 21st	29·844	7th	·179	81·4	89·5	?	75·0	?	82·3	?	14·5	98·3	16th	68·7	23rd	29·6
		Trichinopoly	255	29·716	+·053	29·906	29·782	19th	29·618	6th	·164	81·0	92·4	+1·6	74·8	+0·8	83·6	+1·2	17·6	99·1	9th	69·9	23rd	29·2
		Madras	22	29·955	+·063	29·908	30 020	22nd	29·816	6th	·204	81·9	90·7	+1·7	74·0	−1·2	82·4	+0·3	16·7	96·5	8th	68·5	23rd	28·0
55	Madras, East Coast, Central.	Nellore	71	29·900	?	29·905	29·982	27th	29·761	6th	·221	82·1	92·7	?	74·3	?	83·5	?	18·4	99·8	8th	70·1	22nd	29·7
		Masulipatam	15	29·971	+·087	29·921	30·053	25th & 27th	29·819	6th	·234	82·3	91·4	+2·4	75·1	−0·6	83·3	+0·9	16·3	96·6	8th	70·6	22nd	26·0
54	Madras, Central	Cuddapah	433	29·540	?	29·914	29·622	27th	29·414	6th	·208	83·6	97·3	+7·4	74·1	0	85·7	+3·7	23·2	102·2	8th	68·5	30th	33·7
		Kurnool	923	29·048	+·055	29·921	29·134	26th	28·937	6th	·197	79·5	96·5	+7·2	69·3	?	82·9	?	27·2	100·2	7th	63·3	10th	36·9
		Bellary	1,475	28·501	+·058	29·923	28·579	27th	28·390	6th	·189	80·7	96·4	+7·0	71·9	+1·1	84·2	+4·1	24·5	102·2	7th	66·7	11th	35·5
		Rajahmundry	112			Not recorded.						79·6	96·2	+6·8	73·6	−1·2	84·9	+2·8	22·6	101·0	7th	70·0	26th	31·0
52	Madras, East Coast, North.	Cocanada	26	29·951	+·088	29·912	30·034	25th	29·796	6th	·238	81·8	91·0	+5·0	74·1	−1·6	82·6	+1·7	16·9	98·1	7th	69·0	31st	29·1
		Vizagapatam	31	29·936	+·071	29·905	30·032	25th	29·775	6th	·257	82·2	92·3	+3·0	72·4	−2·8	82·4	+0·1	19·9	95·2	7th & 8th.	66·4	31st	28·8
		Gopalpur	21	29·950	?	29·911	30·049	25th	29·781	6th	·268	79·3	89·8	?	71·1	?	80·5	?	18·7	95·7	7th	67·6	4 days	28·1
	XII.—Hill Stations																							
48	Baluchistan	Kachh	?	23·972	?	?	24·050	26th	23·910	8th	·140	53·5	69·1	?	?	?	?	?	?	90·0	8th	?	...	?
		Pishin	?			Not recorded.						?	75·6	?	34·8	?	55·2	?	40·8	85·0	1st & 4th	24·5	16th	60·5
		Quetta	5,502	24·767	+·043	?	24·850	26th	24·651	2nd	·199	53·4	71·2	−3·6	37·8	−1·4	54·5	−2·5	33·4	80·7	1st	29·8	30th	50·9
		Kalat	?			Not recorded.						51·2	71·9	?	32·4	?	52·1	?	39·5	80·5	2nd	23·6	31st	56·9
		Chaman	4,311	25·831	?	?	25·941	26th	25·709	2nd	·232	61·1	74·9	?	18·4	?	61·6	?	26·5	87·0	1st	33·1	29th	48·9
30	Punjab	Leh	11,503	19·784	?	?	19·888	19th	19·677	2nd	·211	35·7	54·4	?	29·5	?	42·0	?	24·9	64·7	12th	21·5	30th	43·2
		Srinagar	5,204	25·035	?	?	25·135	25·h	24·935	7th	·200	46·1	64·1	?	41·4	?	52·8	?	22·7	72·8	4 days	36·6	17th & 18th.	36·2
		Skardu (Kashmir)	?			Not recorded.						44·8	61·4	?	41·1	?	51·3	?	20·3	70·9	12th	34·2	24th	36·7
		Dras	?	20·937	?	?	21·043	19th	20·783	2nd	·260	32·1	47·4	?	26·1	?	36·7	?	21·3	56·8	12th	18·0	4th	38·8
		Gilgit	?	24·794	?	?	24·930	26th	24·670	2nd & 11th, 4th	·260	56·1	70·9	?	51·7	?	61·3	?	19·2	80·0	11th	42·3	30th	37·7
		Samana	?	23·798	?	?	23·880	5 days	23·630	4th	·250	?	67·4	?	44·7	?	56·1	?	22·7	85·1	10th & 11th.	40·0	6 days	45·1
		Cherat	?	25·788	?	?	25·888	25th	25·677	2nd	·211	64·7	77·1	?	57·0	?	67·1	?	20·1	86·4	11th	45·6	31st	40·8
		Murree*	6,344	23·910	+·032	?	24·041	26th	23·787	2nd	·254	58·0	68·8	−0·6	50·9	−2·3	59·9	−1·5	17·9	75·6	10th	43·5	24th & 29th	32·1
		Poo	?			Not recorded						?	63·5	?	40·5	?	52·0	?	23·0	73·2	12th	34·2	30th	39·0
		Simla	7,224	23·208	+·027	?	23·287	25th	23·104	6th & 7th,	·183	54·9	62·8	+0·3	51·0	+0·1	56·9	+0·2	11·8	70·4	3rd	44·6	31st	25·8
25	N.-W. Provinces	Chakrata	6,977	23·412	+·047	?	23·475	26th	23·291?	15th	·184	55·8	66·2	+0·2	51·0	+0·3	58·6	+0·3	15·2	71·2	3rd	43·2	29th	28·0
		Mussooree	6,705	23·609	?	?	23·666	20th & 21st,	23·501	6th & 7th.	·165	58·8	66·6	+2·4	53·2	+1·5	59·9	+2·0	13·4	71·8	3rd	46·0	31st	25·8
		Ranikhet	6,069	24·199	+·050	?	24·264	21st	24·073	6th	·191	60·8	70·9	+1·7	56·1	+2·0	63·5	+1·9	14·8	76·0	3rd	51·5	31st	24·5
13	Bengal	Yatung	10,180?			Not recorded.						?	56·7	?	43·3	?	50·0	?	13·4	66·0	22nd	34·4	21st	31·6
		Gnatong	?	19·343	?	?	19·400	20th	19·275	20th	·125	39·6	45·4	?	33·1	?	39·4	?	12·0	52·4	9th	28·1	31st	24·3
		Darjeeling	7,421	23·061	+·007	?	23·143	21st	22·969	6th	·174	54·4	60·7	−0·1	49·4	+0·4	55·1	+0·2	11·3	65·1	9th	45·7	31st	19·4
		Gantok	5,660	24·519	?	?	24·639	27th	24·372	6th	·267	61·8	69·3	?	47·7	?	58·5	?	21·6	75·2	9th	43·8	31st	31·4

* Mean of 3 days.

—continued.

n India, Burma, etc., in October 1896—continued.

WIND DIRECTION. Number of Winds from									WIND VELOCITY.			HYGROMETRY, 8 A.M.		Mean cloud amount.	RAINFALL.									Heaviest rainfall during month.	STATION.	METEOROLOGICAL PROVINCE OR DISTRICT.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	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 31st October 1896.	Normal rainfall for period, from 1st October to 31st October.	Variation from normal of period, from 1st October to 31st October.			
9	1	7	4	1	...	1	3	5	3·4	2·8	+21	77	·766	4·2	5	11·36	−6·36	3·55	6·89	− 3·34	3·55	6·89	− 3·34	2·19	Salem .	MADRAS, SOUTH, CENTRAL.	34
..	2	...	17	...	...	...	12	...	1·8	3·5	−49	84	·774	5·4	8	8·91	−0·91	5·61	5·94	− 0·33	5·61	5·94	− 0·33	3·49	Coimbatore.		
4	4	5	7	...	...	...	...	1	4·8	3·6	+33	85	·595	5·0	6	13·50	−7·50	3·29	9·60	− 6·31	3·29	9·60	− 6·31	1·07	Mercara .	COORG.	35
..	2	1	8	5	...	4	6	5	6·8	?	?	67	·615	3·5	2	?	?	0·90	?	?	0·90	?	?	0·44	Chitaldroog.	MYSORE.	36
..	...	7	10	4	1	3	4	2	6·3	4·0	+58	75	·597	3·8	3	10·00	−7·00	2·23	7·15	− 4·92	2·23	7·15	− 4·92	1·78	Bangalore.		
..	4	9	9	5	...	...	1	3	2·5	?	?	77	·628	5·7	8	?	?	2·59	?	?	2·59	?	?	0·70	Hassan.		
6	2	6	8	1	1	...	4	3	6·2	?	?	79	·647	6·1	4	?	?	2·88	?	?	2·88	?	?	1·29	Mysore.		
5	...	3	1	1	2	2	8	9	7·5	3·7	+103	83	·901	5·8	12	10·82	+1·18	14·85	10·59	+ 4·26	14·85	10·59	+ 4·26	3·78	Negapatam	MADRAS, EAST COAST, SOUTH.	56
...	7	...	1	...	...	3	3	16	1·5	?	?	82	·881	3·5	9	9·40	−0·40	4·46	?	?	4·46	?	?	1·57	Cuddalore.††		
23	...	3	1	...	...	...	3	1	3·0	3·8	−21	77	·809	5·2	6	10·00	−4·00	4·02	7·49	− 3·47	4·02	7·49	− 3·47	1·40	Trichinopoly.		
3	3	1	...	...	1	10	3	10	3·4	5·0	−32	81	·871	3·8	5	12·09	−7·09	2·97	11·00	− 8·03	2·97	11·00	− 8·03	1·67	Madras.		
11	6	3	4	4	...	...	...	3	3·7	?	?	78	·857	4·4	4	8·90	−4·90	1·77	?	?	1·77	?	?	0·80	Nellore .	MADRAS, EAST COAST, CENTRAL	55
1	13	6	1	1	...	...	2	7	4·5	4·4	+ 2	79	·870	1·4	1	9·91	−8·91	0·30	9·34	− 9·04	0·30	9·34	− 9·04	0·30	Masulipatam.		
...	...	15	6	7	1	2	...	...	?	?	?	62	·718	1·9	0	6·80	−6·80	0	6·33	− 6·33	0	6·33	− 6·33	0	Cuddapah .	MADRAS, CENTRAL.	54
30	...	...	...	1	...	...	...	...	?	?	?	57	·582	1·3	1	7·00	−6·00	0·43	5·03	− 4·60	0·43	5·03	− 4·60	0·43	Kurnool.		
13	...	...	6	4	3	...	...	5	3·7	4·3	−14	49	·512	3·5	1	6·73	−5·73	1·18	4·29	− 3·11	1·18	4·29	− 3·11	1·12	Bellary.		
1	29	...	...	...	...	...	...	1	?	?	?	63	·646	2·2	0	7·80	−7·80	0	5·96	− 5·96	0	5·96	− 5·96	0	Rajahmundry.	MADRAS, EAST COAST, NORTH.	52
...	10	3	...	..	...	1	4	13	6·3	?	?	63	·690	0·8	0	10·00	−10·00	0	10·36	−10·36	0	10·36	−10·36	0	Cocanada.		
29	...	...	...	...	...	...	2	...	1·4	2·0	−30	68	·760	1·6	0	10·36	−10·36	0	10·54	−10·54	0	10·54	−10·54	0	Vizagapatam.		
...	17	...	...	...	...	...	1	13	7·6	6·3	+21	70	·701	0	0	9·44	−9·44	0	9·35	− 9·35	0	9·35	− 9·35	0	Gopalpur.		
																									XII.—Hill Stations.		
10	6	...	...	...	2	6	4	3	3·8	?	?	42	·177	?	0	?	?	0	?	?	0	?	?	0	Kachh .	BALUCHISTAN.	48
				Not recorded.					?	?	?	?	?	?	0	?	?	0	?	?	0	?	?	0	Fishin.		
26	...	...	...	...	...	...	2	3	1·8	3·0	−40	48	·199	1·4	0	0·18	−0·18	0·03	0·07	− 0·04	0·03	0·07	− 0·04	0·03	Quetta.		
...	2	...	7	3	13	2	2	2	?	?	?	36	·130	0·1	1	?	?	0·13	?	?	0·13	?	?	0·13	Kalat		
...	1	1	6	14	5	2	1	1	8·4	?	?	27	·141	1·9	0	?	?	0	?	?	0	?	?	0	Chaman.		
...	2	7	5	2	8	5	1	1	2·5	2·0	+25	65	·135	5·5	0	?	?	0·04	?	?	0·04	?	?	0·02	Leh .	PUNJAB.	30
4	4	1	2	10	1	3	2	4	4·9	?	?	94	·293	4·8	6	?	?	3·34	?	?	3·34	?	?	1·79	Srinagar.		
8	3	5	1	...	1	3	9	1	6·2	?	?	79	·224	5·5	0	?	?	0·03	?	?	0·03	?	?	0·02	Skardu (Kashmir).		
30	...	...	...	...	...	...	...	1	2·4	?	?	87	·158	5·5	8	?	?	3·13	?	?	3·13	?	?	0·70	Dras .		
				Not recorded.					?	?	?	68	·303	5·5	0	?	?	0·11	?	?	0·11	?	?	0·07	Gilgit.		
				Imperfect.					?	?	?	?	?	2·5	0	?	?	0·01	?	?	0·01	?	?	0·01	Samana.		
4	13	...	...	1	1	1	...	11	11·8	?	?	37	·220	1·5	0	?	?	0·15	?	?	0·15	?	?	0·08	Cherat.		
...	2	2	3	9	1	1	4	8	8·0	5·7	+40	69‡	·349‡	2·1	0	2·45	−2·45	0·14	1·65	− 1·51	0·14	1·65	− 1·51	0·05	Murree.		
24	1	...	2	2	1	1	...	...	?	?	?	?	?	2·7	3	?	?	0·99	?	?	0·99	?	?	0·41	Poo.		
18	8	3	...	1	...	...	...	...	2·7	2·5	+ 8	43	·186	2·1	4	1·27	+2·73	0·73	1 22	− 0·49	0·73	1·22	− 0·49	0·20	Simla.††		
17	7	5	...	...	...	...	...	2	10·0	5·1	+96	50	·220	1·7	3	?	?	0·95	0·84	+ 0·11	0·95	0·84	+ 0·11	0·43	Chakrata .	N.-W. PROVINCES.	25
...	1	1	7	2	1	1	4	14	?	8·5	?	46	·229	1·5	2	1·10	+0·60	0·20	0·99	− 0·79	0·20	0·99	− 0·79	0·10	Mussooree.		
27	...	...	...	...	...	1	3	...	2·8	1·7	+65	54	·284	0·8	1	1·09	−0·09	0·18	1·48	− 1·30	0·18	1·48	− 1·30	0·15	Ranikhet.		
				Not recorded.					?	?	?	?	?	?	6	?	?	2·14	?	?	2·14	?	?	0·97	Yatung .	BENGAL.	13
8	1	...	3	6	2	2	5	4	4·1	?	?	87	·210	4·3	13	?	?	7·38	?	?	7·38	?	?	1·72	Gnatong.		
6	2	6	8	1	2	2	2	2	3·4	2·6	+32	93	·396	?	3	4·92	−1·92	0·63	5·83	−5·20	0·63	5·83	− 5·20	0·29	Darjeeling.		
18	...	1	...	...	...	...	10	...	0·6†	?	?	85	·470	?	13	?	?	10·76	?	?	10·76	?	?	2·04	Gantok.		

†† Wind observations of 30 days. ‡ Mean of 29 days. † Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 207 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	26·149	+·033	P	26·238	26th	26·067	7th	·171	73·6	80·3	+1·4	66·0	+1·8	73·2	+1·6	14·3	86·7	1st	62·9	3 days	23·8
	Pachmarhi	3,528	26·552	+·059	P	26·641	26th	26·471	6th	·170	75·9	84·1	+6·8	58·6	−1·3	71·4	+2·8	25·5	87·7	3rd & 4th	53·2	11th	34·5
South India	Wellington	6,200	24·303	+·041	P	24·352	20th	24·245	3rd	·107	62·8	70·5	+2·0	53·2	−1·8	61·9	+0·1	17·3	73·2	8th	47·2	24th	26·0
XIII.—Extra India.																							
Ceylon	Trincomalee	12	29·957	P	29·895	30·026	21st	29·862	6th	·164	79·9	88·1	P	76·1	P	82·1	P	12·0	94·0	9th	74·0	11th & 22nd	20·0
	Colombo	40	29·944	+·029	29·910	30·003	19th	29·868	5th & 6th	·135	79·4	86·3	P	74·8	P	80·6	P	11·5	90·0	30th	72·0	22nd & 29th	18·0
Persia	Meshed	3,104			Not recorded.						46·7	P	P	39·7	P	P	P	P	P	P	32·2	31st	P
	Resht	P			Not recorded.						61·9†	69·3	P	55·7	P	62·5	P	13·6	77·4	4th	42·1	21st	35·3
	Teheran*	?	26·256‡ / 25·715	P	P	26·580 / 25·850	18th / 20th	25·950 / 25·440	17th / 17th	·630 / ·410	59·5†	71·5†	P	49·6	P	60·5	P	21·9	84·3	5th & 6th.	40·8	28th	43·5
	Isphahan	P	24·569 / 24·887	P	P	24·680 / 25·000	13th / 13th	24·330 / 24·650	17th / 17th	·350 / ·350	55·0	71·8	P	42·5	P	57·1	P	29·3	84·8	4th	31·3	28th	53·5
	Bushire	14	30·011	+·070	29·984	30·244	30th	29·866	3rd	·378	77·7	85·5	−2·4	72·3	+1·6	78·9	−0·½	13·2	95·0	4th	63·2	23rd	31·8
	Jask	P	29·997	P	29·949	30·142	27th	29·882	2nd	·260	83·3	90·6	P	75·8	P	83·2	P	14·8	96·3	13th	71·2	16th & 28th	25·1
Arabia	Muscat	20	29·997	P	29·965	30·128	26th	29·890	2nd	·238	83·3	85·0	?	81·3	?	83·1	P	3·7	87·1	20th	77·1	26th	10·0
	Baghdad	220?	29·894a	+·063	30·096a	30·083	19th	29·695	1st	·388	65·7a	85·9a	−7·3	61·1a	−0·5	73·5a	−3·9	24·8	98·0	3rd	51·8	30th	46·2
	Aden	94	29·886	+·013	29·912	29·964	20th	29·799	3rd	·165	82·3	87·9	−3·3	78·9	+1·8	83·4	−0·8	9·0	96·3	4th	74·9	15th	21·4
	Perim	P	29·759	P	P	29·837	21st	29·676	3rd	·161	84·2	90·4	P	81·6	P	86·0	P	8·8	93·9	5th	75·6	15th	18·3
Afghanistan	Kabul	P			Not recorded.						44·7	74·1	P	38·5	P	56·3	P	35·6	81·2	19th	28·4	31st	52·8
Central India	Kashgar	P	25·848	P	P	26·260	28th	25·670	1st	·590	46·9	68·3	P	40·4	P	54·4	P	27·9	76·1	9th	29·3	31st	46·8
Africa	Zanzibar	23	30·029	P	30·029	30·112	14th	29·952	29th	·160	78·0	83·1	P	75·0	P	79·1	P	8·1	87·6	26th	70·5	3rd	17·1

* Mean of 29 days. a Mean of 24 days. † 9 A. M. ‡ Uncorrected.

I—*concluded.*

in India, Burma, etc., in October 1896—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 Oct. to 31st Oct. 1896.	Normal rainfall for period, from 1st Oct. to 31st Oct.	Variation from normal of period, from 1st Oct. to 31st Oct.			
1	2	4	...	...	2	11	6	5	5·9	4·0	+48	41	·330	0·3	0	0·60	−0·60	0	0·71	− 0·71	0	0·71	− 0·71	0	Mount Abu	CENTRAL INDIA.
24	1	...	...	...	1	2	2	1	4·5	2·9	+55	39	·350	0·4	0	4·27	−4·27	0	2·63	− 2·63	0	2·63	− 2·63	0	Pachmarhi.	
20	4	5	...	1	1	...	...	...	2·8	2·6	+ 8	75	·430	3·3	12	15·89	−3·89	7·71	12·10	− 4·39	7·71	12·10	− 4·39	3·06	Wellington.	SOUTH INDIA.
																									XIII.—Extra India.	
16	...	...	...	...	...	14	1	...	2·4	P	P	87	·888	2·8	12	P	P	3·96	8·41	−4·45	3·96	8·41	− 4·45	0·68	Trincomalee	CEYLON.
...	...	4	6	12	5	2	1	1	6·5	7·3	−11	87	·879	5·6	20	P	P	21·21	13·51	+7·70	21·21	13·51	+ 7·70	4·96	Colombo.	
				Not recorded.					P	P	P	56	·181	1·5	0	P	P	0	P	P	?	0	P	P	0	Meshed.	PERSIA.
				Not recorded.					P	P	P	83	·468	?	6	P	P	14·00	P	P	14·00	P	P	P	Resht.	
14	3	9	1	1	...	...	...	1	2·9	?	P	47	·236	1·9	1	P	P	0·40	P	P	0·40	P	P	0·40	Teheran.	
5	...	5	10	2	2	3	2	1	2·4	P	P	65	·291	3·2	1	P	P	0·11	P	P	0·11	P	P	0·11	Isphahan.	
3	4	9	6	4	1	1	...	3	6·7	6·5	+ 3	68	·657	3·4	1	P	P	1·08	0	+1·08	1·08	0	+ 1·08	0·92	Bushire.	
4	7	1	17	...	1	...	...	1	7·5	P	P	62	·715	1·6	0	P	P	0·02	P	P	0·02	P	P	0·02	Jask.	
...	3	4	2	2	2	1	8	9	3·5	P	?	73	·837	0·4	1	P	P	0·17	P	P	0·17	P	P	0·14	Muscat	ARABIA.
15	4	1	...	...	1	1	...	2	1·3†	P	P	67‡	·440‡	0	0	P	P	0	P	P	0	?	P	0	Baghdad.	
2	2	7	14	1	1	4	...	...	13·5‖	12·2	+11	69	·764	5·5	0	P	P	0	0·02	−0·02	0	0·02	− 0·02	0	Aden.	
1	...	7	15	7	1	...	...	...	19·8	P	?	71	·833	2·1	1	P	?	0·47	?	P	0·47	P	P	0·47	Perim.	
...	4	2	11	...	...	...	14	...	P	P	P	68	·202	0	1	P	P	0·10	?	P	0·10	P	P	0·10	Kabul	AFGHANISTAN.
23	...	1	1	...	...	...	...	...	0·8	P	P	55	·176	2·7	0	P	P	0·03	P	P	0·03	P	P	0·03	Kashgar¶	CENTRAL INDIA.
...	1	...	1	11	12	5	...	1	4·2	P	P	83	·793	5·6	6	P	P	6·81	P	P	6·81	P	P	3·39	Zanzibar	AFRICA.

‖ Mean of 30 days. † Mean of 23 days. ‡ Mean of 24 days. ¶ Wind observation of 25 days.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity, 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·903	29·801	·102	29·850	+·042	29·842	87·6	77·6	10·0	90·5	75·2	15·3	85·5	83·6	81·1	+1·0	75·7	80·5	79·0	78·4
	Rangoon	...	·915	·794	·121	·860	+·013	·838	88·5	76·3	12·2	93·9	72·9	21·0	83·1	84·5	80·5	+0·8	74·8	79·5	79·4	77·9
	Diamond Island	...	·918	·812	·106	·863	+·019	·837	85·8	79·1	6·7	87·6	74·4	13·2	84·0	83·1	81·3	+1·6	76·1	78·5	77·5	77·4
	Cocos Island	111	·831	·735	·096	·781	P	·823	88·1	78·7	9·4	90·8	74·3	16·0	84·5	84·2	81·9	P	75·1	79·4	78·7	77·7
	Akyab	...	·943	·824	·119	·885	+·032	·847	86·8	75·3	11·5	89·2	68·9	20·3	82·8	84·5	80·5	−1·0	73·5	79·2	80·1	77·6
Assam.	Silchar	...	·868	·736	·132	·806	+·031	·861	90·9	71·0	19·9	94·0	65·2	28·8	83·7	89·2	80·0	+0·9	69·7	76·3	76·6	74·2
	Sibsagar	...	·651	·515	·136	·582	+·015	·874	84·4	69·3	15·1	90·4	64·2	26·2	78·4	82·2	75·6	−0·6	69·1	75·1	75·9	73·4
	Dhubri	...	·859	·722	·137	·787	+·020	·857	86·3	72·3	14·0	90·3	67·7	22·6	80·0	84·9	78·2	+0·3	70·6	75·0	75·7	73·8
Bengal and Orissa.	Chittagong	...	·870	·756	·114	·813	+·027	·847	88·0	71·6	16·4	91·2	64·7	26·5	83·3	85·8	79·3	+0·2	71·2	77·7	78·0	75·6
	Narayanganj	...	·933	·811	·122	·870	+·037	·844	89·8	75·5	14·3	91·4	71·3	20·1	85·2	87·8	82·5	+2·2	73·0	77·5	77·0	75·8
	Calcutta (Alipore)	...	·941	·826	·115	·879	+·044	·845	88·8	73·0	15·8	91·7	69·4	22·3	84·4	87·7	80·9	+1·0	71·6	75·5	74·3	73·8
	Saugor Island	...	·930	·817	·113	·869	+·041	·838	89·0	77·6	11·4	91·5	71·5	20·0	85·8	86·6	82·2	+2·2	73·8	78·2	77·4	76·5
	Burdwan	...	·863	·756	·107	·805	+·040	·851	93·1	72·1	21·0	96·0	67·2	28·8	86·1	90·1	81·8	+0·5	69·8	74·8	75·1	73·2
	Berhampore	...	·884	·770	·114	·822	+·029	·838	90·9	71·3	19·6	93·7	66·3	27·4	85·7	90·5	80·9	+0·3	69·0	75·1	75·4	73·2
	False Point	...	·954	·842	·112	·896	+·051	·858	90·5	71·3	19·2	94·1	67·8	26·3	87·0	87·7	79·7	−0·1	70·6	76·2	75·9	74·2
	Cuttack	...	·888	·764	·124	·824	+·041	·846	93·3	72·8	20·5	96·1	68·6	27·5	84·5	90·9	82·2	+1·5	69·9	73·7	72·7	72·1
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·944	27·851	·093	27·900	+·033	·831	87·9	67·1	20·8	91·6	64·4	27·2	83·4	85·9	76·6	+3·3	59·0	65·3	65·4	63·2
	Patna	...	29·757	29·639	·118	29·694	+·010	·828	93·0	70·9	22·1	98·0	65·3	32·7	85·8	91·6	81·3	+2·1	66·6	73·2	72·0	70·6
	Darbhanga	...	·784	·656	·128	·716	+·010	·836	90·6	71·2	19·4	94·0	65·2	28·8	84·5	89·7	80·4	+1·0	69·1	74·2	74·2	72·5
	Allahabad	...	·635	·515	·120	·569	+·016	·827	99·2	66·0	33·2	105·1	62·0	43·1	89·5	97·2	81·5	+3·6	59·0	69·1	69·7	65·9
	Lucknow	...	·573	·459	·114	·510	+·014	·831	97·2	63·5	33·7	104·0	57·7	46·3	89·1	94·7	79·6	+1·8	P	68·8	68·7	P
Upper Sub-Himalayas.	Dehra Dun	...	27·739	27·644	·095	27·680	+·026	·868	85·4	59·6	25·8	89·3	52·8	36·5	76·9	80·3	70·8	0	53·9	62·6	63·0	59·8
	Roorkee	...	29·039	28·935	·104	28·976	+·010	·825	91·9	59·0	32·9	96·3	49·8	46·5	82·2	89·1	74·4	+0·2	55·9	65·9	65·8	62·5
	Meerut	...	·194	29·095	·099	29·138	+·020	·839	93·8	62·7	31·1	99·5	55·9	43·6	81·8	90·9	77·1	+1·4	57·6	64·7	66·8	63·0
	Lahore	...	·233	·139	·094	·179	+·027	·848	92·5	63·6	28·9	100·0	52·8	47·2	81·3	91·9	77·2	+2·2	55·9	64·6	67·4	62·6
	Ludhiana	...	·124	·033	·091	·071	+·027	·849	92·3	63·7	28·6	99·2	53·2	46·0	82·6	88·8	76·5	+1·3	58·0	67·2	68·5	64·6
Indus Valley and N.-W. Rajputana.	Peshawar	...	28·876	28·779	·097	28·821	+·041	·918	87·6	57·8	29·8	95·5	47·0	48·5	79·1	84·3	71·2	+0·3	50·8	61·3	63·7	58·6
	Mooltan	...	29·520	29·416	·104	29·461	+·026	·847	96·3	64·3	32·0	105·4	55·9	49·5	81·5	93·5	79·1P	+1·9P	55·8	64·4	69·2	63·1
	Jacobabad	...	·771	·658	·113	·707	+·041	·851	97·9	62·5	35·4	107·7	51·2	56·5	88·3	95·6	78·9	+0·7	53·2	63·9	66·3	61·2
	Kurrachee	...	·969	·877	·092	·924	+·031	·886	92·6	70·8	21·8	103·4	63·0	40·4	87·2	87·3	80·3	+0·8	68·5	74·2	75·7	72·8
E. Rajputana, C. India and Gujarat.	Jeypore	...	28·547	28·445	·102	28·490	+·031	·858	96·8	65·6	31·2	103·6	60·1	43·5	88·9	94·4	79·6	+3·6	54·8	64·2	65·8	61·6
	Ajmere	...	·368	·269	·099	·315	+·023	·865	95·1	63·2	31·9	100·4	56·5	43·9	86·2	93·7	78·2	+2·2	56·3	66·8	70·1	64·4
	Deesa	...	29·517	29·404	·113	29·454	+·037	·866	100·2	65·1	35·1	105·4	59·1	46·3	91·3	98·3	82·4	+1·8	58·2	69·3	69·1	65·4
	Nowgong	...	·191	·081	·110	29·131	+·023	·836	95·1	64·4	30·7	100·0	59·9	40·1	84·9	93·6	79·2	+2·3	58·5	65·8	68·7	64·3
	Agra	...	·389	·279	·110	·323	+·009	·830	98·5	68·3	30·2	106·0	61·9	44·1	89·8	94·7	82·2	+3·0	58·4	67·7	69·1	65·1
Deccan.	Belgaum	...	27·464	27·349	·115	27·405	+·056	·821	88·8	65·2	23·6	92·2	60·9	31·3	81·3	83·4	75·3	+3·1	63·9	68·3	67·7	66·6
	Sholapur	...	28·396	28·250	·146	28·326	+·047	827	97·0	68·4	28·6	101·1	62·2	38·9	89·4	95·4	81·7	+4·7	P	68·2	69·1	P
	Poona	...	·145	·020	·125	·086	+·041	·831	96·1	67·7	28·4	97·6	62·9	34·7	87·9	92·7	80·9	+5·1	64·4	67·8	67·5	66·6
	Akola	...	29·040	·908	·132	·970	+·034	·836	98·6	66·4	32·2	102·4	58·8	43·6	90·2	97·0	82·9	+4·9	58·3	69·7	70·0	66·0
	Buldana	2,132	27·865	27·752	·113	27·804	+·048	·834	92·8	70·3	22·5	96·0	65·6	30·4	88·0	91·1	81·9	+5·4	57·7	65·7	64·9	62·8

II.

at 85 Stations in India, Burma, etc., for October 1896.

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.		
																								%	%						
·865	·975	·927	·922	+·014	91	80	81	84	− 2	7·2	7·4	7·3	+1·5	5	3	6	2	8	6	8	15	9	S 77° W	S 5° W	26	24	103	152	...	...	Port Blair	Burma Coast and Bay Islands.
·846	·961	·939	·915	+·024	93	85	80	86	+ 1	7·2	7·1	7·2	+1·1	...	4	6	7	8	11	10	9	7	S 22° W	S 37° E	18	28	33	77	...	...	Rangoon	
·862	·892	·868	·874	+·003	87	78	77	81	− 3	6·4	7·1	6·8	+1·5	2	5	6	2	4	...	10	6	27	N 52° W	S 59° E	47	21	235*	159	...	...	Diamond Island	
·820	·939	·911	·890	?	84	79	78	80	?	4·6	5·1	4·9	?	...	5	8	4	3	7	7	16	11	N 75° W	?	27	?	?	?	5·64	2·08	Cocos Island.	
·808	·954	·971	·911	+·033	91	85	82	86	+ 4	4·4	2·9	3·7	−1·2	...	2	9	16	1	5	...	9	20	S	S 35° E	76	12	62	58	...	...	Akyab	
·714	·812	·754	·760	−·051	93	70	54	72	− 8	3·0	2·4	2·7	−2·1	48	2	...	...	...	...	2	4	6	N 64° W	S 56° E	18	9	31*	47	...	...	Silchar	Assam.
·714	·832	·815	·787	−·005	99	85	74	86	+ 1	5·7	5·2	5·5	−1·0	13	4	19	8	12	4	2	..	...	N 83° E	N 66° E	47	53	44*	47	...	...	Sibsagar	
·725	·804	·768	·766	−·013	91	79	65	78	− 2	2·2	1·2	1·7	−1·0	10	5	16	15	1	3	10	2	...	N 74° E	N 47° E	29	20	99*	69	...	...	Dhubri	
·764	·877	·857	·833	−·021	98	77	69	81	− 2	3·5	2·4	3·0	−1·3	1	6	18	1	4	1	3	2	26	N 11° W	N 10° W	52	14	48*	71	...	...	Chittagong	Bengal and Orissa.
·779	·843	·785	·802	−·018	88	69	60	72	− 8	2·9	2·7	2·8	−1·3	...	4	4	7	7	9	16	4	11	S 60° W	S 55° E	35	4	53	58	...	...	Narayanganj	
·758	·765	·670	·731	−·111	93	64	51	69	−15	1·2	0·8	1·0	−3·2	1	1	...	1	...	1	29	18	11	S 74° W	N 48° W	76	11	65	70	...	...	Calcutta (Alipore).	
·789	·869	·819	·825	−·037	83	70	64	72	−10	2·2	2·3	2·3	−2·3	..	3	...	...	1	10	25	13	10	S 61° W	N 10° E	66	13	208	156	...	...	Saugor Island	
·706	·714	·674	·698	−·096	89	57	48	65	−10	0·2	0·3	0·3	−3·9	...	11	4	...	2	8	11	7	19	N 67° W	N 19° E	42	29	44*	47	...	...	Burdwan	
·682	·734	·684	·700	−·093	88	59	47	65	−14	0·2	0·6	0·4	−4·3	10	...	...	1	...	9	14	18	10	S 71° W	N 12° W	58	16	41*	51	...	...	Berhampore	
·746	·765	·742	·751	−·078	96	59	56	70	−10	2·3	3·0	2·7	−1·9	2	3	...	3	13	17	4	10	10	S 23° W	N 40° E	32	25	78*	142	...	...	False Point	
·702	·691	·565	·653	−·132	86	58	44	63	−12	0·8	2·1	1·5	−2·9	19	14	3	...	1	...	5	11	9	N 46° W	N 32° E	42	25	32	43	...	...	Cuttack	
·406	·400	·374	·393	−·152	60	35	30	42	−23	0	0·4	0·2	−4·1	7	19	2	1	...	1	3	8	21	N 35° W	N 42° W	64	34	141	119	...	...	Hazaribagh	Gangetic Plain and Chota Nagpur.
·606	·653	·528	·596	−·104	79	53	36	56	−14	0·1	0·1	0·1	−3·4	11	...	2	6	5	11	7	11	9	S 3° W	N 21° E	27	4	51*	46	...	...	Patna	
·689	·713	·644	·682	−·083	89	60	46	65	−11	0·5	0·4	0·5	−2·3	22	1	1	10	9	3	5	7	4	S 22° E	N 68° E	15	3	32	54	...	...	Darbhanga	
·412	·441	·364	·406	−·224	64	32	20	39	−29	0	0·2	0·1	−1·6	9	3	2	2	1	...	3	25	17	N 69° W	N 42° W	61	13	61	43	...	...	Allahabad	
?	·437	·359	?	?	?	31	22	?	?	0	0·4	0·2	−1·5	9	16	2	1	1	1	5	17	10	N 52° W	N 30° W	50	39	36*	47	...	...	Lucknow	
·349	·390	·363	·367	?	68	42	35	48	?	1·6	1·4	1·5	+0·4	23	4	1	3	7	5	3	8	8	S 78° W	N 38° W	13	19	25	40	...	...	Dehra Dun	
·411	·421	·329	·387	−·106	82	38	24	48	−11	1·4	0·9	1·2	+0·4	33	1	7	...	6	...	3	...	12	N 10° W	S 27° E	13	11	25	34	...	...	Roorkee	Upper Sub-Himalayas.
·415	·386	·339	·380	−·118	72	35	23	43	−14	0·5	0·5	0·5	−0·2	31	...	...	1	...	...	...	20	10	N 75° W	N 48° W	43	40	34*	34	...	...	Meerut	
·350	·388	·344	·361	−·090	59	37	23	40	− 7	2·7	1·8	2·3	+1·6	6	10	5	2	8	4	...	18	9	N 52° W	N 3° W	27	12	50	38	...	...	Lahore	
·412	·463	·428	·434	−·040	69	42	32	48	− 6	1·4	2·7	2·1	+1·2	11	1	15	...	11	1	...	5	18	N 3° E	N 40° W	26	24	38	25	...	...	Ludhiana	
·289	·320	·338	·316	−·052	60	33	29	41	− 6	2·3	3·1	2·7	+1·3	24	4	5	12	8	3	2	1	3	S 89° E	N 54° E	27	35	70*	59	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·339	·379	·390	·369	−·163	56	35	25	39	−15	1·7	2·1	1·9	+1·6	24	...	12	...	12	...	11	2	...	S 43° E	S 70° W	18	21	24*	45	...	...	Mooltan	
·288	·273	·259	·273	−·165	51	20	15	29	−14	1·3	1·6	1·5	+1·1	33	17	2	3	2	2	1	...	2	N 13° E	S 47° E	26	11	78*	52	...	...	Jacobabad	
·677	·680	·738	·698	?	89	54	58	67	?	0·9	1·4	1·2	+0·3	...	2	3	4	...	2	28	21	2	S 66° W	S 67° W	64	64	185*	235	...	...	Kurrachee	
·301	·297	·280	·293	−·129	47	21	17	28	−17	0·5	1·5	1·0	−0·8	1	2	3	2	...	2	11	25	16	N 82° W	N 4° W	66	37	77	86	...	...	Jeypore	
·373	·420	·442	·412	−·050	64	33	27	41	− 8	0·4	1·0	0·7	−0·4	6	3	...	...	3	4	4	31	11	N 87° W	N 76° W	64	23	70	61	...	...	Ajmere	E. Rajputana, C. India and Gujarat.
·401	·427	·323	·378	−·066	65	30	18	37	− 5	0	0·3	0·2	−1·7	...	5	8	9	2	5	4	16	13	N 73° W	N 62° W	20	16	151	161	...	...	Deesa	
·416	·463	·368	·416	−·120	68	38	23	43	−15	0	0·7	0·4	−2·3	17	1	1	...	...	1	5	29	8	N 86° W	N 42° W	61	35	26*	35	...	...	Nowgong	
·362	·386	·374	·374	−·118	52	27	23	34	−15	0·1	0·5	0·3	−0·6	...	...	3	...	3	1	14	1	40	N 63° W	N 78° W	63	40	124*	72	...	...	Agra	
·580	·534	·488	·534	−·055	93	50	46	63	− 9	1·3	3·7	2·5	−3·1	...	9	9	12	11	5	5	6	5	N 79° E	N 88° E	22	72	206	251	...	...	Belgaum	Deccan.
?	·330	·385	?	?	?	32	23	?	?	0·9	3·0	2·0	−4·0	13	...	19	8	17	3	...	...	2	S 89° E	N 50° E	52	30	183*	190	...	...	Sholapur	
·568	·432	·361	·454	−·099	83	33	24	47	−12	1·3	4·3	2·8	−2·1	8	1	7	18	5	...	4	4	15	N 42° E	N 38° E	21	17	198*	139	...	...	Poona	
·386	·456	·376	·406	−·168	59	32	21	37	−24	0·1	2·7	1·4	−1·7	12	12	10	3	...	3	6	8	8	N 24° W	N 20° E	31	32	61	82	...	...	Akola	
·324	·358	·292	·325	−·214	43	27	20	30	−30	0·3	2·4	1·4	−2·6	...	12	6	3	2	1	5	4	29	N 32° W	N 29° E	59	52	83	117	0·04	0·04	Buldana	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85 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.
Deccan—*contin. ded.*	Khandwa	...	28·933	28·816	·117	28·871	+·049	29·850	98·3	66·9	31·4	100·7	59·6	41·1	91·3	97·3	81·7	+5·0	58·6	68·5	69·3	65·5
	Hoshangabad	...	·972	·845	·127	·905	+·045	·858	94·7	66·1	28·6	97·3	59·8	37·5	85·8	93·9	79·6	+2·7	59·8	68·6	69·5	66·0
	Nagpur	...	·949	·811	·138	·876	+·055	·842	95·8	68·6	27·2	99·3	62·5	36·8	87·3	94·0	82·6	+3·9	60·6	71·4	71·4	67·8
	Do. (Sanitary Commr.'s Office)	...	·973	·841	·132	·903	P	·859	96·9	67·6	29·3	100·2	61·0	39·2	88·4	95·2	81·9	P	60·0	70·8	71·5	67·4
	Jubbulpore	...	·642	·522	·120	·578	+·040	·844	94·1	61·9	32·2	97·8	56·1	41·7	84·3	92·7	77·0	+3·1	59·0	68·7	68·7	65·5
	Saugor	...	·158	·053	·105	·102	+·029	·827	93·7	68·5	25·2	97·9	59·1	38·8	87·9	91·3	79·9	+4·8	57·2	65·1	65·7	62·7
	Raipur	...	29·002	·876	·126	·935	+·046	·834	93·9	69·0	24·9	97·8	64·7	33·1	85·6	92·0	81·8	+3·2	63·4	69·4	68·1	67·0
	Sutna	...	28·898	·791	·107	·840	+·017	·825	95·0	65·1	29·9	100·3	60·0	40·3	89·1	93·6	79·1	+3·6	57·3	66·4	66·2	63·3
	Hyderabad (Deccan).	...	·297	·175	·122	·234	?	·843	93·8	66·9	26·9	98·4	62·3	36·1	86·4	90·6	79·6	P	62·8	70·8	69·8	67·8
West-Coast.	Bombay	...	29·949	29·838	·111	29·890	+·048	·866	90·2	78·7	11·5	95·0	76·6	18·4	85·1	87·2	83·6	+2·5	74·2	78·0	79·3	77·2
	Ratnagiri	...	·882	·752	·110	·803	+·052	·850	89·8	76·2	13·6	96·5	73·3	23·2	87·5	87·4	82·3	+2·5	73·6	77·9	79·4	77·0
	Karwar	...	·944	·829	·115	·882	+·050	·858	88·0	74·7	13·3	91·6	70·5	21·1	83·6	86·5	80·9	+2·7	73·6	77·4	78·4	76·5
	Cochin	...	·977	·878	·099	·924	+·036	·861	88·8	75·6	13·2	91·0	71·2	19·8	84·2	84·8	81·1	+1·6	74·3	78·2	78·1	76·9
South India.	Salem	...	·062	28·921	·141	28·998	+·054	·869	91·4	71·2	20·2	94·2	65·2	29·0	84·0	88·0	79·3	+1·4	69·6	74·4	75·1	73·0
	Mysore	...	27·498	27·373	·125	27·436	P	·850	85·8	66·7	19·1	87·9	62·8	25·1	78·8	83·9	75·8	P	61·0	69·4	68·3	66·2
	Mercara	...	26·301	26·199	·102	26·257	+·054	?	78·0	63·1	14·9	80·8	59·5	21·3	73·0	73·6	69·5	+1·9	61·4	66·3	65·9	64·5
	Bangalore	...	27·006	·889	·117	·952	+·045	·839	84·5	65·0	19·5	87·3	61·3	26·0	78·6	82·1	74·2	+1·9	63·2	67·7	66·6	65·8
	Hassan	...	26·945	·835	·110	·894	P	·854	83·0	63·9	19·1	85·8	57·6	28·2	77·6	80·3	72·8	P	62·6	67·8	67·4	65·9
	Chitaldroog	...	27·596	27·471	·125	27·536	P	·834	88·5	68·7	19·8	90·1	63·8	26·3	81·8	86·5	78·1	P	60·9	69·0	67·3	65·7
	Trichinopoly	...	29·723	29·591	·132	29·663	+·062	·848	92·4	74·9	17·5	99·2	69·9	29·3	85·5	89·2	81·8	+1·5	72·1	75·7	76·0	74·6
	Madras	...	·962	·851	·111	·911	+·072	·862	90·7	74·0	16·7	96·8	68·6	28·2	86·3	86·4	81·4	+0·3	P	77·7	77·5	76·8
	Bellary	...	28·505	28·361	·144	28·435	+·053	·826	96·5	71·9	24·6	102·2	66·5	35·7	88·4	93·6	82·9	+4·2	63·6	68·7	69·4	67·2
	Vizagapatam	...	29·942	29·820	·122	29·876	+·058	·844	92·3	72·4	19·9	95·2	66·6	28·6	89·9	88·8	83·1	−0·2	70·0	75·4	75·1	73·5
	Cocanada	...	·959	·834	·125	·892	P	·854	91·0	74·1	16·9	98·1	69·0	29·1	87·1	88·5	81·9	P	68·9	75·2	74·0	72·7
Hill Stations, Baluchistan.	Quetta	...	24·776	24·701	·075	24·729	+·051	P	70·6	37·7	32·9	79·0	29·6	49·4	62·1	67·2	53·3	−2·6	32·8	47·2	49·0	42·0
Hill Stations, Punjab.	Leh	11,503	19·788	19·711	·077	19·759	+·027	P	53·8	29·8	24·0	64·7	21·5	43·2	43·1	49·4	41·8	−0·3	27·7	34·2	36·6	32·8
	Srinagar	...	25·051	24·967	·084	25·000	P	P	64·0	41·4	22·6	72·8	36·6	36·2	52·4	62·0	52·2	P	40·9	48·8	56·0	48·6
	Murree	...	23·948‡	23·937‡	·011	23·934‡	+·021	P	68·7‡	50·9‡	17·8	75·6	43·5	32·1	62·7§	62·6§	58·0§	−1·3	45·4‡	55·4‡	55·4‡	52·1
	Chamba	3,005	27·009	26·920	·089	26·973	+·024	P	81·4	55·8	25·6	88·2	51·2	37·0	68·4	76·5	66·0	+0·8	50·9	57·0	60·4	56·1
	Kailang	10,087	20·853	20·784	·069	20·827	+·019	P	56·9	31·6	25·3	66·3	26·0	40·3	46·5	48·9	40·8	−1·6	29·1	38·1	38·3	35·2
	Simla (Ridge)	...	23·231	23·182	·049	23·198	+·036	P	62·5	50·9	11·6	70·4	44·6	25·8	57·9	59·4	55·7	+0·2	42·6	46·9	47·6	45·7
Hill Stations, N.W.P.	Chakrata	...	·435	·370	·065	·393	+·033	P	65·9	51·0	14·9	71·3	43·3	28·0	60·9	60·0	56·8	0	43·8	48·4	47·8	46·7
	Ranikhet	...	24·219	24·145	·074	24·167	+·051	P	71·2	56·0	15·2	76·2	51·3	24·9	67·4	67·0	62·3	+1·4	47·8	53·3	53·7	51·6
Hill Station, Nepal.	Katmandu	4,388	25·660P	25·580P	·080	25·619P	P	P	82·3	54·2	28·1	86·0	47·5	38·5	72·2	76·6	66·8	−0·8	53·0	63·1	65·1	60·4
Hill Station, Bengal.	Darjeeling	...	23·072	22·985†	·087	23·027	+·008	P	60·5	49·4	11·1	65·0	45·6	19·4	56·1	57·6†	54·3†	−0·2	49·2	54·5	55·3†	53·0
Hill Stations, Central India.	Mount Abu	...	26·163	26·088	·075	26·119	+·027	P	80·1	66·1	14·0	84·7	62·7	22·0	76·6	78·2	72·6	+1·8	54·2	59·5	60·9	58·2
	Pachmarhi	...	·567	·480	·087	·520	+·065	P	84·0	58·6	25·4	87·7	53·2	34·5	80·7	82·6	71·0	+3·5	52·8	61·1	61·7	58·5
	Chikalda	3,642	·459	·361	·098	·406	+·066	P	83·6	68·3	15·3	86·2	65·5	20·7	79·8	81·8	75·5	+5·7	57·2	61·5	62·9	60·5

† Mean of 27 days.
‡ Mean of 30 days.
§ Mean of 29 days.
‖ Mean of 28 days.

II—*continued.*

in India, Burma, etc., for October 1896—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 for the month.	Heaviest rainfall during the month.		
																								%	%						
·394	·417	·368	·393	−·150	59	28	21	36	−22	0	0·3	0·2	−2·1	2	5	23	3	5	1	5	3	15	N 14° E	N 24° E	39	28	76	68	...	...	Khandwa	Deccan—*continued.*
·440	·487	·419	·449	−·148	68	39	26	44	−19	0·1	1·0	0·6	−1·9	47	2	3	1	...	...	3	4	2	N 55° W	N 2	10	25	74	38	...	...	Hoshangabad	
·436	·560	·490	·495	−·087	62	44	31	46	−14	0·4	2·2	1·3	−2·7	60	...	1	...	...	...	...	...	1	N	N 37° E	2	51	32	89	...	...	Nagpur	
·428	·537	·478	·481	?	63	40	29	44	?	0·2	2·4	1·3	?	46	...	2	3	3	2	2	3	1	S 21° E	?	6	?	22*	?	...	...	Do. (Sanitary Commr.'s Office)	
·470	·508	·405	·461	−·107	84	43	26	51	−14	0	0·8	0·4	−2·4	7	8	6	3	5	6	17	4	6	S 61° W	N 3° E	18	17	38	49	...	...	Jubbulpore	
·333	·338	·313	·328	−·179	48	25	21	31	−26	0·3	1·7	1·0	−0·7	9	13	3	4	3	2	1	18	9	N 46° W	N 28° W	39	45	68	64	...	...	Saugor	
·514	·520	·373	·469	−·172	71	41	25	46	−20	0·4	2·5	1·5	−2·0	23	4	12	4	...	4	9	2	4	N 16° E	N 28° E	8	37	72*	95	...	...	Raipur	
·377	·368	·304	·350	−·165	61	26	19	35	−22	0	0·2	0·1	−2·1	2	13	...	...	...	1	1	15	30	N 49° W	N 34° W	79	47	90*	105	...	...	Sutna	
·525	·563	·474	·531	?	79	45	33	52	?	0·6	1·4	1·0	?	10	3	9	19	15	5	...	1	...	S 80° E	?	58	?	80*	?	...	...	Hyderabad (Deccan)	
·790	·867	·896	·851	+·008	80	72	69	74	− 6	0·7	0·9	0·8	−3·4	...	3	9	13	3	1	1	9	23	N 12° W	N 15° E	35	38	186	231	...	...	Bombay	West Coast.
·799	·831	·901	·844	+·053	88	64	69	74	− 2	1·7	2·9	2·3	−0·8	2	4	...	...	5	1	9	22	19	N 80° W	S 81° W	63	17	111	168	...	...	Ratnagiri	
·816	·859	·865	·847	+·029	95	75	69	79	− 5	1·8	3·4	2·6	−1·9	4	...	...	...	...	...	...	36	22	N 73° W	N 82° W	87	56	75	?	...	...	Karwar	
·832	·884	·877	·864	+·033	94	75	73	81	− 2	5·2	7·4	6·3	+0·5	10	4	2	1	...	...	4	27	14	N 71° W	S 76° W	63	40	91	?	...	...	Cochin	
·703	·726	·700	·711	−·047	92	62	51	69	− 8	4·1	6·2	5·2	−0·4	9	4	14	12	1	2	7	8	5	N 31° E	S 52° W	19	39	81	63	...	...	Salem	South India.
·468	·607	·501	·525	?	71	62	43	59	?	5·6	5·4	5·5	?	7	3	17	18	5	1	1	5	5	N 61° E	?	45	?	148*	?	...	...	Mysore	
·526	·571	·552	·550	−·032	90	71	68	76	−10	5·2	6·0	5·6	−2·2	27	2	14	6	2	1	1	3	6	N 36° E	N 36° W	26	24	113	82	...	...	Mercara	
·562	·558	·477	·532	−·059	91	57	44	64	−12	3·4	3·6	3·5	−2·3	...	5	20	21	3	2	3	3	5	N 60° E	N 16° W	53	9	151*	95	...	...	Bangalore	
·557	·570	·525	·551	?	93	61	52	69	?	4·5	5·8	5·2	?	...	3	33	18	7	...	...	1	...	N 65° E	?	81	?	60*	?	...	...	Hassan	
·445	·552	·434	·477	?	63	51	34	49	?	2·9	2·6	2·8	?	...	3	15	20	6	...	1	8	9	N 53° E	?	40	?	141*	?	...	...	Chitaldroog	
·751	·757	·723	·744	−·020	87	62	53	67	− 6	4·3	6·2	5·3	−2·2	40	...	14	3	...	...	...	3	2	N 37° E	N 44° W	23	33	73	93	...	...	Trichinopoly	
?	·834	·826	·861	+·041	?	67	66	80	+ 1	5·0	3·7	4·4	−1·7	...	6	26	23	7	...	...	...	...	N 67° E	N 35° E	81	10	80	121	...	...	Madras	
·487	·458	·417	·454	−·175	62	34	26	41	−23	4·0	5·6	4·8	−1·6	12	...	5	37	4	1	...	...	3	S 88° E	N 24° E	66	14	91	104	...	...	Bellary	
·708	·689	·694	·697	−·119	88	49	51	63	− 9	2·0	2·5	2·3	−2·3	2	4	2	7	10	16	9	10	2	S 6° W	S 65° E	37	18	34	44	...	...	Vizagapatam	
·644	·717	·648	·670	?	76	56	48	60	?	1·2	1·3	1·3	?	...	1	7	15	21	1	3	10	4	S 65° E	?	35	?	157*	?	...	...	Cocanada	
·141	·173	·162	·159	−·034	63	31	25	40	− 2	1·4	2·4	1·9	+1·5	18	...	...	...	...	1	2	19	22	N 70° W	N 56° W	61	50	43*	63	...	...	Quetta	Hill Station, Baluchistan.
·135	·122	·109	·122	+·023	83	46	35	55	+14	5·1	6·4	5·8	+2·0	...	...	2	2	2	16	22	15	3	S 43° W	S 56° W	64	34	60	45	...	...	Leh	Hill Stations, Punjab.
·254	·305	·387	·315	?	96	78	71	82	?	4·4	5·4	4·9	?	...	10	12	2	12	...	5	5	16	N 3° W	?	29	?	88*	?	...	...	Srinagar	
·258‡	·369§	·383†	·337	+·104	67‡	62§	63†	64	+19	28‡	4·3‡	3·6‡	+1·5	...	5	1	7	17	6	8	8	8	S 10° W.	S 30° E	22	10	195*	145	...	...	Murree	
·320	·338	·345	·334	−·063	71	49	39	53	− 1	4·2	4·1	4·2	+2·4	39	3	1	...	...	...	4	2	13	N 53° W	N 11° E	27	7	101¶	107	0·75	0·37	Chamba	
·141	·160	·142	·148	+·022	80	53	45	59	+12	4·9	6·3	5·6	+2·2	...	1	...	1	1	26	14	16	3	S 38° W	S 49° W	69	68	31	37	1·36	0·44	Kailang	
190	·209	·210	·203	−·053	51	43	42	45	− 7	2·3	2·9	2·6	+1·2	36	6	2	1	...	8	8	...	...	S 26° W	N 87° W	11	35	65	?	...	...	Simla (Ridge)	Hill Stations, N. W. P.
·214	·212	·209	·212	−·065	57	40	40	46	−12	2·1	1·9	2·0	+0·3	5	8	2	2	5	39	...	...	1	S 11° E	S 64° W	53	30	250	120	...	...	Chakrata	
·251	·262	·276	·263	−·065	56	39	42	46	−15	0·2	1·5	0·9	−0·7	12	1	...	...	...	3	21	22	3	S 69° W	S 54° W	68	55	75*	42	...	...	Ranikhet	
·392	·477	·490	·453	−·024	92	60	54	69	− 4	2·8	4·0	3·4	−0·4	1	...	...	14	4	...	1	35	7	N 87° W	W	39	52	20	?	0·16	0·16	Katmandu	Hill Station, Nepal.
·348	·411	·416†	·392	+·022	97	91	87†	92	+10	8·9	7·0	8·0	+2·5	6	3	4	10	2	2	8	18	5	N 89° W	S 3° E	22	5	118	62	...	...	Darjeeling	Hill Station, Bengal.
·287	·316	·338	·313	−·025	45	34	35	38	− 6	0	0·1	0·1	−2·0	...	7	1	...	2	2	16	21	13	N 87° W	N 14° E	64		140*	98	...	...	Mount Abu	Hill Stations, Central India.
·338	·314	·309	·320	−·128	68	30	27	42	−21	0·6	1·5	1·1	−2·1	30	4	4	2	...	2	4	10	6	N 64° W	N 17° E	23	37	94*	70	...	...	Pachmarhi	
·342	·337	·357	·346	−·127	49	33	33	38	−26	0·5	3·0	1·8	−1·7	26	19	8	...	...	1	4	1	3	N 1° W	N 3° E	37	42	164*	135	*Nil*	*Nil*	Chikalda	

* Corrected. ¶ Partly corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85 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.
High Station, South India.	Wellington . .	...	24·296	24·227	·069	24·261	+·044	?	70·6	53·2	17·4	73·4	47·4	26·0	66·6	65·8	60·7	−0·1	52·2	58·9	59·8	57·0
Extra India.	Muscat . . .	...	30·004	29·927	·077	29·966	?	29·933	84·9	81·3	3·6	87·1	77·1	10·0	84·8	84·6	83·0	?	73·5	78·0	77·6	76·4
	Aden . . .	...	29·891	·779	·115	·837	+·004	·862	88·0	78·8	9·2	96·1	74·7	21·4	84·7	85·8	82·8	0	72·4	75·8	75·1	74·4
	Perim . . .	...	·763	·650	·113	·707	?	?	90·2	81·6	8·6	93·9	75·6	18·3	87·3	86·6	85·0	P	74·4	77·9	77·4	76·6
	Zanzibar . .	...	30·031	·919	·112	·975	+·021	·977	83·1	75·0	8·1	87·6	70·5	17·1	79·2	82·3	78·8	−0·2	72·5	74·9	75·2	74·2
	Port Victoria (Seychelles) .	15	·022	·933	·089	·978	P	·916	83·3	76·1	7·2	85·6	72·6	13·0	81·6	82·5	79·5	?	72·4	75·8	75·8	74·7
	Mauritius . .	181	P	P	P	·927	−·004	30·057	P	P	P	89·4	58·3	31·1	P	P	73·4	+0·8	P	P	P	P

II—*concluded.*

in India, Burma, etc., for October 1896—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.		
																								%	%						
·383	·423	·454	·420	−·021	93	65	71	76	−7	5·3	7·4	6·4	−0·9	5	15	15	3	15	6	1	...	1	N 68° E	S 32° E	39	27	69	56	...	...	Wellington	Hill Station, South India.
·723	·876	·856	·818	P	67	74	71	71	P	0·2	1·2	0·7	P	...	7	12	19	2	...	1	2	19	N 25° E	P	48	P	85	P	...	...	Muscat	Extra India.
·712	·775	·729	·739	+·016	73	65	59	66	+1	5·3	3·9	4·6	+2·9	...	...	7	29	11	5	7	3	...	S 70° E	S 88° E	58	55	388	307	...	...	Aden	
·755	·831	·818	·801	P	70	64	65	66	P	1·9	1·9	1·9	P	...	...	4	32	25	1	...	...	...	S 74° E	P	89	P	189	P	...	...	Perim	
·768	·810	·781	·786	+·020	88	81	71	80	+2	4·3	3·5	3·9	−0·8	...	3	4	2	10	22	11	1	4	S 1° E	S 9° W	51	38	96*	109	...	...	Zanzibar	
·749	·816	·804	·790	P	83	76	72	77	P	5·4	5·7	5·6	?	5	2	6	8	27	8	2	1	3	S 53° E	P	53	P	153	P	4·71	1·09	Port Victoria (Seychelles)	
P	P	P	·577	P	P	P	P	73	+1	P	P	P	P	P	?	P	?	P	P	P	?	P	P	P	P	P	235	269	0·54	0·08	Mauritius	

G. I. C. P. O.—No. 116 Meteor.—3-2-97.—385.

* Corrected.

Reg. No. 705, Wr., I.—Feb. 97—[illegible]

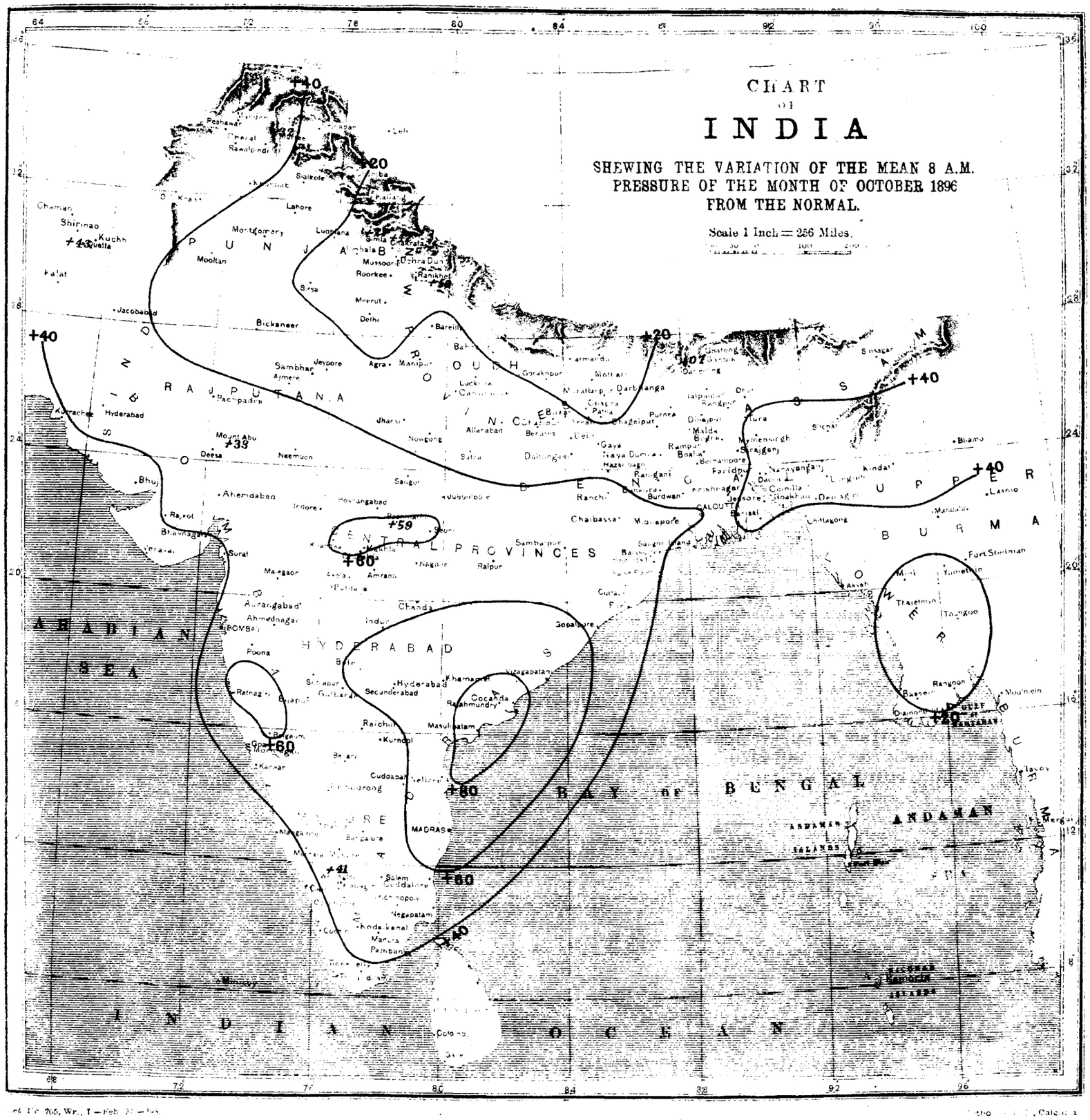
Litho. S. I. O., Calcutta

Explanation.

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

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

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



Explanation.

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

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

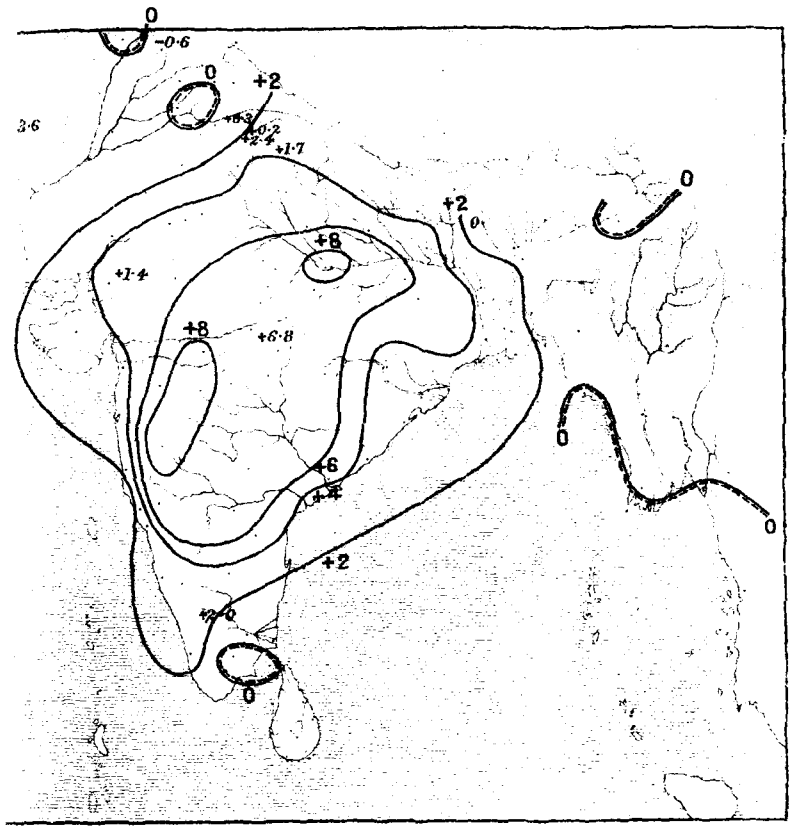
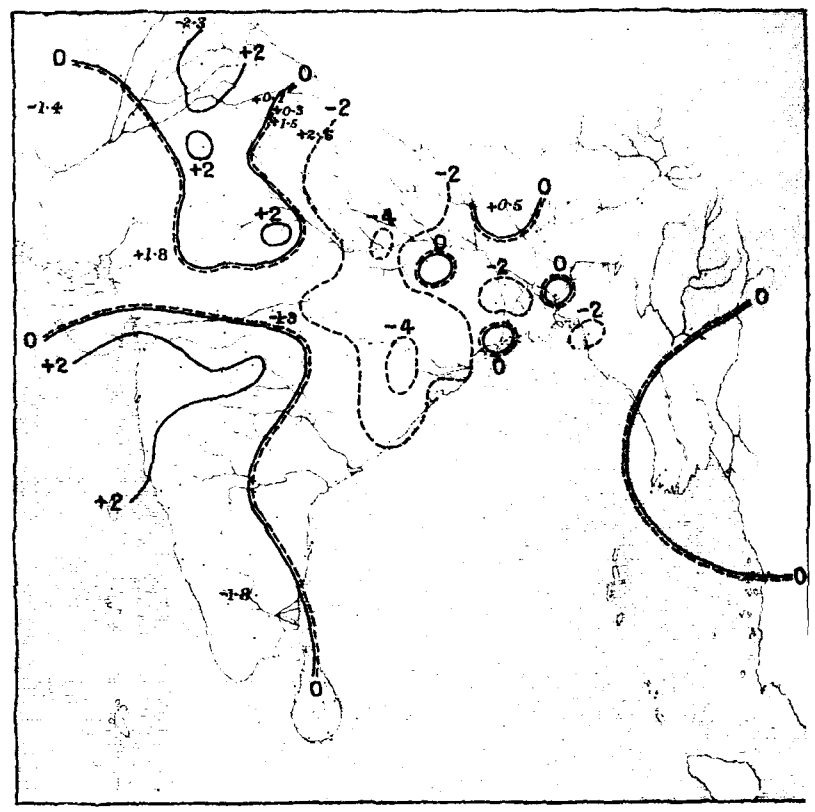


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

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

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

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

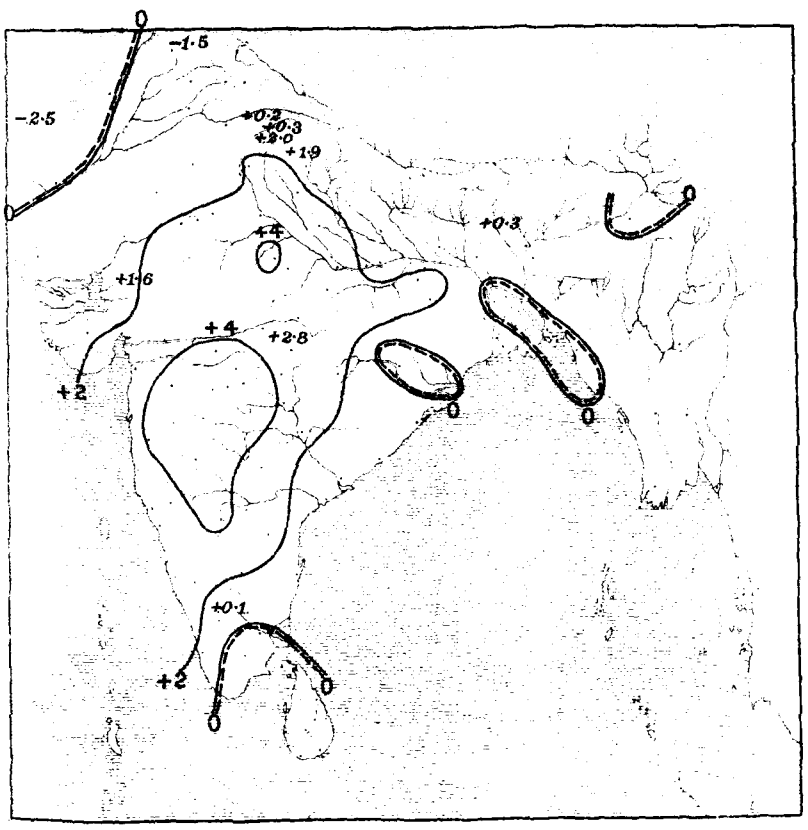
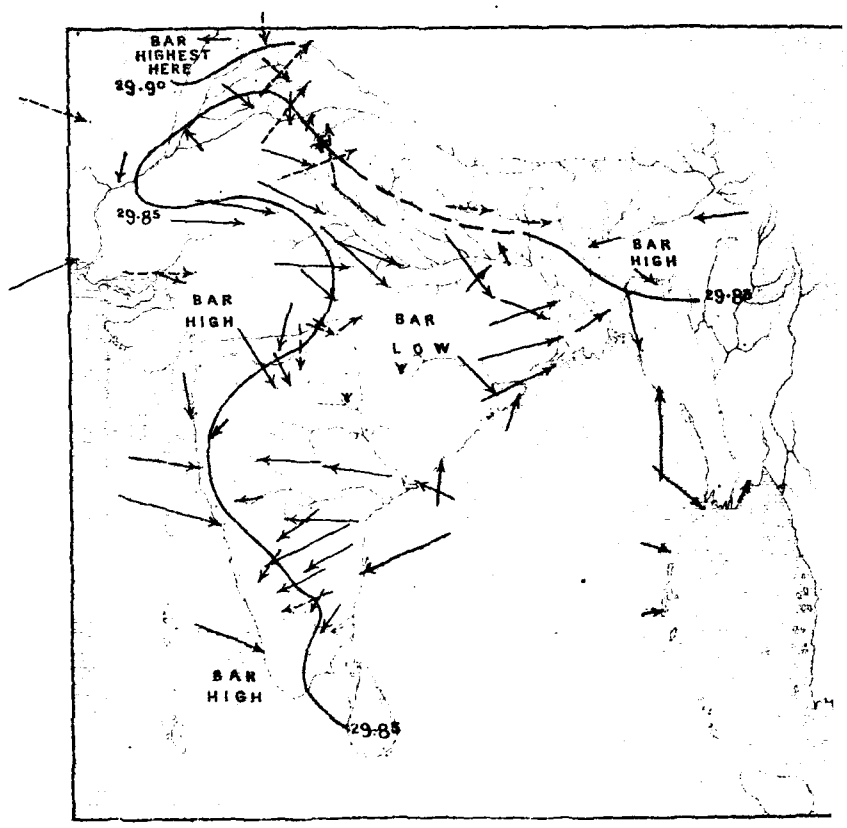


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF OCTOBER 1896.



Reg. No. 705, Wr., I.—Feb. 97.—395.

Zinco. S. I. O., Calcu

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 whic have hitherto appeared in the Annual Report, the only alteration mad being that pressures are reduced to constant gravity (45°). The isoba are given for each twentieth of an inch. The arrows show the directio of the resultants of the wind recorded at 10 and 16 hours, and by the lengths the percentage of the observations expressing the numerical val

Sr. No. 705, Wr., I.—Feb. 97—125 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 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. 705, Wr., I.—Feb. 97.—395. 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 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim	17. North Bihar	33. Malabar	49. Central India, East
2. Lower Burma Deltaic	18. North Western Provinces, East	34. Madras, South Central	49a. Do. do.
3. Central do.	19. South Oudh	35. Coorg	50. Rajputana East, Central India West
4. Upper do.	20. North do.	36. Mysore	51. West Rajputana
5. Arakan	21. North Western Provinces, Central	37. Konkan	52. East Coast, North
6. East Bengal	22. Do. do., West	38. Bombay Deccan	52a. Do. do. (a)
7. Assam Surma	23. Do. do., East Submontane	39. Hyderabad, North	53. Hyderabad, South
8. Do. Hills	24. Do. do., West do.	40. Khandesh	54. Madras, Central
9. Do. Brahmaputra	25. Do. do. Hills	41. Berar	55. East Coast, Central
10. Deltaic Bengal	26. South East Punjab	42. Central Provinces, West	56. East Coast, South
11. Central do.	27. South do.	43. Do., Central	57. Madras, South
12. North do.	28. Central do.	44. Do., East	
13. Bengal Hills	29. Punjab, Submontane	45. Gujarat	
14. Orissa	30. Do. Hills	46. Kathiawar	
15. Chota Nagpur	31. North Punjab	47. Sind	
16. South Bihar	32. West do.	48. Baluchistan Hills	

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, NOVEMBER 1896.

INTRODUCTION.

THIS Review of the weather in India during the month of November 1896 is based on observations taken daily at 8 A.M. at 209 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 85 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 1896.

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 areas.

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 tenth to an average of two-tenths of an inch during the month.

The most important feature in the mean 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,

LIBRARY MAY 3 1897 WEATHER BUREAU

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 westwards 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 Nilgiris, 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 1896 :—

The weather during November 1896 divided itself naturally into two almost equal parts. During the first part conditions were unusually quiet, the retreating south-west monsoon over the south of the Bay was light, and, though showers were experienced over Madras, the fine weather which characterised the greater part of October continued uninterruptedly. During the second part a series of disturbances was developed over the south of the Bay, of which one disturbance extended its influence over the greater part of India.

Thus the first-half of the month was unusually free from disturbance while the second-half on the contrary exhibited a prolonged period of disturbance which affected an unusually large area of the country. Temperature at the commencement of the month was in excess of the normal in all parts of India, except the north-west, which, with Baluchistan, experienced at this time cooler weather than usual. The excess was most marked over West Bengal and the adjacent parts of the North-Western Provinces and of Central India. Showers were falling at a few places in the south of the Peninsula.

From the 1st to the 5th the mean temperature was steadily higher than usual, except in the North-Western Provinces on the 4th and 5th, in the Punjab on the 1st, 2nd and 3rd, and in Sind and Rajputana on the 3rd. The excess was greatest in the Central Provinces and Berar, and the variations for this area are shown by the following variation data for the period :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	1st Nov.	2nd Nov.	3rd Nov.	4th Nov.	5th Nov.
	°	°	°	°	°
Central Provinces and Berar.	+5·5	+6·3	+6·3	+5·5	+5·2

Showers fell on each of these five days in the south of the Peninsula, but they were scattered and accompanied unusual north-westerly winds. On the 4th and 5th showers were also received in Lower Burma, but elsewhere during this period the weather was fine. The pressure was higher than usual, the abnormal excess being most marked on the 2nd and in the Madras coast districts. The following table gives the pressure variations for the period for the Madras ports :—

Date.	Variation from normal of pressure at				
	Vizagapatam.	Cocanada.	Masulipatam.	Madras.	Negapatam.
	"	"	"	"	"
1st . .	+ ·102	+ ·118	+ ·142	+ ·117	+ ·112
2nd . .	+ ·113	+ ·127	+ .143	+ ·115	+ ·092
3rd . .	+ ·093	+ ·108	+ ·.22	+ ·098	+ ·081
4th . .	+ ·081	+ ·094	+ ·114	+ ·093	+ ·078
5th . .	+ ·044	+ ·068	+ ·083	+ ·082	+ ·062

On the 3rd the sky became overcast in Baluchistan, with a rapid rise of temperature, and on that day a slight disturbance of the cold weather type began to affect the weather in North-Western India, and on the morning of the 5th a small shallow depression had appeared over Upper Sind. The depression drifted eastwards into Rajputana on the 6th and had disappeared by the morning of the 7th. It gave cloudy weather to Upper India and occasioned a feeble cyclonic circulation of the winds over North-Western India. Slightly showery weather accompanied the depression, but the rainfall was confined to Baluchistan, the Kashmir and Punjab Himalayas and the submontane districts of the Punjab and was heaviest (0·67 inch) at Fatehjang. Very high night temperatures were recorded during this cloudy period in North-Western India. The following gives the variation data of the minimum temperature for a few representative stations :—

Station.	Variation from normal of minimum temperature of 24 hours preceding 8 A.M. of			
	4th Nov.	5th Nov.	6th Nov.	7th Nov.
	°	°	°	°
Quetta	+9·1	+15·4	+5·4	+12·4
Mooltan . . .	+4·9	+6·1	+7·5	+4·2
Rawalpindi . . .	+5·2	+9·7	+6·7	+8·0
Lahore	+2·6	+10·2	+13·4	+12·5
Jacobabad . . .	+4·9	+8·2	+16·8	+12·4

During the period of the existence of this disturbance the weather in other parts of India was fine and rainless, but in Lower Burma there were occasional light showers. There was no cold wave after the disappearance of the above depression, and the most noteworthy feature in the weather was the steady large excess of temperature which held over the central parts of the country and the head of the Peninsula. The following gives variation data for every day, from the 1st to the 7th for this area :—

PROVINCE OR STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	1st Nov.	2nd Nov.	3rd Nov.	4th Nov.	5th Nov.	6th Nov.	7th Nov.
	°	°	°	°	°	°	°
Sind and Rajputana .	+1·0	+0·6	−1·3	+0·4	+3·2	+6·4	+4·2
North-Western Provinces and Oudh.	+2·5	+1·3	−0·1	−1·1	−0·3	+1·8	+1·2
Central India and Gujarat.	+2·8	+2·6	+2·5	+1·4	+1·2	+3·3	+5·1
Central Provinces and Berar.	+5·5	+6·3	+6·3	+5·5	+5·2	+5·0	+5·5
Hyderabad, Deccan (Station).	+3·1	+2·9	+2·9	+3·0	+3·0	+4·6	+5·1

A rapid rise of pressure occurred over North-Western India on the 7th November when the depression disappeared, and this rise extended to nearly all parts of the country. A high pressure area was established over the West Punjab, and readings decreased steadily from that area to a low pressure area over the south-west of the Bay while the winds were more north-westerly than usual along the Madras coast.

From the 8th to the 10th the weather was fine and quiet throughout the Indian region with a generally high barometer and excessive temperature.

The following gives the variation data for the nine divisions of India for this period and shows how universal was the excessive heat at this time :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	8th Nov.	9th Nov.	10th Nov.
	°	°	°
Burma	+1·1	+0·9	+0·2
Bengal and Assam	+1·3	+0·7	+1·0
N.-W. Provinces and Oudh . .	+2·7	+3·6	+3·3
Punjab	+1·7	+2·8	+4·3
Sind and Rajputana	+4·8	+4·4	+6·1
Central India and Gujarat. . .	+4·4	+6·0	+6·0
Central Provinces and Berar . .	+4·0	+4·2	+4·8
Bombay	+3·6	+3·8	+3·9
Madras	+2·3	+2·6	+2·9

During this period the winds were much more westerly than usual along the west coast of the Bay. The following table gives the actual directions for the 8th, 9th and 10th for three stations and normal direction at Madras for November :—

STATION.	DIRECTION OF WIND AT 8 A.M. OF			
	8th Nov. 1896.	9th Nov. 1896.	10th Nov. 1896.	Mean normal Nov.
Gopalpur . . .	NNW	NW	NNW	...
Madras . . .	N	NNW	NNW	N 24° E
Negapatam . . .	WNW	NW	NW	...

On the first of these three days pressure was above the normal everywhere, but the greatest excess was reported from the Madras Coast districts. On the 9th a change occurred. The area of greatest excess of pressure was transferred to North-East India, and this change in the relative distribution of pressure coincided with the commencement of an important change of weather.

On the 10th the pressure fell below the normal in Ceylon, the wind became strong along the Madras coast and heavy rain fell at Cuddalore. During the next two days the barometer fell everywhere and pressure was in large defect in Ceylon. The winds along the Madras coast were still more westerly than usual, but the weather was very unsettled over the south of Madras and Ceylon and a good deal of rain—heavy at some stations—was reported. During these two days the sky became more or less cloudy in other parts of India besides the south, and one or two local showers were received.

On the 13th pressure rose in the north, while it still fell in the extreme south, with the result that there occurred a sudden steepening of the barometric gradient over the Bay, and a depression formed over the south-west of the Bay. At the same time the wind along the Madras coast ost its westerly component and the rainfall became heavier.

During these few days there was no alteration as regards temperature over the greater part of India, the heat remaining excessive, except in the north-east, where there had been light showers, and in the south of Madras where the rainfall had suddenly become heavier.

The following table gives the variation data of mean temperature for the nine divisions of India from the 11th to

the 14th and shows the steady large excess of heat over the central parts of the country :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	11th Nov.	12th Nov.	13th Nov.	14th Nov.
	°	°	°	°
Burma	—0·2	+1·1	+1·8	—0·1
Bengal and Assam. .	+1·2	+1·6	+1·2	+0·3
N.-W. Provinces and Oudh.	+3·3	+3·0	+2·7	+3·8
Punjab	+4·0	+3·2	+3·4	+3·0
Sind and Rajputana .	+7·2	+5·6	+4·0	+5·6
Central India and Gujarat	+6·4	+6·0	+5·7	+5·1
Central Provinces and Berar.	+4·9	+5·0	+5·3	+5·7
Bombay . . .	+3·9	+3·9	+4·0	+3·9
Madras . . .	+2·1	+2·5	+2·2	+1·8

On the 14th the depression which formed over the south of the Bay had reached the south of the Indian Peninsula and was close to the station of Tinnevelly, and strong cyclonic winds were reported around the storm with heavy rain over the Madras Coast districts from Madras southward. On the next day, the 15th, the storm had passed out into the Arabian Sea.

During the next five days heavy rain continued to fall along the Madras Coast districts with rough unsettled weather and lower temperature than usual at the coast and most southern stations and higher temperature than usual in the interior. The following gives temperature variation data for this period :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	16th Nov.	17th Nov.	18th Nov.	19th Nov.	20th Nov.
	°	°	°	°	°
Kurnool . . .	+4·5	+6·1	+9·1	+6·4	+6·8
Cuddapah . .	+5·3	+3·5	+5·9	+6·6	+6·8
Salem . . .	+2·8	+4·5	+2·3	+3·4	+2·2
Masulipatam . .	+2·7	+2·2	+4·7	+4·8	+3·1
Madras . . .	+1·3	—1·8	—3·0	+1·5	+1·0
Negapatam . .	—0·9	+1·0	+0·4	+0·7	+1·0

During these five days pressure was high, the winds light and the weather fine throughout Northern, Central and North Eastern India. A few light showers were received in Burma and temperature was low over Burma, Assam and part of Bengal, but over Northern and Central India the excess of temperature was maintained steadily. The following gives data for the period 16th to 20th :—

POLITICAL PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	16th Nov.	17th Nov.	18th Nov.	19th Nov.	20th Nov.
	°	°	°	°	°
Sind and Rajputana .	+2·6	+3·8	+3·0	+2·9	+4·3
Gujarat and Central India.	+5·1	+5·2	+5·9	+6·1	+6·6
Berar and Central Provinces.	+5·1	+5·3	+3·6	+3·5	+4·2
North-Western Provinces and Oudh.	+3·4	+3·5	+2·8	+2·3	+2·1
Burma . . .	—0·9	—1·0	—0·6	—0·6	—1·4

The most important changes during this period occurred along the west coast. The cyclonic storm which passed out into the Arabian Sea on the 15th apparently lay off the Malabar coast during the 16th, 17th and 18th. The storm began to move northward on the morning of the 18th. It lay in about the latitude of Karwar on the morning of the 19th and between Bombay and Veraval on the morning of the 20th. The following variations of pressure from the normal mark the northward progress of the storm :—

STATION.	VARIATION FROM NORMAL OF MEAN PRESSURE OF 24 HOURS PRECEDING 8 A.M. OF				
	16th Nov.	17th Nov.	18th Nov.	19th Nov.	20th Nov.
	"	"	"	"	"
Mangalore . .	—·106	—·091	—·120	—·029	—·032
Karwar . . .	—·084	—·087	—·089	—·045	—·042
Ratnagiri . . .	—·067	—·079	—·079	—·061	—·073
Bombay . . .	—·068	—·081	—·081	—·078	—·134
Surat . . .	—·091	—·086	—·072	—·059	—·146

The progress of the disturbance northward was also marked by a steady extension of rain northward and by strong easterly winds at the west coast ports.

On the three following days a very important change of weather occurred over India. The depression which has been traced up the west coast crossed the Kathiawar coast on the early morning of the 21st. It travelled quickly east-north-eastward and on the morning of the 22nd was entering the east of the North-Western Provinces. On the morning of the 23rd the main depression had apparently filled up, but it had left the barometer low throughout the Indian region, and the pressure observations apparently showed two or three shallow residual depressions. Widely extended light to moderate or heavy rainfall accompanied the depression in

its passage from North Bombay to the Gangetic Plain, and the changes in temperature were very large owing to this rainfall.

The following gives temperature data for the period 20th to 23rd :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	20th Nov.	21st Nov.	22nd Nov.	23rd Nov.
	°	°	°	°
Bombay . . .	+5·5	+5·0	+2·5	−0·6
Central India and Gujarat.	+6·[illegible]	+2·4	−1·2	−2·5
Central Provinces and Berar.	+4·2	+7·5	+10·4	+5·7
North-Western Provinces and Oudh.	+2·1	+2·5	+1·2	+0·9

During this period a fresh though slight depression appeared over the south-west of the Bay occasioning a brisk barometric fall over Madras. The rainfall due to this depression was heavy and continuous at the coast stations, and extended inland, so that, combined with the rainfall due to the shallow residual depressions noticed above, rain on the 23rd was reported from nearly all the stations in the Peninsula except a few on the west coast.

After the 23rd pressure increased throughout India, the rise continuing until the 25th, after which pressure was nearly steady for two days, and the distribution fairly normal, except for a slight oscillation over North-West India.

During these four days rain continued to fall over the east of the Peninsula, but in other parts of India the weather was fine and quiet and was settling down from the recent disturbance. During this period the temperature conditions gradually reverted to the distribution which obtained previous to the appearance of the storm, and the relatively low temperatures which were brought about by the rainfall over North Bombay, Rajputana and Central India had almost disappeared by the 26th or 27th.

The following gives temperature data for the period :—

POLITICAL PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	24th Nov.	25th Nov.	26th Nov.	27th Nov.
	°	°	°	°
Sind and Rajputana .	−1·5	−0·4	+1·2	+3·9
Gujarat and Central India.	−2·0	+0·8	+3·4	+4·9
Bombay . . .	−2·3	−0·1	+1·4	+2·8
Central Provinces and Berar.	+3·1	+1·7	+5·5	+7·5
North-Western Provinces and Oudh.	+0·2	+1·7	+1·8	+2·1

In Madras at this time the coast stations where rain was falling exhibited deficient, and the inland stations excessive, temperatures. The following gives data:—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	24th Nov.	25th Nov.	26th Nov.	27th Nov.
	°	°	°	°
Kurnool . . .	−0·2	+3·6	+2·6	+6·1
Cuddapah . . .	+0·5	+2·8	+1·6	+0·7
Salem	+2·9	+3·7	+2·8	+4·0
Masulipatam . .	−1·2	−3·5	+1·7	+1·8
Madras . . .	+0·9	−1·6	−3·5	−5·2
Negapatam .	+0·9	+1·6	+1·2	+2·2

During the three closing days of the month the principal feature in the weather was a slight shallow depression in the extreme north-west. On the 27th the barometer began to fall slowly at Quetta, light rain accompanying the fall, and on the morning of the 28th a shallow depression was shown over the western desert. Rain and snow fell in Baluchistan, snow in Kashmir, and showers of rain at several stations in North-Western India. On the 29th the barometer was rising everywhere, but particularly in the north-west, and at the close of the month strongly marked anti-cyclonic conditions existed over India, barometric readings decreasing from 30·249″ at Jacobabad to 29·916″ at Trincomalee and to 29·982″ at Gorakhpur, while pressure was above the normal in all parts of the country except the north-east.

Accompanying the rainfall there occurred a brisk fall of temperature over the extreme north-west of India on the 29th and 30th, as is shown by the following table giving the temperature variation from the normal at the following stations :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF		
	28th Nov.	29th Nov.	30th Nov.
	°	°	°
Quetta	+0·9	−11·8	−9·7
Mooltan	+1·9	−0·1	−6·1
Jacobabad	+5·1	−0·1	−6·2
Peshawar	+6·3	−2·7	−2·8

Over the central parts of the country and the Gangetic Plain the effect of the rainfall was not felt and the following data show that the large excess of temperature

which had hitherto been the most marked feature in the weather over this region was maintained right up to the close of the month:—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	27th Nov.	28th Nov.	29th Nov.	30th Nov.
	°	°	°	°
Central Provinces and Berar.	+7·5	+7·8	+8·2	+9·3
Gujarat and Central India.	+4·9	+5·8	+6·6	+6·7
North-Western Provinces and Oudh.	+2·1	+3·5	+6·2	+8·9

Pressure—Averaged ·008″ below the normal, and was hence considerably lower than in November 1895 and November 1894. In the early part of the month the pressure distribution relatively to the normal was similar to that which prevailed during October, pressure being in considerable excess generally and largely in excess over the Deccan and the Madras Coast districts, but after the first ten days a change set in and pressure fell considerably to largely below the average. The result was that for the whole month and for the whole area the pressure was slightly below the normal. The local anomalies were moderate or slight except in North Bombay, where they were negative and ranged between ·02″ and 04″. Pressure was in local excess over the greater part of the Peninsula, more especially about the mouth of the Godaveri, where the positive anomalies were ·023″. It was also in excess over the submontane regions of the Punjab and the north-western districts of the North-West Provinces, where the local variations ranged from +·001″ to +·020″. It was also in excess over Bengal proper, Assam and Burma, more especially over the region represented by the stations of Silchar, Kindat and Akyab, where the local anomalies ranged between +·02″ and +·03″. In all other parts of India pressure was in defect. Two areas of maximum defect were shown—one over the extreme south represented by Colombo, with a local deficiency of ·02″, the other over North Bombay, represented by the stations of Rajkot, with a local deficiency of ·03″, Deesa with a local deficiency of ·03″ and Bhuj with a deficiency of ·04″. The vertical anomalies as determined by the variations at the hill stations and neighbouring plain stations were generally positive, but were not large. The most noteworthy feature of the month was the sudden change in the general pressure conditions which set in after the first ten days of the month.

The following table gives the mean pressure variations and anomalies of the eleven meteorological provinces:—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of November 1896 from normal.	Pressure anomaly, November 1896.
	″	″
Burma Coast and Bay Islands	+·008	+·016
Burma Inland	?	?
Assam	+·007	+·015
Bengal and Orissa	0	+·008
Gangetic Plain and Chota Nagpur	—·013	—·005
Upper Sub-Himalayas	—·004	+·004
Indus Valley and North-West Rajputana	—·015	—·007
East Rajputana, Central India and Gujarat	—·024	—·016
Deccan	—·016	—·008
West Coast	—·010	—·002
South India	—·001	+·007

Temperature.—The variations of the mean temperature conditions of the month were broadly marked and, as in November 1895, the chief feature was the general excess over India and the general deficiency over the Burma Peninsula. The mean day or maximum temperature was normal or in trifling defect at the stations in the Brahmaputra Valley and the Irrawaddy Valley, at those on the Carnatic coast and at most of the Punjab stations, it was normal or in slight excess over the remaining portions of Northern India, over the south of the Peninsula and in East and North Bengal. In all other parts of the Indian region it was in considerable to large excess. This excess was greatest over Khandesh, Central India (west) and the west and south of the Central Provinces, over which region the variations from the normal ranged between +6°·1 and +7°·1. The variations exceeded 5° throughout, a broad band running roughly from South-West Bengal to the Bombay Deccan.

The mean night or minimum temperature was lower than usual over Burma, Assam and Bengal (except West Bengal) and was higher than usual in all other places. The deficiency was moderate over Assam and the northern half of Burma, and was absolutely greatest (3°·7) at Akyab. The excess was large over Sind, Rajputana, the Central Punjab, Central India, the greater part of the Central Provinces and Khandesh. It was absolutely largest at Akola (8°·6), but exceeded 7° at Jeypore (7°·9), Ajmere (7°·7), Sutna (7°·1), Saugor (7°·2), Hoshangabad (7°·3) and Khandwa (7°·7).

The mean temperature of the month was in nearly general defect in Burma, Assam and East and North Bengal and in excess in all other parts of the Indian area. The deficiency was 2°·0 at Sibsagar and 1°·9 at

Akyab but was slight elsewhere. The mean was in slight to considerable excess over Bengal, the Peninsula and the north-west of India and was in large excess over the central parts of the country. It was over 4° in excess at all the more central stations and in the north of the Peninsula and over 6° at Sutna, Jubbulpore, Saugor, Hoshangabad (each 6°·2), Indore (6°·4), Khandwa (7°·4), Akola (7°·5) and Malegaon (6°·6). At Pachmarhi the temperature was nearly as excessive as at the neighbouring plains stations and at Quetta there was a moderate excess, but at the hill stations in the Himalayas the variations were small and rather irregular.

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	—0·1	—0·3	—0·2
Burma Inland	—0·4	—2·5	—1·5
Assam	+0·2	—2·4	—1·1
Bengal and Orissa	+2·4	—0·2	+1·1
Gangetic Plain and Chota Nagpur.	+3·4	+2·1	+2·8
Upper Sub-Himalayas	+0·4	+4·0	+2·2
Indus Valley and North-West Rajputana.	+0·7	+4·2	+2·5
East Rajputana, Central India and Gujarat.	+1·3	+5·5	+3·5
Deccan	+5·2	+5·6	+5·4
West Coast	+2·1	+2·2	+2·2
South India	+2·1	+2·2	+2·2

Winds—Were steadier than usual in Burma, while they were slightly less steady than usual in Bengal. In both provinces they were somewhat more northerly than the average. The velocity was lower than usual except at Saugor Island. In Chota Nagpur and the Gangetic Plain the directions were about normal, but as in Bengal the velocity was abnormally low. Over the central parts of the country and the Deccan the wind was steady and strong, and there was at most stations a slight southerly component. In Madras the directions were nearly normal, but the velocity was low. The winds were hence unsteady and slightly more northerly than usual over the north-east of the Indian region, strong and more southerly than usual over the central parts of India and of the Peninsula, and normal in direction but low in force in Madras.

Humidity and cloud.—The air was slightly but generally drier than usual over Burma, Assam, Bengal and part of the Gangetic Plain. The mean humidity of the month was, for example, 8 below the normal at Silchar and Berhampore and 14 below at Allahabad. The air contained more aqueous vapour than usual over North-Western and Central India and the whole of the Peninsula. The abnormal excess was greatest over East Rajputana, Central India and Gujarat. The mean humidity of the month exhibited only slight variations from the normal, but was generally in defect. The Upper Sub-Himalayas showed a trifling, and East Rajputana, Central India and Gujarat a slight, excess. In the latter region there occurred, unlike other parts of India, a period of very deficient temperature after the rainfall of the 20th and 21st.

The cloud amount of the month was about normal in Burma, Bengal and Orissa, and was deficient in Assam, where the amount of aqueous vapour was in large defect. In all other parts of the Indian region the sky was more cloudy than usual. The abnormal excess was 2·0 in East Rajputana, Central India and Gujarat and was 1·8 in the Indus Valley and West Rajputana and 1·6 in the Upper Sub-Himalayas. The principal features were hence diminished dampness and greater serenity over the north-east of the Indian region—more particularly in Assam—and more aqueous vapour and more cloud than usual in all other places.

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.	VARIATION FROM NORMAL OF		
	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.
	"		
Burma Coast and Bay Islands	—·012	—2	0
Assam	—·051	—3	—1·2
Bengal and Orissa	—·014	—5	—0·4
Gangetic Plain and Chota Nagpur.	+·002	—4	+0·9
Upper Sub-Himalayas	+·019	+2	+1·6
Indus Valley and North-West Rajputana.	+·021	—2	+1·8
East Rajputana, Central India and Gujarat.	+·067	+6	+2·0
Deccan	+·033	—2	+1·2
West Coast	+·015	—4	+1·2
South India	+·020	—2	+1·1

Rainfall.—The scanty rainfall which characterised

October continued during the early part of the month of November, and the weather was practically rainless from the 1st to the 10th. Subsequently rain began to fall heavily in the south, and under the influence of the storm described in a subsequent section, rain extended over a large part of the country. In addition slight depressions in the north-west gave showers on two or three occasions to parts of the Punjab. One of the chief features of the rainfall of the month was the very scanty rainfall over Lower Burma which usually receives moderate rain from the retreating south-west monsoon, but which during the month under review had a general deficiency of about 1¼ inches. Assam also received very scanty rainfall, the mean average fall for the province for the whole month being about three-tenths of an inch. In Bengal the small normal fall was exceeded only in one division, and in Orissa the average rainfall for the division for the month was only 0·14 inch instead of the normal 2·09 inches. In Chota Nagpur, Bihar and the whole of the North-Western Provinces the rainfall was heavier than usual by nearly half-an inch, and the south-east of the Punjab had an equally satisfactory fall. In other parts of the Punjab the variations from the normal were irregular and generally small. Over the central parts of India, the central parts of the Peninsula and the north of the Bombay Presidency there was a general excess, the amount of which varied from a few hundredths of an inch only in the case of Sind to as much as 1·01″ in the east of the Central Provinces and to 1·13″ in Kathiawar. In the north-east of the Peninsula, in the northern districts of Madras, where ordinarily the rainfall averages about 3″, there was a serious deficiency in the amount of fall, but all over the south of the Peninsula the almost constant rainfall of the last three weeks of the month occasioned an excess which, though only slight in the case of Malabar, South-Central Madras and Mysore, was very large in the case of the Madras coast districts. Over the west of the Peninsula the rainfall was lighter, the Konkan and Khandesh showing a deficiency of about half an inch, while the Deccan obtained about the normal amount. The Punjab Hills received less and the Baluchistan Hills more than the usual amount.

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

Meteorological Province.	Rainfall.		
	Average actual, November 1896.	Average normal, November.	Variation from normal.*
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	1·64	4·20	−2·38
Burma Inland	0·57	1·95	−1·36
Assam	0·25	0·85	−0·54
Bengal and Orissa	0·11	0·99	−0·92
Gangetic Plain and Chota Nagpur	0·52	0·22	+0·29
Upper Sub-Himalayas	0·33	0·15	+0·20
Indus Valley and North-West Rajputana.	0·23	0·17	−0·01
East Rajputana, Central India, and Gujarat.	1·21	0·20	+0·83
Deccan	1·38	0·85	+0·49
West Coast	3·14	3·30	+0·23
South India	9·01	5·94	+2·10

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

Atmospheric Pressure.

The mean pressure of the Indian land area in the month of November 1896 was ·008″ below the normal. There was hence a considerable difference in the pressure conditions compared with those of the corresponding months of 1895 and 1894, when the variations were +·033″ and +·038″, respectively, although, however, pressure was everywhere lower in November 1896 than in November 1895, there was general similarity in the relative distribution. Thus pressure exhibited its greatest excess in both months over the Central Madras coast districts and was, relatively to surrounding districts, high right across the centre of the Peninsula. It was also relatively high over Burma and Cachar, while it was low in Ceylon and within a large area embracing North Bombay, Sind, Rajputana, the South Punjab, the whole of the central parts of the country, and the Gangetic plain. The large deficiency of pressure shown in Kathiawar in November 1896 was not shown in November 1895, because in the earlier year no cyclone affected that area.

Pressure relatively to the general condition was in defect over Ceylon, also over the greater part of the Bombay Presidency, Rajputana, the Southern Punjab, the Gangetic Plain and the central parts of India. The negative

anomalies in these two areas were greater than 0·02″ at the stations given below :—

DIVISION.	STATION.	Variation of mean 8 A.M. pressure of November 1896 from normal.	Pressure anomaly, November 1896.
		″	″
Kathiawar and Cutch.	Bhuj	−·048	−·040
	Rajkot	−·042	−·034
Rajputana	Deesa	−·041	−·033
Gujarat	Surat	−·030	−·022
Sind	Kurrachee	−·032	−·024

The deficiency in Ceylon was due apparently to conditions over equatorial regions, while much of the deficiency in Northern and Central India—more particularly in North Bombay—was due to the cyclonic storm of the 20th to the 23rd and the disturbed weather which succeeded this depression.

The pressure anomalies were positive over the northern districts of the Punjab, the west of the North-Western Provinces, Bengal, Assam, Burma, and the centre and north of the Peninsula. The anomalies exceeded ·020″ at the following stations :—

DIVISION.	STATION.	Variation of mean 8 A.M. pressure of November 1896 from normal.	Pressure anomaly, November 1896.
		″	″
Burma	Kindat	+·019	+·027
Assam	Silchar	+·023	+·031
Bengal	Jalpaiguri	+·015	+·023
Madras	Masulipatam	+·015	+·023
	Cocanada	+·015	+·023

The considerable excess of pressure in the Madras coast districts was mainly due to the very excessive pressures which prevailed in this area during the first ten days of the month, and which were related to the deficient rainfall in that area at that time.

The variations of pressure at the hill stations were generally small and irregular, and the comparative data of the following six pairs of stations give no reliable indications of the condition of pressure in the middle and higher strata of the atmosphere relatively to that at the level of the plains :—

HILL STATION.	Variation of pressure from normal. (*a*)	NEIGHBOURING PLAIN STATION.	Variation of pressure from normal. (*b*)	Vertical pressure anomaly or (*a*)—(*b*)
	″		″	″
Leh	+·020	Lahore	−·029	+·049
Quetta	−·022	Jacobabad	−·015	−·007
Murree	+·008 ?	Rawalpindi	+·012	−·004?
Simla	+·003	Ludhiana	−·002	+·005
Chakrata	+·021	Roorkee	−·008	+·029
Ranikhet	+·025	Bareilly	+·001	+·024

The chief features of the pressure distribution of the month were :—

(1) General slight deficiency.

(2) Local excess in Bengal, Assam, Burma, and the central parts of the Peninsula—moderate in amount in Cachar, Upper Burma and Arakan on the one hand, and over part of the Coromandel Coast on the other.

(3) Local deficiency in the extreme south of the Peninsula and Ceylon, the amount of the deficiency apparently increasing southward.

(4) Deficiency of pressure over the Bombay Presidency, Rajputana, the South Punjab, the central parts of the country and the Gangetic Plain, the abnormal deficiency being greatest in Kathiawar and Gujarat.

(5) Slight deficiency at the hill stations of Darjeeling Quetta and Wellington as compared with the pressure at the neighbouring plains stations and irregular variations at the remaining hill stations.

Barometric depressions and cyclonic storms of the month.

During the first four days of the month the barometer was above the normal average in all parts of India the abnormal excess being greatest, as was also the case at the close of the previous month, in the Madras coast districts. On the 4th the barometer began to fall over the Indus Valley, and on the following day was below the normal average over the western desert. On this day, the 5th, a slight depression probably formed on the plateau of Iran,

and thence transmitted eastward, crossed the Indus Valley, the wind drew into cyclonic directions over North-West India, and rain and snow fell at the following stations:—

STATION.	ACTUAL RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF		Total of period.
	6th November.	7th November.	
	Inch.	Inch.	Inch.
Lahore	0·05	...	0·05
Montgomery	0·03	...	0·03
Rawalpindi	0·30	...	0·30
Peshawar	0·20	...	0·20
Dera Ismail Khan	0·03	...	0·03
Simla	0·09	0·02	0·11
Murree	0·47	0·03	0·50
Skardu	0·16	...	0·16
Dras	0·11	...	0·11
Srinagar	0·53	...	0·53
Cherat	0·03	...	0·03
Quetta	0·06	...	0·06
Chaman	0·19	...	0·19

On the 6th the barometer was rising briskly in the Punjab but pressure was still below the normal over North Bombay, Rajputana and Sind, as is shown by the following table:—

STATION.	PRESSURE VARIATION FROM NORMAL OF 24 HOURS PRECEDING 8 A.M. OF		
	5th November.	6th November.	7th November.
	"	"	"
Bhuj	—·019	—·054	—·003
Jacobabad	—·073	—·029	+·081
Kurrachee	—·032	—·084	+·028
Hyderabad	—·028	—·058	+·062
Rajkot	—·003	—·032	+·025
Deesa	—·009	—·042	+·003
Jeypore	—·005	—·046	+·015
Ajmere	—·009	—·048	+·012

On the 7th pressure again exceeded the average everywhere, but on the 8th a deficiency was appearing in Ceylon. This deficiency gradually increased in the south and spread northward. It had extended to all parts of the Indian region by the 11th. On the 12th and 13th, the deficiency was large at Colombo, and considerable over Kathiawar and Northern India. On the 10th a depression had formed over the south of the Bay, the centre lying apparently in about Lat. 8°N and Long. 86°E, around which area cyclonic winds, strong to a gale in force, were blowing. By the morning of the 11th the centre had advanced very slightly westward, but the observations on this day did not afford much information as to the disturbance. On the 12th the centre was apparently in Long. 84°E and on the 13th in Long. 83°E, where the barometer was probably below 29·70″. The advance westward had hence been carried out very slowly. Between 8 A.M. of the 13th and 8 A.M. of the 14th the depression marched more quickly, and pressure rose about a tenth of an inch off the east coast of Ceylon. On this day the centre lay at 8 A.M. close to Tinnevelly, where the barometer marked 29·75″, and was over 0·10″ below the normal. On this day the following falls of rain were reported:—

ACTUAL RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF THE 14TH NOVEMBER.

Madras.	Cuddalore.	Trichinopoly.	Negapatam.	Tinnevelly.	Colombo.
Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
3·50	3·15	1·44	1·55	4·34	3·60

The wind was strongest on the southern side of the disturbance and had blown with a velocity of 21 miles per hour at Colombo.

Between the morning of the 14th and the morning of the 15th the storm passed westwards into the Arabian Sea.

At 8 A.M. on the 15th the centre was apparently in about Lat. 9°N and Long. 75°E. The following gives the observations around the centre:—

STATION OR SHIP.	POSITION.		BAROMETER.		WIND	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	"	"		
Mangalore	...	...	29·808	—·099	ESE	2*
Cochin	...	...	·804	—·091	SE	8*
Colombo	...	...	·831	—·077	SE	9*
R. I. M. S. *Canning*	13 26	74 28	·773	...	ENE	3
S.S. *Khandalla*	Bombay.		·747	...	Var.	2
S.S. *Bhopal*	10 37	74 48	·784	...	NE	3 to 4
S.S. *Landaura*	6 44	79 13	·796	...	SW	2
S.S. *City of Bombay*	8 34	71 11	·814	...	N	2
S. *Grosvenor*	6 17	68 35	...	...	N by W	3
S.S. *Coronae*	3 21	70 16	...	...	WSW	3

* Velocity in miles per hour.

The barometer observations from ships in this and the following tables in this section are not wholly reliable, but in the Daily Marine reports for the period the corrected readings will be found.

On the morning of the 16th there was apparently no change in the position of the centre but the intensity of the disturbance had apparently increased. The following gives data for the 16th:—

Station or Vessel.	Position.		Barometer.		Wind	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	″	″		
Mangalore	...	...	29·800	—·106	Calm	2*
Cochin	...	...	·810	—·085	Calm	3*
Colombo	...	...	·826	—·081	SE	8*
S. *Manydown*	13 31	73 52	...	...	E	2
S.S. *Nubia* (*b*)	8 31	70 30	·737	...	NNW	3
S. *Grosvenor*	8 01	69 21	...	...	WNW	3
S. *Coronae*	5 04	70 19	...	...	W	5
S.S. *City of Bombay*	7 38	75 52	·774	...	S	4
S.S. *Landaura*	8 46	76 41	·755	...	ESE	5
S.S. *Bhopal*	8 12	76 47	·789	...	SSE	5

* Velocity in miles per hour.

On the 17th the barometer was still falling, but slowly, over the S.E. of the Arabian Sea, but the depression was less clearly shown by the available observations than on the 16th. On the 18th the storm had begun to move more westward. The following gives data for 8 A.M. of this day:—

Station or Vessel.	Position.		Barometer.		Wind	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	″	″		
Cochin	...	...	29·819	—·071	SSE	1*
Mangalore	...	...	·784	—·120	ESE	1*
Karwar	...	...	·817	—·089	ENE	3*
S. *Manydown*	15 42	73 02	...	...	E	2
S.S. *Landaura*	15 17	73 40	·739	...	NE	2
S.S. *Hoseinee*	13 50	69 40	·713	...	NE	6
S.S. *Saint Renald*	10 00	69 23	·683	...	NNE	8
S. *Grosvenor*	10 12	70 07	...	...	WSW	2
S. *Coronae*	8 09	71 22	·600	...	WNW	5

* Velocity in miles per hour.

From the above it would appear that the centre on this day was close to the S.S. *Saint Renald* in Lat. 10° N and Long. 69½° E, where the NNE wind was very strong and hard rain squalls were experienced.

On the 19th at 8 A.M. the centre of the storm was apparently in about Lat. 14° 30′N and Long. 70°E. The following gives data for this day:—

Station or Vessel.	Position.		Barometer.		Wind	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	″	″		
Karwar	...	...	29·858	—·045	Calm	3*
Ratnagiri	...	...	·846	—·061	ENE	8*
Bombay	...	...	·869	—·078	ESE	15*
S.S. *Clan Fraser*	18 10	69 04	·769	...	NE	5
S.S. R. *Rubbattino*	17 01	65 43	...	...	NE	4
R. I. M. S. *Clive*	17 57	68 39	·836	...	NE	3 to 4
S.S. *Kapurthala*	19 36	71 30†	·850	...	E	6
S.S. *Landaura*	Bombay.†		·747	...	NE	4
S. *Manydown*	17 15	72 33	...	...	NE	4
S.S. *Imperatrix*	Bombay.		...	...	ENE	6 to 8
S.S. *Hoseinee*	16 55	71 19	·763	...	E	6
S. *Grosvenor*	11 07	70 26	...	...	SSW	2
S. *Coronae*	9 19	71 07	...	...	SW	4
S.S. *Saint Renald*	9 33	72 06	·721	...	S	5
S.S. *Goldenfels*	8 31	70 35	·891	...	SSW	4

* Velocity in miles per hour.
† Noon position.

There were no ships on this morning close to the centre.

On the morning of the 20th the storm was in about the latitude of Bombay and the centre was moving north-north-eastward. The following gives data for 8 A.M. of this date:—

Station or Vessel.	Position.		Barometer.		Wind	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	″	″		
Veraval	...	...	29·815	?	NW	10*
Surat	...	...	·826	—·146	NE	5*
Bombay	...	...	·814	—·134	SE	15*

* Velocity in miles per hour.

Station or Vessel.	Position.		Barometer.		Wind	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	″	″		
Ratnagiri	...	...	29·834	—·073	E	6*
S.S. *Dumra*	21 53	69 07	...	...	ESE	5
S.S. *Peninsular*	17 09	65 02	·727	...	NNW	4
S.S. R. *Rubbattino*	17 19	67 20	...	...	N	5
R. I. M. S. *Clive*	17 00	66 15	7·84	...	NW	7
R. I. M. S. *Lawrence*	19 29	71 15	·707	...	E	3
S.S. *Clan Fraser*	18 45	72 08	·619	...	ESE	6
S.S. *Sirdhana*	16 18	73 13	·746	...	SE	5
S. *Grosvenor*	12 43	70 31	...	...	W	2
S.S. *Setos*	12 21	67 53	·712	...	N	2
S. *Caronae*	9 54	71 05	...	...	SW	4

* Velocity in miles per hour.

On the morning of the 21st the storm was passing through Kathiawar, the centre lying apparently close to but to the eastward of Rajkot. The following gives data for this date :—

Station or Vessel.	Position.		Barometer.		Wind	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	″	″		
Bhuj	...	...	29·816	—·205	NE	21*
Deesa	...	...	·820	—·206	ENE	15*
Rajkot	...	...	·738	—·269	NNE	16*
Surat	...	...	·752	—·221	NNE	6*
Bombay	...	...	·823	—·125	SW	27*
Veraval	...	...	·735	?	WNW	42*
S.S. *Simla*	23 21	68 11	·736	...	NNE	4
S.S. *Mosaffari*	20 52	67 19	·885	...	NNE	4
S.S. *Peninsular*	18 05	69 30	·823	...	NW	4
S.S. *Loodiana*	18 01	69 45	·735	...	N by W	6
S.S. R. *Rubbattino*	18 13	71 26	...	...	W	3
S.S. *Dumra*	19 49	70 40	...	...	NW	7

* Velocity in miles per hour.

Strong winds and gales prevailed along the North Bombay coasts as the centre advanced to and crossed the Kathiawar coast, and strong squally winds and rain over North Bombay, Southern Rajputana and Central India as the storm advanced inland.

The following gives the daily barometric variation from the normal and the daily rainfall at various stations in Western India, and shows the steady northerly advance of the disturbance :—

Date.	15th November.		16th November.		17th November.		18th November.		19th November.		20th November.		21st November.	
Station.	Barometer variation.	Rainfall.	Barometer variation.	Rainfall.	Barometer variation.	Rainfall.	Barometer variation.	Rainfall.	Barometer variation.	Rainfall.	Barometer variation.	Rainfall.	Barometer variation.	Rainfall.
	″	Inches.	″	Inches.	″	Inch.	″	Inch.	″	Inch.	″	Inch.	″	Inches.
Cochin	—·091	1·29	—·085	1·52	—·086	0·15	—·071	0·12	—·010	...	—·023	...	—·040	1·04
Mangalore	—·099	...	—·106	...	—·091	...	—·120	0·70	—·029	0·26	—·032	...	—·039	0·18
Karwar	—·060	...	—·084	...	—·087	...	—·089	...	—·045	0·01	—·042	0·02	—·039	0·02
Ratnagiri	—·050	...	—·067	...	—·079	...	—·079	...	—·061	0·03	—·073	...	—·046	...
Bombay	—·071	...	—·068	...	—·081	...	—·081	...	—·078	...	—·134	0·12	—·125	0·23
Surat	—·079	...	—·091	...	—·086	...	—·072	...	—·059	...	—·146	...	—·221	0·73
Rajkot	—·083	...	—·101	...	—·095	...	—·091	...	—·070	...	—·130	0·12	—·269	1·60

Between the 21st and the 22nd the storm moved very quickly east-north-eastward and at 8 A.M. on the latter date lay over the south of the North-Western Provinces and the adjoining parts of Central India. The following gives

the pressure variation data for this date, showing that the greatest barometric depression was situated over Sutna :—

DATE.	VARIATION OF 8 A.M. PRESSURE FROM NORMAL AT					
	Benares.	Allahabad.	Sutna.	Nowgong.	Jubbulpur.	Hoshangabad.
	"	"	"	"	"	"
22nd	—·185	—·225	—·231	—·205	—·193	—·222

The storm occasioned a general and most important fall of rain over the central parts of the country, the Gangetic Plain and part of West Bengal, and a large and sudden reduction of temperature occurred over North Bombay, Rajputana and Central India. The storm practically filled up during the 22nd, but apparently left pressure in a disturbed condition, and rain was still falling over West Bengal, the east of the North-Western Provinces and the Central Provinces on the morning of the 23rd.

On the 23rd the wind had become easterly over the centre of the Bay, while strong westerly winds were blowing in the south, and variable breezes prevailed in the intervening region.

On the following day a depression was shown over the south-west of the Bay, the centre lying in about Lat. 12°N and Long. 82°E. The following gives data for this day :—

STATION OR VESSEL.	POSITION.		BAROMETER.		WIND	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	"	"		
Madras . . .	...	...	29·805	—·116	Calm	3*
Cuddalore . .	...	...	·778	?	W	2*
Negapatam . .	...	...	·774	—·119	NW	6*
Trincomalee . .	...	...	·774	?	SW	5*
S. S. *Bhopal* . .	15 29	82 57	·845	...	E	3
S. S. *Nubia* (*b*) .	15 29	82 47	·772	...	E	4
S. S. *Roma* . .	15 19	85 41	·809	...	E by N	4
S. S. *Chemnitz* .	10 38	85 34	·693	...	Variable	1 to 2
S. S. *Secundra* .	9 10	86 03	·748	...	Calm	0
S. S. *Kerbela*. .	6 36	81 31	·686	...	WSW	5
S. S. *Virawa*. .	6 13	81 02	·730	...	WSW	7

* Velocity in miles per hour.

During the next two days there was little change to record, the disturbed area continuing to lie over the south-west of the Bay, and on the morning of the 26th the centre of the disturbed area still occupied the same position. The following gives data for 8 A.M. of the 26th :—

STATION OR VESSEL.	POSITION.		BAROMETER.		WIND	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	"	"		
Madras . . .	...	...	29·890	—·053	NNE	6*
Cuddalore . .	...	...	·869	?	N	3*
Nagapatam . .	...	...	·867	—·044	NW	10*
Trincomalee . .	...	...	·837	?	SW	7*
S. S. *Okhla* . .	13 23	84 36	30·029	...	E	4
S. S. *Onipenta* .	12 45	84 28	29·827	...	ESE	5
S. S. *Secundra* .	12 35	80 20	·789	...	NNE	6
S. S. *Bohemia* .	11 17	83 40	·969	...	ESE	3
S. S. *Nairung* .	9 23	81 14†	·694	...	NNW	3
S. S. *Nuddea* .	Trincomalee†		·809	...	W by S	6
S. S. *Barrister* .	10 15	83 31	·762	...	S	4

* Velocity in miles per hour.
† Noon position.

On the 27th the barometer was falling briskly at Madras, and a small concentrated centre which had presumably been developed within the stationary area of low pressure advanced quickly westward, occasioning a sudden gale in Madras station and its immediate neighbourhood. The following gives data for 8 A.M. on this day, from which it will be seen that beyond the gale on board the S. S. *Goldenfels* no important change had occurred over the sea area over the south-west of the Bay :—

STATION OR VESSEL.	POSITION.		BAROMETER.		WIND	
	Lat. N.	Long. E.	Reading.	Variation from normal.	Direction.	Force.
	° ′	° ′	"	"		
Madras . . .	...	...	29·832	—·112	NNW	12*
Cuddalore . .	...	...	·845	?	NW	4*
Negapatam . .	...	...	·839	—·077	W	11*
Trincomalee . .	...	...	·867	?	SW	3*
S. S. *Bohemia* .	14 59	85 15	30·019	...	ENE	4
S. S. *Goldenfels* .	13 53	81 27	29·811	...	NE by E	8
S. S. *Barrister* .	14 25	85 15	·898	...	ENE	5
S. S. *Okhla* . .	10 40	83 30	30·039	...	SSW	4
S. S. *Onipenta* .	9 43	83 27	29·814	...	SSW	4
S. S. *Clan Macintosh*.	9 15	81 40	·779	...	W	4
S. S. *Osborne* .	5 42	83 30	...	...	W	5
S. S. *Rewa* . .	6 01	81 17	·881	...	W	4

* Velocity in miles per hour.

The small central area of disturbance which subsequently visited Madras was hence probably close to the S. S. *Goldenfels* at 8 A.M. on this day. The following extract from the *Madras Mail* shows the character of weather experienced at the Madras observatory :—

"At Madras the barometer was falling slowly, but the total fall from 8 A.M. on the 26th to 8 A.M. on the 27th was only six-hundredths of an inch, and the wind velocity was considerably below what it had been during the night. Shortly after 10 A.M. the barometer began to fall rapidly, and fell six-hundredths more than it ought to have done up to 12-30, when it began to rise again. The lowest reading of the barometer (corrected for temperature and reduced to sea level) was 29·779, which is less than a quarter of an inch below the average for the same hour and day. From 12-30 to 4 P.M. the barometer rose steadily, it fell again slightly till about 6 P.M., when it again began to rise, and has continued rising, slowly. From the behaviour of the barometer it is evident that there was a comparatively large but shallow low pressure area with a small central area in which the pressure was somewhat lower. The wind velocity at the observatory never rose to anything like cyclone strength. The maximum for any one hour was only about 26 miles, and the heaviest gust about 12-20 P.M. was only about 35 miles an hour, a velocity often exceeded in ordinary squalls". On the 28th the barometer rose briskly at Madras, and on the 29th and 30th pressure rose above the normal average over the whole of the south of the Indian region.

Simultaneously with this change in the south, conditions became unsettled in the extreme north-west. The barometer began to fall at Quetta on the 27th due to the approach of a feeble low pressure area from the westward, and this fall extended to the whole of North-Western India on the 28th. The following gives data for 8 A.M. of this day :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.
	"	"	"				Inch.
Quetta . . .	24·637	—·022	—·137	Calm	5	10	0·52
Peshawar . .	30·025	—·094	—·078	W	4	10	0·17
D. I. Khan . .	30·013	—·074	—·085	Calm	2	10	0·02
Mooltan . .	29·964	—·116	—·136	NE	1	2	...
Bickaneer . .	·960	—·080	?	SSE	8	4	...
Jacobabad . .	·968	—·049	—·108	WNW	8	10	...
Ajmere . . .	30·039	—·015	—·045	SE	2	5	0·07

The greatest abnormal deficiency on the plains on this day was at Mooltan, and the centre of the disturbed area was probably near this station. A rapid recovery succeeded as is shown by the following data for 8 A.M. on the 29th :—

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.
	"	"	"				Inch.
Mooltan .	30·189	+·225	+·076	NE	1	2	...
Monigomery .	·181	+·203	?	NW	8	1	...
D. I. Khan .	·233	+·220	+·117	NE	6	0	0·15
Jacobabad .	·176	+·208	+·093	NNW	8	3	...
Bickaneer .	·165	+·205	?	WNW	8	1	...
Peshawar .	·231	+·206	+·108	SW	3	0	0·69
Hyderabad .	·163	+·168	+·107	WNW	6	0	...
Kurrachee .	·159	+·176	+·100	NE	6	3	...

The depression had hence disappeared on this day, and the barometer read above the normal average in all parts of the Indian region. On the last day of the month a barometric fall occurred in the north-east and pressure, went below the normal in that area, but in all other parts of the country the month closed with excessive pressures.

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

I.—AFGHAN MOUNTAIN AREA.

(1) *Hills bordering the Dera-Ismail-Khan district.*

(*a*) *Dera Ismail Khan.—5th November.*—Very light snow on the Marwatti Hills (elevation 10,000 feet).

26th.—Light snow on the neighbouring hills down to 9,000 feet.

27th and 28th.—Snow fell down to 5,500 feet on these days. The fall measured about 6 inches in depth at 10,000 feet and 3 inches at 6,000 feet. More or less rain was received on each occasion on the plains of Wano. Snow lay 3 inches deep above 9,000 feet at the end of the month.

(*b*) *The Kulachi Border.*—Heavy snow (about 1 foot) fell on the 29th on the Kat and Ubashta peaks.

(*2*) *Kurram.*—Snow fell on the neighbouring hills from the 26th to the 28th and rain in the valley. The snowfall on the 28th was heavy and descended as low as the level of Para Chinar, where 9 inches were recorded. Heavy and continuous rain fell for over 24 hours all over the valley. The disturbance was very extensive, and extended well into Afghanistan and Khost. The fall was unusually heavy and early for the time of year, and blocked all the higher passes. There was severe cold during the greater part of the month.

II.—KASHMIR AND PUNJAB HIMALAYAS.

(*1*) *Chamba.—September.*—Snow fell on two occasions down to 12,000 feet.

October.—Snow fell on twelve days. The snow line descended to 7,500 feet at the end of the month.

November.—There were falls of snow on the 5th and 6th, 22nd and 23rd, and the 28th and 29th down to elevations between 8,000 and 8,500 feet.

High winds from the plains and much thunder prevailed during the storms in November.

Skies were much less clouded and weather was colder and drier than during the corresponding period of 1895.

(*2*) *Upper Sutlej Valley* (*Kilba*).—*October.*—Snowstorms occurred on the 22nd, 24th, 28th and 29th down to 9,000 feet, but the fall was heavy on the last occasion only.

November.—Snow fell on only one occasion, *viz.*, the 7th. The fall was heavy and was confined to elevations above 10,000 feet.

(*3*) *Bushahr.—November 7th.*—Heavy snow above 10,000 feet. The snow storms extended along the higher slopes of the valley as far as Hattu. The depth of snow on the Chencil Pass was about 3 feet and on the Rupin Pass between 4 and 5 feet on the 15th of the month.

(*4*) *Poo.*—The Superintendent of the Observatory at Poo has sent the following information of the snowfall in that part of the valley:—

21st September.—Snow fell down to 14,000 feet, but melted quickly on the hill sides, facing south and east.

2nd and 3rd October.—Snow fell about 1 foot on the passes above 13,000 feet.

27th and 28th October.—Rather heavy snow fell on the passes.

5th November.—Snow line descended to 12,000 feet and on this day snow lay 3 feet deep on the Chaling Pass (14,000 feet).

21st and 22nd November.—Snow fell down to the bottom of the valley, but melted next day. Snow lies down to 10,000 feet on the sides of the hills facing north. Snowstorms extended over the whole of the Upper Sutlej Valley. The depth of snow at the end of the period measured about 4 feet on the Chaling Pass.

Summary of special storm reports.

The weather was much more settled than is frequently the case in November, and there were hence only a few local storms. The reports of these are given below:—

3rd.—Thunderstorm at Jask from 3-41 P.M. to 7-40 P.M.

22nd.—Very severe thunderstorm with heavy rain at Salem from 4-40 P.M. to 6-40 P.M.

24th.—Thunderstorm at Salem at 9-20 P.M. Storm lasted till 10-45 P.M., and gave 1-10 inches of rain during the interval.

The following report of the occurrence of a hailstorm in Assam has been received from the Deputy Commissioner of Cachar.

12th.—Hailstorm at Hailakandi in the Cachar district. The storm came from west and lasted 2 minutes, and did great damage to the crops and fruit trees.

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

Arabian Sea.—During the first thirteen days of the month light to fresh north-westerly winds obtained in the north and light to strong north-easterly winds of the winter monsoon over the remainder of the Arabian Sea. The

mean force of the air movement during this period ranged between 2·7 and 3·5. Weather was generally fine except near the Malabar and Ceylon coasts, where it was more or less showery and squally. On the 14th the winds were unchanged in direction over the area to the north of the parallel of 9°N, but had drawn into cyclonic directions over the region between the Maldives and west Ceylon, and were blowing freshly to strongly. Weather was very disturbed over this area, but continued fine over the remainder of the sea. The general force had increased and averaged 3·3 or 0·2 above the normal of the month. Unsettled weather with moderate to fresh cyclonic winds prevailed over the south-east of the Arabian Sea during the next three days. On the morning of the 17th the air movement for the whole area averaged 3·3 and the strongest winds reported were of force 6 in Lat. 8½°N and Long. 70° 8′ E. The disturbance intensified and began to advance northwards during the next 24 hours. On the morning of the 18th the influence of the storm extended over the greater part of the east of the sea, but the winds were generally light to moderate, and only in two instances exceeded 4 in force. The disturbance continued to drift northwards until the 21st, on the morning of which day it passed inland across the Kathiawar coast. Very squally rainy weather was experienced during this period from the 19th to the 21st over the east of the sea. The strongest winds experienced by vessels on these days were however only of force 7. With the passage inland of the disturbance conditions improved rapidly, so much so that on the morning of the 22nd fairly normal winds and fine weather were re-established over nearly the whole of the Arabian Sea. Ordinary winter monsoon winds (slightly feebler than usual) and fine weather prevailed until the 26th at 8 A.M. on which day the mean strength of the winds was 2·6 or 0·5 below the normal. A rapid increase in the strength of the winds occurred during the day, and on the morning of the 27th the general strength of the air movement had risen to 3·3 or 0·2 above the normal. Winds continued to strengthen during the remainder of the month, and averaged 3·7 or 0·6 above the normal at the end of the month.

Bay of Bengal.—Light to moderate ordinary north-east monsoon winds obtained over the Bay during the first seven days of the month. Weather was fine over the north and west, and slightly showery over the centre, east and south. The general air movement varied between 2·0 and 2·6. Winds increased considerably in strength during the next two days over the south and centre, of the Bay, at the same time shifting to cyclonic directions. This change in the air movement is shown fully by the data of Port Blair, where the direction changed from east-north-east on the 7th to south-east on the 9th, and where the average hourly velocity increased from 4 miles to 9 miles during this interval.

A storm formed over the central portion of the south of the Bay and drifting slowly westwards passed out into the Arabian Sea on the 14th. The marine information for the south of the Bay is very scanty, but it is probable that weather was more or less rainy and squally with moderate to strong winds over this area during the period from the 11th to the 14th. Conditions became again normal on the 15th and continued so until the 23rd, when a fresh depression formed in the south-west of the Bay, and the winds became again cyclonic in direction over the southern half of the Bay. A small central area of depression developed within the disturbed area during the next three days and marching rapidly westwards on the 27th, struck the coast at Madras. Winds fell off in strength and reverted to their normal directions on the 28th in the southern half of the Bay, and weather became fine over that area. Light to moderate north-east monsoon winds with fine weather obtained generally over the Bay during the last two days of the month.

Temperature of the Air.

The variations of the mean temperature conditions of the month were large and strongly marked and in many respects were similar to those reported in November 1895. The principal difference in the relative distribution of the two months was the more southerly position of the area of greatest excess and the extension southward over the Peninsula of much higher temperatures in this November than in last. The mean temperature of the whole month was more or less considerably in excess over India and in defect over Burma, Assam and the adjoining parts of Bengal.

The mean maximum or day temperature of the month was higher than usual except in the three following areas, *viz.*, the north and east Punjab and adjoining part of Rajputana, North Bengal, the Assam Valley, and the greater part of Burma and finally the Madras coast districts. In these three regions it was in slight defect.

The excess was most pronounced over the area represented by the stations of Indore, Khandwa, Chanda, Ahmednagar and Malegaon, where the abnormal excess was over 6° but it was large and strongly marked right across the head of the Peninsula, over an area running from South-West Bengal as far as Poona. Within this area the excess was over 5°.

The following gives comparative data for the stations at which the abnormal excess was more than 5° in amount :—

STATION.	MEAN MAXIMUM TEMPERATURE.		
	Actual, November 1896.	Normal, November.	Variation of actual from normal.
	°	°	°
Khandwa	92·4	85·3	+7·1
Malegaon	92·2	85·7	+6·5
Chanda	91·1	84·7	+6·4
Akola	92·2	85·9	+6·3
Indore	87·9	81·8	+6·1
Poona	91·0	85·2	+5·8
Allahabad	87·5	82·1	+5·4
Jubbulpore	86·2	80·8	+5·4
Raipur	87·3	82·1	+5·2
Sutna	85·3	80·1	+5·2
Belgaum	86·7	81·6	+5·1

At the Hill station of Pachmarhi the abnormal excess of the day temperature was even larger than at the neighbouring plains stations but at Mount Abu and on the North-West Himalayas the variations from the normal were small. At Darjeeling there was some deficiency.

The mean night or minimum temperature of the month was in slight to moderate defect in Assam, Bengal (proper) and the greater part of Burma. The abnormal deficiency exceeded 2° at the following stations :—

PROVINCE.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, November 1896.	Normal, November.	Variation of actual from normal.
		°	°	°
Burma	Akyab	68·2	71·9	−3·7
	Kindat	62·1	64·6	−2·5
Assam	Sibsagar	56·6	59·8	−3·2
	Silchar	61·7	63·8	−2·1
Bengal	Jessore	61·7	64·2	−2·5

The mean minimum temperature of the month exceeded the normal elsewhere the abnormal excess being considerable to large over a large area including almost the whole of North-Western and Central India. The excess was over 4° in amount at most stations in Baluchistan, the Punjab, Rajputana, Central India, the Central Provinces, the North-Western Provinces, Khandesh and the Deccan and exceeded 5° at the following large number of stations :—

PROVINCE.	STATION.	MEAN MINIMUM TEMPERATURE.		
		Actual, November 1896.	Normal, November.	Variation of actual from normal.
		°	°	°
North-Western Provinces	Jhansi	62·7	56·7	+6·0
Punjab	Lahore	53·1	46·3	+6·8
	Sirsa	54·1	48·0	+6·1
	Rawalpindi	47·4	42·1	+5·3
Sind	Jacobabad	56·0	49·4	+6·6
Rajputana	Jeypore	60·9	53·0	+7·9
	Ajmere	57·1	49·4	+7·7
	Sambhar	57·4	51·9	+5·5
	Deesa	62·3	56·8	+5·5
Central India	Sutna	59·9	52·8	+7·1
	Indore	60·4	53·8	+6·6
	Nowgong	58·2	51·9	+6·3
	Neemuch	60·5	54·2	+6·3
Gujarat	Surat	68·7	62·3	+6·4
Central Provinces	Khandwa	63·4	55·7	+7·7
	Hoshangabad	63·9	56·6	+7·3
	Saugor	63·3?	56·0	+7·3?
	Jubbulpore	59·2	52·3	+6·9
	Nagpur	65·3	59·7	+5·6
	Seoni	60·3	55·1	+5·2
	Chanda	64·3	59·1	+5·2
Berar	Akola	65·5	56·9	+8·6
	Amraoti	66·5	60·7	+5·8
Khandesh	Malegaon	63·4	56·8	+6·6

The mean temperature of the month was below the normal in part of North and East Bengal, in Assam and in the greater part of Burma but was above in all other parts of the Indian region. The only important negative variations were −2°·0 at Sibsagar and −1°·5 at Kindat. The excess was small or slight over the greater part of Bengal, along the foot of the Hills, over North Bombay and over the south of the Peninsula but was moderate to large elsewhere. It exceeded 4° at all the more central stations

and exceeded 5° at the stations given in the following table :—

PROVINCE.	STATION.	MEAN DAILY TEMPERATURE. Actual, November 1896.	Normal, November.	Variation of actual from normal.
		°	°	°
Central Provinces	Khandwa.	77·9	70·5	+7·4
	Hoshangabad	76·2	70·0	+6·2
	Jubbulpore	72·8	66·6	+6·2
	Saugor	74·5	68·3	+6·2
	Chanda	78·1	72·3	+5·8
	Nagpur	77·1	71·9	+5·2
Berar	Akola	78·9	71·4	+7·5
	Amraoti	78·3	73·0	+5·3
Central India	Indore	74·2	67·8	+6·4
	Sutna	72·6	66·4	+6·2
Khandesh	Malegaon	77·8	71·2	+6·6
Bombay Deccan	Poona	77·6	72·4	+5·2

The following is a brief summary of the more important temperature features of the month :—

(1) Both the day and night temperatures were in defect in parts of Burma and of Assam and the night temperatures were in defect in parts of Bengal. The principal deficiency was in the night temperatures.

(2) The day temperatures were normal or in slight defect over the greater part of North Western India, while the night temperatures were in considerable to large excess in this area.

(3) Both the day and night temperatures were in more or less considerable excess over the central parts of India and the greater part of the Peninsula. In both cases the most marked excess was over Khandesh and the west of the Central Provinces where the variations averaged between 6° and 8° above the normal.

(4) There was a slight deficiency in the day temperatures in the Madras coast districts.

The following table gives comparative data for 56 meteorological divisions into which India is divided :—

PROVINCE.	DIVISION.	ACTUAL TEMPERATURE. Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	VARIATION FROM NORMAL. Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
BURMA	Tenasserim	89·0	73·2	81·1	15·8	24·2	—0·2	+1·4	—1·6
	Lower Burma (Deltaic)	86·2	73·7	80·0	12·6	20·3	—0·1	—0·5	+0·4
	Central do.	88·6	69·0	78·8	19·6	34·2	—0·2	+1·6	—1·8
	Upper do.	83·9	59·5	71·7	24·4	35·5	—0·4	—2·5	+2·1
	Arakan	85·4	68·2	76·8	17·2	28·0	—0·1	—3·7	+3·6
BENGAL AND ASSAM	Eastern Bengal	82·6	62·3	72·5	20·3	32·2	+1·6	—1·3	+2·9
	Assam (Surma)	84·0	59·0	71·5	25·0	35·5	+1·6	—2·1	+3·7
	Do. (Brahmaputra)	78·7	59·2	69·0	19·5	34·4	—0·5	—2·5	+2·0
	Deltaic Bengal	85·7	63·8	74·8	22·0	36·6	+3·0	—0·5	+3·5
	Central do.	85·0	62·0	73·5	23·0	38·7	+3·0	—0·6	+3·6
	North do.	81·6	59·7	70·8	21·9	33·6	—0·2	—0·6	+0·4
	Bengal Hills	56·2	37·4	46·8	18·9	32·2	—1·0	0	—1·0
	Orissa	87·2	69·3	78·3	17·9	28·9	+4·4	+2·1	+2·3
	Chota Nagpur	82·6	59·6	71·1	23·0	36·4	+4·7	+2·7	+2·0
	Bihar (South)	85·4	61·3	73·4	24·0	39·4	+2·9	+2·5	+0·4
	Do. (North)	83·8	58·5	71·2	25·3	40·1	+1·6	—0·8	+2·4
NORTH-WESTERN PROVINCES AND OUDH.	North-Western Provinces (East)	86·5	58·0	72·3	28·5	42·4	+4·5	+3·0	+1·5
	Oudh (South)	85·3	54·7	70·0	30·6	42·6	+2·4	+2·9	—0·5
	Do. (North)	84·3	56·6	70·4	27·7	40·4	?	?	?
	North-Western Provinces (Central)	85·5	58·1	71·8	27·4	40·1	+1·9	+6·0	—4·1
	Do. do. (West)	81·3	53·8	67·6	27·5	37·9	+0·2	+4·3	—4·1
	Do. do. (Submontane East)	84·1	58·1	71·1	26·0	41·1	+2·5	+0·6	+1·9
	Do. do. (do. West)	79·4	53·0	66·2	26·5	38·5	+0·9	+2·0	—1·1
	Do. do. (Hills)	60·0	46·1	53·1	13·9	23·1	0	+1·2	—1·2
PUNJAB	Punjab (South-East)	81·2	56·6	68·9	24·6	35·8	?	?	?
	Do. (South)	82·5	53·7	68·2	28·8	43·7	—0·3	+6·1	—6·4
	Do. (Central)	81·0	53·1	67·0	27·9	40·3	—0·3	+6·8	—7·1
	Do. (Submontane)	81·2	52·7	67·0	28·5	39·3	+0·5	+3·8	—3·3
	Do. (Hill Districts)	55·4	35·6	45·5	19·9	36·5	+0·1	—0·2	+0·3
	Do. (North)	76·1	46·0	61·1	30·1	42·4	—0·2	+4·0	—4·2
	Do. (West)	83·7	52·2	68·0	31·4	47·2	+1·4	+4·2	—2·8

Province.	Division.	Actual Temperature.					Variation from normal.		
		Mean maximum.	Mean minimum.	Mean of day.	Mean daily range.	Absolute range.	Maximum.	Minimum.	Daily range.
		°	°	°	°	°	°	°	°
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	87·5	75·0	81·3	12·5	19·5	+2·0	+1·8	+0·2
	Madras (South Central)	87·5	70·5	79·2	17·4	26·7	+1·5	+1·9	−0·4
	Coorg	76·5	62·6	69·6	13·9	21·3	+1·5	+2·3	−0·8
	Mysore	83·5	64·8	74·1	18·7	27·8	+3·3	+2·2	+1·1
	Konkan	89·8	74·0	81·9	15·8	26·8	+2·2	+2·7	−0·5
	Bombay Deccan	89·5	65·5	77·5	24·0	36·3	+4·8	+3·7	+1·1
	Hyderabad (North)	88·1	65·6	76·9	22·5	33·7	?	?	?
	Khandesh	90·7	62·5	76·6	28·2	40·4	+6·5	+6·6	−0·1
Central Provinces and Berar.	Berar	91·1	66·0	78·6	25·1	36·9	+5·6	+7·2	−1·6
	Central Provinces (West)	89·9	64·2	77·1	25·6	37·3	+5·6	+6·9	−1·3
	Do. (Central)	87·0	61·8	74·5	25·2	37·0	+5·3	+6·2	−0·9
	Do. (East)	87·3	65·0	76·2	22·3	36·1	+5·2	+4·8	+0·4
Bombay (North)	Gujarat	90·3	68·0	79·2	22·3	37·1	?	?	?
	Kathiawar	89·1	64·2	76·7	24·8	41·0	+0·6	+2·6	−2·0
	Sind	88·1	55·2	74·7	23·8	46·2	+1·0	+5·0	−4·0
	Baluchistan Hills	65·0	34·2	49·6	30·8	55·2	+0·1	+4·1	−4·0
Rajputana and Central India.	Central India (East)	85·4	59·8	72·6	25·7	38·8	+3·6	+6·6	−3·0
	Rajputana (East), Central India (West)	85·7	59·4	72·6	26·2	41·7	+0·7	+6·7	−6·0
	Do. (West)	87·5	56·9	73·7	27·5	47·2	?	?	?
Madras	East Coast (North)	87·4	71·5	79·4	15·9	24·3	+3·2	+2·7	+0·5
	Hyderabad (South)	88·6	68·0	78·3	20·6	31·8	+3·6	+4·4	−0·8
	Madras (Central)	90·5	69·8	80·2	20·8	30·8	+4·0	+3·4	+0·6
	East Coast (Central)	86·5	72·7	79·6	13·8	21·6	+1·7	+1·1	+0·6
	Do. (South)	84·8	73·9	79·4	10·9	20·0	0	+1·5	−1·5
	Madras (South)	86·4	75·1	80·8	11·3	19·9	+0·2	+1·5	−1·3

The following is a statement of the larger and more important changes of the temperature conditions during the month :—

Temperature at the beginning of the month was in slight defect over the greater part of North-West India and in large defect in Baluchistan. It was also in slight defect in part of Burma and at one or two stations on the Madras coast. Elsewhere it was in excess but particularly so over the South Gangetic Plain and Khandesh. The following table giving variation data for the 24 hours ending at 8 A. M. on the 1st explains the conditions relatively to the normal prevailing at the commencement of the month :—

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

These conditions lasted with slight modifications during the 2nd and 3rd but on the 4th a brisk rise set in in the Punjab while on the contrary a fall occurred over the North-Western Provinces. The following gives variation data for the 4th and shows that while there had been a fall over the North-East of the Indian region and the North-Western Provinces there had been a rise in the North-West :—

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

On the 5th there was no important change to record but on the 6th a fresh fall set in over the North of the Punjab and Baluchistan which however proved to be only a temporary effect which had disappeared by the 9th when as is shown by the following comparative statement, the mean

temperature was excessive in all the nine divisions :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·5	+0·2	+0·9
Bengal and Assam	+2·6	—1·3	+0·7
N.-W. Provinces and Oudh . .	+4·2	+3·0	+3·6
Punjab	—0·5	+6·1	+2·8
Sind and Rajputana	+2·7	+6·0	+4·4
Central India and Gujarat . .	+7·3	+4·6	+6·0
Central Provinces and Berar . .	+6·7	+1·6	+4·2
Bombay	+6·6	+1·0	+3·8
Madras	+5·1	+0·1	+2·6

During the whole of these nine days temperature was very steady over the central parts of the country where it was in uninterrupted large excess. This is shown by the following table giving the temperature variation for each alternate day from the 1st to the 9th:—

POLITICAL PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A. M. OF				
	1st November.	3rd November.	5th November.	7th November.	9th November.
	°	°	°	°	°
Berar and Central Provinces .	+5·5	+6·3	+5·2	+5·5	+4·2
Central India and Gujarat. .	+2·8	+2·5	+1·2	+5·1	+6·0

From the 10th to the 13th the mean temperature remained steadily excessive in all provinces—most so in the central parts of the country and least so in the North-East, North-West and South, but on the 14th showers occurred in North-East India and heavy rain in South Madras reducing temperature which on that date was over 3° below the normal average at the stations of Dhubri, Sibsagar, Kindat and Akyab and 2½° below at Madura. The following gives variation data for the 24 hours period preceding 8 A. M. of the 14th and 15th and shows that temperature was in large excess over the central parts of the country, in defect in the North-East and normal in the South :—

POLITICAL AREA OR PROVINCE.	14TH NOVEMBER.			15TH NOVEMBER.		
	VARIATION FROM NORMAL OF			VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°	°	°	°
Burma . . .	+0·5	—0·6	—0·1	—2·6	—1·0	—1·8
Bengal and Assam .	+1·5	—0·9	+0·3	+1·6	+0·3	+1·0
North Western Provinces and Oudh.	+3·9	+3·7	+3·8	+3·3	+2·6	+3·0
Punjab . . .	+1·7	+4·2	+3·0	+2·0	+1·5	+1·8
Sind an d Rajputana .	+3·0	+8·2	+5·6	+4·1	+5·2	+4·7
Central India and Gujarat.	+5·5	+4·7	+5·1	+5·6	+5·0	+5·3
Central Provinces and Berar.	+6·3	+5·1	+5·7	+5·5	+4·8	+5·2
Bombay . . .	+5·2	+2·5	+3·9	+3·3	+2·9	+3·1
Madras . . .	+1·8	+1·8	+1·8	—0·3	+1·2	+0·5

These conditions lasted up to the 20th when rain began to fall in North Bombay owing to the cyclonic storm which was crossing the Kathiawar coast on that date. The following table explains the rapid changes of temperature which occurred in this area about this time :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A. M. OF				
	17th November.	18th November.	19th November.	20th November.	21st November.
	°	°	°	°	°
Bhuj . . .	+3·2	+3·4	+7·5	+8·0	—6·1
Rajkot . . .	+4·8	+6·9	+8·0	+5·8	—5·4
Deesa . . .	+5·8	+8·3	+8·5	+10·9	+3·3

This fall of temperature spread quickly North-westward and affected the whole of the Bombay Presidency, Rajputana, the East of the Punjab and the West of the North-Western Provinces but only affected the Central Provinces to a slight extent. The North-East of the Indian region and the coast districts of Madras were also unaffected and the mean temperature in those two regions remained in slight to moderate defect of the normal generally.

The following gives the variation data for the 24 hours period preceding 8 A.M. of the 22nd when the deficiency of temperature was most marked :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	— 0·5	— 3·9	— 2·2
Bengal and Assam	+ 1·7	— 0·5	+ 0·6
N.-W. Provinces and Oudh . .	— 4·2	+ 6·6	+ 1·2
Punjab	— 3·7	+ 4·4	+ 0·4
Sind and Rajputana	—13·9	+ 2·5	— 5·7
Central India and Gujarat . .	— 9·1	+ 6·7	— 1·2
Central Provinces and Berar . .	+ 5·3	+15·4	+10·4
Bombay	— 0·6	+ 5·5	+ 2·5
Madras	— 1·3	+ 5·1	+ 1·9

On this date the contrasts of temperature were very marked, thus at the stations of Jeypore, Bhuj and Rajkot there was an abnormal deficiency of over 10° and at Jubbulpore and Akola an abnormal excess of over 13° so that over a space of about 250 to 300 miles there existed an abnormal temperature difference of over 23°.

During the next five days the principal feature in the temperature conditions was the gradual disappearance of the area of low temperature over Bombay, Rajputana, Gujarat and Central India as the influence of the recent rainfall gradually diminished and by the 28th this had wholly vanished. During this period the mean temperature remained low over the North-East of the Indian region and on the Madras coast while in the Central Provinces the large excess of temperature which had held so steadily was temporarily interrupted on the 25th by showers of rain which reduced the mean temperature at some stations below the normal average. The following shows the fall and subsequent rise of temperature which occurred over this region :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	22nd November.	23rd November.	24th November.	25th November.	26th November.
	°	°	°	°	°
Akola	+13·6	+8·7	+7·3	—0·6	+6·3
Amraoti	+ 9·6	+1·2	+1·3	—3·0	+4·5
Nagpur	+10·8	+6·0	+2 ·3	—2·0	+4·0

The following gives variation data for the 24 hour's period preceding 8 A.M. of the 28th and shows that the distribution of temperature with respect to the normal had reverted to the condition which had been more or less the prevailing condition of the month :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·3	+ 0·4	+0·4
Bengal and Assam	+1·1	— 1·0	+0·1
N.-W. Provinces and Oudh	+2·9	+ 4·1	+3·5
Punjab	—0·9	+ 9·7	+4·4
Sind and Rajputana	+0·3	+11·2	+5·8
Central India and Gujarat	+2·0	+ 9·5	+5·8
Central Provinces and Berar	+5·1	+10·4	+7·8
Bombay	+0·2	+ 6·3	+3·3
Madras	—1·6	+ 5·4	+1·9

On the last two days of the month a rise of temperature occurred over the North-East of the Indian region and the South of the Peninsula almost altogether obliterating the low temperature areas which had previously existed in those regions, while on the contrary a brisk fall entered North-West India from the westward. Hence at the close of the month though the mean temperature on the 30th exceeded the normal in all the provinces, the abnormal excess was least in the Punjab and at all the Indus Valley stations and at Quetta the mean was nearly 10° below the normal. The following gives variation data for the 24 hour's period preceding 8 A.M. of the 30th :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·8	+ 1·1	+1·5
Bengal and Assam	+3·8	+ 2·0	+2·9
N.-W. Provinces and Oudh	+6·9	+10·9	+8·9
Punjab	—2·2	+ 4·0	+0·9
Sind and Rajputana	—1·1	+ 4·0	+1·5
Central India and Gujarat	+2·6	+10·8	+6·7
Central Provinces and Berar	+6·9	+11·6	+9·3
Bombay	+2·6	+ 6·7	+4·7
Madras	+1·6	+4·0	+2·8

The following 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* :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF WEEK ENDING				
	7th November.	14th November.	21st November.	28th November.	For whole month.
	°	°	°	°	°
Burma	+0·6	+0·7	—1·1	—0·7	—0·2
Bengal and Assam	+1·7	+1·0	+0·6	+1·2	+1·2
N.-W. Provinces and Oudh	+0·8	+3·2	+2·8	+1·6	+2·5
Punjab	+0·8	+3·2	+2·0	+2·3	+2·5
Sind and Rajputana	+2·1	+5·4	+3·1	0	+3·4
Central India and Gujarat	+2·7	+5·7	+5·2	+1·3	+3·9
Central Provinces and Berar	+5·6	+4·8	+4·9	+5·8	+5·7
Bombay	+3·4	+3·9	+4·4	+1·0	+3·2
Madras	+2·0	+2·3	+2·6	+1·9	+2·5

Winds.

Winds were weaker than usual at Port Blair, but the percentage of steadiness was somewhat higher than the normal. The normal direction for the month at this station is N 63° E, while the mean wind direction for the month under review was S 83° E hence as in November 1895 there was a feeble southerly instead of northerly component in the wind direction.

The wind was steadier than usual both at Rangoon and Akyab, but was unsteady at Diamond Island. Both at Rangoon and Diamond Island the wind was more northerly and less easterly than usual, while at Akyab the mean wind direction was N 9° E, instead of N 6° W. The force was low at Rangoon but was above the normal at the other two stations in Burma.

The wind was more easterly than usual in Orissa as is shown by the following table :—

Station.	Wind direction.		
	Mean actual, November 1896.	Mean normal, November.	Easterly deflection.
False Point	N 64° E	N 22° E	+42°
Cuttack	N 27° E	N 1° W	+28°

At these two stations the steadiness and the force were both slightly less than usual.

In Bengal there was perhaps a little more northering in the wind than usual, but the variation was not very distinct or important. The following gives instances :—

Station.	Wind direction.		
	Mean actual, November 1896.	Mean normal, November.	Northerly deflection.
Chittagong	N 15° W	N 20° W	+5°
Narayangunj	N 3° W	N 17° W	+14°
Burdwan	N 6° W	N 7° W	+1°

Except at Chittagong the wind in this province was slightly less steady than usual generally, and much less steady at Berhampore while the velocity was generally lower than the normal. The following gives data :—

Station.	Velocity in miles per diem.			Steadiness.		
	Mean actual, November 1896.	Mean normal, November.	Percentage variation from normal.	Actual percentage, November 1896.	Normal percentage, November.	Variation from normal.
Chittagong	46	73	−37	55	53	+ 2
Calcutta	59	65	− 9	50	58	− 8
Saugor Island	182	154	+18	33	58	−25
Burdwan	30	44	−32	40	69	−29
Berhampore	10	40	−75	5	54	−49

The winds were less steady and slightly lighter than usual in Chota Nagpur and the Gangetic Plain but the mean directions in this area were nearly normal.

In Upper India the wind directions were exceedingly irregular and the variations from the normal steadiness and velocity were in many cases large. Thus at Roorkee the percentage of steadiness was only 7 instead of the normal 28 and the mean daily velocity 6 miles instead of 27 miles.

In Rajputana, Central India and Gujarat the wind was more easterly than usual, while unlike the winds in the Gangetic Plain, the wind over this area was more steady than the average. The following gives data :—

Station.	Wind direction.			Steadiness.		
	Mean actual, November 1896.	Mean normal, November.	Easterly deflection.	Actual percentage, November 1896.	Normal percentage, November.	Variation from normal.
Jeypore	N36° E	N12°W	+48°	27	39	−12
Ajmere	N81° E	N32° E	+49°	38	10	+28
Deesa	N66° E	N33° E	+33°	44	31	+13
Nowgong	N28° E	N10°W	+38°	32	32	0
Agra	N42°W	N81°W	+39°	40	36	+ 4

In the Deccan the general easterly winds contained a feeble southerly instead of the usual northerly component on the mean of the month. The steadiness in this area was generally less than usual—more particularly at the stations of Buldana and Khandwa, but the mean diurnal velocity was generally greater than usual—more particularly at Poona. These unusual features in the wind of

this area are shown by the following representative data :—

STATION.	WIND DIRECTION.		VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, November 1896.	Mean normal, November.	Mean actual, November 1896.	Mean normal, November.	Percentage variation from normal.	Mean actual percentage, November 1896.	Mean normal percentage, November.	Variation from normal.
Sholapur . .	S 76° E	N 69° E	224	191	+17	76	63	+13
Poona . . .	S 72° E	N 83° E	206	138	+49	58	45	+13
Buldana . .	S 62° E	N 69° E	120	113	+ 6	18	59	—41
Khandwa . .	S 50° E	N 63° E	87	62	+40	15	55	—40

In the Central Provinces this abnormal southerly component in the wind direction was much less general than in the Deccan, but at Khandwa (as shown above) and at Saugor it was well shown. Along the west coast the only important variation in the wind conditions was the increased westing in the wind direction at most of the stations.

At Bellary the wind exhibited the same characteristics as at the stations in the above table, *viz.*, a feeble southerly instead of northerly component (in the generally easterly wind) increased steadiness and increased velocity. The following gives data for this station :—

STATION.	WIND DIRECTION.		VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, November 1896.	Mean normal, November.	Mean actual, November 1896.	Mean normal, November.	Variation from normal.	Mean actual percentage, November 1896.	Mean normal percentage, November.	Variation from normal.
Bellary . .	S 86° E	N 80° E	84	78	+6	77	56	+21

In South India generally the mean wind directions were very nearly normal, but the steadiness was greater than usual. In Mysore the wind was stronger than the normal, while on the contrary along the Madras coast the velocity was relatively low. The following gives examples :—

STATION.	WIND DIRECTION.		VELOCITY IN MILES PER DIEM.			STEADINESS.		
	Mean actual, November 1896.	Mean normal, November.	Mean actual, November 1896.	Mean normal, November.	Variation from normal.	Mean actual percentage, November 1896.	Mean normal percentage, November.	Variation from normal.
Bangalore . .	N 65° E	N 60° E	185	90	+95	80	63	+17
Trichinopoly .	N 35° E	N 31° E	77	100	—23	55	53	+ 2
Madras . .	N 25° E	N 24° E	125	159	—34	77	59	+18

The winds were generally steadier than usual at the Hill stations. The mean percentage of steadiness at Leh was 78 instead of the normal 24, at Chakrata 52 instead of 28 and at Darjeeling 18 instead of 8. The winds varied in direction very irregularly from the normal, while the mean velocity was generally greater than the normal.

The principal variations from the normal for the month were hence increased northing in the winds over Burma and Bengal, and increased southing over the central parts of India and of the Peninsula. In Upper India the wind directions were irregular, but while there was diminished steadiness and velocity on the plains the opposite conditions were exhibited by the returns from the Hill stations.

Humidity and Cloud.

In October 1896 one of the most noteworthy features of the meteorology of the month was the excessive dryness of the air over Northern and Central India, due to the abnormally early withdrawal of the monsoon. This condition was not maintained during the month under review, when owing to the occurrence of rain the humidity conditions exhibited little departure from the normal, and the amount of aqueous vapour present in the air was generally excessive except over the north-east of the Indian region.

In North-East India including Burma, Assam, Bengal and the Gangetic Plain, the weather was to a great extent unaffected by the disturbances which brought rain to the southern, western and central parts of India and the relative humidity over this area was slightly but very generally below the normal average. In the case of the amount of aqueous vapour present in the air the deficiency was less general than in the case of humidity, the stations of False Point and Hazaribagh exhibiting a slight and the stations of Diamond Island, Saugor Island, Patna and

Lucknow a very slight excess. The following gives data for 7 stations within this area of relative dryness where the variations from the normal were greatest:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, November 1896.	Normal, November.	Variation from normal.	Actual, November 1896.	Normal, November.	Variation from normal.
	"	"	"	%	%	
Port Blair . . .	·911	·947	—·036	79	84	—5
Silchar . . .	·556	·619	—·063	69	77	—8
Sibsagar . . .	·546	·588	—·042	84	84	0
Dhubri . . .	·566	·612	—·046	77	77	0
Chittagong . . .	·632	·689	—·057	74	79	—5
Narayanganj . .	·582	·625	—·043	68	72	—4
Allahabad . . .	·374	·407	—·033	49	63	—14

The mean temperature over this area varied somewhat irregularly from the normal but was generally in excess except over Assam and part of Burma.

The following gives data for stations within this generally dry area at which the amount of aqueous vapour in the air exceeded the normal:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, November 1896.	Normal, November.	Variation from normal.	Actual, November 1896.	Normal, November.	Variation from normal.
	"	"	"	%	%	
Diamond Island . .	·810	·806	+·004	77	80	—3
Saugor Island . .	·648	·638	+·010	71	75	—4
False Point . . .	·660	·626	+·034	72	74	—2
Hazaribagh . . .	·397	·353	+·044	55	54	+1
Patna	·466	·459	+·007	59	62	—3
Lucknow . . .	·370	·355	+·015	55	54	+1

With a few local exceptions the amount of aqueous vapour in the air exceeded the normal average in all other parts of the Indian plains. In the Upper Sub-Himalayas the excess was slight but general. The temperature in this area was a trifle above the normal and the humidity was about normal or a little above.

In the Indus Valley, Rajputana, Central India and Gujarat the air contained somewhat more vapour than usual with perhaps the doubtful exception of Mooltan, the abnormal excess having been greatest in Eastern Rajputana and Central India. The mean temperature averaged about 3° above the normal and the relative humidity was in trifling excess. The following gives data for the five stations exhibiting the greatest excess:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, November 1896.	Normal, November.	Variation from nomal.	Actual, November. 1896.	Normal, November.	Variation from normal.
	"	"	"	%	%	
Jeypore . . .	·352	·287	+·065	47	43	+4
Ajmere . . .	·376	·308	+·068	54	46	+8
Deesa	·351	·279	+·072	43	34	+9
Nowgong . . .	·400	·328	+·072	55	52	+3
Agra	·372	·312	+·060	52	44	+8

In the Deccan the mean vapour pressure of the month was generally in excess but by smaller amounts than in the preceding district while the mean temperature was in large excess, hence the relative humidity exhibited a slight but fairly general deficiency. At some of the stations in the central parts of the country, as for example, Jubbulpore, Nagpur and Sutna, the variations were as large as in Rajputana as is shown by the following data:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, November 1896.	Normal, November.	Variation from normal.	Actual, November 1896.	Normal, November.	Variation from normal.
	"	"	"	%	%	
Jubbulpore . . .	·444	·368	+·076	58	56	+2
Sutna	·373	·298	+·075	48	46	+2
Nagpur . . .	·535	·415	+·120	60	53	+7

Along the West Coast there was a trifling excess of vapour in the air which was accompanied with higher temperature than usual and a lower humidity.

In South India the variations were irregular. At Madras and at Salem there was a moderate excess of vapour accompanied with a normal temperature at the former and a higher temperature than usual at the latter station, while at Bellary, on the contrary, the vapour tension and the relative humidity were both below the average. In other parts of this area the variations were small.

The hill stations in Central and Southern India had a higher vapour tension and higher humidity than the normal and the same was the case at Leh but at most of the stations in the North-Western Himalayas the amount of vapour present in the air was slightly less than usual.

The variations in the amount of cloud were similar in general character to those of the aqueous vapour conditions. There was thus a slight deficiency in the north-east—greatest in Assam—and a more general cloudiness than usual elsewhere.

There was less cloud than usual in Burma and Assam, as is shown by the following :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1896.	Normal, November.	Variation from normal.
Rangoon	4·2	4·6	—0·4
Akyab	1·8	3·3	—1·5
Silchar	2·5	3·4	—0·9
Sibsagar	1·5	4·5	—3·0

There was slightly less cloud than usual in Bengal and part of Orissa, but with the above exceptions the sky was more cloudy than the normal in all other parts of the Indian area. The abnormal excess was considerable in Sind and Rajputana as is shown by the following :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1896.	Normal, November.	Variation from normal.
Jacobabad	3·2	1·1	+2·1
Jeypore	3·6	1·0	+2·6
Ajmere	3·4	0·9	+2·5

The excess was moderate in the Deccan and South India and within this area was greatest at the following stations :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1896.	Normal, November.	Variation from normal.
Akola	3·3	1·5	+1·8
Nagpur	4·2	2·5	+1·7
Saugor	3·3	1·1	+2·2
Salem	6·6	5·0	+1·6
Bellary	6·8	4·7	+2·1

The amount of cloud was greater than usual at all the hill stations though the excess was very slight in the case of Wellington. The following gives data showing the excess in different parts of India at the level of the hills :—

STATION.	MEAN CLOUD AMOUNT.		
	Actual, November 1896.	Normal, November.	Variation from normal.
Chamba	4·7	2·2	+2·5
Simla	4·1	1·9	+2·2
Chakrata	3·1	1·6	+1·5
Darjeeling	5·3	4·2	+1·1
Mount Abu	3·1	1·3	+1·8
Pachmarhi	3·5	2·0	+1·5
Wellington	7·0	6·8	+0·2

The chief features in the cloud distribution relatively to the normal during the month were :—

(1) Less cloud than usual in the North-East, particularly so in Assam.

(2) Increased cloud in all other parts of India both over the hills and plains, but particularly so in Rajputana, Central India, Gujarat and the Indus Valley.

Rainfall.

Rainfall in November is generally due 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-easterly 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 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 barely three inches.

The light and scanty rainfall which characterised October 1896 continued to be reported during the early part of the month under review, so that from the 1st to the 10th the country was rainless except for some showers—mostly light and scattered—which fell over parts of the Punjab, Lower Burma and of the south of the Peninsula. About the 10th the rainfall became heavier over Southern India, the weather gradually became more unsettled over the Bay, and about the middle of the month a depression was developed there which subsequently carried rain to the greater part of the country, so that the month of November 1896, instead of being as dry as the same month last year, exhibited at its close a fair rainfall generally and an excessive fall in the extreme south.

The chief features of the rainfall distribution of the month of November 1896 were as follows :—

(1) The rainfall of the month was largely in defect in Burma and Orissa and slightly in defect over the greater part of Bengal.

(2) It was largely in defect in North Madras—more particularly at the inland stations.

(3) It was normal or in slight defect over the greater part of the Punjab except the south-east.

(4) It was in slight excess over West Bengal, the Gangetic Plain and the south-east of the Punjab.

(5) It was normal or in slight excess over the west coast districts except the Konkan.

(6) It was in considerable to large excess over the central parts of the country, Gujarat, Kathiawar and Rajputana.

(7) It was in very large excess in the central and southern divisions of Madras.

Rain was received in all the rainfall divisions during the month though in parts of Lower Bengal and of the Punjab the amount was so small as to be altogether unimportant. The chief periods of rainfall in the other parts of India were as follows :—

1st.—From the 1st to the 10th when scattered showers were received in parts of the Punjab, Lower Burma and the south of the Peninsula.

2nd.—The 10th to the 28th when daily more or less heavy rain was received over the central and southern divisions of Madras.

3rd.—The 13th and 14th when showers occurred in Upper Burma, Assam and part of Bengal.

4th.—The 19th to the 24th when rain spread from the west coast districts across the central parts of the country into the North-Western Provinces and West Bengal.

5th.—The 27th to the 29th when rain fell over the west and north of the Punjab and the North-Western Himalayas.

The following table gives the mean actual, mean normal, and variation rainfall data for the 57 meteorological divisions or districts into which India is divided in the same manner as in the previous month, and has been prepared in the same manner as hitherto :—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, November 1896.	Average normal, November.	Average actual, November 1896.	Average normal, November.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	1·64	0·62	+1·02
	Lower Burma (Deltaic)*	?	?	1·74	2·82	−1·08
	Central (do.)*	?	?	0·38	1·56	−1·18
	Upper (do.)*	?	?	0·27	?	?
	Arakan*	?	?	0·29	1·57	−1·28

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

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, November 1896.	Average normal, November.	Average actual, November 1896.	Average normal, November.	Variation from normal.
				Inches.	Inches.	Inches.
Bengal and Assam	Eastern Bengal	0·2	1·6	0·05	1·33	—1·28
	Assam (Surma)*	?	?	0·64	0·66	—0·02
	Do. (Hill Tracts)*	?	?	0·09	0·72	—0·63
	Do. (Brahmaputra)*	?	?	0·16	0·50	—0·34
	Deltaic Bengal	0·1	1·1	0·03	0·91	—0·88
	Central do.	0·1	0·8	0·03	0·57	—0·54
	North do.	0·5	0·3	0·19	0·15	+0·04
	Bengal Hills	0·7	0·8	0·27	0·38	—0·11
	Orissa	0·2	2·0	0·14	2·09	—1·95
	Chota Nagpur	0·9	0·8	0·54	0·47	+0·07
	Bihar (South)	0·8	0·4	0·53	0·25	+0·28
	Do. (North)	0·4	0·3	0·16	0·15	+0·01
North-Western Provinces and Oudh.	North-Western Provinces (East)	0·7	0·2	0·41	0·11	+0·30
	Oudh (South)	1·1	0·1	0·30	0·02	+0·28
	Do. (North)	1·3	0·1	0·45	0·04	+0·41
	North-Western Provinces (Central)	0·9	0·1	0·44	0·04	+0·40
	Do. do. (West)	1·2	0	0·51	0·01	+0·50
	Do. do. (Submontane East)	0·4	0·2	0·16	0·07	+0·09
	Do. do. (do. West)	1·2	0·3	0·41	0·11	+0·30
	Do. do. (Hills)	2·1	0·6	0·68	0·22	+0·46
Punjab	Punjab (South-East)	0·8	0·1	0·49	0·03	+0·46
	Do. (South)	0·2	0·1	0·09	0·06	+0·03
	Do. (Central)	0·5	0·3	0·11	0·36	—0·25
	Do. (Submontane)	0·4	0·3	0·11	0·17	—0·06
	Do. (Hill Districts)	2·1	0·9	0·55	0·72	—0·17
	Do. (North)	2·0	0·7	0·95	0·69	+0·26
	Do. (West)	0·2	0·2	0·05	0·14	—0·09
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	6·4	5·6	4·07	4·01	+0·06
	Travancore	10·5	?	95·9	?	?
	Madras (South-Central)	7·7	5·9	4·67	3·76	+0·91
	Coorg	6·8	?	5·11	?	?
	Mysore*	?	?	2·55	1·90	+0·65
	Konkan	1·4	2·2	0·59	1·11	—0·52
	Bombay Deccan	2·0	2·4	1·49	1·44	+0·05
	Khandesh	0·9	1·4	0·47	0·92	—0·45
Central Provinces and Berar.	Berar*	?	?	0·76	0·76	0
	Central Provinces (West)*	?	?	0·74	0·39	+0·35
	Do. (Central)*	?	?	0·79	0·31	+0·48
	Do. (East)*	?	?	1·39	0·38	+1·01
Bombay (North)	Gujarat	1·7	0·4	0·72	0·18	+0·54
	Kathiawar	1·5	0·1	1·44	0·31	+1·13
	Sind	0	?	0·10	0·07	+0·03
	Baluchistan Hills	1·8	?	0·84	0·18	+0·66
Rajputana and Central India.	Central India (East)	0·9	?	0·32	0·33	—0·01
	Rajputana (East) and Central India (West)	1·8	?	0·84	0·08	+0·76
	Rajputana (West)	1·1	?	0·79	0·02	+0·77
Madras	East Coast (North)	1·8	3·5	1·32	3·26	—1·94
	Do. (do.) (a)	0·5	4·6	0·19	2·80	—2·61
	Hyderabad (South)*	?	?	2·10	0·34	+1·76
	Madras (Central)	5·0	3·3	2·95	2·28	+0·67
	East Coast (Central)	11·1	7·6	16·30	9·22	+7·08
	Do. (South)	13·4	8·8	14·54	8·66	+5·88
	Madras (South)	12·5	8·3	12·10	6·21	+5·89

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

Occasional showers were received in Lower Burma from the 1st to the 10th, but the falls during this period were generally light and local. On the 13th rain commenced to fall in Upper Burma, the fall continued and spread into Central Burma on the 14th, but ceased on the 15th. Lashio received a fall of 1·13 inches on the 13th,

but the rain was most extensive on the following day. The total rainfall for the month was excessive in Tenasserim where it was nearly three times the normal, but was much lighter than usual elsewhere and averaged only about ¼ of an inch in Upper Burma and Arakan.

Assam obtained light showers during the 1st and 2nd, and the 11th, 12th and 13th, but the amounts were small and the rainfall less than the small normal average. The following gives a comparative statement of the rainfall of the three divisions compiled from the *Assam Gazette* :—

Division.	Number of rainy days.		Rainfall.		
	Average actual, November 1896.	Average normal, November.	Average actual, November 1896.	Average normal, November.	Percentage variation from normal.
			Inch.	Inch.	
Assam (Surma)	?	?	0·64	0·66	—3
„ (Hill Tracts)	?	?	0·09	0·72	—89
„ (Brahmaputra)	?	?	0·16	0·50	—68

The south-west divisions of Bengal received light showers generally less than $\frac{1}{10}$ of an inch on the 23rd and 24th; North Bengal received showers on two occasions, *viz.*, the 12th and 13th and the 23rd and the 24th. During the earlier period the following falls exceeding ½ an inch were recorded :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Cooch Behar	Dinhatta	13th	1·65
Bogra	Panchbibi	„	0·63
Darjeeling	Kurseong	„	0·60

East Bengal had a few scattered showers on the 13th while practically the whole of Bihar and Chota Nagpur had general moderate to heavy rain on the 23rd and 24th, the following being the principal amounts exceeding 1 inch :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
Lohardaga	Palkot	23rd	2·27
„	Chainpur	„	1·50
„	Tamar	„	1·10
Shahabad	Dehri	„	1·38
„	Bhabhua	„	1·30
„	Sasaram	„	1·15
„	Mohanea	„	1·02
Gaya	Aurangabad	„	1·32
„	Daudnagar	„	1·30
Darbhanga	Bahera	„	1·31
Palamow	Palamow	„	1·15
„	Garhwa	„	1·14
Orissa Tributary Mahals	Angul	24th	3·00
„ „	Talcher	„	1·58
„ „	Bispara	„	1·32
Singhbhum	Gailkura	„	1·61
„	Chaibassa	„	1·04
Cuttack	Pal Lahara	„	1·50

Orissa also received showers on the 23rd and 24th.

With the exception of North Bengal, which received a little more than the small normal amount and of Bihar and Chota Nagpur which recorded a slight excess the rainfall of the province was in more or less defect as is shown by the following statement :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, November 1896.	Average normal, November.	Variation from normal.	Average actual, November 1896.	Average normal, November.	Variation from normal.
				Inch.	Inches.	Inches.
Eastern Bengal	0·2	1·6	—1·4	0·05	1·33	—1·28
Daltaic „	0·1	1·1	—1·0	0·03	0·91	—0·88
Central „	0·1	0·8	—0·7	0·03	0·57	—0·54
North „	0·5	0·3	+0·2	0·19	0·15	+0·04
Bengal Hills	0·7	0·8	—0·1	0·27	0·38	—0·11
Orissa	0·2	2·0	—1·8	0·14	2·09	—1·95
Chota Nagpur	0·9	0·8	+0·1	0·54	0·47	+0·07
Bihar (South)	0·8	0·4	+0·4	0·53	0·25	+0·28
„ (North)	0·4	0·3	+0·1	0·16	0·15	+0·01

There was no rain in the North-Western Provinces until the 21st. On the 22nd a remarkably general fall set in and lasted during the two following days. The fall was heavy and most general on the 22nd and the rainfall of the month was in excess of the normal in all the divisions as is shown by the following statement :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, November 1896.	Average normal, November.	Variation from normal.	Average actual, November 1896.	Average normal November.	Variation from normal.
				Inch.	Inch.	Inch.
North-Western Provinces (East).	0·7	0·2	+0·5	0·41	0·11	+0·30
Oudh (South) . .	1·1	0·1	+1·0	0·30	0·02	+0·28
„ (North) . .	1·3	0·1	+1·2	0·45	0·04	+0·41
North-Western Provinces (Central) . .	0·9	0·1	+0·8	0·44	0·04	+0·40
North-Western Provinces (West).	1·2	0	+1·2	0·51	0·01	+0·50
North-Western Provinces (Submontane East).	0·4	0·2	+0·2	0·16	0·07	+0·09
North-Western Provinces (Submontane West).	1·2	0·3	+0·9	0·41	0·11	+0·30
North-Western Provinces (Hills).	2·1	0·6	+1·5	0·68	0·22	+0·46

The rainfall exceeded one inch in 24 hours at the following stations :—

District.	Station.	Date.	Rainfall during 24 hours preceding 8 A.M., of date.
			Inches.
Jhansi	Pachwara . . .	21st .	1·47
Hamirpur. . . .	Rath	22nd .	1·76
Aligarh	Iglas	„ .	1·38
Muttra	Mat	„ .	1·35
Mirzapur	Robertsganj . . .	23rd .	1·80
„	Dudhi	„ .	1·26
„	Chunar	„ .	1·11
„	Chakra	„ .	1·07

The rainfall in the Punjab occurred on the 6th and between the 22nd and 24th and again between the 28th and 30th. The second fall was mainly confined to the east and south-east of the Province, and the last to the north and west, all the three falls affected the Hill Districts. The variations from the normal were generally small and in defect of the average except in the south-east, south and north divisions which exhibited some excess. The following gives comparative data for the seven divisions for the month :—

Division.	Rainy days.			Rainfall.		
	Actual, November 1896.	Normal, November.	Variation from normal.	Actual, November 1896.	Normal, November.	Variation from normal.
				Inch.	Inch.	Inch.
Punjab (South-East) .	0·8	0·1	+0·7	0·49	0·03	+0·46
„ (South . .	0·2	0·1	+0·1	0·09	0·06	+0·03
„ (Central) . .	0·5	0·3	+0·2	0·11	0·36	—0·25
„ (Submontane) .	0·4	0·3	+0·1	0·11	0·17	—0·06
„ (Hill Districts) .	2·1	0·9	+1·2	0·55	0·72	—0·17
„ (North) . .	2·0	0·7	+1·3	0·95	0·69	+0·26
„ (West) . .	0·2	0·2	0	0·05	0·14	—0·09

In Baluchistan the principal fall of rain was between the 25th and the 28th, and in Rajputana and Central India between the 20th and the 22nd. In the two latter regions the rainfall of the month was heavy, as is shown by the data given below :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, November 1896.	Average normal, November.	Variation from normal.	Average actual, November 1896.	Average normal, November.	Variation from normal.
				Inch.	Inch.	Inch.
Central India (East) .	0·9	?	?	0·32	0·33	—0·01
Rajputana (East) and Central India (West).	1·8	?	?	0·84	0·08	+0·76
Rajputana (West) .	1·1	?	?	0·79	0·02	+0·77

In the Central Provinces there was no rain until the 21st when a fall lasting for four days set in and the general rainfall of the month exceeded the normal as is shown by the following comparative data :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, November 1896.	Average normal, November.	Variation from normal.	Average actual, November 1896.	Average normal, November.	Variation from normal.
				Inches.	Inch.	Inches.
Central Provinces (West)	?	?	?	0·74	0·39	+0·35
„ (Central)	?	?	?	0·79	0·31	+0·48
„ (East)	?	?	?	1·39	0·38	+1·01

During this disturbed period the rain was most extensive and heavy on the 23rd, as is shown by the following return :—

STATION.	Total fall for 4 days, 21st to 24th.	Rainfall in 24 hours preceding 8 A.M. of date.	Date.
	Inches.	Inches.	
Multai (Betul)	1·87	1·15	24th
Hinganghat (Wardha)	1·87	1·87	23rd
Katol (Nagpur)	2·03	1·12	22nd
Chanda	2·68	2·20	23rd
Mul (Chanda)	2·76	2·18	24th
Sakoli (Bhandara)	2·55	1·95	23rd
Lanji (Balaghat)	1·80	1·70	,,
Simga (Raipur)	2·63	1·39	24th
Bilaspur	1·79	1·13	23rd

Rainfall in Berar during the period from the 21st to the 25th, but the falls were only light to moderate in amount, the heaviest fall being 2·40 inches at Pander Kowra in the Wun district, which was reported on the 23rd.

No rain was received during the month in Upper Sind and none in any part of the Bombay Presidency between the 1st and the 17th. On the 18th showers commenced at a few stations, but the rainfall extended quickly and was reported from nearly all districts during the following few days. A second but much slighter period of rainfall occurred between the 27th and 29th. The total fall for the month was below the normal in the Konkan and Khandesh, about normal in the Deccan, and above the normal in Gujarat, and Kathiawar and Lower Sind. The following gives data for the six divisions of the Presidency :—

DIVISION.	NUMBER OF RAINY DAYS.			RAINFALL.		
	Average actual, November 1896.	Average normal November.	Variation from normal.	Average actual, November 1896.	Average normal November.	Variation from normal.
				Inches.	Inches.	Inches.
Konkan	1·4	2·2	—0·8	0·59	1·11	—0·52
Bombay Deccan	2·0	2·4	—0·4	1·49	1·44	+0·05
Khandesh	0·9	1·4	—0·5	0·47	0·92	—0·45
Gujarat	1·7	0·4	+1·3	0·72	0·18	+0·54
Kathiawar	1·5	0·1	+1·4	1·44	0·31	+1·13
Sind	0	?	?	0·10	0·07	+0·03
Baluchistan (Hills)	1·8	?	?	0·84	0·18	+0·66

The rainfall of the month was heaviest at the following stations and the heaviest fall in 24 hours is given in the same statement :—

DISTRICT.	Station.	Total for month.	Rainfall in 24 hours preceding 8 A.M. of date.	Date.
		Inches.	Inches.	
DHARWAR	Ranebennur	4·65	2·10	22nd
,,	Gadag	3·76	2·88	,,
POONA	Indapur	3·08	3·00	21st
AHMEDNAGAR	Karjat	4·30	4·30	20th
KATHIAWAR	Navanagar	3·58	3·48	21st
,,	Porbander	4·72	4·30	,,
,,	Veraval	4·28	3·32	20th
KOLHAPUR	Mudhol	3·14	2·70	23rd
SATARA	Dahevadi	3·14	2·70	20th
SHOLAPUR	Sholapur	6·76	5·03	,,

There was only one period of rainfall during November in the Nizam's territory, extending from the 22nd to the 26th when light to moderate showers occurred in several districts. The heaviest local fall of 5·45 inches during the month, was reported from Bidar on the 23rd. The rainfall of the month was above the normal in both the northern and southern divisions as is shown by the following statement :—

DIVISION.	RAINY DAYS.		RAINFALL.		
	Average actual, November 1896.	Average normal November.	Average actual, November 1896.	Average normal, November.	Variation from normal.
			Inches.	Inches.	
Hyderabad South	3·4	?	1·98	1·12	+0·86
,, North	1·4	?	1·63	1·27	+0·36

In Ganjam there was one fall of rain on the 24th, which was slight, and received only at a few stations ; in Vizagapatam there was also only one rainfall period, but the rainfall in this case lasted during the 24th and 25th and was altogether more extensive and heavier than in the more northern division. In the Godaveri and Kistna districts the rainfall commenced on the 21st and lasted till the 25th, and was general and heavy from the 22nd to the 25th. In the Nellore district there were showers on the 1st, but general rain did not commence until the 17th, after which date the fall continued generally and fairly heavily up to the close of the month. In all the

more southern districts, *viz.*, Chingleput, North and South Arcot, Tanjore, Trichinopoly, Madura and Tinnevelly, the main characteristics of the rainfall distribution were the same. There were a few scattered showers during the first few days of the month, then a few days of fairly fine weather and then about the 10th general moderate to heavy rain set in and continued to the end of the month. In Travancore the distribution of the rainfall was similar to that in South Madras, but the fall ceased earlier as after the 23rd only scattered showers were received. In Malabar and South Canara there were two rainfall periods, one between the 18th and 24th and the second between the 28th and 30th. In the central divisions there were a few showers during the first three days, then fine weather till the 15th to 18th after which steady rain set in and continued up to the 30th. In the dry area comprising Anantapur, Bellary and Kurnool there was no rain till the 19th and thereafter the fall was light and scattered.

The wettest region was the Chingleput and Madras districts where the average rainfall for the whole district was 25·33 inches (Chingleput) and 32·75 inches (Madras), the driest Ganjam with an average of only 0·3 inch for the month.

There were only two cases where the fall within 24 hours exceeded 10 inches *viz.*, Chandragiri (North Arcot) 10·01 inches on the 28th and Rajakamangalam in Travancore which received 10·11 inches on the 14th, but falls of between 5 and 8 inches in the 24 hours were very numerous.

The following gives data for each of the 22 collectorates of the Presidency and shows that the rainfall for the month was in defect in the Ganjam, Vizagapatam, Godaveri, Malabar and Anantapur districts, and in excess of the normal in all the remaining districts: —

District.	Number of rainy days.		Rainfall.		
	Actual, November 1896.	Normal, November.	Actual, November 1896.	Normal, November.	Variation *from* normal.
			Inches.	Inches.	Inches.
Ganjam	0·3	3·3	0·13	3·33	— 3·20
Vizagapatam	0·6	4·2	0·36	3·27	— 2·91
Godaveri	3·0	3·1	1·95	3·22	— 1·27
Kistna	4·2	3·3	3·75	3·15	+ 0·60
Nellore	11·1	7·6	16·30	9·22	+ 7·08
Chingleput	17·2	9·9	25·33	11·46	+13·87
Madras	19·0	11·0	32·75	13·75	+19·00
North Arcot	11·2	7·3	10·23	7·64	+ 2·59
South Arcot	13·9	9·2	14·22	8·72	+ 5·50
Tanjore	14·2	10·2	15·47	10·42	+ 5·05
Trichinopoly	11·8	7·1	9·55	4·53	+ 5·02
Madura	13·0	7·7	11·55	5·53	+ 6·02
Tinnevelly	11·6	9·1	12·89	7·11	+ 5·78
Malabar	6·7	6·6	4·40	4·66	— 0·26
South Canara	5·9	4·3	3·47	3·07	+ 0·40
Salem	7·7	5·9	4·49	3·80	+ 0·69
Coimbatore	7·7	5·9	4·92	3·64	+ 1·28
Nilgiris	10·3	8·6	8·06	5·62	+ 2·44
Cuddapah	8·1	4·8	5·10	3·85	+ 1·25
Anantapur	3·1	4·7	2·47	2·98	— 0·51
Bellary	2·2	2·3	1·64	1·30	+ 0·34
Kurnool	4·3	2·9	2·10	1·50	+ 0·60

Table

Abstract of Observations taken at 8 A.M. at 209

Number of Districts.	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.		...	...	+·008	...	...	...	...	...	...	...	87·4	−0·1	72·6	−0·3	80·0	−0·2	14·8	...	...	...	...	24·0
1	Tenasserim and Bay Islands.	Port Blair	61	29·882	?	29·874	29·949	30th	29·814	12th	·135	82·1	88·7	?	78·9	?	83·8	?	9·8	90·3	9th	75·9	2nd	14·4
		Mergui	96	29·873	?	29·901	29·939	29th	29·814	14th	·125	80·1	89·2	?	71·7	?	80·4	?	17·5	91·4	12th	68·7	20th	22·7
		Tavoy	26	29·972	?	29·929	30·027	29th	29·916	12th	·111	76·9	90·0	?	69·6	?	79·8	?	20·4	100·2	14th	63·7	27th	36·5
		Moulmein	94	29·897	+·006	29·929	29·971	29th	29·848	2 days	·123	76·2	88·1	−0·2	72·5	+1·4	80·3	+0·6	15·6	91·5	14th	68·3	23rd	23·2
2	Lower Burma	Rangoon	41	29·941	+·001	29·919	30·018	29th	29·884	12th	·134	75·9	86·9	−0·4	72·1	−0·8	79·5	−0·6	14·8	90·2	1st	66·8	22nd	23·4
		Bassein	27	29·960	+·010	29·922	30·029	29th	29·897	12th	·132	75·8	86·2	+0·3	71·6	−0·2	78·9	+0·1	14·6	89·7	7th	65·9	21st	23·8
		Diamond Island	41	29·934	+·007	29·910	30·019	29th	29·872	12th	·147	81·1	85·6	−0·1	77·3	?	81·5	?	8·3	88·6	3 days	74·9	22nd	12·7
5	Arakan	Akyab	20	29·974	+·012	29·937	30·051	29th	29·907	12th	·144	72·5	85·4	−0·1	68·2	−3·7	76·8	−1·9	17·2	89·2	3rd	61·2	27th	28·0
3	Central Burma	Toungoo	183	29·806	+·009	29·936	29·873	29th	29·738	13th	·135	73·6	86·8	−0·2	71·9?	+1·6	79·4	+0·7	14·9	92·7	1st	62·2	23rd	30·5
	II.—Burma Inland		...	...	?	...	...	...	...	...	...	...	84·7	−0·4	60·3	−2·3	72·5	−1·5	24·4	...	...	...	...	35·8
3	Central Burma	Thayetmyo	134	29·856	?	29·935	29·932	29th	29·788	13th	·144	74·3	90·3	?	66·0	−2·0	78·2	?	24·3	94·1	2 days	56·2	20th	37·9
4	Upper Burma	Minbu	?	29·847	?	?	29·924	29th	29·776	12th	·148	74·5	90·4	?	68·3	?	79·4	?	22·1	96·1	1st	59·0	20th	37·1
		Yamethin	645	29·338	?	29·947	29·400	29th	29·245	12th	·155	72·8	92·0	?	62·8‡	?	76·8‡	?	29·2	98·0	1st	55·0	21st	43·0
		Taunggyi	?			Not recorded.						64·7	74·1	?	51·7	?	62·9	?	22·4	79·2	9th	50·0	13 days	29·2
		Mandalay	249	29·747	?	29·952	29·807	17th	29·667	12th	·140	71·0	88·8	?	64·0	?	76·4	?	24·8	95·6	1st	57·7	21st	37·9
		Kindat	?	29·670	?	?	29·732	17th	29·580	23rd	·152	64·4	81·6	−0·4	62·1	−2·5	71·9	−1·5	19·5	86·3	1st	58·5	3 days	27·8
		Lashio	?	27·224	?	?	27·293	19th	27·150	18th	·143	61·2	78·6	?	52·7	?	65·7	?	25·9	83·6	2 days	48·0	27th	35·6
		Bhamo	?	29·662	?	?	29·722	19th	29·576	12th	·146	63·5	82·1	?	54·9	?	68·5	?	27·2	86·0	3 days	47·9	21st	38·1
	III.—Assam		...	...	+·007	...	...	...	...	...	...	...	81·3	+0·2	59·1	−2·4	70·2	−1·1	22·2	...	...	...	...	34·9
7	Surma	Silchar	104	29·929	+·023?	29·989	29·996	29th	29·848	22nd	·148	68·0	86·3	+1·6	61·7	−2·1	74·0	−0·3	24·6	91·3	11th	54·4	29th	36·9
		Salonah	?	29·797	?	?	29·878	19th	29·696	23rd	·182	64·2	81·6	?	56·3	?	68·9	?	25·3	84·8	3rd	50·7	18th	34·1
9	Brahmaputra	Sibsagar	333	29·723	+·003	30·030	29·800	17th	29·618	23rd	·182	60·9	77·6	−0·8	56·6	−3·2	67·2	−2·0	21·0	90·4	1st	50·3	22nd	40·1
		Dhubri	115	29·914	−·005	29·989	29·989	19th	29·820	22nd	·169	66·6	79·8	−0·2	61·8	−1·8	70·8	−1·0	18·0	86·2	1st	57·6	19th	28·6
	IV.—Bengal and Orissa		...	...	0	...	...	...	...	...	...	...	84·5	+2·5	63·3	−0·2	73·9	+1·1	21·2	...	...	...	...	3·5
6	East Bengal	Chittagong	87	29·913	+·006	29·950	29·984	29th	29·831	2 days	·153	71·5	85·6†	+2·8	64·3	−2·0	74·8†	+0·2	20·7	90·2	3rd	58·1	2 days	32·1
		Lungleh	?			Not recorded.						61·3	70·7	?	57·4	?	64·1	?	13·3	76·5	11th	51·8	26th	24·7
		Noakhali	43	29·956	?	29·947	30·019	29th	29·864	22nd	·155	70·8	84·0	?	62·2	?	73·1	?	21·8	88·5	3 days	56·0	21st & 27th.	32·5
		Comilla	36	29·974	?	29·959	30·036	19th & 29th	29·895	23rd	·141	71·6	85·5	?	61·7	?	73·6	?	23·8	90·9	3rd	55·0	27th & 28th	35·9
		Sirajganj	49	29·959	?	29·960	30·035	19th	29·869	12th	·166	67·1	82·8	?	61·1	?	72·0	?	21·7	90·8	2nd	54·9	27th	35·9
		Narayanganj	26	29·982	+·007	29·957	30·052	19th	29·889	23rd	·163	71·5	84·5	+0·8	64·9	−1·0	74·8	−0·1	19·6	90·6	3 days	58·8	2 days	31·8
		Barisal†	13	29·986	−·003	29·945	30·054	29th	29·895	23rd	·159	73·0	85·2	+3·0	64·6	−0·8	75·0	+1·1	20·6	91·3	4 days	58·0	28th	33·3
		Mymensingh	59	29·949	+·005	29·962	30·017	19th	29·860	12th	·157	68·1	82·8	+0·5	61·9	−1·3	72·3	−0·4	20·9	88·5	2nd	57·0	27th	31·5
10	Deltaic Bengal	Faridpur	46	29·967	?	29·962	30·033	19th & 29th	29·883	23rd	·150	69·9	83·8	?	62·6	?	73·2	?	21·2	92·8	1st	57·0	3 days	35·8
		Jessore	33	29·975	−·006	29·956	30·053	29th	29·881	23rd	·172	70·9*	86·1*	+2·8	61·7	−2·5	73·8*	+0·2	24·4	93·1	3rd	51·4	28th	41·7
		Calcutta	21	30·000	−·002	29·967	30·087	29th	29·896	23rd	·191	70·8	83·8	+2·6	64·4	−0·2	74·1	+1·2	19·4	89·9	3rd	58·2	28th	31·7
		Saugor Island	25	29·980	−·013	29·950	30·059	29th	29·881	23rd	·178	74·0	85·1	+3·7	68·3	+1·3	76·7	+2·5	16·8	88·9	2 days	60·9	28th	28·0
		Krishnagar	47	29·980	?	29·977	30·062	29th	29·869	23rd	·193	71·0	86·4	?	60·4	?	73·5	?	26·0	94·9	1st	51·9	28th	43·0
		Midnapore	149	29·868	?	29·969	29·951	29th	29·773	22nd & 23rd	·178	71·9	89·1	?	65·2	?	77·2	?	23·9	97·3	1st	58·2	28th	39·1

* Mean of 10 days. † Mean of 29 days. ‡ Mean of 16 days.

I.

Stations in India, Burma, etc., in November 1896.

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 Oct. to 30th Nov. 1896.	Normal rainfall for period, from 1st Oct. to 30th Nov.	Variation from normal of period, from 1st Oct. to 30th Nov.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·64	4·20	−2·38	...	...	...	...	I.—Burma Coast and Bay Islands.		
3	1	5	5	8	2	1	3	2	5·8	7·1	−18	84	·921	6·0	15	?	?	4·63	8·97	− 4·34	13·65	21·14	− 7·49	1·00	Port Blair .	Tenasserim and Bay Islands.	1
...	9	5	5	5	1	...	...	5	1·6	1·6	0	80	·824	3·2	5	?	?	1·94	3·63	− 1·69	15·52	17·17	− 1·65	0·60	Mergui .		
26	1	...	1	...	...	...	1	1	1·0	?	?	84	·777	0·4	1	?	?	0·21	?	?	9·50	?	?	0·13	Tavoy.		
...	6	12	4	2	2	...	...	4	2·2	2·4	− 8	89	·796	3·9	2	2·18	− 1·18	1·64	2·32	− 0·68	7·75	10·42	− 2·67	0·90	Moulmein.		
...	6	13	7	1	...	...	1	2	1·1	4·4	−75	90	·807	3·3	5	3·18	+ 1·82	2·08	2·98	− 0·90	10·89	9·72	+ 1·17	0·86	Rangoon .	Lower Burma.	2
7	3	9	4	2	1	1	...	3	3·5	3·1	+13	88	·790	3·6	1	5·55	− 4·55	1·33	4·21	− 2·88	7·99	12·42	− 4·43	1·27	Bassein.		
...	7	20	2	...	...	...	...	1	8·8	8·6	+ 2	79	·839	3·7	2	7·10	− 5·10	1·45	7·21	− 5·76	7·47	16·43	− 8·96	0·96	Diamond Island.		
...	6	22	2	...	...	...	...	...	2·3	2·2	+ 5	87	·695	2·1	2	3·09	− 1·09	0·65	2·94	− 2·29	3·92	13·38	− 9·46	0·34	Akyab .	Arakan.	5
3	14	1	1	...	1	1	1	8	2·4	1·7	+41	87	·731	3·4	4	2·36	+ 1·64	0·87	1·37	− 0·50	9·73	8·13	+ 1·60	0·36	Toungoo.	Central Burma.	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·57	1·95	−1·36	...	...	...	...	II.—Burma Inland.		
...	11	...	...	...	2	...	...	17	3·1	3·5	−11	70	·594	1·4	2	3·45	− 1·45	0·73	2·16	− 1·43	2·88	6·40	− 3·52	0·44	Thayetmyo.	Central Burma.	3
1	8	...	...	...	...	...	4	17	7·7	?	?	67	·581	2·1	0	?	?	0·07	?	?	0·60	?	?	0·07	Minbu.	Upper Burma.	4
15	7	...	...	...	...	...	...	8	1·9	?	?	72	·585	1·3	1	?	?	0·10	?	?	1·71	?	?	0·10	Yamethin.		
6	2	...	...	4	4	3	6	5	?	?	?	77	·470	6·3	2	?	?	1·22	?	?	7·47	?	?	0·79	Taunggyi.		
4	14	3	1	...	3	1	2	2	1·7	?	?	78	·593	1·0	0	?	?	0·01	?	?	3·79	?	?	0·01	Mandalay .		
25	5	...	...	...	...	...	...	...	0·1	?	?	96	·585	3·6	1	?	?	0·14	1·73	− 1·29	4·22	8·63	− 4·41	0·42	Kindat.		
				Not	recorded.				?	?	?	87	·473	4·9	2	?	?	1·26	?	?	1·73	?	?	1·13	Lashio.		
9	3	14	2	1	...	...	...	1	3·0	?	?	90	·526	1·4	2	?	?	0·75	?	?	0·82	?	?	0·42	Bhamo.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·25	0·85	−0·54	...	...	...	...	III.—Assam.		
28	...	...	1	...	1	...	...	...	0·9	2·1	−57	85	·586	3·4	2	1·86	+ 0·14	0·74	1·31	− 0·57	1·36	7·96	− 6·60	0·42	Silchar .	Surma.	7
14	2	7	4	1	...	1	1	...	?	?	?	92	·554	1·4	0	?	?	0·08	?	?	0·08§	?	?	0·04	Saiconah.		
21	...	8	...	...	1	...	...	...	2·0	1·7	+18	97	·531	?	0	2·00	− 2·00	0·12	0·98	− 0·86	2·46	5·82	− 3·36	0·06	Sibsagar .	Brahmaputra.	9
...	1	21	4	2	1	1	...	...	5·2	4·9	+ 6	86	·566	1·6	0	0·47	− 0·47	0·07	0·26	− 0·19	2·19	3·76	− 1·57	0·07	Dhubri.		
...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·11	0·99	−0·92	...	...	...	...	IV.—Bengal and Orissa.		
2	7	18	2	...	...	...	...	1	1·9	3·0	−37	85	·656	2·3	0	1·96	− 1·96	0	1·53	− 1·53	1·78	7·77	− 5·99	0	Chittagong .	East Bengal.	6
				Not	recorded.				?	?	?	86	·466	0	3	?	?	1·13	?	?	3·46	?	?	0·66	Lungleh.		
...	14	12	2	...	1	...	...	1	1·9	?	?	86	·656	1·0	0	1·58	− 1·58	0	1·81	− 1·81	0·92	9·51	− 8·59	0	Noakhali.		
18	4	1	4	2	1	...	...	...	1·2	?	?	88	·679	0·7	0	1·88	− 1·88	0	1·14	− 1·14	0·39	6·34	− 5·95	0	Comilla.		
24	4	...	...	...	...	1	...	1	1·0	?	?	89	·594	1·4‖	0	0·96	− 0·96	0	0·60	− 0·60	0·10	4·83	− 4·73	0	Sirajganj.		
3	5	5	5	4	...	1	3	4	2·2	1·9	+16	84	·650	1·5	0	1·85	− 1·85	0·01	1·74	− 1·73	0·05	6·16	− 6·11	0·01	Narayanganj.		
27	1	1	...	...	...	...	...	...	0·8	?	?	82	·676	0·6	0	1·58	− 1·58	0	1·27	− 1·27	0	6·88	− 6·88	0	Barisal.†		
9	4	8	5	3	...	...	...	1	0·4	?	?	88	·608	?	0	1·00	− 1·00	0	0·61	− 0·61	0	6·23	− 6·23	0	Mymensingh.		
25	3	1	...	...	...	...	1	...	1·2	?	?	86	·617	0·7	1	1·27	− 0·27	0·25	1·18	− 0·93	0·30	5·27	− 4·97	0·25	Faridpur .	Deltaic Bengal	10
27	2	1	...	...	...	...	...	...	1·5	1·8	−17	82*	·620*	1·0	0	1·27	− 1·27	0	1·22	− 1·22	0·03	5·77	− 5·74	0	Jessore.		
10	9	3	...	...	...	3	3	2	2·5	3·0	−17	82	·621	1·7	0	1·00	− 1·00	0·05	0·66	− 0·61	0·05	5·05	− 5·00	0·05	Calcutta.		
...	7	14	1	...	1	3	2	2	7·6	6·4	+19	82	·696	2·4	1	1·58	− 0·58	0·10	1·52	− 1·42	0·12	10·66	−10·54	0·10	Saugor Island.		
...	7	2	3	3	1	4	4	6	2·5	?	?	77	·590	1·6	0	0·88	− 0·88	0·02	0·94	− 0·92	0·02	5·16	− 5·14	0·02	Krishnagar.		
13	10	5	...	...	2	...	...	...	0·6	?	?	69	·547	1·6	0	0·96	− 0·96	0	0·63	− 0·63	0	4·93	− 4·93	0	Midnapore.		

§ For November only.

‖ Mean of 28 days.

Table

Abstract of Observations taken at 8 A.M. at 209 Stations

Number of Districts.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal.	Bankura	298	29·701	?	29·961	29·790	29th	29·579	23rd	·211	70·3	86·5	?	64·1	?	75·3	?	22·4	96·1	1st	57·0	28th	39·1
		Raniganj	334	29·690	?	29·987	29·774	29th	29·568	22nd	·206	69·2	86·1	?	62·4	?	74·3	?	23·7	96·1	1st	56·7	28th	39·4
		Burdwan	99	29·926	−·004	29·976	30·008	29th	29·811	23rd	·197	72·6	87·7	+5·0	64·8	+0·7	76·3	+2·9	22·9	96·4	2nd	57·7	23th	38·7
		Naya Dumka	489	29·511	?	29·978	29·599	29th	29·391	22nd	·208	69·4	84·1	?	61·2	?	72·7	?	22·9	93·5	1st	54·2	28th	39·3
		Berhampore	67	29·957	−·007	29·974	30·042	29th	29·846	23rd	·196	67·9	84·5	+2·7	62·2	−1·9	73·4	+0·4	22·3	93·0	1st	54·4	28th	38·6
		Rampur Boalia	70	29·944	?	29·965	30·025	29th	29·846	23rd	·179	69·6	84·2	?	61·1	?	72·7	?	23·1	92·9	1st	53·9	28th	39·0
		Malda	72	29·948	?	29·975	30·023	19th	29·850	12th	·173	67·5	83·3	?	58·8	?	71·1	?	24·5	92·1	1st	51·6	28th	40·5
		Bogra	61	29·939	?	29·955	30·010	2 days	29·847	12th	·163	68·4	83·5	+1·4	61·5	−0·7	72·5	+0·4	22·0	91·2	2 days	55·9	27th	35·3
12	North Bengal	Dinajpur	123	29·897	+·010	29·980	29·969	19th	29·807	22nd	·162	66·4	82·3	+0·4	58·7	−1·6	70·8	−0·6	24·1	90·3	1st	52·9	26th	37·4
		Rangpur	123	29·910	?	29·993	29·982	19th	29·816	12th	·166	67·4	81·1†	?	60·3‡	?	71·1‡	?	20·8	88·1	1st	55·2	18th	32·9
		Jalpaiguri	284	29·757	+·015	30·011?	29·816	19th	29·675	12th	·141	66·2	80·9	−0·8	60·1	+0·5	70·5	−0·2	20·8	85·6	1st	55·1	16th	30·5
17	North Bihar	Purnea	125	29·905	+·004	29·990	29·987	19th	29·800	23rd	·187	64·2	83·0	+1·1	59·1	+0·3	71·1	+0·7	23·9	90·0	2nd	52·7	28th	37·3
14	Orissa	Balasore	56	29·962*	−·010*	29·955*	30·004	9th	29·894	12th	·110	71·4	87·7	+5·0	65·4	+3·0	76·6	+4·0	22·3	94·4	2 days	59·6	4 days	34·8
		False Point	21	29·999	?	29·961	30·088	29th	29·911	23rd	·177	75·0	86·2	+4·3	66·6	+0·9	76·4	+2·6	19·6	91·5	3rd	60·0	29th	31·5
		Cuttack	80	29·933	−·007	29·958	30·023	29th	29·831	23rd	·192	72·5	88·9	+3·9	68·6	+2·5	78·8	+3·2	20·3	94·7	2 days	63·2	2 days	31·5
		Shortt's Island	?	30·007	?	?	30·068	29th	29·917	22nd& 23rd.	·151	79·4	86·3	?	75·3	?	80·8	?	11·0	93·0	4th	70·8	29th	22·2
		Puri	20	29·997	?	29·960	30·081	29th	29·894	23rd	·187	74·4	87·0	?	70·5	?	78·8	?	16·5	90·7	5th	66·1	17th & 19th.	24·6
	V.—Gangetic Plain and Chota Nagpur.		...	...	—·013	...	...	...	...	...	...	...	84·5	+3·4	58·8	+2·1	71·6	+2·8	25·7	...	...	...	...	39·9
15	Chota Nagpur	Hazaribagh	2,007	27·978	−·009	29·983	28·049	29th	27·849	22nd	·200	67·8	80·5	+3·8	60·3	+2·6	70·4	+3·2	20·2	89·2	1st	54·2	27th	35·0
		Ranchi	2,128	27·870	?	29·991	27·947	29th	27·750	23rd	·197	68·2	80·9	+4·5	59·4	+3·4	70·1	+4·0	21·5	90·0	1st	53·9	28th	36·1
		Daltonganj	730?	29·302	?	30·021?	29·384	29th	29·150	22nd	·234	64·4	82·5	?	56·6	?	69·6	?	25·9	87·4	1st & 2nd.	52·0	16th	35·4
		Chaibassa	760	29·248	?	29·983	29·333	29th	29·134	23rd	·199	69·4	86·4	+3·9	62·2	+2·2	74·2	+3·1	24·2	94·7	1st	55·7	19th	39·0
16	South Bihar	Gaya	375	29·648	−·010	29·992	29·723	19th	29·502	22nd	·221	69·3	85·9	+3·5	61·7	+2·6	73·8	+3·1	24·2	94·9	1st	56·8	28th	38·1
		Dehri	351			Not recorded.						68·8	85·7	?	62·8	?	74·3	?	22·9	97·3	10th	58·8	27th	38·5
		Patna	183	29·846	−·017	29·988	29·924	19th	29·714	22nd	·210	71·0	83·6	+2·2	62·2	+2·3	72·9	+2·3	21·4	93·9	1st	55·4	27th	38·5
		Arrah	190	29·844	?	29·994	29·927	19th	29·710	22nd	·217	67·1	85·9	?	58·9	?	72·4	?	27·0	95·5	1st	53·1	28th	42·4
		Buxar	239	29·781	?	29·984	29·867	19th	29·651	22nd	·216	69·2	85·7	?	61·1	?	73·4	?	24·6	95·5	1st	55·9	26th	39·6
17	North Bihar	Bhagalpur	160	29·867	?	29·985	29·946	29th	29·748	22nd	·198	71·2	85·0	?	60·1	?	72·6	?	24·9	94·2	1st	52·0	28th	42·2
		Darbhanga	166	29·856	−·014	29·984	29·950	19th	29·750	22nd	·200	66·2	82·8	+2·0	60·2	−1·8	71·5	+0·1	22·6	90·4	1st	54·8	29th	35·6
		Muzaffarpur	178	29·849	?	29·989	29·934	19th	29·738	22nd	·196	65·9	82·6	?	57·9	?	70·3	?	24·7	90·7	1st	51·3	27th	39·4
		Motihari	224	29·803	?	29·995	29·885	19th	29·687	22nd	·198	64·6	83·9	?	53·9	?	68·9	?	30·0	92·0	2nd	47·4	27th	44·6
		Chapra	181	29·847	?	29·990	29·934	19th	29·716	22nd	·218	66·8	85·4	?	59·8	?	72·6	?	25·6	94·4	1st	53·2	28 h	41·2
18	N.-W. P. East	Benares	267	29·760	−·010	29·995	29·857	29th	29·602	22nd	·255	65·2	85·4	+3·5	57·5	+1·9	71·5	+2·7	27·9	95·3	1st	53·2	5th	42·1
		Allahabad	309	29·713	−·017	29·989	29·801	29th	29·524	22nd	·277	67·6	87·5	+5·4	58·5	+4·0	73·0	+4·7	29·0	96·1	1st	53·4	4th	42·7
23	N.-W. P. (East Submontane).	Gorakhpur	256	29·755	−·014	29·981	29·837	19th	29·638	22nd	·199	66·4	84·1	+2·5	58·1	+0·6	71·1	+1·6	26·0	93·4	1st	52·3	27th	41·1
19	South Oudh	Lucknow	368	29·656	−·010	30·001	29·752	29th	29·516	22nd	·236	65·2	85·3	+2·4	54·7	+2·9	70·0	+2·7	30·6	92·8	1st	50·2	5th	42·6
20	North Oudh	Bahraich	403	29·610	?	29·993	29·701	19th	29·490	22nd	·211	64·9	84·3	?	56·6	?	70·4	?	27·7	92·4	1st	52·0	3 days	40·4
21	N.-W. Provinces (Central).	Cawnpore	416	29·596	?	29·984?	29·689	29th	29·460	22nd	·229	67·3	86·1	?	56·1	?	71·1	?	30·0	93·3	1st	52·0	4th	41·3
		Mainpuri	516	29·511	?	30·013	29·608	29th	29·374	22nd	·234	62·5	84·3	?	55·4	?	69·9	?	28·9	92·3	1st	51·1	5th & 20th.	41·2

* Mean of 15 days. † Mean of 29 days. ‡ Mean of 28 days.

1—*continued.*

in India, Burma, etc., in November 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
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 1896.	Normal rainfall for period from 1st October to 30th November.	Variation from normal of period from 1st October to 30th November.				
19	2	1	...	1	...	1	6	...	0·9	?	?	72	·556	1·5	0	0·85	− 0·85	0·05	0·52	− 0·47	0·05	4·34	− 4·29	0·05	Bankura .	Central Bengal.	11
21	1	1	...	1	...	...	3	3	1·3	?	?	69	·490	1·4	0	0·65	− 0·65	0·06	0·50	− 0·44	0·06	3·81	− 3·75	0·06	Raniganj.		
16	5	2	1	1	...	1	2	2	1·3	1·9	−10	70	·568	1·6	0	0·88	− 0·88	0	0·67	− 0·67	0	4·28	− 4·28	0	Burdwan.		
12	4	2	...	1	1	...	2	8	0·5	?	?	67	·478	1·8	0	0·60	− 0·60	0·12	0·37	− 0·25	0·12	4·59	− 4·47	0·07	Naya Dumka		
23	1	...	...	...	...	...	...	...	0·5	1·7	−70	84	·574	1·4	0	0·63	− 0·63	0·07	0·56	− 0·49	0·07	4·39	− 4·32	0·07	Berhampore.		
10	15	2	1	...	1	...	1	...	1·6	?	?	84	·601	0·8	0	0·53	− 0·53	0	0·31	− 0·31	0	4·42	− 4·42	0	Rampur Boalia.		
...	3	1	1	...	1	7	12	5	1·5	?	?	84	·564	0·7	0	0·42	− 0·42	0·01	0·20	− 0·19	0·01	4·62	− 4·61	0·01	Malda.		
24	2	1	...	1	...	...	2	...	0·8	?	?	85	·591	?	1	0·65	+ 0·35	0·20	0·64	− 0·44	0·29	4·38	− 4·18	0·20	Bogra.		
1	7	12	2	...	...	4	3	1	2·6	?	?	83	·535	1·8	0	0·23	− 0·23	0·20	0·08	+ 0·12	1·19	4·63	− 3·44	0·08	Dinajpur .	North Bengal.	12
3	3	13	6	1	1	3	...	...	0·9†	?	?	86	·589	1·1†	1	0·11	+ 0·89	0 43	0·13	+ 0·30	1·47	5·57	− 4·10	0·34	Rangpur.		
...	15	4	3	1	...	2	1	4	1·9	?	?	83	·536	0·8	0	0·34	− 0·34	0·04	0·16	− 0·12	1·61	5·48	− 3·87	0·03	Jalpaiguri.		
9	3	6	5	1	...	3	1	2	2·0	1·2	+67	88	·527	2·2	10	0·19	− 0·19	0·09	0·08	+ 0·01	0·09	3·65	− 3·56	0·08	Purnea .	North Bihar.	17
9	6	...	...	...	1	2	1	11	1·2	?	?	85	·657	1·1	0	1·73	− 1·73	0	1·32	− 1·32	0	7·45	− 7·45	0	Balasore .	Orissa.	14
1	14	1	...	...	1	...	3	10	4·8	6·5	−26	79	·694	3·1	1	2·73	− 1·73	0·37	3·23	− 2·86	0·42	12·42	−12·00	0·37	False Point.		
17	4	3	1	1	...	...	3	1	1·4	1·7	−18	78	·636	2·2	0	1·88	− 1·88	0·07	1·73	− 1·66	0·07	7·37	− 7·30	0·04	Cuttack.		
...	2	11	2	1	...	1	5	8	8·6	?	?	69	·696	1·3	0	?	?	0	?	?	0	?	?	0	Shortt's Island.		
5	18	3	...	...	...	1	1	2	3·1	?	?	78	·667	1·7	0	2·77	− 2·77	0	3·48	− 3·48	0	12·38	−12·38	0	Puri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·52	0·22	+0·29	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**		
15	3	...	1	2	3	1	2	3	4·0	4·3	−7	65	·435	2·7†	2	0·69	+ 1·31	0·25	0·29	− 0·04	0·25	3·70	− 3·45	0·14	Hazaribagh.	Chota Nagpur	15
12	...	1	7	2	2	...	3	3	2·9	?	?	61	·414	1·1	2	0·80	+ 1·20	0·59	0·43	+ 0·16	0·59	3·38	− 2·79	0·30	Ranchi.		
...	...	1	2	1	11	12	3	...	2·5	?	?	75	·457	1·4†	1	0·76	+ 0·24	1·18	0·37	+ 0·81	1·18	2·87	− 1·69	1·15	Daltonganj.		
5	...	...	...	...	1	15	8	1	1·0	?	?	75	·543	2·3	1	0·92	+ 0·08	1·04	0·45	+ 0·59	1·04	3·17	− 2·13	1·04	Chaibassa.		
10	...	...	2	6	7	3	2	...	2·3	1·2	+92	64	·465	1·8	1	0·53	+ 0·47	0·80	0·38	+ 0·42	0·80	2·65	− 1·85	0·78	Gaya . .	South Bihar.	16
3	...	1	1	2	11	11	1	...	3·8	?	?	71	·496	2·1	1	0·54	+ 0·46	1·39	0·28	+ 1·11	1·39	2·91	− 1·52	1·38	Dehri.		
4	1	4	6	2	3	2	7	1	1·4	1·5	− 7	67	·506	1·9	1	0·34	+ 0·66	0·74	0·17	+ 0·57	0·74	3·42	− 2·68	0·72	Patna.		
18	1	...	1	2	...	2	5	1	0·5	?	?	77	·507	1·2	1	0·46	+ 0·54	0·45	0·20	+ 0·25	0·45	3·19	− 2·74	0·45	Arrah.		
4	...	2	7	1	1	1	11	3	?	?	?	64	·455	1·8†	1	0·42	+ 0·58	0·45	0·46	− 0·01	0·45	3·72	− 3·27	0·45	Buxar.		
9	2	6	4	2	1	4	2	...	2·0	?	?	69	·517	2·3	0	0·26	− 0·26	0·03	0·21	− 0·18	0·03	3·01	− 2·98	0·03	Bhagalpur.	North Bihar.	17
1	2	2	8	5	1	...	6	5	1·8	1·8	0	80	·504	1·2	1	0·19	+ 0·81	0·32	0·07	+ 0·25	0·49	2·91	− 2·42	0·32	Darbhanga.		
21	...	...	3	2	...	...	2	2	1·0	?	?	83	·527	1·6	1	0·40	+ 0·60	0·19	0·17	+ 0·02	0·19	3·28	− 3·09	0·19	Muzaffarpur.		
3	2	6	4	1	...	3	6	5	3·0	?	?	85	·520	1·1	0	0·20	− 0·20	0·03	0·13	− 0·10	0·03	3·52	− 3·49	0·03	Motihari.		
13	...	1	6	3	...	4	3	...	1·2	?	?	75	·491	2·1	1	0·42	+ 0·58	0·19	0·38	− 0·19	0·19	3·46	− 3·27	0·19	Chapra.		
24	...	1	1	...	...	1	3	...	1·8	2·1	−14	76	·474	2·5	1	0·82	+ 0·18	0·53	0·36	+ 0·17	0·53	2·66	− 2·13	0·53	Benares .	N.-W. P. East.	18
21	...	2	3	...	...	...	3	1	1·5	1·3	+15	62	·419	2·7	0	0·45	− 0·45	0	0·17	− 0·17	0	2·00	− 2·00	0	Allahabad.		
6	6	7	2	1	2	1	2	3	1·2	0·9	+33	73	·470	2·0	0	0·18	− 0·18	0·02	0·10	− 0·08	0·02	3·87	− 3·85	0·02	Gorakhpur .	N.-W. P. (East Submontane).	23
24	...	1	...	...	...	...	3	2	1·3	1·4	− 7	69	·421	1·9	2	0·09	+ 1·91	0·31	0·05	+ 0·26	0·31	0·88	− 0·57	0·21	Lucknow .	South Oudh.	19
24	...	...	2	1	...	...	...	3	0·7	?	?	73	·457	0·7	2	?	?	0·88	0	+ 0·88	0·88	1·69	− 0·81	0·75	Bahraich .	North Oudh.	20
13	2	3	2	1	2	2	2	3	2·2	?	?	58	·381	2·0	1	0	+ 1·00	0·67	0·02	+ 0·65	0·67	1·10	− 0·43	0·64	Cawnpore .	N.-W. Provinces (Central).	21
28	1	1	...	...	...	...	...	...	0·1	?	?	62	·350	3·1	1	?	?	0·78	0	+ 0·78	0·78	0·82	− 0·04	0·75	Mainpuri.		

Table

Abstract of Observations taken at 8 A.M. at 209 Stations

Number of Districts.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 A.M., in inches.								Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas		...	...	−·004	...	...	...	...	...	...	...	80·6	+0·4	52·9	+4·0	66·8	+2·2	27·7	...	...	...	...	39·7
24	N.-W. Provinces, West (Submontane).	Bareilly	568	29·144	+·001	30·006	29·532	29th	29·330	22nd	·202	61·8	82·5*	+1·5*	54·2	+2·0	68·4	+1·8	28·3	90·5	1st	49·7	3rd & 20th.	40·8
		Dehra Dún	2,233	27·756	−·019	30·028	27·875	29th	27·641	22nd	·234	58·2	75·6	+1·4	53·3	+1·9	64·5	+1·7	22·3	81·5	1st	47·0	27th	34·5
		Roorkee	887	29·112	−·008	30·019	29·230	29th	29·002	12th	·228	57·6	80·2	−·0·2	51·4	+2·2	65·8	+1·0	28·8	85·8	8th	45·6	19th	40·2
22	N.-W. P., West	Meerut	738	29·266	−·007	30·013	29·381	29th	29·159	12th & 23rd	·222	58·1	81·3	+0·2	53·8	+4·3	67·6	+2·3	27·5	87·5	8th	49·6	16th	37·9
26	South-East Punjab.	Delhi	718	29·291	−·007	30·007	29·405	29th	29·177	23rd	·228	63·5	81·2	?	56·6	?	68·9	?	24·6	87·2	8th	51·4	4 days	35·8
28	Central Punjab.	Lahore	702	29·305	−·011	30·022	29·448	30th	29·203	22nd	·245	57·5	81·0	−0·3	53·1	+6·8	67·0	+3·3	27·9	85·6	3 days	45·3	30th	40·3
27	South Punjab	Sirsa	662	29·345	−·010	30·009	29·452	30th	29·234	22nd	·258	60·6	84·0	−0·3	54·1	+6·1	69·1	+2·9	29·9	94·3	6th	45·2	30th	49·1
		Patiala	818	29·183	?	?	29·280	30th	29·065	12th	·215	60·9	81·0	?	53·3	?	67·2	?	27·7	86·1	8th	47·8	17th	38·3
29	Punjab (Submontane).	Ludhiana	812	29·194	−·002	30·022	29·318	29th	29·078	22nd	·240	59·0	80·8	+0·4	54·0	+3·9	67·4	+2·2	26·8	85·6	4th & 8th.	49·2	17th	36·4
		Sialkot	830	29·178	+·007	30·028	29·304	29th	29·079	22nd	·225	58·3	81·2	+0·6	52·1	+3·6	66·7	+2·1	29·1	86·6	3 days	46·1	27th	40·5
		Umballa	892	29·107	?	30·015	29·218	29th	29·001	12th	·217	57·3	81·6	?	52·0	?	66·8	?	29·6	86·0	5 days	45·0	19th	41·0
31	North Punjab	Rawalpindi	1,643	28·344	+·012	30·063	28·450	29th	28·229	23rd	·221	52·9	77·1	+0·5	47·4	+5·3	62·3	+2·9	29·7	83·1	10th	42·0	27th	41·1
	VII.—Indus Valley and N.-W. Rajputana.		...	...	−·015	...	...	...	...	...	...	...	84·3	+0·7	55·0	+4·2	69·7	+2·5	29·3	...	...	...	...	47·0
31	North Punjab	Peshawar	1,110	28·941	−·002	30·056	29·101	29th	28·825	23rd	·276	53·5	76·1	−0·8	46·8	+2·7	61·5	+1·0	29·3	85·1	3rd	41·9	3 days	43·2
		Mardan	?	29·014	?	?	29·190	30th	28·869	22nd	·321	49·8	75·2	?	43·8	?	59·5	?	31·4	82·0	2nd	39·0	25th & 30th.	43·0
32	West Punjab	Khushab	612	29·402	?	30·026	29·546	29th	29·303	12th	·243	56·4	83·0	?	50·8	?	66·9	?	32·2	89·8	3rd & 4th.	44·5	30th	45·3
		Montgomery	558	29·463	?	30·019	29·615	30th	29·366	23rd	·249	61·6	84·1	?	52·8	?	68·5	?	31·3	92·9	6th	41·0	30th	51·9
		D. I. Khan (Hospl.)	594	29·459	−·010	30·036	29·643	29th	29·339	23rd	·304	58·2	81·9	?	51·1	?	66·5	?	30·8	88·3	3rd	44·5	25th	44·3
		D. I. Khan (Jail).‡	?				Not recorded.					59·3	83·9	?	50·7	?	67·3	?	33·2	88·6	2nd	44·4	21st	44·2
		Mooltan	420	29·605	−·025	30·020	29·806	30th	29·482	23rd	·324	60·0	85·5	+1·4	55·8	+4·2	70·7	+2·8	29·7	92·3	5th	42·0	30th	50·3
47	Sind	Jacobabad	186	29·846	−·015	30·004	30·083	30th	29·737	5th	·346	62·8	86·7	+0·8	56·0	+6·6	71·4	+3·7	30·7	95·5	6th	39·0	30th	56·5
		Hyderabad	96	29·936	−·006	29·988	30·181	30th	29·838	6th	·343	69·1	88·4	+1·2	62·6	+3·4	75·5	+2·4	25·8	100·1	6th	51·5	30th	49·6
		Kurrachee	12	30·011	−·032	29·973	30·250	30th	29·913	6th	·337	71·9	89·1	?	65·1	?	77·1	?	24·0	95·3	18th	52·9	29th	42·4
		Bickaneer	771	29·245	?	30·018	29·431	30th	29·137	22nd	·294	65·1	84·4	?	58·7	?	71·6	?	25·7	94·7	6th	49·1	22nd	45·6
51	West Rajputana	Pachpadra	380	29·581	?	29·939?	29·764	30th	29·489	21st	·275	66·0	89·8	?	58·2	?	74·0	?	31·6	99·4	10th	48·4	23rd	51·0
		Jodhpur		29·217	?	?	29·396	30th	29·093	22nd	·303	69·4	88·2	?	62·9	?	75·6	?	25·3	98·2	7th	53·2	23rd	45·0
	VIII.—East Rajputana, Central India and Gujarat.		...	...	−·024	...	...	...	...	...	...	...	86·9	+1·3	62·0	+5·6	74·5	+3·5	25·0	...	...	...	...	39·8
50	East Rajputana	Jeypore	1,431	28·590	−·010	30·030	28·705	30th	28·460	2nd	·249	67·9	83·9	−0·7	60·9	+7·9	72·4	+3·6	23·0	93·5	8th	52·7	25th	40·8
		Sambhar	1,254	28·756	−·013	30·025	28·890	30th	28·624	22nd	·266	63·4	83·5	+1·0	57·4	+5·5	70·5	+3·3	26·1	91·6	6th	53·4	19th & 25th.	38·2
		Ajmere	1,611	28·408	−·017	30·051	28·537	30th	28·275	22nd	·262	62·3	83·1	0	57·1	+7·7	70·2	+3·9	26·0	93·4	8th	50·8	4th	42·6
		Deesa	466	29·519	−·041	29·354	29·673	29th	29·376	21st	·297	72·5	92·1	+1·7	62·3	+5·5	77·2	+3·6	29·8	99·3	3 days	54·1	23rd	45·2
46	Kathiawar and Cutch.	Bhuj	395	29·580	−·048	29·940	29·768	30th	29·448	21st	·320	72·4	89·3	+1·1	64·0	+2·0	76·6	+1·6	25·3	98·5	12th	56·5	22nd	42·0
		Rajkot	429	29·544	−·042	29·937	29·702	29th	29·339	21st	·363	72·6	90·0	+0·1	61·6	+3·1	75·9	+1·6	28·4	98·4	3 days	53·0	23rd & 24th.	45·4
		Veraval	?	29·955	?	29·915	30·100	29th	29·775	21st	·325	74·3	88·0	?	67·2	?	77·6	?	20·8	96·1	1st	60·8	21st	35·3
49	Central India	Nowgong	757	29·260	−·024	30·005	29·368	29th	29·101	22nd	·267	65·7	83·1	+1·1	58·2	+6·3	70·7	+3·7	24·9	90·0	1st	53·0	4th	37·0
		Indore	1,823	28·166	−·021	29·974	28·293	29th	28·018	22nd	·275	71·3	87·9	+6·1	60·4	+6·6	74·2	+6·4	27·5	93·2	2nd	54·6	24th	38·6
		Neemuch	1,630	28·378	−·014	30·010	28·519	30th	28·222	22nd	·297	69·1	85·4	+2·0	60·5	+6·3	73·0	+4·2	24·9	92·3	9th	50·9	24th	41·4
45	Gujarat	Surat	39	29·942	−·030	29·924	30·056	29th	29·770	21st	·296	73·5	89·5	?	68·7	+6·4	79·1	?	20·8	95·2	16th	61·5	24th	33·7
		Ahmedabad	164	29·812?	?	29·927?	29·951	29th	29·637	21st	·314	74·0	91·0	?	67·3	?	79·2	?	23·7	98·2	9th	57·7	23rd	40·5
22	N.-W. P., West	Agra	555	29·470	−·016	30·011	29·580	29th	29·320	22nd	·260	65·4	84·2	+0·2	59·0	+4·1	71·6	+2·2	25·2	93·0	7th	54·4	19th & 22nd.	38·6
21	N.-W.P., Central	Jhansi	858	29·167	−·007	30·012	29·273	29th	29·016	22nd	·257	69·3	86·0	+1·9	62·7	+6·0	74·4	+4·0	23·3	94·1	15th	56·4	22nd	37·7

* Mean of 29 days. ‡ Mean of 23 days.

I—*continued.*

in India, Burma, etc., in November 1895—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 of month.	Total rainfall from 1st October to 30th November 1896.	Normal rainfall for period, from 1st October to 30th November.	Variation from normal of period, from 1st October to 30th November.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	0·33	0·15	+0·20	...	...	...	...	**VI.—Upper Sub-Himalayas.**		
14	2	4	1	...	...	...	1	8	1·1	1·7	− 35	72	·397	2·4	2	0·27	+1·73	0·68	0·13	+ 0·55	0·68	1·28	− 0·60	0·53	Bareilly .	N.-W. Provinces, West (Submontane).	24
30	...	...	...	...	...	...	...	...	0·7	1·7	− 59	70	·343	3·3	1	0·60	+0·40	0·43	0·37	+ 0·06	0·43	1·36	− 0·93	0·38	Dehra Dun.		
28	...	...	...	...	...	1	...	1	0·2	1·1	− 82	74	·357	2·4	1	0·64	+0·36	0·68	0·16	+ 0·52	0·72	0·59	+ 0·13	0·62	Roorkee.		
26	...	...	1	..	...	1	2	...	0·7	1·3	− 46	68	·333	2·6	1	0·36	+0·64	0·13	0·08	+ 0·05	0·13	0·50	− 0·37	0·10	Meerut.	N.-W. P., West	22
17	...	...	2	1	...	1	6	3	1·2	2·3	− 48	54	·311	3·2	2	0·18	+1·82	0·37	0·07	+ 0·30	0·37	0·15	+ 0·22	0·20	Delhi .	South-East Punjab,	26
24	1	...	1	1	1	...	2	...	1·5	1·4	+ 7	69	·326	2·2	0	0·27	−0·27	0·12	0·10	+ 0·02	0·14	0·36	− 0·22	0·07	Lahore .	Central Punjab,	28
12	1	1	5	4	1	1	...	5	4·1	2·0	+105	50	·260	3·9	0	0·09	−0·09	0	0·01	− 0·01	0·20	0·15	+ 0·05	0	Sirsa.	South Punjab.	27
26	...	...	...	...	2	2	...	...	0·6**	P	P	72	·385	2·5	1	P	P	0·17	P	P	0·23	P	P	0·17	Patiala.		
25	...	1	...	2	...	...	1	1	0·9	0·8	+ 13	67	·336	3·7	0	0·36	−0·36	0	0·09	− 0·09	0·34	0·49	− 0·15	0	Ludhiana .	Punjab (Submontane),	29
23	2	2	1	...	...	...	1	1	1·1	1·0	+ 10	63	·308	1·9	1	0·18	+0·82	0·39	0·09	+ 0·30	0·70	0·40	+ 0·30	0·39	Sialkot.		
30	...	...	...	...	...	...	...	...	0·4	P	P	76	·355	2·9	0	P	P	0·05	0·18	− 0·13	0·17	0·49	− 0·32	0·03	Umballa.		
19	2	1	1	1	...	...	5	1	2·8	1·1	+155	71	·287	3·1	2	0·36	+1·64	0·95	0·35	+ 0·60	1·25	0·90	+ 0·35	0·64	Rawalpindi.	North Punjab.	31
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·23	0·17	−0 01	...	...	...	...	**VII.—Indus Valley and N.-W Rajputana.**		
20	...	...	...	1	4	3	2	...	2·2	2·1	+ 5	69	·280	4·4	3	0·64	+2·36	1·06	0·57	+ 0·49	1·06	0·68	+ 0·38	0·69	Peshawar .	North Punjab.	31
			Not	rec	orde	d.			P	P	P	93	331	4·5	2	P	P	0·69	P	P	0·69†	P	P	0·40	Mardan.		
10	3	5	5	...	...	1	5	1	2·6	P	P	53	·241	2·1	0	0·40	−0·40	0	0·33	− 0·33	0	0·40	− 0·40	0	Khushab .	West Punjab.	32
17	2	1	3	4	1	...	1	1	2·2	P	P	53	·294	2·5	0	0·20	−0·20	0·03	0·07	− 0·04	0·33	0·13	− 0·20	0·03	Montgomery.		
28	1	1	...	...	...	...	...	...	0·9	0·7	+ 29	70	·340	2·1	1	0·45	+0·55	0·20	0·21	− 0·01	0·54	0·26	+ 0·28	0·15	D. I. Khan (Hospital),		
				Not	rec	orded.			P	P	P	56	·286	0	0	P	P	0	P	P	0	P	P	0	D. I. Khan (Jail)‡.		
13	...	6	...	10	...	...	...	1	0·9	1·5	− 40	63	·330	2·1	0	0·09	−0·09	0	0·10	− 0·10	0	0·10	− 0·10	0	Mooltan.		
14	3	2	2	1	1	1	2	4	2·9	1·6	+ 81	54	·312	3·2	0	0	0	0	0·16	− 0·16	0	0·16	− 0·16	0	Jacobabad	Sind.	47
4	9	2	...	3	...	1	1	10	10·8	6·1	+ 77	44	·314	3·0	0	0·20	−0·20	0	0·06	− 0·06	0	0·06	− 0 06	0	Hyderabad.		
4	2	11	8	1	1	...	2	1	5·1	7·9	− 35	57	·456	3·1	0	0·09	−0·09	0	0·09	− 0·09	0	0·09	− 0·09	0	Kurrachee.		
2	...	6	5	9	5	2	...	1	4·8	2·4	+100	52	·319	3·6	0	P	P	0	0·08	− 0 08	0	0.18	− 0·18	0	Bickaneer .	West Rajputana.	51
...	7	12	5	3	2	...	...	1	3·3	2·1	+ 57	47	·281	1·5	1	P	P	0·25	0	+ 0·25	0·25	0·05	+ 0·20	0·17	Pachpadra.		
3	5	20	2	...	...	...	...	...	3·5	P	P	44	·294	1·9	2	P	P	0·79	P	P	0·79†	P	P	0·4 5	Jodhpur.		
...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·21	0·20	+ 0·83	...	...	...	...	**VIII.—East Rajputana, C. India and Gujarat.**		
6	3	13	3	2	...	1	...	2	2·9	3·0	− 3	56	·361	3·8	1	0·20	+0·80	0·71	0·24	+ 0·47	0·91	0·54	+0·37	0·60	Jeypore .	East Rajputana.	50
18	4	3	4	...	1	...	...	...	2·8	3·4	− 18	57	·329	3·9	1	0·30	+0·70	1·17	0·19	+ 0·98	1·37	0·36	+ 1·01	1·08	Sambhar.		
23	1	5	...	1	...	...	...	...	1·5	1·4	+ 7	67	·370	2·9	2	0·27	+1·73	1·73	0·19	+ 1·54	1·73	0·50	+ 1·23	1·26	Ajmere.		
...	1	14	8	5	1	...	1	...	7·5*	7·5	0	41	·372	2·4	2	0·18	+1·82	1·39	0·16	+ 1·23	1·39	0·51	+ 0·88	1·13	Deesa.		
8	5	3	4	1	1	1	6	1	6·0	4·7	+ 28	51	·395	1·3	1	P	P	2·21	0·02	+ 2·19	2·21	0·37	+ 1·84	2·18	Bhuj .	Kathiawar and Cutch.	46
13	4	9	3	1	...	...	...	...	4·4	4·9	− 10	60	·480	2·0	2	0·18	+1·82	1·78	0 36	+ 1·42	1·78	0·81	+ 0·97	1·60	Rajkot.		
6	15	3	2	...	...	...	...	4	6·4	P	P	58	·477	2·3	2	P	P	3·66	P	P	3·66	P	P	3·54	Veraval.		
15	2	4	3	...	1	1	4	...	1·2	1·0	+ 20	67	·423	3·7	1	0·55	+0·45	0·17	0·25	− 0·08	0·17	1·42	− 1·25	0·15	Nowgong .	Central India.	49
15	1	6	1	4	3	...	...	...	1·4	2·0	− 30	53	·395	3·5	0	0·73	−0·73	0·02	0·45	− 0·43	0·02	1·90	− 1·88	0·02	Indore.		
...	6	19	4	1	...	...	...	...	4·7	7·5	− 37	51	·354	3·0	2	0·18	+1·82	1·34	0·21	+ 1·13	1 34	0·70	+ 0·64	0·94	Neemuch.		
3	12	10	1	...	4	...	...	...	P	5·9	P	65	·545	2 3	1	0·55	+0·45	0·79	0·17	+ 0·62	0·79	1·70	− 0·91	0·73	Surat .	Gujarat.	45
4	3	13	8	...	...	...	...	2	3·8	P	P	53	·430	2·8	2	P	P	0·91	P	P	0·91	P	P	0·63	Ahmedabad.		
8	...	5	...	1	...	3	...	13	3·0	2·5	+ 20	58	·358	2·6	1	0·18	+0·82	0·32	0·05	+ 0·27	0·32	0 52	− 0 20	0·24	Agra .	N.-W. P., West.	22
18	1	5	1	...	...	3	...	2	1·3	1·8	− 28	52	·360	3·1	1	0·36	+ 0·64	0·68	0·12	+ 0·56	0·68	0·82	− 0·14	0·68	Jhansi.	N.-W.P., Central.	21

** Mean of 28 days. † For November only.

Table

Abstract of Observations taken at 8 A.M. at 209 Stations

Number of Districts.	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 .		...	...	−·016	...	...	...	...	...	...	...	88·7	+5·2	64·8	+5·9	76·8	+5·6	23·9	...	...	...	...	35·7
38	Bombay (Deccan)	Belgaum .	2,524	27·441	+·001	29·912	27·539	30th	27·354	23rd	·185	72·1	86·7	+5·1	63·7	+2·1	75·2	+3·6	23·0	90·2	9 days	56·9	24th	33·3
		Sholapur .	1,590	28·395	−·001	29·952	28·501	29th	28·279	23rd	·222	75·2	90·5	+3·6	66·7	+4·5	78·6	+4·1	23·8	96·2	1st & 4th,	61·6	16th	34·6
		Poona . .	1,840	28·141	−·018	29·948	28·255	30th	28·034	22nd	·221	73·7	91·0	+5·8	64·2	+4·5	77·6	+5·2	26·8	96·5	7th	54·4	24th	42·1
		Bijapur . .	1,946	28·020	P	29·922	28·148	30th	27·892	23rd	·256	75·0	89·6	P	67·4	P	78·6	P	22·2	95·2	4th	60·1	16th	35·1
40	Khandesh . .	Malegaon .	1,430	28·552	−·028	29·954	28·672	30th	28·427	22nd	·245	74·9	92·2	+6·5	63·4	+6·6	77·8	+6·6	28·8	96·4	5th & 6th.	55·5	23rd	40·9
		Ahmednagar .	2,152	27·845	P	29·958	27·956	29th & 30th.	27·735	22nd	·221	74·0	89·2*	P	61·6	P	75·4*	P	27·6	93·8	5th & 6th.	54·0	16th	39·8
41	Berar . . .	Akola . .	930	29·052	P	29·951	29·169	29th	28·911	22nd	·258	74·3	92·3	+6·4	65·5	+8·6	78·9	+7·5	26·8	97·5	7th	59·0	18th	38·5
		Amraoti .	1,215	28·781	−·011	29·972	28·891	30th	28·635	23rd	·256	74·2	90·0	+4·8	66·5	+5·8	78·3	+5·3	23·5	96·2	4th	60·3	18th	35·9
42	Central Provinces (West).	Khandwa .	1,044	28·944	−·018	29·970	29·068	30th	28·805	22nd	·263	71·8	92·4	+7·1	63·4	+7·7	77·9	+7·4	29·0	97·7	2nd	56·6	6th & 8th.	41·1
		Hoshangabad .	1,006	28·989	−·028	29·987	29·111	30th	28·813	22nd	·298	69·0	88·4	+5·0	63·9	+7·3	76·2	+6·2	24·5	94·4	2nd	58·3	20th	36·1
		Nagpur . .	1,025	28·969	−·015	29·974	29·090	29th	28·842	22nd	·248	72·4	88·8	+4·8	65·3	+5·6	77·1	+5·2	23·5	94·3	1st	60·2	25th	34·6
43	Central Provinces (Central).	Chanda . .	634	29·343	P	29·937?	29·452	29th	29·200	23rd	·252	73·6	91·1†	+6·4†	64·3	+5·2	78·1†	+5·8	26·8	94·9	3 days	55·6	19th	39·3
		Seoni . .	2,033	27·970	P	29·985	28·082	29th	27·793	22nd	·289	69·9	84·9	+4·3	60·3	+5·2	72·6	+4·8	24·6	90·0	3 days	55·0	18th & 19th.	35·0
		Jubbulpore .	1,327	28·673	−·021	29·997	28·777	30th	28·517	22nd	·260	68·1	86·2	+5·4	59·2	+6·9	72·8	+6·2	27·0	93·5	1st & 2nd,	53·9	6th & 20th.	39·6
		Saugor . .	1,807	28·173?	−·028?	29·968?	28·323	29th	28·023	22nd	·300	70·2	85·7	+5·0	63·3?	+7·3?	74·5	+6·2	22·4	92·3	1st	58·1	26th	34·2
49	Central India .	Sutna . .	1,040	28·958	−·027	29·993	29·052	29th	28·773	22nd	·279	68·4	85·3	+5·2	59·9	+7·1	72·6	+6·2	25·4	92·4	1st	54·3	5th	38·1
44	Central Provinces (East).	Raipur . .	970	29·027	−·015	29·975	29·114	29th	28·884	22nd	·230	70·6	87·3	+5·2	65·0	+4·8	76·2	+5·0	22·3	94·4	1st	58·3	18th & 19th,	36·1
		Sambalpur .	486	29·533	−·018	29·984	29·627	29th	29·404	23rd	·223	71·3	86·7	+3·5	64·2	P	75·5	P	22·5	93·0	1st	58·2	18th	34·8
39	Hyderabad (North).	Aurangabad .	P	28·138	P	?	28·203	30th	28·030	22nd	·173	76·9	91·9	P	65·0*	P	78·4*	P	26·9	96·1	6th	60·3	18th	35·8
		Indur . .	P				Not recorded.					75·6	88·4	P	65·3	P	76·9	P	23·1	93·6	5th	57·3	18th	36·3
		Bidar . .	P	27·828	P	?	27·929	30th	27·711	23rd	·218	75·5	85·5	P	67·9	P	76·7	P	17·6	90·3	5th	63·3	18th	27·0
53	Hyderabad (South).	Gulbarga .	1,502	28·472	P	29·941	28·576	30th	28·362	23rd	·214	74·9	90·2	P	66·8	P	78·5	P	23·4	95·1	4th	58·7	16th	36·4
		Raichur .	1,309	28·663	P	29·936	28·781	30th	28·569	23rd	·212	75·9	88·8	P	71·1	P	80·0	P	17·7	93·1	3 days	67·6	16th	25·5
		Hyderabad (Deccan).	1,690	28·297	+·008	29·930	28·400	30th	28·175	23rd	·225	72·4	86·5	+3·6	66·5	+4·4	76·5	+4·0	20·0	92·4	6th & 7th	60·7	16th	31·7
		Secunderabad .	1,787	28·206	P	29·966	28·304	30th	28·082	23rd	·222	71·9	87·2	P	66·5	P	76·9	P	20·7	93·6	2nd	60·5	16th	33·1
		Khamamet .	373	29·625	P	29·949	29·726	29th	29·493	23rd	·233	77·0	90·3	P	68·9	P	79·6	P	21·4	95·5	2nd	63·2	17th	32·3
	X.—West Coast . .		...	...	−·010	...	...	...	...	...	...	...	88·7	+2·1	74·4	+2·2	81·6	+2·2	14·3	...	...	...	...	23·5
37	Konkan .	Bombay .	37	29·933	−·020	29·911	30·040	30th	29·837	20th	·203	78·9	88·2	+1·7	75·4	+2·3	81·8	+2·0	12·8	93·0	13th & 19th.	66·0	24th	27·0
		Ratnagiri .	110	29·843	0	29·892	29·944	30th	29·777	22nd	·167	80·7	92·6	+2·2	73·7	+3·8	83·2	+3·0	18·9	98·8	17th	64·9	24th	33·9
		Mormugao .	60	29·901	P	29·896	29·997	30th	29·830	18th	·167	78·3	90·0	P	75·4	P	82·7	P	14·6	93·0	5 days	69·4	24th	23·6
		Goa . .	199	29·751	−·004	29·888	29·838	30th	29·679	18th	·159	79·1	88·3	P	74·0	P	81·2	P	14·3	91·0	10 days	70·0	13th & 24th.	21·0
		Karwar . .	44	29·914	+·001	29·890	30·010	30th	29·840	18th	·170	74·6	89·7	+2·8	71·5	+2·0	80·6	+2·4	18·2	93·8	17th & 19th,	65·5	24th	28·3
33	Malabar . .	Cochin . .	11	29·926	−·018	29·864	29·998	30th	29·865	13th	·133	79·4	88·5	+1·6	75·6	+1·4	82·1	+1·5	12·9	92·3	3 days	72·7	23rd	19·6
		Calicut . .	27	29·909	−·019	29·865	29·986	30th	29·831	15th	·155	79·5	88·7	+1·6	74·9	+1·8	81·8	+1·7	13·8	92·3	9th	71·5	10th	20·8
		Mangalore .	65	29·883	−·010	29·880	29·967	30th	29·787	18th	·180	80·7	90·1	+2·9	74·9	+2·1	82·5	+2·5	15·2	94·8	9th	70·9	25th	23·9
		Trivandrum .	198	29·737	P	29·868	29·828	30th	29·673	12th & 22nd.	·155	77·5	82·6	P	74·6	P	78·6	P	8·0	85·5	9th	72·0	15th	13·5
	XI.—South India . .		...	...	−·001	...	...	...	...	...	...	...	86·0	+2·1	70·6	+2·2	78·3	+2·2	15·4	...	...	...	...	24·3
57	Madras (South) .	Pamban . .	37	29·901	P	29·865	29·993	30th	29·814	22nd	·179	80·3	84·5	P	76·7	P	80·6	P	7·8	88·3	3rd & 29th.	73·7	17th	14·6
		Tinnevelly .	168	29·779	P	29·878	29·872	30th	29·652	14th	·220	78·5	87·3	P	74·8	P	81·1	P	12·5	93·2	29th	70·9	14th & 15th.	22·3
		Madura . .	447	29·493	−·009	29·880	29·594	30th	29·393	23rd	·201	78·4	87·5	+0·2	73·8	+1·5	80·7	+0·9	13·7	91·4	1st & 3rd.	68·6	6th.	22·8

* Mean of 29 days.
† " " 16 "

I—*continued.*

in India, Burma, etc., in November 1896—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 1896.	Normal rainfall for period from 1st October to 30th November.	Variation from normal of period from 1st October to 30th November.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·38	0·85	+0·49	...	...	...	...	IX.—Deccan.		
4	...	1	11	11	1	...	1	1	10·7	11·7	− 9	63	·489	4·0	1	2·73	− 1·73	0·90	2·11	− 1·21	3·40	8·50	− 5·10	0·82	Belgaum	Bombay (Deccan).	38
7	...	1	10	10	1	...	1	...	9·9	7·7	+ 29	58	·498	4·7	4	1·73	+ 2·27	6·76	1·15	+ 5·61	7·20	6·25	+ 0·95	5·03	Sholapur.		
6	...	2	10	7	...	3	1	1	7·7	5·8	+ 33	58	·469	3·1	1	2·64	− 2·64	1·04	1·31	− 0·27	1·19	6·11	− 4·92	0·96	Poona.		
2	...	...	13	13	1	...	...	...	5·5	?	?	78	·660	3·3	3	2·20	+ 0·80	1·57	?	?	?	?	?	0·91	Bijapur.		
3	4	2	2	3	1	1	4	10	7·4	4·0	+ 85	72	·614	3·5	0	1·75	− 1·75	0·10	0·64	− 0·54	0·20	3·48	−3·28	0·09	Malegaon.	Khandesh.	40
10	2	2	3	7	4	2	...	...	10·1	?	?	72	·603	3·2	1	?	?	1·23	?	?	1·29	?	?	1·18	Ahmednagar.		
2	...	11	12	2	1	...	1	1	4·8	3·4	+ 41	53	·445	2·6	0	1·18	− 1·18	0·04	0·75	− 0·71	0·04	4·25	−4·21	0·02	Akola	Berar.	41
...	1	7	15	3	3	1	...	...	4·8	3·0	+ 60	58	·483	2·6	2	1·27	+ 0·73	1·51	0·62	+ 0·89	1·69	3·50	−1·81	0·92	Amraoti.		
10	1	5	7	5	...	...	1	1	3·6	2·6	+ 38	51	·397	2·4	0	1·09	− 1·09	0	0·31	− 0·31	0	2·04	− 2·04	0	Khandwa	Central Provinces (West).	42
4	...	16	8	...	...	1	...	1	1·9	1·9	0	56	·402	3·0	0	0·91	− 0·91	0·01	0·61	− 0·60	0·01	2·43	− 2·42	0·01	Hoshangabad.		
15	5	6	2	1	...	...	1	...	4·1	3·0	+ 37	66	·517	3·6	2	1·09	+ 0·91	0·57	0·90	− 0·33	0·57	3·85	− 3·28	0·37	Nagpur.		
3	4	8	8	4	1	1	...	1	1·5	1·8	− 17	69	·575	3·1	2	?	?	2·68	1·12	+ 1·56	2·68	3·36	− 0·68	2·20	Chanda	Central Provinces (Central).	43
...	5	8	3	3	3	2	2	4	2·1	2·6	− 19	64	·477	2·3	2	0·82	+ 1·18	0·97	0·60	+ 0·37	0·97	2·96	− 1·99	0·55	Seoni.		
12	2	2	...	5	7	1	...	1	1·5	1·8	− 17	66	·456	3·3	1	1·27	− 0·27	0·31	0·50	− 0·19	0·31	2·57	− 2·26	0·30	Jubbulpore.		
...	2	3	7	12	5	1	...	...	4·3	2·3	+ 87	47	·340	3·7	0	0·55	− 0·55	0·05	0·45	− 0·40	0·05	1·90	−1·85	0·05	Saugor.		
8	10	4	4	...	1	...	...	3	2·8	3·2	− 13	55	·378	3·0	1	0·73	+ 0·27	0·22	0·30	− 0·08	0·22	2·67	− 2·45	0·22	Sutna	Central India	49
19	1	2	1	3	2	1	1	...	3·0	3·3	− 9	65	·488	2·4	2	1·82	+ 0·18	1·74	0·52	+ 1·22	1·74	2·81	− 1·07	1·23	Raipur	Central Provinces (East).	11
...	13	10	1	...	1	...	1	4	2·9	1·4	+107	74	·568	2·2	1	?	?	0·73	0·65	+ 0·08	0·73	2·69	− 1·96	0·73	Sambalpur.		
15	...	2	4	7	1	1	...	...	4·1	?	?	52	·471	2·9	0	?	?	0·03	0·61	− 0·58	0·32	3·57	− 3·25	0·03	Aurangabad.	Hyderabad (North).	39
18	...	...	4	4	4	...	...	...	3·5	?	?	76	·667	4·1	2	?	?	1·70	1·06	+ 0·64	1·70	3·69	− 1·99	1·53	Indur.		
...	...	1	13	10	2	4	...	...	7·0	?	?	68	·590	2·7	1	?	?	5·45	1·15	+ 4·30	6·08	4·80	+ 1·28	5·45	Bidar.		
8	...	2	11	8	1	...	...	...	9·2	?	?	61	·516	4·7	1	?	?	0·72	0·64	+ 0·08	0·96	3·70	− 2·74	0·57	Gulbarga	Hyderabad (South).	53
...	...	3	21	4	2	...	...	...	7·8	?	?	74	·652	3·1	3	?	?	2·21	?	?	2·21	?	?	1·75	Raichur.		
21	...	...	1	8	...	...	...	...	3·5	?	?	74	·591	4·2	5	?	?	2·49	1·76	+ 0·73	2·60	4·94	− 2·24	1·22	Hyderabad (Deccan).		
10	...	...	19	1	...	...	...	...	4·9	3·5	+ 40	74	·573	4·0	4	?	?	1·87	?	?	1·91	?	?	1·10	Secunderabad.		
23	3	...	2	2	...	...	...	...	4·6	?	?	76	·715	1·7	4	?	?	0·85	?	?	1·05	?	?	0·30	Khamamet.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·14	3·30	+0·23	...	...	...	...	X.—West Coast.		
...	5	13	6	2	...	1	1	2	9·4	9·9	− 5	73	·723	3·6	3	1·09	+ 1·91	0·53	0·66	− 0·13	0·53	3·13	− 2·60	0·23	Bombay	Konkan.	37
13	1	4	11	...	...	...	...	1	4·4	9·0	− 51	62	·641	2·6	1	1·18	− 0·18	0·22	0·50	− 0·28	0·44	4·78	− 4·34	0·19	Ratnagiri.		
...	2	6	17	5	...	...	...	...	8·1	?	?	77	·762	2·3	0	?	?	0·04	?	?	0·63	?	?	0·04	Mormugao.		
...	1	10	14	...	1	3	...	1	?	?	?	67	·665	3·7	0	?	?	0	1·45	− 1·45	1·53	7·42	− 5·89	0	Goa.		
5	3	7	13	2	...	...	...	...	3·5	?	?	84	·714	3·3	0	3·82	− 3·82	0·06	2·63	− 2·57	2·54	10·31	− 7·77	0·02	Karwar.		
4	11	12	1	1	1	...	...	...	4·0	?	?	82	·832	5·2	10	10·09	− 0·09	6·54	6·77	− 0·23	16·92	20·78	− 3·86	1·52	Cochin	Malabar.	33
2	1	7	14	4	...	...	...	2	10·6	?	?	82	·815	4·3	5	8·44	− 3·44	7·48	5·06	+ 2·42	13·84	15·23	− 1·39	4·39	Calicut.		
4	...	1	14	10	1	...	...	...	2·4	3·0	− 20	76	·779	3·9	8	5·10	+ 2·90	2·36	3·09	− 0·73	5·92	10·91	− 4·99	0·70	Mangalore.		
13	5	5	1	3	...	...	1	2	3·6	?	?	85	·810	7·1	13	?	?	11·07	6·24	+ 4·83	14·99	17·00	− 2·01	3·08	Trivandrum		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9·01	5·94	+2·11	...	...	...	...	XI.—South India.		
...	9	11	4	1	1	1	...	3	9·5	?	?	86	·892	5·1	19	8·00	+11·00	20·97	9·55	+11·42	38·41	16·11	+18·00	5·42	Pamban.	Madras (South).	57
...	9	3	1	...	...	1	4	12	3·2	?	?	84	·817	7·0	13	10·50	+ 2·50	17·66	?	?	21·63	?	?	4·34	Tinnevelly.		
2	14	7	...	...	...	...	...	7	3·7	3·8	− 3	77	·761	5·6	13	7·09	+ 5·91	8·68	4·66	+4·02	17·90	12·87	+ 5·03	1·61	Madura.		

Table

Abstract of Observations taken at 8 A.M. at 209 Stations

Number of Districts.	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.
34	Madras (South Central).	Salem	940	29·040	+·001	29·929	29·134	30th	28·933	22nd	·201	77·4	89·4	+2·5	71·1	+3·1	80·3	+2·8	18·3	94·4	3 days	65·9	6th	28·5
		Coimbatore	1,348	28·610	+·002	29·915	28·676	30th	28·512	22nd	·164	75·5	86·3	+0·4	69·8	+0·7	78·1	+0·6	16·5	91·4	3rd & 12th.	66·6	9th	24·8
35	Coorg	Mercara	3,781	26·259	+·008	?	26·334	30th	26·184	22nd	·150	66·6	76·5	+1·5	62·6	+2·3	69·6	+1·9	13·9	79·5	4th	58·2	24th	21·3
36	Mysore	Chitaldroog	2,405	27·576	?	29·914	27·669	30th	27·495	22nd	·174	73·8	85·3	?	66·9	?	76·1	?	18·4	90·6	2nd & 3rd.	62·9	8th	27·7
		Bangalore	3,021	26·977	−·008	29·918	27·067	30th	26·881	22nd	·186	69·3	81·8	+3·3	64·2	+2·2	73·0	+2·8	17·6	87·3	2nd & 4th.	60·9	8th	26·4
		Hassan	3,091	26·916	?	29·923	27·004	30th	26·835	22nd	·169	71·7	82·4	?	61·9	?	72·2	?	20·5	86·3	2nd	55·9	4th	30·4
		Mysore	2,518	27·468	?	29·917	27·561	30th	27·384	22nd	·177	72·8	84·3	?	66·1	?	75·2	?	18·2	87·9	4th & 5th.	61·4	9th	26·5
56	Madras (East Coast, South).	Negapatam	31	29·912	−·010	29·873	30·011	30th	29·814	23rd	·197	78·9	83·6	−0·1	75·5	+1·6	79·6	+0·8	8·1	87·7	5th	71·9	21st	15·8
		Cuddalore	12	29·939	?	29·880	30·045	30th	29·837	23rd	·208	76·8	83·8	?	73·1	?	78·5	?	10·7	88·3	7th	70·2	5th & 6th.	18·1
		Trichinopoly	255	29·691	−·015	29·881	29·789	30th	29·585	23rd	·204	78·3	87·5	+0·8	73·8	+2·1	80·7	+1·5	13·7	93·0	10th	68·4	6th	24·6
		Madras	22	29·947	−·003	29·900	30·057	30th	29·852	23rd	·205	77·7	84·2	−0·8	73·1	+0·8	78·6	0	11·1	90·0	10th	68·5	27th	21·5
55	Madras (East Coast, Central).	Nellore	71	29·904	?	29·910	30·008	30th	29·780	23rd	·228	77·9	86·5	?	72·9	?	79·7	?	13·6	91·7	4 days	70·6	3rd	21·1
		Masulipatam	15	29·985	+·015	29·935	30·082	29th	29·865	23rd	·217	77·9	86·4	+1·7	72·5	+1·1	79·5	+1·4	13·9	91·1	8th	69·1	4th	22·0
54	Madras (Central)	Cuddapah	433	29·547	?	29·924	29·650	30th	29·457	22nd	·193	78·8	90·3	+3·7	72·3	+3·0	81·3	+3·4	18·0	97·1	2nd	68·5	30th	28·6
		Kurnool	923	29·052	?	29·933	29·156	30th	28·944	23rd	·212	75·1	90·8	+4·2	67·9	+3·7	79·4	+4·0	22·9	96·7	2nd	63·3	5th	33·4
		Bellary	1,475	28·500	−·002	29·837	28·607	30th	28·402	23rd	·205	75·6	90·5	+4·2	69·1	+3·4	79·8	+3·8	21·4	96·2	1st & 2nd.	55·7	15th	30·5
52	Madras (East Coast, North).	Rajahmundry	112			Not recorded.						77·8	90·2	+3·6	72·1	+3·1	81·1	+3·4	18·1	96·0	8th	68·2	5th	27·8
		Cocanada	26	29·970	+·015	29·932	30·070	29th	29·868	23rd	·202	78·8	85·1	+3·3	72·9	+2·9	79·0	+3·1	12·2	88·1	6th	68·5	3 days	19·6
		Vizagapatam	31	29·962	−·003	29·931	30·056	29th	29·834	23rd	·222	79·6	87·7	+2·7	72·5	+2·0	80·1	+2·4	15·2	91·2	2nd	65·4	4th	25·8
		Gopalpur	21	29·998	?	29·959	30·095	29th	29·889	23rd	·206	76·3	86·4	?	68·4	?	77·4	?	18·0	89·2	5th & 6th.	65·1	4 days	24·1
	XII.—Hill Stations.																							
48	Baluchistan	Kachh	?	*23·940 (a)	?	?	24·100	1st	23·810	22nd & 23rd.	·290	47·5*	(b)58·5*	?	?	?	?	?	?	65·0	4th	?	...	?
		Pishin	?			Not recorded.						?	66·6	?	29·4	?	48·0	?	37·2	78·6	7th	16·9	23rd	61·7
		Quetta	5,502	24·743	−·022	?	24·855	30th	24·632	22nd	·223	44·5 (b)	63·9	+0·1	35·0 (b)	+4·1	49·4 (b)	+2·1	28·9	73·2	5th	24·8	29th	48·4
		Kalat	?			Not recorded.						43·0*	63·9*	?	28·4*	?	46·1*	?	35·5	77·7	4th	14·4	29th	63·3
		Chaman	4,311	25·813	?	?	25·988	30th	25·709	23rd	·279	52·2	65·4	?	44·0	?	54·7	?	21·4	77·1	5th	29·6	28th	47·5
30	Punjab	Leh	11,503	19·778	?	?	19·923	3rd	19·525	23rd	·398	26·7	45·7	?	20·8	?	33·3	?	24·9	54·7	5th	13·5	25th	41·2
		Srinagar	5,204	25·020	?	?	25·130	7th	24·829	23rd	·301	37·7	58·7	?	32·2	?	45·5	?	26·5	63·9	3rd	26·6	19th	37·3
		Skardu (Kashmir).	?	23·039	?	?	23·208	13th	22·767	23rd	·441	34·2	51·4	?	30·8	?	41·1	?	20·6	58·0	10th	24·2	19th	33·8
		Dras	?	20·854	?	?	21·061	4th	20·685	23rd	·376	21·2	38·9	?	16·1	?	27·5	?	22·8	58·3	3rd	−5·0	30th	63·3
		Gilgit	?	24·821 (a)	?	?	24·970	2nd	24·630	23rd	·340	46·0	61·6	?	42·2	?	51·9	?	19·4	69·0	10th	37·7	4 days	31·3
		Samana	?	23·762	?	?	23·880	1st	23·530	28th	·350	?	59·7	?	40·4	?	50·0	?	19·3	68·0	14th & 15th.	29·0	30th	39·0
		Cherat	?	25·800	?	?	25·896	30th	25·679	23rd	·217	55·9	66·1	?	49·0	?	57·6	?	17·1	73·8	16th	38·6	29th	35·2
		Murree	6,344	23·931?	+·008?	?	24·009?	7th	23·791?	23rd	·218?	49·8?	61·1?	+0·1?	43·9?	−1·1?	52·5?	−0·5?	17·2?	71·6?	27th	36·0?	29th	35·6?
		Poo	?			Not recorded.						?	56·4	?	35·2	?	45·8	?	21·2	63·3	20th	30·5	27th	32·8
		Simla	7,224	23·187	+·003	?	23·323	29th	23·048	23rd	·275	48·4	55·7	+0·1	44·6	+0·7	50·2	+0·4	11·1	60·4	14th	38·4	25th	22·0
25	North-Western Provinces.	Chakrata	6,977	23·396	+·021	?	23·529	29th	23·267	22nd	·262	48·6	60·5	+1·1	44·5	+1·1	52·5	+1·1	16·0	64·7	16th	39·7	25th	25·0
		Mussooree	6,705	23·598	?	?	23·734	29th	23·457	22nd	·277	50·8	57·4	−0·3	45·4	+0·6	51·4	−0·2	12·0	61·2	4th & 5th.	40·0	25th	21·2
		Ranikhet	6,069	24·194	+·025	?	24·315	29th	24·067	22nd & 23rd.	·248	52·1	62·2	−0·2	48·5	+1·8	55·4	+0·8	13·7	65·6	3 days	42·5	24th	23·1
13	Bengal	Yatung	10,480?			Not recorded.						?	52·2	?	30·9	?	41·5	?	21·3	62·0	1st & 29th.	25·9	18th	36·1
		Darjeeling	7,421	23·047	−·013	?	23·132	4th	22·938	23rd	·194	47·4	53·5	−1·0	41·6	0	47·6	−0·5	11·9	59·0	1st	30·8	29th	28·2
		Gantok	5,660	24·616	?	?	24·696	17th	24·503	23rd	·193	54·3	63·0	?	39·6	?	51·3	?	23·4	67·6	6th	35·4	15th	32·2

(a) Aneroid uncorrected. (b) Uncorrected. * Mean of 29 days.

I—*continued.*

in India, Burma, etc., in November, 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of Districts.
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 Oct. to 30th Nov. 1896.	Normal rainfall for period from 1st Oct. to 30th Nov.	Variation from normal of period from 1st Oct. to 30th Nov.				
6	...	6	8	1	...	4	3	2	4·7	3·3	+ 42	79	·744	6·2	8	7·36	+ 0·64	4·98	3·96	+ 1·02	8·53	10·85	− 2·32	2·00	Salem	Madras (South Central).	34
...	3	...	22	...	...	...	5	...	2·0	2·6	− 23	87	·772	6·4	10	8·09	+ 2·91	3·04	3·72	− 0·68	8·65	9·66	− 1·01	0·43	Coimbatore.		
8	...	12	8	1	...	...	...	1	5·8	3·7	+ 57	85	·558	6·0	7	7·20	− 0·20	4·96	3·34	+ 1·62	8·25	12·94	− 4·69	1·68	Mercara	Coorg.	85
1	...	5	16	6	...	1	1	...	9·2	?	?	69	·573	2·0	4	?	?	1·98	?	?	2·88	?	?	0·96	Chitaldroog	Mysore.	36
...	3	10	14	1	1	...	...	...	7·7	3·7	+109	79	·542	6·7	5	6·09	− 1·09	5·48	3·59	+ 1·89	7·71	10·74	− 3·03	3·29	Bangalore.		
1	...	9	13	4	1	...	1	1	3·6	?	?	74	·572	6·5	5	?	?	4·24	?	?	6·83	?	?	1·47	Hassan.		
2	3	14	9	1	...	...	1	...	8·9	?	?	75	·598	7·3	4	?	?	4·10	?	?	6·98	?	?	2·85	Mysore.		
2	4	7	...	...	1	...	5	11	10·5	5·2	+102	86	·844	7·7	17	13·09	+ 3·91	23·39	15·95	+ 7·44	38·24	26·54	+11·70	5·54	Negapatam	Madras (East Coast, South).	56
...	15	...	...	1	...	...	3	11	2·0	?	?	90	·834	6·5	18	11·80	+ 6·20	24·41	?	?	28·87	?	?	4·42	Cuddalore.		
16	6	8	...	...	...	...	...	...	3·2	4·2	− 24	82	·794	6·9	15	8·45	+ 6·55	9·26	5·37	+ 3·89	13·28	12·86	+ 0·42	1·44	Trichinopoly.		
2	12	7	1	...	...	1	...	7	5·2*	6·8	− 24	89	·847	7·0	19	13·00	+ 6·00	32·75	13·21	+19·54	35·72	24·21	+11·51	5·26	Madras.		
9	10	3	...	...	...	...	1	7	4·6	?	?	88	·840	8·3	12	9·40	+ 2·60	18·15	?	?	19·92	?	?	4·20	Nellore	Madras (East Coast, Central).	55
...	15	15	...	...	...	...	...	...	7·6	5·5	+ 38	86	·818	4·7	7	5·91	+ 1·09	10·09	7·06	+ 3·03	10·39	16·40	− 6·01	2·16	Masulipatam		
...	1	20	2	1	1	2	...	3	?	?	?	76	·743	5·5	8	7·00	+ 1·00	4·31	4·67	− 0·36	4·31	11·00	− 6·69	1·41	Cuddapah	Madras (Central)	54
29	...	...	...	1	...	...	...	...	?	?	?	71	·612	4·5	2	3·17	− 1·17	1·39	1·15	+ 0·24	1·82	6·18	− 4·36	0·87	Kurnool.		
16	1	...	3	5	3	...	...	2	3·5	3·3	+ 6	62	·545	6·0	2	3·82	− 1·82	2·76	2·13	+ 0·63	3·94	6·42	− 2·48	2·58	Bellary.		
5	14	11	...	...	...	...	...	...	?	?	?	67	·640	4·4	3	2·80	+ 0·20	1·62	3·35	− 1·73	1·62	9·31	− 7·69	1·04	Rajahmundry	Madras (East Coast, North).	52
...	9	18	1	...	...	...	...	2	11·0	?	?	71	·691	4·1	3	4·30	− 1·30	3·01	7·41	− 4·40	3·01	17·77	−14·76	1·11	Cocanada.		
23	2	4	...	...	...	...	...	1	2·1	2·4	− 12	68	·691	4·5	0	7·18	− 7·18	0·08	6·90	− 6·82	0·08	17·44	−17·36	0·08	Vizagapatam.		
...	16	...	...	...	...	...	...	14	9·2	7·0	+ 31	68	·602	1·3	0	4·33	− 4·33	0·03	4·99	− 4·96	0·03	14·34	−14·31	0·03	Gopalpur.		
																									XII.—Hill Stations.		
16	2	...	1	2	6	...	...	2	3·4*	?	?	53*	·174*	?	3	?	?	0·90	?	?	0·90	?	?	0·55	Kachh	Baluchistan.	48
			Not	rec	orde	d.			?	?	?	?	?	?	0	?	?	0	?	?	0	?	?	0	Pishin.		
28	...	...	...	...	1	...	...	1	2·2	2·7	− 19	63	·185	2·9	3	0·09	+ 2·91	0·94	0·27	+ 0·67	0·97	0·34	+ 0·63	0·52	Quetta.		
...	1	...	...	...	25	1	...	2	?	?	?	63*	·175*	1·2*	1	?	?	0·27	?	?	0·40	?	?	0·27	Kalat.		
...	2	2	8	12	4	2	...	...	5·6	?	?	43	·183	3·2	5	?	?	1·21	?	?	1·21	?	?	0·37	Chaman.		
...	2	22	1	2	1	1	...	1	2·1	?	?	67	·097	4·6	0	?	?	0·01	?	?	0·05	?	?	0·01	Leh	Punjab.	30
6	2	1	5	8	5	1	1	1	4·3	?	?	93	·212	4·0	2	?	?	1·10	?	?	4·44	?	?	0·57	Srinagar.		
13	...	9	1	2	...	...	5	...	3·3	?	?	96	·191	5·2	2	?	?	0·52	?	?	0·55	?	?	0·36	Skardu (Kashmir).		
28	...	...	...	...	...	...	1	1	1·2	?	?	85	·103	4·3	3	?	?	2·16	?	?	5·29	?	?	1·80	Dras.		
			Not	rec	orde	d.			?	?	?	86	·272	5·2	0	?	?	0	?	?	0·11	?	?	0	Gilgit.		
			Not	rec	orde	d.			?	?	?	?	?	3·9	3	?	?	1·83	?	?	1·84	?	?	1·00	Samana.		
6	13	...	...	2	1	...	2	6	12·2	?	?	41	·178	2·6	2	?	?	0·55	?	?	0·70	?	?	0·42	Cherat.		
5	4	2	1	5	...	1	4	3	6·6	5·1	+ 29	43?	·149?	3·9	2	0·73	+ 1·27	1·52	1·08	+ 0·44	1·66	2·73	− 1·07	1·02	Murree.		
17	...	...	1	4	4	1	3	...	?	?	?	?	?	3·6	3	?	?	0·79	?	?	1·78	?	?	0·38	Poo.		
13	1	7	...	2	5	...	...	...	3·3	1·9	+ 74	51	·165	3·9	2	1·18	+ 0·82	0·72	0·54	+ 0·18	1·45	1·76	− 0·31	0·40	Simla.‡		
14	11	4	8	...	...	...	...	1	8·0	4·5	+ 78	50	·169	2·6	2	?	?	0·83	0·59	+ 0·24	1·78	1·43	+ 0·35	0·55	Chakrata	North-Western Provinces.	25
...	3	3	3	5	1	...	2	8	?	?	?	55	·203	2·5	2	?	?	0·81	0·76	+ 0·05	1·01	1·75	− 0·74	0·58	Mussooree.		
18	2	2	3	2	1	1	1	...	2·3	1·2	+ 92	61	·234	2·4	2	1·00	+ 1·00	0·44	0·33	+ 0·11	0·62	1·81	− 1·19	0·25	Ranikhet.		
			Not	rec	orde	d.			?	?	?	?	?	?	0	?	?	0·04	?	?	2·18	?	?	0·04	Yatung	Bengal.	13
6	1	5	8	5	...	3	1	1	3·1	1·7	+ 82	79	·257	2·9	1	0·61	+ 0·39	0·33	0·20	+ 0·13	0·96	6·03	− 5·07	0·31	Darjeeling.		
4	3	2	5	...	1	5	4	3	0·6†	?	?	72	·308	0	1	?	?	0·30	?	?	11·06	?	?	0·20	Gantok.§		

† Mean of 28 days.

‡ Wind observations of 29 days.
§ do. 27 ,,

Table

Abstract of Observations taken at 8 A.M. at 209 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 of month.	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	26·128	−·035	P	26·258	30th	25·933	21st	·325	66·7	73·6	+0·3	59·9	+2·8	66·8	+1·6	13·7	80·7	5th & 6th	47·0	24th	33·7
	Pachmarhi	3,528	26·549	0	P	26·668	3)th	26·394	22nd	·274	68·5	78·0	+6·0	55·8	+4·8	67·0	+5·4	22·2	83·2	1st & 2nd	49·7	19th	33·5
South India	Wellington	6,200	24·257	−·018	P	24·355	30th	24·184	22nd	·171	60·6	68·8	+2·0	53·8	+1·3	61·3	+1·7	15·0	71·2	4 days	45·7	9th	25·5
XIII.—Extra India.																							
Ceylon	Trincomalee	12	29·910	P	29·848	29·989	29th	29·786	13th	·203	78·6	85·4	P	75·6	P	80·5	P	9·8	88·0	4 days	73·5	8th	14·5
	Colombo	40	29·894	−·031	29·860	29·970	30th	29·801	13th	·169	80·0	87·2	P	75·1	P	81·2	P	12·1	91·0	6th	72·0	23rd	19·0
Persia	Meshed	3,104			Not recorded.						36·0	P	P	32·3	P	P	P	P	P	P	23·0	26th & 28th	P
	Risht‡	?			Not recorded.						52·7	61·6	?	48·1	?	51·8	P	13·5	79·5	15th	36·0	27th	43·5
	Teheran*	P	†26·163	P	P	26·400	19th	25·955	6th	·445	44·8	57·3	?	37·9	P	47·6	P	19·4	70·1	6th	27·7	28th	42·4
		P	†25·612	P	P	25·830	19th	25·440	6ih	·390													
	Ispahan	P	†24·490	P		24·690	10th	24·230	24th	·460	41·1	59·5	?	32·3	?	45·9	?	27·2	72·0	7th	20·5	22nd	51·5
		P	†24·784	P	P	24·970	10th	24·550	24th	·420													
	Bushire	14	30·067	−·001	30·040	30·202	30th	29·835	24th	·367	66·4	74·3	−4·7	60·5	−1·6	67·4	−3·2	13·8	80·6	1st	51·3	28th	29·3
	Jask	P	30·053	P	30·005	30·274	30th	29·938	6th	·336	71·6	80·8	P	67·6*	P	74·1*	P	13·2	91·3	12th	55·3	29th	36·0
Arabia	Muscat	20	30·050	P	30·018	30·265	30th	29·950	24th	·315	76·7	78·7	P	74·8	P	76·7	P	3·9	83·4	1st	67·1	29th	16·3
	Baghdad	220?	29·960	−·015	30·170	30·110	27th	29·816	23rd	·294	51·9	73·3	−3·3	47·9	−2·0	60·6	−2·7	25·4	82·5	6th	38·9	28th	43·6
	Aden	94	29·924	−·034	29·950	30·021	30th	29·875	3rd	·146	78·7	84·5	−1·7	75·2	+1·9	79·9	+0·1	9·3	87·3	4 days	71·9	24th	15·4
	Perim	P	29·804	P	P	29·913	29th	29·756	3rd	·157	81·1	86·9	P	77·4	P	82·2	P	9·5	88·7	1st	74·6	24th	14·1
Afghanistan	Kabul	P			Not recorded.						37·7	67·2	P	33·5	P	50·3	P	33·7	85·1	19th	22·4	30th	62·7
Central Asia	Kashgar	P	25·754	P	P	25·930	1st	25·470	23rd	·460	34·0	56·2	P	30·5	P	43·4	P	25·7	65·5	5th	23·1	30th	42·4
Africa	Zanzibar	23	29·956	P	29·955	29·996	10th	29·880	13th	·116	78·5	81·9	P	76·3	P	79·1	P	5·6	85·6	3rd	73·6	1st	12·0

* Mean of 29 days. † Aneroid uncorrected. ‡ 9 A.M. observations.

I—*concluded.*

in India, Burma, etc., in November, 1896—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 Oct. to 30th November 1896.	Normal rainfall for period from 1st Oct. to 30th November.	Variation from normal of period from 1st Oct. to 30th November.	Heaviest rainfall during month.		
9	5	11	1	...	2	1	1	...	4·8	3·7	+ 30	53	·337	3·4	2	0·18	+1·82	2·71	0·27	+ 2·44	2·71	0·98	+1·73	1·72	Mount Abu	Central India.
26	...	...	...	...	2	2	...	...	4·2	2·5	+ 68	57	·393	3·3	2	1·09	+0·91	0·25	0·71	− 0·46	0·25	3·34	−3·09	0·14	Pachmarhi.	
18	2	6	2	1	...	1	...	...	2·8	2·7	+ 3	80	·424	6·2	12	13·22	−1·22	9·83	8·45	+ 1·38	17·54	20·55	−3·01	3·03	Wellington	South India.
																									XIII.—Extra India.	
12	...	3	...	...	...	15	...	...	2·0	?	?	89	·874	3·8	18	?	?	19·04	12·68	+6·36	23·00	21·09	+1·91	5·08	Trincomalee	Ceylon.
...	2	6	6	11	1	...	3	1	6·9	5·8	+19	84	·861	5·4	18	?	?	20·23	13·25	+6·98	41·44	26·76	+14·68	5·61	Colombo.	
				Not recorded.					?	?	?	78	·165	6·4	3	?	?	0·66	?	?	0·66	?	?	0·22	Meshed .	Persia.
				Not recorded.					?	?	?	72	·284	?	8	?	?	9·15	?	?	23·15	?	?	3·10	Risht.	
16	6	6	1	...	...	...	...	...	2·2¶	?	?	63	·179	4·1	4	?	?	1·21	?	?	1·61	?	?	0·84	Teheran*	
2	1	1	8	4	1	...	6	7	3·2	?	?	77	·198	4·1	2	?	?	0·55	?	?	0·66	?	?	0·10	Ispahan.	
...	1	11	6	12	...	...	...	...	5·9	?	?	68	·443	2·6	3	?	?	0·74	?	?	1·82	?	?	0·31	Bushire.	
2	10	5	4	...	...	...	2	7	8·2	?	?	70	·554	2·7	1	?	?	0·43	?	?	0·45	?	?	0·27	Jask.	
...	1	...	2	3	2	2	9	11	4·4	?	?	67	·640	3·8	3	?	?	3·04	?	?	3·21	?	?	1·91	Muscat .	Arabia.
7	12	1	...	3	2	...	...	5	3·4	?	?	70	·270	0·3	0	?	?	0·10	?	?	0·10	?	?	0·05	Baghdad.	
1	...	6	20	3	...	...	...	...	*11·5	11·6	−1	71	·695	3·9	0	?	?	0	0·21	−0·21	0	0·23	−0·23	0	Aden.	
...	1	3	21	4	...	1	...	...	18·8	?	?	69	·729	1·7	0	?	?	0·04	?	?	0·51	?	?	0·04	Perim.	
...	4	4	10	...	1	3	5	3	?	?	?	78	·177	1·3	4	?	?	1·02	?	?	1·12	?	?	0·50	Kabul .	Afghanistan.
28	...	...	...	...	...	...	...	...	0·4	?	?	61§	·132§	3·8	0	?	?	*Nil*	?	?	0·03	?	?	*Nil*	Kashgar‖ .	Central Asia.
...	3	2	1	6	10	7	1	...	4·4	?	?	87	·844	7·3	20	?	?	13·86	?	?	20·67	?	?	1·96	Zanzibar .	Africa.

§ Mean of 19 days. ‖ Wind observations of 28 days. ¶ Mean of 28 days.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45°Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·891	29·794	·097	29·842	—·001	29·833	88·6	78·9	9·7	90·3	75·9	14·4	86·5	85·4	82·6	+ 2·1	75·4	80·6	79·5	78·5
	Rangoon	...	·951	·835	·116	·893	—·003	·871	86·9	72·1	14·8	89·9	67·0	22·9	81·0	84·1	77·7	— 0·3	70·5	76·1	76·2	74·3
	Diamond Island	...	·944	·841	·103	·892	+·007	·867	85·4	77·3	8·1	88·8	75·0	13·8	83·2	82·9	80·3	+ 1·3	74·2	76·5	75·8	75·5
	Cocos Island	111	·844	·746	·098	·794	?	·837	85·0	77·3	7·7	87·6	73·9	13·7	82·7	81·6	79·9	?	73·4	77·2	76·4	75·6
	Akyab	...	·985	·879	·106	·935	+·010	·898	85·2	68·2	17·0	89·2	61·2	28·0	78·9	82·4	76·4	— 1·7	66·1	73·6	77·1	72·3
Assam.	Silchar	...	·929	·807	·122	·864	—·010	·920	86·0	61·7	24·3	91·3	54·4	36·9	76·6	83·6	72·6	0	60·3	68·7	70·1	66·4
	Sibsagar	...	·730	·591	·139	·660	—·016	·957	77·1	56·7	20·4	79·5	50·3	29·2	68·5	75·6	65·6	— 2·0	56·6	65·6	67·6	63·3
	Dhubri	...	·930	·793	·137	·856	0	·928	79·6	61·8	17·8	84·2	57·7	26·5	71·5	78·4	69·1	— 1·0	60·6	66·8	68·9	65·4
Bengal and Orissa.	Chittagong	...	·928	·815	·113	·870	+·003	·907	85·4	64·1	21·3	90·2	58·2	32·0	79·2	81·7	74·2	+ 0·2	63·3	71·8	71·4	68·8
	Narayangunge	...	·993	·877	·116	·931	—·006	·905	84·3	65·0	19·3	90·9	58·6	32·3	78·5	82·2	74·9	+ 0·4	62·7	70·5	69·6	67·6
	Calcutta (Alipore)	...	30·009	·889	·120	·941	—·008	·908	83·6	64·4	19·2	89·7	58·0	31·7	77·7	82·5	73·7	+ 1·4	63·3	68·9	69·5	67·2
	Saugor Island	...	29·994	·882	·112	·932	—·019	·901	85·0	68·3	16·7	88·7	60·7	28·0	80·4	82·2	75·5	+ 2·1	65·7	72·2	72·0	66·6
	Burdwan	...	·937	·811	·126	·867	—·007	·915	87·5	64·9	22·6	96·4	57·7	38·7	80·1	84·3	75·4	+ 1·9	62·4	69·5	69·1	67·0
	Berhampore	...	·964	·847	·117	·899	—·013	·915	84·2	62·2	22·0	92·7	54·4	38·3	77·8	83·1	73·0	— 0·2	60·1	68·7	69·1	66·0
	False Point	...	30·007	·897	·110	·951	—·022	·914	86·1	66·5	19·6	91·5	60·1	31·4	82·8	82·9	75·1	+ 2·1	65·9	73·1	72·3	70·4
	Cuttack	...	29·941	·819	·122	·879	—·013	·903	88·8	68·6	20·2	94·5	63·0	31·5	80·4	85·9	77·8	+ 3·2	66·1	70·1	70·3	68·8
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	27·996	27·896	·100	27·942	—·015	·913	80·2	60·3	19·9	87·1	54·2	32·9	74·3	77·9	69·4	+ 2·7	55·5	62·2	63·0	60·2
	Patna	...	29·855	29·739	·116	29·792	—·025	·930	83·2	62·2	21·0	92·0	55·4	36·6	77·3	81·0	71·8	+ 1·5	58·5	66·1	66·5	63·7
	Darbhanga	...	·877	·747	·130	·807	—·013	·930	82·5	60·2	22·3	90·1	54·8	35·3	76·0	80·5	70·5	— 0·7	58·8	66·7	67·8	64·4
	Allahabad	...	·728	·608	·120	·658	—·026	·924	87·5	58·5	29·0	96·1	53·4	42·7	79·1	85·0	71·5	+ 4·1	54·4	64·1	64·9	61·1
	Lucknow	...	·676	·561	·115	·611	—·014	·941	86·0	54·7	31·3	90·6	50·4	40·2	76·9	81·6	69·4	+ 2·5	52·5	63·0	63·7	59·7
Upper Sub-Himalayas.	Dehra Dun	...	27·787	27·691	·096	27·728	—·015	·961	75·5	53·2	22·3	80·5	47·2	33·3	67·4	70·8	62·5	+ 0·8	49·3	57·1	58·0	54·8
	Roorkee	...	29·135	29·024	·111	29·068	—·015	·941	79·9	51·3	28·6	85·8	45·7	40·1	70·6	76·9	64·2	+ 0·3	49·8	59·6	61·5	57·0
	Meerut	...	·294	·190	·104	·233	—·013	·956	80·9	54·0	26·9	87·5	49·6	37·9	69·4	76·9	65·9	+ 2·2	51·1	58·6	61·0	56·9
	Lahore	...	·327	·231	·096	·269	—·016	·958	80·5	53·0	27·5	85·6	45·2	40·4	69·1	79·6	65·1	+ 3·1	48·6	58·6	62·8	56·7
	Ludhiana	...	·216	·115	·101	·155	—·010	·955	80·3	53·7	26·6	85·7	49·3	36·4	71·2	77·7	65·2	+ 2·6	50·1	59·5	61·2	56·9
Indus Valley and N.-W. Rajputana.	Peshawar	...	28·954	28·855	·099	28·895	—·009	30·025	75·7	46·9	28·8	85·1	41·9	43·2	65·3	71·5	58·9	+ 0·9	43·0	54·7	57·8	51·8
	Mooltan	...	29·623	29·526	·097	29·565	—·023	29·963	85·1	55·8	29·3	92·3	42·2	50·1	71·7	82·0	68·3	+ 3·2	50·2	58·6	64·2	57·7
	Jacobabad	...	·869	·749	·120	·799	—·016	·947	86·2	56·0	30·2	95·7	39·2	56·5	76·0	83·5	69·0	+ 4·1	50·4	59·9	63·1	57·8
	Kurrachee	...	30·019	·920	·099	·965	—·036	·927	88·6	65·1	23·5	95·3	52·9	42·4	82·4	84·2	76·3	+ 2·5	58·3	67·1	69·9	65·1
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·611	28·507	·104	28·549	—·010	·955	83·6	60·8	22·8	93·4	52·2	41·2	76·5	80·8	70·5	+ 3·0	53·5	60·9	63·8	59·4
	Ajmere	...	·418	·314	·104	·363	—·032	·956	82·8	57·1	25·7	93·4	50·7	42·7	73·4	80·8	68·4	+ 3·8	52·2	60·6	64·8	59·2
	Deesa	...	29·532	29·421	·111	29·469	—·040	·890	91·7	62·1	29·6	99·2	54·1	45·1	83·5	89·1	76·7	+ 3·0	55·6	64·3	66·0	61·9
	Nowgong	...	·273	·161	·112	·210	—·019	·934	82·9	58·1	24·8	88·8	53·0	35·8	76·0	81·2	70·0	+ 3·6	54·2	63·1	65·4	60·9
	Agra	...	·490	·377	·113	·423	—·019	·948	83·9	59·0	24·9	93·0	54·4	38·6	75·3	80·4	70·2	+ 2·5	53·4	62·1	64·3	59·9
Deccan.	Belgaum	...	27·445	27·332	·113	27·383	—·006	·802	86·6	63·7	22·9	90·5	56·9	33·6	78·9	83·8	74·3	+ 3·6	60·0	65·3	65·1	63·5
	Sholapur	...	28·398	28·258	·140	28·326	—·014	·849	90·2	66·7	23·5	96·2	61·6	34·6	81·8	88·5	77·6	+ 4·0	61·0	67·7	69·1	65·9
	Poona	...	·138	·016	·122	·079	—·022	·839	90·8	64·2	26·6	96·7	54·4	42·3	83·1	88·4	77·2	+ 5·0	60·0	65·8	66·6	64·2
	Akola	...	29·052	·926	·126	·985	—·044	·862	92·4	65·4	27·0	97·7	59·0	38·7	84·0	90·6	79·3	+ 7·3	58·8	68·0	68·7	65·2
	Buldana	2,132	27·863	27·752	·111	27·803	—·027	·857	87·5	66·2	21·3	93·0	61·1	31·9	82·1	85·2	77·2	+ 5·2	57·9	64·8	65·2	62·6
	Khandwa	...	28·944	28·822	·122	28·879	—·033	·871	92·4	63·5	28·9	97·7	56·6	41·1	84·7	91·1	77·6	+ 7·5	56·9	66·3	68·2	63·8

II.

Stations in India, Burma, etc., for November, 1896.

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.		
																								%	%						
·834	·968	·932	·911	—·036	85	77	76	79	−5	6·0	6·6	6·3	+1·3	2	5	15	11	19	7	...	...	1	S. 83° E.	N. 63° E.	59	53	145	165	...	...	Port Blair	Burma Coast and Bay Islands.
·730	·839	·801	·790	—·008	92	79	68	80	+1	3·7	4·6	4·2	−0·4	...	14	27	9	2	2	2	1	1	N. 42° E.	N. 60° E.	65	57	31	102	...	...	Rangoon	
·806	·827	·796	·810	+·004	86	73	71	77	−3	4·6	5·1	4·9	+0·5	1	5	26	9	7	1	...	3	8	N. 45° E.	N. 59° E.	55	64	232*	195	...	...	Diamond Island,	
·773	·858	·842	·824	?	82	77	78	79	?	3·2	4·0	3·6	?	...	12	30	12	4	...	...	...	2	N. 47° E.	?	78	?	?	?	8·31	2·92	Cocos Island	
·618	·761	·866	·748	—·008	89	77	78	81	+1	1·7	1·3	1·8	−1·5	...	4	18	7	2	6	1	7	15	N. 9° E.	N. 6° W.	32	29	56	54	...	...	Akyab	
·511	·599	·558	·556	—·063	93	66	49	69	−8	2·5	2·5	2·5	−0·9	49	...	3	4	...	...	1	2	1	N. 45° E.	S. 77° E.	7	30	21*	45	...	...	Silchar	Assam.
·463	·593	·582	·546	—·042	100	86	66	84	0	1·6	1·3	1·5	−3·0	32	...	26	2	...	...	...	...	...	N. 48° E.	N. 62° E.	45	69	48*	39	...	...	Sibsagar	
·519	·596	·580	·565	—·047	93	78	60	77	0	2·1	1·3	1·7	+0·3	8	2	32	14	1	1	2	...	...	N. 59° E.	N. 47° E.	70	46	129*	118	...	...	Dhubri	
·575	·686	·634	·632	—·057	96	69	58	74	−5	1·7	2·4	2·1	−0·7	...	7	19	2	1	...	2	10	19	N. 15° W.	N. 20° W.	55	53	46	73	...	...	Chittagong	Bengal and Orissa.
·544	·643	·558	·582	—·043	87	66	51	68	−4	1·2	2·8	2·0	−0·2	...	12	9	7	6	2	6	5	13	N. 3° W.	N. 17° W.	28	38	52	47	...	...	Narayan-gunge.	
·574	·594	·550	·573	—·019	94	62	49	68	−7	1·7	2·4	2·1	−0·6	1	23	8	3	...	1	7	10	7	N. 22° W.	N. 17° W.	50	58	59	65	...	...	Calcutta (Alipore).	
·604	·686	·653	·648	+·010	87	66	59	71	−4	2·4	2·8	2·6	−0·2	...	16	13	...	...	6	10	7	8	N. 32° W.	N. 5° E.	33	58	182	154	...	...	Saugor Island,	
·534	·585	·510	·543	—·003	86	57	43	62	−5	1·4	2·8	2·1	−0·6	14	22	3	4	2	2	3	3	7	N. 6° W.	N. 7° W.	40	69	30*	44	...	...	Burdwan.	
·496	·585	·526	·535	−·028	88	62	47	66	−8	1·2	2·5	1·9	−0·6	51	2	1	1	...	1	1	2	1	N. 45° W.	N. 25° W	5	54	10*	40	...	...	Berhampore	
·635	·685	·659	·660	+·034	97	61	58	72	−2	3·3	3·7	3·5	−0·2	...	16	11	12	10	6	...	2	2	N. 64° E.	N. 22° E.	47	57	113*	157	...	...	False Point	
·613	·605	·535	·584	−·002	87	58	44	63	−5	2·1	3·4	2·8	+0·2	9	14	18	6	1	2	4	5	1	N. 27° E.	N. 1° W.	40	43	34	40	...	...	Cuttack	
·385	·412	·394	·397	+·044	74	49	42	55	+1	3·9	4·0	4·0	+1·6	6	16	2	3	2	8	3	4	16	N. 34° W.	N. 42° W.	35	55	99	104	...	...	Hazaribagh	Gangetic Plain and Chota Nagpur.
·447	·494	·457	·466	+·007	79	53	45	59	−3	1·8	1·8	1·8	+0·1	14	1	8	3	6	3	3	14	8	N. 72° W.	N. 64° W.	15	29	33*	36	...	...	Patna	
·481	·535	·513	·510	−·022	92	60	50	67	−3	0·8	1·3	1·1	+0·3	3	5	3	11	7	1	6	16	8	N. 72° W.	S. 79° W.	13	55	43	44	...	...	Darbhanga	
·373	·401	·349	·374	−·033	75	42	31	49	−14	2·3	2·5	2·4	+1·3	16	7	9	5	3	2	2	7	9	N. 5° W.	N. 65° W.	24	21	39	34	...	...	Allahabad	
·368	·390	·353	·370	+·015	86	44	34	55	+1	2·1	2·1	2·1	+1·1	17	4	2	2	2	5	2	17	9	N. 79° W.	N. 45° W.	33	46	31*	34	...	...	Lucknow	
·305	·342	·324	·324	?	75	52	44	57	?	2·8	2·9	2·9	+1·7	34	...	...	...	3	6	8	7	2	S. 43° W.	N. 76° W.	28	18	17	41	...	...	Dehra Dun	Upper Sub-Himalayas.
·344	·369	·343	·352	+·016	90	50	39	60	+3	2·3	2·3	2·3	+1·4	41	...	3	...	5	...	2	1	8	N. 41° W.	S. 36° W.	7	28	10	27	...	...	Roorkee	
·341	·352	·328	·340	+·013	81	50	37	56	+1	2·2	2·3	2·3	+1·6	37	...	...	...	1	...	3	15	4	W.	N. 50° W.	32	46	24*	30	...	...	Meerut	
·289	·355	·349	·331	+·018	71	50	35	52	+3	2·1	3·1	2·6	+1·4	16	13	2	4	2	4	1	10	8	N. 35° W.	N. 47° W.	28	22	34	33	...	...	Lahore	
·318	·356	·328	·334	+·029	77	47	34	53	+1	3·3	4·0	3·7	+2·1	29	2	7	...	5	1	...	3	13	N. 17° W.	N. 44° W.	20	36	22	32	...	...	Ludhiana	
·233	·301	·312	·282	+·011	72	50	42	55	+1	3·7	3·5	3·6	+1·6	35	2	3	4	5	1	1	3	6	N. 25° E.	N. 73° E.	7	15	49	51	...	...	Peshawar	Indus Valley and N.-W. Rajputana.
·295	·324	·368	·329	−·023	66	42	34	47	−7	1·7	1·5	1·6	+0·8	27	...	9	...	16	2	5	1	...	S. 52° E.	S. 73° W.	28	8	17*	33	...	...	Mooltan	
·300	·307	·311	·306	+·007	66	34	27	42	−3	2·5	3·9	3·2	+2·1	30	3	3	8	3	2	3	5	3	N. 48° E.	N. 12° W.	5	16	71*	38	...	...	Jacobabad	
·417	·475	·552	·481	+·044	65	43	47	51	−3	2·8	2·5	2·7	+1·6	1	1	13	11	4	2	17	10	1	S. 3° E.	S. 81° W.	10	18	155*	190	...	...	Kurrachee	
·324	·346	·386	·352	+·065	61	41	39	47	+4	3·1	4·1	3·6	+2·6	...	5	16	11	4	4	5	5	10	N. 36° E.	N. 12° W.	27	39	69	70	...	...	Jeypore	East Rajputana, Central India and Gujarat.
·334	·373	·420	·376	+·068	71	48	43	54	+8	2·9	3·9	3·4	+2·5	8	2	17	7	16	1	1	4	4	N. 81° E.	N. 22° E.	38	10	38	35	...	...	Ajmere	
·359	·349	·331	·351	+·072	65	34	27	43	+9	2·2	2·5	2·4	+1·0	...	7	16	14	8	4	1	5	3	N. 66° E.	N. 33° E.	44	31	177	181	...	...	Deesa	
·372	·408	·419	·400	+·072	76	47	41	55	+3	3·0	3·2	3·1	+1·8	5	11	5	20	...	2	1	10	6	N. 28° E.	N. 10° W.	32	32	12*	24	...	...	Nowgong	
·338	·385	·393	·372	+·060	68	46	41	52	+8	2·8	2·6	2·7	+2·1	...	...	13	...	5	1	11	...	30	N. 42° W.	N. 81° W.	40	36	87*	60	...	...	Agra	
·477	·458	·390	·442	−·028	81	47	36	55	−4	4·1	4·4	4·3	+0·7	...	...	4	22	19	6	1	6	2	S. 62° E.	N. 84° E.	57	67	257	280	...	...	Belgaum	
·477	·504	·473	·491	+·023	72	48	37	53	0	4·7	4·9	4·8	+1·0	1	...	15	14	28	2	...	...	...	S. 76° E.	N. 69° E.	76	63	224*	191	...	...	Sholapur	Deccan.
·473	·424	·382	·426	+·003	78	39	30	49	+1	3·5	4·2	3·9	+1·1	5	...	7	22	18	...	5	2	1	S. 72° E.	N. 83° E.	58	45	206*	138	...	...	Poona	
·413	·473	·410	·432	+·032	65	41	30	45	−7	2·5	4·0	3·3	+1·8	4	5	10	18	10	2	4	2	5	N. 83° E.	N. 64° E.	42	50	115*	84	...	...	Akola	
·382	·401	·376	·386	−·018	60	39	33	44	−7	3·1	4·3	3·7	+1·2	3	7	7	6	14	8	6	2	7	S. 62° E.	N. 69° E.	18	59	120	113	1·15	0·61	Buldana	
·387	·420	·405	·404	+·045	65	36	28	43	−5	2·4	2·8	2·6	+1·0	...	6	10	5	10	13	5	4	7	S. 50° E.	N. 63° E.	15	55	87	62	...	...	Khandwa	

* Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure. Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L., and for gravity 45° Lat.	Temperature of Air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Temperature Wet-bulb. Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Deccan—*contd.*	Hoshangabad	...	28·999	28·870	·129	28·931	−·033	29·898	88·3	64·0	24·3	94·2	58·4	35·8	79·4	86·6	75·7	+ 6·3	56·6	65·3	67·5	63·1
	Nagpur	...	·979	·852	·127	·912	−·023	·893	88·8	64·9	23·9	94·5	60·2	34·3	80·3	86·3	77·2	+ 4·8	60·5	69·2	70·4	66·7
	Nagpur (Sanitary Commissioner's Office).	...	29·000	·873	·127	·933	?	·903	90·0	64·7	25·3	96·1	60·6	35·5	81·9	87·6	76·8	?	59·4	68·2	69·6	65·7
	Jubbulpore	...	28·682	·566	·116	·620	−·023	·909	86·0	59·2	26·8	93·3	53·7	39·6	76·9	83·9	72·1	+5·7	56·6	65·1	66·2	62·6
	Saugor	...	·193	·086	·107	·136	−·029	·897	85·7	63·3	22·4	90·7	57·9	32·8	77·1	82·7	73·8	+4·3	54·4	60·6	63·4	59·5
	Raipur	...	29·038	·917	·121	·974	−·019	·886	87·0	65·0	22·0	93·6	58·1	35·5	80·0	85·3	76·5	+4·9	60·1	66·8	66·4	64·4
	Sutna	...	28·966	·857	·109	·905	−·030	·912	85·0	59·8	25·2	90·4	54·1	36·3	79·1	83·3	71·4	+5·4	54·1	63·3	64·7	60·7
	Hyderabad (Deccan).	...	·307	·191	·116	·247	?	·879	86·4	66·2	20·2	92·6	60·6	32·0	80·3	83·0	75·4	?	62·7	69·7	68·8	67·1
West Coast.	Bombay	...	29·936	29·826	·110	29·875	−·025	·852	88·2	75·4	12·8	92·8	66·2	26·6	82·4	85·2	80·8	+1·8	69·2	73·9	75·9	73·0
	Ratnagiri	...	·847	·735	·112	·785	−·005	·831	92·5	73·7	18·8	98·7	65·0	33·7	88·5	87·2	81·5	+2·9	69·1	73·0	76·1	72·7
	Karwar	...	·915	·796	·119	·849	−·010	·825	90·0	71·4	18·6	94·1	65·6	28·5	82·7	87·3	79·7	+2·5	69·4	74·2	76·3	73·3
	Cochin	...	·931	·837	·094	·878	−·019	·815	88·5	75·7	12·8	92·7	72·5	20·2	83·9	85·1	81·0	+1·3	73·8	77·0	77·2	76·0
South India.	Salem	...	·039	28·915	·124	28·982	−·002	·858	89·2	71·1	18·1	94·4	66·0	28·4	82·4	83·9	78·4	+2·6	69·7	73·8	74·5	72·7
	Mysore	...	27·471	27·351	·120	27·411	?	·831	84·2	66·1	18·2	88·1	61·5	26·6	78·0	81·7	74·5	?	58·8	67·6	67·3	64·6
	Mercara	...	26·264	26·169	·095	26·222	+·010	?	76·4	62·5	13·9	79·3	58·4	20·9	70·8	72·3	68·4	+1·8	59·9	64·8	64·1	62·9
	Bangalore	...	·987	·876	·111	·935	−·009	·840	81·6	64·2	17·4	87·3	60·9	26·4	75·2	78·3	72·1	+2·3	62·2	65·6	66·2	64·7
	Hassan	...	·921	·812	·109	·870	?	·833	82·3	61·9	20·4	86·3	55·9	30·4	76·5	79·4	71·4	?	60·4	66·2	65·8	64·1
	Chitaldroog	...	27·581	27·466	·115	27·524	?	·836	85·1	66·9	18·2	90·5	62·9	27·6	78·6	82·5	75·3	?	60·2	67·3	67·2	64·9
	Trichinopoly	...	29·698	29·583	·115	29·646	−·013	·834	87·4	73·8	13·6	93·2	68·3	24·9	81·1	83·7	79·3	+1·0	71·5	74·9	75·5	74·0
	Madras	...	·955	·854	·101	·904	−·010	·856	84·2	73·2	11·0	90·3	68·6	21·7	81·1	80·4	78·0	−0·2	?	76·8	76·0	75·6
	Bellary	...	28·502	28·365	·137	28·434	−·009	·848	90·2	69·1	21·1	96·2	65·5	30·7	82·6	87·0	78·4	+3·2	63·1	67·8	68·9	66·6
	Vizagapatam	...	29·973	29·857	·116	29·910	−·010	·879	87·6	72·5	15·1	91·4	65·6	25·8	85·4	84·0	80·4	+2·1	69·1	73·5	74·0	72·2
	Cocanada	...	·982	·873	·109	·923	?	·885	85·0	72·9	12·1	87·9	68·3	19·6	82·7	82·8	78·4	?	68·7	74·2	73·8	72·2
Hill Station, Baluchistan.	Quetta	...	24·752	24·669	·083	24·700	−·021	?	63·6	35·0	28·6	73·1	24·7	48·4	55·5	59·0	48·2	+1·4	31·2	44·4	46·1	40·6
Hill Stations, Punjab.	Leh	...	19·784	19·707	·077	19·747	+·020	?	45·9	20·8	25·1	54·7	13·5	41·2	33·9	42·5	33·2	+0·9	19·9	29·3	33·5	27·6
	Srinagar	...	25·043	24·943	·100	24·983	?	?	58·6	32·2	26·4	63·9	26·6	37·3	45·7	56·8	45·0	?	32·0	42·4	51·6	42·0
	Murree**	...	23·941	23·920	·021	23·921	−·003	?	60·9	43·9	17·0	71·6	36·0	35·6	54·1	53·8	50·5	−0·1	35·4	43·6	44·8	41·3
	Chamba	3,005	27·047	26·946	·101	27·006	−·019	?	72·4	43·4	24·0	79·2	44·0	35·2	59·0	65·6	56·8	+0·6	44·6	50·2	54·0	49·6
	Kailang	10,087	20·857	20·778	·079	20·826	+·002	?	48·1	25·6	22·5	54·7	17·0	37·7	38·3	42·6	33·6	+0·2	24·0	29·9	33·0	29·0
	Simla (Ridge)	...	23·210	23·153	·057	23·172	+·011	?	55·7	44·6	11·1	60·4	38·4	22·0	51·6	51·6	48·9	−0·1	37·5	42·1	43·7	41·1
Hill Stations, N.W.P.	Chakrata	...	·425	·356	·069	·380	+·012	?	60·2	44·5	15·7	64·5	39·8	24·7	53·0	52·7	50·3	−0·4	38·5	43·1	44·0	41·9
	Ranikhet	...	24·215	24·141	·074	24·165	+·018	?	62·4	48·5	13·9	65·8	42·5	23·3	58·2	58·2	54·2	+0·1	42·7	48·6	49·0	46·8
Hill Station, Nepal.	Katmandu	4,388	25·686	25·631	·055	25·655	?	?	72·8	44·3	28·5	79·7	35·8	43·9	62·0	65·2	56·7	−2·0	43·3	54·5	55·9	51·2
Hill Station, Bengal.	Darjeeling	...	23·056	22·977†	·079	23·010†	−·022	?	53·4‡	41·6	11·8	58·5	30·8	27·7	50·6	51·0†	46·7†	−0·8	39·0§	46·2	47·3†	44·2
Hill Stations, Central India.	Mount Abu	...	26·141	26·066	·075	26·096	−·038	?	73·5	59·8	13·7	80·7	47·2	33·5	70·9	71·0	66·0	+1·4	51·9	57·9	58·1	55·9
	Pachmarhi	...	·565	·478	·087	·518	−·003	?	77·9	55·9	22·0	83·2	49·7	33·5	73·8	75·6	67·1	+5·5	52·2	60·3	61·3	57·9
	Chikalda	3,642	·449	·354	·095	·397	−·002	?	79·2	63·7	15·5	83·8	57·0	26·8	73·5	76·9	71·6	+5·0	56·6	60·8	62·2	59·9

† Mean of 25 days. ** Observations doubtful. ‡ Mean of 29 days.

II—*continued.*

Stations in India, Burma, etc., for November, 1896—continued.

Vapour Tension.					Humidity.					Cloud.				Wind Directions.											Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Prov. Meteorological Office.
														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.		
·373	·452	·426	·420	+·032	62	46	35	48	− 6	2·2	2·8	2·5	+1·1	25	...	24	4	2	1	1	...	3	N. 50° E.	N. 60° E.	% 42	% 66	45	48	...	...	Hoshangabad.	Deccan—*contd.*
·477	·579	·549	·535	+·120	77	57	45	60	+ 7	3·1	5·2	4·2	+1·7	16	1	14	15	8	2	1	2	1	N. 83° E	N. 60° E.	45	60	99	71	...	...	Nagpur.	
·444	·523	·502	·490	?	72	49	39	53	?	2·4	4·5	3·5	?	24	6	15	5	7	1	...	...	2	N. 58° E.	?	38	?	23	?	...	...	Nagpur(Sanitary Commissioner's Office).	
·433	·473	·425	·444	+·076	85	52	38	58	+ 2	2·8	2·7	2·8	+1·1	14	6	9	4	8	5	4	2	8	N. 50° E.	N. 47° E.	12	25	37	41	...	...	Jubbulpore.	
·315	·332	·349	·332	+·036	54	38	34	42	− 1	2·8	3·7	3·3	+2·2	4	12	4	15	7	14	2	...	2	S. 78° E.	N. 20° E.	33	47	103	56	...	...	Saugor.	
·459	·485	·401	·448	+·003	74	49	34	52	− 7	2·2	3·5	2·9	+0·7	22	4	12	6	9	2	4	1	...	N. 86° E.	N. 31° E	28	57	71*	83	...	...	Raipur.	
·352	·387	·381	·373	+·075	68	40	35	48	+ 2	1·7	2·1	1·9	+0·7	2	21	11	10	...	5	1	2	8	N. 18° E.	N. 21° W.	50	33	58*	82	...	...	Sutna.	
·535	·595	·530	·553	?	82	59	49	63	?	4·0	4·7	4·4	?	...	...	...	29	28	3	...	...	...	S. 65° E.	?	90	?	85*	?	...	...	Hyderabad (Deccan).	
·635	·725	·762	·707	+·014	72	66	64	67	− 4	2·8	3·2	3·0	+0·8	...	7	14	8	2	2	1	6	20	N. 4° W.	N. 17° E.	45	59	224	236	...	...	Bombay.	West Coast.
·657	·607	·754	·673	+·013	79	46	59	61	− 3	3·1	2·8	3·0	+1·8	9	3	...	6	7	2	7	11	15	N. 84° W.	N. 1° W.	26	30	127	199	...	...	Ratnagiri.	
·694	·733	·761	·730	+·014	90	65	59	71	− 5	2·6	3·5	3·1	+0·6	3	2	1	5	...	...	7	19	23	N. 68° W.	N 26° W.	62	46	88	?	...	...	Karwar.	
·813	·838	·830	·827	+·019	91	72	69	77	− 3	5·4	6·4	5·9	+1·4	9	10	4	1	...	2	2	17	15	N. 51° W.	S. 49° W.	53	24	95	?	...	...	Cochin.	
·712	·719	·731	·721	+·068	92	66	65	75	− 1	6·0	7·2	6·6	+1·6	4	4	17	20	5	...	3	3	4	N. 64° E.	S. 65° E.	50	22	115	74	...	...	Salem.	South India.
·417	·552	·494	·488	?	66	58	47	57	?	7·3	7·0	7·2	?	6	3	15	24	5	...	...	1	2	N. 70° E.	?	68	?	215*	?	...	...	Mysore.	
·490	·547	·508	·515	−·026	86	73	66	75	− 8	5·8	6·5	6·2	−0·3	27	2	10	9	8	...	1	1	2	N. 78° E.	N. 61° E.	32	49	140	90	...	...	Mercara.	
·540	·522	·505	·522	−·006	89	61	55	68	− 5	6·3	6·0	6·2	+1·3	...	3	25	26	3	...	...	1	2	N. 65° E.	N. 60° E.	80	63	185*	90	...	...	Bangalore.	
·513	·526	·482	·507	?	91	58	51	67	?	6·7	6·3	6·8	?	...	3	28	21	5	...	1	...	2	N. 64° E.	?	78	?	76*	?	...	...	Hassan.	
·443	·531	·477	·484	?	67	55	45	56	?	5·7	5·9	5·8	?	...	1	18	29	7	...	...	3	2	N. 76° E.	?	73	?	190*	?	...	...	Chitaldroog.	
·741	·785	·774	·767	+·033	89	74	68	77	+ 1	6·8	8·0	7·4	+0·4	22	9	23	4	...	...	...	...	2	N. 35° E.	N. 31° E.	55	53	77	100	...	...	Trichinopoly	
?	·868	·839	·856	+·098	?	83	82	89	+ 9	7·3	7·6	7·5	+1·4	...	24	25	4	2	...	1	1	3	N. 25° E.	N. 24° E.	77	59	125	159	...	...	Madras.	
·506	·497	·483	·495	−·050	71	46	39	52	−10	6·7	6·8	6·8	+2·1	9	2	...	43	4	2	...	...	...	S. 86° E.	N. 80° E.	77	56	84	78	...	...	Bellary.	
·672	·667	·706	·682	+·022	85	55	61	67	+ 1	4·2	4·5	4·4	+1·0	...	9	24	7	9	1	7	...	3	N. 56° E.	N. 75° E.	47	56	51	53	...	...	Vizagapatam	
·651	·735	·714	·700	?	80	66	64	70	?	3·7	4·4	4·1	?	...	3	25	22	10	...	...	...	...	N. 74° E.	?	82	?	283*	?	...	...	Cocanada.	
·143	·184	·183	·170	+·020	68	43	39	50	+ 2	2·2	3·7	3·0	+1·8	29	2	...	...	2	3	4	9	11	N. 82° W.	N. 41° W.	30	46	55*	60	...	...	Quetta.	Hill Station, Baluchistan.
·103	·127	·118	·116	+·031	91	64	44	66	+16	4·3	6·0	5·2	+1·3	...	3	...	...	...	29	23	4	1	S. 27° W.	S. 4° W.	78	24	50	46	...	...	Leh.	
·177	·236	·327	·247	?	97	77	71	82	?	3·7	3·9	3·8	?	4	10	13	3	7	6	1	2	14	N. 14° E.	?	30	?	83*	?	...	...	Srinagar.	Hill Stations, Punjab.
·121	·178	·206	·168	+·010	44	45	52	47	+ 5	3·9	4·4	4·2	+1·3	1	6	2	8	18	5	9	5	6	S. 27° E.	S. 46° E.	23	17	177*	138	...	...	Murree.	
·253	·264	·286	·268	−·008	74	53	46	58	+ 7	4·2	5·1	4·7	+2·5	41	...	1	1	5	...	5	1	6	S. 58° W.	S. 65° E.	7	14	89	87	1·01	0·73	Chamba.	
·116	·099	·111	·109	+·008	85	42	40	56	+ 6	4·7	6·0	5·4	+1·8	...	1	...	1	6	16	23	7	6	S. 35° W.	S. 53° W.	63	65	35	29	0·65	0·60	Kailang.	
·154	·170	·206	·177	−·002	53	45	54	51	+ 3	3·8	4·4	4·1	+2·2	21	4	4	1	1	21	7	...	1	S. 4° W.	S. 89° W.	32	32	76	?	...	...	Simla (Ridge).	Hill Stations, N.W.P.
·173	·178	·199	·183	−·013	59	46	51	52	− 3	2·8	3·3	3·1	+1·5	9	4	6	...	4	36	...	...	1	S. 12° E.	S. 55° W.	52	28	194	109	...	...	Chakrata.	
·218	·244	·254	·237	−·009	64	51	53	56	− 2	2·5	2·7	2·6	+1·3	17	6	4	1	3	3	10	13	3	S. 86° W.	S. 52° W.	27	35	62*	30	...	...	Ranikhet.	
·273	·342	·343	·319	−·018	92	62	56	70	− 1	2·9	2·8	2·9	+0·8	...	...	...	24	...	...	...	32	4	N. 76° W.	N. 81° W.	18	60	20	?	0·33	0·29	Katmandu.	Hill Station, Nepal.
·207§	·270	·289†	·255	−·011	77§	74	78†	76	− 4	4·3†	6·2¶	5·3	+1·1	5	4	16	6	2	2	5	11	4	N. 70° E.	N. 61° W.	18	8	76	40	...	...	Darjeeling.	Hill Station, Bengal.
·298	·333	·337	·323	+·092	59	47	47	51	+14	2·5	3·7	3·1	+1·8	1	5	13	2	8	3	11	6	11	N. 40° W.	N. 73° E.	12	20	112*	90	...	...	Mount Abu	Hill Stations, C. India.
·356	·370	·381	·369	+·068	78	46	44	56	+ 2	2·9	4·0	3·5	+1·5	29	5	1	4	5	5	5	3	3	S. 6° W.	N. 52° E.	7	46	87*	60	...	...	Pachmarhi.	
·380	·387	·393	·387	+·019	65	48	44	52	− 4	2·6	5·3	4·0	+1·8	24	5	1	...	...	7	22	...	1	S. 44° W.	N. 3° W.	37	21	156*	114	0·24	0·14	Chikalda.	

§ Mean of 21 days. ¶ Mean of 20 days. * Corrected.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M. at 85

Meteorological Province.	Station.	Elevation of barometer cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Hill Station, S. India.	Wellington . .	...	24·263	24·196	·067	24·230	−·012	?	68·7	53·5	15·2	71·4	43·8	27·6	64·9	64·2	60·0	+1·5	51·9	59·2	59·5	56·9
Extra India.	Muscat . .	...	30·062	29·978	·084	30·020	?	29·988	78·4	74·8	3·6	82·1	67·1	15·0	77·9	78·0	76·5	?	67·6	69·7	69·8	69·0
	Aden . . .	...	29·930	·831	·099	29·885	−·028	·911	84·4	75·2	9·2	87·5	71·7	15·8	80·8	82·4	79·3	+0·8	69·3	72·7	71·4	71·1
	Perim . . .	...	·808	·700	·108	·758	?	?	86·7	77·4	9·3	88·3	74·6	13·7	84·0	83·1	81·2	?	71·2	74·5	74·5	73·4
	Zanzibar . .	...	·959	·865	·094	·912	−·005	·912	81·9	76·3	5·6	85·6	73·6	12·0	79·8	80·9	78·9	−1·0	74·2	76·1	76·1	75·5
	Port Victoria (Seychelles).	15	·972	·879	·093	·962	?	·865	83·0	76·3	6·7	85·7	74·2	11·5	81·8	82·1	79·5	?	73·2	76·7	76·6	75·5
	Mauritius . .	181	?	?	?	·867	−·010	·996	?	?	?	90·5	58·9	31·6	?	?	75·5	−0·3	?	?	?	?

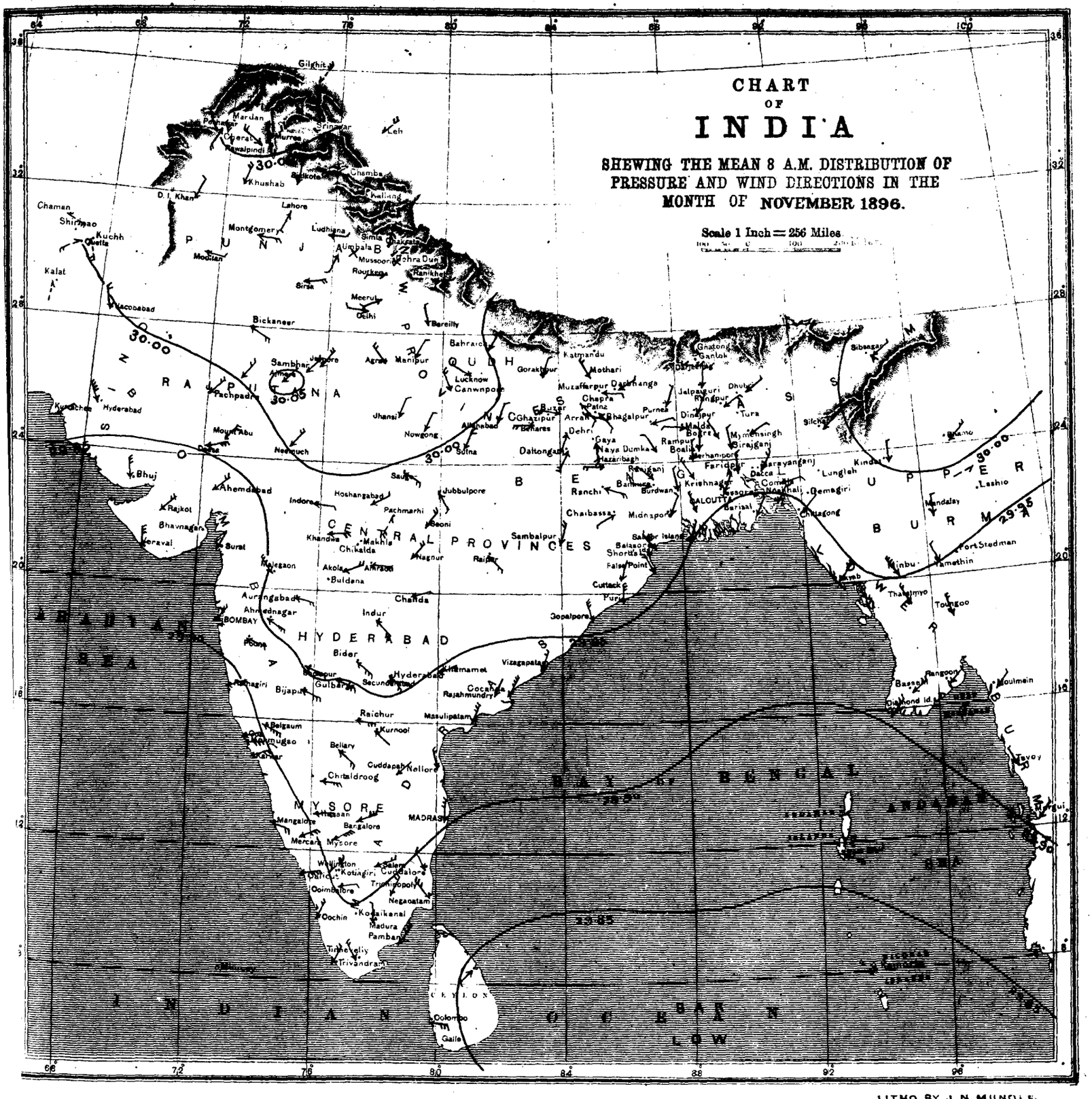
II—*concluded.*

Stations in India, Burma, etc., for November 1896—concluded.

Vapour tension.					Humidity.					Cloud.				Wind direction.												Wind Steadiness.		Wind Velocity.		Rainfall.		Station.	Meteorological Proviences.
														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.		
																								%	%						
·376	·449	·493	·428	+·014	91	73	77	80	− 4	7·1	6·8	7·0	+0·2	9	6	16	5	15	5	3	...	1	N. 89° E.	S. 41° E.	40	53	66	56	...	...	Wellington,	Hill Station, S. India.
·586	·623	·624	·611	?	67	65	61	65	?	3·2	3·8	3·5	?	...	4	5	11	3	1	...	6	30	N. 22° W.	?	47	?	106	?	...	...	Muscat,	Extra India.
·612	·698	·621	·655	+·005	74	66	53	65	− 2	4·6	2·9	3·8	+1·7	...	...	11	29	11	3	3	...	...	S. 81° E.	E.	75	65	361	286	..	...	Aden,	
·683	·727	·733	·716	?	72	62	65	66	?	1·1	1·2	1·3	?	1	1	...	26	29	...	...	1	1	S. 67° E.	?	82	?	470	?	...	...	Perim,	
·817	·851	·835	·834	+·033	90	81	80	85	+ 6	6·7	6·1	6·4	+0·8	...	6	6	3	15	19	7	1	1	S. 25° E.	S. 6° W.	44	9	103*	104	...	...	Zanzibar,	
·777	·850	·845	·824	?	86	78	77	80	?	6·9	6·9	6·9	?	6	6	1	3	24	5	1	2	12	S. 52° E.	?	20	?	177	?	16·56	2·30	Port Victoria (Seychelles).	
?	?	?	·582	?	?	?	?	70	− 2	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	264	262	0·91	0·24	Mauritius,	

* Corrected.

G. I. C. P. O.—No. 127 Meteor.—13-3-97.—385.



Explanation.

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

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

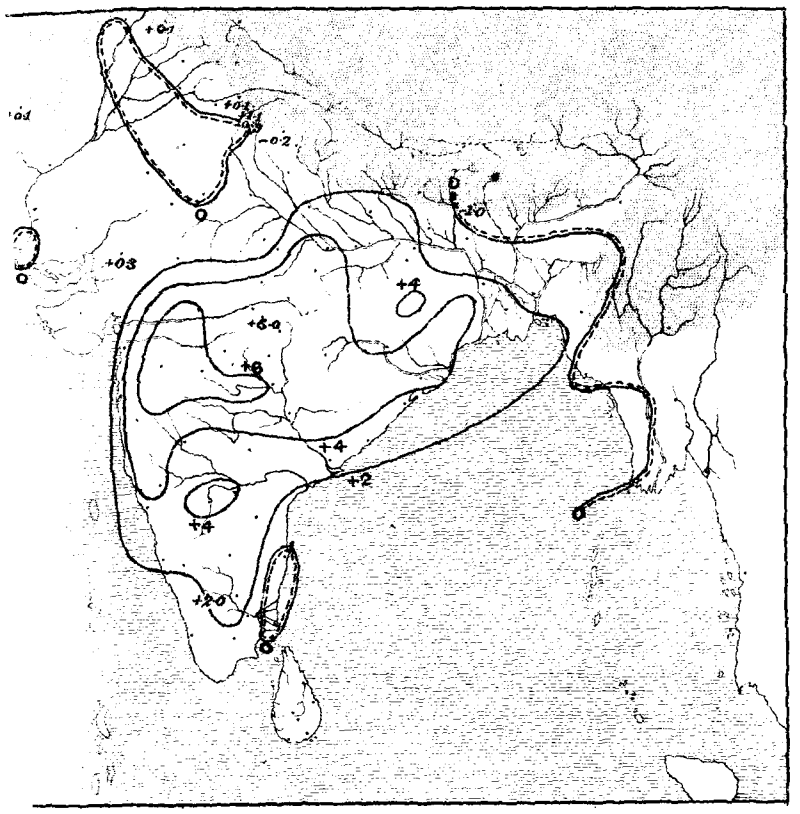
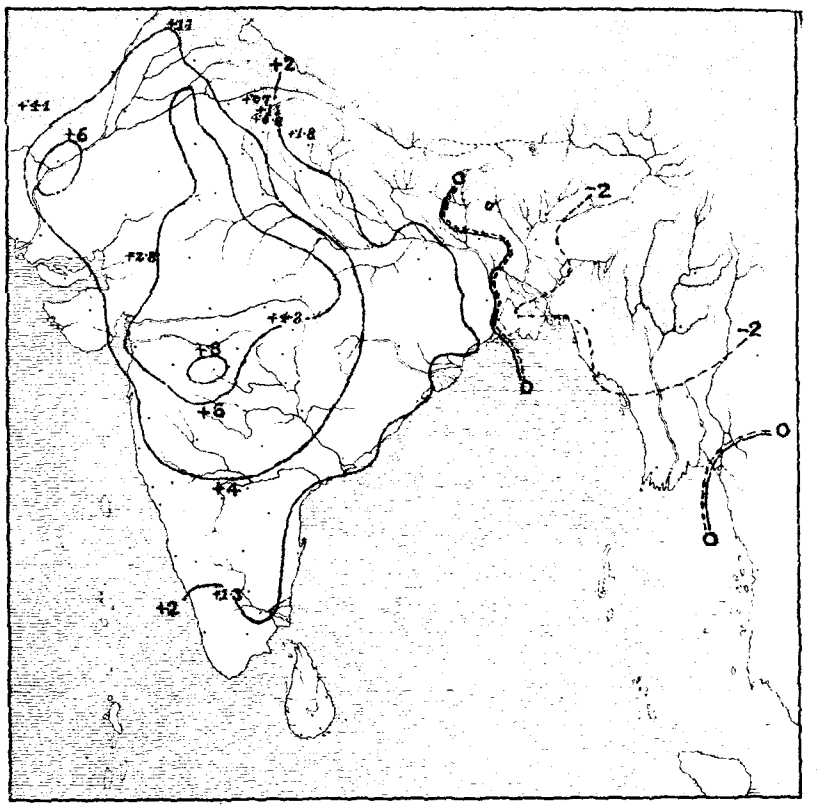


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

'ontinuous lines indicate that the mean maximum of month was in xcess by amounts indicated by the attached numbers. Broken or dotted nes that it was in defect by the amounts indicated by the attached nubers. Double lines are the lines of no variation, the broken line facing he 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.

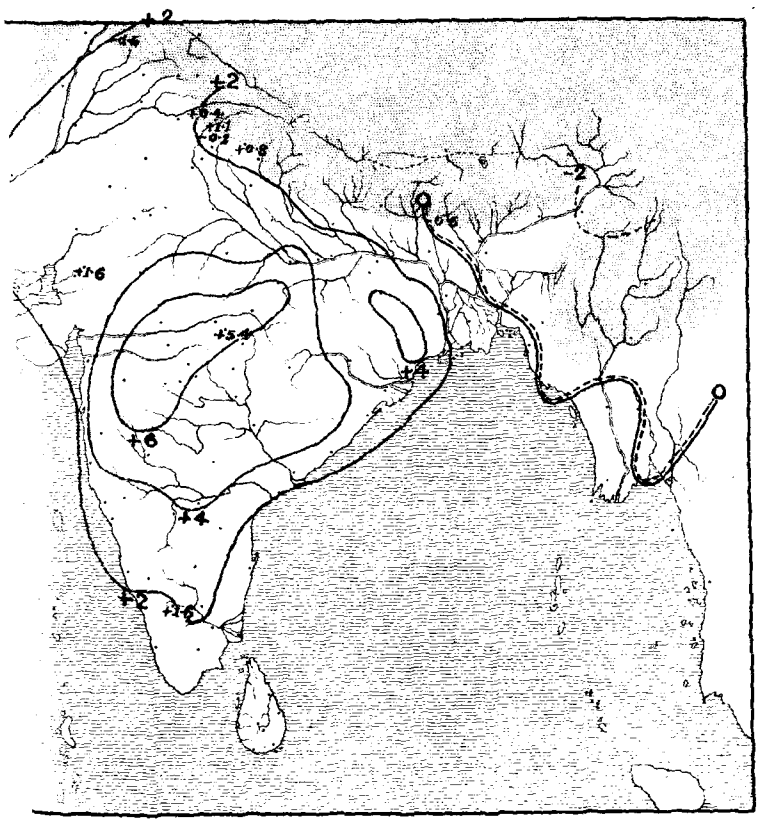
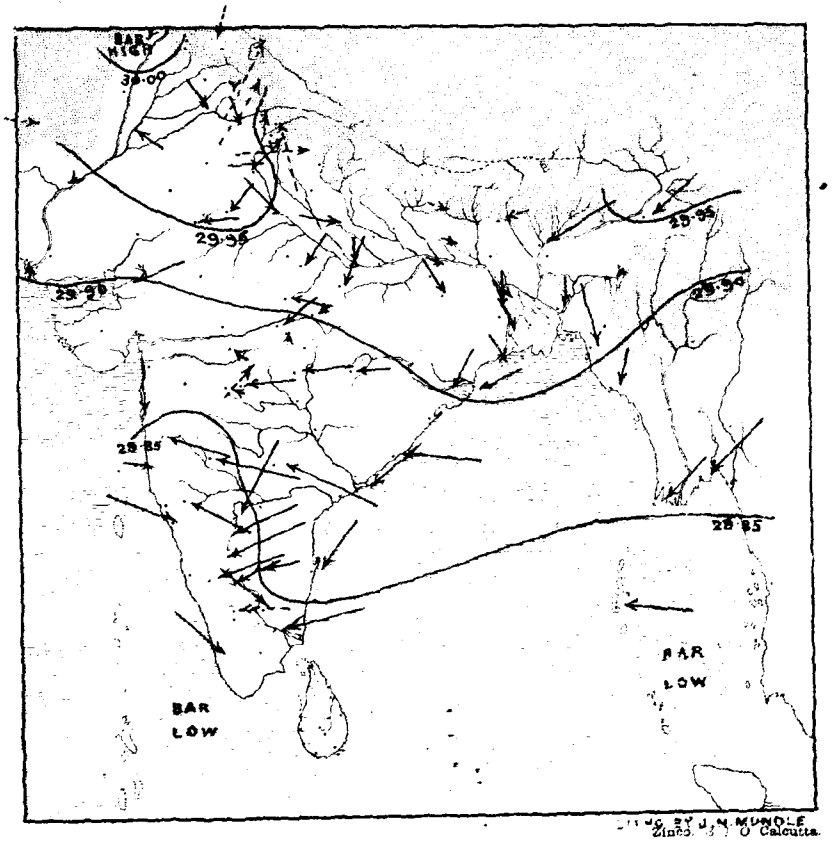


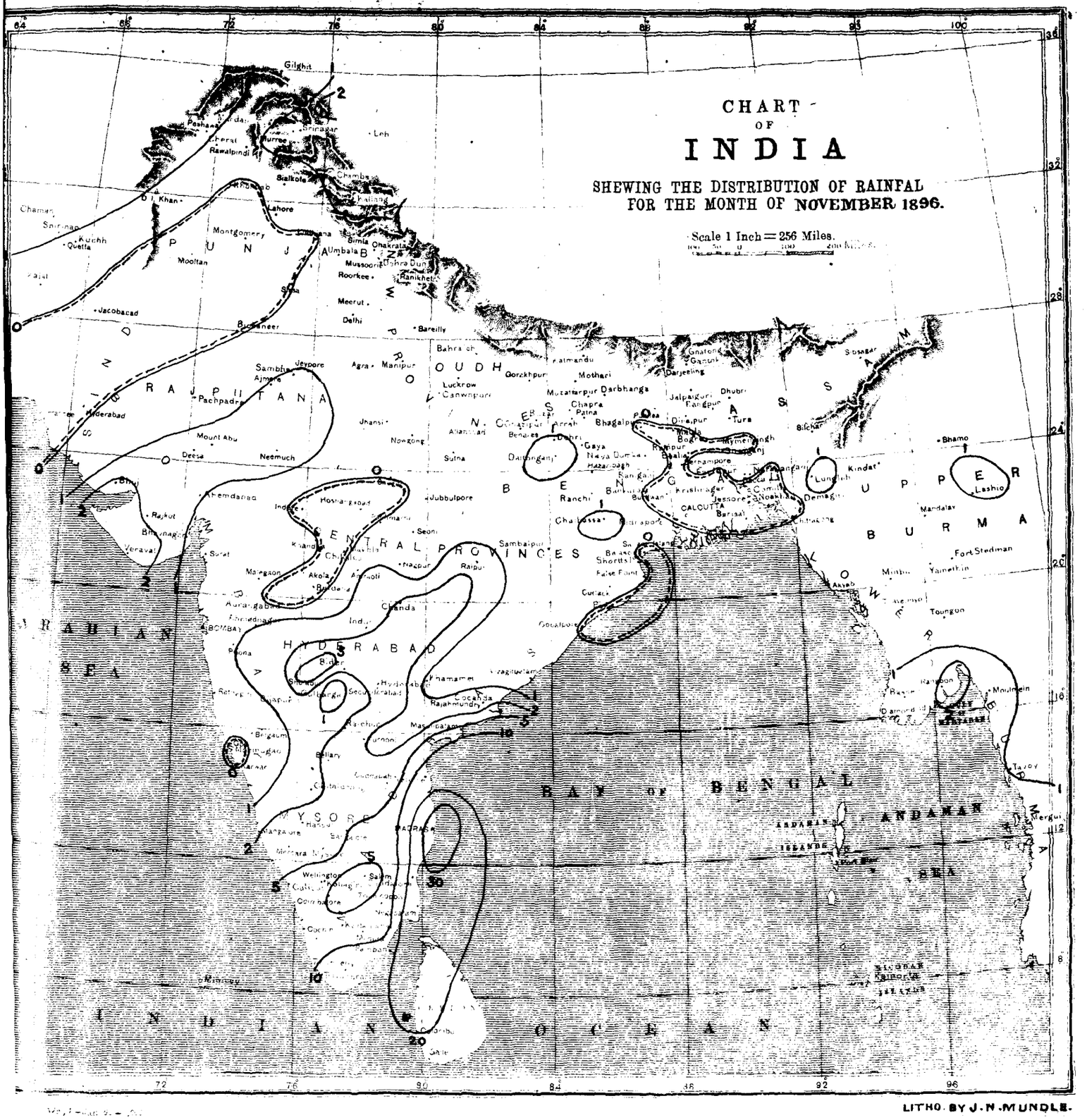
CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF NOVEMBER 1896.



Explanation.

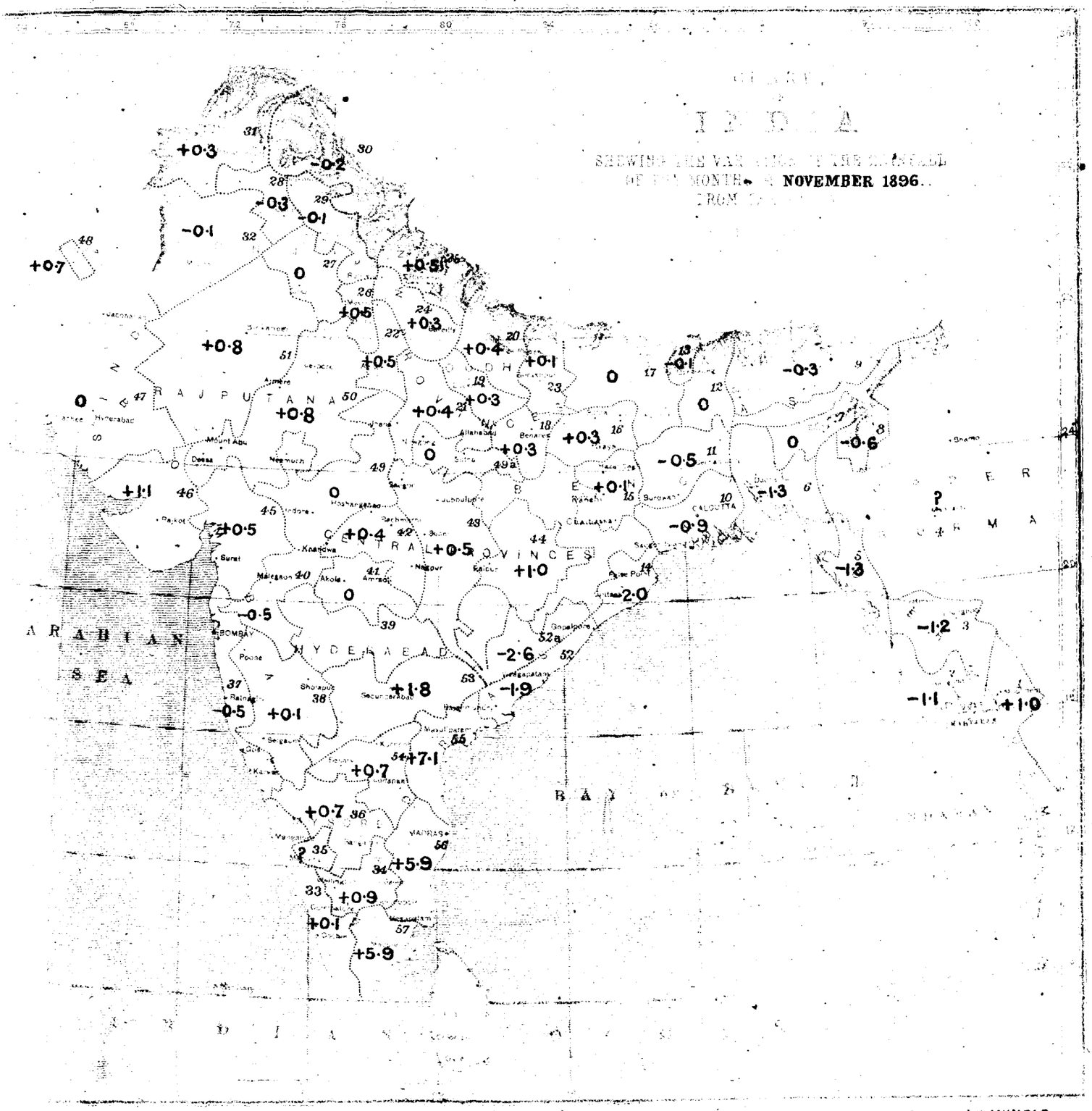
tinuous lines indicate that the mean daily temperature of month n excess by amounts indicated by the attached numbers. Broken lotted lines that it was in defect by the amounts indicated by the hed numbers. Double lines are the lines of no variation, the broken

The Chart is prepared in the same manner as the Monthly Charts which have hitherto appeared in the Annual Report, the only alteration made being that pressures are reduced to constant gravity (45°) The isobars are given for each twentieth of an inch. The arrows show the directions of the resultants of the wind recorded at 10 and 16 hours, and by their



Explanation.

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



Explanation.

LITHO. BY J.N. MUNDLE.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) [illegible] the whole of India and [illegible] with the exception of Upper Burma, for which rainfall data have not been [illegible] furnish [illegible] and useful means. The country is divided into 57 areas, over each of which [illegible] are fairly uniform, [illegible] simple crops similar in character, and the means both actual and normal [illegible] numbers [illegible] in the centre of each division (usually with a — or — sign attached) [illegible] of the district of the month. A plus sign indicates that the rainfall was [illegible] defect by [illegible] indicated by the numbers to which the signs are attached. The [illegible] following [illegible] the number given near the right hand boundary of [illegible]

[illegible]	[illegible]	North Punjab	[illegible]	[illegible]	[illegible]
[illegible] Burma [illegible]	[illegible]	North Western Provinces, East	[illegible]	[illegible]	[illegible]
[illegible] do.	[illegible]	South [illegible]	[illegible]	[illegible]	[illegible]
[illegible] do.	[illegible]	North [illegible]	36.	[illegible]	[illegible]
[illegible]	21.	North Western Provinces, Central	37.	[illegible]	[illegible]
[illegible] Bengal	22.	Do. do. West	[illegible]	[illegible]	[illegible]
[illegible] Surma	23.	Do. do. [illegible]	[illegible]	[illegible]	[illegible]
[illegible] Hills	24.	Do. do. West	[illegible]	[illegible]	[illegible]
[illegible] Brahmaputra	25.	Do. do. Hills	[illegible]	[illegible]	[illegible]
[illegible] Bengal	26.	South East Punjab	[illegible]	[illegible]	[illegible]
Central do.	27.	South do.	[illegible]	[illegible]	[illegible]
North do.	28.	Central do.	[illegible]	[illegible]	[illegible]
Bengal Hills	29.	Punjab, Sub-montane	45.	[illegible]	[illegible]
Orissa	30.	Do. Hills	46.	Kathiawar	[illegible]
Chota Nagpur	31.	North Punjab	47.	[illegible]	[illegible]
South Bihar	32.	West do.	48.	Baluchistan Hills	[illegible]

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, DECEMBER, 1896.

INTRODUCTION.

THIS review of the weather in India during the month of December 1896 is based on observations taken daily at 8 A.M. at 211 stations, and on additional observations taken at 10 A.M. and 4 P.M. at 85 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 the District Officers throughout India, and the rainfall statements of the month published by the Provincial Governments which 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, 1896.

The most important feature in the meteorology of the month of December is the final withdrawal of the south-west humid winds from the south of the Bay and the extension of the north-east monsoon winds over the whole of the Bay. This change usually occurs in the third or 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 disminishes rapidly westwards from the coast into the interior.

Cyclonic storms are also of occasional occurrence during the month, and the final withdrawal of the retreating south-west monsoon current from the south of the Bay is frequently immediately preceded by the formation of a cyclonic storm in the south-west of the Bay. These storms almost invariably march westwards to the South Coromandel Coast between Nagapatam 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 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.

At the commencement of the month, pressure was falling everywhere but especially in the north-west and the barometer read below the normal average in all parts of the country except Sind and the South of the Peninsula where it was in trifling excess. The mean temperature

LIBRARY
JUL
10
1897
WEATHER BUREAU

was below the normal in the north-west, north-east, and south of the Indian region and above in all other places. The following table of variations of temperature from the normal for the 1st exhibits the large contrasts of temperature which prevailed at this time.

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 1st December 1896.	Mean minimum temperature, 1st December 1896.	Mean temperature, 1st December 1896.
	°	°	°
Burma	+0·9	+0·8	+0·9
Bengal and Assam . . .	+4·8	+4·4	+4·6
North-Western Provinces and Oudh.	+5·0	+3·1	+4·1
Punjab	−2·3	+3·5	+0·6
Sind and Rajputana . .	−3·2	−4·1	−3·7
Central India and Gujarat .	+2·7	+8·4	+5·6
Central Provinces and Berar .	+8·4	+12·9	+10·7
Bombay	+4·1	+5·6	+4·9
Madras	+1·8	+1·2	+1·5

The weather was everywhere fine and humidity had fallen and was very low on the North West Himalayas. During the next day, the 2nd, the barometric changes were slight and the general conditions described above remained unchanged, but on the morning of the 3rd the barometer began to fall in the South Carnatic and Ceylon, the wind was increasing around the Bay and heavy rain set in at Trincomalee. From this day onward to the 11th the weather was very unsettled over Ceylon and the south of the Peninsula and daily heavy rain fell over the area to the south of Madras from the 5th to the 11th. The following were the principal falls of rain for the twenty-four hours ending at 8 A.M. on each day.

STATION.	RAINFALL IN 24 HOURS PRECEDING 8 A.M. OF						
	5th December.	6th December.	7th December.	8th December.	9th December.	10th December.	11th December.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inches.
Madras. .	4·32	1·32	4·40	2·43	0·59	0·11	0·47
Cuddalore .	1·49	1·09	4·23	2·60	1·99	0·31	2·40
Negapatam .	5·30	3·04	2·40	0·45	0·54	0·40	0·60
Madura. .	0	0·01	0·31	0·64	0·07	0·03	0·09
Tinnevelly .	0·04	0	0·99	0	0·75	0	0

Notwithstanding this heavy rainfall, the temperature was only slightly affected, and on most days was only a little below the normal average. The following gives mean temperature variation data for the same period for certain representative stations.

STATION.	VARIATION FROM NORMAL OF MEAN DAILY TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	5th December.	6th December.	7th December.	8th December.	9th December.	10th December.	11th December.
	°	°	°	°	°	°	°
Madras . .	+0·4	−2·1	−3·3	−3·1	+1·7	+2·4	+0·1
Negapatam .	−3·0	+0·2	−0·4	0	+1·2	+0·2	+2·1
Madura . .	−1·3	−0·1	−1·2	−0·9	−1·2	−0·1	−0·5

Similarly with pressure. The following shows that there was a steady excess of pressure over the region of heavy rainfall with only small daily changes:—

STATION.	VARIATION FROM NORMAL OF 8 A.M. PRESSURE ON						
	5th December.	6th December.	7th December.	8th December.	9th December.	10th December.	11th December.
	"	"	"	"	"	"	"
Madras. .	+·042	+·063	+·075	+·056	+·065	+·044	+·027
Negapatam .	+·019	+·041	+·050	+·054	+·066	+·030	+·028
Madura. .	+·009	+·048	+ 057	+·064	+·071	+·062	+·022

During the period from the 3rd to the 11th the variations of temperature from the normal over North-West India were generally small and the daily changes were slight and unimportant. The following gives data for each second day in illustration:—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	3rd December.	5th December.	7th December.	9th December.	11th December.
	°	°	°	°	°
Punjab	+0·7	+0·7	−0·7	+1·8	+0·6
Sind and Rajputana . . .	+0·6	+1·0	+0·6	+1·8	−1·4

On the other hand all over the more central parts of the country the excessive temperatures to which attention was directed on the first day of the month held

uninterruptedly during the period under review. The following gives data in illustration :—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF				
	3rd December.	5th December.	7th December.	9th December.	11th December.
	°	°	°	°	°
North-Western Provinces and Oudh.	+1·7	+1·1	+1·5	+2·5	+2·7
Bombay	+4·7	+4·4	+4·5	+3·2	+2·7
Central Provinces and Berar .	+10·4	+8·1	+4·5	+3·9	+4·2
Gujarat and Central India .	+2·5	+1·8	+2·2	+2·0	+1·5

In North-East India the temperature was unsteady during this period and there occurred a sudden and considerable fall of temperature over Burma after the 6th when showers had been experienced over the upper parts of the Province. The following gives temperature variation data for the Burma stations immediately before and after the occurrence of these showers :—

STATION.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF						
	5th December.	6th December.	7th December.	8th December.	9th December.	10th December.	11th December.
	°	°	°	°	°	°	°
Diamond Island.	+2·9	+1·9	+0·1	—0·9	—2·1	—2·4	—0·6
Bassein . .	+2·3	+2·7	—0·6	?	—3·2	—2·3	—2·3
Rangoon .	+1·9	—0·3	—3·1	—5·0	—6·6	—7·0	—6·4
Moulmein .	+1·6	—0·1	—5·9	—2·4	—6·8	—5·3	—5·3
Toungoo .	+2·2	+3·1	+1·7	—0·6	—2·7	—1·3	—1·1
Thayetmyo .	+4·0	+4·4	+4·9	+1·7	—0·6	—1·0	—0·5
Akyab . .	+0·7	+0·2	—0·5	+0·5	—1·0	—1·3	—3·1
Kindat . .	+4·1	+4·7	+3·5	+1·8	+1·7	+3·1	+3·4

On the 12th pressure exceeded the normal almost everywhere. Readings were highest over Rajputana and Central India, lowest in Malabar, Ceylon and the south of the Bay and the general wind circulation was fairly normal. The weather was fine and quiet generally and only two stations recorded any rain. These quiet settled conditions continued during the 13th, 14th and 15th, during which period practically no rain fell throughout India though in the extreme south there were one or two showers. During these three days the sky was clear and free radiation proceeded each night so that the minimum temperatures at this time were much below the normal. The following were the lowest night temperatures recorded on the 15th :—

PROVINCE.	STATION.	MINIMUM TEMPERATURE.		
		Actual, 15th December 1896.	Normal, 15th December.	Variation from normal.
		°	°	°
Assam	Silchar . .	49·5	55·5	—6·0
Bengal	Chittagong .	53·1	58·2	—5·1
North-Western Provinces.	Benares . .	40·6	48·8	—8·2
	Allahabad .	40·9	48·4	—7·5
Punjab . . .	Delhi . .	39·9	49·5	—9·6
	Sirsa . .	35·2	43·1	—7·9
Central Provinces .	Pachmarhi .	37·3	45·3	—8·0
	Chanda . .	44·9	51·9	—7·0
Central India . . .	Indore . .	42·1	48·7	—6·6
Sind	Hyderabad .	43·0	52·3	—9·3
Rajputana . . .	Bickaneer .	44·1	52·9	—8·8

Owing to the lowness of the night temperatures the mean temperature of nearly the whole country was lower than usual as is shown by the following data for the 15th :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature 15th December 1896.	Mean minimum temperature 15th December 1896.	Mean temperature 15th December 1896.
	°	°	°
Burma	—0·3	—2·1	—1·2
Bengal and Assam . . .	+0·8	—3·2	—1·2
N.-W. Provinces and Oudh .	+1·0	—4·6	—1·8
Punjab	+1·0	—4·2	—1·6
Sind and Rajputana . .	+0·1	—5·8	—2·9
Central India and Gujarat .	+0·9	—3·4	—1·3
Central Provinces and Berar .	—0·2	—3·7	—2·0
Bombay	+1·2	+1·0	+1·1
Madras	—0·7	—1·1	—0·9

During the 14th and 15th conditions had apparently become somewhat unsettled in the extreme south of the Bay and on the morning of the 16th pressure was giving way briskly to rapidly over Ceylon and the extreme south of the Peninsula. During the 15th and 16th a diffused depression crossed Ceylon and passed westward into the Arabian Sea only slightly affecting the south of the Indian Peninsula. Strong winds and gales from north-east and east directions prevailed in the extreme south accompanied with heavy rain, and on the morning of the 16th when the disturbed area was passing over Ceylon the pressure at Colombo was 0·13″ below the normal average. During the existence of this disturbance in the south the weather was fine and dry and pressure was high in all other parts of the Indian region. Temperature however remained low very generally.

On the 17th the barometer was falling everywhere and was below the normal in all parts of the country. Between the 18th and the 21st the barometric changes were generally small but were on the whole upward, so that by the morning of the 21st the barometer read almost everywhere above the normal average. During this period rain continued to fall more or less heavily in the extreme south, but a steady rise of temperature occurred over the Peninsula as is shown by the following data:—

PROVINCE.	VARIATION FROM NORMAL OF MEAN TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF			
	18th December.	19th December.	20th December.	21st December.
	°	°	°	°
Bombay	+2·4	+4·6	+5·6	+5·5
Madras	+1·4	+3·2	+2·7	+2·4

The hottest area at this time was Berar, Khandesh and the Bombay Deccan, and the variations of the mean temperature from the normal on the 21st were as follows:—

STATION.	VARIATION FROM NORMAL OF		
	Maximum temperature 21st December 1896.	Minimum temperature 21st December 1896.	Mean temperature 21st December 1896.
	°	°	°
Poona	+4·9	+17·5	+11·2
Bombay	+6·1	+ 7·6	+ 6·9
Malegaon	+5·8	+ 9·8	+ 7·8
Akola	+4·6	+ 8·9	+ 6·8

On the 21st the records showed a general excess of temperature over the Peninsula and a general defect over Northern India as is shown by the following:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature 21st December 1896.	Mean minimum temperature 21st December 1896.	Mean temperature 21st December 1896.
	°	°	°
Burma	+0·4	—1·0	—0·3
Bengal and Assam	+0·5	—6·6	—3·1
N.-W. Provinces and Oudh	+0·1	—6·2	—3·1
Punjab	—1·4	—6·3	—3·9
Sind and Rajputana	—1·6	—6·7	—4·2
Central India and Gujarat	—0·6	—1·7	—1·2
Central Provinces and Berar	+1·0	+1·2	+1·1
Bombay	+4·3	+6·7	+5·5
Madras	+1·9	+2·9	+2·4

On the morning of the 21st a change of weather commenced, the barometer began to fall slightly over Central India, the west of the Central Provinces, Berar and the Bombay Deccan or within the area of excessive temperature noticed above, and on the following day, the 22nd, a shallow depression was shown there. Hardly any rain was reported on this day, as the rainfall was decreasing in the south, and the weather was fine. On the 23rd the shallow depression was still shown over much the same region as on the 22nd and was accompanied with very high temperatures, as is shown by the following:—

STATION.	VARIATION FROM NORMAL OF		
	Maximum temperature 22nd December 1896.	Minimum temperature 22nd December 1896.	Mean temperature 22nd December 1896.
	°	°	°
Indore	+7·5	+14·5	+11·0
Khandwa	+8·2	+13·1	+10·7
Akola	+6·7	+10·9	+ 8·8
Malegaon	+6·4	+12·3	+ 9·4
Surat	+4·1	+13·3	+ 8·7

On this day however the depression appeared to exercise a more important influence on the weather as showers were reported from Jhansi, Indore and Gadechi. On the morning of the 24th the barometer was falling every where, and two small shallow depressions were shown, one over the south of the Central Provinces, and the second over the east of Rajputana. These feeble disturbances had occasioned showers of small amount at several central stations and the weather was cloudy and feebly unsettled except in the north-east and north-west. A barometric rise occurred during the succeeding 24 hours, but the shallow depressions were still feebly indicated at 8A.M. on the 25th and disturbed, showery weather was again reported on this date. This rainfall was accompanied with a fall of temperature—more particularly in the north-west and centre—but the mean temperature was still above the normal average over a large part of the country as is shown by the following comparative data for the 24 hours ending at 8 A.M. on the 25th:—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature 25th December 1896.	Mean minimum temperature 25th December 1896.	Mean temperature 25th December 1896.
	°	°	°
Burma	+1·7	+0·3	+1·0
Bengal and Assam	—0·4	+2·6	+1·1
N.-W. Provinces and Oudh	—2·2	+4·2	+1·0

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature 25th December 1896.	Mean minimum temperature 25th December 1896.	Mean temperature 25th December 1896.
	°	°	°
Punjab	—1·4	—5·1	—3·3
Sind and Rajputana	—0·7	—5·7	—3·2
Central India and Gujarat	—4·3	+0·7	—1·8
Central Provinces and Berar	—1·5	+7·5	+3·0
Bombay	+0·3	+5·9	+3·1
Madras	+2·6	+6·0	+4·3

By the morning of the 26th pressure had become excessive everywhere, the low pressure areas had disappeared and the weather was fine with one or two scattered showers. On the 27th a fresh depression appeared over Kathiawar and the barometer was falling all over North-Western and Central India. Light showers again commenced over Gujarat and Central India. The depression and disturbed weather advanced north-north-eastwards and from that date until the close of the month showery and feebly unsettled weather prevailed over a large part of Northern India. Notwithstanding this rainfall the temperature continued high over a considerable part of the country. The following gives temperature data for the 31st and shows that temperature was high and low relatively to the normal in much the same regions as on the 25th :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature 31st December 1896.	Mean minimum temperature 31st December 1896.	Mean temperature 31st December 1896.
	°	°	°
Burma	+3·2	+5·0	+4·1
Bengal and Assam	+1·3	+3·6	+2·5
N.-W. Provinces and Oudh	—5·9	+5·2	—0·4
Punjab	—7·7	—0·3	—4·0
Sind and Rajputana	—6·1	—3·4	—4·8
Central India and Gujarat	—5·4	—0·5	—3·0
Central Provinces and Berar	+2·3	+6·7	+4·5
Bombay	+1·6	+1·6	+1·6
Madras	+1·6	+3·7	+2·7

Pressure.—The mean pressure of the Indian land area was 0·030″ above the normal average of the month.

Relatively to this general condition of pressure the barometer read below the normal average over North Bombay and the greater part of the Peninsula. The local defect was more than 0·020″ at Surat and in Malabar and Ceylon.

Relatively to this general condition, pressure was in slight excess in North-Eastern India while in the centre and north-west the variations were small and irregular.

The abnormal excess of pressure was somewhat less at the Hill stations in Northern India than at the stations on the neighbouring plains, while on the contrary in the centre and south the pressure variations at the upper and lower elevations were nearly identical. The vertical anomalies were hence slightly negative in the north.

The following table gives comparative data showing the amount of variation in the eleven meteorological provinces in India :—

METEOROLOGICAL PROVINCE.	Variation of mean 8 A.M. pressure of December 1896 from normal.	Pressure anomaly, December 1896.
	″	″
Burma Coast and Bay Islands	+·044	+·014
Burma Inland	?	?
Assam	+·042	+·012
Bengal and Orissa	+·041	+·011
Gangetic Plain and Chota Nagpur	+·034	+·004
Upper Sub-Himalayas	+·033	+·003
Indus Valley and North-West Rajputana	+·030	0
East Rajputana, Central India and Gujarat	+·025	—·005
Deccan	+·024	—·006
West Coast	+·012	—·018
South India	+·025	—·005

Temperature.—The variations of the mean temperature conditions from the normal were smaller in December than in the preceding month, but they exhibited the same general characteristics, *viz.*—an excess of heat in all parts of the Indian region except portions of the north-east and north west of India. This excess of heat over so large an area was due to the steady fine weather which prevailed over the greater part of the country (except the south) during the first 20 days of the month while the diminished amount of excess as compared with that in November was due in part to the rainfall which occurred during the last ten days of the month.

The maximum or day temperature was in slight to considerable excess over the greater part of the country but was in defect of the normal in four areas, *viz.*—Gujarat, South Madras, Deltaic Burma and the Punjab, Rajputana and the South Gangetic Plain. The abnormal deficiency exceeded 2° at the following stations, Madura (—2°·3) Bhuj (—3°·0) and Lahore (—2°·5). The abnormal excess

exceeded 2° all over the central parts of the country and the greater part of the Peninsula and exceeded 4° at Indore (+4°·2), Khandwa (+4°·6), Nagpur (+4°·2), Amraoti (+4°·1), Akola (5°·8), Malegaon (+4°·5) and at Poona (+5°·4).

The minimum or night temperature of the month was below the normal over nearly the whole of north-western India, along the foot of the Hills in the North-Western Provinces and over the greater part of North-East India, while it was above the normal in all other places. The greatest abnormal excess was over Berar, the greatest abnormal deficiency over Lower Sind and over Lower Bengal. The general distribution, relatively to the normal, was hence similar to that of the day temperature. The most considerable variations were Hyderabad (Sind) (−4°·3) Jessore (−5°·1) and Akola (+8°·3). The following table shows the large abnormal excess over the west of the Central Provinces, Khandesh and the Bombay Deccan.

STATION.	MEAN MINIMUM TEMPERATURE.		
	Actual December 1896.	Normal December.	Variation from normal.
	°	°	°
Khandwa	55·4	48·9	+6·5
Akola	58·3	50·0	+8·3
Malegaon	56·4	50·3	+6·1
Sholapur	62·9	56·9	+6·0

The mean temperature of the month was lower than usual in the North-East and North-West and above elsewhere. The deficiency was generally small and with the doubtful exception of Bickaneer did not reach 2° anywhere. The abnormal excess on the contrary was large generally and in the Bombay Deccan and west of the central Provinces was very large, as is shown by the following table.

STATION.	MEAN TEMPERATURE.		
	Actual December 1896.	Normal December.	Variation from normal.
	°	°	°
Khandwa	70·9	65·3	+5·6
Amraoti	73·5	68·5	+5·0
Akola	73·1	66·0	+7·1
Malegaon	72·1	66·8	+5·3
Poona	74·1	68·6	+5·5

The mean temperature was lower than usual at the Hill stations in Northern India and in Baluchistan and higher than usual at the central and southern Hill stations. The variations at the more elevated stations were generally similar to the variations at the stations on the neighbouring plains. At Leh in Ladakh, the variation was −3°·2

The following table gives comparative temperature data of the month for the eleven meteorological divisions :—

METEOROLOGICAL PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature December 1896.	Mean minimum temperature December 1896.	Mean daily temperature December 1896.
	°	°	°
Burma Coast and Bay Islands . .	+0·1	−1·4	−0·6
Burma Inland	+1·8	+1·2	+1·5
Assam	+0·7	−1·6	−0·5
Bengal and Orissa	+1·8	−1·4	+0·2
Gangetic Plain and Chota Nagpur .	+1·6	+0·5	+1·1
Upper Sub-Himalayas . . .	−0·6	−0·5	−0·6
Indus Valley and North-West Rajputana.	0	−2·5	−1·2
East Rajputana, Central India and Gujarat.	0	+0·6	+0·3
Deccan	+3·4	+4·9	+4·1
West Coast	+2·1	+3·3	+2·7
South India	+0·7	+2·8	+1·8

Winds.—Winds were more easterly than usual at the stations in Lower Burma and at the Bay Islands and at Diamond Island the velocity was considerably above the normal. The winds in Bengal exhibited about the normal steadiness except in one or two cases but were somewhat more northerly than usual. In the Gangetic Plain and Upper India there was but little departure from the normal.

In East Rajputana, Gujarat and the central parts of the country generally, the winds were unusually unsteady and at the same time unusually strong. Along the west coast the wind was very variable while in South India both the steadiness and the velocity exceeded the normal average.

Humidity and cloud.—The variations in the humidity over Burma and the Bay Islands were irregular but almost all over Northern India from Assam westward to the Punjab and Rajputana the air was drier than usual, though generally by small amounts. In the Deccan the variations from the normal were irregular. In South India the air was damper than usual.

The amount of cloud was larger than usual over the Peninsula and was also locally in excess over Bengal, Orissa, the Gangetic Plain and Chota Nagpur.

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.	VARIATION FROM NORMAL OF		
	Mean aqueous vapour pressure, December 1896.	Mean Humidity, December 1896.	Mean cloud amount, December 1896.
Burma-Coast and Bay Islands	—·007	—2	—0·3
Assam	—·022	—3	—0·5
Bengal and Orissa	—·040	—8	+0·2
Gangetic Plain and Chota Nagpur	—·025	—6	+0·9
Upper Sub-Himalayas	—·031	—2	—0·2
Indus Valley and North-West Rajputana.	—·053	—7	—0·2
East Rajputana, Central India and Gujarat.	—·012	0	—0·1
Deccan	+·020	—2	+0·6
West Coast	+·025	—4	+0·9
South India	+·053	+3	+1·6

Rainfall.—The month was abnormally wet over a considerable part of the country. In the south the weather was rainy and unsettled almost throughout the month, but the fall was particularly heavy and general between the 4th and the 11th and again between the 16th and 20th when an area of disturbed weather passed westward across Ceylon. In Upper Burma there were showers on the 6th and 7th. In Upper and Central India the first twenty days of the month were fine. In Central India showers commenced on the 22nd, and after that date scattered rainfall continued up to the close of the month. In the Central Provinces rain commenced on the 24th and with a brief interruption on the 26th continued in a desultory manner up to the 31st. The North-West Provinces received showers on the 24th and 25th and again between the 27th and 31st at which time also Rajputana, the Punjab and West Bengal received rain.

It will be seen from the above that the north-east of the Indian region including Burma, Assam and the greater part of Bengal lay outside the area of disturbed weather, and in these regions the rainfall was unimportant and less than the normal. The same was true of the Madras Presidency North of Lat. 14°N and in a modified degree was true of the north, centre, and west of the Punjab, and the west and centre of the Peninsula. The abnormal conditions of rainfall were due in the south in part to the unusual disturbance which passed westward in the extreme south and gave a heavy burst of rain to Ceylon and south Madras, and in the north and centre to the abnormal place of origin and direction of movement of the barometric disturbances which appeared over India during the last ten days of the month. These disturbances, instead of entering India on the North-West frontier, first appeared over Kathiawar and the North of the Bombay Presidency and passing north-eastward or east-north-eastward across the central parts of the country determined very unusual rainfall to the more central and northern districts.

The following gives comparative rainfall data for the eleven meteorological divisions:—

METEOROLOGICAL PROVINCE.	RAINFALL.		
	Average actual, December 1896.	Average normal, December.	Variation from normal. *
	Inches.	Inches.	Inches.
Burma Coast and Bay Islands	0·16	1·09	—0·92
Burma Inland	0·33	0·10	—0·10
Assam	0·11	0·40	—0·28
Bengal and Orissa	0·03	0·23	—0·19
Gangetic Plain and Chota Nagpur	0·52	0·23	+0·30
Upper Sub-Himalayas	0·43	0·45	—0·01
Indus Valley and North-West Rajputana.	0·09	0·16	—0·09
East Rajputana, Central India and Gujarat.	0·27	0·16	+0·17
Deccan	0·32	0·51	—0·13
West Coast	0·73	0·81	+0·02
South India	5·02	2·48	+2·39

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

Atmospheric Pressure.

The mean pressure of the Indian land area for the month of December was 0·030″ above the normal average. In the preceding year the mean pressure for December was approximately normal, the variation having been —·002″. This difference in the pressure conditions of December 1896 as compared with the pressure conditions of December 1895 is important as there was a marked difference at the same time in the weather, December 1896 having been wetter and December 1895 drier than usual.

The local anomalies in December 1896 were generally small and differed in some important respects from those of December 1895, while on the contrary they were generally similar to those of December 1894. In the month

under review the local anomalies were generally, though not universally, positive over Sind, the Punjab, the Gangetic Plain, Central India, Bengal, Assam, Burma and part of Madras while they were negative over Bombay, Berar and the centre and south of the Peninsula.

The positive anomalies were in almost every case small and only exceeded 0·015″ at the following stations :—

Station.	Variation of mean 8 A.M. pressure of December 1896 from normal.	Pressure anomaly, December 1896.
	″	″
Sialkot	+·049	+·019
Ranchi	+·051	+·021
Jalpaiguri	+·057	+·027
Purnea	+·050	+·020
Balasore	+·049	+·019
Mymensingh	+·049	+·019
Narayanganj	+·047	+·017
Silchar	+·054	+·024
Moulmein	+·049	+·019
Bassein	+·046	+·016

The negative anomalies were larger and more marked more particularly over the south-west of the Peninsula and Ceylon where pressure relatively to the general condition was in moderate defect. It was also in moderate defect locally over Kathiawar and Gujarat apparently due to local disturbances of pressure which have been a marked feature of this area during the present cold weather. The pressure anomalies were hence negative and more than 0·015″ in absolute amount at the following stations :—

Station.	Variation of mean 8 A.M. pressure of December 1896 from normal.	Pressure anomaly December 1896.
	″	″
Bhuj	+·012	—·018
Surat	+·009	—·021
Akola	+·010	—·020
Poona	+·013	—·017
Calicut	—·003	—·033
Mangalore	+·003	—·027
Cochin	+·007	—·023
Bombay	+·014	—·016
Trichinopoly	+·010	—·020
Bangalore	+·013	—·017

The deficiency of pressure, with respect to the normal conditions, in the extreme South and South West was due to persistent abnormal conditions throughout the month in that area. In the absence of information from Zanzibar and the Seychelles, it is impossible to say whether this deficiency was general over the Equatorial area, but it was probably present in the Gulf of Aden and in the South Indian Ocean as is shown by the pressure records of Aden and of Mauritius where the actual variations were only +·014″ and +·019″ respectively while the general anomaly for the whole Indian area was +·030″.

Pressure at the level of the hill stations in India was everywhere in excess. At Quetta the abnormal excess was moderate, and at Ranikhet it was nearly as large, but at Murree, Simla, Chakrata and Darjeeling the excess was slight or small. At Mount Abu and Pachmarhi the excess was also slight and at Wellington it was very slight. The variations generally differed little in amount from the pressure variations recorded at the neighbouring plains stations, but on the whole pressure was in more marked excess at the lower than at the higher elevations this being particularly the case at Darjeeling, Simla and Wellington. The following data illustrate this feature :—

Hill Station.	Variation of pressure from normal. (*a*)	Plain Station.	Variation of pressure from normal. (*b*).	Vertical pressure anomaly or (*a*)—(*b*).
	″		″	″
Leh	—·001	Lahore	+·029	—·030
Quetta	+·044	Jacobabad	+·037	+·007
Simla	+·010	Ludhiana	+·036	—·026
Murree	+·021	Peshawar	+·027	—·006
Chakrata	+·024	Roorkee	+·027	—·003
Ranikhet	+·036	Bareilly	+·035	+·001
Darjeeling	+·013	Dhubri	+·034	—·021
Mount Abu	+·013	Deesa	+·018	—·005
Pachmarhi	+·025	Hoshangabad	+·023	+·002
Wellington	+·008	Coimbatore	+·026	—·018

The vertical anomalies were hence generally negative. This condition was the reverse of that which prevailed during December 1895 and this distribution of pressure in the vertical direction is usually associated with wetter and more disturbed weather than usual in Northern India.

Barometric depressions and cyclonic storms of the month.

At the commencement of the month, pressure exceeded the normal average over Sind, Gujarat and the greater part of the Peninsula and was below the normal elsewhere. The abnormal deficiency was considerable over Bengal and along the foot of the Himalayas from Roorkee eastward to Sibsagar. Except over these areas the departures, from the normal were not important. This distribution, however, only applied to the first day of the month as on the second a brisk barometric rise occurred in the NE and on the 3rd the Peninsula and North-east India exhibited excessive pressures, and the area of relatively low barometer was reported from the North-west. This increase of pressure in the North-east gradually extended over the country, and on the 6th the barometer exceeded the normal in all parts of the Indian region. This condition lasted practically up to the 13th but during this period a shallow depression appeared in the North-west. On the 8th, the barometer was giving way slightly over North-west India and Baluchistan, the greatest fall during the previous 24 hours having been 0·040″ at Jacobabad. On the following day, the 9th, a shallow depression was shown over the Southern Punjab and the adjoining parts of Rajputana. The depression occasioned a slight cyclonic circulation in the winds and cloudy weather over the plains of North-west India and apparently the snow which was falling in Kashmir was connected with this disturbance. The depression passed on into the Gangetic Plain by the morning of the 10th and reached Bihar by the morning of the 11th. The depression was throughout a feeble and unimportant feature of the meteorological conditions.

As stated above pressure was excessive over nearly the whole of the Indian area up to the morning of the 13th. At that time a pressure deficiency appeared in Ceylon. By the following morning this area of deficient pressure had increased in intensity and had extended to Malabar. During the 14th, the barometric fall in the extreme south and in Ceylon temporarily ceased, but after 8 A.M. on the 15th, it suddenly became rapid and a fairly well defined storm was shown over Ceylon.

Cyclonic storm and disturbance of the 13th to 18th December.—On the 13th pressure was highest and about 0·150″ above the normal in the north of the Punjab. From this area readings decreased southward and were lowest in Ceylon. Half an inch of rain had fallen at Trincomalee, but the fall had ceased over the Madras Presidency. A strong northerly wind was blowing at Colombo while the winds at the Madras Coast stations showed an indraught towards a low pressure area over the south of the Bay. On this day the barometer began to fall slowly at Colombo.

The following observations taken on board vessels in the south of the Bay at 8 A.M. indicate the general character of the weather in this area on this day, the 13th.

Name of Vessel.	8 A.M. Position.		Barometer reading.	Wind.		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Scindia* (*a*) .	6 53	81 53	29·879	N by W	5	Dull and cloudy with moderate sea.
S.S. *Umlasi* . .	9 54	83 26	·955	NE	5	Clear.
S.S. *Colaba* . .	8 30	81 47	·966	NNE	6	Light passing showers.
S S. *Alboin* . .	6 03	80 25	30·042	Var	5	4 A.M. squally.
S.S. *Euplectela* .	5 49	80 28	29·797	NE	1	Fine, midnight rainy.
S.S. *Fultala* . .	7 07	82 32	·800	NNE	4	Moderate sea and passing clouds; moon light showers.

Note.—The barometer observations from ships in this and the following tables in this section are not wholly reliable, but in the Daily Marine reports for the period the corrected readings will be found.

Fresh to strong NE winds prevailed generally between Lats. 5° and 9° N. with squally weather and some showers.

14th December:—On this day the barometric changes over the south of the Peninsula and Ceylon were slight, and the general conditions were practically unchanged. The wind at Trincomalee had backed to north-west but at Colombo a strong northerly wind was blowing, and at the Madras Coast stations the winds were unchanged. A light shower of rain had been received at Negapatam, but in Ceylon on the contrary the rain had ceased. The following gives the only marine information available for this day:—

Name of Vessel.	8 A.M. Position.		Barometer reading.	Wind.		Weather.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Ravenna* .	5 41	85 41	29·672	N by W	6	Confused sea and squally; 4 A.M. heavy rain squalls.
S.S. *Scindia* (*a*) .	8 35	81 27	·868	NE	4	Moderate sea and fine.
S.S. *Euplectela* .	7 29	81 58	·797	N	...	Cloudy, 4 A.M. showery.

The above shows that over the sea area also there had been no important change during the 24 hours ending at 8 A.M. on the 14th.

15th December:—The chart of this day also showed no important developments. Steeper gradients and stronger winds than usual prevailed over the Bay. Trincomalee reported 0·82″ of rain and Negapatam a few drops. The following were the average wind velocities for the three days at the representative stations around the Bay.

STATION.	AVERAGE HOURLY VELOCITY IN MILES DURING PAST 24 HOURS OF		
	13th December 1896.	14th December 1896.	15th December 1896.
Diamond Island	11	18	19
Negapatam	21	16	17
Colombo	19	19	18

The marine observations for the south of the Bay on this day were as follows:—

NAME OF VESSEL.	8 A.M. POSITION.		Barometer reading.	WIND.		WEATHER.
	Lat. N.	Long. E.		Direction.	Force.	
	° ′	° ′	″			
S.S. *Scindia* (*a*) .	10 26	80 09	29·869	NE	5	Rough sea and squally with rain.
S.S. *Euplectela* .	10 00	81 19	·777	NNE	6	High sea and dull, cloudy.
S.S. *Amra* . .	10 34	80 24	·821	NE by N	5	Heavy NE swell; 4 A.M. squally.
S.S. *Ravenna* .	6 07	80 48	·823	NNW	4	NE swell overcast; 4 A.M. frequent squalls of wind and rain.

These observations show that fresh to strong squally north-east winds prevailed with a rough sea and squally rainy weather.

16th December:—On this day a brisk to rapid barometric fall occurred at Negapatam (—·052″), Trincomalee (—·069″); and Colombo (—·102″), and a central area of depression had apparently been developed within the low pressure area over the south of the Bay. The following gives the observatory records for this day:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″				Inches	
Madras . .	29·955	—·017	—·024	NNE	12	10	0·04	Sea rising.
Negapatam	·889	—·052	—·048	NE	24	10	1·78	Sea tremendous and heavy rain.
Trincomalee	·797	—·069	?	NE	4	8	2·34	Continuous rain.
Colombo .	·774	—·102	—·130	N	22	10	1·21	Overcast.
Tinnevelly .	·909	—·030	?	NNW	5	10	0·03	Drizzling.
Trivandrum	·876	—·037	?	Calm	...	10	...	Overcast.
Cochin .	·882	—·021	—·035	NNE	5	8	...	Sea smooth.

Gradients were now very steep over the south of the Peninsula, the pressure difference between Masulipatam and Colombo being 0·25″ or 0·15″ greater than usual. Only four ships were in this neighbourhood on this date. The *S. S. Nubia* (*b*) in Lat. 6°51′ N and Long. 82° 13′ and the *S. S. Coromandel* in Lat. 8°56′ N and Long. 82°25′ had fresh S. S. E. winds, while the *S. S. Osborne* in Lat. 6°19′ N. and Long. 79°15′ had a fresh northerly wind and continuous rain and the *S.S. Nizam* in Lat. 8°17′ N and Long. 78°18′ experienced a northerly wind of force 9 to 10, a high sea and heavy rain.

17th December:—The barometer had commenced a slight recovery at Colombo, while on the contrary it had fallen briskly over the west and south of the Peninsula. The following gives the observatory records for this day:—

STATION.	PRESSURE.			WIND.		Cloud.	Rainfall.	WEATHER.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	′	″	″				Inches	
Madras .	29·898	—·057	—·087	E	10	10	1·16	Showery and sea rough.
Negapatam	·873	—·016	—·068	NE	20	10	0·94	Sea tremendous and heavy rain.
Trincomalee	·790	—·007	?	E	1	5	0·24	
Colombo .	·774	0	—·131	SSE	8	8	1·55	
Tinnevelly .	·818	—·091	?	NNE	6	10	1·45	Continuous rain.
Trevandrum	·789	—·087	?	E	...	10	0·67	Drizzling.
Cochin .	·808	—·074	—·111	NNE	8	9		

The changes in the wind directions at the Ceylon stations and at Trevandrum indicate the passage westward of the disturbance.

The following observations taken on board vessels in the neighbourhood of Ceylon show the character of the weather in this area at this time :—

Name of Vessel.	8 A.M. Position. Lat. N.	8 A.M. Position. Long. E.	Barometer reading.	Wind. Direction.	Wind. Force.	Weather.
	° ′	° ′	″			
S.S. *Nubia* (*b*) .	9 57	83 43	29·804	ESE	...	Clear 4 A.M., squally.
S.S. *Osborne* . .	7 26	82 37	·987	E	4	Moderate sea; Clear; 8 P.M., heavy showers.
S.S. *Simla* . .	6 1	81 22	·749	ESE	4	Fine; Noon heavy rain squalls at times.
S.S. *City of Venice*.	6 25	81 45	·830	ESE	4 to 5	Showery; 4 A.M. heavy rain and squally.
S.S. *Bhundara* .	7 32	77 49	·724	NE	...	Cloudy and rainy.
S.S. *Dictator* .	6 16	78 28	...	SSW	5	Strong gusts and cloudy; 4 A.M. hard squalls and showers of rain.
S.S. *Clan Macgregor*.	7 16	77 27	·795	NE	6	Heavy squalls of wind and rain.
S.S. *Patna* . .	7 50	77 34	·693	NE	5	Heavy rain.
S.S. *Chilka* . .	7 19	77 59*	·763	E	4	Heavy rain.
S.S. *Amra* . .	12 55	81 18	·801	ENE	4	Heavy ENE swell and incessant rain.
S.S. *Culna* . .	13 11	80* 24	·947	ENE	5	Noon heavy rain.

* Noon position.

If a definite centre existed at this time it lay within the area bounded by the S.S. *Bhundara* and S.S. *Patna* and the station of Colombo. The lowest pressure reported was 29·693″ (uncorrected) on board the S.S. *Patna*.

December 18th.—On this morning the barometer was rising briskly at Colombo, and the area of disturbed weather was travelling westward out into the Arabian Sea. The following are the observatory records for this day at 8 A.M. :—

Station.	Pressure. 8 A.M. reduced to sea level and constant gravity at Lat. 45°.	Pressure. Change in past 24 hours.	Pressure. Variation from normal.	Wind. Direction at 8 A.M.	Wind. Average hourly velocity in miles during past 24 hours.	Cloud.	Rainfall.	Weather.
	″	″	″				Inch.	
Trincomalee .	29·828	+·038	?	SE	1	3	0·16	Fine.
Colombo .	·825	+·051	—·081	E	7	0	0·48	Clear.
Trevandrum .	·783	—·006	?	E	...	10	0·46	Overcast.
Cochin . .	·789	—·019	—·131	ENE	6	9	0·01	Sea smooth.
Mangalore .	·822	—·021	—·127	ESE	1	10		

The marine observations of this day over the Arabian Sea give no indication of the continued existence of the disturbance.

During the greater part of the time of its existence the low pressure area appears to have been rather of the nature of a diffused disturbance than of a distinct storm with a definite centre, but the wind changes at Colombo seem to indicate that as the disturbance passed over Ceylon, a centre with a cyclonic circulation of the wind around it at the time existed. The rainfall accompanying the storm was very heavy.

The following extract from the *Madras Mail* of the 21st of December also gives an account of the gale experienced on the 15th in Colombo harbour :—

"A strong northerly wind, which was evidently caused by something of the nature of a cyclonic disturbance, commenced to blow over Colombo yesterday afternoon (15th), and, as it increased in force a very heavy sea rose in the harbour, and effected sufficient damage to put an entire stop to all coaling operations there to-day. The heavy sea was produced by a strong northerly wind which began yesterday afternoon, and which gradually increased until midnight. The damage in the harbour was all done during the night, and it was found very early this morning that many boats had been sunk. It was rather unusual to have such a strong wind at this time of the year and there had evidently been a cyclonic disturbance in the Bay of Bengal. It was the sea, however, which sunk the boats and not the wind."

During the period dealt with above, *viz.*, December 13th to 18th, pressure was somewhat unsteady at times over Northern India, and as the disturbance in the south passed out westward into the Arabian Sea, a rapid barometric fall occurred simultaneously in North-west India, but though the barometer in the Punjab fell to as much as 0·150″ below the normal, no definite depression appeared, and the barometer subsequently rose to above the normal average again without the weather being affected by the changes.

On December 20th the barometric changes were slight, and the general distribution of pressure exhibited comparatively little departure from the normal except off the Bombay coast, between Bombay and Goa, where the barometer was in moderate defect of the normal, and gradients were unusually steep for the time of year over Gujarat and North Bombay. The observations of the next day showed that an exceedingly shallow, feeble depression existed over Gujarat where the barometer marked slightly below the normal average, the pressure in most other parts of India being above the normal. This situation continued during the 22nd, but on the 23rd a slight modification appeared, the returns showing that in addition to the area of relatively low pressure over Gujarat another equally shallow low pressure area had

appeared over Eastern Rajputana, the relation between the two being apparently that of primary and secondary depressions. Both depressions subsequently moved eastward and as soon as movement commenced, slight rain fell over the central parts of the country. They still existed and were still occasioning scattered rainfall at the more central stations on the morning of the 25th, but by the morning of the 26th they had disappeared, the weather had cleared, and the barometer exceeded the normal average everywhere.

Depression of the 27th to the 29th:—On the morning of the 27th, the barometer was falling slightly to rapidly over the whole of Central and North-Western India. The fall was greatest and amounted to about 0·14″ over Gujarat, and the observations showed that a fresh depression was appearing, this time over Kathiawar. The marine observations of the 26th give no indication of any unusual disturbance over the north of the Arabian Sea, so that the first definite sign of the depression was given by the land observations on the morning of the 27th. The following are the observatory records for this day:—

Station.	Pressure.			Wind.		Cloud.	Rainfall.	Weather.
	8 A.M. reduced to sea level and constant gravity at Lat. 45°	Change in past 24 hours.	Variation from normal.	Direction at 8 A.M.	Average hourly velocity in miles during past 24 hours.			
	″	″	″					
Bhuj .	30·024	—·129	—·041	NNE	11	0		Wind variable.
Rajkot .	29·997	—·133	—·053	E	7	0		Clear.
Veraval .	·981	—·080	?	NE	6	1		Fine.
Deesa .	30·040	—·140	—·023	NE	12	6		Gale of wind.
Ahmedabad	29·999	—·140	?	E	11	0		Clear.
Surat .	30·012	—·038	—·004	SSE	5	7		

The above show that an ill-defined depression existed with its central area apparently near Surat and Rajkot.

The next day's observations showed a slight to brisk recovery of pressure over the Bombay Presidency, and a fall in all other parts of the Indian region. The fall was greatest, exceeding 0·20″, over Rajputana, and a shallow but well defined depression was shown over that area. The changes which had occurred during the 27th, leave a doubt as to whether this storm was the same as that which lay over Kathiawar at 8 A.M. on the 27th or was a secondary disturbance developed in the same manner as in the case of the slight disturbance on the 23rd. The following gives the pressure and wind observations for 8 A.M., 10 A.M., and 4 P.M. on the 27th for certain stations in the north-west and centre of India:—

Station.	8 A.M.				10 A.M.				4 P.M.			
	Pressure.		Wind.		Pressure.		Wind.		Pressure.		Wind.	
	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.	10 A.M. reduced to sea level and constant gravity at Lat. 45°	Change in past 24 hours.	Direction at 10 A.M.	Average hourly velocity in miles during past 24 hours.	4 P.M. reduced to sea level and constant gravity at Lat 45°	Change in past 24 hours.	Direction at 4 P.M.	Average hourly velocity in miles during past 24 hours.
	″	″			″	″			″	″		
Deesa .	30·040	—·140	NE	12	30·043	—·144	ENE	12	29·868	—·159	SSW	17
Mount Abu	...	—·075	SE	5	...	—·072	SE	6	...	—·104	S	13
Ajmere .	30·217	—·108	E	2	·211	—·095	E	2	30·051	—·096	NE	7
Jeypore .	·223	—·077	NE	3	·218	—·081	NE	3	·068	—·087	ENE	6

The changes in the wind direction appear to show that the disturbance passed northward, and the observer at Mount Abu records that the storm passed over that station in the afternoon of the 27th. The following is the statement of the special observations taken at Mount Abu on that day:—

Station.	Hour.	Pressure.		Wind.	
		Reduced to 32°	Change since last observation.	Direction.	Velocity in miles per hour.
		″	″		
Mount Abu . .	9 A.M.	26·186	+·028	SE	...
Do. . . .	11 „	·175	—·011	SE	20
Do. . . .	Noon	·150	—·025	SE	...
Do. . . .	2 P.M.	·110	—·040	SW	11

The storm over Rajputana occasioned easterly winds over a very large part of Northern India, and the rain which followed was general over the Gangetic Plain and parts of the Punjab and of the central disticts of India. By the morning of the 29th, the depression, noticed over Rajputana had disappeared, but at the same time a shallow low pressure area was shown over the south of the Central Provinces and the North Deccan, and it is the appearance of this low pressure area in this position at this time which raises the doubt whether the depression over Rajputana was the direct continuation of the storm noticed over Kathiawar on the morning of the 27th or a subsidiary depression locally developed.

In Persia and Mesopotamia the weather was very quiet generally during the month of December. At Baghdad a rapid barometric fall occurred in the first few days

of the month accompanied with strong winds and light rain, but at Bushire this disturbance was very little felt. Again during the last four days of the month the barometer fell fast at Baghdad, but the weather was even less disturbed than on the preceding occasion. This continuance of high steady pressure in the Persian area is what might have been naturally anticipated from the above account of the barometric depressions of the month, as, though the weather over India from the 20th onward was unusually disturbed, this disturbed weather was in no way due to depressions advancing into North-West India from the countries further to the westward.

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.

(*a*) *Hills bordering the Dera Ismail Khan district, (Tonk border).* There was a slight fall of snow on the Marwatti hills (elevation 10,000 feet) on the 29th, and a slight to moderate fall on the 30th down to 7,000 feet. Snow lay to a depth of about three inches on the 31st December 1896, above 9,000 feet. Much less snow is said to have fallen than is the case in most years in December.

(*b*) *Kurram.*—The officer on special duty writes—"No snow has fallen during December in this district, while a good deal of the fall of the previous month has melted away from all except the higher elevations. The fall in November was abnormally early in the season — a circumstance which is usually regarded as unfavourable by the natives for the occurrence of a normal and regular fall during the winter months."

(*c*) *Khyber Pass District.*—During the last week of December light snow fell in Tirah and melted away very quickly.

II.—KASHMIR AND PUNJAB HIMALAYAS.

(*a*) *Chamba.*—Snow occurred on the inner ranges down to 6,500 feet from the 8th to the 10th, but it melted rapidly on the lower elevations. Snow lay 1 foot deep on the Padri Pass on the 15th of December. Another fall occurred during the period from the 28th to the 30th December when snow fell down to about 4,000 feet.

(*b*) *Simla hill districts.*—During the period from the 15th November to the end of December, snow fell in Bushahr on the 22nd and 23rd of November down to 9,000 feet, and on the 18th December down to 10,000 feet. Again on the 25th December there was a heavy fall down to an elevation of 5,700 feet. The snow measured 3 feet deep at an elevation of 10,000 feet. The falls were repeated from the 29th to the 31st December, the snow line descending to 5,700 feet. The falls during both November and December were local in character.

(*c*) *Kilba.*—During the period from the 22nd November to the end of December, snow fell at Kilba on the 22nd and 23rd of November and on the 8th, 25th, 28th, 29th and 31st of December, but heavy falls were reported only on the 25th, 29th, and the 31st of December.

III.—NORTH-WESTERN PROVINCES HIMALAYAS.

Almora District.—The following account of the snowfall for the period 16th November to 15th December has been received from the Officiating Commissioner of Kumaon:—

Malla Danpur.—Snow fell on the following occasions:—4th December, 1 foot; 10th December, 1½ feet; and 15th December, ½ foot.

Malla Johar.—Snow fell to a depth of 4 feet on the peaks of Uttamdhara and Ralamdhara on the 23rd November, and to a depth of 2 feet on the 10th December. In Millan the fall on these days amounted to 2 feet.

Malla Byan, Chandans and Darma.—Snow fell on these passes on the 21st, 22nd and 26th November, and again on the 10th December. The fall on each occasion measured ½ foot in depth. The fall is said to be less than during the corresponding period of 1895.

Summary of special Storm Reports.

Hailstorms and thunderstorms are of occasional occurrence in Northern and Central India, during the cold weather. The following storms were reported during the month.

4th.—Very violent hailstorm in the Namtidole Tahsil of the Sibsagar District from 3 A.M. to 3·15 A. M. which caused great destruction to the standing crops. The largest stones are said to have measured about 5 inches in circumference.

28th.—Thunderstorm with rain at Khandwa at 11 P.M. Hailstorm in the Rajgarh Tahsil of the Bickaneer State from 3 A.M. to 4 A.M.

29th.—Thunderstorm with rain at Khandwa at 10 P.M.

30th.—Thunderstorm with hail at Jubbulpore at 2 A.M.—Hailstorms are reported to have occurred also in the Merwara, Sehora, and Panagarh Tahsils of the district.

Thunderstorm with hail and heavy rain at Chikalda from 8-25 A.M. to 8-32 A.M. Violent hailstorm at Pachmarhi from 2-50 to 3 P.M.

31st—Hailstorm in the Mirzawala Tahsil of the Bickaneer State.

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

Arabian Sea.—Light to strong north-east monsoonwinds obtained over the whole of the Arabian Sea during the first fifteen days of the month. Weather was generally fine during this period, except in the south-east, where it was more or less disturbed with occasional squalls and rain. The mean air movement ranged from 3·1 on the 9th to 4·2 on the 14th, and was, during the greater part of the period, more or less above the normal of the month. Winds strengthened rapidly to the west of Ceylon during the 15th, and weather became much disturbed in that area. The S.S. *Nizam* in Lat. 8¼° N. and Long. 78¼°E. at 8 A.M. of the 16th experienced northerly gales, force 9 to 10, heavy rain and a high sea. During the succeeding 24 hours a depression appeared over that area from the eastward and winds became cyclonic in direction. On the morning of the 17th moderate to strong cyclonic winds with heavy rain and heavy to hard squalls were experienced by the vessels passing through this region. The depression filled up rapidly during the day, and on the morning of the 18th fairly normal conditions were re-established. During the remainder of the month steady north-east monsoon winds force 2 to 6, held over the whole of the Arabian Sea and on one occasion, *viz.*, the 27th, extended southwards right across the equator as far as the Seychelles. As during the first fortnight, winds were, on the majority of days, stronger than usual. The air movement for the whole of the month averaged 3·6 or 0·3 above the normal.

Bay of Bengal—Ordinary north-east winds prevailed generally over the Bay to the north of Lat. 8°N. during the first twelve days of the month. Further south winds were very unsteady, westerly winds alternating with northerly winds. Weather was fine throughout the period over the region of north-east winds, but was more or less unsettled with occasional squalls and showers in the south and near the East and South Ceylon coasts. The mean force of the air movement over the Bay during this period ranged from an average of 2·4 on the 11th to 3·8 on the 8th and was on at least eight days above the normal average of December. No important change occurred during the next two days, except that the winds increased in the extreme south of the Bay and the weather became slightly more disturbed. A slight depression formed rapidly during the 15th in this area of disturbed conditions off the Ceylon coast, and, marching westwards passed out into the Arabian Sea by the 17th. Unsteady southerly winds (S.E. to S.W.), however, continued in the south of the Bay until the 20th. Normal north-east winds were established over the whole of the Bay on the 21st and held steadily during the remainder of the month. Fine weather prevailed generally over the Bay on these days, except in the extreme south, where showers and occasional squalls continued to occur.

Temperature of the air.

The mean maximum temperature of the month was above the normal over by far the greater part of India. The variations were small over the North Gangetic Plain, North and East Bengal, Assam and Burma, as well as over part of the south of the Peninsula and the Western Desert. They exceeded 2° over West Bengal, the South Gangetic Plain, the central parts of the country, and the whole of the Peninsula to the north of about Lat. 14°N.,

and were greatest (more than 4°) within the area, for which data are given below :—

Division.	Station.	Mean maximum temperature.		
		Actual, December 1896.	Normal, December.	Variation from normal.
		°	°	°
Central Provinces.	Nagpur	84·5	80·3	+ 4·2
	Amraoti	85·8	81·7	+ 4·1
	Akola	87·8	82·0	+ 5·8
	Khandwa	86·3	81·7	+ 4·6
	Indore	82·7	78·5	+ 4·2
Khandesh	Malegaon	87·7	83·2	+ 4·5
Deccan	Poona	88·8	83·4	+ 5·4

The mean maximum temperatures were in defect of the normal within four areas. The first was Deltaic Burma, where the greatest abnormal deficiency was 0°·8 at Diamond Island; the second was South Madras, where the deficiency was small except in the case of Madura, where it amounted to 2°·3; the third was Kathiawar, where the principal deficiency was 3°·0 at Bhuj; and the fourth and last included the Punjab, Rajputana, and the west of the North-Western Provinces, where the abnormal deficiency ranged generally between ½° and 1½°, except at Lahore, where it amounted to 2½°.

The mean minimum or night temperature varied more largely from the normal than did the day temperature. It was in defect of the average over North-East and North-West India, and in excess elsewhere. The abnormal deficiency exceeded 2° in two areas for which data are given below :—

Division.	Station.	Mean minimum temperature.		
		Actual, December 1896.	Normal, December.	Variation from normal.
		°	°	°
Lower and East Bengal.	Jessore	50·1	55·2	− 5·1
	Chittagong	55·1	58·4	− 3·3
	Dinajpur	48·5	51·3	− 2·8
	Berhampore	53·0	55·3	− 2·3
	Darbhanga	51·7	54·0	− 2·3
	Narayanganj	55·2	57·3	− 2·1
Sind.	Hyderabad	48·0	52·3	− 4·3
	Jacobabad	39·9	43·4	− 3·5

The mean night temperature of the month was more than 2° in excess of the average over nearly the whole of the central parts of the country and of the Peninsula. As was the case with the mean maximum or day temperature, the abnormal excess was greatest and most marked over the Central Provinces, the Deccan and Khandesh. The following gives data for the region within which the excess was more than 4° :—

Province.	Station.	Mean minimum temperature.		
		Actual, December 1896.	Normal, December.	Variation from normal.
		°	°	°
Central Provinces and Berar.	Akola	58·3	50·0	+ 8·3
	Amraoti	61·2	55·4	+ 5·8
	Khandwa	55·4	48·9	+ 6·5
	Nagpur	58·5	53·3	+ 5·2
	Hoshangabad	55·4	50·7	+ 4·7
	Chanda	55·7	51·1	+ 4·6
	Jubbulpore	49·6	45·2	+ 4·4
	Seoni	53·2	49·0	+ 4·2
Khandesh	Malegaon	56·4	50·3	+ 6·1
	Surat	61·2	56·8	+ 4·4
Deccan	Sholapur	62·9	56·9	+ 6·0
	Poona	59·4	53·8	+ 5·6
	Hyderabad	62·3	56·6	+ 5·7
	Ratnagiri	71·5	66·8	+ 4·7
	Kurnool	64·3	59·4	+ 4·9

The general variations of the mean day and night temperatures were hence on the whole similar for all parts of India, and in both cases the greatest departure from the normal was reported from the same region. The mean temperature of the month hence exhibited a deficiency of heat over North-East and North-West India and an excess over the central parts of the country and the Peninsula. The largest variations were +7°·1 at Akola, +5°·6 at Khandwa, +5°·3 at Malegaon, and +5°·5 at Poona. Of the deficient temperatures the principal variations, with the doubtful exception of Bickaneer, were −1°·9 at Hyderabad (Sind) and−1°·6 at Jacobabad.

Both the day and night temperatures were below the normal average at the Himalayan hill stations; at Wellington the day temperature was below and the night temperature above the average, while at Pachmarhi both the day and night temperatures were excessive. Hence the variations of the temperature from the normal at the level of the hills were generally similar to those at the level of the plains stations.

The following table gives temperature data for each of the 56 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.	Daily range.
		°	°	°	°	°	°		
Burma	Tenasserim	88·1	69·6	78·9	18·6	28·4	−0·1	+0·3	−0·4
	Lower Burma (Deltaic)	85·2	68·2	76·8	17·0	25·0	+0·3	−1·2	+1·5
	Central do.	85·7	60·8	73·3	25·0	39·3	?	?	?
	Upper do.	80·3	54·6	67·5	25·7	35·5	+1·8	+1·2	+0·6
	Arakan	82·0	61·1	71·6	20·9	32·0	+0·1	−3·3	+3·4
Bengal and Assam	Eastern Bengal	77·3	53·4	65·3	23·9	34·8	+1·2	−2·1	+3·3
	Assam (Surma)	78·6	51·3	65·0	27·4	38·7	+1·2	−1·8	+4·0
	Do. (Brahmaputra)	73·6	51·8	62·7	21·8	34·0	+0·4	−1·5	+1·9
	Deltaic Bengal	79·6	53·4	66·5	26·2	41·0	+2·4	−2·7	+5·1
	Central do.	78·9	52·9	66·0	26·0	40·3	+2·4	−1·2	+3·6
	North do.	76·4	50·6	63·5	25·9	38·0	+0·6	−1·5	+2·1
	Bengal Hills	52·4	35·0	43·7	17·5	29·0	−0·8	−1·0	+0·2
	Orissa	81·8	60·6	71·2	21·2	36·6	+3·0	+0·7	+2·3
	Chota Nagpur	76·6	50·7	63·7	25·9	40·4	+3·0	+1·5	+1·5
	Bihar (South)	75·7	51·8	63·8	23·9	40·4	+0·4	+1·1	−0·7
	Do. (North)	75·8	48·8	62·3	27·0	41·6	+0·7	−1·8	+2·5
North-Western Provinces and Oudh.	North-Western Provinces (East)	76·4	47·8	62·1	28·6	48·2	+1·5	+0·2	+1·3
	Oudh (South)	78·2	46·7	64·0	31·5	52·6	+1·7	+1·1	+0·6
	Do. (North)	76·3	47·3	61·8	29·0	59·8	?	?	?
	North-Western Provinces (Central)	76·0	47·9	62·0	28·1	43·7	−1·1	+1·2	−2·3
	Do. do. (West)	74·5	45·9	60·2	28·6	40·6	0	−0·2	+0·2
	Do. do. (Submontane East)	75·1	49·2	62·2	25·9	42·1	+0·8	−0·9	+1·7
	Do. do. (do. West)	71·6	44·1	57·8	27·5	40·8	+0·4	−0·7	+1·1
	Do. do. (Hills)	52·0	36·7	44·4	15·3	34·5	−0·9	−0·8	−0·1
Punjab	Punjab (South-East)	72·6	46·2	59·4	26·4	40·3	?	?	?
	Do. (South)	71·7	41·4	56·6	30·4	44·2	−1·5	−1·5	0
	Do. (Central)	69·1	41·5	55·3	27·6	40·9	−2·5	+0·9	−3·4
	Do. (Submontane)	70·3	41·5	55·9	28·9	43·6	−1·5	−0·8	−0·7
	Do. (Hill Districts)	43·5	24·4	33·9	19·2	33·2	−1·5	−2·7	+1·2
	Do. (North)	66·3	35·3	50·8	31·0	44·0	−0·9	−0·6	−0·3
	Do. (West)	73·4	39·6	56·5	33·8	48·3	+1·4	−1·1	+2·5
Bombay and Malabar Coast Districts (Madras).	Malabar Coast	88·0	74·2	81·1	13·9	20·6	+1·6	+3·0	−1·4
	Madras (South Central)	83·9	68·2	76·1	15·7	24·2	−1·5	+2·5	−4·0
	Coorg	75·0	60·8	67·9	14·2	22·8	+0·5	+3·2	−2·7
	Mysore	80·6	63·2	72·0	18·2	27·9	+0·2	+3·4	−3·2
	Konkan	88·8	72·5	80·7	16·4	25·2	+2·6	+3·6	−1·0
	Bombay Deccan	87·1	61·6	74·4	25·5	38·4	+3·9	+5·1	−1·2
	Hyderabad (North)	85·0	60·4	72·7	24·6	39·1	?	?	?
	Khandesh	86·7	56·9	71·8	29·9	47·2	+4·5	+6·1	−1·6
Central Provinces and Berar.	Berar	86·8	59·8	73·3	27·1	47·5	+5·0	+7·1	−2·1
	Central Provinces (West)	84·0	56·4	70·2	27·6	44·3	+3·8	+5·5	−1·7
	Do. (Central)	80·0	53·2	66·6	26·8	44·5	+2·3	+4·2	−1·9
	Do. (East)	81·0	56·7	68·8	24·3	30·1	+3·6	+4·0	−0·4
Bombay (North)	Gujarat	88·4	60·3	74·4	28·2	43·6	+3·5	+4·4	−0·9
	Kathiawar	83·5	56·2	69·9	27·4	41·1	−2·1	+0·7	−2·8
	Sind	79·4	46·8	63·1	32·6	49·1	+0·5	−3·9	+4·4
	Baluchistan Hills	57·7	25·7	41·7	32·1	52·7	−0·6	−2·0	+1·4
Rajputana and Central India.	Central India (East)	78·2	49·0	63·6	29·2	46·5	+1·6	+1·6	0
	Rajputana (East), Central India (West)	78·0	46·8	63·2	31·1	44·1	−0·6	−0·9	+0·3
	Do. (West)	78·1	46·0	62·2	32·2	48·6	?	?	?
Madras	East Coast (North)	83·8	66·1	75·0	18·0	29·0	+2·3	+2·0	+0·3
	Hyderabad (South)	86·0	63·8	74·9	22·2	33·3	+2·0	+5·7	−3·7
	Madras (Central)	87·8	65·9	76·9	21·9	31·0	+2·6	+3·9	−1·3
	East Coast (Central)	83·8	69·7	76·8	14·1	21·9	+1·0	+2·1	−1·1
	Do. (South)	82·8	72·8	77·8	10·0	17·4	0	+2·8	−2·8
	Madras (South)	82·9	73·5	78·2	9·5	16·0	−2·3	+1·6	−3·9

At the commencement of the month the mean temperature was normal in Arakan and South Madras, in defect in Sind, West Rajputana and the Southern Punjab, and in excess in all other places. The contrasts of temperature were very large, as is shown by the data given below :—

Province.	Station.	Mean temperature. Actual December 1896.	Normal December.	Variation from normal.
		°	°	°
Baluchistan	Quetta	40·5	44·9	— 4·4
Sind	Hyderabad	59·0	68·0	— 9·0
	Jacobabad	55·2	62·9	— 7·7
Central Provinces	Khandwa	79·4	66·5	+12·9
	Akola	80·3	67·1	+13·2
	Seoni	76·5	64·0	+12·5
	Jubbulpore	73·9	61·9	+12·0
	Indore	76·7	64·7	+12·0
	Nagpur	78·9	67·7	+11·2
	Hoshangabad	77·3	66·2	+11·1

The following table gives temperature data for the different divisions for the 1st :—

Political area or Province.	Variation from normal of: Mean Maximum temperature, 1st December 1896.	Mean minimum temperature, 1st December 1896.	Mean temperature, 1st December 1896.
	°	°	°
Burma	+0·9	+ 0·8	+ 0·9
Bengal and Assam	+4·8	+ 4·4	+ 4·6
N.-W. Provinces and Oudh	+5·0	+ 3·1	+ 4·1
Punjab	—2·3	+ 3·5	+ 0·6
Sind and Rajputana	—3·2	— 4·1	— 3·7
Central India and Gujarat	+2·7	+ 8·4	+ 5·6
Central Provinces and Berar	+8·4	+12·9	+10·7
Bombay	+4·1	+ 5·6	+ 4·9
Madras	+1·8	+ 1·2	+ 1·5

The preceding data indicate that the night temperature in most provinces was more largely above the normal than the day temperature, more particularly in the Punjab and parts of the more central districts.

Between the 2nd and 3rd a rapid rise of temperature occurred over Sind, and hence on the latter date the abnormal coolness over the Indus Valley and Baluchistan had disappeared, but the general distribution was unaltered, the mean temperature exhibiting a large excess over the west of the Central Provinces whence the amount of the excess decreased in all directions.

Heavy showers were reported from the Madras Coast districts on the 6th which reduced the temperature at Madras and Negapatam to considerably below the normal average, but in other respects very little change had occurred, and the following table, which gives temperature data for the 6th, shows that the mean temperature remained excessive generally but particularly so over the Central Provinces :—

Political area or Province.	Variation from normal of: Mean maximum temperature, 6th December 1896.	Mean minimum temperature, 6th December 1896.	Mean temperature, 6th December 1896.
	°	°	°
Burma	+2·5	+1·7	+2·1
Bengal and Assam	+2·7	+0·9	+1·8
N.-W. Provinces and Oudh	+1·3	+1·5	+1·4
Punjab	—0·7	0	—0·4
Sind and Rajputana	+2·3	0	+1·2
Central India and Gujarat	+1·3	+2·4	+1·9
Central Provinces and Berar	+5·0	+7·4	+6·2
Bombay	+3·8	+6·0	+4·9
Madras	+0·1	+3·9	+2·0

On the following day, the 7th, a sudden and considerable fall of temperature appeared over the North Punjab and over Lower Burma. The fall in the former locality proved to be only a temporary effect and disappeared shortly afterwards, but the latter was an important and persistent change which held steadily over Burma and apparently extended westward and northwestward across the Bay. The following table gives the temperature variations for the various Burma stations for the period December 6th to 15th in illustration :—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of: 6th Dec.	7th Dec.	8th Dec.	9th Dec.	10th Dec.	11th Dec.	12th Dec.	13th Dec.	14th Dec.	15th Dec.
	°	°	°	°	°	°	°	°	°	°
Moulmein	−0·1	−5·9	−2·4	−6·8	−5·3	−5·3	−6·3	−2·7	−1·8	+0·8
Rangoon	−0·3	−3·1	−5·0	−6·6	−7·0	−6·4	−4·9	−4·2	−2·9	−0·8
Bassein	+2·7	−0·6	...	−3·2	−2·3	−2·3	−2·7	−2·5	−3·6	−1·1
Akyab	+0·2	−0·5	+0·5	−1·0	−1·3	−3·1	−5·0	−3·8	−3·1	−2·8

At the same time rain continued steadily in the Madras coast districts, and the mean temperature hence remained steadily low over the south of the Peninsula. The following table gives data from the 8th to the 13th in illustration :—

STATION.	VARIATION FROM NORMAL OF MEAN DAILY TEMPERATURE DURING 24 HOURS PRECEDING 8 A.M. OF					
	8th Dec.	9th Dec.	10th Dec.	11th Dec.	12th Dec.	13th Dec.
	°	°	°	°	°	°
Madras	—3·1	+1·7	+2·4	+0·1	—0·9	—0·2
Negapatam	0	+1·2	+0·2	+2·1	+1·2	—3·3
Madura	—0·9	—1·2	—0·1	—0·5	—1·4	—1·4
Bangalore	—1·0	+2·2	+0·8	+3·8	—0·6	—1·3

During the greater part of this period the heat remained steadily excessive in most parts of the country, except the two regions noticed above. The following table gives the variation of the mean temperature for the six days December 8th to 13th, in illustration for the nine political divisions of the country :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF MEAN DAILY TEMPERATURE OF 24 HOURS PRECEDING 8 A.M. OF					
	8th Dec.	9th Dec.	10th Dec.	11th Dec.	12th Dec.	13th Dec.
	°	°	°	°	°	°
Burma	—0·5	—2·1	—2·2	—1·7	—2·5	—1·9
Bengal and Assam	+1·2	+1·2	+1·3	+1·3	+0·6	—1·1
N.-W. Provinces and Oudh	+2·4	+2·5	+2·9	+2·7	+0·6	—0·5
Punjab	+1·0	+1·8	+1·3	+0·6	0	+0·1
Sind and Rajputana	+1·6	+1·8	+2·3	—1·4	—1·9	—2·6
Central India and Gujarat	+1·4	+2·0	+3·1	+1·5	+0·2	+0·9
Central Provinces and Berar	+3·5	+3·9	+4·4	+4·2	+2·3	+1·4
Bombay	+2·5	+3·2	+2·9	+2·7	+3·4	+2·7
Madras	+1·1	+1·8	+1·8	+2·1	+1·3	+0·2

It will be noticed that on the 11th the mean temperature fell below the normal in Sind and Rajputana. This area of deficient temperature gradually extended during the next few days, and, as at the same time the low temperature area noticed over the Eastern Peninsula was also extending and spreading westward, the result was that by the 14th, lower temperatures than usual prevailed over a very large part of the country. The following gives variation data for this date :—

POLITICAL AREA OR PROVINCE.	VARIATION FROM NORMAL OF		
	Mean maximum temperature, 14th December 1896.	Mean minimum temperature, 14th December 1896.	Mean temperature, 14th December 1896.
	°	°	°
Burma	—1·1	—4·8	—3·0
Bengal and Assam	+1·1	—2·6	—0·8
N.-W. Provinces and Oudh	+1·4	—4·0	—1·3
Punjab	0	—1·2	—0·6
Sind and Rajputana	—0·1	—3·3	—1·7
Central India and Gujarat	+1·7	0	+0·9
Central Provinces and Berar	+1·2	—0·7	+0·3
Bombay	+2·1	+0·4	+1·3
Madras	0	—0·6	—0·3

The only region which experienced excessive temperature on this date, was hence Bombay while the area of greatest relative coolness was reported from Lower Burma.

On the 15th similar conditions prevailed, and the mean temperature was more than 3° below the normal average at the following stations :—

PROVINCE.	MEAN TEMPERATURE.			
	Station.	Actual temperature, 15th December 1896.	Normal temperature, 15th December. 1896.	Variation from normal.
		°	°	°
Punjab	Delhi	57·1	61·7	—4·6
	Sirsa	54·5	58·9	—4·4
	Ludhiana	54·0	57·3	—3·3
N.-W. Provinces	Benares	57·7	61·9	—4·2
	Allahabad	58·6	61·8	—3·2
Sind	Hyderabad	60·0	65·4	—5·4
	Jacobabad	57·0	60·2	—3·2
Central Provinces	Sambalpur	62·9	66·8	—3·9
	Chanda	63·0	66·9	—3·9
	Jubbulpore	57·4	61·0	—3·6
Central India	Nowgong	57·3	61·1	—3·8
Deccan	Hyderabad	67·3	70·4	—3·1
Assam	Sibsagar	57·9	61·0	—3·1

On the 16th a change commenced, and temperature began to rise almost everywhere, but the change was not

upheld, and on the 17th the mean temperature was almost everywhere in defect again, as is shown by the following data :—

Political area or Province.	Variation from normal of		
	Mean maximum temperature, 17th December 1896.	Mean minimum temperature, 17th December 1896.	Mean temperature, 17th December 1896.
	°	°	°
Burma	+0·2	—0·8	—0·3
Bengal and Assam	+0·9	—3·3	—1·2
N.-W. Provinces and Oudh	+1·5	—2·9	—0·7
Punjab	0	—2·2	—1·1
Sind and Rajputana	+1·6	—1·4	+0·1
Central India and Gujarat	+1·7	—2·9	—0·6
Central Provinces and Berar	+1·2	—2·6	—0·7
Bombay	+1·0	+0·8	+0·9
Madras	—2·7	+1·5	—0·6

On the 18th the mean temperature was higher than usual over the Peninsula and Lower Burma and lower than usual in all other places. The abnormal excess over Burma was not very steady, but over the Peninsula there occurred a steady rise of temperature during the next few days. The following data show the variations of the mean temperature from the normal for the provinces of Madras and of Bombay for the 18th, and three subsequent days :—

Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M of			
	18th Dec.	19th Dec.	20th Dec.	21st Dec.
	°	°	°	°
Madras	+1·0	+3·2	+2·7	+2·4
Bombay	+2·4	+4·6	+5·6	+5·5

During the same period the temperature in Northern India was as steadily but less markedly below the normal average. The following gives comparative data :—

Political area or Province.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of			
	18th Dec.	19th Dec.	20th Dec.	21st Dec.
	°	°	°	°
Bengal and Assam	—1·6	—1·9	—2·3	—3·1
N.-W. Provinces	—2·0	—1·3	—1·5	—3·1
Punjab	—2·0	—1·1	—2·7	—3·9
Sind and Rajputana	—1·7	—1·7	—1·7	—4·2

During the 22nd and 23rd there were no general changes in temperature, but some largish local changes introduced some important modifications in the general distribution. Thus very low minimum temperatures were recorded over North-Western India, of which the following were themore important :—

Date.	Station.	Minimum temperature.	Variation from normal.
		°	°
22nd	Roorkee	35·8	— 7·2
	Meerut	36·5	— 6·7
	Ludhiana	32·7	—10·8
	Sialkot	34·5	— 7·8
	Rawalpindi	29·9	— 6·8
	Sirsa	35·2	— 6·6
	Peshawar	31·4	— 6·4
	Sambhar	39·0	— 6·1
23rd	Ludhiana	32·2	—11·6
	Delhi	38·9	— 8·4
	Peshawar	30·4	— 7·6
	Sialkot	35·0	— 7·4
	Bickaneer	38·6	—11·9?
	Jacobabad	35·0	— 6·9

At the same time a rapid rise of temperature occurred over Kathiawar, Gujarat and Central India and the area of greatest excess of temperature was established over the west of the Central Provinces and the adjoining parts of Central India. The following gives the stations at which the mean temperature was 8° or more above the normal :—

Date.	Station.	Mean daily temperature.	Variation from normal.
		°	°
22nd	Poona	77·2	+ 9·3
	Ratnagiri	86·2	+ 8·7
23rd	Indore	74·4	+11·0
	Khandwa	75·4	+10·7
	Malegaon	75·4	+ 9·4
	Akola	74·0	+ 8·8
	Surat	80·1	+ 8·7

Finally heavy showers in the extreme south caused a local deficiency within the region represented by the stations of Trichinopoly and Madura.

During the period of low minimum temperatures noticed above the temperature observations of the hill

and plain stations exhibited a well marked inversion of the ordinary temperature relations. This is shown by the following table, which gives the night temperatures recorded at three pairs of stations between the 21st and the 24th :—

Date.	Hill Station.	Minimum temperature of 24 hours preceding 8 A.M. of date.	Plain Station.	Minimum temperature of 24 hours preceding 8 A.M. of date.
		°		°
21st	Simla	42·5	Ludhiana	33·8
,,	Chakrata	40·2	Roorkee	32·7
,,	Ranikhet	42·5	Bareilly	36·7
22nd	Simla	45·4	Ludhiana	32·7
,,	Chakrata	43·2	Roorkee	35·8
,,	Ranikhet	45·0	Bareilly	39·7
23rd	Simla	40·5	Ludhiana	32·2
,,	Chakrata	41·2	Roorkee	37·4
,,	Ranikhet	45·5	Bareilly	39·7
24th	Simla	40·2	Ludhiana	36·3
,,	Chakrata	38·7	Roorkee	39·4
,,	Ranikhet	43·5	Bareilly	41·7

From the 23rd to the close of the month the distribution of temperature with respect to the normal exhibited one main characteristic throughout, viz., excessive temperatures over the Peninsula, the Central Provinces, North-East India and Burma, and deficient temperatures over North-West India, but during this period showers of rain occurred at different times over Northern and Central India, and these showers occasioned large local changes of temperature which, though they did not affect the main features of the distribution, yet caused considerable local disturbances of that distribution. The following table gives comparative data for the 24th :—

Political area or Province.	Variation from normal of		
	Mean maximum temparature, 24th December 1896.	Mean minimum temperature, 24th December 1896.	Mean temperature, 24th December 1896.
	°	°	°
Burma	+1·8	+0·4	+1·1
Bengal and Assam	+1·3	—0·9	+0·2
N.-W. Provinces and Oudh	—2·3	0	—1·2
Punjab	—1·1	—5·9	—3·5
Sind and Rajputana	+0·8	—1·4	—0·3
Central Inda and Gujarat	—0·9	+5·5	+2·3
Central Provinces and Berar	+3·3	+7·6	+5·5
Bombay	+3·2	+8·6	+5·9
Madras	—0·5	+3·1	+1·3

The above shows the general excess of temperature and the defect in the North-West, while the following table, which gives the same data for the 31st, shows that though changes had occurred in the amount of the variations in the different provinces, the general conditions relatively to the normal were not dissimilar :—

Political area or Province.	Variation from normal of		
	Mean maximum temperature, 31st December 1896.	Mean minimum temparature, 31st December 1896.	Mean temperature, 31st December 1896.
	°	°	°
Burma	+3·2	+5·0	+4·1
Bengal and Assam	+1·3	+3·6	+2·5
N.-W. Provinces and Oudh	—5·9	+5·2	—0·4
Punjab	—7·7	—0·3	—4·0
Sind and Rajputana	—6·1	—3·4	—4·8
Central India and Gujarat	—5·4	—0·5	—3·0
Central Provinces and Berar	+2·3	+6·7	+4·5
Bombay	+1·6	+1·6	+1·6
Madras	+1·6	+3·7	+2·7

Between the 24th and the 28th the area of greatest heat relatively to the normal held steadily over Berar, the Bombay Deccan and Khandesh, and the largest positive variations from the average were—on the 24th, 14° at Malegaon ; on the 25th, 9°·7 at Akola ; on the 26th, 13°·8 at Akola ; on the 27th, 11°·0 at Poona ; and on the 28th, 8°·4 at Akola, but after the 28th, the area of greatest excess commenced an easterly movement and the greatest excess on the 29th was 11°·2 at Jubbulpore, on the 30th 9°·1 at Sutna, and on the 31st, 7°·4 at Raipur and Sambalpur.

The following table gives the variation of the mean temperature week by week during the month and of the whole month :—

Division.	Variation from normal of mean temperature of week ending					
	5th December 1896.	12th December 1896.	19th December 1896.	26th December 1896.	2nd January 1897.	For whole month.
	°	°	°	°	°	°
Burma	+1·1	—0·9	—0·6	—0·1	+2·9	+0·2
Bengal and Assam	+2·3	+1·3	—1·3	—1·0	+1·7	+0·4
N.-W. Provinces and Oudh	+3·5	+2·0	—1·2	—1·5	—0·6	+0·2
Punjab	+1·2	+0·5	—1·0	—3·4	—1·6	—0·8
Sind and Rajputana	—0·1	+0·6	—1·5	—2·7	—3·1	—1·2
Central India and Gujarat	+4·2	+1·8	—0·4	0	—2·1	+0·7
Central Provinces and Berar	+9·5	+4·1	—0·3	+3·1	+3·9	+4·0
Bombay	+4·5	+3·4	+2·0	+4·8	+2·8	+3·5
Madras	+2·3	+1·7	+0·5	+2·8	+3·0	+1·9

Winds.

Winds were on the mean of the month more easterly than usual at the Lower Burma stations and at Port Blair. This easting was most marked at Rangoon where the mean direction for December 1896 was N 57° E, the normal direction being N. 36° E. The steadiness was also greater than usual at this station, while on the contrary at Port Blair and at Diamond Island the wind was less steady than the normal. At Diamond Island the air movement was considerably higher than usual. At Akyab the conditions of steadiness, direction and velocity were nearly normal.

At Silchar the wind was more southerly, more unsteady and lighter than the average, but at the other stations in Assam there was but little departure from the normal.

Winds in Bengal were slightly more northerly than usual. The steadiness and velocity were nearly normal, except at Chittagong, Saugor Island and Berhampore where either the velocity or the steadiness exhibited some variation from the average as is shown below:—

Station.	Velocity in Miles per diem.			Steadiness.		
	Mean actual, December 1896.	Mean normal, December.	Variation from normal.	Mean actual, December 1896.	Mean normal, December.	Variation from normal.
Chittagong .	41	76	−35	58	59	−1
Saugor Island .	182	153	+29	58	56	+2
Berhampore .	15	38	−23	21	62	−41

In the Gangetic Plain and Chota Nagpur the winds were about normal, and in the Upper Sub-Himalayas the ordinary variable, unsteady, light winds were shown.

The air movement was as usual light and unsteady in the Indus Valley and West Rajputana, as is shown by the following data:—

Station.	Velocity in Miles per diem.			Steadiness.		
	Mean actual, December 1896.	Mean normal, December.	Variation from normal.	Mean actual December 1896.	Mean normal, December.	Variation from normal.
Peshawar . .	48	59	−11	11	8	+3
Mooltan . .	16	30	−14	24	11	+13
Kurrachee . .	134	216	−82	19	14	+5
Jacobabad . .	56	38	+18	11	22	−11
Jeypore . .	68	79	−11	16	29	−13

In East Rajputana, Central India and Gujarat the winds were very variable in direction, but both the steadiness and velocity were generally greater than usual. The following gives data for this region:—

Station.	Direction.		Steadiness.		Velocity.	
	Mean actual, December 1896.	Mean normal, December.	Mean actual, December 1896.	Variation from normal.	Mean actual, December 1896.	Variation from normal.
Ajmere . . .	S60°E	N84°E	21	+6	39	+4
Deesa . . .	N55°E	N17°E	65	+38	209	+14
Nowgong . .	N34°W	N34°W	35	+6	8	−19
Agra . . .	N39°W	N64°W	47	+19	109	+46

In the Deccan the winds were practically normal in direction, while at the same time they were less steady but stronger than usual. The following gives illustrations of this diminished steadiness and greater strength:—

Station.	Steadiness.			Velocity.		
	Mean actual, December 1896.	Mean normal, December.	Variation from normal.	Mean actual, December 1896	Mean normal, December.	Variation from normal.
Sholapur . .	70	57	+13	221	169	+52
Poona . .	43	56	−13	186	136	+50
Akola . .	46	58	−12	109	77	+32
Saugor . .	34	38	−4	85	60	+25

Along the west coast the mean directions were very variable, but on the whole were more westerly than the normal. Except at Cochin where the winds were remarkably steady the average percentage of steadiness was below the normal, while the velocity was apparently lower than usual. The wind directions over South India showed no important variation from the normal, but both the steadiness and the wind velocity were above the average at several stations. The following gives comparative data for this area:—

Station.	Steadiness.			Velocity.		
	Mean actual, December 1896.	Mean normal, December.	Variation from normal.	Mean actual, December. 1896.	Mean normal, December.	Variation from normal.
Salem . .	68	48	+20	115	91	+24
Mercara . .	71	75	−4	204	117	+87
Bangalore . .	85	84	+1	213	93	+120
Bellary . .	84	69	+15	79	75	+4
Vizagapatam .	78	55	+23	56	49	+7

Very variable winds were reported from the hill stations in Northern India. The percentage of steadiness was unusually high at Leh, Murree, Chakrata and Darjeeling while the velocity was greater than usual at Chakrata

Ranikhet and Darjeeling. The following gives data for these five stations:—

STATION.	DIRECTION.		STEADINESS.		VELOCITY.	
	Mean actual, December 1896.	Mean normal, December.	Mean actual, December 1895.	Variation from normal.	Mean actual, December 1896.	Variation from normal.
Leh . . .	S6°W	S1°W	55	+21	35	+5
Murree . . .	S62°E	S58°E	45	+14	173	+6
Chakrata . .	S11°E	S55°W	52	+38	189	+89
Ranikhet . .	S37°W	S54°W	16	—6	56	+21
Darjeeling . .	N8°E	N54°W	27	+23	78	+32

The principle feature in the winds at the hill stations in the central parts of the country was the increased velocity as is shown by the following:—

At Mount Abu the mean velocity was 129 miles in 24 hours, the normal being 86 miles;

at Pachmari the mean velocity was 85, the normal being 63, and

at Chikalda the mean velocity was 156, the normal being 1·17.

This increased velocity was not accompanied with an increased percentage of steadiness, and was apparently connected with the barometric depression which passed over the central parts of the country.

Humidity and cloud.

The amount of aqueous vapour, as measured by the pressure, was somewhat greater than usual at Port Blair, but the mean temperature of the Bay Islands was excessive and the relative humidity was in defect of the normal. In Lower Burma both the aqueous vapour and the relative humidity were in defect while on the contrary at Akyab both were in excess. The following gives data for the Burma Coast Stations:—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1896.	Normal, December.	Variation from normal.	Actual, December 1896.	Normal, December.	Variation from normal.
	"	"	"	%	%	
Rangoon . . .	·613	·671	—·058	70	73	— 3
Diamond Island . .	·696	·698	—·002	71	75	— 4
Akyab . . .	·603	·583	+·020	78	75	+ 3

All over Northern India from Assam westward to Rajputana and the Punjab the amount of aqueous vapour, with the doubtful exceptions of Hazaribagh and Nowgong, was less than usual, and in many cases considerably so, but the mean temperature of the month having been generally less than the average, the variations of humidity from the normal, though almost everywhere in defect, were so only to a small extent. The following table gives data for the various stations within this area where the deficiency in the pressure of aqueous vapour exceeded ·050" in illustration:—

PROVINCE.	STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
		Actual, December 1896.	Normal, December.	Variation from normal.	Actual, December 1896.	Normal, December.	Variation from normal.
		"	"	"	%	%	
Burma . . .	Rangoon .	·613	·671	—·058	70	73	— 3
Bengal . .	Calcutta .	·394	·445	—·051	62	72	—10
	Berhampore .	·372	·432	—·060	59	72	—13
	Darbhanga .	·374	·428	—·054	66	74	— 8
North-Western Provinces.	Allahabad .	·289	·342	—·053	53	67	—14
Punjab . . .	Mooltan .	·208	·269	—·061	47	56	— 9
Sind . . .	Kurrachee .	·305	·380	—·075	45	56	—11

In the Deccan the variations in the absolute humidity were irregular. At Belgaum, Sholapur, Poona and Akola there was some excess, and at these stations, notwithstanding the high temperature prevailing, there was some excess in the relative humidity returns with the exception of Akola, but at the remaining stations in this division the variations from the normal average were irregular. In the case of the relative humidity the variations were more regular, and in nearly all cases showed

a slight deficiency. The following gives data for the stations in the area of irregular variations :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1896.	Normal, December.	Variation from normal.	Actual, December 1896.	Normal, December.	Variation from normal.
	"	"	"	%	%	
Buldana . . .	·303	·337	—·034	39	49	—10
Khandwa . . .	·311	·321	—·010	42	51	— 9
Hoshangabad . .	·319	·336	—·017	46	55	— 9
Nagpur . . .	?·423	·345	?+·078	55?	52	+ 3?
Saugor . . .	·264	·265	—·001	44	45	— 1
Raipur . . .	·358	·345	+·013	51	54	— 3
Sutna . . .	·285	·250	+·035	50	48	+ 2

At the stations along the west coast, the vapour tension was generally in excess, the only important local exception being at Bombay where there was a deficiency of ·031". At Bombay also the relative humidity was lower than usual, while at the remaining stations it was normal or nearly so.

In South India the absolute humidity was in slight to considerable excess of the normal, the largest and most important variations being +·101" at Salem, +·054" at Bangalore, +·051" at Trichinopoly and +·094" at Madras. The mean temperature of this region was generally excessive, and the relative humidity exhibited a trifling general excess.

The Hill stations in Northern India exhibited as is frequently the case at this season very irregular variations, but in the present instance the variations were generally small. The following gives data in illustration :—

STATION.	ABSOLUTE HUMIDITY.			RELATIVE HUMIDITY.		
	Actual, December 1896.	Normal, December.	Variation from normal.	Actual, December 1896.	Normal, December.	Variation from normal.
	"	"	"	%	%	
Leh . . .	·077	·079	—·002	68	60	+ 8
Murree . . .	·176	·135	+·041	64	49	+15
Chamba . . .	·184	·234	—·054	52	55	— 3
Simla . . .	·120	·142	—·022	45	46	— 1
Chakrata . . .	·136	·149	—·013	50	51	— 1
Ranikhet . . .	·207	·197	+·010	61	56	+ 5
Katmandu . . .	·255	·274	—·019	73	73	0
Darjeeling . . .	·213	·200	+·013	79	76	+ 3

In Central and Southern India, Mount Abu and Chikalda exhibited normal conditions or a trifling deficiency in the amount of aqueous vapour, while Pachmarhi and Wellington on the contrary showed a large excess. In the case of the two latter stations the relative humidity also showed an excess.

The general results for the whole country then showed that in Burma and the whole of Northern and Central India, the absolute and relative humidities were lower than usual, while over the Peninsula the absolute humidity was everywhere higher, and over South India both the absolute and relative humidities were in excess. As compared with December 1895, the most important differences were the decrease in the mean aqueous vapour pressure in Burma Coast and the Bay Islands and in the Indus Valley and North-West Rajputana, and the large increase over the Deccan, the West Coast and South India districts. In other parts of the country the variations in the two months were not dissimilar.

The mean cloud amount of the month was more or less in excess over the area of increased vapour pressure and was also locally in excess over Bengal and Orissa and the Gangetic Plain and Chota Nagpur. In the Bay Islands there was more cloud than usual, at Diamond Island the amount of cloud on the mean of the month was exactly normal, while both at Rangoon and Akyab it was less than the average. Within the area of excessive cloud amount, viz., Bengal, Orissa, the Gangetic Plain and Chota Nagpur, the abnormal cloudiness was greatest at the following stations : —

STATION.	MEAN CLOUD AMOUNT.		
	Actual, December 1896.	Normal, December.	Variation from normal.
Narayanganj	2·5	1·4	+1·1
Calcutta	2·1	1·8	+0·3
Saugor Island	2·7	2·2	+0·5
Berhampore	2·1	1·9	+0·2
Cuttack	2·3	1·8	+0·5
Hazaribagh	4·1	2·0	+2·1
Patna	2·4	1·8	+0·6
Darbhanga	1·8	1·0	+0·8
Allahabad	2·5	1·5	+1·0

In Upper India, Rajputana and the central parts of the country the amount of cloud was practically normal

but with a slight tendency to greater serenity than usual. The following gives data in illustration :—

STATION.	MEAN CLOUD AMOUNT. Actual, December 1896.	Normal, December.	Variation from normal.
Dehra Dun	2·0	2·4	—0·4
Roorkee	1·2	2·1	—0·9
Meerut	1·4	1·7	—0·3
Lahore	2·4	2·2	+0·2
Ludhiana	3·2	3·0	+0·2
Peshawar	3·2	3·5	—0·3
Mooltan	1·7	2·0	—0·3
Jacobabad	1·6	2·0	—0·4
Kurrachee	1·8	1·8	0
Jeypore	1·6	1·9	—0·3
Ajmere	1·3	1·4	—0·1
Deesa	1·0	1·7	—0·7
Nowgong	2·5	1·9	+0·6
Sutna	2·1	1·4	+0·7
Agra	1·2	1·4	—0·2

In the Deccan the increased cloudiness was general, but not very excessive. The following gives data for this division :—

STATION.	MEAN CLOUD AMOUNT. Actual, December 1896.	Normal, December	Variation from normal.
Belgaum	3·5	2·8	+0·7
Sholapur	3·3	3·0	+0·3
Poona	2·7	2·7	0
Akola	2·4	1·7	+0·7
Buldana	3·0	2·7	+0·3
Khandwa	1·9	1·9	0
Hoshangabad	2·3	1·6	+0·7
Nagpur	3·9	2·4	+1·5
Saugor	2·1	1·2	+0·9
Raipur	2·3	1·8	+0·5

At the west coast stations the cloud was about 1·0 more than usual at all stations except Karwar where the abnormal excess was only 0·2. In South India the excess in the cloud amount was more marked than in the other regions of India, the abnormal excess ranging from 0·7 at Vizagapatam and Mercara to 2·9 at Bellary. At the following stations, the abnormal cloudiness exceeded 1·0 :—

STATION.	MEAN CLOUD AMOUNT. Actual, December 1896.	Normal December.	Variation from normal.
Bombay	3·0	1·8	+1·2
Ratnagiri	2·0	0·9	+1·1
Cochin	4·3	3·2	+1·1
Bellary	6·3	3·4	+2·9
Salem	6·7	4·1	+2·6
Trichinopoly	7·7	5·9	+1·8
Madras	6·8	5·3	+1·5
Bangalore	5·3	4·1	+1·2

At the hill stations the sky was generally clearer than usual but at Leh, Darjeeling, Pachmarhi and Wellington there was increased cloudiness. In the case of Darjeeling, Pachmarhi, and Wellington this increased cloudiness was general over the plains stations in their neighbourhood.

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 northwards, 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 in Burma.

Unlike the same month of last year, the rainfall of December was excessive over a considerable part of the country. In the south the weather throughout the month was rainy and unsettled, the rainfall culminating in the large amounts which were recorded during the passage

westward of the area of disturbed weather between the 13th and 18th.

In the north and centre unsettled showery weather commenced with the barometric depressions which appeared over that area after the 20th. North East India, including Burma, Assam and the greater part of Bengal, were to a large extent outside the influence of these disturbances, and the rainfall in these localities was unimportant and less than the normal amount. This was also to a great extent the case with the north, centre and west of the Punjab, Sind, the Central Provinces (except the central division), the west and centre of the Peninsula, Mysore and Madras north of Lat 14° N.

Persia and Baluchistan received less rain than usual owing to the absence of the ordinary disturbances of the cold weather.

The chief periods of disturbance and of rainfall were as follows:—

1st.—The 4th to 11th when heavy rain fell over Southern India.

2nd.—The 6th and 7th when showers fell in Upper Burma.

3rd.—The 16th to 20th when heavy rain again fell over Southern India.

4th.—The 23rd and 24th when showers fell over Southern India.

5th.—The 24th and 25th when showers fell over the Central Provinces, Central India, and the North-Western Provinces.

6th.—The 27th to 31st when moderate to heavy showers fell over the Central Provinces, Central India, Rajputana, the Punjab, the North-Western Provinces and West Bengal.

The following table gives comparative rainfall data for 57 meteorological divisions of the Empire:—

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, December 1896.	Average normal, December.	Average actual, December 1896.	Average normal, December.	Variation from normal.
				Inches.	Inches.	Inches.
Burma	Tenasserim*	?	?	0	0	0
	Lower Burma (Deltaic)*	?	?	0	0·16	− 0·16
	Central do.*	?	?	0	0·07	− 0·07
	Upper do.*	?	?	0·12	?	?
	Arakan*	?	?	0	0·37	− 0·37
Bengal and Assam	Eastern Bengal	0	0·4	0	0·28	− 0·28
	Assam (Surma)*	?	?	0	0·61	− 0·61
	Do. (Hill tracts)*	?	?	0·04	0·43	− 0·39
	Do. (Brahmaputra)*	?	?	0·27	0·42	− 0·15
	Deltaic Bengal	0	0·3	0	0·18	− 0·18
	Central do.	0·3	0·2	0·12	0·11	+ 0·01
	North do.	0·4	0·2	0·10	0·10	0
	Bengal Hills	0·5	0·7	0·23	0·25	− 0·02
	Orissa	0	0·5	0	0·32	− 0·32
	Chota Nagpur	0·6	0·3	0·42	0·23	+ 0·19
	Bihar (South)	1·0	0·2	0·30	0·15	+ 0·15
	Do. (North)	0·8	0·3	0·25	0·10	+ 0·15
North-Western Provinces and Oudh.	North-Western Provinces (East)	1·1	0·4	0·31	0·26	+ 0·05
	Oudh (South)	2·0	0·6	0 78	0·41	+ 0·37
	Do. (North)	2·0	0·6	0 85	0·38	+ 0·47
	North-Western Provinces (Central)	1·5	0·5	0·52	0·36	+ 0·16
	Do. do. (West)	1·5	0·5	0·58	0·34	+ 0·24
	Do. do. (Submontane East)	1·6	0·4	0·46	0·20	+ 0·26
	Do. do. (do. West)	1 7	0·8	0·72	0·47	+ 0·25
	Do. do. (Hills)	2·6	1·2	1·18	0·53	+ 0·65
Punjab	Punjab (South-East)	1·3	0·6	0·39	0·30	+ 0·09
	Do. (South)	1·1	0·5	0·32	0·27	+ 0·05
	Do. (Central)	0·4	0·5	0·10	0·30	− 0 20
	Do. (Submontane)	1·4	0·8	0·62	0·57	+ 0·05
	Do. (Hill Districts)	2·6?	1·3	2·05?	0·90	+ 1·15?
	Do. (North)	0·6	0·9	0·18	0·52	− 0·34
	Do. (West)	0	0·2	0	0·12	− 0·12
Bombay and Malabar Coast Districts, Madras.	Malabar Coast	2·1	1·4	1·07	0·80	+ 0·27
	Travancore	5·4	?	4·15	?	?
	Madras (South Central)	5·1	2·6	2·79	1·40	+ 1·39
	Coorg	0·7	?	0·15	?	?
	Mysore*	?	?	0·48	0·60	− 0·12
	Konkan	0·1	0·3	0·06	0·14	− 0·08
	Bombay Deccan	0·6	0·7	0·26	0·41	− 0·15
	Khandesh	0·9	0·8	0·34	0·56	− 0·22

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

Province.	Division.	Number of rainy days.		Rainfall.		
		Average actual, December 1896.	Average normal, December.	Average actual, December 1896.	Average normal, December.	Variation from normal.
				Inches.	Inches.	Inches.
Central Provinces and Berar.	Berar*	?	?	0·22	0·76	— 0·54
	Central Provinces (West)*	?	?	0·33	0·52	— 0·19
	Do. do. (Central)*	?	?	0·50	0·36	+ 0·14
	Do. do. (East)*	?	?	0·01	0·38	— 0·37
Bombay (North)	Gujarat	0·2	0·1	0·13	0·06	+ 0·07
	Kathiawar	0·1	0·1	0·05	0·05	0
	Sind	0	?	0	0·11	— 0·11
	Baluchistan Hills	0	?	0·01	0·34	— 0·33
Rajputana and Central India.	Central India (East)	1·8	?	0·59	0·41	+ 0·18
	Rajputana (East), and Central India (West)	1·1	?	0·44	0·20	+ 0·24
	Rajputana (West)	0·3	?	0·09	0·02	+ 0·07
Madras	East Coast (North)	0	0·8	0	0·99	— 0·99
	Do. (do.) (a)	0	0·7	0	0·34	— 0·34
	Hyderabad (South)*	?	?	0	0·23	— 0·23
	Madras (Central)	0·6	0·9	0·20	0·46	— 0·26
	East Coast (Central)	3·0	2·9	2·31	2·72	— 0·41
	Do. (South)	10·0	5·2	9·48	5·13	+ 4·35
	Madras (South)	11·0	4·8	7·94	3·93	+ 4·01

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

The rainfall of December 1896 was in marked contrast to that of the previous December. In December 1895 the rainfall of the month was in defect over the whole Indian area, with the exception of those districts in the south which received rain from two cyclonic storms, and was less than one-tenth of an inch in amount over the greater part of the country.

During the month under review there was only one period of rainfall in Burma, *viz.*, the 6th and 7th, when showers were received in Upper Burma. In all other parts of the Province the weather was fair throughout the month.

The following table gives comparative data for the five divisions of this Province :—

Division.	Rainfall.		
	Average actual, December 1896.	Average normal, December.	Variation from normal.
	Inch.	Inch.	Inch.
Tenasserim	0	0	0
Lower Burma (Deltaic)	0	0·16	—0·16
Central ,,	0	0·07	—0·07
Upper ,,	0·12	?	?
Arakan	0	0·37	—0·37

The rainfall was lighter than usual in Assam and none whatever was received in the Surma division. The following gives comparative data :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, December 1896.	Average normal, December.	Variation from normal.	Average actual, December 1896.	Average normal, December.	Variation from normal.
				Inch.	Inch.	Inch.
Assam (Surma)	*Nil*	0·6	—0·6	*Nil*	0·73	—0·73
,, (Hill tracts)	0·1	0·7	—0·6	0·04	0·61	—0·57
,, (Brahmaputra)	0·9	1·1	—0·2	0·37	0·44	—0·07

No rain of importance occurred in Bengal until the 25th, when fairly general rain fell in Bihar. During the next few days a few scattered showers occurred in the western divisions of the Province, and then on the 31st there occurred a general moderate fall over Bihar, Central Bengal, Chota Nagpur and North Bengal. The fall on this day exceeded an inch at the following divisional and sub-divisional stations :—

District.	Station.	Rrainfall during 24 hours preceding 8 A.M. of 31st December 1896.
		Inches.
Lohardaga	Lohardaga	1·94
,,	Chainpur	1·61
Palamau	Daltonganj	1·53
Hazaribagh	Pachamba (Giridhi)	1·30
Sonthal Parganas	Balbadda	1·20

The following gives comparative data for the Province :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, December 1896.	Average normal, December.	Variation from normal.	Average actual, December 1896.	Average normal, December.	Variation from normal.
				Inch.	Inch.	Inch.
Eastern Bengal . .	0	0·4	—0·4	0	0·28	—0·28
Deltaic „ . .	0	0·3	—0·3	0	0·18	—0·18
Central „ . .	0·3	0·2	+0·1	0·12	0·11	+0·01
North „ . .	0·4	0·2	+0·2	0·10	0·10	0
Bengal Hills . .	0·5	0·7	—0·2	0·23	0·25	—0·02
Orissa . . .	0	0·5	—0·5	0	0·32	—0·32
Chota Nagpur . .	0·6	0·3	+0·3	0·42	0·23	+0·19
Bihar (South) . .	1·0	0·2	+0·8	0·30	0·15	+0·15
„ (North) . .	0·8	0·3	+0·5	0·25	0·10	+0·15

No rain was received over the plains of the N.-W. Provinces until the 23rd or 24th. At that time showers commenced in Oudh and extended during the 24th and 25th to the South-East, Central, Submontane and some of the Western Districts of these provinces. The fall was most general on the 25th. Falls of rain of over 1 inch in amount in 24 hours were recorded during this period at the following stations :—

Date.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
24th	Unao	Purwa	1·32
„	„	Mohan . . .	1·32
25th	Lucknow . . .	Lucknow . . .	1·20
„	„ . . .	Malihabad . . .	1·09

Three days fine weather succeeded, and then on the 29th, 30th and 31st a second general fall of rain was recorded. This fall was experienced in all parts of the N.-W. Provinces, but was most general on the 29th. The following falls exceeding an inch in 24 hours were recorded during this period of disturbance :—

Date.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
29th	Naini Tal . . .	Naini Tal . . .	1·26
„	Almora	Ranikhet . . .	1·04
30th	Cawnpore . . .	Bhonipur . . .	1·20
31st	Debra Dun . . .	Chakrata (Observatory)	1·44
„	„ . . .	Chakrata . . .	1·40
„	Almora	Ranikhet . . .	1·06
„	Pilibhit . . .	Puranpur . . .	1·07

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.		
	Average actual, December 1896.	Average normal, December.	Variation from normal.	Average actual, December 1896.	Average normal, December.	Variation from normal.
				Inches.	Inch.	Inch.
N.-W. Provinces (East)	1·1	0·4	+0·7	0·31	0·26	+ 0·05
Oudh (South) . .	2·0	0·6	+1·4	0·78	0·41	+ 0·37
„ (North) . .	2·0	0·6	+1·4	0·85	0·38	+ 0·47
North-Western Provinces (Central).	1·5	0·5	+1·0	0·52	0·36	+ 0·16
North-Western Provinces (West).	1·5	0·5	+1·0	0·58	0·34	+ 0·24
North-Western Provinces (Submontane East)	1·6	0·4	+1·2	0·46	0·20	+ 0·26
North-Western Provinces (Submontane West).	1·7	0·8	+0·9	0·72	0·47	+ 0·25
North Western Provinces Hills).	2·6	1·2	+1·4	1·18	0·53	+ 0·65

No rain fell over the plains of the Punjab until the 26th December, when a showery period set in which lasted until the close of the month. During this rainfall period, rain was received in all the districts of the Punjab except the West Punjab, which remained rainless throughout the month. The days of most general fall were the 28th and 29th, and the only falls exceeding one inch in the 24 hours were as follows :—

Date.	District.	Station.	Rainfall during 24 hours preceding 8 A.M. of date.
			Inches.
28th	Gurdaspur . . .	Dalhousie . . .	1·77
29th	Jullundur . . .	Phillour . . .	1·02
„	Hoshiarpur . . .	Sadr Station . .	1·05
„	„ . . .	Hoshiarpur . . .	1·04
„	Gurdaspur . . .	Tibri	1·10
„	Kangra . . .	Palampur . . .	1·57
„	„ . . .	Dera	1·35
„	„ . . .	Kangra . . .	1·08
„	„ . . .	Dharmsala . . .	1·30
„	„ . . .	Hamirpur . . .	1·46
30th	„ . . .	Plach	1·33
31st	„ . . .	Palampur . . .	1·71
„	„ . . .	Dharmsala . . .	1·43
„	„ . . .	Nurpur . . .	1·11

The following gives comparative data for the seven divisions of the province :—

Division.	Number of rainy days.			Rainfall.		
	Average actual, December 1896.	Average normal, December.	Variation from normal.	Average actual, December 1896.	Average normal, December.	Variation from normal.
				Inches.	Inch.	Inches.
Punjab (South-East) .	1·3	0·6	+0·7	0·39	0·30	+0·09
„ (South) . .	1·1	0·5	+0·6	0·32	0·27	+0·05
„ (Central) . .	0·4	0·5	—0·1	0·10	0·30	—0·20
„ (Submontane) .	1·4	0·8	+0·6	0·62	0·57	+0·05
„ (Hill Districts) .	2·6	1·3	+1·3	2·05	0·90	+1·15
„ (North) . .	0·6	0·9	—0·3	0·18	0·52	—0·34
„ (West) . .	0	0·2	—0·2	0	0·12	—0·12

A few light showers of no importance were received near the close of the month in Baluchistan. In Kashmir there were two periods of rainfall or snowfall, one between the 8th and 11th, and the second between the 28th and 31st. The latter was the only period of important fall. The Native States in Rajputana had, like the Punjab, no rain up to the 26th or 27th, but thereafter received showers up to the close of the month. In Central India the disturbed period commenced some days earlier, and showery weather was experienced from the 22nd up to the close of the month. The amounts were not, however, large, only exceeding one inch in 24 hours in one or two instances.

In the Central Provinces there was no rain until the 24th, on which date showers were reported from a few districts in the Jubbulpore and Nerbudda divisions. On the 28th rain recommenced, and during the 29th, 30th and 31st, rain fell in most parts of the Central Provinces. At Betul a fall of 2·30″ in 24 hours was recorded, and at Saugor, Sihora and Seoni (Hoshangabad) falls of an inch or over. The following gives comparative data for the three divisions of the Central Provinces.

Division.	Number of rainy days.			Rainfall.		
	Average actual, December 1896.	Average normal, December.	Variation from normal.	Average actual, December 1896.	Average normal, December.	Variation from normal.
				Inch.	Inch.	Inch.
Central Provinces (West) .	1·2	0·5	+0·7	0·63	0·52	+0·11
„ (Central) .	1·4	0·5	+0·9	0·64	0·33	+0·31
„ (East) . .	0·1	0·4	—0·3	0·01	0·30	—0·29

No rain was received during the month in Sind and Cutch. In Kathiawar there were one or two insignificant showers, and in Baroda Rewakantha and Mahikantha light showers between the 23rd and 29th. In Gujarat there were showers between the 22nd and 24th and again on the 28th, of which the only heavy one was at Hansot in Broach where 1·60″ was received on the 23rd. In the North Deccan and Khandesh there were fairly general showers between the 27th and the 30th. In other parts of the Bombay Presidency there were a few scattered showers during the latter half of the month. The rainfall was generally deficient as is shown by the following table of the six rainfall divisions of the Presidency :

Division.	Number of rainy days.			Rainfall.		
	Average actual, December 1896.	Average normal, December.	Variation from normal.	Average actual, December 1896.	Average normal, December.	Variation from normal.
				Inch.	Inch.	Inch.
Konkan . . .	0·1	0·3	—0·2	0·06	0·14	—0·08
Bombay Deccan . .	0·6	0·7	—0·1	0·26	0·41	—0·15
Khandesh . . .	0·9	0·8	+0·1	0·34	0·56	—0·22
Gujarat . . .	0·2	0·1	+0·1	0·13	0·06	+0·07
Kathiawar . . .	0·1	0·1	0	0·05	0·05	0
Sind	0	?	?	0	0·11	—0·11

There was no rainfall whatever during the month in the Ganjam, Vizagapatam, Godavari and Kistna districts of Madras. In Nellore, Chingleput, North Arcot and South Arcot there were two well-marked rainfall periods, the first lasting from the 5th to the 11th, and the second from the 16th to the 19th. The rainfall was heavy during both periods, and the total rainfall of the month for these districts (with the exception of Nellore) was much above the average. In Tanjore, Trichinopoly, Madura and Tinnevelly there was more or less rainfall throughout the month, though there was a brief cessation on the 1st to 3rd, on the 13th to 15th, on the 25th and 26th and on the 30th and 31st. The total rainfall of the month in these districts also was largely above the normal. In Travancore and Malabar

there was general rain between the 6th and 8th and showers at other times, and in South Canara there was light rain between the 17th and 25th. In Salem, Coimbatore and the Nilgiris the rainfall periods were the same as in Nellore, Chingleput, etc., but the falls were lighter. In Cuddapah only a few showers were experienced during the first half of the month and the total was less than usual, while in Anantapur, Bellary and Kurnool there was actually or practically no rain. In Coorg the fall was insignificant.

The following gives comparative data for the seven divisions of the Madras Presidency:—

Division.	Number of rainy days.			Rainfall.		
	Average actual, December 1896.	Average normal, December.	Variation from normal.	Average actual, December 1896.	Average normal, December.	Variation from normal.
				Inches.	Inches.	Inches.
Malabar Coast	2·1	1·4	+0·7	1·07	0·80	+0·27
Madras (South-Central)	5·1	2·6	+2·5	2·79	1·40	+1·39
,, East-Coast (North).	0	0·8	—0·8	0	0·99	—0·99
,, ,, ,, (a)	0	0·7	—0·7	0	0·34	—0·34
,, Central	0·6	0·9	—0·3	0·20	0·46	—0·26
,, East Coast (Central).	3·0	2·9	+0·1	2·31	2·72	—0·41
,, ,, (South)	10·0	5·2	+4·8	9·48	5·13	+4·35
,, (South)	11·0	4·8	+6·2	7·94	3·93	+4·01

The distribution of the rainfall is shown more fully by the following data for each of the 22 Collectorates of the Presidency:—

District	Number of rainy days.		Rainfall.		
	Average actual, December 1896.	Average normal, December.	Average actual, December 1896.	Average normal, December.	Variation from normal.
			Inches.	Inches.	Inches.
Ganjam	0	1·1	0	1·43	—1·43
Vizagapatam	0	0·8	0	1·10	—1·10
Godavari	0	0·7	0	0·69	—0·69
Kistna	0	0·7	0	0·52	—0·52
Nellore	3·0	2·9	2·31	2·72	—0·41
Chingleput	8·8	4·7	13·35	5·03	+8·32
Madras	10·0	5·2	17·21	5·24	+11·97
North Arcot	6·7	3·3	3·84	2·83	+1·01
South Arcot	9·8	5·4	10·46	5·64	+4·82
Tanjore	14·9	7·3	14·51	8·02	+6·49
Trichinopoly	8·2	5·2	5·23	3·69	+1·54
Madura	12·6	4·9	8·38	4·02	+4·36
Tinnevelly	9·0	4·6	7·39	3·80	+3·59
Malabar	2·8	1·8	1·42	1·02	+0·40
South Canara	0·9	0·9	0·46	0·48	—0·02
Salem	4·4	2·7	2·36	1·47	+0·89
Coimbatore	6·0	2·5	3·38	1·31	+2·07
Nilgiris	9·2	4·5	6·48	2·95	+3·53
Cuddapah	1·8	1·7	0·60	1·06	—0·46
Anantapur	0·2	0·7	0·12	0·24	—0·12
Bellary	0	0·4	0	0·17	—0·17
Kurnool	0	0·6	0	0·25	—0·25

Table

Abstract of Observations taken at 8 A.M. at 211

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure during month.	Date.	Lowest pressure during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	I.—Burma Coast and Bay Islands.		...	...	+·044	...	...	...	...	...	...	...	86·0	+0·1	67·6	−1·4	76·9	−0·6	18·4	...	...	...	...	28·5
1	Tenasserim and Bay Islands.	Port Blair	61	29·946	?	29·938	30·011	26th	29·871	17th	·140	81·9	87·8	?	79·3	?	83·6	?	8·5	90·6	30th	76·8	3rd	13·8
		Mergui	96	29·945	?	29·974	30·024	26th	29·876	19th	·148	78·0	88·7	?	68·4	?	78·6	?	20·3	91·7	18th	60·2	9th	31·5
		Tavoy	26	30·051	?	30·008	30·136	26th	29·978	1st	·158	72·6	88·9	?	63·2	?	76·4	?	25·1	93·2	3 days	55·2	10th	38·0
		Moulmein	94	29·991	+·049	30·024	30·088	8th	29·892	18th	·196	71·3	87·1	−0·1	66·8	+0·3	77·0	+0·1	20·3	90·5	3 days	60·4	9th	30·1
2	Lower Burma	Rangoon	41	30·035	+·039	30·013	30·131	8th	29·945	1st	·186	70·1	86·9	−0·4	66·0	−1·7	76·5	−1·1	20·9	91·2	31st	59·8	10th	31·4
		Bassein	27	30·055	+·046	30·018	30·140	8th	29·961	1st	·179	68·7	85·3*	+0·9	64·6	−0·7	75·0*	+0·1	20·7	89·3	6th	60·5	22nd	28·8
		Diamond Island.	41	30·023	+·043	29·999	30·092	8th	29·946	1st	·146	77·4	83·5	−0·8	74·0	?	78·8	P	9·5	86·1	30th & 31st	71·4	14th	14·7
5	Arakan	Akyab	20	30·074	+·045	30·037	30·149	27th	29·966	1st	·183	65·3	82·0	+0·1	61·1	−3·3	71·6	−1·6	20·9	85·2	8th	53·2	21st	32·0
3	Central Burma	Toungoo	133	29·897	+·042	30·030	29·971	8th	29·805	1st	·166	65·4	84·1	+0·1	†64·4	P	74·3	P	19·7	88·7	6th	52·1	22nd	36·6
	II.—Burma Inland.		...	...	?	...	...	...	...	...	...	...	81·2	+1·8	54·9	+1·2	68·1	+1·5	26·3	...	...	...	...	36·3
3	Central Burma	Thayetmyo	134	29·952	P	30·033	30·035	8th	29·845	1st	·190	65·3	87·3	?	57·1	−1·8	72·2	P	30·2	91·6	5th	49·7	22nd	41·9
4	Upper Burma	Minbu	?	29·949	?	?	30·031	27th	29·819	1st	·212	67·1	85·9	?	69·6	?	73·3	?	25·3	90·6	6th	55·9	20th & 23rd	35·6
		Yamethin	645	29·429	?	30·049	29·517	27th	29·319	1st	·207	66·2	88·9	P	58·2	P	73·6	?	30·7	94·0	4th	50·7	22nd	43·3
		Taunggyi	P				Not recorded.					57·5	72·5	?	50·6	?	61·6	?	21·9	76·7	4th	50·0	24 days	26·7
		Mandalay	249	29·839	?	P	29·916	8th & 27th	29·723	1st	·193	64·7	85·4	?	58·8	?	72·1	?	26·6	90·0	1st & 3rd	53·2	13th & 23rd	36·8
		Kindat	?	29·771	?	P	29·860	15th	29·656	1st	·204	58·9	77·5	+1·8	56·5	+1·2	67·1	+1·5	21·0	81·3	5th & 6th	52·0	3 days	29·3
		Lashio	?	27·281	?	P	27·348	8th	27·215	1st	·133	54·5	74·7	?	47·2	?	61·0	?	27·5	79·6	3rd & 5th	40·1	13th	39·5
		Bhamo	?	29·757	?	P	29·844	27th	29·617	1st	·227	55·0	77·1	?	50·0	?	63·5	?	27·1	81·5	5th	43·9	21st & 22nd.	37·6
	III.—Assam.		...	...	+·042	...	...	...	...	...	...	...	76·1	+0·7	51·5	−1·6	63·8	−0·5	24·6	...	...	...	...	36·3
7	Surma	Silchar	104	30·029	+·054	30·090	30·120	27th	29·929	1st	·210	59·8	80·7	+1·2	53·4	−1·8	67·1	−0·3	27·3	84·3	3rd & 8th	45·8	24th	38·5
		Selonah	P	29·893	?	P	30·052	27th	29·716	3rd	·336	55·9	76·5	?	49·1	P	62·8	P	27·4	81·5	2nd	42·7	22nd	38·8
9	Brahmaputra	Sibsagar	333	29·819	+·039	30·133	29·930	27th	29·673	1st	·257	53·0	71·8	+0·1	49·6	−0·9	60·7	−0·4	22·2	77·3	3rd	43·2	23rd	34·1
		Dhubri	115	30·019	+·034	30·097	30·137	27th	29·880	1st	·257	58·6	75·3	+0·7	53·9	−2·0	64·7	−0·7	21·4	80·4	1st	46·5	21st	33·9
	IV.—Bengal and Orissa.		...	...	+·041	...	...	...	...	...	...	...	78·8	+1·8	54·0	−1·4	66·4	+0·2	24·8	...	...	...	...	38·2
6	East Bengal	Chittagong	87	30·018	+·042	30·058	30·108	27th	29·900	1st	·208	61·0	80·2	+2·3	55·1	−3·3	67·7	−0·5	25·1	83·2	3 days	49·1	21st & 22nd.	34·1
		Lungleh	?				Not recorded.					57·6	67·4	?	52·9	?	60·1	?	14·5	71·1	24th	46·1	20th	25·0
		Noakhali	43	30·055	?	?	30·159	27th	29·930	1st	·229	59·2	78·4	?	51·4	P	64·9	P	27·0	82·5	2nd	45·0	21st	37·5
		Comilla	36	30·075	P	30·060	30·182	27th	29·968	1st	·214	60·6	80·0	?	51·9	?	66·0	?	28·1	83·9	2nd	45·1	21st	38·8
		Sirajganj	49	30·069	P	30·070	30·187	27th	29·920	1st	·267	57·9	77·5	?	53·0	?	65·3	?	24·5	81·6	1st	44·1	20th	37·5
		Narayanganj	26	30·087	+·047	30·062	30·196	27th	29·948	1st	·248	60·7	78·5	+0·1	55·2	−2·1	66·9	−1·0	23·3	82·1	1st	48·2	20th & 21st.	32·9
		Barisal	13	30·091	+·042	30·050	30·195	27th	29·956	1st	·239	62·2	79·3	+2·1	54·3	−1·9	66·7	+0·1	25·0	84·3	2nd	47·0	21st	37·3
		Mymensingh	59	30·053	+·049	30·067	30·152	27th	29·924	1st	·228	58·5	76·9	+0·4	53·1	−0·9	65·1	−0·3	23·8	80·7	3rd	45·6	20th	35·1
10	Deltaic Bengal	Faridpur	46	30·076	P	30·072	30·192	27th	29·935	1st	·257	59·6	77·4	?	52·4	?	64·9	P	25·0	80·7	3 days	44·0	21st	36·7
		Jessore	33	30·089	+·042	30·070	30·203	27th	29·931	1st	·272	59·0	79·4	+1·6	50·1§	−5·1	64·8§	−1·8	29·2	83·6	1st & 2nd	40·3	21st	43·3
		Calcutta	21	30·110	+·039	30·078	30·225	27th	29·966	1st	·259	60·8	78·2	+2·1	54·6	−1·5	66·4	+0·3	23·6	85·4	1st	45·7	22nd	39·7
		Saugor Island	25	30·092	+·026	30·062	30·184	27th	29·957	1st	·227	63·4	79·3	+3·5	57·8	−1·5	68·4	+1·0	21·7	85·9	2nd	48·6	21st	37·3
		Krishnagar	47	30·091	P	30·090	30·206	27th	29·940	1st	·266	60·6	80·2	P	50·6	P	65·4	P	29·6	85·3	1st	40·6	21st	44·7
		Midnapore	149	29·976	P	30·081	30·077	27th	29·834	1st	·243	61·3	82·8	?	54·9	?	68·9	?	27·9	90·3	1st	46·1	22nd & 23rd.	44·2

* Mean of 30 days.

I.

stations in India, Burma, etc., in December, 1896.

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 31st December 1896.	Normal rainfall for period, 1st October to 31st December.	Variation from normal of period, 1st October to 31st December.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·16	1·09	−0·92	...	...	...	...	I.—Burma Coast and Bay Islands.		
...	2	12	8	7	1	1	...	...	6·8	7·2	− 6	78	·845	5·4	1	?	?	1·40	5·94	−4·54	15·05	27·08	−12·03	1·02	Port Blair .	Tenasserim and Bay Islands.	1
...	12	7	4	...	...	1	...	7	1·9	1·8	+ 6	68	·655	3·1	0	?	?	0	0·57	−0·57	15·52	17·74	− 2·22	0	Mergui .		
27	1	2	...	...	..	...	...	1	1·4	?	?	79	·635	0	0	?	?	0	?	?	9·50	?	?	0	Tavoy.		
...	8	9	6	6	...	...	1	1	2·9	2·6	+ 12	81	·620	2·4	0	0·18	−0·18	0	0·05	−0·05	7·75	10·47	− 2·72	0	Moulmein.		
...	6	14	8	1	...	...	1	1	4·2	4·9	− 14	85	·631	1·7	0	0·45	−0·45	0	0·09	−0·09	10·89	9·81	+ 1·08	0	Rangoon .	Lower Burma.	2
5	1	17	4	...	...	...	...	4	4·1	2·7	+ 52	86	·608	1·9	0	0·55	−0·55	0	0·14	−0·14	7·99	12·56	− 4·57	0	Bassein.		
...	6	21	4	...	...	...	...	...	11·0	7·4	+ 49	75	·705	2·2	0	0·90	−0·90	0	0·87	−0·87	7·47	17·30	− 9·83	0	Diamond Island.		
...	9	22	...	...	...	...	...	...	2·4	2·2	+ 9	88	·559	2·2	0	1·27	−1·27	0	0·88	−0·88	3·82	14·26	−10·34	0	Akyab. .	Arakan.	5
...	15	6	1	...	..	...	1	8	2·5	2·3	+ 9	89	·567	1·5	0	0·36	−0·36	0	0·20	−0·20	9·73	8·33	+ 1·40	0	Toungoo .	Central Burma.	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·33	0·10	−0·10	...	...	...	...	II.—Burma Inland.		
...	16	4	...	...	...	...	1	10	2·3	3·2	− 28	73	·456	1·0	0	0·36	−0·36	0	0·10	−0·10	2·88	6·50	− 3·62	0	Thayetmyo .	Central Burma.	3
1	4	...	...	...	...	...	4	22	6·6	?	?	70	·467	1·6	0	?	?	0	?	?	0·60	?	?	0	Minbu .	Upper Burma.	4
22	4	1	...	...	1	...	...	3	0·7	?	?	71	·470	1·1	1	?	?	0·20	?	?	1·91	?	?	0·20	Yamethin.		
7	...	1	2	9	11	...	...	1	?	?	?	76	·361	3·0	2	?	?	0·67	?	?	3·14	?	?	0·52	Taunggyi.		
3	10	4	1	1	...	2	5	5	2·4	?	?	83	·509	1·2	1	?	?	0·24	?	?	4·03	?	?	0·24	Mandalay.		
31	...	...	...	...	...	...	...	...	?	?	?	96	·487	3·4	0	?	?	0	0·09	−0·09	4·22	8·72	− 4·50	0	Kindat.		
			Not	rec	orde	d.			?	?	?	92	·385	5·4	1	?	?	0·74	?	?	2·47	?	?	0·70	Lashio.		
18	2	9	1	...	1	...	...	...	2·2	?	?	96	·420	1·4	2	?	?	0·80	?	?	1·62	?	?	0·44	Bhamo.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·11	0·40	−0·28	...	...	...	...	III.—Assam.		
30	...	...	...	...	1	...	...	...	0·8	1·9	− 58	89	·462	3·9¶	0	0·71	−0·71	0	0·52	−0·52	1·36	8·48	− 7·12	0	Silchar .	Surma.	7
22	1	3	3	2	...	...	...	...	?	?	?	96	·435	3·3	0	?	?	0·08	?	?	0·16(a)	?	?	0·05	Salonah .		
20	1	6	2	1	1	...	...	...	2·3	1·6	+ 44	99	·405	?	1	1·81	−0·81	0·33	0·57	−0·24	2·79	6·39	−3·60	0·32	Sibsagar .	Brahmaputra.	
2	2	21	4	...	...	1	...	1	4·4	4·5	− 2	91	·450	2·0†	0	0·13	−0·13	0·02	0·10	−0·08	2·21	3·86	− 1·65	0·02	Dhubri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·03	0·23	−0·19	...	...	...	...	IV.—Bengal and Orissa.		
6	13	12	...	...	...	...	...	...	1·8	3·2	− 44	86	·466	2·6	0	0·92	−0·92	0	0·77	−0·77	1·78	8·54	− 6·76	0	Chittagong .	East Bengal.	6
			Not	rec	orde	d.			?	?	?	71	·336	?	0	?	?	0	?	?	3·46	?	?	0	Lungleh.		
...	22	5	1	1	...	1	...	1	1·8	?	?	89	·450	1·0	0	0·58	−0·58	0	0·60	−0·60	0·92	10·11	− 9·19	0	Noakhali.		
16	14	1	...	...	...	...	...	...	1·0	?	?	90	·475	0·8‡	0	0·54	−0·54	0	0·36	−0·36	0·39	6·70	− 6·31	0	Comilla.		
24	7	...	...	...	...	...	...	...	1·3	?	?	89	·434	2·3§	0	0·46	−0·46	0	0·13	−0·13	0·10	4·96	− 4·86	0	Sirajganj.		
14	7	3	1	..	1	...	2	3	2·3	1·9	+ 21	88	·472	?	0	0·54	−0·54	0	0·25	−0·25	0·05	6·41	− 6·36	0	Narayanganj.		
31	...	...	...	...	...	...	...	...	1·1	?	?	86	·485	0·7	0	0·54	−0·54	0	0·39	−0·39	0	7·27	− 7·27	0	Barisal.		
20	2	3	5	1	...	...	...	...	0·3	?	?	92	·455	?	0	0·31	−0·31	0	0·13	−0·13	0	6·36	− 6·36	0	Mymensingh.		
27	4	...	...	...	...	...	...	...	1·2	?	?	88	·453	1·5	0	0·31	−0·31	0	0·11	−0·11	0·30	5·38	− 5·08	0	Faridpur .	Deltaic Bengal.	10
15	13	...	...	1	...	...	...	2	1·6§	1·7	− 6	79	·398	1·7¶	0	0·35	−0·35	0	0·18	−0·18	0·03	5·95	− 5·92	0	Jessore.		
5	15	1	...	...	1	...	1	3	2·4	3·0	− 20	78	·417	1·7	0	0·46	−0·46	0	0·24	−0·24	0·05	5·29	− 5·24	0	Calcutta.		
...	15	13	...	1	...	...	1	1	7·5	6·0	+ 25	86	·507	2·6	0	0·65	−0·65	0	0·28	−0·28	0·12	10·94	−10·82	0	Saugor Island.		
...	8	1	3	1	...	1	5	12	2·5	?	?	74	·398	2·1	0	0·19	−0·19	0	0·08	−0·08	0·02	5·24	− 5·22	0	Krishnagar.		
10	12	4	...	...	...	...	1	4	1·0	?	?	63	·351	1·7	0	0·31	−0·31	0	0·26	−0·26	0	5·19	− 5·19	0	Midnapree.		

Mean of 29 days. ‡ Mean of 28 days. (a) Total for Nov. and Dec. ¶ Mean of 27 days. † Mean of 26 days.

Table

Abstract of Observations taken at 8 A.M. at 211 stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
11	Central Bengal	Bankura	298	29·807	?	30·075	29·922	27th	29·674	1st	·248	59·8	80·1	?	54·6	?	67·4	?	25·5	88·1	1st	46·8	21st	41·3
		Raniganj	334	29·799	?	30·104	29·916	27th	29·651	1st	·265	58·9	80·0	?	53·7	?	66·9	?	26·3	88·2	1st	46·5	21st	41·7
		Burdwan	99	30·036	+·039	30·088	30·141	27th	29·883	1st	·258	62·6	81·7	+4·0	55·3	−0·6	68·5	+1·7	26·4	88·9	1st	47·3	22nd	41·1
		Naya Dumka	489	29·614	?	30·096	29·735	27th	29·484	1st	·251	58·0	77·1	?	51·7	?	64·4	?	25·4	85·4	1st	43·4	21st	42·0
		Berhampore	67	30·066	+·037	30·088	30·178	27th	29·910	1st	·268	58·3	78·7	+2·2	53·0	−2·3	65·9	−0·1	25·7	84·7	1st	45·6	21st	39·1
		Rampur Boalia.	70	30·058	?	30·081	30·155	27th	29·911	1st	·254	61·3	78·1	?	52·2	?	65·2	?	25·9	82·1	1st	43·9	21st	38·2
		Malda	72	30·054*	?	30·083*	30·179	27th	29·902	1st	·277	56·8	77·7	?	49·9	?	63·9	?	27·8	82·7	1st	40·6	21st	42·1
		Bogra	61	30·047	?	30·064	30·171	27th	29·907	1st	·264	58·6	77·8	+0·9	52·9	−0·7	65·4	+0·1	24·9	82·3	1st	45·2	20th	37·1
12	North Bengal	Dinajpur	123	29·999	+·041	30·086	30·122	27th	29·852	1st	·270	55·0	77·4	+0·8	48·5	−2·8	62·9	−1·0	28·9	82·3	1st	41·5	21st	40·8
		Rangpur	123	30·011	?	30·097	30·136	27th	29·879	1st	·257	57·6	76·3	?	51·0	?	63·7	?	25·3	80·9	3rd	42·5	22nd	38·4
		Jalpaiguri	284	29·852	+·057	30·112	29·984	27th	29·718	1st	·266	57·0	75·6	+0·3	52·2	−0·2	64·0	+0·1	23·4	80·4	1st	46·6	20th	33·8
17	North Bihar	Purnea	125	30·012	+·050	30·101	30·141	27th	29·858	1st	·283	52·9	76·2	+0·3	48·2	−1·2	62·2	−0·5	28·0	81·8	1st	40·3	21st	41·5
14	Orissa	Balasore	56	30·091†	+·049	30·087†	30·182	27th	30·011	17th	·171	59·7	82·7	+3·9	54·9	+0·8	68·8	+2·4	27·8	89·4	1st & 2nd.	46·4	21st	43·0
		False Point.	21	30·103	+·034	30·067	30·194	27th	29·985	1st	·209	65·2	80·4	+3·1	56·9	−0·4	68·7	+1·4	23·5	88·5	1st & 2nd	48·5	22nd	40·0
		Cuttack	80	30·041	+·028	30·067	30·132	27th	29·927	1st	·205	63·5	83·9	+1·9	50·1	+1·8	72·0	+1·9	23·8	90·7	2nd	52·1	22nd	38·6
		Shortt's Island.	?	30·123	?	?	30·205	27th	29·990	1st	·215	73·1	80·0	?	68·7	?	74·4	?	11·3	87·2	1st	62·3	26th	24·9
		Puri	20	30·101	?	30·064	30·187	27th	29·984	1st	·203	66·1	82·1	?	62·4	?	72·3	?	19·7	91·2	1st	54·6	22nd	36·6
	V.—Gangetic Plain and Chota Nagpur.		...	...	+·034	...	...	...	...	...	...	...	76·0	+1·6	49·4	+0·5	62·8	+1·1	26·6	...	...	...	...	43·5
15	Chota Nagpur	Hazaribagh.	2,007	28·053	+·027	30·104	28·160	27th	27·956	1st	·204	58·1	74·6	+3·0	51·9	+1·7	63·2	+2·4	22·7	80·8	1st	46·3	15th & 17th.	34·5
		Ranchi	2,128	27·944	+·051	30·114	28·041	27th	27·848	1st	·193	58·5	75·4	+3·4	51·6	+2·0	63·6	+2·7	23·8	80·4	1st	43·9	20th	36·5
		Daltonganj	730?	29·409	?	30·149	29·500	27th	29·303	1st	·197	53·9	75·6	?	46·7	?	61·2	?	28·9	84·4	1st	37·0	21st	47·4
		Chaibassa	760	29·352	?	30·107	29·447	27th	29·231	1st	·216	58·0	80·8	+2·7	52·7	+0·7	66·8	+1·7	28·1	87·2	1st	44·0	21st	43·2
16	South Bihar	Gaya	375	29·755	+·036	30·109	29·872	27th	29·643	1st	·229	57·9	76·0	+0·2	52·7	+1·6	64·3	+0·9	23·3	85·0	1st	44·0	21st	41·0
		Dehri	351				Not recorded					58·2	75·7	?	54·4	?	65·1	?	21·3	85·3	1st	47·7	19th	37·6
		Patna	183	29·959	+·019	30·107	30·069	27th	29·831	1st	·238	58·2	74·6	+0·5	51·7	+0·6	63·2	+0·6	22·9	82·4	1st	43·7	20th	38·7
		Arrah	190	29·954	?	30·110	30·073	27th	29·820	1st	·253	55·3	76·2	?	49·3	?	62·9	?	26·9	85·2	1 t	41·5	21st	43·7
		Buxar	239	29·895	?	30·105	30·026	27th	29·758	1st	·268	58·7	76·2	?	51·1	?	63·7	?	25·1	84·1	1st	42·9	21st	41·2
17	North Bihar	Bhagalpur	160	29·973	?	30·095	30 090	27th	29·830	1st	·260	60·3	77·3	?	50·4	?	63·9	?	26·9	84·4	1st	42·6	21st	41·8
		Darbhanga	166	29·962	+·029	30·094	30·096	27th	29·816	st	·280	55·8	75·1	+1·1	51·7	−2·3	63·4	−0·6	23·4	81·4	1st	44·3	21st	37·1
		Muzaffarpur	178	29·958	?	30·104	30·084	27th	29·811	1st	·273	54 5	74·4	?	48·5	?	61·5	?	25·9	80·3	1st	40·3	21st	40·0
		Motihari	224	29·890*	?	30·098*	30·038	27th	29·756	1st	·282	53·41	75·5	?	44·4	?	60·0	?	31·1	82·0	1st	35·0	21st	47·0
		Chapra	181	29·955	?	30·103	30·073	27th	29·817	1st	·256	54·1	76·1	?	49·6	?	62·9	?	26·5	84·4	1st	42·4	21st	42·0
18	N. W. Provinces (East).	Bĕnares	267	29·872	+·040	30·115	29·990	27th	29·766	1st	·224	53·4	75·6	+0·7	47·6	−0·2	61·6	+0·3	28·0	86·7	1st	38·6	21st	48·1
		Allahabad	309	29·826	+·034	30·113	29·949	26th	29·725	1st	·224	54·7	77·2	+2·2	48·0	+0·6	62·6	+1·4	29·2	87·1	1st	38·9	21st	48·2
23	N.-W. Provinces (East, Sub-montane).	Gorakhpur	256	29·858	+·027	30·091	29·970	27th	29·719	1st	·251	55·2	75·1	+0·8	49·2	−0·9	62·2	−0·1	25·9	82·4	1st	40·3	21st	42·1
19	South Oudh	Lucknow	368	29·764	+·043	30·120	29·880	26th	29·650	1st	·230	54·0	178·2	‡+1·7	46·7	+1·1	64·0	+1·4	31·5	91·8	1st	39·2	15th & 22nd.	52·6
20	North Oudh	Bahraich	403	29·706	?	30·100	29·819	27th	29·573	1st	·246	53·4	76·3	?	47·3	?	61·8	?	29·0	98·9	1st	39·1	20th & 21st.	59·8
21	N.-W. Provinces (Central).	Cawnpore	416	29·697	?	?	29·814	26th	29·605	1st	·209	54·0	76·4	?	46·6	?	61 5	?	29·8	85·3	1st	38·5	21st & 22nd.	46·8
		Mainpuri	516	29·609	?	30·126	29·728	26th	29·501	1st	·227	50·6	74·7	?	45·5	?	60·2	?	29·2	81·3	1st	37·0	22nd	44·3

* Mean of 30 days. † Mean of 28 days. ‡ Mean of 16 days.

I—*continued.*

in India, Burma, etc., in December, 1896—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 31st December 1896.	Normal rainfall for period, 1st October to 31st December.	Variation from normal of period, 1st October to 31st December.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
22	...	...	1	...	...	...	7	1	1·0	?	?	64	·335	2·1	0	0·38	−0·38	0	0·15	−0·15	0·05	4·49	−4·44	0	Bankura .	Central Bengal.	11
10	3	...	...	1	...	...	4	13	2·2	?	?	72	·359	1·7	0	0·31	−0·31	0	0·09	−0·09	0·06	3·90	−3·84	0	Raniganj.		
14	7	2	1	...	...	...	3	4	1·2	1·9	−37	64	·367	2·1§	0	0·19	−0·19	0	0·15	−0·15	0	4·43	−4·43	0	Burdwan.		
13	4	...	...	1	...	2	1	10	0·7	?	?	64	·314	2·6	1	0·36	+0·64	0·43	0·17	+0·26	0·55	4·76	−4·21	0·43	Naya Dumka.		
28	1	...	1	...	...	1	...	...	0·6	1·6	−63	79	·392	2·4	0	0·42	−0·42	0	0·12	−0·12	0·07	4·51	−4·44	0	Berhampore.		
12	18	...	...	...	...	...	...	1	1·9	?	?	81	·444	0·6†	0	0·23	−0·23	0·03	0·07	−0·04	0·03	4·49	−4·46	0·03	Rampore Boalia.		
...	10	...	...	...	1	3	4	13	1·9	?	?	83	·385	0·8	1	0·23	+0·77	0·18	0·13	+0·05	0·19	4·73	−4·54	0·18	Malda.		
24	5	...	...	...	...	...	1	1	1·3	?	?	83	·413	?	0	0·23	−0·23	0	0·10	−0·10	0·20	4·48	−4·28	0	Bogra.		
...	6	3	1	1	...	2	6	12	2·4	?	?	87	·383	1·6	1	0·23	+0·77	0·16	0·08	+0·08	1·35	4·71	−3·36	0·16	Dinajpur .	North Bengal.	12
15	2	11	1	...	1	...	...	1	0·7	?	?	90	·429	2·0(a)	1	0·23	+0·77	0·10	0·08	+0·02	1·57	5·65	−4·08	0·10	Rangpur.		
...	13	7	2	1	...	...	...	8	1·7	?	?	90	·421	0·7	0	0·27	−0·27	0·01	0·09	−0·08	1·82	5·57	−3·95	0·01	Jalpaiguri.		
15	2	2	1	...	...	5	4	2	1·9	1·3	+46	88	·357	2·7*	0	0·23	−0·23	0·12	0·11	+0·01	0·21	3·76	−3·55	0·09	Purnea .	North Bihar.	17
13	6	...	...	...	...	1	1	10	1·0	?	?	85	·447	1·2	0	0·58	−0·58	0	0·28	−0·28	0	7·73	−7·73	0	Balasore .	Orissa.	14
1	20	...	...	...	...	...	...	10	5·2	6·3	−17	80	·506	1·9	0	0·73	−0·73	0	0·59	−0·59	0·42	13·01	−12·59	0	False Point.		
24	1	2	1	1	...	...	2	...	1·3	1·3	0	79	·471	2·1	0	0·62	−0·62	0	0·25	−0·25	0·07	7·62	−7·55	0	Cuttack.		
...	2	10	1	...	...	...	1	7	9·3	?	?	64	·526	0·5	0	?	?	0	?	?	0	?	?	0	Shortt's Island.		
4	25	1	...	...	...	...	...	1	7·6	?	?	79	·515	0·9†	0	0·73	−0·73	0	0·50	−0·50	0	12·88	−12·88	0	Puri.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·52	0·23	+0·30	...	...	...	...	**V.—Gangetic Plain and Chota Nagpur.**		
18	2	...	...	1	1	1	4	4	5·1	4·6	+11	60	·293	3·6	1	0·46	+0·54	0·59	0·22	+0·37	0·84	3·92	−3·08	0·56	Hazaribagh	Chota Nagpur.	15
16	...	3	2	...	2	2	3	3	3·3§	?	?	56	·284	0·8	1	0·42	+0·58	0·39	0·21	+0·18	0·98	3·59	−2·61	0·39	Ranchi.		
...	...	1	1	3	9	14	2	1	2·6	?	?	81	·344	1·7	2	0·42	+1·58	1·70	0·21	+1·49	2·88	3·08	−0·20	1·53	Daltonganj.		
13	...	...	...	...	...	11	7	...	0·8	?	?	79	·390	2·8	0	0·65	−0·65	0	0·28	−0·28	1·04	3·45	−2·41	0	Chaibassa.		
22	...	...	...	3	4	1	1	...	1·9	1·3	+46	67	·327	2·8	1	0·31	+0·69	0·52	0·18	+0·34	1·32	2·83	−1·51	0·49	Gaya . .	South Bihar.	16
3	1	...	1	1·	10	13	2	...	4·3	?	?	76	·374	3·1	1	0·38	+0·62	0·65	0·32	+0·33	2·04	3·23	−1·19	0·53	Dehri.		
8	...	...	2	1	...	6	12	2	1·6	1·7	− 6	69	·339	2·3*	1	0·31	+0·69	0·26	0·13	+0·13	1·00	3·55	−2·55	0·21	Patna.		
17	2	...	1	...	...	5	3	3	0·6	?	?	79	·352	1·8§	1	0·27	+0·73	0·23	0·16	+0·07	0·68	3·35	−2·67	0·19	Arrah.		
2	3	3	2	1	1	8	10	1	4·0	?	?	65	·326	2·3*	2	0·38	+1·62	0·37	0·18	+0·19	0·82	3·90	−3·08	0·21	Buxar.		
17	...	1	...	2	...	4	6	1	1·5	?	?	67	·354	2·2	1	0·27	+0·73	0·23	0·07	+0·16	0·26	3·68	−2·82	0·20	Bhagalpur.	North Bihar.	17
6	3	1	1	1	2	4	6	7	2·0	2·0	0	81	·365	1·7¶	0	0·27	−0·27	0·13	0·12	+0·01	0·62	3·03	−2·41	0·07	Darbhanga.		
14	...	...	1	2	...	3	7	4	1·5	?	?	86	·375	1·4	1	0·19	+0·81	0·35	0·10	+0·25	0·54	3·38	−2·84	0·18	Muzaffarpur.		
...	3	3	3	2	3	8	2	7	3·2	?	?	89‡	·371‡	1·1*	1	0·46	+0·54	0·34	0·14	+0·20	0·37	3·66	−3·29	0·30	Motihari.		
17	1	...	...	2	...	6	4	1	1·4	?	?	79	·338	2·0§	0	0·31	−0·31	0·21	0·14	+0·07	0·40	3·60	−3·20	0·09	Chapra.		
14	...	1	1	1	...	7	7	...	2·6	2·4	+ 8	80	·333	2·7	2	0·45	+1·55	0·42	0·24	+0·18	0·95	2·90	−1·95	0·24	Benares .	N.-W. Provinces (East).	18
18	...	1	1	1	...	...	5	5	2·3	1·5	+53	69	·304	2·6	1	0·64	+0·36	0·25	0·32	−0·07	0·25	2·32	−2·07	0·19	Allahabad.		
9	6	4	...	2	3	3	1	3	1·4	0·9	+56	79	·351	2·2	2	0·45	+1·55	0·37	0·17	+0·20	0·39	4·04	−3·65	0·24	Gorakhpur .	N.-W. Provinces (East, Submontane).	23
15	1	...	...	...	1	1	12	1	1·4	1·7	−18	74	·314	1·5	2	0·82	+1·18	1·63	0·35	+1·28	1·94	1·23	+0·71	1·20	Lucknow .	South Oudh.	19
25	...	...	1	1	...	1	2	1	0·6	?	?	80	·342	0·9	2	?	?	1·08	0·45	+0·63	1·96	2·14	−0·18	0·70	Bahraich .	North Oudh.	20
14	2	1	1	1	...	3	6	3	2·6	?	?	67	·287	2·0	3	0·50	+2·50	0·82	0·30	+0·52	1·49	1·40	+0·09	0·60	Cawnpore .	N.-W. Provinces (Central) .	21
26	...	...	...	...	...	...	4	1	0·3	?	?	65	·244	1·5	1	?	?	0·46	0·48	−0·02	1·24	1·30	−0·06	0·33	Mainpuri.		

(a) Mean of 24 days. § Mean of 29 days. ¶ Mean of 27 days.

Table

Abstract of Observations taken at 8 A.M. at 211 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	VI.—Upper Sub-Himalayas		...	...	+·033	...	...	...	...	...	...	...	71·0	−0·6	42·2	−0·5	56·6	−0·6	28·7	...	...	...	...	42·4
24	N.-W. Provinces West (Submontane).	Bareilly	568	29·533	+·035	30·113	29·693	26th	29·392	1st	·251	49·3	73·9*	+1·1*	44·8	−0·6	59·3	+0·3	29·1	80·0	1st	36·7	21st	43·3
		Dehra Dun	2,233	27·815	+·016	30·135	27·917	26th	27·665	1st	·252	49·1	68·6	+0·3	45·1	−0·4	56·9	−0·1	23·5	74·5	2nd	39·0	20th	35·5
		Roorkee	887	29·192	+·027	30·124	29·299	26th	29·044	1st	·255	46·6	72·3	−0·2	42·3	−1·1	57·3	−0·7	30·0	76·3	5th	32·7	21st	43·6
22	N.-W. P. West	Meerut	738	29·362	+·037	30·133	29·479	26th	29·246	18th	·233	46·0	73·3	+0·3	43·8	−0·1	58·6	+0·1	29·5	77·6	4 days	36·5	22nd	41·1
26	South-East Punjab.	Delhi	718	29·384	+·028	30·124	29·510	26th	29·286	1st	·224	51·1	72·6	−1·7	46·2	?	59·4	?	26·4	79·2	1st	38·9	23rd	40·3
28	Central Punjab.	Lahore	702	29·405	+·032	30·146	29·554	26th	29·289	18th	·265	43·8	69·1	−2·5	41·5	+0·9	55·3	−0·8	27·6	75·1	4th	34·2	24th & 25th.	40·9
27	South Punjab	Sirsa	682	29·447	+·032	30·136	29·586	26th	29·354	18th	·232	46·1	73·4	−1·5	40·8	−1·5	57·1	−1·5	32·6	82·3	9th	35·2	15th & 22nd.	47·1
		Patiala	?	29·277	?	30·134	29·378	26th	29·183	2nd	·195	46·6	70·0	?	41·9	?	56·0	?	28·1	75·8	10th	34·5	22nd.	41·3
29	Punjab Submontane.	Ludhiana	812	29·283	+·036	30·138	29·411	26th	29·184	1st	·227	45·1	69·4	−1·9	42·4	−0·8	55·9	−1·4	27·0	74·6	9th	32·2	23rd	42·4
		Sialkot	830	29·269	+·049	30·147	29·400	26th	29·150	18th	·250	45·5	69·2	−1·0	41·2	−0·8	55·3	−0·9	28·0	74·5	1st	34·0	21st	40·5
		Umballa	892	29·191	?	30·126	29·328	26th	29·100	18th	·226	45·2	72·4	?	40·8	?	56·6	?	31·6	79·0	18th & 21st,	31·0	22nd	48·0
31	North Punjab	Rawalpindi	1,643	28·416	+·040	30·184	28·564	26th	28·286	18th	·278	41·0	67·4	−0·2	36·1	−0·2	51·8	−0·2	31·3	74·0	5th	28·9	26th	45·1
	VII.—Indus Valley and North-West Rajputana.		...	...	+·030	...	...	...	...	...	...	...	74·8	0	41·4	−2·5	58·5	−1·2	32·6	...	...	...	...	47·4
31	North Punjab	Peshawar	1,110	29·024	+·027	30·172	29·190	26th	28·863	18th	·327	40·7	66·2	−1·6	37·2	−1·0	51·7	−1·3	29·0	73·2	4th	30·4	23rd & 24th.	42·8
		Mardan	?	29·102	?	?	29·206	13th	28·938	18th	·268	38·3	65·2	?	32·5	?	48·8	?	32·7	70·0	4th & 5th	26·0	22nd & 27th.	44·0
32	West Punjab	Khushab	612	29·504	?	30·152	29·696	26th	29·376	18th	·320	41·4	72·3	?	37·8	?	55·1	?	34·5	81·2	2nd	30·5	25th	50·7
		Montgomery	558	29·566	?	30·144	29·710	26th	29·446	18th	·264	46·0	73·0	?	40·0	?	56·5	?	33·0	82·0	5th	31·5	25th	50·5
		D. I. Khan	594	29·563	+·028	30·164	29·718	26th	29·423	18th	·295	42·2	73·2	?	38·2	?	55·7	?	35·0	78·8	2nd	31·5	24th	47·3
		Mooltan	420	29·718	+·019	30·147	29·876	26th	29·613	28th	·263	45·2	75·0	+1·4	42·4	−1·1	58·7	+0·2	32·6	81·8	4th & 5th	37·0	25th	44·8
		Jacobabad	186	29·967	+·037	30·133	30·123	26th	29·865	18th	·258	46·1	77·0	+0·4	39·9	−3·5	58·5	−1·6	37·1	86·0	4th	33·0	25th	53·0
47	Sind	Hyderabad	96	30·059	+·035	30·115	30·189	26th	29·971	18th	·218	55·2	79·1	+0·5	48·0	−1·3	63·6	−1·9	31·1	87·1	5th	40·0	25th & 26th.	47·1
		Kurrachee	12	30·142	+·032	30·105	30·265	26th	30·057	18th	·208	57·9	81·6	?	52·4	?	67·1	?	29·2	88·3	7th	46·0	24th	42·3
		Bickaneer*	771?	29·344	?	30·143	29·492	26th	29·199	28th	·293	51·7	74·5	−0·7	46·0	?	60·3	?	28·5	83·2	9th	38·6	23rd & 27th.	44·6
51	West Rajputana	Jodhpur	?	29·327	?	?	29·469	26th	29·201	28th	·268	56·4	79·3	?	50·0	?	64·7	?	29·3	86·0	11th	38·4	25th	47·6
		Pachpadra	380?	29·745	?	?	29·873	26th	29·606	21st	·267	49·3	80·6	?	41·9	?	61·3	?	38·7	87·3	10th	33·7	25th	53·6
	VIII.—East Rajputana, Central India, and Gujarat.		...	...	+·025	...	...	...	...	...	...	...	80·7	0	51·9	+0·6	66·3	+0·3	28·8	...	...	...	...	43·1
50	Rajputana East	Jeypore	1,431	28·669	+·024	30·155	28·796	26th	28·568	28th	·228	53·3	76·5	−1·1	48·1	0	62·3	−0·6	28·4	82·0	7th	41·2	21st	40·8
		Sambhar	1,254	28·840	+·019	30·148	28·970	26th	28·705	28th	·265	50·4	75·2	−0·1	44·6	−1·1	59·9	−0·6	30·6	81·4	10th	37·5	21st	43·9
		Ajmere	1,611	28·488	+·017	30·184	28·608	26th	28·345	28th	·263	47·7	74·7	−1·5	43·2	−1·1	59·0	−1·3	31·5	80·4	10th	36·9	21st	43·5
		Deesa	466	29·632	+·018	30·082	29·727	26th	29·557	18th	·170	59·8	85·4	+0·3	51·4	−0·6	68·4	−0·2	34·0	90·2	8th & 9th	42·0	29th	43·2
		Bhuj	395	29·696	+·012	30·068	29·787	26th	29·620	18th	·167	60·6	78·7	−3·3	56·4	+0·8	67·6	−1·3	22·3	83·4	4 days	51·0	24th & 28th.	32·4
46	Kathiawar and Cutch.	Rajkot	429	29·659	?	30·062	29·723	26th	29·585	18th	·138	63·6	94·6	−0·8	52·6	+0·5	68·6	−0·2	32·0	88·9	3 days	43·0	26th	45·9
		Veraval	?	30·054	?	30·014	30·123	31st	29·980	18th	·143	68·5	86·2	?	62·8	?	74·5	?	23·4	94·6	2nd	54·3	30th	40·3
		Ghadechi†	35	30·057	?	30·039	30·122	26th	29·982	18th	·140	59·8	84·5	?	52·8	?	68·7	?	31·7	90·6	28th	44·8	25th	45·8
49	Central India	Nowgong	757	29·369	+·030	30·139	29·490	26th	29·294	3rd	·196	53·9	74·8	−0·4	47·5	+1·8	61·2	+0·7	27·3	82·0	1st & 2nd	38·0	21st	44·0
		Indore	1,823	28·258	+·034	30·113	28·346	26th	28·183	18th	·163	60·1	82·7	+4·2	50·0	+1·1	66·4	+2·7	32·7	90·7	1st	38·6	12th	52·1
		Neemuch	1,630	28·473	+·042	30·146	28·538	7th	28·395	18th	·143	58·3	78·5	+0·6	48·9	−0·1	63·7	+0·3	29·6	84·8	10th	41·9	31st	42·9
45	Gujarat	Surat	39	30·035	+·009	30·018	30·088	8th	29·959	18th	·129	67·4	90·2	+3·5	61·2	+4·4	75·8	+4·0	29·0	96·7	2nd	52·6	30th	44·1
		Ahmedabad	164	29·929	?	30·048	30·018	26th	29·857	18th	·161	65·3	86·6	?	59·3	?	73·0	?	27·3	94·2	1st	51·2	30th	43·0
22	N.-W. P. (West)	Agra	555	29·572	+·029	30·130	29·694	26th	29·478	1st	·216	53·2	75·5	−0·5	48·0	−0·3	61·7	−0·4	27·5	81·0	10th	40·9	22nd	40·1
21	N.-W.P., Central	Jhansi	858	29·265	+·039	30·134	29·382	26th	29·186	18th	·196	58·0	77·0	−1·1	51·7	+1·2	64·4	+0·1	25·3	85·0	11th	44·9	21st	40·1

* Mean of 30 days.

† Mean of 22 days.

I—*continued.*

in India, Burma, etc., in December, 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8 A.M.		Mean cloud amount.	Rainfall.								Station.	Meteorological Province or District.	Number of 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 Oct. to 31st December 1896.	Normal rainfall for period, 1st Oct. to 31st December	Variation from normal of period, 1st Oct. to 31st December.	Heaviest rainfall during month.			
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·43	0·45	−0·01	...	...	...	...	VI.—Upper Sub-Himalayas.		
19	...	1	1	...	...	2	1	7	1·1	2·2	− 50	79	·281	0·9	2	0·64	+ 1·36	0·58	0·31	+0·27	1·26	1·59	−0·33	0·40	Bareilly .	N.-W. Provinces, West (Submontane,)	24
29	...	...	...	...	2	...	...	...	0·7	1·7	− 59	73	·263	2·1	2	1·10	+ 0·90	0·49	0·62	−0·13	0·92	1·98	−1·06	0·36	Dehra Dun,		
26	1	...	1	1	1	...	...	1	1·0*	1·3	− 23	80	·263	0·8	1	0·91	+ 0·09	0·46	0·33	+0·13	1·18	0·92	+0·26	0·39	Roorkee,		
23	...	...	...	1	...	2	5	...	1·3	1·6	− 19	70	·223	1·1	2	1·00	+ 1·00	0·46	0·32	+0·14	0·59	0·82	−0·23	0·24	Meerut. .	N.-W. P. West.	22
11	...	...	2	1	...	...	14	3	2·0	2·7	− 26	53	·204	1·3	1	0·55	+ 0·45	0·34	0·30	+ ·004	0·71	0·45	+0·26	0·25	Delhi . .	South-East Punjab.	26
26	1	1	1	...	...	...	1	1	1·0	1·5	− 33	74	·214	2·6	0	0·55	− 0·55	0·03	0·38	−0·35	0·17	0·74	−0·57	0·03	Lahore.	Central Punjab.	28
9	3	2	4	2	3	3	3	2	4·1	2·2	+ 86	56	·182	3·4	2	0·73	+ 1·27	0·58	0·35	+0·23	0·78	0·50	+0·28	0·45	Sirsa.	South Punjab.	27
30	...	...	...	...	...	1	...	...	1·3	?	?	80	·262	1·4	1	?	?	0·22	?	?	0·45	?	?	0·13	Patiala		
26	...	...	...	1	...	...	2	2	0·8	0·8	0	79	·244	2·7	2	1·27	+ 0·73	0·75	0·53	+0·22	1·09	1·02	+0·07	0·52	Ludhiana	Punjab, Submontane,	29
29	...	1	...	1	...	...	...	...	0·6	1·1	− 45	74	·229	1·9	1	0·82	+ 0·18	0·21	0·63	−0·42	0·91	1·03	−0·12	0·18	Sialkot		
29	...	...	...	...	...	...	...	2	0·8	?	?	80	·241	1·2	2	?	?	0·86	0·44	+0·42	1·03	0·93	+0·10	0·56	Umballa,		
15	6	3	...	1	...	...	4	2	2·6	1·1	+136	73	·194	3·4	1	1·27	− 0·27	0·14	0·76	−0·62	1·39	1·66	−0·27	0·13	Rawalpindi.	North Punjab.	31
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·09	0·16	−0·09	...	...	...	...	VII.—Indus Valley and North-West Rajputana.		
15	...	...	1	2	9	4	...	...	2·0	2·4	− 17	74	·194	3·5	0	0·64	− 0·64	0	0·24	−0·24	1·06	1·02	+0·04	0	Peshawar .	North Punjab.	31
			Not	rec	orde	d.			?	?	?	98	·229	3·7	1	?	?	0·27	?	?	0·96	?	?	0	Mardan,		
7	6	6	3	...	1	2	6	...	2·6	?	?	57	·153	2·5	0	0·20	− 0·20	0	0·16	−0·16	0	0·56	−0·56	0	Khushab .	West Punjab.	32
20	1	1	4	3	...	...	2	...	1·6	?	?	56	·180	2·4	1	0·40	+ 0·60	0·10	0·20	−0·10	0·43	0·33	+0·10	0·10	Montgomery,		
28	...	...	...	...	...	...	...	3	0·8	0·8	0	76	·211	2·0	0	0·27	− 0·27	0	0·24	−0·24	0·54	0·50	+0·04	0	D. I. Khan		
18	...	7	...	6	...	...	...	...	0·9	1·3	− 31	67	·206	1·5	0	0·18	− 0·18	0	0·20	−0·20	0	0·30	−0·30	0	Mooltan,		
21	2	1	3	1	2	...	1	...	2·4	1·6	+ 50	58	·184	2·4	0	0·09	− 0·09	0	0·10	−0·10	0	0·26	−0·26	0	Jacobabad .	Sind . . .	47
8	11	1	...	...	...	...	1	10	7·3	6·5	+ 12	43	·190	1·7	0	0	0	0	0	0	0	0·06	−0·06	0	Hyderabad,		
1	3	18	8	1	...	...	...	...	4·5	9·2	− 51	49	·240	1·9	0	0·10	− 0·10	0	0·16	−0·16	0	0·25	−0·25	0	Kurrachee		
3	4	5	1	3	6	3	1	4	4·6	2·4	+ 92	47	·181	2·1	1	?	?	0·59	0·16	+0·43	0·59	0·34	+0·25	0·59	Bickaneer*	West Rajputana.	51
3	10	17	...	...	...	...	...	1	3·7	?	?	39	·174	0·5	0	?	?	0·07	?	?	0·86	?	?	0·07	Jodhpore.		
...	8	7	8	2	1	...	...	5	3·2	2·1	+ 52	53	·188	0·1	0	?	?	0·03	0·03	0	0·28	0·08	+0·20	0·03	Pachpadra.		
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·27	0·16	+0·17	...	...	...	...	VIII.—East Rajputana, Central India, and Gujarat.		
7	4	7	4	...	1	2	...	6	2·8	3·4	− 18	62	·253	1·6	1	0·30	+0·70	0·61	0·08	+0·53	1·52	0·62	+0·90	0·61	Jeypore .	East Rajputana.	50
22	1	2	2	1	1	...	1	1	2·7	3·7	− 27	64	·240	1·2	1	0·60	+ 0·40	0·12	0·19	−0·07	1·49	0·55	+0·94	0·12	Sambhar.		
24	2	1	1	1	1	...	...	1	1·6	1·4	+ 14	76	·227	1·5	0	0·45	− 0·45	0·07	0·15	−0·08	1·80	0·65	+1·15	0·07	Ajmere.		
...	1	16	13	...	...	...	...	1	8·6	8·1	+ 6	48	·248	0·9	0	0·09	− 0·09	0	0·06	−0·06	1·39	0·57	+0·82	0	Deesa.		
11	3	2	4	1	...	3	6	1	6·5	5·1	+ 27	46	·249	0·3	0	?	?	0	0·08	−0·08	2·21	0·45	+1·76	0	Bhuj . .	Kathiawar and Cutch,	46
6	1	12	11	...	...	...	...	1	4·4	4·8	− 8	41	·247	1·0	0	0	0	0	0·04	−0·04	1·78	0·85	+0·93	0	Rajkot.		
...	19	9	1	...	...	...	...	2	5·4	?	?	43	·301	1·5	0	?	?	0	?	?	3·66	?	?	0	Veraval.		
1	3	1	...	...	...	...	4	13	5·3	?	?	47	·238	1·6	0	?	?	0·02	?	?	?	?	?	0·02	Ghadecchi.		
14	2	3	2	...	1	3	4	2	1·2	1·2	0	72	·311	2·3	3	0·64	+ 2·36	0·97	0·55	+0·42	1·14	1·97	−0·83	0·73	Nowgong .	Central India.	42
16	1	7	...	1	2	...	2	2	1·5	2·1	− 29	54	·285	2·2	1	0·55	+ 0·45	0·54	0·21	+0·33	0·56	2·11	−1·55	0·38	Indore.		
3	5	16	3	1	...	...	2	1	5·4	8·1	− 33	51	·250	1·4	1	0·73	+ 0·27	0·64	0·25	+0·39	1·98	0·95	+1·03	0·64	Neemuch,		
6	4	8	10	1	1	1	...	...	4·2	5·0	− 16	54	·379	4·6	0	0·18	− 0·18	0	0·02	−0·02	0·79	1·72	−0·93	0	Surat . .	Gujarat.	45
4	2	17	8	...	...	...	...	...	5·9	?	?	43	·268	1·4	0	?	?	0	?	?	0·91	?	?	0	Ahmedabad.		
7	...	4	...	1	...	8	...	11	3·8	2·6	+ 46	61	·251	1·6	1	0·55	+ 0·45	0·59	0·19	+0·40	0·91	0·71	+0·20	0·59	Agra . .	N.-W. P. (West).	22
24	...	...	...	1	...	2	1	3	1·4	2·3	− 39	56	·270	1·7	1	0·36	+ 0·64	0·45	0·13	+0·32	1·13	0·95	+0·18	0·24	Jhansi . .	N.-W.P., Central.	21

Table

Abstract of Observations taken at 8 A.M. at 211 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
	IX.—Deccan	...	...	...	+·024	...	...	...	...	...	...	...	84·3	+3·4	58·6	+4·9	71·5	+4·1	25·6	...	...	...	...	40·9
38	Bombay, Deccan	Belgaum	2,524	27·510	+·026	30·000	27·554	8th	27·410	18th	·144	69·5	84·7	+3·5	61·7	+3·7	73·2	+3·6	23·0	87·7	3 days	56·9	14th	30·8
		Sholapur	1,590	28·471	+·023	30·045	28·523	27th	28·392	18th	·131	71·2	87·7	+2·8	62·9	+6·0	75·3	+4·4	24·8	93·7	26th	54·6	17th	39·1
		Poona	1,840	28·220	+·013	30·053	28·293	8th	28·158	18th	·135	67·7	88·8	+5·4	59·4	+5·6	74·1	+5·5	29·4	95·0	23rd	50·0	18th	45·0
		Bijapur	1,946	28·103	?	30·031	28·159	8th	28·027	18th	·132	69·8	87·3	?	62·5	?	74·9	?	24·8	91·7	26th	53·1	15th	38·6
40	Khandesh	Malegaon	1,430	28·639	+·016	30·069	28·697	8th	28·567	18th	·130	66·7	87·7	+4·5	56·4	+6·1	72·1	+5·3	31·3	95·4	2nd	46·5	15th & 18th.	48·9
		Ahmednagar	2,152	27·914	?	30·062	27·979	8th	27·840	29th	·139	66·8	85·7	?	57·3	?	71·5	?	28·4	90·8	3rd	45·4	18th	45·4
41	Berar	Akola	930	29·145	+·010	30·062	29·221	8th	29·058	4th	·163	65·5	87·8	+5·8	58·3	+8·3	73·1	+7·1	29·5	97·8	1st	45·2	17th	52·6
		Amraoti	1,215	28·868	+·024	30·082	28·943	8th	28·794	4th	·149	66·9	85·8	+4·1	61·2	+5·8	73·5	+5·0	24·6	92·7	3rd	50·4	16th	42·3
2	Central Provinces (West).	Khandwa	1,044	29·046	+·034	30·096	29·126	26th	28·980	18th	·146	62·4	86·3	+4·6	55·4	+6·5	70·9	+5·6	30·9	94·2	1st	44·6	18th	49·6
		Hoshangabad	1,006	29·092	+·023	30·113	29·185	26th	29·011	18th	·174	59·4	81·3	+2·5	55·4	+4·7	68·3	+3·6	25·9	89·3	4th	47·8	3 days	41·5
		Nagpur	1,025	29·060	+·020	30·084	29·127	8th	28·978	4th	·149	64·4	84·5	+4·2	58·5	+5·2	71·5	+4·7	26·0	92·1	2nd	50·2	15th & 18th.	41·9
43	Central Provinces (Central).	Chanda	634	29·450	?	30·058	29·528	8th	29·384	4th	·144	64·5	83·9	+2·3	55·7	+4·6	69·8	+3·5	28·2	90·2	2nd	44·9	15th & 16th.	45·3
		Seoni	2,033	28·048	+·035	30·105	28·124	26th	27·973	18th	·151	61·2	79·8	+2·6	53·2	+4·2	66·5	+3·4	26·6	86·5	2nd	45·0	15th	41·5
		Jubbulpur	1,327	28·767	+·026	30·126	28·870	26th	28·684	3rd	·186	57·1	78·5	+2·5	49·6	+4·4	64·1	+3·5	28·9	85·9	1st	38·4	20th	47·5
49	Central India	Sutna	1,040	29·063	+·025	30·130	29·175	26th	28·989	3rd	·186	55·5	76·6	+1·9	49·5	+3·3	63·1	+2·6	27·1	85·9	1st	39·1	21st	46·8
		Saugor	1,807	28·267	+·026	30·104	28·368	26th	28·194	3 days	·174	60·5	77·7	+1·8	54·4	+3·4	66·1	+2·6	23·3	89·3	3rd	45·6	14th	43·7
44	Central Provinces (East.)	Raipur	970	29·117	?	30·085	29·176	26th	29·040	4th	·136	62·4	81·9	+3·6	57·3	+4·0	69·6	+3·8	24·6	87·8	2nd	49·9	15th & 23rd.	37·9
		Sambalpur	486	29·640	+·033	30·102	29·721	26th	29·552	1st	·169	62·5	80·0	?	56·0	+2·2	68·0	+1·5	24·0	87·5	1st	45·2	21st	42·3
39	Hyderabad, (North).	Aurangabad	?	28·216	?	30·069	28·272	8th	28·079	4th	·193	70·1	88·2	?	59·4	?	73·8	?	28·8	94·3	3rd	48·0	15th	46·3
		Indur	?	.			Not recorded.					69·1	84·7	?	59·0	?	71·8	?	25·7	89·6	2nd	47·0	15th	42·6
		Bidar	?	27·907	?	30·045	27·981	26th	27·823	18th	·158	71·4	82·1	?	62·7	?	72·4	?	19·4	86·4	2nd	58·0	15th & 16th.	28·4
53	Hyderabad (South).	Gulbarga	1,502	28·558	?	30·047	28·656	29th	28·464	18th	·192	69·2	87·4	?	62·4	?	74·9	?	25·0	91·2	2nd	55·0	16th	36·2
		Raichur	1,309	28·743	?	30·028	28·803	27th	28·648	18th	·155	72·4	86·0	?	67·0	?	76·5	?	19·0	89·1	3 days	62·2	15th	26·9
		Hyderabad (Deccan), Secunderabad	1,690 1,787	28·378 28·281	+·033 ?	30·062 30·066	28·436 28·341	26th 26th	28·294 28·205	18th 18th	·142 ·136	67·9 66·5	83·6 84·2	+2·0 ?	62·3 62·1	+5·7 ?	73·0 73·1	+3·9 ?	21·3 22·1	86·9 88·6	2nd 2nd	54·8 54·6	15th & 16th. 15th & 17th.	32·1 34·0
		Khamamet	373	29·716	?	30·045	29·787	27th	29·638	18th	·149	71·3	88·6	?	65·0	?	76·8	?	23·6	93·0	2nd	55·7	16th & 17th.	37·3
	X.—West Coast	...	...	...	+·012	...	...	...	...	...	...	...	88·5	+2·1	73·2	+3·3	80·9	+2·7	15·2	...	...	...	...	23·1
37	Konkan	Bombay	37	30·018	+·014	29·995	30·088	8th	29·918	18th	·170	74·7	86·3	+2·2	71·9	+2·4	79·1	+2·3	14·4	91·0	1st	63·0	31st	28·0
		Ratnagiri	110	29·920	+·023	29·970	29·988	8th	29·823	18th	·165	77·8	91·5	+2·2	71·5	+4·7	81·5	+3·5	20·0	97·4	22nd	66·9	17th	30·5
		Mormugao	60	29·976	?	29·971	30·030	7th	29·872	18th	·158	76·3	89·0	?	73·6	?	81·3	?	15·4	92·0	1st	71·4	4 days	20·6
		Goa	199	29·827	+·020	29·964	29·889	7th	29·722	17th	·167	78·0	86·9	?	75·3	?	81·1	?	11·6	90·0	1st	72·0	3 days	18·0
		Karwar	44	29·986	+·022	29·963	30·030	27th	29·875	18th	·155	73·2	90·5	+3·3	70·1	+3·7	80·3	+3·5	20·4	94·3	20th	65·5	14th	28·8
33	Malabar	Cochin	11	29·982	+·007	29·920	30·038	27th	29·851	18th	·187	78·5	90·5	+2·6	75·1	+2·4	82·8	+2·5	15·4	93·8	19th	71·2	13th	22·6
		Calicut	27	29·969	−·003	29·927	30·043	24th	29·851	18th	·192	77·7	87·9	+0·4	74·1	+3·7	81·0	+2·1	13·8	89·8	20th	68·0	13th	21·8
		Mangalore	65	29·946	+·003	29·944	30·012	24th	29·825	18th	·187	77·7	90·3	+1·8	73·4	+2·9	81·9	+2·4	16·9	94·3	19th	69·5	4th & 14th	24·8
		Trivandrum	198	29·786	?	29·917	29·848	7th	29·652	18th	·196	76·6	83·4	?	71·1	?	78·8	?	9·3	85·5	31st	72·5	26th	13·0
	XI.—South India	...	...	...	+·025	...	...	...	...	...	...	...	83·1	+0·7	67·8	+2·8	75·5	+1·8	15·3	...	...	...	...	24·0
57	Madras (South).	Pamban	37	29·983	?	29·946	30·065	27th	29·863	17th	·202	77·8	81·2	?	74·8	?	78·1	?	6·4	84·3	19th	72·2	27th	12·1
		Tinnevelly	168	29·863	?	29·963	29·942	27th	29·719	17th	·223	76·0	83·9	?	73·6	?	78·8	?	10·3	87·7	3rd	69·9	15th	17·8
		Madura	447	29·575	+·025	29·967	29·647	27th	29·465	17th	·182	75·7	83·9	−2·3	72·0	+1·6	77·8	−0·4	11·7	86·8	3rd	68·6	4th	18·2

I—*continued.*

in India, Burma, etc., in December, 1896—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 Oct. to 31st December 1896.	Normal rainfall for period, 1st Oct. to 31st December.	Variation normal of period, 1st Oct. to 31st December.	Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of District.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·32	0·51	—0·13	...	...	...	...	**IX.—Deccan.**		
6	...	1	12	11	...	...	1	...	13·2	12·3	+ 7	64	·466	2·5	1	0·18	+0·82	0·39	0·13	+0·26	3·79	8·63	−4·84	0·30	Belgaum .	Bombay, Deccan.	38
3	...	5	8	15	...	...	...	...	9·8	6·8	+44	58	·447	3·1	0	0·91	−0·91	0	0·60	−0·60	7·20	6·85	+0·35	0	Sholapore.		
9	1	1	12	2	...	4	2	...	6·9	5·7	+21	53	·373	2·3	0	0·82	−0·82	0·10	0·26	−0·16	1·29	6·37	−5·08	0·09	Poona.		
...	...	2	13	11	1	2	2	...	4·9	?	?	77	·566	2·9	2	0·09	+1·91	0·26	?	?	1·96	?	?	0·16	Bijapur.		
6	7	1	2	2	...	1	2	10	6·6	3·5	+89	70	·463	2·3	0	0·82	−0·82	0·02	0·37	−0·35	0·22	3·85	−3·63	0·01	Malegaon .	Khandesh.	4
5	6	1	3	11	1	...	2	2	9·4	?	?	64	·425	2·1	1	?	?	0·72	?	?	2·01	?	?	0·70	Ahmednagar.		
1	1	5	16	6	...	...	1	1	4·5	3·1	+45	53	·346	2·2	2	0·95	+1·05	0·71	0·96	−0·25	0·75	5·21	−4·46	0·52	Akola . .	Berar.	41
...	1	8	17	3	1	1	...	...	4·5	3·1	+45	52	·357	2·9	2	1·09	+0·91	0·77	0·73	+0·04	2·46	4·23	−1·77	0·57	Amraoti.		
10	2	4	9	2	...	...	2	2	3·7	2·4	+54	52	·298	2·5	2	0·64	+1·36	0·42	0·56	−0·14	0·42	2·60	−2·18	0·24	Khandwa .	Central Provinces (West).	42
8	1	11	11	...	...	...	...	...	2·3	2·4	− 4	57	·300	2·8	1	1·00	0	0·66	0·63	+0·03	0·67	3·06	−2·39	0·55	Hoshangabad		
31	...	...	...	...	...	...	...	...	1·8	2·8	−36	63	·399	3·9	0	1·00	−1·00	0·14	0·64	−0·50	0·71	4·49	−3·78	0·09	Nagpur.		
6	8	5	7	4	...	...	...	1	1·2	1·6	−25	74	·472	2·1	0	?	?	0	0·46	−0·46	2·68	3·82	−1·14	0	Chanda .	Central Provinces (Central).	43
...	8	10	2	4	1	...	3	3	2·8	2·5	+12	61	·339	3·1	1	0·91	+0·09	0·18	0·67	−0·19	1·45	3·63	−2·18	0·38	Seoni.		
12	2	4	...	7	6	...	...	...	1·8	1·8	0	74	·362	3·6	1	0·91	+0·09	0·75	0·38	+0·37	1·06	2·95	−1·89	0·68	Jubbulpore.		
5	5	5	3	2	1	...	1	9	3·2	3·6	−11	62	·283	2·0	4	0·91	+3·09	1·10	0·42	+0·68	1·32	3·09	−1·77	0·55	Sutna.	Central India.	49
2	2	8	6	7	1	3	...	2	3·4	2·5	+36	47	·250	2·3	2	0·73	+1·27	1·28	0·76	+0·52	1·33	2·66	−1·33	1·00	Saugor.		
20	1	1	1	2	2	2	1	1	2·6	2·6	0	64	·374	2·1	0	1·07	−1·07	0	0·35	−0·35	1·74	3·16	−1·42	0	Raipur.	Central Provinces, East.	
...	13	12	...	2	...	...	...	4	4·4	1·4	+214	75	·437	3·2	0	?	?	0	0·34	−0·34	0·73	3·03	−2·30	0	Sambalpur.		
11	...	12	6	2	...	...	...	...	3·8	?	?	53*	·398*	2·1	2	?	?	0·42	0·78	−0·36	0·74	4·35	−3·61	0·26	Aurangabad.	Hyderabad (North).	39
19	...	...	2	4	4	1	1	...	3·0	?	?	72	·530	2·3	0	?	?	0·02	0·40	−0·38	1·72	4·09	−2·37	0·02	Indur.		
...	...	1	11	7	6	5	...	1	6·0	?	?	64	·500	0·7	0	?	?	0	0·61	−0·61	6·08	5·41	+0·67	0	Bidar.		
15	...	5	6	3	1	1	...	...	5·8	?	?	62	·447	3·7	0	?	?	0	0·40	−0·40	0·96	4·10	−3·14	0	Gulbarga .	Hyderabad (South).	53
...	...	3	11	10	7	...	...	...	9·2	?	?	72	·584	1·8	0	?	?	0	?	?	2·21	?	?	0	Raichur.		
16	...	...	5	9	1	...	...	...	3·2	?	?	78	·540	2·1	0	?	?	0	0·27	−0·27	2·60	5·11	−2·51	0	Hyderabad (Deccan), Secunderabad		
7	...	1	18	5	...	...	...	...	4·9	3·3	+48	77	·501	2·3	0	?	?	0	?	?	1·91	?	?	0			
25	1	...	1	4	...	...	...	...	4·8	?	?	75	·589	0·2	0	?	?	0	?	?	1·05	?	?	0	Khamamet.		
...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·73	0·81	+ 0·02	...	...	...	...	**X.—West Coast.**		
1	6	14	9	1	...	...	...	...	9·8	10·0	− 2	66	·576	2·8	0	0·18	−0·18	0	0·09	−0·09	0·53	3·22	−2·69	0	Bombay .	Konkan.	37
13	1	5	9	3	...	...	..	...	4·4	9·9	−56	59	·554	2·0	0	0·27	−0·27	0	0·08	−0·08	0·44	4·86	−4·42	0	Ratnagiri.		
...	...	8	20	1	...	1	1	...	3·0	?	?	75	·684	1·8	0	?	?	0	?	?	0·63	?	?	0	Mormugao.		
...	1	8	22	...	...	...	...	...	?	?	?	64	·621	2·8	0	?	?	0	0·09	−0·09	1·53	7·51	−5·98	0	Goa.		
2	...	8	19	2	...	...	...	...	3·5	?	?	76	·625	1·7	0	0·18	−0·18	0	0·09	−0·09	2·54	10·40	−7·86	0	Karwar.		
2	12	16	1	...	...	...	...	...	4·2	?	?	77	·760	3·8	2	3·36	−1·36	0·53	1·81	−1·28	17·45	22·59	−5·14	0·29	Cochin .	Malabar.	33
...	...	10	18	2	1	...	...	...	9·1	?	?	82	·776	4·0	3	2·11	+0·89	0·68	1·31	−0·63	14·52	16·54	−2·02	0·27	Calicut.		
3	...	1	16	11	...	...	...	...	2·4	3·5	−31	73	·691	3·1	1	1·10	−0·10	1·74	0·48	+1·26	7·66	11·39	−3·73	1·72	Mangalore.		
15	8	2	4	2	...	...	...	...	?	?	?	84	·768	6·3	11	?	?	3·66	2·52	+1·14	18·65	19·52	−0·87	0·67	Trivandrum.		
...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	5·02	2·48	+ 2·39	...	...	...	...	**XI.—South India.**		
...	11	16	3	...	...	...	...	1	13·7	?	?	89	·845	4·7	20	7·00	+13·00	31·23	9·11	+22·12	65·64	25·52	+40·12	3·83	Pamban .	Madras (South).	57
...	12	4	...	...	...	...	...	14	4·8	?	?	85	·775	7·9	10	6·50	+3·50	5·79	?	?	127·42	?	?	1·45	Tinnevelly.		
1	14	7	1	...	...	...	...	8	4·7	4·9	− 4	82	·734	5·6	9	4·36	+4·64	3·65	1·81	+1·84	21·55	14·68	+6·87	0·64	Madura.		

* Mean of 30 days.

Table

Abstract of Observations taken at 8 A.M. at 211 Stations

Number of District.	Meteorological Province or District.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure, 8 A.M., in inches.								Temperature of air.												
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month, e
34	Madras, South Central.	Salem .	940	29·123	+·025	30·021	29·184	27th	29·018	17th	·166	74·3	85·0	−1·0	63·6	+3·5	76·8	+1·3	16·4	89·4	26th	63·9	13th	25·5
		Coimbatore	1,348	28·685	+·026	30·002	28·737	22nd	28·555	17th	·182	72·3	82·8	−1·9	67·8	+1·5	75·3	−0·2	15·0	86·4	31st. 25th & 26th.	63·6	8th	22·8
35	Coorg . . .	Mercara .	3,781	26·308	+·024	?	26·359	26th	26·210	17th	·149	63·3	74·9	+0·4	60·8	+3·2	67·8	+1·8	14·1	78·5	26th	56·7	3 days	21·8
36	Mysore . .	Chitaldroog	2,405	27·643	?	30·002	27·697	27th	27·557	18th	·140	70·6	83·1	?	63·7	?	73·4	?	19·4	87·6	25th	56·9	15th	30·7
		Bangalore	3,021	27·043	+·013	30·010	27·092	26th	26·951	17th & 18th.	·141	66·3	77·7	+0·2	62·0	+3·4	69·9	+1·8	15·7	82·3	25th	57·4	15th	24·9
		Hassan .	3,091	26·980	?	30·017	27·028	27th	26·886	18th	·142	67·8	80·0	?	59·9	?	70·0	?	20·1	83·1	26th	54·3	14th	28·8
		Mysore .	2,518	27·535	?	30·005	27·583	27th	27·441	18th	·142	69·7	81·6	?	63·9	?	72·8	?	17·7	86·4	25th & 26th.	59·4	13th & 15th.	27·0
56	Madras, East Coast, South.	Negapatam	31	29·996	+·019	29·957	30·067	27th	29·903	18th	·164	77·7	81·4	+0·4	74·1	+2·3	77·8	+1·4	7·3	85·2	3rd	71·0	17th	14·2
		Cuddalore .	12	30·031	?	29·972	30·093	27th	29·933	17th	·160	75·4	82·0	?	72·2	?	77·1	?	9·8	85·3	2nd & 3rd.	69·2	13th	16·1
		Trichinopoly	255	29·775	+·010	29·968	29·839	27th	29·672	17th	·167	75·4	84·1	−0·4	72·0	+3·0	78·1	+1·3	12·1	88·5	26th	67·4	13th	21·1
		Madras .	22	30·041	+·019	29·994	30·106	27th	29·942	18th	·164	76·5	83·5	−0·1	72·8	+3·0	78·2	+1·5	10·7	86·5	3rd & 26th	68·5	12th	18·0
55	Madras, East-Coast, Central.	Nellore .	71	29·998	?	30·004	30·067	27th	29·901	17th	·166	74·8	84·1	?	70·8	?	77·5	?	13·3	87·7	3rd & 25th.	66·7	14th	21·0
		Masulipatam	15	30·083	+·043	30·033	30·155	27th	30·001	17th	·154	73·4	83·5	+1·0	68·6	+2·1	76·1	+1·6	14·9	87·0	3rd	64·2	14th & 15th.	22·8
54	Madras, Central	Cuddapah .	433	29·632	?	30·015	29·689	27th	29·540	18th	·149	74·6	87·0	+2·2	68·9	+2·9	78·0	+2·6	18·1	90·0	3days	62·4	14th	26·6
		Kurnool .	923	29·136	?	30·030	29·189	27th	29·039	18th	·150	70·6	88·8	+3·4	64·3	+4·9	76·6	+4·2	24·5	92·2	3rd	57·8	16th	34·4
		Bellary .	1,475	28·582	+·026	30·036	28·632	27th	28·491	18th	·141	71·2	87·6	+2·3	64·6	+3·9	76·1	+3·1	23·0	90·7	26th	58·6	14th	32·1
52	Madras, East-Coast, North.	Rajahmundry	112				Not recorded.					73·2	87·6	+2·1	67·6	+2·6	77·6	+2·4	20·0	92·2	3rd	63·0	3 days	29·2
		Cocanada .	26	30·072	+·039	30·032	30·145	27th	29·992	18th	·153	73·7	81·8	+2·7	68·3	+2·3	75·1	+2·5	13·5	87·1	3rd	62·5	15th	24·6
		Vizagapatam	31	30·063	+·026	30·033	30·145	26th & 27th.	29·964	1st	·181	74·0	83·7	+2·1	66·7	+1·2	75·2	+1·7	17·0	88·3	2nd	61·9	3 days	26·4
		Gopalpur .	21	30·105	?	30·066	30·193	27th	29·993	1st	·200	69·6	82·1	?	61·6	?	71·9	?	20·5	90·2	2nd	54·6	16th & 22nd	35·6
	XII.—Hill Stations.																							
48	Baluchistan .	Pishin .	?				Not recorded.					?	57·3	?	19·7	?	38·5	?	37·6	66·6	5th	10·3	25th	56·3
		Quetta .	5,502	24·785	+·044	?	24·858	10th	24·667	29th	·191	31·3	53·5	−0·6	26·9	−2·0	41·7	−1·3	29·6	67·2	5th	20·3	24th	46·9
		Kalat .	?				Not recorded.					33·1	59·4	?	20·5	?	39·9	?	38·9	73·7	5th	9·2	24th	64·5
		Chaman .	4,311	25·873	?	?	26·006	10th	25·721	29th	·285	41·8	57·7	?	35·6	?	46·7	?	22·1	70·3	5th	27·1	23rd & 25th.	43·2
30	Punjab . .	Leh . .	11,503	19·728	?	?	19·931	27th	19·468	30th	·463	13·7	32·3	?	11·7	?	22·	?	20·6	47·1	1st	4·0	21st & 31st.	43·1
		Srinagar .	5,204	25·052	?	?	25·236	27th	24·851	30th	·385	29·4	49·0	?	26·2	?	37·6	?	22·8	56·5	1st & 4th.	18·1	27th	38·4
		Astor (Kashmir).	?	22·373	?	?	22·599	27th	22·113	30th	·486	22·1	37·0	?	18·6	?	27·8	?	18·4	45·4	10th	12·0	3 days	33·4
		Minimarg .	?	21·434	?	?	21·669	26th	21·189	30th	·480	16·7	32·6	?	12·0	?	22·3	?	20·6	45·3	8th	3·0	19th	42·8
		Skardu .	?	23·052	?	?	23·372	27th	22·736	30th	·636	24·9	40·6	?	22·4	?	31·5	?	18·2	47·0	1st & 4h.	12·3	27th	34·7
		Dras .	?	20·892	?	?	21·118	14th	20·510	30th	·608	−0·8	24·2	?	−10·5	?	6·9	?	34·7	36·3	10th	−24·0	21st	60·3
		Gilgit .	?	24·888	?	?	25·190	27th	24·610	18th	·580	36·0	49·5	?	33·6	?	41·5	?	15·9	55·4	5th	25·3	24th	30·1
		Samana .	?	23·825	?	?	23·930	26th & 27th	23·630	30th	·300	?	56·4	?	34·9	?	45·7	?	21·5	61·0	4th	29·0	31st	32·0
		Chitral‡ .	?	?	?	?	?	?	?	?	?	32·2	50·8	?	30·2	?	40·5	?	20·6	55·5	15th	26·4	20th & 24th	29·1
		Cherat .	?	25·827	?	?	25·928	26th	25·692	18th	·236	46·9	55·3	?	43·6	?	49·5	?	11·7	64·3	3rd	33·0	23rd & 29th,	31·3
		Murree .	6,344	23·926	+·021	?	24·032	26th	23·796	30th	·236	42·0	51·7	−2·0	35·9	−4·1	43·8	−3·1	15·8	62·7	15th	26·0	31st	36·7
		Poo . .	?				Not recorded.					?	49·5	?	28·4	?	38·9	?	21·1	61·1	3rd	22·5	31st	38·6
25	N.-W. Provinces.	Simla .	7,224	23·178	+·010	?	23·264	8th	23·065	30th	·199	42·2	50·3	−0·9	39·0	−1·2	44·7	−1·1	11·3	56·7	1st	26·2	31st	30·5
		Chakrata .	6,977	23·391	+·024	?	23·478	8th	23·292	31st	·186	42·6	54·7	−0·3	38·7	−0·9	46·7	−0·6	16·0	65·2	2nd	24·6	28tth	40·6
		Mussooree .	6,705	23·598	?	?	23·689	27th	23·499	18th	·190	43·3	50·9	−1·7	39·3	−1·3	45·1	−1·5	11·6	60·2	2nd	31·5	31st	28·7
13	Bengal . .	Ranikhet .	6,069	24·202	+·036	?	24·294	8th	24·103	18th	·191	45·7	57·4	−0·8	42·4	−0·2	49·9	−0·5	15·0	65·6	2nd	30·0	31st	35·6
		Yatung .	10,480?				Not recorded.					?	45·0	?	26·5	?	35·8	?	18·5	52·9	16th & 17th.	19·9	11th	33·0
		Darjeeling .	7,421	23·047	+·013	?	23·137	15th	22·908	19th	·229	40·4	48·1	−0·8	35·8	−1·0	42·0	−0·9	12·3	58·6	16th	31·6	21st	27·0
		Gantok .	5,660?	24·607	?	?	24·724	27th	24·468	1st	2·56	46·6	56·7	?	34·1	?	45·4	?	22·6	62·3	1st	31·4	26th	39·0

‡ Mean of 25 days.

I—*continued.*

in India, Burma, etc., in December 1896—continued.

Wind Direction. Number of winds from									Wind Velocity.			Hygrometry, 8A.M.		Mean cloud amount.	Rainfall.								Heaviest rainfall during month.	Station.	Meteorological Province or District.	Number of 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 31st December 1896.	Normal rainfall for period, 1st October to 31st December.	Variation from normal of period, 1st October to 31st December.				
6	1	9	8	1	...	1	4	1	4·9	4·0	+ 23	82	·701	5·5	4	3·18	+0·82	1·64	1·39	+0·25	10·17	12·24	−2·07	0·75	Salem . .	Madras, South Central.	34
...	1	...	30	...	...	...	...	...	3·4	3·0	+ 13	89	·712	6·5	7	3·45	+3·55	2·75	1·21	+1·54	11·40	10·87	+0·53	0·70	Coimbatore.		
3	...	19	8	1	...	...	...	...	8·4	4·7	+ 79	86	·508	6·5	0	1·50	−1·50	0·03	0·70	−0·67	8·28	13·64	−5·36	0·03	Mercara .	Coorg.	55
...	...	1	18	10	1	...	...	1	10·5	?	?	72	·534	4·7	0	?	?	0·09	?	?	2·97	?	?	0·08	Chitaldroog .	Mysore	36
...	1	12	16	2	...	...	...	...	9·0	3·9	+131	83	·538	6·7	1	1·36	−0·36	0·29	0·55	−0·26	8·00	11·29	−3·29	0·17	Bangalore.		
...	...	10	15	5	1	...	...	...	4·4	?	?	78	·536	7·2	1	?	?	0·25	?	?	7·08	?	?	0·22	Hassan.		
1	...	19	11	...	...	...	...	...	11·6	?	?	79	·569	5·8	1	?	?	0·21	?	?	7·19	?	?	0·13	Mysore.		
...	...	20	...	...	...	...	...	11	16·2	6·8	+138	86	·819	8·6	16	11·00	+5·00	20·90	12·41	+8·49	59·14	38·95	+20·19	5·30	Negapatam .	Madras, East Coast, South.	56
...	19	2	4	...	...	...	...	6	2·3	?	?	90	·799	6·0	13	6·90	+6·10	23·14	?	?	52·01	?	?	4·46	Cuddalore.		
15	7	9	...	...	...	...	...	...	3·9	5·0	− 22	83	·731	7·0	7	5·64	+1·36	4·91	2·55	+2·36	18·19	15·41	+2·78	1·48	Trichinopoly.		
5	11	8	3	...	...	...	...	4	6·5	7·6	− 14	87	·805	6·3	10	5·73	+4·27	17·20	5·28	+11·92	52·92	29·49	+23·43	4·40	Madras.		
3	1	...	...	...	...	...	3	19	3·6	?	?	90	·777	8·0	4	3·80	+0·20	3·15	?	?	23·07	?	?	1·55	Nellore .	Madras, East Coast, Central.	55
2	15	12	1	1	...	...	...	...	7·2	5·7	+ 26	84	·689	2·7	0	1·45	−1·45	0	1·06	−1·06	10·39	17·46	−7·07	0	Masulipatam.		
...	...	21	4	1	...	3	...	2	?	?	?	77	·663	4·9	1	1·50	−0·50	0·18	1·19	−1·01	4·49	12·19	−7·70	0·11	Cuddapah .	Madras, Central.	54
27	...	...	1	3	...	...	...	...	?	?	?	71	·534	3·3	0	1·00	−1·00	0	0·20	−0·20	1·82	6·38	−4·56	0	Kurnool.		
14	1	...	2	10	4	...	...	...	3·4	3·1	+ 10	70	·538	5·0	0	0·45	−0·45	0	0·14	−0·14	3·94	6·56	−2·62	0	Bellary.		
4	22	3	2	...	...	...	...	...	?	?	?	65	·533	3·8	0	0·03	−0·03	0	0·38	−0·38	1·62	9·69	−8·07	0	Rajahmundry	Madras, East Coast, North.	52
...	16	14	...	...	...	...	...	1	10·9	?	?	68	·567	1·7	0	1·00	−1·00	0	0·76	−0·76	3·01	18·53	−15·52	0	Cocanada.		
27	4	...	...	...	...	...	...	...	2·3	2·1	+ 10	68	·572	3·0	0	1·82	−1·82	0	2·49	−2·49	0·08	19·93	−19·85	0	Vizagapatam.		
...	15	...	...	...	...	...	...	16	9·9	6·9	+ 43	65	·472	0·4	0	1·18	−1·18	0	0·91	−0·91	0·03	15·04	−15·01	0	Gopalpur.		
			Not	rec	orde	d.			?	?	?	?	?	?	0	?	?	0	?	?	0	?	?	0	**XII.—Hill Stations.** Pishin .	Baluchistan.	48
29	...	...	...	1	1	...	...	...	2·2	2·7	− 19	82	·144	2·1	0	0·91	−0·91	0	0·73	−0·73	0·97	1·07	−0·10	0	Quetta.		
...	...	...	...	...	30	1	...	...	?	?	?	70	·131	1·7	0	?	?	0	?	?	0·40	?	?	0	Kalat.		
...	...	...	9	18	2	1	...	1	6·2	?	?	60	·161	2·4	0	?	?	0·01	?	?	1·22	?	?	0·01	Chaman.		
...	...	19	9	...	2	1	...	...	1·5	1·3	+ 15	53	·044	5·4	1	?	?	0·31	?	?	0·36	?	?	0·16	Leh . .	Punjab.	20
9	2	...	...	12	2	...	1	5	3·9	?	?	92	·152	3·8	2	?	?	0·63	?	?	5·07	?	?	0·32	Srinagar.		
3	...	...	...	...	9	16	2	1	2·7	?	?	63	·078	4·5	3	?	?	0·57	?	?	0·57*	?	?	0·22	Astor (Kashmir).		
8	2	7	9	5	...	...	...	...	7·3	?	?	97	·092	4·5	5	?	?	3·16	?	?	3·16*	?	?	2·32	Minimarg.		
20	1	2	...	1	1	...	4	2	2·4	?	?	100	·136	5·3	0	?	?	0·05	?	?	0·60	?	?	0·03	Skardu.		
29	1	...	...	...	...	...	...	1	0·2	?	?	76†	·040†	4·5	4	?	?	1·32	?	?	6·61	?	?	0·40	Dras.		
			Not	rec	orde	d.	...	...	?	?	?	61	·128	5·1	0	?	?	0	?	?	0·11	?	?	0	Gilgit.		
...	...	...	Not	rec	orde	d.	...	...	?	?	?	?	?	2·4	0	?	?	0	?	?	1·84	?	?	0	Samana.		
3	2	4	1	3	4	7	1	...	?	?	?	78	·141	2·9	0	?	?	0·02	?	?	0·02*	?	?	0·02	Chitral		
4	14	...	...	...	1	...	...	12	12·1	?	?	44	·140	2·0	0	?	?	0·01	?	?	0·71	?	?	0·01	Cherat.		
7	2	3	9	3	...	...	1	6	5·1	6·1	− 16	59	·151	3·6	0	1·55	−1·55	0·16	1·20	−1·04	1·82	3·93	−2·11	0·09	Murree.		
20	1	...	1	2	2	1	1	3	?	?	?	?	?	3·3	4	?	?	1·67	?	?	3·45	?	?	0·68	Poo.		
22	2	2	1	1	1	1	...	...	2·7	1·8	+ 50	36	·090	2·1	2	1·45	+0·55	2·65	0·74	+1·91	4·10	2·50	+1·60	1·55	Simla.	North-Western Provinces.	25
18	3	2	...	1	1	...	...	1	3·1	4·2	+ 93	47	·122	1·4	2	?	?	2·37	0·66	+1·71	4·15	2·09	+2·06	1·44	Chakrata.		
...	3	1	11	3	1	2	3	7	?	?	?	57	·155	1·6	2	1·50	+0·50	1·03	?	?	2·04	?	?	0·67	Mussooree.		
17	2	1	3	4	1	1*	...	2	2·2	1·3	+ 69	58	·176	1·2	3	1·00	+2·00	2·33	0·53	+1·80	2·95	2·34	+ 0·61	1·06	Ranikhet.	Bengal.	13
			Not	rec	orde	d.			?	?	?	?	?	?	0	?	?	0	?	?	2·18	?	?	0	Yatung.		
4	2	2	12	5	2	1	1	2	3·3	1·9	+ 74	78	·197	3·5‡	0	0·62	−0·62	0·09	0·22	−0·13	1·05	6·25	−5·20	0·08	Darjeeling.		
14	1	2	5	3	3	1	1	1	0·5	?	?	78	·249	?	1		?	1·14	?	?	12·20	?	?	0·88	Gantok		

* Record of rainfall commences from 1st December 1896. † Mean of 26 days. ‡ Mean of 27 days.

Table

Abstract of Observations taken at 8 A.M. at 211 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 month.	Date.	Lowest pressure recorded month.	Date.	Total range of pressure during month.	Mean of 8 A.M.	Mean maximum.	Variation from normal.	Mean minimum.	Variation from normal.	Mean daily temperature.	Variation from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Absolute range during month.
Central India.	Mount Abu.	3,945	26·181	+·013	P	26·249	8th	26·090	28th	·159	59°7	68°1	−0°8	52°5	0	60°3	−0°4	15°6	75°1	4th	45°1	29th	30°0
	Pachmarhi .	3,528	26·604	+·025	P	26·687	26th	26·524	18th	·163	58°5	73°3	+4°1	48°0	+3°0	60°7	+3°6	25°3	79°7	1st	37°3	15th	42°4
South India .	Wellington .	6,200	24·310	+·008	P	24·364	27th	24·241	17th	·123	57°8	65°4	−0°2	52°5	+3°4	59°0	+1°6	12°9	71°2	26th	45°2	13th	26°0
XIII.—Extra India.																							
Ceylon . .	Trincomalee.	12	29·974	?	29·912	30·064	27th	29·852	17th	·212	78°1	82°7	?	75°4	?	79°1	?	7°3	85°0	6 days	73°0	11th	12°0
	Colombo .	40	29·940	+·007	29·906	30·022	27th	29·808	16th & 17th.	·214	78°6	87°4	?	73°9	?	80°7	?	13°5	90°0	3 days	70°5	14th	19°5
Persia . .	Meshed .	3,104				Not recorded.					34°8	P	?	30°8	P	P	P	P	P	P	23°0	26th	P
	Teheran .	P†	26·234 25·667	P.	P	26·395 25·820	8th & 9th. 8th & 9th.	26·050 25·480	3rd 31st	·345 ·340	39·2	52·2	P	34·7	P	43·5	P	17·5	60·6	8th	28·9	25th	31·7
	Ispahan .	P†	24·547 24·832	P	P	24·690 24·970	9th 9th	24·360 24·650	29th 29th	·330 ·320	35·7	56·3	P	30·5	P	43·4	P	25·8	64·7	8th	20·6	22nd	44·1
	Bushire .	14	30·184	+·057	30·157	30·330	24th	30·093	3rd	·237	60°8	70°6	+0·9	56°6	+1°1	63°7	+1°0	14°0	78°6	3rd	49°3	27th	29°3
	Jask . .	?	30·164	P	30·116	30·275	24th	30·072	4th	·203	66°7	77°3	P	62°4	P	69°9	?	14°9	82°3	5th	54°3	25th & 26th.	28°0
Arabia . .	Muscat .	20	30·165	P	30·133	30·278	24th	30·078	4th	·200	70°9	73°8	P	68°6	?	71°2	?	5°2	78°6	6th	63°6	25th	15°0
	Baghdad .	220?	30·066	+·055	30·278	30·212	4th	29·742	13th	·470	48°9	67°1	+2°8	45°7	+2°5	56°4	+2°7	21°4	72°9	18th	36°5	23rd	36°4
	Aden . .	94	30·008	+·007	30·036	30·074	9th	29·926	2nd	·148	75°5	80°7	−1°9	72°6	0	76°7	−1°0	8°1	83°8	4th & 18th.	70°4	7th & 8th.	13°4
	Perim . .	?	29·851	P	P	29·913	10th	29·771	18th	·142	77°3	84°8	P	72°4	P	78°6	P	12°4	86°1	6th	65°4	12th	20°7
Afghanistan .	Kabul * .	P				Not recorded.					27°9	57°0	?	25°0	P	41°0	P	32°0	68°2	5th & 8th	19°6	26th	48°6
Central Asia .	Kashgar .	?	25·994	P	P	26·660	2nd	25·542	16th	1·118	17°9	34°4	P	15°7	P	25°0	P	18°7	53°9	18th	0°4	24th	53°5
Arabian Sea Island.	Amini Devi.	15	29·997	?	29·940	30·046	26th	29·850	18th	·196	82°1	82°2	P	75°5	P	78°9	P	6°7	83°9	9th	72°3	15th	11°6
Africa . .	Zanzibar .	23	29·952	?	29·952	30·023	8th	29·884	19th	·139	82°0	85°5	P	79°4	P	82°4	?	6°1	87°5	15th	74°5	19th	13°0

* Mean of 30 days.

† Aneroid and uncorrected.

I—*concluded.*

in India, Burma, etc., in December 1896—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 31st December 1896.	Normal rainfall for period, 1st October to 31st December.	Variation from normal of period, 1st October to 31st December.	Heaviest rainfall during month.		
9	7	4	...	1	...	4	3	3	5·3	3·6	+47	35	·178	1·2	1	0·18	+0·82	0·43	0·10	+0·33	3·14	1·08	+2·06	0·43	Mount Abu.	Central India.
27	...	...	...	...	2	1	1	...	4·1	2·6	+58	70	·352	3·5	2	0·91	+1·09	1·13	0·52	+0·61	1·38	3·86	−2·48	0·75	Pachmarhi.	
23	1	3	1	2	1	...	...	...	2·7	2·5	− 4	86	·413	7·3	12	6·78	+5·22	7·65	4·16	+3·49	25·19	24·71	+0·48	4·64	Wellington.	South India.
																									XIII.—Extra India.	
11	1	9	1	1	...	4	...	4	1·2	?	?	90	·868	5·3	27	?	?	27·03	13·48	+13·55	50·03	34·57	+15·46	3·45	Trincomalee	Ceylon.
...	7	15	5	2	1	...	...	1	8·5	7·9	+ 8	86	·848	5·0	13	?	?	11·74	6·70	+5·04	53·18	33·46	+19·72	2·02	Colombo	
				Not	recorded.				?	?	?	81	·166	5·5	0	?	?	0·02	?	?	0·68	?	?	0·02	Meshed	Persia.
9	10	8	1	...	...	1	1	1	2·8	?	?	77‡	·188‡	3·9	4	?	?	0·85	?	?	2·56	?	?	0·40	Teheran	
7	1	3	9	6	1	1	2	1	2·2	?	?	89	·190	4·5	0	?	?	0	?	?	0·66	?	?	0	Ispahan	
...	3	14	1	11	...	...	...	2	6·3	6·6	+ 3	76	·410	3·1	0	?	?	0	3·60	−3·60	1·82	5·13	−3·31	0	Bushire.	
10	13	4	1	...	...	...	1	2	5·4	?	?	67	·448	1·5	0	?	?	0	?	?	0·45	?	?	0	Jask.	
...	...	1	3	5	...	1	14	7	3·3	?	?	69	·527	1·5	0	?	?	0	?	?	3·21	?	?	0	Muscat	Arabia.
6	13	3	...	...	6	...	...	3	3·4	?	?	78	·275	0·5	1	?	?	0·19	?	?	0·29	?	?	0·10	Baghdad.	
...	...	14	14	1	1	1	...	...	11·8	12·4	− 5	72	·628	5·4	0	?	?	0	0·49	−0·49	0	0·72	−0·72	0	Aden.	
...	...	...	10	7	...	...	...	...	22·0	?	?	69	·659	2·2	0	?	?	0	?	?	0·51	?	?	0	Perim.	
...	1	...	2	2	...	8	10	7	?	?	?	?	?	1·3	0	?	?	0	?	?	1·12	?	?	0	Kabul	Afghanistan.
31	...	...	...	...	...	...	...	...	0·8	?	?	?	?	5·5	0	?	?	0·04	?	?	0·07	?	?	0·03	Kashgar	Central Asia.
...	13	12	1	2	1	...	...	2	?	?	?	78	·858	3·8	2	?	?	1·08	?	?	6·19	?	?	0·62	Amini Devi.	Arabian Sea Island.
...	12	14	2	1	...	1	...	1	4·5	?	?	80	·878	4·2	6	?	?	5·72	?	?	26·39	?	?	2·97	Zanzibar	Africa.

‡ Mean of 24 days.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Burma Coast and Bay Islands.	Port Blair	...	29·961	29·868	·093	29·911	+·039	29·903	87·9	79·3	8·6	90·6	76·8	13·8	85·6	84·8	82·5	+2·8	74·8	78·5	77·7	77·9
	Rangoon	...	30·048	·919	·129	·982	+·044	·959	87·2	66·0	21·2	91·5	60·0	31·5	78·5	84·3	74·9	−0·6	64·1	71·0	71·4	68·8
	Diamond Island	...	·035	·928	·107	·977	+·036	·952	83·7	73·9	9·8	87·1	71·4	15·7	80·3	81·5	77·9	+0·9	70·4	72·3	72·9	71·9
	Cocos Island	111	29·922	·827	·095	·870	?	·913	83·5	76·4	7·1	85·9	74·5	11·4	81·5	80·1	78·7	?	70·9	74·3	73·6	72·9
	Akyab	...	30·087	·970	·117	30·027	+·037	·990	82·0	61·1	20·9	85·1	53·1	32·0	73·9	78·7	71·1	−1·3	59·1	68·2	72·3	66·5
Assam.	Silchar	...	·037	·902	·135	29·966	+·040	30·024	80·6	53·4	27·2	84·3	45·8	38·5	69·3	78·1	65·8	+0·1	52·4	62·8	64·5	59·9
	Sibsagar	...	29·839	·687	·152	·761	+·031	·065	71·7	49·6	22·1	77·3	43·2	34·1	61·0	70·0	59·4	+0·4	49·4	59·1	62·8	57·1
	Dhubri	...	30·039	·898	·141	·962	+·033	·036	74·9	53·9	21·0	80·1	46·5	33·6	65·9	73·5	63·7	−0·8	53·2	61·2	63·7	59·4
Bengal and Orissa.	Chittagong	...	·030	·909	·121	·965	+·030	·003	80·3	55·1	25·2	83·6	49·1	34·5	71·7	76·7	67·2	−0·2	54·4	64·8	65·3	61·5
	Narayanganj	...	·106	·988	·120	30·041	+·039	·016	78·5	55·2	23·3	81·3	49·0	32·3	70·7	76·3	67·0	−0·5	53·1	63·8	63·7	60·2
	Calcutta (Alipore)	...	·128	30·001	·127	·055	+·034	·022	78·0	54·7	23·3	83·7	45·5	38·2	69·9	77·1	65·7	+0·5	53·4	60·7	62·4	58·8
	Sangor Island	...	·106	29·989	·117	·040	+·024	·010	79·2	57·6	21·6	85·9	48·6	37·3	73·4	76·2	67·2	+0·7	55·3	64·7	64·9	61·6
	Burdwan	...	·052	·922	·130	29·977	+·035	·026	81·7	55·3	26·4	86·2	47·8	38·4	72·6	79·3	67·9	+1·1	52·1	60·8	62·6	58·5
	Berhampore	...	·074	·960	·114	30·007	+·037	·024	78·3	53·0	25·3	82·7	45·6	37·1	70·7	77·2	65·4	−0·5	50·5	60·9	62·4	57·9
	False Point	..	·118	30·006	·112	·060	+·027	·023	80·1	56·9	23·2	88·2	48·5	39·7	76·0	77·2	67·4	+0·8	55·3	66·2	66·5	62·7
	Cuttack	...	·058	29·926	·132	29·989	+·023	·013	83·7	60·1	23·6	90·6	51·9	38·7	73·6	81·4	71·0	+1·6	57·8	63·4	65·0	62·1
Gangetic Plain and Chota Nagpur.	Hazaribagh	...	28·078	27·980	·098	28·018	+·024	·022	74·1	51·9	22·2	78·7	46·3	32·4	67·0	71·0	61·9	+2·0	46·9	54·9	56·5	52·8
	Patna	...	29·972	29·857	·115	29·909	+·026	·051	74·1	51·7	22·4	77·9	43·7	34·2	66·2	72·1	62·3	−0·1	48·6	57·8	60·0	55·5
	Darbhanga	...	·998	·869	·129	·928	+·038?	·054	74·6	51·7	22·9	78·8	44·3	34·5	66·6	72·5	62·5	−1·3	50·2	58·9	60·6	56·6
	Allahabad	...	·853	·727	·126	·778	+·030	·053	77·3	47·9	29·4	82·8	38·7	44·1	66·6	75·1	60·9	+1·1	45·2	55·9	58·8	53·3
	Lucknow	...	·790	·672	·118	·720	+·032	·061	?	46·8	?	?	39·0	?	65·5	72·2	59·5	−0·2	44·9	55·2	57·6	52·6
Upper Sub-Himalayas.	Dehra Dun	...	27·858	27·760	·098	27·798	+·023	·070	63·3	45·1	23·2	74·5	38·6	35·9	59·4	64·4	54·8	−0·9	42·2	50·9	52·9	48·7
	Roorkee	...	29·231	29·121	·110	29·163	+·031	·058	71·9	42·3	29·6	76·1	32·5	43·6	59·6	69·4	55·6	−1·0	41·7	52·1	55·4	49·7
	Meerut	...	·395	·289	·106	·333	+·035	·073	72·9	43·8	29·1	77·8	36·4	41·4	58·7	69·3	56·9	−0·3	41·6	50·2	55·0	48·9
	Lahore	...	·438	·347	·091	·380	+·029	·091	68·7	41·4	27·3	74·9	34·4	40·5	55·8	68·6	53·8	−0·1	38·6	48·7	54·7	47·3
	Ludhiana	...	·320	·224	·096	·260	+·040	·084	69·1	42·1	27·0	74·5	32·0	42·5	54·5	67·1	53·9	−0·6	40·1	50·6	55·1	48·6
Indus Valley and N.-W. Rajputana.	Peshawar	...	·053	28·955	·098	28·992	+·029	·148	65·7	37·2	28·5	73·2	30·5	42·7	54·2	62·8	49·5	−1·1	35·1	46·8	50·8	44·2
	Mooltan	...	·738	29·633	·105	29·674	+·027	·085	74·5	42·4	32·1	81·9	37·0	44·9	58·4	71·6	56·4	+0·3	38·5	48·2	55·6	47·4
	Jacobabad	...	·999	·874	·125	·924	+·036	·077	76·9	39·9	37·0	85·9	33·2	52·7	62·9	75·0	56·6	−1·2	36·4	50·7	56·3	47·8
	Kurrachee	...	30·160	30·042	·118	30·096	+·029	·058	81·6	52·4	29·2	88·4	46·2	42·2	72·7	77·8	65·6	−1·4	46·3	57·3	63·7	55·8
E. Rajputana, Central India, and Gujarat.	Jeypore	...	28·702	28·600	·102	28·640	+·030	·074	75·8	47·8	28·0	81·8	49·9	40·9	67·3	73·5	59·9	0	43·1	54·6	58·0	51·9
	Ajmere	...	·510	·404	·106	·451	+·016	·079	74·3	43·2	31·1	80·4	36·9	43·5	62·0	73·1	57·9	−1·1	40·4	51·9	57·8	50·0
	Deesa	...	29·654	29·534	·120	29·586	+·030?	·015	85·1	51·3	33·8	90·4	42·1	48·3	75·4	82·8	67·4	−0·6	45·0	57·8	58·9	53·6
	Nuwgong	...	·383	·274	·109	·319	+·037	·062	74·2	47·5	26·7	82·0	38·0	44·0	63·8	72·2	60·0	+0·1	45·0	55·4	59·0	53·1
	Agra	...	·598	·482	·116	·528	+·027	·067	75·1	48·2	26·9	81·0	40·9	40·1	64·5	72·6	60·9	−0·1	44·1	54·2	58·7	52·3
Deccan.	Belgaum	...	27·518	27·399	·119	27·455	+·021	29·889	84·7	61·7	23·0	87·9	56·8	31·1	76·7	82·6	72·8	+3·5	58·4	63·5	63·7	61·9
	Sholapur	...	28·482	28·342	·140	28·411	+·022	·945	87·7	63·1	24·6	93·6	54·6	39·0	78·9	86·4	74·5	+4·0	58·0	65·7	66·8	63·5
	Poona	...	·220	·092	·128	·157	+·014	·932	88·6	59·4	29·2	94·8	50·0	44·8	78·9	86·1	73·7	+5·3	54·4	62·9	64·4	60·5
	Akola	...	29·152	29·022	·130	29·080	+·005	·971	87·5	58·4	29·1	95·1	45·2	49·9	77·5	85·6	71·8	+6·7	52·2	62·8	65·2	60·1
	Buldana	2,132	27·947	27·831	·116	27·882	+·021	·961	82·9	60·9	22·0	89·5	53·9	35·6	76·4	81·1	70·8	+3·6	52·4	60·2	60·3	57·8
	Khandwa	...	29·053	28·926	·127	28·983	+·029	·994	85·7	55·4	30·3	93·2	44·6	48·6	75·6	84·8	69·7	+4·8	49·3	59·6	63·4	57·4

II.

85 Stations in India, Burma, etc., for December 1896.

Vapour Tension.					Humidity.					Cloud.				Wind Direction. Number of winds from										Wind Steadiness.		Wind Velocity		Rainfall.		Station.	Meteorological Province.
From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Calm.	N.	NE.	E.	SE.	S.	SW.	W.	NW.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
																								%	%						
·803	·882	·857	·847	+·013	80	72	72	75	−5	5·5	5·8	5·7	+1·3	...	12	23	11	10	5	...	1	...	N. 64° E.	N. 51° E.	60	72	165	171	...	...	Port Blair .	Burma Coast and Bay Islands.
·578	·662	·598	·613	−·058	90	68	51	70	−3	1·2	2·2	1·7	−1·4	...	11	23	17	6	1	...	...	2	N. 57° E.	N. 36° E.	72	60	102	114	...	...	Rangoon .	
·699	·692	·698	·696	−·002	83	66	65	71	−4	2·5	3·5	3·0	−0·1	...	4	29	8	6	...	1	6	8	N. 39° E.	N. 34° E.	53	74	288*	166	...	...	Diamond Island, Cocos Island	
·683	·753	·744	·727	P	75	70	72	72	P	2·8	3·7	3·3	P	...	18	33	8	1	...	...	...	2	N. 36° E.	P	84	P	P	P	*Nil*	*Nil*		
·482	·618	·710	·603	+·020	89	74	72	78	+3	1·7	0·8	1·3	−1·1	...	4	22	5	...	4	3	6	18	N. 1° W.	N. 15° W.	42	39	59	56	...	...	Akyab .	
·387	·489	·427	·434	−·039	94	69	45	69	−6	4·0	3·4	3·7	+0·8	46	...	...	3	4	5	3	1	...	S. 15° E.	S. 57° E.	16	35	19*	42	...	...	Silcha .	Assam.
·358	·480	·478	·439	−·010	100	90	65	85	0	2·0	1·9	2·0	−2·4	19	2	34	5	1	1	...	...	...	N. 50° E.	N. 65° E.	63	61	56*	37	...	...	Sibsagar .	
·399	·483	·464	·449	−·018	94	75	56	75	−3	1·1	1·5	1·3	+0·1	10	2	27	15	2	...	4	...	2	N. 66° E.	N. 58° E.	58	42	111*	109	...	...	Dhubri .	
·417	·525	·474	·472	−·048	95	67	52	71	−4	2·0	1·5	1·8	−0·2	1	13	15	4	...	...	1	11	17	N. 14° W.	N. 23° W.	58	59	41*	76	...	...	Chittagong	Bengal and Orissa.
·379	·503	·424	·435	−·044	86	67	47	67	−4	2·5	2·4	2·5	+1·1	...	13	7	8	3	...	3	8	20	N. 18° W.	N. 36° W.	47	44	55	48	...	...	Narayanganj	
·396	·413	·372	·391	−·051	91	56	40	62	−10	2·1	2·0	2·1	+0·3	1	37	3	1	...	2	3	1	14	N. 12° W.	N. 26° W.	74	60	56	66	...	...	Calcutta (Alipore), Saugor Island	
·413	·501	·471	·462	−·041	85	60	51	65	−9	2·7	2·7	2·7	+0·5	...	30	11	1	...	3	6	3	8	N. 8° W.	N. 7° E.	58	56	182	153	...	...		
·353	·380	·350	·361	−·048	79	47	35	54	−9	1·8	1·7	1·8	−0·1	7	23	4	2	1	...	1	6	18	N. 20° W.	N. 23° W.	64	67	31*	43	...	...	Burdwan .	
·338	·408	·369	·372	−·060	63	54	39	59	−13	1·8	2·3	2·1	+0·2	43	9	2	1	...	...	...	4	8	N. 17° W.	N. 26° W.	21	62	15*	38	...	...	Berhampore	
·438	·521	·516	·492	−·007	96	57	55	69	−6	1·7	2·4	2·1	−0·5	...	20	20	10	7	4	...	...	1	N. 47° E.	N. 43° E.	61	64	122*	151	...	...	False Point	
·456	·456	·403	·438	−·019	86	54	37	59	−6	1·8	2·7	2·3	+0·5	18	20	16	3	...	1	1	...	3	N. 20° E.	N. 12° E.	55	35	31	29	...	...	Cuttack .	
·265	·287	·282	·278	+·023	67	43	38	49	−3	3·7	4·4	4·1	+2·1	1	19	1	4	1	2	2	8	24	N. 3 3° W.	N. 54° W.	63	64	120	110	...	...	Hazaribagh	Gangetic Plain and Chota Nagpur.
·306	·372	·361	·346	−·028	78	57	46	60	−5	2·2	2·6	2·4	+0·6	17	1	1	3	3	1	4	23	9	N. 86° W.	N. 83° W.	43	52	28*	41	...	...	Patna .	
·347	·400	·375	·374	−·054	90	61	48	66	−8	1·7	1·9	1·8	+0·8	4	4	3	4	4	4	9	19	11	N. 88° W.	S. 79° W.	39	58	52	51	...	...	Darbhanga	
·272	·311	·285	·289	−·053	80	47	33	53	−14	2·6	2·3	2·5	+1·0	17	3	4	6	4	...	1	14	13	N. 47° W.	N. 54° W.	27	22	56	42	...	...	Allahabad .	
·279	·306	·285	·290	−·015	86	48	37	57	−2	1·3	1·9	1·6	−0·1	18	2	2	2	3	1	1	20	12	N. 70° W.	N. 53° W.	42	49	31*	40	...	...	Lucknow .	
·238	·272	·261	·257	?	77	51	44	58	?	1·7	2·2	2·0	−0·4	30	...	...	1	3	15	7	5	1	S. 19° W.	N. 73° W.	37	16	14	40	...	...	Dehra Dun	Upper Sub-Himalayas.
·263	·295	·259	·272	−·014	95	57	37	63	0	0·7	1·7	1·2	−0·9	34	1	2	1	7	4	...	2	11	N. 62° W.	N. 82° W.	5	11	23	32	...	...	Roorkee .	
·239	·257	·249	·248	−·037	82	52	35	56	−6	1·1	1·7	1·4	−0·3	40	...	...	1	2	—	4	12	3	S. 82° W.	N. 52° W.	24	50	35*	39	...	...	Meerut .	
·202	·254	·246	·234	−·046	76	56	36	56	−1	2·7	2·0	2·4	+0·2	29	5	2	2	2	3	...	6	12	N. 43° W.	N. 36° W.	26	22	26	35	...	...	Lahore .	
·226	·277	·280	·261	−·015	83	58	43	61	0	2·9	3·4	3·2	+0·2	30	2	2	...	2	...	1	7	18	N. 51° W.	N. 30° W.	35	24	20	26	...	...	Ludhiana .	
·183	·233	·228	·214	−·034	80	56	40	59	−2	3·2	3·2	3·2	−0·3	24	2	3	2	8	4	4	3	2	S. 22° E.	S. 2° E	11	8	48*	58	...	...	Peshawar .	Indus Valley and N.-W. Rajputana.
186	·205	·233	·208	−·061	68	42	31	47	−9	1·9	1·4	17?	−0·3	26	1	10	1	15	2	4	...	3	S. 69° E.	N. 14° E.	24	11	16*	30	...	...	Mooltan .	
·172	·213	·209	·198	−·043	69	37	24	43	−6	1·6	1·6	1·6	−0·4	31	1	5	10	3	...	2	6	4	N. 55° E.	N. 15° W.	11	22	56*	38	...	...	Jacobabad .	
·235	·270	·410	·305	−·075	60	34	43	45	−11	1·7	1·8	1·8	0	1	3	13	15	4	5	14	7	...	S. 61 E.	N. 42° E.	19	14	134*	216	...	...	Kurrachee .	
·225	·272	·292	·263	−·009	66	42	36	48	−1	1·6	1·6	1·6	−0·3	2	5	10	7	7	3	7	6	15	N. 14° W.	N. 14° W.	16	29	68	79	...	...	Jeypore .	
·219	·265	·292	·259	−·010	78	48	36	54	+4	1·2	1·3	1·3	−0·1	9	5	10	5	13	8	5	4	3	S. 60° E.	N. 84° E.	21	15	39	35	...	...	Ajmere .	E. Rajputana, Central India, and Gujarat.
·225	·225	·186	·212	−·049	60	26	16	34	−3	0·9	1·1	1·0	−0·7	...	11	21	20	2	3	1	...	4	N. 55° E.	N. 17° E.	65	27	209	185	...	...	Deesa .	
·274	·331	·325	·310	+·012	81	57	42	60	+2	2·4	2·5	2·5	+0·6	7	14	2	10	...	1	5	13	10	N. 34° W.	N. 34° W.	35	29	8*	27	...	...	Nowgong .	
·239	·287	·313	·280	−·004	70	47	40	52	−1	0·8	1·6	1·2	−0·2	...	...	10	...	3	...	7	...	37	N. 39° W.	N. 64° W.	47	28	109*	63	...	...	Agra .	
·453	·423	·359	·411	+·035	82	46	32	53	+4	2·8	4·1	3·5	+0·7	...	...	5	24	24	5	2	2	...	S. 64° E.	S. 84°E.	74	70	254	296	..	....	Belgaum .	Deccan.
·437	·472	·415	·441	+·061	73	47	33	51	+2	2·7	3·8	3·3	+0·3	2	...	15	10	32	1	...	...	2	S. 74° E.	N. 89° E.	70	67	221*	169	...	...	Sholapur .	
·372	·381	·338	·364	+·033	71	38	27	45	+2	2·3	3·1	2·7	0	6	...	7	21	12	2	10	2	2	S. 65° E.	S. 78° E.	43	56	186*	136	...	...	Poona .	
·324	·384	·357	·355	+·022	63	40	29	44	−8	2·1	2·7	2·4	+0·7	1	6	17	18	6	3	4	2	5	N. 68° E.	N. 61° E.	46	58	109*	77	...	...	Akola .	
·298	·326	·286	·303	−·034	54	36	27	39	−10	2·2	3·7	3·0	+0·3	2	10	5	6	14	7	7	2	9	S. 73° E.	N. 82° E.	10	52	112	116	0·37	0·29	Buldana .	
·288	·323	·323	·311	−·010	62	37	27	42	−9	2·0	1·7	1·9	0	1	5	23	10	14	...	4	...	5	N. 68° E.	N. 66° E.	52	41	91	57	...	...	Khandwa .	

* Corrected.

Table

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

Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S.L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.
Deccan—*contd.*	Hoshangabad	...	29·114	28·980	·134	29·040	+·030	30·028	80·7	55·4	25·3	89·3	47·8	41·5	69·7	79·3	67·1	+3·5	48·7	57·8	61·8	56·1
	Nagpur	...	·080	·946	·134	·006	+·027	·002	84·1	58·3	25·8	92·2	50·2	42·0	73·6	81·7	70·0	+4·1	53·4	62·8	66·2	60·8
	Do. (Sanitary Commr.'s Office).	...	·091	·971	·120	·024	?	·009	85·3†	57·9	27·4	93·1	49·5	43·6	75·3	82·9	71·4†	?	53·0	61·4	64·1	59·5
	Jubbulpore	...	28·783	·660	·123	28·715	+·028	·033	78·1	9·6	28·5	85·2	38·6	46·6	66·3	75·9	62·7	+2·0	48·3	57·0	60·8	55·4
	Saugor	...	·294	·186	·108	·233	+·023	·032	77·0	54·5	22·5	89·3	45·6	43·7	67·5	74·5	64·5	+2·4	48·0	54·6	57·1	53·2
	Raipur	...	29·136	29·013	·123	29·068	+·026	29·095	81·7	57·3	24·4	87·7	49·9	37·8	72·6	80·2	68·6	+3·0	53·0	61·1	62·1	58·7
	Sutna	...	·077	28·960	·117	·009	+·024	30·040	76·0	49·5	26·5	83·4	39·1	44·3	67·4	74·8	61·5	+1·6	45·2	55·9	58·4	53·2
	Hyderabad (Deccan.)	...	28·392	·273	·119	28·329	?	29·975	83·7	62·3	21·4	86·9	54·7	32·2	76·5	80·4	72·1	?	59·5	66·8	66·5	64·3
West Coast.	Bombay	...	30·028	29·914	·114	29·964	+·016	·941	85·9	71·9	14·0	90·0	63·2	26·8	78·6	82·3	77·4	+1·5	63·9	68·9	73·0	68·6
	Ratnagiri	...	29·930	·815	·115	·865	+·027	·913	91·3	71·4	19·9	97·2	66·7	30·5	85·9	85·6	79·3	+2·8	65·1	70·5	74·3	70·0
	Karwar	...	·989	·867	·122	·921	+·022	·896	90·5	70·1	20·4	94·1	65·6	28·5	81·9	88·0	79·0	+3·4	67·0	72·1	75·3	71·4
	Cochin	...	·987	·888	·099	·931	+·016	·868	90·7	75·1	15·6	93·7	71·3	22·4	84·5	86·7	81·3	+2·3	72·4	75·7	76·3	74·8
South India.	Salem	...	·128	·009	·119	·068	+·027	·953	85·2	68·6	16·6	89·3	63·9	25·4	78·6	80·7	75·6	+1·6	67·7	72·5	72·4	70·9
	Mysore	...	27·541	27·425	·116	27·483	?	·922	81·7	63·9	17·8	86·5	59·3	27·2	74·9	79·5	72·3	?	57·9	66·3	66·9	63·7
	Mercara	...	26·320	26·228	·092	26·273	+·030	?	74·9	60·8	14·1	78·5	56·7	21·8	68·4	71·9	67·1	+1·9	58·8	62·5	63·2	61·5
	Bangalore	...	27·056	·951	·105	27·002	+·024	·936	77·9	61·9	16·0	83·0	57·2	25·8	71·5	75·4	69·3	+1·7	60·5	64·3	64·9	63·2
	Hassan	...	26·989	·879	·110	26·933	?	·916	80·1	59·9	20·2	83·9	54·3	29·6	73·9	78·3	69·6	?	58·7	64·6	65·2	62·8
	Chitaldroog	...	27·654	27·538	·116	27·595	?	·924	83·3	63·7	19·6	87·5	56·9	30·6	75·9	80·8	72·9	?	60·7	65·3	65·8	63·9
	Trichinopoly	...	29·784	·675	·109	29·729	+·017	·920	84·1	72·1	12·0	88·3	67·3	21·0	78·0	80·6	77·0	+0·9	69·4	72·5	73·5	71·8
	Madras	...	30·056	·954	·102	30·003	+·028	·956	83·5	72·7	10·8	86·7	68·3	18·4	80·5	79·9	77·4	+1·4	?	75·0	74·3	73·7
	Bellary	...	28·592	28·457	·135	28·524	+·036	·944	87·6	64·3	23·0	90·8	58·4	32·4	79·3	84·3	75·0	+2·7	61·6	66·6	68·1	65·4
	Vizagapatam	...	30·075	29·959	·116	30·010	+·018	·980	83·5	66·7	16·8	88·4	61·7	26·7	81·2	80·5	76·2	+1·8	64·0	69·1	69·8	67·6
	Cocanada	...	·086	·973	·113	·023	?	·985	81·6	68·3	13·3	87·1	62·5	24·6	79·1	79·6	74·5	?	64·0	69·9	70·1	68·0
Hill Stations, Baluchistan.	Quetta	...	24·804	24·726	·078	24·753	+·051	?	56·6	26·9	29·7	67·6	20·3	47·3	46·3	52·8	40·8	−1·3	24·1	37·7	40·6	34·1
Hill Stations, Punjab.	Leh	11,503	19·731	19·670	·061	19·697	−·001	?	31·4	11·7	19·7	39·1	4·0	35·1	20·7	28·8	21·1	−3·2	10·6	16·8	24·5	17·3
	Srinagar	...	25·085	24·991	·094	25·026	?	?	48·6	26·1	22·5	56·5	17·9	38·6	36·9	47·2	37·0	?	25·7	34·5	43·0	34·4
	Murree	...	23·934	23·928	·006	23·919	+·012	?	51·7	36·1	15·6	62·6	26·0	36·6	46·7	45·7	42·1	−2·2?	31·0	40·4	41·1	37·5
	Chamba	3,005	27·105	27·006	·099	27·058	+·011	?	65·2	41·3	23·9	73·0	35·4	37·6	50·4	58·0	49·3	−1·2	36·8	42·4	46·9	42·0
	Kailang	10,08??	20·827	20·748	·079	20·790	−·033	?	45·5	19·4	26·1	54·2	9·0	45·2	30·5	34·7	27·7	+3·0	18·0	24·0	27·0	23·0
	Simla (Ridge)	...	23·209	23·152	·057	23·169	+·012	?	49·8	38·9	10·9	59·0	26·2	32·8	46·4	45·5	43·0	−1·6	31·4	35·8	37·7	35·0
Hill Stations, N.-W.P.	Chakrata	...	·426	·361	·065	·382	+·019	?	53·7	39·3	14·4	65·2	27·4	37·8	47·0	46·3	44·3	−1·5	32·8	37·4	38·5	36·2
	Ranikhet	...	24·237	24·162	·075	24·185	+·043	?	56·6	42·3	14·3	65·8	29·8	36·0	50·4	52·0	48·0	−1·0	37·6	43·8	44·5	42·0
Hill Station, Nepal.	Katmandu	4,388	25·753	25·684	·069	25·717	?	?	65·2	37·1	28·1	71·9	29·8	42·1	52·5	58·7	49·5	−3·0	36·1	47·8	50·4	44·8
Hill Station, Bengal.	Darjeeling	...	23·076	22·986	·090	23·032‡	+·020	?	47·3	35·8	12·0	58·6	31·6	27·0	44·4§	45·1§	41·2§	−0·7	34·7	41·1	41·6§	39·1§
Hill Stations, Central India.	Mount Abu	...	26·202	26·124	·078	26·156	+·015	?	67·5	52·5	15·0	75·1	45·1	30·0	64·4	64·6	59·3	−0·4	42·7	49·7	50·5	47·6
	Pachmarhi	...	·629	·539	·090	·577	+·027	?	72·7	48·0	24·7	78·7	37·5	41·2	67·4	69·9	59·8	+3·5	46·0	57·6	60·2	54·6
	Chikalda	3,642	·518	·418	·100	·461	+·037	?	74·7	58·3	16·4	80·6	50·2	30·4	68·2	73·3	66·2	+3·2	51·1	55·5	58·0	54·9

† Mean of 27 days. ‡ Mean of 21 days. § Mean of 28 days.

II—*continued.*

at 85 Stations in India, Burma, etc., for December 1896—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 for the month.	Heaviest rainfall during the month.		
																								%	%						
·272	·343	·342	·319	−·017	59	46	34	46	− 9	2·1	2·4	2·3	+0·7	26	1	23	8	...	...	2	2	...	N. 53° E.	N. 61° E.	42	63	55	58	...	...	Hoshangabad	Deccan—*contd.*
·362?	·448?	·458?	·423?	+·078?	71?	53?	42?	55?	+ 3?	3·1	4·7	3·9	+1·5	33	2	8	8	5	4	2	...	...	S. 85° E.	N. 64° E.	26	52	46	68	...	...	Nagpur	
·355	·389	·372	·372	?	71	43	33	49	?	2·3	3·5	2·9	?	14	8	22	9	4	2	2	...	1	N. 55° E.	?	50	?	22*	?	...	...	Do. (Sanitary Commr.'s Office), Jubbulpore	
·334	·357	·352	·348	+·048	91	55	40	62	+ 5	3·3	3·5	3·4	+1·5	8	13	14	1	8	5	2	1	10	N. 22° E.	N. 32° E.	31	17	44	41	...	...		
·261	·275	·260	·265	0	61	41	31	44	− 1	1·7	2·4	2·1	+0·2	5	7	15	10	7	1	3	3	11	N. 37° E.	N. 37° E.	34	38	85	60	...	...	Saugor	
·357	·392	·326	·358	+·013	73	48	31	51	− 3	2·1	2·4	2·3	+0·5	24	5	8	5	7	5	2	2	4	N. 74° E.	N. 35° E.	16	48	62*	66	...	...	Raipur	
·258	·308	·289	·285	+·035	70	47	34	50	+ 2	2·1	2·0	2·1	+0·7	6	19	4	8	3	2	...	1	19	N. 3° W.	N. 31° W.	50	39	64*	89	...	...	Sutna	
·481	·535	·479	·498	?	85	59	46	63	?	2·2	2·6	2·4	?	7	1	6	11	33	2	...	...	...	S. 62° E.	?	72	?	77*	?	...	...	Hyderabad (Deccan)	
·494	·582	·691	·589	−·031	62	59	63	61	− 9	2·5	3·4	3·0	+1·2	...	6	13	12	2	...	...	4	25	N. 1° E.	N. 17° E.	52	63	237	238	...	...	Bombay	West Coast.
·544	·545	·698	·596	+·038	70	44	57	57	− 1	2·1	1·8	2·0	+1·1	4	3	1	14	4	1	4	14	17	N. 52° W.	N. 4° W.	23	36	167	213	...	...	Ratnagiri	
·623	·659	·711	·664	+·054	84	61	54	66	− 3	1·7	1·9	1·8	+0·2	7	...	8	9	...	...	...	11	27	N. 32° W.	N. 1° E.	47	57	84	?	...	...	Karwar	
·763	·772	·769	·768	+·037	87	65	61	71	− 3	3·5	5·0	4·3	+1·1	3	13	13	...	...	...	...	19	14	N. 31° W.	S. 50° W.	61	15	102	?	...	...	Cochin	
·670	·716	·685	·690	+·101	96	73	66	78	+ 6	6·1	7·3	6·7	+2·6	3	2	23	25	2	2	1	2	2	N. 68° E.	N. 89° E.	68	48	115	91	...	...	Salem	South India.
·409	·540	·502	·484	?	69	62	50	60	?	6·3	5·9	6·1	?	1	...	19	33	8	1	...	...	...	N. 83° E.	?	85	?	283*	?	...	...	Mysore	
·478	·502	·483	·488	+·021	89	72	62	74	− 3	5·8	5·7	5·8	+0·7	13	...	31	15	3	...	...	...	...	N. 64° E.	N. 73° E.	71	75	204	117	...	...	Mercara	
·515	·521	·494	·510	+·054	92	68	57	72	+ 3	5·1	5·4	5·3	+1·2	...	...	22	35	3	1	1	...	...	N. 77° E.	N. 70° E.	85	84	213*	93	...	...	Bangalore	
·486	·501	·474	·487	?	93	60	50	68	?	5·7	5·9	5·8	?	1	...	25	28	7	1	...	...	...	N. 77° E.	?	84	?	105*	?	...	...	Hassan	
·496	·497	·452	·482	?	84	56	43	61	?	4·5	4·5	4·5	?	...	1	14	34	11	...	...	1	1	N. 86° E.	?	81	?	218*	?	...	...	Chitaldroog	
·685	724	·732	·714	+·051	87	76	71	78	+ 4	7·3	8·1	7·7	+1·8	16	9	34	3	...	...	...	...	...	N. 39° E.	N. 39° E.	69	75	94	121	...	...	Trichinopoly	
?	·796	·766	·786	+·094	?	78	76	84	+ 6	6·5	7·0	6·8	+1·5	...	21	35	4	1	...	...	...	1	N. 32° E.	N. 24° E	87	75	157	179	...	...	Madras	
·516	·493	·479	·496	+·031	84	49	40	58	0	6·3	6·2	6·3	+2·9	4	...	2	36	19	1	...	...	...	S. 76° E.	S. 87° E	84	69	79	75	...	...	Bellary	
·563	·553	·588	·568	+·018	86	52	56	65	+ 2	2·8	3·5	3·2	+0·7	1	18	30	9	2	1	...	...	1	N. 39° E.	N. 83° E.	78	55	56	49	...	..	Vizagapatam	
·541	·610	·612	·588	?	78	61	61	67	?	1·9	2·5	2·2	?	...	...	29	24	9	...	...	...	...	N. 71° E.	?	85	?	287*	?	...	...	Cocanada	
·104	·141	·131	·125	−·020	71	45	33	50	− 6	2·5	1·5	2·0	−0·5	51	...	1	...	1	...	1	3	5	N. 62° W.	N. 43° W.	10	37	52*	58	...	...	Quetta	Hill Station, Baluchistan.
064	·066	·102	·077	−·002	84	57	62	68	+ 8	5·7	6·5	6·1	+0·6	2	1	7	3	5	23	19	2	...	S. 6° W.	S. 1° W.	55	34	35	30	0·31	0·16	Leh	
·136	·176	·235	·182	?	95	79	72	82	?	2·8	3·5	3·2	?	...	5	10	7	14	3	1	4	18	N. 30° E.	?	21	?	70*	?	...	...	Srinagar	Hill Stations Punjab.
·126	·188	·214	·176	+·041	61	60	71	64	+15	3·4	3·5	3·5	−1·2	2	3	1	19	21	5	...	7	4	S. 62° E.	S. 58° E.	45	31	173*	167	...	...	Murree	
·172	·183	·197	·184	−·054	65	50	42	52	− 3	3·9	4·2	4·1	−0·3	41	2	...	...	6	1	3	3	6	S. 77° W.	S. 58° E.	8	16	87	70	2·71	1·66	Chamba	
·090	·080	·087	·086	−·011	84	49	45	59	− 7	4·7	5·9	5·3	−0·2	...	3	...	4	7	16	16	11	5	S. 34° W.	S. 44° W.	50	46	33	20	1·75	1·23	Kailang	
·104	·103	·150	·120	−·022	47	35	51	45	− 1	2·9	3·9	3·4	−0·2	34	4	3	...	...	10	9	...	...	S. 22° W.	N. 83° W	18	18	61	?	...	...	Simla (Ridge)	
·125	·128	·156	·136	−·013	56	43	52	50	− 1	1·2	3·1	2·2	−1·0	7	6	4	...	8	34	2	...	1	S. 11° E.	S. 55° W.	52	14	189	100	...	...	Chakrata	Hill Stations, N.W.P.
·179	·222	·219	·207	+·010	67	59	58	61	+ 5	1·4	1·3	1·4	−1·1	21	1	3	5	6	5	7	10	4	S. 37° W.	S. 54° W.	16	22	56*	35	...	...	Ranikhet	
·206	·283	·275	·255	−·019	91	72	56	73	0	2·6	3·1	2·9	0	...	...	...	37	1	...	...	21	3	N. 84° E.	N. 64° W.	24	61	22	?	0·50	0·24	Katmandu	Hill Station, Nepal.
·184‡	·226	·229§	·213	+·013	84‡	78	76§	79	+ 3	5·2	6·9§	6·1	+1·8	5	6	9	12	3	2	1	9	12	N. 8° E.	N. 54° W.	27	4	78§	46	...	...	Darjeeling	Hill Station, Sikkim, Bengal.
·165	·192	·208	·188	−·023	41	32	34	36	− 5	1·6	1·3	1·5	−0·3	...	19	5	3	9	4	8	5	9	N. 18° W.	N. 48° E.	22	14	129*	86	...	...	Mount Abu	Hill Stations, Central Ind'a.
·300	·372	417	·363	+·096	85	55	57	66	+12	3·4	3·6	3·5	+1·4	29	4	3	4	2	4	6	5	5	W.	N. 29° E.	8	22	85*	63	...	...	Pachmarhi	
·300	·304	·313	·306	−·002	60	44	38	47	− 6	2·9	3·6	3·3	+1·0	22	9	1	...	1	9	16	3	1	S. 32° W.	N. 77° W.	20	9	156*	117	0·88	0·50	Chikalda	

* Corrected.

Table

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

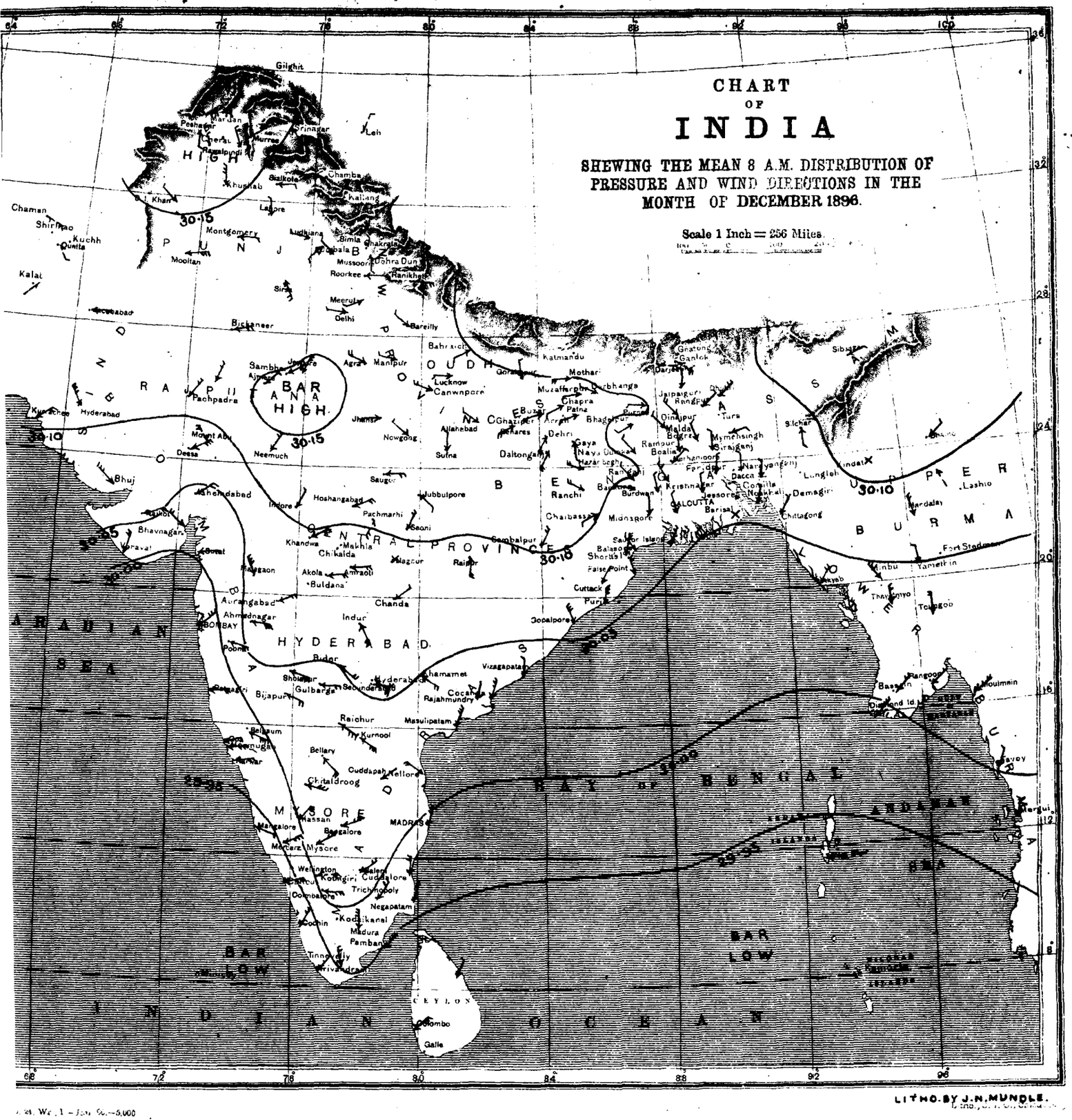
Meteorological Province.	Station.	Elevation of bar-cistern above sea-level in feet.	Pressure.						Temperature of Air.										Temperature, Wet-bulb.			
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S.L. and for gravity 45° Lat.	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, S. India.	Wellington . .	...	24·318	24·246	·072	24·282	+·007	?	65·8	52·5	13·3	72·8	45·1	27·7	62·1	62·0	58·2	+2·1	51·1	57·6	58·4	55·7
Extra India.	Muscat . .	...	30·181	30·086	·095	30·134	?	30·102	73·9	68·6	5·3	78·6	63·6	15·0	73·0	73·7	71·2	?	62·2	66·0	67·0	65·1
	Aden . . .	...	·018	29·915	·103	29·970	+·014	29·996	80·6	72·5	8·1	83·9	70·3	13·6	78·4	79·4	76·3	−0·3	67·6	70·0	69·0	68·9
	Perim . . .	...	29·856	·770	·086	·816	?	?	84·6	72·4	12·2	86·1	65·4	20·7	81·0	80·8	77·6	?	67·9	71·6	71·0	70·2
	Zanzibar . .	...	·955	·844	·111	·899	+·024	·899	85·9	79·4	6·5	87·7	74·5	13·2	83·6	85·6	82·6	+0·5	76·0	78·3	78·1	77·5
	Port Victoria (Seychelles).	...	·993	·903	·090	·948	?	·887	83·1	77·0	6·1	85·8	74·9	10·9	81·4	82·4	79·9	?	73·2	76·6	76·6	75·5
	Mauritius . .	...	?	?	?	·852	+·019	·978	?	?	?	93·6	59·8	33·8	?	?	78·5	+0·4	?	?		?

II—*concluded.*

85 Stations in India, Burma, etc., for December 1896—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.		
																									°/o	°/o						
·369	·432	·453	·418	+·071	91	78	82	84	+8	6·1	6·8	6·5	+1·0	8	2	12	3	32	5	...	...	...	S. 63° E.	S. 35° E.	61	60	66	55	...	...	Wellington.	Hill Station, S. India.
·480	·551	·576	·536	?	68	67	69	68	?	0·9	0·9	0·9	?	...	3	6	12	3	...	1	10	27	N. 26° W.	?	42	?	78	?	...	...	Muscat.	Extra India.
·612	·624	·571	·602	−·035	77	64	57	66	−4	6·2	2·9	4·6	+0·6	...	...	13	29	14	4	2	...	...	S. 82° E.	N. 89° E.	76	69	314	299	...	...	Aden.	Extra India.
·625	·651	·631	·636	?	79	62	60	67	?	1·6	0·3	1·0	?	...	...	...	15	23	1	...	...	...	S. 62° E.	?	58	?	?	?	...	...	Perim.	Extra India.
·855	·899	·862	·872	+·030	85	78	70	78	+1	3·9	2·3	3·1	−1·1	...	21	20	6	5	4	...	2	4	N. 32° E.	N. 26° E.	58	30	109*	140	...	...	Zanzibar.	Extra India.
·767	·852	·843	·821	?	83	79	77	80	?	6·2	6·9	6·6	?	7	2	1	...	...	...	...	12	40	N. 52° W.	?	81	?	178	?	9·23	1·95	Port Victoria (Seychelles).	Extra India.
?	?	?	·665	?	?	?	?	72	−3	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	262	262	1·15	0·61	Mauritius.	Extra India.

G. I. C. P. O.—No. 134 Meteor.—3-5-97.- 385.



LITHO. BY J.N. MUNDLE.

24. Wr. 1 – Jan. 97.—5,000

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	,,	,,	,,	,,	,,

LITHO. BY J.N. MUNDLE.

Explanation

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

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

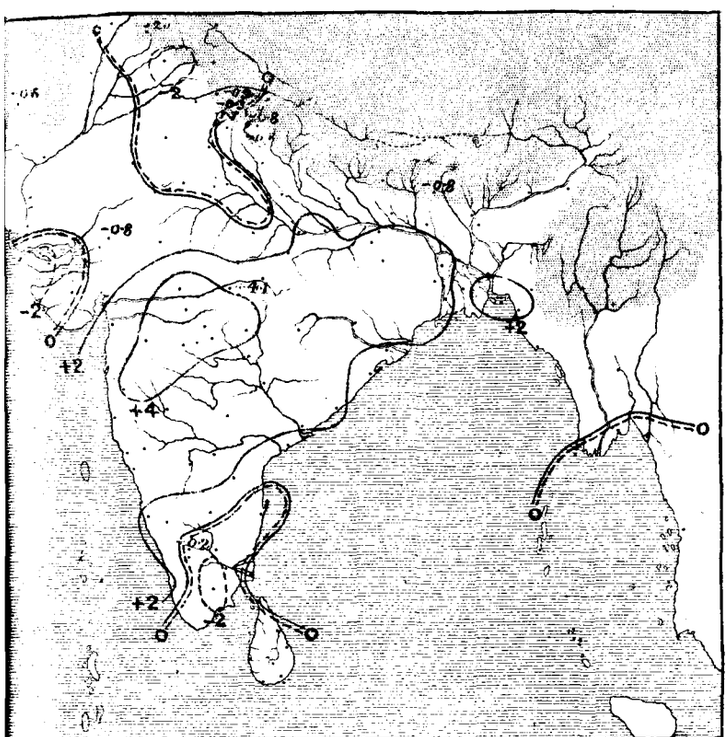
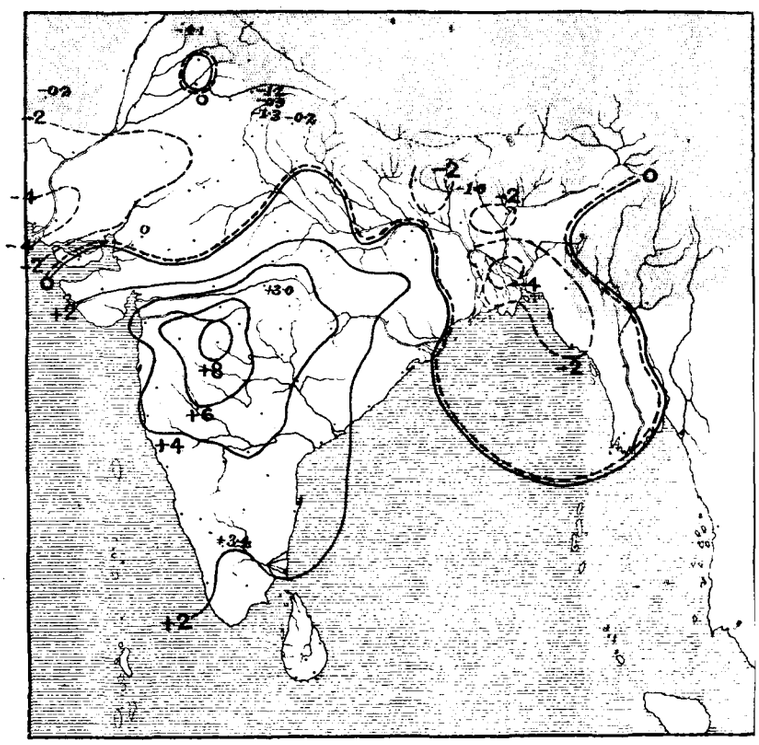


CHART SHEWING THE VARIATION OF THE MEAN MINIMUM TEMPERATURE OF THE MONTH FROM THE NORMAL.



Explanation.

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

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

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

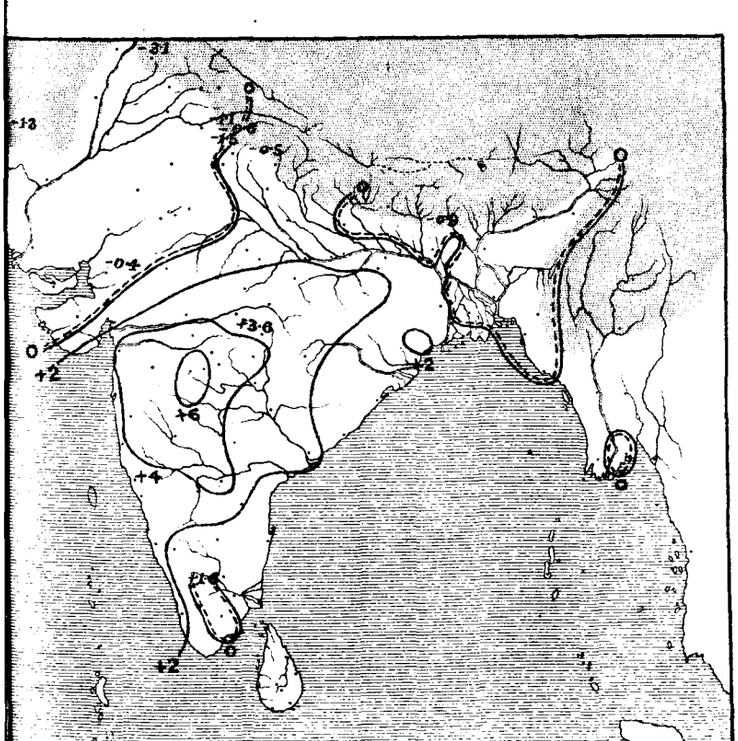
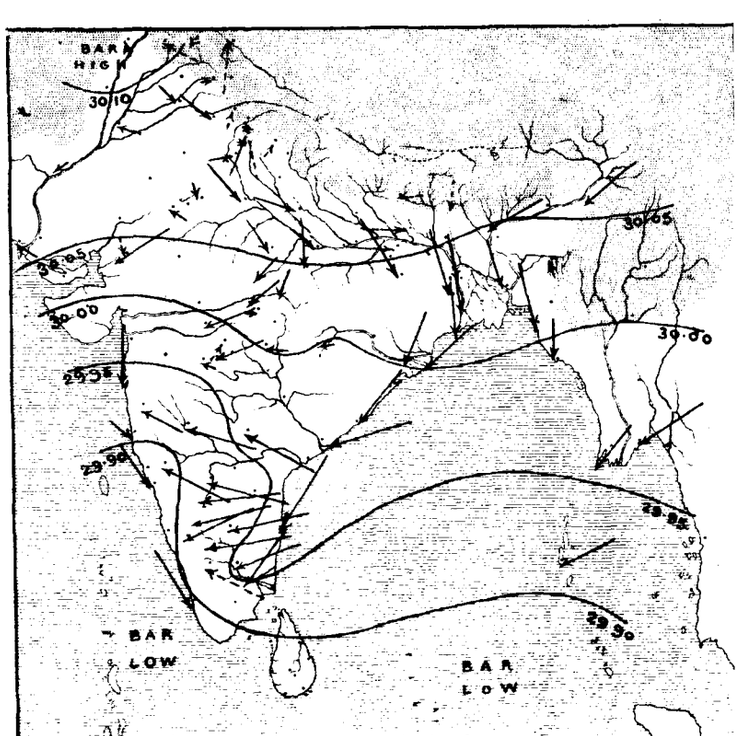


CHART SHEWING THE MEAN DISTRIBUTION OF PRESSURE AND THE RESULTANT WIND DIRECTIONS IN THE MONTH OF DECEMBER 1896.



Reg. No. 24, Wr., I.—Jan. 96.—5,000

LITHO. Zinco. PSMVO. Calcutta

Explanation.

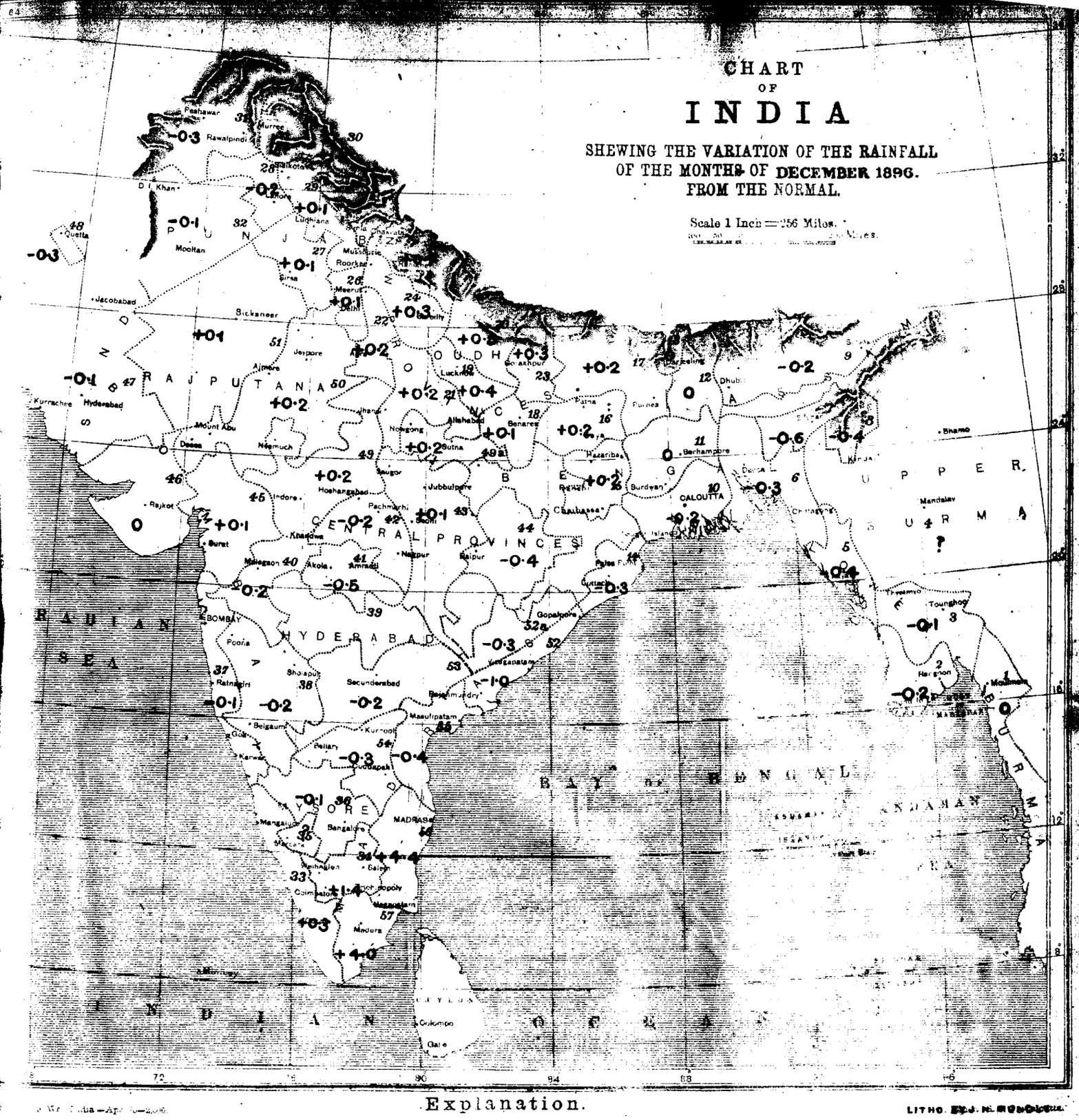
Continuous lines indicate that the mean daily temperature of month was in excess by amounts indicated by the attached numbers. Broken or dotted lines that it was in defect by the amounts indicated by the attached numbers. Double lines are the lines of no variation, the broken line facing the area of 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 ⅜th of an inch being equal to 100 per cent

LITHO. BY ...

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 5,500 feet in Elevation. The double line or line of no rainfall separates areas in which the rainfall exceeded a tenth of an inch from those it was actually or practically *nil* (*i.e.* less than a tenth of an inch). The dotted line faces the area of no rainfall.



Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and ma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish able and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers en in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean fall 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 amounts indicated by the numbers to which the signs are attached. The name of the district can be at once ascertained by referring the following list to the number given near the right hand boundary of each district in small slanting red figures.

Tenasserim	17. North Bihar	33. Malabar	49. Central India, East
Lower Burma Deltaic	18. North Western Provinces, East	34. Madras, South Central	49a. Do. do.
Central do.	19. South Oudh	35. Coorg	50. Rajputana East, Central India West
Upper do.	20. North Do.	36. Mysore	51. West Rajputana
Arakan	21. North Western Provinces, Central	37. Konkan	52. East Coast, North
East Bengal	22. Do. do., West	38. Bombay Deccan	52(a). Do. do. (a)
Assam, Surma	23. Do. do., East Submontane	39. Hyderabad, North	53. Hyderabad, South
Do., Hills	24. Do. do., West do.	40. Khandesh	54. Madras, Central
Do., Brahmaputra	25. Do. do., Hills	41. Berar	55. East Coast, Central
Deltaic Bengal	26. South East Punjab	42. Central Provinces, West	56. East Coast, South
Central do.	27. South do.	43. Do., Central	57. Madras, South
North do.	28. Central do.	44. Do., East	
Bengal Hills	29. Punjab, Submontane	45. Gujarat	
Orissa	30. Do., Hills	46. Kathiawar	
Chota Nagpur	31. North Punjab	47. Sind	
South Bihar	32. West do.	48. Baluchistan Hills	