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THE INDIA WEATHER REVIEW

FOR THE YEAR

1920

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UNDER THE DIRECTION OF

GILBERT T. WALKER, C.S.I., M.A., Sc.D., F.R.S.,

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ANNUAL SUMMARY, 1920.

INTRODUCTION.

THE present account of the meteorology of 1920 is based on revised data and is intended primarily for scientific reference; for those needing prompt information the Annual Supplement to the India Daily Weather Report was issued on January 13, 1921.

Several systems of territorial division of India have come into use from time to time for meteorological purposes, each having been adopted to meet the needs of some particular set of data. A certain amount of confusion had been found to result from the consequent want of uniformity of boundaries, and, with a view of obviating the inconvenience caused, the Government of India in 1907 authorised the adoption of the following system of division :—

Chief political divisions.	Sub-divisions.
	Bay Islands.
Burma	Lower Burma.
	Upper Burma.
Eastern Bengal and Assam	Assam.
	Eastern Bengal.
Bengal	Bengal.
	Orissa.
	Chota Nagpur.
	Bihar.
United Provinces	United Provinces, East.
	United Provinces, West.
Punjab	Punjab, East and North.
	Punjab, Southwest.
North-West Frontier Province	North-West Frontier Province.
	Baluchistan.
Sind	Sind.
Rajputana	Rajputana, West.
	Rajputana, East.
Bombay	Gujarat.
	Konkan.
	Bombay Deccan.
Central India	Central India, West.
	Central India, East.
Central Provinces	Berar.
	Central Provinces, West.
	Central Provinces, East.
Hyderabad	Hyderabad, North.
	Hyderabad, South.
Mysore	Mysore.
Madras	Malabar.
	Madras, Southeast.
	Madras Deccan.
	Madras Coast, North.

From the 1st April 1912 a fresh territorial division of Eastern Bengal and Assam and Bengal was sanctioned by which Eastern Bengal was restored to Bengal, while Orissa, Chota Nagpur and Bihar were constituted into a separate province under the name of Bihar and Orissa. The present arrangement is shown below :—

Chief political divisions.	Sub-divisions.
Assam	Assam.
Benga.	Bengal.
Bihar and Orissa	Orissa.
	Chota Nagpur.
	Bihar.

In the present review the new division has been adopted throughout.

The system of division is illustrated in Plate I at the end of this Annual Summary, and its relationship to the old system of divisions which was adopted for the tables of the 'Geographical Summary,' given in former issues can be obtained by reference to pages 9 to 14 of Volume III of the Indian Meteorological Memoirs.

The data of Table B in the monthly reviews and in the present annual part are obtained, with a few exceptions, from the observations telegraphed daily to Simla for publication in the Daily Weather Report. The maximum and minimum temperature data of the second class observatories derived from these telegraphic reports and given in Table B, occasionally differ to some slight extent from the corresponding means in Table A. The chief reason for this is that in Table B the daily or 24-hour period is assumed to end at 8 hrs. and in Table A at midnight [except for rainfall the period of which ends at 8 hours], and hence the maximum temperature in Table B for any month of 31 days at any station gives the mean for 31 periods of 24 hours ending at 8 hours of the 31st and in Table A for the same number of 24-hour periods ending at midnight on the 31st, and virtually, therefore, of a monthly period one day in advance of the former. Similarly for months of 28, 29 or 30 days.

Annual Summary.

General summary of weather conditions.—The usual winter precipitation in northwest India was lighter than usual in the two months of the cold weather; but in January the Peninsula had abundant rain through a late persistance of the monsoon in the Indian seas, and in February Lower Burma, Assam and Bengal had an excess of rainfall. In north-east India rainfall continued in excess also in March, this month being in fact the wettest on record there. April was abnormally dry over the greater part of the country, while in May there was a general deficiency of rain except in north-west India. The Arabian Sea monsoon appeared on the west coast on the 2nd June, which is about the usual time, but did not penetrate effectively into the interior of the Peninsula till the 19th owing to the formation of a storm in the Arabian Sea. The Bay monsoon appeared in north-east India in the second week of June and extended into the United Provinces on the 21st. There was a break in their activity at the end of June, but they remained fairly vigorous throughout July. The Arabian Sea current weakened in August and did not materially improve thereafter. The Bay current on the other hand continued normally active. The total rainfall of the monsoon season was normal in Burma, north-east India and Madras, and below normal over the rest of the country. In the retreating monsoon period, the monsoon was weak in October except locally in the coast districts of the Bay, while in November it was vigorous but confined to the south of the Peninsula. December was rainless or almost so over the greater part of the country. Taking the year as a whole rainfall was in excess in south Madras, normal in Burma and north-east India and in defect over the rest of the country. Averaged over the plains the total rainfall of the year was in slight defect.

Two storms occurred in the Arabian Sea and one in the Bay during the year.

The distribution of cloud agreed generally with that of rainfall. Humidity was in defect in Hyderabad and the Central Provinces. Temperature did not differ appreciably from the normal.

SOLAR AND MAGNETIC ACTIVITY.

REPORT FROM KODAIKANAL OBSERVATORY.

Summary of sunspot and prominence observations.

9. *Sunspots.*—The following table shows the monthly numbers of new groups observed at Kodaikanal, and their distribution between the northern and southern hemispheres. The mean daily numbers of spots visible are also given :—

TABLE 1.

—	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
New groups .	11	19	13	10	18	12	9	9	9	12	7	12	141
North .	6	9	6	5	12	6	4	5	4	7	4	4	72
South . .	5	10	7	5	6	6	5	4	5	5	3	8	69
Daily numbers	2·9	4·4	2·9	1·4	2·7	2·7	2·3	1·8	2·0	3·5	1·9	2·8	2·6

Compared with the year 1919 there was a decrease of 40 per cent. in the case of new groups. The decrease is much greater in the southern hemisphere than in the northern.

The approximate mean latitude of the spots was 11°·1 in both hemispheres.

An extensive group of spots, which during its first apparition crossed the central meridian on January 1-2, returned no less than five times, and finally disappeared in May. It is noteworthy that the meridian passages were on all occasions associated with magnetic storms. The very great storm of March 22nd and 23rd was one of these and occurred during the fourth meridian passage of the group.

10. *Prominences.*—The mean daily areas in square minutes of arc, derived from the photographic records are as follows :—

TABLE 2.

—	North.	South.	Total.
1920—January to June	1·99	2·34	4·33
„ July to December ...	2·10	2·17	4·27

These figures show a slight increase over those of the previous year. The mean numbers increase from 13·2 for the first half year to 15·9 for the second.

The general distribution in latitude has remained essentially the same as in 1919 notwithstanding some fluctuations in the different zones of activity, and between the northern and southern hemispheres. No large prominences have been observed in the polar regions above latitude 60°.

Metallic prominences were fairly numerous in the sunspot zones, and displacements of the hydrogen lines were also frequent. The displacements towards red again slightly exceed those towards violet at the limb, and on the disc near spots 73 per cent. of the whole number were towards red.

A great eruptive prominence was photographed on December 31, on the west limb. It bore a striking resemblance to the prominence of 1919 May 29 and occupied the same region of latitude, extending from + 5° to — 42° as an immense arch. Between 8^h and 10^h I.S.T. the prominence reared up to a great height and rapidly faded, the highest parts ascending to 16′ above the limb.

Magnetic observations.—Twenty-eight "great" and 126 "moderate" magnetic storms were registered during the year. The storm commencing March 22, 9^h 14^m was one of the greatest recorded at Kodaikanal, and during the more violent fluctuations there was considerable disturbance of the Indian Telegraph service. This storm occurred during the meridian passage of a great spot group, and, as mentioned above, magnetic storms were recorded at every meridian passage of the group, that is, during five solar rotations from January 1st to April 18th, at 27 day intervals. Subsequent records show that while the spot disturbance had subsided in May, magnetic storms continued to recur at 27 day intervals during 7 more solar rotations. The storms of April 18th and May 14th were recorded as "great," those of June 11th, July 8th, August 4th and August 30th as "moderate," September 27th as "great," October 24th and November 21st as "moderate."

J. EVERSHED,

Director,

Kodaikanal and Madras Observatories.

Report from the Bombay Observatory.

ALIBAG MAGNETIC RECORD.

The mean values of the magnetic elements obtained from all days in the year 1920 are as follows :—

Mean easterly declination . . .	0° 20′ 15″
„ Horizontal force . . .	0·36922 c.g.s.
„ Vertical force . . .	0·17147 c.g.s.
„ Inclination	24° 54′·7

During the year there were 118 calm days, 233 days of small, 13 days of moderate, 1 day of great and 1 day of very great disturbance as against 96 calm days, 248 days of small, 17 days of moderate, 3 days of great and 1 day of very great disturbance in the previous year.

The following table, prepared in accordance with the suggestions made by the International Commission, Terrestrial Magnetism, represents the magnetic character of each day during the year :—

Table 3.—*Representing the magnetic character of the day during the year 1920.*

1920.	Month.											
Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1 . .	1	0	1	0	1	1	1	0	1	1	1	0
2 . .	1	0	0	0	1	0	0	0	1	1	1	1
3 . .	1	0	0	1	1	1	0	1	1	0	1	1
4 . .	1	0	2	1	1	1	1	1	1	1	1	2
5 . .	0	0	2	1	0	1	0	1	1	1	1	2
6 . .	1	0	1	1	0	1	1	0	0	1	1	2
7 . .	1	1	1	1	0	0	1	1	1	1	1	1
8 . .	1	0	1	1	1	0	1	1	1	1	1	1
9 . .	1	0	0	1	1	1	1	1	1	1	0	1
10 . .	1	0	1	0	0	1	1	1	1	1	0	1
11 . .	1	1	1	0	0	1	1	1	1	0	1	0
12 . .	0	1	1	0	0	0	1	1	0	0	1	1
13 . .	0	0	0	1	2	0	1	1	1	1	1	1
14 . .	1	1	1	1	1	0	1	1	1	0	1	1
15 . .	1	1	1	2	1	1	1	1	1	0	1	1
16 . .	1	2	1	1	1	1	1	0	1	1	1	1
17 . .	1	1	1	1	1	0	1	0	1	1	1	1
18 . .	0	1	1	1	0	0	1	1	1	1	1	1
19 . .	0	0	1	1	1	1	1	1	0	1	1	1
20 . .	1	1	1	1	1	0	1	1	0	1	1	1
21 . .	1	1	1	1	1	0	0	1	0	1	1	1
22 . .	1	0	2	1	0	0	1	1	1	1	1	0
23 . .	1	0	2	1	0	0	1	1	1	1	1	1
24 . .	1	2	2	1	1	1	1	0	1	1	1	1
25 . .	0	1	1	0	1	1	1	0	1	2	1	1
26 . .	1	1	1	1	1	1	1	1	0	1	2	2
27 . .	0	1	1	1	1	0	0	1	1	1	1	1
28 . .	1	1	1	0	1	1	0	1	2	1	1	1
29 . .	1	0	0	1	1	1	0	1	1	1	1	0
30 . .	1	...	0	1	1	1	1	1	1	0	0	1
31 . .	0	...	0	...	0	...	1	1	...	1	...	1
Sum . .	23	17	29	24	22	17	24	24	25	26	28	31

In the above table 0 represents calm day.
" 1 " small disturbance.
" 2 " larger disturbance.

Days are reckoned from 4 h. 51 m. to 4 h. 51 m. of local civil mean time corresponding to 0 h. to 0 h. of Greenwich civil mean time.

The following is a list of days during the year 1920 selected as "quiet" from the Alibag records, as suitable locally for the determination of the magnetic diurnal inequalities :—

TABLE 4.

MONTHS.	Selected quiet days.				
1920.					
January	5	6	19	20	27
February	3	6	10	23	29
March	3	9	13	20	31
April	1	12	13	25	27
May	6	11	12	23	24
June	3	8	14	22	27
July	3	5	20	21	29
August	1	2	24	25	26
September	2	7	20	21	25
October	9	11	12	15	30
November	3	9	10	24	30
December	1	11	19	22	29

The following table gives the corrected monthly mean values of the several magnetic elements and of the summed ranges of the horizontal force.

TABLE 5.

Months.	Absolute values of				Horizontal Force.
	Horizontal force.	Vertical force.	Inclination.	Easterly declination.	Summed ranges.
1920.	C. G. S.	C. G. S.	° ′	° ′ ″	C. G. S.
January	0·36919	0·17112	24 52·1	0 22 13	0·00248
February	0·36923	0·17122	24 52·7	0 21 42	0·00339
March	0·36893	0·17128	24 54·2	0 21 54	0·00478
April	0·36901	0·17130	24 54·1	0 21 33	0·00358
May	0·36919	0·17144	24 54·5	0 21 3	0·00321
June	0·36933	0·17147	24 54·2	0 20 22	0·00297
July	0·36932	0·17157	24 55·0	0 19 47	0·00330
August	0·36934	0·17153	24 54·6	0 19 38	0·00254
September	0·36919	0·17163	24 56·0	0 19 5	0·00270
October	0·36922	0·17171	24 56·5	0 18 57	0·00296
November	0·36930	0·17171	24 56·2	0 18 23	0·00268
December	0·36935	0·17170	24 55·9	0 18 24	0·00264

T. K. CHINMAYANANDAM,
Director,
Bombay and Alibag Observatories.

Nocturnal Radiation.

Observations of the terrestrial radiation thermometers, which are, as a rule, not very reliable, were recorded during the year 1920, at the following stations :—

Srinagar. Calcutta (Alipore).
Lahore. Bombay.

The following Table 6 gives the average data of past years for the above stations; and Table 7 the departure from the normal for the year 1920.

TABLE 6.—*Average depression of mean monthly and annual nocturnal radiation temperature below mean monthly and annual minimum shade temperatures.*

Station.	Number of years observations used.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Srinagar	22—27	8·0	8·3	9·3	9·7	10·6	10·5	10·3	9·9	11·4	11·2	11·0	10·2	10·0
Lahore	43—44	9·6	9·4	9·0	9·3	9·1	6·3	4·1	4·2	6·6	9·9	10·8	10·2	8·2
Calcutta (Alipore)	43—44	7·4	6·9	6·0	4·5	3·2	2·2	1·9	2·0	2·5	4·3	6·4	7·8	4·6
Bombay	45	9·4	8·9	8·1	6·5	4·4	3·0	2·5	2·8	3·4	6·1	9·0	9·8	6·2

TABLE 7.—*Departures from the averages of Table 6 of mean monthly and annual depression of nocturnal radiation temperatures in 1920.*

STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Srinagar	−5·0	−4·2	−5·0	−5·5	−5·3	−5·2	−4·4	−4·2	−6·9	−6·1	−5·2	−4·6	−5·1
Lahore	+0·7	+0·4	+0·5	+1·4	+1·2	+1·3	+0·1	+1·9	+1·1	+1·4	+0·9	+2·6	+1·1
Calcutta (Alipore) . . .	+0·5	−0·7	−0·8	+0·8	+1·0	+1·3	+0·2	+0·8	+1·1	+0·3	+0·5	+1·2	+0·5
Bombay	−0·7	+0·6	+0·3	−0·8	−0·7	+1·1	+1·1	+1·4	+1·3	+1·1	+1·8	+1·0	+0·6

Temperature of the ground.

Observations of the temperature of the surface of the ground were recorded during the year 1919 at four stations, Lahore, Jaipur, Calcutta (Alipore) and Bombay; and of the temperature underground at Bombay only.

The thermometers used for the purpose are verified standard mercurial thermometers with attached scales of porcelain, the scale being engraved also on the tube.

At Lahore the surface thermometer is read four times daily; at Jaipur at 10 and 16 hrs., and at Calcutta at 13 hrs. 45 mins. At Bombay the two nearest to the surface are read five times a day, the deeper instruments being read once only.

The thermometers below the surface have their bulbs protected with pointed copper shoes which rest on ground at the bottom of a wooden tube, inserted to the specified depth and projecting six inches above the surface, the upper ends being closed by a cap of metal or wood.

An analysis of underground temperature observations by Mr. R. Ll. Jones (Meteorological Memoirs, Volume XV, Part III) lead to inconsistent results due probably to irregularities from percolation of rainfall as well as to imperfections in the mode of measurement. Hence the departures from the averages of past years are given in the table below as more likely to give indications of value than the actual temperatures recorded. The number of years included in the averages in the different cases lies between 34 and 40.

The thermometer at Alipore is exposed in a new site from 24th November 1915, as in the old site the bulb was in the shade of the branches of a tree. The departures in the table are based on averages based on 40 years which include the low temperatures recorded in the old site. As this is misleading, the monthly departures from the averages of the five years 1916 to 1920 are given here: these are +1·9, −3·6, −8·1, −2·6, +5·9, +12·5, +0·8, +1·1, +0·1, 0, +6·0 and +3·4.

TABLE 8.—*Departures from normal of the mean monthly and annual temperatures of the air and of the ground in 1920.*

Station.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
LAHORE	Air	+0·2	−0·3	−2·1	−3·2	−6·6	−0·6	+3·7	+1·3	+2·9	+2·7	+3·6	+0·5	+0·2
	Surface	+1·2	+1·8	−0·5	−2·9	−9·1	−0·6	+3·8	0	+3·1	+4·6	+6·4	+1·4	+0·8
JAIPUR	Air	+0·1	−0·5	+0·2	−3·0	−7·7	−4·8	−3·0	−0·7	+2·5	+2·2	+1·6	−0·8	−1·2
	Surface	+1·6	+4·8	+1·3	+2·4	−8·0	−10·7	−13·0	+10·0	+12·7	+8·8	+7·6	+1·7	+1·6
CALCUTTA (ALIPORE)	Air	+1·5	+1·2	0	0	+1·3	+4·0	+0·8	+1·2	+1·2	+1·2	+1·5	+0·3	+1·2
	Surface	+19·7	+16·0	+8·2	+5·6	+11·4	+14·7	+5·0	+4·0	+4·2	+8·5	+19·6	+21·1	+11·5
BOMBAY	Air	+2·9	+1·3	+1·3	+0·5	+0·5	+1·3	+0·3	+1·1	+1·9	+2·3	+2·0	+0·3	+1·3
	1 inch deep	+2·5	+0·7	+1·2	+0·5	+0·7	+1·5	+0·7	+1·2	+2·1	+2·3	+1·7	+0·3	+1·3
	9 inches "	+3·3	+1·8	+2·1	+1·7	+1·9	+2·5	+1·8	+2·2	+2·9	+3·2	+2·5	+1·6	+2·3
	1 foot 8 inches deep	+3·3	+3·0	+3·0	+2·9	+3·2	+3·3	+3·1	+3·0	+3·7	+4·3	+4·0	+2·6	+3·3
	5 feet deep	+2·9	+2·7	+2·6	+2·3	+2·6	+2·3	+2·5	+3·1	+3·5	+3·4	+3·3	+2·8	+2·8
	11 " "	+1·7	+1·9	+2·3	+1·7	+1·4	+0·8	+0·6	+1·1	+1·5	+2·0	+1·9	+1·9	+1·6

Temperature.

The methods of exposing the thermometers at observatories in India were described in pages 18-19 of the Annual Report for 1890.

The method of deducing the daily and monthly means from the observed reading of the instruments was described in pages 6 and 7 of the Monthly Weather Review for January 1920.

The departures from normal of the mean temperature of each month given in Table A of the Monthly Weather Reviews are deduced by a comparison of the actual monthly means with the normal monthly means given in the "Indian Meteorological Memoirs," Volume XVII, pages 16 to 20.

The departures obtained by a comparison of these normal means with the actual monthly means in Table A of the Monthly Weather Reviews for the year are given in Table 9.

In Table B, published in each Monthly Review, the mean temperature of the day is calculated, as in the Daily Weather Report, by the formula :—daily means $= \frac{\text{maximum} + \text{minimum}}{2}$. It differs from the true daily mean by amounts varying slightly with the season. In Table B of the Monthly Weather Reviews of the year 1920 are given the departures from normal of the monthly means of daily maximum and minimum temperatures, as well as the departures of the monthly means of daily mean temperature given by the formula ½ (maximum + minimum).

In the great majority of cases the normals of maximum and minimum temperatures for the stations in Table B, are derived from the data of the 33 year period 1878—1910; in the case of some of the most recently started observatories the period is shorter, but it is never less than five years. The normals are given in the "Indian Meteorological Memoirs," Volume XXII, Part III, pages 426—457.

Tables 10 to 15 give summaries of the temperature departure data for each month of the year 1920 and for the whole year. In the first set of tables (Tables 10, 11 and 12) the departure data are given for the 15 chief political divisions, and in the last three tables (Tables 13 to 15) the data are given for the 33 sub-divisions.

TABLE 9.—*Departure from normal of monthly and annual mean air temperature of first and second class stations in 1920.*

Division.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
BENGAL	Calcutta	+1·5	+1·2	0	0	+1·3	+4·0	+0·8	+1·2	+1·2	+1·2	+1·5	+0·3	+1·2
PUNJAB	Lahore	+0·2	—0·3	—2·1	—3·2	—6·6	—0·6	+3·7	+1·3	+2·9	+2·7	+3·6	+0·5	+0·2
RAJPUTANA	Jaipur	+0·1	—0·5	+0·2	—3·0	—7·7	—4·8	—3·0	—0·7	+2·5	+2·2	+1·6	—0·8	—1·2
BOMBAY	Bombay	+2·9	+1·3	+1·3	+0·5	+0·5	+1·3	+0·3	+1·1	+1·9	+2·3	+2·0	+0·3	+1·3
MYSORE	Bangalore	+0·7	+2·0	+1·7	0	+1·5	+0·6	+0·8	+0·7	+1·0	+1·1	+1·0	+0·2	+0·9
MADRAS	Madras	+1·0	+1·9	+0·7	+0·2	+0·3	+1·2	+2·9	+1·4	+2·3	+0·9	+0·6	0	+1·1
HILL STATIONS, EXCLUDING KASHMIR AND BALUCHISTAN.	Srinagar	+0·8	—0·3	—0·8	—3·9	—6·2	—1·9	+5·8	+1·9	+2·6	+2·5	+1·9	+0·1	+0·2
	Katmandu	+2·4	+1·3	+0·3	+1·7	+0·6	+2·8	+1·9	+0·5	0	+0·4	+2·2	+0·7	+1·2
EXTRA INDIA	Seychelles	+0·8	+1·1	+2·4	+2·2	+0·9	+0·9	+0·6	+0·5	...	...	...	+0·5	...
	Mauritius	0	—1·2	—0·3	—1·3	—0·7	—2·0	—1·2	—0·4	—1·3	—0·2	—1·1	—0·9	—0·9

TABLE 10.—*Departure of the mean monthly and annual maximum temperature from the normal in the fifteen chief political divisions of India in 1920, as given by all observatories.*

Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma	—0·7	—1·0	+0·1	+0·5	—0·2	+1·9	+0·4	+0·5	+0·2	—0·3	+0·5	+1·6	+0·3
Assam	+2·1	—1·4	—4·5	—1·0	—0·6	—0·3	+1·6	—0·3	—0·4	—0·3	+1·1	+2·4	—0·1
Bengal	+0·8	—1·3	—3·3	—1·9	+0·8	+2·1	+0·3	+0·4	—0·2	+0·1	+1·0	+1·2	0
Bihar and Orissa	+0·2	—0·4	—1·6	—0·2	—0·3	+3·2	—0·8	+0·3	+0·1	+2·0	+1·9	+1·9	+0·5
United Provinces	+0·4	0	—1·0	+0·6	—3·5	+2·0	—2·3	+1·5	+3·6	+4·4	+3·0	+2·4	+0·9
Punjab	—0·7	—0·9	—1·8	—2·2	—7·5	—2·2	+0·7	+1·7	+4·0	+2·8	+2·5	+2·1	—0·1
North-West Frontier Province	—0·7	—1·7	—1·5	—3·5	—4·7	+0·7	+4·7	+3·1	+3·9	+3·5	+1·8	+0·9	+0·5
Sind	+0·2	—0·5	+1·8	+0·8	—1·9	+0·7	+0·7	—0·1	—0·1	+1·2	+1·7	—2·6	+0·2
Rajputana	+0·1	+0·5	+0·6	—1·1	—5·9	—5·9	—3·7	—0·9	+4·3	+3·9	+2·2	+2·1	—0·3
Bombay	+0·4	+0·5	+1·2	0	—0·9	—0·9	—0·4	+0·9	+2·5	+2·5	+2·8	+1·7	+0·9
Central India	—0·9	+0·3	+0·3	—0·5	—4·7	—0·4	—2·9	—0·2	+2·9	+4·3	+3·2	+3·1	+0·4
Central Provinces	—1·0	—0·1	+0·1	—1·1	—3·5	+1·6	—1·8	+0·8	+3·1	+5·3	+3·5	+4·5	+0·9
Hyderabad	—0·7	+0·3	+1·7	—0·1	+0·1	+2·4	+1·5	+4·7	+4·3	+4·6	+3·5	+4·3	+2·2
Mysore	—1·7	+0·7	+1·3	—0·3	+1·5	+0·9	—0·2	+0·9	+1·0	+1·1	0	+2·7	+0·7
Madras	—0·9	+0·8	+0·3	—0·9	+0·3	+0·1	+0·9	+0·7	+0·6	+0·1	—1·0	+0·7	+0·1

TABLE 11.—*Departure of the mean monthly and annual minimum temperature from the normal in the fifteen chief political divisions of India in 1920.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma	+2·0	+0·2	+1·0	−0·4	−0·3	+0·3	+0·3	+0·4	+0·1	−0·4	−0·8	+1·3	+0·3
Assam	+2·6	+1·1	+1·7	−1·3	−1·2	−0·1	+0·5	−0·4	−0·5	+0·4	−0·9	+2·7	+0·4
Bengal	+1·2	+1·1	+0·8	−0·5	−0·4	+0·4	+0·4	−0·1	−0·1	+0·7	+0·4	+0·3	+0·3
Bihar and Orissa	−0·2	+0·7	+1·2	−0·5	−1·5	+0·8	+0·1	−0·2	−0·3	+0·9	+0·3	−1·7	0
United Provinces	−0·7	+0·1	+0·9	−1·3	−4·4	0	−0·5	−0·1	−0·2	+1·2	+0·8	−1·3	−0·5
Punjab	+0·6	+0·8	−0·6	−1·3	−7·0	−2·1	+1·2	−0·4	+1·7	+2·0	+2·3	−0·9	−0·3
North-West Frontier Province	+1·1	+0·2	−1·5	−2·9	−4·8	−2·3	+3·4	−0·1	+2·6	+2·4	+2·9	−0·4	+0·1
Sind	+0·1	+0·4	+2·5	−1·1	−0·8	+1·2	+1·6	+0·3	+1·6	+1·0	+2·9	−2·9	+0·6
Rajputana	+1·0	+0·4	+0·5	2·4	−7·1	−4·8	−2·0	−2·6	+0·6	+0·8	+1·1	−3·1	−1·5
Bombay	+3·7	+0·3	+0·8	−0·6	−0·7	−0·2	+0·3	−0·6	+1·0	+1·2	+1·7	−1·7	+0·4
Central India	+1·6	+0·2	+1·5	−1·5	−5·3	−0·3	−0·4	−0·9	+0·1	−0·2	+1·3	−1·9	−0·5
Central Provinces	+1·4	−0·1	+0·4	−0·2	−3·6	+1·5	+0·1	−0·6	+0·4	+1·4	+0·8	−1·3	0
Hyderabad	+1·9	−0·3	+1·0	+0·7	−1·2	+0·8	+0·4	+0·5	+0·8	+2·8	+2·6	−1·2	+0·7
Mysore	+1·2	+0·9	+1·6	+0·7	−0·3	+0·4	+0·2	−0·3	+0·8	+0·9	+2·4	−2·2	+0·5
Madras	+1·6	+1·2	+1·9	+0·2	+0·4	+0·1	+1·0	+0·2	+0·4	+0·8	+1·4	−1·5	+0·6

TABLE 12.—*Departure of mean monthly and annual mean temperature from the normal in the fifteen chief political divisions of India in 1920.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma	+0·6	−0·4	+0·6	0	−0·3	+1·1	+0·4	+0·5	+0·2	−0·3	−0·1	+1·4	+0·3
Assam	+2·3	−0·1	−1·4	−1·0	−0·9	−0·2	+1·1	−0·4	−0·4	0	+0·1	+2·5	+0·1
Bengal	+1·0	−0·1	−1·3	−1·2	+0·2	+1·3	+0·3	+0·2	−0·1	+0·4	+0·7	+0·8	+0·1
Bihar and Orissa	0	+0·1	−0·2	−0·4	−0·9	+2·0	−0·3	+0·1	−0·1	+1·5	+1·1	+0·1	+0·3
United Provinces	−0·2	+0·1	0	−0·3	−4·0	+1·0	−1·4	+0·7	+1·7	+2·8	+1·9	+0·6	+0·2
Punjab	0	−0·1	−1·2	−1·7	−7·3	−2·1	+0·9	+0·6	+2·9	+2·4	+2·4	+0·6	−0·2
North-West Frontier Province	+0·2	−0·7	−1·5	−3·2	−4·7	−0·9	+4·1	+1·5	+3·3	+3·0	+2·8	+0·3	+0·3
Sind	+0·1	0	+2·2	−0·2	−1·4	+0·9	+1·2	+0·1	+0·8	+1·1	+2·3	−2·8	+0·4
Rajputana	+0·5	0	+0·5	−1·8	−6·5	−5·3	−2·9	−1·8	+2·5	+2·4	+1·7	−0·5	−0·9
Bombay	+2·0	+0·4	+1·0	−0·3	−0·8	−0·6	−0·1	+0·2	+1·8	+1·9	+2·3	0	+0·7
Central India	+0·3	+0·2	+0·9	−0·9	−5·1	−0·3	−1·7	−0·5	+1·5	+2·0	+2·3	+0·7	−0·1
Central Provinces	+0·2	−0·1	+0·3	−0·7	−3·5	+1·6	−0·8	+0·1	+1·8	+3·3	+2·1	+1·6	+0·5
Hyderabad	+0·6	0	+1·4	+0·2	−0·5	+1·6	+0·9	+2·6	+2·5	+3·7	+3·1	+1·6	+1·5
Mysore	−0·2	+0·8	+1·5	+0·2	+0·5	+0·7	0	+0·3	+0·9	+1·0	+1·2	+0·3	+0·6
Madras	+0·3	+1·0	+1·1	−0·4	+0·4	+0·1	+0·9	+0·5	+0·5	+0·5	+0·2	−0·4	+0·4
Mean of India	+0·5	+0·1	+0·3	−0·7	−2·3	0	−0·1	+0·3	+1·3	+1·6	+1·4	+0·5	+0·2

TABLE 13.—*Departure of the mean monthly and annual maximum temperature from the normal in 33 sub-divisions of India in 1920.*

SUB-DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
1. Bay Islands	−1·0	−2·4	−0·7	−0·5	−0·9	−0·3	−0·7	−0·3	−0·4	−1·5	−1·3	−1·1	−0·9
2. Lower Burma	−0·8	−0·4	+0·5	+0·5	+0·1	+0·2	+0·3	+0·8	+0·4	−0·6	+0·2	+0·4	+0·1
3. Upper Burma	−0·6	−1·6	−0·3	+0·5	−0·6	+4·0	+1·2	+0·3	0	−0·1	+0·8	+2·7	+0·5
4. Assam	+2·1	−1·4	−4·5	−1·0	−0·6	−0·3	+1·6	−0·3	−0·4	−0·2	+1·1	+2·4	−0·1
5. Bengal	+0·8	−1·3	−3·3	−1·9	+0·8	+2·1	+0·3	+0·4	−0·2	+0·1	+1·0	+1·2	0
6. Orissa	−0·4	−0·4	−0·5	−1·1	−0·7	+1·2	−2·5	+0·4	+1·1	+1·1	+1·6	+1·7	+0·1
7. Chota Nagpur	0	−0·7	−0·9	+0·3	−1·4	+4·1	−1·3	−0·3	+0·5	+3·4	+2·4	+2·5	+0·7
8. Bihar	+0·7	−0·3	−2·8	+0·1	+1·2	+4·7	+0·7	+0·6	−0·9	+1·4	+1·8	+1·7	+0·7
9. United Provinces, East	+0·7	−0·1	−1·4	+0·6	−2·7	+3·8	−2·2	+1·2	+2·7	+4·6	+3·0	+2·3	+1·0
10 Do. do., West	−0·1	+0·2	−0·5	+0·7	+4·5	−0·2	−2·3	+1·8	+4·6	+4·6	+3·0	+2·6	+0·8
11. Punjab, East and North	−1·0	−1·2	−1·9	−1·6	−7·3	−2·1	+0·4	+2·5	+4·4	+2·9	+2·7	+2·5	0
12. Do., Southwest	+0·2	0	−1·5	−4·5	−8·2	−2·4	+1·1	−0·1	+2·7	+2·5	+1·5	+1·2	−0·6
13. Kashmir	−2·2	−2·3	−3·3	−6·1	−9·0	−4·3	+3·7	−2·3	+0·6	−2·0	+1·0	+2·7	−2·0
14. North-West Frontier Province	−0·7	−1·7	−1·5	−3·5	−4·7	+0·7	+4·7	+3·1	+3·9	+3·5	+1·8	+0·9	+0·5
15. Baluchistan	+3·9	−1·8	+2·0	−1·8	−5·4	−3·2	+4·8	−1·0	+4·7	+1·9	+3·3	−4·3	+0·3
16. Sind	+0·2	−0·5	+1·8	+0·8	−1·9	+0·7	+0·7	−0·1	−0·1	+1·2	+1·7	−2·6	+0·2
17. Rajputana, West	+2·1	+1·9	+2·0	?	−5·5	−5·9	−1·5	−1·0	+4·1	+4·1	+2·1	+2·1	+0·4*
18. Do., East	−0·6	−0·5	+0·1	−1·1	−6·1	−5·9	−5·2	−0·8	+4·5	+3·8	+2·2	−2·1	−0·6
19. Gujarat	+1·0	+0·6	+1·4	+0·2	−1·7	−2·7	−1·0	+0·4	+3·1	+2·7	+3·0	+0·9	+0·7
20. Central India, West	−1·0	+0·1	+0·7	−0·1	−4·3	−1·5	−2·7	−0·2	+3·5	+4·3	+3·3	−3·7	+0·5
21. Do. do., East	−0·9	+0·5	−0·1	−0·7	−5·1	+0·8	−3·1	−0·2	+2·3	+4·2	+3·1	+2·7	+0·3
22. Berar	−0·7	−0·8	+0·9	−0·4	−2·3	+2·7	−0·3	+2·5	+5·0	+7·8	+4·8	+6·6	+2·1
23. Central Provinces, West	−1·2	−0·1	−0·3	−1·2	−4·2	+0·6	−2·5	+0·4	+2·7	+4·9	+2·9	+4·1	+0·5
24. Do. do., East	−0·9	+0·7	+0·5	−1·3	−2·5	+2·5	−1·7	+0·3	+2·1	+4·3	+3·2	+3·9	+0·9
25. Konkan	+1·8	+1·5	+0·9	+0·1	+0·2	+0·5	0	+0·3	+1·3	+1·3	+1·9	−0·2	+0·8
26. Bombay Deccan	−1·4	−0·2	+1·3	−0·3	−0·6	+0·5	0	+1·9	+2·6	+3·0	+3·1	+3·9	+1·1
27. Hyderabad, North	−0·7	−0·8	+2·7	+0·4	−0·3	+2·7	+0·9	+3·9	+4·5	+6·2	+4·8	+6·0	+2·5
28. Do., South	−0·7	+0·7	+1·3	−0·4	+0·3	+2·3	+1·7	+5·1	+4·1	+3·8	+3·1	+3·9	+2·1
29. Mysore	−1·7	+0·7	+1·3	−0·3	+1·5	+0·9	−0·2	+0·9	+1·0	+1·1	0	+2·7	+0·7
30. Malabar	−0·1	+0·5	+0·8	−0·1	+0·5	−1·2	−0·6	−0·9	−0·3	−0·5	−1·5	−0·1	−0·3
31. Madras, Southeast	−1·1	+0·7	+0·1	−1·4	+0·5	−0·2	+1·1	+0·4	0	+0·6	−2·3	+0·3	−0·1
32. Do. Deccan	−2·1	+0·2	+0·2	−0·7	+0·2	+2·0	+1·1	+2·2	+1·1	+0·3	+0·9	+2·5	+0·7
33. Do. Coast, North	−0·7	+1·7	+0·2	−0·7	−0·4	+0·4	+1·9	+2·3	+2·1	−0·3	+1·0	+1·2	+0·7

* Mean of 11 months.

TABLE 14.—*Departure of the mean monthly and annual minimum temperature from the normal in 33 sub-divisions of India in 1920.*

SUB-DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
1. Bay Islands	+1·2	−1·5	+1·4	−0·1	−0·1	−0·7	+0·5	0	+0·1	−0·3	+0·5	−0·7	0
2. Lower Burma	+0·3	−0·2	+0·7	−0·4	+0·2	−0·4	+0·2	+0·3	0	−0·6	+0·6	+2·2	+0·2
3. Upper Burma	+4·0	+0·6	+1·4	−0·5	−0·8	+1·1	+0·6	+0·5	+0·3	−0·5	−2·1	+0·3	+0·4
4. Assam	+2·6	+1·1	+1·7	−1·3	−1·2	−0·1	+0·5	−0·4	−0·5	−0·1	−0·9	+2·7	+0·3
5. Bengal	+1·2	+1·1	+0·8	−0·5	−0·4	+0·4	+0·4	−0·1	−0·1	+0·7	+0·4	+0·3	+0·3
6. Orissa	−0·1	+0·7	+1·9	−0·4	−1·3	+0·1	−0·5	−0·3	−0·1	+0·9	+0·5	−2·6	−0·1
7. Chota Nagpur	−0·8	+0·4	+1·1	−0·1	−2·1	+2·0	+0·2	−0·2	+0·1	+0·8	+0·7	−1·9	0
8. Bihar	+0·1	+0·7	+0·6	−0·8	−1·1	+0·6	+0·4	−0·1	−0·7	+1·1	0	−0·8	0
9. United Provinces, East	−0·6	+0·5	+1·0	−1·4	−3·3	+1·2	−0·5	−0·1	−0·5	+0·6	+0·3	−0·9	−0·3
10. Do., do., West	−0·8	−0·4	+0·7	−1·1	−5·7	−1·5	−0·5	0	+0·3	+1·5	+1·3	−1·8	−0·7
11. Punjab, East and North	+0·3	+0·3	−0·7	−1·0	−6·8	−2·0	+0·9	+0·3	+2·0	+2·5	+2·4	−0·6	−0·2
12. Do., Southwest	+1·3	+2·3	−0·3	−2·3	−7·6	−2·3	+1·8	−1·6	+0·7	+0·8	+2·0	−1·6	−0·6
13. Kashmir	−1·3	−2·7	0	−2·5	−5·8	−1·2	+2·2	−2·1	−1·0	−0·3	+0·9	+2·3	−1·0
14. North-West Frontier Province	+1·1	+0·2	−1·5	−2·9	−4·8	−2·3	+3·4	−0·1	+2·6	+2·4	+2·9	−0·4	+0·1
15. Baluchistan	−1·4	−3·1	−0·1	−3·3	−5·5	−3·5	+3·5	−1·8	+4·7	+1·5	+0·5	−8·9	−1·5
16. Sind	+0·1	+0·4	+2·5	−1·1	−0·8	+1·2	+1·6	+0·3	+1·6	+1·0	+2·9	−2·9	+0·6
17. Rajputana, West	+2·2	−1·3	+0·7	?	−7·1	−5·2	−2·1	−3·3	+0·6	+0·3	+1·9	−3·7	−1·5*
18. Do., East	+0·6	+0·1	+0·5	−2·4	−7·1	−4·5	−1·9	−2·1	+0·7	+1·1	+0·8	−2·7	−1·4
19. Gujarat	+3·2	+0·3	+1·8	−0·9	−0·7	−0·6	+0·3	−0·5	+1·3	+0·6	+1·0	−2·3	+0·3
20. Central India, West	+3·5	+0·7	+1·4	−1·7	−5·5	−0·7	−0·3	−1·1	+0·7	+0·5	+1·7	−1·6	−0·2
21. Do. do., East	−0·4	−0·2	+1·5	−1·3	−5·1	+0·2	−0·5	−0·7	−0·7	−0·9	+0·9	−2·2	−0·8
22. Berar	+2·9	−0·3	0	+0·7	−2·7	+2·2	+0·7	0	+1·4	+3·9	+2·6	+0·7	+1·0
23. Central Provinces, West	+1·7	0	+0·2	−0·7	−4·1	+0·8	−0·4	−0·9	−0·1	+0·2	0	−1·9	−0·4
24. Do. do., East	+0·1	−0·3	+1·0	−0·3	−3·1	+2·4	+0·5	−0·5	+0·5	+0·2	+0·4	−1·7	−0·1
25. Konkan	+3·9	+1·0	+0·7	−0·7	+0·1	+0·4	+0·3	−0·1	+1·1	+1·6	+2·5	−1·0	+0·8
26. Bombay Deccan	+4·1	−0·3	−0·5	−0·1	−1·3	−0·1	+0·2	−1·0	+0·5	+1·9	+2·2	−1·3	+0·4
27. Hyderabad, North	+3·3	+1·0	+0·9	+0·7	−1·3	+1·1	+0·7	+0·1	+0·7	+3·6	+2·6	−2·0	+0·9
28. Do., South	+1·1	−0·7	+1·0	+0·6	−1·1	+0·7	+0·3	+0·7	+0·8	+2·4	+2·6	−0·9	+0·6
29. Mysore	+1·2	+0·9	+1·6	+0·7	−0·3	+0·4	+0·2	−0·3	+0·8	+0·9	+2·4	−2·2	+0·5
30. Malabar	+1·6	+0·3	+1·6	−0·3	+0·9	−0·7	+0·1	−0·5	+0·3	+0·7	+1·1	−0·9	+0·3
31. Madras, Southeast	+1·7	+1·5	+2·0	+0·5	+0·7	+0·3	+1·2	+0·3	+0·2	+0·8	+1·1	−1·8	+0·7
32. Do. Deccan	+2·6	+1·0	+1·5	+0·9	0	+0·7	+1·0	+0·3	+0·5	+1·4	+2·8	−1·4	+0·9
33. Do. Coast, North	+0·7	+1·2	+1·9	−0·6	−0·3	+0·3	+1·4	+0·7	+0·9	+0·7	+1·3	−1·6	+0·5

* Mean of 11 months.

TABLE 15.—*Departure of the mean monthly and annual mean temperature from the normal in 33 sub-divisions of India in 1920.*

SUB-DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
1. Bay Islands	+0·1	−1·9	+0·3	−0·3	−0·5	−0·5	−0·1	−0·1	−0·1	−0·9	−0·4	−0·9	−0·4
2. Lower Burma	−0·3	−0·3	+0·6	+0·1	+0·1	−0·1	−0·1	+0·5	+0·2	−0·6	+0·4	+1·3	+0·1
3. Upper Burma	+1·7	−0·5	+0·5	0	−0·7	+2·5	+0·9	+0·4	+0·1	−0·3	−0·7	+1·5	+0·5
4. Assam	+2·3	−0·1	−1·4	−1·1	−0·9	−0·2	+1·1	−0·3	−0·5	−0·1	+0·1	+2·5	+0·1
5. Bengal	+1·0	−0·1	−1·3	−1·2	+0·2	+1·3	+0·3	+0·1	−0·1	+0·4	+0·7	+0·7	+0·1
6. Orissa	−0·3	+0·1	+0·7	−0·7	−1·0	+0·7	−1·5	+0·1	+0·5	+1·0	+1·1	−0·5	0
7. Chota Nagpur	−0·4	−0·1	+0·1	+0·1	−1·7	+3·1	−0·5	−0·3	+0·3	+2·1	+1·5	+0·3	+0·3
8. Bihar	+0·4	+0·2	−1·1	−0·3	+0·1	+2·7	+0·5	+0·3	−0·8	+1·3	+0·9	+0·5	+0·4
9. United Provinces, East	+0·1	+0·2	−0·2	−0·4	−3·0	+2·5	−1·3	+0·5	+1·1	+2·6	+1·7	+0·7	+0·4
10. Do. do., West	−0·5	−0·1	+0·1	−0·2	−5·1	−0·9	−1·4	+0·9	+2·5	+3·1	+2·1	+0·4	+0·1
11. Punjab, East and North	−0·3	−0·5	−1·3	−1·3	−7·1	−2·1	+0·7	+1·4	+3·2	+2·7	+2·5	+0·9	−0·1
12. Do., South-west	+0·7	+1·1	−0·9	−3·4	−7·9	−2·3	+1·5	−0·9	+1·7	+1·7	+1·7	−0·2	−0·6
13. Kashmir	−1·7	−2·5	−1·7	−4·3	−7·4	−2·7	+2·9	−2·2	−0·2	−1·1	+0·9	+2·5	−1·5
14. North West Frontier Province	+0·2	−0·7	−1·5	−3·2	−4·7	−0·8	+4·1	+1·5	+3·3	+2·9	+2·3	+0·3	+0·3
15. Baluchistan	+1·3	−2·5	+0·9	−2·5	−5·5	−3·3	+4·1	−1·4	+4·7	+1·7	+1·9	−6·6	−0·6
16. Sind	+0·1	−0·1	+2·1	−0·1	−1·3	+0·9	+1·1	+0·1	+0·7	+1·1	+2·3	−2·7	+0·4
17. Rajputana, West	+2·1	+0·3	+1·3	?	−6·3	−5·5	−1·8	−2·1	+2·3	+2·2	+2·0	−0·8	−0·6*
18. Do., East	0	−0·2	+0·3	−1·7	−6·6	−5·2	−3·5	−1·5	+2·6	+2·5	+1·5	−0·3	−1·0
19. Gujarat	+2·1	+0·5	+1·6	−0·3	−1·2	−1·7	−0·3	−0·1	+2·2	+1·7	+2·0	−0·7	+0·5
20. Central India, West	+1·3	+0·4	+1·1	−0·9	−4·9	−1·1	−1·5	−0·7	+2·1	+2·4	+2·5	+ ·1	+0·1
21. Do. do., East	−0·7	+0·1	+0·7	−1·0	−5·1	+0·5	−1·8	−0·5	+0·8	+1·7	+2·0	+0·3	−0·3
22. Berar	+1·1	−0·5	+0·5	+0·1	−2·5	+2·5	+0·2	+1·3	+3·2	+5·6	+3·7	+3·7	+1·6
23. Central Provinces, West	+0·3	−0·1	−0·1	−0·9	−4·1	+0·7	−1·5	−0·3	+1·3	+2·5	+1·5	+1·1	0
24. Do. do., East	−0·4	+0·2	+0·7	−1·1	−2·8	+2·5	−0·6	−0·1	+1·3	+2·3	+1·8	+1·1	+0·4
25. Konkan	+2·9	+1·3	+0·8	−0·3	+0·1	+0·5	+0·1	+0·1	+1·2	+1·5	+2·2	−0·6	+0·8
26. Bombay Deccan	+1·3	−0·3	+0·4	−0·2	−0·9	+0·2	+0·1	+0·5	+1·5	+2·5	+2·7	+1·3	+0·8
27. Hyderabad, North	+1·3	+0·1	+1·8	+0·5	−0·8	+1·9	+0·8	+2·0	+2·6	+4·9	+3·5	+2·0	+1·7
28. Do., South	+0·2	0	+1·1	+0·1	−0·4	+1·5	+1·0	+2·9	+2·5	+3·1	+2·9	+1·5	+1·4
29. Mysore	−0·3	+0·8	+1·5	+0·2	+0·6	+0·7	0	+0·3	+0·9	+1·0	+1·2	+0·3	+0·6
30. Malabar	+0·7	+0·4	+1·2	−0·2	+0·7	−0·9	−0·3	−0·7	0	+0·1	−0·2	−0·5	0
31. Madras, Southeast	+0·3	+1·1	+1·1	−0·5	+0·6	+0·1	+1·1	+0·3	+0·1	+0·7	−0·6	−0·7	+0·3
32. Do. Deccan	+0·3	+0·6	+0·9	+0·1	+0·1	+1·3	+1·1	+1·3	+0·8	+0·9	+1·9	+0·5	+0·8
33. Do. Coast, North	0	+1·5	+1·1	−0·7	−0·3	+0·3	+1·7	+1·5	+1·5	+0·2	+1·1	−0·2	+0·6

* Mean of 11 months.

Atmospheric pressure.

Full information regarding the types of barometers in use at Indian observatories and of the methods of reducing the observations and obtaining the mean daily and monthly pressures will be found on page 4 of the Monthly Review for January 1920.

In Table A, called Table II prior to 1907, of each Monthly Review, the monthly mean daily pressure (corrected for temperature) is given in the seventh column, and the departure from the normal in the eighth column. The normal monthly mean pressure values were recalculated in 1904 for all first and second class stations, and will be found in pages 66-69 of the "Indian Meteorological Memoirs," Volume XVII. The departure data in the Monthly Reviews for the year 1920 were obtained by a comparison of the actual monthly means with these normals; the departures of the monthly pressure of all first and second class stations in 1920 are given in Table 16. The figures in the seventh and eighth columns of Table A, appended to the present Annual Summary, giving data of the mean pressure of the air and its departure from the normal for all first and second class stations, are comparable with the corresponding data of previous years published in the Annual Reports and Annual Summaries.

In the ninth column of Table A in each Monthly Review are given the mean pressures reduced to sea-level and corrected to constant gravity (Lat. 45°). These are not directly comparable with the sea-level pressure values of the years 1875-90 as given in the Annual Reports for those years, for previous to 1891 no correction was made to reduce the monthly pressure means to standard gravity.

In Table B of each monthly Review, and also in that appended to the Annual Summary, are given the pressure data for 8 hours local time. The fourth column in that table gives the mean 8 hours pressures for the month corrected for temperature. In the fifth column are given the departures of these mean 8 hours pressures from the normal pressures.

The greater part of the normal 8 hours monthly means of pressure used in Table B have been deduced from the barometric observations of the whole of the twenty-two years' period 1889-1910, and in all except 24 cases the periods employed equalled or exceeded five years.

TABLE 16.—*Departure from normal of monthly and annual mean pressure of first and second class observatories in 1920.*

Division.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Years.
		″	″	″	″	″	″	″	″	″	″	″	″	″
Bengal	Calcutta	+·005	—·008	—·012	+·014	+·009	—·022	—·084	+·012	—·045	—·001	—·040	—·059	—·020
Punjab	Lahore	+·029	—·016	—·041	+·026	+·047	—·013	—·053	+·008	—·038	—·033	—·052	—·063	+·017
Rajputana	Jaipur	+·038	+·008	—·037	+·031	+·041	+·013	—·011	+·051	—·001	—·010	—·020	—·029	+·006
Bombay	Bombay	—·015	+·018	—·018	+·004	+·023	—·023	—·011	+·012	+·006	0	—·058	—·027	—·005
Mysore	Bangalore	+·010	+·023	—·003	+·021	+·031	+·001	+·017	+·036	+·001	+·009	—·017	—·002	+·011
Madras	Madras	—·010	0	—·018	+·007	+·003	—·013	—·011	+·015	—·019	—·006	—·050	—·017	—·010
Hill Stations, excluding Kashmir and Baluchistan.	Srinagar	+·107	+·008	—·033	—·004	—·006	—·003	—·058	+·014	—·020	+·006	—·030	—·053	—·006
	Katmandu	+·031	+·020	+·026	+·068	+·058	+·066	+·053	+·072	+·047	+·043	+·022	+·006	+·048
Extra India	Seychelles	+·013	+·028	—·003	+·011	—·013	+·020	+·019	+·035	...	...	...	—·007	...
	Mauritius	—·042	—·057	+·033	—·021	+·015	—·003	+·054	—·030	—·018	0	—·021	+·009	—·002

TABLE 17.—*Departure of the mean monthly and annual pressure from the normal in the fifteen chief political divisions of India in 1920.*

Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	"	"	"	"	"	"	"	"	"	"	"	"	"
Burma	+·025	+·017	+·007	+·004	—·014	—·025	—·036	—·006	—·034	+·018	—·031	—·056	—·011
Assam	+·018	—·006	+·009	+·028	—·010	—·023	—·044	—·011	—·022	+·025	—·024	—·053	—·009
Bengal	+·017	—·007	0	+·020	—·003	—·012	—·068	+·008	—·038	+·010	—·028	—·047	—·012
Bihar and Orissa	+·028	—·007	—·014	+·019	+·016	—·009	—·053	+·026	—·019	+·008	—·025	—·044	—·006
United Provinces	+·040	+·001	—·023	+·024	+·033	—·017	—·029	+·022	—·011	+·006	—·019	—·047	—·002
Punjab	+·038	—·001	—·040	+·031	+·046	—·006	—·034	+·013	—·024	—·015	—·035	—·050	—·006
North-West Frontier Province	+·031	—·006	—·051	+·037	+·042	+·002	—·059	—·001	—·043	—·021	—·041	—·059	—·014
Sind	+·029	+·013	—·058	+·033	+·040	—·017	—·034	+·036	—·006	—·009	—·035	—·034	—·003
Rajputana	+·035	+·013	—·047	+·030	+·032	—·008	—·019	+·052	+·004	—·010	—·028	—·035	+·002
Bombay	0	+·016	—·028	+·007	+·009	—·039	—·013	+·042	+·004	+·001	—·043	—·020	—·005
Central India	+·027	+·004	—·042	+·015	+·024	—·015	—·025	+·036	+·003	—·004	—·029	—·035	—·003
Central Provinces	+·022	+·009	—·029	+·017	+·022	—·006	—·016	+·046	+·010	0	—·027	—·033	+·001
Hyderabad	+·019	+·025	—·014	+·016	+·012	—·001	+·003	+·045	+·010	+·007	—·033	—·025	+·005
Mysore	+·001	+·021	—·011	+·004	+·009	—·009	+·004	+·028	—·005	+·001	—·034	—·011	0
Madras	0	+·012	—·013	+·009	+·006	—·004	+·005	+·029	—·003	0	—·041	—·010	—·001
Mean of India	+·022	+·008	—·021	+·017	+·015	—·014	—·027	+·024	—·012	+·003	—·032	—·038	—·005

Storms.

Two storms occurred in the Arabian Sea and one in the Bay of Bengal. The dates on which they occurred and their intensities are given below; other details about them have been given in the weather reviews of the respective months.

TABLE 18.

Month.	Date.	Bay or Arabian Sea.	Greatest observed barometric depth.	Intensity.
			"	
April—May .	28th April to 6th May.	Bay	0·4	Slight.
June . .	6—15	Arabian Sea.	1·4	Severe.
November .	20—28	"	...	"

Winds of force nine or more were recorded on ships in the Indian seas during the year 1920 on the dates and at the places given below.

TABLE 19.

Month and date.	Name of ship.	Approximate position.		Remarks.*
		Latitude.	Longitude.	
1920.		°	°	
25th February .	Trewellard . .	15	42	
5th May . .	Burma Maru . .	6	84	
10th June . .	Rotenfels . .	21	68	
11th " . .	Ditto . .	20	69	
12th " . .	Ditto . .	19	70	
23rd " . .	Baron Elcho . .	13	55	
24th " . .	Ditto . .	12	58	
30th June . .	Maidan . . .	13	55	
7th July . .	Morca . . .	16	59	10 Force.
7th " . .	Scindia . . .	15	58	10 "
8th " . .	Ditto . . .	16	62	
8th " . .	Nellore . . .	16	74	
13th " . .	Zira . . .	19	91	
13th " . .	Oolobaria . .	21	63	
13th " . .	Inventor . .	13	56	
14th " . .	Oolobaria . .	20	65	
15th " . .	Ditto . .	18	67	
18th " . .	Eskbridge . .	16	59	
20th " . .	Clan Macinnes .	13	54	
21st " . .	Ditto . .	14	57	
22nd " . .	Ditto . .	15	62	
23rd " . .	Ditto . .	16	66	
23rd " . .	Khiva . . .	16	59	
24th " . .	Ditto . . .	17	64	
30th " . .	Narkunda . .	16	57	
5th August .	Gregory Apear .	18	91	
22nd November .	Clan Macquarria .	10	61	10 Force.
23rd " .	Ditto . .	9	64	10 "

* No remarks are given, when the wind force recorded was nine.

Surface and upper air winds.

Surface.—The mean direction of the wind and the mean diurnal movement of the air as measured by Robinson anemometers are given for all second class stations in Table A in each Monthly Weather Review. The normal values are also stated for the sake of ready comparison. The normal data of these elements, utilized in Table A of the Monthly Weather Reviews of the year 1920, will be found in a collected form in Tables XXII, XXVI and XXVII of Vol. XVII of Indian Meteorological Memoirs. The mean 8 hours wind directions for each month are charted in the first plate and are given in Table B, in each Monthly Review; they are calculated in the usual manner by finding the resultant, irrespective of velocity, of the directions actually observed each day at 8 hours. As a general rule, the mean 8 hours wind directions vary little from the mean wind directions (calculated from the 10 and 16 hours mean wind data) in Table A of the Monthly Reviews, but in some areas and at certain seasons of the year they differ very considerably. The normal values used in Table B have been published in Volume XVII of the departmental Memoirs.

Up to 1911 the factor representing the ratio of air movement to travel of Beckley cups had in India, as in other countries, been taken as 3·0; but as in that year it had been generally accepted that the factor should be 2·2, the change to 2·2 was made in the Monthly Weather Review of January 1912 (see note on page 8 there).

The monthly peculiarities of the air movement have already been dealt with in the Monthly Weather Reviews.

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore, and for some months at other stations have been given in the Monthly Weather Reviews. The results are based upon observations of Balloons by a single theodolite, heights being determined by the tail method. Details of the method will be published in a separate memoir.

Humidity.

The departures from normal of the mean monthly and annual aqueous vapour pressure and relative humidity for stations in Table A, for the year 1920, are given in Tables 20 and 21. The normal values employed in the determination of the departures are given in Tables XXX and XXXIII of the Indian Meteorological Memoirs, Volume XVII. The Tables 22 and 23 give departure data of 8 hours' aqueous vapour pressure and relative humidity for each month of the year and for the year for the fifteen chief political divisions.

Normal values for most of the stations in Table B, have been derived from the 8 hours' records of the period 1889—1910 and are given in Part III, Volume XXII of Meteorological Memoirs.

TABLE 20.—*Departure of the monthly and annual mean vapour pressure data of 1920 from the average of past years.*

Division.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
Bengal	Calcutta	−·003	+·040	+·064	+·047	−·064	−·027	+·009	−·024	−·004	+·037	+·002	−·045	+·003
Punjab	Lahore	+·039	+·014	+·040	−·028	−·039	−·016	−·017	−·085	−·036	−·004	+·039	−·041	−·011
Rajputana	Jaipur	−·017	−·033	−·045	−·090	−·125	+·038	+·016	−·076	−·100	−·080	−·031	−·084	−·052
Bombay	Bombay	+·071	−·040	−·028	−·045	−·053	−·042	−·049	−·054	−·026	−·026	−·050	−·060	−·033
Mysore	Bangalore	+·048	+·005	−·020	−·022	−·051	−·013	−·010	−·026	+·010	+·001	+·028	−·079	−·011
Madras	Madras	+·040	+·030	−·001	−·024	−·040	−·054	−·053	−·077	−·047	+·005	+·040	−·087	−·022
Hill Stations, including Kashmir and Baluchistan.	Srinagar	−·003	−·010	−·020	−·018	−·132	−·067	+·013	−·063	−·056	−·011	−·027	−·022	−·035
	Katmandu	−·008	−·007	−·021	−·080	−·106	−·035	+·026	−·002	−·016	−·002	−·008	+·007	−·021
Extra India	Seychelles	−·011	−·011	−·001	−·041	−·006	−·029	−·015	+·002	...	...	...	−·001	...
	Mauritius	−·006	−·012	−·021	−·033	+·009	−·051	−·021	+·006	+·015	+·006	−·033	−·027	−·014

TABLE 21.—*Departure of the monthly and annual mean relative humidity data of 1920 from the average of past years.*

Division.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Bengal	Calcutta	− 5	+ 2	+ 5	+ 2	− 7	− 9	+ 1	− 3	− 3	− 1	− 5	− 8	− 3
Punjab	Lahore	+ 6	+ 4	+ 8	0	+ 4	− 3	− 8	−10	− 6	− 3	0	− 8	− 1
Rajputana	Jaipur	− 4	− 4	− 4	− 7	− 3	+ 7	+ 4	−10	−16	−11	− 8	−14	− 6
Bombay	Bombay	+ 2	− 5	− 4	− 5	− 5	− 6	− 3	− 8	− 6	− 7	− 8	− 7	− 5
Mysore	Bangalore	+ 7	− 1	− 2	0	− 5	− 2	− 1	− 5	− 1	− 1	+ 2	−11	− 2
Madras	Madras	+ 1	− 2	− 2	− 3	− 3	− 6	−10	− 9	−10	− 2	+ 2	−11	− 5
Hill Stations, excluding Kashmir and Baluchistan.	Srinagar	+ 5	+ 7	+ 3	+ 4	−10	−10	−13	−11	−10	−12	−12	− 6	− 5
	Katmandu	− 6	− 4	− 6	−13	−13	− 9	− 2	− 1	− 2	− 3	− 3	− 1	− 5
Extra India	Seychelles	− 3	−13	− 3	− 5	− 2	− 7	− 2	− 1	...	...	...	0	...
	Mauritius	− 2	+ 1	− 2	− 2	+ 3	− 3	− 1	+ 1	+ 4	+ 1	− 1	− 1	0

TABLE 22.—*Departure of the mean monthly and annual aqueous vapour pressure from the normal in the fifteen chief political divisions of India in 1920.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	"	"	"	"	"	"	"	"	"	"	"	"	"
Burma	−·001	−·006	+·003	−·043	−·028	−·023	0	−·005	−·007	−·026	−·026	+·007	−·013
Assam	+·022	+·009	+·033	−·016	−·033	−·018	+·013	−·018	−·024	−·003	−·015	+·044	−·001
Bengal	−·008	+·017	+·035	−·002	−·046	−·017	+·001	−·018	−·014	+·012	−·007	−·017	−·005
Bihar and Orissa	−·021	−·008	+·072	−·030	−·077	−·058	+·009	−·019	−·010	+·024	−·004	−·060	−·015
United Provinces	−·004	−·009	+·012	−·104	−·126	−·052	+·013	−·055	−·052	−·013	−·016	−·064	−·039
Punjab	+·024	+·006	−·007	−·064	−·094	−·031	+·016	−·102	−·069	−·016	−·008	−·056	−·033
North-West Frontier Province	+·025	+·006	+·005	−·063	−·115	+·005	+·027	−·106	−·011	+·022	+·013	−·023	−·018
Sind	+·020	+·025	+·017	−·072	−·083	−·010	0	−·030	+·012	−·011	−·030	−·075	−·020
Rajputana	+·017	+·009	−·012	−·103	−·147	+·043	−·010	−·089	−·111	−·064	−·058	−·076	−·050
Bombay	+·089	+·012	+·039	−·041	−·030	−·004	−·006	−·037	+·004	−·014	−·032	−·056	−·006
Central India	+·043	+·014	+·070	−·033	−·048	−·055	+·010	−·039	−·033	−·065	−·056	−·071	−·022
Central Provinces	+·032	−·034	−·004	−·022	−·083	−·062	−·036	−·055	−·032	−·081	−·082	−·120	−·048
Hyderabad	+·035	−·048	+·040	−·043	−·017	−·035	−·019	−·050	−·024	−·038	−·041	−·105	−·029
Mysore	+·021	−·023	+·005	−·009	−·053	−·010	−·014	−·023	+·002	−·002	+·048	−·023	−·007
Madras	+·031	+·014	+·029	−·007	−·025	−·003	−·022	−·021	+·004	+·020	+·040	−·030	+·003
Mean of India	+·021	−·001	+·020	−·045	−·064	−·023	−·003	−·042	−·027	−·020	−·022	−·048	−·021

TABLE 23.—*Departure of the mean monthly and annual relative humidity from the normal in the fifteen chief political divisions of India in 1920.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma	−1	−1	−1	−4	−2	−3	0	−1	−1	−1	−2	−4	−2
Assam	−2	−1	+5	+1	−2	−1	−2	−1	−1	0	−2	−2	−1
Bengal	−3	+2	+6	+3	−3	−3	0	−2	−1	+1	−2	−5	−1
Bihar and Orissa	−4	−2	+9	−2	−4	−7	+3	−2	−1	−2	−6	−10	−2
United Provinces	+1	−2	+1	−10	−5	−8	+4	−6	−8	−7	−7	−15	−5
Punjab	+8	+2	+1	−5	+1	+1	−2	−9	−10	−6	−5	−16	−3
North-West Frontier Province	+7	+3	−1	+3	+3	+5	−1	−8	−2	+3	−1	−6	0
Sind	−2	+3	−2	−6	−4	−2	−3	−4	−2	−2	−8	−14	−4
Rajputana	+4	+1	−1	−8	−3	+9	+4	−4	−11	−9	−10	−14	−3
Bombay	+7	+2	+4	−2	+1	+1	0	−3	−2	−2	−7	−7	−1
Central India	+7	+4	+6	−3	+2	−6	+5	−5	−7	−13	−10	−17	−3
Central Provinces	+3	−6	−2	−2	−1	−7	−2	−7	−8	−14	−16	−22	−7
Hyderabad	+4	−5	+1	−4	−3	−5	−2	−8	−7	−9	−13	−16	−6
Mysore	+3	−3	0	+1	−4	−1	−2	−2	−1	−2	+6	−7	−1
Madras	+2	0	+1	+1	−1	0	−4	−2	0	+2	+5	−1	0
Mean of India	+2	0	+2	−3	−2	−3	0	−4	−4	−4	−5	−10	−3

Cloud.

Normal values of the mean monthly and annual amount of cloud at stations in Table A have been obtained from the whole of the available data up to the end of the year 1899 and given in Tables XXXV and XXXVI of the Indian Meteorological Memoirs, Volume XVII. These means are the arithmetical averages of the cloud amounts as registered at 10 and 16 hours, and hence represent the mean amount during the day period rather than of the whole 24 hours.

The normals used in Table B are in the case of the majority of stations based on the 8 hours' records of the period 1889—1910, and are given in Volume XXII, Part III, of the Memoirs.

Departure data of this element of meteorological observation for first and second class stations for the year 1920 are given in Table 24. Table 25 gives the departures of the 8 hours cloud for the fifteen chief political divisions of India.

TABLE 24.—*Departure of the monthly and annual mean cloud amount of 1920 from the average of past years.*

DIVISION.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Bengal	Calcutta	+1·2	−0·1	+1·4	+0·6	−0·6	−0·5	+0·9	0	0	+0·3	−0·8	−1·7	+0·1
Punjab	Lahore	−0·1	−0·1	+0·7	+0·2	−0·3	−1·6	−1·7	−2·3	−1·6	−0·8	−1·0	−0·5	−0·8
Rajputana	Jaipur	−0·9	−0·8	+1·4	−0·8	+0·8	+0·1	+0·7	−2·5	−1·8	−1·4	−0·4	−1·4	−0·6
Bombay	Bombay	+1·0	−0·9	−0·4	−0·7	−0·3	−0·2	+0·6	−1·5	−1·1	+0·4	+0·3	−1·6	−0·4
Madras	Madras	+0·4	−1·5	+0·4	+0·6	−0·1	−1·5	+0·2	−0·6	+0·2	+0·3	+1·5	−2·5	−0·2
Hill Stations, excluding Kashmir and Baluchistan.	Srinagar	+2·8	+0·9	+2·3	+2·0	+1·5	+0·4	−1·5	−0·3	−1·3	−0·4	0	−0·1	+0·5
	Katmandu	−0·3	+1·5	+1·6	−0·5	+0·1	−0·1	−0·1	−0·5	−0·2	+0·1	0	−0·7	+0·1
Extra India	Seychelles	+0·1	−1·1	−0·6	+0·6	+1·2	−1·3	+0·3	−0·8	...	...	...	−0·4	...
	Mauritius	+0·4	+1·7	+0·1	+2·0	+0·6	+0·3	+1·3	+0·9	+0·1	+0·2	+0·4	+0·5	+0·7

TABLE 25.—*Departure of the mean monthly and annual cloud amount from normal in the fifteen chief political divisions of India in 1920.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma	+1·7	+0·2	+1·1	+0·2	0	+0·1	+0·6	+0·1	+0·5	+0·6	0	+0·4	+0·5
Assam	+1·0	+0·9	+2·6	−0·2	−1·3	−0·4	−1·5	−0·8	−1·0	+0·2	−0·2	+1·3	+0·1
Bengal	+0·9	+0·9	+1·6	+0·2	−0·8	−0·1	+0·2	+0·1	−0·4	+0·1	−0·5	−1·0	+0·1
Bihar and Orissa	+1·0	+0·1	+1·7	+0·3	+0·2	0	+1·3	+0·1	0	0	0	−1·0	+0·3
United Provinces	−0·2	−0·6	+1·6	−0·8	+0·2	−1·0	+1·0	−1·7	−1·7	−1·0	−0·1	−0·9	−0·4
Punjab	−0·7	−0·6	−0·1	−0·1	+0·5	+0·2	−0·9	−2·0	−1·0	−0·3	−0·6	−0·9	−0·5
North-West Frontier Province	−0·4	−0·1	−0·5	−0·6	+0·1	0	−1·2	−1·6	−0·5	−0·3	−0·9	−0·6	−0·5
Sind	−1·7	−1·0	−0·8	−1·3	−0·2	−0·8	−1·4	−1·0	−0·2	−0·4	−0·9	−1·1	−0·9
Rajputana	+0·1	−0·9	+0·6	−0·9	+0·9	+0·8	+0·2	−2·2	−1·8	−0·8	−0·3	−1·1	−0·5
Bombay	+1·0	−0·5	0	+0·3	+0·3	−0·2	+0·3	−0·6	−0·4	+0·4	+0·5	−1·0	0
Central India	+0·1	−0·9	+0·6	−0·5	−0·1	−0·6	+0·9	−1·3	−2·5	−1·3	0	−1·0	−0·5
Central Provinces	+1·0	−1·1	+0·2	+0·3	+0·6	−0·8	+0·6	−0·9	−1·5	+0·1	+0·1	−1·1	−0·2
Hyderabad	+0·7	−0·6	−0·1	+0·7	−0·1	−1·7	+0·1	−1·7	−0·4	+0·6	+1·1	−1·3	−0·2
Mysore	+0·1	−0·8	+0·5	+1·8	−0·9	−1·2	0	−0·7	−0·5	−0·9	+1·6	−2·9	−0·3
Madras	+0·3	−0·7	+0·4	+1·0	−0·2	−0·8	+0·1	−0·4	−0·4	+0·3	+1·7	−1·8	0
Mean of India	+0·5	−0·4	+0·7	+0·1	+0·1	−0·3	+0·2	−0·9	−0·7	−0·1	+0·1	−0·8	−0·1

Snowfall.

(*A*).—*The cold weather of 1919-20 and the succeeding hot weather*:—

(*a*) In Persia the winter rains began unusually late in the second week of December and in northern Persia they continued into June. Owing mainly to heavy falls throughout the country in December, January and February, and in northern Persia in April and May, the total precipitation of the period was much above normal.

(*b*) Unprecedentedly heavy snowfall was reported in Afghanistan during May; this was corroborated by the May temperature of north Baluchistan which was almost the lowest on record.

(*c*) In Baluchistan the winter precipitation began late and was much below normal in February; it was nearly normal or in excess in the other months. From November to March its amount was in defect by 1·2″. But in April and May there was an excess adding up to 0·3″.

(*d*) In the North-West Frontier Province the winter precipitation began later than usual, but the total, as measured at the observatories, up to the end of March was roughly normal; in April the amounts at the hill stations were above normal, but in May they were in defect. According to the reports from local officers unusually late falls of snow occurred in May in the Tochi hills; and the Samana range received appreciably more snow than usual during the first three months of the year. No information is available about snow accumulation.

(*e*) In Kashmir precipitation was in defect in November and January, nearly normal in February and May, and in large excess in March and April. The month of May was unusually cold and at the end of the month the snow accumulations on the mountains were unusually heavy. As seen from Leh the snowline was at about 13,000 feet and the passes to northern regions were still closed for traffic at the end of May.

(*f*) In Chamba the accumulations of snow were unusually heavy and none of the passes into Pangi had been crossed by the 22nd of May. On three days during May snow fell as low as 8,000 feet. In Kulu winter condition continued until the end of May and snow was falling intermittently as low as 8,500 feet. The snow accumulations were much greater than usual. On the ranges near Kilba the snow accumula-

tions were practically normal at the end of March, but very much above normal at the end of May. Eighteen inches of snow fell at 9,000 feet about the 22nd May in Chini.

(*g*) The snowfall in Garhwal was heavier than usual during May. In the Almora hills it was below the average till the end of April, but owing to heavy falls and low temperatures during May the accumulation at the end of the month was roughly normal.

(*h*) In the eastern Himalayas snowfall was very much heavier than usual on the ranges bordering on north Lakhimpur and in the Balipara and Sadiya frontier tracts.

On the whole it appears that over the mountain area from Persia to Almora the winter precipitation began late and continued until the end of May. The snow accumulations at the end of May were probably much above normal in north Persia, Afghanistan, Kashmir and the Punjab Himalayas: but in Almora they were roughly normal.

(*B*).—*The south-west monsoon period, June to September:*—

During June snowfall was in defect in Kashmir, and in excess in the Punjab and roughly normal in the United Provinces Himalayas.

In July snowfall was in defect almost everywhere, but the accumulations at the end of the month were above normal in the Punjab, the United Provinces and the eastern Himalayas.

In August little or no snow fell in Kashmir. In the Almora district the accumulations at the end of the month were below the average on the lower ranges, and above it on the higher mountains.

During September light snow fell occasionally in Kashmir. In the Almora hills a fairly normal amount of snow fell, but the accumulations at the end of the month were below normal.

(*C*).—*The period October to December:*—

The total snowfall of October was below the average over the greater part of the Himalayas.

In November snowfall was much lighter than usual in the western Himalayas.

During December the weather was unusually dry and the snowfall of the month was below the average except in parts of Almora, where it was above normal.

Rainfall.

The rainfall data of India are now issued annually in a separate volume entitled "Rainfall of India." The twenty-eighth volume, that of 1920, contains the whole rainfall data of 2,917 stations which are there classified under their respective administrative divisions according to the following scheme:—

Province.	Number of stations.
Burma	215
Assam	125
Bengal	245
Bihar and Orissa	306
United Provinces of Agra and Oudh	274
Punjab	192
Kashmir	39
North-West Frontier Province	33
Baluchistan	84
Rajputana	182
Bombay	289
Central India	126
Central Provinces	188
Hyderabad	19
Mysore	77
Coorg	10
Madras (including Puddukkottai, Travancore and Cochin)	513
Total	2,917

The information includes monthly statements of—

(*a*) the actual rainfall, day by day, of all the rainfall stations;

(*b*) the total rainfall of the month;

(*c*) the number of rainy days during the month;

(*d*) the average or normal rainfall of the month of all stations for which rainfall data of at least five years are available;

(*e*) the average or normal number of rainy days of the month for all stations for which rainfall data of five years or upwards are available.

Symon's rain-gauges are now used at all rain-gauge stations with the exception of those in Mysore. The time of measuring rainfall is 8 hours by local time throughout India, and the amounts registered give the rainfall of the previous 24 hours, and hence generally of the previous civil day.

The Tables 26 to 28 give summaries of the rainfall data of the year. The first and second tables give average rainfall data based on the returns of about 2,400 rain-gauge stations for the 15 chief political divisions and the 33 sub-divisions, respectively, while the third table (Table 28) contains data of the number of rainy days for the 33 sub-divisions for the four seasons into which the year has been divided.

The normals employed in this section are based on all the available records ending in 1915.

TABLE 26.—*Average over the 15 chief political divisions of the actual and normal rainfall for the four seasons of the year 1920, and for the whole year.*

Division.	January and February.				March to May.				June to September.				October to December.				Whole year.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"		"	"	"		"	"	"		"	"	"		"	"	"	
Burma	0·35	0·31	+0·04	+ 13	7·63	10·54	−2·91	−28	59·19	59·80	−0·61	− 1	8·39	9·23	−0·84	− 9	75·56	79·88	−4·32	− 5
Assam	2·47	2·22	+0·25	+ 11	26·84	26·75	+0·09	0	63·33	64·33	−1·00	− 2	4·84	6·62	−1·78	− 27	97·48	99·92	−2·44	− 2
Bengal	1·71	1·38	+0·33	+ 24	12·56	13·03	−0·47	− 4	55·38	54·65	+0·73	+ 1	6·73	5·72	+1·01	+ 18	76·38	74·78	+1·60	+ 2
Bihar and Orissa	0·88	1·48	−0·60	− 41	3·88	4·12	−0·24	− 6	45·47	42·13	+3·34	+ 8	0·87	3·52	−2·65	− 75	51·10	51·25	−0·15	0
United Provinces	0·64	1·58	−0·94	− 59	1·30	1·41	−0·11	− 8	28·54	33·45	−4·91	−15	0·10	1·84	−1·74	− 95	30·58	38·28	−7·70	−20
Punjab	1·43	2·05	−0·62	− 30	1·93	1·92	+0·01	+ 1	10·07	15·09	−5·02	−33	0·08	0·77	−0·69	− 90	13·51	19·83	−6·32	−32
North-West Frontier Province	2·46	2·87	−0·41	− 14	3·92	4·50	−0·58	−13	4·17	8·14	−3·97	−49	0·21	1·31	−1·10	− 84	10·76	16·82	−6·06	−36
Sind	0·43	0·54	−0·11	− 20	0·67	0·47	+0·20	+43	1·01	5·33	−4·32	−81	0·01	0·17	−0·16	− 94	2·12	6·51	−4·39	−67
Rajputana	0·46	0·65	−0·19	− 29	1·61	0·81	+0·80	+99	15·90	18·45	−2·55	−14	0	0·72	−0·72	−100	17·97	20·63	−2·66	−13
Bombay	1·23	0·17	+1·06	+624	1·34	1·42	−0·08	− 6	29·87	40·49	−10·62	−26	1·28	3·24	−1·96	− 60	33·72	45·32	−11·60	−26
Central India	0·90	0·81	+0·09	+ 11	0·96	0·78	+0·18	+23	24·83	31·40	− 6·57	−21	0	1·36	−1·36	−100	26·69	34·35	−7·66	−22
Central Provinces	1·11	1·07	+0·04	+ 4	1·38	1·56	−0·18	−12	27·87	39·82	−11·95	−30	0·03	2·50	−2·47	− 99	30·39	44·95	−14·56	−32
Hyderabad	0·86	0·35	+0·51	+146	1·56	1·76	−0·20	−11	14·54	26·71	−12·17	−46	0·69	3·68	−2·99	− 81	17·65	32·50	−14·85	−46
Mysore	0·43	0·22	−0·21	+ 95	3·76	5·38	−1·62	−30	19·68	22·44	−2·76	−12	4·96	8·05	−3·09	− 38	28·83	36·09	−7·26	−20
Madras	3·26	0·96	+2·30	+240	5·41	5·82	−0·41	− 7	28·20	28·23	−0·03	0	19·16	15·31	+3·85	+ 25	56·03	50·32	+5·71	+11
Mean of India	1·19	1·00	+0·19	+ 19	4·28	4·69	−0·41	− 9	30·72	35·03	−4·31	−12	3·98	4·87	−0·89	− 18	40·17	45·59	−5·42	−12

TABLE 27.—*Average over the 33 sub-divisions of the actual and normal rainfall for the four seasons of the year 1920, and for the whole year.*

Sub-division.	January and February.				March to May.				June to September.				October to December.				Whole year.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"		"	"	"		"	"	"		"	"	"		"	"	"	
1. Bay Islands	2·77	1·45	+1·32	+91	5·95	10·80	−4·85	−45	49·07	49·43	− 0·36	− 1	15·65	16·19	−0·54	− 3	73·44	77·87	−4·43	− 6
2. Lower Burma	0·50	0·41	+0·09	+22	10·07	15·22	−5·15	−34	112·42	105·89	+ 6·53	+ 6	11·99	11·06	+0·93	+ 8	134·98	132·58	+ 2·40	+ 2
3. Upper Burma	0·25	0·24	+0·01	+ 4	6·04	7·48	−1·44	−19	24·42	29·68	− 5·26	−18	5·79	7·91	−2·12	−27	36·50	45·31	− 8·81	−19
4. Assam	2·47	2·22	+0·25	+11	26·84	26·75	+0·09	0	63·33	64·33	− 1·00	− 2	4·84	6·62	−1·78	−27	97·48	99·92	− 2·44	− 2
5. Bengal	1·71	1·38	+0·33	+24	12·56	13·03	−0·47	− 4	55·38	54·65	+ 0·73	+ 1	6·73	5·72	+1·01	+18	76·38	74·78	+ 1·60	+ 2
6. Orissa	1·17	1·48	−0·31	−21	5·98	5·63	+0·35	+ 6	50·05	44·53	+ 5·52	+12	2·73	5·77	−3·04	−53	59·93	57·41	+ 2·52	+ 4
7. Chota Nagpur	0·84	2·03	−1·19	−59	4·42	3·69	+0·73	+20	50·95	42·13	+ 8·82	+21	0·13	2·80	−2·67	−95	56·34	50·65	+ 5·69	+11
8. Bihar	0·77	1·21	−0·44	−36	2·69	3·62	−0·93	−26	40·90	41·09	− 0·19	0	0·35	2·83	−2·48	−88	44·71	48·75	− 4·04	− 8
9. United Provinces, East	0·47	1·21	−0·74	−61	1·03	1·21	−0·18	−15	30·05	34·42	− 4·37	−13	0·09	2·38	−2·29	−96	31·64	39·22	− 7·58	−19
10. Do. do., West	0·79	1·90	−1·11	−58	1·52	1·57	−0·05	− 3	27·24	32·62	− 5·38	−16	0·11	1·37	−1·26	−92	29·66	37·46	− 7·80	−21
11. Punjab, East and North	1·58	2·35	−0·77	−33	2·03	2·07	−0·04	− 2	11·92	17·78	− 5·86	−33	0·09	0·90	−0·81	−90	15·62	23·10	− 7·48	−32
12. Do., Southwest	0·97	1·10	−0·13	−12	1·59	1·50	+0·09	+ 6	4·15	6·49	− 2·34	−36	0·06	0·39	−0·33	−85	6·77	9·50	− 2·73	−29
13. Kashmir	6·69	8·02	−1·33	−17	12·64	9·71	+2·93	+30	11·68	21·45	− 9·77	−46	1·41	3·42	−2·01	−59	32·42	42·60	−10·18	−24
14. North-West Frontier Province.	2·46	2·87	−0·41	−14	3·92	4·50	−0·58	−13	4·17	8·14	− 3·97	−49	0·21	1·31	−1·10	−84	10·76	16·82	− 6·06	−36
15. Baluchistan	1·99	2·95	−0·96	−33	1·76	2·33	−0·57	−24	0·82	2·32	− 1·50	−65	0·34	1·30	−0·96	−74	4·91	8·90	− 3·99	−45
16. Sind	0·43	0·54	−0·11	−20	0·67	0·47	+0·20	+43	1·01	5·33	− 4·32	−81	0·01	0·17	−0·16	−94	2·12	6·51	− 4·39	−67
17. Rajputana, West	0·17	0·48	−0·31	−65	2·13	0·67	+1·46	+218	8·17	10·31	− 2·14	−21	0	0·39	−0·39	−100	10·47	11·85	− 1·38	−12
18. Do., East	0·62	0·74	−0·12	−16	1·40	0·86	+0·54	+63	19·35	22·17	− 2·82	−13	0·01	0·85	−0·84	−99	21·38	24·62	− 3·24	−13
19. Gujarat	1·51	0·16	+1·35	+844	1·78	0·28	+1·50	+536	22·92	31·10	− 8·18	−26	0	0·90	−0·90	−100	26·21	32·44	− 6·23	−19
20. Central India, West	1·36	0·60	+0·76	+127	0·50	0·71	−0·21	−30	25·06	29·57	− 4·51	−15	0	1·21	−1·21	−100	26·92	32·09	− 5·17	−16
21. Do. do., East	0·16	1·16	−1·00	−86	1·30	0·94	+0·36	+38	24·53	34·72	−10·19	−29	0	1·60	−1·60	−100	25·99	38·42	−12·43	−32
22. Berar	2·07	0·64	+1·43	+223	0·27	1·02	−0·75	−74	13·63	28·24	−14·61	−52	0·03	2·48	−2·45	−99	16·00	32·38	−16·38	−51
23. Central Provinces, West	1·73	1·11	+0·62	+56	1·20	1·28	−0·08	− 6	29·99	40·60	−10·61	−26	0	2·38	−2·38	−100	32·92	45·37	−12·45	−27
24. Do. do., East	0·16	1·30	−1·14	−88	2·17	2·07	+0·10	+ 5	35·01	46·34	−11·33	−24	0·04	2·59	−2·55	−98	37·38	52·30	−14·92	−39
25. Konkan	0·64	0·13	+0·51	+392	0·81	1·74	−0·93	−53	72·87	101·85	−28·98	−28	2·68	4·93	−2·25	−46	77·00	108·65	−31·65	−29
26. Bombay Deccan	1·25	0·19	+1·06	+558	1·24	2·07	−0·83	−40	18·83	24·55	− 5·72	−23	1·61	4·13	−2·52	−61	22·93	30·94	− 8·01	−26
27. Hyderabad, North	0·89	0·33	+0·56	+170	0·70	1·48	−0·78	−53	14·54	29·24	−14·70	−50	0·15	3·43	−3·28	−96	16·28	34·48	−18·20	−53
28. Do., South	0·83	0·38	+0·45	+118	2·53	2·08	+0·45	+22	14·53	23·89	− 9·36	−39	1·30	3·96	−2·66	−67	19·19	30·31	−11·12	−37
29. Mysore	0·43	0·22	+0·21	+95	3·76	5·38	−1·62	−30	19·68	22·44	− 2·76	−12	4·96	8·05	−3·09	−38	28·83	36·09	− 7·26	+20
30. Malabar	1·65	1·09	+0·56	+51	11·22	12·31	−1·09	− 9	83·79	72·14	+11·65	+16	25·82	19·74	+6·08	+31	122·48	105·28	+17·20	+16
31. Madras, Southeast	5·73	1·23	+4·50	+366	4·48	4·37	+0·11	+ 3	11·39	11·71	− 0·32	− 3	24·58	17·65	+7·23	+41	46·48	34·96	+11·52	+33
32. Do., Deccan	1·16	0·26	+0·84	+323	1·26	2·46	−1·20	−49	10·67	15·12	− 4·45	−29	3·91	6·57	−2·66	−40	16·94	24·41	− 7·47	−31
33. Do., Coast, North	1·13	0·69	+0·44	+64	3·60	3·49	+0·11	+ 3	17·48	25·24	− 7·76	−31	9·63	10·94	−1·31	−12	31·84	40·36	− 8·52	−21

TABLE 28.—*Average over the 33 sub-divisions of the actual and normal number of rainy days for the four seasons of the year 1920, and for the whole year.*

Sub-division.	January and February.			March to May.			June to September.			October to December.			Whole year.		
	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.
1. Bay Islands	3·0	1·9	+1·1	9·0	13·3	−4·3	57·7	62·2	−4·5	22·3	20·0	+ 2·3	92·0	97·4	−5·4
2. Lower Burma	0·7	0·8	−0·1	12·5	16·2	−3·7	90·8	91·1	−0·3	15·0	14·6	+0·4	119·0	122·7	−3·7
3. Upper Burma	0·9	0·7	+0·2	7·4	11·2	−3·8	35·5	42·2	−6·7	8·6	11·3	−2·7	52·4	65·4	−13·0
4. Assam	5·1	5·0	+0·1	38·8	32·9	+5·9	68·2	67·9	+0·3	7·2	8·9	−1·7	119·3	114·7	+4·6
5. Bengal	3·0	2·5	+0·5	14·8	16·3	−1·5	58·2	59·4	−1·2	5·3	6·4	−1·1	81·3	84·6	−3·3
6. Orissa	2·0	2·5	−0·5	5·5	9·3	−3·8	53·1	53·8	−0·7	3·0	6·8	−3·8	63·9	72·4	− 8·5
7. Chota Nagpur	2·2	3·7	−1·5	9·1	7·0	+2·1	53·6	51·7	+1·9	0·3	4·4	−4·1	65·2	66·8	− 1·6
8. Bihar	1·9	2·7	−0·8	4·9	5·9	−1·0	45·7	44·4	+1·3	0·7	3·5	−2·8	53·2	56·5	−3·3
9. United Provinces, East	1·4	2·7	−1·3	2·5	2·7	−0·2	36·9	37·9	−1·0	0·2	2·6	−2·4	41·0	45·9	−4·9
10. Do. do., West	2·3	3·7	−1·4	3·8	3·4	+0·4	28·9	33·6	−4·7	0·2	1·9	−1·7	35·2	42·6	−7·4
11. Punjab, East and North	3·5	4·5	−1·0	4·8	4·4	+0·4	14·6	19·5	−4·9	0·3	1·7	−1·4	23·2	30·1	−6·9
12. Do., Southwest	2·4	2·7	+0·3	4·6	3·6	+1·0	5·9	5·4	−2·5	0·2	0·9	−0·7	13·1	15·6	−2·5
13. Kashmir	10·9	10·8	+0·1	18·9	15·3	+3·6	18·6	24·6	−6·0	2·8	5·7	−2·9	51·2	56·4	−5·2
14. North-West Frontier Province	6·2	5·7	+0·5	8·6	9·0	−0·4	7·9	11·7	−3·8	0·9	2·5	−1·6	23·6	28·9	−5·3
15. Baluchistan	5·0	6·3	−1·3	4·3	5·5	−1·2	1·8	4·0	−2·2	0·8	3·1	−2·3	11·9	18·9	−7·0
16. Sind	1·4	1·5	−0·1	1·9	1·0	+0·9	1·9	6·1	−4·2	0·1	0·3	−0·2	5·3	8·9	−3·6
17. Rajputana, West	0·7	0·9	−0·2	3·9	1·6	+2·3	10·0	13·7	−3·7	0	0·8	−0·8	14·6	17·0	−2·4
18. Do., East	1·6	1·8	−0·2	2·8	2·2	+0·6	21·8	27·1	−5·3	0	1·4	−1·4	26·2	32·5	−6·3
19. Gujarat	1·7	0·3	+1·4	3·2	0·6	+2·6	29·9	34·5	−4·6	0	1·3	−1·3	34·8	36·7	−1·9
20. Central India, West	2·0	1·3	+0·7	1·6	1·7	−0·1	29·2	34·8	−5·6	0	2·0	−2·0	32·8	39·8	− 7·0
21. Do. do., East	0·6	2·5	−1·9	2·8	2·2	+0·6	30·8	37·1	−6·3	0	2·3	−2·3	34·2	44·1	− 9·9
22. Berar	3·0	1·3	+1·7	1·0	2·4	−1·4	23·8	38·4	−14·6	0·1	3·8	−3·7	27·9	45·9	−18·0
23. Central Provinces, West	2·1	2·2	−0·1	2·7	3·0	−0·3	34·5	47·0	−12·5	0	3·5	−3·5	39·3	55·7	−16·4
24. Do. do., East	0·4	2·3	−1·9	5·2	4·3	+0·9	41·3	51·0	−9·7	0·1	3·8	−3·7	47·0	61·4	−14·4
25. Konkan	1·4	0·2	+1·2	1·6	2·4	−0·8	82·9	83·7	−0·8	3·9	6·9	−3·0	89·8	93·2	−3·4
26. Bombay Deccan	1·7	0·4	+1·3	2·3	4·0	−1·7	32·5	37·1	−4·6	2·7	6·4	−3·7	39·2	47·9	−8·7
27. Hyderabad, North	1·6	0·8	+0·8	2·5	3·3	−0·8	25·0	40·6	−15·6	0·5	5·1	−4·6	29·6	49·8	−20·2
28. Do., South	0·9	0·8	+0·1	4·3	4·2	+0·1	24·1	37·6	−13·5	2·8	6·2	−3·4	32·1	48·8	−16·7
29. Mysore	1·0	0·4	+0·6	6·5	9·0	−2·5	33·0	33·5	−0·5	9·1	12·2	−3·1	49·6	55·1	−5·5
30. Malabar	2·5	1·7	+0·8	16·2	16·2	0	77·1	70·8	+6·3	17·2	23·7	−6·5	113·0	112·4	+ 0·6
31. Madras, Southeast	5·1	1·8	+3·3	6·7	6·6	+0·1	18·1	18·1	0	25·2	21·1	+4·1	55·1	47·6	+7·5
32. Do, Deccan	1·4	0·5	+0·9	2·4	4·4	−2·0	19·3	25·4	−6·1	7·6	9·6	−2·0	30·7	39·9	−9·2
33. Do. Coast, North	1·7	1·1	+0·6	5·3	5·5	−0·2	28·5	36·0	−7·5	9·3	11·2	−1·9	44·8	53·8	−9·0

I. *The cold weather period.*—Five winter disturbances entered northern India in January, but the resulting precipitation was much below the average. An improvement occurred in February, when four disturbances appeared from the west and proved much more active than those of January. For the two months together, however, rainfall was greatly in defect over the whole area from the northwest frontier to Bihar and Orissa. Conditions were different in the Peninsula, as the monsoon persisted much longer than usual and caused exceptionally heavy rainfall in south India in January.

The aggregate fall of the period was above normal in the Bay Islands, Lower Burma, Assam, Bengal, Gujarat, Central India West, Berar, the Central Provinces West and the Peninsula, and was in defect elsewhere.

II. *The hot weather period.*—Five disturbances of the winter type entered northern India during March, and rain fell frequently in the tract of country extending from the North-West Frontier Province to Assam. The falls were greatly above the average in Kashmir, and extraordinarily heavy in northeast India; for the latter area the month was the wettest on record. In the Peninsula on the other hand the usual thundershowers were almost entirely absent. In the month of April weather was abnormally dry over the greater part of the country; the rainfall associated with the six disturbances that affected northern India was confined mainly to the hills, and thundershowers were less frequent than usual except in the south of the Peninsula. During May four western disturbances passed into northwest India; the third of these, in conjunction with a pressure distribution favouring the inflow of moist winds from the Indian seas, gave widespread rainfall in northern and central India between the 22nd and 26th. The month's fall was below normal in northeast India and the Peninsula. The monsoon made an effort on the 28th May to appear at Colombo, but the advance was feeble and died out on the 31st.

The aggregate rainfall of the season was above normal in Chota Nagpur, Kashmir, Sind, Rajputana, Gujarat, Central India East and Hyderabad South, the excess being 1·46″ or 218 per cent. in Rajputana West and 1·50″ or 536 per cent. in Gujarat. It was below normal in Burma, Bihar, the United Provinces East, the North-West Frontier Province, Baluchistan, Central India West, Berar, the Konkan, the Bombay Deccan, Hyderabad North, Mysore and the Madras Deccan, and was about the average over the rest of the country.

III. *The southwest monsoon period.*—The monsoon appeared on the Malabar coast on the 2nd June, which is about the usual time, and advanced at the normal rate up to the Konkan coast; but it was prevented from extending into the interior of the Peninsula by the formation on the 6th of a severe storm off the Canara coast in the Arabian Sea. The storm moved in a northerly direction, and crossing into Kathiawar on the 11th caused great damage to property there, besides stopping all traffic while it lasted; it, however, introduced the monsoon rains into northwest India at a much earlier date than usual. The monsoon did not arrive effectively in the interior of the Peninsula until the 19th, when the Arabian Sea current was stimulated by a depression that had formed near the head of the Bay. The Bay monsoon appeared in northeast India in the middle of the second week, and extended into the United Provinces on the 21st. For the next four days there was widespread rain from Rajputana and the east Punjab to Assam, but during the last five days of the month a break occurred over the greater part of the country. Both the currents strengthened somewhat on the 2nd July, and they continued active till the 5th August in Central India, Rajputana and the Gangetic plain. After this date the Arabian Sea monsoon weakened and was less active than usual, except for four days from the 7th September when fairly widespread rain fell in the United Provinces and the central parts of the country. The Bay monsoon on the other hand continued normally active and in connection with two depressions, one at the end of the first week of August and the other between the 7th and the 10th September, caused heavy rain and serious floods in Bihar and Bengal. During the last twenty days of September the monsoon rarely extended beyond Burma, northeast India and the Peninsula.

It is remarkable that of the depressions which formed at the head of the Bay during this period not one travelled westwards beyond the Central Provinces; they either disappeared shortly after crossing the coast, or moved northwest towards the west of the United Provinces and later in the season, northwards into Bihar and Bengal. Several western disturbances appeared in northwest India, and besides giving rain in the hill districts there, stimulated occasionally the activity of the monsoon in the plains.

The aggregate rainfall of the season was in excess in Orissa, Chota Nagpur and Malabar, about normal in the Bay Islands, Lower Burma, Assam, Bengal, Bihar and southeast Madras, and below normal everywhere else. The deficiency was considerable in the Punjab, Kashmir, the North-West Frontier Province, Baluchistan, Sind, Berar and Hyderabad. Averaged over the plains of India as a whole it was 4·31″, or 12 per cent. below normal.

IV. *The retreating southwest monsoon period.*—During October the monsoon was weak and its activity was chiefly controlled by two depressions in the Bay. These determined an excess of rainfall in the Bay Islands, Lower Burma, Bengal, Malabar and the Madras Coast North, while much less rain than usual fell over the rest of the country. During November the monsoon produced abnormally heavy rain in south Madras, but outside that area the weather was unusually dry. The month of December was rainless or nearly so over the greater part of India. Although several disturbances of the winter type passed into India from the west during this period, the associated precipitation was mostly confined to the hills in the extreme north, and even there was far below the average.

The aggregate rainfall of the period was in excess in Bengal and South Madras, and was in defect everywhere else. Hardly any rain fell in Sind, Rajputana, Gujarat, Central India and the Central Provinces.

The year.—I. The distribution during the cold weather period—January and February—was very abnormal; rainfall was greatly in defect over the greater part of Northern India, and very much in excess in the Peninsula.

II. The influence of western disturbances contributed to the rainfall in Northern India in March and May, and the amount of rain there during the hot weather months differed little from the average. In the Peninsula, however, there was an appreciable defect.

III. The Bombay branch of the monsoon withdrew much earlier than usual, and the rainfall of the period—June to September—was very much below the average over the field of its activity. For the plains of India as a whole the deficiency was 12 per cent.

IV. The total fall of the period—October to December—was greatly below normal except in Bengal and south Madras.

V. The year's fall was in defect over most of the country, the only exceptions being south Madras and parts of northeast India.

V. DORAISWAMY IYER.

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 13 stations in India, etc., in the year 1920.

TABL

Abstract of observations taken at 10 hrs. and 16 h

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure.						Temperature of air.									
			Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea-level and to gravity at 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	III.—Bengal.																	
5	Calcutta	21	29·827	29·712	·115	29·767	—·021	29·736	87·7	71·7	16·0	105·4	50·4	55·0	81·8	85·3	79·2	+1
	VI.—Punjab.																	
11	Lahore	702	29·109	29·015	·094	29·055	—·016	29·724	89·0	63·0	26·0	112·8	34·2	78·6	78·2	87·9	74·9	+0
	IX.—Rajputana.																	
18	Jaipur	1,431	28·440	28·339	·101	28·383	+·006	29·746	90·4	63·9	26·5	111·7	33·2	78·5	82·0	88·3	75·9	—1
	X.—Bombay.																	
25	Bombay	37	29·876	29·775	·101	29·823	—·004	29·800	87·2	76·1	11·1	94·4	62·3	32·1	81·4	83·8	80·6	+1
	XIV.—Mysore.																	
29	Bangalore	3,021	26·965	26·853	·112	26·912	+·011	29·741	85·6	64·6	21·0	98·8	50·1	48·7	77·2	82·5	73·7	+0
	XV.—Madras.																	
31	Trivandrum	198	29·747	29·644	·103	29·700	+·010	29·827	84·1	74·7	9·4	91·1	68·1	23·0	80·8	82·3	78·3	—0
	Pudukkottai	318	29·614	29·477	·137	29·545	...	29·790	93·0	74·7	18·3	107·2	63·9	43·3	84·9	89·9	83·8	...
	Madras	22	29·887	29·771	·116	29·833	—·010	29·786	92·0	76·0	16·0	108·7	62·8	45·9	86·7	87·3	82·9	+1
	Kashmir.																	
13	Srinagar	5,204	24·894	24·807	·087	24·851	...	24·822	64·3	42·6	21·7	94·8	8·7	86·1	55·2	62·2	53·5	...
	Hill stations, excluding Kashmir and Baluchistan.																	
	Katmandu	4,388	25·643	25·579	·064	25·608	+·043	25·562	78·7	53·6	25·1	95·6	30·8	64·8	68·1	74·2	65·8	+1·2
	Kodaikanal	7,688	22·844	22·782	·062	22·813	...	22·748	65·6	50·6	15·0	75·5	40·3	35·2	62·2	59·7	58·1	...
	Extra India.																	
	Seychelles	15*	29·989	29·904	·085	29·951	+·007	29·914	83·3	77·8	5·5	88·1	73·6	14·5	81·1	82·1	79·3	+1·1
	Mauritius	181	...	...	...	29·887	+·003	29·956	80·0	66·5	14·1	91·2	51·8	39·4	...	...	72·6	-0·7

NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
* Mean of 9 months.

A.

at 13 stations in India, etc., in the year 1920.

Temperature, Wet-bulb.				Vapour tension in inches of mercury.					Humidity.					Cloud.				Rainfall.		Station.	Number of sub-division.
Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Total rainfall for the year.	Heaviest rainfall during the year.		
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
																				III.—Bengal.	
69·2	74·2	74·3	72·5	·707	·767	·720	·747	+·003	87	68	59	74	— 3	4·4	4·8	4·6	0	63·77	8·92	Calcutta	5
																				VI.—Punjab.	
57·6	65·2	68·7	63·8	·450	·486	·472	·480	—·018	73	50	36	55	— 1	2·0	2·2	2·1	—0·8	10·64	4·69	Lahore	11
																				IX.—Rajputana.	
57·1	64·3	66·0	62·5	·421	·411	·383	·412	—·052	64	37	29	47	— 6	2·7	3·4	3·1	—0·6	31·31	5·08	Jaipur	18
																				X.—Bombay.	
69·9	74·6	76·1	73·5	·653	·770	·797	·758	—·034	71	71	69	73	— 5	3·7	3·3	3·5	—0·3	41·05	7·18	Bombay	25
																				XIV.—Mysore.	
62·3	66·9	67·0	65·4	·539	·542	·482	·531	—·011	88	60	46	66	— 2	5·4	6·0	5·7	...	25·99	1·83	Bangalore	29
																				XV.—Madras.	
72·2*	75·3	76·2	74·4*	·769*	·803	·821	·802*	...	92*	77	75	87*	...	7·0	7·1	7·1	+1·6	94·06	5·94	Trivandrum	31
...	74·0	75·0	...	...	·693	·672	...	...	...	59	49	...	...	4·5	5·5	5·0	...	51·77	6·35	Pudukkottai.	
72·7	76·3	76·6	75·2	·765	·767	·776	·785	—·024	86	61	61	72	— 4	5·1	4·6	4·9	—0·1	65·31	5·92	Madras.	
																				Kashmir.	
41·5	49·4	53·7	48·5	·282	·339	·363	·328	...	90	71	61	75	...	4·8	5·3	5·1	...	24·19	2·76	Srinagar.	13
																				Hill stations, excluding Kashmir and Baluchistan.	
51·1	60·0	62·6	57·9	·375	·453	·454	·428	—·021	83	64	53	68	— 5	4·1	5·2	4·7	+0·2	35·34	2·25	Katmandu.	
46·8	54·3	55·1	52·1	·286	·345	·387	·340	...	77	64	77	73	...	5·4	7·6	6·5	...	65·46	3·03	Kodaikanal.	
																				Extra India.	
71·8	75·7	75·6	74·4	·702	·820	·861	·794	—·018	74	77	73	77	— 4	5·9	6·2	6·1	—0·1†	76·21	10·07	Seychelles.	
...	...	...	...	...	...	...	·615	—·005	...	...	...	75	0	...	...	6·0	...	50·36	3·33	Mauritius.	

* Mean of 4 months. † Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 213 stations in India, etc., in the year 1920.

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,500 stations.

Division.	Pressure departure from normal of year.	Temperature of air.							Wind	Hygrometry.				Cloud.		Rainfall.		
		Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Departure of velocity from normal.	Mean humidity of year.	Departure from normal of year.	Mean vapour tension of year.	Departure from normal of year.	Mean cloud amount of year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.
	"	°	°	°	°	°	°	°				"	"			"	"	"
rma	—·011	85·0	+0·3	71·0	+0·3	79·5	+0·3	17·0	+0·1	83	—2	·748	—·013	5·5	+0·5	75·56	79·88	—4·32
sam	009	83·5	-0·1	66·5	+0·4	75·0	+0·1	17·1	+0·1	89	—1	·699	—·001	5·4	+0·1	97·48	99·92	—2·44
ngal	—·012	86·3	0	69·9	+0·3	78·1	+0·1	16·4	—0·3	84	—1	·747	—·005	4·5	+0·1	76·38	74·78	+1·60
ar and Orissa	—·006	88·9	+0·5	68·6	0	78·7	+0·3	20·3	+0·1	73	—2	·649	—·015	3·8	+0·3	51·10	51·25	—0·15
ited Provinces of Agra and Oudh	—·002	90·1	+0·9	65·7	—0·5	77·9	+0·2	24·4	—0·3	63	—5	·538	—·039	2·4	—0·4	30·58	38·28	—7·70
njab	—·006	88·8	—0·1	62·8	—0·3	75·8	—0·2	25·9	+0·4	59	—3	·460	—·033	2·1	—0·5	13·51	19·83	—6·32
rth-West Frontier Province	—·014	88·1	+0·5	60·9	+0·1	74·6	+0·3	27·3	—0·8	64	0	·466	—·018	1·9	—0·5	10·76	16·82	—6·06
d	—·003	91·1	+0·2	58·8	+0·6	79·9	+0·4	22·3	—1·1	60	—4	·562	—·020	1·7	—0·9	2·12	6·51	—4·39
jputana	+·002	91·1	—0·3	5·8	—1·5	78·5	—0·9	25·2	0	51	—3	·433	—·050	2·3	—0·5	17·97	20·63	—2·66
mbay	—·005	90·3	+[illegible]	[illegible]·3	+0·4	79·8	+0·7	20·9	—1·2	67	—1	·615	—·006	3·6	0	33·72	45·32	—11·60
ntral India	—·003	88·9	+0·4	4·5	—0·5	76·7	—0·1	24·6	—0·9	59	—3	·501	—·022	2·9	—0·5	26·69	34·35	—7·66
ntral Provinces	+·001	90·8	+0·9	66·9	0	78·8	+0·5	23·8	+0·3	55	—7	·484	—·048	3·1	—0·2	30·39	44·95	—14·56
derabad	+·005	93·8	+2·2	70·1	+0·7	81·9	+1·5	23·7	+0·2	58	—6	·552	—·029	3·5	—0·2	17·65	32·50	—14·85
more	0	85·9	+0·7	65·5	+0·5	75·7	+0·6	20·4	+0·3	75	—1	·579	—·007	5·0	—0·3	28·83	36·09	—7·26
dras	—·001	90·6	+0·1	74·5	+0·6	82·6	+0·4	16·1	+0·1	76	0	·769	+·003	4·6	0	56·03	50·32	+5·71

TABL

(2) *Abstract of observations taken at 8 hrs. at 2*

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Temperature of air. Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	I.—Burma.																	
2	Victoria Point	147	29·777	...	29·855	29·919	29·614	79·4	75·3	86·1	...	75·1	...	80·6	...	11·0	99·0	6
	Mergui	66	29·858	—·010	29·854	30·028	29·649	77·5	74·7	87·4	—0·1	73·4	+1·6	80·4	+0·7	14·1	96·6	8
	Tavoy	19	29·900	—·023	29·851	30·068	29·650	76·9	74·0	88·2	+0·4	72·3	+0·7	80·3	+0·5	16·0	99·8	5
	Moulmein	77	29·839	—·007	29·855	30·078	29·537	76·8	73·5	87·4	—0·7	73·0	+0·5	80·2	—0·1	14·4	99·0	6
	Rangoon	18	29·887	—·005	29·842	30·107	29·565	76·9	74·1	89·3	0	73·3	+0·3	81·3	+0·1	16·1	99·3	6
	Bassein	27	29·881	0	29·845	30·111	29·535	78·5	74·7	89·2	+1·1	72·1	—0·4	80·7	+0·3	17·1	102·2	6
	Diamond Island	41	29·847	—·018	29·823	30·056	29·521	81·3	76·3	86·1	+0·8	76·7	+1·0	81·4	+0·9	9·3	92·1	6
	Toungoo	164	29·741	—·001	29·845	29·985	29·420	76·5	73·1	89·4	—0·7	69·2	—1·3	79·3	—1·0	20·2	104·5	4
	Kyaukpyu	18	29·852	...	29·810	30·096	29·445	77·7	74·4	84·8	...	73·4	...	79·1	...	11·3	95·5	5
	Akyab	20	29·839	—·028	29·800	30·107	29·400	75·3	72·6	85·2	—0·7	70·4	—1·7	77·8	—1·2	14·8	95·4	5
3	Minbu	*166*	29·702	—·023	29·812	29·983	29·330	76·7	71·0	91·4	—0·2	71·9	+0·5	81·7	+0·1	19·4	109·4	5
	Yamethin	644	29·231	—·010	29·830	29·478	28·878	75·7	70·4	91·6	+0·3	70·2	+0·6	80·9	+0·5	21·4	105·9	7
	Mandalay	250	29·628	—·006	29·827	29·915	29·308	79·1	71·0	94·4	+1·8	71·8	+0·5	83·0	+1·1	22·6	109·1	4
	Monywa	*280*	29·605	—·005	29·837	29·887	29·279	76·6	70·4	93·3	+2·1	71·7	+0·6	82·5	+1·3	21·6	109·8	4
	Lashio	*2,820*	27·101	—·008	27·047	27·360	26·804	66·2	62·9	81·5	—0·6	60·8	+0·5	71·1	—0·1	20·8	94·0	3
	Bhamo	*361*	29·501	—·005	29·824	29·807	29·193	69·8	68·4	86·3	+0·4	65·9	+0·8	76·1	+0·6	20·4	100·8	4
	Myitkyina	463	29·395	—·015	29·827	29·694	29·039	69·1	66·7	84·3	0	65·4	—0·4	74·9	—0·2	18·9	99·4	4
	II.—Assam.																	
4	Dibrugarh	353	29·514	—·021	29·837	29·847	29·072	69·4	67·9	81·3	+0·5	65·5	+0·6	73·4	+0·5	15·8	96·3	4
	Sibsagar	333	29·537	—·026	29·838	29·895	29·121	68·8	67·5	80·1	—1·4	66·7	+0·9	73·4	—0·3	13·5	94·4	4
	Tezpur	252	29·631	+·007	29·847	29·982	29·232	70·0	67·9	83·3	+0·2	67·2	+0·4	75·2	+0·3	16·2	96·0	4
	Gauhati	196	29·683	—·007	29·839	30·010	29·285	72·0	69·3	84·6	0	66·8	+0·9	75·7	+0·5	17·8	97·4	4
	Dhubri	115	29·740	—·011	29·812	30·060	29·302	71·9	69·3	81·7	—1·2	68·7	+0·8	75·2	—0·2	13·0	96·1	4
	Silchar	104	29·798	+·005	29·849	30·090	29·317	74·0	71·2	86·1	0	67·3	—0·2	76·7	—0·1	18·8	97·8	4
	Srimangal	66	29·809	...	29·826	30·095	29·344	71·1	68·7	87·7	+0·2	63·4	—2·1?	75·6	—0·9?	24·3	99·5	3
	III.—Bengal.																	
5	Cox's Bazar	36	29·828	...	29·809	30·098	29·360	75·7	72·7	85·2	...	69·4	...	77·3	...	15·7	92·5	5
	Chittagong	87	29·778	—·011	29·812	30·072	29·301	73·7	71·4	85·5	+0·7	69·1	—0·3	77·3	+0·2	16·5	94·7	4
	Noakhali	43	29·826	0	29·817	30·129	29·357	75·5	72·6	85·0	+0·4	70·9	+2·0?	77·9	+1·2?	14·0	95·8	4
	Barisal	12	29·835	—·012	29·795	30·141	29·356	76·3	73·3	85·6	—0·3	70·8	+0·5	78·2	+0·1	14·8	96·7	4
	Narayanganj	26	29·826	—·011	29·801	30·136	29·360	75·8	71·9	85·6	—0·7	70·7	+0·2	78·1	—0·8	15·0	96·1	5
	Mymensingh	63	29·791	—·012	29·807	30·097	29·340	73·4	70·3	85·0	+0·3	69·6	+1·0	77·3	+0·7	15·4	97·0	4
	Bogra	75	29·769	—·015	29·797	30·094	29·321	73·2	70·5	86·0	—0·3	68·4	+0·3	77·2	0	17·6	106·4	4
	Dinajpur	123	29·710	—·018	29·790	30·046	29·285	72·3	68·8	85·9	—0·2	67·5	+0·8	76·7	+0·3	18·4	103·8	4
	Jalpaiguri	283	29·573	—·005	29·820	29·909	29·188	70·7	68·1	84·8	+0·8	66·9	+0·8	75·9	+0·8	17·9	98·3	4
	Saugor Island	10	29·826	—·011	29·781	30·157	29·247	78·1	74·0	85·1	—0·5	73·5	—0·1	79·3	—0·3	11·5	97·0	5

N.B.—Elevations in italics indicate barometrical determinations.

B.

stations in India, etc., in the year 1920.

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 of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs.: Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Cloud: Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall: Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
																								I.—Burma.
96	17	75	50	26	22	40	34	7	5·7	...	...	82	...	·821	...	6·7	...	153	+ 1·7	148·47	169·58	—21·11	5·65	Victoria Point.
25	4	13	62	76	23	11	1	2	3·9*	1·4	+2·5	88	+ 1	·829	—·002	4·8	— 0·2	153	— 1·4	146·73	162·94	—16·21	5·39	Mergui.(a)
79	11	14	4	19	27	8	0	4	1·7	1·1	+0·6	87	— 2	·804	—·002	6·2	+ 2·3?	143	— 2·6	230·10	214·81	+15·29	7·00	Tavoy.
62	3	85	114	48	28	17	5	4	2·7	2·3	+0·4	85	— 2	·788	—·013	5·4	+ 0·4	140	+ 0·1	211·36	188·91	+22·45	10·46	Moulmein. *
36	54	76	20	21	64	52	23	20	3·8	3·1	+0·7	87	0	·811	+·005	6·6	+ 1·4	113	— 9·3	93·91	99·10	— 5·19	4·25	Rangoon.
66	24	29	13	10	29	23	21	51	2·8	3·2	—0·4	84	— 5	·825	+·002	4·9	+ 0·4	113	—12·1	107·66	109·41	— 1·75	3·48	Bassein.
1	53	74	32	8	17	74	52	55	8·0	6·4	+1·6	79	— 1	·840	+·011	6·1	+ 1·0	112	— 1·1	134·88	117·81	+17·07	6·72	Diamond Island.
74	58	43	9	102	58	13	1	8	2·4	2·4	0	85	— 1	·779	—·006	5·3	0	113	— 1·5	71·26	83·28	—12·02	2·00	Toungoo.
96	6	9	24	11	6	1	5	8	0·9	...	...	85	...	·815	...	5·5	...	115	—15·0	163·38	175·42	—12·04	6·60	Kyaukpyu.(b)
78	60	105	25	37	27	17	4	13	2·8	2·4	+0·4	87	— 2	·779	—·028	5·3	+ 0·3	120	— 4·3	224·45	196·37	+28·08	10·89	Akyab.
32	9	5	10	159	18	14	8	111	3·1	6·3	—3·2	75	— 1	·702	—·002	4·2	+ 0·3	54	— 3·8	38·50	35·02	+ 3·48	4·50	Minbu.
...	...	...	...	...	...	...	...	...	...	...	...	76	— 3	·689	—·018	3·8	— 0·2	47	—15·9	24·92	38·05	—13·13	2·17	Yamethin.
28	0	0	0	10	11	0	0	1	3·0†	3·7	—0·7†	67	— 8	·664	—·041	4·6	+ 1·0	34	—17·2	28·80	33·45	— 4·65	4·17	Mandalay.(c)
87	110	11	10	92	34	1	1	40	2·2	...	...	73	— 6	·676	—·038	5·1	+ 0·4	35	— 9·5	18·06	32·27	—14·21	1·92	Monywa.
77	5	6	6	4	20	33	12	3	2·2	...	...	83	— 3	·546	—·017	5·1	— 1·2	89	—11·6	44·22	62·29	—18·07	2·45	Lashio.
57	1	8	0	0	0	0	0	0	0·7	1·8	—1·1	93	+ 4	·701	+·024	8·3	+ 3·2?	92	— 8·4	60·93	72·72	—11·79	3·55	Bhamo.
09	15	32	7	0	1	1	1	0	2·3	...	...	88	+ 2	·642	—·032	5·9	0	103	— 3·7	83·81	78·91	+ 4·90	3·70	Myitkyina.
																								II.—Assam.
74	0	26	34	25	0	3	0	4	0·3	...	...	93	+ 2	·689	+·026	6·2	+ 0·3	135	— 0·9	98·96	109·06	—10·10	8·80	Dibrugarh.
91	41	67	15	11	22	12	1	6	1·1	1·8	—0·7	93	— 1	·683	—·022	8·3	+ 1·0	112	—17·4	82·98	96·54	—13·56	3·97	Sibsagar.
59	2	88	96	5	5	6	4	1	2·0	...	...	89	0	·681	+·002	5·1	0	100	— 8·3	66·09	71·98	— 5·89	2·46	Tezpur.
88	2	38	103	15	3	6	4	7	1·1	...	...	87	— 2	·707	+·014	6·2	— 0·4	100	+ 6·1	59·61	66·05	— 6·44	2·66	Gauhati.
35	3	118	138	27	22	19	3	1	4·8	3·8	+1·0	86	— 1	·701	0	4·8	+ 0·3	102	+ 7·9	140·61	95·41	+45·20	7·61	Dhubri.
38	3	26	30	12	1	2	0	4	1·7	1·7	0	85	— 3	·728	+·003	4·1	— 1·5?	139	+ 2·2	103·84	126·29	—22·45	2·92	Silchar.
...	...	...	...	...	...	...	...	...	...	...	...	88	+ 1	·703	—·026	2·8	...	129	+ 3·9	109·48	102·50	+ 6·98	5·20	Srimangal.
																								III.—Bengal.
0	1	26	38	78	27	4	1	1	2·5	...	...	86	...	·783	...	4·4	...	106	— 4·7	136·29	135·29	+ 1·00	5·60	Cox's Bazar.
3	12	80	81	86	24	5	4	1	2·5	3·6	—1·1	89	+ 3	·762	+·006	4·7	0	96	+ 1·4	87·99	101·54	—13·55	3·43	Chittagong.
2	62	42	12	109	44	16	7	2	2·9	...	...	87	0	·785	+·005	4·1	+ 0·5	108	— 5·2	127·55	120·84	+ 6·71	5·86	Noakhali.
6	22	33	18	55	56	48	22	26	2·7	2·3	+0·4	86	+ 1	·799	—·002	4·1	— 0·3	106	+ 3·7	89·25	81·59	+ 7·66	5·25	Barisal.
4	9	4	36	53	64	30	17	19	2·6	3·6	—1·0	82	— 4	·755	—·021	4·7	— 0·6	102	+ 9·6	96·11	72·44	+23·67	3·88	Narayanganj.
6	1	13	41	19	4	0	1	1	1·2	2·0	—0·8	85	— 2	·727	—·011	5·4	+ 0·4	106	— 0·1	77·93	93·83	—15·90	4·30	Mymensingh.
1	14	20	95	4	22	19	10	11	1·3	2·2	—0·9	87	+ 4	·745	+·029	5·4	+ 1·8	82	— 3·3	70·35	70·23	+ 0·12	4·14	Bogra.
0	15	60	121	25	15	22	35	13	2·7	2·6	+0·1	83	0	·693	+·001	3·7	— 0·7	71	— 8·4	71·62	69·68	+ 1·94	6·80	Dinajpur.
8	8	40	40	21	13	3	0	12	1·1	...	...	87	+ 1	·687	+·002	2·6	— 0·7	111	+ 8·3	126·41	121·11	+ 5·30	7·35	Jalpaiguri.(b)
4	70	54	12	8	67	97	23	21	8·0	5·91	+2·1	82	— 3	·808	—·023	5·0	— 0·4	70	— 9·8	58·92	69·58	—10·66	6·46	Saugor Island.

* Mean of 11 months.
† " 5 "
(a) Wind observations of 317 days.
(b) " 365 "
(c) " 150 "

TABL

(2) *Abstract of observations taken at 8 hrs. at 2*

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.					Temperature of air.										
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	III.—Bengal—*concld.*																	
	Midnapore	149	29·680	—·017	29·780	30·093	29·153	76·1	70·1	89·8	—0·2	70·8	+0·3	80·3	+0·1	19·0	112·4	47·1
	Calcutta	21	29·813	—·017	29·781	30·155	29·286	75·3	72·0	87·7	+0·9	71·6	+1·1	79·7	+1·0	16·1	105·4	50·4
	Jessore	30	29·812	—·011	29·789	30·145	29·318	75·3	71·5	87·1	—0·4	69·7	—0·1	78·4	—0·3	17·5	104·1	45·7
	Burdwan	99	29·722	—·028?	29·770	30·073	29·233	74·0	70·0	88·8	—0·1	69·8	—0·7	79·3	—0·4	19·0	109·4	49·0
	Berhampore	67	29·776	—·006	29·793	30·126	29·315	75·0	70·8	87·9	+0·2	69·9	+0·4	78·9	+0·3	18·0	108·6	47·3
	IV.—Bihar and Orissa.																	
6	Balasore	50	29·783	—·017	29·779	30·143	29·217	74·9	71·1	89·1	+0·5	70·2	—0·3	79·6	+0·1	18·9	108·2	49·0
	Hukitala (False Point)	29	29·821	—·006	29·791	30·155	29·256	...	...	...	...	...	...	...	...	...	...	...
	Cuttack	80	29·770	—·002	29·792	30·101	29·241	76·3	72·7	90·4	—0·8	72·4	—0·1	81·4	—0·5	18·0	109·7	53·2
	Puri	24	29·840	+·006	29·805	30·156	29·326	78·4	74·6	86·3	0	75·4	+0·9	80·8	+0·5	10·9	96·0	58·0
	Angul	455	29·384	—·006	29·791	29·711	28·845	75·8	70·3	90·5	+0·4	69·8	+0·5	80·2	+0·5	20·9	111·8	48·4
	Sambalpur	486	29·355	—·013	29·796	29·677	28·886	75·8	69·2	91·1	+0·3	68·3	—1·6	79·7	—0·7	22·9	112·2	43·7
	Chaibasa	*733*	29·084	—·014	29·781	29·438	28·596	73·1	67·4	90·3	+0·7	68·2	+0·5	79·2	+0·6	22·1	112·1	41·3
	Ranchi	2,133	27·699	—·003	29·768	27·996	27·280	71·8	63·1	84·6	+0·2	65·6	+0·1	75·1	+0·1	19·0	105·7	44·4
	Purulia	*816*	29·014	—·002	29·791	29·362	28·554	74·9	66·8	91·4	+2·0?	69·1	+0·7	80·2	+1·3?	22·2	113·7	47·6
	Daltonganj	*730*	29·102	—·004	29·801?	29·470	28·687	70·9	64·6	90·7	+1·3	64·6	—0·7	77·7	+0·3	26·1	113·4	37·6
8	Purnea	124	29·712	—·015	29·793	30·074	29·283	72·4	68·5	87·1	+0·5	68·1	—0·2	76·6	+0·1	21·1	107·1	39·3
	Monghyr	155	29·669	...	29·781	30·058	29·247	74·3	68·2	88·2	...	68·6	...	78·4	...	19·6	109·2	45·9
	Darbhanga	165	29·672	—·005	29·795	30·040	29·251	73·7	68·2	88·0	+2·0?	66·8	—1·3	77·4	+0·3?	21·2	109·4	41·9
	Pusa	188	29·637	...	29·784	30·005	29·215	73·0	68·1	89·3	...	66·3	...	77·8	...	23·0	112·9	42·0
	Patna	183	29·653	—·001	29·793	30·022	29·230	75·8	68·1	87·7	+0·1	69·0	+0·4	78·3	+0·3	18·7	108·0	44·5
	Buxar	239	29·581	—·010	29·780	29·974	29·178	73·1	66·4	87·9	—0·8?	67·9	—0·2	77·9	—0·5?	20·0	110·1	43·6
	Gaya	372	29·462	+·001	29·793	29·851	29·041	76·2	66·7	90·0	+0·1	69·7	+0·9	79·9	+0·5	20·3	112·0	46·1
	Naya Dumka	489	29·341	—·005	29·789	29·698	28·890	76·0	68·9	88·9	+1·3	68·1	+0·2	78·5	+0·7	20·7	110·8	45·2
	V.—United Provinces of Agra and Oudh.																	
9	Gorakhpur	257	29·571	+·002	29·791	29·948	29·181	73·5	66·5	88·4	+0·6	66·3	—0·7	77·3	—0·1	22·2	110·6	41·1
	Benares	267	29·559	—·004	29·785	29·944	29·166	75·3	66·5	90·4	+0·8	66·1	—0·6	78·2	+0·1	24·3	112·5	39·0
	Allahabad	309	29·539	+·017	29·809?	29·931	29·136	74·9	65·2	91·3	+1·1	67·0	+0·2	79·1	+0·7	24·3	115·5	38·5
	Cawnpore	416	29·417	+·010	29·798	29·787	29·014	72·7	64·5	90·7	+1·5	67·0	+0·3	78·8	+0·9	23·7	113·8	40·9
	Lucknow	368	29·451	—·005	29·785	29·851	29·075	73·2	64·8	91·5	+1·8	64·6	—1·0	78·1	+0·4	26·9	113·5	39·0
	Bahraich	407	29·403	—·009	29·780	29·781	29·047	71·4	64·7	88·8	+0·5	65·5	—0·2	77·2	+0·1	23·3	111·4	37·5
10	Jhansi	824	29·013	—·011	29·805	29·373	29·601	74·7	64·2	92·3	+1·1	66·7	—2·8	79·5	—0·9	25·5	115·0	39·8
	Agra	556	29·272	—·002	29·794	29·668	28·840	76·9	65·0	91·5	+1·1	67·5	—0·3	79·5	+0·4	24·0	115·3	37·3
	Mainpuri	516	29·299	—·007	29·785	29·677	28·877	72·5	62·9	91·2	+1·1	65·0	—0·5	78·1	+0·3	26·2	115·3	38·0
	Bareilly	568	29·239	—·005	29·781	29·623	28·788	71·7	65·0	88·7	+1·1	65·3	+0·6	77·0	+0·9	23·4	113·1	38·9
	Roorkee	899	28·910	0	29·800	29·309	28·458	69·1	62·0	86·4	—0·3	61·5	—0·8	73·9	—0·5	24·9	112·3	33·6

N. B.—Elevations in italics indicate barometrical determinations.

B—contd.

stations in India, etc., in the year 1920.

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 of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs.: Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Cloud: Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall: Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
																								III.—Bengal—*concld.*
95	60	31	11	36	78	19	6	23	2·5	...	...	73	— 3	·690	— 022	4·4	+1·6	72	— 8·8	65·24	58·42	+ 6·82	4·20	Midnapore. (*a*)
38	24	30	25	26	41	99	21	62	3·4	3·2	+0·2	84	+ 1	·772	+·002	4·9	+0·5	70	-15·5	63·77	61·82	+ 1·95	8·92	Calcutta.
265	1	5	13	38	26	16	2	0	1·3	2·2	—0·9	82	— 3	·751	—·031	4·7	+0·1	77	-11·2	57·86	66·17	— 8·31	5·28	Jessore.
195	19	16	10	13	22	36	18	37	1·3	2·3	—1·0	80	+ 2	·713	—·003	4·8	+0·2	72	— 4·6	53·67	57·84	— 4·17	3·11	Burdwan.
134	20	19	44	33	64	32	10	10	2·3	2·4	—0·1	80	— 3	·729	—·005	4·6	— 0·1	72	— 4·3	58·72	56·10	+ 2·62	5·31	Berhampore.
																								IV.—Bihar and Orissa.
106	48	13	2	3	67	93	2	32	2·6	3·5	—0·9	82	+ 1	·742	—·008	4·5	+1·2	70	— 7·3	57·81	62·09	— 4·28	6·19	Balasore.
21	63	36	8	14	50	101	35	38	8·6	6·8	+1·8	...	...	...	...	6·5	+1·1	69	— 2·1	64·21	62·92	+ 1·29	3·66	Hukitala (False Point.)
187	0	6	9	1	7	85	65	6	1·9	2·0	—0·1	84	+ 5	·778	+·029	4·6	+0·3	66	— 8·1	52·69	59·30	— 6·61	4·14	Cuttack.
92	88	57	4	1	49	87	38	20	9·3	...	...	83	0	·824	+·001	4·0	+0·1	64	+ 3·1	53·76	54·00	— 0·24	5·70	Puri.
86	7	28	7	12	14	19	48	45	4·3	...	...	75	— 2	·694	+·004	4·4	+1·0	76	+ 5·1	50·90	47·04	+ 3·86	2·77	Angul.
0	69	85	11	11	16	104	12	58	2·8	2·6	+0·2	71	+ 1	·648	—·003	3·8	- 0·1	65	— 8·9	74·30	64·72	+ 9·58	6·72	Sambalpur.
211	6	14	8	0	12	108	5	2	1·8	1·3	+0·5	74	— 3	·626	—·015	3·9	+0·5	75	+ 0·3	64·85	52·11	+12·74	7·30	Chaibassa.
57	24	13	10	17	17	47	101	80	3·6	4·6	—1·0	61	— 5	·494	—·037	3·8	0	77	— 2·7	62·49	56·20	+ 6·29	4·82	Ranchi.
184	6	9	5	19	3	40	76	24	1·1	...	...	64	— 9	·586	—·044	3·6	+0·4	66	— 8·2	49·31	52·51	— 3·20	6·75	Purulia.
249	5	10	20	18	5	31	22	5	3·0	...	...	70	— 2	·550	—·038	2·6	—0·1	53	— 8·1	72·51	41·91	+30·60	11·45	Daltonganj. (*b*)
40	15	54	135	28	3	43	38	10	2·5	2·3	+0·2	82	— 3	·687	—·002	4·2	+0·8	69	— 1·3	44·77	61·72	—16·95	9·12	Purnea.
108	0	13	60	72	1	82	28	2	3·3	...	...	73	...	·655	...	3·1	...	52	—10·4	42·05	50·99	— 8·94	4·40	Monghyr.
267	0	2	77	2	0	3	15	0	2·6	2·9	—0·3	75	— 6	·655	—·029	3·8	+0·7	60	+ 0·9	43·03	51·09	— 8·07	7·57	Darbhanga.
90	10	32	104	33	13	40	31	13	2·6	...	...	78	...	·659	..	3·0	...	48	—10·1	44·63	49·13	— 4·50	7·31	Pusa.
121	3	3	118	5	3	37	70	6	3·5	2·7	+0·8	66	— 6	·623	—·033	3·5	0	48	— 8·1	32·26	47·98	—15·72	4·04	Patna.
66	5	19	62	33	17	76	74	14	3·1	...	...	70	+ 2?	·598	—·010	3·4	+0·1	53	— 0·3	34·03	41·09	— 7·06	2·65	Buxar.
71	16	33	25	18	21	110	53	19	2·4	2·7	—0·3	61	—10	·569	—·074	2·9	—0·5	54	— 3·1	54·55	46·48	+ 8·07	5·12	Gaya.
332	3	2	8	13	3	3	1	1	1·4	...	...	69	— 4	·646	—·003	3·3	0	84	+ 7·7	62·09	56·21	+ 5·88	5·32	Naya Dumka.
																								V.—United Provinces of Agra and Oudh.
55	1	24	102	6	1	1	75	1	1·9	1·7	+0·2	73	— 2	·613	—·031	1·6	—1·4	48	— 9·1	45·18	50·58	— 5·40	5·90	Gorakhpur.
07	6	13	18	47	3	76	64	32	2·2	2·7	—0·5	64	— 8	·571	—·051	2·9	—0·4	48	— 4·1	38·75	40·18	— 1·43	3·55	Benares.
25	2	17	38	7	3	30	131	13	2·7	3·8	—1·1	59	— 7	·532	—·050	3·3	—0·2	40	— 9·1	34·42	38·80	— 4·38	8·24	Allahabad.
60	26	22	32	26	28	49	78	45	2·2	2·7	—0·5	65	— 6	·544	—·025	1·7	—0·8	32	—12·3	22·47	35·90	—13·43	5·10	Cawnpore.
235	1	30	5	17	1	32	6	39	1·3	2·2	—0·9	64	— 5	·552	—·027	2·4	—0·8	43	— 4·9	31·43	38·53	— 7·10	4·10	Lucknow.
159	22	8	89	19	3	5	32	29	2·0	2·3	—0·3	70	— 5	·567	—·068	1·8	—0·6	46	— 4·7	46·35	45·32	+ 1·03	5·65	Bahraich.
95	12	11	4	4	15	136	52	29	3·4	2·4	+1·0	56	— 2	·495	—·049	2·1	0	33	—13·8	20·18	35·95	—15·77	1·96	Jhansi. (*c*)
133	9	23	28	12	20	78	43	20	2·4	3·3	—0·9	51	— 9	·492	—·033	2·5	—0·2	39	+ 1·6	22·56	26·69	— 4·13	2·75	Agra.
05	30	15	27	29	13	22	54	71	1·6	1·4	+0·2	58	— 7	·491	—·054	3·0	—0·2	40	+ 1·7	22·42	27·30	— 4·88	3·40	Mainpuri.
29	7	8	21	14	3	10	48	26	1·1	2·0	—0·9	69	— 3	·569	—·006	3·4	+0·5	39	— 8·0	27·22	44·41	—17·19	4·05	Bareilly.
58	0	2	0	56	0	0	0	20	2·0	1·8	+0·2	66	— 5	·487	—·028	2·0	—0·8	38	— 9·4	39·77	42·33	— 2·56	5·86	Roorkee.

(*a*) Wind observations of 359 days.
(*b*) Wind observations of 365 days.
(*c*) Wind observations of 358 days.

TAB

(2) *Abstract of observations taken at 8 hrs. at*

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Temperature of air. Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	VI.—Punjab.																
11	Delhi	718	29·101	+·001	29·799	29·468	28·669	71·0	61·4	87·9	—0·8	67·1	—0·4	77·5	—0·6	20·8	112·8
	Hissar	725	29·100	+·013	29·807	29·490	28·670	71·1	60·8	91·8	+0·4	62·8	—1·3	77·3	—0·5	29·0	115·7
	Patiala	*818*	28·964	—·031?	29·766	29·367	28·528	70·8	62·9	87·9	+0·8	63·8	+0·3	75·9	+0·5	24·1	112·2
	Ambala	892	28·907	—·007	29·787	29·310	28·454	70·3	60·8	89·4	+1·8	63·1	+0·7	76·4	+1·3	26·0	114·6
	Ludhiana	812	28·987	—·006	29·789	29·389	28·524	69·1	60·2	88·8	+0·9	63·6	—0·3	76·2	+0·3	25·1	112·9
	Lahore	702	29·090	—·011	29·783	29·503	28·605	69·0	60·8	89·0	—1·2	62·7	+1·1?	75·9	—0·1?	26·2	112·8
	Sialkot	830	28·963	—·012	29·787	29·371	28·480	68·4	61·4	85·3	—2·2	60·4	—2·4	72·9	—2·3	24·9	107·5
	Rawalpindi	1,674	28·138	—·010	29·808	28·494	27·667	67·8	58·4	84·1	0	57·9	+0·2	71·0	+0·1	26·2	114·0
12	Khushab	612	29·203	+·001	29·801	29·623	28·637	71·7	60·2	90·2	+0·5	61·4	—2·5	75·8	—1·0	28·8	114·2
	Lyallpur	605	29·187	...	29·778	29·598	28·684	69·3	60·1	89·4	...	61·4	...	75·4	...	28·0	113·5
	Montgomery	558	29·238	—·011	29·779	29·653	28·746	71·4	60·9	89·9	—1·7	62·8	—1·4	76·3	—1·5	27·0	113·1
	Multan	426	29·370	—·015	29·771	29·810	28·855	71·6	62·9	91·4	—0·5	66·5	+0·9	79·0	+0·2	24·9	113·8
	VII.—North-West Frontier Province.																
14	Peshawar	1,113	28·705	—·023	29·830	29·119	28·169	64·3	57·4	86·8	+1·5	58·5	—0·8	72·7	+0·3	28·3	121·6
	Dera Ismail Khan	590	29·233	—·006	29·810	29·718	29·083	70·3	62·2	89·5	—0·5	63·3	+0·9	76·5	+0·2	26·2	112·0
	VIII.—Sind.																
16	Jacobabad	186	29·629	—·001	29·779	30·109	29·125	75·0	62·2	94·8	—0·8	66·2	+0·7	80·5	—0·1	28·7	115·9
	Hyderabad	96	29·730	—·011	29·781	30·158	29·255	74·3	65·7	93·7	+0·3	68·5	+0·3	81·0	+0·3	25·2	113·4
	Karachi	13	29·853	0	29·816	30·236	29·390	75·7	69·8	84·8	+0·7	71·8	+0·6	78·3	+0·7	13·0	107·6
	IX.—Rajputana.																
17	Bikaner	*771*	29·062	+·013	29·810	29·450	28·634	73·4	63·0	92·9	+0·9	65·9	—3·4?	79·4	—1·3?	26·9	116·0
	Jodhpur	780	29·069	+·004	29·820	29·441	28·670	73·8	60·7	92·4	—0·2	66·6	—1·2	79·5	—0·7	25·8	111·7
18	Jaipur	1,431	29·423	+·004	29·827	28·748	28·038	72·7	60·9	90·4	—0·5	63·7	—2·0	77·1	—1·3	26·7	111·7
	Ajmer	1,611	28·238	—·010	29·834	28·562	27·866	67·0	58·5	87·7	—1·1	63·8	—1·2	75·8	—1·1	23·9	109·6
	Kotah	833	29·007	—·005	29·803	29·359	28·616	77·1	63·7	91·9	—0·4	69·1	—1·0	80·6	—0·7	22·8	114·8
	X.—Bombay.																
19	Deesa	466	29·405	+·008	29·832	29·727	28·997	74·9	64·9	95·1	+1·0	66·4	—0·6	80·8	+0·2	28·7	114·8
	Bhuj	334	29·530	—·005	29·819	29·879	29·043	76·7	71·3	91·9	+0·7	67·2	—1·4	79·5	—0·3	24·7	109·8
	Jamnagar	61	29·797*	—·014*	29·910†	30·157	29·207	74·0‡	67·0‡	89·6‡	+0·9‡	63·2‡	—0·5‡	76·3‡	+0·2‡	26·4‡	104·7
	Dwarka	37	29·849	—·011	29·832	30·173	29·290	77·4	72·7	85·3	+1·2	75·5§	+1·4§	80·4§	+1·3§	9·7§	97·8
	Rajkot	429	29·483	—·02[illegible]?	29·817	29·734	29·066	75·5	66·7	93·8	+0·8	68·6	+2·6?	81·2	+1·8?	25·1	110·2
	Veraval	*18*	29·868	—·007	29·829	30·138	29·003	76·3	70·2	84·8	—0·1	72·4	+1·4	78·6	+0·7	12·4	101·3
	Bhavnagar Para	55	29·830	—·007	29·832	30·120	29·030	76·4	66·4	93·8	+0·2	68·7	—0·6	81·3	—0·2	25·1	109·8
	Surat	39	29·859	+·001	29·842	30·120	29·267	77·1	69·9	91·4	—0·2	71·1	+1·4	81·3	+0·7	20·3	108·9
	Ahmadabad	163	29·727	+·005	29·840	30·018	29·223	77·8	67·8	95·8	+1·4	70·4	—0·3	83·1	+0·5	25·4	110·9
25	Bombay	37	29·864	—·009	29·841	30·065	29·485	78·4	73·4	87·3	+1·3	76·0	+1·1	81·7	+1·2	11·2	94·4
	Ratnagiri	207	29·690	—·011	29·838	29·869	29·353	80·4	72·2	88·1	+0·8	74·5	+1·4	81·3	+1·1	13·6	101·3

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 7 months.
† " " 5 "
‡ " " 8 "
§ " " 10 "

3—contd.

tations in India, etc., in the year 1920.

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 of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs. Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Cloud. Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall. Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
																								VI.—Punjab.
104	7	17	10	43	11	9	105	60	2·4	2·5	—0·1	57	— 2	·459	—·036	2·1	—1·1	24	—12·7	23·20	27·38	— 4·18	4·00	Delhi.
26	21	8	25	55	49	89	77	16	4·6	3·5	+1·1	55	— 5	·443	—·050	1·8	—0·8	15	—8·8	6·53	14·02	— 7·49	2·00	Hissar.
59	26	25	20	99	5	12	70	48	4·3			65	— 2	·520	—·022	2·4	—0·3	30	—6·8	23·78	25·59	— 1·81	3·67	Patiala.†
89	61	7	66	64	5	3	27	44	3·8	1·5	+2·3	58	—14?	·448	—·089?	3·2	+0·4	33	—9·7	16·96	30·63	—13·67	1·62	Ambala.
381	13	10	1	19	15	2	9	16	1·4	1·4	0	60	— 5	·445	—·059	1·9	—1·1	25	—11·3	16·60	28·58	—11·98	3·44	Ludhiana.
160	18	28	21	46	14	20	25	34	1·6	1·8	—0·2	65	— 2	·479	—·033	2·4	—0·2	14	—14·1	10·64	19·58	— 8·94	4·69	Lahore.
98	49	54	68	37	8	11	13	28	1·8	1·5	+0·3	68	+ 2	·496	—·011	2·3	0	32	—8·4	19·81	30·69	—10·88	2·61	Sialkot.
159	17	30	19	33	12	27	54	15	2·3	1·6	+0·7	58	— 7	·415	—·031	1·6	—1·6	36	—12·1	20·60	34·06	—13·46	1·75	Rawalpindi.
155	26	65	51	16	16	18	10	9	3·8	3·6	+0·2	51	— 4	·421	—·034	2·1	0	20	—3·6	7·92	14·85	— 6·93	1·80	Khushab.
105	7	31	34	44	25	67	21	32	2·1	...	...	60	...	·443	...	2·8	...	16	—4·1	8·27	13·13	— 4·86	1·53	Lyallpur.
68	39	28	27	34	52	56	22	40	3·8	4·3	—0·5	54	+ 2	·441	—·010	1·8	—0·3	12	—6·5	3·72	10·47	— 6·75	0·71	Montgomery.
173	31	23	3	17	21	61	1	36	1·4	1·5	—0·1	61	+ 2	·509	0	1·3	—0·3	8	—4·5	5·25	6·92	— 1·67	1·38	Multan.*
																								VII.—North-West Frontier Province.
315	24	4	3	0	12	2	1	4	0·6	2·4	—1·8	67	+ 4	·431	—·022	1·7	—1·3	19	—7·0	9·83	13·42	— 3·50	1·62	Peshawar.*
223	0	73	0	21	0	0	0	49	1·5	1·3	+0·2	61	— 4	·501	—·021	2·2	+0·2	11	—5·3	8·82	9·32	— 0·50	1·79	Dera Ismail Khan.
																								VIII.—Sind.
193	1	18	4	113	4	9	0	24	1·7	2·5	—0·8	46	—12	·443	—·090	0·5	—1·3	4	—3·4	2·26	3·59	— 1·33	1·00	Jacobabad.
107	47	5	3	7	30	138	19	11	5·5	8·1	—2·6	62	+ 4	·554	+·019	0·8	—1·5	6	—3·3	1·70	7·13	— 5·43	0·44	Hyderabad.
12	43	64	18	3	2	68	120	36	9·2	9·2	0	72	— 1	·689	+·012	3·7	+0·2	5	—4·3	1·97	7·64	— 5·67	0·77	Karachi.
																								IX.—Rajputana.
48	4	8	36	61	68	89	37	15	5·2	4·3	+0·9	54	+ 1	·489	—·011	1·5	—0·9	13	—5·8	13·26	11·09	+ 2·17	5·28	Bikaner.
109	5	97	9	4	10	120	20	2	3·1	...	...	44	— 5	·394	—·057	3·1	0	20	+1·9	10·77	12·63	— 1·86	2·20	Jodhpur.
120	24	33	22	6	2	50	60	49	3·0	3·2	—0·2	50	— 5	·419	—·061	2·8	—0·3	30	—4·8	31·31	23·63	+ 7·68	5·08	Jaipur.
226	3	5	1	1	1	65	63	1	2·8	3·6	—0·8	60	— 3	·421	—·085	1·5	—1·3	32	+2·9	21·98	20·21	+ 1·77	2·55	Ajmer.
164	18	8	2	13	1	67	51	42	1·8			47	— 3	·441	—·030	2·4	+0·2	27	—7·2	22·23	26·51	— 4·28	3·21	Kotah.
																								X.—Bombay.
37	15	71	59	8	32	82	37	25	6·3	7·5	—1·2	56	0	·519	—·004	3·2	0	32	+4·1	19·78	23·57	—3·79	2·70	Deesa.
113	29	6	4	2	5	55	145	7	5·9	8·1	—2·2	76	+ 9?	·726	+·095?	2·9	—0·1	11	—5·3	10·60	14·36	—3·76	2·88	Bhuj.
12	4	53	49	2	20	74	76	28	6·0*a*	...	...	68*i*	+ 1	·594*i*	—·048	2·3	+0·2	20	—0·8	25·32	18·53	+16·79	13·30	Jamnagar.‡
7	68	46	16	2	21	78	87	41	10·5	...	...	78	+ 1	·756	+·007	2·3	—1·0	12	—4·7	10·63	14·50	—3·87	3·90	Dwarka.
44	26	39	24	9	21	121	56	26	7·2	6·6	+0·6	61	— 5	·565	—·044	4·3	+1·4	22	—8·8	22·86	26·06	—3·20	5·77	Rajkot.
35	94	34	4	8	7	41	97	45	8·0	6·1	+1·9	73	+ 2	·685	+·016	3·2	—0·3	30	+5·3	20·91	18·28	+2·63	4·64	Veraval.*
11	18	13	3	10	13	81	120	97	4·0	7·3	—3·3	58	— 5	·557	—·046	3·3	+0·1	32	+2·1	26·86	22·40	+4·46	4·52	Bhavnagar Para.
104	30	41	34	28	45	48	23	13	3·5	5·5	—2·0	68	— 2	·664	—·008	3·9	+0·6	51	+4·8	31·08	40·98	—9·90	3·69	Surat.
64	8	62	40	16	7	77	12	80	3·2	3·6	—0·4	59	+ 1	·581	+·010	2·4	—1·1	32	—2·1	24·38	29·15	—4·77	3·90	Ahmadabad.
6	30	70	79	27	18	44	65	37	6·7	8·6	—1·9	78	0	·763	—·005	4·1	—0·2	60	—11·9	41·65	71·15	—30·10	7·18	Bombay.
42	38	45	45	56	12	47	37	42	7·5	6·2	+1·3	66	— 7	·686	—·036	3·7	—0·2	87	—5·1	57·63	100·32	—42·69	4·09	Ratnagiri.

a Mean of 10 months.
i „ „ 8 „

* Wind observations of 365 days.
† „ „ „ 364 „
‡ „ „ „ 318 „

TAB

(2) *Abstract of observations taken at 8 hrs. at*

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Temperature of air. Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
	X.—Bombay—*concld.*																	
	Marmagao	60	29·855	+·001	29·849	30·027	29·571	77·9	74·9	85·7	—0·2	75·1	+0·2	80·4	0	10·7	93·2	
	Karwar	44	29·874	—·005	29·853	30·043	29·612	75·9	73·1	87·4	+1·3	73·4	+0·7	80·4	+1·0	14·0	93·7	
26	Malegaon	1,430	28·453	—·004	29·835	28·677	28·075	75·6	64·1	93·8	+1·9	65·3	+0·2	79·6	+1·1	28·5	109·5	
	Ahmadnagar	2,154	27·756	—·005	29·830	27·956	27·474	74·5	62·9	91·7	+2·3	64·5	+0·7	78·1	+1·5	27·2	110·0	
	Poona	1,846	28·075	+·012	29·870	28·271	27·753	71·7	64·0	89·8	+0·3	63·6	—1·0?	76·7	—0·3?	26·1	104·0	
	Sholapur	1,590	28·302	—·007	29·828	28·520	28·043	76·7	64·4	94·0	+1·1	69·1	+1·0	81·6	+1·1	24·9	108·1	
	Bijapur	*1,948*	27·959	+·001	29·834	28·159	27·709	75·6	66·6	91·2	+0·5	68·3	+0·7	79·7	+0·6	22·9	105·9	
	Belgaum	2,562	27·383	+·006	29·862	27·553	27·117	70·6	64·6	85·2	+0·7	64·2	+0·3	74·7	+0·5	21·1	99·1	
	XI.—Central India.																	
20	Neemuch	1,626	28·235	—·010	29·815	28·531	27·877	74·4	64·2	88·8	—0·1	64·0	—0·5	76·3	—0·3	24·8	108·7	
	Indore	1,823	28·055	0	29·823	28·318	27·711	75·1	65·1	89·2	+1·1	63·9	+0·2	76·5	+0·7	25·3	108·9	
21	Nowgong	754	29·077	—·006	29·804	29·431	28·684	71·1	62·1	89·2	+0·3	64·3	—1·4	77·0	—0·5	25·5	114·1	
	Sutna	1,041	28·788	+·002	29·796	29·132	28·382	73·9	64·1	88·5	+0·3	65·7	—0·2	77·1	+0·1	22·7	110·8	
	XII.—Central Provinces.																	
22	Buldana	2,134	...	...	...	...	...	76·0	63·7	89·3	+1·7	68·7	+0·8	79·0	+1·3	20·7	104·4	
	Akola	925	28·956	+·007	29·835	29·229	28·618	76·8	63·9	95·8	+2·8	68·2	+1·0	82·0	+1·9	27·6	111·3	
	Amraoti	1,215	28·654	+·001	29·818	28·922	28·311	77·8	63·9	93·7	+1·6	70·4	+1·4	82·0	+1·5	23·4	111·1	
23	Khandwa	1,044	28·827	+·001	29·832	29·096	28·483	75·3	64·8	93·0	+1·0	66·2	—0·8	79·6	+0·1	26·8	111·5	
	Hoshangabad	1,006	28·864	+·005	29·837	29·160	28·491	72·7	64·5	90·7	+0·3	65·3	—1·6	78·0	—0·7	25·4	111·2	
	Saugor	1,807	28·014	—·038?	29·774?	28·297	27·640	72·5	60·2	89·1	+1·2	66·5	0	77·8	+0·6	22·6	109·9	
	Jubbulpore	1,327	28·501	—·015	29·793	28·799	28·108	72·0	62·3	88·7	+0·2	64·8	+0·4	76·7	+0·3	23·9	108·9	
	Seoni	2,033	27·839	+·008	29·814	28·107	27·439	73·5	61·8	87·4	—0·5	64·8	+0·1	76·1	—0·2	22·6	106·4	
	Nagpur	1,017	28·856	+·017	29·827	29·144	28·477	77·1	65·0	93·0	+0·9	68·3	—0·5	80·6	+0·2	24·7	112·4	
24	Pendra	2,040	27·823	+·013	29·805?	28·107	27·410	73·1	62·1	85·8	+0·3	63·7*	—1·3*	74·3*	—0·5	21·2*	103·9	
	Raipur	970	28·870	—·008	29·795	29·173	28·386	76·1	66·4	91·0	+0·7	69·2	+0·1	80·1	+0·4	21·8	112·0	
	Chanda	*634*	29·232	—·007	29·817	29·518	28·880	77·6	67·7	94·3	+1·4	68·5	—0·1	81·4	+0·7	25·7	113·1	
	Jagdalpur	1,813	28·071	...	29·828	28·328	27·697	73·2	66·9	88·6		65·2		76·9		23·4	107·2	
	XIII.—Hyderabad.																	
27	Aurangabad	1,905	28·001	—·004	29·838	28·222	27·705	75·6	62·1	92·2	+1·4	67·6	+2·0?	79·9	+1·7?	24·6	107·0	
	Nizamabad	1,248	28·633	+·008	29·824	28·869	28·320	78·1	66·7	95·3	+3·7	68·5	+0·1	81·9	+1·9	26·8	114·6	
28	Gulbarga	1,503	28·391	—·004	29·833	28·607	28·127	76·3	66·8	95·2	+2·6	69·2	+0·2	82·2	+1·4	26·0	111·0	
	Raichur	*1,311*	28·589	+·014	29·837	28·797	28·336	78·8	69·0	94·5	+2·2	72·3	+0·6	83·4	+1·4	22·2	110·0	
	Hyderabad (Deccan)	1,719	28·186	+·015	29·836	28·558	27·894	76·3	68·4	91·4	+0·9	70·1	+0·6	80·8	+0·7	21·3	108·4	
	Hanamkonda	877	29·003	+·006	29·826	29·232	28·679	79·7	70·0	94·0	+2·2	72·9	+1·1	83·5	+1·7	21·1	112·5	

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 11 months.

B—contd.

tations in India, etc., in the year 1920.

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 of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs.: Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Cloud: Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall: Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
																								X.—Bombay—*concld.*
34	22	37	80	11	11	11	79	29	7·1	6·7	+0·4	84	+ 1	·823	+ ·010	5·5	+ 1·2	103	+ 8·6	79·83	93·84	—14·01	6·24	Marmagao. †
81	39	9	0	0	10	24	0	3	2·2	3·0	—0·8	87	+ 4	·785	+ ·008	4·7	+0·9	103	— 0·2	83·65	120·63	—36·98	4·27	Karwar.
30	5	1	2	8	11	159	76	24	5·5	6·5	—1·0	53	— 5	·485	—·031	3·2	+0·2	20	—15·0	11·54	22·58	—11·04	1·75	Malegaon.
40	25	12	6	14	13	33	58	95	5·3	8·3	—3·0	52	—10	·441	—·084	1·9	—1·1	30	— 5·3	12·65	22·33	— 9·68	1·58	Ahmadnagar.
17	3	3	8	4	3	23	117	57	6·7§	7·6	—0·9	65	+ 2	·519	+ ·016	5·4	+1·77	44	— 2·8	25·08	27·25	— 2·17	2·29	Poona. ‡
25	18	37	31	46	7	35	38	126	8·0	7·1	+0·9	49	— 6	·450	—·046	3·7	—0·2	17	—24·3	14·66	28·52	—13·86	3·65	Sholapur.
7	45	21	13	18	25	30	83	51	3·3§	4·7	—1·4	62	— 5	·551	—·028	2·5	—1·2	35	— 1·2	13·69	20·50	— 6·81	2·18	Bijapur.
6	14	17	20	5	6	40	60	8	3·8	11·0	—7·2	73	+ 3	·533	—·004	5·2	+0·8	75	— 6·3	44·90	50·86	— 5·96	1·94	Belgaum.
																								XI.—Central India.
3	2	6	30	4	2	5	143	1	4·3	6·4	—2·1	58	0	·506	+ ·007	2·5	—0·3	37	+ 1·7	31·06	28·03	+ 3·03	4·10	Neemuch.
7	18	24	15	14	9	8	102	63	3·7	3·0	+0·7	58	— 4	·510	—·012	3·1	—0·5	45	+ 0·2	39·17	32·34	+ 6·83	4·90	Indore.*
0	12	14	17	20	20	58	81	44	1·8	1·9	—0·1	62	— 3	·477	—·062	3·5	—0·2	40	— 8·1	26·46	42·86	—16·40	2·36	Nowgong.
0	9	4	16	10	25	66	51	15	2·3	4·4	—2·1	60	— 1	·512	—·004	2·5	—1·2	39	—15·7	33·31	44·34	—11·03	3·82	Sutna.
																								XII.—Central Provinces.
3	1	11	55	45	5	35	117	91	5·5	5·7	—0·2	51	...	·450	...	3·8	...	25	—26·5	24·38	34·62	—10·24	4·46	Buldana.
7	14	27	40	16	13	26	104	69	5·1	4·4	+0·7	47	—10	·446	—·064	3·4	—0·2	21	—24·5	12·21	31·99	—19·78	1·79	Akola.
7	3	90	59	14	4	48	74	67	5·3	4·2	+1·1	46	—12	·432	—·097	3·7	+0·2	29	—18·5	15·42	33·47	—18·05	1·55	Amraoti.
3	17	36	33	11	18	45	129	41	5·0	4·4	+0·6	57	0	·498	+·004	3·9	+0·8	31	— 9·3	26·82	29·54	— 2·72	4·74	Khandwa.
1	0	82	0	5	0	102	4	20	2·0	2·3	—0·3	63	— 1	·538	—·003	3·1	—0·3	39	—15·9	34·31	48·27	—13·96	5·80	Hoshangabad.
	8	22	28	27	15	34	116	45	4·5	3·2	+1·3	49	— 7	·397	—·079	2·8	—0·3	41	—14·1	36·18	44·76	— 8·58	4·23	Saugor.
1	9	12	19	96	44	53	61	19	2·0	2·3	—0·3	58	— 9	·468	—·056	2·5	—0·8	44	—19·4	30·49	55·01	—24·52	2·83	Jubbulpore. (‖)
	58	36	8	2	20	22	61	35	3·6	2·7	+0·9	51	—11	·429	—·078	3·0	—0·2	49	—21·1	37·77	52·46	—14·69	4·59	Seoni.
	59	53	30	9	4	13	84	65	4·1	4·1	0	51	— 8	·479	—·056	2·8	—1·0	40	—22·5	29·23	49·16	—19·93	4·84	Nagpur.
	19	2	1	6	17	15	14	41	3·5	...	...	53	— 7	·438	—·042	3·4	0	58	—14·1	35·22	49·19	—13·97	3·23	Pendra.
	9	11	21	4	13	34	33	9	3·2	4·3	—1·1	59	— 4	·545	—·015	4·0	+0·2	52	—11·3	36·42	50·02	—13·60	7·97	Raipur.
	19	30	27	36	26	75	73	53	3·6	2·7	+0·9	59	— 5	·571	—·015	3·6	0	41	—21·7	29·80	52·68	—22·88	2·58	Chanda.
	11	5	4	5	56	46	41	11	2·4	...	...	73	...	·602	...	0·8	...	63	—15·4	37·53	61·33	—23·81	2·12	Jagdalpur.
																								XIII.—Hyderabad.
	27	20	66	28	6	39	101	27	8·2	...	...	47	— 7	·409	—·077	3·7	+0·4	18	—25·6	10·49	27·78	—17·29	2·03	Aurangabad.
	38	31	14	13	23	57	63	32	2·9	...	...	55	—11	·529	—·087	3·5	0	42	—13·0	24·65	40·83	—16·18	4·08	Nizamabad.
	32	65	57	15	15	41	83	43	7·4	7·4	0	60	— 4	·555	—·025	2·3	—1·3	24	—23·9	14·09	31·37	—17·28	1·98	Gulbarga.
	17	25	40	41	27	35	100	64	7·8	7·1	+0·7	60	— 3	·597	0	3·2	—0·3	30	—14·3	14·77	27·64	—12·87	2·80	Raichur.
	2	4	19	27	7	16	93	43	3·8	4·0	—0·2	66	— 2	·605	+ ·017	3·8	—0·1	31	—18·0	21·35	31·62	—10·27	2·88	Hyderabad (Deccan).
	10	5	6	78	34	15	42	55	4·1	..	...	61	— 5	·615	—·014	4·2	+0·1	31	—19·0	15·13	34·53	—19·40	1·63	Hanamkonda.

* Wind observations of 360 days.
† " " 314 "
‡ " " 335 "
§ Mean of 11 months.
‖ Wind observations of 365 days.

TAB

(2) *Abstract of observations taken at 8 hrs. at*

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.					Temperature of air.									
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
	XIV.—Mysore.																	
29	Chitaldrug	2,405	27·523	−·001	29·831	27·691	27·308	73·9	65·9	88·1	+1·1	68·2	+0·8	78·1	+0·9	19·9	100·9	
	Hassan	3,149	26·836	+·009	29·854	27·001	26·628	70·3	66·0	83·7	+0·4	63·3	+0·9	73·5	+0·7	20·4	97·4	
	Bangalore	3,021	26·955	+·002	29·854	27·113	26·765	70·5	65·7	85·6	+1·1	64·6	+0·4	75·1	+0·7	21·0	98·8	
	Mysore	2,518	27·432	−·007	29·851	27·580	27·267	72·8	67·1	86·2	−0·2	66·0	+0·2	76·1	0	20·3	99·0	
	XV.—Madras.																	
30	Mangalore	72	29·860	−·010	29·863	30·008	29·654	79·7	74·6	87·9	+0·5	74·5	+1·0	81·2	+0·7	13·4	100·1	
	Calicut	27	29·905	−·003	29·861	30·053	29·753	78·2	75·3	85·3	−1·4	74·9	+0·6	80·1	−0·4	10·4	98·7	
	Cochin	9	29·932	0	29·869	30·088	29·815	79·7	74·9	87·4	−0·4	75·2	+0·3	81·4	−0·1	12·3	98·8	
	Trivandrum	198	29·741	+·009	29·870	29·909	29·614	77·4	74·5	84·1	0	74·6	−0·6	79·4	−0·3	9·5	91·2	
31	Pamban	37	29·869	−·011	29·834?	30·032	29·706	81·3	76·4	88·9	+1·1	78·2	+0·8	83·5	+0·9	10·8	94·2	
	Madura	447	29·475	+·022?	29·855	29·683	29·283	80·7	74·1	92·5	−1·3	75·1	+1·2	83·7	−0·1	17·4	104·4	
	Pudukkottai	318	29·605	+·005	29·855	29·781	29·426	80·2	73·5	93·0	−0·4	74·7	+0·7	83·9	+0·1	18·3	107·2	
	Negapatam	31	29·879	−·001	29·839	30·066	29·692	80·7	75·2	89·9	−0·2	76·6	+0·4	83·2	+0·1	13·3	103·4	
	Trichinopoly	255	29·660	−·003	29·848	29·860	29·467	81·3	74·4	94·1	−0·2	74·6	+0·4	84·4	+0·1	19·5	107·9	
	Coimbatore	1,341	28·590	+·009	29·867	28·768	28·404	76·2	71·2	89·5	−0·5	70·3	+0·6	79·9	+0·1	19·3	100·2	
	Salem	913	29·009	+·008	29·862	29·186	28·808	76·2	71·7	92·6	−0·5	71·6	+0·6	82·1	+0·1	20·9	105·3	
	Cuddalore	37	29·871	−·001	29·837	30·100	29·650	80·4	75·1	89·9	−0·7	75·5	+1·0	82·7	+0·1	14·4	105·7	
	Vellore	707	29·196	−·007	29·844	29·403	28·971	77·9	62·3	92·5	+1·1	72·9	+0·4	82·7	+0·7	19·6	109·4	
	Madras	22	29·878	−·007	29·831	30·102	29·642	81·1	75·5	93·0	+1·0	76·0	+1·2	84·0	+1·1	16·0	108·7	
32	Cuddapah	428	29·474	−·002	29·840	29·688	29·227	81·2	72·9	95·3	−0·5	75·2	+0·7	85·3	+0·1	20·1	110·0	
	Bellary	1,475	28·431	+·001	29·839	28·634	28·186	78·8	69·1	94·4	+1·1	71·4	+0·5	82·9	+0·8	22·9	107·3	
	Kurnool	923	28·973	+·004	29·840	29·191	28·728	77·4	70·5	95·3	+1·4	72·6	+1·8	84·0	+1·6	22·8	112·0	
33	Nellore	66	29·820	−·008	29·821	30·065	29·559	81·1	75·4	93·4	−0·6	75·8	+0·7	84·6	+0·1	17·6	109·8	
	Masulipatam	15	29·875	−·006	29·825	30·139	29·557	80·8	74·8	91·3	+0·8	74·7	+0·2	83·0	+0·5	16·7	111·9	
	Cocanada	26	29·861	+·002	29·824	30·115	29·510	80·0	75·1	90·1	+0·6	75·6	+0·6	82·8	+0·6	14·4	105·6	
	Vizagapatam	38	29·828	−·004	29·806	30·114	29·421	81·3	74·7	88·1	+3·0	77·1	−0·6	82·6	+1·2	11·0	102·0	
	Calingapatam	19	29·841	....	29·798	30·137	29·411	79·1	74·7	89·8	...	73·9	...	81·8	...	15·8	104·1	
	Gopalpur	56	29·796	−·002	29·793	30·129	29·330	77·9	74·1	87·1	+1·1	73·5	+0·4	80·3	+0·7	13·6	100·0	
	Bay Stations.																	
1	P. V. Fraser	8	29·815		29·783	30·146	29·216	81·0	76·5	...	...	...	...	...	...	...	...	
	Port Blair	58	29·828	−·025	29·817	29·997	29·621	80·3	76·4	86·1	−1·1	76·6	−0·4	81·3	−0·7	9·6	94·6	70
	Table Island	90	29·799	−·016	29·824	29·987	29·504	80·7	76·9	84·9	−0·8	77·6	+0·5	81·3	−0·1	7·3	92·0	70
	Kashmir.																	
13	Muzaffarabad	...	27·472	...	...	27·803	26·973	62·0	54·7	80·7	...	55·3	...	68·0	...	25·5	109·2	31
	Srinagar	5,304	24·885	−·002	24·856	25·274	24·481	50·1	52·8*	64·3	−1·8	42·4	−1·7	53·4	−1·7	21·9	94·9	9
	Gulmarg†	*8,569*	21·795	−·013	21·763	21·945	21·637	60·4	53·8	68·4	+1·7	46·3	−0·7	57·3	+0·5	22·1	82·0	36
	Dras	*10,059*	20·809	+·014	20·777	21·169	20·308	30·7	48·7†	46·6	−4·4	22·4	+1·1	34·5	−1·7	24·2	86·6	−35

N. B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
* Mean of 9 months.
† " " 4 "

B—contd.

tations in India, etc., in the year 1920.

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 of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs. Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Cloud. Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall. Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
																								XIV.—Mysore.
59	1	5	45	43	6	62	104	41	5·1	5·9	—0·8	67	—3	·550	—·030	4·3	—0·5	29	—18·4	18·38	24·52	—6·14	3·10	Chitaldrug.
38	2	13	82	18	1	32	120	30	5·1	2·6	+2·5	80	+3	·594	+·015	5·3	—0·3	74	+ 7·5	28·12	35·39	—7·27	1·75	Hassan.
28	1	32	67	25	19	56	128	10	6·0	4·6	+1·4	77	—1	·574	—·007	5·7	+0·6	47	—11·3	26·00	35·10	—9·10	1·83	Bangalore.
55	13	40	38	11	24	99	81	5	5·4	7·3	—1·9	74	—3	·596	—·012	4·7	—1·2	50	— 5·5	27·58	31·21	—3·63	3·27	Mysore.
																								XV.—Madras.
33	41	28	180	17	9	7	34	27	4·7	2·1	+2·6	78	+1	·783	+·010	4·7	—0·5	115	— 0·9	121·33	126·43	—5·10	5·50	Mangalore.
30	37	29	83	29	5	9	13	41	4·1	6·3	—2·2	87	+4	·833	+·025	5·5	+0·6	113	—0·6	139·80	117·29	+22·51	8·10	Calicut.
57	4	70	85	12	4	4	17	13	3·8	4·0	—0·2	79	—2	·804	—·005	4·7	—0·2	130	+ 1·3	128·33	114·60	+13·73	4·78	Cochin.
92	36	67	11	5	1	2	23	129	4·0	4·4	—0·4	87	+5	·813	+·023	6·3	+0·8	107	+12·6	94·01	64·16	+29·85	5·94	Trivandrum.
31	59	57	35	11	66	69	31	17	7·8	7·5	+0·3	80	0	·856	—·013	3·2	—0·3	53	+7·3	47·66	36·84	+10·82	3·10	Pamban.
37	65	52	24	4	4	8	84	98	4·1	3·1	+1·0	73	+2	·755	+·007	6·5	+2·2	64	+15·4	41·91	33·63	+8·28	2·72	Madura.
9	77	53	7	2	8	15	60	45	3·7	...	...	72	—2	·737	—·017	4·8	—1·1	65	+10·2	52·83	35·35	+17·48	6·35	Pudukkottai.
5	13	21	22	15	6	66	116	73	6·4	5·0	+1·4	77	+2	·802	—·006	4·7	—0·4	66	+9·9	84·07	54·15	+29·92	7·60	Negapatam.
3	36	68	6	2	10	79	102	20	3·7	4·2	—0·5	73	+1	·763	+ 021	4·7	+0·1	60	+13·8	51·36	32·66	+18·70	6·25	Trichinopoly.
0	12	62	37	1	14	87	30	3	3·8	3·1	+0·7	76	—7	·697	—·035	3·5	—1·4	49	+4·7	20·94	22·20	—1·26	1·34	Coimbatore.
7	7	64	16	0	29	108	16	8	3·4	3·1	+0·3	76	—1	·707	—·038	4·2	—0·3	69	+5·4	39·11	39·43	—0·32	2·22	Salem. (a)
2	29	9	0	6	7	137	31	65	5·2	1·8	+3·4	78	—3	·803	—·034	5·0	+0·7	57	+0·4	77·55	52·68	+24·87	8·66	Cuddalore.
9	0	0	2	1	2	0	48	64	2·6	...	...	77	+2	·734	+·016	3·3	—0·6	51	—5·0	32·05	42·50	—10·45	2·28	Vellore.
3	17	9	1	0	30	103	48	15	3·0	5·0	—2·0	75	—2	·799	—·012	4·7	—0·2	54	—3·2	65·31	49·85	+15·46	5·92	Madras.
3	21	14	20	57	20	30	76	50	...	...	...	67	0	·706	—·003	4·5	+0·2	49	+3·5	30·58	31·03	—0·45	3·23	Cuddapah.
2	16	10	25	35	17	30	96	69	4·7	4·8	—0·1	60	—1	·592	+·023	3·9	—0·7	24	—10·8	17·41	20·13	—2·72	2·79	Bellary. (b)
.	1	4	2	4	3	39	77	35	3·2	...	...	70	+2	·666	+ 028	2·7	—1·1	27	—20·0	11·05	26·08	—15·03	1·02	Kurnool.
.	20	9	7	28	58	25	71	77	2·9	4·9	—2·0	77	+1	·806	+·012	5·1	—0·7	43	+ 0·3	51·86	36·26	+15·60	7·10	Nellore.
1	54	83	9	17	48	25	67	65	5·3	4·8	+0·5	78	—4	·814	—·043	4·6	—0·4	49	—4·5	29·23	40·21	—10·98	2·00	Masulipatam.
0	32	50	3	5	5	29	88	25	5·5	5·8	—0·3	79	+2	·818	+·028	5·6	+1·0	49	— 3·5	36·43	38·33	—1·90	5·10	Cocanada.
.	18	31	3	2	4	29	132	112	7·4	...	...	72	0	·780	+·033	5·8	+0·7	37	—13·2	31·33	37·25	—5·92	2·92	Vizagapatam.
.	49	15	4	1	12	73	98	86	5·8	...	...	81	...	·817	...	3·3	...	51	+1·3	33·59	44·30	—10·71	2·49	Calingapatam.
.	165	20	5	5	51	88	10	12	7·3	8·6	—1·3	81	0	·805	+·022	3·8	+1·4	43	—13·5	25·79	45·30	—19·51	2·14	Gopalpur.
																								Bay Stations.
	36	41	16	10	31	149	32	15	...	...	...	81	...	·862	...	4·5	...	44	—10·2	29·31	38·76	—9·45	2·55	P. V. Fraser.
	37	44	31	19	24	61	41	93	6·8	5·5	+1·3	83	—2	·856	—·032	5·7	—0·3	137	— 2·2	115·83	117·07	— 1·24	3·28	Port Blair.
	52	42	32	11	19	66	63	43	11·1	...	...	84	+2	·881	+·018	5·4	—1·5	98	—1·2	76·68	78·41	— 1·73	6·95	Table Island. (c)
																								Kashmir.
	1	8	4	7	12	71	9	0	1·6	...	...	63	...	·372	...	3·8	...	65	—13·1	48·72	52·25	— 3·53	5·02	Muzaffarabad.
	20	13	17	62	31	23	13	35	2·2	2·6	—0·4	75*	— 9*	·375*	—·038*	5·1	+0·5	58	— 1·2	24·19	26·47	—2·28	2·76	Srinagar.
	13	24	11	18	1	2	3	9	3·1	...	...	67	—11	·354	—·043	3·7	—0·1	24	—8·7	7·78	15·16	—7·38	0·71	Gulmarg.
	9	15	2	3	4	13	40	21	3·1	...	...	67†	+3†	·290†	—·009†	5·3	+1·2	65	+9·2	35·37	21·22	+14·15	2·20	Dras.

* Mean of 9 months.
† „ „ 4 „

(a) Wind observations of 365 days.
(b) „ „ of 360 „
(c) „ „ of 343 „

TAB

(2) *Abstract of observations taken at 8 hrs. at*

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Temperature of air. Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
	Kashmir—*concld.*																	
	Leh	*11,503*	19·696	—·008	19·665	19·278	19·165	36·9	42·7*	53·3	—2·1	29·5	—0·1	41·5	—1·1	23·8	80·5	–
	Skardu	*7,505*	22·859	—·017	22·828	23·364	22·405	45·1	47·6§	60·6	—1·7	39·5	—0·9	50·2	—1·3	21·1	99·2	–
	Gilgit	4,890	25·158	+·029	25·131	25·655	24·6:8	56·6	51·6†	71·9	—0·7	50·4	—2·2	61·1	—1·5	21·5	106·8	
	Baluchistan.																	
15	Fort Sandeman	4,614	25·361	...	25·330	25·651	25·037	58·4	49·5	80·7	...	52·9	...	66·8	...	27·9	110·1	
	Quetta	5,502	24·624	—·004	24·584	24·914	24·336	49·2	49·2‡	74·1	+0·5	43·1	—1·2	58·7	—0·3	31·1	103·9	
	Chaman	4,311	25·643	—·034	25·605	26·003	25·314	60·5	52·4†	77·9	+0·4	52·1	—1·7	65·1	—0·7	25·8	110·8	1
	Kalat	6,630	23·709	...	23·671	23·953	23·490	46·5	46·1‡	71·8	—1·9	43·6†	...	58·5†	...	29·9†	100·1	
	Dalbandin	2,772	27·087	...	27·055	27·496	26·629	60·6	50·0†	86·5	...	53·5	...	70·0	...	33·0	118·5	
	Pasni	...	29·863	...	29·823	30·216	29·347	72·9	67·9	88·7	...	61·8	...	75·2	...	26·9	114·8	
	Panjgur	3,177	26·707	...	26·665	27·030	26·351	61·5	53·8†	84·9	...	56·6	...	70·7	...	28·3	111·8	
	Seistan	...	28·152	...	...	28·690	27·690	59·4	54·4†	80·3	...	51·4‡	...	64·8†	...	26·8‡	110·8	
	Hill stations, excluding Kashmir and Baluchistan.																	
	Parachinar	6,000	24·410	—·011	24·386	24·666	24·121	56·8	49·6†	70·4	+0·3	47·0	—1·0	58·7	—0·3	23·5	99·0	1
	Cherat	*4,256*	25·676	+·003	25·644	25·960	25·333	62·0	51·3	72 2	—0·8	56·9	+0 3	64·6	—0·3	15·3	104·0	2
	Drosh (*c*)	4,500	25·049	...	...	25·425	24·625	54·4	48·4†	70·0	—2·9	51·1	—0·5	60·6	—1·7	19·0	108·1	2
	Murree	6,333	23·951	—·027	23·919	24·210	23·657	55·7	48·0	63·9	—1·2	51·3	+1·1	57·6	—0·1	12·7	89·2	1
	Simla	7,232	23·093*	+·009	23·055	23·329	22·847	54·1	46·1	60·5	—0·4	49·8	+0·1	55·2	—0·1	10·7	77·3	1
	Chakrata	6,922	23·354		23·308	23·616	23·037	56·6	48·8	66·7	+2·3	50·2	+0·6	58·5	+1·5	16·5	86·7	2
	Mukteswar	7,592	22·838	+·003	22·797	23·058	22·600	53·7	46·2	64·2	+0·1	46·2	—2·1	55·2	—1·0	18·0	81·7	2
	Darjiling	7,432	22·937	—·007	22·802	23·191	22·541	52·2	49·9	60·8	+2·0	48·2	+0·8	54·4	+1·4	12·6	76·5	2
	Kalimpong§	...	25·933		25·887	26·232	25·659	64·5	62·1	73·1		61·2		67·1		12·0	83·6	4
	Shillong	4,920	25·117	+·002	25·069	25·375	24·831	60·8	56·0	69·9	—0·2	53·8	+0·5	61·8	+0·1	16·2	80·9	3
	Cherrapunji	4,309	25·675	0	25·626	25·899	25·346	62·9	58·9	69·0	+0·5	57·7	+0·5	63·3	+0·5	11·3	81·9	3
	Netarhat†		26·064‖		26 013‖	26·187	25·911	70·0	61·2	79·0		59·0		69·0		20·0	98·8	3
	Maymyo	3,546	26·404	—·021	26·348	26·647	26·095	62·3	60·0	76·8	—0·2	57·2	+1·2	67·0	+0·5	19·6	89·8	3
	Pachmarhi	3,528	26·429	—·005	26·376	26·657	26·104	68·6	59·8	81·4	+1·6	60·8	—0·2	71·1	+0·7	20·6	101·0	3
	Mount Abu	3,945	26·034	+·007	25·984	26·276	25·712	68·3	58·7	75·8	—0·1	62·4	+0·4	69·1	+0·1	13·5	94·6	3
	Mercara	3,781	26·226	—·007	26·160	26·255	26·062	65·3	63·1	76·4	—0·2	60·2	—1·1	68·3	—0·7	16·2	89·0	5
	Ootacamund	*7,327*	23·065	+·015	23·011	23·174	22·918	57·9	42·4	65·9	+0·4	49·2	0	57·6‖	+0·2	16·7	75·8	3
	Kodaikanal	7,688	22·831	—·002	22·765	22·920	22·698	57·4	51·4	65·6	+1·0	50·6	—0·5	58·1	+0·3	15·1	75·5	3
	Extra India.																	
	Singapore (*a*)	10	29·846	—·089	29·777	29·959	29·566	83 5	...	88·7	+0·9	74·7	+0·9	81·7	+0·9	14·0	94·5	70
	Penang (*a*)	17	29·833	—·082	29·775	30·051	29·640	81·9	...	89·1	—0·3	72·1	—1·7	80·6	—1·0	16·9	95·0	68
	Trincomalee	99	29·815	+·008	29·843	29·988	29·600	78·0	74·2	90·6	+2·0?	76·1	—0·2	83·4	+0·9?	14·5	98·5	67

N. B.—Elevations in italics indicate barometrical determinations.
Note.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
(*c*) Aneroid.
(*a*) 9 hrs. observations.

* Mean of 5 months.
† „ 11 „
‡ „ 9 „
§ „ 7 „
‖ „ 4 „

—contd.

ations in India, etc., in the year 1920.

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 of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs. Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Cloud. Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall. Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
																							Kashmir—*concld.*
4	16	4	2	22	0	2	0	1·4	1·5	—0·1	48*	— 2*	·194*	—·014*	4·5	—0·3	7	—2·7	1·98	3·21	— 1·23	0·36	Leh.
0	19	30	10	24	59	42	10	4·5	...	...	47‡	— 9‡	·127‡	—·064‡	4·8	0	21	+1·2	6·55	7·66	— 1·11	0·54	Skardu.
0	0	0	0	1	35	1	6	0·4	...	...	57‖	+ 9‖	·318‖	+·045‖	4·4	—0·5	23	+7·6	5·74	4·91	+ 0·83	0·55	Gilgit.
																							Baluchistan.
9	16	14	10	20	24	21	5	3·5‖	...	...	48‖	...	·278‖	...	1·8	...	24	— 1·6	8·32	10·43	— 2·11	1·13	Fort Sandeman. (*a*)
7	6	5	19	18	3	5	5	2·1	2·1	0	59§	+ 8§	·293§	—·027§	2·0	+0·1	19	— 5·5	5·11	10·02	— 4·91	0·73	Quetta.
2	5	46	61	57	39	2	3	3·3	5·9	—2·6	47‖	+ 3‖	·277‖	+·010‖	2·4	+0·5	17	— 2·2	6·54	7·12	— 0·58	1·05	Chaman.
5	1	3	9	30	27	2	11	4·3	...	...	53§	+ 7§	·233§	—·030§	1·7	...	14	— 4·6	3·77	6·96	— 3·19	0·46	Kalat.
13	66	19	15	8	31	31	10	4·4	...	...	39‖	...	·207‖	...	2·2	...	7	— 2·7	3·25	3·77	— 0·52	0·91	Dalbandin.
33	15	25	13	5	11	58	103	5·4	...	...	76	...	·656	...	2·7	...	5	— 4·7	4·38	7·39	— 3·01	3·56	Pasni.
20	108	64	3	12	19	9	16	5·0	...	...	51‖	...	·320‖	...	1·2	...	5	...	2·57	...	...	1·28	Panjgur. (*b*)
23	4	7	1	1	3	2	237	9·7	...	...	60‖	...	·357‖	...	1·5	...	5	...	1·00	...	...	0·34	Seistan.
																							Hill stations, excluding Kashmir and Baluchistan.
0	0	0	0	0	1	0	0	0·5	...	...	51‖	— 4	·278‖	+·001	2·5	—0·9	61	— 3·6	25·86	29·69	— 3·83	1·81	Parachinar.
136	10	1	4	17	5	1	27	5·3	8·3	—3·0	46	— 7	·282	—·034	1·5	—1·5	32	—10·0	20·17	28·00	— 7·83	2·81	Cherat. (*c*)
0	11	35	7	0	3	0	1	2·8	...	...	56‖	— 4	·267‖	—·030	2·9	0	50	+ 9·7	16·93	16·76	+ 0·17	1·90	Drosh.
13	16	23	53	37	4	4	11	4·0	5·3	—1·3	54	— 2	·266	—·003	3·8	+0·2	60	—17·1	35·13	59·00	—23·87	1·72	Murree.
...	...	...	...	...	...	...	...	...	...	...	52	— 5	·241	—·015	4·2	+0·1	89	+ 3·0	63·61	63·07	+ 0·54	5·45	Simla.
10	122	118	19	5	18	21	6	7·4	4·6	+2·8	57	— 7	·279	—·009	3·5	+0·2	76	—12·8	39·79	73·01	—33·22	3·06	Chakrata.
9	20	62	17	6	7	171	7	6·4	...	...	55	— 6	·246	—·026	3·9	—0·2	68	—12·3	45·06	52·34	— 7·28	4·31	Mukteswar.
6	20	12	14	2	22	25	6	2·3	3·5	—1·2	85	0	·391	+·038	6·7	+0·9	126	+ 3·6	107·17	125·44	—18·27	6·18	Darjiling.
...	...	...	...	...	...	...	...	...	...	...	88	...	·545	...	5·4	...	?	...	?	...	...	?	Kalimpoug.
0	3	20	12	29	40	8	0	2·2	...	...	74	0	·410	—·002	4·6	+0·3	121	— 3·5	68·05	86·05	—18·00	2·68	Shillong.
6	45	27	19	31	54	22	4	3·6‖	...	...	79	— 2	·466	—·003	5·4	0	159	— 1·2	369·73	424·02	—54·29	18·95	Cherrapunji.
27	31	15	17	17	63	86	88	5·6	...	...	63	...	·457	...	2·7	...	68	...	55·06	...	...	3·85	Netarhat.
0	3	4	0	7	78	13	0	1·1	...	...	88	+ 4	·507	—·032	5·0	+0·7	62	—29·6	41·62	60·20	—18·58	3·46	Maymyo.
10	16	24	26	12	38	99	72	4·4	4·3	+0·1	62	+ 2	·431	+·001	2·7	—1·0	62	—14·7	56·55	75·75	—19·20	9·50	Pachmarhi.
27	31	4	14	9	123	38	30	4·9	5·7	—0·8	51	— 3	·350	—·017	3·3	0	54	+ 1·2	40·48	58·19	—17·71	3·86	Mount Abu.
16	56	53	3	7	31	73	52	3·9	4·3	—0·4	88	+ 3	·551	+·009	5·9	—0·4	133	+ 1·3	142·64	126·47	+16·17	4·94	Mercara.
7	12	67	82	30	17	54	36	3·9	...	...	72	+ 4	·342	+·018	5·8	+0·8	113	+ 5·6	49·58	56·46	— 6·88	2·29	Ootacamund.
72	62	43	32	12	4	80	53	8·4	...	...	69	0	·321	—·001	4·8	+0·3	109	+ 1·4	65·46	62·19	+ 3·27	3·03	Kodaikanal.
																							Extra India.
19	79	6	38	14	55	4	48	...	...	...	...	...	...	...	6·8	...	116	—15·1	89·11	96·13	— 7·02	4·61	Singapore.
92	306	2	42	6	1	0	17	...	...	...	...	...	...	...	5·5‡	...	114	—15·1	78·10	102·63	—24·53	4·29	Penang.
13	27	19	4	9	192	76	3	6·4	7·3	—0·9	83	— 1	·794	—·065	6·5	+3·2	65	— 7·8	47·34	62·15	—14·81	4·21	Trincomalee.

* Mean of 5 months.
‡ " " 7 "
§ " " 9 "
‖ " " 11 "

(*a*) Wind observations of 364 days.
(*b*) " " " 365 "
(*c*) " " " 335 "

TAB

(2) *Abstract of observations taken at 8 hrs. at*

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.					Temperature of air.									
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of year.	Lowest pressure of year.	Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Extra India—*concld.*																
	Colombo	24	29·912	—·005	29·862	30·026	29·752	76·1	74·0	86·2	−1·0	74·8	—0·7	80·5	—0·9	11·3	93·0
	Hambantota	64	29·857	...	29·847	29·989	29·712	76·1	73·3	86·9	...	75·0	...	80·9	...	11·9	95·5
	Minicoy	7	29·960	+·022	...	30·072	29·822	...	...	...	...	...	...	...	...	...	...
	Amini Divi	*13*	29·920	—·009	29·861	30·068	29·715	83·0	76·9	88·5	+1·6	76·9	—0·1	82·7	+0·7	11·7	96·4
	Gangtok	*5,760*	24·256	—·108	24·211	24·522	24·002	56·7	53·9	67·5	—0·7	53·7	+7·9	60·6	+3·6	13·9	81·6
	Kashgar (*c*)	4,255	25·509	—·111	...	26·320	25·042	49·7	53·1‡	65·2	−1·4	42·3	—0·6	53·8	—1·0	22·9	99·8
	Meshed	3,104	...	...	...	...	...	47·9	50·6‡	67·8	—0·8	41·0	—3·5	54·5	−2·1	26·8	98·4
	Jask	13	29·846	—·014	29·812	30·271	29·324	76·7	70·9	88·1	+1·7	70·3	—3·3	79·1	—0·8	17·8	113·5
	Muscat	20	29·871	+·014	29·839	30·276	29·391	81·0	72·5	88·9	+3·8	77·7	—0·7	83·4	+1·5	11·2	112·2
	Bushire	14	29·857	—·010	29·833	30·304	29·408	73·2	67·3	81·6	—0·5	68·8	+0·2	75·2	—0·1	12·7	106·2
	Busrah	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ispahan (*c*)	*5,817*	24·239	—·141	...	24·580	23·950	51·3	51·3‡	71·2	—2·6	46·5	+0·9	58·8	−6·9	24·7	105·4
	Tehran (*c*)	*4,002*	25·719	—·221	...	26·150	25·450	56·3	54·8‡	69·2	—4·1	49·7	—0·5	59·4	—2·3	19·6	102·6
	Baghdad	125	29·766	—·025	29·870	30·302	29·263	63·3	53·3	83·9	—2·1	60·4	+0·3	72·1	—0·9	23·5	115·1
	Aden	94	29·817	—·012	29·844	30·047	29·555	80·3	74·7	87·3	—0·7	78·3	+0·3	82·8	—0·2	9·0	97·7
	Zanzibar	72	30·004	+·011	30·002	30·178	29·814	78·7	74·6	84·0	+0·2	76·5	+0·1	80·2	+0·1	7·5	91·9

N.B.—Elevations in italics indicate barometrical determinations.
Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
(*c*) Aneroid.

‡ Mean of 9 months.

B—concld.

tations in India, etc., in the year 1919.

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 of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs.: Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Cloud: Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall: Number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
																								Extra India —*concld.*
78	13	34	8	11	4	82	30	6	3·5	5·8	—2·3	91	+ 9	·811	—·043	6·5	+1·2	131	+20·8	92·07	84·57	+7·50	5·55	Colombo.
28	83	48	0	0	1	62	120	24	8·6	...	...	87	...	·784	...	4·7	...	62	...	30·14	37·94	— 7·80	2·45	Hambantota.
49	64	34	15	9	7	40	64	78	4·5	6·9	—2·4	...	...	...	...	4·6	0	99	+6·5	81·17	62·84	+18·33	4·15	Minicoy.†
17	82	51	6	14	3	30	75	88	8·3	...	...	75	— 2	·842	—·018	5·2	—0·2	76	+0·9	49·11	53·57	—4·46	3·02	Amini Divi.
32	4	15	4	1	6	1	0	1	1·3*	...	...	84	+ 2	·406	—·013	6·3	+2·4	163	— 3·0	131·88	136·43	— 4·55	6·95	Gangtok. ‡§
03	25	11	2	0	2	1	4	18	1·5	2·1	—0·6	67‡	...	·370‡	...	5·0	+1·5	20	+11·6	6·61	3·18	+ 3·43	1·08	Kashgar.
31	5	1	1	13	0	0	1	8	1·5	...	...	69‡	+4‡	·319‡	+·021	3·6	+0·7	41	+18·0	15·18	9·18	+ 6·00	0·74	Meshed.
25	56	66	116	22	3	2	23	53	7·6	8·7	—1·1	75	+ 3	·718	—·016	2·2	+0·3	12	+ 3·1	4·45	4·20	+ 0·25	1·26	Jask.
67	6	0	1	69	0	3	5	114	2·7	3·1	—0·4	68	0	·708	—·029	2·6	+0·7	3	—5·8	0·98	4·16	— 3·18	0·46	Muscat. (*a*)
60	49	60	23	23	4	2	24	121	7·0	5·8	+1·2	75	+ 6	·644	+·025	2·7	+0·6	18	—0·2	14·13	10·85	+ 3·28	2·10	Bushire.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	—	...	...	...	...	...	...	...	Busrah.
12	3	1	0	5	1	14	20	6	1·6	2·9	—1·3	58‡	— 6	·309‡	—·001	1·7	—0·4	17	+ 3·3	5·95	4·64	+ 1·31	1·00	Ispahan. (*b*)
58	24	30	4	7	17	14	0	4	3·1	2·2	+0·9	54‡	+ 3	·369‡	+·046	3·1	+0·6	37	+10·0	14·34	9·30	+ 5·04	1·04	Tehran. (*c*)
50	52	33	26	15	13	17	94	66	5·2	2·7	+2·5	53	— 5	·290	—·100	3·3	+1·7	16	— 0·3	7·24	6·89	+ 0·35	1·38	Baghdad.
95	26	163	24	19	18	12	1	6	7·8	9·1	—1·3	75	+ 1	·792	—·006	5·2	+1·2	1	— 2·8	0·16	2·10	— 1·94	0·16	Aden.
57	39	46	6	20	97	89	9	3	4·6	4·9	—0·3	81	— 2	·799	—·016	6·4	+0·2	63	—24·3	44·03	61·52	—17·49	5·24	Zanzibar.

* Mean of 10 months.
† Wind observations of 360 days.
‡ Mean of 9 months.
§ Wind observations of 364 days.

(*a*) Wind observations of 365 days.
(*b*) Wind observations of 362 days.
(*c*) Wind observations of 358 days.

73.3

52 2

Table C.—Abstract of observations taken at 8 hrs. at 60 fourth and fifth class stations in India, etc., in the year 1920.

TABLE

Abstract of observations taken at 8 hrs. at 60 fourth and

Number of sub-division.	Station.	Temperature of air.											Wind direction.								
													Number of winds from								
		Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	II.—Assam.																				
4	Bishnath	70·1	67·0	84·2	+0·8	54·6	−3·6	69·4	−2·9	29·6	96·9	33·3	...	...	...	...	...	...	...	...	...
	Borjuli	73·8	69·8	92·1	+7·2	60·3	−3·2	76·2	+2·0	31·9	99·6	41·8	...	...	...	...	...	...	...	...	...
	Chandkhira	69·3	66·6	86·5	+0·2	57·6	+3·1	72·1	+1·7	28·9	110·4	30·9	...	...	...	...	...	...	...	...	...
	Doom Dooma	68·0	65·9	83·0	+3·3	64·0	+1·4	73·5	+2·3	19·1	98·8	40·2	...	...	...	...	...	...	...	...	...
	Dikom	68·8	66·7	83·0	+0·8	64·0	+0·8	73·5	+0·9	19·0	98·8	39·4	...	...	...	...	...	...	...	...	...
	Golaghat	69·7	68·4	82 5	+0·9	62·3	...	72·4	...	20·2	96·1	40·2	...	...	...	...	...	...	...	...	...
	Hailakandi	71·8	69·5	86·2	+0·3	67·5	+1·6	76·9	+0·9	18·6	97·2	44·6	...	...	...	...	...	...	...	...	...
	Jorehat	69·8	67·5	83·0	0	64·6	−0·5	73·8	...	18·4	97·9	41·3	...	...	...	...	...	...	...	...	...
	Lumding	71·3	68·1	85·4	...	62·6	...	74·0	...	22·7	101·9	39·0	...	...	...	...	...	...	...	...	...
	Messa	76·2	70·7	87·8	−0·4	63·8	+1·8	75·8	+0·5	24·0	99·1	39·8	...	...	...	...	...	...	...	...	...
	Panerihat	66·7	65·8	83·4	+0·3	61·4	−1·1	72·4	...	22·0	96·4	33·8	...	...	...	...	...	...	...	...	...
	III.—Bengal.																				
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	76·5	68·8	89·3	+2·9	64·6	−3·4	76·9	−0·3	24·8	98·4	45·1	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	79·0	73·2	87·1	+0·3	68·0	+1·0	77·5	+0·7	19·0	102·3	49·9	...	...	...	...	...	...	...	...	...
	Pabna(a)	55·2	71·7	88·6	−1·3	67·6	+1·2	78·1	−0·1	21·0	105·6	46·5	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim (a)	66·5	65·3	84·3	−3·6	62·0	+0·7	73 2	−1·5	22·3	98·9	34·8	...	...	...	...	...	...	...	...	...
	Kalchini	73·9	69·2	84·4	−0·3	62·3	−0·4	73·4	−0·3	22·1	96·6	39·0	...	...	...	...	...	...	...	...	...
	Nagrakata	75·3	69·2	83·4	−1·3	63·9	−0·9	73·6	−1·1	19·5	95·3	41·2	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	*77·3	*71·7	†92·1	...	*71·0	...	†82·2	...	†19·7	112·2	40·3	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																				
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

(a) Mean of 11 months.
* " " 8 "
† " " 7 "

C.

fifth class stations in India, etc., in the year 1920.

Wind velocity.			Hygrometry, 8 hrs.				Cloud.		Rainfall.						Station.
Mean velocity in miles per hour of year.	Normal of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Rainfall for the year.	Normal rainfall for the year.	Departure from normal of year.	Heaviest rainfall during year.	
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
															II.—Assam.
...	...	...	84	— 9	·654	—·023	..	...	128	+ 7·5	102·92	94·12	+ 8·80	3·67	Bishnath.
...	...	...	81	— 6	·698	+·015	...	...	115	+ 1·5	68·40	85·98	—17·58	2·56	Borjuli.
...	...	...	88	— 3	·640	—·074	...	...	136	+ 4·4	118·74	110·16	+ 8·58	3·30	Chandkhira.
...	...	...	90	— 3	·640	—·028	...	...	129	— 1·9	91·06	99·99	— 8·93	2·80	Doom Dooma.
...	...	...	89	— 2	·656	+·003	...	...	125	—10·4	96·64	104·58	— 7·94	5·10	Dikom.
...	...	...	93	+ 3	·704	+·009	...	...	95	—18·2	51·71	69·05	—17·34	3·10	Golaghat.
...	...	...	89	— 2	·704	+·012	...	...	145	+ 9·4	121·40	124·34	— 2·94	5·27	Hailakandi.
...	...	...	89	— 1	·671	—·016	...	...	119	—1·4	82·41	83·56	— 1·15	2·97	Jorehat.
...	...	...	86	...	·670	...	...	...	82	+ 2·3	40·80	51·04	—10·24	3·10	Lumding.
...	...	...	75	— 6	·704	+·004	...	...	121	+ 5·7	73·92	82·27	— 8·35	4·10	Messa.
...	...	...	95	+ 4	·659	+·056	...	...	112	+ 9·0	85·22	81·54	+ 3·68	2·40	Panerihat.
															III.—Bengal.
...	...	...	...	...	...	...	...	...	89	—12·5	107·72	90·87	+16·85	5·90	Comilla.
...	...	...	66	—18	·616	—·141	...	...	87	—15·9	82·86	86·79	— 3·93	5·30	Brahmanbaria.
...	...	...	...	...	...	...	...	...	97	+ 5·1	80·63	70·53	+10·10	4·03	Faridpur.
...	...	...	75	— 7	·765	+·022	...	...	99	+ 9·7	68·95	66·04	+ 2·91	7·48	Goalundo.
...	...	...	83	+ 2	·761	+·020	...	...	82	— 1·5	54·16	59·70	— 5·54	2·95	Pabna.
...	...	...	...	...	...	...	...	...	83	+ 0·5	57·13	64·27	— 7·14	3·42	Sirajganj.
...	...	...	...	...	...	...	...	...	78	+ 3·7	45·02	54·92	— 9·90	3·28	Rampur Boalia.
...	...	...	...	...	...	...	...	...	67	— 0·9	49·37	52·83	— 3·46	5·33	Malda.
...	...	...	...	...	...	...	...	...	83	— 0·1	99·00	80·75	+18·25	8·14	Rangpur.
...	...	...	93	+ 1	·643	—·030	...	...	112	—10·8	122·20	153·08	—30·88	5·88	Dam Dim.
...	...	...	77	— 4	·676	—·035	...	...	139	+19·5	161·75	146·67	+15·08	8·85	Kalchini.
...	...	...	72	— 8	·651	+·001	...	...	121	—11·3	134·73	156·81	—22·08	7·82	Nagrakata.
...	...	...	...	...	...	...	...	...	121	+17·1	215·29	143·51	+71·78	10·04	Cooch Behar.
...	...	...	...	...	...	...	...	...	84	+ 6·4	57·82	57·96	— 0·14	3·60	Krishnagar.
...	...	...	...	...	...	...	...	...	68	— 6·0	53·48	55·11	— 1·63	4·10	Bankura.
...	...	...	75*	...	·735*	...	5·6†	...	69	— 4·2	46·26	52·37	— 6·11	3·09	Raniganj (Asansol).
															IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	67	— 7·5	44·86	52·59	— 7·73	3·90	Hazaribagh.
...	...	...	...	...	...	...	...	...	59	—0·9	48·54	49·24	— 0·70	6·24	Bhagalpur.
...	...	...	...	...	...	...	...	...	47	— 9·8	39·84	49·55	— 9·71	7·52	Muzaffarpur.
...	...	...	...	...	...	...	...	...	57	— 1·8	50·93	55·57	— 4·64	5·05	Motihari.
...	...	...	...	...	...	...	...	...	55	+ 2·1	40·87	42·30	— 1·43	3·14	Chapra.
...	...	...	...	...	...	...	...	...	63	+ 8·2	53·93	44·95	+ 8·98	5·09	Arrah.
...	...	...	...	...	...	...	...	...	47	— 6·9	30·81	42·01	—11·20	3·40	Dehri.

* Mean of 8 months.
† „ „ 7 „

TABL

Abstract of observations taken at 8 hrs. at 60 fourth a

Number of sub-division.	Station.	Temperature of air. Mean of 8 hrs. dry bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Wind direction. Number of winds from Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	V.—United Provinces of Agra and Oudh.																			
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	VI.—Punjab.																			
12	Khanpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																			
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																			
23	Chhindwara	71·6	63·1*	88·1	...	63·6	...	75·9	...	24·5	104·9	42·7	265	8	15	0	1	3	17	29
	XIII.—Hyderabad.																			
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																			
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	77·4	72·5	93·9	...	71·2	...	82·6	...	22·7	107·6	51·6	...	...	...	...	...	...	...	...
33	Guntur	80·5	74·4	94·7	...	74·6	...	84·6	...	20·1	115·4	60·9	...	...	...	...	...	...	...	...
	Koraput	68·5	63·3	83·7	...	62·1	...	72·9	...	21·6	101·0	40·3	...	...	...	...	...	...	...	...
	Bay Islands.																			
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																			
13	Jammu	71·4	60·3	85·2	...	65·8	...	75·5	...	19·4	108·5	37·7	37	136	99	44	8	9	5	7
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	42·8	44·2†	57·9	...	24·0	...	41·0	...	33·9	97·1	−25·1	93	0	1	4	97	10	93	4
	Baluchistan.																			
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																			
	Panighatta	70·0	65·0	83·5	0	64·0	−1·0	73·7	−0·5	19·5	97·1	38·6	...	...	...	...	...	...	...	...
	Kurseong	62·5*	61·1*	68·8	+0·8	56·1	−0·6	62·4	+0·1	12·6	82·5	37·9	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	62·0	+1·2	40·5	−0·1	51·3	+0·5	21·5	88·6	12·2	122	20	19	47	31	40	45	24
	Kailang§	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	75·4	−1·1	38·3	−3·9	56·9	−2·5	37·0	105·0	3·2	...	...	...	...	...	...	...	...

* Mean of 11 months.
† " 7 "
§ Rainfall for January and April wanting.

C—contd.

fifth class stations in India, etc., in the year 1920—contd.

Wind velocity.			Hygrometry, 8 hrs.				Cloud.		Rainfall.						Station.
Mean velocity in miles per hour.	Normal of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Rainfall for the year.	Normal rainfall for the year.	Departure from normal of year.	Heaviest rainfall during year.	
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
															V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	31	— 7·5	28·12	31·96	— 3·84	5·20	Meerut.
...	...	...	...	...	...	...	...	...	64	—16·2	70·40	83·66	—13·26	7·18	Dehra Dun.
															VI.—Punjab.
...	...	...	...	...	...	...	...	...	5	...	1·70	...	...	0·75	Khanpur.
															IX.—Rajputana.
...	...	...	...	...	...	...	...	...	30	— 1·8	22·50	22·78	— 0·28	2·41	Udaipur.
															XII.—Central Provinces.
1·3	...	...	57*	...	·477*	...	2·9	...	42	—17·3	31·86	40·71	— 8·85	2·90	Chhindwara.
															XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	19	—27·4	10·76	32·57	—21·81	2·77	Parbhani.
															XV.—Madras.
...	...	...	...	...	...	...	...	...	56	+14·9	41·23	28·56	+12·67	4·31	Tinnevelly.
...	...	...	79	...	·747	...	3·9	...	25	—13·1	13·41	24·06	—10·65	2·97	Anantapur.
...	...	...	75	...	·777	...	0·3†	...	42	—12·4	26·00	33·20	— 7·20	2·50	Guntur.
...	...	...	75	...	·535	...	...	...	66	...	48·68	...	...	5·35	Koraput.
															Bay Islands.
...	...	...	...	...	...	...	...	...	114	— 6·5	73·89	98·64	—24·75	2·36	Car Nicobar.
															Kashmir.
...	...	...	53	...	·451	...	3·0	...	47	— 7·5	27·14	42·60	—15·46	2·30	Jammu. (*a*)
...	...	...	...	...	...	...	...	...	108	+ 1·3	78·96	73·55	+ 5·41	4·12	Sonamarg.
...	...	...	39‡	...	·172‡	...	4·0	...	30	+ 8·1	10·56	8·93	+ 1·63	1·08	Kargil.
															Baluchistan.
...	...	...	...	...	...	...	...	...	20	— 3·7	10·24	12·25	— 2·01	2·20	Harnai.
															Hill stations, exclusive of Kashmir.
...	...	...	75	+ 4	·573	—·027	...	...	118	— 3·7	111·45	139·57	—28·12	4·80	Panighatta.
...	...	...	92*	+12	·532*	+·090	...	...	122	—13·6	118·84	161·92	—43·08	4·30	Kurseong.
...	...	...	...	...	...	...	...	...	181	— 8·6	146·78	168·46	—21·68	3·50	Gnatong.
...	...	...	...	...	...	...	...	...	143	— 3·1	62·76	65·08	— 2·32	2·00	Lachung.
...	...	...	...	...	...	...	...	...	69	...	51·79	...	...	3·75	Dharampur.
...	...	...	...	...	...	...	...	...	79	— 9·6	70·50	94·30	—23·80	3·75	Mussoorie.
...	...	...	...	...	...	...	3·7	—0·3	39	+ 5·7	15·51	14·10	+ 1·41	1·47	Poo.
...	...	...	...	...	...	...	...	...	38	—11·0	11·97	23·29	—11·32	1·35	Kailang.
...	...	...	...	...	...	...	1·7†	...	17	— 3·2	4·92	8·83	— 3·91	0·73	Pistin.

* Mean of 11 months.
† " 10 "
‡ " 7 "

(*a*) Wind observations for 365 days.

TABI

Abstract of observations taken at 8 hrs. at 60 fourth a

Number of sub-division.	Station.	Temperature of air.											Wind direction.							
													Number of winds from							
		Mean of 8 hrs. dry-bulb of year.	Mean of 8 hrs. wet bulb of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	Extra India.																			
	Chumbi*	43·1†	49·7‡	56·6	...	37·4	...	47·0	...	19·2	78·0	15·0	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	77·5	63·2	90·3	...	64·9	...	77·6	...	25·3	119·5	30·0	0	217	7	1	6	94	12	12

* Mean of 11 months.
† „ 10 „
‡ „ 7 „

C—concld.

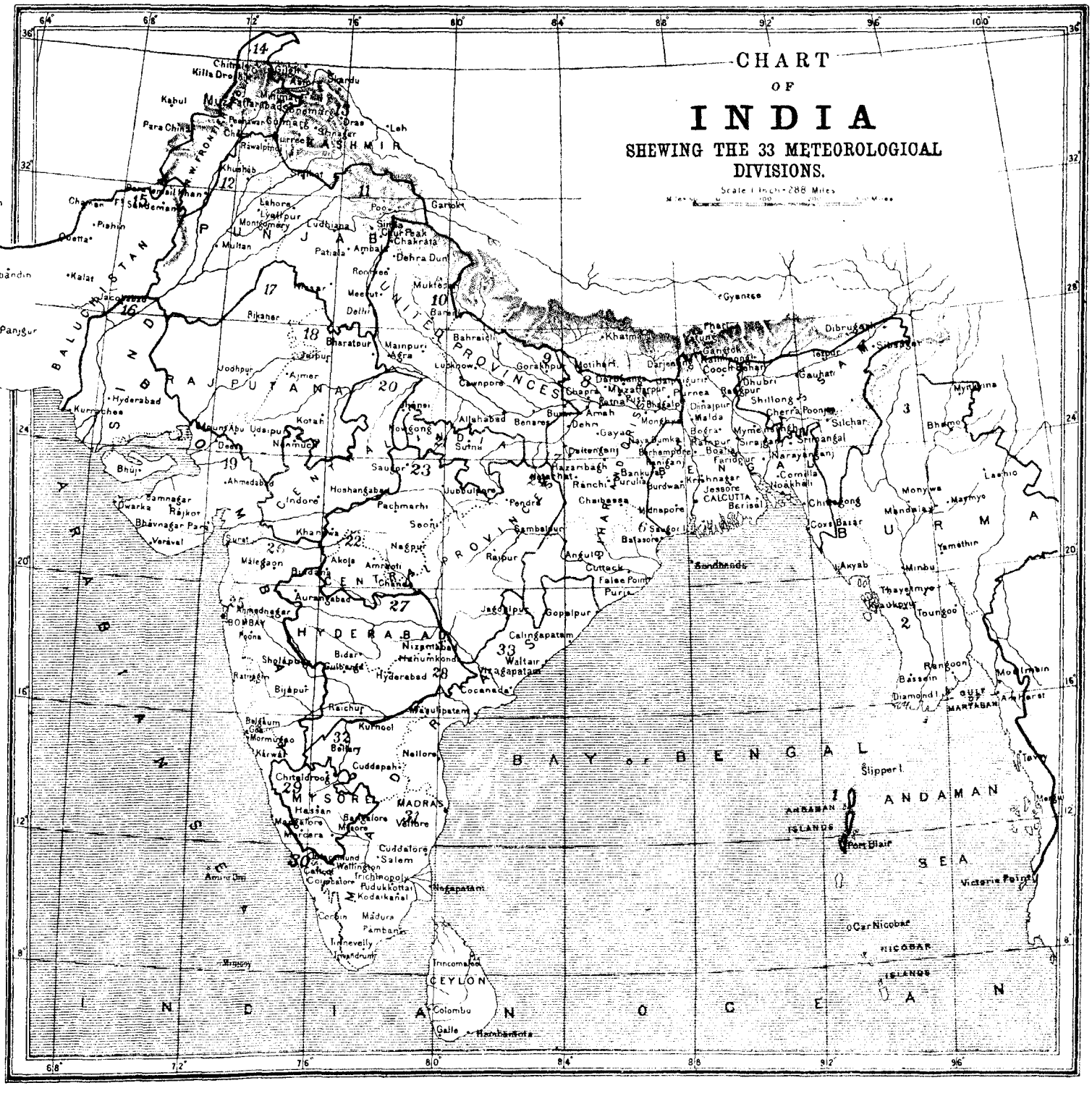
fifth class stations in India, etc., in the year 1920.

Wind velocity.			Hygrometry, 8 hrs.				Cloud.		Rainfall.						Station.
Mean velocity in miles per hour of year.	Normal of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal of year.	Mean cloud amount at 8 hrs. of the year.	Departure from normal of year.	Number of rainy days during year.	Departure from normal of year.	Rainfall for the year.	Normal rainfall for the year.	Departure from normal of year.	Heaviest rainfall during year.	
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
															Extra India.
...	...	...	93‡	...	·355‡	...	3·7	...	59	−37·1	39·01	34·29	+4·72	5·55	Chumbi.
...	...	...	...	...	...	...	...	...	88	−15·9	69·09	78·89	−9·80	7·75	Pemba.
...	...	...	52	...	·427	...	...	...	16	...	6·78	...	...	1·05	Abadan.*

* 5 Winds variable.

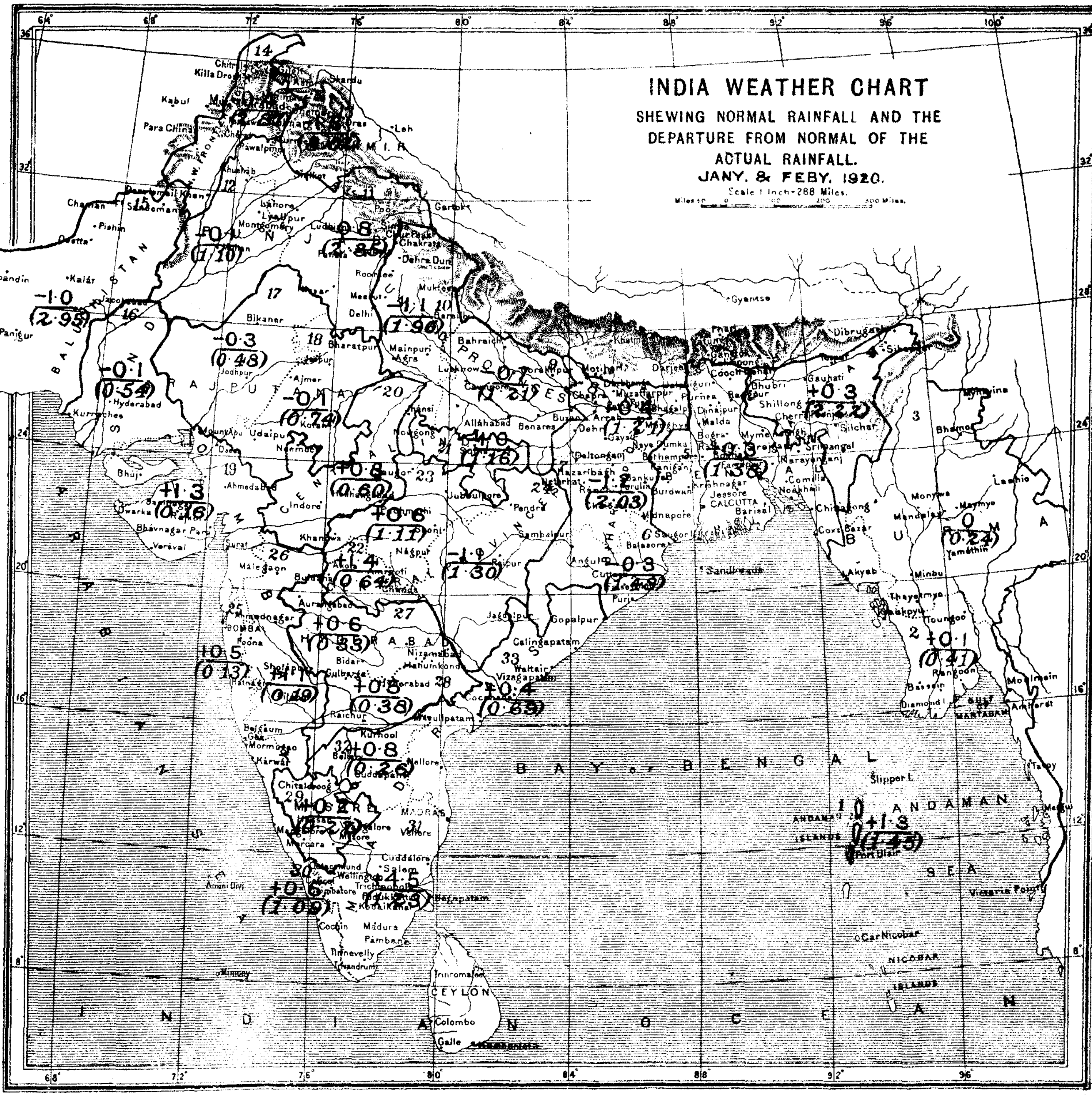
‡ Mean of 7 months.

SGPI-21-IV-5-(23)—11-6-23—353.



The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North



The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal rainfall; the numbers above these give the departures from normal of the average actual rainfall over the divisions.

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3. Upper Burma
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5. Bengal
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7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
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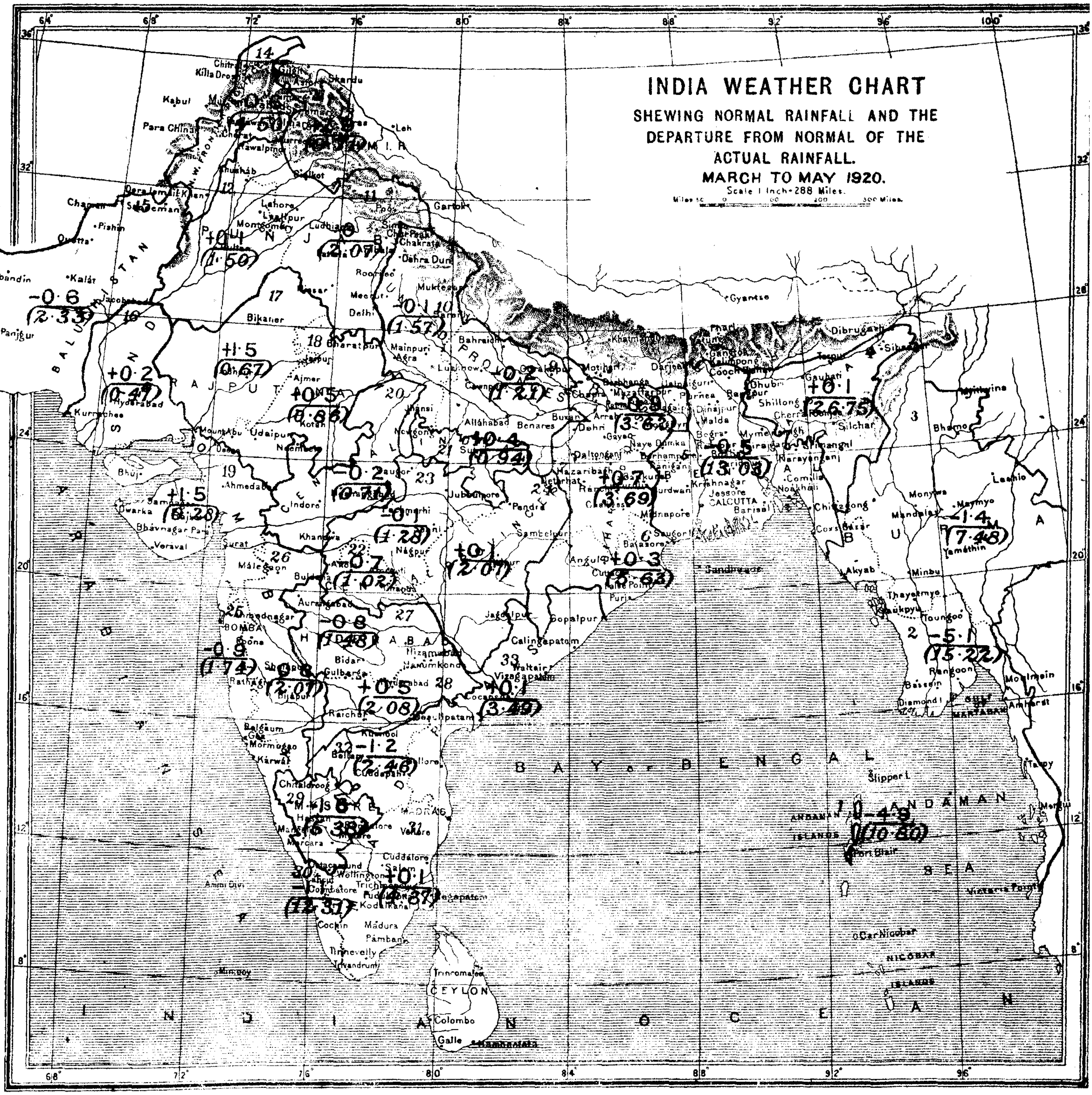
33. Madras Coast, North



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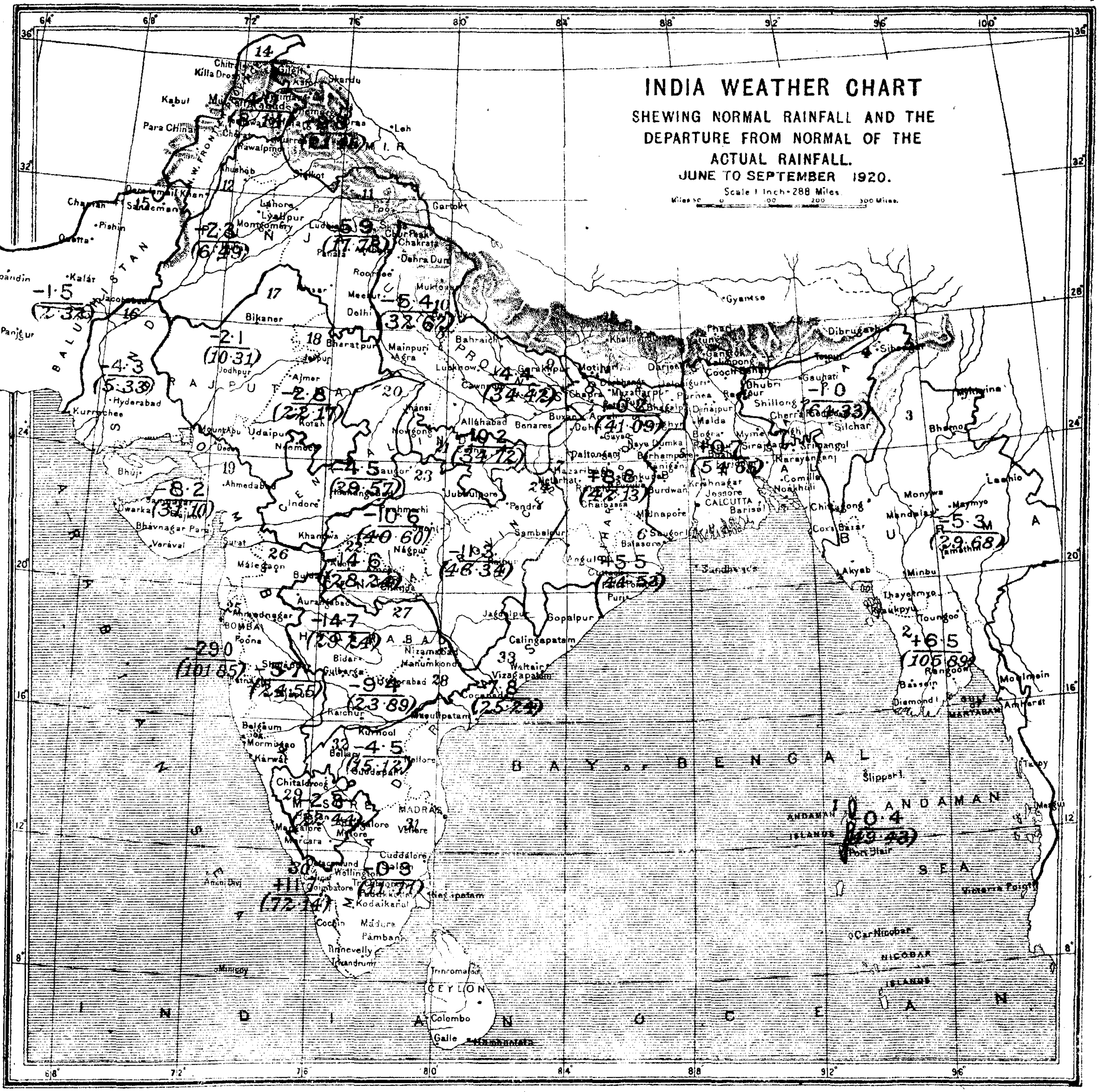

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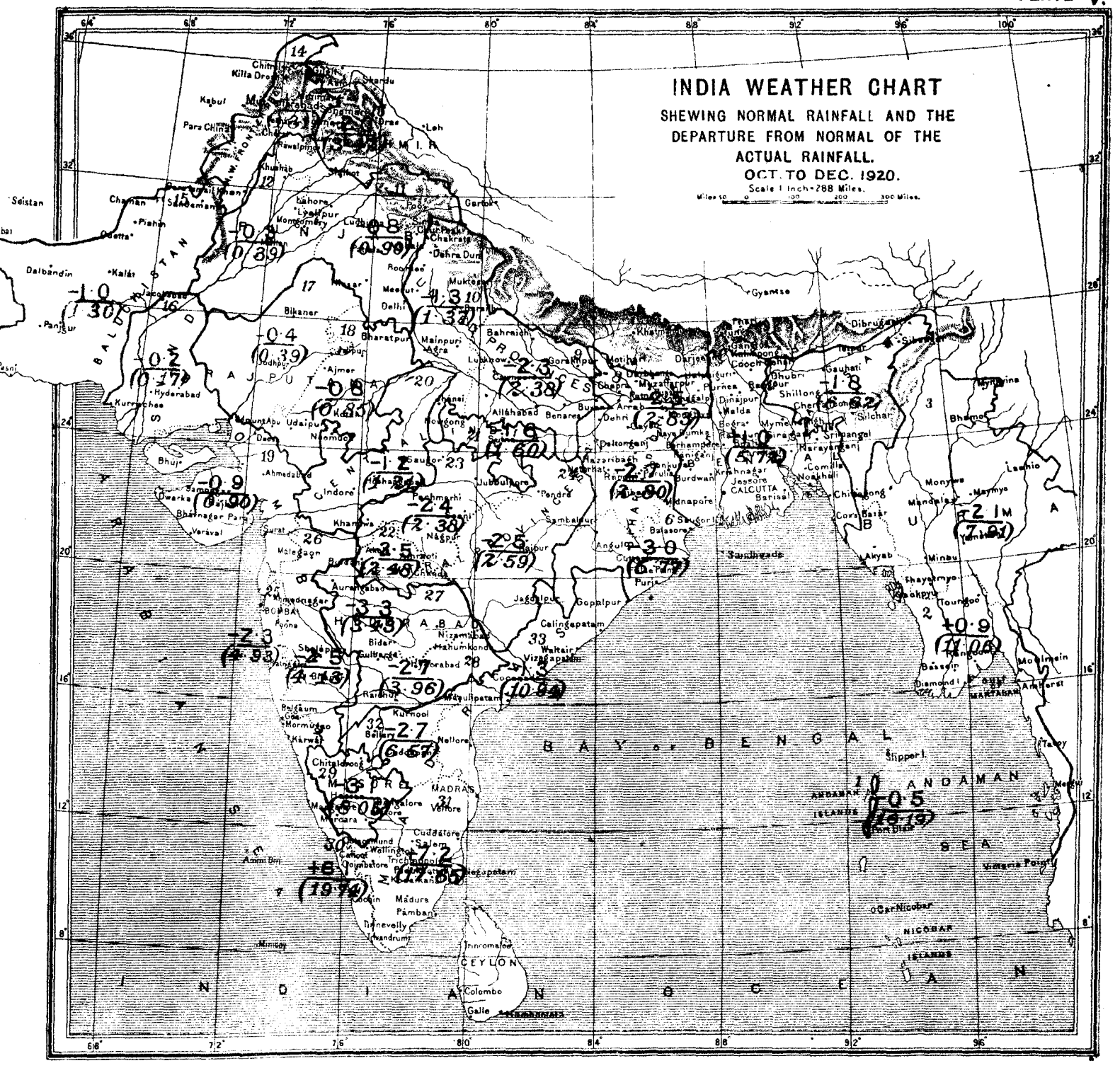

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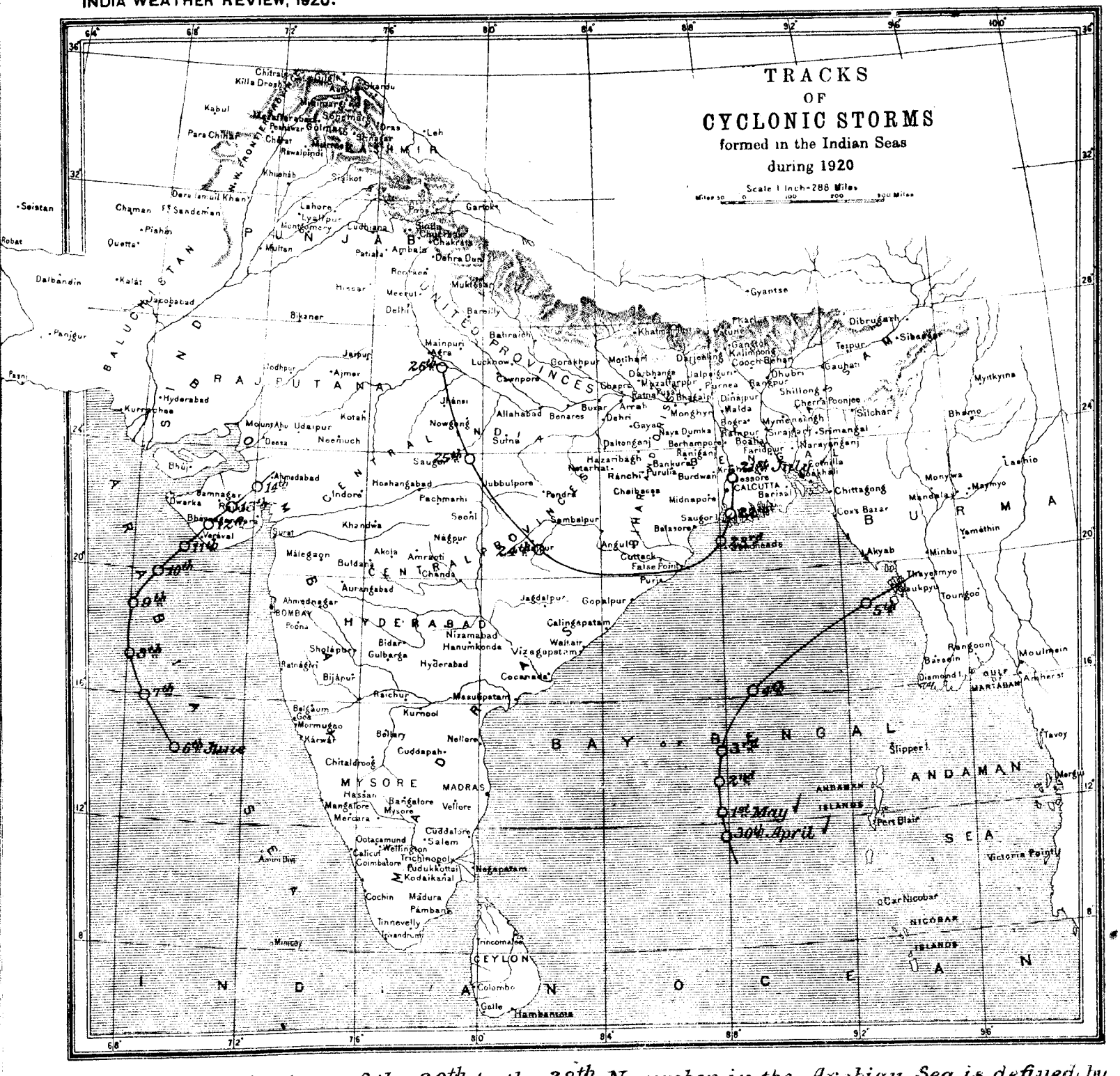

The track of the storm of the 20th to the 28th November in the Arabian Sea is defined by the following positions which lie outside the boundaries of the map:—

	Lat. N.	Long. E.		Lat. N.	Long. E.
20th November	10½°	66½° ?	25th November	9¼°	63¼°
21st ,,	10½°	64°	26th ,,	9°	62½°
22nd ,,	10½°	63°	27th ,,	9°	60½°
23rd ,,	10¼°	62°	28th ,,	10°	58°
24th ,,	9¾°	62½°			

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METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REVIEW

SEPTEMBER 1920

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