

SUMMARY OF OBSERVATIONS.

FEBRUARY, 1903.

General Summary.—Until the closing week the weather in the eastern and southern parts of the United Kingdom was mostly fair and dry. In the west and north it was far less settled, and on the Atlantic seaboard gales and heavy rains were of frequent occurrence, with nocturnal thunder and lightning; towards the end of the month similar conditions extended to the eastern and southern districts. A violent South-westerly to Westerly gale occurred on the night of the 26th or on the 27th over nearly the whole kingdom. On the 21st a peculiar dust haze was observed at many places in the south-east of England, and on the following day a muddy deposit, mostly of a sandy or reddish brown colour, occurred over a considerable portion of England and Wales. Pressure was below the average in the north, but above it in the south; temperature was considerably above the normal; the winds were chiefly from the South-westward or Westward; rainfall was in excess of the average in the west and north and especially in the west of Scotland, but showed a deficiency in most of the eastern and southern districts; bright sunshine was less than the normal in all but a few isolated parts of England.

Pressure.—*Mean at 8 a.m.* ranged from 30·25 ins. and upwards over Jersey and the neighbouring parts of France to about 29·50 ins. in the Shetlands. The general distribution over these islands was of quite an ordinary character, but as the mean pressures at the English Channel stations were from 0·15 in. to 0·25 in. above the average,* while those in the north of Scotland were just as much below it, the gradient for South-westerly winds was very much steeper than that shown on the normal chart. The difference between the mean pressures in the north and south was, in fact, nearly three times as great as the average. *Highest* readings occurred either on the 12th–13th or on the 16th–17th. On the earlier occasion the barometer rose to 30·5 ins. and upwards over nearly the whole of our western districts, and to 30·4 ins. and upwards in most other parts of the kingdom; on the later dates it exceeded 30·6 ins. in the south and east of England, but in other districts it scarcely rose so high as it had a few days earlier. *Lowest* readings occurred during the passage of the deep cyclonic system of the 26th–27th, the barometer falling below 28·3 ins. in the north of Ireland and the western, southern, and central parts of Scotland, and below 28·5 ins. over the northern parts of the kingdom generally. In the south of England it never went below 29·3 ins. *Range* was moderate in the south of England, but large elsewhere—more than 2 ins. in Scotland and the north of Ireland.

Depressions.—Until very nearly the end of month the Atlantic storm systems, which were numerous, moved along to the north-westward or northward of our islands in the tracks shown approximately in Map 2, Pl. II., by the generalised arrows marked A, B and C. On the night of the 26th–27th, however, the centre of a cyclonic disturbance of unusual depth advanced in a north-easterly direction over the west and north of Ireland, the system afterwards travelling across Scotland and the North Sea to Scandinavia, where it rapidly became shallower. As the disturbance passed away from our neighbourhood, a small but well-defined secondary depression moved in an east-north-easterly direction along the English Channel to the Netherlands and North Germany, in which latter position it quickly dispersed.

Anticyclones.—In the earlier part of the month three such systems were observed. The first advanced over these islands from the south-westward on the 2nd and 3rd, but soon passed away in a south-easterly direction. The second spread over very temporarily from the southward on the 9th, but receded southwards on the following day. The third advanced over Western Europe from the Atlantic on the 12th and 13th, and remained with us until the 17th, when it moved away to the south-eastward. In the closing week the highest pressures were found over various parts of Southern Europe.

Winds were chiefly from the South-westward or Westward, but in the west of Ireland an occasional backing to South occurred in the front of the low pressure systems which skirted our north-west coasts. Gales were numerous, especially in the west and extreme north; at Deerness they occurred on 18 days, at Holyhead and Blacksod Point on 19 days, and at Malin Head on as many as 20 days. The South-westerly to Westerly gale of the 26th–27th was of unusual severity over Ireland, Wales, and the west and north of England, the maximum wind velocity in squalls being as high as 92 miles per hour at Southport, and more than 85 miles at Holyhead and Falmouth.

Temperature.—*Mean at sea level* ranged from 48°·5 at Scilly, and 47° and upwards on our south-west coasts generally, and also on the shores of the St. George's Channel, to 41° and less in Caithness, Sutherland, and the Shetlands. In the more northern and eastern parts of the kingdom the distribution of temperature showed a wide divergence from the wintry type usually prevailing in February, and over the country generally the actual values were considerably above the average,* the excess amounting to more than 4° in all districts, excepting the north of Scotland and the south of Ireland, to more than 5° in many parts of northern, eastern, and central England, and to as many as 6°·2 at York. *Highest* readings occurred either between the 7th and 9th, or between the 19th and 21st; on each of these occasions the thermometer exceeded 55° in most districts, the highest reading reported being 61° (at Cambridge on the 9th and at Southampton on the 20th). *Lowest* readings occurred at times varying widely in different localities. The lowest of all were registered on the 18th, and in inland portions of the south and east of England, the sheltered thermometer falling to 20° at Bramley and to 22° at Rothamsted and Swarraton. In other districts the absolute minima were very little below the freezing point. *Vapour Pressure* ranged from 0·28 in. or rather more on our south-west coasts to between 0·20 in. and 0·22 in. in the east of Scotland. *Relative Humidity* varied from 93 per cent. at Dungeness and Newton Reigny to 81 per cent. at Strathpeffer, Leith, and Liverpool.

Rainfall was very deficient in the eastern, central, and southern parts of England, and also at some stations in the south of Ireland. In the western and northern districts generally there was a considerable excess, the amount at many of the Scotch stations being more than twice as much as the average.* The largest aggregates reported were 16·5 ins. at Fort William, 13·5 ins. at Glencarron, and 13·3 ins. at Laudale; the smallest being 0·1 in. at Geldeston, 0·2 in. at Yarmouth, and 0·3 in. at Cromer. In the west of Scotland falls exceeding an inch in 24 hours were of frequent occurrence, the largest daily amounts being 2·1 ins. at Fort William on the 19th, 1·8 in. at Glasgow on the 8th, and 1·7 in. at Laudale on the 28th. Heavy falls occurred also over the north of England on the 21st, and at some of the Channel stations on the 27th. Snow or sleet showers were experienced in many parts of the United Kingdom on the 1st and 2nd, and in the western and northern districts between the 22nd and 26th, and on the 28th.

Bright Sunshine amounted to less than the average* over the United Kingdom generally, but showed a slight excess in a few scattered parts of England. The percentage of the possible duration ranged from 38 at Clacton-on-Sea, and 30 or more at several of our other eastern stations, as well as at Jersey, to 10 or less in many parts of Scotland, and to only 4 at Fort William.

* The averages employed are—*Pressure and Temperature* for the 30 years 1871–1900; *Rainfall* for the 35 years 1866–1900; and *Bright Sunshine* for the 20 years 1881–1900. See appendix III. "Weekly Weather Report," 1901.