

SUMMARY OF OBSERVATIONS.

AUGUST, 1902.

General Summary.—The weather of August was for the most part cool and very changeable, with occasional thunderstorms in most districts, the latter being accompanied in many instances by exceedingly heavy falls of rain or hail. Pressure was slightly above the normal in the north, but below it in the south; temperature was low, especially over the northern parts of Great Britain; the winds were rather variable in the west, but chiefly from the Westward in the eastern and central districts; rainfall was in excess of the average over the greater part of England, but was deficient in Ireland and Scotland; bright sunshine amounted to less than the normal in all the more eastern, central, and southern parts of the kingdom, but showed an excess at several of our western and extreme northern stations.

Pressure.—*Mean at 8 a.m.* ranged from 29·95 ins. and upwards over the English Channel to 29·85 ins. and less in the extreme north of Scotland and to very little above 29·80 ins. in the Shetlands, the general distribution being favourable for winds from the Northward rather than from the Southward of West, as in a normal August. The mean values differed but little from the average,* but owing to a slight excess in the north and a deficit in the south, the gradient was less decided than that shown by the normal chart. *Highest* readings were observed as a rule on the 1st, when the barometer exceeded 30·2 ins. over Ireland, Wales, and the central parts of England, and exceeded 30·1 ins. at all but our extreme northern stations. In the south-western districts the mercury rose quite as high, or even higher, on the 9th, the readings being then above 30·2 ins. in most places, and above 30·3 ins. in the south-west of Ireland. *Lowest* readings were registered on the 18th, when the barometer fell below 29·5 ins. in the east of Scotland and the northern parts of England and Ireland, and below 29·7 ins. at all but our most south-eastern stations. *Range* was moderate for the time of year.

Depressions.—The depressions which traversed our islands or their immediate neighbourhood were few in number and of little intensity. It will be seen from Map 2, Plate VIII., that most of the barometric minima which appeared over Western Europe showed a marked inclination to travel eventually on towards Sweden and Northern Russia, the same tendency being observed also throughout the month of July. Between the 10th and 13th a depression, which was originally developed over the south of Norway, moved slowly and in a very erratic path over the south of Sweden, the disturbance ultimately passing away over the Baltic and filling up.

Anticyclones.—Three such systems were observed. The first spread over Western Europe from the Atlantic at the end of July, but moved away to the southward and dispersed soon after the commencement of the month. The second hung almost stationary off our south-west coasts between the 9th and 12th, its borders extending temporarily over all our western and southern districts on the 9th and again on the 11th; on the 13th it moved southwards and dispersed. The third spread over our islands from the south-westward on the 21st, but soon passed away to Central Europe and eventually to Russia.

Winds.—Winds were mainly from the Westward (South-west to North-west) in the eastern parts of the United Kingdom, but showed considerable variability in the west. A complete absence of gales was reported on all but our extreme western coasts—a very unusual feature in the month of August.

Temperature.—*Mean at sea level* ranged from a little above 62° at Southampton and Jersey, and from 60° and upwards over the south of England generally to 55° and less over the northern and central parts of Scotland, and to a little below 50° in the Shetlands. Over the southern half of the kingdom the general distribution was in fair accordance with the normal, but in all the more northern districts the ordinary summer type was far less clearly marked than usual. The actual mean values were, in all cases, below the average*, the deficit being small at our extreme southern and south-western stations, but large in the north; at many stations in the northern parts of Great Britain it amounted to more than 3°, and at Marchmont, Durham, and Scarborough to more than 4°. *Highest* readings occurred at various times in the different districts. In the west they were observed mostly between the 14th and 18th, and at the majority of the northern stations between the 22nd and 26th, but in the east and south of England they occurred more commonly on the 29th. In the northern parts of Ireland and Scotland the thermometer did not reach 70°, but at many of the English and Welsh stations it exceeded 75°, the highest readings reported being 81° in London and at Cambridge, and 80° at Bramley. *Lowest* readings also occurred at various times—mostly on or about the 11th over England, but in the concluding week in Ireland and Scotland. At one or other of these times the sheltered thermometer fell below 40°, the lowest values reported being 34° at Braemar, and 35° at Fort Augustus, Marchmont, and Dublin (Phoenix Park); at some of our northern stations a slight ground frost occurred on the nights of the 11th and 20th. *Range* was generally moderate (especially in the north, where the absolute maxima were unusually low), but amounted to more than 35° at several of the English stations, and to 40° at Geldeston. *Vapour Pressure* was high in the south, the values at most of the Channel stations being above 0·45 in.; in the northern parts of Great Britain they decreased to 0·35 in., or less, and in the Shetlands to about 0·30 in. *Relative Humidity* ranged from 90 per cent. at Dungeness, 89 per cent. at Donaghadee, and 85 per cent. or more over the western, central, and extreme northern parts of the kingdom generally to 79 per cent. at Yarmouth, and 76 per cent. at Leith.

Rainfall was in excess of the average* over the eastern, central, and southern parts of England, but was less than the normal in most other districts, the deficit being considerable at many of the Scotch and Irish stations. The largest aggregates reported were 6·8 ins. at Laudale, 5·6 ins. at Glencarron, 5·0 ins. at Killarney; the smallest being 1·5 in. at Newton Reigny, 1·7 in. at Leith, and 1·8 in. at Durham and Spurn Head. The number of days with rain was large, more than 20 being recorded at several stations situated in all parts of the kingdom, and as many as 25 at Strathpeffer. Heavy individual falls (exceeding an inch in 24 hours), and accompanied in most instances by thunderstorms, were experienced in many places, the largest daily amounts reported being 2·0 ins. at Laudale on the 22nd, and 1·6 in. at Hillington on the 6th. At Fulbeck a thunderstorm with *very* heavy hail occurred on the 28th, the fall amounting to 1·05 in. in 90 minutes.

Bright Sunshine amounted to more than the average* in Ireland, the north-west of England, and the west and north of Scotland, but showed a deficiency in all other districts, the departure from the normal being rather large in the south of England. The percentage of the possible duration ranged from 49 at Jersey, 47 at Falmouth, and 40 or more at several of our western and southern stations to 25 or less at many places in the northern and central parts of Great Britain, and to only 18 at Fort Augustus.

* 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.