

SUMMARY OF OBSERVATIONS.

SEPTEMBER, 1902.

General Summary.—The changeable weather which had prevailed during the summer months continued throughout the earlier half of September, strong South-westerly gales and heavy rains being experienced in the west and north on the 2nd and 3rd, and further heavy rains over our central and southern districts on the 10th. On the latter date the newspapers reported the occurrence of a disastrous hail storm in mid-Kent. After the middle of the month a decided improvement took place in all but the western districts, the change to autumn being however shown in the occasional prevalence of night fogs and frosts at many of the inland stations. Pressure was above the average; temperature was slightly below the normal over England, but above it in Ireland and the west of Scotland. The winds varied greatly in direction; rainfall was deficient in all but the extreme north-western parts of the kingdom; bright sunshine was fairly abundant over England and Ireland, but was less than the normal in Scotland.

Pressure.—*Mean at 8 a.m.* ranged from 30·05 ins. and upwards over the greater part of England to very little above 29·90 ins. in the Shetlands. The actual values were in all cases above the average, and as the excess was greatest (0·12 in. to 0·14 in.) in the extreme north, and least (0·06 in. to 0·08 in.) in the south, the gradient over the United Kingdom was slighter than that shown by the normal chart. *Highest* readings were observed between the 26th and 28th, when the barometer rose to 30·5 ins. and upwards at several of our northern and central stations, and to 30·4 ins. and upwards in most other places. *Lowest* readings occurred on the 3rd or 4th, when the mercury sank below 29·0 ins. in the west and north of Scotland, and below 29·5 ins. in most of the other western and northern districts; in the south and east of England it did not fall below 29·6 ins. *Range* was moderate for the time of year.

Depressions.—Very few depressions of any importance appeared over our islands or their immediate neighbourhood. The most striking instance occurred between the 2nd and 3rd, when a cyclonic disturbance of growing intensity advanced suddenly from the southward and moved in a north-north-easterly direction across the St. George's Channel, the Irish Sea and the west of Scotland, the system afterwards passing on to the Norwegian coasts, where it gradually dispersed. Throughout the earlier half of the month the northern parts of the continent were again affected (as in July and August) by numerous depressions, some of which advanced from the Atlantic, while others were developed immediately over the Scandinavian peninsula.

Anticyclones.—On the 5th and 6th an anticyclone spread from the south-westward over our islands and the western parts of the continent, but on the 9th the system apparently broke into two portions,—one moving away to Central Europe, and the other to the northward of Scotland. On the 17th and 18th a larger anticyclone advanced over Western Europe from the Atlantic, its central area remaining over Denmark, North Germany and the south of Scandinavia between the 21st and 23rd. On the 25th the system apparently spread westward again, and between the 26th and 29th its central portion was situated directly over the United Kingdom; at the close of the month, however, the entire system was drifting northwards.

Winds.—The winds varied greatly in direction, but in the northern parts of the United Kingdom they were commonly from some Westerly point (South-west to North-west). Scarcely any gales were reported in the north, but in other parts they were more frequent, the South-westerly storm of the 3rd being severe at some of our western and south-western stations.

Temperature.—*Mean at sea level* ranged from about 60° in the Scilly and Channel Islands, and from 58° and upwards in the extreme south of England generally to 53° or less on the north and east coasts of Scotland, and to very little above 49° in the Shetlands. Over the greater part of England, and also on the north and east coasts of Scotland, the mean values were below the average, but in other districts they were as a rule above it, the departure in either direction being slight, excepting at Lairg, where the excess amounted to nearly 4°. *Highest* readings occurred at various times in the different districts, but most commonly on the 2nd and 3rd, between the 8th and 10th, or between the 21st and 23rd. Over the greater part of Ireland and Scotland and at most of the English Channel stations the thermometer did not reach 70°; at Killarney, however, it rose to 74°, and at Ochertyre to 76°. Over England readings above 70° were observed in most places, the highest reported being 77° in London and 76° at Cambridge. *Lowest* readings occurred as a rule either on the 13th or on the 18th or 19th, slight frost being observed on each occasion at many of our northern and inland stations. The lowest temperatures registered in the screen were 30° at Lairg, Fort Augustus and Newton Reigny, and 31° at Cally and Swarraton. *Range* was moderate. *Vapour Pressure* ranged from 0·40 in. or rather more on several parts of our south and south-west coasts to 0·35 in. or less over the northern and central parts of Great Britain generally, and to about 0·30 in. in the Shetlands. *Relative Humidity* varied from between 90 and 93 per cent. in the extreme northern and north-western parts of the United Kingdom to 85 per cent. or less on several parts of the English and Welsh coasts, and to 77 per cent. at Jersey.

Rainfall amounted to less than the average* over the country generally, but, owing to a heavy fall on the 2nd and 3rd, it exceeded the normal in the north and east of Ireland, and also at some places in the west of Scotland. Over the eastern and central parts of Great Britain the deficit was as a rule very large, many stations having less than half the normal quantity, and some places in the north-east of England less than one fourth. The largest aggregates reported were 7·6 ins. at Glencarron, 7·4 ins. at Laudale and 5·3 ins. at Fort William; the smallest being 0·3 in. at Spurn Head, 0·4 in. at York and 0·6 in. at Bawtry and Bognor. In the east and south of England the number of days with rain was also small, less than 10 being reported in many places, and only 6 at Cambridge. More than 2 ins. of rain fell in several parts of Ireland and the west of Scotland on the 2nd or 3rd, the largest amounts reported being 2·9 ins. at Greystones (co. Wicklow), 2·8 ins. at Kingstown, 2·3 ins. at Glencarron and 2·1 ins. at Dublin (City) and Kilkenny. A heavy fall (accompanied in many places by thunderstorms) occurred also over Central and Southern England on the 10th, the amounts being as large as 1·8 in. at Felixstowe and 1·0 in. at Hereford. Large quantities were experienced, locally, at Hastings (1·6 in.) on the 2nd, and at Portland Bill (1·8 in.) on the 6th.

Bright Sunshine was in excess of the average* in most parts of England and Ireland, but was deficient in Scotland, the total duration at Edinburgh being less than half the average. The percentage of the possible amount ranged from 57 at Clacton-on-Sea, and 50 or more on the south and south-east coasts of England generally, to 25 or less at most stations in the northern parts of Great Britain, to 16 at Fort William and to only 14 at Edinburgh.

* 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.