

SUMMARY OF OBSERVATIONS.

SEPTEMBER, 1904.

General Summary.—The month was nearly equally divided between two different types of weather. During the first half the conditions were generally of an unsettled character, under the influence of various disturbances, so that rain was frequent and sometimes heavy in the western and northern districts, less marked elsewhere, and occasionally gales were experienced in some situations, but they presented no exceptional features. High pressure systems were in the ascendant throughout nearly the whole of the second half, the weather was much quieter, finer and drier, the days usually being very sunny, but in the closing week many parts of England were affected by dense fogs. There were no instances of exceptionally high or low temperatures. A remarkable feature was the almost entire absence of thunderstorms, including thunder or lightning alone, the very few instances recorded being local and unimportant. Taking the whole month pressure was above the normal nearly everywhere; the winds were mainly Easterly, Southerly and Westerly; temperature was above the normal in Scotland, below it elsewhere; rainfall was deficient over the greater part of the kingdom; and there was an excess of bright sunshine.

Pressure.—*Mean at 8 a.m.* ranged from 30·09 ins. at Oxford, 30·08 ins. at Clacton-on-Sea, and above 20·05 ins. in nearly all parts of England to below 29·95 ins. at the north-western coast stations, and to 29·93 ins. at Stornoway. With the exception of a very slight defect at Valencia the values were in all cases above the average,* the excess being more than 0·1 in. at most stations, as much as 0·17 in. at Aberdeen, and 0·20 in. at Sumburgh Head. The distribution of mean pressure shows a general northward and southward gradient, whereas the normal gradient is westward and eastward. (See Map I, Plate IX.) *Highest* readings were recorded on various dates, 30·38 ins. being reached on the east coast of England on the 18th, and 30·42 ins. over the north of Scotland on the 23rd. *Lowest* readings also occurred at various times, 29·40 ins. at Blacksod Point on the 4th, 29·43 ins. at Valencia on the 14th, and 29·44 ins. at Stornoway on the 30th. *Range* was everywhere moderate, from a little over 0·5 in. at Jersey to rather less than an inch in the north-west of Ireland and north of Scotland.

Depressions.—Nearly all the disturbances belonged to the earlier portion of the period. One moved east across the south of Ireland and of England on the 14th–15th, the others for the most part keeping off the western and northern coasts on their way northward or north-eastward. On the morning of the 24th a very small shallow depression formed between Norfolk and Holland, remained almost stationary until the following day, growing deeper and expanding in all directions, then moved up the east coast and passed north-westward beyond the north of Scotland on the 26th.

Anticyclones.—Although pressure was generally high the centre of only one anticyclone visited the country, moving across from south-west to north-east between the 10th and 12th, the barometer being a little above 30·2 ins. The centres of the other anticyclones occupied various situations from the Bay of Biscay to Russia and Scandinavia, and an extensive one was situated out on the upper part of the Atlantic westward of our north-western coasts about the 23rd. The barometer was above 30·6 ins. from the 18th to the 20th at stations between the North Sea and Moscow, and on the 26th and 27th between Moscow and the White Sea.

Winds.—Under the two main types of pressure distribution there was a considerable proportion of winds in most quarters of the compass, an Easterly preponderance being recorded in some localities, Southerly or Westerly in others. Gale force was attained on 8 days at Blacksod Point, on 7 days at Plymouth, on 6 days at Pembroke and Scilly, and on 5 days at Donaghadee and Malin Head.

Temperature.—*Mean at sea level* ranged from above 59° at Guernsey and above 58° at several stations on the south coast of England to below 53° in the north of Scotland and 52° in the Shetlands. The general distribution over the country exhibits some local differences from the normal. The mean values were above the average* over Scotland generally, Glencarron and Lairg having an excess of 2°; over England and Ireland there was a deficiency, amounting to 2°·8 at Cambridge and 3°·7 at Wisley. *Highest* readings occurred mainly on the 5th over the eastern half of England, on very varied dates elsewhere. Maidenhead reached 76° and London 75°, many other English stations registering 73° or 74°. The only record above 70° in Scotland was 73° at Lairg and Leith, and in Ireland 72° at Dublin (City). At Sumburgh Head the maximum was 58°. *Lowest* night values were registered on various dates, 32° at Stornoway, Swarraton and Wisley, 30° at Braemar, Lairg and Wokingham, and 29° at Woburn. At Scilly the minimum was 52°. *Range* varied greatly, from 43° at Lairg, 42° at Woburn and Wokingham, and 41° at Maidenhead to 19° at Donaghadee. Falmouth and Portland Bill, 17° at Sumburgh Head, 15° at Deerness, and only 13° at Scilly. *Vapour Pressure at 8 a.m.* ranged from 0·32 in. at Nairn and Stornoway, and 0·33 in. at Wick, Leith and Oxford to 0·39 in. at Roche's Point and Spurn Head and 0·41 in. at Scilly. *Relative Humidity at 8 a.m.* varied from 90 per cent. at Stornoway, Malin Head, Donaghadee and Birr Castle to 80 per cent. at Dungeness and Jersey.

Rainfall.—At about half the Irish stations the rainfall exceeded the average,* at Valencia by as much as 3·6 ins. Over Great Britain nearly all the returns show a deficiency, the defect amounting to 2 ins. at Marchmont, 2·3 ins. at Prestwich and 3·6 ins. at Stonyhurst. The largest aggregate totals for the month were 8·6 ins. at Fort William, 8·0 ins. at Valencia and 7·9 ins. at Glencarron; the smallest, 0·6 in. at Shoeburyness and 0·5 in. at Garforth. There were very few records of falls of as much as an inch in a day, the heaviest being 2 ins. at Fort William on the 5th, and 1·5 in. at Valencia on the 7th. The days with rain numbered 23 at Stornoway and 20 at Blacksod and Valencia, against 7 at Alnwick Castle, Whitby and Forest of Dean (900 feet), and 5 at Seaham.

Bright Sunshine was above the average* at nearly all stations, by as much as an hour or more per day in many localities, the excess amounting in the aggregate to 45 hours at Blackpool, 49 at Hillington and 50 at Stornoway. The percentage of possible duration was 50 and upwards over a large area of England and Wales, 56 at Jersey and Guernsey (Fort Road), and 59 at Guernsey (Villa Carey), the latter by photographic recorder. Valencia, Newcastle and Edinburgh had 30 per cent., Crathes 29, and Fort Augustus 28.

* 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.