

SUMMARY OF OBSERVATIONS.

JANUARY, 1905.

General Summary.—The weather experienced during January was of an exceedingly variable character, at times very unsettled, with rain, hail, sleet or snow in many localities, a thunderstorm accompanying a fall of hail in the south-east of Scotland on the 12th; at other times, and particularly towards the close, it was exceptionally fine and bright, the duration of sunshine being abnormally large for the mid-winter month. There were some severe frosts, local rather than general, and of brief duration, while high day temperatures were common to all districts. In the night of the 6th a deep disturbance appeared beyond the Shetlands, travelling quickly south-eastward, a more or less severe North-Westerly gale being felt in many parts of the country, and in the rear of the centre the barometer at Sumburgh Head rose 1.13 in. in 14 hours. Associated with this disturbance there was an unusually high tide, which flooded all the low-lying districts on the east coast of England, and caused much destruction. The middle of the month was marked by very strong South-Easterly winds and gales, with an intensely dry searching atmosphere, the relative humidity at 9 a.m. on the 15th being as low as 52 per cent. at Aspatria and Glasgow, and 54 per cent. at Southampton. On the 16th and 17th a very deep cyclonic system (barometer 27.99 ins. at Blacksod Point) moved up the western coasts, occasioning violent Southerly to Easterly gales. In the early hours of the 20th slight earthquake shocks were felt in some parts of Cornwall. An anticyclone which appeared off the west of Ireland on the morning of the 24th steadily increased in intensity, and by 11 a.m. on the 27th the barometer reached 31 ins. at Jersey. Until the evening of the 29th, readings of 31 ins. and upwards were recorded at stations from Jersey westward, and from Holyhead down to the north of Spain, the highest level attained being 31.097 ins. at Falmouth at 11 a.m. on the 28th. The records in the possession of the Meteorological Office give no previous instance of readings as high as 31 ins. in this particular region. Fogs were of rare occurrence and of an unimportant character. Over the southern and eastern districts the days with precipitation in any form were few in number. For the month as a whole pressure was decidedly above the normal everywhere; temperature was in excess except at some southern stations; the winds were mainly North-Westerly to South-Westerly and Southerly, and gales were rather numerous; rainfall was nearly everywhere deficient; and bright sunshine was in excess over Britain, and in defect over Ireland.

Pressure.—*Mean at 8 a.m.* ranged from 30.34 ins. at Jersey to 29.83 ins. in the Shetlands, the values in all cases being above the average,* by as much as 0.32 in. at Jersey and 0.14 in. at Sumburgh Head. *Highest* readings were recorded in the south-western districts from the 27th to the 29th, several stations exceeding 31 ins. On the 1st readings between 30.7 ins. and 30.8 ins. were reported in the south and east of England. *Lowest* readings occurred in Ireland on the 16th and 17th, some stations below 28.5 ins., and Blacksod Point touched 27.99 ins. At Sumburgh Head 28.7 ins. was registered on the 6th. *Range* was very large everywhere, from 1.7 in. at the eastern stations to more than 2 ins. over Wales and Ireland, and 2.97 ins. at Blacksod Point.

Depressions.—With the exception of the deep one of the 16th-17th on our extreme western coasts, the principal disturbances of the month were confined to Scandinavia.

Anticyclones.—While the barometer was generally rather high over the country, the only anticyclonic centre which visited us was on the 26th, when the mercury rose above 30.8 ins. over the western half of England. The system moved south-westward and developed greater intensity, the readings at all south-western stations and down to Spain passing above 31 ins. Other anticyclones had their centres between the Bay of Biscay and Russia, 31.1 ins. being recorded in the central parts of Russia on the 20th.

Winds.—At the southern and south-western stations there was a large proportion of Easterly and South-Easterly winds, but in the main North-Westerly to South-Westerly and Southerly currents prevailed. Gales were experienced at Deerness on 19 days, at Malin Head on 17 days, at Blacksod Point on 14 days, at Cockle Park and Durham on 13 days, and at Sumburgh Head on 12 days.

Temperature.—*Mean at sea level* ranged from slightly above 46° at Scilly and Valencia to below 38° at a number of the inland English stations. The general distribution did not differ much from the normal, but with the exception of a number of isolated stations in the southern half of England the mean values were above the average,* to the extent of 3° at Armagh, Glencarron, Edenfel, Foynes and Stornoway, and nearly 4° at Lairg. *Highest* readings were recorded on very varied dates, 58° at Colly Weston on the 6th, and at Reading on the 8th, and 57° at Southampton on the 7th. *Lowest* readings also occurred on varied dates, but mainly on the 2nd and round the 19th, 14° at Bawtry and Wokingham, 12° at Garforth, Hereford, and Littlestone-on-Sea, and 11° at Llangammarch Wells. *Range* was moderate in amount as a general rule, but it was as much as 41° at Hereford, Littlestone-on-Sea and Llangammarch Wells, and 40° at Garforth and Wokingham, and only 18° at Falmouth and 16° at Scilly. *Vapour Tension* ranged from 0.19 in. at Nottingham and Oxford to 0.26 in. at Blacksod Point and Valencia, and 0.27 in. at Roche's Point. *Relative Humidity* at 8 a.m. or 9 a.m. showed no great variation, from 82 per cent. at Pembroke to 90 per cent. at Clacton-on-Sea, Dungeness, Malin Head, Birr Castle and Roche's Point.

Rainfall.—There was a fairly large excess of rain in the north of Scotland, of as much as 2 ins. at Sumburgh Head and Lairg and 3.5 ins. at Glencarron, and there was a small excess at Laudale and Blacksod Point. Over the rest of the kingdom the amounts were all below the average,* the deficiency ranging upwards to 2.8 ins. at Clifton, Falmouth and Roche's Point, and 3.3 ins. at Clathick. The largest aggregates for the month were 13.4 ins. at Glencarron, 8.6 ins. at Laudale and 5.8 ins. at Stornoway and Sumburgh Head, while the smallest were less than 0.5 in. in various parts of England, 0.24 in. at Seaham, 0.21 in. at Shields, and only 0.11 in. at Spurn Head. The heaviest falls in one day were 1 in. at Jersey on the 16th, 1.1 in. at Laudale on the 3rd, at Valencia on the 14th, and at Dungeness on the 16th, and 1.4 in. at Glencarron on the 10th. The days on which any precipitation was measured numbered 26 at Sumburgh Head and 25 at Stornoway, against less than 10 in many parts of England, only 4 at Spurn Head.

Bright Sunshine exceeded the average* over Britain, by an hour or more per day at several stations in England. Over Ireland and in the Hebrides and Orkneys there was a deficiency, of as much as 37 hours at Valencia. The percentage of possible duration ranged from 40 at Bournemouth and 38 at Totland Bay to 7 at Stornoway and Valencia and 4 at Manchester (Whitworth Park).

* 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.