

SUMMARY OF OBSERVATIONS.

DECEMBER, 1905.

General Summary.—The meteorological features presented during the closing month of 1905 were of an interesting character. There was an unusual persistency of anticyclonic conditions, the regions of greatest pressure being, as a rule, on the Continent, extending from the Bay of Biscay and Portugal to southern Russia and Turkey, but the northern limits of the systems nearly always embraced a large portion of the British Isles, and the highest barometer readings of the month, above 30·9 ins., occurred at several of our home stations. Disturbances were, consequently, almost exclusively confined to the ocean, well outside our western and northern coasts, one of minor importance passing from the Bay of Biscay along the north of France and on to Germany. The only general gale was experienced on the last day when, coincident with a fall of the barometer in the south-west there was a very decided increase of pressure elsewhere, resulting in a strong wind to a whole gale from South-East in many localities. Taking the period as a whole, however, a South-Westerly type of conditions prevailed, but with the centres of the depressions so far distant that occasional gales were felt only at the more exposed situations in the far west and north. One consequence of the steady flow of breezes from the Atlantic was the abnormal mildness, which was most marked in Ireland and Scotland. A curious anomaly was that these ocean winds brought with them very little rain, many days passing in some districts without any precipitation, so that there was the rare occurrence of a December drought. In the first half of the month there were several days of thick mist or fog in many parts of England, but the Christmas season was remarkably clear. Thunderstorms were reported in several parts of Scotland on the 8th. For the entire month pressure and temperature were in excess of the normal; the winds were mainly Southerly to Westerly in direction, frequently blowing strongly on the western coasts; there was a general deficiency of rain; and the duration of bright sunshine was rather variable.

Pressure.—*Mean at 8 a.m.* ranged from 30·26 ins. at Jersey and above 30·2 ins. over the southern counties of England to below 29·9 ins. in the north of Scotland, and to 29·83 ins. at Sumburgh Head. The values were in all cases well above the average*, by as much as 0·16 in. at Valencia, and 0·3 in. at Oxford. The general distribution showed a fair agreement with the normal, but the gradient was rather more steep. *Highest* readings were attained all over the country on the 12th, when the mercury rose to 30·9 ins. and upwards over an area extending from the Midland counties of England to the west coast of Ireland, 30·94 ins. at Donaghadee. There were only 6 days during the month on which the barometer was not above 30·2 ins. in some part of the Kingdom. *Lowest* values occurred at the close of the first and fourth weeks, 28·92 ins. at Stornoway on the evening of the 6th, and 28·99 ins. at Sumburgh Head next morning; and 29·12 ins. at Dungeness on the morning of the 29th. *Range* was remarkably uniform, 1·6 in. at three-fourths of the stations, 1·5 in. at Leith and Shields, and 1·9 in. at Stornoway.

Depressions.—Most of the depressions followed a north-easterly path at some distance out on the ocean, but for about a week towards the close large systems of low pressure were indicated beyond our south-western coasts, and from one of these a small disturbance moved along the north of France to Germany on the 28th and 29th. No centre of minimum pressure visited any part of the British Isles.

Anticyclones.—An area of very high pressure, 30·9 ins. and above, lay immediately over the British Isles on the 12th, but although the barometer was usually high during the remainder of the month the anticyclonic centres were most of the time situated over the central or southern portions of the Continent.

Winds.—Southerly to Westerly winds predominated largely nearly all through the month, but after Christmas a South-Easterly current prevailed over the south-western districts. The days on which gales were recorded numbered 14 at Stornoway, 12 at Deerness, 7 at Laudale, and 5 at Cockle Park (Durham) and at Pembroke.

Temperature.—*Mean at sea level* ranged from nearly 49° at Scilly and above 45° in most parts of Ireland, and on the south-west coasts of England to below 40° in some of the eastern counties, and to 38° at Rauceby. With the exception of Cardiff and Jersey all stations returned temperatures above the average*, the excess over the western and northern districts generally being large, exceeding 5° in many parts of Scotland and Ireland, and amounting to 5·4° at Armagh and Dublin. *Highest* readings were recorded on very varied days, but mainly on or about the 7th, when Rhyl touched 59°, Westminster, Maidenhead and Reading 58°, and several other southern stations 57°. *Lowest* values also occurred on varied dates, mostly on the 10th or 11th or quite at the close of the month, but frosts of any great intensity were almost entirely absent, the only minima below 25° being 17° at Nairn (31st), 20° at Braemar and Strathpeffer (30th), and Lairg (26th). 21° at Wokingham (11th), 22° at Rauceby (11th) and Llangammarch Wells (26th) and 23° at Epsom (11th) and Tunbridge Wells (12th). *Range* was, in consequence, unusually small, 13° at Scilly, 15° at Falmouth and less than 20° at many stations, generally less than 30°, but was 36° at Wokingham and 38° at Nairn. *Vapour Pressure* ranged from 0·22 in. over the inland and eastern counties of England to 0·30 in. at Roche's Point. *Relative Humidity* was as high as 95 per cent. at Roche's Point, 94 per cent. at Spurn Head, and 90 per cent. or above in several other localities, only Leith being as low as 83 per cent.

Rainfall.—Only at Killarney and Stornoway was there a small excess of rain for the month. As a rule the aggregates were decidedly below the average*, the deficiency being more than 2 ins. in many places, and exceeding 3 ins. at a few stations. The largest totals were 9·3 ins. at Glencarron and 8·1 ins. at Killarney; the smallest 0·19 in. at Saltburn-by-the-Sea, and 0·15 in. at Shields, several localities returning 0·5 in. or less. Over the greater part of England the amounts were less than an inch. The days with rain numbered 25 at Killarney and Sumburgh Head, and 24 at Blacksod, but many places had less than 10, only 5 at Durham, Garforth and Shoeburyness, and 4 at Saltburn-by-the-Sea. The stations at which an inch or more fell in a day were Fort Augustus, Glencarron, Laudale and Killarney.

Bright Sunshine.—There was a very irregular distribution of bright sunshine, some stations being above, others below the average*, Llandudno having an excess of 34 hours, and Margate a deficiency of 20 hours. The aggregates ranged from 8·5 hours at Glasgow, 12 hours in London, and 14 hours at Westminster to 69 hours at Scilly, Llandudno and Hoylake, and 75 hours at Rhyl. The percentage of possible duration was only 4 at Glasgow against 25 or more at several of the west coast stations, and 33 at Rhyl.

* 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.