

SUMMARY of the OBSERVATIONS made at the STATIONS included in the DAILY and WEEKLY WEATHER REPORTS for the CALENDAR MONTH,

DECEMBER 1898.

(Issued as a Supplement to the Weekly Weather Report, 1898.)

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PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & CO., 12, HANOVER ST., EDINBURGH, and 90, WEST NILE STREET, GLASGOW; AND HODGES, FIGGIS, & CO., LIMITED, 104, GRAFTON STREET, DUBLIN.

General Summary.—The weather of December was unusually mild, with heavy rains in most districts in the first and last weeks, and occasional thunder and lightning at some of the northern stations. Pressure was low in the north, but high in the south; temperature was greatly above the average; the winds were Westerly or South-westerly, with frequent gales in the west and north; rainfall varied in amount in different districts, but was slightly in excess of the normal in the south of England, and very considerably in excess in the north-west of Scotland; bright sunshine was rather deficient at several of the western and southern stations, but fully equal to the average in most other places.

Pressure.—*Mean at 8 a.m.* ranged from 30·18 ins. at Jersey, and 30·1 ins. and upwards over the English Channel generally, to 29·5 ins. and less in the Shetlands, the general distribution over our islands being in close agreement with the normal. As, however, the mean readings in the south were considerably above the average* while those in the north were as much below it, the gradient over our islands was unusually steep, the difference in pressure between the north of Scotland and the English Channel stations being about twice as great as that shown by the chart of normal values. *Highest* readings were recorded between the 20th and 22nd, when the barometer rose to 30·62 ins. at Valencia, to 30·5 ins. and upwards, at many of the English and Irish stations, and to 30·3 ins. and upwards on all but our extreme northern coasts. *Lowest* readings occurred in the north on the 27th, when the barometer fell to 28·2 ins. and less in the Hebrides, to 28·5 ins. and less on all our extreme north and north-west coasts, and to 29·0 ins. and less over the northern parts of the United Kingdom generally. In the southern districts the lowest readings (29·0 ins. to 29·2 ins.) were recorded on the 29th. *Range* was moderate for the time of year.

Depressions.—The centres of the large Atlantic depressions passed, as a rule, in a track lying to the northward of our islands, the most important systems observed being those of the 9th, 10th and the 27th. On the 29th, however, a well-defined, though somewhat shallow, disturbance travelled eastwards directly across Ireland and England, and eventually passed on to the Baltic and western Russia.

Anticyclones.—After the 10th a large anticyclone previously existing over the central and southern parts of Europe extended over our islands and remained with us until the 17th, when it again receded southwards. Two days later a new system spread in from the Atlantic, and moved very slowly eastwards across the whole of Europe, its influence disappearing from our own islands after the 24th.

Winds were mainly from the Westward or South-westward, but on our south-west coasts there was a fairly large proportion of breezes from the Southward. Gales were unusually prevalent in the west and north, the number of days affected being as large as 20 at Aberdeen and Pembroke, 18 at Holyhead, and 16 at Ardrossan.

Temperature.—*Mean at sea level* ranged from 50·5° at Scilly, and 49° and upwards on most other parts of our south-west coasts, to 45° and less in inland parts of the north of Ireland, to 44° and less at some stations in the north of England, and to between 40° and 42° in the north of Scotland. Over England and Ireland the general distribution was in fair agreement with the normal, but in Scotland there was an absence of the cold area which usually appears over the central parts of the country at this time of the year. Compared with the average* the mean values showed a very large excess of warmth over the entire kingdom, the excess amounting to 6° or more in many districts, to 7° or more at several stations in the central and south-western parts of England, and to as much as 7·7° at Clifton. Over the kingdom generally the mean values were the highest recorded in December since at least the year 1871. *Highest* readings were registered mostly between the 4th and 6th, when the thermometer rose to 55° and upwards at nearly all stations, to 60° at York and to 61° at Llandudno. *Lowest* readings occurred in Ireland on the 20th or 21st, but over Great Britain on the 30th or 31st. In the western and southern districts the thermometer fell very little below the freezing point, but in the north the frost of the 30th–31st was rather severe, the sheltered thermometer falling as low as to 16° at Braemar, 19° at Hawes Junction, 21° at Lairg and Nairn, and 22° at Fort Augustus, Ochertyre, and Alnwick Castle. *Range* was somewhat small for the time of year. *Vapour Tension* ranged from between 0·30 in. and 0·33 in. on most parts of our south and south-west coasts to 0·25 in. or less over northern and central England, and to 0·22 in. or less in the east of Scotland. *Relative Humidity* varied from between 95 and 97 per cent. at some of our north-western stations, and 93 per cent at Dungeness, to 82 per cent. at Liverpool, and 81 per cent. at Nairn and Aberdeen.

Rainfall varied greatly in amount in different parts of England, but was mostly in excess of the average* in the south. In Ireland the fall was, as a rule, somewhat deficient, while in Scotland there was a fairly general excess, the amount in the north-western districts being considerably more than twice as much as the normal. The largest aggregates reported were 23·1 ins. at Fort William, 21·7 ins. at Glencarron, and 14·9 ins. at Stornoway; the smallest being 0·9 in. at Shields, 1·1 in. at Leith and Durham, and 1·4 in. at Dungeness. Over the greater part of England the heaviest falls occurred on the 6th, when amounts varying between 1·0 in. and 1·3 in. were measured at several of the south-western stations. In the north-west of Scotland falls exceeding an inch in 24 hours were very frequent, no fewer than 8 being reported at Glencarron. Snow or sleet fell in many of the northern districts between the 18th and 20th, and again in the north and east at the close of the month.

Bright Sunshine was slightly deficient at many of the western and southern stations, but was mostly in excess of the average* elsewhere. The percentage of the possible duration ranged from 28 at Geldeston, 27 at Hollesley Bay (Suffolk), and 25 at Falmouth, to 10 or less at several of the northern stations, and to 5 at Fort Augustus.

* The averages employed are—*Pressure and Temperature* for the 25 years 1871–95; *Rainfall* for the 30 years 1866–95; and *Bright Sunshine* for the 15 years 1881–95.