

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

DECEMBER 1890.

(Issued as a Supplement to the Weekly Weather Report, 1890.)

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PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; JOHN MENZIES & Co., 12, HANOVER
STREET, EDINBURGH, and 21, DRURY STREET, GLASGOW; AND HODGES, FIGGIS, & Co., 104, GRAFTON STREET, DUBLIN.

General Summary.—The weather of December was dull, gloomy, and exceptionally cold over England, with thick local fogs and occasional falls of snow. In Ireland and the west and north of Scotland, however, the conditions were much less unfavourable. Pressure was considerably above the average, excepting in the south-west of England; temperature was greatly below the normal; the winds were mainly Easterly in the south, but Southerly in the north; and rainfall was very deficient in most places. The amount of bright sunshine was excessively small over the inland parts of Great Britain.

Pressure.—Mean for the month at 8 a.m. varied from 30·10 ins. and upwards off the north-east coasts of Great Britain to 29·95 ins. and less in the extreme south-west of England. The mean distribution was, therefore, of quite an abnormal character, the gradient being favourable for Easterly winds over the southern parts of the kingdom and for Southerly winds in the north. In the Channel Islands and the south-west of England the values did not differ materially from the average,* but in all other parts of the country there was a decided excess, the departure amounting to 0·3 in. or more in the north and east of Scotland. *Highest* readings were recorded on the 26th and 29th, when the barometer rose to between 30·3 ins. and 30·5 ins. in nearly all districts. *Lowest* readings were observed very generally on the 19th, when the mercury fell in most places to between 29·2 ins. and 29·3 ins. *Range* was small for the time of year.

Depressions.—The depressions which reached our Islands from the Atlantic were mostly of a “V-shaped” character, and dispersed over the western and northern parts of the kingdom. Between the 15th and 17th a shallow system, which had appeared in the first case off the north-east of England, moved southwards to the Bay of Biscay, and afterwards travelled in a south-easterly direction across France to the Mediterranean; while at the beginning and end of the month depressions were drifting about in an irregular manner over Spain and the Bay of Biscay.

Anticyclones.—These were very numerous and persistent. In the majority of cases the systems extended over our Islands from a large high-pressure area which existed almost continuously over Russia, but in one or two instances the anticyclone advanced from the westward, while on the 21st a well-marked system was formed directly over the United Kingdom.

Winds.—In the northern parts of our Islands the winds were chiefly Southerly, but in the more southern districts there was an unusually large proportion from the Eastward. At Liverpool, Pembroke, and Jersey there were no fewer than 27 days with winds from an Easterly point (North-east to South-east), at Hurst Castle 26, and at Yarmouth 24. Gales were very rare on our south and east coasts, but were somewhat numerous in the extreme west and north, the largest numbers reported being 11 at Mullaghmore and 10 at Stornoway.

Temperature.—Mean at sea-level ranged from 43° at Scilly and from between 41° and 42° in the extreme south of Ireland to 37° and less over central Ireland, to 36° and less in various parts of central Scotland, and to between 28° and 30° over the eastern and south-midland counties of England. The winter distribution was, therefore, very strongly marked, and the actual values were everywhere below the average.* In the extreme north and north-east of Scotland the deficit was rather less than 1°, and over central Ireland it varied from 3° to 4°, but over central England and the inland parts of our eastern and southern counties it amounted to not less than 9° or 10°. *Highest* readings were observed very generally on the 1st, but in some parts of England they occurred on the 4th; in the eastern, midland, and southern districts the daily maxima were unusually low, and the temperature never exceeded 45°. *Lowest* readings were observed mostly between the 21st and 23rd, when very severe frost occurred over England; at Stokesay (Salop) the thermometer fell to 1°, at Cambridge to 4°, and at Hereford to 6°. *Range* was moderate. *Vapour Tension* was less than 0·14 in. over the central parts of England, but exceeded 0·20 in. on our extreme south-western, western, and northern coasts, the highest value of all being 0·25 in. at Scilly. *Relative Humidity* varied from 80 per cent. in London, 82 at Aberdeen, and 83 at Jersey, to 94 at York, 95 at Hurst Castle, and 100 at Hawes Junction.

Rainfall was exceedingly slight over England and central Scotland, the total amounts being less than an inch in most places and as low as 0·39 in. at Rothamsted, 0·43 in. at Braemar, and 0·45 in. at Manchester. In the south of Ireland, however, there were more than 4 ins. and on the south coast of Devon and Cornwall more than 5 ins. In the districts last mentioned the aggregate fall did not differ much from the average,* but in all other localities there was a very considerable deficit, the amounts over eastern and central England and western and central Scotland being in many cases less than one-fourth of the normal. Rainy days were somewhat frequent in the extreme west and north; at Sumburgh Head there were 21, at Valencia 22, and at Aberdeen 23. Over the greater part of England the number varied between 7 and 11.

Bright Sunshine.—The amount of bright sunshine was fairly large in the extreme north of Scotland, the west and south of Ireland, and the Channel Islands, the per-centage of the possible amount being as high as 30 at Jersey and 26 at Stornoway. In all other districts the amount was excessively small, less than 5 per cent. being recorded at many of the English stations and also at Leith. At York the total sunshine for the month was only 1·1 hours, while in London there was no more than one tenth of an hour, the per-centage of the possible amount being in each case inappreciable.

* The averages employed are—*Pressure* and *Temperature* for 20 years, 1861–80; *Rainfall* for the 20 years, 1866–85.