

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

DECEMBER 1901.

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ISSUED BY THE METEOROLOGICAL OFFICE, 63, VICTORIA STREET, LONDON; W. N. SHAW, F.R.S., SECRETARY.
PUBLISHED BY EYRE AND SPOTTISWOODE, EAST HARDING STREET, FLEET STREET, E.C.; OR OLIVER & BOYD, EDINBURGH; OR
E. PONSONBY, 116, GRAFTON STREET, DUBLIN.

General Summary.—The weather of December was extremely unsettled, with high temperatures at the beginning and end of the month, but with much colder weather at other times, and frequent falls of snow or sleet. Thunder and lightning occurred in several parts of the kingdom between the 7th and 10th, and at many of the western and northern stations between the 17th and 19th. Pressure and temperature were each below the average; the winds were chiefly Westerly, with frequent gales in the west; rainfall exceeded the normal in all districts excepting the south of Ireland; bright sunshine varied greatly in amount in different places, but was mostly in excess of the average.

Pressure.—*Mean at 8 a.m.* ranged from about 29·75 ins. at Jersey, and from 29·67 ins. and upwards on our southern coasts generally to 29·40 ins. and less in Caithness and the Shetlands, the general distribution being favourable for winds from the Westward and North-westward rather than from the South-westward, as is usual in December. The mean values were considerably below the average,* the deficit varying from about 0·2 in. in the west and south of Ireland to a little above 0·3 in. on the east coasts of Great Britain. *Highest* readings were recorded on the 3rd or 4th, when the barometer rose to 30·4 ins. and upwards over central and southern England, and to 30·2 ins. and upwards in all other parts of the kingdom excepting the Hebrides. After the first week it was only in the extreme western districts that the mercury ever rose as high as 30·0 ins. *Lowest* readings were observed on the evening or night of the 24th, when the barometer fell to 28·50 ins. at Yarmouth, to 28·55 ins. at Nairn, and to 28·8 ins. and less in all but the south-western parts of the kingdom. *Range* was large, especially in the south and east of England, where it amounted to between 1½ in. and 2 ins.

Depressions were rather numerous, the centres of the more important systems moving as a rule over the northern parts of our islands or the North Sea. A noteworthy exception occurred, however, in the case of a deep depression the centre of which advanced over the Bristol Channel early on the 12th. In this instance the disturbance moved south-eastwards across Cornwall, and afterwards passed slowly eastwards along the English Channel to Belgium and Western Germany, where it appears to have dispersed on the 15th.

Anticyclones.—The only anticyclone observed in the immediate neighbourhood of our islands spread northwards from the Bay of Biscay on the 3rd, but moved away to the eastward after the 4th. During the early part of the month the highest European pressures were found mostly in the south, while in the middle of the month they were reported in the extreme north. In the closing week two anticyclonic areas existed, one over northern Russia, and the other over Spain and Algeria.

Winds were chiefly from the Westward, but on our south-west coasts there was a fair admixture of breezes from North-west, while in the extreme north of Scotland the direction varied considerably from time to time. Gales were very frequent in the west, a wind force of 7 or more being recorded on as many as 18 days at Malin Head and Scilly, 17 days at Holyhead, and 15 days at Blacksod Point and Pembroke. The gale of the 12th–13th blew with considerable violence from the Northward on our south-west coasts, and from the South-eastward in the east and south-east.

Temperature.—*Mean at sea level* ranged from 47° at Scilly, and 44° and upwards on our extreme south-west coasts generally, to 39° and less in some parts of central Ireland, and to 36° and less in inland portions of the north of Scotland. The general distribution agreed very closely with the normal, but the actual values were in nearly all cases below the average,* the deficit being very slight in the east and south of England, but rather large in some parts of Ireland and Scotland. *Highest* readings were recorded as a rule on the 6th or 7th, but at several stations in central and southern England the thermometer rose as high, and in some cases higher, on the 30th or 31st. In many parts of England the thermometer on one or other of these dates exceeded 55°, and at Yarmouth it reached 60°, the latter reading being 4° higher than anything recorded in the locality in December for at least 30 years past. *Lowest* readings occurred mostly between the 20th and 23rd in England and Ireland, but on various dates in Scotland; at several of our northern and central stations the thermometer fell below 15°, the lowest values reported being 4° at Newton Reigny (Penrith), 10° at Braemar and 12° at Lairg and Loughborough. *Vapour Tension* ranged from 0·28 in. at Scilly, and 0·23 in. or more on several parts of our west and south-west coasts, to 0·20 in. or less over central England and the east of Scotland. *Relative Humidity* exceeded 90 per cent. at many stations in the south and east of England, and also at Wick, the lowest values, 80 per cent. or rather less, being reported on the west coasts of Ireland.

Rainfall was in excess of the average* over the United Kingdom generally, and especially in the east of England, where the total amount was in many cases more than twice as much as the normal. In the southern parts of Ireland, however, there was, as a rule, a slight deficit. The largest aggregates reported were 10·2 ins. at Glencarron, 10·0 ins. at Fort William, and 9·2 ins. at Laudale; the smallest being 1·8 in. at Chester, 1·9 in. at Durham and 2·0 ins. at Dublin. The number of rainy days was large, especially in the extreme west and north; at Sumburgh Head and Blacksod Point a measurable quantity was recorded every day. Amounts exceeding an inch in 24 hours were registered in many localities and on several occasions, the principal cases occurring on the 11th and 12th, when heavy rain was experienced over the southern parts of Ireland and England, and heavy snow in the north; on the latter date the amount measured was as large as 2·5 ins. at Yarmouth, 1·9 in. at Colly Weston, and 1·8 in. at Spurn Head, Hillington, Geldeston, and Arlington.

Bright Sunshine varied considerably in amount in different places, but was as a rule in excess of the average.* More than 25 per cent. of the possible duration was recorded on many parts of our south and east coasts, and as much as 31 per cent. at Felixstowe. In London, however, the percentage value was only 9, and in several parts of Scotland it was lower still, the smallest reported being 3 at Fort Augustus.

* The averages employed are—*Pressure and Temperature* for the 33 years 1871–1900; *Rainfall* for the 35 years 1866–1900; and *Bright Sunshine* for the 20 years 1881–1900. (The averages will be published shortly as an appendix to the "Weekly Weather Report.")