

## 104 MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS

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**FEBRUARY, 1940.—Unusually dull; dry in Scotland, wet in England, Wales and Ireland; very cold 9th-19th.**

Except in the north of Scotland, the month was distinguished by an unusual scarcity of sunshine. Broadly speaking it was dry in the northern half of the British Isles and wet in the southern half. Temperature was appreciably below the average in Great Britain but slightly exceeded the average in Ireland; the period 9th-19th was markedly cold.

The severe conditions experienced in January persisted during the first three days of February with cold easterly winds and deep snow lying over much of Great Britain. There was some precipitation on the 1st and 2nd and it was almost general on the 3rd and heavy rain fell locally in Ireland and south-west England on that day. On the 4th and 5th a trough of low pressure associated with an Atlantic depression moved north-east over the British Isles and filled up; precipitation occurred at most places on the 4th and there was further snow in Scotland. On the 6th a new disturbance approached south-west Ireland and on the 7th it moved eastward across England; heavy rain fell in the south-west on the 6th and locally in north-west England on the 7th. There was a rise in temperature on the 4th and the somewhat milder conditions persisted until the 8th. Fog was widespread in England from the 3rd-7th and in south Scotland from the 5th-7th.

On the 9th the anticyclone over Scandinavia extended its influence south-westward and subsequently it moved west; over the British Isles the period 9th-19th was very cold with frequent sleet or snow but considerable periods of bright sunshine locally. By the 16th, pressure was highest over east Greenland, while a wedge of relatively high pressure moved east over Britain in front of a vigorous Atlantic depression; heavy precipitation was reported in the south-west and west on the 15th and 16th. On the 17th this depression moved rapidly east-south-east to Germany and on the 18th and 19th a trough of low pressure extending at first from south-west Ireland to the Bay of Biscay moved slowly north-east over the British Isles and filled up; precipitation occurred, chiefly in England and Ireland.

Subsequently an anticyclone moved south-east from Scandinavia to south-east Europe, while pressure was low over the north-east Atlantic. Tropical air in front of the low pressure system caused a considerable rise of temperature over the British Isles; there was occasional local rain. On the 26th a complex depression off our western seaboard moved north-east, and from the 27th-29th it moved slowly south-east before an anticyclone advancing from Greenland. There was general rainfall between the 26th and 28th and some, chiefly in southern England, on the 29th; some snow and sleet were reported locally in Scotland and north-east Ireland on the 28th and locally in Britain on the 29th. By the last day cold north-easterly winds had spread over the country.

**Pressure and Wind.**—Mean pressure for the month exceeded the average in the north and was considerably below the average in the south-west, the deviation at 7h. ranging from +4.4 mb. at Lerwick to -7.6 mb. at Valentia Observatory. The mean pressure distribution was consequently quite different from the average, the lowest pressure being situated over south-west Ireland and the highest over the eastern districts of England. Winds from some easterly point were in excess of the average, while winds from the west were infrequent on the whole. Local gales were reported at times, particularly in the north of Scotland but none was especially severe. The gale on the 4th was widespread in Scotland and a fairly widespread gale occurred on the south-west coasts on the 16th. Among the highest speeds recorded in gusts were 63 m.p.h. at Valentia Observatory on the 6th, 64 m.p.h. at Plymouth, 73 m.p.h. at St. Mary's, Scilly and 79 m.p.h. at the Lizard on the 16th and 62 m.p.h. at Stornoway on the 26th.

**Temperature.**—Except in Ireland and extreme south-west England, where there was a slight excess, mean temperature for the month was considerably below the average. The deficiency was

greatest in England, N.E., England, E. and the Midlands, the deviation from the average in these districts being -4.0°F., -4.1°F. and -3.5°F. respectively. At individual stations the deficiency was 5°F. or more. The first three days were cold and the period 9th-19th was very cold; some unusually low screen minima were registered during the latter period, values of 10°F. or below being recorded at numerous stations in Great Britain. From the 19th onwards, much milder conditions prevailed.

The extremes for the month were:—(England and Wales) 60°F. at Dawlish on the 19th, Bude on the 20th, Prestatyn on the 21st and Rhyl and Colwyn Bay on the 22nd, 2°F. at Castleton on the 16th; (Scotland) 58°F. at Gordon Castle on the 22nd, 8°F. at Dalwhinnie on the 13th and 18th and at Braemar on the 19th; (Ireland) 62°F. at Trinity College, Dublin, and Rathfarnham on the 20th and at Newtownforbes on the 26th and 18°F. at Markree Castle and Aldergrove on the 13th.

**Precipitation.**—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881-1915 was 106, the values for the constituent countries being England and Wales 123, Scotland 57 and Ireland 128. In Scotland the deficiency was practically general. In Ireland less than the average occurred in the extreme north and at one or two other isolated stations; more than the average was registered elsewhere and more than twice the average locally in the south and east. In England and Wales less than the average was received over fairly large areas in the north, in parts of east and south-east England and a few rather isolated places elsewhere; more than the average was received over most of the country south of a line drawn roughly from Liverpool to the Humber.

Among the heaviest falls in 24 hours may be mentioned:—

- 3rd 2.29 in. at Fofanny Reservoir (County Down).
- 15th 4.09 in. at Derreen (County Kerry), 3.26 in. at Millstreet Convent (County Cork), 3.01 in. at Bantry (County Cork), 2.88 in. at Sheen Falls, Kenmare (County Kerry) and 2.30 in. at Aasleagh House (County Mayo).
- 16th 2.77 in. at Enniskerry (County Wicklow), and 2.35 in. at Roundwood (County Wicklow) and 2.19 in. at Thomastown (County Kilkenny).
- 20th 2.90 in. at Broadford (Skye).

Thunder was reported locally in Hampshire on the 16th and 29th.

Deep snow lay over much of Great Britain during the first few days; undrifted snow lay to a depth of 12 inches at many places in the south-western counties of Scotland and in Aberdeenshire and, as in January, caused dislocation of rail and road traffic. At Rotherham, Yorkshire, snow was 12 inches deep on the 1st and some snow was lying continuously until the 20th. Snow or sleet occurred frequently between the 9th and 19th.

**Sunshine.**—Sunshine was notably deficient except in the north of Scotland; the percentage of the average for districts 1-10 was only 52, while the percentages of the average for the individual districts ranged from 27 in the Midland Counties to 113 in Scotland, N. At York and Oxford, where records go back to 1881 and at Kew Observatory where they are available since 1880, the total sunshine was the lowest on record for February. At Ross-on-Wye, the total was the lowest for any month since records began in 1915 and at Wakefield, the total for January and February together was the lowest for the first two months of the year in a record back to 1900. At Phoenix Park, Dublin, the total was equal to the record low total which occurred in 1897. At York there was no sunshine from January 24th to February 20th inclusive, and at Oxford, no sunshine was recorded from January 26th to February 9th, the longest sunless spell on record there.

**Fog.**—There was a good deal of fog, particularly on the 1st, 3rd-9th, 11th, 16th, 18th-23rd and 25th-26th.

**Miscellaneous Phenomena.**—The aurora was observed locally in Scotland on 12 nights. Solar halos were noted at Oxford on 10 days.