

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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**JANUARY, 1940.—Exceptionally cold; intense frost; considerable snow in latter half of month.**

The month will long be remembered for the intense cold. The general rainfall was slightly above the average over England and Ireland and notably below the average over Scotland. There was a marked excess of sunshine on the whole.

During the opening days a depression off Portugal moved slowly north, while an anticyclone over southern Scandinavia moved south, and, from the 3rd–5th, another anticyclone moved south-east from Iceland to Germany. Over the British Isles the weather was cold, with periods of bright sunshine locally; there was little rain on the whole, though some rain occurred in south-west England, north-east England and south-east Scotland on the 3rd and considerable rainfall was reported in south-west Ireland on the night of the 5th–6th. On the 6th and 7th an Atlantic depression extended its influence over the British Isles; there was a rise in temperature and rain fell generally and was rather heavy locally. On the 9th an anticyclone over west Russia spread westward; subsequently it moved south and an associated ridge of high pressure lay across the British Isles; between the 9th and 14th there was very little rain in this country but a good deal of fog at times, while temperature was low on the whole except in the north of Scotland. From the 15th to 17th an intense anticyclone was centred over Greenland and a ridge extended south to westward of the British Isles, while a depression moved from southern Norway to Germany; heavy snow was reported in Kent on the night of the 16th–17th. On the 18th a depression was centred near the Shetlands and another approached our south-west coasts; there was precipitation (mainly sleet or snow) at numerous places and it was heavy locally in the west. On the 19th a belt of low pressure extended from Lerwick to Portugal and on the 20th it filled up without much movement. Precipitation occurred in the west and north on the 19th and there was scattered precipitation on the 20th. The period 17th–23rd was mainly very cold. On the 22nd and 23rd a wedge of high pressure moved east over the British Isles before a large Atlantic depression; considerable rain fell in south-west Ireland on the 23rd. Further precipitation in the west and north on the 24th, and in the west on the 25th was associated with the Atlantic depression. Pressure had risen considerably over Scandinavia by the 26th and an anticyclone remained centred in this area until the end of the month. Meanwhile pressure continued low on the Atlantic and an associated trough of low pressure extended from the west of Ireland to France; this trough also persisted with little change until the end of the month. There was widespread precipitation and considerable snow, which was unusually heavy in many places.

**Pressure and Wind.**—Mean pressure exceeded the average except in the extreme south-west, the excess being large in the north; the deviation from the average at 7 h. ranged from +12.2 mb. at Lerwick to -1.6 mb. at the Scilly Isles. In the southern half of the country winds from some easterly point were very prevalent. Local gales occurred at times; for example, on the 2nd, 4th, 7th, 8th, 10th, 15th–19th and 25th–31st. Among the highest speeds recorded in gusts were 86 m.p.h. at Bell Rock on the 16th and 77 m.p.h. at Holyhead on the 19th.

**Temperature.**—Mean temperature for the month was exceptionally low; the deviation from the average for the districts ranged from -4.5°F. in Ireland, S. to -9.8°F. in the Midland Counties. Over Scotland as a whole, it was the coldest month since February 1895 and the coldest January since 1881; in the long temperature record at Oxford, January 1940 was the coldest month since February 1895 and the coldest January since 1838; at Wakefield, the mean temperature was the lowest for any month since February 1895; at Eastbourne it was the coldest January since records began in 1888 and at Ross-on-Wye the coldest January since 1881. Temperature in the screen fell to 0°F. or below at numerous

stations; at a few individual stations the screen minimum for the month was the lowest on record.

The extremes for the month were:—(England and Wales) 57°F. at Prestatyn on the 7th, -10°F. at Rhayader on the 21st; (Scotland) 52°F. at Skallary on the 8th, -5°F. at Dalwhinnie on the 17th; (Ireland) 57°F. at Malin Head on the 7th and at Foynes on the 28th, 10°F. at Newtownforbes on the 18th.

**Precipitation.**—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881–1915 was 90, the values for the constituent countries being England and Wales 103, Scotland 49 and Ireland 102. In Scotland the deficiency was practically general, an excess being registered only at a few isolated stations; the deficiency was greatest in the north-west; at a number of stations in Inverness-shire less than 10 per cent. of the average was received. In England and Wales less than the average occurred in an irregular belt extending from south-west England across Wales and north-west England to Northumberland, and locally in East Anglia, Cambridge, Lincoln and Yorkshire. More than the average was recorded in a large area covering south-east England, the Midlands and part of east and north-east England, as well as in a strip along the north coast of Wales; 210 per cent. was registered at Holyhead and 196 at Douglas, Isle of Man. In Ireland, broadly speaking, more than the average occurred in the east and less than the average in the west; at Belfast 220 per cent. was registered.

Among the largest falls in 24 hours were:—

- 17th 2.50 in. at Buckies (Caithness).
- 23rd 2.16 in. at Derreen Lauragh (County Kerry) and 2.37 in. at Tourmakeady (County Mayo).
- 27th 2.47 in. at Mallaranny, 2.15 in. at Delphi Lodge (County Mayo) and 2.11 in. at Aloha (County Tyrone).

Snow was widespread and the falls considerable in the latter half of the month, particularly from the 26th onwards. For example, at Eastbourne snow was 1 foot deep on the morning of the 17th, and heavy snow fell on the night of the 29th–30th causing deep drifts in the neighbourhood; at Pontefract snow was 15 inches deep on the 28th with 5-foot drifts; at Sheffield snow was 23 inches deep on the 29th, at Malvern roughly 2 ft. deep on the 29th, at Bolton 20 inches deep, with drifts 10 to 12 feet, on the 29th. At Edgbaston, Birmingham, snow was 15 inches deep on the mornings of the 29th and 30th. In Scotland, snow lay undrifted to a depth of a foot in many places, while drifts caused trains to be marooned and villages to be isolated.

**Sunshine.**—Sunshine markedly exceeded the average on the whole, the percentage of the average for districts 1–10 being 121. The percentages of the average for the districts ranged from 91 in Scotland, W. to 144 in England, N.W. At individual stations the month was notably dull; for example, the percentage of the average was only 21 at Paisley, 27 at Renfrew, 29 at Huddersfield, 38 at Whitworth Park, Manchester, and 45 at Wakefield. The lack of sunshine in these large towns was probably due to the prevalence of fog. On the other hand at Eastbourne and Oxford it was the sunniest January in records back to 1888 and 1881 respectively.

**Fog.**—Fog occurred frequently and was considerable and sometimes persistent in a number of the large towns. It was recorded at the morning observation hour on 23 occasions at Greenock, 22 at Pontefract, 21 at Wakefield and 20 at Renfrew. Fog occurred mainly from the 1st–15th, 21st–28th and 31st.

**Miscellaneous Phenomena.**—The aurora was observed in Scotland on 17 nights. At Oxford solar halos were noted on 8 days and a short sun pillar on the 21st. An exceptional glazed frost was widely experienced on the 28th; an abnormal amount of ice was deposited on all solid surfaces, notably on trees, shrubs, tall grasses and telegraph wires. In some places it was a week or more before the last of the ice disappeared.