

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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JANUARY, 1938.—Unsettled, mild and wet; frequent and sometimes severe gales.

The month was unsettled, mild and generally wet; gales occurred frequently from the 9th–31st. Sunshine was below the normal for the most part except in Scotland, E. and England, N.E.

During the first five days an anticyclone was situated over or to the westward of Ireland. Subsequently unsettled conditions developed and persisted until the end of the month. From the 6th–11th complex depressions moved south-east from Iceland and then east across the British Isles; precipitation occurred generally, and gales were reported locally on the 7th, 9th and 10th. From the 12th–17th pressure was low near Iceland and secondary disturbances moved north-east over the British Isles. The one of the 14th–16th became very intense and caused widespread and severe gales and general rainfall, which was heavy locally. Subsequently high pressure was established over France and Spain and deep Atlantic depressions moved north-east off our north-west seaboard. A period of very mild weather ensued with mainly south-westerly winds and frequent gales in the west and north; heavy rain fell at times in the west and north but it was a period of small rainfall over eastern England. On the 25th a trough of low pressure moved east over the British Isles causing widespread gales in the west and north and general, but not usually heavy, rainfall. Thereafter pressure was high south-westward of the British Isles, while deep depressions moved in an easterly direction across the Icelandic region. Rain fell generally, while gales were reported daily from the 28th to 31st and were widespread on the 28th and 29th.

Pressure and Wind.—Mean pressure was below the average throughout the country but the deficiency was considerably greater in the north than in the south; the deviation at 7 h. ranged from -11.7 mb. at Lerwick to -1.7 mb. at the Scilly Isles.

The pressure gradient over the country was thus very greatly increased above the average. From the 9th–31st gales occurred frequently and were severe at times; they were reported on 17 days at Lerwick, 15 days at Stornoway and Tiree, and 14 days at St. Ann's Head, Pembroke. The severity of the gale of the 14th–15th is described in the "Meteorological Magazine" for February 1938, page 4. Among the highest speeds recorded in gusts were 101 m.p.h. at St. Ann's Head on the 15th and at Bidston Observatory on the 29th, 100 m.p.h. at Kirkwall on the 23rd, and 94 m.p.h. at Lerwick on the 29th and at St. Ann's Head on the 30th.

Temperature.—Mean temperature exceeded the average generally, the excess in the districts ranging from 0.6° F. in Ireland, N. to 3.0° F. in the Midlands and England, S.E. (see Table I). At numerous inland stations in England and Wales temperature in the screen did not fall to 32° F. throughout the month; at Ross-on-Wye it is the only January on record in which the absolute minimum failed to reach 32° F. It was somewhat cold at times during the first 11 days and some low day maxima were recorded in Scotland during the last week; for example, the maximum was 31° F. at Braemar on the 26th, 32° F. at Dalwhinnie on the 30th and 33° F. at Dungavel on the 29th. Otherwise it was mainly very mild from the 12th onwards.

The extremes for the month were:—(England and Wales) 59° F. at Cardiff on the 23rd, 22° F. at Bellingham on the 11th; (Scotland) 58° F. at Banff on the 23rd, 14° F. at West Linton on the 11th;

(Ireland) 58° F. at Foynes, Rathfarnham and Dublin (Glasnevin and Phoenix Park) on the 22nd, 22° F. at Markree Castle on the 4th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881–1915 was 150, the values for the constituent countries being England and Wales 147, Scotland 162 and Ireland 144. The excess was general, a deficiency being confined to a small area near the border of Northumberland and Durham. More than 200 per cent. of the average occurred in small areas in Scotland, at a few isolated stations in England such as Holne, South Devon and Church Stretton, Shropshire, and at St. Peter's Port, Guernsey. Measurable rain fell on 31 days at Baltasound, Colonsay and Glenbranter, on 30 days at Kirkwall, Deerness and Markree Castle and on 29 days at Lerwick and Blacksod Point.

Among the heavier falls in 24 hours were:—

- 14th. 3.35 in. at New Dungeon Ghyll (Westmorland) and 3.08 in. at Watendlath Farm (Cumberland).
- 18th. 2.50 in. at Kinlochquoich (Inverness-shire).
- 20th. 2.47 in. at Glenquoich (Inverness-shire), 2.09 in. at Borrowdale (Cumberland) and 2.08 in. at New Dungeon Ghyll.
- 21st. 2.14 in. at Ceannacroc Lodge (Inverness-shire).
- 26th. 2.20 in. at Kinlochquoich.
- 31st. 3.30 in. at Kinlochquoich, 2.91 in. at Achnacarry (Inverness-shire), 2.66 in. at Clunes (Inverness-shire) and 2.09 in. at Fort William.

Local thunderstorms occurred at times chiefly on the 7th, 9th, 11th, 13th, 21st, 26th and 28th–30th. They were reported fairly frequently in Scotland.

In Scotland snow fell frequently and over wide areas from the 8th–17th, on the 21st and from 24th–31st, but there were no really heavy falls; snow lay on the hills in the north and west throughout the month.

Sunshine.—Sunshine exceeded the average in the east of Scotland and the north-east of England but it was deficient on the whole in other districts. The percentages of the average for the districts ranged from 70 in Ireland, N. to 124 in England, N.E. and in Scotland, E. Locally in the north of Ireland the deficiency was marked; at Malin Head only 50 per cent. of the average was registered and at Aldergrove it was the dullest January since records were started in 1927.

Fog.—Fog was not very prevalent but local fog occurred at times mainly from the 2nd–5th, 8th, 10th–12th and 21st–23rd. It was thick locally in the south of Scotland and the north of Ireland on the 2nd and 3rd and fog was somewhat widespread in England on the 22nd.

Miscellaneous Phenomena.—A magnificent display of aurora was observed throughout the British Isles on the evening of the 25th, continuing until the early hours of the 26th. (See "Meteorological Magazine," February 1938, pp. 9–14.) The aurora was seen in Scotland on 19 nights. "Mother of Pearl Clouds" were observed at Aberdeen on the 28th and at Ross-on-Wye on the 29th. Solar halos were noted at Oxford on 16 days.