

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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MARCH, 1937.—Cold; frequent sleet and snow; serious floods in the Fenlands

The month was notably cold, with frequent falls of sleet and snow. Severe snowstorms occurred in Scotland, northern districts of England and in Northern Ireland between the 11th and 14th and serious flooding caused extensive damage in the Fenlands, the peak condition of the flooding occurring about March 17th.

During the opening days a depression moved westward from Denmark across Scotland and filled up; unsettled weather prevailed with occasional rain, sleet and snow but good records of bright sunshine were reported locally. From the 4th–9th depressions moved on an easterly track to the south of the British Isles and caused a spell of very cold weather with winds mainly from some easterly point. Wintry precipitation was widespread and a fairly heavy fall of sleet and snow occurred locally in south-east England and the southern Midlands on the night of the 6th–7th. A deep depression which approached the south of Ireland on the 11th and subsequently moved slowly north-eastward caused severe snowstorms in northern districts accompanied by strong north-easterly winds and local gales. On the 14th a new deep depression moved along the English Channel to Denmark giving further precipitation, mainly in England. Subsequently a deep depression approached south-west Ireland from the Atlantic and remained almost stationary from the 17th–19th. Somewhat milder, unsettled weather prevailed with occasional rain and local thunderstorms; sleet or snow occurred in places in northern districts on the 16th. On the 20th the depression off south-west Ireland moved away south-east and, in its rear, a spell of cold northerly winds prevailed over the British Isles with wintry showers and good records of bright sunshine in many places, particularly on the 23rd. A depression near the Shetlands moved south-east from the 24th–26th and, in its rear, an anti-cyclone situated off the south of Iceland moved slowly south-east over the British Isles. Cool, mainly sunny weather prevailed from the 26th–29th though there was some precipitation at times. Finally, on the 30th a deep depression on the Atlantic moving towards Iceland brought a change of type with southerly gales locally in the west and north.

Pressure and Wind.—Mean pressure was below the average except in the Shetland Islands, the deficiency being greatest in the south. The deviation from the average at 7 h. ranged from +0.9 mb. at Lerwick to –10.7 mb. at the Scilly Isles, the normal distribution of pressure being approximately reversed. Winds from some northerly or easterly point frequently prevailed. Gales were most frequent on the western and northern coasts; they were reported on 7 days at Wick, 6 days at Stornoway and St. Ann's Head and 5 days at Lerwick and Tynemouth. Among the highest speeds recorded in gusts were 77 m.p.h. at Holyhead on the 11th and at Kirkwall on the 21st, 76 m.p.h. at Valentia Observatory on the 30th and 70 m.p.h. at Pendennis Castle on the 11th.

Temperature.—The month was cold, exceptionally so in Scotland and Ireland. The deviation from the average mean temperature for the districts ranged from –4.4°F. in Scotland, E. to –2.0°F. in the Channel Islands.

Over Scotland as a whole it was the coldest March since 1919. A feature of the cold was its persistence; there were no really warm days, the highest temperature recorded being 55°F. at Kilmarnock on the 19th. The only other year in a period of at least 80 years in which temperature failed to reach a higher level in Scotland in March was 1919.

The lowest minimum temperature reported in the British Isles was 0°F. at Braemar on the 8th, but readings of 20°F. or below occurred at numerous stations in Great Britain. Ground frosts were very frequent; they were reported on 29 days at West Linton and on 28 days at Dalwhinnie, Ardtornish, Dungavel, Doncaster and Meltham. Among relatively mild spells may be mentioned the 17th–20th.

The extremes for the month were:—(England and Wales), 59°F. at Chelmsford, Camden Square (London) and Canterbury on the 20th, 13°F. at Castleton on the 16th; (Scotland), 55°F. at Kilmarnock on the 19th, 0°F. at Braemar on the 8th; (Ireland), 55°F. at Mallaranny on the 19th and 20th and at Foynes on the 18th, and 19°F. at Markree Castle on the 9th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881–1915 was 115, the values for the constituent countries being England and Wales 139, Scotland 77 and Ireland 109.

Less than the average rainfall occurred over Scotland (except a large part of the eastern district), over the north-western half of Ireland and over the north-west of England and most of Wales. Less than half the average was received locally in the north-west of Ireland and in the Western Highlands of Scotland and less than a quarter locally in Argyllshire and the extreme west of Inverness-shire. On the other hand, more than twice the average occurred at a few stations in the south and east of Ireland and at a number of stations in England, while 242 per cent. was registered at Cambridge, 244 per cent. at Phoenix Park, Dublin, 264 per cent. at Glasnevin, Dublin, and 265 per cent. at Gorey, County Wexford. The excessive rainfall over most of England was the more significant as March followed two very wet months. From the general values published in *British Rainfall*, 1931, it appears that the rainfall of January to March 1937 over England and Wales exceeded that for any similar period since before 1727. The Great Ouse Catchment area received about 190 per cent. of the average during these three months. The peak condition of the severe flooding in this area occurred about March 17th.

Among heavy falls in 24 hours were:—

11th. 2.20 in. at Hazelhatch, County Dublin, and 1.85 in. at Huddersfield (Oakes).

16th. 1.93 in. at Aber, Carnarvonshire, and 1.92 in. at Glendevon, Perthshire.

Sleet and snow were unusually frequent. For example, the number of days with sleet or snow was the largest on record for March at such widely-separated stations as Croydon, Birmingham and Eskdalemuir. The snowstorms of the 11th–13th or 14th were severe in the north of England, the south of Scotland and Northern Ireland. The storms in these areas were accompanied by strong north-easterly winds and deep drifts accumulated. Practically all the roads in the province of Ulster were impassable for wheeled traffic (see *Met. Mag.*, April 1937, p. 67) and in Scotland also roads in all parts of the country were blocked. Local thunderstorms were reported on 11th, 12th, 15th and from the 17th to 20th.

Sunshine.—The distribution of bright sunshine was variable; broadly speaking, sunshine exceeded the average in the west and north of Scotland and the greater part of Ireland and was deficient over most of England and the eastern and central districts of Scotland. There were, however, exceptions to this distribution among the individual stations. A large excess was registered at some places in the extreme north and west of Scotland and in north-west Ireland; for example, the percentage of the average was 149 at Tiree, 144 at Baltasound, 137 at Lerwick and 130 at Stornoway and Mallaranny. On the other hand, the percentage was only 53 at Houghall and 60 at Durham.

Fog.—Local fog occurred at times, mainly from the 3rd–6th, 9th–12th, 16th–20th, 23rd and 28th–30th.

Miscellaneous Phenomena.—The aurora was observed in Scotland on 9 days; it was reported as far south as Paisley on the 1st and 24th. At Oxford solar halos were noted on 14 days and a short sun pillar on the evening of the 27th.