

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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MARCH, 1938.—An exceptionally mild month.

The month was distinguished by unprecedented mildness; at stations scattered throughout the British Isles the mean temperature for the month was easily the highest ever recorded in March. Over most of England and in east Scotland, the deficiency of rainfall was also remarkable, but there was a notable excess in the west and north-west of Scotland. Local gales were reported frequently in Scotland.

The complex depression which caused widespread gales in the west and north on the last day of February moved away eastward and, in its rear, the anticyclone off our south-west coasts spread north-east and mainly anticyclonic conditions became established over most of England and Ireland. Meanwhile deep depressions moving eastward across the Icelandic region maintained unsettled weather with strong westerly winds and gales at times in Scotland. On the 6th and 7th the anticyclone extended its influence northward and quieter weather prevailed for a time in Scotland also. A new depression moving north-east across Iceland on the 8th brought local rain in the west and north and gales locally in Scotland on the 8th and 9th. Subsequently the anticyclone moved north-east and for a period extended its influence over the whole country. From the 14th–23rd Atlantic disturbances maintained unsettled conditions in the west and north but mainly fair weather persisted over most of England.

The long dry period experienced in the south-eastern section of the British Isles was broken temporarily on the 24th, when a depression south of Iceland and an associated trough moved east. Rain fell in most places and polar air in the rear of the disturbance caused a decided though temporary fall in temperature. Sleet and snow were widely reported in Scotland and locally in north Ireland on the 25th.

Subsequently the anticyclone off our south-west coasts spread north-east, while Atlantic depressions approached Iceland from the south-west; temperature rose decidedly and unsettled weather with local gales prevailed in the north, while mainly fair weather was re-established over most of England.

Pressure and Wind.—Mean pressure exceeded the average generally the excess at 7h. varying from 1.2 mb. at Lerwick in the Shetland Isles to 13.0 mb. at Portland Bill. The pressure gradient was thus greatly increased above the average and westerly or south westerly winds predominated. Local gales were reported in Scotland from the 1st–5th, 8th–9th, 14th–20th and 22nd–31st. Gales occurred locally in north-east England on the 1st and 2nd, at Pembroke on the 19th and 20th, in north-west Ireland on the 18th and at Kingstown, County Dublin on the 30th. Among the highest speeds recorded in gusts were 85 m.p.h. at Lerwick and 77 m.p.h. at Kirkwall on the 4th, 80 m.p.h. at Stornoway on the 18th, 77 m.p.h. at South Shields and 74 m.p.h. at Durham on the 1st and 73 m.p.h. at Eskdalemuir on the 9th.

Temperature.—The extreme mildness of the month was general and, as far as can be ascertained at present, unprecedented for March. The deviation of the mean temperature from the average for the districts ranged from +3.8°F. in the Channel Islands to +7.9°F. in England, N.E. and Scotland, E. At numerous stations scattered throughout the British Isles, the mean temperature was the highest on record for March; at Oxford, the value, 49.9°F. is the highest for March in a record going back to 1815, the previous highest being 47.3°F. in 1822. The number of days with a maximum of 60°F. or above was most unusual for March; for example, 17 days at Croydon, 16 days at Oxford (previous highest number of such days 11 in 1929) and 14 days at Kew Observatory and Gorleston. Even in Scotland individual maxima of 60°F. or above were unusually frequent and occurred on 9 days at Forres and Logie

Coldstone. Some of the lowest minima were registered from the 2nd–8th, 13th–14th, 22nd–23rd and 26th.

The extremes for the month were:—(England and Wales) 70°F. at Cambridge (University Farm) on the 21st, 22°F. at South Farnborough and Rhayader on the 8th; (Scotland) 68°F. at Stonehaven on the 30th, 21°F. at Braemar on the 22nd; (Ireland) 64°F. at Waterford on the 29th, 26°F. at Phoenix Park, Dublin on the 7th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881–1915 was 52, the values for the constituent countries being, England and Wales 27, Scotland 97 and Ireland 65. In England and Wales the deficiency of rainfall was noteworthy; more than the average was confined to a small area in Cumberland, while at numerous stations less than 10 per cent of the average occurred. It was the driest March on record at some individual stations; for example, at Ross-on-Wye, Bath, Falmouth and Tynemouth since records were first taken in 1859, 1866, 1871 and 1915 respectively. In Ireland the deficiency was almost general, an excess occurring only in a few small isolated areas in counties Mayo, Galway and Antrim. The distribution in Scotland shows a strong contrast between the rainfall in the east and in the west and north-west; less than 25 per cent of the average occurred over a large area in the east, more than 200 per cent in a large part of the west and north-west, while more than 300 per cent was registered locally in Argyllshire and Invernessshire. When the distribution is expressed as actual rainfall in inches, the variation is still more striking; in East Lothian, the totals were 0.19 in. and 0.25 in. at East Fortune and Dunbar respectively, while in Invernessshire, Loan registered 50.03 in. and Kinlochquoich 40.03 in. More than 50 inches in a single month has previously been recorded on only one or two occasions anywhere in the British Isles. Among the heaviest daily falls were 5.10 in. at Kinlochquoich on the 23rd and 4.05 in. at the same station on the 28th.

An "absolute drought" occurred at many places in south and east England and the Midlands and locally in east Scotland during the first half of the month, and at numerous places in England it lasted over the 23rd; at Ross-on-Wye an absolute drought of 33 days ended on April 2nd.

In Scotland, snow was fairly widespread on the 25th and 26th but no heavy falls were reported; it occurred locally there at times outside this period.

Local thunderstorms occurred on a few occasions.

Sunshine.—Sunshine was deficient in Ireland, Scotland (except at some stations in the east), the extreme north of England and locally in Wales. In other districts of England it was excessive on the whole, notably so in England, S.E., England, E. and the Midlands, where the percentages of the average were 151, 143 and 137 respectively. The deficiency was marked in the west and north of Scotland, the percentage of the average being only 48 at Oban, 51 at Stornoway and Fort Augustus and 52 at Tiree. Some good daily records were obtained; 11.8 hours at Ross-on-Wye on the 31st is the highest sunshine for a March day there.

Fog.—Fog occurred locally at times, mainly from the 3rd–8th, 10th–18th, 22nd–25th and locally on the south-west coast of England and Wales from 29th–31st. It was widespread and thick locally in England from the 5th–8th and 22nd–23rd. It was also widespread in Great Britain on the 12th and in England and south Scotland on the 13th.

Miscellaneous Phenomena.—The aurora was noted in Scotland on 11 nights. On the night of the 22nd–23rd it was observed at Holyhead. Solar halos were noted at Oxford on 9 days.