

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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DECEMBER, 1926: EXCEPTIONALLY DRY.

General.—The outstanding feature of the weather of the month was its abnormal dryness. The marked excess of the monthly means of pressure above the normal, and the unusually high absolute values of pressure recorded generally are also noteworthy. In most districts monthly aggregates of sunshine were above the normal.

Fine weather associated with a ridge of high pressure extending from Scandinavia across England and Wales to the Azores, prevailed generally on the 1st; on the 2nd the passage of a depression eastwards near the Faroes caused occasional rain or showers in most districts and in its rear, strong northwesterly winds and hail, sleet and thunder occurred locally in the northern and western districts on the 3rd. Subsequently an anticyclone spread northeastwards from the Azores, and from the 6th to the 11th cloudy weather with much local fog prevailed generally while temperatures rose frequently above the normal.

By the 12th the anticyclone was withdrawing towards Switzerland, while a shallow depression was approaching from Iceland. Northerly winds in the rear of the depression were associated with a temporary drop in temperature on the 14th over Scotland, and on the 15th over England and Wales and Ireland; at Lerwick the day maximum temperature on the 14th was only a degree above freezing point, while at Leafield the day maximum temperature on the 15th did not exceed 35°F. A grass minimum temperature of 11°F. was recorded at Dumfries on the 15th. Snow and sleet were reported from most districts, and "snow lying" from a few places in the north. Further depressions travelling south of Iceland in an east-south-east direction caused a renewal of generally mild conditions on the 16th with freshening westerly winds.

On the 20th and 21st an anticyclone lay to the west of the British Isles; fair to fine weather with northerly winds and showers of hail or snow were experienced generally. On the 22nd an anticyclone over Scandinavia extended over Scotland: cold north-easterly winds with bright periods and showers of snow or hail were experienced generally during the next few days. At Braemar a screen minimum of 7°F. was recorded on the 25th. The wind freshened considerably at times rising to gale force in the western part of the English Channel.

A comparatively warm westerly current caused a marked rise in temperature in Scotland on the 27th, the day maximum temperature at Aberdeen on that day being 53°F., compared with a day maximum temperature of 41°F. on the 26th. On the 28th the westerly winds had spread over the whole of the British Isles, and during the last few days of the month mild weather was experienced generally.

The general character of the month is illustrated by the following remarks taken from observers' notes:—Southport—A great deficiency of winds from the southern quadrant and an excessive frequency of those from the west and all northerly points. Yet a mild month. Very little precipitation. Huddersfield—(Oakes)—A mild and dry month. Bromyard—A very pleasant month. Dublin—A month notable for persistent high atmospheric pressure, an absence of gales, small rainfall and excessive cloudiness. Cork—A dull month with much cloud and light winds principally from west and north-west. Pressure throughout was remarkably high, particularly on the 24th and 25th. The month was the driest of the year and the driest December in the past 43 years.

Pressure and Winds.—A noteworthy feature of the weather of the month was the high pressure recorded at all stations in regard to both mean and absolute values. The excess above the normal of monthly mean pressure at fixed hours varied from 19.8 mb. at Cahirciveen to 11.4 mb. at Lerwick. The mean pressure was the highest recorded in December at Edinburgh for at least 80 years and the highest on record for December at Greenwich Observatory, Aberdeen and Cahirciveen. At Southport, the mean air pressure was decidedly higher than in any previous December during 55 years observations. The highest recorded pressure at fixed hours during the month was 1052 mb. at Wick on the 24th.

High winds occurred fairly frequently on various dates and at a few places attained gale force. There were no gales of remarkable

severity; the highest mean velocity for an hour was 48 mi/hr. on the 9th and the highest velocity attained in a gust 74 mi/hr. on the 28th at Lerwick.

Temperature.—With the exception of low readings on the 14th and 15th and between the 22nd and the 28th, December, on the whole, was a month of moderate temperature. The mean temperature for Districts 1-10 was 40.8°F. and was 0.2°F. above the normal. The mean temperature was below the normal in the southern districts of England and Wales and Ireland, and in the Channel Isles, and above the normal in the remaining districts. The largest excess relative to the normal was 2.0°F. in Scotland E. (mean temperature 39.9°F.) and the largest deficit, 1.4°F. in England S.W. (mean temperature 41.4°F.). Ground frost occurred frequently during the month; at Hereford, ground frost was recorded on no less than 28 days.

The extreme temperatures for the month were:—(England and Wales) 56°F. at Fowey on the 6th, 15°F. at Welshpool on the 15th; (Scotland) 59°F. at Logie Coldstone on the 8th, 7°F. at Braemar on the 25th; (Ireland) 56°F. at Roches Point on the 5th, 20°F. at Markree and Birr on the 15th.

Precipitation.—In striking contrast to November, the rainfall of December was remarkably deficient in all districts with the exception of parts of the north and north-west of Scotland.

The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881-1915 was 34; the values for the constituent countries were:—England and Wales 26, Scotland 57, Ireland 30. It was the driest December in the period 1870-1926 over the British Isles taken as a whole; in England and Wales, December, 1873, was as dry; in Ireland, December, 1873, was drier, with a general rainfall amounting to 28 per cent. of the normal.

Over England and Wales the greatest deficiency occurred along the south coast of Dorset and Devon; the deficiency was least in some northern districts where rather more than half the normal was recorded.

Over Scotland rainfall exceeded the normal in some northern and north-western districts, but elsewhere there was a decided deficiency and over considerable areas towards the east aggregates were trifling and represented one quarter or less of the normal.

Over Ireland less than one tenth of the normal was recorded at stations in Cork; in the extreme north a few stations recorded rather more than half the normal.

Many observers reported the driest December on record; at stations as widely distributed as Slough (Buckinghamshire), Bath, Lyme Regis (Dorset), Church Stretton (Shropshire) and Darrynane (Kerry) the total for the month was the smallest recorded in December in over 50 years' records. The month was the driest December at Ross-on-Wye since 1818, at Rothamsted since 1864, and at Richmond (Kew Observatory) since the commencement of rainfall records in 1866.

Sunshine.—The mean daily duration of sunshine was above the normal in all Districts except in Scotland N. (where it was only slightly below the normal), Ireland and the Channel Isles. The largest excess relative to the normal, 0.66 hr., occurred in England N.E. (mean daily duration 1.86 hr.) and the largest deficit, 0.41 hr., in Ireland S. (mean daily duration 1.06 hr.).

Fog.—Local fog occurred frequently particularly during the first half of the month. Stations reporting 10 or more days of fog included London (Greenwich Observatory and Kensington), Glasgow, Manchester, Nottingham, Hull, Lincoln and Usk.

Miscellaneous Phenomena.—Halos of 22° were observed on several occasions during the month. Aurora was observed at Deerness on the 4th, at Edinburgh on the 11th, at Wick on the 23rd and at Rothesay on the 25th. In Shetland there was an active display on the 23rd with "auroral glows" on the 16th and 28th. A sun pillar was seen at Ross-on-Wye on the 4th. The Zodiacal light was observed at Ross-on-Wye on the 28th and at Oxford on the 31st.