

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

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

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VOL. 47. No. 3.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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**MARCH, 1930. Unsettled. Polar winds with rain, hail or snow 9th to 24th.**

The weather during March was on the whole unsettled, depressions and associated secondaries frequently passing across or in the neighbourhood of the British Isles. Mild conditions prevailed during the first and last few days of the month with an intervening spell of wintry weather from the 9th to about the 24th.

On the 2nd a shallow depression over the Bay of Biscay caused some precipitation locally in the extreme south-west (3 mm. at Plymouth) whilst a depression to the south-west caused further rain in Ireland and locally in the west of Great Britain on the 3rd, 4th and 5th. Amongst the heaviest measurements were 15 mm. at Roches Point on the 4th, 14 mm. at Renfrew and Inchkeith and 13 mm. at Birr Castle on the 5th. On the 6th a trough of low pressure passed eastwards across the country and rain was general; amongst the heaviest falls were 30 mm. at Tyn-y-waun (Glamorgan) on the 6th and 18 mm. at Rothesay on the 5th. In the rear of the trough an anticyclone to the south of the British Isles spread northwards and on the 7th and 8th fair and mainly mild weather extended to all districts except those in the extreme north-west.

On the 9th a complete change occurred: pressure was high over eastern Greenland whilst a large area of low pressure with several centres became established over north-west Europe. From the 9th to about the 23rd the British Isles lay in the broad Arctic Current between these two systems and unsettled wintry weather with much precipitation, frequently in the form of hail, snow or sleet, prevailed widely. Precipitation was heaviest from the 14th to the 16th and from the 19th to the 21st, while much snow fell in northern districts and on high ground between the 13th and 20th. Night temperatures in the screen were frequently below 30° F., while ground frost was common. Good sunshine records were obtained in many places on the 18th, 20th, 22nd and 24th.

By the morning of the 23rd, warm south-westerly winds in the rear of a ridge of high pressure reached Ireland. The mild weather spread north and east reaching south-east England on the 25th, but the snow had not disappeared from Scotland until the 26th; 61° F. was recorded in the screen at Balmakewan on the 27th, 63° F. at Greenwich and Norwich and 64° F. at Cromer on the 28th. From the 27th to the 29th, deep depressions on the Atlantic moving north-east caused moderate rain locally with gales at a few exposed places on the 28th. Abundant sunshine was recorded in many places on the 26th-29th (11·1 hours at Plymouth and Oxford on the 26th).

**Pressure and Winds.**—Conditions were cyclonic throughout the greater part of the month and in all districts monthly mean pressures were below the normal, the deficiency at 0700h. ranging from 1 mb. to 3 mb. The predominant winds were south-westerly to north-westerly and frequently strong in exposed places, especially between the 9th and 12th, the 20th and 25th and during the last few days of the month. Gales were recorded on several days at a few well-exposed places. The highest gust recorded during the month was 67 miles per hour at Scilly on the 11th and at the Bell Rock Lighthouse on the 20th.

**Temperature.**—The mean temperature for the month was above the normal in the east and south of England, below the normal in Scotland and about normal or slightly below elsewhere. At the majority of stations, however, the deviation from the normal did not exceed 1° F. Rather mild conditions prevailed during the first week and again after the 24th, the highest temperatures of the month being recorded in most places during the last few days. Ground frost was common and occasionally severe. Unusually low screen minimum temperatures were recorded on many nights during the spell of cold weather between the 9th and the 24th. The nights of the 18th to 19th and 19th to 20th were abnormally cold, minimum temperatures of 25° F. and below being widely recorded, whilst in some places the temperature fell below 10° F., e.g., at West Linton (8° F. on the 19th), Wolfelee (7° F. on the 19th), Roden Wellington and Bromyard (8° F. on the 20th). The unusually low screen minimum temperature of 3° F. was recorded at Newport (Shropshire) on the morning of the 20th. At Ross-on-Wye a screen minimum of 13° F. was recorded on the morning of the 20th, the lowest temperature reported in March since observations commence

there in 1859. On the same morning the terrestrial radiation thermometer, freely exposed over snow covered ground, recorded the unprecedentedly low minimum temperature for March of 3° F.

The extreme temperatures for the month were:—(England and Wales) 64° F. at Cromer on the 28th and 3° F. at Newport (Salop) on the 20th; (Scotland) 61° F. at Balmakewan on the 27th and at Stonehaven on the 28th, and 7° F. at Wolfelee on the 19th; (Ireland) 59° F. at Balbriggan, Dublin (Glasnevin, Phoenix Park), Newcastle (Wicklow) and Kilkenny on the 25th and at Killarney on the 26th and 21° F. at Aldergrove on the 19th.

**Precipitation.**—The general precipitation over the British Isles expressed as a percentage of the normal for the period 1881-1915 was 106: the values for the constituent countries were:—England and Wales 102, Scotland 78, Ireland 146.

In England and Wales precipitation was in general below the normal to the east of a line extending roughly from Lyme Regis to Flamborough Head and above the normal in the North of England, Northern Wales, the Severn Valley, and over the greater part of the Devon-Cornwall Peninsula. There were, however, local exceptions, some districts in the north-west, e.g., Newton Rigg and Stonyhurst, having a deficiency, and some in the east and south-east, e.g., Cambridge and St. Leonards, an excess. Less than three quarters of the normal rainfall was recorded in many parts of the east and south-east and more than one and a half times the normal in parts of the western midlands, northern Wales and the north-east of England.

Precipitation in Scotland was, with the exception of small coastal areas in Fifeshire, the Lothians and parts of Sutherlandshire, below the normal, the deficiency being as much as 50 per cent. locally in the north-east. Among the heaviest daily falls were 48 mm. at Ardtornish on the 28th, 49 mm. Gruline on the 30th and 44 mm. at Glendessary on the 31st.

In Ireland, apart from a deficiency in the north-east and in coastal areas in the west and north-west, there was a decided excess of precipitation, notably in the south-east where more than twice the normal was recorded locally.

Snow fell frequently during the period 13th to 20th; it was reported from almost all stations but was most frequent and heavy in northern districts and on high ground. Many roads in Scotland and the North of England, the Midlands and in Wales were rendered impassable. In Birmingham snow fell to a depth of 7½ in. on the 15th. Severe snow storms occurred on the 19th-20th. In parts of eastern Kent from 5 to 6 inches snow fell on the 19th while in Scotland falls of 9 or more inches were common.

**Sunshine.**—Sunshine aggregates exceeded the normal in northern and eastern Scotland, eastern and south-eastern England and the Channel Isles and were below the normal in the north-east of England, the western districts and in Ireland. Representative totals for districts expressed as a percentage of the normal for the period 1881-1915, ranged from 111 per cent. in the Channel Isles to 75 per cent. in Ireland N. Good sunshine records, exceeding 10 hours, were obtained widely on the 1st, in Scotland between the 9th and 15th, and in various districts on the 18th, 20th, 22nd, 24th, 26th, 29th and 30th. Among the largest daily amounts recorded were 11·2 hours at Inchkeith on the 19th and at Calshot on the 24th, 11·0 hours at Falmouth and Spurn Head on the 24th, and at Plymouth on the 26th and 10·7 hours at Tiree and Edinburgh on the 22nd.

**Fog.**—Fog occurred fairly frequently, especially in industrial areas, during the first eight days and on the 12th, but was rare during the remainder of the month.

**Miscellaneous Phenomena.**—Halo phenomena, mostly the halo of 22°, were observed frequently during the month. Aurora was observed in Scotland on the 6th, 11th, 12th-14th, 18th-25th and 27th, that on the 12th being seen as far south as Dumfriesshire. The aurora on the 21st was reported from Orkney as being brilliant.