

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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JANUARY, 1942.—Cold; mainly dull; considerable snow.

The weather was unusually cold, with severe frost; it was mainly dull except at some places in the west. Except over a large area covering most of north-west Scotland and the Grampians rainfall was excessive, unusually so over much of a coastal strip of east Britain and in Northern Ireland.

During the opening days an anticyclone over France and southern England moved south; meanwhile on the 1st a trough of low pressure south of Iceland moved south-east causing rain in the west and north, and from the 2nd-5th an Atlantic depression and an associated trough moved first north-east to a position off our north-west coasts and later slowly south-east across the British Isles. Rain was reported in the north and west on the 2nd and over the country generally on the 3rd; precipitation was also fairly general on the 4th, but in the form of sleet or snow in the northern half of the country, while on the 5th there were scattered showers, mainly of a wintry character in Great Britain. A decided fall of temperature occurred on the 5th. Subsequently a large anticyclone centred south-west of Iceland moved south-south-east to a position off our south-west coasts; a period of rather cold, showery weather, with northerly winds and local bright periods ensued. From the 9th-11th a ridge of high pressure moved south-east across the British Isles; cold weather persisted with bright periods and showers on the 9th and 10th and somewhat more widespread precipitation on the 11th. On the 12th a very deep depression moved north-east across Iceland and on the 13th an associated trough moved in over the British Isles and filled up; precipitation was almost general and heavy locally in the west. Another trough westward of Ireland moved in over the country and caused heavy rain in Ireland and south-west England on the 15th, and a depression moving south-east from Ireland caused further precipitation, chiefly in western districts, on the 16th. Meanwhile pressure became high eastward of the British Isles and remained so until the 23rd. On the 17th and 18th a trough of low pressure moved eastward over the British Isles, where it filled up without much movement; cold, mainly dull weather prevailed with some precipitation. On the 19th a deep depression approached west Iceland and again an associated trough moved in and filled up over our western districts; heavy rain fell to the west of the trough and considerable snow to the east of it, and it was very cold eastward of the front. Weather continued very cold in most parts, with further snow, particularly in Scotland, but it was milder with rain in the west. A milder south-westerly wind brought a rapid thaw on the 23rd with heavy rainfall. On the 24th an Atlantic depression moved north-east to the Hebrides, becoming very deep, and on the 25th and 26th it moved south-east to the southern North Sea; there were gales and further precipitation. During the closing days depressions moved south-eastward over the British Isles and rather cold, unsettled weather prevailed with frequent precipitation.

Pressure and Wind.—Mean pressure exceeded the average in the north and was somewhat below the average in the south; at 7h. the deviation ranged from +6.6 mb. at Sumburgh, Shetlands, to -0.6 mb. at Portland Bill and Lympne. The mean pressure gradient was thus less steep than the average. Gales occurred frequently at exposed coastal stations in Scotland and the Irish Sea, but they were not generally very severe. In a strong south-easterly gale between the 25th and 27th, however, a mean hourly velocity of 65 m.p.h. was registered at Bell Rock Lighthouse and gusts of 82 m.p.h. and 79 m.p.h. at Bell Rock and Kirkwall respectively on the 25th. A speed of 84 m.p.h. was registered in a gust at the Lizard on the 31st, and one of 80 m.p.h. at Pendennis Castle on the 30th.

Temperature.—For the third January in succession mean temperature was markedly below the average, particularly in the eastern

districts of England and the Midlands; at numerous places in east and south-east England and at a few in the Midlands the mean for the month was 7°F. or more below the average. In Ireland and extreme south-west England the deficiency was not very great.

The mildest spell occurred at the beginning of the month, and it was less cold for a while from about the 23rd-25th. The weather was exceedingly cold from about the 11th-22nd; at Dunstable, for example, temperature continued at 32°F. or below from the 14th-23rd. At a number of stations in England temperature in the screen fell to 10°F. or below on the 12th, 15th, 21st and 22nd, while 4°F. was registered at Woburn and 5°F. at Raunds on the 21st.

The extremes for the month were:—(England and Wales) 56°F. at Barnstaple on the 4th, 4°F. at Woburn on 21st; (Scotland) 56°F. at Balfon on the 3rd, 8°F. at Braemar on the 14th; (Northern Ireland) 55°F. at Armagh on the 4th, and 22°F. at Garvagh on the 11th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 146 over England and Wales, 131 over Scotland, and 200 over Northern Ireland. The excess was almost general, apart from a large area in Scotland covering most of the north-western counties and the Grampians, where less than the average was received. More than twice the average occurred at many places in east and south-east Scotland, while Arbroath and Edinburgh had approximately three times the average. The rainfall of Northern Ireland was noteworthy; at Queen's University, Belfast, the total 6.99 in. was the highest for January since the station was founded in 1866.

Daily falls of 2.0 in. or more were recorded locally on the 2nd, 3rd, 21st-25th and 30th, the largest reported being 2.80 in. at Glendessary (Inverness-shire) and Blaenau Festiniog (Merioneth) on the 3rd.

Snow fell frequently and the snowstorms of the 19th-21st were widespread and severe. Level snow was lying 6-8 inches deep over much of north-east England and the Midlands; locally, particularly in the west Midlands, it was 8-12 inches deep. In the north of Scotland it was said to be the worst storm for many years and heavy drifting interfered seriously with road and rail traffic. In the south of Scotland also, many roads were blocked; West Linton had 2 ft. of undrifted snow and depths of from 12-18 inches were reported from practically the whole of the southern counties.

Thunderstorms occurred locally on the 5th, 9th, 27th-28th and 30th. They occurred at a number of places in Scotland on the 27th, were rather widespread in south-west England on the 28th and in southern England on the 30th.

Sunshine.—On the whole sunshine was considerably below the average, particularly in the east of Britain. In Northern Ireland and the extreme west of Britain, however, there was generally an excess. The percentages of the average for the districts ranged from 38 in England, N.E. to 110 in England, S.W., and 121 in Northern Ireland (see Table I). At Edinburgh it was the dullest January since 1917, at Leuchars the dullest January since records were begun in 1922, while at Scarborough the incredibly low total of 8 hours was registered, the previous lowest in the long record back to 1898 being 17 hours in 1917.

Fog.—Fog occurred at times, chiefly on the 1st, 7th-8th, 10th-15th, 18th-19th, 23rd-24th, 30-31st.

Miscellaneous Phenomena.—The aurora was seen on eight nights from northern stations in Scotland. Solar halos were noted at Oxford on seven days. At Belper, Derbyshire, snowflakes approximately two inches in diameter were observed on the 30th.