

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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DECEMBER, 1943. — Dry; cold spell 11th-17th.

The month was distinguished by a deficiency of rainfall; fog developed fairly frequently, particularly at inland stations and mean temperature was below the average in England and Wales.

From the 1st-3rd a depression centred west of Iceland moved first south-east to the north-west of Scotland and then quickly south. Rain occurred, and fog, which was widespread in England on the 3rd. In the rear of this disturbance an anticyclone moved southward from Iceland and for a time a belt of high pressure lay from west to east across the British Isles. Conditions were dry over most of the country, but there was considerable fog, especially on the 5th and 6th. Rain occurred generally in Scotland, Ireland and northern England on the 7th, and widespread fog in a belt across the British Isles. On the 8th and 9th a shallow depression moved south over Ireland to the Bay of Biscay. There was further rain, heavy in south-west England and south Wales on the 8th.

By the 10th an anticyclone was situated over southern Scandinavia, with an extension over the British Isles. This pressure distribution persisted for some days and on the 13th and 14th the anticyclone moved south-west over the British Isles and ultimately slowly east. Over most of the country the weather from the 10th-16th was cold and mainly dry, with appreciable fog, particularly from the 13th-15th.

A period of milder, unsettled weather ensued, with strong winds and local gales. On the 17th and 18th a trough of low pressure moved east over the British Isles, on the 18th and 19th a deep depression moved quickly north-east from mid-Atlantic and on the morning of the 19th a small secondary depression moved quickly east over southern England. Rain occurred, and was heavy at many places on the 18th. On the 20th a depression centred north of the Shetlands moved north and became less deep, while another centre west of Iceland moved south-east. Further rain, heavy in places, was reported on the 20th and 21st.

On the 24th an anticyclone developed off the south-west coasts of the British Isles and thereafter until the 29th pressure was high over our southern districts. Meanwhile depressions in the north affected conditions in the west and north. Gales were reported at times in the northern Hebrides and the Shetlands and there was some rain, chiefly in the west and north. Fog developed in south-east and east England.

On the 30th a wedge of high pressure moved east over the British Isles, and on the 31st a trough of low pressure over the north-west districts moving south-east was associated with rain, which was very heavy locally in the north and north-west of Scotland.

Pressure and Wind.—Mean pressure substantially exceeded the average; the excess at 7h. ranged from 9.2 mb. at Lympne to 12.2 mb. at Tynemouth. Chart I shows an area of highest pressure over the central regions of southern England. Strong winds and local gales were recorded from the 17th-22nd and gales occurred locally in the extreme north between the 25th and 30th. On the whole, however, the month was less windy and there were fewer gales than is usual in December. Among the highest speeds recorded in gusts were 78 m.p.h. at Bell Rock Lighthouse on the 14th, 76 m.p.h. at Tiree on the 18th, 79 m.p.h. at Stornoway on the 19th, and 78 m.p.h. at Lerwick on the 25th.

Temperature.—Broadly speaking, mean temperature was not very different from the average in Scotland, Northern Ireland and north-

east England, but over England and Wales as a whole it was 1.2°F. below the average. (See Table I.) It was mainly cold from about the 5th-17th, particularly from the 11th-17th. Screen minimum temperatures of 20°F. or below were recorded at a number of stations in Britain from the 12th-15th: stretches of the Forth-Clyde canal were frozen over during this cold spell. The highest day temperatures were most widespread during the Christmas period, although the 1st and 18th were also warm days in some parts of England.

The extremes for the month were:—(England and Wales) 56°F. at Dawlish, Newton Abbot, Seaton and Totnes on the 1st, and at Aberystwyth on the 2nd and 5th, 17°F. at Santon Downham and Warburton on the 14th; (Scotland) 57°F. at Achnashellach on the 26th, 12°F. at West Linton on the 13th; (Northern Ireland) 54°F. at Castlerock on the 26th, 26°F. at Garvagh on the 13th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 54 over England and Wales, 55 over Scotland and 69 over Northern Ireland. Except at Loch More in Sutherland, where the total was slightly more than the average, the deficiency was general. More than 75 per cent. occurred in small areas in a belt extending from Lough Foyle in Northern Ireland to Sutherland and in a narrow strip in southern England extending from Teignmouth to Falconhurst (Kent) and at Dungeness. Less than 30 per cent. was received over part of north Aberdeenshire, Morey and Mairn. The heavier rainfall in Sutherland was largely due to the heavy falls on the 31st.

Among the heavier falls in 24 hours were:—

18th	1.75 in. at Glenshiel and 1.60 in. at Storrington (Sussex).
23rd	1.50 in. at Borrowdale.
28th	1.75 in. at Glenquoich (Inverness-shire).
31st	3.50 in. at Loch More (Sutherland), 3.00 in. at Polish, Lochailort (Inverness-shire) and 2.91 in. at Glenshiel (Ross and Cromarty).

Snow was reported at times: slight snow fell over a fairly large area in south-east and east England and the southern Midlands on the 11th. In Scotland, snow was rather widespread on the 18th and 19th, the falls being heaviest on Deeside, where about 6 in. was reported. Snow also fell widely in the north of Scotland on the 30th and 31st.

Thunderstorms occurred locally on the 11th, from 17th-22nd and on the 31st.

Sunshine.—Sunshine was deficient in Northern Ireland and over much of Scotland, though at scattered stations in the west and north of Scotland there was an excess. Over England and Wales as a whole sunshine was excessive, but the distribution was variable, particularly in the Midlands and south-east England.

Fog.—There was a considerable amount of fog at times during the first 17 or 18 days. Fog also developed locally from the 24th onwards, chiefly from the 24th-28th and on the 31st.

Miscellaneous Phenomena.—The aurora was observed from northern stations in Scotland on 9 nights. On the 21st it was seen as far south as Edinburgh. Solar halos were noted at Oxford on five days. The upper arc of contact of the 46° halo was observed at Sevenoaks on the 31st.