

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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**DECEMBER, 1944.—Mainly cold; considerable snow in Scotland 10th-12th; hard frost and fog later in England.**

The month was cold on the whole. There was considerable snow, particularly in Scotland, from the 10th-12th and a notably cold, foggy spell in England from the 25th-29th.

During the opening days a depression west of Iceland moved south-east and then east, while secondaries moved east across the British Isles causing rain or showers and local gales. On the 3rd and 4th pressure was high south-westward of the British Isles, and depressions moved east-south-east from the south of Iceland. There were widespread strong winds and gales and some precipitation. On the 6th and 7th, a depression south of Iceland moved south-east across the north of Scotland causing fairly general precipitation. During the ensuing days pressure remained low eastward of the British Isles and relatively high to westward and cold winds of polar origin prevailed, with wintry showers. On the 10th and 11th a deep depression south of Iceland moved east-south-east and on the 11th a secondary trough swung south-east across Ireland and England: precipitation was general and it continued cold: considerable snowfall was reported in Scotland and locally in England. A wedge of high pressure crossed the country on the 13th giving a mainly fair day, apart from fog, in Britain but heavy rain in western Ireland was associated with a trough approaching from the west. On the 14th a depression west of Ireland moved north and from the 14th-16th associated troughs of low pressure moved east over the British Isles: heavy rain occurred, particularly on the 16th, and gales were reported locally on the 14th and 15th and widely on the 16th. On the 16th a small secondary disturbance north of the Azores moved rapidly north-east to north-west Ireland and then turned north: rain and widespread gales were experienced on the 17th. Weak troughs of low pressure moving north-east across the British Isles on the 19th and 20th were associated with rain in the west on the 19th and in most areas on the 20th.

Subsequently high pressure south and south-west of the British Isles spread north and from the 23rd onwards pressure remained high over England. Meanwhile it continued low in the far north and associated weak troughs caused precipitation at times in Scotland and Ireland. The anticyclone spread further north on the 23rd and 28th and on these days dominated conditions over most of the country. There was much fog in England from the 19th-29th and throughout the British Isles on the 23rd. The period 25th-29th was intensely cold in the southern half of England and the Midlands. On the 30th troughs of low pressure moving south caused some wintry precipitation.

**Pressure and Wind.**—Mean pressure exceeded the average, the excess at 6 h. ranging from 1.4 mb. at Eskdalemuir to 4.1 mb. at Scilly and Portland Bill. Gales occurred most frequently in the Irish Sea area. Local gales were reported frequently during the first 19 days and in the Shetland Isles on the 29th. The most widespread gale occurred on the 16th-17th, while the gale on the 3rd-4th was fairly widespread.

Among the highest speeds registered in gusts were 75 m.p.h. at St. Ann's Head on the 4th, 74 m.p.h. at Scilly on the 8th, and 72 m.p.h. at Lerwick, 70 m.p.h. at Tiree and 69 m.p.h. at Croydon on the 17th.

**Temperature.**—Mean temperature was below the average by 0.4°F. in Scotland and 1.5°F. in England and Wales. (See Table I). The opening days and the period 17th-23rd were mild: the rest of the month was mainly cold, the week 24th-30th being notably cold in England but about average in Scotland. In Scotland the lowest night temperatures were registered on the 13th but low readings were also recorded locally on the 28th and 31st. The period 25th-29th was extremely cold at inland stations in England: at numerous places temperature remained at 32°F. or below for the

three days 25th-27th and at a few for the five days 25th-29th. Very severe night frosts occurred during this spell.

The extremes for the month were (England and Wales) 57°F. at Parkend on the 1st, Cannington and Dawlish on the 3rd and Bude on the 16th, 9°F. at Santon Downham on the 27th; (Scotland) 54°F. at Dunoon (Benmore) on the 1st and Balfron on the 22nd, 16°F. at Braemar on the 13th; (Northern Ireland) 54°F. at Bishop's Court on the 3rd, 27°F. at Lisburn on the 28th and Garvagh on the 29th.

**Precipitation.**—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 71 over England and Wales, 103 over Scotland and 117 over Northern Ireland. In Scotland less than the average was received in a belt extending from the Firth of Forth west and north to cover most of north-west Scotland, as well as in a small area in Aberdeenshire. More than the average occurred for the most part elsewhere and more than 150 per cent. of the average in a small inland area in the south-west. More than the average was reported also around Applecross Gardens (Ross and Cromarty). In England and Wales more than the average was practically confined to small areas in the West Riding of Yorkshire and north-west England and around Blaenau Festiniog (Merioneth). Less than 50 per cent. occurred in a small area extending north from London to Cambridge and Woburn, on the coast at Spurn, Skegness and Cromer and also in the south at Margate. In Northern Ireland the excess was almost general except in the south-east, where Seaford, County Down, reported only 83 per cent.

Among the heaviest falls in 24 hours were:—

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| 1st  | 4.70 in. near Blaenau Festiniog (Merioneth)   |
| 15th | 2.84 in. at Glengyle (Perth) and 2.62 in. at Benmore, Lock Eck.   |
| 16th | 3.35 in. at Princetown, 2.84 in. at Holne (S. Devon), 2.68 in. at Blacklunans (Perthshire) and more than 2 in. at a number of other stations. |

Local thunderstorms were reported rather frequently for December, for example on the 1st, 2nd, 4th, 6th-9th, 15th and 27th.

In Scotland, there was considerable snow during the first half of the month. At Ullapool (Ross and Cromarty) severe storms were reported during the first week resulting in the blocking of roads from the 8th-17th. Heavy falls occurred over Deeside on the 10th and 11th: at Aitnach there was about 14 in. on the 10th, and at Littlewood Park, near Alford some 10 in. fell in the night of the 10th-11th. Balmoral reported 8 in. on the 11th and at Derry Lodge above Braemar there was about 2½ feet. There was about 1 foot of snow on Kincaig on the 12th. In England snow was 8 in. deep at Huddersfield at 21 h. on the 10th and 5 in. at Bellingham and Harrogate on the 11th.

**Sunshine.**—In England and Wales the month was unusually sunny on the whole, though the percentages of the average show some variability probably owing to the incidence of fog. Over Scotland generally sunshine was about average: the percentages at individual stations were, however, very variable. In Northern Ireland sunshine was appreciably below the average.

**Fog.**—Fog occurred frequently inland in England and Wales, particularly in large towns: it was most considerable and most persistent on the 13th and from the 19th-29th. In Scotland fog was mainly confined to the Forth-Clyde belt and the country to the south, where it developed frequently in the latter half of the month: it was widespread and dense in places on the 23rd.

**Miscellaneous Phenomena.**—The aurora was observed on 8 nights in Scotland. Solar halos were noted at Oxford on 11 days. There was a very beautiful and unusually heavy deposit of rime in England between the 25th and 28th.