

# Monthly Weather Report

## OF THE METEOROLOGICAL OFFICE

*Summary of observations compiled from returns of official stations and voluntary observers*

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### December 1960—*Changeable and rather cold.*

At the beginning and end of the month the weather over the British Isles was generally cyclonic in character, but on the 8th-17th the country lay in a col between anticyclones over the Azores and Russia, and thereafter until the 22nd, an anticyclone in the eastern Atlantic dominated the situation.

The month opened stormy and wet generally with heavy rain in places although there were sunny periods particularly on the 2nd. Wind reached gale force in many midland and south-eastern districts on the 1st. On the 3rd and 4th strong upper westerlies from the Atlantic extended to the British Isles as a complex low pressure system near Iceland moved eastwards and surface winds reached gale force in many parts of the country. Fronts moved quickly across northern districts but wave disturbances developing on the cold front gave exceptionally heavy rain in South Wales and southern England. On the 3rd many places in South Wales had over 4in. of rain, 5½in. being recorded in 20hr. in the Rhondda Valley. A total of 7in. fell on the Brecon Beacons during the first three days of the month resulting in serious and widespread floods in Glamorgan. Floods also occurred in many other midland and southern counties of England.

A more settled spell began on the 5th as surface winds moderated. The strong upper westerlies moved to Europe, and over the British Isles and the north-eastern Atlantic the flow became comparatively light with symptoms of a blocking development. Most districts had ground frost at night and fog became widespread, particularly in industrial areas, persisting in parts of the North and Midlands for about three days with temperature in the foggy areas little above freezing point.

On the 9th a small depression, which had formed over the Irish Sea, brought snow to many south-western districts as it moved into France. Winds over the country became easterly for a time and on the 10th and 11th there were sleet showers in eastern England with snow over high ground further inland. A rather weak belt of rain moved eastward across the country on the 12th, and with the arrival of moister air from the Atlantic fog developed over a wide area. Thereafter, and until about the 17th, weather was dull but mainly dry with a good deal of frost and fog, the fog persisting all day with temperature below freezing in many places, especially in the west Midlands and the Forth-Clyde valley.

From the 17th to the 23rd an anticyclone was situated in the eastern Atlantic and depressions moved southwards on its eastern flank. Northerly winds over the British Isles on the 19th and 20th brought showers to all areas which later turned to sleet and snow even in the extreme south-west of Cornwall. On the 21st and 22nd the anticyclone moved south towards the Azores but with a feeble, though declining, ridge over the British Isles, weather was mainly dry with sunny periods.

From the 23rd weather over the British Isles was of a generally unsettled westerly type with a series of deep and complex depressions moving east between Scotland and Iceland. Rainy spells were alternated with bright periods and showers, the showers falling as sleet or snow over high ground in most northern and western districts. Christmas Day was generally cloudy although there were some sunny periods in southern and eastern England at first. A wide belt of rain and gale force winds swept across the country during the night as a deepening depression moved east off our north-west coasts. Rain was very heavy in North Wales, north-west England and western Scotland; there were local falls of over 3in. in 24hr. in Westmorland and Caernarvon. Further belts of rain moved across the country during the night of 27th-28th and on

the 30th but otherwise weather was mainly showery for the remainder of the month, with thunderstorms in western districts on 26th and some snow in the north. Many places had long sunny periods on 27th and 31st.

**Pressure and Wind.** Mean pressure was below the average everywhere, the deficit at 9h. ranging from 7.9mb. at Lerwick to 5.5mb. at Scilly. Winds were mainly between south-west and west until the 5th, becoming variable and mainly light until the 18th, northerly on the 19th-21st, rather variable but predominantly westerly until the 24th and thereafter again between west and south-west until the end of the month. Gales were reported in Scotland on 15 days (1st-5th, 15th-17th and 24th-30th) and in England and Wales on 18 days (1st-6th, 9th-10th, 16th, 19th-20th and 25th-31st). They were widespread on the 1st, 3rd, 4th, 26th and 28th. Wind reached 68 kt. in gusts on the south coast on the 4th and 74kt. in the Hebrides on the 26th.

**Temperature.** Mean temperature was everywhere below the average, the deficit being 0.9°F. in England and Wales (mainly due to low maximum temperatures), 1.9°F. in Scotland and 3.8°F. in Northern Ireland (mainly due to low minimum temperatures). The first three days were among the warmest of the month. The coldest nights were mainly during the second week in England and Wales and during the second and third weeks in Scotland.

Extremes included:— (England and Wales) 59°F. at Maldon on the 3rd, 14°F. at Alwen on the 11th; (Scotland) 55°F. at Glenlee on the 1st and at Tarbert on the 1st, 2nd and 3rd, 10°F. at Cannich on the 11th; (Northern Ireland) 56°F. at Ely Lodge on the 1st, 19°F. at Armagh on the 15th.

**Precipitation.** The general rainfall expressed as a percentage of the 1916-50 average was 131 in England and Wales, 104 in Scotland and 88 in Northern Ireland. Less than half the average occurred locally in Northern Ireland while more than twice the average was exceeded in the Dover area and on the Lincolnshire coast.

Thunder occurred on 15 days in Scotland (2nd-5th, 7th-9th and 24th-31st) and on 11 days in England and Wales (1st-2nd, 4th-6th, 8th-9th, 26th-28th and 31st); it was widespread in east and south-east England on the 1st.

Sleet or snow was reported from one place or another in Scotland every day except the 17th, and in England and Wales on 20 days (5th-16th, 20th-23rd and 26th-29th). Higher ground was snow-covered in northern and central England on 10th, 12th-15th and 27th-31st.

**Sunshine.** The general sunshine expressed as percentage of the 1921-50 average was 122 in England and Wales, 141 in Scotland and 148 in Northern Ireland. Sunshine varied from 75 per cent. of the average at Margate to 233 per cent. at Bolton; it was also more than 150 per cent. of average locally in the London area.

**Fog.** Morning fog was reported from one place or another in Scotland every day except the 3rd and 26th, the most prolonged periods of fog being the 6th-9th and 13th-20th when southern and central districts were most affected. In England and Wales fog occurred somewhere or other every day from 6th to 31st except the 26th and 28th; it was widespread on 6th-9th and from about 13th to 17th.

**Miscellaneous Phenomena.** The aurora was observed in Scotland on 17 nights.