

# Monthly Weather Report

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## OF THE METEOROLOGICAL OFFICE

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### September 1957—Cool, cloudy and rather wet

A succession of troughs and ridges moved across the British Isles during the first 10 days of the month, but from the 11th to 15th unstable north-westerly winds prevailed. Thereafter the country lay in a col for about another 10 days with mostly easterly winds over Scotland and south-westerlies in the south. The month ended with bright showery weather.

From 1st to 10th a mobile westerly regime at 500 mb. extended across much of the Atlantic and over the British Isles, and moderate amplitude troughs, alternating with ridges, moved eastward across the country. The associated surface troughs during the first few days were weak, and although there was some rain, most places had good sunny periods, especially in the north. On the night of the 5th/6th a depression deepened off the west of Scotland, pressure falling unusually low for the time of year. The following day was generally dull and wet, with gales over the north-western part of the country and heavy rain locally, especially in South Wales where falls of 3 in. and more were recorded in 24 hr. The 8th was sunny and dry but a slow moving frontal system, followed closely by a rapidly developing depression, reached western Ireland from the Atlantic late that night, and rain again became widespread and locally heavy over the British Isles during the next two days. On the 10th rainfall at many stations in the south-west exceeded 2 in.

The regime became less mobile on the 11th as a weak blocking pattern formed in the western Atlantic. Downstream a large amplitude upper trough developed, and in association with this trough an intense upper low and a deep surface depression became established over Scandinavia from 12th to 16th. In the circulation of this depression an unstable polar airstream covered the British Isles; from the 11th to 13th there were frequent showers and scattered thunderstorms with strong north-westerly winds, but on the 15th winds moderated generally and showers in the south largely died out.

Warm air, preceded by rain, spread from the south-west of the country on the 16th. Weather became generally dull and temperature remained somewhat below the average until the 18th when many places in southern England had more than 10 hr. of sunshine and afternoon temperatures rose generally to the upper sixties and reached 73°F. at Boxworth, Cambridgeshire. The 19th was another mainly fine day. Except over much of Scotland where winds remained easterly, the weather from the 20th to 25th was generally dull and wet with a broad frontal belt lying east-west across the country. A deep depression, which had originated as a tropical cyclone in the western Atlantic more than two weeks earlier, arrived off south-west Ireland on the 23rd. In its circulation a broad belt of rain, which was heavy at times with scattered thunderstorms, was carried northwards across England and Wales into Northern Ireland. The following day colder air, accompanied by outbreaks of rain and occasional thunder, spread southwards from Scotland as far as the Midlands and the London area. Afternoon temperatures rose only to 50°F. in North Wales, contrasting with a south coast maximum of 70°F. More than 2 in. of rain fell at many Welsh stations on both the 23rd and 24th. On the 25th the depression moved south-east into the English Channel and thence into northern France, filling rapidly.

An anticyclone to the west of the British Isles increased in intensity on the 26th and 27th and, except in Scotland, weather was generally sunny and dry, but on the following day cold air spread south-east over the whole country bringing mainly bright and showery weather for the remainder of the month.

**Pressure and wind.** Mean pressure was everywhere below the average, the deficit at 9h. ranging from 0.6 mb. at Newquay to 2.3 mb. at Lerwick. Winds varied mainly between west and south-west during the first ten days, were generally north-westerly from 11th to 15th and light but

predominantly north-westerly until the 19th. Thereafter winds were rather light and variable, but mainly easterly in the north and south-westerly in the south until the 25th afterwards becoming generally north-westerly until the end of the month. Wind reached gale force on 12 days in Scotland and on 14 days in England and Wales. Gales occurred in many northern and western districts on the 7th when gusts of 60 kt. 59 kt. and 56 kt. were recorded at Stornoway, Tiree and Moor House respectively.

**Temperature.** Mean temperature was everywhere below the 1921-50 average; the deficit was 1.8°F. in England and Wales, 2.0°F. in Scotland and 1.2°F. in Northern Ireland and was mainly due to low maximum temperatures. The warmest period of the month occurred during the first 10 days in Scotland when afternoon temperatures were generally between 60°F. and 65°F. and reached 69°F. locally, but in England and Wales the warmest weather occurred around the 22nd. In Scotland screen temperature on the 25th fell to 23°F. locally and to 12°F. on the ground at Dalwhinnie; in England and Wales slight air frost occurred on the 30th.

Extreme temperatures for the month included:—(England and Wales) 73°F. at Boxworth on the 22nd, 29°F. at several places on the 30th; (Scotland) 69°F. at Ruthwell on the 3rd, 23°F. at Glenlivet on the 25th and at Kincaig on the 25th and 26th; (Northern Ireland) 67°F. at Kilkeel on the 4th and Ballykelly on the 22nd, 31°F. at Aldergrove on the 26th.

**Precipitation.** The general precipitation expressed as a percentage of the 1881-1915 average was 196 in England and Wales, 98 in Scotland and 167 in Northern Ireland. It was the wettest September since 1950 over England and Wales and over Northern Ireland where rainfall nearly everywhere was above the average and twice the average was exceeded over most of Wales and over England north of the Thames and south of a line from St. Bees Head to Flamborough Head. Three times the average was exceeded locally in Nottinghamshire. In Scotland rainfall was mainly between 75 and 100 per cent. of the average, but the average was exceeded in parts of the north and south-west.

Among the heaviest falls in 24 hr. were:—

- 6th 3.15 in. at Rhondda Waterworks, Glamorgan. 2.93 in. at Swansea W.W. (Cray Reservoir), Brecknockshire.
- 10th 2.30 in. at Challacombe, Devonshire.
- 16th 2.37 in. at Bolton Waterworks, Lancashire.
- 23rd 2.14 in. at Goodwick (Trenwydd), Pembrokeshire.

Thunder was heard in Scotland during the first half of the month and occurred on 8 days; in England and Wales it was heard on 9 days especially on 11th-13th and 21st-22nd.

Snow and sleet showers occurred in several northern districts of Scotland mainly on the 28th-30th; they occurred locally in north-west England and North Wales on the 12th and in north-east England on the 30th.

**Sunshine.** The general sunshine expressed as a percentage of the 1921-50 average was 85 in England and Wales, 105 in Scotland and 90 in Northern Ireland. Sunshine was above the average in the south of Scotland and locally in northern England.

**Fog.** Early morning fog occurred on 9 days in Scotland and 14 days in England and Wales; it persisted locally during the afternoon in south-west England on the 4th and 24th and in the Midlands and north-east England on the 21st, 22nd and 25th.

**Miscellaneous phenomena.** The aurora was seen on 20 nights in Scotland and was seen from most parts of the British Isles on the 29th.