

Monthly Weather Report

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September 1958—*Very wet in England and Wales, warm generally*

Pressure was low to the south-west of the British Isles for the first two weeks of the month and during the third week the country was on the fringe of an extensive depression centred in mid-Atlantic. The situation was alternately cyclonic and anticyclonic during the remainder of the month.

The month began with a large and slow moving anticyclone centred over the Baltic which, together with an upper trough to the west of the British Isles, gave rise to a deep southerly airstream over the country. The trough developed a closed and extensive circulation and the high over the Baltic and Scandinavia extended westward between Scotland and Iceland to form a blocking situation. South-easterly surface winds maintained warm weather over the country during the first few days of the month, with temperature on the 5th exceeding 80°F. at many places in south-east England. Slow moving fronts brought occasional rain to most districts on the 2nd, 3rd and 4th, while cloud associated with these fronts helped to keep night temperatures around 60°F. The rain was mostly slight, although a number of places in North Wales reported falls in excess of 1 in. in 24 hr. Thunderstorms accompanied by unusually heavy rain, probably associated with a shallow trough of low pressure moving north-eastwards from France, reached the Hampshire coast soon after midday on the 5th and moved north-eastwards over much of south-east England. A minor tornado travelled from Sussex to Kent during the afternoon associated with gale force winds and severe thunderstorms; hailstones 2½ in. in diameter caused considerable damage at Horsham, Sussex, during one of these storms. Rainfall in excess of 3 in. in 24 hr. was recorded at a number of places, and 5 in. fell at Knockholt Waterworks, Kent, the largest fall during this time recorded in Kent since 1868. The westward extension of the Scandinavian anticyclone receded, and on the 6th heavy thunderstorms developed over northern England and Scotland.

Temperature fell to near normal on the 7th and winds over the greater part of the country veered towards west, as the depression and associated upper low, which had been situated in our South-west Approaches since the beginning of the month, moved northward to Scotland. Weather was showery with a few scattered thunderstorms on the 7th and 8th, but there were good sunny periods. On the 10th the country came under the influence of an upper Atlantic ridge which, as it moved eastward, formed a blocking pattern at about 20°W. with a cold cut-off low near the Azores. Weather from 9th to 13th was mostly sunny and dry, although there was some thundery activity over Devon and Cornwall on the 12th as the blocking high began to move eastward and decline. Many places in central and southern England had 8–10 hr. sunshine on the 14th when afternoon temperature rose to about ten degrees above the mid-September normal, but that night a small depression moved eastward along the English Channel accompanied by heavy thunderstorms, and over 2 in. of rain fell at a number of places. The 16th was generally fair apart from a few scattered showers, but by the 17th rain from the Atlantic reached western districts.

A blocking pattern re-formed on the 18th at about 10°E., with an upper ridge over Scandinavia and a cold trough over northern Germany, and from then until the 21st the British Isles was dominated by a south-westerly airstream between the European high and an extensive and slow moving depression off south-east Greenland. Fronts associated with this depression moved slowly across the country on the 18th and 19th giving generally cloudy weather with rain in all districts; thundery showers were widespread during the next three days as the main depression moved south-east towards Scotland and filled.

On the 22nd a large amplitude, but mobile, wave-train at 500 mb. extended from the Rockies to the eastern Atlantic, and a deepening depression, associated with the trough nearest the British Isles, moved north-east toward Scotland and brought prolonged rain to the whole country on the 23rd. The rain was heavy in places, 3 in. and more falling in some parts of Wales during the day where there was widespread flooding. The depression skirted the north of Scotland the following day, becoming very intense and, turning south-eastwards into the North Sea,

brought severe gales to many nearby coastal districts with gusts exceeding 50 kt. at a number of places; one reached 73 kt. at St. Abb's Head.

A large amplitude upper ridge moved slowly eastwards over the British Isles in the rear of the depression to become centred over the Baltic on the 30th. Weather was dry and sunny for two or three days but on the 27th pressure began to fall again as a deep depression on the Atlantic moved steadily eastward, and on the night of the 28th/29th a major rainbelt crossed the country which led to a renewal of flooding in many areas. On the last day of the month there were frequent showers with occasional thunder, but also good sunny periods.

Pressure and wind. Pressure was above average over much of Scotland, but below average elsewhere; at 09h. it ranged from 4.0 mb. above average at Lerwick to 3.3 mb. below average at Scilly. Winds were mainly south-easterly until the 6th and south-westerly on 7th–9th after which they were light and generally variable until the 21st, although south-easterly winds predominated in southern England on 11th–13th. Southerly winds on 17th and 18th veered to south-west on 19th and persisted from this direction until a further veer to north-west occurred on the 25th. After a day of light variable winds on the 26th winds became generally southerly until the end of the month. Gales occurred on the 3rd, 5th, 23rd–25th and 27th–29th in Scotland and, except for the 27th, daily from the 23rd till the end of the month in England and Wales. They were widespread on the 24th and 25th when gusts exceeded 60 kt. at a number of places.

Temperature. Mean temperature exceeded the 1921–50 average by 2.2°F. in England and Wales, 3.5°F. in Scotland and 3.2°F. in Northern Ireland. The warmest days were around the 2nd in Scotland when a number of places reported temperatures in excess of 75°F. and around the 5th in southern England when temperature rose locally above 80°F. The coldest night was the 27th when ground frost was fairly widespread in Scotland.

Extreme temperatures included:—(England and Wales) 82°F. at Regent's Park on 5th, 31°F. at Moor House on 27th; (Scotland) 78°F. at Largs on the 2nd, 27°F. at Grantown-on-Spey on the 27th; (Northern Ireland) 72°F. at Ballykelly on the 5th, 40°F. at Nutts Corner on the 26th.

Precipitation. The general precipitation expressed as a percentage of the 1916–50 average was 160 in England and Wales, 97 in Scotland and 103 in Northern Ireland. Less than half the average was recorded over much of northern Scotland while twice the average was exceeded in west Cornwall, in Kent and Essex, over much of mid and south Wales and over the greater part of the Severn Valley. More than three times the average occurred in Shropshire. A feature of the rainfall distribution of the month was the large number of heavy daily falls in southern England and in hilly western districts of Wales. In Scotland, apart from 5th–8th and around the 13th, it was mainly dry until the 17th. Among the "very rare" falls recorded in Essex on the 5th were 3.17 in. in 120 min. at Tilbury, 3.08 in. in 120 min. at Horndon, 3.27 in. in 90 min. at Wickford and 2.73 in. in 58 min. at Chelmsford.

Thunder was heard on the 2nd–7th, 11th–15th, 20th–22nd and 28th–30th in England and Wales and on the 5th–9th, 15th and 20th–25th in Scotland. Thunderstorms were particularly heavy and widespread on the 5th, 6th, 14th and 23rd.

Sunshine. The general sunshine expressed as a percentage of the 1921–50 average was 94 in England and Wales, 107 in Scotland and 86 in Northern Ireland. It was somewhat above the average in eastern districts of England, but only 80 per cent. of the average in the Midlands.

Fog. Early morning fog occurred locally in England and Wales every morning except from 23rd–26th; in Scotland fog was reported on 17 days. It was most frequent during the first week and around the 15th.

Miscellaneous Phenomena. The aurora was visible in Scotland on 18 nights. It was seen as far south as Aberporth, Guernsey, Manby and Dublin on the nights of the 3rd/4th, 4th/5th, 16th/17th and 25th/26th respectively. A minor tornado was observed on the 5th moving north-eastward from Coolham to Oxted, Surrey.