

Monthly Weather Report

OF THE METEOROLOGICAL OFFICE

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

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SEPTEMBER, 1946.—Unsettled, wet and dull; warm spell from 26th–29th.

The month was unsettled, dull and very wet. A warm spell occurred during the last week. Heavy rain on the 19th caused serious flooding in parts of England and a severe gale occurred widely in England on the 20th.

During the opening days a shallow depression centred over southern Scotland drifted slowly east; the weather was showery with local thunderstorms. Meanwhile a depression on the Atlantic was moving south-east and deepening and reached south west Ireland by the morning of the 3rd. Thereafter it moved north-east across the Irish Sea to the south of Scotland and eventually drifted westward to the north of Ireland and filled. Rainfall was general and heavy locally and strong winds were reported on the 3rd and 4th, and on the 5th and 6th showery conditions prevailed, with local thunderstorms. On the 7th and 8th a shallow secondary depression moved rapidly north-east over Southern England to the Netherlands and subsequently to southern Scandinavia; heavy rain occurred in Southern England on the 7th and in south-east England on the 8th. In the rear of this disturbance pressure became high over France and a wedge moved south-east over the British Isles giving fair weather temporarily in many places though further rain fell in Ireland during the night of the 9th–10th, with the approach of a new depression to the north-west of Ireland. This depression moved rather quickly eastward; rain, heavy locally in Scotland and north Ireland, occurred in most areas on the 10th, while slight, scattered showers were reported on the 11th. On the 12th and 13th a new depression off west Ireland moved north-east across Scotland causing further rain and strong winds. Subsequently it moved away north and filled up, while another disturbance off south-east Greenland moved east-south-east to the south of Iceland. Meanwhile troughs of low pressure moved east across the British Isles. Weather continued unsettled with rain at times and gales at a few exposed stations. On the 18th a secondary depression west of Ireland moved rapidly across the country to Denmark causing heavy rain, and on the 19th another Atlantic depression approached southern Ireland and thereafter moved quickly across England to the southern North Sea and thence to the Baltic. Widespread, destructive gales occurred in England on the 20th and heavy rain was widely reported in England on the 19th. On the 22nd and 23rd a depression moved east over Iceland and an associated trough moved east across the British Isles and showery weather prevailed.

Subsequently, by the 26th, pressure became high in a belt over central Europe and north Russia, while a trough of low pressure extended southward from Iceland to the Azores. Temperature rose over the British Isles and rainfall was slight in England but heavy locally in Ireland and north-west Scotland on the 26th and thunderstorms were reported in east England during the early hours of the 27th. By the 28th a wedge of high pressure extended from Germany across the North Sea and a fair, very warm day was experienced over much of the country. Thereafter the highest pressure was situated north-east of Scotland and a trough of low pressure moved north-east from the Bay of Biscay giving local thunderstorms in the west. Appreciable fog was reported locally at times from the 26th–30th.

Pressure and Wind.—Mean pressure was below the average, the deficiency at 9h. ranging from 2.7 mb. at Lympne to 9.0 mb. at Stornoway. The pressure gradient was thus considerably increased and on the whole the month was windier than usual, especially in the south. Winds from between south and west predominated. Local gales occurred on the 3rd, almost daily between the 10th and 23rd and at Stornoway on the 25th. The gale on the 20th was widespread in

England and Wales and very severe; mean hourly velocities of 69 m.p.h. and 63 m.p.h. were registered at Scilly and Lizard respectively and gusts of 100 m.p.h., 94 m.p.h., 86 m.p.h. and 79 m.p.h. at Scilly, Lizard, Pendennis and St. Ann's Head respectively. Other high speeds recorded in gusts were 82 m.p.h. at Alness on the 16th and 78 m.p.h. at Bell Rock on the 17th.

Temperature.—Mean temperature exceeded the average by 0.9°F. in England and Wales, 1.6°F. in Scotland and 1.4°F. in Northern Ireland. Broadly speaking the first three weeks were cool, but temperature rose on the 25th and a warm spell occurred from the 26th–29th. The coolness was mainly due to low day temperatures: the nights were mild on the whole, temperature in the screen not falling to freezing point at any station, a condition which, in Scotland, has only occurred once before, namely, in 1945, in any September for nearly 90 years.

The extremes for the month were:—(England and Wales) 79°F. at Sprowston, Southampton, Weston-super-Mare and Blandford on the 28th, 37°F. at Houghall on the 12th and 28th; (Scotland) 72°F. at Achnashellach, Wolfelee, Glasgow, Auchincruive and Kilmarnock on the 28th, 33°F. at Logie Coldstone on the 18th; (Northern Ireland) 71°F. at Castlerock on the 28th, 42°F. at Armagh on the 12th and 18th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881–1915 was 192 over England and Wales, 164 over Scotland and 213 over Northern Ireland. The excessive rainfall was general, less than the average being received only at one or two scattered stations on the east coast of Britain. In Scotland, more than twice the average occurred in an area extending from southern Perthshire to the Solway Firth. More than twice the average occurred over most of Wales, the Midlands, and an area stretching from the Lizard to Berkshire. More than 250 per cent. of the average was registered over areas in Wales, Yorkshire and part of Dorset and south Wiltshire. At Porton, in Wiltshire, 380 per cent. of the average occurred. In Northern Ireland percentages of the average ranged from 191 at Ballymena to 237 at Seaford. Heavy rain occurred frequently during the first three weeks, notably in England and Wales on the 19th. The widespread heavy rain on that day caused serious flooding. Rainfall was also very frequent, the number of days with measurable rain being 9 in excess of the average in Scotland, W.

Among the heavier falls in 24 hours were:—

3rd	2.98 in. at Princetown (S. Devon).
5th	2.79 in. at Garrock (Dakry)
19th	3.15 in. at Chellow Heights Reservoir, Bradford; 2.98 in. at Aber and more than 2 in. at many stations.
22nd	2.97 in. at Llyn Mawr, Rhondda Water Works (Glam.).

Thunderstorms were reported locally at times, mainly on the 1st, 2nd, 4th–6th, 8th, 13th, 20th, 21st, 27th and 29th–30th.

Sunshine.—Sunshine was very deficient; at some places in the north of Scotland there was a slight excess, but elsewhere there was a general deficiency. At a number of stations in south and west Scotland and Ireland it was the dullest September on record.

Fog.—Fog occurred at times locally mainly on the 6th, 7th, 12th, 14th, 19th, 23rd and 25th–30th.

Miscellaneous Phenomena.—The aurora was observed in Scotland on nine nights. On the night of the 28th–29th it was widely observed in the British Isles and was seen as far south as Scilly. Solar halos were noted at Oxford on 14 days.