

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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VOL. 53. No. 9.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE

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## SEPTEMBER, 1936.—Warm; dull and wet on the whole.

The weather of the month was distinguished by a marked deficiency of sunshine in most districts. Rainfall, though variable, exceeded the average for the country generally and thunderstorms were frequent, while temperature was high for the season except during the last five days.

The fair, warm weather experienced during the latter part of August persisted over most of England on the 1st and in eastern England on the 2nd. Meanwhile, a secondary depression off south-west Ireland moved north-east and caused considerable rain in the west and north. Between the 2nd and 6th an Atlantic depression moved east and then north to the north of Scotland causing unsettled weather with general rain and widespread thunderstorms. New, intense disturbances approached the British Isles from the Atlantic on the 6th; one moved eastward to the Hebrides, while a second moved rapidly north-east across England to Denmark and occasioned squally winds which reached gale force locally on the 7th and 8th. In the rear of the latter depression a belt of high pressure passed eastwards across the British Isles and subsequently an anticyclone formed over southern Scandinavia. Meanwhile, a depression was centred south of Iceland and secondary troughs moved over the British Isles. Warm unsettled weather prevailed with occasional rain, while thunderstorms occurred between the 12th and 14th. A wedge of high pressure which was situated over Scotland and Ireland on the 15th moved south-east and mainly anticyclonic conditions prevailed until the 19th, but a shallow depression over the southern North Sea moving south gave rain and widespread thunderstorms in England on the 15th. On the 20th and 21st a depression moved north-east from the Bay of Biscay and caused further widespread thunderstorms in England on the 20th. In the rear of this disturbance a wedge of high pressure moved north-east from France but unsettled weather was renewed on the 24th by secondary depressions, which moved north-east from off our south-west coasts.

Subsequently an anticyclone over Iceland moved southwards to the west of Scotland and a depression north of Iceland moved rapidly south-east giving northerly winds accompanied by a considerable fall of temperature on the 26th. Thereafter, the anticyclone spread over the British Isles and mainly fair, cool conditions persisted until the end of the month.

**Pressure and Wind.**—Mean pressure somewhat exceeded the average in Scotland and Ireland and was slightly below the average in most of England. The deviation at 7h. varied from  $-1.3$  mb. at Kew Observatory to  $+4.9$  mb. at Lerwick. In consequence the mean pressure map shows an almost uniform distribution over Scotland and northern and eastern England. A period of strong squally winds occurred, particularly in England and Ireland, between the 6th and 8th and a widespread gale was reported in these areas around the 7th. Isolated gales occurred outside this period; at Skye on the 9th, at Kirkwall on the 12th and at Fort Augustus on the 25th. Strong winds occurred in places on the 27th and a gale was recorded locally in north Wales. Among the highest speeds registered in gusts were 68 m.p.h. at the Scilly Isles, 64 m.p.h. at Bidston, Spurn Head and the Lizard, 63 m.p.h. at Southport on the 7th and 65 m.p.h. at Holyhead on the 8th.

**Temperature.**—Mean temperature exceeded the average in all districts, the excess varying from  $1.5^{\circ}\text{F}$ . in the Channel Islands to  $3.2^{\circ}\text{F}$ . in Scotland, W. At Eskdalemuir and Hull the excess amounted to  $4.0^{\circ}\text{F}$ . and  $4.2^{\circ}\text{F}$ . respectively.

The period 1st–25th was warm, the nights as well as the days being mild. High night minima were a feature of this period; for example, on the mornings of the 2nd, 3rd, 12th, 21st and 25th minimum readings of  $60^{\circ}\text{F}$ . or somewhat above were recorded at many stations. The mean minimum for the month at Oxford,  $52.3^{\circ}\text{F}$ . was the highest for September since records were first taken in 1881. Temperature fell on the 26th and cool conditions persisted for the most part until the end of the month.

The extremes for the month were:—(England and Wales)  $81^{\circ}\text{F}$ . at Newport, Isle of Wight, on the 1st,  $27^{\circ}\text{F}$ . at Rickmansworth on the 29th; (Scotland)  $73^{\circ}\text{F}$ . at Forres on the 3rd and 12th,  $24^{\circ}\text{F}$ . at Dalwhinnie on the 28th; (Ireland)  $73^{\circ}\text{F}$ . at Glasnevin and Trinity College, Dublin, on the 3rd and  $28^{\circ}\text{F}$ . at Markree Castle on the 29th.

**Precipitation.**—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881–1915 was 136, the values for the constituent countries being England and Wales 142, Scotland 119 and Ireland 140.

In Scotland less than the average occurred over large areas in the west and north but more than the average was received elsewhere. In England less than the average was registered in parts of the north-eastern and south-eastern districts and at rather isolated stations in south-west England and South Wales but over most of the country there was a substantial excess, while in Ireland the excess was general except at a few places in the south-west.

Thunderstorms occurred frequently mainly from the 2nd–7th, 12th–16th and on the 18th, 20th, 25th and 27th. They were accompanied at times by heavy rain and among heavy falls in 24 hours or less may be mentioned:—

4th 91 mm. at Poolewe (Ross and Cromarty) and 53 mm. at Clunes (Inverness-shire).

5th 15 mm. in 9 minutes at Hayward's Heath.

14th 57 mm. at Attenborough, 50 mm. at Staindrop, Durham and 50 mm. at Middleton-in-Teesdale.

20th 79 mm. at Berkhamsted between midnight and 8 a.m., 56 mm. at Cottenham, Cambridge and 50 mm. at Furneaux Pelham, Herts.

24th 55 mm. at Dornach House, Dumfries.

A light covering of snow fell on the peaks of the Cairngorms and higher hills on the 26th.

**Sunshine.**—A notable feature of the weather of the month was the marked deficiency of sunshine in most areas, the percentage of the average for the districts 1–10 being only 77 (See Table I). At many stations, it was the dullest September on record; at Kew Observatory and Oxford it was the dullest September in records which go back as far as 1880 and 1881 respectively and at Edinburgh it was the dullest September of the century. At a few places in Ireland and the extreme north of Scotland, however, totals exceeded the average.

**Fog.**—Local fog occurred frequently mainly from the 1st–4th, 9th–25th and 29th–30th. It was reported at the morning observation on 9 days at West Linton, Cranwell, Princetown and Waterford. Fog was widespread in England on 22nd and 23rd and persisted all day in the western English Channel on the 22nd.

**Miscellaneous Phenomena.**—The aurora was observed in the north of Scotland on 5 days, in Skye on the 22nd and near Edinburgh on the 7th. Solar halos were noted at Oxford on 11 days. A funnel cloud was observed at Felixstowe on the 5th.