

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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Annual Summary and Introduction,
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frequent thunderstorms in England.**

The month was dry on the whole in England and Wales, Ireland and eastern Scotland and wet in western and northern Scotland. Sunshine was somewhat variable but deficient generally, the deficiency being marked in Ireland. Thunderstorms occurred frequently in England between the 10th and 22nd.

In the rear of a depression over Norway a wedge of high pressure passed eastward over the British Isles on the 1st and 2nd. A depression approached south-west Iceland on the 3rd and remained almost stationary until the 8th, while associated secondary depressions moved north-east over this country; rain occurred at times in Scotland, Ireland and north and west England but there was little rainfall over a large part of England until the 7th or 8th. Thunderstorms were reported in Ireland on the 8th. Between the 9th and 11th a belt of high pressure moved northward over the British Isles, while a depression over the Bay of Biscay moved north-west and widespread thunderstorms were experienced in England on the 10th and 11th. The high pressure was centred near the Shetland Islands by the 12th and subsequently it moved away eastward. Meanwhile a shallow depression situated off south-west England on the morning of the 13th moved north-east across England and reached Denmark on the 15th; thunderstorms were again reported in England on the 12th and 13th and heavy rain fell in north-east England and south-east Scotland on the 14th. Thereafter pressure was high to the west and low to the east of the British Isles and for a period mainly northerly winds prevailed with showers or occasional rain and local thunderstorms, but considerable sunshine at times. Subsequently, about the 24th, the anticyclone westward of Ireland spread east while a deep depression became centred near the Faeroes; little rainfall was registered between the 24th and 26th but gales occurred in the extreme north on the 25th and 26th. Finally between the 27th and 30th a depression moved from southern Greenland to southern Scandinavia and on the 30th another depression approached the Hebrides; rainfall was only slight in the south during this period but was heavier in northern districts. In the north of Scotland, heavy rain was recorded in some places on the 27th and 28th and gales occurred locally in Scotland on the 27th and 28th.

Pressure and Wind.—Mean pressure was slightly below the average in northern Scotland and somewhat exceeded the average in Ireland and most of England. The deviation at 7 h. ranged from -2.6 mb. at Lerwick to $+3.1$ mb. at Valentia; the pressure gradient was thus appreciably increased.

Local gales occurred on several occasions in Scotland, mainly on the 1st, 2nd, 10th and from the 25th–28th, the north coasts being the area chiefly affected. Gales were reported on six days at Lerwick and Kirkwall and on two days at Stornoway, Braemar and Inchekeith. Among the highest speeds registered in gusts were 69 m.p.h. at Lerwick on the 1st, 58 m.p.h. at Bell Rock Lighthouse and 57 m.p.h. at Tiree on the 28th, 57 m.p.h. at Stornoway on the 26th and 55 m.p.h. at Kirkwall on the 25th.

Temperature.—Mean temperature slightly exceeded the average on the whole, the deviation from the average ranging from 0.0°F . in Ireland, N. to $+1.3^{\circ}\text{F}$. in Scotland, E. A warm spell occurred in parts of England, particularly in the east and south-east, from the 5th–7th and temperatures were high over a wider area between the 10th and 12th. It was rather warm on the 21st and in some districts between the 25th and 27th. At a large number of places in eastern Scotland the 25th was the warmest day of the month, maxima above 75°F . being recorded locally. Cool spells occurred from the 1st–3rd and 16th–20th and low minima were registered at some stations on the 30th.

The extremes for the month were:—(England and Wales) 85°F . at Camden Square and Regent's Park (London) on the 11th, 35°F . at Castleton and Askham Bryan on the 3rd and at Welshpool on

the 17th; (Scotland) 78°F . at Balmoral, Logie Coldstone and Montrose on the 25th, 28°F . at Dalwhinnie on the 24th; (Ireland) 73°F . at Markree Castle on the 12th and at Newcastle (Co. Wicklow) and Waterford on the 27th and 36°F . at Markree Castle on the 10th and 24th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881–1915 was 81, the values for the constituent countries being England and Wales 71, Scotland 103 and Ireland 78.

In England and Wales more than the average occurred locally in the north-west, in an area in the south-east covering Essex, and parts of Hertfordshire and Kent, and at a few other isolated places; on the other hand less than 50 per cent. was received in many parts including a large area in the Midlands and smaller areas in the south and south-west. In Ireland more than the average was confined to a few stations in Counties Mayo, Antrim and Down, while less than 50 per cent. occurred at a number of stations in the south. In Scotland, broadly speaking, more than the average was registered in western and northern districts and in an area, mostly coastal, extending from Montrose to North Berwick. On the other hand there were considerable areas in central and eastern Scotland which received less than the average.

Among heavy falls in 24 hours were:—

3rd	2.26 in. at Blaenau Festiniog (Merioneth). 1.71 in. at Stonyhurst and 1.67 in. at Mallaranny.
4th	1.81 in. at Stornoway.
13th	2.06 in. at Ilkley, 1.57 in. at Doncaster and 1.56 in. at Troutbeck (Cumberland).
14th	2.47 in. at Driffield, Yorkshire (2.00 in. of which fell in $2\frac{1}{2}$ hours).
27th	2.76 in. at Kinlochquoich (Inverness-shire) and 2.10 in. at Glenshiel (Ross and Cromarty).
28th	2.10 in. at Kinlochquoich.

Thunderstorms occurred on a number of days; in England and Wales, they occurred frequently between the 10th and 22nd and were severe locally at times, especially between the 10th and 13th and at Torquay on the 22nd.

Sunshine.—Sunshine was deficient on the whole, the percentage of the average for districts 1–10 being 87. The deficiency was most marked in Ireland; at Phoenix Park, Dublin, the total was 69 hours below the June average and at Birr Castle, it was the dullest June in a record back to 1881. At Tiree (Argyll) normally a very sunny place in June, the total was only 163 hours or 62 hours below the average. On the other hand, sunshine totals exceeded the average locally; for example, in the Clyde area, at some stations in the eastern districts of Great Britain (including south-east England) and in the Channel Islands.

Fog.—Local fog occurred at times, chiefly between the 4th–6th, 10th–14th and on the 21st. It was thick locally on the south-west coasts on the 4th and 6th.

Miscellaneous Phenomena.—The thunderstorms experienced in many parts of south-east England on the 10th were associated with a line squall; some interesting forms of lightning were observed (see *Meteorological Magazine*, July, 1937, pp. 138–42). A period of intense gloom occurred at Rotherham during the afternoon and evening of the 24th. Solar halos were noted at Oxford on 12 days.