

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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**JULY, 1941.—Warm periods; frequent thunderstorms, severe at times.**

In England and Wales the month was remarkable for the warm, dry and sunny period from the 1st–10th, and the severe local thunderstorms from the 12th–15th.

During the first ten days depressions moved north-east or east in the neighbourhood of Iceland, while a belt of high pressure covered southern England with only slight interruptions on the 3rd and 8th by the passage of troughs of low pressure associated with the Icelandic depressions. Rather unsettled weather prevailed in Scotland and Ireland, but mainly fair, sunny weather continued over most of England with short breaks on the 3rd and 8th. On the 11th an almost stationary trough of low pressure extended from the Hebrides to Cornwall, and thunderstorms occurred in England, chiefly during the night. Meanwhile, a shallow depression over France spread northward, and widespread thunderstorms, severe locally, were reported on the 12th and 13th. Some high temperatures were registered between the 7th and 12th.

Subsequently a period of unsettled, cooler weather prevailed until about the 20th or 21st. Between the 14th and 17th a depression initially off south-west England moved north-east and then north; there was fairly general rain on the 14th and 15th and some scattered rain or showers on the 16th. Another disturbance moving eastward from the Atlantic crossed central Scotland on the morning of the 18th and then turned north-east, and on the 19th a secondary depression over St. George's Channel moved rather rapidly eastward; rain fell in most places on these two days and there were local thunderstorms. A wedge of high pressure moving in from the west gave mainly fair weather in England and southern Ireland on the 20th and 21st, but depressions off northern Scotland caused rain in the north.

In the rear of this depression a feeble wedge of high pressure moved slowly eastward over the British Isles to Germany, and was associated with a short spell of generally fair weather on the 22nd and 23rd, which lasted in England over the 24th also. Temperature rose considerably as the high pressure moved east and our air supply was drawn from the south, and rather widespread thunderstorms occurred on the 25th–26th.

During the last few days a depression near Iceland and an associated trough extending over Ireland moved eastward to the North Sea; rain occurred in most places on the 28th and 29th and there were showers and local thunderstorms on the 30th and 31st. There was a fall of temperature in the rear of the trough.

**Pressure and Wind.**—Mean pressure was not very different from the average, but on the whole it was slightly below the average. Wind reached gale force from the south in Skye on the evening of the 5th, but otherwise the month was free from gales. Among the highest speeds recorded in gusts were 59 m.p.h. at Mildenhall on the 8th, 55 m.p.h. at Manchester (Barton) on the 12th, and 50 m.p.h. at St. Ann's Head on the 15th.

**Temperature.**—Mean temperature was above the average almost everywhere, the excess being least in the west and greatest in east and north-east England and the Midlands. The deviation from the average for the districts ranged from +0.3°F. in Northern Ireland and +0.5°F. in Scotland, W, to +3.3°F. in England, E. From the observers notes it is found that at Ross-on-Wye and Teignmouth it was the warmest July since 1935 and at Wakefield since 1934. The first fortnight was distinctly warm, the period 7th–12th being notably warm over much of England. At Ross-on-Wye the mean temperature for the week ending July 12th was the highest for any calendar week since that ending July 14th, 1923. Temperature reached or exceeded 90°F. locally in the eastern half of England on the 7th, 8th, 11th and 12th. The warmest spell in Scotland occurred from the 10th–12th. There were a number of cool days in the latter half of the month, but there was a brief

warm spell in England on the 24th and 25th, when temperature rose to 80°F. or above at many places.

The extremes for the month were:—(England and Wales) 93°F. at London (Camden Square) and Tunbridge Wells on the 8th, 38°F. at Castleton on the 23rd; (Scotland) 85°F. at Ruthwell on the 12th, 37°F. at Eskdalemuir on the 23rd; (Northern Ireland) 75°F. at Armagh on the 1st, 41°F. at Aldergrove on the 19th and 23rd, and at Garvagh on the 23rd.

**Precipitation.**—The general precipitation expressed as a percentage of the average for the period 1881–1915 was 96 over England and Wales, 98 over Scotland and 111 over Northern Ireland.

In Scotland less than the average occurred on the mainland in the extreme north as well as over most of the south-west and west. Rainfall generally exceeded the average in a belt which extended from the Hebrides across the middle of Scotland to the east coast, though a number of places on the east coast had less than the average. At three widely separated stations, namely New Deer (Aberdeenshire), Onich and Kilmarnock, totals exceeded the average by approximately 50 per cent. In England and Wales the distribution was very variable, but broadly speaking, rainfall was below the average in the west and extreme north and above the average over most of the Midlands and the eastern half of the country. Less than the average, however, occurred over an area in East Anglia. More than 150 per cent. of the average was received in a belt extending over Lincolnshire and across Leicester and Oxford to the Thames Valley, and more than twice the average in patches in this area. Nearly twice the average occurred in the neighbourhood of Dover. On the other hand less than 50 per cent. was registered in the extreme south-west and in a strip extending across Northumberland and the Lake District to North Wales. At Wakefield, Teignmouth and Newquay it was the driest July since 1935. At a number of places an absolute drought was reported during the latter part of June and first part of July. At Ross-on-Wye the absolute drought of 31 days from June 10th to July 10th was the longest summer drought since 1925. At Bala, Merioneth, the observer says that the summer of 1941 was probably the driest summer in 25 years.

Thunderstorms were a notable feature of the weather of the month. They were severe locally, particularly between the 12th and 15th, causing floods and considerable damage, and several deaths were caused by lightning. Among heavy falls in short periods were 1.09 in. in 15 minutes at Hesketh Park, Southport, on the 12th, 3.15 in. in 1 hour 40 minutes at Penn (Bucks.), 1.70 in. in 35 minutes at Kennington Nursery, Oxford, and 0.62 in. in 12 minutes at Hampstead on the 13th, and 3.90 in. in 2 hours at Writtle, Essex, on the 26th. The total in 24 hours at Writtle was 4.25 in.

**Sunshine.**—Sunshine was below the average in Northern Ireland and over most of Scotland; in Dumfries-shire, however, there was an excess, and at Carnoustie, in Angus, the total just exceeded the average. In England there was on the whole a considerable excess, but a number of stations in the north-east registered less than the average. At stations as far apart as Ross-on-Wye, Teignmouth and Wakefield, it was the sunniest July since 1935. The chart of mean daily duration of sunshine shows more than 8 hours at most places along the south coast of England from Bude to Lowestoft, decreasing to less than 4 hours inland in Northern Ireland and over most of the north of Scotland.

**Fog.**—Local fog occurred at times, mainly from 1st–3rd, 7th–15th, 18th, 22nd–24th, 26th–28th and 31st. It was fairly persistent locally on the north-east coast at times between the 11th and 15th.

**Miscellaneous Phenomena.**—The aurora was observed at Abbotsinch on the 27th and 28th. Solar halos were noted at Oxford on 11 days.