

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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**JULY, 1933.—A notably warm month with much sunshine; very dry in Eastern England.**

By the 1st of this month the northerly winds of the last few days of June had been replaced by the light variable breezes of an anticyclone. The second hot spell of the summer began in Scotland on the 2nd and extended to the south of England on the next day. By the 6th it had become decidedly cooler in Scotland, a general drift of the wind from the North Sea in the rear of the retreating anticyclone being accompanied by cloudier skies. Over England the cooling effect of the North Sea was less evident and temperatures above 80° continued for another two days, until by the 8th an Atlantic depression had nearly reached Scotland, and the wind was becoming southwesterly. Widespread rain during the following night was followed by a spell of generally unsettled weather with winds at first mainly from S.W., but later more from the west. It improved generally for about two days when the wind became northwesterly during the night of the 15th. Then began a long spell during which the wind was for the most part light, and the weather was mainly fair and very warm in the south but wet at times in the north. The wet weather became general again on the 27th with the arrival of cooler westerly winds on a day which was at first exceptionally hot over most of England, and there was no general improvement until a deep depression had moved eastwards across southern Scotland on the night of the 30th and a wedge of high pressure had begun to spread northeastwards over the British Isles.

**Pressure and Winds.**—Pressure was a little above the normal except in the north of Scotland, where it was just below the normal. The windiest period was near the end of the month. In most cases both the highest hourly wind and the strongest gust were caused by the depression that crossed southern Scotland on the night of the 30th. There was a gust of 67 mi./hr. at Liverpool and one of 66 mi./hr. at Southport on the 31st, in the rear of that depression, while a mean hourly speed of more than 38 mi./hr. was reached at a number of places on that day.

**Temperature.**—The month was notable for the number of unusually high day temperatures, both in England and Scotland.

In Scotland it was the warmest July for over 30 years; temperature touched 88° F. at Ruthwell on the 5th, 87° F. at Perth and Kirkcaldy on the 4th and at West Linton on the 5th, and 86° F. at a number of places daily from the 2nd to the 5th. The reading of 85° F. at Eskdalemuir on the 5th was the highest for that station since records began there in 1911. In Ireland this same period gave many readings of 80° F. and over, the 4th or 5th usually giving the extreme for the month. On the 4th 86° F. was reached at Kilkenny and 83° F. at Mountmellick and Mallaranny.

In England, temperature in many places reached its highest level also in this same period, but in the south-east, East Anglia, and most of central England, and at a few places in northern England, the climax did not occur until the 27th. Apart from the reading of 95° F. obtained on a Glaisher stand at Greenwich on that day, the highest figure recorded was 94° F. at Cambridge (Botanic Gardens) and Margate, followed by 93° F. at Rickmansworth, Chelmsford, Earls Colne, Enfield, Tottenham and London (Regent's Park and Camden Square).

In addition to the frequency of hot days, the absence of cold nights deserves notice. Temperature fell below 40° F. at only two stations in the British Isles—Rickmansworth and Usk. In Scotland this was the first month for a very long time during which there was

no ground frost. The mean for the month was everywhere above the normal, generally by four or five degrees in Scotland and N.E. England.

The extremes for the month were:—(England and Wales) 94° F. at Cambridge and Margate on the 27th, 38° F. at Rickmansworth and Usk on the 1st; (Scotland) 88° F. at Ruthwell on the 5th, 40° F. at Wick on the 29th; (Ireland) 86° F. at Kilkenny on the 4th, 44° F. at Kilkenny on the 30th.

**Precipitation.**—The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881–1915 was 90; the corresponding figures for the constituent countries were: England and Wales 82, Scotland 108, Ireland 90. For individual stations the percentage of the normal exceeded 150 at a number of places in the south of Scotland. At Edinburgh it was 170, and this was the wettest July there since 1916. Locally in eastern England it was 40 or even less—at Scarborough 35 and at Skegness only 34.

Thunderstorms were frequent in southern Scotland and northern England, and few places outside the extreme south of England and the north of Scotland had none. Among the largest falls of rain on individual days were: 63 mm. at Giggleswick on the 7th, 43 mm. at Llyn Fawr (Glamorgan) on the 9th and 42 mm. at Newquay on the 15th. A thunderstorm in the west of London that flooded Gloucester Road Tube Station on the 15th deserves notice, as the rainfall must locally in that neighbourhood have greatly exceeded the 29 mm. that fell at Kensington Palace in this storm. Other abnormal falls reported were: 54 mm. in a little less than 1 hour at Aspley Guise (Bucks) on the 15th and the same amount in about half an hour at Woolmans Wood (near Chatham) on the 21st. At Lancaster a hailstone—typical of those that fell in a thunderstorm on the 7th was found to measure 1 by 1½ by 1½ inches; a storm earlier on the same day was accompanied by very large hailstones also at West Kirby, where 15·2 mm. of rain fell in 15 minutes.

**Sunshine.**—Except in the north of Scotland where there was in general a little less than the normal sunshine for July, the month was a sunny one, especially in the Midlands and northeast of England, over which regions there was an average excess of 20 per cent. of the normal. The fine period from the 2nd to the 5th gave many notable days of sunshine; on the 3rd 16·5 hours of bright sunshine were recorded at Inchkeith and 16·3 hours at Berwick-on-Tweed. The 3rd and 4th were the sunniest days for many places in England. At Holyhead the totals for these days were 15·8 and 16·0 hours and at several places in Kent they were slightly over 15 hours on each day. At Mount Batten (Plymouth) the duration was 14·8 hours on the 1st and the mean daily duration from the 3rd to the 5th was 14·1 hours. From the 19th to the 27th sunshine was also very abundant over England; the duration was 15 hours at Southport and Aberystwyth on the 22nd, and over 14 hours at Skegness and Greenwich on the 26th.

**Fog.**—Fog was dense around the Shetlands in the anticyclonic period early in the month. It was rather frequent along the south coast of England during the second half of the month; much of this fog was associated with the warm weather in the south from about the 17th to the 27th.

**Miscellaneous Phenomena.**—A solar halo was seen on 14 days at Oxford, and parhelia with the halo on the 12th.