

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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JULY, 1939.—Dull; cool; excessive rainfall, especially in Scotland; frequent and widespread thunderstorms.

The chief feature of the weather of July was the excessive rainfall experienced in Scotland, Ireland and the western districts of England and Wales. It was the wettest July over Scotland since before 1870. From the 15th until the end of the month there were numerous and widespread though not very severe thunderstorms.

A ridge of high pressure situated to the west of the British Isles on the 1st weakened as a secondary depression moved south-eastwards across the country from the south of Iceland on the 2nd. Anticyclonic conditions prevailed over southern England on the 3rd and 4th due to the anticyclone which after moving eastwards from France on the 3rd became centred over Eastern Europe on the 4th. Temperatures rose appreciably and the 4th was the only day on which 80°F. was reached or exceeded during the month, Camden Square (London) and Tunbridge Wells recording 83°F. and 82°F. respectively.

A complex depression situated to the west of Ireland on the 4th moved very slowly in a north-easterly direction becoming centred over north-east Scotland on the 9th; associated secondary depressions brought rain to all districts of the British Isles. There were many reports of thunderstorms in England on the 5th, and on the 6th falls of rain of between half an inch and one inch were recorded generally over the British Isles.

An anticyclone to the west and south-west of the British Isles on the 9th extended slowly eastwards on the following three days but decreased in intensity owing to the eastward movement of a depression situated to the south-east of Greenland on the 11th. There was practically no rain over the whole of the British Isles on the 10th and England and Wales experienced a period of dry weather from the 9th to the 12th.

Conditions gradually deteriorated, however, owing to the continued eastward movement of the depression which on the 12th was centred off north-west Ireland and became almost stationary over the British Isles on the 14th. The British Isles remained the centre of a complex low-pressure area until the 20th when the depression decreased considerably in intensity. Pressure, although low, was more uniform until the 25th, but from then until the 29th, a series of Atlantic depressions moving in a north-easterly direction along the western seaboard brought unsettled weather with several brief bright intervals. There were frequent thunderstorms which were widespread but seldom heavy from the 15th until the end of the month: local flooding occurred in several low-lying districts in England and Wales.

Pressure and Wind.—Mean pressure was considerably below the average over the whole of the British Isles, the deficiency at 7h. ranging from 3.6 mb. at Yarmouth to 6.3 mb. at Holyhead. Gales were infrequent during the month but were experienced locally on the western coasts of Scotland and Ireland on the 14th and 15th, and on the Welsh coast on the 28th. Among the highest speeds recorded in gusts were 57 m.p.h. at Calshot on the 7th, 56 m.p.h. at The Lizard on the 6th, 54 m.p.h. at Bidston Observatory on the 31st and 53 m.p.h. at Point of Ayre on the 28th.

Temperature.—Mean temperature was less than the average generally, the deficiency being greater over the southern half of the British Isles than over the northern half. The deviation from the average for the districts ranged from -0.2°F. in Scotland, E. to -1.4°F. in England, S.W. (and S. Wales).

The warmest period during the month was about the 3rd to the

5th when temperatures were about 75°F. and reached 80°F. or above at a few isolated stations in England, S.E. on the 4th. For the remainder of the month temperatures were below 70°F., except for the last few days when temperatures of 70°F. or above were recorded in the eastern half of England.

The extremes for the month were:—(England and Wales) 83°F. at Camden Square, London on the 4th, 33°F. at Thetford on the 11th; (Scotland) 76°F. at Edinburgh University on the 4th, 32°F. at West Linton on the 24th; (Ireland) 72°F. at Glasnevin, Dublin and at Newcastle, Co. Wicklow, on the 12th, 39°F. at Hazelhatch on the 1st.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881–1915 was 164, the values for the constituent countries being England and Wales 171, Scotland 166 and Ireland 145. This was the wettest July over Scotland since before 1870 and the wettest over the British Isles as a whole since before 1870 with the exception of 1888 and 1936. The variation in the district percentage values ranged from 81 per cent for England, E. to 224 per cent for England, S.W. (and S. Wales).

The excess was almost general, a deficiency being experienced only in the south-eastern and eastern coastal districts of England and in the coastal regions south of the Firth of Forth in Scotland. More than twice the average was recorded over the greater part of the western half of England and over almost the whole of Wales, while several individual stations in this area recorded more than three times the average.

Among the heavy falls of rain during the month were the following:—

6th	2.86 in. at Holne (S. Devon).
11th	2.87 in. at Ratagan (Ross and Cromarty).
12th	3.50 in. at Ardgour (Argyllshire), 3.48 in. at Kinlochmoidart (Inverness-shire) and 3.33 in. at Kinlochquoich (Inverness-shire).
15th	3.22 in. at Troon (Ayrshire) and 2.09 in. recorded in 90 minutes at Bagnalstown (Co. Carlow).
16th	2.60 in. at Brushford (Somerset), 2.49 in. being recorded in 90 minutes.
28th	3.24 in. at Borrowdale (Cumberland).

Thunderstorms occurred on more than 20 days during the month but were not severe although on some occasions viz., July 21st, they were very widespread.

Sunshine.—Over the whole of the British Isles sunshine was greatly below the average, the percentage for districts 1–10 being 74. The percentages for the various districts ranged from 53 in Scotland, N. to 89 in England, S.E. The deficiency in Scotland was due chiefly to the prolonged spell of exceptionally dull weather from the 5th to the 18th. Duntulm (Skye) registered only 2.3 hours' sunshine in this period. Stornoway recorded the lowest July total hours of sunshine since records were commenced in 1881.

Fog.—Local coast fog occurred in the eastern districts of the British Isles on the 15th, 16th, 19th and 26th and in the south-western districts on the 27th to 29th while early morning mist or fog occurred frequently during the latter half of the month.

Miscellaneous Phenomena.—Solar halos were noted at Oxford on sixteen days.