

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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JULY, 1937.—A dull month; occasional thunderstorms with heavy rain.

The month was characterised by a general deficiency of sunshine. Fog, thick at times, developed frequently on the south-west coasts, and exceptionally heavy rain occurred during thunderstorms at numerous places in England on the 15th. Rainfall exceeded the average on the whole in Scotland and Ireland and was variable, but deficient for the country generally, in England.

During the opening days a depression moved north-north-east across Iceland and from the 2nd–4th an associated depression moved from south-westward of Ireland north-east across England to the North Sea. Heavy rain occurred at times, chiefly in Scotland and Ireland, and thunderstorms were recorded locally in Scotland on the 3rd and 4th and in north-east England on the 3rd. In England it was warm, particularly on the 3rd, but a marked drop in temperature occurred on the 4th. From the 5th–7th another depression remained almost stationary off south-west Iceland, while a trough of low pressure moved north-east over the British Isles. Rain fell fairly generally on the 5th and 6th and in Scotland and north-east England on the 7th. From the 8th–13th wedges and troughs passed alternately across the country maintaining variable weather, with occasional rain but considerable sunshine at times. Thunderstorms occurred locally on the 9th and 10th. From the 14th–16th a depression moved north-east across Iceland; meanwhile a depression over the Bay of Biscay moved north-north-east over England. Thunderstorms occurred in south and east Ireland and western districts of England on the 14th and were widespread and severe in England on the 15th with exceedingly heavy rainfall. In the rear of this depression a wedge of high pressure moved eastward over the British Isles, and on the 19th and 20th the Azores anticyclone spread north-east over the country. Thunderstorms occurred in the Midlands and south-east and east England on the 19th in the region between the two anticyclones. Unsettled weather was renewed in the west and north on the 20th and generally on the 21st, when a depression off the Hebrides and an associated trough extending south over Ireland moved eastward. On the 23rd a disturbance west of Ireland moved rapidly east over England causing further rain.

In the rear of these depressions pressure rose over the British Isles and subsequently from the 26th to the end of the month, mainly anticyclonic weather was maintained.

Pressure and Wind.—Mean pressure was not very different from the average; at 7 h. it was somewhat below the average except in the south and at Lerwick, in the Shetland Islands, the deviation ranging from -1.1 mb. at Wick to $+1.3$ mb. at the Scilly Isles. Mean hourly velocities of more than 38 m.p.h. were registered at Stornoway on the 2nd, at Bell Rock on the 4th and at Pendennis Castle on the 23rd. Among the highest speeds recorded in gusts were 55 m.p.h. at Stornoway on the 2nd, 57 m.p.h. at Scilly and 54 m.p.h. at the Lizard on the 3rd and 63 m.p.h. at Pendennis Castle on the 23rd.

Temperature.—Mean temperature did not differ very greatly from the average, the deviations for the districts varying from -0.5°F. in Ireland, S. to $+1.0^{\circ}\text{F.}$ in England, N.E.

The opening days were warm in England, particularly the 3rd, when maxima of 80°F. or above were widespread. In Scotland and Ireland, however, it was cool on the 3rd. Temperatures were high at times between the 13th and 19th and the last day was very warm in many parts but cool in east and south-east England. A cool spell

occurred from the 4th–11th and it was rather cool on the whole from about the 22nd–28th, though the 28th was warmer in the west.

The extremes for the month were:—(England and Wales) 87°F. at Camden Square, London, on the 3rd, 37°F. at Barton, Manchester, on the 8th; (Scotland) 80°F. at Kelso on the 31st, 34°F. at Dalwhinnie and Braemar on the 11th; (Ireland) 79°F. at Newcastle, County Wicklow, on the 13th, 41°F. at Birr Castle on the 20th.

Precipitation.—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881–1915 was 109, the values for the constituent countries being England and Wales 84, Scotland 126 and Ireland 141.

In Scotland, less than the average occurred in Berwickshire and in coastal districts in the north. Elsewhere there was an excess which was greatest around Edinburgh and Dundee, along Luce Bay and locally in Argyllshire. At the Royal Observatory, Edinburgh, the total 5.37 in. was the heaviest for July in a record covering 42 years. In Ireland a deficiency was confined to a strip along the east coast. More than twice the average occurred locally in counties Kerry and Galway; at Valentia Observatory it was the wettest July since before 1866. Owing to heavy falls of rain during thunderstorms, rainfall in England was very variable; in Dorset, parts of Northumberland and in a belt extending from the Bristol Channel north-east to south Yorkshire and parts of Lincolnshire there was an excess; elsewhere, apart from small isolated areas, there was generally a deficiency, which was as much as 78 per cent. in London (Camden Square).

Thunderstorms occurred frequently during the first 19 days; among the most notable were those in England on the 15th and in east and south-east England and the Midlands on the 19th. Exceptional falls of rain occurred in many places on the 15th (see below).

Among heavy falls of rain in 24 hours or less were:—

- 2nd. 2.80 in. at Glencoe (Argyll) and 2.50 in. at Inveraray (Argyll).
- 15th. 5.46 in. at Boston (Lincs.), 4.56 in. at Belvoir Castle (Leicester), 4.19 in. at Pensford (Somerset), 4.14 in. at Bideford-on-Avon (Warwickshire), 1.70 in. at Lincoln in 30 minutes. More than 3 inches were measured at a number of other stations.
- 18th. 1.03 in. in 12½ minutes at Lingfield, Surrey.
- 19th. 2.11 in. in 115 minutes at Spellbrook (Herts.), 1.72 in. in 65 minutes at Dorking and 1.40 in. in 25 minutes at Edenbridge (Kent).
- 20th. 2.63 in. at Kingairloch (Argyll).

Sunshine.—There was a general and very marked deficiency of sunshine. The percentage of the average for the districts ranged from 64 in England, E. and 65 in England, S.W. to 82 in Scotland, W.

Fog.—Fog occurred frequently on the south-west coasts during the first three weeks; it was reported at the morning observation hour on nine days at the Lizard and on eight days at St. Ann's Head.

Miscellaneous Phenomena.—On the 19th, ball lightning was observed during a thunderstorm at Horndon-on-the-Hill, Essex. A funnel cloud was seen between Witney and Abingdon on the morning of the 19th. Solar halos were noted at Oxford on seven days.