

Monthly Weather Report

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JULY, 1946—Warm periods; occasional severe thunderstorms

The weather was warm on the whole during the first fortnight and then mainly cool apart from a short, warm spell in the south-east around the 24th. Severe thunderstorms were reported from the 2nd–4th and on the 26th.

During the opening days a depression on the Atlantic moved north-north-east to the south of Iceland and a trough of low pressure moved slowly east over the British Isles. Temperature was high over much of England and severe thunderstorms occurred in some parts of England on the 2nd and 3rd. On the 4th a complex depression moved north-north-east over the British Isles from the south of Ireland and was associated with widespread thunderstorms.

On the 6th an anticyclone situated south-westward of the British Isles spread north-east and subsequently maintained fair, sunny, warm weather over most of the country until the 13th, although there was some rain at times in the north and west.

A very unsettled spell set in on the 13th and persisted until the 20th. On the 14th a depression centred off north-east Scotland moved south-west to the Hebrides and on subsequent days followed a complicated track moving south across Ireland, east across southern England and then turned north over the North Sea and west to northern England. Eventually on the 20th, it moved away north-east to the northern North Sea. Weather was cool, with frequent rain or showers and some scattered thundershowers. From the 21st–23rd a depression south-west of Iceland moved slowly east and associated secondary depressions moved east or north-east over the northern half of the British Isles. Rain fell in most places on the 21st and in the west and north on the 22nd and 23rd. On the 24th a trough extending from north-west Scotland across Ireland to the Azores moved east across the country. The tropical air in front of the trough was warm and temperature rose to 80°F. at numerous places in east and south-east England. There were scattered showers and local thunderstorms occurred in the south-east but sunny conditions prevailed on the whole. On the 26th and 27th a depression over south-west France moved north-north-east to the northern North Sea. Widespread and severe thunderstorms occurred in England and Wales on the 26th; they were accompanied by heavy rain in some areas which caused severe flooding. Showery conditions and scattered thunderstorms occurred on the 27th. On the 28th a trough of low pressure moved quickly east across the British Isles causing further rain generally. Subsequently a new depression off the Hebrides moved east and was followed by a ridge of high pressure. Some rain occurred in the west and north but there was little or none in south-east or east England.

Pressure and Wind.—Mean pressure was somewhat below the average in the northern half of the country and slightly above the average in the southern half. At 9 h. the deviations from the average ranged from -2.3 mb. at Lerwick and Wick to $+1.6$ mb. at the Scilly Isles. The gradient for westerly winds was thus increased and winds from between south and west predominated. A gale was reported locally on the 14th, 17th and 23rd and widespread strong winds and local gales prevailed on the 30th. Among the highest speeds registered in gusts were 74 m.p.h. at Lympne and 61 m.p.h. at South Farnborough on the 3rd, 69 m.p.h. at Bidston and 62 m.p.h. at Point of Ayre on the 30th.

Temperature.—Broadly speaking mean temperature was slightly above the average in the eastern and somewhat below the average in the western districts of the British Isles. The deviation for the districts ranged from $+1.2^{\circ}\text{F.}$ in England, N.E. to -0.5°F. in Scotland, W. and Northern Ireland. The first fortnight was generally warm,

particularly the period 8th–13th and in the south, the 1st–3rd. There was a rapid fall in temperature on the 14th and weather continued cool until the 20th. Another brief warm spell occurred in parts of England from the 24th–26th. The extremes for the month were:—(England and Wales) 87°F. in London (Camden Square and Kensington) on the 2nd at Finningley on the 12th and at Greenwich and Maldon on the 24th, 37°F. at Rhayader on the 17th; (Scotland) 82°F. at Liberton on the 12th, 37°F. at Dalwhinnie on the 10th and 16th; (Northern Ireland) 79°F. at Lisburn on 11th, 40°F. at Garvagh on the 1st.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881–1915 was 107 over England and Wales, 139 over Scotland and 119 over Northern Ireland. In Scotland, less than the average occurred locally in the south-east and at a few isolated stations in the south-west, while more than twice the average occurred at a number of stations in the northern half of the country. In England more than the average occurred in the north and east and less than the average over most of the Midlands, Wales and south-west England. Over much of East Anglia more than twice the average was received and at Bury St. Edmunds 386 per cent. was reported. This was mainly due to heavy rain during thunderstorms on the 2nd, 3rd and 26th. In Northern Ireland more than the average occurred except in the east of County Down and percentages ranged from 91 at Seaford to 148 at Garvagh.

Among the heaviest falls in 24 hours were:—

2nd 2.36 in. at Westley, near Bury St. Edmunds.
3rd 2.75 in. at Westley, 2.63 in. at Elmstone and 2.52 in. at Long Melford (Suffolk)
26th 3.27 in. at Bungay, 3.01 in. at Arnfield Reservoir (Cheshire), 2.83 in. at Westley and 2.10 in. at Kew Observatory, of which 1.97 in. fell in 35 mins. (a very rare fall).

Thunderstorms occurred fairly frequently, mainly from the 2nd–4th, 13th, 24th and 26th–27th. Those on the 2nd–4th and 26th were severe and were accompanied by heavy precipitation which caused serious damage and flooding locally.

Sunshine.—Broadly speaking the duration of bright sunshine was below the average in Scotland, Northern Ireland and locally in the western half of England and above the average in eastern districts of England. The percentages for the districts ranged from 73 in Scotland, N. to 111 in England, E. The deficiency was large in parts of west and north-west Scotland and along the Caledonian canal; for example, the percentage of the average was only 53 at Fort William and 55 at Oban. The period 6th–12th was very sunny in most areas except the north of Scotland.

Fog.—There was considerable fog at times on the south-west coasts of England and Wales and in the extreme north of Scotland. Elsewhere fog was infrequent but occurred locally at times. The chief periods, when fog was reported on the south-west coasts of England and Wales were the 1st–3rd and 22nd–24th.

Miscellaneous Phenomena.—The aurora was observed over a wide area extending from the north of Scotland to southern England on the nights of the 26th–27th and 27th–28th. Solar halos were noted at Oxford on nine days. Severe hailstorms, with stones $\frac{3}{4}$ in. to $1\frac{1}{4}$ in. in diameter caused considerable damage to glass and crops in East Anglia on the 2nd; on the 3rd a heavy hailstorm caused much damage to glass and crops in the Farnham (Surrey) area.