

Monthly Weather Report

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

VOL. 68 No. 7

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

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July, 1951 - Rather warm and sunny in the south and east of the British Isles; dry on the whole in England and Wales.

Broadly speaking the weather of the month was dry, rather sunny and warm in England and Wales, wet on the whole in Scotland and Northern Ireland and dull in west and north Scotland and Northern Ireland. The rainfall was often of a thundery type and therefore variable.

During the opening days pressure was high in a belt from north of the Azores across the southern half of the British Isles to central Europe. Warm, sunny, mainly dry weather prevailed over most of England and Wales but troughs of low pressure caused rain in the northern half of the British Isles. On the 3rd and 4th a small depression moved east-south-east from Northern Ireland across England to North Germany causing rain in most parts of England, Wales and Ireland; in its rear, northerly winds of polar origin brought a big drop in temperature. Thereafter a ridge of high pressure moved in over the British Isles from the west and subsequently moved south-east. Behind the ridge troughs of low pressure, associated with a depression south of Greenland, moving east caused rain in the north and west, while weather continued mainly fair in the south. On the 7th a small secondary off south-east Scotland moved quickly east-north-east and an associated trough extending to Ireland moved slowly south-east; showers occurred, which were slight and scattered in England and Wales but somewhat heavier locally in Scotland. An unsettled spell ensued from the 8th until the 13th with depressions passing over or near the British Isles. On the 10th and 11th a depression moved irregularly east-north-east across north Ireland and south Scotland and then turned north over the North Sea; on the 12th another disturbance over Brittany moved quickly north-east to Kent and thence to the south of Norway. Thunderstorms or thundery rain occurred during this period with varying amounts of rainfall, heavy locally. By the 14th an anticyclone was situated off south-west Ireland and mainly fair weather prevailed until the 20th, apart from slight rain in the north-west and north caused by shallow troughs associated with depressions to the north of the British Isles. On the 22nd a trough of low pressure over south-west England moved north-east causing widespread and severe thunderstorms accompanied by heavy rainfall. In the rear of the trough cold, squally, north-westerly winds caused a decided fall in temperature on the 23rd. Subsequently an anticyclone off our south-west coasts moved slowly east across France to Germany, while troughs to depressions near Iceland moved east over Scotland; little or no rain occurred in England but rain and local thunder were recorded in Scotland. Scattered rain occurred on the 27th and 28th but on the 29th another anticyclone centred west of Ireland moving east-north-east gave a fair day in most parts. On the 30th and 31st a trough of low pressure off south-west England moved north-east and was associated with another outbreak of thunderstorms.

Pressure and Wind.—Mean pressure somewhat exceeded the average except in the Shetland Isles, the deviation from the average at 9h. ranging from -0.2 mb. at Lerwick to $+3.5$ mb. at Newquay. Winds from some westerly point predominated and the total run of the wind was somewhat below the average on the whole in England but slightly exceeded the average in the Shetland Isles. No mean hourly speed of more than 33 knots was registered at anemograph stations. Among the highest gusts registered in knots were 43 at Harwell on the 10th and 45 at Kew Observatory and 43 at Hampton on the 22nd.

Temperature.—Broadly speaking mean temperature slightly exceeded the average except locally in the west and north-west of Scotland and the Shetlands, the deviations for the districts ranging from -0.3°F . in Scotland, N. to $+1.2^{\circ}\text{F}$. in Scotland, E. and $+1.4^{\circ}\text{F}$.

in England, S.W. and S. Wales (*see* Table I). There were no really hot days but it was warm on the 1st, 16th–22nd and 28th–30th. In the south of England it was warm also on the 2nd and 3rd. Cool days included the 4th, 5th, 11th–14th and 23rd, while low minimum temperatures were registered locally on the 5th, 14th, 15th and 30th.

Extreme temperatures in the screen included:—(England and Wales) 86°F . at Southend on the 28th, 36°F . at Kielder Castle on the 30th; (Scotland) 79°F . at Dundee on the 19th, 31°F . at Dalwhinnie on the 14th; (Northern Ireland) 74°F . at Castlerock on the 1st, 39°F . at Aldergrove and Hillsborough on the 14th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881–1915 was 67 over England and Wales, 116 over Scotland and 109 over Northern Ireland. As much of the rainfall was of a thundery type the distribution was variable. In Scotland less than the average occurred in the south-west in a central area and at a few other places. More than the average was registered elsewhere, the excess being considerable in some parts, notably in the Shetlands and locally in Aberdeenshire and Kinross-shire. In England and Wales more than the average occurred in a narrow belt extending from Southampton Water across the Thames Estuary to Yarmouth and in small scattered areas elsewhere. Less than 50 per cent. of the average was received over a large area covering the Bristol Channel and stretching north-east across the Midlands to Lincolnshire, as well as in a few places elsewhere. In Northern Ireland somewhat more than the average was general except at Londonderry.

Among the heavier falls in 24 hours were

- 12th 2.31 in. at Longfield, Kent and 2.04 in. at Great Bealings, Suffolk.
- 22nd 2.81 in. at Preston Gardens, Linlithgow, 2.70 in. at Davidson's Mains, Edinburgh, 2.68 in. at Long Sutton, Hampshire, and 2.52 in. at Lothrie Reservoir, Fife and at Terphichen, West Lothian.
- 26th 2.62 in. at Kinlochquoich, Inverness-shire.

Thunderstorms occurred locally on the 1st, 3rd, 4th, 6th–13th, 20th–23rd, 25th, 26th, 30th and 31st. They were rather widespread on the 8th, 10th, 11th, 22nd, 30th and 31st. The thunderstorms on the 22nd were severe and accompanied by widespread heavy rain; in the south of England four people were killed by lightning.

Sunshine.—The general sunshine expressed as a percentage of the average for the period 1906–35 was 108 over England and Wales, 91 over Scotland and 79 over Northern Ireland. Broadly speaking the sunshine exceeded the average in the south and east and was less than the average in the north-west. The difference between the duration of bright sunshine in the west and east of Scotland was marked; Tiree, with a total of 120 hours, had its dullest July since 1928, while at Leuchars, total 217 hours, it was the sunniest since 1935. The mean daily duration ranged from 3 hours or less over much of north-west Scotland and at Lerwick, in the Shetland Isles, to more than 8 hours at most places on the south coast of England and Wales from Porthcawl round to Clacton and to 9.0 hours at Falmouth (*see* Chart 4).

Fog.—Local fog, mainly at night and in the early morning, occurred rather frequently for the time of year; for example, on the 1st, 2nd, 6th–12th, 15th, 17th–22nd, 26th, 30th and 31st. It was most frequent in the Shetland Islands and the extreme north of Scotland and at Guernsey.

Miscellaneous Phenomena.—The aurora was observed in Scotland on the 30th. Solar halos were noted at Oxford on eight days. Hailstones $1\frac{1}{4}$ in. in diameter were reported at Wootton, Isle of Wight, in a thunderstorm on the 22nd.