

Monthly Weather Report

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

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July 1955—Warm and sunny; dry apart from thunderstorms.

Except for the first day or two when depressions moved eastwards across Scotland, the weather was warm and dry—apart from thunderstorms—with pressure high from the Azores region to Scandinavia, practically the whole month.

Depressions moved eastwards across Scotland on the 1st and 3rd. The frontal system of the first depression was accompanied by widespread rain and local thunder and the second brought heavy rain to Scotland and north-west England where many stations measured more than 1.5 in. at 0900 on 3rd. A blocking pattern became fully established over north-west Europe about the 6th or 7th. It was preceded by the penetration of a tongue of cold air south-eastwards into north-west Germany on the 4th and 5th. During this time another frontal system with a fairly well marked thermal ridge above it moved east towards the British Isles with surface pressure rising all round it. A further thermal ridge followed it quickly and prevented any penetration of cold air behind it. The augmented thermal ridge then joined up with the warm air over Scandinavia, cutting off a cold pool over east Germany and completing the blocking pattern. The weather had been cool for the first five days, but a brilliantly sunny day over England and Wales on the 6th, when over 15 hr. of sunshine was recorded at many places in south-west England and the Channel Isles, brought temperatures generally into the seventies. Sea fog and low cloud however kept temperatures in the fifties on the islands and coasts of north and west Scotland. For much of the month weather followed the same pattern day after day; easterly winds brought cloud inland at night but this cleared from most areas during the morning to give warm sunny days except on the east coast where temperature was persistently below normal. The zonal westerlies were located mainly near and to the north of Scotland and any thermal troughs in this stream weakened as they approached the British Isles. The warmest period of the month was from the 11th to the 18th when temperatures at many places in southern England and the Midlands rose above 80°F. almost daily. Thunderstorms, although scattered, occurred frequently during this period and were often of unusual severity and accompanied by torrential rain, particularly on the 14th and 18th. For much of the month a cold pool existed aloft over France or Germany and a warm pool over the British Isles or Scandinavia, but on the 17th and 18th thunderstorms occurred over southern England on the west flank of a large thermal ridge extending over Spain, France and west Germany. On the 14th, 1.02 in. of rain fell at Blandford, Dorset in 15 min. while on the 18th a "very rare fall" occurred at Gnoll Reservoir, Neath, Glamorgan, when 3.37 in. was recorded in 90 min. During heavy storms which caused severe flooding in south Dorset, several places, including Weymouth and Dorchester, registered more than 7 in., and Upwey 9.5 in. of rain during 24 hours. The warmest day was the 17th when 90°F. was registered at Camden Square, London, and temperatures were above 85°F. at many other stations, but the remainder of the month was cooler. The blocking pattern became particularly well marked during the last week when there was a strong cold pool over Germany.

Pressure and Wind.—Mean pressure substantially exceeded the 1921–50 average everywhere, the deviation ranging from 9.9 mb. at Stornoway to 4.4 mb. at Southampton. Winds were mainly light and between north and north east.

Temperature.—Mean temperatures differed from the 1921–50 average by +1.9°F. in England and Wales, +3.0°F. in Scotland and

+2.3°F. in Northern Ireland. In Scotland temperature rose to 86°F. or above at several places, a temperature which had not been attained since June 1950. Ground frost occurred locally; grass minima were 22°F. at Glenlivet on the 25th and 25°F. at Dalwhinnie on the 23rd.

Extreme temperatures included:—(England and Wales) 90°F. at Camden Square, London on the 14th and 17th, 34°F. at Kielder Castle and Moor House on the 26th; (Scotland) 87°F. at Carnoustie on the 22nd and Stirling on the 27th, 29°F. at Glenlivet on the 25th; (Northern Ireland) 82°F. at Armagh on the 23rd, 40°F. at Garvagh on the 26th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881–1915 was 37 over England, Wales and Scotland and 51 over Northern Ireland. July has been drier over England and Wales on only four previous occasions since 1869; 35 per cent. (1885), 34 per cent. (1898), 23 per cent. (1911), 29 per cent. (1935). A number of places which missed the local thunderstorms recorded absolute droughts of 28 days from 4th–31st. More than 100 per cent. was confined to a small area in County Down, Peebles-shire and west Kent and to an area affected by the severe Devon-Dorset storm of the 18th–19th; Portland Bill had 301 per cent., Weymouth 400 per cent. and the Upwey district probably more than 450 per cent. Most of the country had less than 50 per cent. There was less than 25 per cent. over much of the northern half of Scotland, over a broad belt from East Anglia and Lincolnshire across the south Midlands and Thames Valley to Monmouthshire, most of Cornwall, the south coast of Wales and locally in Sussex and in a narrow belt between Llandudno and Wakefield. There was less than 10 per cent. in west Cornwall, around Worthing and over a considerable area from Suffolk to the Severn Estuary and Monmouthshire. At St. Agnes and Cambourne, Cornwall and at Bury St. Edmunds, Suffolk the month was rainless.

Among heavy falls in 24 hr. outside of Dorset were:—

2nd	3.36 in. at Seaforde, County Down.
17th	3.65 in. at Tunbridge Wells and 3.14 in. at Broadstairs, both in Kent.
18th	3.59 in. at Neath, Glamorgan, 3.25 in. at Yeovil, Somerset, and 2.92 in. at Ashburton, Devon.

Thunderstorms.—In Scotland thunderstorms were of less than usual frequency and occurred on 7 days during the first half of the month. In England and Wales there were thunderstorms on the 1st 4th, 9th, and 11th 20th; they were widespread on 11th–14th and 17th–18th and severe in the south of England on the 14th, 17th and 18th.

Sunshine.—During this outstandingly sunny month general sunshine expressed as a percentage of the 1921–50 average was 146 over England and Wales, 172 over Scotland and 184 over Northern Ireland. It was the sunniest July on record in south and east Scotland north-west England, north and west Wales, Northern Ireland and parts of the Midlands. At Southport it was the sunniest month ever recorded since observations of sunshine commenced in 1896.

Fog.—In Scotland fog occurred on 19 days and was rather widespread on the 9th and 10th. In England and Wales there was fog locally during the early morning from 8th to 22nd; it was fairly widespread in Yorkshire from 19th–21st.

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