

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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JULY, 1942.—Unsettled and mainly cool.

The month opened with mainly fair, warm, anticyclonic weather. On the 2nd and 3rd a large depression centred south-westward of Iceland moved slowly east to a position off our north-west coasts where it remained almost stationary for some days; meanwhile associated troughs of low pressure moved eastward over the British Isles. A period of unsettled weather ensued, with rain at times and local thunderstorms but long sunny periods. Between the 7th and 10th the depression off north-west Scotland moved east and filled up, while on the 9th and 10th a depression moved from a position off our south-west coasts to the Netherlands; showery conditions with local thunder but a good deal of sunshine, prevailed for the most part but in the south-east on the 10th, weather was very cool and dull with heavy rain locally. A wedge of high pressure moving east was associated with a fair day in many districts on the 12th, but further rain was experienced in the west and north later. A deep depression moved north-east across Iceland on the 13th and associated troughs crossed the British Isles causing rain or showers in most districts. From the 15th to 17th a new depression moved eastward across the north of Scotland; rain occurred fairly generally and in the rear of the depression there was a considerable fall of temperature. On the 19th and 20th the dominating feature of the pressure distribution was a large anticyclone centred north of the Azores. Mild weather prevailed with only slight local rain. A depression south of Iceland moved quickly east-south-east on the 22nd and 23rd giving unsettled weather accompanied by strong winds and local gales. On the 24th and 25th a new disturbance moved north-east from a position off the Hebrides and on the 26th and 27th a secondary depression south-west of Ireland moved quickly eastward across southern England. Some rain fell on the 24th and 25th chiefly in the north and west but there were also sunny periods on the 24th and many good sunshine records on the 25th. There was considerable rainfall in the southern half of the country during the passage of the depression on the 26th and 27th. On the 28th a shallow depression on the Atlantic south-west of Iceland and an associated trough moved east and caused rain in the west and north of the British Isles on the 28th and some scattered rain on the 29th. Subsequently a large anticyclone on the Atlantic extended its influence eastward and maintained fair weather over most of the British Isles on the 30th and over England and southern Scotland also on the 31st but a trough of low pressure off our north-west seaboard moving south-east was associated with rain in the extreme west and north on the 31st.

Pressure and Wind.—Mean pressure was somewhat below the average over most of the country, but slightly above in the extreme south, particularly the south-west. The deviation at 7h. ranged from -2.3 mb. at Sumburgh in the Shetlands to $+1.2$ mb. at the Scilly Isles. South-westerly to north-westerly winds predominated, and those from the east were few. Local gales occurred on the 17th-18th, 22nd-25th and 27th. Among the highest speeds reached in gusts were 60 m.p.h. at Bidston and 54 m.p.h. at St. Ann's Head on the 23rd, 56 m.p.h. at Renfrew on the 24th and 67 m.p.h. at Lerwick and 63 m.p.h. at Bell Rock lighthouse on the 25th.

Temperature.—Mean temperature was, on the whole, somewhat below the average, the deviations for the districts ranging from -1.2°F. in Scotland, W. to 0°F. in Scotland, E. The days were mainly cool, particularly in the west of Scotland; for example at Duntuil, Skye, temperature did not exceed 60°F. on any day from the 6th to the 29th. Among the warmest days were the 1st-2nd, 5th, 20th-21st and 31st; the 5th was very warm in the eastern

districts of England, 80°F. being reached or exceeded at numerous stations. The coolest days included the 10th, 17th and 18th, when maxima below 60°F. occurred in some parts.

The extremes for the months were:—(England and Wales) 84°F. at Whitstable on the 5th and at Poole on the 21st, 35°F. at Droitwich on the 12th; (Scotland) 78°F. at Marchmont and Peebles on the 2nd, 36°F. at Peebles and West Linton on the 12th, at Peebles, West Linton and Glenbranter on the 27th and at Balmoral on the 28th; (Northern Ireland) 75°F. at Armagh on the 31st, 39°F. at Aldergrove on the 12th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 100 over England and Wales, 111 over Scotland and 144 over Northern Ireland.

In England and Wales the distribution was variable but broadly speaking less than the average occurred over a large area covering most of the Midlands and south and south-west England, as well as in a part of the Lake district and at some isolated stations. More than the average occurred over most of Wales and north-west England, much of north-east and east England and east Kent; more than twice the average was received in the neighbourhood of Lowestoft. In Scotland there was an excess west of a line drawn from Wigtown Bay to Sutherland as well as on the extreme north coast and in the Orkneys and Shetlands. A few stations in the east also had a little more than the average. Elsewhere there was a deficiency. In Northern Ireland the excess was general and percentages of the average ranged from 114 at Seaford to 179 at Ballymena.

Measurable rain fell frequently in the west and north; for example on 28 days at Achnashellach and Onich and 25 days at Duntuil, Fort William and Ardtornish.

Among the heaviest falls in 24 hours were:—

- 3rd 2.78 in. at Princetown, 2.30 in. at Kingairloch (Argyllshire) and 2.28 in. at Garelochhead (Dumbarton).
- 21st 2.76 in. at Kinlochurn (Argyllshire) and 2.49 in. at Loch Carron (Ross and Cromarty).
- 22nd 3.94 in. at Blaenau Festiniog, 3.00 in. at Borrowdale, 2.80 in. at Machynlleth (Montgomery) and 2.65 in. at Glenmoidart (Inverness-shire).
- 31st 2.10 in. at Carboist (Skye).

Local thunderstorms were reported daily during the first ten days and on the 13th, 14th, 16th, 26th and 27th.

Sunshine.—In Scotland, sunshine was below the average on the whole in the north-west and north and above the average at most stations in the east and west. In England and Wales sunshine was below the average on the whole but there was an excess in some areas in the north, in parts of Wales and at a few isolated stations elsewhere: the deficiency was generally greatest in the east and south-east. In Northern Ireland there was a slight deficiency. The percentages of the average for the districts ranged from 85 in England, S.E., to 109 in Scotland, W.

Fog.—There was not much fog during the month but local fog (chiefly early morning) was reported at times mainly on the 1st, 2nd, 4th-6th, 13th, 19th-21st, 24th, 27th-29th and 31st.

Miscellaneous Phenomena.—Solar halos were noted at Oxford on eight days. A halo phenomenon, which presented several infrequent features, was widely observed in the west and north of Scotland on the 1st.