

## MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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**AUGUST, 1938.—Frequent thunderstorms 1st–12th; dry on the whole in Scotland and Ireland.**

The weather of the month was distinguished by a remarkable series of thunderstorms during the first twelve days. Rainfall was below the average over practically the whole of Scotland and most of Ireland; in England and Wales it varied considerably owing to intense local falls of rain during some of the frequent thunderstorms. The first twelve days were warm generally but subsequently it became considerably cooler. The month was dull on the whole in England, except in the north-west, and in southern Ireland but sunshine exceeded the average in Scotland and at most places in the north of Ireland.

During the opening days of the month an anticyclone moved north-north-east from northern England to the west of Norway. Meanwhile pressure was relatively low over the Bay of Biscay; thunderstorms were reported in Ireland and the south-western districts of England and Wales but little rain occurred elsewhere. On the 4th a shallow depression was centred south of Ireland and further shallow depressions moved north from France; widespread thunderstorms occurred in England and Ireland, the storms being exceptionally severe in south-west England. From the 5th–10th a complex area of shallow low pressure covered most of the British Isles, while an extension of the anticyclone over Scandinavia stretched westward to the north of Scotland; thunderstorms were reported daily from the 5th–12th. Temperature was high during the first 12 days.

Subsequently the Azores anticyclone spread north-east over the British Isles and mainly fair weather prevailed in many places on the 13th and 14th, though it was considerably cooler. At Lerwick and Kirkwall rain on the 15th ended an absolute drought of 15 days. A deep depression south of Greenland and an associated trough extending to south-west Ireland moved east between the 15th and 17th and caused further rain, chiefly in the west and north. Strong, squally winds and local gales prevailed at exposed places on the 16th and 17th. A further spell of cool, unsettled weather was associated with the eastward passage of depressions to the north of Scotland; rain fell at times and gales were recorded locally in the west between the 18th and 20th, while local thunderstorms occurred on each day from the 19th–22nd. On the 23rd a wedge of high pressure crossed Great Britain giving a fair day in the eastern half of England but much fog on the south-west coasts. Meanwhile a depression on the Atlantic moving north-east and an associated trough approaching Ireland caused heavy rain in west Ireland and west Scotland on the 23rd and later, locally in north England. Thereafter a belt of high pressure stretching from the Azores across the British Isles to northern Scandinavia occasioned fair weather in many parts on the 25th and 26th, but a trough of low pressure passing east over the country brought renewed unsettled weather on the 27th and 28th.

Subsequently pressure was low over central Europe and relatively high to the south-west and north-west of the British Isles. Cool weather prevailed, with scattered rain or showers and good records of bright sunshine locally.

**Pressure and Wind.**—Mean pressure slightly exceeded the average generally, the excess at 7h. ranging from 0.3 mb. at Kew Observatory to 3.4 mb. at Lerwick. A period of fresh or strong, squally winds with gales at a few exposed places occurred from the 16th–20th. Among the highest speeds recorded in gusts were 62 m.p.h. at St. Mary's, Scilly, on the 4th, 57 m.p.h. at Bidston and 56 m.p.h. at Kirkwall on the 17th and 57 m.p.h. at Pembroke and 56 m.p.h. at Valentia Observatory on the 19th.

**Temperature.**—Mean temperature slightly exceeded the average on the whole, the deviations from the average for the districts ranging from +0.2°F. in Ireland, S. to +1.6°F. in Scotland, N.

The first 12 days were warm; maxima of 80°F. or above were registered at some station or other on each of these days. Subsequently the weather became cooler and the last few days were decidedly cool. Low minima were registered on the 21st, 22nd, 23rd and 31st.

The extremes for the month were:—(England and Wales) 87°F. at Camden Square (London) and Reading on the 1st, 32°F. at Mayfield, Newton Rigg, Barton (Manchester), Llandrindod Wells and Rhayader on the 31st; (Scotland) 82°F. at Ardtornish and Ruthwell on the 10th and at Fort Augustus, Kilmarnock and Forres on the 11th, 31°F. at Balmoral and Braemar on the 22nd and at Logie Coldstone on the 22nd and 23rd; (Ireland) 78°F. at Birr Castle and Foynes on the 3rd, 34°F. at Aldergrove on the 31st.

**Precipitation.**—The general precipitation of the British Isles expressed as a percentage of the average for the period 1881–1915 was 89, the values for the constituent countries being England and Wales 100, Scotland 68 and Ireland 83. In Scotland the deficiency was almost general, an excess being practically confined to a few rather isolated stations in the south and the Outer Hebrides. In Ireland an excess occurred at a number of places, chiefly in central and western districts, but the majority of the stations recorded a deficiency. In England and Wales the distribution was variable owing to intense local falls of rain during thunderstorms.

Thunderstorms occurred frequently, chiefly from the 1st–12th, 19th–22nd and locally in Scotland on the 24th. They were reported on as many as nine days at Wakefield and Newport (Shropshire) and on eight days at Huddersfield, Shrewsbury, Bristol and West Kirby. The storms on the 4th were exceptionally severe in south-west England; at Torquay 6.39 in. of rain occurred, nearly all of which fell between 5h. and 14h., at Hedgebarton 15 miles north-west of Torquay 5.86 in. fell between about 4h. 15m. and 8h., and at Ilington 5.35 in. fell between 4h. 30m. and 9h. 45m. Among other intense rains reported during thunderstorms were 2.20 in. in 75 minutes at East Kirkby Manor, Lincolnshire, on the 5th, 2.25 in. in 60 minutes at Lexden, Essex, on the 6th, 1.44 in. in 45 minutes at Bishops Cannings, Wiltshire, and 1.80 in. in 105 minutes at Wallasey on the 9th, 2.25 in. in 90 minutes at Wembley and 5.11 in. during the 24 hours at East Overton House, Strathaven, Lanarkshire, on the 11th, and 2.26 in. in 2 hours 15 minutes at Edenbridge, Kent, and 1.18 in. in 20 minutes at Peterborough on the 12th. Some of the storms were accompanied by heavy hail; for example, hail stones were said to be as large as small walnuts at Torquay on the 4th, and as large as pullets' eggs near Strathaven on the 11th. On the 12th hail lay deep on the ground at Wold Newton, near Bridlington and lasted until the next day.

**Sunshine.**—Sunshine exceeded the average in Scotland and at most places in the north of Ireland and north-west England. There was a deficiency on the whole elsewhere in England and in southern Ireland. The percentages of the average for the districts ranged from 79 in Ireland, S. to 162 in Scotland, N. The excess in the north of Scotland was noteworthy; the total at Lerwick, 229 hours, was greater than at any other station in the British Isles and was 112 hours in excess of the average.

**Fog.**—Much fog was reported from the 1st–12th; it was persistent and thick at times on the north-east coast of England from the 5th–12th. Some fog was reported at times outside this period, mainly from the 15th–16th, 22nd–27th and 30th–31st.

**Miscellaneous Phenomena.**—The aurora was observed locally in Scotland on nine nights; it was seen at Holyhead on the night of the 3rd–4th. A water spout was seen from Margate on the 15th and solar halos were noted at Oxford on 16 days.