

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

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

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JULY, 1945.—Changeable and rather warm; severe thunderstorms from the 13th-15th.

The opening days were rather unsettled, with occasional rain or showers. On the 1st a depression over south-east Scotland moved east and was associated with showers and fairly widespread thunderstorms. In its rear a wedge of high pressure moved rather slowly across the British Isles but a trough of low pressure extending from a depression west of Iceland and moving in behind the wedge brought rain to Ireland on the 2nd and thereafter to western districts of Britain also. On the 5th an elongated trough west of Ireland moved east; rain fell in Ireland and west and north Scotland. A second trough followed on the 6th and was associated with scattered showers. Some high day temperatures were registered from the 4th-6th. A ridge of high pressure over Ireland moving slowly east maintained fair weather with much bright sunshine in England and Wales on the 7th and 8th but there was some scattered rain in Scotland and Ireland.

A period of thundery conditions ensued from the 9th-16th. On the 10th a shallow depression over the Straits of Dover moved slowly north; thunderstorms and heavy local rain were reported in the south-east. On the 13th and 14th a shallow depression moved north-north-west from the Bay of Biscay across Ireland and from the 14th-16th another moved north from south-west France across Great Britain, and deepened considerably. The first disturbance caused thunderstorms, mainly in western districts of England and Wales and parts of Ireland and the second general and severe thunderstorms over the British Isles. The period 13th-15th was very warm in England and Wales. On the 17th a depression in mid-Atlantic moved south-east while an anticyclone over France and Germany moved north; weather was mainly fair apart from local rain in Ireland. On the following days the depression off south-west Ireland moved north-east; unsettled weather prevailed, and local thunderstorms were reported on the 19th and 20th. A new depression west of Ireland moving north-east on the 21st caused rain in most parts except the south-east; local thunderstorms were reported in north-east England. From the 22nd-24th a ridge of high pressure extended from the Azores anticyclone to northern France; meanwhile on the 22nd troughs of low pressure moving east caused rain in northern districts. Fair weather prevailed on the 23rd and 24th, apart from slight rain locally in Ireland and west and north Scotland. On the 25th and 26th the ridge of high pressure moved slowly north and a depression over the Bay of Biscay moved north-east. Rain occurred in the south-west on the 25th and heavy rain, accompanied locally by thunder, in southern England on the 26th.

By the 26th an elongated anticyclone extended from the Azores to Iceland and on the 27th and 28th rather cool, mainly fair weather prevailed, though there was some local rain, chiefly in the west and north. Subsequently the anticyclone remained centred west-south-west of the British Isles; slight scattered rain occurred and bright periods, but a good deal of cloud locally. There was a rise of temperature, particularly in the north.

Pressure and Wind.—Mean pressure was not very different from the average and deviations from the average were somewhat irregular. Winds were most frequently from a westerly point and the month was less windy than usual in the north, particularly in the far north.

Mean hourly velocities of more than 38 m.p.h. were registered at Felixstowe and Southport on the 16th and at Alness on the 23rd. Among the highest speeds registered in gusts were 59 m.p.h. at Manchester (Ringway) on the 15th and 56 m.p.h. at Manston and 55 m.p.h. at Gorleston, Lympne and Southport on the 16th.

Temperature.—Mean temperature exceeded the average by 2.0°F. in Scotland, 1.3°F. in England and Wales and 0.9°F. in Northern

Ireland. Broadly speaking the excess was general except in England S.W. and S. Wales where the deviation for the district was -0.2°F. (See Table I.) The warmest days in Scotland were the 4th, 5th, 29th, 30th, and 31st, when temperature reached 75°F. or above in places. Among warm days in England and Wales were the 5th, 6th, 13th-15th, 18th and 23rd. Low night minima for the season were registered locally on the 3rd, 8th, 26th, 28th and 29th. The extremes for the months were:—(England and Wales) 90°F. at Norwich and at Whitstable on the 15th, 37°F. at Santon Downham on the 29th; (Scotland) 80°F. at Gordon Castle on the 5th and at Stirling on the 31st, 36°F. at Balmoral and Dalwhinnie on the 3rd and at Peebles on the 28th; (Northern Ireland) 75°F. at Castlerock and Lisburn on the 4th and at Armagh on the 31st., 41°F. at Garvagh on the 11th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 97 over England and Wales, 97 over Scotland and 128 over Northern Ireland. Much of the rain was of a thundery type and in consequence the distribution was variable. In Scotland, more than the average occurred in an area covering most of Aberdeenshire and extending south-south-west to Renfrew and Peebles. More than the average was registered also at a number of places on or near the north and west coasts. The deficiency was greatest in a central area covering part of Inverness; for example, at Fort Augustus the percentage of the average was only 47. In England and Wales, broadly speaking more than the average was received in an area covering east Hampshire, Sussex, and most of Kent and extending north to include Hertfordshire, and in another area covering Cornwall, north and west Devon and stretching north to the Wirral and north-east to Cranwell, Lincolnshire. An excess was registered also round Keswick. More than twice the average was registered over part of Sussex, Surrey, and the neighbouring part of Hampshire and in the Newquay area. Less than 50 per cent. was received over most of Norfolk and part of the fen-district and also part of the East Riding of Yorkshire.

Among the heavier falls in 24 hours or less were:—

10th. 2.82 in. at Bognor Regis and 2.55 in. at Arundel Castle.
14th. 4.20 in. at Petworth (Sussex), 3.49 in. at Bognor Regis, 3.30 in. at Pulborough, and 3.16 in. at Arundel Castle.
15th. 3.14 in. at Aberporth (Cardigan), 1.65 in. in 20 minutes (a fall of very rare intensity) at Neston (Cheshire), .71 in. in 15 minutes at Beaminster, Dorset and 2.45 in. at Grey Abbey, County Down.

Thunderstorms occurred frequently, those of the 13th-15th being very severe in some areas and causing flooding and damage to crops. On the night of the 14th-15th there was a prolonged and brilliant display of lightning over south-east England and the Midlands, rivalling the storm of the night of July 9th-10th, 1923.

Sunshine.—On the whole the duration of bright sunshine was considerably below the average, the percentage of the average being 84 over Northern Ireland, 87 over Scotland and 94 over England and Wales. An excess occurred locally, chiefly in eastern districts of Britain, the percentages for the districts ranging from 71 in England, S.W. and S. Wales and 75 in Scotland, N. to 103 in England, S.E. and 112 in England, N.E. (See Table I.)

Fog.—Fog, chiefly coastal and on high ground, occurred locally at times, mainly from the 3rd-6th, 11th-13th, 15th-16th, 21st and 29th-30th. It occurred most frequently on the south-west coasts and in the extreme north of Scotland. It was rather persistent along the east coast of Scotland on the 13th.

Miscellaneous Phenomena.—A faint aurora was seen from Stornoway on the 30th. Solar halos were noted at Oxford on 10 days.