

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, AND AT GIBRALTAR AND MALTA, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANIZATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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Cold generally—Sunny and Dry in Scotland and Ireland, Dull in England.

At the beginning of the month the weather was, in some respects, a continuation of that which characterised the closing days of June, and in Scotland the first week was unusually cold for midsummer. Temperature was well below the normal, the only really warm days being, as a rule, between the 9th and 11th, the 16th and 20th, about the 25th, and at the close of the month. At Durham on the 6th the maximum temperature was as low as 28.4a. The highest of the maxima were recorded at Dundee on the 10th, and at Hodsock Priory (Notts) on the 11th, when the thermometer in each case reached 30.0a. The nights round about the 14th were very cold in Scotland, with ground frosts in some places, and a reading in the screen at Balmoral as low as 27.1a. There was a considerable amount of cloud during the first and last weeks of the month, and the amount of bright sunshine was in consequence scanty. At Glasgow, however, it was the sunniest July on record. There was a remarkable absence of thunderstorms in Scotland, though thunder was reported in isolated places on the 10th, 17th, 19th and 31st, but in England and Wales thunderstorms were experienced over a wide area during the first five days, and in the Midlands and along the South and South-West of England there was hail on the 1st. Many stations registered a heavy fall of rain on the 19th, exceeding 30 mm., and amounting to 41 mm. at Belvoir Castle (Grantham), Cheadle (Staffs), and Malmesbury (Wilts), 47 mm. at Cheltenham (Glos.), and 63 mm. at Overcourt, near Bristol. At Mayfield (Staffs) rain fell continuously for the 22 hours, commencing at 18 h. 45 m. on the 19th.

The observer at Allans Green, Northumberland, says: "July has been a very fine dry month." *Tenbury, Worcester*.—"Fine dry month, rain badly needed." *Sheepstor, Devon*.—"A very dry month, extraordinary cold nights." *Weston Turville, Bucks*.—"Vegetation much benefited by break up of May and June drought." *Hurdlestown, Co. Clare*.—"A very favourable July; crops of all kinds have not been so good for many years." *Catterick, Yorks*.—"Extraordinary rainfall. On the afternoon of the 1st the rain fell in torrents, flooding everything in a few minutes, and then suddenly ceased, only to come on again with redoubled fury." *Lampeter, Cardigan*.—"Dull, sunless month, very dry and cold." *Kenninghall, Norfolk*.—"Generally an exceptionally cold and disappointing month." *Totland Bay*.—"Coldest July for 39 years." *Carnforth, Lancs.*, experienced a "black fog" on the 18th. At *Hidecote, Glos.*, the rain was 29 mm. above the average, and at *Kimberley, Llandrindod Wells*, was 34 mm. below.

Air Pressure.—As in June, the mean monthly trend of the isobars, as shown by the map on p. 75, was abnormal, the type of pressure distribution being much more of a northerly character than is usual in July. Throughout almost the entire month the weather map showed an anticyclone to the West or South-West of the British Isles, with low pressure systems moving along tracks over various parts of the North Sea and its neighbourhood, conditions favourable for winds from points between North-West and North-East. The frequency of north-westerly and northerly winds combined was greater at Southport than in any previous July since 1871. The wind was, however, of low speed on most days and gales were rare. Some of the more prominent incidents connected with the movements of the month's anticyclones and depressions were:—A depression (June Track E. July Track A.) which was over the North Sea on the 1st and 2nd remained the dominating influence of the weather of the British Isles until the 5th, the centre moving across England and the Channel to France. During this period cool showery weather prevailed, and thunderstorms were experienced, that of the 3rd extending over a large area. The subsequent days until

the 9th were affected by the anticyclone to the westward. As a result, northerly winds and a low temperature for the time of year were general, a minimum of 27.4a being recorded at Balmoral on the 8th, and 27.7 at Benson on the 9th. On the 10th the current across the British Islands became more westerly, and the temperature more seasonable, an improvement which was maintained on the following day. On the 19th at 7 h. a large depression extended over the British Isles from the North-East Atlantic, and during the day there was heavy rain in some parts of England. Very little change occurred in the general distribution of pressure after the 20th, and until the close of the month the dominating features were an anticyclone in the West and depressions and secondaries moving in various directions over the North Sea region. Winds from northerly points prevailed, and mostly the weather was dull and unseasonably cold. The highest barometer reading recorded at a telegraphic reporting station during the month was 102.9 at Scilly on the 13th, and the lowest 99.8 at Spurn Head on the 1st, so that the range of pressure was exceptionally small.

Temperature.—The mean monthly temperature was below the normal in all districts, the deficit ranging from 0.3a in Ireland South and 0.4a in Scotland North to 1.9a in England South-East and 2.2a in England East. At the individual stations the highest of the daily maxima, which nearly everywhere were lower than those for June, was 30.0a. at Dundee on the 10th, and at Hodsock Priory (Notts) on the 11th; while the lowest of the minima, which in most cases were higher than those for June, was 27.1a at Balmoral on the 14th.

Precipitation.—Except in England East, which had an excess of 7 mm., and the Midland Counties with an excess of 6 mm., the rainfall was everywhere below the normal, although the shortage in England South-East was only 1 mm. In the other districts the deficit ranged from 10 mm. in England North-East and 21 mm. in the English Channel to 50 mm. in Scotland North, 52 mm. in Scotland East, and 55 mm. in Scotland West. At Glasgow the month was the driest July since 1878, and in Berwickshire and Morayshire the driest since 1868. The individual stations which showed the greatest deviation from the normal were Fort William with a deficit of 83 mm., and Glencarron with a deficit of 88 mm., Belvoir Castle (Grantham) with an excess of 50 mm., and Sheffield with an excess of 53 mm.

Sunshine.—The mean daily amount of sunshine varied considerably from the normal, ranging from a deficit of 3.8 hr. per day at St. Leonards to an excess of 2.4 hr. per day at Glasgow. Scotland North was the only Scottish district which showed a deficit, and England North-West was the only English district which showed an excess. The departure of the district values from the normal fluctuated between -3.0 hr. per day in England South-East and +1.7 hr. per day in Scotland West.

Optical Phenomena.—Solar halos were observed at Birmingham, Mayfield (Staffs.), and Ross (Hereford) on the 9th and 10th, and at Redruth on the 19th. A sun pillar was seen at Oxford on the 3rd.

