

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

(Supplement to the Weekly Weather Report.)

SUMMARY OF OBSERVATIONS COMPILED FROM THE RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM
WITH A CHART CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

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SUMMARY OF OBSERVATIONS.

General Summary.—The abnormal weather conditions which were almost uninterruptedly prolonged through the three consecutive months, April to June, were somewhat less persistently maintained in the period now under review. During July there was one striking modification in the distribution of atmospheric pressure, which served to render the month much less disturbed than any of its three predecessors. On the whole the regions of highest barometer readings were found, as previously, in the neighbourhood of the Arctic Circle on the one side, and over south-western Europe and thence out towards mid-Atlantic on the other, but there was one period of twelve days, the 10th to the 21st, when the British Isles were almost continuously covered by an extensive system of high pressure. One result of this was the very great reduction in the number of cyclonic depressions which arrived on our coasts from the Atlantic, only half-a-dozen instances in all. They were of moderate to slight depth, and possessed of very little wind energy, so that it was not necessary to hoist the storm cones throughout the month, fresh to strong breezes being usually the greatest force reported, a few cases of the force of a high wind being felt at some of the more exposed situations on the coast. The anemometrical records show no hourly velocity equivalent to a gale. It was during the anticyclonic period referred to that the only hot weather of the month—practically of the whole season—occurred, the highest temperatures being registered between the 14th and 22nd, mainly at stations in Ireland and Scotland, very few places in the eastern half of England attaining a maximum of 80°. The rest of the month was characterised by a distinct tendency for the afternoon temperatures to be several degrees below the summer normal. As was the case in the preceding month, there was again a very notable absence of those heavy rains of tropical intensity which are fairly common at this time of the year under more normal conditions of weather. There were a few isolated instances of very heavy showers of brief duration—on the 6th, at Epsom, 0.2 in. fell in five minutes; on the 10th, at Birmingham, 0.54 in. in an hour; and on the 30th at Nottingham, 0.58 in. in fifteen minutes. But the only exceptionally large general downpours occurred with the severe thunderstorms which marked the close of the anticyclonic fine weather spell. On the 21st, at Bath, 2.6 ins. fell in three hours, at Llangammarch Wells, 1.75 in. in two hours twenty minutes, at Rochford, Worcester, 1.61 in. in half an hour; on the 22nd, at Cirencester, 1.28 in. in two and a half hours, and at Llangammarch Wells, 1.10 in. in forty-five minutes, very large amounts being reported also over north Middlesex on this day.

Thunderstorms, or thunder or lightning alone, occurred on twenty-four days, the most extensive being over northern England on the 1st, eastern England on the 2nd, England generally on the 4th, northern England on the 5th, the southern half of England on the 10th, Ireland on the 18th, 19th and 20th, and England, Wales and many parts of Ireland on the 21st and 22nd. Those of the 21st and 22nd appear to have been of extraordinary violence in many neighbourhoods, especially over the region between central Wales and Gloucestershire, where, in addition to a tremendous torrent of rain, there were unusually severe hailstorms, which occasioned considerable damage. Hail fell on several other days, mostly accompanying thunderstorms, a remarkably heavy fall being reported at Cirencester on the 4th. At Belvoir Castle thunderstorms occurred on six days, and at Garforth and Dublin City on five days.

From the 12th to the 28th a great deal of thick foggy weather was experienced along the coasts—north, west, south and east—but during the rest of the month there were hardly any reports of fog.

For the month as a whole pressure was in excess of the normal; temperature was nearly everywhere deficient; the winds varied greatly in direction; rainfall was less than usual, except at various stations in the western districts; and the duration of bright sunshine was in excess over the western half of the kingdom, in defect over the eastern districts.

Pressure.—Mean at 8 a.m. ranged from 30.09 ins. at Jersey, and above 30.05 ins. over the south of England to below 29.95 ins. in the north-east of Scotland, 29.92 ins. at Sumburgh Head. The general distribution of mean pressure differed somewhat from the normal, the most notable variation being the shifting of the region of minimum values from beyond our north-western coasts to a position to the eastward and north-eastward of Shetland and on to the Norwegian coast, a change which accounts for the large proportion of winds from Polar directions during the period. At all stations the results for the month were above the average, by 0.06 in. at Scilly and in London, and by more than 0.1 in. over the northern half of Scotland, nearly 0.15 in. in the Hebrides. Highest readings, rather above 30.5 ins., occurred on the 11th, 30.55 ins. at Valencia, and 30.56 ins. at Roche's Point, and on the 15th and 16th, 30.55 ins. at Stornoway on the latter date. Lowest readings, which were in most cases only a little below 29.5 ins., were observed on the 4th and 5th, 29.33 ins. being recorded at Sumburgh Head on the morning of the 5th. Range consequently was only moderate, and it was also fairly uniform, amounting to about 0.8 in. in the south-east of England and in the Channel Islands, and slightly exceeding an inch generally over the western and northern districts.

Depressions.—Compared with the immediately preceding months there was a very considerable decrease in the frequency of disturbances passing over or near the British Isles. On the morning of the 2nd the Iceland reports indicated the existence of a depression far out on the Atlantic, and by the afternoon it had already caused the wind to back Southerly on our western coasts. The minimum of pressure was near the north-west coast of Ireland by the morning of the 3rd, but the subsequent behaviour of the system was erratic, at first lingering over northern Ireland, then in the vicinity of Shetland, and finally disappearing off the Norwegian coast on the 7th. It occasioned a North-Easterly gale in the Færøe on the 5th, but over these islands the pressure gradient was not sufficient to produce much wind anywhere. There were slight indications of the approach of a depression towards our north-western coasts on the evening of the 7th, and next morning the minimum of pressure had arrived near Ben Nevis, then passed Aberdeen and up the Norwegian coast, disappearing on the 10th. It was deepest on its first appearance, but the barometer did not touch 29.5 ins. On the morning of the 11th a shallow disturbance was found over eastern Iceland. Two days later it was beyond our north-western coasts, but the British Isles were at this time covered by a high pressure system, and the depression changing its course to the westward passed out to the Atlantic, having occasioned rainy weather over our north-western and western districts. When the anticyclone took up a more northerly position in the Færøe-Iceland region, a shallow disturbance appeared near Ireland on the 22nd, and until the morning of the 25th it was indicated off our south-western coasts, moved into the English Channel on the evening of the 25th and then disappeared. On the 26th and 29th disturbances appeared beyond Ireland, and advancing on a general north-easterly path they passed across Scotland and Scandinavia. The former remained uniform in depth during its progress, but the latter became considerably deeper as it advanced, and on its arrival in Sweden the barometer was as low as 29.1 ins. at Stockholm, with the wind at several places beyond the North Sea becoming strong to a gale in force.

Anticyclones.—During the earlier and later portions of the month the regions of highest pressure were situated mainly about Iceland, Spain and eastern Europe, but on the 10th a decided increase of pressure spread in upon us from the south-westward, and thenceforward, until the 21st, a well-marked high pressure system was in the ascendant over the country, the barometer rising a little above 30.5 ins. in many localities on the 11th, 15th and 16th.

Winds.—Associated with the almost equal prevalence of high and of low pressure areas the winds varied greatly in direction, all quarters of the compass being represented, the balance being in favour of points in the northern half. At no station was the force of a gale recorded.