

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

(Supplement to Weekly Weather Report.)

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

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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MILD, DRY AND SUNNY.

This month provides an excellent illustration of the difficulty of securing an adequate representation of the weather for a fixed period by mean values; the first 10 days were mild, windy, and wet, while the remainder of the month was calm, very dry, and exceptionally sunny in most places with warm days and cool nights. The detailed account of the changes during these two periods follows:—

Until the 12th the pressure distribution over the United Kingdom and the surrounding regions continued very similar to that which had obtained during the greater part of March, the chief difference being that none of the depressions affecting this country were of exceptional depth, and that none of their centres passed directly over these Islands. The gradient was, however, sometimes sufficiently steep to allow the wind to attain the force of a gale on the western and northern coasts. The most important low-pressure system during the first week was indicated off the west of Scotland on the 5th, whence it advanced in a north-easterly direction and increased in intensity. On the 6th, when its centre lay a little to the northward of the Hebrides, the minimum isobar was as low as 975 millibars. With the steepening gradient the wind rose to a gale from between South and South-West or West on various parts of our northern and western coasts on the 5th, reaching a gust velocity of 29 m/s (metres per second) at Quilty and 27 m/s at Southport. On the following day gales occurred over a somewhat larger area, the highest gust velocity being 30 m/s at Southport, 27 at Paisley, 26 at Eskdalemuir and Holyhead, 25 at South Shields, and 21 m/s at Spurn Head. On the 7th the centre of the depression lay over Shetland, and the barometer was still below 975 millibars, but a decrease of pressure over the Bay of Biscay region had reduced the gradient, and except at Scilly and Dover there was no gale reported. The depression remained almost stationary until the evening of the 8th, when it moved away north-eastward and became much less deep. Another depression of considerable size was already encroaching on these Islands from the Atlantic, and by the morning of the 10th its centre was located about half-way between the Hebrides and Iceland. Further gales from the South-Westward accompanied the presence of this depression on the 9th and 10th. At Pendennis Castle and Warlingham the wind rose to a gust velocity of 25 m/s, at Aberdeen, Shoeburyness, and Dover to 23 m/s, and at Gorleston to 22 m/s. This disturbance failed to bring the barometer so low in these Islands as its predecessor, but at its centre the reading was possibly lower. Another depression which was centred over Iceland on the 12th caused a sporadic gale from the South-Westward in the north and north-west of the Kingdom. At Paisley there was a gust of 26 m/s, and at Aberdeen and Rosyth gusts of 24 m/s. With the cyclonic conditions rain fell almost daily over the whole country, but the quantity was not, as a rule, large. Even in the mountainous and hilly districts of the west and north heavy falls were rare. In some parts of western Scotland on the 12th there was a downpour exceeding an inch, the highest figures being 1.7 in. at Dalavich and 1.8 in. at Fort William. Thunderstorms, or thunder only, occurred at a number of stations in the Midlands, the north of England, and the south of Scotland on various dates between the 2nd and 10th. In the south-west of Ireland the daily falls of rain which began late in January continued until the 14th. At Caragh Lake the 82 days ending on that date were all more or less rainy, and yielded a total of 36.43 in., a mean of rather more than 0.44 in. per day. Subsequently there was no rain except on the 23rd and 24th.

From the 12th the pressure distribution underwent a radical change. An anticyclonic system from the Azores approached these Islands and gained intensity, its centre reaching the south-west of Ireland on the 14th. From this point it travelled slowly eastward across England and the North Sea, the barometer rising to above 1,033 millibars, and finally disappeared over central Europe on the 23rd. In the meantime a depression on the Bay of Biscay caused a steepening of the gradient and a very decided breeze from East and South-East over these Islands; on the 17th gales were reported at Wick and Scilly. During the prevalence of the anticyclone the weather in the United Kingdom generally was rainless and nearly cloudless, while the day temperature was high and that of the night seldom very low. By the 22nd, however, a South-Westerly to Westerly wind, due to the expansion southward of a depression from Iceland, brought a less settled condition, and slight to moderate quantities of rain, with thunderstorms at several stations, in the northern and western districts. Slight rain also occurred on the 24th over a considerable portion of the Kingdom, but by the 25th the centre of another anticyclone had arrived off the south-west of Ireland, and subsequently travelling slowly across the Kingdom, it brought about a renewal of dry, bright weather, which continued in most districts until the end of the month. With this system barometric pressure reached

its highest point. On the 26th the readings in Ireland and over a large area in England were above 1,036 millibars. The range of pressure during the month was greater in the north than in the south. In Shetland it amounted to 62.3 millibars between the 7th and 25th, but in the south of Ireland the corresponding value was 48.4 millibars and over the English Channel only 41.3 millibars.

The mean pressure map on page 39 shows that the pressure was in fair accord with the normal, but that the trend of the isobars was more westerly.

The rainy, cyclonic period before the 12th was marked by a rather high and equable temperature for April, while the occasional clearances permitted the sunshine records to be about normal. At a few exposed spots the sheltered thermometer descended to 32°, and in a few northern localities dropped below that point. The range of temperature during the dry and bright period of anticyclonic régime was, on the contrary, very large, especially at inland stations. Alternating with maxima of 70° or above were minima little above 32°, while occasionally the thermometer fell below freezing point. At Wisley fruit blossom was damaged by frost on the 16th, and potatoes, as well as fruit blossom, suffered on the 26th. At Oundle the observer noted.—“Severe frost on the 26th; potatoes and orchard blossom badly cut.” The area of damaging frost was not, however, very extensive. At Isleworth the observer noted.—“The finest April for 34 years with the possible exception of 1893. No frost; favourable in gardens.” At Meltham the month was the finest April in 35 years with the exception of 1893.

After the unusually protracted rainy period continuing from late January or early February the soil was greatly in need of warm sunshine and active evaporation, and this was afforded by the dry air that accompanied the two dominating anticyclones. Over the major portion of England—practically the southern half—and at a few places in the east and south of Ireland, there was no measurable amount of rain from the 10th, 11th, or 12th to the 29th or 30th, a period of absolute drought of 18 to 20 days, while at some places in the south and south-east of England, including most of the metropolitan area, the first two days of May were dry also. Along the coastline of the south of England rain, with local thunderstorms, accompanied a shallow depression over the Channel on the 29th or 30th, the fall, although slight generally, being heavy locally. Some of the normally wettest places in the south-west of England were as dry as the south-east. At Princetown the only rain between the 11th and 30th was 0.06 in. on the 22nd; at Penzance and Scilly there was absolute drought for 19 days, and at Ashburton and Falmouth for 20 days.

Rainfall.—Over England and Wales generally the rainfall, expressed in a percentage of the average was 62, and in Ireland 72, but in Scotland, owing to heavy falls in the west, it was 106. At all stations in the eastern half of Scotland there was much less rain than the normal. At Wick and Nairn the fall was only 60 per cent. of the average, and at Aberdeen only 28 per cent. At Glencarron, on the other hand, the percentage amounted to 166, at Poltalloch to 171, and at Fort William to 185. In the north-eastern and eastern counties of England the percentage was less than 40 generally, falling to 31 at York, 30 at Cockle Park, 22 at Hull, and 18 at Durham.

Temperature was above the normal throughout the entire Kingdom. An occasional day was rather cold for the time of year, but over the country as a whole each week had a mean temperature considerably in excess of the normal. The temperature of the sea surface water was slightly below the temperature of the air, the difference being more marked on the north-east coast of England than elsewhere. Fog occurred on some part of the coast almost daily, but it was generally restricted in its area, and more prevalent along the western than the eastern coast. The most foggy periods were between the 1st and 5th, the 16th and 22nd, and from the 28th to the 30th. On these dates fog was reported on some parts of the north-east as well as the west coast.

Bright sunshine exceeded the normal at all the stations except Stornoway. In the east of Scotland, nearly the whole of England, and the greater part of Ireland the total number of hours was more than 200, in many localities more than 240 hours. At Seskin (Carrick-on-Suir) and Haverfordwest it exceeded 260 hours. The most striking excess on the average was at Westminster, where the daily mean of 7.2 hours represented a percentage of 191. At Durham the percentage was 179, at Strelley 163, Cheadle 162, Birr Castle 161, and at several other places about 150.