

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 OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

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SUMMARY OF OBSERVATIONS.

Pressure, Winds and Weather.—The distribution of atmospheric pressure during May was unusually variable, so that it is difficult to divide the month into periods exhibiting any approach to definite types of conditions. Cyclonic and anticyclonic systems were always on the move, and in nearly all instances their centres were outside the British Isles, to east, west, north or south. The highest barometer readings occurred in extensions over these islands of Continental or Arctic anticyclones. On the 6th and 7th values were above 30.3 in. at most of our southern stations; on the 19th a reading of 30.41 in. was recorded at Stornoway in a high pressure area which had spread down from the north; and on the 28th the mercury reached 30.47 in. in Shetland, the centre of the system, with the barometer above 30.5 in., being on the Norwegian coast. Numerous disturbances were indicated in the course of the month on the north-west quarter of the Atlantic, but all moved along paths to the north-eastward, the centre of one passing close to the Farøe, while the others crossed Iceland, or moved up Denmark Strait, between Iceland and Greenland. Some of these depressions were very deep, the barometer descending below 29 in. One which appeared beyond the south-west of Iceland on the morning of the 1st, advanced due eastward at a very slow rate, not reaching the Farøe until the morning of the 4th. On its approach the barometer at Stornoway fell rapidly to 28.89 in. on the 3rd, the only record in this country below 29 in. during the month. The centre then moved to the north-eastward, and soon disappeared beyond the Arctic Circle. Several disturbances visited Southern Europe. One of these, which appeared over northern Italy on the 6th, followed an erratic path to Spain and Western France, and finally dispersed over north-eastern France on the 11th. The only depression whose centre crossed the British Isles travelled along an unusual path. It was indicated to the north-westward of the Azores on the 9th moving south-eastward. Altering its course to the eastward it reached Portugal on the evening of the 10th, then followed an irregular path to Brittany by the evening of the 12th. On the 13th and 14th it moved northward through the western channels to the Irish Sea, the barometer falling to about 29.6 in. Subsequently the depression crossed the south of Scotland to the North Sea, and eventually dispersed on the 16th, between Shetland and Norway.

Owing to the proximity of one of the Icelandic disturbances the range of pressure during the month over the northern half of these islands exceeded an inch, and at Stornoway it amounted to 1.52 in. In the south, however, no deep depressions were experienced, so that the range at most of the southern stations was less than $\frac{1}{2}$ in. The mean pressure results for the whole month show that the highest values, above 30.05 in., were over Sweden and eastern Germany, with a belt of relatively high values, above 30 in., stretching across the North Sea and England to Brittany and the Bay of Biscay. This belt separated a shallow low over western Europe, below 30 in., from an extensive depression having its centre off the south-west of Iceland, where the barometer was 29.6 in. At the home stations the mean results ranged from 30.06 in. at Kew Observatory to 29.95 in. at Birr Castle and Castlebay. The distribution differed considerably from the normal, and as a result of the ever-changing position of the various pressure systems the winds were distributed through every quarter of the compass.

In the opening days of the month the depression to the southward of Iceland was marked by a considerable gradient for winds from between West and South over these Islands, so that the force of a strong breeze was exceeded in many parts of the country. The conditions, however, were not of a stormy character, a strong gale (force 9) being noted at Malin Head on the 1st and 2nd, and a gale (force 8) at Holyhead, Pembroke, Portland Bill, Nottingham and Spurn Head on the 3rd. This absence of very rough weather is confirmed by the records from anemometers which show that the only instances during the month of wind velocities at the rate of 50 miles an hour and upwards in gusts of short duration were 58 miles at Llanelugrad on the 2nd, 52 miles at Quilty and Shoburness, 55 miles at Holyhead, 57 miles at Pendennis Castle, and 64 miles at Llanelugrad on the 3rd. Under the influence of other disturbances near Iceland a Southerly gale was felt at Stornoway on the 8th, and at Stornoway and Malin Head on the 25th. These exhaust the instances of gale force at the telegraphic reporting stations.

A remarkable feature of the weather of the month was the general absence of rain in all parts of the kingdom, the number of days on which precipitation was measured being less than 10 at the great majority of stations. Continuous periods of 15 or more rainless days occurred in many districts—16 days from the 14th at Skegness, from the 15th at Heathfield, and from the 16th at Killiney and Inch; 17 days from the 14th at Colwyn Bay and Sandgate, and from the 15th at Eastbourne, Brighton, Barnstaple, Hidcote Campden and Lampeter; 18 days from the 11th at Plymouth, Falmouth and Penzance, and from the 14th at Rhyl and Bridlington; 20 days from the 5th at Edgbaston, and from the 12th at Newcastle, Wicklow; and from the 4th, 21 days at Rugby

and Sparkhill; 22 days at Wistanstow; 23 days at Sheepstor; and 26 days at Fowey. In some of these cases the drought remained unbroken at the close of the month, and extended far into June.

Notwithstanding this droughty feature there were some heavy rainstorms. The most windy days of the month brought with them large amounts of rain to many localities, without being accompanied by thunderstorms. On the 1st Gruline (Mull) registered 2.1 in., Cruachan 1.5 in., Fort William 1.3 in., Ford (Argyll) 1.2 in., and Caragh Lake (Kerry) and Oban a little over an inch; on the 2nd there was a fall of 2.2 in. at Caragh Lake, and an inch or a little over at Sheepstor, Valencia Observatory and Broadford (Clare); and on the 3rd 1.4 in. at Graythwaite (Ulverston), at Bethesda 1.2 in., and 1.1 in. at Uldale, Pant-yr-Eos and Eskdalemuir.

With the arrival over the Bay of Biscay and the north of France of the shallow depression which had previously worked round from Italy, conditions became favourable for thunderstorms over southern England on the 10th, and on the three following days the greater part of the kingdom was affected. In many instances the storms were reported to be violent and the thunder of unusual intensity. Numerous churches and other buildings in various districts were damaged by the lightning, and horses and cattle were killed. Locally, also, there was considerable destruction caused by the overflowing of the smaller rivers, but the returns disclose very few cases of large falls of rain. On the 11th, Valencia Island had 1.2 in.; on the 13th Burnley and Newton Rigg 1.7 in., York 1.3 in., Carrigallen (Leitrim) 1.1 in., and Belfast an inch; and on the 14th Burnley had another 1.3 in., making 3 in. in 2 days. At Kirkby Lonsdale 0.5 in. fell in half-an-hour. From the 15th to the 24th there were only a few sporadic thunderstorms or heavy local rains, 1.2 in. at Kinlochewe on the 22nd, but the 25th to the 27th were again marked by severe thunderstorms, and a few heavy rainfalls. On the 25th Wokingham had 1.8 in. of rain, Winslow 1.6 in., Watergate and Watlington 1.4 in., and Reading 1.3 in.; and on the 26th Claypole (Lines) 1.5 in. in 6½ hours, and Bromyard in 8 hours. Belvoir Castle 1.4 in. in 9 hours, and Abergavenny during the day; Great Billing an inch in 4 hours, and another inch in the next 5 hours, or 2 in. for the day. At Upwey (Dorset) 1.3 in. fell in 1 hour 25 minutes. Much damage resulted from floods and lightning. At Epsom, in the night of the 25th, 1,797 lightning flashes were registered in 6 hours 50 minutes, the maximum number in one minute being 22, and in one hour 581. Another very violent storm broke over a large part of England on the 31st, rainless in some places, heavy rain in others, 1.1 in. at Newdigate (Surrey), 1.3 in. at Offley, 1.6 in. in one hour at Sevenoaks, 2.44 in. in 50 minutes at Epsom, 2.86 in. in 3 hours, 3.6 in. at Banstead. At Epsom there were 159 flashes of sheet and fork lightning in 15 minutes, and within a radius of 3 miles, 3 persons were killed, 14 injured, 4 horses killed, and 3 hayricks fired.

Mildness was an almost constant feature of the month, so that the mean temperature was everywhere above the average, by more than 4° at many stations, nearly 5½° at Buxton and Prestwich. At Southport the mean temperature was the highest May value in 40 years. The warmest days were at the close, temperature ascending to 80° and upwards on the 29th to 31st, to 83° at Balmoral and Fort William on the 29th. Frost occurred on various dates, the lowest record being 27° at Eskdalemuir on the 6th. The touch of cold which is usual about the 12th was on this occasion delayed until about the 21st, but it affected the day readings mostly, a few maxima being below 50°. Very few of the night readings indicated frost in the shade.

Fog was very prevalent on the western coasts from the 5th to the 9th, 13th to 18th, and 23rd to 26th; on the south coast, 11th to 18th, and 23rd to 25th; and on the east coast, 12th to 18th, and 26th to 31st.

The sea water was everywhere warmer than in April, by as much as 9° off Eastbourne and Margate, and 10° on Cromarty Firth. Nevertheless the water was colder than the air on shore in nearly all localities, to the extent of 6° at several eastern stations, and 7° off Plymouth and at the entrance to the Mersey.

Rainfall.—In a few cases the heavy thunderstorm rains caused the aggregate amount for the month to be above the normal, but generally the precipitation was well under the average, by more than an inch in many localities. Killarney returned 5.5 in. (184 per cent. of the average), Rothamstead 3.6 (181 per cent.), and Fort William 6.1 in. (161 per cent.), but Guernsey had only 0.6 in. (31 per cent.), and Birmingham 0.71 in. (32 per cent.). The largest totals were 10.1 in. at Glenquoich (183 per cent.), and 8.7 in. (115 per cent.) at Seathwaite, but those below an inch were very numerous, down to 0.4 in. at Stifford and Bridlington. Rain fell on 20 days at Caragh Lake, but as a rule the frequency was small, only 4 days in several places.

Bright Sunshine.—There was an all-round excess of sunshine, by more than 50 hours at many stations. Hastings had 286 hours (122 per cent. of the average), Felixstowe 286, Penzance 282, Douglas 279 (123 per cent.), and Scilly 278 (117 per cent.), being 59 or 60 per cent. of the possible duration, while Fort Augustus had 160 hours (118 per cent. of the average), and Hull 150 hours.