

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, AND AT GIBRALTAR AND MALTA, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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UNSETTLED at FIRST: DRY in the SOUTH and EAST.

During the first ten days of the month the weather was unsettled, and the wind blew with considerable force at times; subsequently quiet conditions prevailed except on the 19th-20th when a line squall crossed the country. In the north the unsettled weather was prolonged through the first twenty days of the month.

Until the 7th none of the centres of the depressions on the Atlantic came over this country, but their lateral extension produced a steep gradient at times. A slight gale was experienced at some northern and north-western stations on the 1st, and there was a gale over a wider area on the 2nd. At Southport the velocity in the gusts reached 22 m/s (metres per second), at Eskdalemuir 23 m/s, and at Edinburgh 27 m/s. The Westerly and South-Westerly winds that prevailed during the next few days seldom exceeded a strong breeze, but on the 6th a Southerly gale, beginning in Ireland, spread to all parts of the Kingdom; the highest velocities in the gusts were 22 m/s at Shoeburyness, 23 m/s at Warlingham, 24 m/s at Weaver Point, and 28 m/s at Pendennis Castle.

More or less rain was experienced almost daily. The actual quantity was not large, the highest measurements being about 25 mm. at Dartmoor and Pen-y-Gwryd and about half that amount at other places on the 6th.

The first depression to pass directly over the Kingdom appeared on the 8th, when its centre travelled eastward over the north of Scotland and subsequently reached Scandinavia and the Baltic (track B on the map on page 39.) A general gale from the Westward accompanied its progress over this country, and a gale from the North-Westward was experienced in its rear during its passage across the North Sea. The velocity in the gusts was greater than at any other period of the month. On the 8th 27 m/s was recorded at South Shields and Spurn Head, 28 m/s at Rosyth, 29 m/s at Scilly, 30 m/s at Paisley, and 31 m/s at Eskdalemuir; and on the 9th 27 m/s at Holyhead, and 29 m/s at Southport and Aberdeen. Over a very extensive area the velocity in gusts exceeded 20 m/s both on the 8th and 9th. The disturbance brought no heavy falls of rain, and at many stations the measurement was very slight. Thunderstorms were experienced in several localities both on the 7th and 8th.

After the 10th a decided increase of pressure extended over these Islands from the south-westward, and during the remainder of the month the pressure distribution was mainly anticyclonic. There were, however, some breaks in the north, and between the 11th and 13th, and again on the 20th, the passage of V-shaped disturbances (tracks C and D) brought considerable modification in the pressure distribution over the Kingdom generally, while a very shallow depression on the 22nd, track E, affected the distribution locally. The wind, after falling light as this country came more under the influence of the anticyclone, blew a slight gale from the Northward on our south-east coasts on the 13th, and a Westerly and South-Westerly gale in Scotland on the 16th and 19th. In the rear of a clearly defined V-shaped depression, marked D on the map, a brief gale from the North-Westward occurred on various parts of the northern and western coasts on the 20th. None of these depressions was accompanied by a generally heavy rainfall, but some stations in Snowdonia received more than 35 mm. on the 11th; on the 18th about 40 mm. fell at Glencarron and Fort William, and on the 19th as much as 54 mm. was reported at Copper Mill, Snowdonia.

After the 24th the highest pressure became established over our north-western and northern districts, and the wind shifted to the North-East and increased in force. On the 27th the velocity in gusts reached 27 m/s at Brighton and 22 m/s at Dover. Scarcely any rain fell during this North-Easterly type of weather, and the sky was cloudless for long periods, while the air was very dry. By the end of the month the anticyclone had passed on to the Netherlands, and the North-Easterly wind current over these Islands had been succeeded by light airs from various quarters.

Barometer.—The mean pressure and range of pressure was above the normal. (See map 1 on p. 39). On at least 11 days the pressure distribution over the United Kingdom was favourable for winds from between West and North, and during about half the month the distribution was anticyclonic over the greater portion of the country. The lowest readings over England and northern Ireland were registered while a depression lay off the western coasts on the 7th, but in Scotland the lowest point was reached on the 8th, when pressure fell to 969 millibars, a lower figure than during either March or February. After the 10th the barometer rose to about 1,030 millibars on the extreme south-west coasts, but the maximum pressure of the month was reached on the 27th, when the barometer touched 1,035 or 1,036 millibars over the whole of Scotland, 1,034 millibars in England North-East, and 1,033 millibars in Ireland North.

Rainfall.—Until after the 8th rain was of almost daily occurrence in all districts, and it continued very frequent in the extreme north and west until much later in the month. In all the more southern and eastern regions,

however, the subsequent weather was mostly dry, no rain falling over considerable tracts of country during many consecutive days, and the amounts during the occasional unsettled intervals being small. Very few stations away from the mountainous districts of the west and north-west had as much as 15 mm. within 24 hours through the entire month, and at many the greatest fall was much less. Over most of Scotland and at various places in the north of Ireland and the north-west of England the total fall exceeded the average. At Fort William the percentage of the normal was 200, at Pottaloch 198, and at Glencarron 173. At Markree Castle the value was 157 and at Stonyhurst 152, but generally there was a large deficit. At a great number of stations in the Midlands, north-eastern, and south-western England there was less than 50 per cent. of the average; at Wakefield and Strelley the value was only 40, at Rousdon 36, Durham 30, and at Cockle Path, Morpeth, 29. Locally in the adjacent part of Scotland the percentage was even lower; at Marchmont the figure was only 24.

Over England and Wales as a whole the percentage was only 78, but in Ireland it was 95, and in Scotland as high as 129. At seven stations in England and Ireland, where rainfall was measured twice within 24 hours—at 9 a.m. and at 9 p.m.—the mean fall was rather greater during the daytime, 19 mm., than at night, 17 mm. During the preceding two months the fall during the night had been rather greater than that during the day. Measurements at 12 other stations for the nine hours ending at 6 p.m. and for the 15 hours ending at 9 a.m., show that each period received about its proportional amount on the whole. For the nine hours the mean value was 11.4 mm., and for the 15 hours 20.8 mm.

Temperature was slightly below the average in several parts of England. The advance from March was in fair accordance with the normal seasonal increase, but at most stations in Great Britain the rise in the mean temperature was due to an increase in the maximum rather than in the minimum readings. Frost occurred rather frequently, and was seldom severe. As a rule, the lowest minima were recorded about the middle of the month and the few subsequent nights. Low maxima for the time of year were not uncommon, some occurring on the 6th or earlier, many more about the 13th, and a few on the 25th. Maximum readings below 45° were registered on the 13th at stations scattered over a very large area; 44° at Tunbridge Wells, Southend-on-Sea, Chelmsford, Copdock, and Little Massingham, 43° at Ridgewell, Addington Hills, and Matfield, and 42° at St. Leonards and Cromer. On the 25th the maxima were 45° or 44° in many parts of southern and south-eastern England. Until nearly the middle of the month the maxima were generally much below 55°, except in the extreme south-west, but some eastern stations recorded a reading of 60° on the 4th, and the same value was registered locally in the north-east and north on the 11th. From the 16th onward maximum readings of 60° or above were recorded more frequently and over a wider area, and late in the month, when the sky was practically cloudless the thermometer rose a little beyond 70° at several English stations and in a few Irish and Scottish localities.

The mean temperature of the water of the River Derwent, at Belper, was 47.5, and the mean temperature of the air 45.5.

The level of the underground water at Kew Observatory varied between 294 cm. above M.S.L. on the 1st and 250 cm. on the 30th.

Coastal Fog was rather common in various parts of the west and south coasts with the mild South-West winds of the early days of the month, and was also experienced at times with the light and more variable winds later. Along the east coast the weather was generally clear until the establishment of the anticyclonic conditions towards the close of the month.

Bright Sunshine was less abundant than during April of last year, but it exceeded the normal in Scotland East and West, and all parts of England except the south-west. In the extreme north of Scotland the mean daily duration was only 3.5 hours, or 1.1 hour less than the normal, and locally at Deerness the percentage of the average was as low as 51. In the south-west of England and in some parts of Ireland the deficit was also rather marked. At Falmouth the percentage of the average was no more than 76 and that at Markree Castle 86. At Durham the corresponding value was 132, at Morpeth and Blackpool 126, and at Margate 123.

Aurora was observed at Balta Sound and Deerness on the 7th, at Balta Sound and Wistanstow on the 8th, at Balta Sound and Aberdeen on the 16th, and at Balta Sound only on the 19th.

Haze.—"All through April," remarks the observer at Southport, "the sky has been notably hazy—of a brownish tint (not greyish-white as in July-August, 1912). The strongest sea wind brought no deep blue sky, and with Easterly winds insolation was much reduced. Small stars were always invisible. In February, 1915, the reverse was the case. The sky was of an exceptionally deep blue by day and very brilliantly starlit at night."