

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 ORGANIZATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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FORTY-FIRST YEAR.

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Stormy and Abnormally Mild. Rainy in North and North-West, Dry in East and South.

The first day brought a Southerly to South-Westerly gale over the United Kingdom, due to a large and very deep depression, marked A on the map, which travelled north north-eastward beyond our north-western and northern coasts. Force 10, Beaufort Scale, was very common, and several anemograph stations recorded gust velocities exceeding 30 m/s; at Eskdalemuir 34 m/s was attained, Southport 38 m/s, and at Weaver Point 39 m/s. The accompanying rain, although general, was not very heavy except locally; at Meltham there was 26 mm. and at Allan's Green 32 mm. Thunderstorms occurred in Ireland and in Yorkshire. Many large trees were uprooted and much structural damage wrought by the gale in various districts. This depression was followed immediately by another which moved on a similar path, track B. It was, however, less deep, and the gales accompanying it were less severe and widespread, the greatest gust velocity being 30 m/s at Pendennis Castle on the 2nd. Gales continued locally in some exposed places on the 3rd, and by the 4th the passage eastward of another disturbance off our northern coast, track C, was accompanied by a South-Westerly gale in most parts of the country; at Edinburgh the gusts reached 31 m/s. The South-West to West wind continued strong, with a gale locally, during the two subsequent days. On the arrival of a fresh depression centred to the north-westward of Scotland on the 6th, track D, the gale area became enlarged, and on the 7th, when the direction had veered to the North-Westward in the rear of the depression shown by track E, a general gale was again experienced; at Aberdeen and Eskdalemuir the gust velocity reached 29 m/s. On the 6th heavy rains fell in Snowdonia, and on the 7th there was 36 mm. at Dyce, but generally the precipitation about this time was slight or moderate. By the 9th further depressions travelling between Iceland and Norway had caused the wind to return temporarily to the Westward and increase considerably in force; in the extreme north of Scotland a gale was experienced both on the 9th and 10th. Another gale, with direction between South-West and North-West, occurred over a large portion of the Kingdom on the 13th and 14th, on the occasion of a depression moving east south-eastward from beyond Scotland to Denmark, track F. This disturbance grew deeper as it approached the south-west of Norway on the 13th, and the gale from the North-Westward in Scotland and over the North Sea region was very severe. At Dyce and Aberdeen the gust velocity reached 34 m/s, Paisley 32 m/s, and Southport 31 m/s. The wind was brought back to the Westward again on the 14th by another depression moving eastward beyond Scotland, track G, but gales were restricted mostly to the north of these Islands. Depressions far out on the Atlantic on the 16th and subsequent days caused the wind to back to South-West and South, but the force did not increase much until the 18th, when Southerly gales were felt in the extreme north-west. From the 19th till the 25th the conditions were very stormy, gales from between South and South-West or West being experienced in some part of these Islands daily. On the 19th and 20th almost all parts of the Kingdom were affected, but later gale force was confined generally to the northern and most western coasts. On the 19th Aberdeen recorded a gust velocity of 28 m/s, Eskdalemuir 30 m/s, and Paisley 32 m/s. On the 20th Quilty and Scilly had 30 m/s, and on the 21st there was a gust of 33 m/s at Edinburgh. The 23rd and 24th brought gusts above 20 m/s over a large area. Few heavy falls of rain accompanied these gales, but on several days local thunderstorms passed over the western and northern districts. In the west of Scotland, however, very heavy rains were general on the 24th and 25th, Glencarron and Fort William measuring about 85 mm. A landslip following the rain stopped railway communication between Fort William and Fort Augustus for some days. The remainder of the month was quiet except on the 28th and 29th, when slight Southerly and South-Westerly gales occurred on our most western and north-western coasts. During the whole month gale force was experienced at Stornoway on as many as 19 days, while the force of a strong breeze occurred on 30 days.

Barometric Pressure.—The trend of the mean isobars, map 1, p. 3, agreed well with the normal, but the actual readings of the barometer diverged greatly. In the Shetland region the mean was 4 millibars below the average, and in the Channel Islands as much as 8 millibars above it. The mean gradient was consequently unusually steep, especially in Ireland and Scotland.

Although the month was so unsettled, and strong winds and gales so frequent, only one depression, a V-shaped system, passed directly over these Islands. Local irregularities of pressure associated with the main depressions, but too small for their track to be traced accurately, passed over from time to time and exercised considerable effect on the wind. The deep depression of the 1st gave the lowest readings for the month in all districts, the values ranging from 969 millibars in Scotland North to 999 millibars in England South-East. The highest readings occurred on the 9th and 10th in the western and south-western parts of the Kingdom, on the 23rd in the south-east, and on the 31st elsewhere. The values ranged from 1,038 millibars in England South-East and the English Channel to 1,027 millibars in Scotland North.

Temperature.—Through the greater part of the month the temperature was abnormally high. During the first week the mean for most of the English districts was between 5° A. and 5½° A. (9° F. and 10° F.) above the average, and about 3°·4 A. (6° F.) in Ireland and Scotland, while the mean for the subsequent weeks ranged from 2° A. to 4° A. (3°·4 to 7° F.) above. For the whole month the departure from the average ranged from 2°·2 A. (4° F.) in the English Channel and about 2°·6 A. (4°·7 F.) in Ireland and Scotland to 4° A. (7°·2 F.) in the Midland Counties. Only twice since 1878 has the mean temperature for January been at all comparable with that under review, the years being 1884 and 1898. In Scotland the only January comparable for about 60 years was that for 1898.

At Hodsock the month was the warmest January for at least 40 years 280°·5 A. (45°·5 F.), the nearest approach to it being in 1884 and 1898, when the mean temperature was 279° A. (43° F.). At Isleworth it was the mildest January in a record of 34 years; and at Southport the temperature for the month was higher than in any January, February, December, or March in a record of 45 years. Observers in various parts of the Kingdom remarked on the forward state of vegetation.

The highest maximum readings occurred very early in the month, with strong winds from the South-Westward. On the 1st 288½° A. (60° F.) was recorded at Wistinstow, and on the 6th that value was reached or slightly exceeded at several stations in the north of England and North Wales, the highest value being 290° A. (63° F.) at Rhyl. At Kingstown there was a reading of 288½° A. (60° F.) on the 2nd and again on the 6th. At Kew the highest maximum was 286°·6 A. (56°·5 F.) on the 1st. This is a record for January, but in January, 1877, and also in 1910, 286°·4 A. (56° F.) was recorded. Further, very unusual maxima occurred with the strong Southerly and South-Westerly winds and gales between the 19th and 22nd, the thermometer rising to 287° A. and 288° A. (between 57° F. and 59° F.) at many stations. At Kew, Nottingham, and Leith the maximum was 283° A. (50° F.) or higher on 20 days, at Portland Bill and Birr Castle on 23 days, Falmouth 26, and at Scilly 29 days.

Scarcely any frost occurred, and, as a rule, the nights were extremely mild for the time of the year. Minimum readings above 280° A. (45° F.) were of very frequent occurrence in England, and several places in the southern counties had many minimum values as high as 283° A. (50° F.). At Nottingham there were only eleven nights with a minimum below 277½° A. (40° F.). At Lerwick the lowest reading for the month was 273° A. (32° F.), at Deerness 274° A. (34° F.), at Birmingham 273½° A. (33° F.), Malvern 274½° A. (35° F.), and at Bettws-y-Coed 275° A. (36° F.). Stations along the west and south-west coasts without frost in the screened thermometer were very numerous; at Aberystwyth the lowest minimum was 277½° A. (40° F.), and at Scilly 279° A. (43° F.). In England the coldest night generally was the 23rd, when the thermometer fell to 269° A. (25° F.) at a few stations, but on the 31st there was a minimum of 268½° A. (24° F.) at Wellington (Shropshire). The lowest reading in any part of the Kingdom was recorded at Balmoral on the 28th, the value being 267° A. (21° F.).

The temperature of the Sea Surface Water differed little from that of the air. Very few days were without Coastal Fog on some part of the west and south-west coast, but it seldom extended over a large area. Fog on the east and south coasts was infrequent. At Belper the mean temperature of the water of the River Derwent was 280°·1 A. (44°·8 F.), that of the air 279°·9 A. (44°·5 F.).

Rainfall.—Rain was generally heavy in the north and extreme north-west, and light in the east, south, and parts of the midlands. Over large areas in the latter districts the amount was only about 50 per cent. of the average; at Rounton only 24 per cent., Teignmouth 33, and Hereford and Hull 36 per cent. At Aspatria the value was 174 per cent., and at Fort Augustus 211 per cent. At Scarborough only 8 days had rain, and at Oundle 9 days. In the far north and west many places had more than 27 days; at Valencia, Dunfanaghy, and Kilmarnock rain fell on 30 days, and at Rothesay on 31 days. The difference between the day and night falls was again very slight. The level of the underground water at Kew varied from 407 cm. above M.S.L. on the 9th to 307 cm. on the 31st.

Bright Sunshine was less than the average generally in the southern districts, but above it in the north as well as at a few stations in the south-east. At Woolacombe the percentage of the average was only 64, Ballinacurra 67, and Ventnor 72, but at York the corresponding value was 131, at Birmingham 138, Aberdeen 156, and Westminster 163. At Aberdeen the month was the brightest January since 1881.

Aurora was observed at Aberdeen, Alston (Cumberland), and Kirkby Lonsdale on the 11th, and again at Aberdeen on the 12th.

A sharp Earthquake shock occurred at Shrewsbury, Craven Arms, and Oundle at 7.30 p.m. on the 14th. The rumbling noise lasted 10 seconds; houses were shaken and windows rattled. At the same time earth tremors were felt at Fulbeck.