

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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DRY AND DULL.

Pressure, Winds and Weather.—The month began with an anticyclonic circulation round a centre, with the barometer above 1,040 millibars, off the south of Ireland. This moved slowly southward and finally extended across France to South Germany, while the United Kingdom gradually came under the influence of large depressions over the Icelandic region. The chief of these travelled east-south-eastward to Norway and Denmark between the 4th and 6th, at the same time gaining depth, and subsequently passed on to central Europe. On the 9th a great change in the pressure distribution set in. It was brought about by the development of a large anticyclone over the extreme north of Europe and its extension over Scandinavia to these Islands. By the 12th the anticyclone had increased greatly in intensity and moved southwards, and at its centre over the south of Sweden, the barometer marked readings above 1,046 millibars. The distribution gave Easterly winds in the United Kingdom on the 11th, and a small secondary depression made a temporary appearance over the north-east of France. After the 12th the anticyclonic centre moved westward to Scotland and gradually lost intensity, the maximum reading on the 16th being 1,019 millibars. From that date it travelled slowly in an easterly direction, but finally it moved away over Germany to the southern-central countries and Italy. During the prevalence of the anticyclone over these Islands the wind was generally light or moderate, but associated with the depression over France on the 11th, there was a gale from the eastward at Dungeness and Great Yarmouth, and on the 12th at Pendennis Castle, while on the 13th and 14th the North-easterly wind continued strong to a gale in the south-eastern corner of England. On the 19th the cyclonic systems on the Atlantic began to encroach on our western and northern coasts. The main low-pressure centres, however, continued to move on a track far to the northward, while small, secondary depressions passed more directly over these Islands. On the 26th and 27th the wind over the British Isles was North-Westerly to Westerly, but towards the end of the month pressure again became low over the vast area between the Azores and Iceland, and the wind over this country became South-Westerly. The deepest depression of the month was centred off the south-east of Iceland on the 31st, the barometer standing below 962 millibars.

The depressions to the westward and northward of the United Kingdom, were attended by strong winds and gales both before the high-pressure system appeared and after it departed. On the 25th and 31st the gales were experienced over the greater part of the Kingdom, otherwise they were confined to the western or north-western and northern coasts. Their force was generally no greater than a strong gale, although some of the squalls and gusts were of great violence. On the 4th a Westerly gale was experienced in the north-west and north of the Kingdom, and also on some parts of the west coast, the greatest velocity reported being in gusts of 26 metres per second at South Shields and Southport and 28 metres per second at Hexham. On the 5th and 6th the same parts of these Islands felt a Westerly to North-Westerly gale in the rear of the deep depression that travelled from Iceland to Norway. At Southport, on the 5th, some of the squalls reached the velocity of 28 metres per second, and at Quilty and Scilly of 26 metres per second. As the northern anticyclone extended towards this country the wind backed from the Westward to South and South-East, or East, and it was not until the 24th that a wind current from the Atlantic again had access to these Islands generally. On the 23rd, however, gale force from South-West was reached at Stornoway and Malin Head. On the 24th a South-Westerly to Westerly gale blew in the north of the Kingdom, the velocity of the gusts being 23 metres per second at Aberdeen and Hexham, 24 metres per second at Eskdalemuir and Paisley, and 26 metres per second at South Shields. The South-Westerly gale on the following day was general but was of greater force along the western and northern coasts. The velocity in gusts reached 26 metres per second at Holyhead and Southport, 27 metres per second at Aberdeen and Alnwick Castle, 29 metres per second at Quilty and Hexham, and 32 metres per second at Eskdalemuir. On the 28th Southerly to Westerly gales occurred in the extreme north of these Islands, and on the 30th a South-Westerly gale sprang up in some parts of the western and northern districts. At Hexham the gust velocity reached 32 metres per second. The deep depression of the 31st brought a South-Westerly gale over a larger area, practically the whole of the west and north being affected. The velocity in gusts attained 25 metres per second at Holyhead, 26 metres per second at Pendennis Castle, 31 metres per second at Eskdalemuir, and 34 metres per second at Hexham.

The general character of the weather with the Easterly winds was dry and cold, and with the Westerly winds rainy and mild. As a whole the month was both dull and dry. There were a few isolated exceptions to this statement which are enumerated in the paragraphs below. The sky during the first week was very variable, and sunshine more abundant over the Kingdom generally than during the period of the settled anticyclonic conditions. A little snow fell locally early in the

month and during the subsequent cold spell but the precipitation was very slight everywhere, none being recorded for about a fortnight at many stations in the south-west. At Newport (Mon.) there was an absolute drought of 17 days; there was no precipitation between the 11th and 27th; at Ventnor there was no rain from the 11th to the 26th, 16 days; and at Weymouth and Weston-super-Mare there were 15 days with no measurement, while at a number of other stations—mostly in the south-west—there were 14 days. Some of the depressions that affected the north and north-west early in the month brought heavy falls, notably that of the 8th, when more than an inch was recorded over a large area in Scotland and the north of England. With the return of the South and South-West winds, falls exceeding an inch occurred at various stations in the north and north-west. On the 24th there was 1.25 in. at Fort William, followed by 3.22 in. on the 25th, and on one of those dates many places registered more than an inch. At Pen-y-Gwryd, Snowdonia, the figure on the 24th equalled 3.65 in. Further large quantities fell in the north-west and north between the 28th and 31st; at Pen-y-Gwryd, on the 29th, 3.05 in., at Glencarron on the 30th, 1.98 in.

There was frost in the south at the opening of the month, with calm, anticyclonic weather, but from the 3rd to the 10th temperature exceeded the normal. With the extension towards these Islands of the Scandinavian anticyclone and the resulting shift of wind to the Eastward, a spell of frost, due to the drift of cold air from the Continent, began on the 11th and continued until the 23rd in the west and north, and until the 24th in the east and south. During this cold spell, although the mean temperature was many degrees below the normal, very low minima were seldom recorded. Occasionally in Scotland the thermometer dropped to 20° or slightly lower, but the marked divergence from the normal was due mainly to the low maximum readings. On many consecutive days the thermometer rose but a few degrees above freezing point in central and southern England. The greatest cold in the south-east of England occurred immediately before the change to milder weather, which came in London after "three white frosts." On the 23rd the maximum temperature at Kew, with a dull sky, was 31°, and at night, when the sky cleared, the minimum was 19°. Similar minimum readings were registered over a considerable area. The remaining week was remarkably mild; in some parts of the Kingdom the thermometer rose to 55° or a little above.

The mean temperature of the sea surface water was a few degrees lower than in December, and on most parts of the coast it was below the average. On the east coast of Scotland, however, it was above it. All round the coast the temperature of the water was higher than the temperature of the air on land.

Coastal fogs were rather frequent. Few days passed without fog being observed on some part of the western coasts, and the phenomenon was not uncommon on the south and east coasts.

Mean Pressure.—As will be seen by Chart 1, p. 3, the mean pressure distribution for the month was similar to the normal. The mean height of the barometer, however, exceeded the average very considerably. To the north of Scotland the excess was 4 millibars, and over the south of England about 6 millibars. The mean gradient was consequently rather steeper than normally. In Iceland the mean pressure was 15 millibars lower than in the north of Scotland, while in a large anticyclonic area including the north of the Spanish Peninsula, the Bay of Biscay, most of France, and extending eastward across South Germany to Austria, it was 8 millibars higher. The highest reading in the British Islands, 1,045 millibars, occurred in the south-west of England with the anticyclone of the 1st, while the lowest value was recorded on the 31st in Shetland, the value being 977 millibars. In the latter region the range of pressure during the month was unusually large. On the 13th the barometer touched the high level of 1,041 millibars, or 64 millibars above the reading of the 31st. In the south-east of England the range was much less marked, amounting to only 37 millibars. On the 1st the figure was 1,037 millibars, and on the 6th 1,000 millibars.

Rainfall was very generally deficient. Over a large portion of England the fall was less than 50 per cent. of the average, and at several southern and south-western stations less than 30 per cent. At Southampton and Bath the percentage was 23, and at Totland Bay 15. Some Scottish localities and a few places on the east coast of England experienced an excess. At Dunrobin the percentage equalled 125, at Nairn 139, at Spurn Head 137, and at Yarmouth 145.

Bright Sunshine exceeded the average in a few parts of Scotland. At Fort Augustus the percentage of the average was 155. At Brighton and Jersey there was also an excess, the respective percentages being 114 and 115. Over the Kingdom generally there was a large deficiency. At Armagh the percentage of the average was 40, at Dublin 35, and at Glasgow only 32, while in many parts of England it was less than 50.