

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 CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

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SUMMARY OF OBSERVATIONS.

General Summary.—For the winter season the weather of the month under review was as a rule of an exceedingly quiet character, but there was a notable exception in the severest general gale which has been experienced in these islands for many months. There were during February five well-defined types of pressure distribution. Between the 1st and the 6th two anticyclonic systems were transferred slowly across the country, the first from the south-westward, the second from the westward, both eventually passing on to Russia. They were accompanied by sharp, cold weather, severe frost being felt in all districts, the thermometer in the shade sinking to between 10° and 20° at a large number of stations, and in several localities the mean temperature of the period was from 5° to more than 7° lower than usual. Light variable breezes prevailed, few places experiencing more than a moderate breeze. In the night of the 6th the conditions underwent a complete change. A deep depression appeared between Iceland and Færøe, and remained almost stationary until the morning of the 12th, the barometer during part of the time being below 28.5 ins. in the east of Iceland. The system embraced the whole of the British Isles, where temperature increased to about the normal, and both the frequency and the quantity of the various forms of precipitation were in excess, but the winds were singularly weak, rarely rising to the force of a fresh or strong breeze on any section of the coast. The only instance of a gale at the telegraphic reporting stations was at Malin Head in the night of the 8th, when the barometer fell 0.5 in. in six hours, and the wind, which was previously only a fresh breeze, increased rapidly to a whole gale from South. With the morning of the 12th the influence of this system was abruptly terminated; a new depression, with the minimum of pressure below 29 ins., advanced quickly from the Atlantic across our southern districts, and dispersed after two days over central Germany. Round the system there was a complete cyclonic circulation of the wind, the force over Scotland being very light, while over Ireland and England a strong to a high wind was common to all districts, and at some of the western and south-western coast stations a fresh or strong gale was experienced. A whole gale from North North-West prevailed at Scilly in the afternoon and evening of the 12th, the fiercest gust having a velocity of 71 miles per hour. Rain, sleet or snow fell generally during the passage of the disturbance. During the nine days, 14th to 22nd, pressure was highest to the south-westward, over the Bay of Biscay or the Peninsula, while disturbances of considerable depth passed eastward from the neighbourhood of Iceland, mainly beyond the Arctic Circle, so that South-Westerly to Westerly winds largely prevailed on our coasts, but with the following exceptions they were of no great strength. In the night of the 16th a disturbance, which had previously been indicated to the south-westward and southward of Iceland, passed between Orkney and Shetland to the Norwegian coast, subsequently going on to the Baltic and Russia. It occasioned a decided increase of Westerly wind over these islands, to a strong or high wind at nearly all stations, a fresh gale at Donaghadee, and a strong gale at Malin Head. This was soon followed by weather of the most tempestuous character, not only on our own coasts, but over a large portion of the Continent also. Details of this period given on page xv. From the 23rd to the close of the month the distribution of pressure was anticyclonic, the winds light, and the weather mainly fair and dry, with temperature above the normal.

Fog was experienced in various districts very frequently, mainly on the 9th and 10th, 14th and 15th, and the 28th, unusually dense on the last day. Thunderstorms were fairly numerous, on the 9th at Malin Head, 17th at Fort William, 18th at Laudale, 19th general over north-eastern England, 20th at Markree Castle and locally in eastern England.

Ground frosts were often experienced, and the progress of vegetation was retarded to a marked extent. The observer at Belvoir Castle notes—“Frost on the ground almost throughout the month has kept the grass from growing, the pasture lands look very bare, genial showery weather will be welcome for them, but the land is in good condition for corn sowing.” A remarkable feature is the continued dryness of the weather over the south of Ireland. The rainfall at Waterford during 1906 was below the average by 10.3 ins., at Killarney 10.5 ins., and at Roche's Point 16.8 ins. For the first two months of this year these stations return a deficiency of 5.6 ins., 6.6 ins., and 5.8 ins. respectively.

For the month as a whole pressure was in excess over the south-western half of the kingdom, in defect elsewhere; the winds were mainly Southerly to Westerly and North-Westerly in direction; temperature was deficient; rainfall was less than usual over the greater part of the country; and bright sunshine was in excess nearly everywhere.

Pressure.—Mean at 8 a.m. ranged from 30.09 ins. at Jersey, and above 30 ins. generally over southern England and Ireland to less than 29.8 ins. over northern Scotland, 29.62 ins. at Sumburgh Head. The values were below the average over Scotland and down the east coast of England, the deficiency exceeding 0.13 in. at Sumburgh Head. In other districts the results were in excess, by as much as 0.14 in. at Valencia. The distribution of mean pressure differed to some extent from the normal, and the gradient was decidedly steeper. Highest readings were registered on the 2nd, 30.61 ins. at Oxford, on the 5th, 30.59 ins. at Blacksod Point and Donaghadee, and on the 28th, when Oxford again touched 30.61 ins. Lowest readings occurred on the 8th, 29.15 ins. at Malin Head, on the 12th, 28.95 ins. at Roche's Point and Holyhead, and on the 19th, 28.13 ins. at Nairn. Range amounted to 2.4 ins. at Aberdeen and Nairn, and exceeded 2 ins. over Scotland and the extreme north of England and of Ireland, diminishing southward to 1.4 in. at Jersey.

Depressions.—As was the case in January most of the disturbances which affected any part of the region under observation during February had their minimum of pressure beyond the Arctic Circle. Of the few to the southward only two crossed the British Isles—on the 12th across the more southern districts, and on the 19th across the north of Scotland, both of them very deep. A shallow rain disturbance passed outside our south-western coasts and down the Bay of Biscay on the 22nd and 23rd.

Anticyclones.—Areas of high pressure covered the country during the first six and the last six days of the month, the maximum pressures being attained on the 2nd, 5th, and 28th. From the 14th to the 17th the conditions were influenced by an anticyclone in which the highest pressure was over the Bay of Biscay, northern Spain and westward to the Atlantic.

Winds.—In all parts of the kingdom the prevailing winds were from between South, West and North, but over the southern and western districts, and especially on the English Channel, South-Easterly to North-Easterly breezes were comparatively frequent. The days on which the force of a gale was felt numbered 7 at Deerness, Malin Head and Guernsey, 6 at Strathpeffer, Bettws-y-Coed and Dublin, 5 at Laudale, Durham, Southport and Hastings.

Temperature.—Mean at sea level ranged from 44° at Scilly, and above 40° in the extreme south-west of England and the south and west of Ireland to below 38° in many parts of Britain, slightly under 36° at Skegness. The general distribution was in fair accordance with the normal, but the actual values equalled the average only at Aberdeen and Scarborough; all other stations showed a deficiency which exceeded 2° in many cases, chiefly in the southern districts, and reached 4.2° at Arlington, and 5.2° at Llangammarch Wells. Highest readings were registered generally about the 15th–18th and 25th–28th, Crathes touching 60° on the 25th, Killarney 59° on the 15th, and there were numerous instances of 55° to 58° . Lowest values occurred on the 1st in most parts of Scotland, on the 2nd–4th and 23rd–24th in England, and on the 5th–6th in Ireland; 5° at Balmoral (1st), 10° at Llangammarch Wells (3rd), 13° at Wokingham (3rd), 14° at Garforth (2nd) and Marlborough (3rd), and many records below 20° in Scotland and England. In Ireland 21° at Birr Castle and Clongowes Wood College (6th). Scilly alone, with a minimum of 35° , escaped frost. Range amounted to 45° at Balmoral, 42° at Clathick, Garforth and Shrewsbury, and 41° at Llangammarch Wells, but only 18° at Pembroke, and 17° at Scilly. Vapour Pressure ranged from 0.165 in. at Newton Rigg and Stonyhurst (9 a.m.) to 0.241 in. at Roche's Point (6 p.m.). Relative Humidity ranged from 77 per cent. at Kew (9 a.m.) to 97 per cent. at Malin Head (8 a.m.). Nocturnal Radiation Temperature (on grass) was very frequently 30° and under, on 25 nights at Coventry, 24 at Balmoral and Hull, and 23 at Cambridge and Crathes. The lowest records were 4° at Balmoral (1st) and Llangammarch Wells, 6° at Edgbaston, 7° at Coventry, Oundle and Newton Rigg (3rd). Mean Earth Temperature at 1 ft. depth ranged from 33.3° at Marchmont and 33.5° at Crathes to 40.9° at Guernsey; and at 4 ft. depth from 36.2° at Crathes to 45° at Eastbourne.