

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.—Following the dry, quiet weather of September and October, a prolonged period of very unsettled conditions set in with the arrival in the vicinity of Shetland, on the last evening of October, of the very deep cyclonic area which had advanced at a brisk rate from Greenland and Iceland. Thenceforward the British Isles were nearly always under the influence of low pressure areas, generally of considerable depth, and their paths of progression exceedingly variable and complex. On various occasions the barometer fell below 29 in. at a number of stations, the lowest point touched being 28.37 in., at Castlebay on the evening of the 6th, and at Wick next morning, when pressure fell below 29 in. over practically the whole kingdom. Anticyclones, on the other hand, were conspicuous by their absence, not one high pressure centre visiting the country, but on a few days the influence of anticyclones, centred over Iceland or Spain was felt. Barometric readings as high as 30½ in. were consequently unusually rare for the time of year. In the extreme west this level was exceeded on the 19th, when the pressure at Valencia reached 30.32 in., and on the 30th, when Stornoway touched 30.3 in. Under these circumstances the mean pressure for the month was everywhere decidedly below the normal, the deficiency ranging from 0.15 in. at Stornoway, and 0.20 in. at Blacksod Point to 0.33 in. at Yarmouth, and 0.34 in. at Spurn Head. The actual values ranged from 29.49 in. at Sumburgh Head, and 29.52 in. at Wick to 29.69 in. at Scilly, and 29.71 in. at Jersey. There was a marked variation from the normal distribution of pressure. Instead of the minimum values being in the neighbourhood of Iceland, they formed a clearly defined centre below 29.5 in. between Shetland and southern Norway, whence, southward the values increased to 29.75 in. at Paris, and, north-westward, to 30.06 in. in the north-west of Iceland. Over the British Isles the direction of the gradient wind instead of being South-Westerly, was between West and North. In the individual disturbances the gradient was frequently steep, so that as a whole the month was very windy—even stormy. At the telegraphic reporting stations there were only three days, the 20th, 21st and 26th, on which the wind did not exceed the force of a strong breeze, whereas gales were felt on as many as twenty days—on six days the force of a strong gale (9) was attained at one or more stations, and on ten other days a whole gale or storm (10 or 11).

By the morning of the 1st the centre of the depression of the end of October had moved down to the vicinity of the Stavanger Fjord, the barometer at Skudesnaes having dropped to 28.28 in., while at Biarritz, a thousand miles distant, it had risen above 30 in. Across the intervening region there was thus a steep gradient, and strong winds and gales were prevalent over an extensive area. A strong Westerly to North-Westerly gale was experienced at Blacksod Point, Roche's Point, Holyhead, Jersey, Dungeness and Spurn Head, a whole gale at Malin Head, Scilly and Portland Bill. In gusts the anemometers registered velocities at the rate of 68 miles per hour at Pendennis Castle, and of 74 miles at Scilly. Thunderstorms occurred in many parts of the kingdom, but although rain was general and considerable, and in places alternated with snow or hail, the only record of as much as an inch during the day was at Mayfield (Staffs). On subsequent days the changes of pressure were irregular, and the gales were less extensively felt; but they were still severe; on the 2nd a strong North-Westerly gale at Holyhead and Portland Bill, a whole gale at Malin Head, and a storm at Scilly; on the 3rd a strong gale at Malin Head, Scilly and Jersey; and on the 4th a whole gale at Scilly.

Wireless reports from steamships disclosed the centre of a deepening cyclonic system in about 57° N., 15° W., on the evening of the 5th, the barometer at 29 in., and North-Westerly gales over a considerable area westward and south-westward of the centre. The eastward advance of the disturbance was slow, the minimum pressure on the evening of the 6th, below 28½ in., being midway between Donegal and the Hebrides. Maintaining a fairly uniform slow rate of progression it passed across Scotland (barometer below 28.4 in.) to the southern extremity of Norway, then bore away north-eastward and disappeared across Lapland on the 10th. Its approach towards our north-western coasts was marked by a rapid decrease of pressure and rapidly increasing winds, with thunderstorms and heavy rains on the 6th, when a strong gale blew at Malin Head and Holyhead from West, and at Jersey and Portland Bill from South-West, the rainfall ranging up to 1.3 in. at Dover Water Works and Kearsney (Kent), and 1.6 in. at Dunrobin. Next day the gale affected a much larger area and increased in violence, to a whole gale from North-West at Holyhead, from West at Malin Head, Scilly and Portland Bill, and a storm from East at Wick. At Scilly the squalls were at the rate of 68 miles per hour, and at Pendennis Castle 67 miles per hour.

Although thunder and lightning occurred in numerous localities the rainfall was not heavy.

A depression which crossed the country eastward from the Atlantic on the 10th, occasioned a strong Westerly gale at Aberdeen, South-Westerly at Portland Bill, and a whole gale from South at Spurn Head, with heavy rains, ranging up to 1.4 in. at Darwen, and 1.9 in. at Burnley.

From the 12th to the 18th the conditions were under the influence of a complex disturbance from the Atlantic, the main portion of which crossed Ireland and southern England, and dispersed over Denmark on the 16th, while a secondary moved up the western Channels, crossed to the upper part of the North Sea, and from near Shetland passed down the East coast of Britain, filling up near the Dutch coast on the morning of the 19th. Gales were experienced daily. On the 13th a South-Easterly storm at Sumburgh Head; on the 14th a whole Northerly gale at Sumburgh Head, and a storm at Malin Head; on the 15th a whole Westerly gale at Scilly; and on the 18th a whole Northerly gale at Spurn Head. Many large falls of rain were registered, 1.7 in. at Douglas, Isle of Man, on the 12th, and 1.6 in. at Sheepstor, Devon, on the 13th. Snow or hail fell at several stations. There were a few local thunderstorms, a short but violent one at Guernsey on the evening of the 15th, when many houses were damaged, electric cable destroyed, and lighting arrangements disorganised. While this storm was in progress in the Channel Islands the observer at Salisbury noted a "very strange light during sunset," and this had been preceded at Bromyard, Hereford, after midday, by a very dark appearance to the south-west, and by unusual darkness at Bristol between 2 p.m. and 3 p.m. There was no fog or mist, but "dense slow-moving clouds from N.N.W. involved us in a gloom which, as far as my recollection serves, is without parallel in my experience." (Mr. W. F. Denning.)

The disturbances of the remainder of the month produced much less wind, but several heavy rainstorms, on the 22nd, 23rd, 24th, 27th, 29th and 30th.

Notwithstanding the frequent and heavy rains the month was unusually cold. There was an almost complete absence of afternoon maximum temperatures above 55°, while there were very numerous maxima below 40°, as low as 30° at Fort Augustus on the 22nd, and 31° at Limerick on the 30th. Severe night frosts occurred extensively, many minima of 20° and under being registered, 15° at West Linton on the 22nd, 14° at Kilmarnock on the 20th and 22nd, 13° at Eskdalemuir on the 10th, and 10° at Balmoral on the 23rd. As a result the mean temperature was far below the normal, more than 5° at a large number of stations, ranging up to nearly 8° at West Linton.

Aurora was reported at Dublin on the 5th; at Aberdeen and Baltasound on the 8th; Baltasound on the 28th; over Scotland and the north of England and of Wales on the 29th, bright at Fort William, very brilliant at Oban; and over northern Scotland on the 30th.

Fog was fairly frequent in some inland districts, other localities noting unusual freedom. It was reported almost daily on various sections of the east coast, at many places on the western coasts between the 22nd and 27th, but rarely mentioned at south coast stations.

The temperature of the sea water along our coasts showed a decided decrease on the October records, by 8° or more in some neighbourhoods, 10° at the Shipwash and off Pennan, 12° off Margate. Still, the water was much warmer than the air on shore, by 10° at Plymouth, South Rock (Down), Lam-lash and Wick, and by 11° at the Coningbeg light vessel (Wexford).

Rainfall.—Generally over the north and west of Scotland and the north of Ireland there was a small deficiency of rain, hail and snow, the rest of the kingdom returning an excess, which increased southward. Fort William had a deficiency of 5.1 in., while Douglas had an excess of 5.1 in., Guernsey of 5.4 in. to 6 in., and Jersey an excess of 6½ in. Numerous aggregates exceeded 7 in., the largest between 10 in. and 11 in., at Treherbert, Jersey and Guernsey, and at Seathwaite, 13.6 in. There were few totals of less than 2½ in., Armagh and Rounton reporting 2 in. Many stations had more than 25 rain days, Guernsey, Newquay and Foynes 29, and Baltasound 30. A small number of places had less than 15 rain days, Tealby only eight.

Bright Sunshine.—Notwithstanding the disturbed type of weather the duration of bright sunshine was above the normal in nearly all localities. Armagh having 31 hours, and Eastbourne 33 hours more than usual, but in the south-west Newquay had 25 hours, and Scilly 27 hours less than the average. The aggregate totals ranged from 107 hours (41 per cent. of the possible duration) at Bournemouth, 103 hours (39 per cent.) at Totland Bay, and 100 hours (38 per cent.) at Dover, to 26 hours (11 per cent.) at Fort William, 19 hours (8 per cent.) at Manchester, and 15 hours (6 per cent.) at Whitworth Park.