

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.—The opening day of October witnessed a complete reversal of the atmospheric conditions which had for some time previously been prevalent over the British Isles. Fine, quiet and very dry weather held until the last day of September, but on the following morning a cyclonic disturbance of considerable depth appeared off the south-west of Ireland, and its influence extended to all parts of the Kingdom. Thenceforward, there was an all but unbroken succession of disturbances throughout the month, so that the weather was of an exceedingly unsettled type, very breezy, but not marked by such severe storms as are sometimes characteristic of October, while rain was exceptionally frequent and often unusually heavy over large areas, particularly so over the southern half of Scotland on the 15th, and over a great part of England on the following day. Such excessive falls as occurred in the Lowlands on the 15th appear to have been very rarely equalled in the past 100 years, in the neighbourhood of Edinburgh only once. In connection with this rainy month over these islands it is interesting to observe that the wet weather extended southward to the Mediterranean, and was much worse to the southward than to the northward of the English Channel. Various parts of France, both in the north and in the south, received more than 10 ins. of rain during the month, the amounts ranging upwards to more than 15 ins. at Nice, and 23 ins. at Biarritz. The Weekly Weather Report, No. 43, page 340, contains a description of a fall of "black rain" at Birr Castle in the night of the 8th-9th, together with a note on the general conditions at the time, indicating, from the "travel" of the air, that the soot which contaminated the rain probably had its origin in the manufacturing centres of Lancashire, the Midlands or South Wales. Thunderstorms, or thunder or lightning alone, occurred on 16 days, but as a general rule only in few isolated situations on any one day, while in all cases the storms were of a comparatively unimportant character, and speaking generally they were not associated with the heavy rains of the month. On the 8th, 9th and 10th thunderstorms were experienced in many places in England, Wales, Ireland, and the Isle of Man; on the 11th and 19th, many scattered places in England were visited; and on the 15th the reports were mainly confined to eastern Scotland and the north of England.

From time to time falls of hail were reported both with and without thunderstorms. On the 7th, 8th and 15th the observer at Laudale and on the 16th the observer at Ardross Castle noted snow on the neighbouring hills, the only references to snow during the month.

With the approach of winter the frequency of days with fog continues to increase over the inland districts, but although fog was reported on various sections of our coasts on as many as 20 days, it was on most occasions limited to one or two stations, in the majority of cases somewhere on the east coast of Britain, a very decided decrease being noticeable on the western and southern coasts. On the 1st fog was reported along the northern shores from the Hebrides to the Tyne; on the 5th in the west, between Holyhead and Plymouth; and on 24th and 25th down the east of England, from the Tyne to the Straits of Dover.

Between 2.20 p.m. and 2.30 p.m. on the 3rd, a well-defined waterspout was observed on the English Channel at a distance of about 8 miles off Brighton.

For the month as a whole pressure was considerably below the usual level; temperature was nearly everywhere in excess of the normal, decidedly so in several localities; the winds were very variable in direction, but no great gales were experienced; rainfall was deficient in some parts of Scotland, decidedly in excess elsewhere; and bright sunshine was irregularly distributed in all districts.

Pressure.—Mean at 8 a.m. ranged from 29.52 ins. in the north-west of Ireland to about 29.65 ins. at Jersey and on the Straits of Dover. The mean gradient was thus not only very slight, about 0.1 in. over a distance of 400 miles, but it was also almost at right angles to the normal gradient, the normal pressure distribution being from an area of low value beyond the north of Scotland to an area of relatively high readings over the Channel and France. In the month now under review pressure increased northward from Scotland to about 29.8 ins. along the Arctic Circle. The mean values were in all cases much below the average, the deficiency amounting to 0.12 in. at Sumburgh Head, 0.17 in. at Wick, and increasing southward to more than 0.3 in. generally over the south-western quarter of the Kingdom, nearly 0.34 in. at Valencia, Roche's Point and Birr Castle. Highest readings were recorded on the 5th, 30.18 ins. at Jersey, and 30.17 ins. at Scilly; on the 12th, 30.16 ins. at Jersey, and 30.12 ins. at Dover; and on the 31st, 30.17 ins. at Wick, and 30.16 ins. at Sumburgh Head and Stornoway. Lowest values occurred on the 15th, 29.01 ins. at Leith, and 29.02 ins. at Shields; on the 16th, 28.84 ins. at Jersey, and next morning 28.87 ins. at Portland Bill; on the 18th, below 29 ins. generally over Ireland, Wales and Scotland, 28.52 ins. at Valencia, and 28.54 ins. at Blacksod Point; and on the 30th 29.10 ins. at Portland Bill, and 29.11 ins. at Bath. Range, in the absence of any very high readings, was not large for the season. It was from 0.9 in. to an inch over the eastern portion of England, and only on the west coast of Ireland did it exceed 1.5 in.

Depressions.—As is reflected in the distribution of mean pressure, one of the most notable features during the month was the almost constant presence of low pressure systems with their minima either directly over the country—mainly the southern districts—or lying out on the ocean immediately beyond the western and south-western coasts, too ill-defined and irregular in their movements for their positions to be determined. It is an unusual circumstance that practically the whole of the important disturbances of the period remained and finally dispersed in our immediate neighbourhood, only one passing so far east as the coast of Denmark. On the 16th a deep cyclonic area moved from the Bay of Biscay across Brittany to the English Channel, and on nearing the Isle of Wight on the evening of the 17th it completely dispersed or was merged in a deeper depression which on the following morning was situated off the south-west of Ireland, but which subsequently disappeared out on the Atlantic.

Anticyclones.—Nearly all through the month the principal areas of high pressure were situated over the eastern half of Europe, but occasionally anticyclones of slight intensity visited the Bay of Biscay and Spanish region, and at the close of the month one appeared to the westward of Iceland and advanced to the Faerøe, but there was no instance of the central space of an anticyclonic system being found over any portion of the British Isles, so that there was an entire absence of barometer readings much above the average height.

Winds.—With so many pressure minima crossing the country in various directions the winds experienced were from every quarter of the compass, but over the eastern half of England, as the disturbances did not pass on to the North Sea, there was a larger proportion of Southerly and South-Westerly breezes than in other districts. The disturbances often occasioned a considerable increase in the force of the breeze, to a strong or high wind, but the gales reported were comparatively unimportant for the month of October. The strength of a gale was felt on some section or other of our coasts on fourteen days, but as a rule only at one, two or three stations, the most stormy period being the four days, 17th to 20th, gale force being reported in several situations on each day. A strong Southerly gale occurred at Jersey and Portland Bill on the 10th, South-Westerly at Jersey on the 16th, Southerly at Portland Bill and Roche's Point, and Northerly at Donaghadee on the 18th, and Southerly at Pembroke and Roche's Point, and Westerly at Jersey on the 19th. At the self-recording anemometrical stations the only instances of a mean hourly velocity of 50 miles or more occurred at Falmouth (Pendennis Castle). On the morning of the 18th a velocity of 55 miles was attained, some gusts being at the rate of 71 miles per hour. On the 20th a velocity of 50 miles was registered, with gusts at the rate of 64 miles per hour, the direction on both days being Southerly. At the same station on the 16th a Northerly gale which reached 46 miles in an hour had gusts of 71 miles per hour. The days on which the force of a gale was reported at various stations numbered 6 at Jersey, 4 at Holyhead and Pembroke, and 3 at Malin Head, Donaghadee, Roche's Point, Scilly and Portland Bill.