

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

(Supplement to the 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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ROUGH AND WET.

Pressure, Winds and Weather.—Throughout the month the distribution of atmospheric pressure round the British Isles was of a very unsettled type. During the first twenty-three days anticyclonic systems were in evidence along the middle belt of the Atlantic to the Spanish Peninsula, and thence across Southern Europe and the Mediterranean, the barometer standing between $30\frac{1}{2}$ in. and $30\frac{3}{4}$ in. in various regions from the 3rd to the 13th. On some days the northern limit of the high pressure embraced a considerable portion of this country, and on the 9th, when the anticyclonic centre occupied the Bay of Biscay, the barometer rose above 30.5 in. over the southern counties of England, above 30.6 in. on the south coast, and touched 30.68 in. at Jersey, the highest home record for the month. All through this period of three weeks an extensive area of low pressure covered the northern half of the Atlantic, Scandinavia and Northern Russia. Within this basin numerous depressions wandered along very irregular paths, most of their centres passing to the northward or eastward in the vicinity of Iceland, a few, mainly secondaries to main systems out on the ocean, visiting these islands. As a rule these disturbances were very deep, the barometer often falling below 29 in., on several days below $28\frac{1}{2}$ in. On the 4th, in the deepest cyclone of the month, there were readings below 28 in. over Iceland, down to 27.79 in. at Seydisfjord, on the east coast. Ten days later there was a reading of 28.3 in. off the south coast, at the Vestmanna Island. Of those which visited any part of the British Isles the deepest was a cyclone of great energy which appeared on the 17th in 52° N., 25° W., and advancing on an east-north-easterly course arrived over the Hebrides on the morning of the 19th, and subsequently passed on to Southern Scandinavia and Finland. All over Scotland the barometer sank below $28\frac{1}{2}$ in., to 28.32 in. at Wick, and to 28.29 in. at Aberdeen. The period came to an end with the passage of a deep system moving on a due easterly path across the south of Scotland in the night of the 22nd, with the barometer below 29 in. It absorbed a secondary of even greater energy than itself, which had formed on the upper part of the Bay of Biscay on the morning of the 22nd, and moved up the Western Channels, causing a violent gale along the south coast.

As this disturbance travelled away on a north-easterly course across Scandinavia towards the White Sea, an area of high pressure began to move up from the neighbourhood of the Azores, and on the 25th its central space crossed this country, with the barometer just below of 30.4 in. The system then became established over Northern and Eastern Europe, and for the remainder of the month disturbances were confined to the western regions, mainly between Iceland, the Bay, Spain and Morocco. There was an interesting case of a very deep cyclone advancing due eastward to within 125 miles of the Kerry coast on the morning of the 28th, with the barometer below $28\frac{1}{2}$ in. Apparently its progress was suddenly arrested by the eastern high pressure, and the evening reports showed that its centre had travelled due westward about 320 miles, then working northward past the west of Iceland to the Arctic Sea.

The mean pressure for the entire month was below the normal, by as much as $\frac{1}{4}$ in. along the north-western and northern coasts, the deficiency diminishing southward to less than 0.1 in. over Southern England. The results disclose a centre of minimum pressure off the south of Iceland, barometer 29.25 in., the values increasing thence to 29.50 in. in Shetland, 29.98 in. at Jersey, above 30.15 in. over South-Eastern Europe, and 30.29 in. at the Azores. While the general resultant gradient was of a South-Westerly type, the closing week had winds from between South and East.

The weather was frequently rough and boisterous, the force of the wind exceeding that of a strong breeze at one or more of the telegraphic reporting stations on 27 days, the strength of a gale (force 8) being attained on 25 days, and a strong gale (force 9) on 21 days.

The month opened with a strong Southerly gale along the north-west of Ireland. On the appearance of a very deep cyclone off the south-west of Iceland on the morning of the 4th, the conditions over these islands assumed a very stormy character, and remained so until the disappearance of the system beyond the north of Scandinavia on the evening of the 6th. On each of the three days a strong Southerly to Westerly gale was experienced on several sections of the northern, western and southern coasts, a whole gale (force 10) in Shetland, Donegal and Mayo. Severe squalls accompanied the gale ; at Dwyran (Anglesey) a gust at the rate of 76 miles an hour was recorded on the 6th. The occurrence of a strong gale round the north of Scotland on the 9th and 10th was associated with the eastward translation of a deep system along the Arctic Circle.

The gales of the 15th to the 18th were due to two disturbances, one, of no great depth, moving eastward beyond the north of Scotland, and on the evening of the 16th throwing off a secondary over the Hebrides. This secondary struck off to the south-eastward, as far as Cambridge, then altered

its course to the north-eastward, and became much deeper as it crossed the North Sea. Strong gales were felt on many coasts each day, a whole gale off Pembroke. Velocities on the 15th ranged up to 68 miles per hour at Scilly, and 75 at Pendennis ; next day Pendennis had 69 miles per hour, and on the 17th 72. Hitherto the unsettled weather was marked by very few electrical disturbances, mainly in Scotland and Ireland, and large rainfalls were limited almost entirely to the more mountainous districts, a few exceeding 2 in. in a day, and on the 2nd Llanberis (Penygwryd) had 3 in. Hail and snow showers were, however, very common. On the 15th thunderstorms became more widely distributed, heavier rains fell in the low levels, and there was rather more snow locally. Fulbeck had 4 in. of snow on the 17th, and Fort William, as the result of a two days' fall, 12 in.

Several districts experienced a strong gale on the 19th and 20th, the wind at Dungeness rising to a storm (force 11), the velocities in squalls ranging up to 70 miles per hour at Holyhead on the 19th, and 68 miles per hour at Scilly next day. The rainfall was insignificant.

On the morning of the 22nd, when a large disturbance was beyond our north-western coasts, a small secondary was formed on the Bay of Biscay. As it moved northward it brought about a stormy night over Southern England, where the force of a whole gale was felt, squalls at the rate of 67 miles an hour being recorded at Shoeburyness and Kew Observatory. Worthing pier was destroyed, and there were numerous other casualties. Thunderstorms were pretty general over England, severe in several places. The day was the wettest of the month over the low level districts, with more than an inch of rain locally, at Aberdeen 1.3 in. in 12 hours.

Under the South-Easterly type of the remainder of the month the gales were much more moderate, and the weather all round was less rainy and thundery.

The temperature of the month, which was generally above the normal, and especially so over Eastern and South-Eastern England, was remarkable for its general uniformity. On the 7th an afternoon maximum of 61° was recorded at Bridlington, and on the 30th 60° at Lisburn, but as a rule there were few maxima above 55° . On the 17th Glencarron and Lerwick remained as low as 33° , otherwise day readings as low as 40° were unusually rare. The early morning of the 18th was marked by sharp frost over a wide area, the thermometer in the screen sinking to 20° at Fulbeck, Crieff and Marchmont, 19° at Bellingham, and 16° at West Linton. Most of the other frosts were very slight. Mild nights were as rare as cold days, the only minimum temperature as high as 50° being registered at Villa Carey, Guernsey, during the night of the 5th.

An earth tremor was felt at Isleworth, Middlesex, at about 5 p.m. on the 22nd. A thunderstorm was then in progress, and a line squall was passing across the neighbourhood from west to east, marked by a sudden and sharp rise of the barometer.

There was a decided falling off in the records of fog, both inland and on the coasts. They were noted at a few places round Ireland in the first ten days, and locally on the east coast of Britain in the last eight days, thick off Wick on the 30th, but along the English Channel there were hardly any references to fog.

As compared with the preceding month the temperature of the sea surface water round our shores showed no change at more than one-half of the points of observation, at the others it was 1° or 2° warmer or cooler. As a rule the water was rather warmer than the air on shore, by 2° or 3° in several localities.

Rainfall.—Precipitation was nearly everywhere in excess of the normal, considerably so over a large portion of the country, there being an entire absence of the keen, dry winds associated with the season. Glencarron returned 84 per cent. of its average, Margate 89, and Ventnor and Dunrobin 93 per cent., but a number of places had more than double the usual quantity, Coventry 238 per cent., Crieff 249, Birmingham 259, Church Stretton 267, and Hereford 320. Ridgewell (Essex) totalled 1.4 in., and Colchester, Ipswich and Sandwich 1.5 in., but there were about a score of stations in the hilly districts which received more than 10 in., up to 16.2 in. at Seathwaite, 18.1 in. at Loch Quoich, 19 in. at Llanberis (Penygwryd), and 19.3 in. at Copper Mill (Snowdon). At Kingstown and Cawdor rain was measured on 14 days, and at Dyce and Fortrose on 15 days, but generally the frequency exceeded 20 days, 27 or 28 in many places, 29 at Caragh Lake and Enniscoe.

Bright Sunshine.—The duration of bright sunshine was rather variable, Eastern Scotland, North-Western England and the North of Ireland returning an excess, other regions a deficit. Southampton, Torquay, Scilly and Pembroke had 78 per cent. of the normal, and Cullompton and York 80 per cent., while Llandudno had 115, Strathpeffer 116, and Markree Castle 117 per cent.