

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.

AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE. To be purchased, either directly or through any Bookseller, from WYMAN AND SONS, LTD., FETTER LANE, E.C.; or H.M. STATIONERY OFFICE (SCOTTISH BRANCH), 23, FORTH STREET, EDINBURGH; or E. PONSONBY, LTD., 116, GRAFTON STREET, DUBLIN; or from the Agencies in the British Colonies and Dependencies, the United States of America, the Continent of Europe and Abroad of T. FISHER UNWIN, LONDON, W.C.

THIRTY-EIGHTH YEAR.

Vol. XXX. (New Series)
Weekly Weather Report.

No. VIII.

AUGUST, 1913.

[Price 6d.]

CALM, COOL, DULL AND DRY.

Pressure, Winds and Weather.—The very quiet weather conditions, which were experienced all over the British Isles during the month of July, were maintained, with very little variation, through August. There was, however, greater variety in the distribution of atmospheric pressure during the period now under review, though, as will be seen on referring to Map 1, at pages lxxv. and lxxv., the general results for the two months were very similar, differing only in the values of the isobaric lines, the August values being 0.05 in. lower than those for the preceding month. Between the beginning and the end of the month the country was visited by as many as six types of pressure distribution, but they were too feeble to introduce any very striking modifications in the weather, excepting a few local passing rainstorms. An area of high pressure which settled over the whole kingdom on July 22nd remained in the ascendant until August 8th. Until the 3rd it was part of a very extensive system, which covered the greater portion of the North Atlantic, Europe and Western Siberia, but during the remaining days it extended no further east than the North Sea. At no time was the system of any great intensity over the land, the barometer standing above 30.3 in. at various stations early in the month, 30.35 in. at Blacksod on the 2nd, but it rose above 30.5 in. on the upper part of the Atlantic, midway between Iceland and Southern Greenland, on the 4th. In the night of the 8th the anticyclone withdrew to the ocean, and a depression which had occupied Northern Europe for some days expanded westward and covered the whole of these Islands, the system becoming, however, at the same time very shallow. One of the few Atlantic depressions of the month advanced towards the mouth of the English Channel on the 11th, but it was devoid of energy, and on passing into North-Western France on the morning of the 12th it dispersed, the anticyclone soon returning from the ocean. The high pressure was now re-established all over the country, the system extending south-westward to and beyond the Azores, and at times stretching north-eastward across Norway to Lapland and the Arctic Sea. At the home stations the anticyclone attained its maximum intensity on the 17th and 18th, when the barometer ascended to 30.4 in. over Scotland, to 30.43 in. at Stornoway and Wick, and 30.42 in. at Nairn. This type was maintained, with comparatively little variation in the general conditions, until the 20th, when an extensive depression was indicated moving across the upper portion of the Atlantic, and next morning its eastern section already embraced Ireland and Scotland. The system was at its greatest depth over Scotland on the 22nd and 23rd, when the barometer fell below 29.5 in. at the most northern stations, to 29.41 in. at Lerwick, the lowest value reported during the month. Its progress, however, was very slow, the centre advancing on an easterly path off the south of Iceland, but on arriving in the Shetland-Farøe region on the 24th the system collapsed. Again, on the 25th, there was a resumption of an anticyclonic pressure distribution over the British Isles, flanked by well-marked depressions about Iceland on the one side, and the Bay of Biscay region on the other. The anticyclone was at its maximum on the 26th and 27th, with the barometer above 30.3 in., touching 30.35 in. at some of the Irish stations. By the 29th the Bay depression was following a north-easterly course, its influence extending over practically the whole of the kingdom, the weather of the last three days being the most unsettled which the country experienced during the month. This disturbance was of little depth, the mercury sinking below 29.75 in. in nearly all parts of England, the lowest readings, 29.71 in., being reported at Dover and Dungeness.

With such a decided preponderance of anticyclonic conditions the mean pressure for the month was everywhere well in excess of the normal, by 0.07 in. at Jersey, and 0.09 in. at Portland Bill, while along the north-western coasts, from Blacksod to Stornoway, it was 0.21 in. The general distribution, consequently, differed widely from the normal, the results indicating a region of maximum pressure from Ireland out to the Atlantic and down across the Azores, and regions of minimum pressure respectively to the northward of Iceland, and from Sweden down to the Black Sea. From 29.79 in. along the north of Iceland, and 29.91 in. at Odessa the mean values ranged upwards to 30.00 in. at Lerwick, 30.12 in. at Roche's Point, and 30.27 in. at Horta (Azores). The extreme range of pressure at the home stations was small, from 0.6 in. over the southern half of the kingdom to an inch in Shetland. The mean pressure gradient was very slight, amounting to about 0.08 in. between Yarmouth and Valencia. As there were half a dozen different types of pressure distribution the winds were very variable in direction, almost equally divided between the South-West, North-West and North-East quarters.

As will have been gathered from the foregoing remarks, the disturbances of the month were not only few in number, but also very shallow, so that the variations of pressure and the gradients were slight. This fact is very strikingly illustrated in the observations of wind force, which show that calms and light airs to gentle breezes formed 86 per cent. of the records. Strong winds (force 6) were unusually rare occurrences. A high wind (force 7) was felt at Stornoway on the 3rd, and at Portland Bill and Scilly on the 22nd, the only instance of a gale (force 8) being at Malin

Head in the night of the 23rd. The passage of a small "V"-shaped secondary depression across the country in the night of the 22nd was marked by a few smart squalls, the anemometrical records disclosing gust velocities of 44 miles per hour at Rosyth, 45 miles at Pendennis, and 48 miles at Scilly. The highest mean hourly velocity for the month, which also occurred on this occasion, was 37 miles at Pendennis.

The weather was almost as quiet as the winds. A spell of dryness had set in in the course of July, as far back as the 10th of that month in some localities, and it was maintained over the greater part of the kingdom until the close of the anticyclonic type of conditions in the early days of August, about the 8th or 9th. At many scores of stations no rain was measured during 15 or more consecutive days, amongst those exceeding 20 days being Scaleby, Donaghadee, Glenarm, Waterford, Cardross, Poltalloch and Fortrose, 21 days; Thrapston, Orieff, Leith and Thorntonhall, 22; Portland Bill, 24; Exmouth, 29; Teignmouth, 30; and South Hanningfield, Essex, 34 days, this last station being rainless from July 20th to August 22nd. As a partial drought the spell covered a period of very variable duration, more than three months locally in the south-west, an observer near Exmouth registering 1.01 in. of rain in the 103 days ending with August 29th, and Portland Bill 1.00 in. in 102 days, and 1.03 in. in 103 days to the 25th. South Hanningfield received 0.30 in. in 44 days to August 30th. The break in the drought was brought about over the country generally by light showers, there being only a few local heavy downpours, and hardly any thunderstorms until the closing days. In Snowdonia there were falls up to 1.6 in. on the 8th; Bath an inch on the 9th; Mount Callan (Co. Clare), on the 10th, and Scilly, on the 11th, had 1.5 in. The Icelandic disturbance of the 21st to 23rd brought good rainfalls, mostly to the mountainous regions, some exceeding 1.5 in., Aspatria 2 in., and Seathwaite 4.3 in. on the 21st. The northward advance of the Bay depression, towards the end of the month, was marked by thunderstorms in many parts of England and Ireland on the 29th, but, with the exception of 1.1 in. at Croyland Abbey, little rain. Next day the thunderstorms spread to Scotland, and towards evening heavy rain set in over a limited area in the extreme south of England, 1.5 in. at Folkestone and Sandgate, and 1.7 in. at Selsey. On the 31st very few places reported thunderstorms, but the rain area in the south expanded, many stations receiving more than an inch, Folkestone 1.7 in., Portland Bill 1.8 in., Selsey 1.9 in., Patching 2.3 in., and Worthing 2.5 in.

Excepting in south-western and western England, where the weather was finer and brighter than elsewhere, temperature was below the normal, by from 2° to 3° in places. There were few hot days, temperatures above 80° occurring on the 2nd-4th, and 28th-30th in various localities, 83° at Lisburn on the 2nd, Belper and Rugby on the 3rd, and Woking on the 28th; 84° at Hodsock on the 4th, and at Matfield on the 28th. Cold nights were uncommon, but there were some minima below 40°, and on the morning of the 18th St. Andrews touched 32°. Damage by frost was reported at Linnere Delamere (Cheshire) on the 4th, and on the "Moss" lands, near Southport, on the 19th.

The temperature of the coastal sea water was warmer than in July, by as much as 4° off Kerry and Stornoway. Off the north-east of England and in the Western Channels the water was colder than the air; elsewhere equal to or a little warmer.

Much fog was reported on the western coasts from the 1st-3rd, 13th-22nd, and 28th-30th; and on the east coast from the 27th-31st.

Rainfall was generally very deficient, both as regards frequency and intensity. At a large number of stations situated in nearly all parts of the country there were less than 10 days with a measurable quantity, at Fortrose, Hull and Teignmouth only 6, and at Rauceby and Newcastle (Co. Wicklow) only 5. In many districts the total for the month amounted to considerably less than half the normal, the smallest aggregates reported being 0.23 in. (only 9 per cent. of the average) at Rauceby, 0.26 in. (13 per cent.) at Southend, 0.30 in. at Fowey, 0.34 in. (17 per cent.) at Margate and 0.35 in. (20 per cent.) at Shoeburyness. Locally, on the coasts of Kent and Sussex, where the month's rainfall was largely swollen by the heavy downpours which occurred on the 30th and 31st, the aggregate was in excess of the average. At Dungeness the excess amounted to 15 per cent., at Folkestone to 51 per cent., and at Worthing to as much as 71 per cent.

Bright Sunshine was unusually prevalent in Ireland, the west of Scotland and the north-west of England, and, locally, at a few places in the north and east of Scotland. Elsewhere there was a general deficiency, the loss amounting to at least one hour per day in the midland and south-eastern counties, and to nearly two hours per day at Greenwich. At Armagh 120 per cent. of the average duration was registered, at Blackpool and Markree Castle 122 per cent., and at Valencia 132 per cent. Worksop recorded, upon the other hand, only 68 per cent. of the average amount, Scilly 69 per cent., Greenwich 70 per cent., and Kew 75 per cent.