FOR OFFICIAL USE.

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.—The main features of the general distribution of atmospheric pressure during the period now under review were divided between two well-marked types, each occupying about one-half of the month. In the closing week of May, an extensive anticyclonic system was established over the northern half of Europe, and by the opening days of June it was expanding in all directions, the Atlantic high pressure area at the same time spreading north-eastward. Eventually the two systems coalesced, and became one great anticyclone. By the evening of the 5th, the centre was taking up a position over or near our western and north-western districts, the maximum pressure being attained on the 6th, when the barometer rose above 30·6 in. in Scotland and the north of Ireland, 30·65 in. at Castlebay. After this the intensity diminished slowly, and the centre drifted gradually to the north-westward and northward, to a position off the east of Iceland, where it was situated from the 11th to the 13th. Then it changed its movement to the southward again, passing across the British Isles on the 15th and 16th, on its way to Italy and the Mediterranean, the highest barometer readings during this period of translation being about 30¼ in. As this system left our coasts the type of conditions underwent a complete transformation, and the remainder of the month was of a continuously unsettled cyclonic character.

Wireless reports from steamships had indicated the existence of a disturbance in the vicinity of the Banks of Newfoundland as early as the 10th, but its progress to the eastward, across the ocean, was very slow, its centre arriving in 47° N., 30° W., on the morning of the 15th. By this time it was beginning to declare its existence in the observations on our south-western coasts. Until the evening of the 16th it maintained a due easterly course to 48° N., 16° W, when, with one high pressure on the Continent, and another beyond the Arctic Circle, its advance became exceedingly erratic. Bearing away about north-north-east, off the west of Ireland, it took two days to reach the Southern Hebrides. Thence it drifted about over the sea between Scotland and Iceland, returning to the vicinity of St. Kilda on the morning of the 22nd, then struck off towards Shetland, but before reaching there retreated to the Hebrides, and in the night of the 23rd it suddenly moved off to the south-east at a much faster rate, its centre being found over Norfolk next morning. Here its course was again arrested, and during the next two days it crept slowly up the east coast of Britain, and from the morning of the 26th it followed a north-easterly path up the Norwegian coast and across Lapland to the Arctic Ocean. During the long period of its complex wanderings in our neighbourhood it was of fairly uniform depth, the pressure minimum on most days being below 29·5 in., on the morning of the 22nd, descending to 29·25 in. at Castlebay, on the return from the Iceland region, and to 29·29 in. at Spurn Head on the evening of the 24th, when moving up the east coast. After the disappearance of this disturbance to the northward of Scandinavia another appeared over Iceland on the 28th. Its centre passed close to Shetland, where the barometer fell to 29·31 in. on the morning of the 30th, then curved off to the north-eastward up the Norwegian coast.

With an almost equal division of the period between anticyclones and cyclones the mean pressure for the month differed very little from the normal, the result at Lerwick being nearly 0·03 in. less, and at Blacksod 0·03 in. more than the normal. The actual values ranged from 30·07 in. at Paris, and 30·04 in. at Jersey, to 29·92 in. at Lerwick, and 29·89 in. at Bodö, this belt of lower readings being flanked on its northern side by an Arctic high pressure, the mean reading at Seydisfjord, in the east of Iceland, being 30·01 in. The range of pressure amounted to 1·4 in. at Castlebay and Malin Head, and 1·3 in. at Spurn Head, considerably less at the south-western stations. The gradient was very slight, and the conditions during the month favoured winds from all quarters of the compass.

It was not until the return of the Atlantic disturbance from the Iceland region towards the Hebrides, on the 22nd, that the winds showed any marked increase of strength, a strong South-westerly gale being felt at Malin Head on that day. On the 24th and 25th, gale force from points between south-west, north-west and north-east was experienced at a few coast stations, and on the 26th Malin Head reported an extreme force of 10 (a whole gale) from west north-west, and on the following day a strong gale (force 9) from north. This general absence of much wind was confirmed by the self-registering anemometers, only Roche's Point supplying an instance of a gust of short duration in which the wind attained a velocity at the rate of 55 miles per hour, on the 24th, there being no other record of as much as 47 miles.

The weather itself presented several interesting features. Under the high pressure distribution of the first half of the month there was a marked absence of rain, but, as explained in the summary for May, this dry spell had set in in the earlier days of that month, and over an extensive region it was maintained as a partial drought until June 15th, with only one or two trifling showers in a period of five weeks or longer. Both in May and in June there were very numerous instances of a complete drought of 15 or more consecutive rainless days, the longest unbroken spells, exceeding three weeks, being 22 days at Belfast and Bethesda, 23 days at Insch and Holyhead, 24 days at Lincoln, 30 days at Killiney, 31 days at Eastbourne, Brighton and Barnstaple, and 34 days at Newcastle, Wicklow. There were, however, a few heavy local rains in the first part of June, accompanying small irregularities of pressure. Thunderstorms occurred in many parts of the country between the 1st and the 4th, in many cases rainless. There was a terrific storm at Fortrose on the 1st, producing only 0·1 in. of rain, while on the same day Cornwall and Devon suffered greatly from very heavy rain and hail during a severe storm, many cattle being killed. On the 3rd a thunderstorm at Mountmellick precipitated 1·3 in. of rain. A heavy storm visited the Channel Islands on the 8th, with rainfall up to 1·7 in. in Guernsey, the lightning causing considerable damage.

With the break which occurred on the 16th, the weather became very wet for a period of ten days, with thunderstorms of more or less violence in numerous districts almost daily. Until the 22nd the falls of an inch or more in a day were comparatively few, the largest 1·8 in. at Cruachan, and 1·9 in. at Gruline on the 21st. But the march of the disturbance from the Hebrides to Norfolk and thence up the east coast was marked by a remarkable rainstorm, unattended by electrical outbursts. Falls of more than an inch were unusually numerous, on the 23rd ranging up to 2·3 in. at St. Asaph, and 3·2 in. at Uldale; and on the 24th to 2 in. at Bethesda, 2·1 in. at Morpeth, 2·2 in. at Tynemouth, 2·3 in. at Leeds, 2·6 in. at Alnwick and Shields, 2·7 in. at Marchmont and 2·8 in. at Rothbury. In a continuous fall extending over about 55 hours Whitby registered 3·65 in. During the remainder of the month the rainfall was unimportant.

Temperature attained a high level in the first week, passing 80° in many places, and touching 85° on the 5th at East Ham, Barnet, and Norwood, and 88° at Camden Square. At Stonehaven a reading of 85° was recorded on the 8th. As a rule the remainder of the month had moderate day and night temperatures, but there were one or two brief, but sharp, touches of cold. A good deal of damage was occasioned by frost on the mornings of the 14th, 15th and 16th, in various parts of the Kingdom, the shade temperature touching 28° at Balmoral and Garforth, while at Llangammarch Wells there was a grass minimum of 19° and at Chopwellwood 20°, spruces and other forest plants being injured in this neighbourhood. Round the 25th, the afternoon maxima were low, down to 49° at Eskdalemuir on the 24th, accompanied by flakes of snow, and 48° at Insch on the 26th.

On our coasts fog was less prevalent than usual at this season, reported at many places in the first four days, then from the 16th to the 18th in the west, and the 18th and 19th in the east. Towards the close it was recorded at a few western stations.

The temperature of the sea water along the coasts was everywhere warmer than in the preceding month, by as much as 5° to 7° at a large number of stations. Off the west and north of Ireland and along Sussex and Kent the water was warmer than the air on shore, by as much as 3° locally on the Irish coast. In most localities, however, the water was colder than the air, by 4° or 5° in several places.

Rainfall.—Showed considerable local variations. Over Ireland and a considerable portion of central and southern England the total amount was much less than the average. A slight deficiency was reported also at several of the Scottish stations, but over North Britain as a whole the aggregate fall was large, the difference from the normal being especially noticeable in the north-east of England. In many parts of Northumberland and Berwickshire, the total quantity for the month exceeded 5 in., the largest amounts reported to the Meteorological Office being 6·0 in. at Rothbury, 5·9 in. (285 per cent. of the average) at Alnwick Castle. 5·4 in. (291 per cent.) at North Shields, and 5·3 in. (234 per cent.) at Cockle Park, Morpeth. The lowest aggregates were 0·8 in. (39 per cent. of the average), at Malin Head, 0·9 in. (42 per cent.) at Dundee, and 1·0 in. at Dunrossness and Dunrobin Castle. The number of days with rain was generally rather small, less than 10 at several of the English and Irish stations, and only 8 at Margate, Broadstairs, Clacton, Scilly and Kingstown.

Bright Sunshine.—The total duration was nearly everywhere in excess of the normal, but the difference was, as a rule, somewhat small. On many parts of the English and Welsh coasts more than 250 hours were registered, the largest aggregates reported being 269 hours at Sandown, 261 hours at Totland Bay and Haverfordwest, and 260 hours at Westbourne. The smallest aggregates were 148 hours (110 per cent. of the average) at Fort Augustus, 153 hours at Hull, 162 hours at Balta Sound and Birmingham, and 165 hours (equal at the two respective stations to 107 and 116 per cent. of the average) at Deerness and Newcastle-on-Tyne.

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